Schäfer + Peters GmbH



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KOMPLE KATALOG

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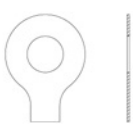
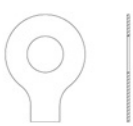
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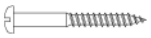
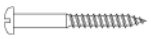
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DIRECTORY

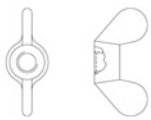
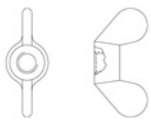
DIN - İçindekiler tablosu artan DIN numarasına göre
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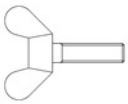
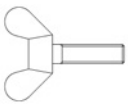
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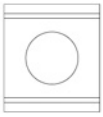
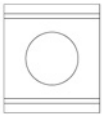
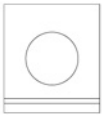
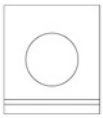
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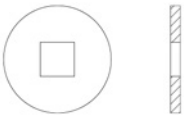
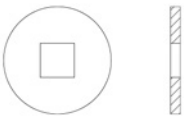
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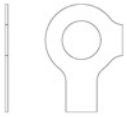
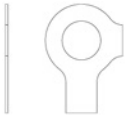
DIN - İçindekiler tablosu artan DIN numarasına göre
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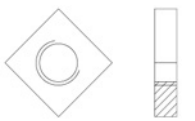
DIN - İçindekiler tablosu artan DIN numarasına göre
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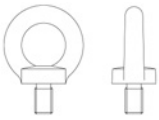
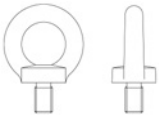
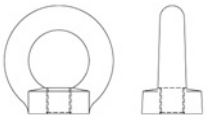
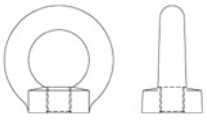
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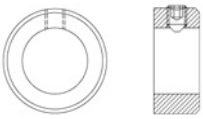
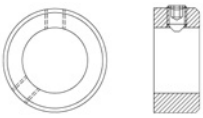
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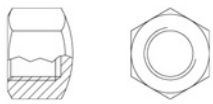
DIN - İçindekiler tablosu artan DIN numarasına göre
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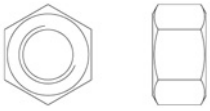
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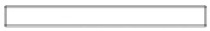
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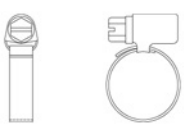
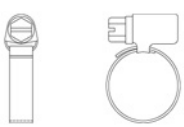
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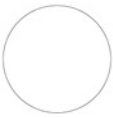
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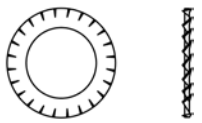
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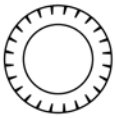
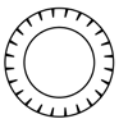
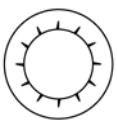
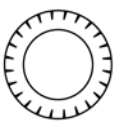
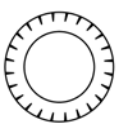
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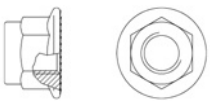
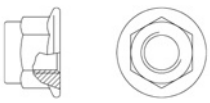
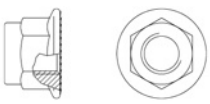
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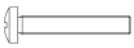
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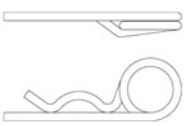
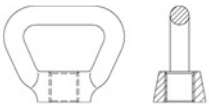
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	DIN 7982 A4	**DIN 7982 A4 PH** **Yıldız havşa başlı sac vidası, H Form** *DIN 7982 A4 PH* *Cross recessed countersunk head tapping screws*	527
	DIN 7982 A4	**DIN 7982 A4 PZ** **Yıldız havşa başlı sac vidası, Z Form** *DIN 7982 A4 PZ* *Cross recessed countersunk head tapping screws*	529
	DIN 7983 A2	**DIN 7983 A2 PH** **Yıldız mercimek başlı sac vidası, H Form** *DIN 7983 A2 PH* *Cross recessed raised countersunk tapping screws*	531
	DIN 7983 A2	**DIN 7983 A2 PZ** **Yıldız mercimek başlı sac vidası, Z Form** *DIN 7983 A2 PZ* *Cross recessed raised countersunk tapping screws*	533
	DIN 7983 A4	**DIN 7983 A4 PH** **Yıldız mercimek başlı sac vidası, H Form** *DIN 7983 A4 PH* *Cross recessed raised countersunk tapping screws*	535
	DIN 7983 A4	**DIN 7983 A4 PZ** **Yıldız mercimek başlı sac vidası, Z Form** *DIN 7983 A4 PZ* *Cross recessed raised countersunk tapping screws*	537
	DIN 7984 A2	**DIN 7984 A2** **Silindir başlı cıvatalar, allen, ince kafalı** *DIN 7984 A2* *Hexagon socket head cap screws with low head*	539
	DIN 7984 A4	**DIN 7984 A4** **Silindir başlı cıvatalar, allen, ince kafalı** *DIN 7984 A4* *Hexagon socket head cap screws with low head*	541

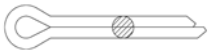
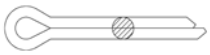
DIN - İçindekiler tablosu artan DIN numarasına göre
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İllüstrasyon *Picture*	Makale *Item*	Tanımlama *Description*	Sayfa *Page*
	DIN 7985 A2	**DIN 7985 A2 PH** **Yıldız mercimek başlı vidalar** *DIN 7985 A2 PH* *Cross recessed raised cheese head screws*	543
	DIN 7985 A2	**DIN 7985 A2 PZ** **Yıldız mercimek başlı vidalar** *DIN 7985 A2 PZ* *Cross recessed raised cheese head screws*	545
	DIN 7985 A4	**DIN 7985 A4 PH** **Yıldız mercimek başlı vidalar** *DIN 7985 A4 PH* *Cross recessed raised cheese head screws*	547
	DIN 7985 A4	**DIN 7985 A4 PZ** **Yıldız mercimek başlı vidalar** *DIN 7985 A4 PZ* *Cross recessed raised cheese head screws*	549
	DIN 7989-1 A2	**DIN 7989-1 A2** **çelik yapılar icin rondela** *DIN 7989-1 A2* *Washers for steel constructions*	551
	DIN 7989-1 A4	**DIN 7989-1 A4** **çelik yapılar icin rondela** *DIN 7989-1 A4* *Washers for steel constructions*	552
	DIN 7995 A2	**DIN 7995 A2 PZ** **Yıldız mercimek havşa başlı ağaç vidaları** *DIN 7995 A2 PZ* *Cross recessed raised countersunk head wood screws*	553
	DIN 7995 A2/Cu	**DIN 7995 A2 Cu PZ** **Yıldız mercimek havşa başlı ağaç vidaları** *DIN 7995 A2 Cu PZ* *Cross recessed raised countersunk head wood screws*	554
	DIN 7996 A2	**DIN 7996 A2 PZ** **Yıldız bombe başlı ağaç vidaları** *DIN 7996 A2 PZ* *Cross recessed round head wood screws*	555
	DIN 7996 A4	**DIN 7996 A4 PZ** **Yıldız bombe başlı ağaç vidaları** *DIN 7996 A4 PZ* *Cross recessed round head wood screws*	556
	DIN 7997 A2	**DIN 7997 A2 PZ** **Yıldız havşa başlı ağaç vidaları** *DIN 7997 A2 PZ* *Cross recessed countersunk head wood screws*	557

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İllüstrasyon *Picture*	Makale *Item*	Tanımlama *Description*	Sayfa *Page*
	DIN 9021 A2	**DIN 9021 A2** **Rondela dış çapı ≈ 3 x Vida dişi çapı** *DIN 9021 A2* *Washers with outside diameter ≈ 3x nominal thread diameter*	558
	DIN 9021 A4	**DIN 9021 A4** **Rondela dış çapı ≈ 3 x Vida dişi çapı** *DIN 9021 A4* *Washers with outside diameter ≈ 3x nominal thread diameter*	559
	DIN 9021 A5	**DIN 9021 1.4571** **Rondela dış çapı ≈ 3 x Vida dişi çapı** *DIN 9021 1.4571* *Washers with outside diameter ≈ 3x nominal thread diameter*	560
	DIN 9925 A1	**DIN 9925 1.4310** **Miller için yuvarlak telli yaylı halkalar** *DIN 9925 1.4310* *Round wire snap rings for shafts*	561
	DIN 9926 A1	**DIN 9926 1.4310** **Delikler için yuvarlak telli yaylı halkalar** *DIN 9926 1.4310* *Round wire snap rings for bores*	562
	DIN 11024 A4	**DIN 11024 A4** **Maşalı pim** *DIN 11024 A4* *Cotter pins with double ring*	563
	DIN 80701 A4	**DIN 80701 A4** **Mafsallı somunlar** *DIN 80701 A4* *Toggle nuts*	564
	DIN 80704 A4	**DIN 80704 A4** **Halkalı somunlar** *DIN 80704 A4* *Bow nuts*	565

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İllüstrasyon *Picture*	Makale *Item*	Tanımlama *Description*	Sayfa *Page*
	ISO 1234 A2	DIN 94 A2 çatal Pim(Kopilya) *ISO 1234 A2* *Split pins*	568
	ISO 1234 A4	DIN 94 A4 çatal Pim(Kopilya) *ISO 1234 A4* *Split pins*	569
	ISO 4014 A2	ISO 4014 A2 Altıköşe yarım dişli civata *ISO 4014 A2* *Hexagon head bolts*	570
	ISO 4014 A4	ISO 4014 A4-80 Altıköşe yarım dişli civata *ISO 4014 A4* *Hexagon head bolts*	571
	ISO 4014 A4-80	ISO 4014 A4-80 Altıköşe yarım dişli civata *ISO 4014 A4-80* *Hexagon head bolts*	572
	ISO 4017 A2	ISO 4017 A2 Altıköşe tam dişli civata *ISO 4017 A2* *Hexagon head screws*	573
	ISO 4017 A4	ISO 4017 A4 Altıköşe tam dişli civata *ISO 4017 A4* *Hexagon head screws*	574
	ISO 4017 A4-80	ISO 4017 A4-80 Altıköşe tam dişli civata *ISO 4017 A4-80* *Hexagon head screws*	575
	ISO 4017 1.4828	ISO 4017 1.4828 Altıköşe tam dişli civata *ISO 4017 1.4828* *Hexagon head screws*	576
	ISO 4026 A2	ISO 4026 A2 Yassı uçlu setiskur ayar vidası *ISO 4026 A2* *Hexagon socket set screws with flat point*	577
	ISO 4026 A4	ISO 4026 A4 Yassı uçlu setiskur ayar vidası *ISO 4026 A4* *Hexagon socket set screws with flat point*	578

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İllüstrasyon *Picture*	Makale *Item*	Tanımlama *Description*	Sayfa *Page*
	ISO 4027 A2	**ISO 4027 A2** **Konik uçlu setiskur ayar vidası** *ISO 4027 A2* *Hexagon socket set screws with cone point*	579
	ISO 4027 A4	**ISO 4027 A4** **Konik uçlu setiskur ayar vidası** *ISO 4027 A4* *Hexagon socket set screws with cone point*	580
	ISO 4028 A2	**DIN 915 A2** **Silindir uçlu setiskur ayar vidası** *ISO 4028 A2* *Hexagon socket set screws with dog point*	581
	ISO 4028 A4	**ISO 4028 A4** **Silindir uçlu setiskur ayar vidası** *ISO 4028 A4* *Hexagon socket set screws with dog point*	582
	ISO 4029 A2	**ISO 4029 A2** **Tas uçlu setiskur ayar vidası** *ISO 4029 A2* *Hexagon socket set screws with cup point*	583
	ISO 4029 A4	**ISO 4029 A4** **Tas uçlu setiskur ayar vidası** *ISO 4029 A4* *Hexagon socket set screws with cup point*	584
 	ISO 4032 A2	**ISO 4032 A2** **Altıköşe somun** *ISO 4032 A2* *Hexagon nuts*	585
 	ISO 4032 A2-80	**ISO 4032 A2-80** **Altıköşe somun** *ISO 4032 A2-80* *Hexagon nuts*	586
 	ISO 4032 A4	**ISO 4032 A4** **Altıköşe somun** *ISO 4032 A4* *Hexagon nuts*	587
 	ISO 4032 A4-80	**ISO 4032 A4-80** **Altıköşe somun** *ISO 4032 A4-80* *Hexagon nuts*	588
 	ISO 4035 A2	**ISO 4035 A2** **Altı köşeli somunlar, ince tip** *ISO 4035 A2* *Hexagon thin nuts*	589

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İllüstrasyon *Picture*	Makale *Item*	Tanımlama *Description*	Sayfa *Page*
	ISO 4035 A4	**ISO 4035 A4** **Altı köşeli somunlar, ince tip** *ISO 4035 A4* *Hexagon thin nuts*	590
	ISO 4762 A2	**ISO 4762 A2** **Imbus Civata yarim disli** *ISO 4762 A2* *Hexagon socket head cap screws, partial thread*	591
	ISO 4762 A2	**ISO 4762 A2** **Imbus Civata tam dişli** *ISO 4762 A2* *Hexagon socket head cap screws, fullthread*	592
	ISO 4762 A2	**ISO 4762 A2** **Imbus Civata tam diş, SVZ** *ISO 4762 A2* *Hexagon socket head cap screws with serration*	593
	ISO 4762 A4	**ISO 4762 A4** **Imbus Civata kısmi iplik** *ISO 4762 A4* *Hexagon socket head cap screws, partial thread*	594
	ISO 4762 A4	**ISO 4762 A4** **Imbus Civata tam diş** *ISO 4762 A4* *Hexagon socket head cap screws, fullthread*	595
	ISO 4762 A4-80	**ISO 4762 A4-80** **Imbus Civata kısmi iplik** *ISO 4762 A4-80* *Hexagon socket head cap screws, partial thread*	596
	ISO 4762 A4-80	**ISO 4762 A4-80** **Imbus Civata tam diş** *ISO 4762 A4-80* *Hexagon socket head cap screws, fullthread*	597
	ISO 4762 A5	**ISO 4762 1.4571** **Imbus Civata** *ISO 4762 1.4571* *Hexagon socket head cap screws*	598
	ISO 4762 1.4828	**ISO 4762 1.4828** **Imbus Civata** *ISO 4762 1.4828* *Hexagon socket head cap screws*	599
	ISO 7089 A2	**ISO 7089 A2** **Düz pullar, normal seri, 200 HV** *ISO 7089 A2* *Plain washers, normal series, 200 HV*	600

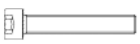
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İllüstrasyon *Picture*	Makale *Item*	Tanımlama *Description*	Sayfa *Page*
	ISO 7089 A4	**ISO 7089 A4** **Düz pullar, normal seri, 200 HV** *ISO 7089 A4* *Plain washers, normal series, 200 HV*	601
	ISO 7090 A2	**ISO 7090 A2** **Pahlı düz pullar, normal seri, 200 HV** *ISO 7090 A2* *Plain washers with chamfered, normal series, 200 HV*	602
	ISO 7090 A4	**ISO 7090 A4** **Pahlı düz pullar, normal seri, 200 HV** *ISO 7090 A4* *Plain washers with chamfered, normal series, 200 HV*	603
	ISO 7092 A2	**ISO 7092 A2** **Plain washers, small series, 200 HV** *ISO 7092 A2* *Plain washers, small series, 200 HV*	604
	ISO 7092 A4	**ISO 7092 A4** **Plain washers, small series, 200 HV** *ISO 7092 A4* *Plain washers, small series, 200 HV*	605
	ISO 7093-1 A2	**ISO 7093-1 A2** **Düz pullar, büyük seri, 200 HV** *ISO 7093-1 A2* *Plain washers, large series, 200 HV*	606
	ISO 7093-1 A4	**ISO 7093-1 A4** **Düz pullar, büyük seri, 200 HV** *ISO 7093-1 A4* *Plain washers, large series, 200 HV*	607
	ISO 7380-1 A2	**ISO 7380-1 A2** **Bombe başlı inbus civata** *ISO 7380-1 A2* *Hexagon socket button head screws with fullthread*	608
	ISO 7380-1 A2	**ISO 7380-1 A2 TX** **Bombe başlı torks inbus civata** *ISO 7380-1 A2 TX* *Button head screws with six lobe drive with fullthread*	609
	ISO 7380-1 A4	**ISO 7380-1 A4** **Bombe başlı inbus civata** *ISO 7380-1 A4* *Hexagon socket button head screws with fullthread*	610
	ISO 7380-1 A4	**ISO 7380-1 A2 TX** **Bombe başlı torks inbus civata** *ISO 7380-1 A4 TX* *Button head screws with six lobe drive with fullthread*	611

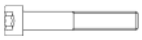
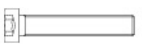
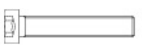
ISO - İçindekiler tablosu artan ISO numarasına göre
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İllüstrasyon *Picture*	Makale *Item*	Tanımlama *Description*	Sayfa *Page*
 	ISO 7380-2 A2	**ISO 7380-2 A2 başlı flanşlı** **Bombe başlı flanşlı inbus civata** *ISO 7380-2 A2 with flange* *Hexagon socket button head screw flange with fullthread*	612
 	ISO 7380-2 A2	**ISO 7380-2 A2 başlı flanşlı torks** **Bombe başlı flanşlı torks inbus civata** *ISO 7380-2 A2 with flange TX* *Button head screws TX-drive flange with fullthread*	613
 	ISO 7380-2 A4	**ISO 7380-2 A4 başlı flanşlı torks** **Bombe başlı flanşlı torks inbus civata** *ISO 7380-2 A4 with flange TX* *Button head screws TX-drive flange with fullthread*	614
 	ISO 7380-2 A4	**ISO 7380-2 A4 başlı flanşlı** **Bombe başlı flanşlı inbus civata** *ISO 7380-2 A4 with flange* *Hexagon socket button head screw flange with fullthread*	615
 	ISO 8673 A2	**ISO 8673 A2** **Altiköse somun** *ISO 8673 A2* *Hexagon nuts with fine pitch thread*	616
 	ISO 8673 A4	**ISO 8673 A4** **Altiköse somun** *ISO 8673 A4* *Hexagon nuts with fine pitch thread*	617
 	ISO 8675 A2	**ISO 8675 A2** **İnce dişli, altı köşeli somunlar, ince disli** *ISO 8675 A2* *Hexagon thin nuts with fine pitch thread*	618
 	ISO 8675 A4	**ISO 8675 A4** **İnce dişli, altı köşeli somunlar, ince disli** *ISO 8675 A4* *Hexagon thin nuts with fine pitch thread*	619
 	ISO 8733 A1	**ISO 8733 1.4305** **İçten vida dişli silindir pimler** *ISO 8733 1.4305* *Parallel pins with internal thread*	620
 	ISO 8750	**ISO 8750 1.4310** **Yay tipi düz pimler** *ISO 8750 1.4310* *Spiral type straight pins*	621
 	ISO 8752	**ISO 8752 1.4310** **Germe pimleri, yarıklı, ağır hizmet tipi** *ISO 8752 1.4310* *Slotted spring dowel pins, heavy type*	622

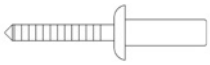
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İllüstrasyon *Picture*	Makale *Item*	Tanımlama *Description*	Sayfa *Page*
 	ISO 10511 A2	**ISO 10511 A2** **Fiberli tip sikmali altiköse somun** *ISO 10511 A2* *Self-locking hexagon nuts, low type*	623
 	ISO 10511 A4	**ISO 10511 A4** **Fiberli tip sikmali altiköse somun** *ISO 10511 A4* *Self-locking hexagon nuts, low type*	624
 	ISO 10642 A2	**ISO 10642 A2** **Havşa başlı allen ve tam dişli cıvatalar** *ISO 10642 A2* *Hexagon socket countersunk head screws with fullthread*	625
 	ISO 10642 A2	**ISO 10642 A2 TX** **Havşa başlı allen cıvatalar** *ISO 10642 A2 TX* *Countersunk head screws six lobe drive with fullthread*	626
 	ISO 10642 A4	**ISO 10642 A4** **Havşa başlı allen ve tam dişli cıvatalar** *ISO 10642 A4* *Hexagon socket countersunk head screws with fullthread*	627
 	ISO 10642 A4	**ISO 10642 A4 TX** **Havşa başlı allen cıvatalar** *ISO 10642 A4 TX* *Countersunk head screws six lobe drive with fullthread*	628
 	ISO 13918 PT A2	**ISO 13918 A2** **Dıştan dişli kaynak saplamaları, tip PT** *ISO 13918 A2* *Welding bolts, type PT*	629
 	ISO 14579 A2	**ISO 14579 A2 TX VG** **Silindir başlı torks cıvatalar** *ISO 14579 A2 TX VG* *Socket head cap screws with six lobe drive*	630
 	ISO 14579 A2	**ISO 14579 A2 TX TG** **Silindir başlı torks cıvatalar** *ISO 14579 A2 TX TG* *Socket head cap screws with six lobe drive*	631
 	ISO 14579 A2	**ISO 14579 A2 TX VG** **Silindir başlı cıvatalar, torks, tırtıllı** *ISO 14579 A2 TX VG* *Socket head cap screws serration six lobe drive*	632
 	ISO 14579 A2	**ISO 14579 A2 TX** **Silindir başlı ve flanşlı torks cıvatalar** *ISO 14579 A2 TX* *Socket head cap screws with six lobe drive flange*	633

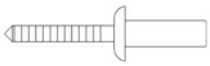
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	ISO 14579 A4	**ISO 14579 A4 TX TG** **Silindir başlı torks cıvatalar** *ISO 14579 A4 TX TG* *Socket head cap screws with six lobe drive*	634
	ISO 14579 A4	**ISO 14579 A4 TX VG** **Silindir başlı torks cıvatalar** *ISO 14579 A4 TX VG* *Socket head cap screws with six lobe drive*	635
	ISO 14580 A2	**ISO 14580 A2** **Silindir başlı cıvatalar, torks, ince kafalı** *ISO 14580 A2 TX* *Hexalobular socket cheese head screws*	636
	ISO 14580 A4	**ISO 14580 A4** **Silindir başlı cıvatalar, torks, ince kafalı** *ISO 14580 A4 TX* *Hexalobular socket cheese head screws*	637
	ISO 14581 A2	**ISO 14581 A2** **Havşa başlı torks vida** *ISO 14581 A2 TX* *Countersunk head screws with six lobe drive*	638
	ISO 14581 A4	**ISO 14581 A4** **Havşa başlı torks vida** *ISO 14581 A4 TX* *Countersunk head screws with six lobe drive*	639
	ISO 14583 A2	**ISO 14583 A2** **Torkslu, mercimek başlı vidalar** *ISO 14583 A2 TX* *Raised cheese head screws with six lobe drive*	640
	ISO 14583 A4	**ISO 14583 A4** **Torkslu, mercimek başlı vidalar** *ISO 14583 A4 TX* *Raised cheese head screws with six lobe drive*	641
	ISO 14584 A2	**ISO 14584 A2** **Yıldız mercimek başlı torks vida** *ISO 14584 A2 TX* *Raised countersunk head screws with six lobe drive*	642
	ISO 14584 A4	**ISO 14584 A4** **Yıldız mercimek başlı torks vida** *ISO 14584 A4* *Raised countersunk head screws with six lobe drive*	643
	ISO 14585 A2	**ISO 14585 A2** **Silindir başlı torks anahtarlı sac vidası** *ISO 14585 A2 TX* *Pan head tapping screws with six lobe drive*	644

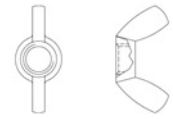
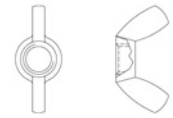
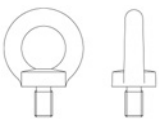
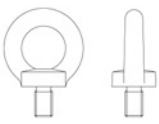
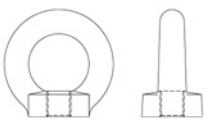
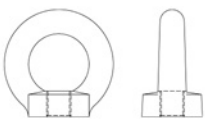
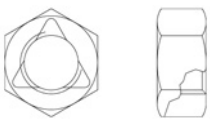
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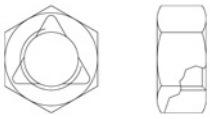
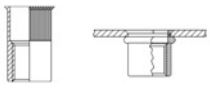
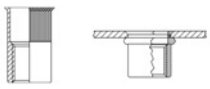
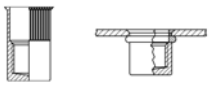
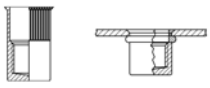
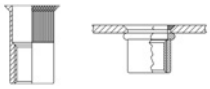
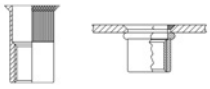
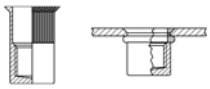
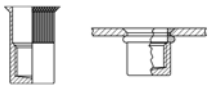
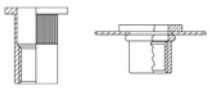
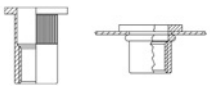
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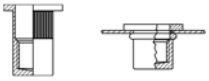
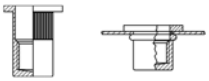
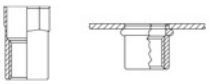
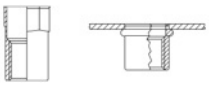
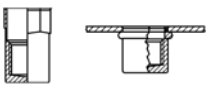
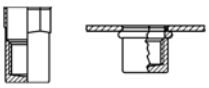
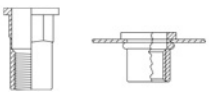
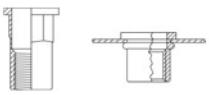
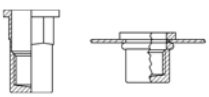
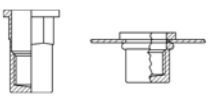
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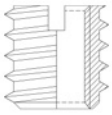
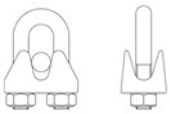
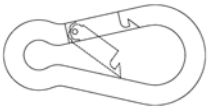
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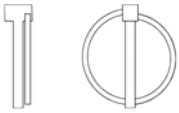
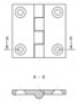
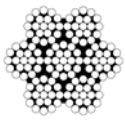
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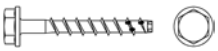
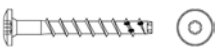
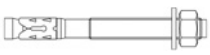
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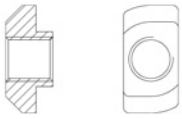
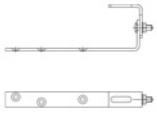
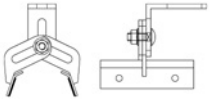
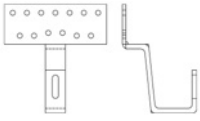
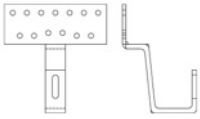
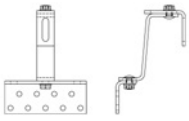
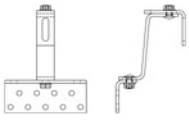
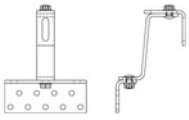
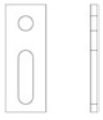
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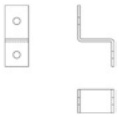
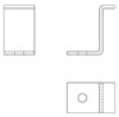
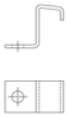
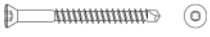
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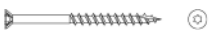
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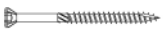
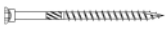
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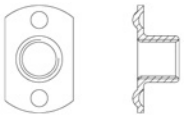
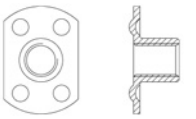
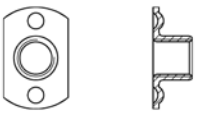
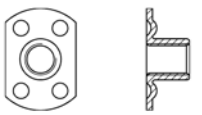
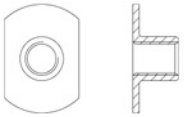
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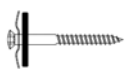
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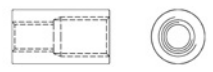
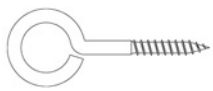
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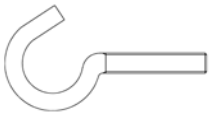
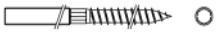
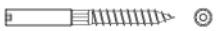
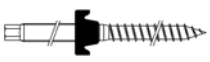
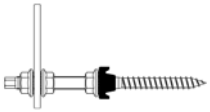
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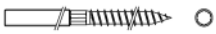
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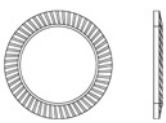
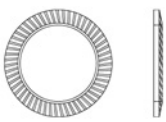
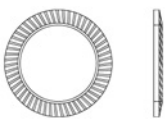
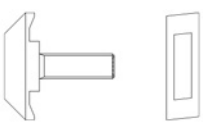
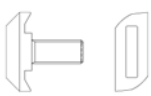
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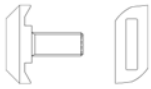
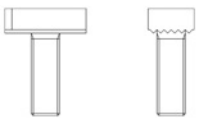
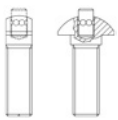
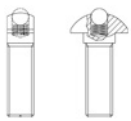
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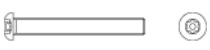
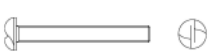
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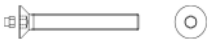
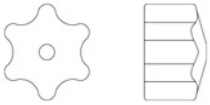
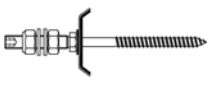
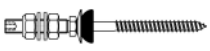
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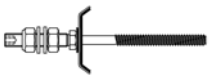
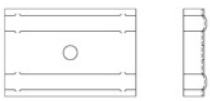
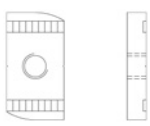
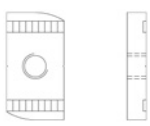
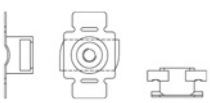
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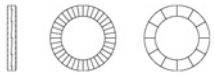
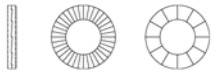
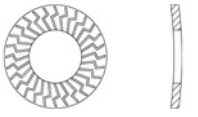
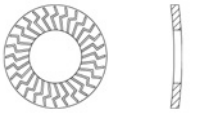
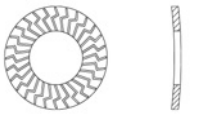
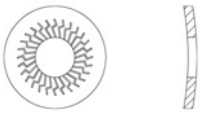
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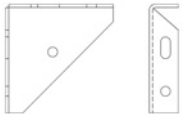
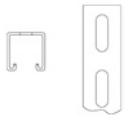
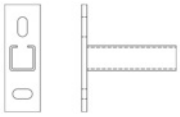
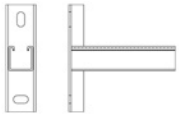
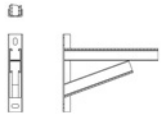
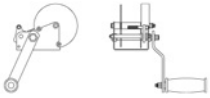
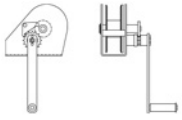
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	**Art. 9504 BI-Metal A2**	**Ürün 9504 SP-B2-2-6,0** **Bimetal matkap uçlu vida** *Item 9504 SP-B2-2-6,0* *BI-Metal-Self drilling screws*	1013
	**Art. 9504 BI-Metal A2**	**Ürün 9504 SP-B2-2H-5,5** **Bimetal matkap uçlu vida** *Item 9504 SP-B2-2H-5,5* *BI-Metal-Self drilling screws*	1014
	**Art. 9504 BI-Metal A2**	**Ürün 9504 SP-B2-2-4,8** **Bimetal matkap uçlu vida** *Item 9504 SP-B2-2-4,8* *BI-Metal-Self drilling screws*	1015
	**Art. 9504 BI-Metal A2**	**Ürün 9504 SP-B2-12-5,5** **Bimetal matkap uçlu vida** *Item 9504 SP-B2-12-5,5* *BI-Metal-Self drilling screws*	1016
	**Art. 9504 BI-Metal A2**	**Ürün 9504 SP-B2-3-5,5** **Bimetal matkap uçlu vida** *Item 9504 SP-B2-3-5,5* *BI-Metal-Self drilling screws*	1017
	**Art. 9504 BI-Metal A2**	**Ürün 9504 SP-B2-6-5,5** **Bimetal matkap uçlu vida** *Item 9504 SP-B2-6-5,5* *BI-Metal-Self drilling screws*	1018
	**Art. 9504 BI-Metal A2**	**Ürün 9504 SP-B2-2-6,3** **Bimetal matkap uçlu vida** *Item 9504 SP-B2-2-6,3* *BI-Metal-Self drilling screws*	1019
	**Art. 9504 BI-Metal A2**	**Ürün 9504 SP-B2-6-6,3** **Bimetal matkap uçlu vida** *Item 9504 SP-B2-6-6,3* *BI-Metal-Self drilling screws*	1020
	**Art. 9504 BI-Metal A2**	**Art. 9504 SP-B2-2-6,5** **Bimetal matkap uçlu vida** *Item 9504 SP-B2-2-6,5* *BI-Metal-Self drilling screws*	1021
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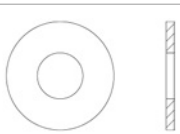
ART - İçindekiler tablosu artan ART numarasına göre
ART - directory ascending to ART number

İllüstrasyon *Picture*	Makale *Item*	Tanımlama *Description*	Sayfa *Page*
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	**Art. 9505 BI-Metal A2**	**Ürün 9505 A2** **Sızdırmazlık rondelalı BI-Metal ince sac vidaları** *Item 9505 A2* *BI-Metal thin sheet screw with washer*	1025
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	**Art. 9510 BI-Metal A2**	**Ürün 9510 B2-4-4,8** **Havşa başlı bimetal kanatlı matkap uçlu vidalar** *Item 9510 SP-B2-4-4,8* *BI-Metal countersunk wing drilling screws*	1031
	**Art. 9510 BI-Metal A2**	**Ürün 9510 B2-6-5,5** **Havşa başlı bimetal kanatlı matkap uçlu vidalar** *Item 9510 SP-B2-6-5,5* *BI-Metal countersunk wing drilling screws*	1032
	**Art. 9510 BI-Metal A2**	**Ürün 9510 B2-12-5,5** **Havşa başlı bimetal kanatlı matkap uçlu vidalar** *Item 9510 SP-B2-12-5,5* *BI-Metal countersunk wing drilling screws*	1033

ART - İçindekiler tablosu artan ART numarasına göre
ART - directory ascending to ART number

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	**Art. 9550 A2**	**Ürün 9550 A2** **Montaj profili, delikli tip 28/28** *Item 9550 A2* *Mounting profile type 28/28*	1035
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	**Art. 9551 A4**	**Ürün 9551 A4** **Profil tablası** *Item 9551 A4* *Profile base*	1037
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ART - İçindekiler tablosu artan ART numarasına göre
ART - directory ascending to ART number

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	NF E 25-511 S A2	**NFE 25-511 A2** **AFNOR kontak rondelaları, Tip S** *NF E 25-511 A2* *AFNOR serrated conical spring washers type S*	1047
	NF E 25-511 L A4	**NFE 25-511 A4** **AFNOR kontak rondelaları, Tip L** *NF E 25-511 A4* *AFNOR serrated conical spring washers type L*	1048
	NF E 25-511 M A4	**NFE 25-511 A4** **AFNOR kontak rondelaları, Tip M** *NF E 25-511 A4* *AFNOR serrated conical spring washers type M*	1049
	NF E 25-511 S A4	**NFE 25-511 A4** **AFNOR kontak rondelaları, Tip S** *NF E 25-511 A4* *AFNOR serrated conical spring washers type S*	1050
	NF E 25-513 LL A2	**NFE 25-513 A2** **AFNOR diskleri, LL şekli** *NF E 25-513 A2* *AFNOR washers type LL*	1051
	NF E 25-513 M A2	**NFE 25-513 A2** **AFNOR diskleri Form M** *NF E 25-513 A2* *AFNOR washers type M*	1052
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ART - İçindekiler tablosu artan ART numarasına göre
ART - directory ascending to ART number

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	NF E 27-128 A4	**NF E 27-128 A4** **Geniş çaplı ve düz yarıklı düz yuvarlak başlı vidalar** *NF E 27-128 A4* *Slotted mushroom head screws*	1064
	NF E 27-619 A2	**NF E 27-619 A2** **Tas rondelalar, zımbalı** *NF E 27-619 A2* *Stamped cup washers*	1065
	NF E 27-619	**NF E 27-619 A4** **Tas rondelalar, zımbalı** *NF E 27-619 A4* *Stamped cup washers*	1066

ART - İçindekiler tablosu artan ART numarasına göre
ART - directory ascending to ART number

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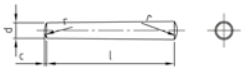
Competence in Stainless Steel

DIN MAKALELERI
DIN ARTICLES

DIN 1
A1

Alt. Norm tarafından değiştirildi ISO 2339





- *type B*

DIN 1 1.4305
Tip B konik pimler, tolerans alanı h10

DIN 1 1.4305
Taper pins type B, Tolerance h10

d	
	Ürün no./*Item no.*

200	200	200	200	100	100
0.15	0.23	0.3	0.4	0.45	0.6
1	1.5	2	2.5	3	4

DIN 1 1.4305
Tip B konik pimler, tolerans alanı h10

DIN 1 1.4305
Taper pins type B, Tolerance h10

DIN 1
A1

Alt. Norm tarafından değiştirildi ISO 2339

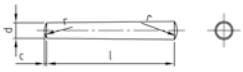
5	6	8	10
Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
000125 16			
000125 20	000126 20		
000125 22			
000125 24	000126 24		
	000126 25		
000125 26	000126 26		
000125 28	000126 28	000128 28	
000125 30	000126 30	000128 30	0001210 30
000125 32	000126 32	000128 32	0001210 32
000125 36	000126 36	000128 36	0001210 36
000125 40	000126 40	000128 40	0001210 40
000125 45	000126 45	000128 45	0001210 45
000125 50	000126 50	000128 50	0001210 50
000125 55	000126 55	000128 55	0001210 55
000125 60	000126 60	000128 60	0001210 60
000125 70	000126 70	000128 70	0001210 70
	000126 80	000128 80	0001210 80
		000128 90	0001210 90
	000126 100	000128 100	0001210 100
		000128 120	

100	100	50	25
0.75	0.9	1.2	1.5
5	6	8	10

DIN 1
A5

Alt. Norm tarafından değiştirildi ISO 2339





- type B

DIN 1 1.4571
Tip B konik pimler, tolerans alanı h10

DIN 1 1.4571
Taper pins type B, Tolerance h10

d					
	Ürün no./*Item no.*				
200	200	200	200	100	100
0.15	0.23	0.3	0.4	0.45	0.6
1	15	2	2.5	3	4

DIN 1 1.4571
Tip B konik pimler, tolerans alanı h10

DIN 1 1.4571
Taper pins type B, Tolerance h10

DIN 1
A5

Alt. Norm tarafından değiştirildi ISO 2339

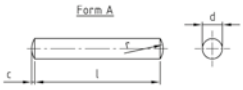
5	6	8	10
Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
000145 16			
000145 20	000146 20		
000145 22			
000145 24	000146 24		
	000146 25		
000145 26	000146 26		
000145 28	000146 28	000148 28	
000145 30	000146 30	000148 30	0001410 30
000145 32	000146 32	000148 32	0001410 32
000145 36	000146 36	000148 36	0001410 36
000145 40	000146 40	000148 40	0001410 40
000145 45	000146 45	000148 45	0001410 45
000145 50	000146 50	000148 50	0001410 50
000145 55	000146 55	000148 55	0001410 55
000145 60	000146 60	000148 60	0001410 60
000145 70	000146 70	000148 70	0001410 70
	000146 80	000148 80	0001410 80
		000148 90	0001410 90
	000146 100	000148 100	0001410 100
		000148 120	

100	100	50 ≥120: box = 25	25
0.75	0.9	1.2	1.5
5	6	8	10

DIN 7
A1

Alt. Norm tarafından değiştirildi ISO 2338





- type A

DIN 7 1.4305
Tip A paralel Pimler, tolerans alanı

DIN 7 1.4305
Parallel pins type A, Tolerance m6

d	
	Ürün no./*Item no.*

500	500	500	500	500	200 ≥65: box = 500
0.13	0.15	0.23	0.3	0.4	0.45
0.8	1	1.5	2	2.5	3

DIN 7 1.4305
Tip A paralel Pimler, tolerans alanı

DIN 7 1.4305
Parallel pins type A, Tolerance m6

DIN 7
A1

Alt. Norm tarafından değiştirildi ISO 2338

4	5	6	8	10	12
Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
000724 5	000725 5				
000724 6	000725 6	000726 6			
000724 8	000725 8	000726 8	000728 8		
000724 10	000725 10	000726 10	000728 10	0007210 10	0007212 10
000724 12	000725 12	000726 12	000728 12	0007210 12	0007212 12
000724 14	000725 14	000726 14	000728 14	0007210 14	0007212 14
000724 16	000725 16	000726 16	000728 16	0007210 16	0007212 16
000724 18	000725 18	000726 18	000728 18	0007210 18	0007212 18
000724 20	000725 20	000726 20	000728 20	0007210 20	0007212 20
000724 24	000725 24	000726 24	000728 24	0007210 24	0007212 24
000724 28	000725 28	000726 28	000728 28	0007210 28	0007212 28
000724 30	000725 30	000726 30	000728 30	0007210 30	0007212 30
000724 32	000725 32	000726 32	000728 32	0007210 32	0007212 32
000724 36	000725 36	000726 36	000728 36	0007210 36	0007212 36
000724 40	000725 40	000726 40	000728 40	0007210 40	0007212 40
	000725 45	000726 45	000728 45	0007210 45	0007212 45
000724 50	000725 50	000726 50	000728 50	0007210 50	0007212 50
		000726 55	000728 55	0007210 55	0007212 55
000724 60	000725 60	000726 60	000728 60	0007210 60	0007212 60
		000726 70	000728 70	0007210 70	0007212 70
		000726 80	000728 80	0007210 80	0007212 80
		000726 90	000728 90	0007210 90	0007212 90
				0007210 100	0007212 100

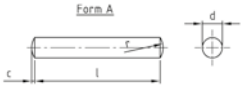
Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

200	100	100	100	50	25
0.6	0.75	0.9	1.2	1.5	1.8
4	5	6	8	10	12

DIN 7
A1

Alt. Norm tarafından değiştirildi ISO 2338





- type A

DIN 7 1.4305
Tip A paralel Pimler, tolerans alanı

DIN 7 1.4305
Parallel pins type A, Tolerance m6

	14	16	20
	Réf./Item no.	Réf./Item no.	Réf./Item no.
	0007214 16	0007216 16	
	0007214 18	0007216 18	
	0007214 20	0007216 20	0007220 20
	0007214 24	0007216 24	0007220 24
	0007214 28	0007216 28	0007220 28
	0007214 30	0007216 30	0007220 30
	0007214 32	0007216 32	0007220 32
	0007214 36	0007216 36	0007220 36
	0007214 40	0007216 40	0007220 40
	0007214 45	0007216 45	0007220 45
	0007214 50	0007216 50	0007220 50
	0007214 55	0007216 55	0007220 55
	0007214 60	0007216 60	0007220 60
d	0007214 70	0007216 70	0007220 70
	0007214 80	0007216 80	0007220 80
	0007214 90	0007216 90	0007220 90
	0007214 100	0007216 100	0007220 100

25	25	10
2	2.5	3
14	16	20

DIN 7 A4
Tip A paralel Pimler, tolerans alanı

DIN 7 A4
Parallel pins type A, Tolerance m6

DIN 7
A4

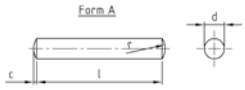
Alt. Norm tarafından değiştirildi ISO 2338

d	
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*



500	500	500	500	500	200 ≥65: box = 500
0.13	0.15	0.23	0.3	0.4	0.45
0.8	1	1.5	2	2.5	3



- type A

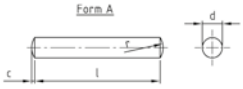
DIN 7
A4

Alt. Norm tarafından değiştirildi ISO 2338

DIN 7 A4
Tip A paralel Pimler, tolerans alanı

DIN 7 A4
Parallel pins type A, Tolerance m6





- type A

d	4	5	6	8	10	12
	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
	000744 5	000745 5				
	000744 6	000745 6	000746 6			
	000744 8	000745 8	000746 8	000748 8		
	000744 10	000745 10	000746 10	000748 10	0007410 10	0007412 10
	000744 12	000745 12	000746 12	000748 12	0007410 12	0007412 12
	000744 14	000745 14	000746 14	000748 14	0007410 14	0007412 14
	000744 16	000745 16	000746 16	000748 16	0007410 16	0007412 16
	000744 18	000745 18	000746 18	000748 18	0007410 18	0007412 18
	000744 20	000745 20	000746 20	000748 20	0007410 20	0007412 20
	000744 24	000745 24	000746 24	000748 24	0007410 24	0007412 24
	000744 28	000745 28	000746 28	000748 28	0007410 28	0007412 28
	000744 30	000745 30	000746 30	000748 30	0007410 30	0007412 30
	000744 32	000745 32	000746 32	000748 32	0007410 32	0007412 32
	000744 36	000745 36	000746 36	000748 36	0007410 36	0007412 36
	000744 40	000745 40	000746 40	000748 40	0007410 40	0007412 40
		000745 45	000746 45	000748 45	0007410 45	0007412 45
	000744 50	000745 50	000746 50	000748 50	0007410 50	0007412 50
			000746 55	000748 55	0007410 55	0007412 55
	000744 60	000745 60	000746 60	000748 60	0007410 60	0007412 60
			000746 70	000748 70	0007410 70	0007412 70
			000746 80	000748 80	0007410 80	0007412 80
			000746 90	000748 90	0007410 90	0007412 90
					0007410 100	0007412 100
	200	100	100	100	50	25
	0.6	0.75	0.9	1.2	1.5	1.8
	4	5	6	8	10	12

DIN 7 A4
Tip A paralel Pimler, tolerans alanı

DIN 7 A4
Parallel pins type A, Tolerance m6

DIN 7
A4

Alt. Norm tarafından değiştirildi ISO 2338

14	16	20
Réf./Item no.	Réf./Item no.	Réf./Item no.
0007414 16	0007416 16	
0007414 18	0007416 18	
0007414 20	0007416 20	0007420 20
0007414 24	0007416 24	0007420 24
0007414 28	0007416 28	0007420 28
0007414 30	0007416 30	0007420 30
0007414 32	0007416 32	0007420 32
0007414 36	0007416 36	0007420 36
0007414 40	0007416 40	0007420 40
0007414 45	0007416 45	0007420 45
0007414 50	0007416 50	0007420 50
0007414 55	0007416 55	0007420 55
0007414 60	0007416 60	0007420 60
0007414 70	0007416 70	0007420 70
0007414 80	0007416 80	0007420 80
0007414 90	0007416 90	0007420 90
0007414 100	0007416 100	0007420 100

25	25	10
2	2.5	3
14	16	20

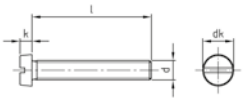
DIN 84
A2

Alt. Norm tarafından değiştirildi ISO 1207

DIN 84 A2
Düz yarıklı silindir başlı cıvatalar

DIN 84 A2
Slotted cheese head screws





d	M
	Ürün no./*Item no.*

1000	1000	1000	1000	1000	1000 ≥22: box = 500
2	2.3	2.6	3	3.4	3.8
0.7	0.8	0.9	1	1.2	1.3

DIN 84 A2
Düz yarıklı silindir başlı cıvatalar

DIN 84 A2
Slotted cheese head screws

DIN 84
A2

Alt. Norm tarafından değiştirildi ISO 1207

M 2,3	M 2,5	M 2,6	M 3	M 3,5	M 4
Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
0084223 3	0084225 3	0084226 3	008423 3		
0084223 4	0084225 4	0084226 4	008423 4	0084235 4	008424 4
0084223 5	0084225 5	0084226 5	008423 5	0084235 5	008424 5
0084223 6	0084225 6	0084226 6	008423 6	0084235 6	008424 6
0084223 8	0084225 8	0084226 8	008423 8	0084235 8	008424 8
0084223 10	0084225 10	0084226 10	008423 10	0084235 10	008424 10
0084223 12	0084225 12	0084226 12	008423 12	0084235 12	008424 12
0084223 14	0084225 14		008423 14	0084235 14	008424 14
0084223 16	0084225 16	0084226 16	008423 16	0084235 16	008424 16
0084223 18	0084225 18		008423 18	0084235 18	008424 18
0084223 20	0084225 20	0084226 20	008423 20	0084235 20	008424 20
0084223 22	0084225 22		008423 22	0084235 22	008424 22
	0084225 25		008423 25	0084235 25	008424 25
	0084225 28		008423 28	0084235 28	008424 28
	0084225 30		008423 30	0084235 30	008424 30
	0084225 35		008423 35	0084235 35	008424 35
			008423 40	0084235 40	008424 40
			008423 45	0084235 45	008424 45
			008423 50	0084235 50	008424 50
			008423 55	0084235 55	008424 55
			008423 60	0084235 60	008424 60
					008424 65
					008424 70
					008424 75
					008424 80
					008424 85
					008424 90
					008424 100

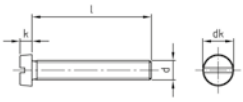
Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

1000	1000 ≥20: box = 500	1000	500 ≥45: box = 200	500 ≥45: box = 200	500 ≥65: box = 200
4.4	4.5	5	5.5	6	7
1.5	1.6	1.7	2	2.4	2.6

DIN 84
A2

Alt. Norm tarafından değiştirildi ISO 1207





DIN 84 A2
Düz yarıklı silindir başlı cıvatalar

DIN 84 A2
Slotted cheese head screws

	M 5	M 6	M 8	M 10
	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
	008425 6	008426 6		
	008425 8	008426 8		
	008425 10	008426 10	008428 10	
	008425 12	008426 12	008428 12	
	008425 14	008426 14		
	008425 16	008426 16	008428 16	0084210 16
	008425 18	008426 18	008428 18	
	008425 20	008426 20	008428 20	0084210 20
	008425 22	008426 22		
	008425 25	008426 25	008428 25	0084210 25
	008425 28	008426 28		
	008425 30	008426 30	008428 30	0084210 30
	008425 35	008426 35	008428 35	0084210 35
	008425 40	008426 40	008428 40	0084210 40
	008425 45	008426 45	008428 45	0084210 45
	008425 50	008426 50	008428 50	0084210 50
	008425 55	008426 55		
	008425 60	008426 60	008428 60	0084210 60
	008425 65	008426 65		
	008425 70	008426 70	008428 70	0084210 70
	008425 75	008426 75		
	008425 80	008426 80	008428 80	0084210 80
	008425 85	008426 85		
	008425 90	008426 90	008428 90	0084210 90
	008425 95			
	008425 100	008426 100	008428 100	0084210 100
d		008426 110		
	008425 120	008426 120		
		008426 130		
		008426 140		

500 ≥45: box = 200	500 ≥22: box = 200	200 ≥60: box = 100	100 ≥70: box = 50
8.5	10	13	16
3.3	3.9	5	6

DIN 84 A4
Düz yarıklı silindir başlı cıvatalar

DIN 84 A4
Slotted cheese head screws

DIN 84
A4

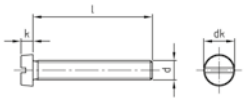
Alt. Norm tarafından değiştirildi ISO 1207



d	M
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

1000	1000	1000	1000	1000	1000 ≥22: box = 500
2	2.3	2.6	3	3.4	3.8
0.7	0.8	0.9	1	1.2	1.3



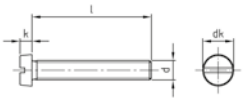
DIN 84
A4

Alt. Norm tarafından değiştirildi ISO 1207

DIN 84 A4
Düz yarıklı silindir başlı cıvatalar

DIN 84 A4
Slotted cheese head screws





d	M 2,3	M 2,5	M 2,6	M 3	M 3,5	M 4
	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
	0084423 3	0084425 3	0084426 3	008443 3		
	0084423 4	0084425 4	0084426 4	008443 4	0084435 4	008444 4
	0084423 5	0084425 5	0084426 5	008443 5	0084435 5	008444 5
	0084423 6	0084425 6	0084426 6	008443 6	0084435 6	008444 6
	0084423 8	0084425 8	0084426 8	008443 8	0084435 8	008444 8
	0084423 10	0084425 10	0084426 10	008443 10	0084435 10	008444 10
	0084423 12	0084425 12	0084426 12	008443 12	0084435 12	008444 12
	0084423 14	0084425 14		008443 14	0084435 14	008444 14
	0084423 16	0084425 16	0084426 16	008443 16	0084435 16	008444 16
	0084423 18	0084425 18		008443 18	0084435 18	008444 18
	0084423 20	0084425 20	0084426 20	008443 20	0084435 20	008444 20
	0084423 22	0084425 22		008443 22	0084435 22	008444 22
		0084425 25		008443 25	0084435 25	008444 25
		0084425 28		008443 28	0084435 28	008444 28
		0084425 30		008443 30	0084435 30	008444 30
		0084425 35		008443 35	0084435 35	008444 35
				008443 40	0084435 40	008444 40
				008443 45	0084435 45	008444 45
				008443 50	0084435 50	008444 50
				008443 55	0084435 55	008444 55
				008443 60	0084435 60	008444 60
						008444 65
						008444 70
						008444 75
						008444 80
						008444 85
						008444 90
						008444 100

1000	1000 ≥22: box = 500	1000	500 ≥45: box = 200	500 ≥45: box = 200	500 ≥65: box = 200
4.4	4.5	5	5.5	6	7
1.5	1.6	1.7	2	2.4	2.6

DIN 84 A4
Düz yarıklı silindir başlı cıvatalar

DIN 84 A4
Slotted cheese head screws

DIN 84
A4

Alt. Norm
tarafından değiştirildi ISO
1207

M 5	M 6	M 8	M 10
Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
008445 6	008446 6		
008445 8	008446 8		
008445 10	008446 10	008448 10	
008445 12	008446 12	008448 12	
008445 14	008446 14		
008445 16	008446 16	008448 16	0084410 16
008445 18	008446 18	008448 18	
008445 20	008446 20	008448 20	0084410 20
008445 22	008446 22		
008445 25	008446 25	008448 25	0084410 25
008445 28	008446 28		
008445 30	008446 30	008448 30	0084410 30
008445 35	008446 35	008448 35	0084410 35
008445 40	008446 40	008448 40	0084410 40
008445 45	008446 45	008448 45	0084410 45
008445 50	008446 50	008448 50	0084410 50
008445 55	008446 55		
008445 60	008446 60	008448 60	0084410 60
008445 65	008446 65		
008445 70	008446 70	008448 70	0084410 70
008445 75	008446 75		
008445 80	008446 80	008448 80	0084410 80
008445 85	008446 85		
008445 90	008446 90	008448 90	0084410 90
008445 95			
008445 100	008446 100	008448 100	0084410 100
	008446 110		
008445 120	008446 120		
	008446 130		
	008446 140		

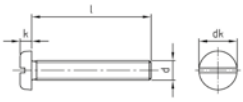
500 ≥45: box = 200	500 ≥22: box = 200	200 ≥60: box = 100	100 ≥70: box = 50
8.5	10	13	16
3.3	3.9	5	6

DIN

DIN 85
A2

Alt. Norm tarafından değiştirildi ISO 1580





DIN 85 A2
Düz yarıklı, düz başlı vidalar

DIN 85 A2
Slotted pan head screws

d	M				
	Ürün no./*Item no.*				
1000	1000	1000	500	500	500
3.2	4	5	6	7	8
1	1.3	1.5	1.8	2.1	2.4

DIN 85 A2
Düz yarıklı, düz başlı vidalar

DIN 85 A2
Slotted pan head screws

DIN 85
A2

Alt. Norm
tarafından değiştirildi ISO
1580

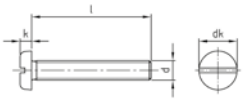
M5	M6	M8
Réf./Item no.	Réf./Item no.	Réf./Item no.
008525 6	008526 6	
008525 8	008526 8	
008525 10	008526 10	008528 10
008525 12	008526 12	008528 12
008525 14	008526 14	
008525 16	008526 16	008528 16
008525 18	008526 18	
008525 20	008526 20	008528 20
008525 22	008526 22	
008525 25	008526 25	008528 25
008525 30	008526 30	008528 30
008525 35	008526 35	008528 35
008525 40	008526 40	008528 40
008525 45	008526 45	
008525 50	008526 50	008528 50
008525 55	008526 55	008528 55
008525 60	008526 60	
008525 65	008526 65	
008525 70	008526 70	
008525 75	008526 75	
008525 80	008526 80	
008525 90	008526 90	
008525 100	008526 100	

500 ≥45: box = 200	500 ≥22: box = 200	200 ≥55: box = 100
10	12	16
3	3.6	4.8

DIN 85
A4

Alt. Norm tarafından değiştirildi ISO 1580





DIN 85 A4
Düz yarıklı, düz başlı vidalar

DIN 85 A4
Slotted pan head screws

d	M				
	Ürün no./*Item no.*				
1000	1000	1000	500	500	500
3.2	4	5	6	7	8
1	1.3	1.5	1.8	2.1	2.4

DIN 85 A4
Düz yarıklı, düz başlı vidalar

DIN 85 A4
Slotted pan head screws

DIN 85
A4

Alt. Norm
tarafından değiştirildi ISO
1580

M5	M6	M8
Réf./Item no.	Réf./Item no.	Réf./Item no.
008545 6	008546 6	
008545 8	008546 8	
008545 10	008546 10	008548 10
008545 12	008546 12	008548 12
008545 14	008546 14	
008545 16	008546 16	008548 16
008545 18	008546 18	
008545 20	008546 20	008548 20
008545 22	008546 22	
008545 25	008546 25	008548 25
008545 30	008546 30	008548 30
008545 35	008546 35	008548 35
008545 40	008546 40	008548 40
008545 45	008546 45	
008545 50	008546 50	008548 50
008545 55	008546 55	008548 55
008545 60	008546 60	
008545 65	008546 65	
008545 70	008546 70	
008545 75	008546 75	
008545 80	008546 80	
008545 90	008546 90	
008545 100	008546 100	

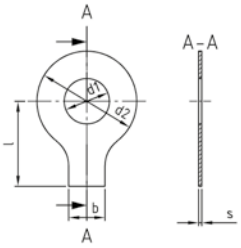
500 ≥45: box = 200	500 ≥22: box = 200	200 ≥55: box = 100
10	12	16
3	3.6	4.8

DIN 93
A2

DIN 93 A2
Tek tırnaklı rondela

DIN 93 A2
Tabwashers with 1 tab

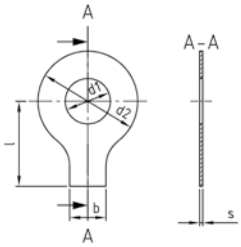




DIN 93 A4
Tek tırnaklı rondela

DIN 93 A4
Tabwashers with 1 tab



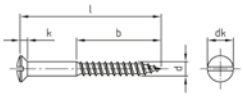


DIN 95
A2

DIN 95 A2
Düz yarıklı, mercimek havşa başlı ağaç vidaları

DIN 95 A2
Slotted raised countersunk head wood screws





b = Standarda uygun

b = at Norm

d						
	Ürün no./*Item no.*					
	500	200	200	200	200	200 ≥65: box = 100
	4.7	5.6	6.5	7.5	8.3	9.2
	1.5	1.65	1.93	2.2	2.35	2.5

DIN 95 A2
Düz yarıklı, mercimek havşa başlı ağaç vidaları

DIN 95 A2
Slotted raised countersunk head wood screws

5,5	6	7	8
Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
0095255 20	009526 20		
0095255 25	009526 25		
0095255 30	009526 30		009528 30
0095255 35	009526 35		009528 35
0095255 40	009526 40	009527 40	009528 40
0095255 45	009526 45	009527 45	009528 45
0095255 50	009526 50	009527 50	009528 50
	009526 55		
0095255 60	009526 60	009527 60	009528 60
0095255 65	009526 65		
0095255 70	009526 70	009527 70	009528 70
0095255 75	009526 75	009527 75	009528 75
0095255 80	009526 80	009527 80	009528 80
0095255 90	009526 90	009527 90	009528 90
0095255 100	009526 100	009527 100	009528 100
	009526 110	009527 110	009528 110
	009526 120	009527 120	009528 120

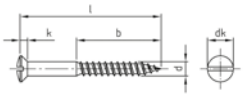
200 ≥65: box = 100	200 ≥65: box = 100	100	100
10.2	11	12.5	14.5
2.75	3	3.5	4

DIN 95
A4

DIN 95 A4
Düz yarıklı, mercimek havşa başlı ağaç vidaları

DIN 95 A4
Slotted raised countersunk head wood screws





b = Standarda uygun

b = at Norm

d					
	Ürün no./*Item no.*				
500	200	200	200	200	200 ≥65: box = 100
4.7	5.6	6.5	7.5	8.3	9.2
1.5	1.65	1.93	2.2	2.35	2.5

DIN 95 A4
Düz yarıklı, mercimek havşa başlı ağaç vidaları

DIN 95 A4
Slotted raised countersunk head wood screws

5,5	6	7	8
Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
0095455 20	009546 20		
0095455 25	009546 25		
0095455 30	009546 30		009548 30
0095455 35	009546 35		009548 35
0095455 40	009546 40	009547 40	009548 40
0095455 45	009546 45	009547 45	009548 45
0095455 50	009546 50	009547 50	009548 50
	009546 55		
0095455 60	009546 60	009547 60	009548 60
0095455 65	009546 65		
0095455 70	009546 70	009547 70	009548 70
0095455 75	009546 75	009547 75	009548 75
0095455 80	009546 80	009547 80	009548 80
0095455 90	009546 90	009547 90	009548 90
0095455 100	009546 100	009547 100	009548 100
	009546 110	009547 110	009548 110
	009546 120	009547 120	009548 120

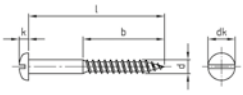
200 ≥65: box = 100	200 ≥65: box = 100	100	100
10.2	11	12.5	14.5
2.75	3	3.5	4

DIN 96
A2

DIN 96 A2
Düz yarıklı, bombe başlı ağaç vidaları

DIN 96 A2
Slotted round head wood screws





b = Standarda uygun

b = at Norm

d					
	Ürün no./*Item no.*				
500	200	200	200	200	200 ≥65: box = 100
5	6	7	8	9	10
1.7	2.1	2.4	2.8	3.1	3.5

DIN 96 A2
Düz yarıklı, bombe başlı ağaç vidaları

DIN 96 A2
Slotted round head wood screws

5,5	6	7	8
Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
0096255 20	009626 20		
0096255 25	009626 25		
0096255 30	009626 30		009628 30
0096255 35	009626 35		009628 35
0096255 40	009626 40	009627 40	009628 40
0096255 45	009626 45	009627 45	009628 45
0096255 50	009626 50	009627 50	009628 50
	009626 55		
0096255 60	009626 60	009627 60	009628 60
0096255 65	009626 65		
0096255 70	009626 70	009627 70	009628 70
0096255 75	009626 75	009627 75	009628 75
0096255 80	009626 80	009627 80	009628 80
0096255 90	009626 90	009627 90	009628 90
0096255 100	009626 100	009627 100	009628 100
	009626 110	009627 110	009628 110
	009626 120	009627 120	009628 120

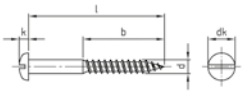
200 ≥65: box = 100	200 ≥65: box = 100	100	100
11	12	14	16
3.8	4.2	4.9	5.6

DIN 96
A4

DIN 96 A4
Düz yarıklı, bombe başlı ağaç vidaları

DIN 96 A4
Slotted round head wood screws





b = Standarda uygun

b = at Norm

d					
	Ürün no./*Item no.*				
500	200	200	200	200	200 ≥65: box = 100
5	6	7	8	9	10
1.7	2.1	2.4	2.8	3.1	3.5

DIN 96 A4
Düz yarıklı, bombe başlı ağaç vidaları

DIN 96 A4
Slotted round head wood screws

5,5	6	7	8
Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
0096455 20	009646 20		
0096455 25	009646 25		
0096455 30	009646 30		009648 30
0096455 35	009646 35		009648 35
0096455 40	009646 40	009647 40	009648 40
0096455 45	009646 45	009647 45	009648 45
0096455 50	009646 50	009647 50	009648 50
	009646 55		
0096455 60	009646 60	009647 60	009648 60
0096455 65	009646 65		
0096455 70	009646 70	009647 70	009648 70
0096455 75	009646 75	009647 75	009648 75
0096455 80	009646 80	009647 80	009648 80
0096455 90	009646 90	009647 90	009648 90
0096455 100	009646 100	009647 100	009648 100
	009646 110	009647 110	009648 110
	009646 120	009647 120	009648 120

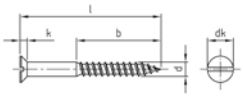
200 ≥65: box = 100	200 ≥65: box = 100	100	100
11	12	14	16
3.8	4.2	4.9	5.6

DIN 97
A2

DIN 97 A2
Düz yarıklı, havşa başlı ağaç vidaları

DIN 97 A2
Slotted countersunk head wood screws





b = Standarda uygun

b = at Norm

d						
	Ürün no./*Item no.*					
		500	200	200	200	200 ≥65: box = 100
		4.7	5.6	6.5	7.5	8.3	9.2
		1.5	1.65	1.93	2.2	2.35	2.5

DIN 97 A2
Düz yarıklı, havşa başlı ağaç vidaları

DIN 97 A2
Slotted countersunk head wood screws

5,5	6	7	8	10
Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
0097255 20	009726 20			
0097255 25	009726 25			
0097255 30	009726 30		009728 30	
0097255 35	009726 35		009728 35	
0097255 40	009726 40	009727 40	009728 40	
0097255 45	009726 45	009727 45	009728 45	
0097255 50	009726 50	009727 50	009728 50	0097210 50
0097255 60	009726 60	009727 60	009728 60	0097210 60
0097255 65	009726 65			
0097255 70	009726 70	009727 70	009728 70	0097210 70
0097255 75	009726 75	009727 75	009728 75	
0097255 80	009726 80	009727 80	009728 80	0097210 80
0097255 90	009726 90	009727 90	009728 90	0097210 90
0097255 100	009726 100	009727 100	009728 100	0097210 100
	009726 110	009727 110	009728 110	0097210 110
	009726 120	009727 120	009728 120	0097210 120
		009727 130	009728 130	0097210 130
		009727 140	009728 140	0097210 140
		009727 150	009728 150	0097210 150

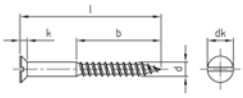
200 ≥65: box = 100	200 ≥65: box = 100	100	100	100
10.2	11	12.5	14.5	18
2.75	3	3.5	4	5

DIN 97
A4

DIN 97 A4
Düz yarıklı, havşa başlı ağaç vidaları

DIN 97 A4
Slotted countersunk head wood screws





d						
	Ürün no./*Item no.*					
	500	200	200	200	200	200 ≥65: box = 100
	4.7	5.6	6.5	7.5	8.3	9.2
	1.5	1.65	1.93	2.2	2.35	2.5

b = Standarda uygun

b = at Norm

DIN 97 A4
Düz yarıklı, havşa başlı ağaç vidaları

DIN 97 A4
Slotted countersunk head wood screws

5,5	6	7	8	10
Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
0097455 20	009746 20			
0097455 25	009746 25			
0097455 30	009746 30		009748 30	
0097455 35	009746 35		009748 35	
0097455 40	009746 40	009747 40	009748 40	
0097455 45	009746 45	009747 45	009748 45	
0097455 50	009746 50	009747 50	009748 50	0097410 50
0097455 60	009746 60	009747 60	009748 60	0097410 60
0097455 65	009746 65			
0097455 70	009746 70	009747 70	009748 70	0097410 70
0097455 75	009746 75	009747 75	009748 75	
0097455 80	009746 80	009747 80	009748 80	0097410 80
0097455 90	009746 90	009747 90	009748 90	0097410 90
0097455 100	009746 100	009747 100	009748 100	0097410 100
	009746 110	009747 110	009748 110	0097410 110
	009746 120	009747 120	009748 120	0097410 120
		009747 130	009748 130	0097410 130
		009747 140	009748 140	0097410 140
		009747 150	009748 150	0097410 150

200 ≥65: box = 100	200 ≥65: box = 100	100	100	100
10.2	11	12.5	14.5	18
2.75	3	3.5	4	5

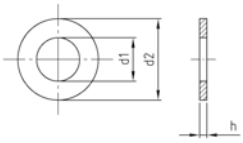
DIN 125 A
A2

Alt. Norm tarafından değiştirildi ISO 7089

DIN 125 A2
Düz Rondela A

DIN 125 A2
Washers type A





- formu A

- *type A*

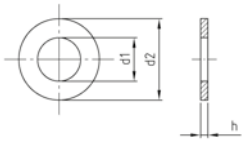
DIN 125 A4
Düz Rondela A

DIN 125 A4
Washers type A

DIN 125 A
A4

Alt. Norm tarafından değiştirildi ISO 7089





- formu A

- *type A*

DIN

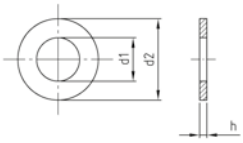
DIN 125 A
A5

Alt. Norm tarafından değiştirildi ISO 7089

DIN 125 1.4571
Düz Rondela A

DIN 125 1.4571
Washers type A





- formu A

- *type A*

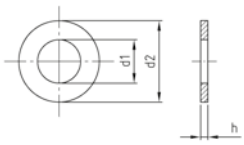
DIN 125 1.4541
Düz Rondela A

DIN 125 1.4541
Washers type A

DIN 125 A
1.4541

Alt. Norm tarafından değiştirildi ISO 7089





- formu A

- *type A*

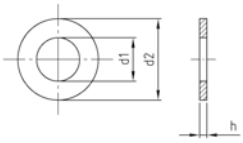
DIN 125 A 1.4462

Alt. Norm tarafından değiştirildi ISO 7089

DIN 125 1.4462 Düz Rondela A

DIN 125 1.4462 Washers type A





- formu A

- *type A*

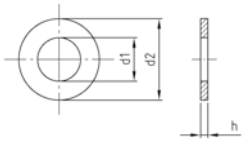
DIN 125 1.4529
Düz Rondela A

DIN 125 1.4529
Washers type A

DIN 125 A
1.4529

Alt. Norm tarafından değiştirildi ISO 7089





- formu A

- *type A*

DIN 127 B
A1

DIN 127 1.4310
Tip B yaylı rondelalar

DIN 127 1.4310
Spring lock washers type B

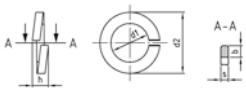




- Tip B

- *type B*





- Tip B

- *type B*

DIN 127 B
A5

DIN 127 1.4571
Tip B yaylı rondelalar

DIN 127 1.4571
Spring lock washers type B





- Tip B

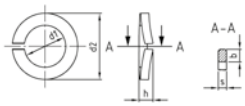
- *type B*

DIN 128 1.4310
Kıvrık yaylı rondela A

DIN 128 1.4310
Spring lock washers type A, curved

DIN 128 A
A1





- Tip A

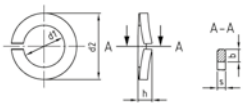
- *type A*

DIN 128 A
A4

DIN 128 A4
Kıvrık yaylı rondela A

DIN 128 A4
Spring lock washers type A, curved





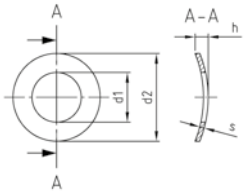
- Tip A

- *type A*

DIN 137 1.4310 A
Ondüla yaylı Rondela A

DIN 137 1.4310 A
Curved spring washers type A





- Tip A

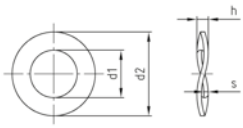
- *curved type A*

DIN 137 B
A1

DIN 137 1.4310 B
Ondüla Dalgalı yaylı Rondela

DIN 137 1.4310 B
Wave spring washers type B





- Tip b

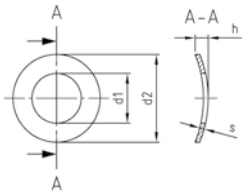
- waved type B

DIN

DIN 137 A4 A
Ondüla Dalgalı yaylı Rondela

DIN 137 A4 A
Wave spring washers type A





- tip A

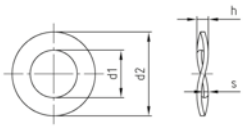
- *waved type A*

DIN 137 B
A4

DIN 137 A4 B
Ondüla Dalgalı yaylı Rondela

DIN 137 A4 B
Wave spring washers type B





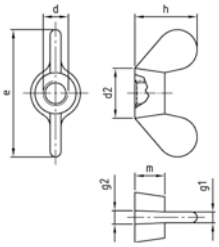
- tip B

- waved type B

DIN 315 A2
Kelebek vida, Alman tip

DIN 315 A2
Wing nuts, German type





- Amerikan şekil için bkz. ürün 315

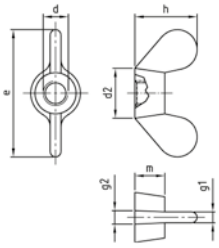
- American type see Art. 315

DIN 315
A4

DIN 315 A4
Kelebek vida, Alman tip

DIN 315 A4
Wing nuts, German type





- Amerikan şekil için bkz. ürün 315

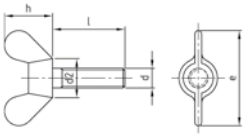
- *American type see Art. 315*

DIN 316 A2
Kelebek başlı cıvatalar, Alman tip

DIN 316 A2
Wing screws, German type

d	M				
	Ürün no./*Item no.*				
50	50	50	25	25	25
8	11	13	16	20	23
20	26	33	39	51	65
10.5	13	17	20	25	33.5





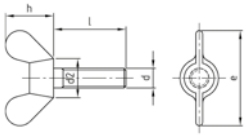
- Amerikan şekil için bkz. ürün 316
- *American type see Art. 316*

DIN 316
A4

DIN 316 A4
Kelebek başlı cıvatalar, Alman tip

DIN 316 A4
Wing screws, German type





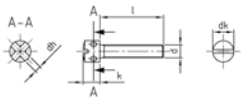
d	M				
	Ürün no./*Item no.*				
50	50	50	25	25	25
8	11	13	16	20	23
20	26	33	39	51	65
10.5	13	17	20	25	33.5

- Amerikan şekil için bkz. ürün 316
- *American type see Art. 316*

DIN 404 1.4305
Başı delikli cıvatalar

DIN 404 1.4305
Capstan screws



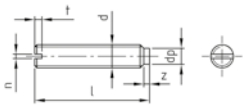


d	M		
	Ürün no./*Item no.*		
200	100	50	50
1.5	2	2.5	3
5.5	7	8.5	10
4	5	6.5	8

DIN 417
A2

Alt. Norm tarafından değiştirildi ISO 7435





DIN 417 A2
Uzun silindir uçlu yarıklı tespit vidası

DIN 417 A2
Slotted set screws with long dog point

d	M				
	Ürün no./*Item no.*				
200	200	200	200	100	100
1.5	2	2.5	3.5	4	5.5
0.4	0.4	0.6	0.8	1	1.2
0.72	0.8	1.12	1.28	1.6	2
1.25	1.5	2	2.5	3	4

DIN 417 A2
Uzun silindir uçlu yarıklı tespit vidası

DIN 417 A2
Slotted set screws with long dog point

DIN 417 A2

Alt. Norm tarafından değiştirildi ISO 7435

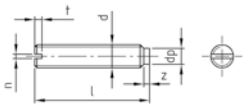
M 10	M 12
Réf./Item no.	Réf./Item no.
0417210 10	
0417210 12	0417212 12
0417210 16	0417212 16
0417210 18	0417212 18
0417210 20	0417212 20
0417210 25	0417212 25
0417210 30	0417212 30
0417210 35	0417212 35
0417210 40	0417212 40

100	50
7	8.5
1.6	2
2.4	2.8
5	6

DIN 417
A4

Alt. Norm tarafından değiştirildi ISO 7435





DIN 417 A4
Uzun silindir uçlu yarıklı tespit vidası

DIN 417 A4
Slotted set screws with long dog point

d	M				
	Ürün no./*Item no.*				
200	200	200	200	100	100
1.5	2	2.5	3.5	4	5.5
0.4	0.4	0.6	0.8	1	1.2
0.72	0.8	1.12	1.28	1.6	2
1.25	1.5	2	2.5	3	4

DIN 417 A4
Uzun silindir uçlu yarıklı tespit vidası

DIN 417 A4
Slotted set screws with long dog point

DIN 417
A4

Alt. Norm tarafından değiştirildi ISO 7435

M 10	M 12
Réf./Item no.	Réf./Item no.
0417410 10	
0417410 12	0417412 12
0417410 16	0417412 16
0417410 18	0417412 18
0417410 20	0417412 20
0417410 25	0417412 25
0417410 30	0417412 30
0417410 35	0417412 35
0417410 40	0417412 40

100	50
7	8.5
1.6	2
2.4	2.8
5	6

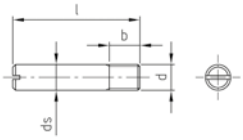
DIN 427
A1

Alt. Norm tarafından değiştirildi ISO 2342

DIN 427 1.4305
Düz yarıklı ve konik pahlı şaft cıvatalar

DIN 427 1.4305
Slotted headless screws with chamfered end





d	M				
	Ürün no./*Item no.*				
200	200	200	100	100	50
3.6	4.8	6	7.2	9.6	12
3	4	5	6	8	10

DIN 427 A4
Düz yarıklı ve konik pahlı şaft cıvatalar

DIN 427 A4
Slotted headless screws with chamfered end

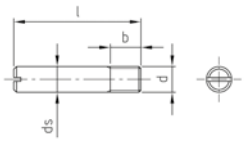
DIN 427
A4

Alt. Norm tarafından değiştirildi ISO 2342



d	M
	Ürün no./*Item no.*

200	200	200	100	100	50
3.6	4.8	6	7.2	9.6	12
3	4	5	6	8	10

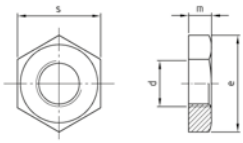


DIN 431
A2

DIN 431 A2 BG
DIN ISO 228'e göre boru dişli boru somunları

DIN 431 A2 BG
Pipe nuts with thread according to DIN ISO 228

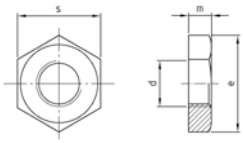




DIN 431 A4
DIN ISO 228'e göre boru dişli boru somunları

DIN 431 A4
Pipe nuts with thread according to DIN ISO 228



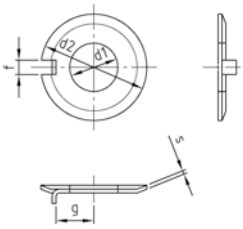


DIN 432
A2

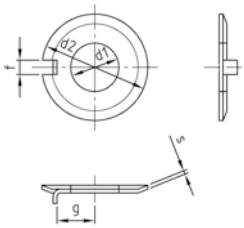
DIN 432 A2
Dişli Kilit Rondelası

DIN 432 A2
Washers with external tab








d2
d1
f
s
g

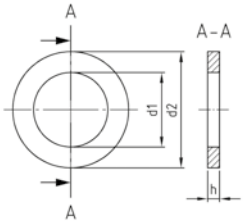
DIN 433
A2

Alt. Norm tarafından değiştirildi ISO 7092

DIN 433 A2
Yassı Başlı Vidalar için Rondela

DIN 433 A2
Washers for cheese head screws





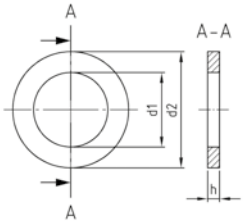
DIN 433 A4
Yassı Başlı Vidalar için Rondela

DIN 433 A4
Washers for cheese head screws

DIN 433
A4

Alt. Norm tarafından değiştirildi ISO 7092



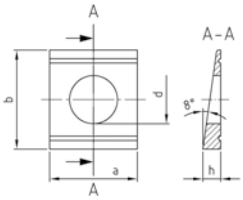


DIN 434
A2

DIN 434 A2
U kesitler için sivri uçlu kare Rondela

DIN 434 A2
Square taper washers for U-sections

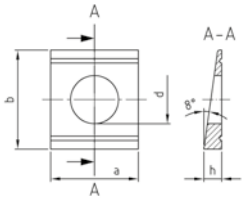




DIN 434 A4
U kesitler için sivri uçlu kare Rondela

DIN 434 A4
Square taper washers for U-sections



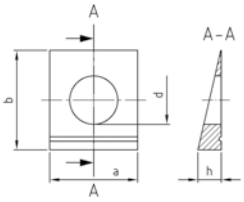


DIN 435
A2

DIN 435 A2
I kesitler için sivri uçlu kare Rondela

DIN 435 A2
Square taper washers for I-sections

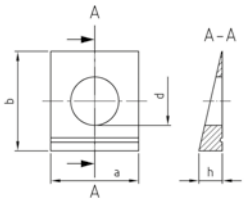




DIN 435 A4
I kesitler için sivri uçlu kare Rondela

DIN 435 A4
Square taper washers for I-sections



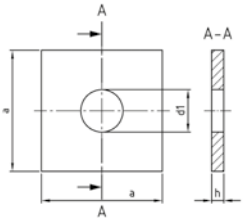


DIN 436
A2

DIN 436 A2
Ahşap işleri için kare pul

DIN 436 A2
Square washers for wood constructions

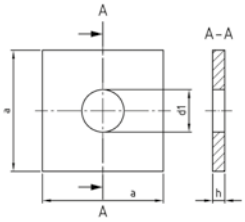




DIN 436 A4
Ahşap işleri için kare pul

DIN 436 A4
Square washers for wood constructions

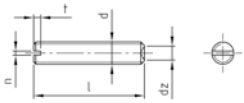




DIN 438
A2

Alt. Norm tarafından değiştirildi ISO 7436





DIN 438 A2
Tas uçlu yarıklı ayar vidası

DIN 438 A2
Slotted set screws with cup point

d	M
	Ürün no./*Item no.*

200	200	200	200	100	100
1.2	1.4	2	2.5	3	5
0.4	0.4	0.6	0.8	1	1.2
0.72	0.8	1.12	1.28	1.6	2

DIN 438 A2
Tas uçlu yarıklı ayar vidası

DIN 438 A2
Slotted set screws with cup point

DIN 438
A2

Alt. Norm
tarafından değiştirildi ISO
7436

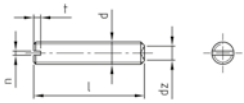
M 10	M 12
Réf./Item no.	Réf./Item no.
0438210 10	
0438210 12	0438212 12
0438210 16	0438212 16
0438210 18	0438212 18
0438210 20	0438212 20
0438210 25	0438212 25
0438210 30	0438212 30
0438210 35	0438212 35
0438210 40	0438212 40

100	50
6	8
1.6	2
2.4	2.8

DIN 438
A4

Alt. Norm tarafından değiştirildi ISO 7436





DIN 438 A4
Tas uçlu yarıklı ayar vidası

DIN 438 A4
Slotted set screws with cup point

d	M
	Ürün no./*Item no.*

200	200	200	200	100	100
1.2	1.4	2	2.5	3	5
0.4	0.4	0.6	0.8	1	1.2
0.72	0.8	1.12	1.28	1.6	2

DIN 438 A4
Tas uçlu yarıklı ayar vidası

DIN 438 A4
Slotted set screws with cup point

DIN 438
A4

Alt. Norm tarafından değiştirildi ISO 7436

M 10	M 12
Réf./Item no.	Réf./Item no.
0438410 10	
0438410 12	0438412 12
0438410 16	0438412 16
0438410 18	0438412 18
0438410 20	0438412 20
0438410 25	0438412 25
0438410 30	0438412 30
0438410 35	0438412 35
0438410 40	0438412 40

100	50
6	8
1.6	2
2.4	2.8

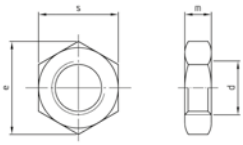
DIN 439
A2

Alt. Norm tarafından değiştirildi ISO 4035

DIN 439 A2
Altı köşe ince somun

DIN 439 A2
Hexagon thin nuts





- "0" = azaltılmış yük kapasitesi

- *"0" = reduced load capacity*

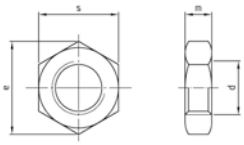
DIN 439 A2
Soldan dişli alti köşe ince somun

DIN 439 A2
Hexagon thin nuts with left-hand thread

DIN 439
A2

Alt. Norm tarafından değiştirildi ISO 8675





- "O" = azaltılmış yük kapasitesi
- *"O" = reduced load capacity*

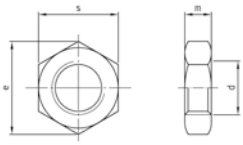
DIN 439
A2

Alt. Norm tarafından değiştirildi ISO 8675

DIN 439 A2
Ince dişli altı köşe ince somun

DIN 439 A2
Hexagon thin nuts with fine pitch thread





- "0" = azaltılmış yük kapasitesi

- *"0" = reduced load capacity*

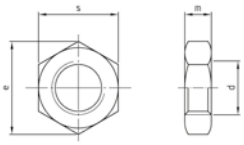
DIN 439 A4
Altı köşe ince somun

DIN 439 A4
Hexagon thin nuts

DIN 439
A4

Alt. Norm
tarafından değiştirildi ISO
4035





- "O" = azaltılmış yük kapasitesi
- *"O" = reduced load capacity*

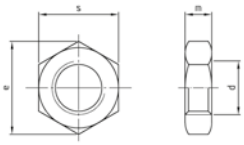
DIN 439
A4

Alt. Norm tarafından değiştirildi ISO 8675

DIN 439 A4
soldan dişli alti köşe ince somun

DIN 439 A4
Hexagon thin nuts with left-hand thread





- "0" = azaltılmış yük kapasitesi

- *"0" = reduced load capacity*

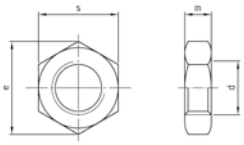
DIN 439 A4
İnce dişli altı köşe ince somun

DIN 439 A4
Hexagon thin nuts with fine pitch thread

DIN 439
A4

Alt. Norm tarafından değiştirildi ISO 8675





- "O" = azaltılmış yük kapasitesi
- *"O" = reduced load capacity*

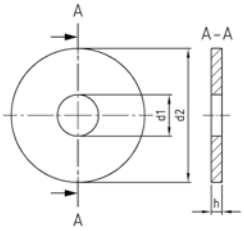
DIN 440 R
A2

Alt. Norm tarafından değiştirildi ISO 7094

DIN 440 A2 R
Özellikle ahşap işleri için rondela, formu R

DIN 440 A2 R
Washers for wood constructions type R





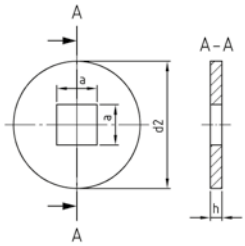
DIN 440 A2 V
Özellikle ahşap işleri için rondela, formu V

DIN 440 A2 V
Washers for wood constructions type V

DIN 440 V
A2

Alt. Norm tarafından değiştirildi ISO 7094





DIN

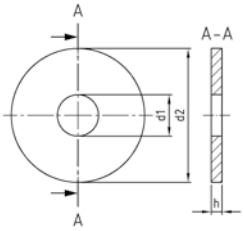
DIN 440 R
A4

Alt. Norm tarafından değiştirildi ISO 7094

DIN 440 A4 R
Özellikle ahşap işleri için rondela, formu R

DIN 440 A4 R
Washers, expecially for wood constructions, type R





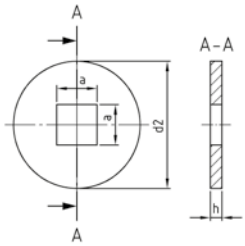
DIN 440 A4 V
Özellikle ahşap işleri için rondela, formu V

DIN 440 A4 V
Washers, expecially for wood constructions, type V

DIN 440 V
A4

Alt. Norm tarafından değiştirildi ISO 7094



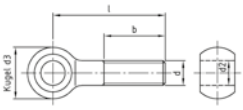


DIN 444 B
A2

DIN 444 A2
Tip B gözlü cıvatalar

DIN 444 A2
Eye bolts type B





b = Standarda uygun

b = at Norm

d	M				
	Ürün no./*Item no.*				
50	50	25	25 ≥140: box = 10	25 ≥140: box = 10	10
6	8	10	12	16	18
14	18	20	25	32	40

DIN 444 A2
Tip B gözlü cıvatalar

DIN 444 A2
Eye bolts type B

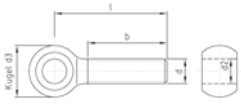
M 24
Réf./Item no.
0444224 80
0444224 90
0444224 100
0444224 110
0444224 120
0444224 130
0444224 140
0444224 150
10
22
45

DIN 444 LB
A2

DIN 444 A2
Tip LB gözlü cıvatalar

DIN 444 A2
Eye bolts type LB





d	M			
	Ürün no./*Item no.*			
50	50	25	25	25 ≥140: box = 10
6	8	10	12	16
14	18	20	25	32

b = Standarda uygun

b = at Norm

DIN 444 A2
Tip LB gözlü cıvatalar

DIN 444 A2
Eye bolts type LB

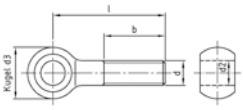
M 20
Réf./Item no.
0444220 80/80
0444220 100/100
0444220 120/120
0444220 130/130
10
18
40

DIN 444 B
A4

DIN 444 A4
Tip B gözlü cıvatalar

DIN 444 A4
Eye bolts type B





b = Standarda uygun

b = at Norm

d	M				
	Ürün no./*Item no.*				
50	50	25	25 ≥140: box = 10	25 ≥140: box = 10	10
6	8	10	12	16	18
14	18	20	25	32	40

DIN 444 A4
Tip B gözlü cıvatalar

DIN 444 A4
Eye bolts type B

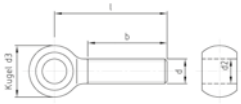
M 24
Réf./Item no.
0444424 80
0444424 90
0444424 100
0444424 110
0444424 120
0444424 130
0444424 140
0444424 150
10
22
45

DIN 444 LB
A4

DIN 444 A4
Tip LB gözlü cıvatalar

DIN 444 A4
Eye bolts type LB





b = Standarda uygun

b = at Norm

d	M			
	Ürün no./*Item no.*			
50	50	25	25	25 ≥140: box = 10
6	8	10	12	16
14	18	20	25	32

DIN 444 A4
Tip LB gözlü cıvatalar

DIN 444 A4
Eye bolts type LB

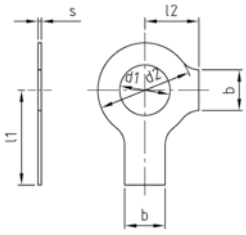
M 20
Réf./Item no.
0444420 80/80
0444420 100/100
0444420 120/120
0444420 130/130
10
18
40

DIN 463 A2

DIN 463 A2
iki tırnaklı emniyet rondela

DIN 463 A2
Tabwashers with 2 tabs

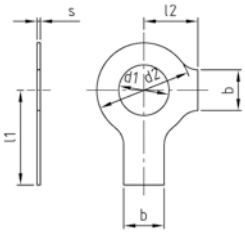




DIN 463 A4
iki tırnaklı emniyet rondela

DIN 463 A4
Tabwashers with 2 tabs



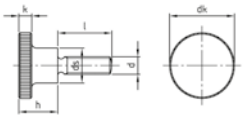


DIN 464
A1

DIN 464 1.4305
Tırtıllı vidalar, yüksek tip

DIN 464 1.4305
Knurled thumb screws, high type





b = Standarda uygun

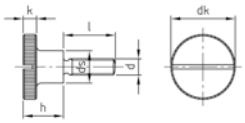
b = at Norm

d	M			
	Ürün no./*Item no.*			
50	50	25	25	25
12	16	20	24	30
6	8	10	12	16
7.5	9.5	11.5	15	18
2.5	3.5	4	5	6

DIN 465 1.4305
Düz yarıklı tırtıllı vidalar, yüksek tip

DIN 465 1.4305
Slotted knurled thumb screws, high type





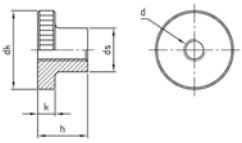
d	M		
	Ürün no./*Item no.*		
50	50	25	25
12	16	20	24
6	8	10	12
7.5	9.5	11.5	15
2.5	3.5	4	5

DIN 466
A1

DIN 466 1.4305
Tırtırlı silindir başlı ayar somunu yüksek tip

DIN 466 1.4305
Knurled thumb nuts, high type

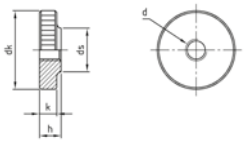




DIN 467 1.4305
Tırtırlı silindir başlı ayar somunu, ice tip

DIN 467 1.4305
Knurled thumb nuts, thin type



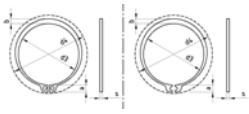


DIN 471
1.4122

DIN 471 1.4122
şaft için tespit segmanı

DIN 471 1.4122
Retaining rings for shafts





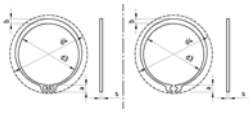
- Ø < 9mm'ye kadar delik mevcut değildir
- Ø 9 mm'den < 300 mm'ye kadar delikler mevcuttur
- Ø >170 mm deliklerden üretici-nin seçimi

- *up to Ø < 9mm no holes available*
- *from Ø 9mm to < 300mm holes available*
- *from Ø >170mm holes choice of manufacturer*

DIN 471 1.4310
şaft için tespit segmanı

DIN 471 1.4310
Retaining rings for shafts





- Ø < 9mm'ye kadar delik mevcut değildir
- Ø 9 mm'den < 300 mm'ye kadar delikler mevcuttur
- Ø >170 mm deliklerden üretici-nin seçimi

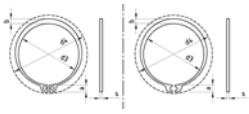
- *up to Ø < 9mm no holes available*
- *from Ø 9mm to < 300mm holes available*
- *from Ø >170mm holes choice of manufacturer*

DIN 471
1.4532

DIN 471 1.4532
şaft için tespit segmanı

DIN 471 1.4532
Retaining rings for shafts





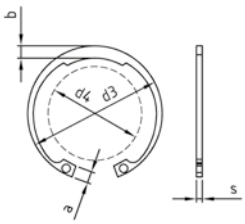
- Ø < 9mm'ye kadar delik mevcut değildir
- Ø 9 mm'den < 300 mm'ye kadar delikler mevcuttur
- Ø >170 mm deliklerden üretici-nin seçimi

- *up to Ø < 9mm no holes available*
- *from Ø 9mm to < 300mm holes available*
- *from Ø >170mm holes choice of manufacturer*

DIN 472 1.4122
boru için tespit segmanı

DIN 472 1.4122
Retaining rings for bores



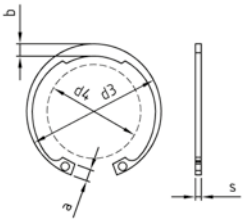


DIN 472
A1

DIN 472 1.4310
boru için tespit segmanı

DIN 472 1.4310
Retaining rings for bores

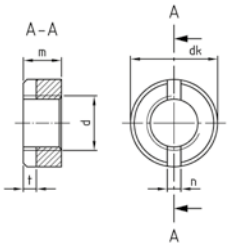




DIN 546 1.4305
Yarıklı yuvarlak somun

DIN 546 1.4305
Slotted round nuts



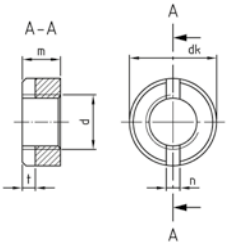


DIN 546
A4

DIN 546 A4
Yarıklı yuvarlak somun

DIN 546 A4
Slotted round nuts





DIN 551 A2
yassı uçlu yarıklı ayar vidası

DIN 551 A2
Slotted set screws with flat point

DIN 551
A2

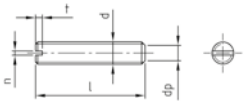
Alt. Norm tarafından değiştirildi ISO 4766

d	M
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*



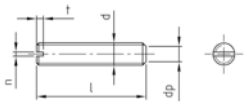
200	200	200	200	200	200
0.8	1	1.5	2	2.5	3.5
0.25	0.25	0.4	0.4	0.6	0.8
0.56	0.64	0.72	0.8	1.12	1.28



DIN 551
A2

Alt. Norm tarafından değiştirildi ISO 4766





DIN 551 A2
yassı uçlu yarıklı ayar vidası

DIN 551 A2
Slotted set screws with flat point

d	M 6	M 8	M 10	M 12	M 16
	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
	055126 6				
	055126 8	055128 8			
	055126 10	055128 10	0551210 10		
	055126 12	055128 12	0551210 12		
	055126 16	055128 16	0551210 16		
		055128 18	0551210 18		
	055126 20	055128 20	0551210 20	0551212 20	0551216 20
	055126 25	055128 25	0551210 25	0551212 25	
	055126 30	055128 30	0551210 30	0551212 30	0551216 30
	055126 35	055128 35	0551210 35		0551216 35
	055126 40	055128 40	0551210 40		
	055126 45	055128 45	0551210 45		
		055128 50	0551210 50		
			0551210 55		
	055126 60	055128 60	0551210 60		
	200	100	50	50	50
	4	5.5	7	8.5	
	1	1.2	1.6	2	
	1.6	2	2.4	2.8	

DIN 551 A4
yassı uçlu yarıklı ayar vidası

DIN 551 A4
Slotted set screws with flat point

DIN 551
A4

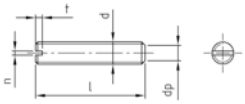
Alt. Norm tarafından değiştirildi ISO 4766

d	M
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*



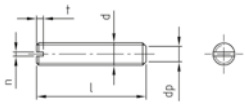
200	200	200	200	200	100
1.5	2	2.5	3.5	4	5.5
0.4	0.4	0.6	0.8	1	1.2
0.72	0.8	1.12	1.28	1.6	2



DIN 551
A4

Alt. Norm tarafından değiştirildi ISO 4766





DIN 551 A4
yassı uçlu yarıklı ayar vidası

DIN 551 A4
Slotted set screws with flat point

	M 10	M 12	M 16
	Réf./Item no.	Réf./Item no.	Réf./Item no.
	0551410 10		
	0551410 12		
	0551410 16		
	0551410 18		
	0551410 20	0551412 20	0551416 20
	0551410 25	0551412 25	
	0551410 30	0551412 30	0551416 30
	0551410 35		0551416 35
	0551410 40		
d	0551410 45		
	0551410 50		
	0551410 55		
	0551410 60		

DIN 553 A2
Konik uçlu yarıklı ayar vidası

DIN 553 A2
Slotted set screws with cone point

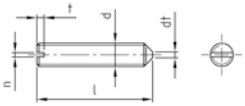
DIN 553 A2

Alt. Norm tarafından değiştirildi ISO 7434

d	M
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*



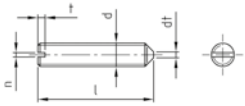


200	200	200	200	200	200
0.16	0.2	0.25	0.3	0.4	0.5
0.25	0.25	0.4	0.4	0.6	0.8
0.56	0.64	0.72	0.8	1.12	1.28

DIN 553
A2

Alt. Norm tarafından değiştirildi ISO 7434





DIN 553 A2
Konik uçlu yarıklı ayar vidası

DIN 553 A2
Slotted set screws with cone point

	M 6	M 8	M 10	M 12	M 16	M 20
	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
	055326 6					
	055326 8	055328 8				
	055326 10	055328 10	0553210 10			
	055326 12	055328 12	0553210 12			
	055326 16	055328 16	0553210 16			
	055326 20	055328 20	0553210 20			
	055326 25	055328 25	0553210 25	0553212 25		
	055326 30	055328 30	0553210 30	0553212 30		0553220 30
	055326 35	055328 35	0553210 35			
d	055326 40	055328 40	0553210 40			
		055328 45	0553210 45			
		055328 50	0553210 50		0553216 50	0553220 50
		055328 60	0553210 60			
	200	100	50	50	50	200 ≥50: box = 50
	1.5	2	2.5	3		
	1	1.2	1.6	2		
	1.6	2	2.4	2.8		

DIN 553 A4
Konik uçlu yarıklı ayar vidası

DIN 553 A4
Slotted set screws with cone point

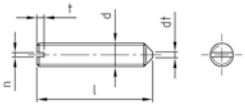
DIN 553
A4

Alt. Norm tarafından değiştirildi ISO 7434

d	M
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*





200	200	200	200	200	100
0.25	0.3	0.4	0.5	1.5	2
0.4	0.4	0.6	0.8	1	1.2
0.72	0.8	1.12	1.28	1.6	2

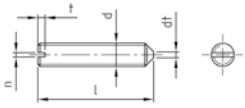
DIN 553
A4

Alt. Norm tarafından değiştirildi ISO 7434

DIN 553 A4
Konik uçlu yarıklı ayar vidası

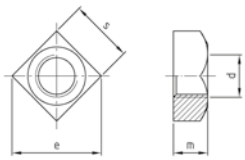
DIN 553 A4
Slotted set screws with cone point





	M 10	M 12	M 16	M 20
	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
	0553410 10			
	0553410 12			
	0553410 16			
	0553410 20			
	0553410 25	0553412 25		
	0553410 30	0553412 30		0553420 30
	0553410 35			
d	0553410 40			
	0553410 45			
	0553410 50		0553416 50	0553420 50
	0553410 60			
	50	50	50	200 ≥50: box = 50
	2.5	3		
	1.6	2		
	2.4	2.8		





G625 = Gleitmo

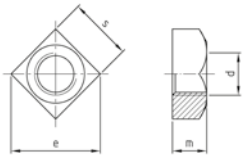
G625 = Gleitmo

DIN 557 A4-80

DIN 557 A4-80
Kare somun

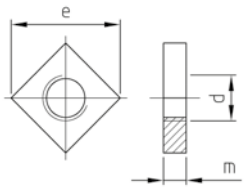
DIN 557 A4-80
Square nuts





DIN 562 A2
Square thin nuts



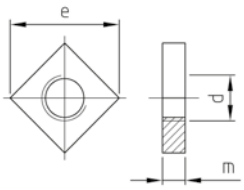


DIN 562
A4

DIN 562 A4
Kare ince somun

DIN 562 A4
Square thin nuts





DIN 571 A2
Trifon Ahşap Vidası

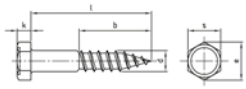
DIN 571 A2
Hexagon head wood screws

d	
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

200	200	200 ≥65: box = 100	200 ≥50: box = 100	100 ≥140: box = 50	100 ≥90: box = 50 ≥260: box = 25
7.5	8.63	10.89	13.07	14.2	18.72
2.8	3.5	4	5	5.5	7
SW 7	SW 8	SW 10	SW 12	SW 13	SW 17





b = Standarda uygun

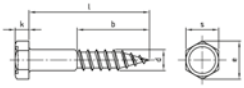
b = at Norm

DIN 571
A2

DIN 571 A2
Trifon Ahşap Vidası

DIN 571 A2
Hexagon head wood screws





b = Standarda uygun

b = at Norm

	12	16
	Réf./Item no.	Réf./Item no.
	0571212 50	0571216 50
	0571212 60	0571216 60
	0571212 65	
	0571212 70	0571216 70
	0571212 75	
	0571212 80	0571216 80
	0571212 90	0571216 90
	0571212 100	0571216 100
	0571212 110	0571216 110
	0571212 120	0571216 120
	0571212 130	0571216 130
	0571212 140	0571216 140
	0571212 150	0571216 150
	0571212 160	0571216 160
	0571212 180	0571216 180
	0571212 200	0571216 200
	0571212 220	
	0571212 240	
d	0571212 250	
	0571212 260	
	0571212 280	
	0571212 300	
	100 ≥70: box = 50 ≥110: box = 25	25
	20.88	26.17
	8	10
	SW 19	SW 24

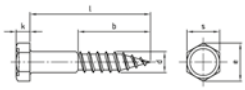
DIN 571 A4
Trifon Ahşap Vidası

DIN 571 A4
Hexagon head wood screws



Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

d					
Ürün no./*Item no.*					
200	200	200 ≥65: box = 100	200 ≥50: box = 100	100 ≥140: box = 50	100 ≥90: box = 50 ≥260: box = 25
7.5	8.63	10.89	13.07	14.2	18.72
2.8	3.5	4	5	5.5	7
SW 7	SW 8	SW 10	SW 12	SW 13	SW 17



b = Standarda uygun

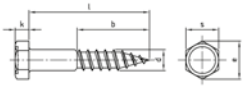
b = at Norm

DIN 571
A4

DIN 571 A4
Trifon Ahşap Vidası

DIN 571 A4
Hexagon head wood screws





b = Standarda uygun

b = at Norm

d	12	16
	Réf./Item no.	Réf./Item no.
	0571412 50	0571416 50
	0571412 60	0571416 60
	0571412 65	
	0571412 70	0571416 70
	0571412 75	
	0571412 80	0571416 80
	0571412 90	0571416 90
	0571412 100	0571416 100
	0571412 110	0571416 110
	0571412 120	0571416 120
	0571412 130	0571416 130
	0571412 140	0571416 140
	0571412 150	0571416 150
	0571412 160	0571416 160
	0571412 180	0571416 180
	0571412 200	0571416 200
	0571412 220	
	0571412 240	
	0571412 250	
	0571412 260	
	0571412 280	
	0571412 300	
	100 ≥70: box = 50 ≥110: box = 25	25
	20.88	26.17
	8	10
	SW 19	SW 24

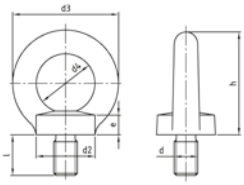
DIN 580 A2
Halkalı vidalar, dövme

DIN 580 A2
Lifting eye bolts drop forged

DIN 580
A2

Alt. Norm tarafından değiştirildi ISO 3266





- Dökülmüş şekil için bkz. ürün 580
- *For the pressed type see Art. 580*

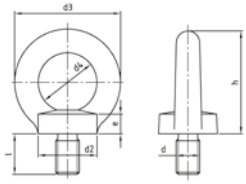
DIN 580
A4

Alt. Norm tarafından değiştirildi ISO 3266

DIN 580 A4
Halkalı vidalar, dövme

DIN 580 A4
Lifting eye bolts drop forged





- Dökülmüş şekil için bkz. ürün 580

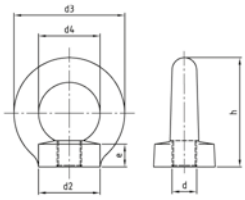
- *For the pressed type see Art. 580*

DIN

DIN 582 A2
Halkalı somunlar, dövme

DIN 582 A2
Lifting eye nuts drop forged





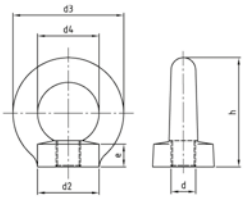
- Dökülmüş şekil için bkz. ürün 582
- *For the pressed type see Art. 582*

DIN 582
A4

DIN 582 A4
Halkalı somunlar, dövme

DIN 582 A4
Lifting eye nuts drop forged





- Dökülmüş şekil için bkz. ürün 582

- *For the pressed type see Art. 582*

DIN 603 A2 tam dişli
Mantar başlı kare boyunlu civata

DIN 603 A2
Mushroom head square neck bolts, fullthread

DIN 603 A2

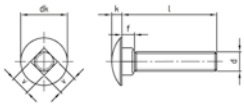
Alt. Norm tarafından değiştirildi ISO 8677

d	M
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

500 ≥25: box = 200 ≥70: box = 100	500 ≥16: box = 200 ≥45: box = 100	500 ≥16: box = 200 ≥25: box = 100 ≥70: box = 50	100 ≥50: box = 50	50 ≥75: box = 25
13.55	16.55	20.65	24.65	30.65
4.1	4.6	5.6	6.6	8.75
3.3	3.88	4.88	5.38	6.95
5.48	6.48	8.58	10.58	12.7





Talep üzerine M6'dan M16'ya kadar ve M16 dahil olmak üzere harici izleme ile mevcuttur.

quality inspection from M6 including to M16 available on demand.



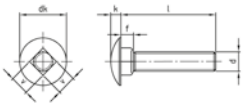
DIN 603
A2

Alt. Norm tarafından değiştirildi ISO 8677

DIN 603 A2 tam dişli
Mantar başlı kare boyunlu civata

DIN 603 A2
Mushroom head square neck bolts, fullthread





Talep üzerine M6'dan M16'ya kadar ve M16 dahil olmak üzere harici izleme ile mevcuttur.

quality inspection from M6 including to M16 available on demand.

d	M 16
	Réf./*Item no.*
	0603216 30
	0603216 35
	25
	38.8
	12.9
	8.95
	16.7

DIN

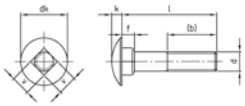
DIN 603 A2 yarim disli
Mantar başlı kare boyunlu civata

DIN 603 A2
Mushroom head square neck bolts, partial thread

DIN 603
A2

Alt. Norm tarafından değiştirildi ISO 8677





b = standarda göre M6'dan M16'ya kadar ve M16 dahil olmak üzere harici izleme ile talep üzerine mevcuttur.

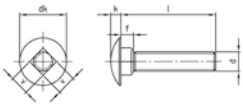
b = at Norm quality inspection from M6 including to M16 available on demand.

d	M					
	Ürün no./*Item no.*					
		200 ≥70: box = 100	200 ≥45: box = 100	100 ≥70: box = 50 ≥160: box = 25	100 ≥50: box = 50 ≥160: box = 25 ≥260: box = 10	50 ≥75: box = 25 ≥160: box = 10	25 ≥160: box = 10
		13.55	16.55	20.65	24.65	30.65	38.8
		4.1	4.6	5.6	6.6	8.75	12.9
		3.3	3.88	4.88	5.38	6.95	8.95
		5.48	6.48	7.42	10.58	12.7	16.7

DIN 603
A4

Alt. Norm tarafından değiştirildi ISO 8677





Talep üzerine M6'dan M16'ya kadar ve M16 dahil olmak üzere harici izleme ile mevcuttur.

quality inspection from M6 including to M16 available on demand.

Schäfer + Peters GmbH
74613 Öhringen
Z - 30.3 - 6

DIN 603 A4 tam dişli
Mantar başlı kare boyunlu civata

DIN 603 A4
Mushroom head square neck bolts, fullthread

d	M				
	Ürün no./*Item no.*				
		500 ≥18: box = 200 ≥80: box = 100	500 ≥16: box = 200 ≥45: box = 100	500 ≥16: box = 200 ≥18: box = 100 ≥70: box = 50	100 ≥50: box = 50	50 ≥75: box = 25
		13.55	16.55	20.65	24.65	30.65
		4.1	4.6	5.6	6.6	8.75
		3.3	3.88	4.88	5.38	6.95
		5.48	6.48	8.58	10.58	12.7

DIN 603 A4 tam dişli
Mantar başlı kare boyunlu civata

DIN 603 A4
Mushroom head square neck bolts, fullthread

DIN 603
A4

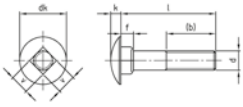
Alt. Norm tarafından değiştirildi ISO 8677

M16
Réf./*Item no.*
0603416 30
0603416 35
25
38.8
12.9
8.95
16.7

DIN 603
A4

Alt. Norm tarafından değiştirildi ISO 8677





b = standarda göre M6'dan M16'ya kadar ve M16 dahil olmak üzere harici izleme ile talep üzerine mevcuttur.

b = at Norm quality inspection from M6 including to M16 available on demand.



DIN 603 A4 yarim disli
Mantar başlı kare boyunlu civata

DIN 603 A4
Mushroom head square neck bolts, partial thread

d	M
	Ürün no./*Item no.*

200 ≥70: box = 100	200 ≥45: box = 100	100 ≥70: box = 50 ≥160: box = 25	100 ≥50: box = 50 ≥160: box = 25 ≥260: box = 10	50 ≥80: box = 25 ≥160: box = 10	25 ≥160: box = 10
13.55	16.55	20.65	24.65	30.65	38.8
4.1	4.6	5.6	6.6	8.75	12.9
3.3	3.88	4.88	5.38	6.95	8.95
5.48	6.48	8.58	10.58	12.7	16.7

DIN 653 1.4305
Tırtıllı vidalar, ince tip

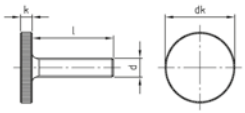
DIN 653 1.4305
Knurled thumb screws thin type

d	M
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*



50	50	50	50	50	25
9	11	12	14	16	20
2	2.5	2.5	3	3.5	4

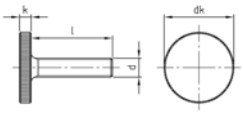


DIN 653
A1

DIN 653 1.4305
Tırtıllı vidalar, ince tip

DIN 653 1.4305
Knurled thumb screws thin type





	M 6	M 8	M 10
	Réf./Item no.	Réf./Item no.	Réf./Item no.
	065326 10		
	065326 12	065328 12	
	065326 14		
	065326 16	065328 16	0653210 16
	065326 18	065328 18	
	065326 20	065328 20	0653210 20
	065326 22	065328 22	0653210 22
	065326 25	065328 25	0653210 25
	065326 28	065328 28	0653210 28
	065326 30	065328 30	0653210 30
d		065328 32	0653210 32
	065326 35	065328 35	0653210 35
			0653210 38
			0653210 40
	25	25	25
	24	30	36
	5	6	8

DIN

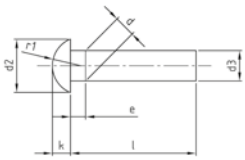
DIN 660 A2
Yuvarlak başlı dövme perçin

DIN 660 A2
Round head rivets

DIN 660
A2

Alt. Norm tarafından değiştirildi ISO 1051





Boyut k = maks. değer
- Yarı yuvarlak baş

Measurement k = max. value
- round head

DIN

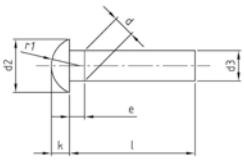
DIN 660
A4

Alt. Norm tarafından değiştirildi ISO 1051

DIN 660 A4
Yuvarlak başlı dövme perçin

DIN 660 A4
Round head rivets





Boyut k = maks. değer
– Yarı yuvarlak baş

Measurement k = max. value
– round head

DIN

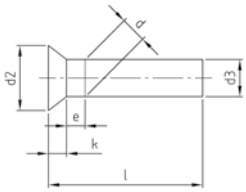
DIN 661 A2
Havşa başlı dövme perçin

DIN 661 A2
Countersunk head rivets

DIN 661
A2

Alt. Norm tarafından değiştirildi ISO 1051





Boyut k = maks. değer - Havşa baş

Measurement k = max. value - countersunk

DIN

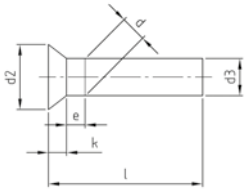
DIN 661
A4

Alt. Norm tarafından değiştirildi ISO 1051

DIN 661 A4
Havşa başlı dövme perçin

DIN 661 A4
Countersunk head rivets





Boyut k = maks. değer
- Havşa baş

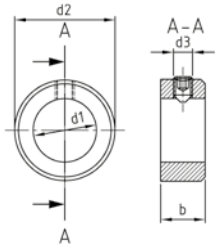
Measurement k = max. value
- countersunk

DIN

DIN 705 A2
DIN 914 setskur pimli ayar bilezikleri

DIN 705 A2
Adjusting rings with set screw ISO 4027



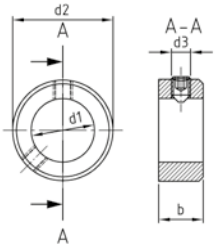


DIN 705 A2

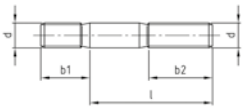
2 adet DIN 914 setskur pimli ayar bilezikleri

DIN 705 A2
Adjusting rings with 2 set screws ISO 4027









b2 = standarda göre

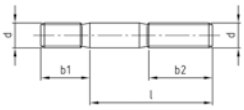
b2 = at norm

DIN 835
A4

DIN 835 A4
Saplama metal ucu ~ 2d

DIN 835 A4
Studs metal end ≈ 2d



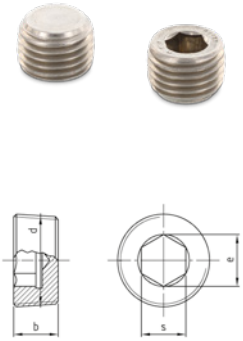


b2 = standarda göre

b2 = at norm

DIN 906 A2 DIN 158'e göre
Altıgen soket boru tıpası

DIN 906 A2 according to DIN 158
Hexagon socket pipe plugs conical thread, metric



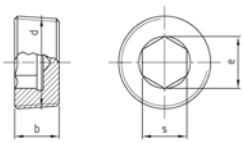
DIN 906
A2

DIN 906 A2 DIN 3858'e göre
Altıgen soket boru tıpası

DIN 906 A2 according to DIN 3858
Hexagon socket pipe plugs conical thread WHITWORTH

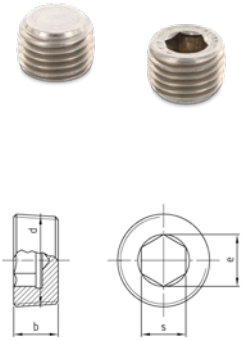






DIN 906 A4 DIN 158'e göre
Altıgen soket boru tıpası

DIN 906 A4 according to DIN 158
Hexagon socket pipe plugs conical thread, metric



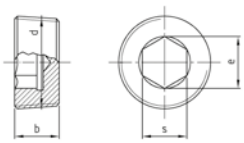
DIN 906
A4

DIN 906 A4 DIN 3858'e göre
Altıgen soket boru tıpası

DIN 906 A4 according to DIN 3858
Hexagon socket pipe plugs conical thread WHITWORTH



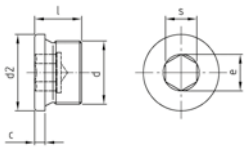




DIN 908 A2 DIN 13'e göre
Altıgen soket boru tıpası, metrik ince tabla

DIN 908 A2 according to DIN 13
Hexagon socket pipe plugs, metric fine pitch



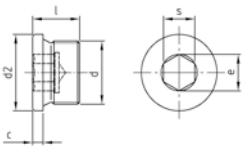


DIN 908 A2

DIN 908 A2 DIN 228'e göre Altıgen soket boru tıpası, metrik ince tabla

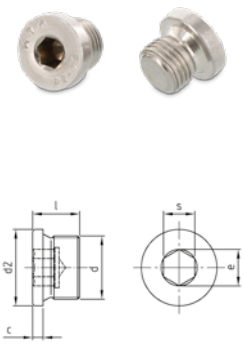
DIN 908 A2 sccording to DIN 228
Hexagon socket pipe plugs, cylindrical thread





DIN 908 A4 DIN 13'e göre
Altıgen soket boru tıpası, metrik ince tabla

DIN 908 A4 according to DIN 13
Hexagon socket pipe plugs, metric fine pitch

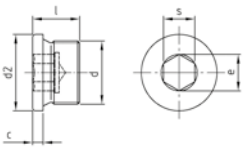


DIN 908
A4

DIN 908 A4 DIN 228'e göre
Altıgen soket boru tıpası, metrik ince tabla

DIN 908 A4 according to DIN 228
Hexagon socket pipe plugs, cylindrical thread

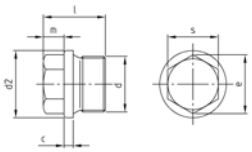




DIN 910 A2 DIN 13'e göre
Altıköşe boru tapası, flanşlı metrik ince diş

DIN 910 A2 according DIN 13
Hexagon head pipe plugs, metric fine pitch



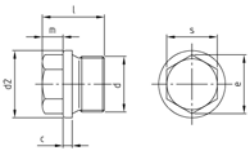


DIN 910
A2

DIN 910 A2 DIN 228'e göre
Altıköşe boru tapası, flanşlı metrik ince diş

DIN 910 A2 according to DIN 228
Hexagon head pipe plugs, cylindrical thread

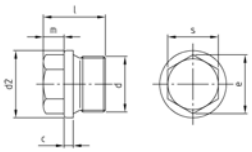




DIN 910 A4 DIN 13'e göre
Altıköşe boru tapası, flanşlı metrik ince diş

DIN 910 A4 according to DIN 13
Hexagon head pipe plugs, metric fine pitch



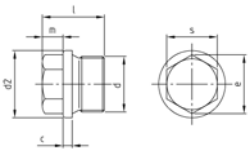


DIN 910
A4

DIN 910 A4 DIN 228'e göre
Altıköşe boru tapası, flanşlı metrik ince diş

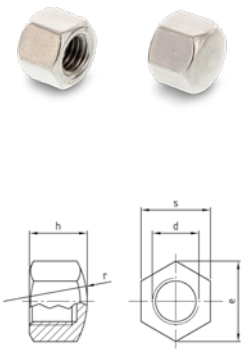
DIN 910 A4 according to DIN 228
Hexagon head pipe plugs, cylindrical thread





DIN 917 A2
Altıköşe kör somunu

DIN 917 A2
Hexagon cap nuts

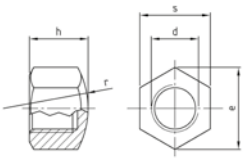


DIN 917
A2

DIN 917 A2 ince tip
Altıköşe kör somunu, ince tip

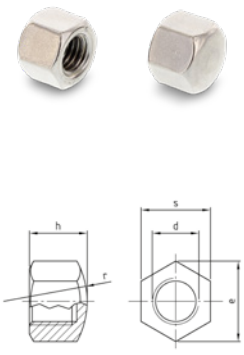
DIN 917 A2 fine
Hexagon cap nuts with fine pitch





DIN 917 A4
Altıköşe kör somunu

DIN 917 A4
Hexagon cap nuts

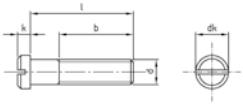


DIN 920
A2

DIN 920 A2
Düz yarıklı ve dar çaplı düz başlı vidalar

DIN 920 A2
Slotted pan head screws with small head





d	M					
	Ürün no./*Item no.*					
		500	500	500	200	200	100
		2.8	4	5.5	6.5	8	10
		1.2	1.8	2.4	2.7	3.1	3.8

b = Standarda uygun

b = at Norm

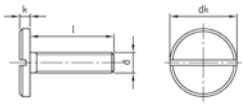
DIN 921 1.4305
Büyük başlıklı yarıklı tava başlı vida

DIN 921 1.4305
Slotted pan head screws with large head

d	M
	Ürün no./*Item no.*



100	100	100	100	50	50
6	8	12	16	20	25
1.2	1.8	2.4	2.7	3.1	3.8

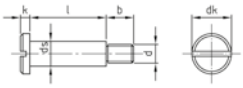


DIN 923
A1

DIN 923 1.4305
Yarıklı tava başlı destekli vida

DIN 923 1.4305
Slotted pan head screws with shoulder





b = Standarda uygun

b = at Norm

d	M					
	Ürün no./*Item no.*					
		100	100	100	100	50	50
		2.8	4	5.5	7	8	10
		1.2	1.8	2.4	2.7	3.1	3.8

DIN 923 1.4305
Yarıklı tava başlı destekli vida

DIN 923 1.4305
Slotted pan head screws with shoulder

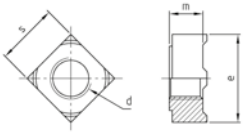
M 10
Réf./Item no.
0923210 10
50
13
4.6

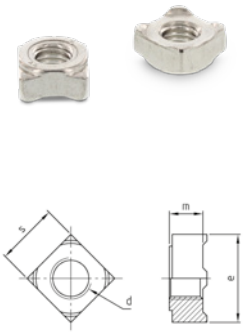
DIN 928
A2

DIN 928 A2
Kare kaynak somunu

DIN 928 A2
Square weld nuts





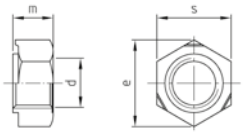

s
m
d
e

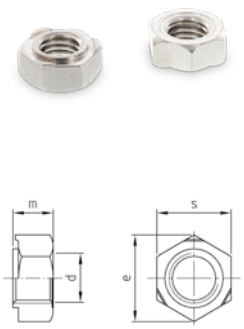
DIN 929
A2

DIN 929 A2
Altıköşe kaynak somunu

DIN 929 A2
Hexagon weld nuts



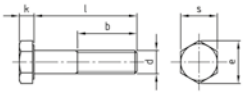



m
d
s
e

DIN 931
A2

Alt. Norm tarafından değiştirildi ISO 4014





b = Standarda uygun M6'dan M24 dâhil, M24'e kadar harici denetim.
Talep üzere farklı ölçüler (boyutlar) teslim edilebilir!

b = at Norm quality inspection from M6 including to M24 available on demand.
Other dimensions on demand!



DIN 931 A2
Altıköşe yarım dişli civata

DIN 931 A2
Hexagon head bolts

d	M				
	Ürün no./*Item no.*				
500 ≥25: box = 200 ≥70: box = 100	200 ≥45: box = 100	100 ≥70: box = 50 ≥160: box = 25	100 ≥50: box = 50 ≥160: box = 25 ≥260: box = 10	50 ≥75: box = 25 ≥160: box = 10	50 ≥75: box = 25 ≥160: box = 10
8.79	11.05	14.38	18.9	21.1	24.49
3.5	4	5.3	6.4	7.5	8.8
SW 8	SW 10	SW 13	SW 17	SW 19	SW 22

DIN 931 A2
Altıköşe yarım dişli civata

DIN 931 A2
Hexagon head bolts

DIN 931
A2

Alt. Norm tarafından değiştirildi ISO 4014

M 16	M 18	M 20	M 22	M 24	M 27
Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
0931216 45					
0931216 50	0931218 50				
0931216 55	0931218 55	0931220 55			
0931216 60	0931218 60	0931220 60	0931222 60		
0931216 65	0931218 65	0931220 65	0931222 65	0931224 65	
0931216 70	0931218 70	0931220 70	0931222 70	0931224 70	0931227 70
0931216 75	0931218 75	0931220 75	0931222 75	0931224 75	0931227 75
0931216 80	0931218 80	0931220 80	0931222 80	0931224 80	0931227 80
0931216 85	0931218 85	0931220 85	0931222 85	0931224 85	0931227 85
0931216 90	0931218 90	0931220 90	0931222 90	0931224 90	0931227 90
0931216 95	0931218 95	0931220 95	0931222 95	0931224 95	0931227 95
0931216 100	0931218 100	0931220 100	0931222 100	0931224 100	0931227 100
0931216 110	0931218 110	0931220 110	0931222 110	0931224 110	0931227 110
0931216 120	0931218 120	0931220 120	0931222 120	0931224 120	0931227 120
0931216 130	0931218 130	0931220 130	0931222 130	0931224 130	0931227 130
0931216 140	0931218 140	0931220 140	0931222 140	0931224 140	0931227 140
0931216 150	0931218 150	0931220 150	0931222 150	0931224 150	0931227 150
0931216 160	0931218 160	0931220 160	0931222 160	0931224 160	0931227 160
0931216 170	0931218 170	0931220 170	0931222 170	0931224 170	0931227 170
0931216 180	0931218 180	0931220 180	0931222 180	0931224 180	0931227 180
0931216 190	0931218 190	0931220 190	0931222 190	0931224 190	0931227 190
0931216 200	0931218 200	0931220 200	0931222 200	0931224 200	0931227 200
0931216 210		0931220 210		0931224 210	0931227 210
0931216 220		0931220 220		0931224 220	0931227 220
0931216 230		0931220 230		0931224 230	0931227 230
0931216 240		0931220 240		0931224 240	0931227 240
0931216 250		0931220 250		0931224 250	0931227 250
0931216 260		0931220 260		0931224 260	0931227 260

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

25 ≥160: box = 10	25	25 ≥160: box = 10	25 ≥110: box = 10 ≥130: box = 20	10 ≥210: box = 5	10 ≥160: box = 5
26.75	30.14	33.53	35.72	39.55	45.2
10	11.5	12.5	14	15	17
SW 24	SW 27	SW 30	SW 32	SW 36	SW 41

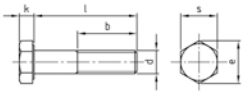
DIN 931
A2

Alt. Norm tarafından değiştirildi ISO 4014

DIN 931 A2
Altıköşe yarım dişli civata

DIN 931 A2
Hexagon head bolts





b = Standarda uygun M6'dan M24 dâhil, M24'e kadar harici denetim.
Talep üzere farklı ölçüler (boyutlar) teslim edilebilir!

b = at Norm quality inspection from M6 including to M24 available on demand.
Other dimensions on demand!



	M 30	M 33	M 36	M 39	M 42	M 45
	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
	0931230 80					
	0931230 85					
	0931230 90	0931233 90				
	0931230 95	0931233 95				
	0931230 100	0931233 100	0931236 100	0931239 100	0931242 100	
	0931230 110	0931233 110	0931236 110	0931239 110	0931242 110	0931245 110
	0931230 120	0931233 120	0931236 120	0931239 120	0931242 120	0931245 120
	0931230 130	0931233 130	0931236 130	0931239 130	0931242 130	0931245 130
	0931230 140	0931233 140	0931236 140	0931239 140	0931242 140	0931245 140
	0931230 150	0931233 150	0931236 150	0931239 150	0931242 150	0931245 150
	0931230 160	0931233 160	0931236 160	0931239 160	0931242 160	0931245 160
	0931230 170	0931233 170	0931236 170	0931239 170	0931242 170	0931245 170
	0931230 180	0931233 180	0931236 180	0931239 180	0931242 180	0931245 180
	0931230 190	0931233 190	0931236 190	0931239 190	0931242 190	0931245 190
	0931230 200	0931233 200	0931236 200	0931239 200	0931242 200	0931245 200
	0931230 210	0931233 210	0931236 210	0931239 210	0931242 210	0931245 210
	0931230 220	0931233 220	0931236 220	0931239 220	0931242 220	0931245 220
d	0931230 230	0931233 230	0931236 230	0931239 230	0931242 230	0931245 230
	0931230 240	0931233 240	0931236 240	0931239 240	0931242 240	0931245 240
	0931230 250	0931233 250	0931236 250	0931239 250	0931242 250	0931245 250
	0931230 260	0931233 260	0931236 260	0931239 260		0931245 260
	10 ≥160: box = 5	10 ≥130: box = 5	10 ≥130: box = 5	5 ≥120: box = 10	5	5
	50.85	55.37	60.79	66.44	69.44	76.95
	18.7	21	22.5	25	26	28
	SW 46	SW 50	SW 55	SW 60	SW 65	SW 70

DIN 931 A2
Altıköşe yarım dişli civata

DIN 931 A2
Hexagon head bolts

DIN 931
A2

Alt. Norm tarafından değiştirildi ISO 4014

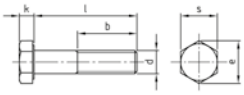
M 48	M 52
Réf./Item no.	Réf./Item no.
0931248 120	
0931248 130	0931252 130
0931248 140	0931252 140
0931248 150	0931252 150
0931248 160	0931252 160
0931248 170	0931252 170
0931248 180	0931252 180
0931248 190	0931252 190
0931248 200	0931252 200
0931248 210	0931252 210
0931248 220	0931252 220
0931248 230	0931252 230
0931248 240	0931252 240
0931248 250	0931252 250
	0931252 260

5	5
82.6	88.25
30	33
SW 75	SW 80

DIN 931
A4

Alt. Norm tarafından değiştirildi ISO 4014





b = Standarda uygun M6'dan M24 dâhil, M24'e kadar harici denetim.
Talep üzere farklı ölçüler (boyutlar) teslim edilebilir!

b = at Norm quality inspection from M6 including to M24 available on demand.
Other dimensions on demand!



DIN 931 A4
Altıköşe yarım dişli civata

DIN 931 A4
Hexagon head bolts

d	M
	Ürün no./*Item no.*

500 ≥25: box = 200 ≥70: box = 100	200 ≥45: box = 100	100 ≥70: box = 50 ≥160: box = 25	100 ≥50: box = 50 ≥160: box = 25 ≥260: box = 10	50 ≥75: box = 25 ≥160: box = 10	50 ≥75: box = 25 ≥160: box = 10
8.79	11.05	14.38	18.9	21.1	24.49
3.5	4	5.3	6.4	7.5	8.8
SW 8	SW 10	SW 13	SW 17	SW 19	SW 22

DIN 931 A4
Altıköşe yarım dişli civata

DIN 931 A4
Hexagon head bolts

DIN 931
A4

Alt. Norm tarafından değiştirildi ISO 4014

M 16	M 18	M 20	M 22	M 24	M 27
Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
0931416 45					
0931416 50	0931418 50				
0931416 55	0931418 55	0931420 55			
0931416 60	0931418 60	0931420 60	0931422 60		
0931416 65	0931418 65	0931420 65	0931422 65	0931424 65	
0931416 70	0931418 70	0931420 70	0931422 70	0931424 70	0931427 70
0931416 75	0931418 75	0931420 75	0931422 75	0931424 75	0931427 75
0931416 80	0931418 80	0931420 80	0931422 80	0931424 80	0931427 80
0931416 85	0931418 85	0931420 85	0931422 85	0931424 85	0931427 85
0931416 90	0931418 90	0931420 90	0931422 90	0931424 90	0931427 90
0931416 95	0931418 95	0931420 95	0931422 95	0931424 95	0931427 95
0931416 100	0931418 100	0931420 100	0931422 100	0931424 100	0931427 100
0931416 110	0931418 110	0931420 110	0931422 110	0931424 110	0931427 110
0931416 120	0931418 120	0931420 120	0931422 120	0931424 120	0931427 120
0931416 130	0931418 130	0931420 130	0931422 130	0931424 130	0931427 130
0931416 140	0931418 140	0931420 140	0931422 140	0931424 140	0931427 140
0931416 150	0931418 150	0931420 150	0931422 150	0931424 150	0931427 150
0931416 160	0931418 160	0931420 160	0931422 160	0931424 160	0931427 160
0931416 170	0931418 170	0931420 170	0931422 170	0931424 170	0931427 170
0931416 180	0931418 180	0931420 180	0931422 180	0931424 180	0931427 180
0931416 190	0931418 190	0931420 190	0931422 190	0931424 190	0931427 190
0931416 200	0931418 200	0931420 200	0931422 200	0931424 200	0931427 200
0931416 210		0931420 210		0931424 210	0931427 210
0931416 220		0931420 220		0931424 220	0931427 220
0931416 230		0931420 230		0931424 230	0931427 230
0931416 240		0931420 240		0931424 240	0931427 240
0931416 250		0931420 250		0931424 250	0931427 250
0931416 260		0931420 260		0931424 260	0931427 260

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

25 ≥160: box = 10	25	25 ≥160: box = 10	25 ≥110: box = 10 ≥130: box = 20	10 ≥210: box = 5	10 ≥160: box = 5
26.75	30.14	33.53	35.72	39.55	45.2
10	11.5	12.5	14	15	17
SW 24	SW 27	SW 30	SW 32	SW 36	SW 41

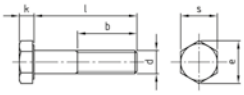
DIN 931
A4

Alt. Norm tarafından değiştirildi ISO 4014

DIN 931 A4
Altıköşe yarım dişli civata

DIN 931 A4
Hexagon head bolts





b = Standarda uygun M6'dan M24 dâhil, M24'e kadar harici denetim.
Talep üzere farklı ölçüler (boyutlar) teslim edilebilir!

b = at Norm quality inspection from M6 including to M24 available on demand.
Other dimensions on demand!



	M 30	M 33	M 36	M 39	M 42	M 45
	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
	0931430 80					
	0931430 85					
	0931430 90	0931433 90				
	0931430 95	0931433 95				
	0931430 100	0931433 100	0931436 100	0931439 100	0931442 100	
	0931430 110	0931433 110	0931436 110	0931439 110	0931442 110	0931445 110
	0931430 120	0931433 120	0931436 120	0931439 120	0931442 120	0931445 120
	0931430 130	0931433 130	0931436 130	0931439 130	0931442 130	0931445 130
	0931430 140	0931433 140	0931436 140	0931439 140	0931442 140	0931445 140
	0931430 150	0931433 150	0931436 150	0931439 150	0931442 150	0931445 150
	0931430 160	0931433 160	0931436 160	0931439 160	0931442 160	0931445 160
	0931430 170	0931433 170	0931436 170	0931439 170	0931442 170	0931445 170
	0931430 180	0931433 180	0931436 180	0931439 180	0931442 180	0931445 180
	0931430 190	0931433 190	0931436 190	0931439 190	0931442 190	0931445 190
	0931430 200	0931433 200	0931436 200	0931439 200	0931442 200	0931445 200
	0931430 210	0931433 210	0931436 210	0931439 210	0931442 210	0931445 210
	0931430 220	0931433 220	0931436 220	0931439 220	0931442 220	0931445 220
d	0931430 230	0931433 230	0931436 230	0931439 230	0931442 230	0931445 230
	0931430 240	0931433 240	0931436 240	0931439 240	0931442 240	0931445 240
	0931430 250	0931433 250	0931436 250	0931439 250	0931442 250	0931445 250
	0931430 260	0931433 260	0931436 260	0931439 260		0931445 260
	10 ≥160: box = 5	10 ≥130: box = 5	10 ≥130: box = 5	10 ≥110: box = 5	5	5
	50.85	55.37	60.79	66.44	69.44	76.95
	18.7	21	22.5	25	26	28
	SW 46	SW 50	SW 55	SW 60	SW 65	SW 70

DIN 931 A4
Altıköşe yarım dişli civata

DIN 931 A4
Hexagon head bolts

DIN 931
A4

Alt. Norm
tarafından değiştirildi ISO
4014

M 48	M 52
Réf./Item no.	Réf./Item no.
0931448 120	
0931448 130	0931452 130
0931448 140	0931452 140
0931448 150	0931452 150
0931448 160	0931452 160
0931448 170	0931452 170
0931448 180	0931452 180
0931448 190	0931452 190
0931448 200	0931452 200
0931448 210	0931452 210
0931448 220	0931452 220
0931448 230	0931452 230
0931448 240	0931452 240
0931448 250	0931452 250
	0931452 260

5	5
82.6	88.25
30	33
SW 75	SW 80

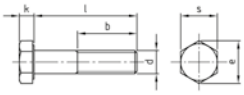
DIN 931
A4-80

Alt. Norm tarafından değiştirildi ISO 4014

DIN 931 A4-80
Altıköşe yarım dişli civata

DIN 931 A4-80
Hexagon head bolts





b = Standarda uygun M6'dan M24 dâhil, M24'e kadar harici denetim.
Talep üzere farklı ölçüler (boyutlar) teslim edilebilir!

b = at Norm quality inspection from M6 including to M24 available on demand.
Other dimensions on demand!
- tensile strength 800 N/mm²



d	M				
	Ürün no./*Item no.*				
		500 ≥25: box = 200 ≥70: box = 100	200 ≥45: box = 100	100 ≥70: box = 50 ≥160: box = 25	100 ≥50: box = 50 ≥160: box = 25 ≥210: box = 10	50 ≥75: box = 25 ≥160: box = 10
		8.79	11.05	14.38	18.9	21.1
		3.5	4	5.3	6.4	7.5
		SW 8	SW 10	SW 13	SW 17	SW 19

DIN 931 A4-80
Altıköşe yarım dişli civata

DIN 931 A4-80
Hexagon head bolts

DIN 931
A4-80

Alt. Norm tarafından değiştirildi ISO 4014

M 14	M 16	M 18	M 20	M 22
Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
093148014 40				
093148014 45	093148016 45			
093148014 50	093148016 50	093148018 50		
093148014 55	093148016 55	093148018 55	093148020 55	
093148014 60	093148016 60	093148018 60	093148020 60	093148022 60
093148014 65	093148016 65	093148018 65	093148020 65	093148022 65
093148014 70	093148016 70	093148018 70	093148020 70	093148022 70
093148014 75	093148016 75	093148018 75	093148020 75	093148022 75
093148014 80	093148016 80	093148018 80	093148020 80	093148022 80
093148014 85	093148016 85	093148018 85	093148020 85	093148022 85
093148014 90	093148016 90	093148018 90	093148020 90	093148022 90
093148014 95	093148016 95	093148018 95	093148020 95	093148022 95
093148014 100	093148016 100	093148018 100	093148020 100	093148022 100
093148014 110	093148016 110	093148018 110	093148020 110	093148022 110
093148014 120	093148016 120	093148018 120	093148020 120	093148022 120
093148014 130	093148016 130	093148018 130	093148020 130	093148022 130
093148014 140	093148016 140	093148018 140	093148020 140	093148022 140
093148014 150	093148016 150	093148018 150	093148020 150	093148022 150
093148014 160	093148016 160	093148018 160	093148020 160	093148022 160
093148014 170	093148016 170	093148018 170	093148020 170	093148022 170
093148014 180	093148016 180	093148018 180	093148020 180	093148022 180
093148014 190	093148016 190	093148018 190	093148020 190	093148022 190
093148014 200	093148016 200	093148018 200	093148020 200	093148022 200
	093148016 210		093148020 210	
	093148016 220		093148020 220	
	093148016 230		093148020 230	
	093148016 240		093148020 240	
	093148016 250		093148020 250	
	093148016 260		093148020 260	

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

50 ≥75: box = 25 ≥160: box = 10	25 ≥160: box = 10	25	25 ≥160: box = 10	25 ≥110: box = 10
24.49	26.75	30.14	32.53	35.72
8.8	10	11.5	12.5	14
SW 22	SW 24	SW 27	SW 30	SW 32

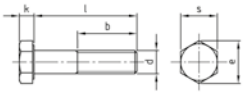
DIN 931
A4-80

Alt. Norm tarafından değiştirildi ISO 4014

DIN 931 A4-80
Altıköşe yarım dişli civata

DIN 931 A4-80
Hexagon head bolts





b = Standarda uygun M6'dan M24 dâhil, M24'e kadar harici denetim.
Talep üzere farklı ölçüler (boyutlar) teslim edilebilir!

b = at Norm quality inspection from M6 including to M24 available on demand.
Other dimensions on demand!
- tensile strength 800 N/mm²



d	M 24	M 27	M 30	M 33	M 36
	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
	093148024 65				
	093148024 70	093148027 70			
	093148024 75	093148027 75			
	093148024 80	093148027 80	093148030 80		
	093148024 85				
	093148024 90	093148027 90	093148030 90	093148033 90	
	093148024 95				
	093148024 100	093148027 100	093148030 100	093148033 100	093148036 100
	093148024 110	093148027 110	093148030 110	093148033 110	093148036 110
	093148024 120	093148027 120	093148030 120	093148033 120	093148036 120
	093148024 130	093148027 130	093148030 130	093148033 130	093148036 130
	093148024 140	093148027 140	093148030 140	093148033 140	093148036 140
	093148024 150	093148027 150	093148030 150	093148033 150	093148036 150
	093148024 160	093148027 160	093148030 160	093148033 160	093148036 160
	093148024 170	093148027 170	093148030 170	093148033 170	093148036 170
	093148024 180	093148027 180	093148030 180	093148033 180	093148036 180
	093148024 190	093148027 190	093148030 190	093148033 190	093148036 190
	093148024 200	093148027 200	093148030 200	093148033 200	093148036 200
	093148024 210				
	093148024 220				
	093148024 230				
	093148024 240				
	093148024 250				
	093148024 260				
	10 ≥210: box = 5	10 ≥160: box = 5	10 ≥160: box = 5	10 ≥130: box = 5	10 ≥130: box = 5
	39.55	45.2	50.85	55.37	60.79
	15	17	18.7	21	22.5
	SW 36	SW 41	SW 46	SW 50	SW 55

DIN 931 1.4828
Altıköşe yarım dişli civata

DIN 931 1.4828
Hexagon head bolts

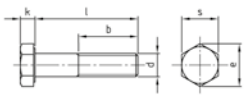
d	M
	Ürün no./*Item no.*

25
33.53
12.5
SW 30

DIN 931
1.4828

Alt. Norm tarafından değiştirildi ISO 4014





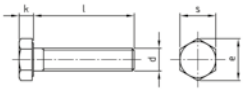
b = Standarda uygun Talep üzere farklı ölçüler (boyutlar) teslim edilebilir!

b = at Norm
Other dimensions on demand!

DIN 933
A2

Alt. Norm tarafından değiştirildi ISO 4017





M6'dan M24 dâhil, M24'e kadar harici denetim.
Talep üzere farklı ölçüler (boyutlar) teslim edilebilir!

quality inspection from M6 including to M24 available on demand.
Other dimensions on demand!

Schäfer + Peters GmbH
74613 Öhringen
Z - 30.3 - 6

DIN 933 A2
Altıköşe tam dişli civata

DIN 933 A2
Hexagon head screws

d	M				
	Ürün no./*Item no.*				
1000	1000	1000 ≥35: box = 500 ≥50: box = 200	1000 ≥20: box = 500 ≥35: box = 200 ≥60: box = 100	500 ≥25: box = 200 ≥70: box = 100	500 ≥14: box = 200 ≥45: box = 100 ≥180: box = 50
4.32	5.45	6.01	7.66	8.79	11.05
1.4	1.7	2	2.8	3.5	4
SW 4	SW 5	SW 5,5	SW 7	SW 8	SW 10

DIN 933 A2
Altıköşe tam dişli civata

DIN 933 A2
Hexagon head screws

DIN 933
A2

Alt. Norm tarafından değiştirildi ISO 4017

M 8	M 10	M 12	M 14	M 16	M 18
Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
093328 8					
093328 10	0933210 10				
093328 12	0933210 12	0933212 12			
093328 14	0933210 14	0933212 14			
093328 16	0933210 16	0933212 16		0933216 16	
093328 18	0933210 18	0933212 18			
093328 20	0933210 20	0933212 20	0933214 20	0933216 20	
093328 22	0933210 22	0933212 22			
093328 25	0933210 25	0933212 25	0933214 25	0933216 25	0933218 25
093328 28					
093328 30	0933210 30	0933212 30	0933214 30	0933216 30	0933218 30
093328 35		0933212 35	0933214 35	0933216 35	0933218 35
093328 40	0933210 40	0933212 40	0933214 40	0933216 40	0933218 40
093328 45	0933210 45	0933212 45	0933214 45	0933216 45	0933218 45
093328 50	0933210 50	0933212 50	0933214 50	0933216 50	0933218 50
093328 55	0933210 55	0933212 55	0933214 55	0933216 55	0933218 55
093328 60	0933210 60	0933212 60	0933214 60	0933216 60	0933218 60
093328 65	0933210 65	0933212 65	0933214 65	0933216 65	0933218 65
093328 70	0933210 70	0933212 70	0933214 70	0933216 70	0933218 70
093328 75	0933210 75	0933212 75	0933214 75	0933216 75	0933218 75
093328 80	0933210 80	0933212 80	0933214 80	0933216 80	0933218 80
093328 85	0933210 85	0933212 85	0933214 85	0933216 85	0933218 85
093328 90	0933210 90	0933212 90	0933214 90	0933216 90	0933218 90
093328 95	0933210 95	0933212 95	0933214 95	0933216 95	0933218 95
093328 100	0933210 100	0933212 100	0933214 100	0933216 100	0933218 100
093328 110	0933210 110	0933212 110	0933214 110	0933216 110	0933218 110
093328 120	0933210 120	0933212 120	0933214 120	0933216 120	0933218 120
093328 130	0933210 130	0933212 130	0933214 130	0933216 130	0933218 130
093328 140	0933210 140	0933212 140	0933214 140	0933216 140	0933218 140
093328 150	0933210 150	0933212 150	0933214 150	0933216 150	0933218 150
093328 160	0933210 160	0933212 160		0933216 160	
093328 170	0933210 170	0933212 170		0933216 170	
093328 180	0933210 180	0933212 180		0933216 180	
093328 190	0933210 190	0933212 190		0933216 190	
093328 200	0933210 200	0933212 200		0933216 200	

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

500 ≥14: box = 200 ≥25: box = 100 ≥70: box = 50 ≥160: box = 25	100 ≥50: box = 50 ≥160: box = 25	50 ≥75: box = 25 ≥160: box = 10	50 ≥75: box = 25	25 ≥160: box = 10	25
14.38	18.9	21.1	24.49	26.75	30.14
5.3	6.4	7.5	8.8	10	11.5
SW 13	SW 17	SW 19	SW 22	SW 24	SW 27

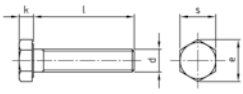
DIN 933
A2

Alt. Norm tarafından değiştirildi ISO 4017

DIN 933 A2
Altıköşe tam dişli civata

DIN 933 A2
Hexagon head screws





M6'dan M24 dâhil, M24'e kadar harici denetim.
Talep üzere farklı ölçüler (boyutlar) teslim edilebilir!

quality inspection from M6 including to M24 available on demand.
Other dimensions on demand!



d	M 20	M 22	M 24	M 27	M 30	M 33
	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
	0933220 20					
	0933220 25					
	0933220 30	0933222 30	0933224 30			
	0933220 35	0933222 35	0933224 35			
	0933220 40	0933222 40	0933224 40			
	0933220 45	0933222 45	0933224 45			
	0933220 50	0933222 50	0933224 50	0933227 50		
	0933220 55	0933222 55	0933224 55	0933227 55		
	0933220 60	0933222 60	0933224 60	0933227 60	0933230 60	
	0933220 65	0933222 65	0933224 65	0933227 65	0933230 65	
	0933220 70	0933222 70	0933224 70	0933227 70	0933230 70	0933233 70
	0933220 75	0933222 75	0933224 75	0933227 75	0933230 75	0933233 75
	0933220 80	0933222 80	0933224 80	0933227 80	0933230 80	0933233 80
	0933220 85	0933222 85	0933224 85	0933227 85	0933230 85	0933233 85
	0933220 90	0933222 90	0933224 90	0933227 90	0933230 90	0933233 90
	0933220 95	0933222 95	0933224 95	0933227 95	0933230 95	0933233 95
	0933220 100	0933222 100	0933224 100	0933227 100	0933230 100	0933233 100
	0933220 110	0933222 110	0933224 110	0933227 110	0933230 110	0933233 110
	0933220 120	0933222 120	0933224 120	0933227 120	0933230 120	0933233 120
	0933220 130	0933222 130	0933224 130	0933227 130	0933230 130	0933233 130
	0933220 140	0933222 140	0933224 140	0933227 140	0933230 140	0933233 140
	0933220 150	0933222 150	0933224 150	0933227 150	0933230 150	0933233 150
	0933220 160		0933224 160	0933227 160	0933230 160	0933233 160
	0933220 170		0933224 170	0933227 170	0933230 170	0933233 170
	0933220 180		0933224 180	0933227 180	0933230 180	0933233 180
	0933220 190		0933224 190	0933227 190	0933230 190	0933233 190
	0933220 200		0933224 200	0933227 200	0933230 200	0933233 200

25 ≥160: box = 10	25 ≥110: box = 10	10	10 ≥160: box = 5	10 ≥160: box = 5	10 ≥130: box = 5
33.53	35.72	39.98	45.2	50.85	55.37
12.5	14	15	17	18.7	21
SW 30	SW 32	SW 36	SW 41	SW 46	SW 50

DIN 933 A2
Altıköşe tam dişli civata

DIN 933 A2
Hexagon head screws

DIN 933
A2

Alt. Norm
tarafından değiştirildi ISO
4017

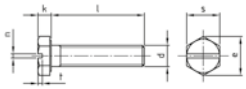
M 36	M 39	M 42	M 45	M 48	M 52
Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
0933236 80					
0933236 85					
0933236 90	0933239 90				
0933236 95					
0933236 100	0933239 100	0933242 100			
0933236 110	0933239 110	0933242 110	0933245 110		
0933236 120	0933239 120	0933242 120	0933245 120	0933248 120	
0933236 130	0933239 130	0933242 130	0933245 130	0933248 130	0933252 130
0933236 140	0933239 140	0933242 140	0933245 140	0933248 140	0933252 140
0933236 150	0933239 150	0933242 150	0933245 150	0933248 150	0933252 150
0933236 160	0933239 160	0933242 160	0933245 160	0933248 160	0933252 160
0933236 170	0933239 170	0933242 170	0933245 170	0933248 170	0933252 170
0933236 180	0933239 180	0933242 180	0933245 180	0933248 180	0933252 180
0933236 190	0933239 190	0933242 190	0933245 190	0933248 190	0933252 190
0933236 200	0933239 200	0933242 200	0933245 200	0933248 200	0933252 200

5	5	5	5	5	5
60.79	66.44	71.3	76.95	82.6	88.25
22.5	25	26	28	30	33
SW 55	SW 60	SW 65	SW 70	SW 75	SW 80

DIN 933
A2

Alt. Norm tarafından değiştirildi ISO 4017





M6'dan M24 dâhil, M24'e kadar harici denetim.
Talep üzere farklı ölçüler (boyutlar) teslim edilebilir!

quality inspection from M6 including to M24 available on demand.
Other dimensions on demand!



DIN 933 A2 SZ
Yarıklı Altıköşe tam dişli civata

DIN 933 A2 SZ
Hexagon head screws with slot

d	M				
	Ürün no./*Item no.*				
1000	500	500	500 ≥16: box = 200	200 ≥25: box = 100	200
6	8	9	11	14.38	18.9
2	3	3.5	4	5.3	6.4
0.8	1	1.2	1.6	2	2
0.8	1.1	1.4	1.6	2.1	2.1
SW 5,5	SW 7	SW 8	SW 10	SW 13	SW 17

DIN 933 A2-80
Altıköşe tam dişli civata

DIN 933 A2-80
Hexagon head screws

DIN 933
A2-80

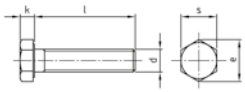
Alt. Norm tarafından değiştirildi ISO 4017

d	M
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

500 ≥16: box = 200 ≥45: box = 100	200 ≥25: box = 100 ≥70: box = 50	100	50 ≥120: box = 25	25
11.05	14.38	18.9	21.1	26.75
4	5.3	6.4	7.5	10
SW 10	SW 13	SW 17	SW 19	SW 24





M6'dan M24 dâhil, M24'e kadar harici denetim.
Talep üzere farklı ölçüler (boyutlar) teslim edilebilir!

quality inspection from M6 including to M24 available on demand.
Other dimensions on demand!
- tensile strength 800 N/mm²

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DIN

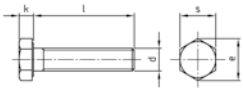
DIN 933
A2-80

Alt. Norm tarafından değiştirildi ISO 4017

DIN 933 A2-80
Altıköşe tam dişli civata

DIN 933 A2-80
Hexagon head screws





M6'dan M24 dâhil, M24'e kadar harici denetim.
Talep üzere farklı ölçüler (boyutlar) teslim edilebilir!

quality inspection from M6 including to M24 available on demand.
Other dimensions on demand!
- tensile strength 800 N/mm²



	M 20
	Réf./*Item no.*
	093328020 40
	093328020 45
	093328020 50
	093328020 55
	093328020 60
	093328020 65
	093328020 70
	093328020 75
	093328020 80
d	093328020 85
	093328020 90
	093328020 100
	25
	33.53
	12.5
	SW 30

DIN

DIN 933 A4
Altıköşe tam dişli civata

DIN 933 A4
Hexagon head screws

DIN 933
A4

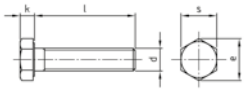
Alt. Norm tarafından değiştirildi ISO 4017

d	M
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

1000	1000	1000 ≥35: box = 500 ≥50: box = 200	1000 ≥20: box = 500 ≥35: box = 200 ≥60: box = 100	500 ≥25: box = 200 ≥70: box = 100	500 ≥14: box = 200 ≥45: box = 100 ≥160: box = 50
4.32	5.45	6.01	7.66	8.79	11.05
1.4	1.7	2	2.8	3.5	4
SW 4	SW 5	SW 5,5	SW 7	SW 8	SW 10





M6'dan M24 dâhil, M24'e kadar harici denetim.
Talep üzere farklı ölçüler (boyutlar) teslim edilebilir!

quality inspection from M6 including to M24 available on demand.
Other dimensions on demand!



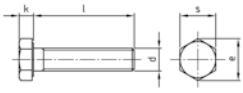
DIN 933
A4

Alt. Norm tarafından değiştirildi ISO 4017

DIN 933 A4
Altıköşe tam dişli civata

DIN 933 A4
Hexagon head screws





M6'dan M24 dâhil, M24'e kadar harici denetim.
Talep üzere farklı ölçüler (boyutlar) teslim edilebilir!

quality inspection from M6 including to M24 available on demand.
Other dimensions on demand!



d	M 8	M 10	M 12	M 14	M 16	M 18
	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
	093348 8					
	093348 10	0933410 10				
	093348 12	0933410 12	0933412 12			
	093348 14	0933410 14	0933412 14			
	093348 16	0933410 16	0933412 16		0933416 16	
	093348 18	0933410 18	0933412 18			
	093348 20	0933410 20	0933412 20	0933414 20	0933416 20	
	093348 22	0933410 22	0933412 22			
	093348 25	0933410 25	0933412 25	0933414 25	0933416 25	0933418 25
	093348 28					
	093348 30	0933410 30	0933412 30	0933414 30	0933416 30	0933418 30
	093348 35	0933410 35	0933412 35	0933414 35	0933416 35	0933418 35
	093348 40	0933410 40	0933412 40	0933414 40	0933416 40	0933418 40
	093348 45	0933410 45	0933412 45	0933414 45	0933416 45	0933418 45
	093348 50	0933410 50	0933412 50	0933414 50	0933416 50	0933418 50
	093348 55	0933410 55	0933412 55	0933414 55	0933416 55	0933418 55
	093348 60	0933410 60	0933412 60	0933414 60	0933416 60	0933418 60
	093348 65	0933410 65	0933412 65	0933414 65	0933416 65	0933418 65
	093348 70	0933410 70	0933412 70	0933414 70	0933416 70	0933418 70
	093348 75	0933410 75	0933412 75	0933414 75	0933416 75	0933418 75
	093348 80	0933410 80	0933412 80	0933414 80	0933416 80	0933418 80
	093348 85	0933410 85	0933412 85	0933414 85	0933416 85	0933418 85
	093348 90	0933410 90	0933412 90	0933414 90	0933416 90	0933418 90
	093348 95	0933410 95	0933412 95	0933414 95	0933416 95	0933418 95
	093348 100	0933410 100	0933412 100	0933414 100	0933416 100	0933418 100
	093348 110	0933410 110	0933412 110	0933414 110	0933416 110	0933418 110
	093348 120	0933410 120	0933412 120	0933414 120	0933416 120	0933418 120
	093348 130	0933410 130	0933412 130	0933414 130	0933416 130	0933418 130
	093348 140	0933410 140	0933412 140	0933414 140	0933416 140	0933418 140
	093348 150	0933410 150	0933412 150	0933414 150	0933416 150	0933418 150
	093348 160	0933410 160	0933412 160		0933416 160	
	093348 170	0933410 170	0933412 170		0933416 170	
	093348 180	0933410 180	0933412 180		0933416 180	
	093348 190	0933410 190	0933412 190		0933416 190	
	093348 200	0933410 200	0933412 200		0933416 200	
	500 ≥14: box = 200 ≥25: box = 100 ≥70: box = 50 ≥160: box = 25	100 ≥50: box = 50 ≥160: box = 25	50 ≥75: box = 25 ≥160: box = 10	50 ≥75: box = 25	25 ≥160: box = 10	25
	14.38	18.9	21.1	24.49	26.75	30.14
	5.3	6.4	7.5	8.8	10	11.5
	SW 13	SW 17	SW 19	SW 22	SW 24	SW 27

DIN 933 A4
Altıköşe tam dişli civata

DIN 933 A4
Hexagon head screws

DIN 933
A4

Alt. Norm tarafından değiştirildi ISO 4017

M 20	M 22	M 24	M 27	M 30	M 33
Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
0933420 20					
0933420 25					
0933420 30	0933422 30	0933424 30			
0933420 35	0933422 35	0933424 35			
0933420 40	0933422 40	0933424 40			
0933420 45	0933422 45	0933424 45			
0933420 50	0933422 50	0933424 50	0933427 50		
0933420 55	0933422 55	0933424 55	0933427 55		
0933420 60	0933422 60	0933424 60	0933427 60	0933430 60	
0933420 65	0933422 65	0933424 65	0933427 65	0933430 65	
0933420 70	0933422 70	0933424 70	0933427 70	0933430 70	0933433 70
0933420 75	0933422 75	0933424 75	0933427 75	0933430 75	0933433 75
0933420 80	0933422 80	0933424 80	0933427 80	0933430 80	0933433 80
0933420 85	0933422 85	0933424 85	0933427 85	0933430 85	0933433 85
0933420 90	0933422 90	0933424 90	0933427 90	0933430 90	0933433 90
0933420 95	0933422 95	0933424 95	0933427 95	0933430 95	0933433 95
0933420 100	0933422 100	0933424 100	0933427 100	0933430 100	0933433 100
0933420 110	0933422 110	0933424 110	0933427 110	0933430 110	0933433 110
0933420 120	0933422 120	0933424 120	0933427 120	0933430 120	0933433 120
0933420 130	0933422 130	0933424 130	0933427 130	0933430 130	0933433 130
0933420 140	0933422 140	0933424 140	0933427 140	0933430 140	0933433 140
0933420 150	0933422 150	0933424 150	0933427 150	0933430 150	0933433 150
0933420 160		0933424 160	0933427 160	0933430 160	0933433 160
0933420 170		0933424 170	0933427 170	0933430 170	0933433 170
0933420 180		0933424 180	0933427 180	0933430 180	0933433 180
0933420 190		0933424 190	0933427 190	0933430 190	0933433 190
0933420 200		0933424 200	0933427 200	0933430 200	0933433 200

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

25 ≥160: box = 10	25 ≥110: box = 10 ≥140: box = 20	10	10 ≥160: box = 5	10 ≥160: box = 5	10 ≥130: box = 5
33.53	35.75	39.98	45.2	50.85	55.37
12.5	14	15	17	18.7	21
SW 30	SW 32	SW 36	SW 41	SW 46	SW 50

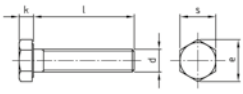
DIN 933
A4

Alt. Norm tarafından değiştirildi ISO 4017

DIN 933 A4
Altıköşe tam dişli civata

DIN 933 A4
Hexagon head screws





M6'dan M24 dâhil, M24'e kadar harici denetim.
Talep üzere farklı ölçüler (boyutlar) teslim edilebilir!

quality inspection from M6 including to M24 available on demand.
Other dimensions on demand!



	M 36	M 39	M 42	M 45	M 48	M 52
	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
d	0933436 80					
	0933436 85					
	0933436 90	0933439 90				
	0933436 95					
	0933436 100	0933439 100	0933442 100			
	0933436 110	0933439 110	0933442 110	0933445 110		
	0933436 120	0933439 120	0933442 120	0933445 120	0933448 120	
	0933436 130	0933439 130	0933442 130	0933445 130	0933448 130	0933452 130
	0933436 140	0933439 140	0933442 140	0933445 140	0933448 140	0933452 140
	0933436 150	0933439 150	0933442 150	0933445 150	0933448 150	0933452 150
	0933436 160	0933439 160	0933442 160	0933445 160	0933448 160	0933452 160
	0933436 170	0933439 170	0933442 170	0933445 170	0933448 170	0933452 170
	0933436 180	0933439 180	0933442 180	0933445 180	0933448 180	0933452 180
	0933436 190	0933439 190	0933442 190	0933445 190	0933448 190	0933452 190
	0933436 200	0933439 200	0933442 200	0933445 200	0933448 200	0933452 200
	5	5	5	5	5	5
	60.79	66.44	71.3	76.95	82.6	88.25
	22.5	25	26	28	30	33
	SW 55	SW 60	SW 65	SW 70	SW 75	SW 80

DIN 933 A4-80
Altıköşe tam dişli civata

DIN 933 A4-80
Hexagon head screws

DIN 933
A4-80

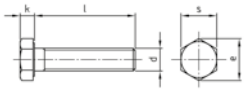
Alt. Norm tarafından değiştirildi ISO 4017

d	M
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

1000 ≥20: box = 500 ≥35: box = 200 ≥60: box = 100	500 ≥25: box = 200 ≥70: box = 100	500 ≥14: box = 200 ≥45: box = 100 ≥160: box = 50	500 ≥14: box = 200 ≥25: box = 100 ≥70: box = 50	100 ≥50: box = 50 ≥160: box = 25
7.66	8.79	11.05	14.38	18.9
2.8	3.5	4	5.3	6.4
SW 7	SW 8	SW 10	SW 13	SW 17





M6'dan M24 dâhil, M24'e kadar harici denetim.
Talep üzere farklı ölçüler (boyutlar) teslim edilebilir!

quality inspection from M6 including to M24 available on demand.
Other dimensions on demand!
- tensile strength 800 N/mm²

Schäfer + Peters GmbH
74613 Öhringen
Z - 30.3 - 6

DIN

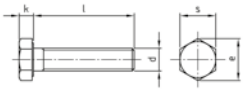
DIN 933
A4-80

Alt. Norm tarafından değiştirildi ISO 4017

DIN 933 A4-80
Altıköşe tam dişli civata

DIN 933 A4-80
Hexagon head screws





M6'dan M24 dâhil, M24'e kadar harici denetim.
Talep üzere farklı ölçüler (boyutlar) teslim edilebilir!

quality inspection from M6 including to M24 available on demand.
Other dimensions on demand!
- tensile strength 800 N/mm²

Schäfer + Peters GmbH
74613 Öhringen
Z - 30.3 - 6

DIN

d	M 12	M 14	M 16	M 18	M 20
	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
	093348012 16				
	093348012 20	093348014 20	093348016 20		
	093348012 25	093348014 25	093348016 25	093348018 25	093348020 25
	093348012 30	093348014 30	093348016 30	093348018 30	093348020 30
	093348012 35	093348014 35	093348016 35	093348018 35	093348020 35
	093348012 40	093348014 40	093348016 40	093348018 40	093348020 40
	093348012 45	093348014 45	093348016 45	093348018 45	093348020 45
	093348012 50	093348014 50	093348016 50	093348018 50	093348020 50
	093348012 55	093348014 55	093348016 55	093348018 55	093348020 55
	093348012 60	093348014 60	093348016 60	093348018 60	093348020 60
	093348012 65	093348014 65	093348016 65	093348018 65	093348020 65
	093348012 70	093348014 70	093348016 70	093348018 70	093348020 70
	093348012 75	093348014 75	093348016 75	093348018 75	093348020 75
	093348012 80	093348014 80	093348016 80	093348018 80	093348020 80
	093348012 85	093348014 85	093348016 85	093348018 85	093348020 85
	093348012 90	093348014 90	093348016 90	093348018 90	093348020 90
	093348012 95	093348014 95	093348016 95	093348018 95	093348020 95
	093348012 100	093348014 100	093348016 100	093348018 100	093348020 100
	093348012 110	093348014 110	093348016 110	093348018 110	093348020 110
	093348012 120	093348014 120	093348016 120	093348018 120	093348020 120
	093348012 130	093348014 130	093348016 130	093348018 130	093348020 130
	093348012 140	093348014 140	093348016 140	093348018 140	093348020 140
	093348012 150	093348014 150	093348016 150	093348018 150	093348020 150
	093348012 160		093348016 160		093348020 160
	093348012 170		093348016 170		093348020 170
	093348012 180		093348016 180		093348020 180
	093348012 190		093348016 190		093348020 190
	093348012 200		093348016 200		093348020 200
	50 ≥75: box = 25 ≥160: box = 10	50 ≥75: box = 25	25 ≥160: box = 10	25	25 ≥160: box = 10
	21.1	24.49	26.75	30.14	33.53
	7.5	8.8	10	11.5	12.5
	SW 19	SW 22	SW 24	SW 27	SW 30

DIN 933 A4-80
Altıköşe tam dişli civata

DIN 933 A4-80
Hexagon head screws

DIN 933
A4-80

Alt. Norm tarafından değiştirildi ISO 4017

M 22	M 24	M 27	M 30	M 33
Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
093348022 30	093348024 30			
093348022 35	093348024 35			
093348022 40	093348024 40			
093348022 45	093348024 45			
093348022 50	093348024 50	093348027 50		
093348022 55	093348024 55	093348027 55		
093348022 60	093348024 60	093348027 60	093348030 60	
093348022 65	093348024 65	093348027 65	093348030 65	
093348022 70	093348024 70	093348027 70	093348030 70	093348033 70
093348022 75	093348024 75	093348027 75	093348030 75	093348033 75
093348022 80	093348024 80	093348027 80	093348030 80	093348033 80
093348022 85	093348024 85			
093348022 90	093348024 90	093348027 90	093348030 90	093348033 90
093348022 95	093348024 95			
093348022 100	093348024 100	093348027 100	093348030 100	093348033 100
093348022 110	093348024 110	093348027 110	093348030 110	093348033 110
093348022 120	093348024 120	093348027 120	093348030 120	093348033 120
093348022 130	093348024 130	093348027 130	093348030 130	093348033 130
093348022 140	093348024 140	093348027 140	093348030 140	093348033 140
093348022 150	093348024 150	093348027 150	093348030 150	093348033 150
	093348024 160			
	093348024 170			
	093348024 180			
	093348024 190			
	093348024 200			

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

25 ≥110: box = 10	10 ≥190: box = 5	10	10	10 ≥130: box = 5
35.72	39.98	45.2	50.85	55.37
14	15	17	18.7	21
SW 32	SW 36	SW 41	SW 46	SW 50

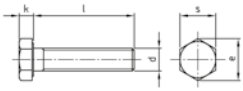
DIN 933
A4-80

Alt. Norm tarafından değiştirildi ISO 4017

DIN 933 A4-80
Altıköşe tam dişli civata

DIN 933 A4-80
Hexagon head screws





M6'dan M24 dâhil, M24'e kadar harici denetim.
Talep üzere farklı ölçüler (boyutlar) teslim edilebilir!

quality inspection from M6 including to M24 available on demand.
Other dimensions on demand!
- tensile strength 800 N/mm²



	M 36
	Réf./*Item no.*
	093348036 80
	093348036 90
	093348036 100
	093348036 110
	093348036 120
	093348036 130
	093348036 140
	093348036 150
d	
	5
	60.79
	22.5
	SW 55

DIN

DIN 933 A4 SZ
Yarıklı Altıköşe tam dişli civata

DIN 933 A4 SZ
Hexagon head screws with slot

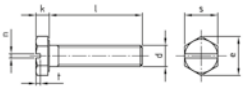
DIN 933
A4

Alt. Norm tarafından değiştirildi ISO 4017

d	M
	Ürün no./*Item no.*

1000	500	500	500 ≥16: box = 200	200 ≥25: box = 100	200
6	8	9	11	14.38	18.9
2	3	3.5	4	5.3	6.4
0.8	1	1.2	1.6	2	2
0.8	1.1	1.4	1.6	2.1	2.1
SW 5,5	SW 7	SW 8	SW 10	SW 13	SW 17





M6'dan M24 dâhil, M24'e kadar harici denetim.
Talep üzere farklı ölçüler (boyut-lar) teslim edilebilir!

quality inspection from M6 including to M24 available on demand.
Other dimensions on demand!



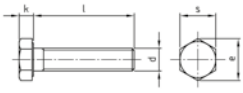
DIN 933
A5

Alt. Norm tarafından değiştirildi ISO 4017

DIN 933 1.4571
Altıköşe tam dişli civata

DIN 933 1.4571
Hexagon head screws





d	M		
	Ürün no./*Item no.*		
		200 ≥25: box = 100	100 ≥50: box = 50
		14.38	18.9
		5.3	6.4
		SW 13	SW 17

DIN

DIN 933 1.4828
Altıköşe tam dişli civata

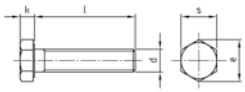
DIN 933 1.4828
Hexagon head screws

DIN 933
1.4828

Alt. Norm tarafından değiştirildi ISO 4017

d	M
	Ürün no./*Item no.*





50
21.1
7.53
SW 19

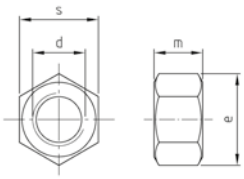
DIN 934
A2

Alt. Norm tarafından değiştirildi ISO 4032

DIN 934 A2
Altıköşe somun

DIN 934 A2
Hexagon nuts





M6'dan M24 dâhil, M24'e kadar harici denetim.

quality inspection from M6 including to M24 available on demand.



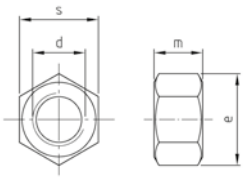
DIN 934 A2-80
Altıköşe somun

DIN 934 A2-80
Hexagon nuts

DIN 934
A2-80

Alt. Norm tarafından değiştirildi ISO 4032





M6'dan M24 dâhil, M24'e kadar harici denetim.

quality inspection from M6 including to M24 available on demand.



DIN

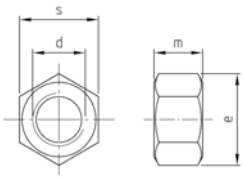
DIN 934 A2

Alt. Norm tarafından değiştirildi ISO 4032

DIN 934 A2 sol Altıköşe somun

DIN 934 A2 Left thread Hexagon nuts





M6'dan M24 dâhil, M24'e kadar harici denetim.

quality inspection from M6 including to M24 available on demand.



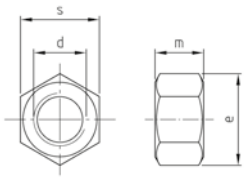
DIN 934 A2 ince disli Altıköşe somun

DIN 934 A2 fine Hexagon nuts

DIN 934 A2

Alt. Norm tarafından değiştirildi ISO 4032





M6'dan M24 dâhil, M24'e kadar harici denetim.

quality inspection from M6 including to M24 available on demand.



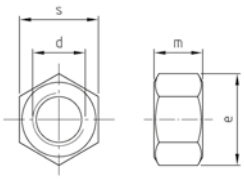
DIN 934
A4

Alt. Norm tarafından değiştirildi ISO 4032

DIN 934 A4
Altıköşe somun

DIN 934 A4
Hexagon nuts





M6'dan M24 dâhil, M24'e kadar harici denetim.

quality inspection from M6 including to M24 available on demand.



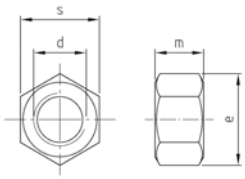
DIN 934 A4-70
Altıköşe somun

DIN 934 A4-70
Hexagon nuts

DIN 934
A4

Alt. Norm tarafından değiştirildi ISO 4032





M6'dan M24 dâhil, M24'e kadar harici denetim.

quality inspection from M6 including to M24 available on demand.



DIN

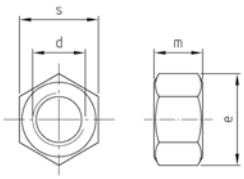
DIN 934 A4-80

Alt. Norm tarafından değiştirildi ISO 4032

DIN 934 A4-80 Altıköşe somun

DIN 934 A4-80 Hexagon nuts





M6'dan M24 dâhil, M24'e kadar harici denetim.

quality inspection from M6 including to M24 available on demand.



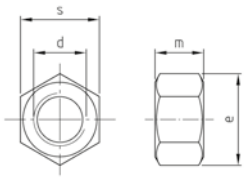
DIN 934 A2 sol
Altıköşe somun

DIN 934 A4 Left thread
Hexagon nuts

DIN 934
A4

Alt. Norm tarafından değiştirildi ISO 4032





M6'dan M24 dâhil, M24'e kadar harici denetim.

quality inspection from M6 including to M24 available on demand.



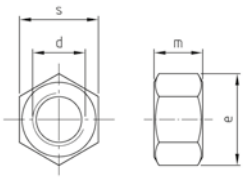
DIN 934
A4

Alt. Norm tarafından değiştirildi ISO 4032

DIN 934 A4-80 ince disli
Altıköşe somun

DIN 934 A4-80 fine Hexagon nuts





M6'dan M24 dâhil, M24'e kadar harici denetim.

quality inspection from M6 including to M24 available on demand.



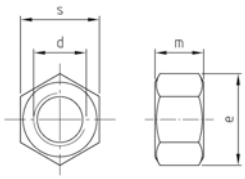
DIN 934 1.4571
Altıköşe somun

DIN 934 1.4571
Hexagon nuts

DIN 934
A5

Alt. Norm tarafından değiştirildi ISO 4032





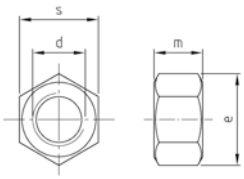
DIN 934 1.4828

Alt. Norm tarafından değiştirildi ISO 4032

DIN 934 1.4828 Altıköşe somun

DIN 934 1.4828
Hexagon nuts





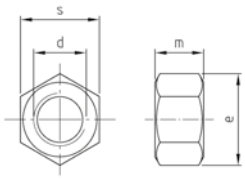
DIN 934 1.4462
Altıköşe somun

DIN 934 1.4462
Hexagon nuts

DIN 934
1.4462

Alt. Norm
tarafından değiştirildi ISO
4032





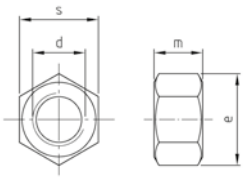
DIN 934 1.4529

Alt. Norm tarafından değiştirildi ISO 4032

DIN 934 1.4529 Altıköşe somun

DIN 934 1.4529 Hexagon nuts





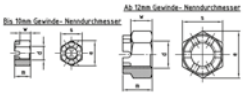
DIN 935 A2
Altıköşe taçlı somun, yarıklı

DIN 935 A2
Hexagon castle nuts, slotted

DIN 935
A2

Alt. Norm tarafından değiştirildi ISO 7035





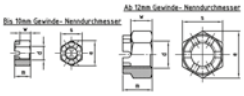
DIN 935
A4

Alt. Norm tarafından değiştirildi ISO 7035

DIN 935 A4
Altıköşe taçlı somun, yarıklı

DIN 935 A4
Hexagon castle nuts, slotted





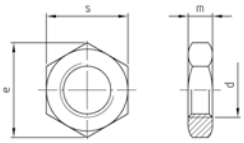
DIN 936 A2
Altıköşe ince somun

DIN 936 A2
Hexagon thin nuts

DIN 936
A2

Alt. Norm
tarafından değiştirildi ISO
4035





- "0" = azaltılmış yük kapasitesi
- *"0" = reduced load capacity*

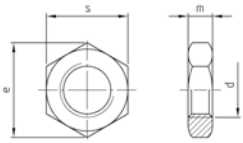
DIN 936
A2

Alt. Norm tarafından değiştirildi ISO 8675

DIN 936 A2 ince disli
Altıköşe ince somun

DIN 936 A2 fine
Hexagon thin nuts





- "0" = azaltılmış yük kapasitesi

- *"0" = reduced load capacity*

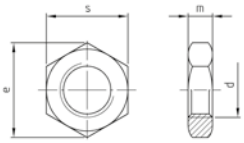
DIN 936 A4
Altıköşe ince somun

DIN 936 A4
Hexagon thin nuts

DIN 936
A4

Alt. Norm
tarafından değiştirildi ISO
4035





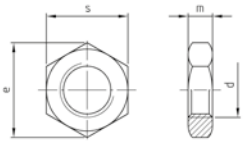
- "0" = azaltılmış yük kapasitesi
- *"0" = reduced load capacity*

DIN 936
A4

DIN 936 A4 ince disli
Altıköşe ince somun

DIN 936 A4 fine
Hexagon thin nuts





- "O" = azaltılmış yük kapasitesi

- *"O" = reduced load capacity*

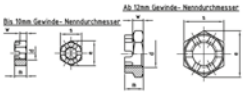
DIN 937 A2
İnce altıköşe taçlı somun, yarıklı

DIN 937 A2
Hexagon slotted thin castle nuts

DIN 937
A2

Alt. Norm tarafından değiştirildi ISO 7038





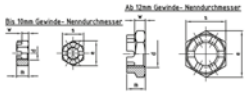
DIN 937
A4

Alt. Norm tarafından değiştirildi ISO 7038

DIN 937 A4
Ince altıköşe taçlı somun, yarıklı

DIN 937 A4
Hexagon slotted thin castle nuts

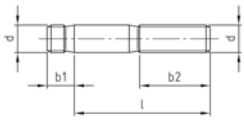




DIN 938 A2
Saplama metal uç ~ 1d

DIN 938 A2
Studs metal end ≈ 1 d



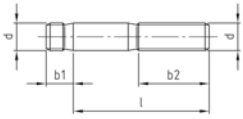


DIN 938
A4

DIN 938 A4
Saplama metal uç ~ 1d

DIN 938 A4
Studs metal end ≈ 1 d

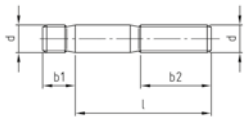




DIN 939 A2
Saplama metal uç ~ 1,25 d

DIN 939 A2
Studs metal end ≈ 1,25 d



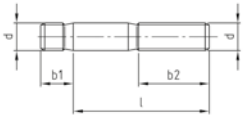


DIN 939
A4

DIN 939 A4
Saplama metal uç ~ 1,25 d

DIN 939 A4
Studs metal end ≈ 1,25 d





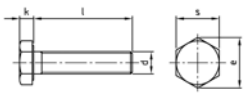
DIN 961 A2
Altiköse civata ince dis

DIN 961 A2
Hexagon head screws with fine pitch thread

d	
	Ürün no./*Item no.*

200 ≥25: box = 100 ≥100: box = 50	100 ≥50: box = 50	50 ≥100: box = 25	25
14.38	18.9	21.1	26.75
5.3	6.4	7.5	10
SW 13	SW 17	SW 19	SW 24





- İnce dis
- *fine pitch thread*

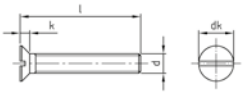
DIN 963 A2

Alt. Norm tarafından değiştirildi ISO 2009

DIN 963 A2
Havşa başlı yarıklı vida

DIN 963 A2
Slotted countersunk head screws





d	M					
	Ürün no./*Item no.*					
		1000	1000	1000	1000	1000	1000 ≥22: box = 500
		1.9	2.3	2.6	3	3	3.8
		0.6	0.72	0.84	0.96	0.96	1.2

DIN 963 A2
Havşa başlı yarıklı vida

DIN 963 A2
Slotted countersunk head screws

DIN 963
A2

Alt. Norm tarafından değiştirildi ISO 2009

M 2,3	M 2,5	M 2,6	M 3	M 3,5	M 4
Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
0963223 3	0963225 3	0963226 3	096323 3		
0963223 4	0963225 4	0963226 4	096323 4	0963235 4	096324 4
0963223 5	0963225 5	0963226 5	096323 5	0963235 5	096324 5
0963223 6	0963225 6	0963226 6	096323 6	0963235 6	096324 6
0963223 8	0963225 8	0963226 8	096323 8	0963235 8	096324 8
0963223 10	0963225 10	0963226 10	096323 10	0963235 10	096324 10
0963223 12	0963225 12	0963226 12	096323 12	0963235 12	096324 12
0963223 14	0963225 14		096323 14	0963235 14	096324 14
0963223 16	0963225 16	0963226 16	096323 16	0963235 16	096324 16
0963223 18	0963225 18		096323 18	0963235 18	096324 18
0963223 20	0963225 20	0963226 20	096323 20	0963235 20	096324 20
0963223 22	0963225 22		096323 22	0963235 22	096324 22
	0963225 25		096323 25	0963235 25	096324 25
	0963225 28		096323 28	0963235 28	096324 28
	0963225 30		096323 30	0963235 30	096324 30
	0963225 35		096323 35	0963235 35	096324 35
			096323 40	0963235 40	096324 40
			096323 45	0963235 45	096324 45
			096323 50	0963235 50	096324 50
			096323 55	0963235 55	096324 55
			096323 60	0963235 60	096324 60
					096324 65
					096324 70
					096324 75
					096324 80
					096324 85
					096324 90
					096324 100

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

1000	1000 ≥22: box = 500	1000	500 ≥50: box = 200	500 ≥50: box = 200	500 ≥70: box = 200
4.7	4.7	4.7	5.6	6.5	7.5
1.5	1.5	1.5	1.65	1.93	2.2

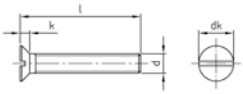
DIN 963
A2

Alt. Norm tarafından değiştirildi ISO 2009

DIN 963 A2
Havşa başlı yarıklı vida

DIN 963 A2
Slotted countersunk head screws





d	M 5	M 6	M 8	M 10	M 12	M 14
	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
	096325 6	096326 6				
	096325 8	096326 8				
	096325 10	096326 10	096328 10			
	096325 12	096326 12	096328 12			
	096325 14	096326 14	096328 14			
	096325 16	096326 16	096328 16	0963210 16		
	096325 18	096326 18	096328 18			
	096325 20	096326 20	096328 20	0963210 20	0963212 20	0963214 20
	096325 22	096326 22	096328 22			
	096325 25	096326 25	096328 25	0963210 25	0963212 25	0963214 25
	096325 28	096326 28				
	096325 30	096326 30	096328 30	0963210 30	0963212 30	0963214 30
	096325 35	096326 35	096328 35	0963210 35	0963212 35	0963214 35
	096325 40	096326 40	096328 40	0963210 40	0963212 40	0963214 40
	096325 45	096326 45	096328 45	0963210 45	0963212 45	0963214 45
	096325 50	096326 50	096328 50	0963210 50	0963212 50	0963214 50
	096325 55	096326 55	096328 55	0963210 55	0963212 55	0963214 55
	096325 60	096326 60	096328 60	0963210 60	0963212 60	0963214 60
	096325 65	096326 65				
	096325 70	096326 70	096328 70	0963210 70	0963212 70	0963214 70
	096325 75	096326 75				
	096325 80	096326 80	096328 80	0963210 80	0963212 80	0963214 80
	096325 85	096326 85				
	096325 90	096326 90	096328 90	0963210 90	0963212 90	0963214 90
	096325 95					
	096325 100	096326 100	096328 100	0963210 100	0963212 100	0963214 100
		096326 110	096328 110	0963210 110	0963212 110	0963214 110
	096325 120	096326 120	096328 120	0963210 120	0963212 120	0963214 120
		096326 130	096328 130	0963210 130	0963212 130	0963214 130
		096326 140	096328 140	0963210 140	0963212 140	0963214 140
			096328 150	0963210 150	0963212 150	0963214 150
			096328 160	0963210 160	0963212 160	
	500 ≥45: box = 200	500 ≥22: box = 200	200 ≥55: box = 100	100 ≥70: box = 50	50	25
	9.2	11	14.5	18	22	25
	2.5	3	4	5	6	7

DIN 963 A2
Havşa başlı yarıklı vida

DIN 963 A2
Slotted countersunk head screws

DIN 963
A2

Alt. Norm tarafından değiştirildi ISO 2009

M 16	M 18	M 20
Réf./Item no.	Réf./Item no.	Réf./Item no.
0963216 20		
0963216 25		
0963216 30		
0963216 35		
0963216 40		
0963216 45		
0963216 50	0963218 50	0963220 50
0963216 55	0963218 55	0963220 55
0963216 60	0963218 60	0963220 60
0963216 70	0963218 70	0963220 70
0963216 80	0963218 80	0963220 80
0963216 90	0963218 90	0963220 90
0963216 100	0963218 100	0963220 100
0963216 110	0963218 110	0963220 110
0963216 120	0963218 120	0963220 120
0963216 130	0963218 130	0963220 130
0963216 140	0963218 140	0963220 140
0963216 150	0963218 150	0963220 150

25 ≥100: box = 10	25 ≥100: box = 10	25 ≥100: box = 10
29	33	36
8	9	10

DIN

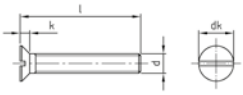
DIN 963 A4

Alt. Norm tarafından değiştirildi ISO 2009

DIN 963 A4
Havşa başlı yarıklı vida

DIN 963 A4
Slotted countersunk head screws





d	M					
	Ürün no./*Item no.*					
		1000	1000	1000	1000	1000	1000 ≥22: box = 500
		1.9	2.3	2.6	3	3	3.8
		0.6	0.72	0.84	0.96	0.96	1.2

DIN 963 A4
Havşa başlı yarıklı vida

DIN 963 A4
Slotted countersunk head screws

DIN 963
A4

Alt. Norm tarafından değiştirildi ISO 2009

M 2,3	M 2,5	M 2,6	M 3	M 3,5	M 4
Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
0963423 3	0963425 3	0963426 3	096343 3		
0963423 4	0963425 4	0963426 4	096343 4	0963435 4	096344 4
0963423 5	0963425 5	0963426 5	096343 5	0963435 5	096344 5
0963423 6	0963425 6	0963426 6	096343 6	0963435 6	096344 6
0963423 8	0963425 8	0963426 8	096343 8	0963435 8	096344 8
0963423 10	0963425 10	0963426 10	096343 10	0963435 10	096344 10
0963423 12	0963425 12	0963426 12	096343 12	0963435 12	096344 12
0963423 14	0963425 14		096343 14	0963435 14	096344 14
0963423 16	0963425 16	0963426 16	096343 16	0963435 16	096344 16
0963423 18	0963425 18		096343 18	0963435 18	096344 18
0963423 20	0963425 20	0963426 20	096343 20	0963435 20	096344 20
0963423 22	0963425 22		096343 22	0963435 22	096344 22
	0963425 25		096343 25	0963435 25	096344 25
	0963425 28		096343 28	0963435 28	096344 28
	0963425 30		096343 30	0963435 30	096344 30
	0963425 35		096343 35	0963435 35	096344 35
			096343 40	0963435 40	096344 40
			096343 45	0963435 45	096344 45
			096343 50	0963435 50	096344 50
			096343 55	0963435 55	096344 55
			096343 60	0963435 60	096344 60
					096344 65
					096344 70
					096344 75
					096344 80
					096344 85
					096344 90
					096344 100

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

1000	1000 ≥22: box = 500	1000	500 ≥45: box = 200	500 ≥50: box = 200	500 ≥70: box = 200
4.7	4.7	4.7	5.6	6.5	7.5
1.5	1.5	1.5	1.65	1.93	2.2

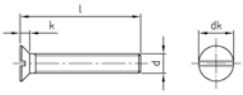
DIN 963
A4

Alt. Norm tarafından değiştirildi ISO 2009

DIN 963 A4
Havşa başlı yarıklı vida

DIN 963 A4
Slotted countersunk head screws





d	M 5	M 6	M 8	M 10	M 12	M 14
	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
	096345 6	096346 6				
	096345 8	096346 8				
	096345 10	096346 10	096348 10			
	096345 12	096346 12	096348 12			
	096345 14	096346 14	096348 14			
	096345 16	096346 16	096348 16	0963410 16		
	096345 18	096346 18	096348 18			
	096345 20	096346 20	096348 20	0963410 20	0963412 20	0963414 20
	096345 22	096346 22	096348 22			
	096345 25	096346 25	096348 25	0963410 25	0963412 25	0963414 25
	096345 28	096346 28				
	096345 30	096346 30	096348 30	0963410 30	0963412 30	0963414 30
	096345 35	096346 35	096348 35	0963410 35	0963412 35	0963414 35
	096345 40	096346 40	096348 40	0963410 40	0963412 40	0963414 40
	096345 45	096346 45	096348 45	0963410 45	0963412 45	0963414 45
	096345 50	096346 50	096348 50	0963410 50	0963412 50	0963414 50
	096345 55	096346 55	096348 55	0963410 55	0963412 55	0963414 55
	096345 60	096346 60	096348 60	0963410 60	0963412 60	0963414 60
	096345 65	096346 65				
	096345 70	096346 70	096348 70	0963410 70	0963412 70	0963414 70
	096345 75	096346 75				
	096345 80	096346 80	096348 80	0963410 80	0963412 80	0963414 80
	096345 85	096346 85				
	096345 90	096346 90	096348 90	0963410 90	0963412 90	0963414 90
	096345 95					
	096345 100	096346 100	096348 100	0963410 100	0963412 100	0963414 100
		096346 110	096348 110	0963410 110	0963412 110	0963414 110
	096345 120	096346 120	096348 120	0963410 120	0963412 120	0963414 120
		096346 130	096348 130	0963410 130	0963412 130	0963414 130
		096346 140	096348 140	0963410 140	0963412 140	0963414 140
			096348 150	0963410 150	0963412 150	0963414 150
			096348 160	0963410 160	0963412 160	
	500 ≥45: box = 200	500 ≥22: box = 200	200 ≥55: box = 100	100 ≥70: box = 50	50	25
	9.2	11	14.5	18	22	25
	2.5	3	4	5	6	7

DIN 963 A4
Havşa başlı yarıklı vida

DIN 963 A4
Slotted countersunk head screws

DIN 963
A4

Alt. Norm tarafından değiştirildi ISO 2009

M 16	M 18	M 20
Réf./Item no.	Réf./Item no.	Réf./Item no.
0963416 20		
0963416 25		
0963416 30		
0963416 35		
0963416 40		
0963416 45		
0963416 50	0963418 50	0963420 50
0963416 55	0963418 55	0963420 55
0963416 60	0963418 60	0963420 60
0963416 70	0963418 70	0963420 70
0963416 80	0963418 80	0963420 80
0963416 90	0963418 90	0963420 90
0963416 100	0963418 100	0963420 100
0963416 110	0963418 110	0963420 110
0963416 120	0963418 120	0963420 120
0963416 130	0963418 130	0963420 130
0963416 140	0963418 140	0963420 140
0963416 150	0963418 150	0963420 150
25 ≥100: box = 10	25 ≥100: box = 10	25 ≥100: box = 10
29	33	36
8	9	10

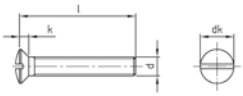
DIN 964
A2

Alt. Norm tarafından değiştirildi ISO 2010

DIN 964 A2
Mercimek başlı yarıklı vida

DIN 964 A2
Slotted raised countersunk head screws





d	M					
	Ürün no./*Item no.*					
		1000 ≥25: box = 500	1000 ≥25: box = 500	500 ≥45: box = 200	500 ≥65: box = 200	500 ≥45: box = 200	500 ≥22: box = 200
		3.8	4.7	5.6	7.5	9.2	11
		1.2	1.5	1.65	2.2	2.5	3

DIN 964 A2
Mercimek başlı yarıklı vida

DIN 964 A2
Slotted raised countersunk head screws

DIN 964
A2

Alt. Norm tarafından değiştirildi ISO 2010

M 8	M 10
Réf./Item no.	Réf./Item no.
096428 12	
096428 16	0964210 16
096428 20	0964210 20
096428 25	0964210 25
096428 30	0964210 30
096428 35	0964210 35
096428 40	0964210 40
096428 45	0964210 45
096428 50	0964210 50
096428 55	0964210 55
096428 60	0964210 60
096428 70	0964210 70
096428 80	
096428 90	
096428 100	0964210 100

200 ≥55: box = 100	100 ≥70: box = 50
14.5	18
4	5

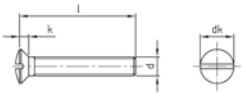
DIN 964
A4

Alt. Norm tarafından değiştirildi ISO 2010

DIN 964 A4
Mercimek başlı yarıklı vida

DIN 964 A4
Slotted raised countersunk head screws





d	M					
	Ürün no./*Item no.*					
	1000	1000 ≥25: box = 500	500 ≥45: box = 200	500 ≥65: box = 200	500 ≥22: box = 200	500 ≥22: box = 200
	3.8	4.7	5.6	7.5	9.2	11
	1.2	1.5	1.65	2.2	2.5	3

DIN 964 A4
Mercimek başlı yarıklı vida

DIN 964 A4
Slotted raised countersunk head screws

DIN 964
A4

Alt. Norm
tarafından değiştirildi ISO
2010

M 8	M 10
Réf./Item no.	Réf./Item no.
096448 12	
096448 16	
096448 20	0964410 20
096448 25	0964410 25
096448 30	0964410 30
096448 35	0964410 35
096448 40	0964410 40
096448 45	0964410 45
096448 50	0964410 50
096448 55	
096448 60	0964410 60
096448 70	
096448 80	
096448 90	
096448 100	

200 ≥55: box = 100	100
14.5	18
4	5

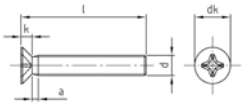
DIN 965
A2

Alt. Norm tarafından değiştirildi ISO 7046

DIN 965 A2 PH
Yıldız havşa başlı vida, H Form

DIN 965 A2 PH
Cross recessed countersunk head screws





- TX formu ISO 14581'e bakınız

- *TX type see ISO 14581*

d	M					
	Ürün no./*Item no.*					
		1000	1000	1000	500	500 ≥65: box = 200	500 ≥45: box = 200
		0.7	0.8	0.9	1	1.4	1.6
		3	3.8	4.7	5.6	7.5	9.2
		0.96	1.2	1.5	1.65	2.2	2.5
		PH0	PH1	PH1	PH1	PH2	PH2

DIN 965 A2 PH
Yıldız havşa başlı vida, H Form

DIN 965 A2 PH
Cross recessed countersunk head screws

DIN 965
A2

Alt. Norm
tarafından değiştirildi ISO
7046

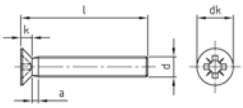
M 6	M 8	M 10
Réf./Item no.	Réf./Item no.	Réf./Item no.
096526 8		
096526 10	096528 10	
096526 12	096528 12	
096526 14		
096526 16	096528 16	0965210 16
096526 18		
096526 20	096528 20	0965210 20
096526 22		
096526 25	096528 25	0965210 25
096526 30	096528 30	0965210 30
096526 35	096528 35	0965210 35
096526 40	096528 40	0965210 40
096526 45	096528 45	0965210 45
096526 50	096528 50	0965210 50
096526 55		
096526 60	096528 60	0965210 60
096526 65		
096526 70	096528 70	0965210 70
096526 75		
096526 80	096528 80	0965210 80
096526 85		
096526 90	096528 90	0965210 90
096526 95		
096526 100	096528 100	0965210 100
096526 110	096528 110	
096526 120	096528 120	
096526 130	096528 130	
096526 140	096528 140	
	096528 150	

500 ≥22: box = 200 ≥85: box = 100	200 ≥100: box = 100	100 ≥70: box = 50
2	2.5	3
11	14.5	18
3	4	5
PH3	PH4	PH4

DIN 965
A2

Alt. Norm tarafından değiştirildi ISO 7046





- TX formu ISO 14581'e bakınız

- TX type see ISO 14581

DIN 965 A2 PZ
Yıldız havşa başlı vida, Z Form

DIN 965 A2 PZ
Cross recessed countersunk head screws

d	M					
	Ürün no./*Item no.*					
		1000	1000	1000	500	500 ≥70: box = 200	500 ≥45: box = 200
		0.7	0.8	0.9	1	1.4	1.6
		3	3.8	4.7	5.6	7.5	9.2
		0.96	1.2	1.5	1.65	2.2	2.5
		PZ0	PZ1	PZ1	PZ1	PZ2	PZ2

DIN 965 A2 PZ
Yıldız havşa başlı vida, Z Form

DIN 965 A2 PZ
Cross recessed countersunk head screws

DIN 965
A2

Alt. Norm tarafından değiştirildi ISO 7046

M 6	M 8	M 10
Réf./Item no.	Réf./Item no.	Réf./Item no.
0965206 8		
0965206 10	0965208 10	
0965206 12	0965208 12	
0965206 14		
0965206 16	0965208 16	09652010 16
0965206 18		
0965206 20	0965208 20	09652010 20
0965206 22		
0965206 25	0965208 25	09652010 25
0965206 30	0965208 30	09652010 30
0965206 35	0965208 35	09652010 35
0965206 40	0965208 40	09652010 40
0965206 45	0965208 45	09652010 45
0965206 50	0965208 50	09652010 50
0965206 55		
0965206 60	0965208 60	09652010 60
0965206 65		
0965206 70	0965208 70	09652010 70
0965206 75		
0965206 80	0965208 80	09652010 80
0965206 85		
0965206 90	0965208 90	09652010 90
0965206 95		
0965206 100	0965208 100	09652010 100
0965206 110	0965208 110	
0965206 120	0965208 120	
0965206 130	0965208 130	
0965206 140	0965208 140	
	0965208 150	

500 ≥25: box = 200 ≥85: box = 100	200 ≥100: box = 100	100 ≥70: box = 50
2	2.5	3
11	14.5	18
3	4	5
PZ3	PZ4	PZ4

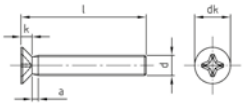
DIN 965
A4

Alt. Norm tarafından değiştirildi ISO 7046

DIN 965 A4 PH
Yıldız havşa başlı vida, H Form

DIN 965 A4 PH
Cross recessed countersunk head screws





- TX formu ISO 14581'e bakınız

- *TX type see ISO 14581*

d	M					
	Ürün no./*Item no.*					
		1000	1000	1000	500	500 ≥65: box = 200	500 ≥45: box = 200
		0.7	0.8	0.9	1	1.4	1.6
		3	3.8	4.7	5.6	7.5	9.2
		0.96	1.2	1.5	1.65	2.2	2.5
		PH0	PH1	PH1	PH1	PH2	PH2

DIN 965 A4 PH
Yıldız havşa başlı vida, H Form

DIN 965 A4 PH
Cross recessed countersunk head screws

DIN 965
A4

Alt. Norm
tarafından değiştirildi ISO
7046

M 6	M 8	M 10
Réf./Item no.	Réf./Item no.	Réf./Item no.
096546 8		
096546 10	096548 10	
096546 12	096548 12	
096546 14		
096546 16	096548 16	0965410 16
096546 18		
096546 20	096548 20	0965410 20
096546 22		
096546 25	096548 25	0965410 25
096546 30	096548 30	0965410 30
096546 35	096548 35	0965410 35
096546 40	096548 40	0965410 40
096546 45	096548 45	0965410 45
096546 50	096548 50	0965410 50
096546 55		
096546 60	096548 60	0965410 60
096546 65		
096546 70	096548 70	0965410 70
096546 75		
096546 80	096548 80	0965410 80
096546 85		
096546 90	096548 90	0965410 90
096546 95		
096546 100	096548 100	0965410 100
096546 110	096548 110	
096546 120	096548 120	
096546 130	096548 130	
096546 140	096548 140	
	096548 150	
500 ≥22: box = 200 ≥85: box = 100	200 ≥100: box = 100	100 ≥70: box = 50
2	2.5	3
11	14.5	18
3	4	5
PH3	PH4	PH4

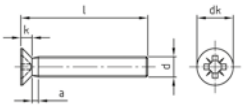
DIN 965
A4

Alt. Norm tarafından değiştirildi ISO 7046

DIN 965 A4 PZ
Yıldız havşa başlı vida, Z Form

DIN 965 A4 PZ
Cross recessed countersunk head screws





d	M					
	Ürün no./*Item no.*					
		1000	1000	1000	500	500 ≥75: box = 200	500 ≥45: box = 200
		0.7	0.8	0.9	1	1.4	1.6
		3	3.8	4.7	5.6	7.5	9.2
		0.96	1.2	1.5	1.65	2.2	2.5
		PZ0	PZ1	PZ1	PZ1	PZ2	PZ2

- TX formu ISO 14581'e bakınız

- *TX type see ISO 14581*

DIN 965 A4 PZ
Yıldız havşa başlı vida, Z Form

DIN 965 A4 PZ
Cross recessed countersunk head screws

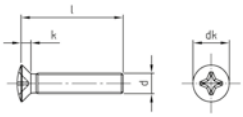
M 6	M 8	M 10
Réf./Item no.	Réf./Item no.	Réf./Item no.
0965406 8		
0965406 10	0965408 10	
0965406 12	0965408 12	
0965406 14		
0965406 16	0965408 16	09654010 16
0965406 18		
0965406 20	0965408 20	09654010 20
0965406 22		
0965406 25	0965408 25	09654010 25
0965406 30	0965408 30	09654010 30
0965406 35	0965408 35	09654010 35
0965406 40	0965408 40	09654010 40
0965406 45	0965408 45	09654010 45
0965406 50	0965408 50	09654010 50
0965406 55		
0965406 60	0965408 60	09654010 60
0965406 65		
0965406 70	0965408 70	09654010 70
0965406 75		
0965406 80	0965408 80	09654010 80
0965406 85		
0965406 90	0965408 90	09654010 90
0965406 95		
0965406 100	0965408 100	09654010 100
0965406 110	0965408 110	
0965406 120	0965408 120	
0965406 130	0965408 130	
0965406 140	0965408 140	
	0965408 150	

500 ≥25: box = 200 ≥90: box = 100	200 ≥100: box = 100	100 ≥70: box = 50
2	2.5	3
11	14.5	18
3	4	5
PZ3	PZ4	PZ4

DIN 966
A2

Alt. Norm tarafından değiştirildi ISO 7047





- TX formu ISO 14584'e bakınız

- TX type see ISO 14584

DIN 966 A2 PH
Yıldız mercimek başlı vida, H Form başlı

DIN 966 A2 PH
Cross recessed raised countersunk head screws

d	M					
	Ürün no./*Item no.*					
		1000	1000	500	500	500 ≥45: box = 200	500 ≥22: box = 200
		3.8	4.7	5.6	7.5	9.2	11
		1.2	1.5	1.65	2.2	2.5	3
		PH1	PH1	PH1	PH2	PH2	PH3

DIN 966 A2 PH
Yıldız mercimek başlı vida, H Form başlı

DIN 966 A2 PH
Cross recessed raised countersunk head screws

DIN 966
A2

Alt. Norm tarafından değiştirildi ISO 7047

M 8
Réf./Item no.
096628 12
096628 16
096628 20
096628 25
096628 30
096628 35
096628 40
096628 45
096628 50
096628 60
096628 70
096628 80
200 ≥60: box = 100
14.5
4
PH4

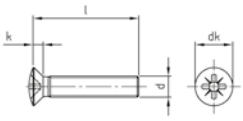
DIN 966
A2

Alt. Norm tarafından değiştirildi ISO 7047

DIN 966 A2 PZ
Yıldız mercimek başlı vida, Z Form başlı

DIN 966 A2 PZ
Cross recessed raised countersunk head screws





- TX formu ISO 14584'e bakınız

- TX type see ISO 14584

d	M					
	Ürün no./*Item no.*					
		1000	1000	500	500	500 ≥45: box = 200	500 ≥25: box = 200 ≥60: box = 100
		3.8	4.7	5.6	7.5	9.2	11
		1.2	1.5	1.65	2.2	2.5	3
		PZ1	PZ1	PZ1	PZ2	PZ2	PZ3

DIN 966 A2 PZ
Yıldız mercimek başlı vida, Z Form başlı

DIN 966 A2 PZ
Cross recessed raised countersunk head screws

DIN 966
A2

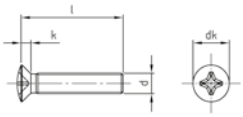
Alt. Norm tarafından değiştirildi ISO 7047

M 8
Réf./Item no.
0966208 12
0966208 16
0966208 20
0966208 25
0966208 30
0966208 35
0966208 40
0966208 45
0966208 50
0966208 60
0966208 70
0966208 80
200 ≥60: box = 100
14.5
4
PZ4

DIN 966
A4

Alt. Norm tarafından değiştirildi ISO 7047





- TX formu ISO 14584'e bakınız

- TX type see ISO 14584

DIN 966 A4 PH
Yıldız mercimek başlı vida, H Form başlı

DIN 966 A4 PH
Cross recessed raised countersunk head screws

d	M					
	Ürün no./*Item no.*					
		1000	1000	500	500	500 ≥45: box = 200	500 ≥22: box = 200
		3.8	4.7	5.6	7.5	9.2	11
		1.2	1.5	1.65	2.2	2.5	3
		PH1	PH1	PH1	PH2	PH2	PH3

DIN 966 A4 PH
Yıldız mercimek başlı vida, H Form başlı

DIN 966 A4 PH
Cross recessed raised countersunk head screws

DIN 966
A4

Alt. Norm tarafından değiştirildi ISO 7047

M 8
Réf./Item no.
096648 12
096648 16
096648 20
096648 25
096648 30
096648 35
096648 40
096648 45
096648 50
096648 60
096648 70
096648 80
200 ≥60: box = 100
14.5
4
PH4

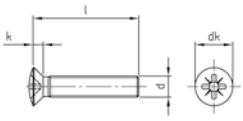
DIN 966
A4

Alt. Norm tarafından değiştirildi ISO 7047

DIN 966 A4 PZ
Yıldız mercimek başlı vida, Z Form başlı

DIN 966 A4 PZ
Cross recessed raised countersunk head screws





- TX formu ISO 14584'e bakınız

- TX type see ISO 14584

d	M					
	Ürün no./*Item no.*					
		1000	1000	500	500	500 ≥50: box = 200	500 ≥25: box = 200 ≥65: box = 100
		3.8	4.7	5.6	7.5	9.2	11
		1.2	1.5	1.65	2.2	2.5	3
		PZ1	PZ1	PZ1	PZ2	PZ2	PZ3

DIN 966 A4 PZ
Yıldız mercimek başlı vida, Z Form başlı

DIN 966 A4 PZ
Cross recessed raised countersunk head screws

DIN 966
A4

Alt. Norm tarafından değiştirildi ISO 7047

M 8
Réf./Item no.
0966408 12
0966408 16
0966408 20
0966408 25
0966408 30
0966408 35
0966408 40
0966408 45
0966408 50
0966408 60
0966408 70
0966408 80
200 ≥60: box = 100
14.5
4
PZ4

DIN 976-1 A2

Alt. Norm
eskiden DIN 975

DIN 976-1 A2 Saplam

DIN 976-1 A2
Stud bolts





M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile talep üzerine mevcuttur.

quality inspection from M6 including to M24 available on demand.



DIN 976-1 A2 soldan dişli Saplam

DIN 976-1 A2 Left thread Stud bolts

DIN 976-1 A2

Alt. Norm eskiden DIN 975





M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile talep üzerine mevcuttur.

quality inspection from M6 including to M24 available on demand.



DIN

DIN 976-1
A2

Alt. Norm
eskiden DIN 975





Diğer boyutlar istek üzerine mevcuttur!
Talep üzerine M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile mevcuttur.

Other dimensions on demand! quality inspection from M6 including to M24 available on demand.



DIN 976-1 A2 form B
Saplam

DIN 976-1 A2 type B
Stud bolts

d	
	Ürün no./*Item no.*

200 ≥65: box = 100 ≥170: box = 50	200 ≥45: box = 100 ≥250: box = 50	100 ≥250: box = 50 ≥300: box = 25	100 ≥250: box = 50 ≥300: box = 20	25	50 ≥260: box = 25

DIN 976-1 A2 form B
Saplam

DIN 976-1 A2 type B
Stud bolts

DIN 976-1
A2

Alt. Norm
eskiden DIN 975

20	24	27	30
Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
0976220 40			
0976220 45			
0976220 50	0976224 50		
0976220 55	0976224 55	0976227 55	
0976220 60	0976224 60	0976227 60	0976230 60
0976220 65	0976224 65	0976227 65	0976230 65
0976220 70	0976224 70	0976227 70	0976230 70
0976220 75	0976224 75	0976227 75	0976230 75
0976220 80	0976224 80	0976227 80	0976230 80
0976220 90	0976224 90	0976227 90	0976230 90
0976220 100	0976224 100	0976227 100	0976230 100
0976220 110	0976224 110	0976227 110	0976230 110
0976220 120	0976224 120	0976227 120	0976230 120
0976220 130	0976224 130	0976227 130	0976230 130
0976220 140	0976224 140	0976227 140	0976230 140
0976220 150	0976224 150	0976227 150	0976230 150
0976220 160	0976224 160	0976227 160	0976230 160
0976220 170	0976224 170	0976227 170	0976230 170
0976220 180	0976224 180	0976227 180	0976230 180
0976220 190	0976224 190	0976227 190	0976230 190
0976220 200	0976224 200	0976227 200	0976230 200
0976220 220	0976224 220	0976227 220	0976230 220
0976220 240	0976224 240	0976227 240	0976230 240
0976220 245			
0976220 250	0976224 250	0976227 250	0976230 250
0976220 260	0976224 260	0976227 260	0976230 260
0976220 280	0976224 280	0976227 280	0976230 280
0976220 290			
0976220 300	0976224 300	0976227 300	0976230 300
0976220 320	0976224 320	0976227 320	0976230 320
0976220 340	0976224 340	0976227 340	0976230 340
0976220 350			
0976220 360	0976224 360	0976227 360	0976230 360
0976220 380	0976224 380	0976227 380	0976230 380
0976220 400	0976224 400	0976227 400	0976230 400
25	25	10 ≥110: box = 1	1

DIN 976-1 A4

Alt. Norm
eskiden DIN 975

DIN 976-1 A4 Saplam

DIN 976-1 A4
Stud bolts





M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile talep üzerine mevcuttur.

quality inspection from M6 including to M24 available on demand.



DIN 976-1 A4 soldan dişli Saplam

DIN 976-1 A4 Left thread Stud bolts

DIN 976-1 A4

Alt. Norm eskiden DIN 975





M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile talep üzerine mevcuttur.

quality inspection from M6 including to M24 available on demand.



DIN

DIN 976-1
A4-80

Alt. Norm
eskiden DIN 975

Saplam

DIN 976-1 A4-80
Stud bolts





M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile talep üzerine mevcuttur.

quality inspection from M6 including to M24 available on demand.
tensile strength 800 N/mm²



DIN 976-1 A4 form B
Saplam

DIN 976-1 A4 type B
Stud bolts

DIN 976-1
A4

Alt. Norm
eskiden DIN 975

d	
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*



200 ≥65: box = 100 ≥170: box = 50	200 ≥45: box = 100 ≥250: box = 50	100 ≥250: box = 50 ≥300: box = 25	100 ≥250: box = 50 ≥300: box = 25	25	50 ≥260: box = 25



Diğer boyutlar istek üzerine mevcuttur!
Talep üzerine M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile mevcuttur.

Other dimensions on demand! quality inspection from M6 including to M24 available on demand.



DIN 976-1
A4

Alt. Norm
eskiden DIN 975

DIN 976-1 A4 form B
Saplam

DIN 976-1 A4 type B
Stud bolts





Diğer boyutlar istek üzerine mevcuttur!
Talep üzerine M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile mevcuttur.

Other dimensions on demand! quality inspection from M6 including to M24 available on demand.



d	20	24	27	30
	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
	0976420 40			
	0976420 45			
	0976420 50	0976424 50		
	0976420 55	0976424 55	0976427 55	
	0976420 60	0976424 60	0976427 60	0976430 60
	0976420 65	0976424 65	0976427 65	0976430 65
	0976420 70	0976424 70	0976427 70	0976430 70
	0976420 75	0976424 75	0976427 75	0976430 75
	0976420 80	0976424 80	0976427 80	0976430 80
	0976420 90	0976424 90	0976427 90	0976430 90
	0976420 100	0976424 100	0976427 100	0976430 100
	0976420 110	0976424 110	0976427 110	0976430 110
	0976420 120	0976424 120	0976427 120	0976430 120
	0976420 130	0976424 130	0976427 130	0976430 130
	0976420 140	0976424 140	0976427 140	0976430 140
	0976420 150	0976424 150	0976427 150	0976430 150
	0976420 160	0976424 160	0976427 160	0976430 160
	0976420 170	0976424 170	0976427 170	0976430 170
	0976420 180	0976424 180	0976427 180	0976430 180
	0976420 190	0976424 190	0976427 190	0976430 190
	0976420 200	0976424 200	0976427 200	0976430 200
	0976420 220	0976424 220	0976427 220	0976430 220
	0976420 240	0976424 240	0976427 240	0976430 240
	0976420 245			
	0976420 250	0976424 250	0976427 250	0976430 250
	0976420 260	0976424 260	0976427 260	0976430 260
	0976420 280	0976424 280	0976427 280	0976430 280
	0976420 290			
	0976420 300	0976424 300	0976427 300	0976430 300
	0976420 320	0976424 320	0976427 320	0976430 320
	0976420 340	0976424 340	0976427 340	0976430 340
	0976420 350			
	0976420 360	0976424 360	0976427 360	0976430 360
	0976420 380	0976424 380	0976427 380	0976430 380
	0976420 400	0976424 400	0976427 400	0976430 400
	25	25	25 ≥60: box = 10 ≥110: box = 1	1

DIN

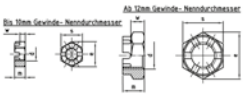
DIN 979 A2
İnce altıköşe taçlı somun, yarıklı

DIN 979 A2
Hexagon slotted thin castle nuts

DIN 979
A2

Alt. Norm tarafından değiştirildi ISO 7038





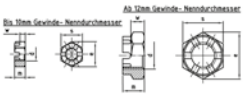
DIN 979 A4

Alt. Norm tarafından değiştirildi ISO 7038

DIN 979 A4
Ince altıköşe taçlı somun, yarıklı

DIN 979 A4
Hexagon slotted thin castle nuts



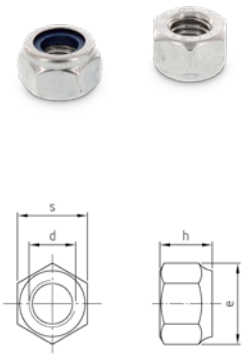


DIN 982 A2
Fiberli tip sıkmalı altıköşe somun,yüksek tip

DIN 982 A2
Self-locking hexagon nuts, high type

DIN 982
A2

Alt. Norm tarafından değiştirildi ISO 7040



DIN 982
A4

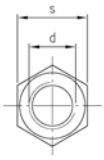
Alt. Norm tarafından değiştirildi ISO 7040

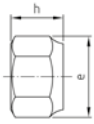
DIN 982 A4
Fiberli tip sıkmalı altıköşe somun,yüksek tip

DIN 982 A4
Self-locking hexagon nuts, high type







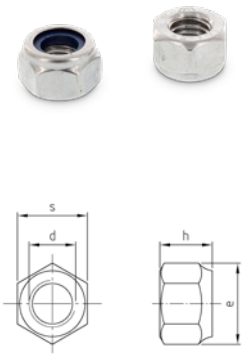


DIN 982 A4 ince disli
Fiberli tip sıkmalı altıköşe somun,yüksek tip

DIN 982 A4 Fine pitch
Self-locking hexagon nuts, high type

DIN 982
A4

Alt. Norm tarafından değiştirildi ISO 7040



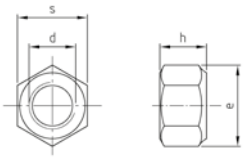
DIN 985 A2

Alt. Norm tarafından değiştirildi ISO 10511

DIN 985 A2
Fiberli tip sıkmalı altıköşe somun

DIN 985 A2
Self-locking hexagon nuts, thin type



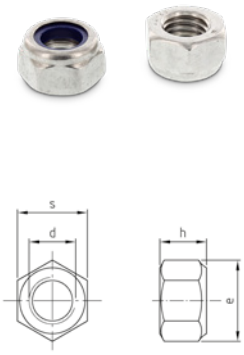


DIN 985 A2 ince disli
Fiberli tip sıkmalı altıköşe somun

DIN 985 A2 fine pitch
Self-locking hexagon nuts, thin type

DIN 985
A2

Alt. Norm tarafından değiştirildi ISO 10512



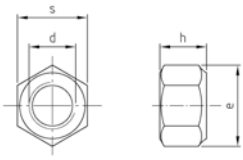
DIN 985
A4

Alt. Norm tarafından değiştirildi ISO 10511

DIN 985 A4
Fiberli tip sıkmalı altıköşe somun

DIN 985 A4
Self-locking hexagon nuts, thin type





DIN 985 A4 ince disli
Fiberli tip sıkmalı altıköşe somun

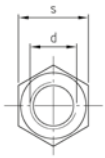
DIN 985 A4 fine pitch
Self-locking hexagon nuts, thin type

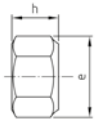
DIN 985
A4

Alt. Norm tarafından değiştirildi ISO 10512







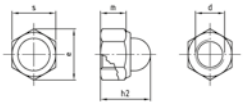


DIN 986 A2

DIN 986 A2
Fiberli kör somun

DIN 986 A2
Self-locking hexagon domed cap nuts

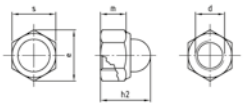




DIN 986 A4
Fiberli kör somun

DIN 986 A4
Self-locking hexagon domed cap nuts



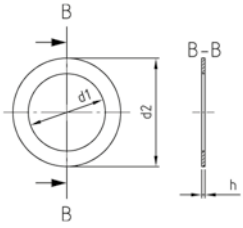


DIN 988 A2

DIN 988 A2
Pul layner

DIN 988 A2
Shim rings

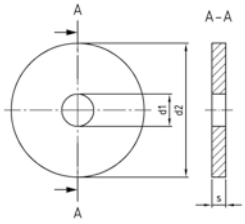




DIN 1052 A2
Rondela (Ahşap işleri için)

DIN 1052 A2
Washers for wood constructions



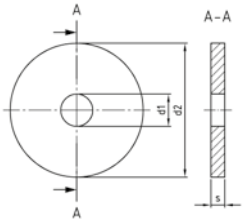


DIN 1052
A4

DIN 1052 A4
Rondela (Ahşap işleri için)

DIN 1052 A4
Washers for wood constructions





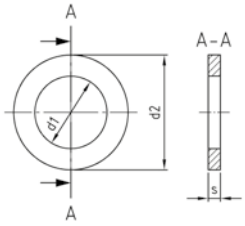
DIN 1440 A2
Çatal pim için rondela

DIN 1440 A2
Washers for clevis pins, finish medium

DIN 1440
A2

Alt. Norm tarafından değiştirildi ISO 8738





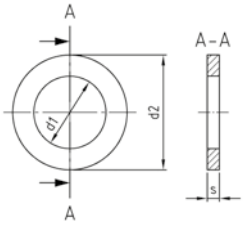
DIN 1440 A4

Alt. Norm tarafından değiştirildi ISO 8738

DIN 1440 A4
Çatal pim için rondela

DIN 1440 A4
Washers for clevis pins, finish medium

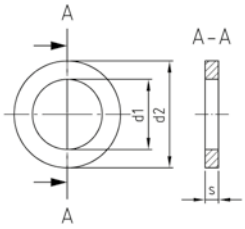




DIN 1441 A2
Çatal pim için rondela, geniş delikli

DIN 1441 A2
Washers for clevis pins, finish coarse



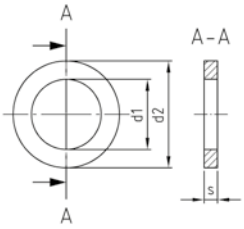


DIN 1441
A4

DIN 1441 A4
Çatal pim için rondela, geniş delikli

DIN 1441 A4
Washers for clevis pins, finish coarse





DIN 1471 1.4305
Konik pim, tam boyu konik oluklu

DIN 1471 1.4305
Grooved pins full length taper grooved

DIN 1471
A1

Alt. Norm tarafından değiştirildi ISO 8744

d	
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*



500	500	500	500	200	200



DIN 1471
A1

Alt. Norm tarafından değiştirildi ISO 8744





DIN 1471 1.4305
Konik pim, tam boyu konik oluklu

DIN 1471 1.4305
Grooved pins full length taper grooved

	6	8	10
	Réf./Item no.	Réf./Item no.	Réf./Item no.
	147126 10	147128 10	
	147126 12	147128 12	
	147126 16	147128 16	1471210 16
	147126 18	147128 18	
	147126 20	147128 20	1471210 20
	147126 25	147128 25	1471210 25
	147126 30	147128 30	1471210 30
	147126 35	147128 35	1471210 35
	147126 40	147128 40	1471210 40
	147126 45	147128 45	1471210 45
	147126 50	147128 50	1471210 50
	147126 55	147128 55	1471210 55
	147126 60	147128 60	1471210 60
	147126 65	147128 65	1471210 65
	147126 70	147128 70	1471210 70
d	147126 75	147128 75	1471210 75
	147126 80	147128 80	1471210 80
		147128 90	1471210 90
		147128 100	1471210 100
	100	50	25

DIN

DIN 1472 1.4305
Konik pim, yarım boyu konik oluklu

DIN 1472 1.4305
Grooved pins half length taper grooved

DIN 1472
A1

Alt. Norm tarafından değiştirildi ISO 8745

d	
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

500	500	500	500	200	200





DIN 1472
A1

Alt. Norm tarafından değiştirildi ISO 8745





DIN 1472 1.4305
Konik pim, yarım boyu konik oluklu

DIN 1472 1.4305
Grooved pins half length taper grooved

d	6	8	10
	Réf./Item no.	Réf./Item no.	Réf./Item no.
	147226 10	147228 10	
	147226 12	147228 12	
	147226 16	147228 16	1472210 16
	147226 18	147228 18	
	147226 20	147228 20	1472210 20
	147226 25	147228 25	1472210 25
	147226 30	147228 30	1472210 30
	147226 35	147228 35	1472210 35
	147226 40	147228 40	1472210 40
	147226 45	147228 45	1472210 45
	147226 50	147228 50	1472210 50
	147226 55	147228 55	1472210 55
	147226 60	147228 60	1472210 60
	147226 65	147228 65	1472210 65
	147226 70	147228 70	1472210 70
	147226 75	147228 75	1472210 75
	147226 80	147228 80	1472210 80
		147228 90	1472210 90
		147228 100	1472210 100
	100	50	25

DIN 1473 1.4305
Düz pim, tam boy paralel oluklu yivli

DIN 1473 1.4305
Grooved pins full length parallel grooved chamfer

DIN 1473
A1

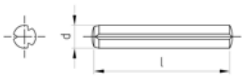
Alt. Norm tarafından değiştirildi ISO 8740

d	
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*



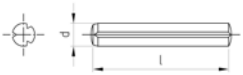
500	500	500	500	200	200



DIN 1473
A1

Alt. Norm tarafından değiştirildi ISO 8740





DIN 1473 1.4305
Düz pim, tam boy paralel oluklu yivli

DIN 1473 1.4305
Grooved pins full length parallel grooved chamfer

d	6	8	10
	Réf./Item no.	Réf./Item no.	Réf./Item no.
	147326 10		
	147326 12	147328 12	
	147326 16	147328 16	1473210 16
	147326 18	147328 18	
	147326 20	147328 20	1473210 20
	147326 25	147328 25	1473210 25
	147326 30	147328 30	1473210 30
	147326 35	147328 35	1473210 35
	147326 40	147328 40	1473210 40
	147326 45	147328 45	1473210 45
	147326 50	147328 50	1473210 50
	147326 55	147328 55	1473210 55
	147326 60	147328 60	1473210 60
	147326 65	147328 65	1473210 65
	147326 70	147328 70	1473210 70
	147326 75	147328 75	1473210 75
	147326 80	147328 80	1473210 80
		147328 90	1473210 90
		147328 100	1473210 100
	100	50	25

DIN

DIN 1474 1.4305
Oluklu Pim, yarım boy tersine konik yivli

DIN 1474 1.4305
Grooved pins half length reserve taper grooved

DIN 1474
A1

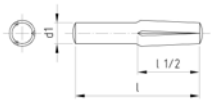
Alt. Norm tarafından değiştirildi ISO 8741

d	
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*



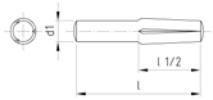
500	500	500	500	200	200



DIN 1474
A1

Alt. Norm tarafından değiştirildi ISO 8741





DIN 1474 1.4305
Oluklu Pim, yarım boy tersine konik yivli

DIN 1474 1.4305
Grooved pins half length reserve taper grooved

d	6	8	10
	Réf./Item no.	Réf./Item no.	Réf./Item no.
	147426 10		
	147426 12	147428 12	
	147426 16	147428 16	
	147426 18	147428 18	
	147426 20	147428 20	1474210 20
	147426 25	147428 25	1474210 25
	147426 30	147428 30	1474210 30
	147426 35	147428 35	1474210 35
	147426 40	147428 40	1474210 40
	147426 45	147428 45	1474210 45
	147426 50	147428 50	1474210 50
	147426 55	147428 55	1474210 55
	147426 60	147428 60	1474210 60
	147426 65	147428 65	1474210 65
	147426 70	147428 70	1474210 70
	147426 75	147428 75	1474210 75
	147426 80	147428 80	1474210 80
		147428 90	1474210 90
		147428 100	1474210 100
	100	100 ≥55: box = 50	25

DIN

DIN 1475 1.4305
oluklu pim

DIN 1475 1.4305
Grooved pins, third length center grooved

DIN 1475
A1

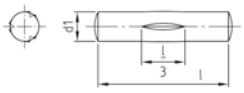
Alt. Norm tarafından değiştirildi ISO 8742

d	
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*



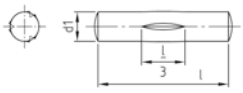
500	500	500	500	200	200



DIN 1475
A1

Alt. Norm tarafından değiştirildi ISO 8742





DIN 1475 1.4305
oluklu pim

DIN 1475 1.4305
Grooved pins, third length center grooved

	6	8	10
	Réf./Item no.	Réf./Item no.	Réf./Item no.
	147526 25	147528 25	
	147526 30	147528 30	
	147526 35	147528 35	1475210 35
	147526 40	147528 40	1475210 40
	147526 45	147528 45	1475210 45
	147526 50	147528 50	1475210 50
	147526 55	147528 55	1475210 55
	147526 60	147528 60	1475210 60
	147526 65	147528 65	1475210 65
	147526 70	147528 70	1475210 70
d	147526 75	147528 75	1475210 75
	147526 80	147528 80	1475210 80
		147528 90	1475210 90
		147528 100	1475210 100
	100	50	25

DIN

DIN 1476 A2
Yuvarlak başlı oluklu pim

DIN 1476 A2
Grooved pins with round head

DIN 1476
A2

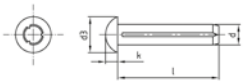
Alt. Norm tarafından değiştirildi ISO 8746

d	
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*



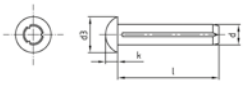
500	500	500	500	500	200
0.5	0.5	0.5	0.7	1	1.5
2.4	2.8	3.5	4.4	5.2	7
0.8	1	1.2	1.5	1.8	2.4



DIN 1476
A2

Alt. Norm tarafından değiştirildi ISO 8746





DIN 1476 A2
Yuvarlak başlı oluklu pim

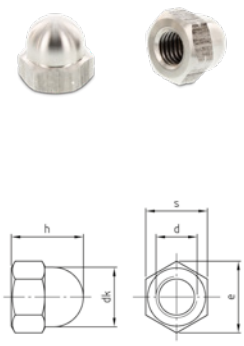
DIN 1476 A2
Grooved pins with round head

	5	6	8
	Réf./Item no.	Réf./Item no.	Réf./Item no.
	147625 6		
	147625 8	147626 8	
	147625 10	147626 10	147628 10
	147625 12	147626 12	147628 12
	147625 16	147626 16	147628 16
	147625 20	147626 20	147628 20
d		147626 25	147628 25
		147626 30	147628 30
		147626 35	147628 35
			147628 40
	200	100	50
	1.5	2	2.5
	8.8	10.5	14
	3	3.6	4.8

DIN 1587 1.4305
Kör somun, yüksek tip

DIN 1587 1.4305
Turned hexagon domed cap nuts high type

DIN 1587
A1

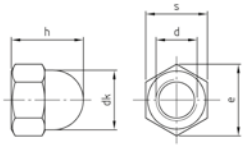


DIN 1587 A2

DIN 1587 A2
Kör somun, yüksek tip

DIN 1587 A2
Hexagon domed cap nuts

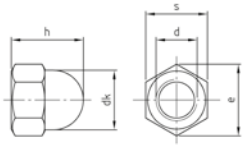




DIN 1587 A2
Kör somun, yüksek tip ince dişli

DIN 1587 A2
Hexagon domed cap nuts with fine pitch



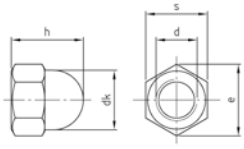


DIN 1587
A4

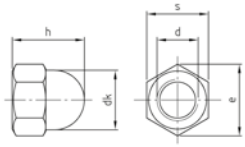
DIN 1587 A4
Kör somun, yüksek tip

DIN 1587 A4
Turned hexagon domed cap nuts high type







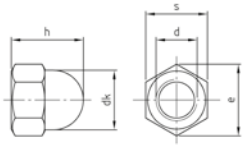

h
dk
s
d
e

DIN 1587
A4

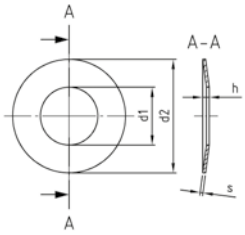
DIN 1587 A4
Kör somun, yüksek tip ince dişli

DIN 1587 A4
Hexagon domed cap nuts pressed form with fine pitch







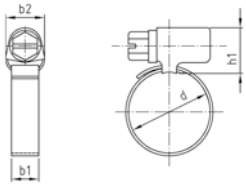

A
A-A
d1
d2
h
s
A

DIN 3017 A
A2

DIN 3017 A2
Hortum kelepçesi

DIN 3017 A2
Hose clamps with worm gear drive, type A



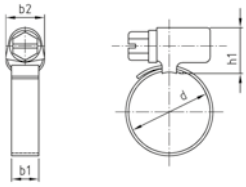


Malzeme A2 = W4

material A2 = W4

DIN 3017 A4
Hose clamps with worm gear drive, type A





Malzeme A4 = W5

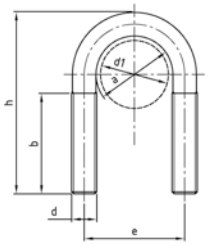
material A4 = W5

DIN 3570 A A4

DIN 3570 A4
Tip A yuvarlak U cıvata, somunsuz ve pulsuz

DIN 3570 A4
Round steel hanger type A without nuts and washers

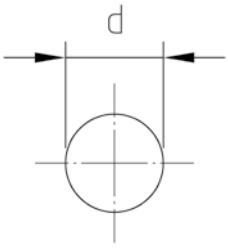




- Dikkat: M8 DIN'e göre değil

Attention: M8 not according to DIN



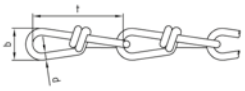

d

DIN 5686 A2

DIN 5686 A2
Dügümlü zincir

DIN 5686 A2
Double loop chains

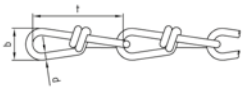




Dügümlü zincir

DIN 5686 A4
Double loop chains



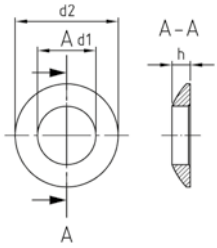


DIN 6319 C
A2

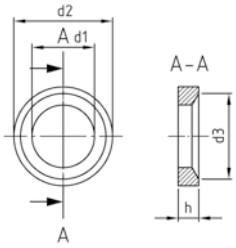
DIN 6319 A2 şekil C
Küresel rondelalar, şekil C

DIN 6319 A2 type C
Spherical washers, type C







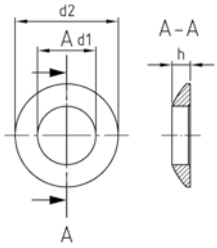

d2
A d1
A
A–A
d3
h

DIN 6319 C
A4

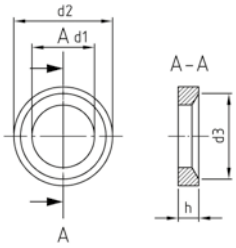
DIN 6319 A4 şekil C
Küresel rondelalar, şekil C

DIN 6319 A4 type C
Spherical washers, type C







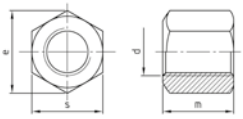

d2
A d1
A
A–A
d3
h

DIN 6330 B
A2

DIN 6330 A2
Altıköşe somun, 1,5 d, form B

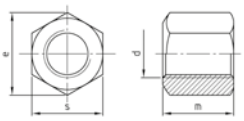
DIN 6330 A2
Hexagon nuts 1,5 d high type B





DIN 6330 A4
Hexagon nuts 1,5 d high type B



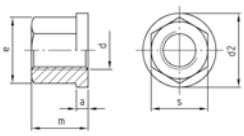


DIN 6331
A2

DIN 6331 A2
Altıköşe somun, 1,5 d bilezikli, form B

DIN 6331 A2
Hexagon nuts 1,5 d high with collar

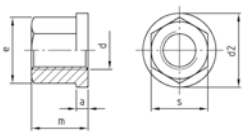




DIN 6331 A4
Altıköşe somun, 1,5 d bilezikli, form B

DIN 6331 A4
Hexagon nuts 1,5 d high with collar



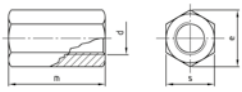


DIN 6334
A2

DIN 6334 A2
Altıköşe somun, 3 d takviyeli

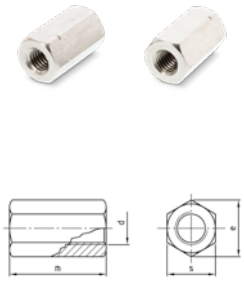
DIN 6334 A2
Hexagon nuts 3 d high





DIN 6334 A4
Altıköşe somun, 3 d takviyeli

DIN 6334 A4
Hexagon nuts 3 d high

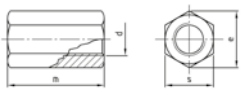


DIN 6334
A5

DIN 6334 1.4571
Altıköşe somun, 3 d takviyeli

DIN 6334 1.4571
Hexagon nuts 3 d high

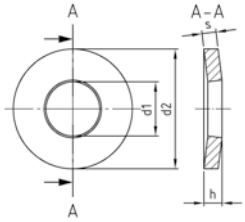




DIN 6796 A2 'e benzer
Konik yaylı rondela (çanak pul)

similar to DIN 6796 A2
Conical spring washers for bolted connections





Malzeme kalınlığı S - DIN 522C'ye göre

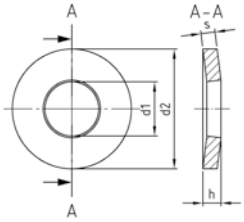
Material thickness S - according to DIN 522C

DIN 6796
A4

DIN 6796 A4 'e benzer
Konik yaylı rondela (çanak pul)

similar to DIN 6796 A4
Conical spring washers for bolted connections





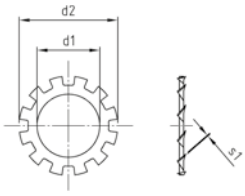
Malzeme kalınlığı S - DIN 522C'ye göre

Material thickness S - according to DIN 522C

DIN 6797 A2 A
Tırtıllı kilit rondelası seyrek dişli, tip A

DIN 6797 A2 A
Toothed lock washers, type A





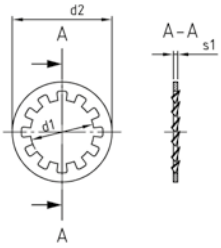
- tip A
- *type A*

DIN 6797 J
A2

DIN 6797 A2 J
Tırtıllı kilit rondelası seyrek dişli, tip J

DIN 6797 A2 J
Toothed lock washers, type J



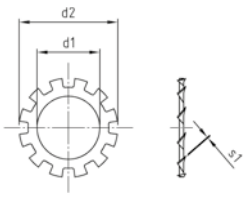


- tip J

- *type J*

DIN





- tip A

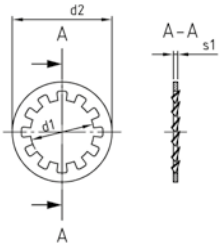
- *type A*

DIN 6797 J
A4

DIN 6797 A4 J
Tırtıllı kilit rondelası seyrek dişli, tip J

DIN 6797 A4 J
Toothed lock washers, type J





- tip J

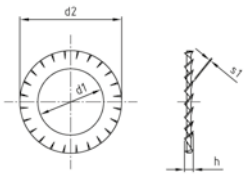
- *type J*

DIN

DIN 6798 A2
Tırtıllı kilit rondelası sık dişli, tip A

DIN 6798 A2
Serrated lock washers type A





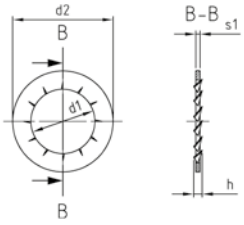
- tip A
- *type A*

DIN 6798 J
A2

DIN 6798 A2
Tırtıllı kilit rondelası sık dişli, tip J

DIN 6798 A2
Serrated lock washers type J





- tip J

- type J

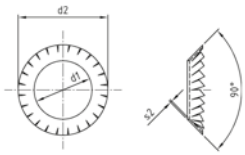
DIN

DIN 6798 A2
Tırtıllı kilit rondelası sık dişli, tip V

DIN 6798 A2
Serrated countersunk lock washers type V

DIN 6798 V
A2





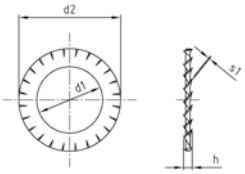
- tip V
- *type V*

DIN 6798 A
A4

DIN 6798 A4
Tırtıllı kilit rondelası sık dişli, tip A

DIN 6798 A4
Serrated lock washers type A





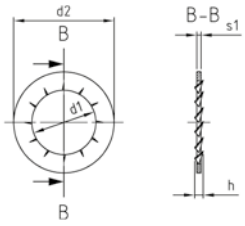
- tip A

- *type A*

DIN 6798 A4
Tırtıllı kilit rondelası sık dişli, tip J

DIN 6798 A4
Serrated lock washers type J





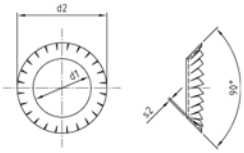
- tip J
- *type J*

DIN 6798 V
A4

DIN 6798 A4
Tırtıllı kilit rondelası sık dişli, tip V

DIN 6798 A4
Serrated countersunk lock washers type V





- tip V

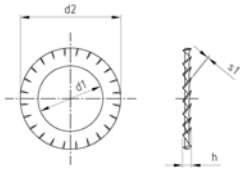
- type V

DIN 6798 1.4571
Tırtıllı kilit rondelası sık dişli, tip A

DIN 6798 1.4571
Serrated lock washers type A

DIN 6798 A
A5





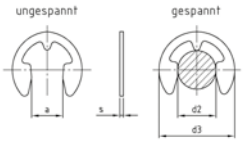
- tip A
- *type A*

DIN 6799 1.4122

DIN 6799 1.4122
Ay tipi segman

DIN 6799 1.4122
Retaining washers for shafts



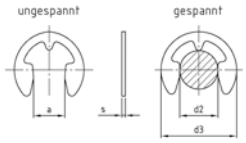


DIN 6799 1.4532
Ay tipi segman

DIN 6799 1.4532
Retaining washers for shafts

DIN 6799
1.4532





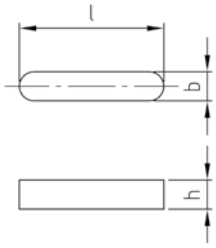
DIN 6885 A
A5

Alt. Norm tarafından değiştirildi ISO 2491

DIN 6885 1.4571
Paralel kamalar, yüksek tip, Tip A

DIN 6885 1.4571
Parallel keys type A





- Genişlik için tolerans alanı H9
- Yükseklik için tolerans alanı H11

- *Tolerance field H9 for the width*
- *Tolerance field H11 for the height*

DIN 6912 A2
Ince başlı imbus

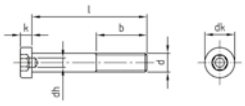
DIN 6912 A2
Socket head cap screws with center hole low head

d	M
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

1000 ≥35: box = 500 ≥50: box = 200	1000 ≥20: box = 500 ≥35: box = 200 ≥60: box = 100	500 ≥25: box = 200 ≥70: box = 100	500 ≥14: box = 200 ≥45: box = 100	500 ≥14: box = 200 ≥25: box = 100 ≥70: box = 50	100 ≥50: box = 50
	2	2.5	3	4	5
5.5	7	8.5	10	13	16
2	2.8	3.5	4	5	6.5
SW 2	SW 3	SW 4	SW 5	SW 6	SW 8





b = Standarda uygun
- "0" = azaltılmış yük kapasitesi

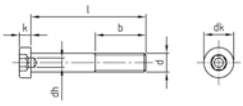
b = at Norm
- "0" = reduced load capacity

DIN 6912
A2

DIN 6912 A2
Ince başlı imbus

DIN 6912 A2
Socket head cap screws with center hole low head





b = Standarda uygun
- "0" = azaltılmış yük kapasitesi

b = at Norm
- "0" = reduced load capacity

	M 12	M 16	M 20	M 24
	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
	6912212 16			
	6912212 18			
	6912212 20	6912216 20		
	6912212 22			
	6912212 25	6912216 25		
	6912212 30	6912216 30	6912220 30	
	6912212 35	6912216 35	6912220 35	
	6912212 40	6912216 40	6912220 40	6912224 40
	6912212 45	6912216 45	6912220 45	6912224 45
	6912212 50	6912216 50	6912220 50	6912224 50
	6912212 55	6912216 55	6912220 55	6912224 55
	6912212 60	6912216 60	6912220 60	6912224 60
	6912212 65	6912216 65	6912220 65	6912224 65
	6912212 70	6912216 70	6912220 70	6912224 70
	6912212 75	6912216 75	6912220 75	6912224 75
	6912212 80	6912216 80	6912220 80	6912224 80
	6912212 90	6912216 90	6912220 90	6912224 90
	6912212 100	6912216 100	6912220 100	6912224 100
	6912212 110	6912216 110	6912220 110	6912224 110
d	6912212 120	6912216 120	6912220 120	6912224 120
		6912216 130	6912220 130	6912224 130
		6912216 140	6912220 140	6912224 140
		6912216 150	6912220 150	6912224 150
	50 ≥75: box = 25	25	25	10
	6	8	10	12
	18	24	30	36
	7.5	10	12	14
	SW 10	SW 14	SW 17	SW 19

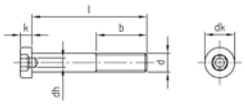
DIN 6912 A4
Socket head cap screws with center hole low head

d	M
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

1000 ≥35: box = 500 ≥50: box = 200	1000 ≥20: box = 500 ≥35: box = 200 ≥60: box = 100	500 ≥25: box = 200 ≥60: box = 100	500 ≥14: box = 200 ≥45: box = 100	500 ≥14: box = 200 ≥25: box = 100 ≥70: box = 50	100 ≥50: box = 50
	2	2.5	3	4	5
5.5	7	8.5	10	13	16
2	2.8	3.5	4	5	6.5
SW 2	SW 3	SW 4	SW 5	SW 6	SW 8





b = Standarda uygun
- "0" = azaltılmış yük kapasitesi

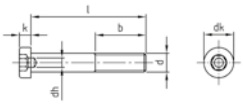
b = at Norm
- "0" = reduced load capacity

DIN 6912
A4

DIN 6912 A4
Ince başlı imbus

DIN 6912 A4
Socket head cap screws with center hole low head





b = Standarda uygun
- "0" = azaltılmış yük kapasitesi

b = at Norm
- "0" = reduced load capacity

	M 12	M 16	M 20	M 24
	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
	6912412 16			
	6912412 18			
	6912412 20	6912416 20		
	6912412 22			
	6912412 25	6912416 25		
	6912412 30	6912416 30	6912420 30	
	6912412 35	6912416 35	6912420 35	
	6912412 40	6912416 40	6912420 40	6912424 40
	6912412 45	6912416 45	6912420 45	6912424 45
	6912412 50	6912416 50	6912420 50	6912424 50
	6912412 55	6912416 55	6912420 55	6912424 55
	6912412 60	6912416 60	6912420 60	6912424 60
	6912412 65	6912416 65	6912420 65	6912424 65
	6912412 70	6912416 70	6912420 70	6912424 70
	6912412 75	6912416 75	6912420 75	6912424 75
	6912412 80	6912416 80	6912420 80	6912424 80
	6912412 90	6912416 90	6912420 90	6912424 90
	6912412 100	6912416 100	6912420 100	6912424 100
	6912412 110	6912416 110	6912420 110	6912424 110
d	6912412 120	6912416 120	6912420 120	6912424 120
		6912416 130	6912420 130	6912424 130
		6912416 140	6912420 140	6912424 140
		6912416 150	6912420 150	6912424 150
	50 ≥75: box = 25	25	25	10
	6	8	10	12
	18	24	30	36
	7.5	10	12	14
	SW 10	SW 14	SW 17	SW 19

DIN 6921 A2
Flanşlı ve tam dişli altı köşe başlı cıvatalar

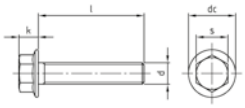
DIN 6921 A2
Hexagon head screws with flange and fullthread

DIN 6921 A2

Alt. Norm
alternatif olarak DIN 1665

d	M				
	Ürün no./*Item no.*				
		200	200	200	100	50
		11.8	14.2	18	22.3	26.6
		5.4	6.6	8.1	9.2	11.5
		SW 8	SW 10	SW 13	SW 15	SW 16





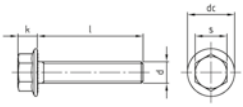
DIN 6921
A2

Alt. Norm
alternatif olarak DIN 1665

DIN 6921 A2
Flanşlı ve tırtıllı altı köşe başlı cıvatalar

DIN 6921 A2
Hexagon head screws fullthread with locking teeth





d	M				
	Ürün no./*Item no.*				
		200	200	200	100	50
		11.8	14.2	18	22.3	26.6
		5.4	6.6	8.1	9.2	11.5
		SW 8	SW 10	SW 13	SW 15	SW 16

DIN 6921 A4
Flanşlı ve tam dişli altı köşe başlı cıvatalar

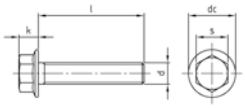
DIN 6921 A4
Hexagon head screws with flange and fullthread

DIN 6921
A4

Alt. Norm
alternatif olarak DIN 1665

d	M				
	Ürün no./*Item no.*				
		200	200	200	100	50
		11.8	14.2	18	22.3	26.6
		5.4	6.6	8.1	9.2	11.5
		SW 8	SW 10	SW 13	SW 15	SW 16





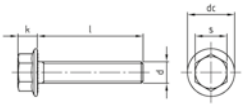
DIN 6921
A4

Alt. Norm
alternatif olarak DIN 1665

DIN 6921 A4
Flanşlı ve tırtıllı altı köşe başlı cıvatalar

DIN 6921 A4
Hexagon head screws fullthread with locking teeth





d	M				
	Ürün no./*Item no.*				
	200	200	200	100	50
	11.8	14.2	18	22.3	26.6
	5.4	6.6	8.1	9.2	11.5
	SW 8	SW 10	SW 13	SW 15	SW 16

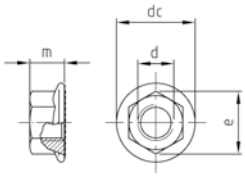
DIN 6923 A2
Flanşlı somun, tirtilsiz ve SVZ

DIN 6923 A2
Hexagon flange nuts with serration

DIN 6923
A2

Alt. Norm tarafından değiştirildi ISO 4161





G625 = Gleitmo

G625 = Gleitmo

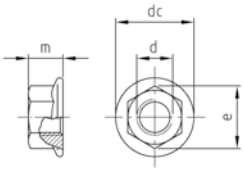
DIN 6923
A2

Alt. Norm
alternatif olarak DIN 1661

DIN 6923 A2
Flanşlı somun, tirtilsiz olmadan SVZ

DIN 6923 A2
Hexagon flange nuts without serration





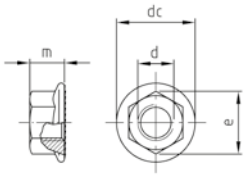
DIN 6923 A4
Flanşlı somun, tirtilsiz ve SVZ

DIN 6923 A4
Hexagon flange nuts with serration

DIN 6923
A4

Alt. Norm
alternatif olarak DIN 1661





G625 = Gleitmo
G625 = Gleitmo

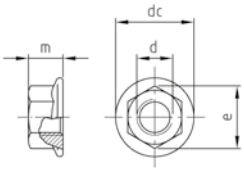
DIN 6923
A4

Alt. Norm
alternatif olarak DIN 1661

DIN 6923 A4
Flanşlı somun, tirtilsiz olmadan SVZ

DIN 6923 A4
Hexagon flange nuts without serration





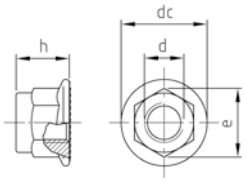
DIN 6926 A2
Flanşlı somun, tirtilsiz ile SVZ

DIN 6926 A2
Hexagon flange nuts with serration

DIN 6926
A2

Alt. Norm
alternatif olarak DIN 1663





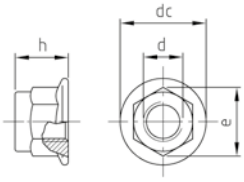
DIN 6926
A2

Alt. Norm
alternatif olarak DIN 1663

DIN 6926 A2
Flanşlı somun, tirtilsiz olmadan SVZ

DIN 6926 A2
Hexagon flange nuts without serration





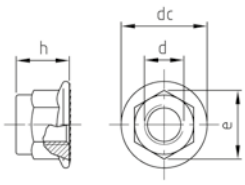
DIN 6926 A4
Flanşlı somun, tirtilsiz ile SVZ

DIN 6926 A4
Hexagon flange nuts with serration

DIN 6926
A4

Alt. Norm
alternatif olarak DIN 1663





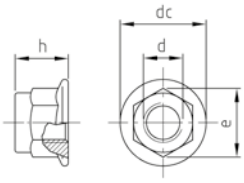
DIN 6926
A4

Alt. Norm
alternatif olarak DIN 1663

DIN 6926 A4
Flanşlı somun, tirtilsiz olmadan SVZ

DIN 6926 A4
Hexagon flange nuts without serration

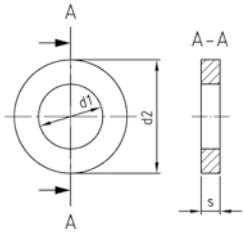




DIN 7349 A2
Ağir tip yaylı pimli civatalar için rondela

DIN 7349 A2
Washers for bolts with heavy type spring pins



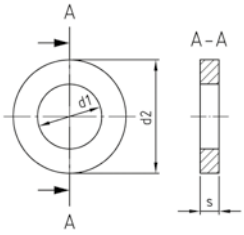


DIN 7349
A4

DIN 7349 A4
Ağir tip yaylı pimli civatalar için rondela

DIN 7349 A4
Washers for bolts with heavy type spring pins

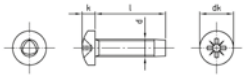




DIN 7500C A2 PZ
Thread rolling raised cheese head screws type CE

d	M			
	Ürün no./*Item no.*			
1000	1000	1000	500	500
4.7	5.3	7.64	9.14	11.57
1.96	2.26	2.92	3.52	4.3
PZ1	PZ1	PZ2	PZ3	PZ3



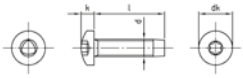


DIN 7500 CE
A2

DIN 7500C A2 TX
Kendinden kılavuzlu mercimek başlı vidalar, Tip CE

DIN 7500C A2 TX
Thread rolling raised cheese head screws type CE



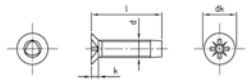


d	M			
	Ürün no./*Item no.*			
1000	1000	1000	500	500
4.7	5.3	7.64	9.14	11.57
1.96	2.26	2.92	3.52	4.3
TX8	TX10	TX20	TX25	TX30

DIN 7500M A2 PZ
Thread rolling countersunk head screws type ME

d	M
	Ürün no./*Item no.*





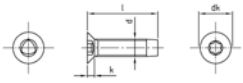
1000	1000	1000	500
4.4	5.2	8	8.9
1.5	1.65	2.7	2.7
PZ1	PZ1	PZ2	PZ2

DIN 7500 ME
A2

DIN 7500M A2 TX
Kendinden kılavuzlu mercimek başlı vidalar, Tip ME

DIN 7500M A2 TX
Thread rolling countersunk head screws type ME





d	M		
	Ürün no./*Item no.*		
1000	1000	1000	500
4.4	5.2	8.04	8.94
1.5	1.65	2.7	2.7
TX8	TX10	TX20	TX25

DIN 7504 K A2
Altıköşe başlı ve flanşlı kendinden delici uçlu K

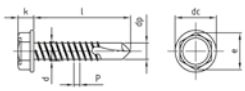
DIN 7504 K A2
Self drilling screws hexagon flange head type K

DIN 7504 K A2

Alt. Norm tarafından değiştirildi ISO 15480

d					
	Ürün no./*Item no.*				
1000	1000 ≥38: box = 500	1000 ≥38: box = 500 ≥50: box = 200	500 ≥60: box = 200	500 ≥50: box = 200 ≥125: box = 100	500 ≥50: box = 200 ≥100: box = 100
8.3	8.3	8.8	10.5	11	
2.8	3.1	3.6	4.1	4.8	5.8
5.96	5.96	7.59	8.71	8.71	10.95
3.4	3.4	4.1	4.3	5.4	5.9
1.2	1.3	1.4	1.5	1.7	2
0,7-2,25	0,7-2,4	1,75-3,0	1,75-4,4	1,75-5,25	2,0-6,0
SW 5,5	SW 5,5	SW 7	SW 8	SW 8	SW 10





Dikkat: sadece yumuşak metaller için

Attention: only for soft metals

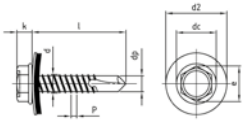
DIN 7504 K A2

Alt. Norm tarafından değiştirildi ISO 15480

DIN 7504 KO A2
Altıköşe başlı ve flanşlı kendinden delici uçlu K, 16mm

DIN 7504 KO A2
Self drilling screws hexagon flange head type K, 16 mm sealing washer





Dikkat: sadece yumuşak metaller için

Attention: only for soft metals

d	
	Ürün no./*Item no.*
	500 ≥50: box = 200
	16
	11
	4.8
	8.71
	5.4
	1.7
	1,75–5,25
	SW 8

DIN

DIN 7504 M A2 PH
Yıldız silindir başlı sac vidası, M Form

DIN 7504 M A2 PH
Self drilling screws with pan head type M

DIN 7504 M A2

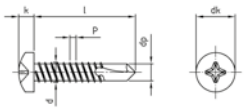
Alt. Norm tarafından değiştirildi ISO 15481

d	
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*



1000	1000	1000	1000 ≥45: box = 500	1000 ≥50: box = 500	1000 ≥25: box = 500 ≥40: box = 200
5.6	6.9	7.5	8.2	9.5	10.8
2.3	2.8	3.1	3.6	4.1	4.8
2.2	2.6	2.8	3.05	3.55	3.95
0.9	1.2	1.3	1.4	1.5	1.7
0,7–1,9	0,7–2,25	0,7–2,4	1,75–3,0	1,75–4,4	1,75–5,25
PH1	PH2	PH2	PH2	PH2	PH3



Dikkat: sadece yumuşak metaller için

Attention: only for soft metals

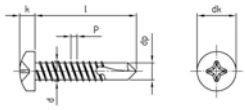
DIN 7504 M A2

Alt. Norm tarafından değiştirildi ISO 15481

DIN 7504 M A2 PH
Yıldız silindir başlı sac vidası, M Form

DIN 7504 M A2 PH
Self drilling screws with pan head type M





Dikkat: sadece yumuşak metaller için

Attention: only for soft metals

	6,3
	Réf./Item no.
	75042M63 16
	75042M63 19
	75042M63 22
	75042M63 25
	75042M63 32
	75042M63 38
	75042M63 45
	75042M63 50
	75042M63 60
	75042M63 70
d	
	75042M63 80
	75042M63 90
	75042M63 100
	500 ≥25: box = 200
	12.5
	5.8
	4.55
	2
	2,0-6,0
	PH3

DIN

DIN 7504 M A2 PZ
Yıldız silindir başlı sac vidası, M Form

DIN 7504 M A2 PZ
Self drilling screws with pan head type M

DIN 7504 M A2

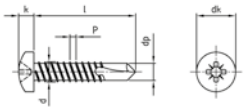
Alt. Norm tarafından değiştirildi ISO 15481

d	
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

1000	1000	1000	1000	1000 ≥50: box = 500
5.6	6.9	7.5	8.2	9.5
2.3	2.8	3.1	3.6	4.1
2.2	2.6	2.8	3.05	3.55
0.9	1.2	1.3	1.4	1.5
0,7-1,9	0,7-2,25	0,7-2,4	1,75-3,0	1,75-4,4
PZ1	PZ2	PZ2	PZ2	PZ2





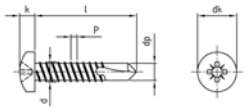
Dikkat: sadece yumuşak metaller için

Attention: only for soft metals

DIN 7504 M A2

Alt. Norm tarafından değiştirildi ISO 15481





Dikkat: sadece yumuşak metaller için

Attention: only for soft metals

DIN 7504 M A2 PZ
Yıldız silindir başlı sac vidası, M Form

DIN 7504 M A2 PZ
Self drilling screws with pan head type M

	5,5	6,3
	Réf./Item no.	Réf./Item no.
	75042M055 16	75042M063 16
	75042M055 19	75042M063 19
	75042M055 22	75042M063 22
	75042M055 25	75042M063 25
	75042M055 32	75042M063 32
	75042M055 35	
	75042M055 38	75042M063 38
	75042M055 40	
	75042M055 45	75042M063 45
	75042M055 50	75042M063 50
	75042M055 60	75042M063 60
	75042M055 70	75042M063 70
d	75042M055 75	
	75042M055 80	75042M063 80
	75042M055 90	75042M063 90
	75042M055 100	75042M063 100
	1000 ≥25: box = 500 ≥40: box = 200	500 ≥25: box = 200
	10.8	12.5
	4.8	5.8
	3.95	4.55
	1.7	2
	1,75–5,25	2,0–6,0
	PZ3	PZ3

DIN 7504 M A2 TX
Yıldız silindir başlı sac vidası, M Form

DIN 7504 M A2 TX
Self drilling screws with pan head type M

DIN 7504 M A2

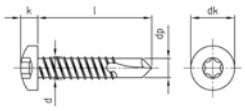
Alt. Norm tarafından değiştirildi ISO 15481

d	
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

1000	1000	1000	1000 ≥32: box = 500	500
5.6	6.9	7.5	8.2	9.5
2.3	2.8	3.1	3.6	4.1
2.2	2.6	2.8	3.05	3.55
0.9	1.2	1.3	1.4	1.5
0,7-1,9	0,7-2,25	0,7-2,4	1,75-3,0	1,75-4,4
TX8	TX10	TX15	TX20	TX25





Dikkat: sadece yumuşak metaller için

Attention: only for soft metals

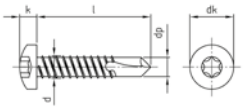
DIN 7504 M A2

Alt. Norm tarafından değiştirildi ISO 15481

DIN 7504 M A2 TX
Yıldız silindir başlı sac vidası, M Form

DIN 7504 M A2 TX
Self drilling screws with pan head type M





Dikkat: sadece yumuşak metaller için

Attention: only for soft metals

d	5,5	6,3
	Réf./Item no.	Réf./Item no.
	75042MT55 16	75042MT63 16
	75042MT55 19	75042MT63 19
	75042MT55 22	75042MT63 22
	75042MT55 25	75042MT63 25
	75042MT55 32	75042MT63 32
	75042MT55 35	
	75042MT55 38	75042MT63 38
	75042MT55 40	
	75042MT55 45	75042MT63 45
	75042MT55 50	75042MT63 50
	75042MT55 60	75042MT63 60
	75042MT55 70	75042MT63 70
	75042MT55 75	
	75042MT55 80	75042MT63 80
	75042MT55 90	75042MT63 90
	75042MT55 100	75042MT63 100
	1000 ≥25: box = 500 ≥45: box = 200	500 ≥25: box = 200
	10.8	12.5
	4.8	5.8
	3.95	4.55
	1.7	2
	1,75–5,25	2,0–6,0
	TX25	TX30

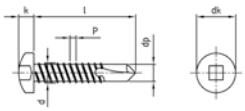
DIN 7504 M A2 V
Yıldız silindir başlı sac vidası, M Form

DIN 7504 M A2 V
Self drilling screws with pan head type M

DIN 7504 M A2

Alt. Norm tarafından değiştirildi ISO 15481





Dikkat: sadece yumuşak metaller için

Attention: only for soft metals

d			
	Ürün no./*Item no.*		
200	200	200	200
7	7.5	8	9.5
2.8	3.2	3.5	4
2.2	2.8	3.1	3.7
1.2	1.3	1.4	1.5
0,7-2,25	0,7-2,4	1,75-3,0	1,75-4,4
V1	V1	V2	V2

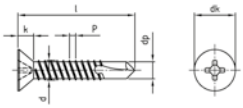
DIN 7504 O A2

Alt. Norm tarafından değiştirildi ISO 15482

DIN 7504 O A2 PH
Yıldız silindir başlı sac vidası, O Form

DIN 7504 O A2 PH
Self drilling screws with countersunk head type O





Dikkat: sadece yumuşak metaller için

Attention: only for soft metals

d					
	Ürün no./*Item no.*				
1000	1000	1000	1000 ≥50: box = 200	1000 ≥50: box = 500 ≥60: box = 200	1000 ≥25: box = 500 ≥40: box = 200
5.5	7.3	7.5	8.4	9.3	10.3
2.3	2.8	3.1	3.6	4.1	4.8
1.7	2.35	2.5	2.6	2.8	3
0.9	1.2	1.3	1.4	1.5	1.7
0,7–1,9	0,7–2,25	0,7–2,4	1,75–3,0	1,75–4,4	1,75–5,25
PH1	PH2	PH2	PH2	PH2	PH3

DIN 7504 O A2 PH
Yıldız silindir başlı sac vidası, O Form

DIN 7504 O A2 PH
Self drilling screws with countersunk head type O

DIN 7504 O A2

Alt. Norm tarafından değiştirildi ISO 15482

6,3
Réf./Item no.
75042063 16
75042063 19
75042063 22
75042063 25
75042063 32
75042063 38
75042063 45
75042063 50
75042063 60
75042063 70
75042063 80
75042063 90
75042063 100
500 ≥25: box = 200
10.9
5.8
3.15
2
2,0-6,0
PH3

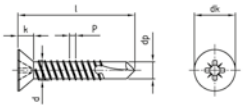
DIN 7504 O A2

Alt. Norm tarafından değiştirildi ISO 15482

DIN 7504 O A2 PZ
Yıldız silindir başlı sac vidası, O Form

DIN 7504 O A2 PZ
Self drilling screws with countersunk head type O





Dikkat: sadece yumuşak metaller için

Attention: only for soft metals

d				
	Ürün no./*Item no.*			
1000	1000	1000	1000	1000 ≥60: box = 500
5.5	7.3	7.5	8.4	9.3
2.3	2.8	3.1	3.6	4.1
1.7	2.35	2.5	2.6	2.8
0.9	1.2	1.3	1.4	1.5
0,7-1,9	0,7-2,25	0,7-2,4	1,75-3,0	1,75-4,4
PZ1	PZ2	PZ2	PZ2	PZ2

DIN 7504 O A2 PZ
Yıldız silindir başlı sac vidası, O Form

DIN 7504 O A2 PZ
Self drilling screws with countersunk head type O

DIN 7504 O A2

Alt. Norm tarafından değiştirildi ISO 15482

5,5	6,3
Réf./Item no.	Réf./Item no.
	750420063 16
750420055 19	750420063 19
750420055 22	750420063 22
750420055 25	750420063 25
750420055 32	750420063 32
750420055 38	750420063 38
750420055 40	
750420055 45	750420063 45
750420055 50	750420063 50
750420055 60	750420063 60
750420055 70	750420063 70
750420055 75	
750420055 80	750420063 80
750420055 90	750420063 90
750420055 100	750420063 100

1000 ≥25: box = 500 ≥40: box = 200	500 ≥25: box = 200
10.3	10.9
4.8	5.8
3	3.15
1.7	2
1,75–5,25	2,0–6,0
PZ3	PZ3

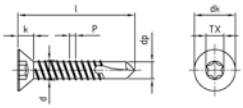
DIN 7504 O A2

Alt. Norm tarafından değiştirildi ISO 15482

DIN 7504 O A2 TX
Yıldız silindir başlı sac vidası, O Form

DIN 7504 O A2 TX
Self drilling screws with countersunk head type O





Dikkat: sadece yumuşak metaller için

Attention: only for soft metals

d					
	Ürün no./*Item no.*				
	1000	1000	1000	1000	1000 ≥25: box = 500
	5.5	7.3	7.5	8.4	9.3
	2.3	2.8	3.1	3.6	4.1
	1.7	2.35	2.5	2.6	2.8
	0.9	1.2	1.3	1.4	1.5
	0,7-1,9	0,7-2,25	0,7-2,4	1,75-3,0	1,75-4,4
	TX8	TX10	TX15	TX20	TX25

DIN 7504 O A2 TX
Yıldız silindir başlı sac vidası, O Form

DIN 7504 O A2 TX
Self drilling screws with countersunk head type O

DIN 7504 O
A2

Alt. Norm tarafından değiştirildi ISO 15482

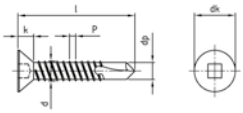
5,5	6,3
Réf./Item no.	Réf./Item no.
	75042OT63 16
75042OT55 19	75042OT63 19
75042OT55 22	75042OT63 22
75042OT55 25	75042OT63 25
75042OT55 32	75042OT63 32
75042OT55 38	75042OT63 38
75042OT55 40	
75042OT55 45	75042OT63 45
75042OT55 50	75042OT63 50
75042OT55 60	75042OT63 60
75042OT55 70	75042OT63 70
75042OT55 75	
75042OT55 80	75042OT63 80
75042OT55 90	75042OT63 90
75042OT55 100	75042OT63 100

1000 ≥25: box = 500 ≥40: box = 200	500 ≥25: box = 200
10.3	10.9
4.8	5.8
3	3.15
1.7	2
1,75–5,25	2,0–6,0
TX25	TX30

DIN 7504 O A2

Alt. Norm tarafından değiştirildi ISO 15482





Dikkat: sadece yumuşak metaller için

Attention: only for soft metals

DIN 7504 O A2 V
Yıldız silindir başlı sac vidası, O Form

DIN 7504 O A2 V
Self drilling screws with countersunk head type O

d			
	Ürün no./*Item no.*		
200	200	200	200
	2.31	2.84	2.84
7	7.5	8.4	9.3
2.8	3.1	3.6	4.1
2.35	2.5	2.6	2.8
1.2	1.3	1.4	1.5
0,7-2,25	0,7-2,4	1,75-3,0	1,75-4,4
V1	V1	V2	V2

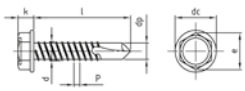
DIN 7504 K A4
Altıköşe başlı ve flanşlı kendinden delici uçlu, K Form

DIN 7504 K A4
Self drilling screws hexagon flange head type K

DIN 7504 K A4

Alt. Norm tarafından değiştirildi ISO 15480





Dikkat, sadece yumuşak metaller için uygun

Attention: only for soft metals

d				
	Ürün no./*Item no.*			
	1000 ≥38: box = 500	1000 ≥38: box = 500 ≥50: box = 200	500 ≥60: box = 200	500 ≥50: box = 200 ≥125: box = 100	500 ≥50: box = 200 ≥100: box = 100
8.3	8.8	10.5	11	13.2
3.1	3.6	4.1	4.8	5.8
5.96	7.59	8.71	8.71	10.95
3.4	4.1	4.3	5.4	5.9
1.3	1.4	1.5	1.7	2
0,7–2,4	1,75–3,0	1,75–4,4	1,75–5,25	2,0–6,0
SW 5,5	SW 7	SW 8	SW 8	SW 10

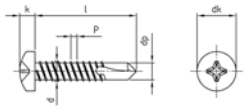
DIN 7504 M A4

Alt. Norm tarafından değiştirildi ISO 15481

DIN 7504 M A4 PH
Yıldız silindir başlı sac vidası, M Form

DIN 7504 M A4 PH
Self drilling screws with pan head type M





Dikkat, sadece yumuşak metaller için uygun

Attention: only for soft metals

d					
	Ürün no./*Item no.*				
1000	1000	1000	1000 ≥45: box = 500	1000 ≥50: box = 500	1000 ≥25: box = 500 ≥40: box = 200
5.6	6.9	7.5	8.2	9.5	10.8
2.3	2.8	3.1	3.6	4.1	4.8
2.2	2.6	2.8	3.05	3.55	3.95
0.9	1.2	1.3	1.4	1.5	1.7
0,7–1,9	0,7–2,25	0,7–2,4	1,75–3,0	1,75–4,4	1,75–5,25
PH1	PH2	PH2	PH2	PH2	PH3

DIN 7504 M A4 PH
Yıldız silindir başlı sac vidası, M Form

DIN 7504 M A4 PH
Self drilling screws with pan head type M

DIN 7504 M
A4

Alt. Norm tarafından değiştirildi ISO 15481

6,3
Réf./Item no.
75044M63 16
75044M63 19
75044M63 22
75044M63 25
75044M63 32
75044M63 38
75044M63 45
75044M63 50
75044M63 60
75044M63 70
75044M63 80
75044M63 90
75044M63 100
500 ≥25: box = 200
12.5
5.8
4.55
2
2,0-6,0
PH3

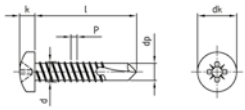
DIN 7504 M A4

Alt. Norm tarafından değiştirildi ISO 15481

DIN 7504 M A4 PZ
Yıldız silindir başlı sac vidası, M Form

DIN 7504 M A4 PZ
Self drilling screws with pan head type M





Dikkat, sadece yumuşak metaller için uygun

Attention: only for soft metals

d				
	Ürün no./*Item no.*			
1000	1000	1000	1000 ≥45: box = 500	1000 ≥50: box = 500
5.6	6.9	7.5	8.2	9.5
2.3	2.8	3.1	3.6	4.1
2.2	2.6	2.8	3.05	3.55
0.9	1.2	1.3	1.4	1.5
0,7-1,9	0,7-2,25	0,7-2,4	1,75-3,0	1,75-4,4
PZ1	PZ2	PZ2	PZ2	PZ2

DIN 7504 M A4 PZ
Yıldız silindir başlı sac vidası, M Form

DIN 7504 M A4 PZ
Self drilling screws with pan head type M

DIN 7504 M A4

Alt. Norm tarafından değiştirildi ISO 15481

5,5	6,3
Réf./Item no.	Réf./Item no.
75044M055 16	75044M063 16
75044M055 19	75044M063 19
75044M055 22	75044M063 22
75044M055 25	75044M063 25
75044M055 32	75044M063 32
75044M055 35	
75044M055 38	75044M063 38
75044M055 40	
75044M055 45	75044M063 45
75044M055 50	75044M063 50
75044M055 60	75044M063 60
75044M055 70	75044M063 70
75044M055 75	
75044M055 80	75044M063 80
75044M055 90	75044M063 90
75044M055 100	75044M063 100

1000 ≥25: box = 500 ≥40: box = 200	500 ≥25: box = 200
10.8	12.5
4.8	5.8
3.95	4.55
1.7	2
1,75–5,25	2,0–6,0
PZ3	PZ3

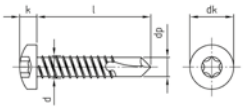
DIN 7504 M A4

Alt. Norm tarafından değiştirildi ISO 15481

DIN 7504 M A4 TX
Yıldız silindir başlı sac vidası, M Form

DIN 7504 M A4 TX
Self drilling screws with pan head type M





Dikkat, sadece yumuşak metaller için uygun

Attention: only for soft metals

d	
	Ürün no./*Item no.*

1000	1000	1000	1000 ≥45: box = 500	1000 ≥50: box = 500
5.6	6.9	7.5	8.2	9.5
2.3	2.8	3.1	3.6	4.1
2.2	2.6	2.8	3.05	3.55
0.9	1.2	1.3	1.4	1.5
0,7-1,9	0,7-2,25	0,7-2,4	1,75-3,0	1,75-4,4
TX8	TX10	TX15	TX20	TX25

DIN 7504 M A4 TX
Yıldız silindir başlı sac vidası, M Form

DIN 7504 M A4 TX
Self drilling screws with pan head type M

DIN 7504 M
A4

Alt. Norm tarafından değiştirildi ISO 15481

5,5	6,3
Réf./Item no.	Réf./Item no.
75044MT55 16	75044MT63 16
75044MT55 19	75044MT63 19
75044MT55 22	75044MT63 22
75044MT55 25	75044MT63 25
75044MT55 32	75044MT63 32
75044MT55 35	
75044MT55 38	75044MT63 38
75044MT55 40	
75044MT55 45	75044MT63 45
75044MT55 50	75044MT63 50
75044MT55 60	75044MT63 60
75044MT55 70	75044MT63 70
75044MT55 75	
75044MT55 80	75044MT63 80
75044MT55 90	75044MT63 90
75044MT55 100	75044MT63 100

1000 ≥25: box = 500 ≥40: box = 200	500 ≥25: box = 200
10.8	12.5
4.8	5.8
3.95	4.55
1.7	2
1,75–5,25	2,0–6,0
TX25	TX30

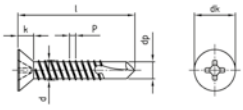
DIN 7504 O A4

Alt. Norm tarafından değiştirildi ISO 15482

DIN 7504 O A4 PH
Yıldız silindir başlı sac vidası, O Form

DIN 7504 O A4 PH
Self drilling screws with countersunk head type O





Dikkat, sadece yumuşak metaller için uygun

Attention: only for soft metals

d					
	Ürün no./*Item no.*				
1000	1000	1000	1000	1000 ≥50: box = 500 ≥60: box = 200	1000 ≥25: box = 500 ≥40: box = 200
5.5	7.3	7.5	8.4	9.3	10.3
2.3	2.8	3.1	3.6	4.1	4.8
1.7	2.35	2.5	2.6	2.8	3
0.9	1.2	1.3	1.4	1.5	1.7
0,7–1,9	0,7–2,25	0,7–2,4	1,75–3,0	1,75–4,4	1,75–5,25
PH1	PH2	PH2	PH2	PH2	PH3

DIN 7504 O A4 PH
Yıldız silindir başlı sac vidası, O Form

DIN 7504 O A4 PH
Self drilling screws with countersunk head type O

DIN 7504 O A4

Alt. Norm tarafından değiştirildi ISO 15482

6,3
Réf./Item no.
75044O63 16
75044O63 19
75044O63 22
75044O63 25
75044O63 32
75044O63 38
75044O63 45
75044O63 50
75044O63 60
75044O63 70
75044O63 80
75044O63 90
75044O63 100
500 ≥25: box = 200
10.9
5.8
3.15
2
2,0-6,0
PH3

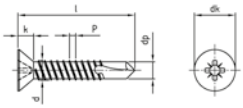
DIN 7504 O A4

Alt. Norm tarafından değiştirildi ISO 15482

DIN 7504 O A4 PZ
Yıldız silindir başlı sac vidası, O Form

DIN 7504 O A4 PZ
Self drilling screws with countersunk head type O





Dikkat, sadece yumuşak metaller için uygun

Attention: only for soft metals

d				
	Ürün no./*Item no.*			
1000	1000	1000	1000	1000 ≥50: box = 500 ≥60: box = 200
5.5	7.3	7.5	8.4	9.3
2.3	2.8	3.1	3.6	4.1
1.7	2.35	2.5	2.6	2.8
0.9	1.2	1.3	1.4	1.5
0,7-1,9	0,7-2,25	0,7-2,4	1,75-3,0	1,75-4,4
PZ1	PZ2	PZ2	PZ2	PZ2

DIN 7504 O A4 PZ
Yıldız silindir başlı sac vidası, O Form

DIN 7504 O A4 PZ
Self drilling screws with countersunk head type O

DIN 7504 O
A4

Alt. Norm tarafından değiştirildi ISO 15482

5,5	6,3
Réf./Item no.	Réf./Item no.
	750440063 16
750440055 19	750440063 19
750440055 22	750440063 22
750440055 25	750440063 25
750440055 32	750440063 32
750440055 38	750440063 38
750440055 40	
750440055 45	750440063 45
750440055 50	750440063 50
750440055 60	750440063 60
750440055 70	750440063 70
750440055 75	
750440055 80	750440063 80
750440055 90	750440063 90
750440055 100	750440063 100

1000 ≥25: box = 500 ≥40: box = 200	500 ≥25: box = 200
10.3	10.9
4.8	5.8
3	3.15
1.7	2
1,75–5,25	2,0–6,0
PZ3	PZ3

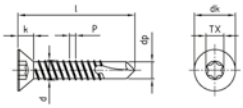
DIN 7504 O A4

Alt. Norm tarafından değiştirildi ISO 15482

DIN 7504 O A4 TX
Yıldız silindir başlı sac vidası, O Form

DIN 7504 O A4 TX
Self drilling screws with countersunk head type O





Dikkat, sadece yumuşak metaller için uygun

Attention: only for soft metals

d				
	Ürün no./*Item no.*			
1000	1000	1000	1000	1000 ≥28: box = 500 ≥60: box = 200
5.5	7.3	7.5	8.4	9.3
2.3	2.8	3.1	3.6	4.1
1.7	2.35	2.5	2.6	2.8
0.9	1.2	1.3	1.4	1.5
0,7-1,9	0,7-2,25	0,7-2,4	1,75-3,0	1,75-4,4
TX8	TX10	TX15	TX20	TX25

DIN 7504 O A4 TX
Yıldız silindir başlı sac vidası, O Form

DIN 7504 O A4 TX
Self drilling screws with countersunk head type O

DIN 7504 O A4

Alt. Norm tarafından değiştirildi ISO 15482

5,5	6,3
Réf./Item no.	Réf./Item no.
	75044OT63 16
75044OT55 19	75044OT63 19
75044OT55 22	75044OT63 22
75044OT55 25	75044OT63 25
75044OT55 32	75044OT63 32
75044OT55 38	75044OT63 38
75044OT55 40	
75044OT55 45	75044OT63 45
75044OT55 50	75044OT63 50
75044OT55 60	75044OT63 60
75044OT55 70	75044OT63 70
75044OT55 75	
75044OT55 80	75044OT63 80
75044OT55 90	75044OT63 90
75044OT55 100	75044OT63 100

1000 ≥25: box = 500 ≥40: box = 200	500 ≥25: box = 200
10.3	10.9
4.8	5.8
3	3.15
1.7	2
1,75–5,25	2,0–6,0
TX25	TX30

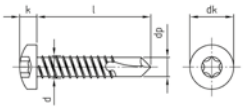
DIN 7504 M C1

Alt. Norm tarafından değiştirildi ISO 15481

DIN 7504 1.4006 M TX
Yıldız silindir başlı sac vidası, M Form

DIN 7504 1.4006 M TX
Self drilling screws with pan head type M





- Martensitik sertleştirilmiş paslanmaz çelik (1.4006)
- *Martensitic stainless steel hardened (1.4006)*

d	
	Ürün no./*Item no.*

1000	1000	1000	1000 ≥32: box = 500	1000 ≥16: box = 500
5.6	6.9	7.5	8.2	9.5
2.3	2.8	3.1	3.6	4.1
2.2	2.6	2.8	3.05	3.55
0.9	1.2	1.3	1.4	1.5
0,7–1,9	0,7–2,25	0,7–2,4	1,75–3,0	1,75–4,4
TX8	TX10	TX15	TX20	TX25

DIN 7504 1.4006 M TX
Yıldız silindir başlı sac vidası, M Form

DIN 7504 1.4006 M TX
Self drilling screws with pan head type M

DIN 7504 M
C1

Alt. Norm tarafından değiştirildi ISO 15481

5,5	6,3
Réf./Item no.	Réf./Item no.
75044006MT55 16	75044006MT63 16
75044006MT55 19	75044006MT63 19
75044006MT55 22	75044006MT63 22
75044006MT55 25	75044006MT63 25
75044006MT55 32	75044006MT63 32
75044006MT55 35	
75044006MT55 38	75044006MT63 38
75044006MT55 40	
75044006MT55 45	75044006MT63 45
75044006MT55 50	75044006MT63 50
75044006MT55 60	75044006MT63 60
75044006MT55 70	75044006MT63 70
75044006MT55 75	
75044006MT55 80	75044006MT63 80
75044006MT55 90	75044006MT63 90
75044006MT55 100	75044006MT63 100

1000 ≥25: box = 500 ≥40: box = 200	500 ≥25: box = 200
10.8	12.5
4.8	5.8
3.95	4.55
1.7	2
1,75–5,25	2,0–6,0
TX25	TX30

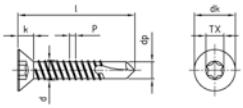
DIN 7504 O
C1

Alt. Norm tarafından değiştirildi ISO 15482

DIN 7504 1.4006 O TX
Yıldız silindir başlı sac vidası, O Form

DIN 7504 1.4006 O TX
Self drilling screws with countersunk head type O





- Martensitik sertleştirilmiş paslanmaz çelik (1.4006)
- *Martensitic stainless steel hardened (1.4006)*

d				
	Ürün no./*Item no.*			
	1000	1000	1000	1000	1000 ≥25: box = 500 ≥90: box = 200
	5.5	7.3	7.5	8.4	9.3
	2.3	2.8	3.1	3.6	4.1
	1.7	2.35	2.5	2.6	2.8
	0.9	1.2	1.3	1.4	1.5
	0,7–1,9	0,7–2,25	0,7–2,4	1,75–3,0	1,75–4,4
	TX8	TX10	TX15	TX20	TX25

DIN 7504 1.4006 O TX
Yıldız silindir başlı sac vidası, O Form

DIN 7504 1.4006 O TX
Self drilling screws with countersunk head type O

DIN 7504 O
C1

Alt. Norm tarafından değiştirildi ISO 15482

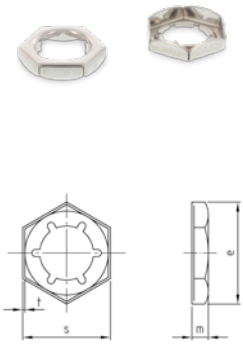
5,5	6,3
Réf./Item no.	Réf./Item no.
	75044006OT63 16
75044006OT55 19	75044006OT63 19
75044006OT55 22	75044006OT63 22
75044006OT55 25	75044006OT63 25
75044006OT55 32	75044006OT63 32
75044006OT55 38	75044006OT63 38
75044006OT55 40	
75044006OT55 45	75044006OT63 45
75044006OT55 50	75044006OT63 50
75044006OT55 60	75044006OT63 60
75044006OT55 70	75044006OT63 70
75044006OT55 75	
75044006OT55 80	75044006OT63 80
75044006OT55 90	75044006OT63 90
75044006OT55 100	75044006OT63 100

1000 ≥25: box = 500 ≥40: box = 200	500 ≥25: box = 200
10.3	10.9
4.8	5.8
3	3.15
1.7	2
1,75–5,25	2,0–6,0
TX25	TX30

DIN 7967 A2

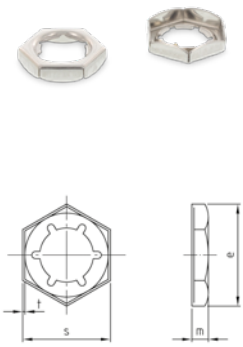
DIN 7967 A2
Kendinden Kilitlemeli ters somun

DIN 7967 A2
Self locking counter nuts



Kendinden Kilitlemeli ters somun

DIN 7967 A4
Self locking counter nuts



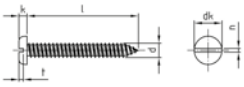
DIN 7971 A2

Alt. Norm tarafından değiştirildi ISO 1481

DIN 7971 A2
Silindir başlı sac vidası

DIN 7971 A2
Slotted pan head tapping screws





d					
	(Inch)	Ürün no./*Item no.*			
			1000	1000	1000
			1000	1000	1000 ≥38: box = 500
			1.35	1.75	2.1
			0.6	0.8	1
			0.55	0.75	0.95

d				
		1000	1000	1000 ≥32: box = 500 ≥50: box = 200
		2.25	2.45	
		1	1.2	
		1.05	1.15	

DIN 7971 A2
Silindir başlı sac vidası

DIN 7971 A2
Slotted pan head tapping screws

DIN 7971 A2

Alt. Norm tarafından değiştirildi ISO 1481

4,8 (No 10)	5,5 (No 12)	6,3 (No 14)
Réf./Item no.	Réf./Item no.	Réf./Item no.
7971248 95		
7971248 13	7971255 13	7971263 13
7971248 16	7971255 16	7971263 16
7971248 19	7971255 19	7971263 19
7971248 22	7971255 22	7971263 22
7971248 25	7971255 25	7971263 25
7971248 32	7971255 32	7971263 32
7971248 38	7971255 38	7971263 38
7971248 45	7971255 45	7971263 45
7971248 50	7971255 50	7971263 50
		7971263 55
7971248 60	7971255 60	7971263 60
7971248 70	7971255 70	7971263 70
1000 ≥25: box = 500 ≥50: box = 200	1000 ≥25: box = 500 ≥45: box = 200	500 ≥38: box = 200
2.8	3.2	3.65
1.2	1.6	1.6
1.35	1.55	1.8

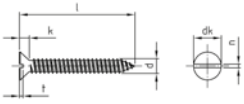
DIN 7972 A2

Alt. Norm tarafından değiştirildi ISO 1482

DIN 7972 A2
Havşa başlı sac vidası

DIN 7972 A2
Slotted countersunk head tapping screws





d		
	(Inch)	Ürün no./*Item no.*

1000	1000	1000	1000 ≥38: box = 500	1000 ≥32: box = 500 ≥50: box = 200
4.3	5.5	6.8	7.5	8.1
1.3	1.7	2.1	2.3	2.5
0.6	0.8	1	1	1.2
0.4	0.5	0.6	0.7	0.75

DIN 7972 A2
Havşa başlı sac vidası

DIN 7972 A2
Slotted countersunk head tapping screws

DIN 7972
A2

Alt. Norm tarafından değiştirildi ISO 1482

4,8 (No 10)	5,5 (No 12)	6,3 (No 14)
Réf./Item no.	Réf./Item no.	Réf./Item no.
7972248 95		
7972248 13	7972255 13	7972263 13
7972248 16	7972255 16	7972263 16
7972248 19	7972255 19	7972263 19
7972248 22	7972255 22	7972263 22
7972248 25	7972255 25	7972263 25
7972248 32	7972255 32	7972263 32
7972248 38	7972255 38	7972263 38
7972248 45	7972255 45	7972263 45
7972248 50	7972255 50	7972263 50
7972248 60	7972255 60	7972263 60
7972248 70	7972255 70	7972263 70
7972248 80		7972263 80

1000 ≥25: box = 500 ≥50: box = 200	1000 ≥25: box = 500 ≥45: box = 200	500 ≥38: box = 200
9.5	10.8	12.4
3	3.4	3.8
1.2	1.6	1.6
0.85	1	1.2

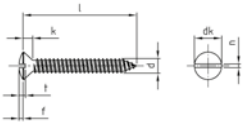
DIN 7973 A2

Alt. Norm tarafından değiştirildi ISO 1483

DIN 7973 A2
Mercimek başlı sac vidası

DIN 7973 A2
Slotted raised countersunk head tapping screws





d				
(Inch)	Ürün no./*Item no.*			
1000	1000	1000	1000 ≥38: box = 500	1000 ≥32: box = 500 ≥50: box = 200
4.3	5.5	6.8	7.5	8.1
0.7	0.9	1.2	1.3	1.4
1.3	1.7	2.1	2.3	2.5
0.6	0.8	1	1	1.2
0.95	1.25	1.55	1.7	1.85

DIN 7973 A2
Mercimek başlı sac vidası

DIN 7973 A2
Slotted raised countersunk head tapping screws

DIN 7973
A2

Alt. Norm tarafından değiştirildi ISO 1483

4,8 (No 10)	5,5 (No 12)	6,3 (No 14)
Réf./Item no.	Réf./Item no.	Réf./Item no.
7973248 95		
7973248 13	7973255 13	7973263 13
7973248 16	7973255 16	7973263 16
7973248 19	7973255 19	7973263 19
7973248 22	7973255 22	7973263 22
7973248 25	7973255 25	7973263 25
7973248 32	7973255 32	7973263 32
7973248 38	7973255 38	7973263 38
7973248 45	7973255 45	7973263 45
7973248 50	7973255 50	7973263 50
7973248 60	7973255 60	7973263 60
7973248 70	7973255 70	7973263 70

1000 ≥25: box = 500 ≥50: box = 200	1000 ≥25: box = 500 ≥45: box = 200	500 ≥38: box = 200
9.5	10.8	12.4
1.5	1.7	2
3	3.4	3.8
1.2	1.6	1.6
2.15	2.45	2.85

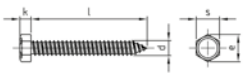
DIN 7976 A2

Alt. Norm tarafından değiştirildi ISO 1479

DIN 7976 A2
Altıköşe başlı sac vidası

DIN 7976 A2
Hexagon head tapping screws





- Sac dişi
- Dış altı köşe

- *Sheet Metal*
- *Outer hex*

d					
	(Inch)	Ürün no./*Item no.*			
		1000	1000	1000	1000 ≥38: box = 500	1000 ≥32: box = 500 ≥50: box = 200
		3.38	5.4	5.96	7.59	7.59
		1.3	1.5	2.3	2.3	2.8
		SW 3,2	SW 5	SW 5,5	SW 7	SW 7

DIN 7976 A2
Altıköşe başlı sac vidası

DIN 7976 A2
Hexagon head tapping screws

DIN 7976 A2

Alt. Norm tarafından değiştirildi ISO 1479

4,8 (No 10)	5,5 (No 12)	6,3 (No 14)	8 (No 16)
Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
7976248 95			
7976248 13	7976255 13	7976263 13	
7976248 16	7976255 16	7976263 16	7976280 16
7976248 19	7976255 19	7976263 19	7976280 19
7976248 22	7976255 22	7976263 22	7976280 22
7976248 25	7976255 25	7976263 25	7976280 25
7976248 32	7976255 32	7976263 32	7976280 32
7976248 38	7976255 38	7976263 38	7976280 38
7976248 45	7976255 45	7976263 45	7976280 45
7976248 50	7976255 50	7976263 50	7976280 50
	7976255 55		
7976248 60	7976255 60	7976263 60	7976280 60
7976248 70	7976255 70	7976263 70	7976280 70
7976248 80	7976255 80	7976263 80	
7976248 90	7976255 90	7976263 90	
7976248 100	7976255 100	7976263 100	
7976248 110	7976255 110	7976263 110	
7976248 120	7976255 120	7976263 120	

1000 ≥25: box = 500 ≥45: box = 200	1000 ≥25: box = 500 ≥45: box = 200	500 ≥38: box = 200	200
8.71	8.71	10.95	14.21
3	4	4.8	5.8
SW 8	SW 8	SW 10	SW 13

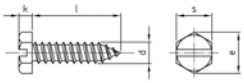
DIN 7976 A2

Alt. Norm tarafından değiştirildi ISO 1479

DIN 7976 A2
Altıköşe başlı sac vidası yarık

DIN 7976 A2
Slotted hexagon head tapping screws





- Sac dişi
- Düz yarık
- Dış altı köşe

- *Sheet thread*
- *Slot*
- *Outer hex*

d		
	(Inch)	Ürün no./*Item no.*
	1000	1000
	7.59	8.71
	2.8	3
	SW 7	SW 8

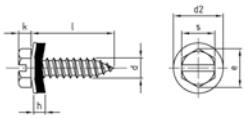
DIN 7976 A2
Altıköşe başlı sac vidası yarık + EPDM

DIN 7976 A2
Slotted hexagon head tapping screws + EPDM

DIN 7976 A2

Alt. Norm tarafından değiştirildi ISO 1479





d		
	(Inch)	Ürün no./*Item no.*
		500
		7.59
		2.8
		SW 7

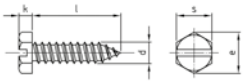
DIN 7976 A2

Alt. Norm tarafından değiştirildi ISO 1479

DIN 7976 A2
Altıköşe başlı sac vidası yarık

DIN 7976 A2
Slotted hexagon head tapping screws with silver slide coating





d		
	(Inch)	Ürün no./*Item no.*
	500	500

- Yuvalı dış altıgen
- Çinko pul kaplama Tuz püskürtme testi 1.000 saat.

- *outer hex with slot*
- *Zinc flake coating salt spray test 1.000 hrs.*

DIN 7976 A2
Altıköşe başlı sac vidası yarık + EPDM

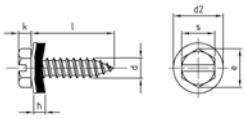
DIN 7976 A2
Slotted hexagon head tapping screws + EPDM with silver slide coating

DIN 7976 A2

Alt. Norm tarafından değiştirildi ISO 1479

d		
	(Inch)	Ürün no./*Item no.*
	500	500





- Yuvalı dış altıgen
- Çinko pul kaplama Tuz püskürtme testi 1.000 saat
- EPDM sızdırmazlık diski Ø12mm

- *outer hex with slot*
- *Zinc flake coating salt spray test 1.000 hrs.*
- *EPDM sealing washer Ø12mm*

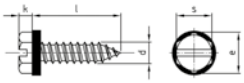
DIN 7976 A2

Alt. Norm tarafından değiştirildi ISO 1479

DIN 7976 A2
Altıköşe başlı sac vidası yarık + Polyamid

DIN 7976 A2
Slotted hexagon head tapping screws + Polyamide with silver slide coating





d		
	(Inch)	Ürün no./*Item no.*

500	500

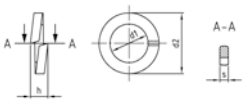
- Yuvalı dış altıgen
- Çinko pul kaplama Tuz püskürtme testi 1.000 saat
- Poliamid disk Ø10mm

- *outer hex with slot*
- *Zinc flake coating salt spray test 1.000 hrs.*
- *Polyamid washer Ø10mm*

DIN 7980 1.4310
Silindir Vida için yaylı rondela

DIN 7980 1.4310
Spring lock washers for screws with cylindrical heads



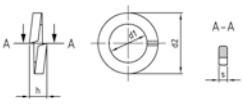


DIN 7980 A4

DIN 7980 A4
Silindir Vida için yaylı rondela

DIN 7980 A4
Spring lock washers for screws with cylindrical heads





DIN 7981 A2 PH
Yıldız silindir başlı sac vidası H Form

DIN 7981 A2 PH
Cross recessed pan head tapping screws

DIN 7981
A2

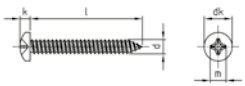
Alt. Norm tarafından değiştirildi ISO 7049

d		
	(Inch)	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

1000	1000	1000 ≥45: box = 500	1000 ≥38: box = 500	1000 ≥32: box = 500 ≥50: box = 200
4.2	5.5	6.8	7.5	8.1
1.8	2.2	2.6	2.8	3.05
2.6	3	4.2	4.4	4.6
PH1	PH1	PH2	PH2	PH2





TX formu ISO 14585'e bakınız
- Sac dişi
- PH
- Mercimek baş

TX type see ISO 14585
- *Sheet thread*
- *PH*
- *Pan head*

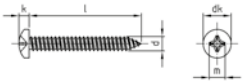
DIN 7981 A2

Alt. Norm tarafından değiştirildi ISO 7049

DIN 7981 A2 PH
Yıldız silindir başlı sac vidası H Form

DIN 7981 A2 PH
Cross recessed pan head tapping screws





TX formu ISO 14585'e bakınız
- Sac dişi
- PH
- Mercimek baş

TX type see ISO 14585
- *Sheet thread*
- *PH*
- *Pan head*

d		4,8 (No 10)	5,5 (No 12)	6,3 (No 14)
		Réf./Item no.	Réf./Item no.	Réf./Item no.
		7981248 95		
		7981248 13	7981255 13	7981263 13
		7981248 16	7981255 16	7981263 16
		7981248 19	7981255 19	7981263 19
		7981248 22	7981255 22	7981263 22
		7981248 25	7981255 25	7981263 25
		7981248 32	7981255 32	7981263 32
		7981248 35		
		7981248 38	7981255 38	7981263 38
			7981255 42	
		7981248 45	7981255 45	7981263 45
		7981248 50	7981255 50	7981263 50
		7981248 55	7981255 55	
		7981248 60	7981255 60	7981263 60
		7981248 70	7981255 70	7981263 70
		7981248 80	7981255 80	7981263 80
		7981248 90	7981255 90	7981263 90
		7981248 100	7981255 100	7981263 100
	(Inch)	7981248 110		
		7981248 120	7981255 120	7981263 120

1000 ≥25: box = 500 ≥45: box = 200	1000 ≥25: box = 500 ≥45: box = 200	500 ≥25: box = 200
9.5	10.8	12.4
3.55	3.95	4.55
5	6.5	7.1
PH2	PH3	PH3

DIN 7981 A2 PZ
Yıldız silindir başlı sac vidası Z Form

DIN 7981 A2 PZ
Cross recessed pan head tapping screws

DIN 7981 A2

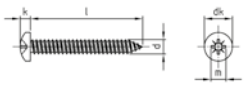
Alt. Norm tarafından değiştirildi ISO 7049

d		
	(Inch)	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

1000	1000	1000 ≥45: box = 500	1000 ≥38: box = 500	1000 ≥32: box = 500 ≥50: box = 200
4.3	5.5	6.8	7.5	8.1
1.8	2.2	2.6	2.8	3.05
2.4	2.9	3.9	4.1	4.3
PZ1	PZ1	PH2	PZ2	PZ2





TX formu ISO 14585'e bakınız
- Sac dişi
- PZ
- Mercimek baş

TX type see ISO 14585
- *Sheet thread*
- *PZ*
- *Pan head*

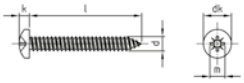
DIN 7981 A2

Alt. Norm tarafından değiştirildi ISO 7049

DIN 7981 A2 PZ
Yıldız silindir başlı sac vidası Z Form

DIN 7981 A2 PZ
Cross recessed pan head tapping screws





TX formu ISO 14585'e bakınız
- Sac dişi
- PZ
- Mercimek baş

TX type see ISO 14585
- *Sheet thread*
- *PZ*
- *Pan head*

d		4,8 (No 10)	5,5 (No 12)	6,3 (No 14)
		Réf./Item no.	Réf./Item no.	Réf./Item no.
		79812048 95		
		79812048 13	79812055 13	79812063 13
		79812048 16	79812055 16	79812063 16
		79812048 19	79812055 19	79812063 19
		79812048 22	79812055 22	79812063 22
		79812048 25	79812055 25	79812063 25
		79812048 32	79812055 32	79812063 32
		79812048 35		
		79812048 38	79812055 38	79812063 38
			79812055 42	
		79812048 45	79812055 45	79812063 45
		79812048 50	79812055 50	79812063 50
		79812048 55	79812055 55	
		79812048 60	79812055 60	79812063 60
		79812048 70	79812055 70	79812063 70
		79812048 80	79812055 80	79812063 80
		79812048 90	79812055 90	79812063 90
		79812048 100	79812055 100	79812063 100
	(Inch)	79812048 110		
		79812048 120	79812055 120	79812063 120

1000 ≥25: box = 500 ≥45: box = 200	1000 ≥25: box = 500 ≥45: box = 200	500 ≥25: box = 200
9.5	10.8	12.4
3.55	3.95	4.55
4.7	6.2	6.7
PZ2	PZ3	PZ3

DIN 7981 A2 V
Yıldız silindir başlı kare sac vidası

DIN 7981 A2 V
Pan head tapping screws with inner square drive

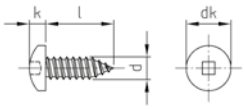
DIN 7981
A2

Alt. Norm tarafından değiştirildi ISO 7049

d		
	(Inch)	Ürün no./*Item no.*



200	200	200	200	200
6.8	7.5	8.1	9.5	12.4
2.6	2.8	3.05	3.55	4.55
V1	V1	V2	V2	V3



TX formu ISO 14585'e bakınız
- Sac dişi
- İç dört köşe
- Mercimek baş

TX type see ISO 14585
- *Sheet thread*
- *inner square drive*
- *Pan head*

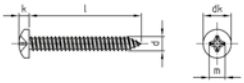
DIN 7981
A4

Alt. Norm tarafından değiştirildi ISO 7049

DIN 7981 A4 PH
Yıldız silindir başlı sac vidası H Form

DIN 7981 A4 PH
Cross recessed pan head tapping screws





TX formu ISO 14585'e bakınız
- Sac dişi
- PH
- Mercimek baş

TX type see ISO 14585
- *Sheet thread*
- *PH*
- *Pan head*

d					
	(Inch)	Ürün no./*Item no.*			
1000	1000	1000 ≥45: box = 500	1000 ≥38: box = 500	1000 ≥32: box = 500 ≥50: box = 200
4.2	5.5	6.8	7.5	8.1
1.8	2.2	2.6	2.8	3.05
2.6	3	4.2	4.4	4.6
PH1	PH1	PH2	PH2	PH2

DIN 7981 A4 PH
Yıldız silindir başlı sac vidası H Form

DIN 7981 A4 PH
Cross recessed pan head tapping screws

DIN 7981
A4

Alt. Norm tarafından değiştirildi ISO 7049

4,8 (No 10)	5,5 (No 12)	6,3 (No 14)
Réf./Item no.	Réf./Item no.	Réf./Item no.
7981448 95		
7981448 13	7981455 13	7981463 13
7981448 16	7981455 16	7981463 16
7981448 19	7981455 19	7981463 19
7981448 22	7981455 22	7981463 22
7981448 25	7981455 25	7981463 25
7981448 32	7981455 32	7981463 32
7981448 35		
7981448 38	7981455 38	7981463 38
	7981455 42	
7981448 45	7981455 45	7981463 45
7981448 50	7981455 50	7981463 50
7981448 55	7981455 55	
7981448 60	7981455 60	7981463 60
7981448 70	7981455 70	7981463 70
7981448 80	7981455 80	7981463 80
7981448 90	7981455 90	7981463 90
7981448 100	7981455 100	7981463 100
7981448 110		
7981448 120	7981455 120	7981463 120

1000 ≥25: box = 500 ≥45: box = 200	1000 ≥25: box = 500 ≥45: box = 200	500 ≥25: box = 200
9.5	10.8	12.4
3.55	3.95	4.55
5	6.5	7.1
PH2	PH3	PH3

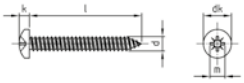
DIN 7981
A4

Alt. Norm tarafından değiştirildi ISO 7049

DIN 7981 A4 PZ
Yıldız silindir başlı sac vidası Z Form

DIN 7981 A4 PZ
Cross recessed pan head tapping screws





TX formu ISO 14585'e bakınız
- Sac dişi
- PZ
- Mercimek baş

TX type see ISO 14585
- *Sheet thread*
- *PZ*
- *Pan head*

d					
	(Inch)	Ürün no./*Item no.*			
			1000	1000	1000 ≥45: box = 500	1000 ≥38: box = 500	1000 ≥32: box = 500 ≥50: box = 200
4.3	5.5		6.8	7.5	8.1
1.8	2.2		2.6	2.8	3.05
2.4	2.9		3.9	4.1	4.3
PZ1	PZ1		PZ2	PZ2	PZ2

DIN 7981 A4 PZ
Yıldız silindir başlı sac vidası Z Form

DIN 7981 A4 PZ
Cross recessed pan head tapping screws

DIN 7981
A4

Alt. Norm tarafından değiştirildi ISO 7049

4,8 (No 10)	5,5 (No 12)	6,3 (No 14)
Réf./Item no.	Réf./Item no.	Réf./Item no.
79814048 95		
79814048 13	79814055 13	79814063 13
79814048 16	79814055 16	79814063 16
79814048 19	79814055 19	79814063 19
79814048 22	79814055 22	79814063 22
79814048 25	79814055 25	79814063 25
79814048 32	79814055 32	79814063 32
79814048 35		
79814048 38	79814055 38	79814063 38
	79814055 42	
79814048 45	79814055 45	79814063 45
79814048 50	79814055 50	79814063 50
79814048 55	79814055 55	
79814048 60	79814055 60	79814063 60
79814048 70	79814055 70	79814063 70
79814048 80	79814055 80	79814063 80
79814048 90	79814055 90	79814063 90
79814048 100	79814055 100	79814063 100
79814048 110		
79814048 120	79814055 120	79814063 120

1000 ≥25: box = 500 ≥45: box = 200	1000 ≥25: box = 500 ≥45: box = 200	500 ≥25: box = 200
9.5	10.8	12.4
3.55	3.95	4.55
4.7	6.2	6.7
PZ2	PZ3	PZ3

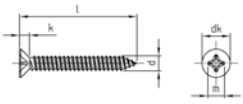
DIN 7982
A2

Alt. Norm tarafından değiştirildi ISO 7050

DIN 7982 A2 PH
Yıldız havşa başlı sac vidası, H Form

DIN 7982 A2 PH
Cross recessed countersunk head tapping screws





TX formu ISO 14586'ya bakınız
- Sac dişi
- PH
- Havşa baş

TX type see ISO 14586
- *Sheet thread*
- *PH*
- *Countersunk head*

d				
(Inch)	Ürün no./*Item no.*			
1000	1000	1000 ≥45: box = 500	1000 ≥38: box = 500	1000 ≥32: box = 500 ≥50: box = 200
4.3	5.5	6.8	7.5	8.1
1.3	1.7	2.1	2.3	2.5
2.5	3	4.2	4.6	4.7
PH1	PH1	PH2	PH2	PH2

DIN 7982 A2 PH
Yıldız havşa başlı sac vidası, H Form

DIN 7982 A2 PH
Cross recessed countersunk head tapping screws

DIN 7982
A2

Alt. Norm
tarafından değiştirildi ISO
7050

4,8 (No 10)	5,5 (No 12)	6,3 (No 14)
Réf./Item no.	Réf./Item no.	Réf./Item no.
7982248 95		
7982248 13	7982255 13	7982263 13
7982248 16	7982255 16	7982263 16
7982248 19	7982255 19	7982263 19
7982248 22	7982255 22	7982263 22
7982248 25	7982255 25	7982263 25
7982248 32	7982255 32	7982263 32
7982248 35		
7982248 38	7982255 38	7982263 38
	7982255 42	
7982248 45	7982255 45	7982263 45
7982248 50	7982255 50	7982263 50
7982248 55	7982255 55	
7982248 60	7982255 60	7982263 60
7982248 70	7982255 70	7982263 70
7982248 80	7982255 80	7982263 80
7982248 90	7982255 90	7982263 90
7982248 100	7982255 100	7982263 100
7982248 110		
7982248 120	7982255 120	7982263 120

1000 ≥25: box = 500 ≥45: box = 200	1000 ≥25: box = 500 ≥45: box = 200	500 ≥25: box = 200
9.5	10.8	12.4
3	3.4	3.8
5.1	6.8	7.1
PH2	PH3	PH3

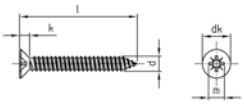
DIN 7982
A2

Alt. Norm tarafından değiştirildi ISO 7050

DIN 7982 A2 PZ
Yıldız havşa başlı sac vidası, Z Form

DIN 7982 A2 PZ
Cross recessed countersunk head tapping screws





TX formu ISO 14586'ya bakınız
- Sac dişi
- PZ
- Havşa baş

TX type see ISO 14586
- *Sheet thread*
- *PZ*
- *Countersunk head*

d	(Inch)	Ürün no./*Item no.*				
		1000	1000	1000 ≥45: box = 500	1000 ≥38: box = 500	1000 ≥32: box = 500 ≥50: box = 200
4.3	5.5	6.8	7.5	8.1
1.3	1.7	2.1	2.3	2.5
2.4	2.8	4	4.2	4.4
PZ1	PZ1	PZ2	PZ2	PZ2

DIN 7982 A2 PZ
Yıldız havşa başlı sac vidası, Z Form

DIN 7982 A2 PZ
Cross recessed countersunk head tapping screws

DIN 7982
A2

Alt. Norm tarafından değiştirildi ISO 7050

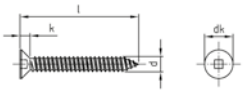
4,8 (No 10)	5,5 (No 12)	6,3 (No 14)
Réf./Item no.	Réf./Item no.	Réf./Item no.
79822048 95		
79822048 13	79822055 13	79822063 13
79822048 16	79822055 16	79822063 16
79822048 19	79822055 19	79822063 19
79822048 22	79822055 22	79822063 22
79822048 25	79822055 25	79822063 25
79822048 32	79822055 32	79822063 32
79822048 35		
79822048 38	79822055 38	79822063 38
	79822055 42	
79822048 45	79822055 45	79822063 45
79822048 50	79822055 50	79822063 50
79822048 55	79822055 55	
79822048 60	79822055 60	79822063 60
79822048 70	79822055 70	79822063 70
79822048 80	79822055 80	79822063 80
79822048 90	79822055 90	79822063 90
79822048 100	79822055 100	79822063 100
79822048 110		
79822048 120	79822055 120	79822063 120

1000 ≥25: box = 500 ≥45: box = 200	1000 ≥25: box = 500 ≥45: box = 200	500 ≥25: box = 200
9.5	10.8	12.4
3	3.4	3.8
5	6.3	7
PZ2	PZ3	PZ3

DIN 7982
A2

Alt. Norm tarafından değiştirildi ISO 7050





TX formu ISO 14586'ya bakınız
- Sac dişi
- İç dört köşe
- Havşa baş

TX type see ISO 14586
- Sheet thread
- inner square drive
- Countersunk head

DIN 7982 A2 V
Yıldız havşa başlı kare sac vidası

DIN 7982 A2 V
Countersunk head tapping screws inner square drive

d		
	(Inch)	Ürün no./*Item no.*
200	200	200
7.5	8.1	9.5
2.3	2.5	3
V1	V2	V2

DIN

DIN 7982 A4 PH
Yıldız havşa başlı sac vidası, H Form

DIN 7982 A4 PH
Cross recessed countersunk head tapping screws

DIN 7982
A4

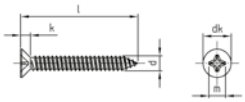
Alt. Norm tarafından değiştirildi ISO 7050

d		
	(Inch)	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

1000	1000	1000 ≥45: box = 500	1000 ≥38: box = 500	1000 ≥32: box = 500 ≥50: box = 200
4.3	5.5	6.8	7.5	8.1
1.3	1.7	2.1	2.3	2.5
2.5	3	4.2	4.6	4.7
PH1	PH1	PH2	PH2	PH2





TX formu ISO 14586'ya bakınız
- Sac dişi
- PH
- Havşa baş

TX type see ISO 14586
- *Sheet thread*
- *PH*
- *Countersunk head*

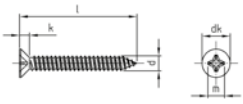
DIN 7982
A4

Alt. Norm tarafından değiştirildi ISO 7050

DIN 7982 A4 PH
Yıldız havşa başlı sac vidası, H Form

DIN 7982 A4 PH
Cross recessed countersunk head tapping screws





TX formu ISO 14586'ya bakınız
- Sac dişi
- PH
- Havşa baş

TX type see ISO 14586
- *Sheet thread*
- *PH*
- *Countersunk head*

d		4,8 (No 10)	5,5 (No 12)	6,3 (No 14)
		Réf./Item no.	Réf./Item no.	Réf./Item no.
		7982448 95		
		7982448 13	7982455 13	7982463 13
		7982448 16	7982455 16	7982463 16
		7982448 19	7982455 19	7982463 19
		7982448 22	7982455 22	7982463 22
		7982448 25	7982455 25	7982463 25
		7982448 32	7982455 32	7982463 32
		7982448 35		
		7982448 38	7982455 38	7982463 38
			7982455 42	
		7982448 45	7982455 45	7982463 45
		7982448 50	7982455 50	7982463 50
		7982448 55	7982455 55	
		7982448 60	7982455 60	7982463 60
		7982448 70	7982455 70	7982463 70
		7982448 80	7982455 80	7982463 80
		7982448 90	7982455 90	7982463 90
		7982448 100	7982455 100	7982463 100
	(Inch)	7982448 110		
		7982448 120	7982455 120	7982463 120

1000 ≥25: box = 500 ≥45: box = 200	1000 ≥25: box = 500 ≥45: box = 200	500 ≥25: box = 200
9.5	10.8	12.4
3	3.4	3.8
5.1	6.8	7.1
PH2	PH3	PH3

DIN 7982 A4 PZ
Yıldız havşa başlı sac vidası, Z Form

DIN 7982 A4 PZ
Cross recessed countersunk head tapping screws

DIN 7982
A4

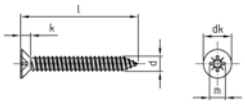
Alt. Norm tarafından değiştirildi ISO 7050

d		
	(Inch)	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*



1000	1000	1000 ≥45: box = 500	1000 ≥38: box = 500	1000 ≥32: box = 500 ≥50: box = 200
4.3	5.5	6.8	7.5	8.1
1.3	1.7	2.1	2.3	2.5
2.4	2.8	4	4.2	4.4
PZ1	PZ1	PZ2	PZ2	PZ2



TX formu ISO 14586'ya bakınız
- Sac dişi
- PZ
- Havşa baş

TX type see ISO 14586
- *Sheet thread*
- *PZ*
- *Countersunk head*

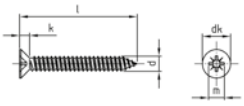
DIN 7982
A4

Alt. Norm tarafından değiştirildi ISO 7050

DIN 7982 A4 PZ
Yıldız havşa başlı sac vidası, Z Form

DIN 7982 A4 PZ
Cross recessed countersunk head tapping screws





TX formu ISO 14586'ya bakınız
- Sac dişi
- PZ
- Havşa baş

TX type see ISO 14586
- *Sheet thread*
- *PZ*
- *Countersunk head*

d		4,8 (No 10)	5,5 (No 12)	6,3 (No 14)
		Réf./Item no.	Réf./Item no.	Réf./Item no.
		79824048 95		
		79824048 13	79824055 13	79824063 13
		79824048 16	79824055 16	79824063 16
		79824048 19	79824055 19	79824063 19
		79824048 22	79824055 22	79824063 22
		79824048 25	79824055 25	79824063 25
		79824048 32	79824055 32	79824063 32
		79824048 35		
		79824048 38	79824055 38	79824063 38
			79824055 42	
		79824048 45	79824055 45	79824063 45
		79824048 50	79824055 50	79824063 50
		79824048 55	79824055 55	
		79824048 60	79824055 60	79824063 60
		79824048 70	79824055 70	79824063 70
		79824048 80	79824055 80	79824063 80
		79824048 90	79824055 90	79824063 90
		79824048 100	79824055 100	79824063 100
	(Inch)	79824048 110		
		79824048 120	79824055 120	79824063 120

1000 ≥25: box = 500 ≥45: box = 200	1000 ≥25: box = 500 ≥45: box = 200	500 ≥25: box = 200
9.5	10.8	12.4
3	3.4	3.8
5	6.3	7
PZ2	PZ3	PZ3

DIN 7983 A2 PH
Yıldız mercimek başlı sac vidası, H Form

DIN 7983 A2 PH
Cross recessed raised countersunk tapping screws

DIN 7983
A2

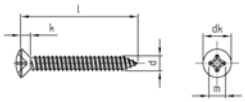
Alt. Norm tarafından değiştirildi ISO 7051

d		
	(Inch)	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

1000	1000	1000 ≥45: box = 500	1000 ≥38: box = 500	1000 ≥32: box = 500 ≥50: box = 200
4.3	5.5	6.8	7.5	8.1
1.3	1.7	2.1	2.3	2.5
2.8	3.4	4.6	4.7	4.9
PH1	PH1	PH2	PH2	PH2





TX formu ISO 14587'ye bakınız
- Sac dişi
- PH
- Mercimek havşa baş

TX type see ISO 14587
- *Sheet thread*
- *PH*
- *Raised countersunk*

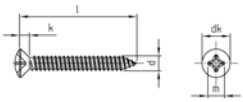
DIN 7983 A2

Alt. Norm tarafından değiştirildi ISO 7051

DIN 7983 A2 PH
Yıldız mercimek başlı sac vidası, H Form

DIN 7983 A2 PH
Cross recessed raised countersunk tapping screws





TX formu ISO 14587'ye bakınız
- Sac dişi
- PH
- Mercimek havşa baş

TX type see ISO 14587
- *Sheet thread*
- *PH*
- *Raised countersunk*

d		4,8 (No 10)	5,5 (No 12)	6,3 (No 14)
		Réf./Item no.	Réf./Item no.	Réf./Item no.
		7983248 95		
		7983248 13	7983255 13	7983263 13
		7983248 16	7983255 16	7983263 16
		7983248 19	7983255 19	7983263 19
		7983248 22	7983255 22	7983263 22
		7983248 25	7983255 25	7983263 25
		7983248 32	7983255 32	7983263 32
		7983248 35		
		7983248 38	7983255 38	7983263 38
			7983255 42	
		7983248 45	7983255 45	7983263 45
		7983248 50	7983255 50	7983263 50
		7983248 55	7983255 55	
		7983248 60	7983255 60	7983263 60
		7983248 70	7983255 70	7983263 70
		7983248 80	7983255 80	7983263 80
		7983248 90	7983255 90	7983263 90
		7983248 100	7983255 100	7983263 100
	(Inch)	7983248 110		
		7983248 120	7983255 120	7983263 120
		1000 ≥25: box = 500 ≥45: box = 200	1000 ≥25: box = 500 ≥45: box = 200	500 ≥25: box = 200
		9.5	10.8	12.4
		3	3.4	3.8
		5.4	7	7.4
		PH2	PH3	PH3

DIN 7983 A2 PZ
Yıldız mercimek başlı sac vidası, Z Form

DIN 7983 A2 PZ
Cross recessed raised countersunk tapping screws

DIN 7983
A2

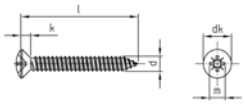
Alt. Norm tarafından değiştirildi ISO 7051

d		
	(Inch)	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*



1000	1000	1000 ≥45: box = 500	1000 ≥38: box = 500	1000 ≥32: box = 500 ≥50: box = 200
4.3	5.5	6.8	7.5	8.1
1.3	1.7	2.1	2.3	2.5
2.4	3.1	4.3	4.4	4.6
PZ1	PZ1	PZ2	PZ2	PZ2



TX formu ISO 14587'ye bakınız
- Sac dişi
- PZ
- Mercimek havşa baş

TX type see ISO 14587
- *Sheet thread*
- *PZ*
- *Raised countersunk*

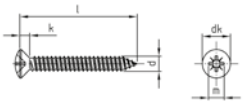
DIN 7983 A2

Alt. Norm tarafından değiştirildi ISO 7051

DIN 7983 A2 PZ
Yıldız mercimek başlı sac vidası, Z Form

DIN 7983 A2 PZ
Cross recessed raised countersunk tapping screws





TX formu ISO 14587'ye bakınız
- Sac dişi
- PZ
- Mercimek havşa baş

TX type see ISO 14587
- *Sheet thread*
- *PZ*
- *Raised countersunk*

d		4,8 (No 10)	5,5 (No 12)	6,3 (No 14)
		Réf./Item no.	Réf./Item no.	Réf./Item no.
		79832048 95		
		79832048 13	79832055 13	79832063 13
		79832048 16	79832055 16	79832063 16
		79832048 19	79832055 19	79832063 19
		79832048 22	79832055 22	79832063 22
		79832048 25	79832055 25	79832063 25
		79832048 32	79832055 32	79832063 32
		79832048 35		
		79832048 38	79832055 38	79832063 38
			79832055 42	
		79832048 45	79832055 45	79832063 45
		79832048 50	79832055 50	79832063 50
		79832048 55	79832055 55	
		79832048 60	79832055 60	79832063 60
		79832048 70	79832055 70	79832063 70
		79832048 80	79832055 80	79832063 80
		79832048 90	79832055 90	79832063 90
		79832048 100	79832055 100	79832063 100
	(Inch)	79832048 110		
		79832048 120	79832055 120	79832063 120

1000 ≥25: box = 500 ≥45: box = 200	1000 ≥25: box = 500 ≥45: box = 200	500 ≥25: box = 200
9.5	10.8	12.4
3	3.4	3.8
5.1	6.6	7.1
PZ2	PZ3	PZ3

DIN 7983 A4 PH
Yıldız mercimek başlı sac vidası, H Form

DIN 7983 A4 PH
Cross recessed raised countersunk tapping screws

DIN 7983
A4

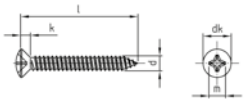
Alt. Norm tarafından değiştirildi ISO 7051

d		
	(Inch)	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

1000	1000	1000 ≥45: box = 500	1000 ≥38: box = 500	1000 ≥32: box = 500 ≥50: box = 200
4.3	5.5	6.8	7.5	8.1
1.3	1.7	2.1	2.3	2.5
2.8	3.4	4.6	4.7	4.9
PH1	PH1	PH2	PH2	PH2





TX formu ISO 14587'ye bakınız
- Sac dişi
- PH
- Mercimek havşa baş

TX type see ISO 14587
- *Sheet thread*
- *PH*
- *Raised countersunk*

DIN 7983 A4

Alt. Norm tarafından değiştirildi ISO 7051

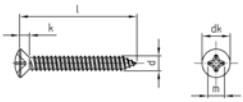
DIN 7983 A4 PH

Yıldız mercimek başlı sac vidası, H Form

DIN 7983 A4 PH

Cross recessed raised countersunk tapping screws





TX formu ISO 14587'ye bakınız
- Sac dişi
- PH
- Mercimek havşa baş

TX type see ISO 14587
- *Sheet thread*
- *PH*
- *Raised countersunk*

d		4,8 (No 10)	5,5 (No 12)	6,3 (No 14)
		Réf./Item no.	Réf./Item no.	Réf./Item no.
		7983448 95		
		7983448 13	7983455 13	7983463 13
		7983448 16	7983455 16	7983463 16
		7983448 19	7983455 19	7983463 19
		7983448 22	7983455 22	7983463 22
		7983448 25	7983455 25	7983463 25
		7983448 32	7983455 32	7983463 32
		7983448 35		
		7983448 38	7983455 38	7983463 38
			7983455 42	
		7983448 45	7983455 45	7983463 45
		7983448 50	7983455 50	7983463 50
		7983448 55	7983455 55	
		7983448 60	7983455 60	7983463 60
		7983448 70	7983455 70	7983463 70
		7983448 80	7983455 80	7983463 80
		7983448 90	7983455 90	7983463 90
		7983448 100	7983455 100	7983463 100
	(Inch)	7983448 110		
		7983448 120	7983455 120	7983463 120

1000 ≥25: box = 500 ≥45: box = 200	1000 ≥25: box = 500 ≥45: box = 200	500 ≥25: box = 200
9.5	10.8	12.4
3	3.4	3.8
5.4	7	7.4
PH2	PH3	PH3

DIN 7983 A4 PZ
Yıldız mercimek başlı sac vidası, Z Form

DIN 7983 A4 PZ
Cross recessed raised countersunk tapping screws

DIN 7983
A4

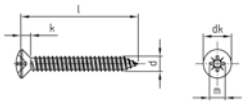
Alt. Norm tarafından değiştirildi ISO 7051

d		
	(Inch)	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*



1000	1000	1000 ≥45: box = 500	1000 ≥38: box = 500	1000 ≥32: box = 500 ≥50: box = 200
4.3	5.5	6.8	7.5	8.1
1.3	1.7	2.1	2.3	2.5
2.4	3.1	4.3	4.4	4.6
PZ1	PZ1	PZ2	PZ2	PZ2



TX formu ISO 14587'ye bakınız
- Sac dişi
- PZ
- Mercimek havşa baş

TX type see ISO 14587
- *Sheet thread*
- *PZ*
- *Raised countersunk*

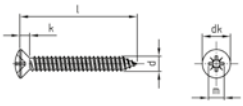
DIN 7983 A4

Alt. Norm tarafından değiştirildi ISO 7051

DIN 7983 A4 PZ
Yıldız mercimek başlı sac vidası, Z Form

DIN 7983 A4 PZ
Cross recessed raised countersunk tapping screws





TX formu ISO 14587'ye bakınız
- Sac dişi
- PZ
- Mercimek havşa baş

TX type see ISO 14587
- *Sheet thread*
- *PZ*
- *Raised countersunk*

d		4,8 (No 10)	5,5 (No 12)	6,3 (No 14)
		Réf./Item no.	Réf./Item no.	Réf./Item no.
		79834048 95		
		79834048 13	79834055 13	79834063 13
		79834048 16	79834055 16	79834063 16
		79834048 19	79834055 19	79834063 19
		79834048 22	79834055 22	79834063 22
		79834048 25	79834055 25	79834063 25
		79834048 32	79834055 32	79834063 32
		79834048 35		
		79834048 38	79834055 38	79834063 38
			79834055 42	
		79834048 45	79834055 45	79834063 45
		79834048 50	79834055 50	79834063 50
		79834048 55	79834055 55	
		79834048 60	79834055 60	79834063 60
		79834048 70	79834055 70	79834063 70
		79834048 80	79834055 80	79834063 80
		79834048 90	79834055 90	79834063 90
		79834048 100	79834055 100	79834063 100
	(Inch)	79834048 110		
		79834048 120	79834055 120	79834063 120

1000 ≥25: box = 500 ≥45: box = 200	1000 ≥25: box = 500 ≥45: box = 200	500 ≥25: box = 200
9.5	10.8	12.4
3	3.4	3.8
5.1	6.6	7.1
PZ2	PZ3	PZ3

DIN 7984 A2
Silindir başlı cıvatalar, allen, ince kafalı

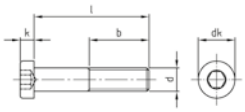
DIN 7984 A2
Hexagon socket head cap screws with low head

d	M
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*



1000 ≥35: box = 500 ≥50: box = 200	1000 ≥20: box = 500 ≥35: box = 200 ≥60: box = 100	500 ≥25: box = 200 ≥70: box = 100	500 ≥14: box = 200 ≥45: box = 100	500 ≥14: box = 200 ≥25: box = 100 ≥70: box = 50	100 ≥50: box = 50
5.5	7	8.5	10	13	16
2	2.8	3.5	4	5	6
SW 2	SW 2,5	SW 3	SW 4	SW 5	SW 7



b = Standarda uygun
- "0" = azaltılmış yük kapasitesi

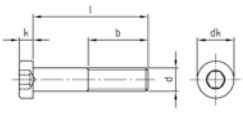
b = at Norm
- "0" = reduced load capacity

DIN 7984 A2

DIN 7984 A2
Silindir başlı cıvatalar, allen, ince kafalı

DIN 7984 A2
Hexagon socket head cap screws with low head





b = Standarda uygun
– "0" = azaltılmış yük kapasitesi

b = at Norm
– "0" = reduced load capacity

d	M 12	M 16	M 20	M 24
	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
	7984212 16			
	7984212 18			
	7984212 20	7984216 20		
	7984212 22			
	7984212 25	7984216 25		
	7984212 30	7984216 30	7984220 30	
	7984212 35	7984216 35	7984220 35	
	7984212 40	7984216 40	7984220 40	7984224 40
	7984212 45	7984216 45	7984220 45	7984224 45
	7984212 50	7984216 50	7984220 50	7984224 50
	7984212 55	7984216 55	7984220 55	7984224 55
	7984212 60	7984216 60	7984220 60	7984224 60
	7984212 65	7984216 65	7984220 65	7984224 65
	7984212 70	7984216 70	7984220 70	7984224 70
	7984212 75	7984216 75	7984220 75	7984224 75
	7984212 80	7984216 80	7984220 80	7984224 80
	7984212 90	7984216 90	7984220 90	7984224 90
	7984212 100	7984216 100	7984220 100	7984224 100
	7984212 110	7984216 110	7984220 110	7984224 110
	7984212 120	7984216 120	7984220 120	7984224 120
		7984216 130	7984220 130	7984224 130
		7984216 140	7984220 140	7984224 140
		7984216 150	7984220 150	7984224 150
	50 ≥75: box = 25	25	25	10
	18	24	30	36
	7	9	11	13
	SW 8	SW 12	SW 14	SW 19

DIN 7984 A4
Silindir başlı cıvatalar, allen, ince kafalı

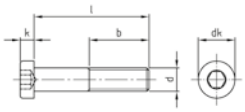
DIN 7984 A4
Hexagon socket head cap screws with low head

d	M
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

1000 ≥35: box = 500 ≥50: box = 200	1000 ≥20: box = 500 ≥35: box = 200 ≥60: box = 100	500 ≥25: box = 200 ≥60: box = 100	500 ≥14: box = 200 ≥45: box = 100	500 ≥14: box = 200 ≥25: box = 100 ≥70: box = 50	100 ≥50: box = 50
5.5	7	8.5	10	13	16
2	2.8	3.5	4	5	6
SW 2	SW 2,5	SW 3	SW 4	SW 5	SW 7





b = Standarda uygun
- "0" = azaltılmış yük kapasitesi

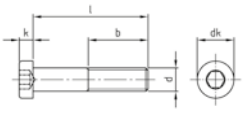
b = at Norm
- "0" = reduced load capacity

DIN 7984
A4

DIN 7984 A4
Silindir başlı cıvatalar, allen, ince kafalı

DIN 7984 A4
Hexagon socket head cap screws with low head





b = Standarda uygun
– "0" = azaltılmış yük kapasitesi

b = at Norm
– "0" = reduced load capacity

d	M 12	M 16	M 20	M 24
	Réf./Item no.	Réf./Item no.	Réf./Item no.	Réf./Item no.
	7984412 16			
	7984412 18			
	7984412 20	7984416 20		
	7984412 22			
	7984412 25	7984416 25		
	7984412 30	7984416 30	7984420 30	
	7984412 35	7984416 35	7984420 35	
	7984412 40	7984416 40	7984420 40	7984424 40
	7984412 45	7984416 45	7984420 45	7984424 45
	7984412 50	7984416 50	7984420 50	7984424 50
	7984412 55	7984416 55	7984420 55	7984424 55
	7984412 60	7984416 60	7984420 60	7984424 60
	7984412 65	7984416 65	7984420 65	7984424 65
	7984412 70	7984416 70	7984420 70	7984424 70
	7984412 75	7984416 75	7984420 75	7984424 75
	7984412 80	7984416 80	7984420 80	7984424 80
	7984412 90	7984416 90	7984420 90	7984424 90
	7984412 100	7984416 100	7984420 100	7984424 100
	7984412 110	7984416 110	7984420 110	7984424 110
	7984412 120	7984416 120	7984420 120	7984424 120
		7984416 130	7984420 130	7984424 130
		7984416 140	7984420 140	7984424 140
		7984416 150	7984420 150	7984424 150
	50 ≥75: box = 25	25	25	10
	18	24	30	36
	7	9	11	13
	SW 8	SW 12	SW 14	SW 19

DIN 7985 A2 PH
Yıldız mercimek başlı vidalar

DIN 7985 A2 PH
Cross recessed raised cheese head screws

DIN 7985
A2

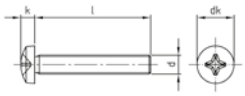
Alt. Norm tarafından değiştirildi ISO 7045

d	M
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

1000	1000	1000 ≥22: box = 500	500 ≥45: box = 200	500	500 ≥45: box = 200
3.2	4	5	6	8	10
1.3	1.6	2	2.4	3.1	3.8
PH0	PH1	PH1	PH1	PH2	PH2





TX formu ISO 14583'e bakınız

TX-type see ISO 14583

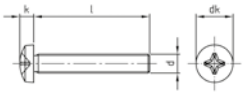
DIN 7985
A2

Alt. Norm tarafından değiştirildi ISO 7045

DIN 7985 A2 PH
Yıldız mercimek başlı vidalar

DIN 7985 A2 PH
Cross recessed raised cheese head screws





TX formu ISO 14583'e bakınız

TX-type see ISO 14583

d	M 6	M 8	M 10
	Réf./Item no.	Réf./Item no.	Réf./Item no.
	798526 8		
	798526 10	798528 10	
	798526 12	798528 12	
	798526 14		
	798526 16	798528 16	7985210 16
	798526 18		
	798526 20	798528 20	7985210 20
	798526 22		
	798526 25	798528 25	7985210 25
	798526 28		
	798526 30	798528 30	7985210 30
	798526 35	798528 35	7985210 35
	798526 40	798528 40	7985210 40
	798526 45	798528 45	7985210 45
	798526 50	798528 50	7985210 50
	798526 55		
	798526 60	798528 60	7985210 60
	798526 65		
	798526 70	798528 70	7985210 70
	798526 75		
	798526 80	798528 80	7985210 80
	798526 90	798528 90	7985210 90
	798526 100	798528 100	7985210 100
	500 ≥25: box = 200 ≥70: box = 100	200 ≥60: box = 100	100 ≥70: box = 50
	12	16	20
	4.6	6	7.5
	PH3	PH4	PH4

DIN 7985 A2 PZ
Yıldız mercimek başlı vidalar

DIN 7985 A2 PZ
Cross recessed raised cheese head screws

DIN 7985
A2

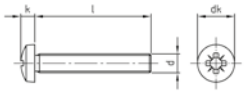
Alt. Norm tarafından değiştirildi ISO 7045



d	M
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

1000	1000	1000 ≥25: box = 500	500 ≥45: box = 200	500 ≥55: box = 200	500 ≥45: box = 200
3.2	4	5	6	8	10
1.3	1.6	2	2.4	3.1	3.8
PZ0	PZ1	PZ1	PZ1	PZ2	PZ2



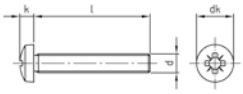
TX formu ISO 14583'e bakınız

TX-type see ISO 14583

DIN 7985 A2

Alt. Norm tarafından değiştirildi ISO 7045





TX formu ISO 14583'e bakınız

TX-type see ISO 14583

DIN 7985 A2 PZ
Yıldız mercimek başlı vidalar

DIN 7985 A2 PZ
Cross recessed raised cheese head screws

d	M 6	M 8	M 10
	Réf./Item no.	Réf./Item no.	Réf./Item no.
	7985206 8		
	7985206 10	7985208 10	
	7985206 12	7985208 12	
	7985206 14		
	7985206 16	7985208 16	79852010 16
	7985206 18		
	7985206 20	7985208 20	79852010 20
	7985206 22		
	7985206 25	7985208 25	79852010 25
	7985206 28		
	7985206 30	7985208 30	79852010 30
	7985206 35	7985208 35	79852010 35
	7985206 40	7985208 40	79852010 40
	7985206 45	7985208 45	79852010 45
	7985206 50	7985208 50	79852010 50
	7985206 55		
	7985206 60	7985208 60	79852010 60
	7985206 65		
	7985206 70	7985208 70	79852010 70
	7985206 75		
	7985206 80	7985208 80	79852010 80
	7985206 90	7985208 90	79852010 90
	7985206 100	7985208 100	79852010 100
	500 ≥25: box = 200 ≥70: box = 100	200 ≥60: box = 100	100 ≥70: box = 50
	12	16	20
	4.6	6	7.5
	PZ3	PH4	PZ4

DIN 7985 A4 PH
Yıldız mercimek başlı vidalar

DIN 7985 A4 PH
Cross recessed raised cheese head screws

DIN 7985
A4

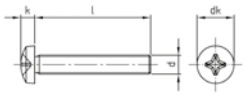
Alt. Norm tarafından değiştirildi ISO 7045

d	M
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

1000	1000	1000 ≥22: box = 500	500 ≥45: box = 200	500	500 ≥45: box = 200
3.2	4	5	6	8	10
1.3	1.6	2	2.4	3.1	3.8
PH0	PH1	PH1	PH1	PH2	PH2





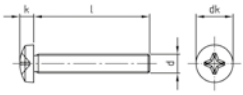
TX formu ISO 14583'e bakınız

TX-type see ISO 14583

DIN 7985
A4

Alt. Norm tarafından değiştirildi ISO 7045





TX formu ISO 14583'e bakınız

TX-type see ISO 14583

DIN 7985 A4 PH
Yıldız mercimek başlı vidalar

DIN 7985 A4 PH
Cross recessed raised cheese head screws

	M 6	M 8	M 10
	Réf./Item no.	Réf./Item no.	Réf./Item no.
	798546 8		
	798546 10	798548 10	
	798546 12	798548 12	
	798546 14		
	798546 16	798548 16	7985410 16
	798546 18		
	798546 20	798548 20	7985410 20
	798546 22		
	798546 25	798548 25	7985410 25
	798546 28		
	798546 30	798548 30	7985410 30
	798546 35	798548 35	7985410 35
	798546 40	798548 40	7985410 40
	798546 45	798548 45	7985410 45
	798546 50	798548 50	7985410 50
	798546 55		
	798546 60	798548 60	7985410 60
	798546 65		
	798546 70	798548 70	7985410 70
d	798546 75		
	798546 80	798548 80	7985410 80
	798546 90	798548 90	7985410 90
	798546 100	798548 100	7985410 100
	500 ≥25: box = 200 ≥75: box = 100	200 ≥60: box = 100	100 ≥70: box = 50
	12	16	20
	4.6	6	7.5
	PH3	PH4	PH4

DIN 7985 A4 PZ
Yıldız mercimek başlı vidalar

DIN 7985 A4 PZ
Cross recessed raised cheese head screws

DIN 7985
A4

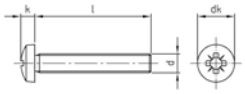
Alt. Norm tarafından değiştirildi ISO 7045



d	M
	Ürün no./*Item no.*

Diğer boyutlar bir sonraki sayfada. / *Further dimensions on the next page.*

1000	1000	1000 ≥25: box = 500	500 ≥45: box = 200	500 ≥55: box = 200	500 ≥45: box = 200
3.2	4	5	6	8	10
1.3	1.6	2	2.4	3.1	3.8
PZ0	PZ1	PZ1	PZ1	PZ2	PZ2



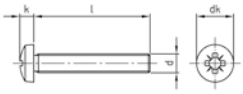
TX formu ISO 14583'e bakınız

TX-type see ISO 14583

DIN 7985
A4

Alt. Norm tarafından değiştirildi ISO 7045





TX formu ISO 14583'e bakınız

TX-type see ISO 14583

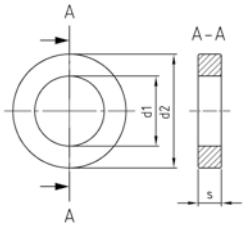
DIN 7985 A4 PZ
Yıldız mercimek başlı vidalar

DIN 7985 A4 PZ
Cross recessed raised cheese head screws

	M 6	M 8	M 10
	Réf./Item no.	Réf./Item no.	Réf./Item no.
	7985406 8		
	7985406 10	7985408 10	
	7985406 12	7985408 12	
	7985406 14		
	7985406 16	7985408 16	79854010 16
	7985406 18		
	7985406 20	7985408 20	79854010 20
	7985406 22		
	7985406 25	7985408 25	79854010 25
	7985406 28		
	7985406 30	7985408 30	79854010 30
	7985406 35	7985408 35	79854010 35
	7985406 40	7985408 40	79854010 40
	7985406 45	7985408 45	79854010 45
	7985406 50	7985408 50	79854010 50
	7985406 55		
	7985406 60	7985408 60	79854010 60
	7985406 65		
	7985406 70	7985408 70	79854010 70
d	7985406 75		
	7985406 80	7985408 80	79854010 80
	7985406 90	7985408 90	79854010 90
	7985406 100	7985408 100	79854010 100

500 ≥25: box = 200 ≥65: box = 100	200 ≥60: box = 100	100 ≥70: box = 50
12	16	20
4.6	6	7.5
PZ3	PZ4	PZ4





d = Nominal boyutu

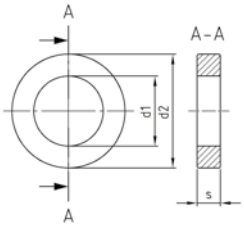
d = Nominal measurement

DIN 7989-1 A4

DIN 7989-1 A4
çelik yapılar icin rondela

DIN 7989-1 A4
Washers for steel constructions





d = Nominal boyutu

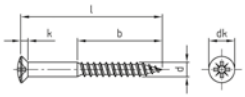
d = Nominal measurement

DIN 7995 A2 PZ
Yıldız mercimek havşa başlı ağaç vidaları

DIN 7995 A2 PZ
Cross recessed raised countersunk head wood screws

d						
	Ürün no./*Item no.*					
	200	200	200	200	200 ≥65: box = 100	200 ≥65: box = 100
	5.6	6.5	7.5	8.3	9.2	11
	1.65	1.93	2.2	2.35	2.5	3
	PZ1	PZ2	PZ2	PZ2	PZ2	PZ3





b = Standarda uygun

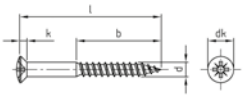
b = at Norm

DIN 7995 A2/Cu

DIN 7995 A2 Cu PZ
Yıldız mercimek havşa başlı ağaç vidaları

DIN 7995 A2 Cu PZ
Cross recessed raised countersunk head wood screws





d	
	Ürün no./*Item no.*
	200
	8.3
	2.35
	PZ2

b = Standarda uygun

b = at Norm

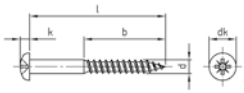
DIN 7996 A2 PZ
Yıldız bombe başlı ağaç vidaları

DIN 7996 A2 PZ
Cross recessed round head wood screws

d	
	Ürün no./*Item no.*

200	200	200	200	200 ≥65: box = 100	200 ≥65: box = 100
6	7	8	9	10	12
2.1	2.35	2.8	3.1	3.5	4.2
PZ1	PZ2	PZ2	PZ2	PZ2	PZ3





b = Standarda uygun

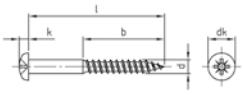
b = at Norm

DIN 7996
A4

DIN 7996 A4 PZ
Yıldız bombe başlı ağaç vidaları

DIN 7996 A4 PZ
Cross recessed round head wood screws





d	
	Ürün no./*Item no.*
	200
	8
	2.8
	PZ2

b = Standarda uygun

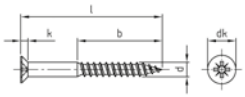
b = at Norm

DIN 7997 A2 PZ
Yıldız havşa başlı ağaç vidaları

DIN 7997 A2 PZ
Cross recessed countersunk head wood screws

d					
	Ürün no./*Item no.*				
	200	200	200	200	200 ≥65: box = 100	200 ≥65: box = 100
	5.6	6.5	7.5	8.3	9.2	11
	1.65	1.93	2.2	2.35	2.5	3
	PZ1	PZ2	PZ2	PZ2	PZ2	PZ3





b = Standarda uygun

b = at Norm

DIN

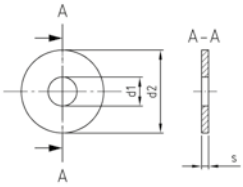
DIN 9021
A2

Alt. Norm tarafından değiştirildi ISO 7093-1

DIN 9021 A2
Rondela dış çapı ≈ 3 x Vida dişi çapı

DIN 9021 A2
Washers with outside diameter ≈ 3x nominal thread diameter





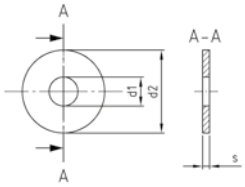
DIN 9021 A4
Rondela dış çapı ≈ 3 x Vida dişi çapı

DIN 9021 A4
Washers with outside diameter ≈ 3x nominal thread diameter

DIN 9021
A4

Alt. Norm
tarafından değiştirildi ISO
7093-1





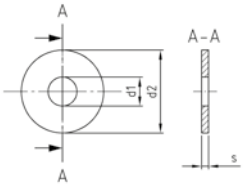
DIN 9021
A5

Alt. Norm tarafından değiştirildi ISO 7093-1

DIN 9021 1.4571
Rondela dış çapı ≈ 3 x Vida dişi çapı

DIN 9021 1.4571
Washers with outside diameter ≈ 3x nominal thread diameter





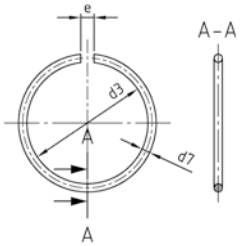
DIN 9925 1.4310
Miller için yuvarlak telli yaylı halkalar

DIN 9925 1.4310
Round wire snap rings for shafts

DIN 9925
A1

Alt. Norm tarafından değiştirildi DIN 7993 A





- şaftlar için

- for shafts

DIN

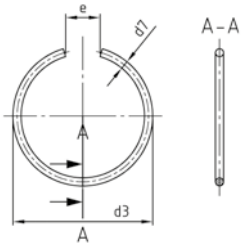
DIN 9926
A1

Alt. Norm tarafından değiştirildi DIN 7993 B

DIN 9926 1.4310
Delikler için yuvarlak telli yaylı halkalar

DIN 9926 1.4310
Round wire snap rings for bores





- matkap delikleri için

- for bores

DIN

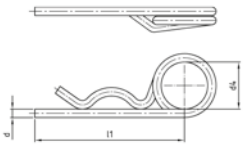
DIN 11024 A4
Maşalı pim

DIN 11024 A4
Cotter pins with double ring

DIN 11024
A4

Alt. Norm tarafından değiştirildi ISO 7072



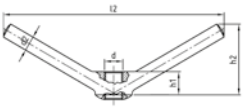


DIN 80701 A4

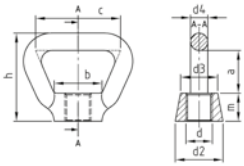
DIN 80701 A4
Mafsallı somunlar

DIN 80701 A4
Toggle nuts









Ebat M6, M8 ve M10 standartlaştırılmış değildir.

Size M6, M8 and M10 not standardized.



Competence in Stainless Steel

DIN

ISO MAKALELERI
ISO ARTICLES

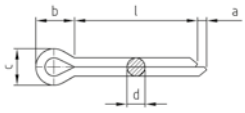
ISO 1234
A2

Alt. Norm
eskiden DIN 94

DIN 94 A2
çatal Pim(Kopilya)

ISO 1234 A2
Split pins





d	
	Ürün no./*Item no.*

ISO

DIN 94 A4
çatal Pim(Kopilya)

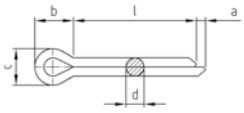
ISO 1234 A4
Split pins

d	
	Ürün no./*Item no.*

ISO 1234
A4

Alt. Norm
eskiden DIN 94





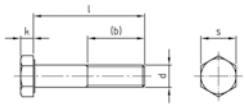
ISO 4014
A2

Alt. Norm
eskiden DIN 931

ISO 4014 A2
Altıköşe yarım dişli civata

ISO 4014 A2
Hexagon head bolts





d	M
	Ürün no./*Item no.*

b = Standarda uygun M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile talep üzerine mevcuttur.

b = at Norm quality inspection from M6 including to M24 available on demand.



ISO 4014 A4-80
Altıköşe yarım dişli civata

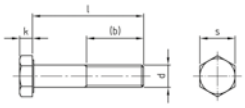
ISO 4014 A4
Hexagon head bolts

d	M
	Ürün no./*Item no.*

ISO 4014
A4

Alt. Norm
eskiden DIN 931





b = Standarda uygun
M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile talep üzerine mevcuttur.

b = at Norm
quality inspection from M6 including to M24 available on demand.



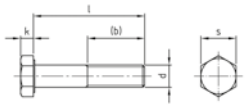
ISO 4014
A4-80

Alt. Norm
eskiden DIN 931

ISO 4014 A4-80
Altıköşe yarım dişli civata

ISO 4014 A4-80
Hexagon head bolts





d	M
	Ürün no./*Item no.*

b = Standarda uygun M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile talep üzerine mevcuttur.

b = at Norm quality inspection from M6 including to M24 available on demand.



ISO 4017 A2
Altıköşe tam dişli civata

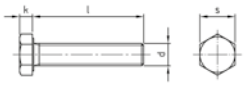
ISO 4017 A2
Hexagon head screws

d	M
	Ürün no./*Item no.*

ISO 4017
A2

Alt. Norm
eskiden DIN 933





M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile talep üzerine mevcuttur.

quality inspection from M6 including to M24 available on demand.



ISO 4017
A4

Alt. Norm
eskiden DIN 933

ISO 4017 A4
Altıköşe tam dişli civata

ISO 4017 A4
Hexagon head screws





d	M
	Ürün no./*Item no.*

M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile talep üzerine mevcuttur.

quality inspection from M6 including to M24 available on demand.



ISO 4017 A4-80
Altıköşe tam dişli civata

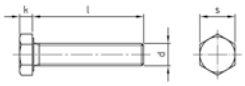
ISO 4017 A4-80
Hexagon head screws

d	M
	Ürün no./*Item no.*

ISO 4017
A4-80

Alt. Norm
eskiden DIN 933





M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile talep üzerine mevcuttur.

quality inspection from M6 including to M24 available on demand.



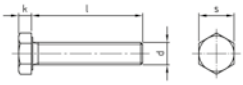
ISO 4017
1.4828

Alt. Norm
eskiden DIN 933

ISO 4017 1.4828
Altıköşe tam dişli civata

ISO 4017 1.4828
Hexagon head screws





d	M
	Ürün no./*Item no.*

ISO 4026 A2
Yassı uçlu setiskur ayar vidası

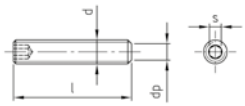
ISO 4026 A2
Hexagon socket set screws with flat point

ISO 4026
A2

Alt. Norm
eskiden DIN 913

d	M
	Ürün no./*Item no.*





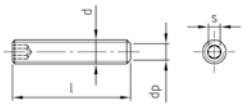
ISO 4026
A4

Alt. Norm
eskiden DIN 913

ISO 4026 A4
Yassı uçlu setiskur ayar vidası

ISO 4026 A4
Hexagon socket set screws with flat point





d	M
	Ürün no./*Item no.*

ISO 4027 A2
Konik uçlu setiskur ayar vidası

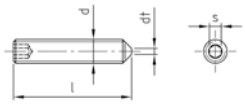
ISO 4027 A2
Hexagon socket set screws with cone point

d	M
	Ürün no./*Item no.*

ISO 4027
A2

Alt. Norm
eskiden DIN 914





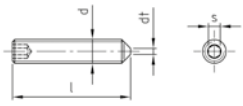
ISO 4027
A4

Alt. Norm
eskiden DIN 914

ISO 4027 A4
Konik uçlu setiskur ayar vidası

ISO 4027 A4
Hexagon socket set screws with cone point





d	M
	Ürün no./*Item no.*

ISO

DIN 915 A2
Silindir uçlu setiskur ayar vidası

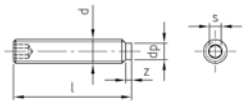
ISO 4028 A2
Hexagon socket set screws with dog point

ISO 4028
A2

Alt. Norm
eskiden DIN 915

d	M
	Ürün no./*Item no.*





z = DIN gereğince, uzunluktan bağımsız

z = acc. to DIN, dependent on length

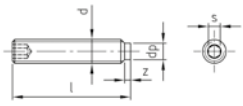
ISO 4028
A4

Alt. Norm
eskiden DIN 915

ISO 4028 A4
Silindir uçlu setiskur ayar vidası

ISO 4028 A4
Hexagon socket set screws with dog point





z = DIN gereğince, uzunluktan bağımsız

z = acc. to DIN, dependent on length

d	M
	Ürün no./*Item no.*

ISO

ISO 4029 A2
Tas uçlu setiskur ayar vidası

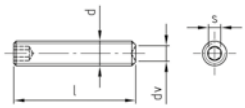
ISO 4029 A2
Hexagon socket set screws with cup point

d	M
	Ürün no./*Item no.*

ISO 4029
A2

Alt. Norm
eskiden DIN 916





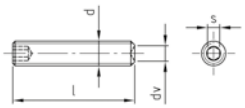
ISO 4029
A4

Alt. Norm
eskiden DIN 916

ISO 4029 A4
Tas uçlu setiskur ayar vidası

ISO 4029 A4
Hexagon socket set screws with cup point





d	M
	Ürün no./*Item no.*

ISO

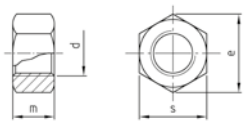
ISO 4032 A2
Altıköşe somun

ISO 4032 A2
Hexagon nuts

ISO 4032
A2

Alt. Norm
eskiden DIN 934





M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile talep üzerine mevcuttur.

quality inspection from M6 including to M24 available on demand.

Schäfer + Peters GmbH
74613 Öhringen
Z - 30.3 - 6

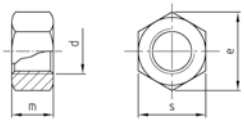
ISO 4032
A2-80

Alt. Norm
eskiden DIN 934

ISO 4032 A2-80
Altıköşe somun

ISO 4032 A2-80
Hexagon nuts





M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile talep üzerine mevcuttur.

quality inspection from M6 including to M24 available on demand.



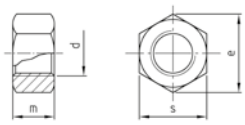
ISO 4032 A4
Altıköşe somun

ISO 4032 A4
Hexagon nuts

ISO 4032
A4

Alt. Norm
eskiden DIN 934





M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile talep üzerine mevcuttur.

quality inspection from M6 including to M24 available on demand.



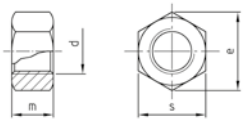
ISO 4032
A4-80

Alt. Norm
eskiden DIN 934

ISO 4032 A4-80
Altıköşe somun

ISO 4032 A4-80
Hexagon nuts





M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile talep üzerine mevcuttur.

quality inspection from M6 including to M24 available on demand.



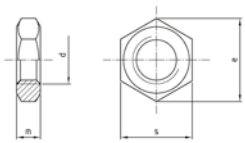
ISO 4035 A2
Altı köşeli somunlar, ince tip

ISO 4035 A2
Hexagon thin nuts

ISO 4035
A2

Alt. Norm
eskiden DIN 439





- "0" = azaltılmış yük kapasitesi
- *"0" = reduced load capacity*

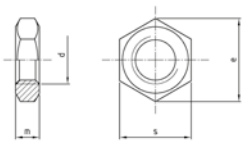
ISO 4035
A4

Alt. Norm
eskiden DIN 439

ISO 4035 A4
Altı köşeli somunlar, ince tip

ISO 4035 A4
Hexagon thin nuts





- "0" = azaltılmış yük kapasitesi
- *"0" = reduced load capacity*

ISO 4762 A2
Imbus Civata yarim disli

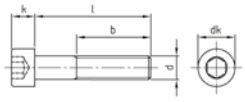
ISO 4762 A2
Hexagon socket head cap screws, partial thread

d	M
	Ürün no./*Item no.*

ISO 4762
A2

Alt. Norm
eskiden DIN 912





b = Standarda uygun
Talep üzere farklı ölçüler (boyut-lar) teslim edilebilir!
Talep üzerine M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile mevcuttur.

b = at Norm
Other dimensions on demand! quality inspection from M6 including to M24 available on demand.



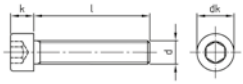
ISO 4762
A2

Alt. Norm
eskiden DIN 912

ISO 4762 A2
Imbus Civata tam dişli

ISO 4762 A2
Hexagon socket head cap screws, fullthread





d	M
	Ürün no./*Item no.*

Talep üzerine M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile mevcuttur.

quality inspection from M6 including to M24 available on demand.



ISO 4762 A2
Imbus Civata tam diş, SVZ

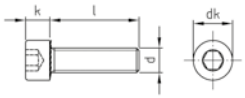
ISO 4762 A2
Hexagon socket head cap screws with serration

d	M
	Ürün no./*Item no.*

ISO 4762
A2

Alt. Norm
eskiden DIN 912





G625 = Gleitmo
M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile talep üzerine mevcuttur.

G625 = Gleitmo
quality inspection from M6 including to M24 available on demand.

Schäfer + Peters GmbH
74613 Öhringen
Z - 30.3 - 6

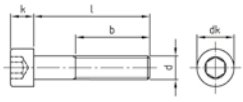
ISO 4762
A4

Alt. Norm
eskiden DIN 912

ISO 4762 A4
Imbus Civata kısmi iplik

ISO 4762 A4
Hexagon socket head cap screws, partial thread





d	M
	Ürün no./*Item no.*

b = Standarda uygun
Talep üzere farklı ölçüler (boyutlar) teslim edilebilir!
Talep üzerine M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile mevcuttur.

b = at Norm
Other dimensions on demand! quality inspection from M6 including to M24 available on demand.



ISO 4762 A4
Imbus Civata tam diş

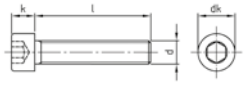
ISO 4762 A4
Hexagon socket head cap screws, fullthread

d	M
	Ürün no./*Item no.*

ISO 4762
A4

Alt. Norm
eskiden DIN 912





quality inspection from M6 including to M24 available on demand.

Schäfer + Peters GmbH
74613 Öhringen
Z - 30.3 - 6

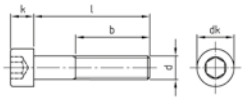
ISO 4762
A4-80

Alt. Norm
eskiden DIN 912

ISO 4762 A4-80
Imbus Civata kısmi iplik

ISO 4762 A4-80
Hexagon socket head cap screws, partial thread





d	M
	Ürün no./*Item no.*

b = Standarda uygun
Talep üzere farklı ölçüler (boyutlar) teslim edilebilir!
Talep üzerine M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile mevcuttur.

b = at Norm
Other dimensions on demand! quality inspection from M6 including to M24 available on demand.



ISO 4762 A4-80
Imbus Civata tam diş

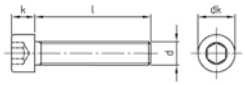
ISO 4762 A4-80
Hexagon socket head cap screws, fullthread

d	M
	Ürün no./*Item no.*

ISO 4762
A4-80

Alt. Norm
eskiden DIN 912





Talep üzerine M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile mevcuttur.

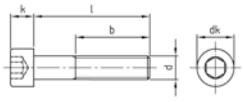
quality inspection from M6 including to M24 available on demand.



ISO 4762
A5

Alt. Norm
eskiden DIN 912





ISO 4762 1.4571
Imbus Civata

ISO 4762 1.4571
Hexagon socket head cap screws

d	M
	Ürün no./*Item no.*

ISO

ISO 4762 1.4828
Imbus Civata

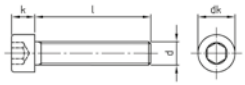
ISO 4762 1.4828
Hexagon socket head cap screws

d	M
	Ürün no./*Item no.*

ISO 4762
1.4828

Alt. Norm
eskiden DIN 912





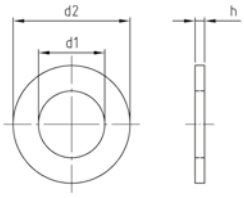
ISO 7089
A2

Alt. Norm
eskiden DIN 125

ISO 7089 A2
Düz pullar, normal seri, 200 HV

ISO 7089 A2
Plain washers, normal series, 200 HV





- Sertlik 200 HV

- *hardness 200 HV*

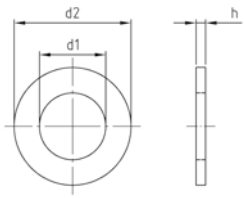
ISO 7089 A4
Düz pullar, normal seri, 200 HV

ISO 7089 A4
Plain washers, normal series, 200 HV

ISO 7089
A4

Alt. Norm
eskiden DIN 125





- Sertlik 200 HV
- *hardness 200 HV*

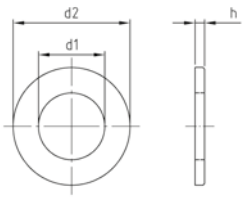
ISO 7090
A2

Alt. Norm
eskiden DIN 125

ISO 7090 A2
Pahlı düz pullar, normal seri, 200 HV

ISO 7090 A2
Plain washers with chamfered, normal series, 200 HV





- Sertlik 200 HV

- *hardness 200 HV*

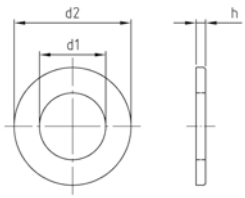
ISO 7090 A4
Pahlı düz pullar, normal seri, 200 HV

ISO 7090 A4
Plain washers with chamfered, normal series, 200 HV

ISO 7090
A4

Alt. Norm
eskiden DIN 125





- Sertlik 200 HV
- *hardness 200 HV*

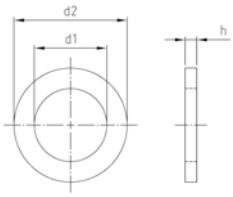
ISO 7092
A2

Alt. Norm tarafından değiştirildi DIN 433

ISO 7092 A2
Plain washers, small series, 200 HV

ISO 7092 A2
Plain washers, small series, 200 HV





- Sertlik 200 HV
- *hardness 200 HV*

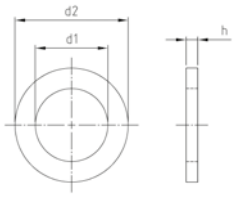
ISO 7092 A4
Plain washers, small series, 200 HV

ISO 7092 A4
Plain washers, small series, 200 HV

ISO 7092
A4

Alt. Norm tarafından değiştirildi DIN 433





- Sertlik 200 HV
- *hardness 200 HV*

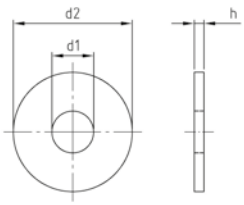
ISO 7093-1 A2

Alt. Norm
eskiden DIN 9021

ISO 7093-1 A2
Düz pullar, büyük seri, 200 HV

ISO 7093-1 A2
Plain washers, large series, 200 HV





- Sertlik 200 HV

- *hardness 200 HV*

ISO

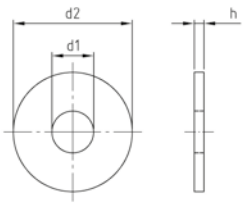
ISO 7093-1 A4
Düz pullar, büyük seri, 200 HV

ISO 7093-1 A4
Plain washers, large series, 200 HV

ISO 7093-1
A4

Alt. Norm
eskiden DIN 9021





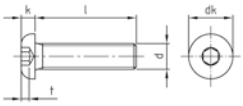
- Sertlik 200 HV
- *hardness 200 HV*

ISO 7380-1
A2

ISO 7380-1 A2
Bombe başlı inbus civata

ISO 7380-1 A2
Hexagon socket button head screws with fullthread





d	M
	Ürün no./*Item no.*

Talep üzerine M6'dan M12'ye kadar ve M12 dahil harici izleme ile mevcuttur.
- "0" = azaltılmış yük kapasitesi

quality inspection from M6 including to M12 available on demand.
- "0" = reduced load capacity

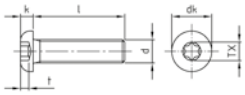


ISO 7380-1 A2 TX
Bombe başlı torks inbus civata

ISO 7380-1 A2 TX
Button head screws with six lobe drive with fullthread

d	M
	Ürün no./*Item no.*





Talep üzerine M6'dan M12'ye kadar ve M12 dahil harici izleme ile mevcuttur.
- "0" = azaltılmış yük kapasitesi

quality inspection from M6 including to M12 available on demand.
- "0" = reduced load capacity

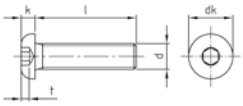


ISO 7380-1
A4

ISO 7380-1 A4
Bombe başlı inbus civata

ISO 7380-1 A4
Hexagon socket button head screws with fullthread





d	M
	Ürün no./*Item no.*

Talep üzerine M6'dan M12'ye kadar ve M12 dahil harici izleme ile mevcuttur.
- "0" = azaltılmış yük kapasitesi

quality inspection from M6 including to M12 available on demand.
- "0" = reduced load capacity

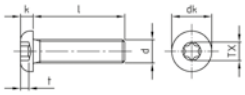


ISO 7380-1 A2 TX
Bombe başlı torks inbus civata

ISO 7380-1 A4 TX
Button head screws with six lobe drive with fullthread

d	M
	Ürün no./*Item no.*





Talep üzerine M6'dan M12'ye kadar ve M12 dahil harici izleme ile mevcuttur.
- "0" = azaltılmış yük kapasitesi

quality inspection from M6 including to M12 available on demand.
- "0" = reduced load capacity

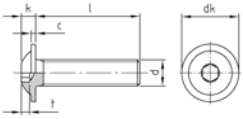


ISO 7380-2
A2

ISO 7380-2 A2 başlı flanşlı
Bombe başlı flanşlı inbus civata

ISO 7380-2 A2 with flange
Hexagon socket button head screw flange with fullthread





d	M
	Ürün no./*Item no.*

Talep üzerine M6'dan M12'ye kadar ve M12 dahil harici izleme ile mevcuttur.
– "0" = azaltılmış yük kapasitesi

quality inspection from M6 including to M12 available on demand.
– "0" = reduced load capacity

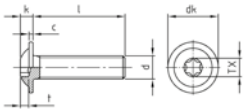


ISO 7380-2 A2 başlı flanşlı torks
Bombe başlı flanşlı torks inbus civata

ISO 7380-2 A2 with flange TX
Button head screws TX-drive flange with fullthread

d	M
	Ürün no./*Item no.*





Talep üzerine M6'dan M12'ye kadar ve M12 dahil harici izleme ile mevcuttur.
- "0" = azaltılmış yük kapasitesi

quality inspection from M6 including to M12 available on demand.
- "0" = reduced load capacity

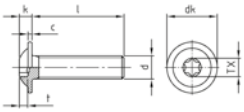
Schäfer + Peters GmbH
74613 Öhringen
Z - 30.3 - 6

ISO 7380-2
A4

ISO 7380-2 A4 başlı flanşlı torks
Bombe başlı flanşlı torks inbus civata

ISO 7380-2 A4 with flange TX
Button head screws TX-drive flange with fullthread





d	M
	Ürün no./*Item no.*

Talep üzerine M6'dan M12'ye kadar ve M12 dahil harici izleme ile mevcuttur.
- "0" = azaltılmış yük kapasitesi

quality inspection from M6 including to M12 available on demand.
- "0" = reduced load capacity

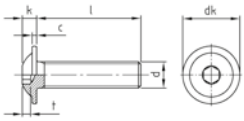


ISO 7380-2 A4 başlı flanşlı
Bombe başlı flanşlı inbus civata

ISO 7380-2 A4 with flange
Hexagon socket button head screw flange with fullthread

d	M
	Ürün no./*Item no.*





Talep üzerine M6'dan M12'ye kadar ve M12 dahil harici izleme ile mevcuttur.
- "0" = azaltılmış yük kapasitesi

quality inspection from M6 including to M12 available on demand.
- "0" = reduced load capacity



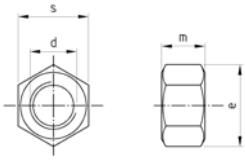
ISO 8673
A2

Alt. Norm
eskiden DIN 934

ISO 8673 A2
Altiköse somun

ISO 8673 A2
Hexagon nuts with fine pitch thread





ISO 8673 A4
Altiköse somun

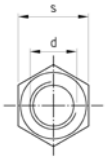
ISO 8673 A4
Hexagon nuts with fine pitch thread

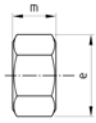
ISO 8673
A4

Alt. Norm
eskiden DIN 934









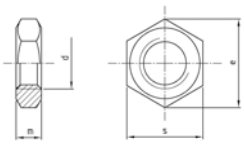
ISO 8675
A2

Alt. Norm
eskiden DIN 439

ISO 8675 A2
İnce dişli, altı köşeli somunlar, ince disli

ISO 8675 A2
Hexagon thin nuts with fine pitch thread





- "0" = azaltılmış yük kapasitesi
- *"0" = reduced load capacity*

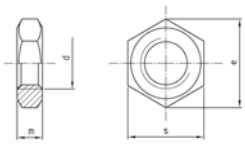
ISO 8675 A4
İnce dişli, altı köşeli somunlar, ince disli

ISO 8675 A4
Hexagon thin nuts with fine pitch thread

ISO 8675
A4

Alt. Norm
eskiden DIN 439





- "0" = azaltılmış yük kapasitesi
- *"0" = reduced load capacity*

ISO 8733
A1

Alt. Norm
eskiden DIN 7979





- ISO 8735'e benzer
- *similar ISO 8735*

ISO 8733 1.4305
İçten vida dişli silindir pimler

ISO 8733 1.4305
Parallel pins with internal thread

d	
	Ürün no./*Item no.*

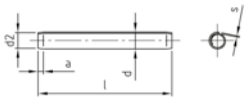
ISO 8750 1.4310
Yay tipi düz pimler

ISO 8750 1.4310
Spiral type straight pins

Alt. Norm
eskiden DIN 7343

d	
	Ürün no./*Item no.*





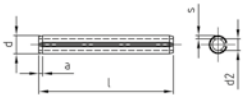
ISO 8752

Alt. Norm
eskiden DIN 1481

ISO 8752 1.4310
Germe pimleri, yarıklı, ağır hizmet tipi

ISO 8752 1.4310
Slotted spring dowel pins, heavy type





d	
	Ürün no./*Item no.*

ISO 10511 A2
Fiberli tip sikmali altiköse somun

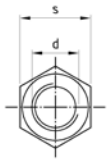
ISO 10511 A2
Self-locking hexagon nuts, low type

ISO 10511
A2

Alt. Norm
eskiden DIN 985









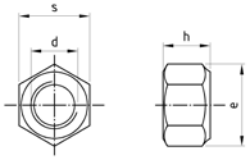
ISO 10511
A4

Alt. Norm
eskiden DIN 985

ISO 10511 A4
Fiberli tip sikmali altiköse somun

ISO 10511 A4
Self-locking hexagon nuts, low type





ISO 10642 A2
Havşa başlı allen ve tam dişli cıvatalar

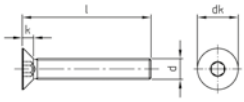
ISO 10642 A2
Hexagon socket countersunk head screws with fullthread

d	M
	Ürün no./*Item no.*

ISO 10642
A2

Alt. Norm
eskiden DIN 7991





Talep üzerine M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile mevcuttur.
- "0" = azaltılmış yük kapasitesi

quality inspection from M6 including to M24 available on demand.
- "0" = reduced load capacity



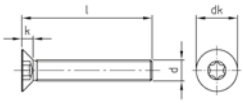
ISO 10642
A2

Alt. Norm
eskiden DIN 7991

ISO 10642 A2 TX
Havşa başlı allen cıvatalar

ISO 10642 A2 TX
Countersunk head screws six lobe drive with fullthread





d	M
	Ürün no./*Item no.*

Talep üzerine M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile mevcuttur.
– "0" = azaltılmış yük kapasitesi

quality inspection from M6 including to M24 available on demand.
– "0" = reduced load capacity



ISO 10642 A4
Havşa başlı allen ve tam dişli cıvatalar

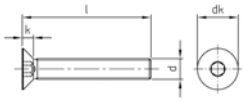
ISO 10642 A4
Hexagon socket countersunk head screws with fullthread

ISO 10642
A4

Alt. Norm
eskiden DIN 7991

d	M
	Ürün no./*Item no.*





Talep üzerine M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile mevcuttur.
- "0" = azaltılmış yük kapasitesi

quality inspection from M6 including to M24 available on demand.
- "0" = reduced load capacity



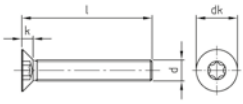
ISO 10642
A4

Alt. Norm
eskiden DIN 7991

ISO 10642 A4 TX
Havşa başlı allen cıvatalar

ISO 10642 A4 TX
Countersunk head screws six lobe drive with fullthread





d	M
	Ürün no./*Item no.*

Talep üzerine M6'dan M24'e kadar ve M24 dahil olmak üzere harici izleme ile mevcuttur.
– "0" = azaltılmış yük kapasitesi

quality inspection from M6 including to M24 available on demand.
– "0" = reduced load capacity



ISO 13918 A2
Dıştan dişli kaynak saplamaları, tip PT

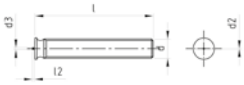
ISO 13918 A2
Welding bolts, type PT

d	
	Ürün no./*Item no.*

ISO 13918 PT
A2

Alt. Norm
eskiden DIN 32501





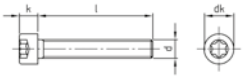
ISO 14579
A2

Alt. Norm
eskiden DIN 912

ISO 14579 A2 TX VG
Silindir başlı torks cıvatalar

ISO 14579 A2 TX VG
Socket head cap screws with six lobe drive





d	M
	Ürün no./*Item no.*

b = Standarda uygun

b = at Norm

ISO 14579 A2 TX TG
Silindir başlı torks cıvatalar

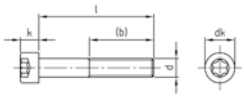
ISO 14579 A2 TX TG
Socket head cap screws with six lobe drive

ISO 14579
A2

Alt. Norm
eskiden DIN 912

d	M
	Ürün no./*Item no.*





b = Standarda uygun

b = at Norm

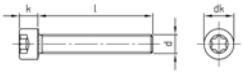
ISO 14579
A2

Alt. Norm
eskiden DIN 912

ISO 14579 A2 TX VG
Silindir başlı cıvatalar, torks, tırtıllı

ISO 14579 A2 TX VG
Socket head cap screws serration six lobe drive





b = Standarda uygun

b = at Norm

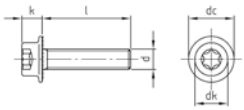
ISO 14579 A2 TX
Silindir başlı ve flanşlı torks cıvatalar

ISO 14579 A2 TX
Socket head cap screws with six lobe drive flange

ISO 14579
A2

Alt. Norm
eskiden DIN 912





b = Standarda uygun

b = at Norm

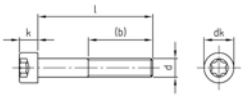
ISO 14579
A4

Alt. Norm
eskiden DIN 912

ISO 14579 A4 TX TG
Silindir başlı torks cıvatalar

ISO 14579 A4 TX TG
Socket head cap screws with six lobe drive





d	M
	Ürün no./*Item no.*

b = Standarda uygun

b = at Norm

ISO 14579 A4 TX VG
Silindir başlı torks cıvatalar

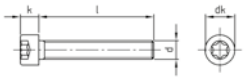
ISO 14579 A4 TX VG
Socket head cap screws with six lobe drive

ISO 14579
A4

Alt. Norm
eskiden DIN 912

d	M
	Ürün no./*Item no.*





b = Standarda uygun

b = at Norm

ISO 14580
A2

Alt. Norm
eskiden DIN 7984

ISO 14580 A2
Silindir başlı cıvatalar, torks, ince kafalı

ISO 14580 A2 TX
Hexalobular socket cheese head screws





d	M
	Ürün no./*Item no.*

- "0" = azaltılmış yük kapasitesi
- *"0" = reduced load capacity*

ISO 14580 A4
Silindir başlı cıvatalar, torks, ince kafalı

ISO 14580 A4 TX
Hexalobular socket cheese head screws

d	M
	Ürün no./*Item no.*

ISO 14580 A4

Alt. Norm
eskiden DIN 7984





- "0" = azaltılmış yük kapasitesi
- *"0" = reduced load capacity*

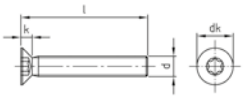
ISO 14581
A2

Alt. Norm
eskiden DIN 965

ISO 14581 A2
Havşa başlı torks vida

ISO 14581 A2 TX
Countersunk head screws with six lobe drive





d	M
	Ürün no./*Item no.*

- "0" = azaltılmış yük kapasitesi
- *"0" = reduced load capacity*

ISO 14581 A4
Havşa başlı torks vida

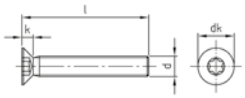
ISO 14581 A4 TX
Countersunk head screws with six lobe drive

ISO 14581
A4

Alt. Norm
eskiden DIN 965

d	M
	Ürün no./*Item no.*





- "0" = azaltılmış yük kapasitesi
- *"0" = reduced load capacity*

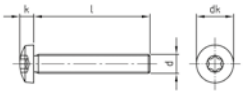
ISO 14583
A2

Alt. Norm
eskiden DIN 7985

ISO 14583 A2
Torkslu, mercimek başlı vidalar

ISO 14583 A2 TX
Raised cheese head screws with six lobe drive





d	M
	Ürün no./*Item no.*

ISO 14583 A4
Torkslu, mercimek başlı vidalar

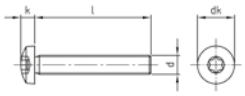
ISO 14583 A4 TX
Raised cheese head screws with six lobe drive

ISO 14583
A4

Alt. Norm
eskiden DIN 7985

d	M
	Ürün no./*Item no.*





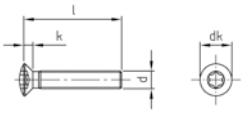
ISO 14584
A2

Alt. Norm
eskiden DIN 966

ISO 14584 A2
Yıldız mercimek başlı torks vida

ISO 14584 A2 TX
Raised countersunk head screws with six lobe drive





d	M
	Ürün no./*Item no.*

ISO

ISO 14584 A4
Yıldız mercimek başlı torks vida

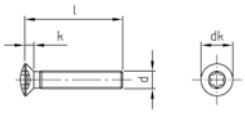
ISO 14584 A4
Raised countersunk head screws with six lobe drive

ISO 14584
A4

Alt. Norm
eskiden DIN 966

d	M
	Ürün no./*Item no.*





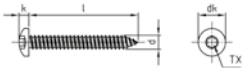
ISO 14585
A2

Alt. Norm
eskiden DIN 7981

ISO 14585 A2
Silindir başlı torks anahtarlı sac vidası

ISO 14585 A2 TX
Pan head tapping screws with six lobe drive





d		
	(Inch)	Ürün no./*Item no.*

- Sac dişi
- TX
- Mercimek baş

- *Sheet thread*
- *TX*
- *pan head*

ISO 14585 A4
Silindir başlı torks anahtarlı sac vidası

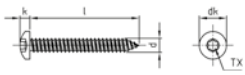
ISO 14585 A4 TX
Pan head tapping screws with six lobe drive

d		
	(Inch)	Ürün no./*Item no.*

ISO 14585
A4

Alt. Norm
eskiden DIN 7981





- Sac dişi
- TX
- Mercimek baş

- *Sheet thread*
- *TX*
- *pan head*

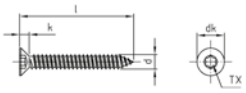
ISO 14586
A2

Alt. Norm
eskiden DIN 7982

ISO 14586 A2
Yıldız havşa başlı torks anahtarlı sac vidası

ISO 14586 A2 TX
Countersunk head tapping screws with six lobe drive





d		
	(Inch)	Ürün no./*Item no.*

- Sac dişi
- TX
- Havşa baş

- *Sheet thread*
- *TX*
- *Countersunk head*

ISO 14586 A4
Yıldız havşa başlı torks anahtarlı sac vidası

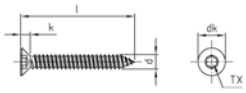
ISO 14586 A4 TX
Countersunk head tapping screws with six lobe drive

ISO 14586
A4

Alt. Norm
eskiden DIN 7982

d		
	(Inch)	Ürün no./*Item no.*





- Sac dişi
- TX
- Havşa baş

- *Sheet thread*
- *TX*
- *Countersunk head*

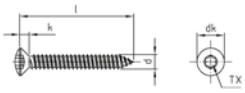
ISO 14587
A2

Alt. Norm
eskiden DIN 7983

ISO 14587 A2 TX
Mercimek başlı torks sac vidası

ISO 14587 A2 TX
Raised countersunk tapping screws with six lobe drive





d		
	(Inch)	Ürün no./*Item no.*

- Sac dişi
- TX
- Mercimek havşa baş

- *Sheet thread*
- *TX*
- *Raised countersunk*

ISO 14587 A4 TX
Mercimek başlı torks sac vidası

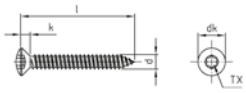
ISO 14587 A4 TX
Raised countersunk tapping screws with six lobe drive

ISO 14587
A4

Alt. Norm
eskiden DIN 7983

d		
	(Inch)	Ürün no./*Item no.*





- Sac dişi
- TX
- Mercimek havşa baş

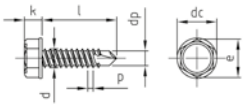
- *Sheet thread*
- *TX*
- *Raised countersunk*

ISO 15480 K
C1

ISO 15480 1.4006
Altiköse basli ve flansli kendinden delici uçlu K

ISO 15480 1.4006
Self drilling screws hexagon flange head, type K





d	
	Ürün no./*Item no.*

- Sertleştirilmiş Martenzitik paslanmaz çelik (1,4006)
- 7504 DIN benzer, K formu

- *Martensitic stainless steel hardened (1.4006)*
- *similar DIN 7504, type K*

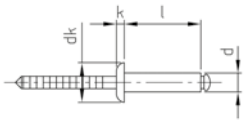
ISO 15983 A2
Düz başlı ve oluklu mandrelli kör perçinler

ISO 15983 A2
Blind rivets with flat head and grooved mandrel

ISO 15983
A2

Alt. Norm
eskiden DIN 7337





Boyut k = maks. değer
- Yassı baş
- Kaydedilemeyen baş
- Oyuklu perçin mandreli

Measurement k = max. value
- flat head
- unloseable head
- grooved mandrel

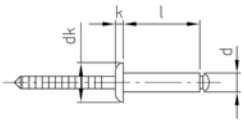
ISO 15983
A4

Alt. Norm
eskiden DIN 7337

ISO 15983 A4
Düz başlı ve oluklu mandrelli kör perçinler

ISO 15983 A4
Blind rivets with flat head and grooved mandrel





Boyut k = maks. değer
- Yassı baş
- Kaydedilemeyen baş
- Oyuklu perçin mandreli

Measurement k = max. value
- flat head
- unloseable head
- grooved mandrel

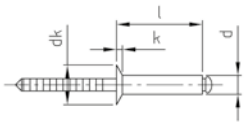
ISO 15984 A2
Havşa başlı ve oluklu mandrelli kör perçinler

ISO 15984 A2
Blind rivets with countersunk head and grooved mandrel

ISO 15984
A2

Alt. Norm
eskiden DIN 7337





Boyut k = maks. değer
- Havşa baş
- Kaydedilemeyen baş
- Oyuklu perçin mandreli

Measurement k = max. value
- countersunk
- unloseable head
- grooved mandrel

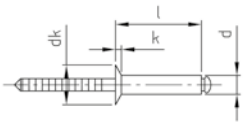
ISO 15984
A4

Alt. Norm
eskiden DIN 7337

ISO 15984 A4
Havşa başlı ve oluklu mandrelli kör perçinler

ISO 15984 A4
Blind rivets with countersunk head and grooved mandrel





Boyut k = maks. değer
- Havşa baş
- Kaydedilemeyen baş
- Oyuklu perçin mandreli

Measurement k = max. value
- countersunk
- unloseable head
- grooved mandrel

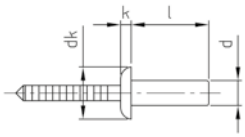
ISO 16585 A2
Düz başlı, kapalı uçlu kör perçin, oluklu mandrelli

ISO 16585 A2
Blind rivets with flat head and grooved mandrel

ISO 16585 A2

Alt. Norm
eskiden DIN 7337





Boyut k = maks. değer
- Yassı baş
- Kaydedilemeyen mandrel
- Kapalı perçin kovanı
- Oyuklu perçin mandreli

Measurement k = max. value
- *Flathead*
- *captive mandrel*
- *closed rivet sleeve*
- *grooved mandrel according to 1.4006*

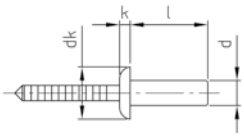
ISO 16585
A4

Alt. Norm
eskiden DIN 7337

ISO 16585 A4
Düz başlı, kapalı uçlu kör perçin, oluklu mandrelli

ISO 16585 A4
Blind rivets with flat head and grooved mandrel





Boyut k = maks. değer
- Yassı baş
- Kaydedilemeyen mandrel
- Kapalı perçin kovanı
- Oyuklu perçin mandreli

Measurement k = max. value
- *Flathead*
- *captive mandrel*
- *closed rivet sleeve*
- *grooved mandrel according to 1.4006*

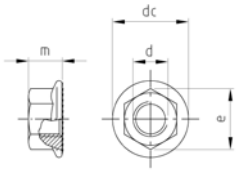
DIN EN 1661 A2
Flanşlı somun, tirtilsiz ve SVZ

DIN EN 1661 A2
Hexagon flange nuts with serration

DIN EN 1661
A2

Alt. Norm
eskiden DIN 6923





- flanşlı
- kilitleme dişleri ile

- *with flange*
- *with serration*

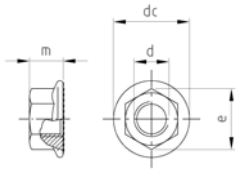
DIN EN 1661
A4

Alt. Norm
eskiden DIN 6923

DIN EN 1661 A4
Flanşlı somun, tirtilsiz ve SVZ

DIN EN 1661 A4
Hexagon flange nuts with serration





- flanşlı
- kilitleme dişleri ile

- *with flange*
- *with serration*

ISO

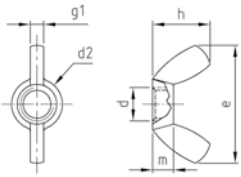
ART MAKALELERI
ART ARTICLES

Art. 315 A2

Ürün 315 A2
Kelebek somun, Amerikan tip

Item 315 A2
Wing nuts, American type



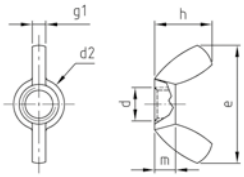


- Alman şekil için bkz. DIN 315

- *German type see DIN 315*

ART





- Alman şekil için bkz. DIN 315

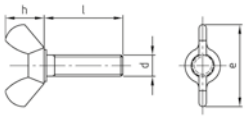
- German type see DIN 315

Art. 316
A2

Ürün 316 A2
Kelebek başlı cıvatalar, Amerikan tip

Item 316 A2
Wing screws, American type





d	M
	Ürün no./*Item no.*

- Alman şekil için bkz. DIN 316

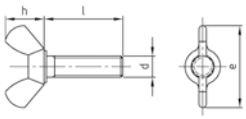
- *German type see DIN 316*

Ürün 316 A4
Kelebek başlı cıvatalar, Amerikan tip

Item 316 A4
Wing screws, American type

d	M
	Ürün no./*Item no.*





- Alman şekil için bkz. DIN 316

- German type see DIN 316

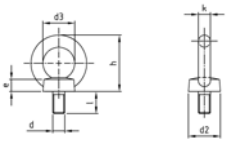
Art. 580 A2

Alt. Norm tarafından değiştirildi ISO 3266

Ürün 580 A2
Halkalı vidalar, döküm

Item 580 A2
Lifting eye bolts cast





- Dövülmüş şekil için bkz. DIN 580

- *For the drop forged type see DIN 580*

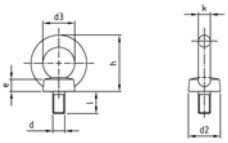
Ürün 580 A4
Halkalı vidalar, döküm

Item 580 A4
Lifting eye bolts cast

Art. 580
A4

Alt. Norm tarafından değiştirildi ISO 3266





- Dövülmüş şekil için bkz. DIN 580

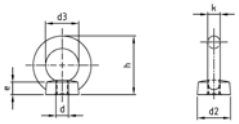
- *For the drop forged type see DIN 580*

Art. 582
A2

Ürün 580 A2
Halkalı somunlar, döküm

Item 582 A2
Lifting eye nuts cast form





- Dövülmüş şekil için bkz. DIN 582

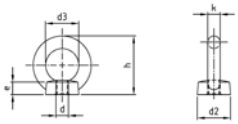
- *For the drop forged type see DIN 582*

Ürün 580 A4
Halkalı somunlar, döküm

Item 582 A4
Lifting eye nuts cast form

Art. 582
A4





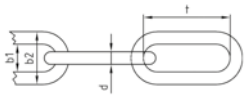
- Dövülmüş şekil için bkz. DIN 582
- *For the drop forged type see DIN 582*

Art. 763
A4

Ürün 763 A4
Yuvarlak uzun baklalı zincir

Item 763 A4
Round long link chains





- DIN 763 benzeri

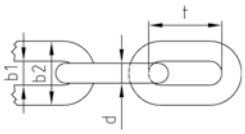
- similar DIN 763

Ürün 766 A4
Yuvarlak kısa baklalı zincir

Item 766 A4
Round short link chains

Art. 766
A4





- DIN 766 benzeri

- similar to DIN 766

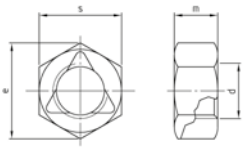
Art. 980 A2

Alt. Norm tarafından değiştirildi ISO 7042

Ürün 980 A2
Tork tipi altıköşe sıkışan somun, tip DIN 934

Item 980 A2
Prevailing torque type hexagon nuts base DIN 934





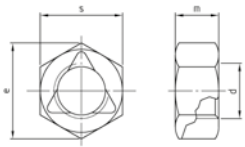
Ürün 980 A4
Tork tipi altıköşe sıkışan somun, tip DIN 934

Item 980 A4
Prevailing torque type hexagon nuts base DIN 934

Art. 980 A4

Alt. Norm tarafından değiştirildi ISO 7042



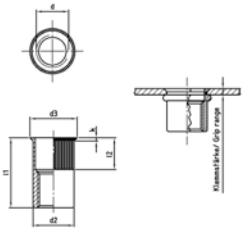


Art. 1021 A2

Art. 1021 A2
Sıfır kafa perçin somun

Item 1021 A2
Blind rivet nuts with small CSK, straight shank, open type knurled





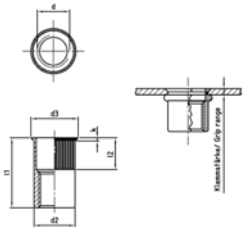
- Küçük havşa baş
- Yuvarlak şaft
- Tırtıllı
- Açık

- *small countersunk*
- *straight shank*
- *knurled*
- *open type*

Art. 1021 A4
Sıfır kafa perçin somun

Item 1021 A4
Blind rivet nuts with small CSK, straight shank, open type knurled





- Küçük havşa baş
- Yuvarlak şaft
- Tırtıllı
- Açık

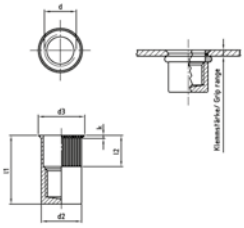
- *small countersunk*
- *straight shank*
- *knurled*
- *open type*

Art. 1022 A2

Art. 1022 A2
Perç.som.,küç.havşa baş.,kapalı tip yu.şaft,tırti.

Item 1022 A2
Rivet nuts with small CSK head closed type knurled





- küçük havşa başlı
- yuvarlak şaft
- tırtıklı
- kapalı

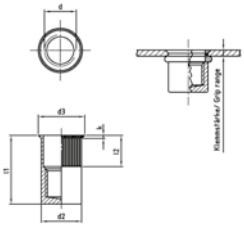
- *small countersunk*
- *straight shank*
- *knurled*
- *closed type*

ART

Art. 1022 A4
Perç.som.,küç.havşa baş.,kapalı tip yu.şaft,tırti.

Item 1022 A4
Rivet nuts with small CSK head closed type knurled





- küçük havşa başlı
- yuvarlak şaft
- tırtıklı
- kapalı

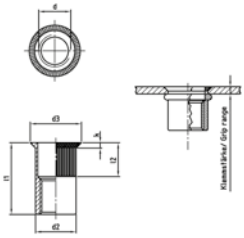
- *small countersunk*
- *straight shank*
- *knurled*
- *closed type*

Art. 1023 A2

Art. 1023 A2
Havşa başlı perçin somunları, açık tip yuvarlak şaftlı, tırtıllı

Item 1023 A2
Blind rivet nuts with CSK, straight shank, open knurled





- Havşa baş
- Yuvarlak şaft
- Tırtıllı
- Açık

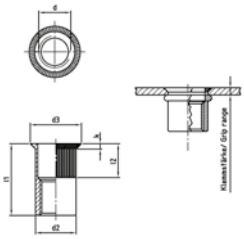
- *countersunk*
- *straight shank*
- *knurled*
- *open type*

ART

Art. 1023 A4
Havşa başlı perçin somunları, açık tip yuvarlak şaftlı, tırtıllı

Item1023 A4
Blind rivet nuts with CSK, straight shank, open knurled





- Havşa baş
- Yuvarlak şaft
- Tırtıllı
- Açık

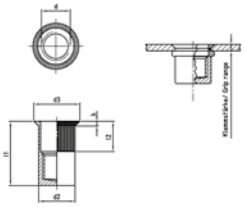
- *countersunk*
- *straight shank*
- *knurled*
- *open type*

Art. 1024
A2

Art. 1024 A2
Havşa başlı perçin som.,kapalı yu.şaft, tırtıllı

Item 1024 A2
Rivet nuts with CSK head, closed type, knurled





- Havşa başlı
- Yuvarlak şaft
- tırtıklı
- kapalı

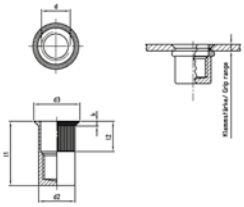
- *countersunk*
- *straight shank*
- *knurled*
- *closed type*

ART

Art. 1024 A4
Havşa başlı perçin som.,kapalı yu.şaft, tırtıllı

Item 1024 A4
Rivet nuts with CSK head, closed type, knurled





- Havşa başlı
- Yuvarlak şaft
- tırtıklı
- kapalı

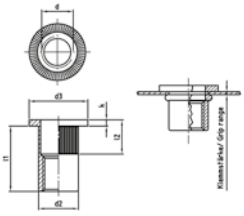
- *countersunk*
- *straight shank*
- *knurled*
- *closed type*

Art. 1025 A2

Art. 1025 A2
Flanşlı perçin somun

Item 1025 A2
Blind rivet nuts with flat head, straight shank, open type knurled





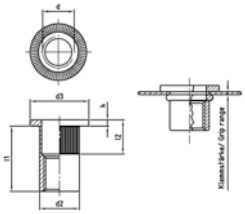
- Yassı baş
- Yuvarlak şaft
- Tırtıllı
- Açık

- *flat head*
- *straight shank*
- *knurled*
- *open type*

Art. 1025 A4
Flanşlı perçin somun

Item 1025 A4
Blind rivet nuts with flat head, straight shank, open type knurled





- Yassı baş
- Yuvarlak şaft
- Tırtıllı
- Açık

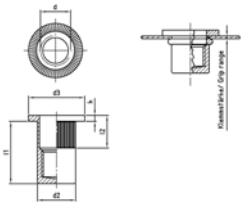
- *flat head*
- *straight shank*
- *knurled*
- *open type*

Art. 1026 A2

Art. 1026 A2
Düz başlı perçin som., kapalı yu.şaft, tırtıllı

Item 1026 A2
Rivet nuts with flat head, closed type, knurled





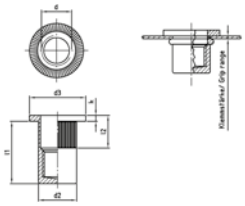
- Düz kafa
- Yuvarlak şaft
- tırtıklı
- kapalı

- flat head
- straight shank
- knurled
- closed type

Art. 1026 A4
Düz başlı perçin som., kapalı yu.şaft, tırtıllı

Item 1026 A4
Rivet nuts with flat head, closed type, knurled





- Düz kafa
- Yuvarlak şaft
- tırtıklı
- kapalı

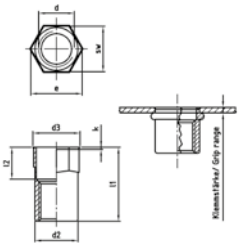
- *flat head*
- *straight shank*
- *knurled*
- *closed type*

Art. 1027
A2

Art. 1027 A2
Altı köşe sıfır kafa perçin somun

Item 1027 A2
Blind rivet nuts with small CSK, partial hexagon, open type





- Küçük havşa baş
- Kısmi altı köşe şaft
- Açık

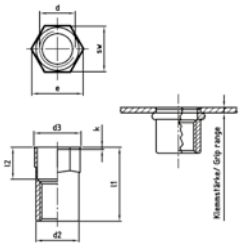
- small countersunk
- partial hexagon
- open type

ART

Art. 1027 A4
Altı köşe sıfır kafa perçin somun

Item 1027 A4
Blind rivet nuts with small CSK, partial hexagon, open type





- Küçük havşa baş
- Kısmi altı köşe şaft
- Açık

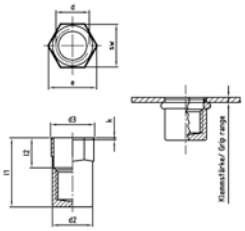
- *small countersunk*
- *partial hexagon*
- *open type*

Art. 1028
A2

Art. 1028 A2
Perç.som.,küç,ha.başlı kısmi altı köş.şaft,kap.tip

Item 1028 A2
Rivet nuts, small CSK head, semi-hexagonal shank, closed type





- küçük havşa başlı
- Kısmi altıgen şaft
- kapalı

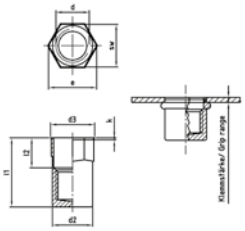
- *small countersunk*
- *partial hexagon*
- *closed type*

ART

Art. 1028 A4
Perç.som.,küç,ha.başlı kısmi altı köş.şaft,kap.tip

Item 1028 A4
Rivet nuts, small CSK head, semi-hexagonal shank, closed type





- küçük havşa başlı
- Kısmi altıgen şaft
- kapalı

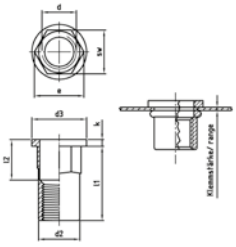
- *small countersunk*
- *partial hexagon*
- *closed type*

Art. 1029
A2

Art. 1029 A2
Altı köşe flanşlı perçin somun

Item 1029 A2
Blind rivet nuts with flat head, open partial hexagon





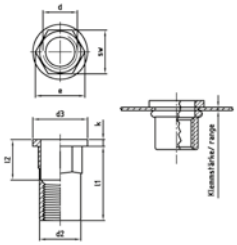
- Yassı baş
- Kısmi altı köşe şaft
- Açık

- flat head
- partial hexagon
- open type

Art. 1029 A4
Altı köşe flanşlı perçin somun

Item 1029 A4
Blind rivet nuts with flat head, open partial hexagon





- Yassı baş
- Kısmi altı köşe şaft
- Açık

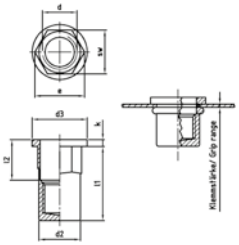
- *flat head*
- *partial hexagon*
- *open type*

Art. 1030
A2

Art. 1030 A2
Düz başlı perçin som.kısmi altı köş.şaft, açık tip

Item 1030 A2
Rivet nuts with flat head, semi-hexagonal shank, closed type





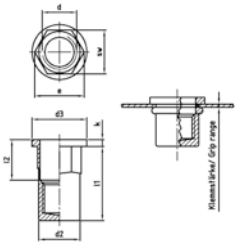
- Düz kafa
- Kısmi altıgen şaft
- kapalı

- flat head
- partial hexagon
- closed type

Art. 1030 A4
Düz başlı perçin som.kısmi altı köş.şaft, açık tip

Item 1030 A4
Rivet nuts with flat head, semi-hexagonal shank, closed type





- Düz kafa
- Kısmi altıgen şaft
- kapalı

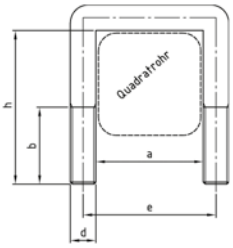
- *flat head*
- *partial hexagon*
- *closed type*

Art. 3575
A4

Ürün 3575 A4
Kare tip U cıvata, somunsuz ve pulsuz

Item 3575 A4
Square tube frame



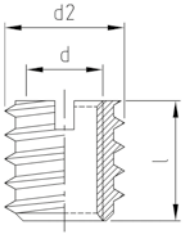


ART

Art. 7965 A2
Vidali somunlar tip B

Item 7965 A2
Screwed inserts Type B





- Yuva
- metrik iç dişli
- Ahşap dış dişli
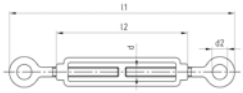
- *Slot*
- *Metric hex socket*
- *External thread for wood*

Art. 9610 A4

Art. 9610 A4
Gerdirme, kuşgözü-kuşgözü

Item 9610 A4
Turnbuckle, eye-eye

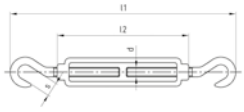




Art. 9611 A4
Gerdirme, kanca-kanca

Item 9611 A4
Turnbuckle, hook-hook



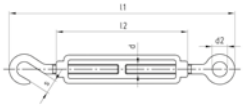


Art. 9612 A4

Art. 9612 A4
Gerdirme, göz kancası

Item 9612 A4
Turnbuckle, eye-hook



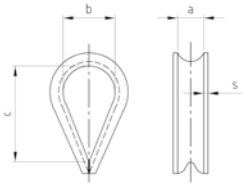


Ürün 9073 A4
Radansa

Item 9620 A4
Wire thimbles

Art. 9620
A4



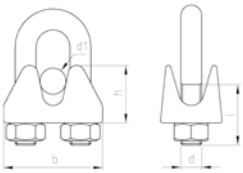


Art. 9625
A4

Ürün 9074 A4
Çelik halat klemensleri, DIN 741 benzeri

Item 9625 A4
Wire rope clips, similar DIN 741



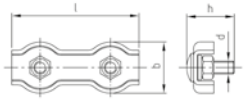


ART

Art. 9626 A4
Dubleks tel halat kelepçesi

Item 9626 A4
Duplex wire rope clip



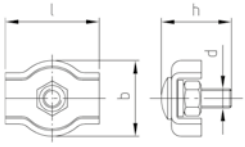


Art. 9627
A4

Art. 9627 A4
Simplex tel halat kelepçesi

Item 9627 A4
Simplex wire rope clip



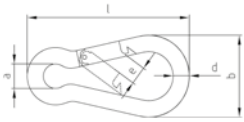


Ürün 9075 A4
Karabina

Item 9635 A4
Spring hooks

Art. 9635
A4



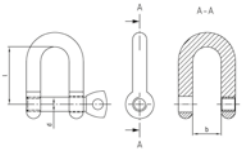


Art. 9640
A4

Ürün 9076 A4
Zincir kilidi

Item 9640 A4
Straight D-shackle short type



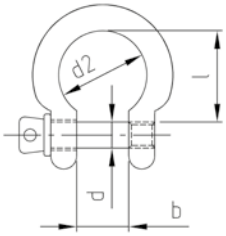


Ürün 8260 A4
Yuvarlak zincir kilidi, kavisli tip

Item 9641 A4
Shackle welded

Art. 9641
A4



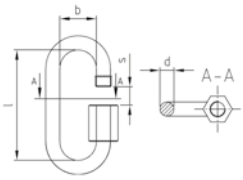


Art. 9645
A4

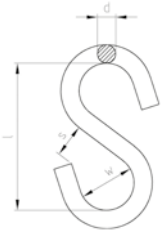
Ürün 9077 A4
Emniyet somunla karabina

Item 9645 A4
Quick links for chains







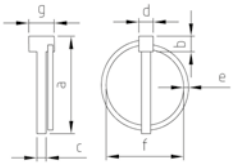

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Art. 9650 A4

Art. 9650 A4
Halkalı katlanır pim

Item 9650 A4
Ring catch



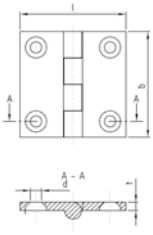


Ürün 8233 A4
Menteşe

Item 9655 A4
Hinge

Art. 9655
A4



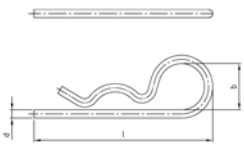


Art. 9660 A4

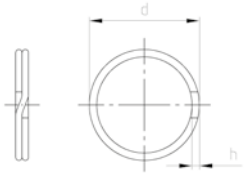
Yay çatal pimi

Item 9660 A4
Spring cotter pin







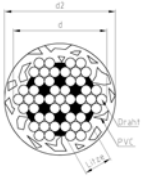

d
h

Art. 814593 A4

Art. 814593 A4
Paslanmaz çelik tel halat 7X7 sZ PVC kaplı şeffaf

Item 814593 A4
Wire rope 7x7 sZ PVC clear coated





Renk: Şeffaf

Colour: Clear

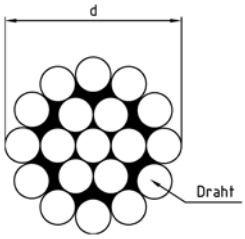
Ürün 8378 A4
Paslanmaz çelik halat 1X19 sert

Item 8378 A4
Wire rope hard/stiff 1x19 sZ

Art. 8378
A4

Alt. Norm
benzer DIN 3053





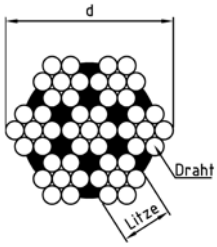
Art. 8379
A4

Alt. Norm
benzer DIN 12385-4

Ürün 8379 A4
Paslanmaz çelik halat 7X7 orta yumuşak

Item 8379 A4
Wire rope semi-soft 7x7 sZ





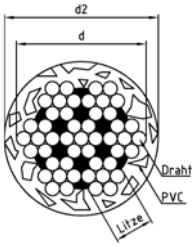
Ürün 8381 A4
Paslanmaz çelik halat 7X7 PVC kaplamalı, beyaz

Item 8381 A4
Wire rope 7x7 sZ PVC white coated

Art. 8381
A4

Alt. Norm
benzer DIN 12385-4





ART

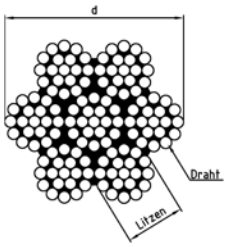
Art. 8382
A4

Alt. Norm
benzer DIN 12385-4

Ürün 8382 A4
Paslanmaz çelik halat 7X19 yumuşak

Item 8382 A4
Wire rope flexible 7x19 sZ





ART

Ürün 9001 A4
Havşa başlı beton vidaları ETA 21/0425

Item 9001 A4
Countersunk concrete bolts ETA 21/0425

Art. 9001
A4





- Yangın koruması konusunda denetlenmiş
- TX torkslu tahrik
- Sert metal ile donatılmış

- *Tested for fire protection*
- *TX drive*
- *carbide-tipped*

ETA - 21/0425

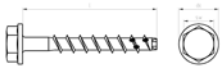
ART

Art. 9001 A4

Ürün 9001 A4
Altı köşe başlı beton vidaları ETA 21/0425

Item 9001 A4
Hexagon head concrete bolts ETA 21/0425





- Yangın koruması konusunda denetlenmiş
- Altı köşe tahrik
- Sert metal ile donatılmış

- *Tested for fire protection*
- *Hex drive*
- *carbide-tipped*

Europäische Technische Zulassung - Option 1 für gerissenen Beton
ETA - 21/0425

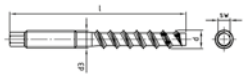
ART

Ürün 9001 A4
Dibi altı köşeli beton vidaları ETA 15/0514

Item 9001 A4
Concrete dowel screws with hexagon end ETA 15/0514

Art. 9001
A4





- Yangın koruması konusunda denetlenmiş
- Altı köşe tahrik
- Sert metal ile donatılmış

- *Tested for fire protection*
- *Hex drive*
- *carbide-tipped*

ETA - 15/0514

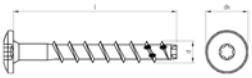
ART

Art. 9001 A4

Ürün 9001 A4
Pan başlı beton vidaları ETA 21/0425

Item 9001 A4
Pan head concrete bolts ETA 21/0425





- Yangın koruması test edildi
- Lens kafası tahriki
- Karbür uçlu
- TX sürücü

- *Tested for fire protection*
- *Pan head*
- *carbide-tipped*
- *TX drive*

Europäische Technische Zulassung - Option 1 für gerissenen Beton
ETA - 21/0425

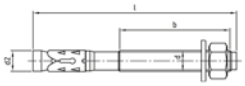
ART

Ürün 9004 A4
Ankraj saplamaları, Seçenek 1, ETA-11/0196

Item 9004 A4
Heavy duty wedge anchor option 1, ETA-11/0196

Art. 9004
A4





- Çatlamış ve çatlamamış beton için orta ve ağır yük sabitlemesi
- Yangın koruması konusunda denetlenmiş

- *Medium to heavy-duty fastening for cracked and non-cracked concrete*
- *Tested for fire protection*

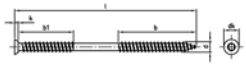
ETA - 11/0196
Option 1

Art. 9008
A2

Art. 9008 A2 TX
FRS beton vida basi 11 mm

Item 9008 A2 TX
Window frame screws - head 11 mm





- Sürekli diş (uzunluk 212 mm hariç)
- Kafa çapı 11 mm
- TX dahili altıgen sürücü
- küçük geri çekilebilir kafa

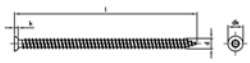
- full thread (except length 212mm)
- head diameter 11 mm
- TX drive
- small countersunk head

Art. 9008 A2 TX
FRS beton vida basi 11 mm

Item 9008 A2 TX
Window frame screws - head 11 mm with fullthread

Art. 9008
A2





- Sürekli diş (uzunluk 212 mm hariç)
- Kafa çapı 11 mm
- TX dahili altıgen sürücü
- küçük geri çekilebilir kafa

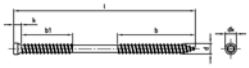
- full thread (except length 212mm)
- head diameter 11 mm
- TX drive
- small countersunk head

Art. 9009 A2

Art. 9009 A2
FRS beton vida basi 7,5 mm

Item 9009 A2 TX
Window frame screws - head 7,5 mm





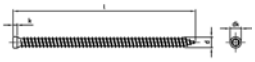
- Sürekli diş (uzunluk 212 mm hariç)
- Kafa çapı 7,5 mm
- TORX altıgen sürücü
- silindir kafası

- *full thread (except length 212mm)*
- *head diameter 7,5 mm*
- *TX drive*
- *socket head*

Art. 9009 A2
FRS beton vida basi 7,5 mm

Item 9009 A2 TX
Window frame screws - head 7,5 mm with fullthread





- Sürekli diş (uzunluk 212 mm hariç)
- Kafa çapı 7,5 mm
- TORX altıgen sürücü
- silindir kafası

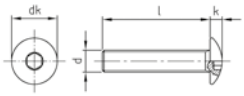
- *full thread (except length 212mm)*
- *head diameter 7,5 mm*
- *TX drive*
- *socket head*

Art. 9020
A2

Ürün 9020 A2
Çit yapım vidaları, ISO 7380 benzeri, tam vida dişli

Item 9020 A2
Fence-building screws similar ISO 7380 fullthread



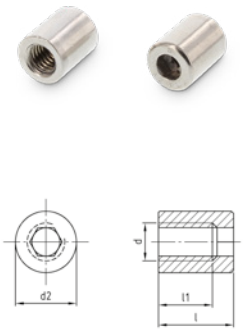


ART

Ürün 9022 A2
Altı köşe sıkmalı somun

Item 9022 A2
Hexagon socket nuts

Art. 9022
A2



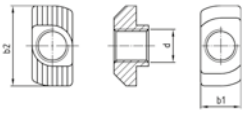
Art. 9023
A4

Ürün 9023 A4
10 mm'lik yiv için çekiç biçimli somunlar

Item 9023 A4
Hammer nuts for groove 10 mm



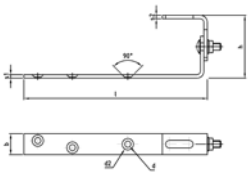




Art. 9031 A2
Vario arduvaz tavan kancası, 1 yönlü ayarlanabilir

Item 9031 A2
Vario slate roof hooks, 1 time adjustable





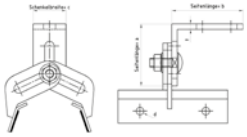
- 1 yönlü ayarlanabilir
- 1 time adjustable

Art. 9032
A2

Ürün 9032 A2
Trapez catı ayağı

Item 9032 A2
Universal brackets for metal sheet roofs





- Trapez saclarının tüm büyüklükleri için değişken
- Kendinden yapışkanlı şeritlerle sabitleme
- Yükseklik ayarlanabilir

- *Variable for all sizes of trapezium plates*
- *Fixing through self-adhesive strip*
- *Height-adjustable*

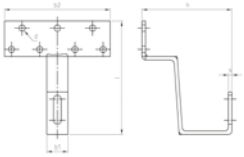


Ürün 9033 A2
Sabit solar çatı kancaları, kemer 5 mm 150X50X5/5

Item 9033 A2
Fix-Solar hooks sandblasted bow 5 mm, 150X50X5/5

Art. 9033 A2



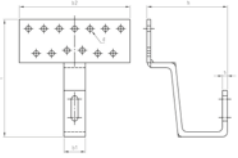


Art. 9033 A2

Ürün 9033 A2
Sabit solar çatı kancaları, kemer 8 mm 180X70X6/8

Item 9033 A2
Fix solar hooks, bow 8 mm, 180X70X6





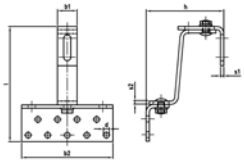
ART

Ürün 9034 A2
Vario kiremit cati ayagi, 3 opziyonlu, kemer 5 mm 140X56X5/5

Item 9034 A2
Vario solar hooks 3 times adjustable sandblasted, bow 5 mm, 140X56X5/5

Art. 9034 A2





- Kumlama uygulanmış
- Vidalar + somunlar dâhil

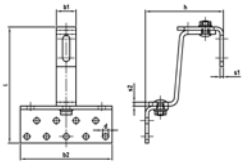
- blasted
- incl. screws + nuts

Art. 9034 A2

Ürün 9034 A2
Vario kiremit cati ayagi, 3 opziyonlu, kemer 6 mm 140X56X5/6

Item 9034 A2
Vario solar hooks 3 times adjustable sandblasted, bow 6 mm, 140X56X5/6





- Kumlama uygulanmış
- Vidalar + somunlar dâhil

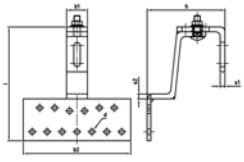
- blasted
- incl. screws + nuts

Ürün 9034 A2
Vario kiremit cati ayagi, 1 opziyonlu, kemer 8 mm 180X70X6/8

Item 9034 A2
Vario solar hooks 1 time adjustable sandblasted, bow 8 mm, 180X70X6/8

Art. 9034 A2





- Kumlama uygulanmış
- Vidalar + somunlar dâhil

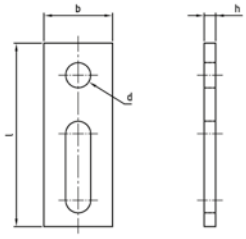
- *blasted*
- *incl. screws + nuts*

Art. 9035 A2

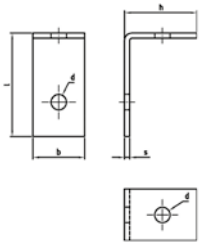
Ürün 9035 A2 Adaptör sacları

Item 9035 A2
Adapter plates







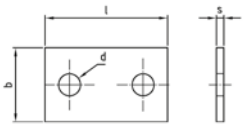


Art. 9036 A2

Ürün 9036 A2 Konektör

Item 9036 A2 Connectors



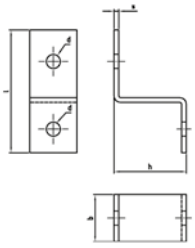


Ürün 9036 A2
Z-dirsek

Item 9036 A2
Z-Angles

Art. 9036
A2



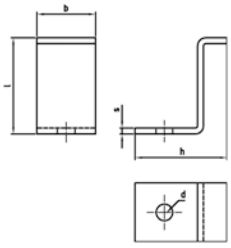


Art. 9036 A2

Ürün 9036 A2 Dirsek

Item 9036 A2 Angles



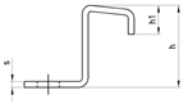


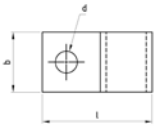
Ürün 9036 A2

Art. 9036 A2

Item 9036 A2
Cross connector, blasted





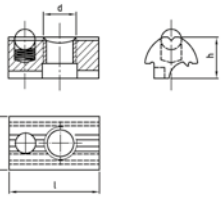


Art. 9037 A2

Ürün 9037 A2
Kılavuz destekli ve bilyeli yaylı T kanalları

Item 9037 A2
T-slot nuts, self aligning with spring ball



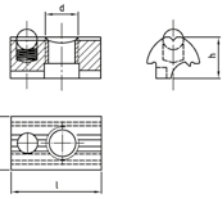


Ürün 9037 ALU
Kılavuz destekli ve bilyeli yaylı T kanalları

Item 9037 ALU
T-slot nuts, self aligning with spring ball

Art. 9037
Alüminyum



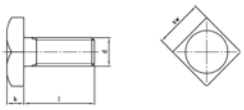


Art. 9038 A2

Ürün 9038 A2 V
Dört köşe başlı cıvatalar

Item 9038 A2
Square head bolts



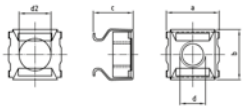


Ürün 9039 A2
Kafes somunlar

Item 9039 A2
Cage nuts

Art. 9039
A2



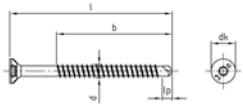


Art. 9040 A2

Ürün 9040 A2 TX
Super-Drill delici uçlu havşa başlı ahşap vida

Item 9040 A2 TX
Super-Drill CSK head timber screws with drilling point





- Avrupa Teknik Ruhsatı ETA 11/0283
- UK Technical Assessment UKTA 22/6473

SUPER-DRILL
- Güçlendirilmiş baş
- Stabilize edilmiş şaft
- Belirgin diş
- Özel kaydırma kaplaması
- Baş altında freze dişleri
- TX torkslu tahrik

- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*

SUPER-DRILL
- *Reinforced head*
- *Stabilised shoulder*
- *Distinct thread*
- *Anti-Friction-coating*
- *ribs under the head*
- *TX drive*

ETA - 11/0283

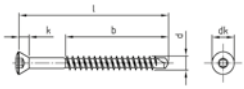
ART

Ürün 9041 A2 TX
Torks başlı tahta döşeme vidaları

Item 9041 A2 TX
Floorboard screws with six lobe drive

Art. 9041
A2





- 60° süslü baş
- 6 freze dişi
- Matkap ucu

- *60° Ornamental head*
- *6 ribs under the head*
- *drilling point*

CE 13
EN 14592:2008

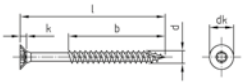
ART

Art. 9042
A4

Ürün 9042 A4 TX
Quadra-Speed kesici uçlu, havşa başlı vidalar

Item 9042 A4 TX
Quadra Speed, CSK head screws, cutting point





- Devrim yaratan 4-kenar diş
- Kesici çentik
- TX torkslu tahrik
- Yıllarca güvenli tutum sağlamaktadır
- Baş altında freze dişleri

- *revolutionary square thread*
- *cutting point*
- *TX drive*
- *Secure hold for years to come*
- *ribs under the head*

CE 13
EN 14592:2008

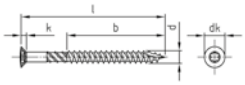
ART

Ürün 9043 1.4006 TX
T-Drill mercimek havşa başlı teras vida, kesici uç

Item 9043 1.4006 TX
T-Drill, RSD CSK head terrace screws, cutting point

Art. 9043
C1





- Güçlendirilmiş kafa
- Döner kesme kaburga
- Stabilize şaft
- Diş yüzeyi Roman aranjman
- Kesme çentik
- Başlık altında Kesme kaburga
- TX-hexalobular sürücü
- Özel sürtünme önleyici kaplama

- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *Reinforced head*
- *milling ribs*
- *Stabilised shaft*
- *New kind of threaded flank arrangement*
- *cutting point*
- *ribs under the head*
- *TX drive*
- *Anti-Friction-coating*

ETA - 11/0283

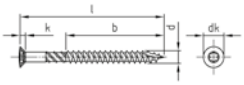
ART

Art. 9043
A2

Ürün 9043 A2 TX
T-Drill mercimek havşa başlı teras vida, kesici uç

Item 9043 A2 TX
T-Drill, RSD CSK head terrace screws, cutting point





- Güçlendirilmiş kafa
- Döner kesme kaburga
- Stabilize şaft
- Diş yüzeyi Roman aranjman
- Kesme çentik
- Başlık altında Kesme kaburga
- TX-hexalobular sürücü
- Özel sürtünme önleyici kaplama

- *Reinforced head*
- *milling ribs*
- *Stabilised shaft*
- *New kind of threaded flank arrangement*
- *cutting point*
- *ribs under the head*
- *TX drive*
- *Anti-Friction-coating*

CE 13
EN 14592:2008

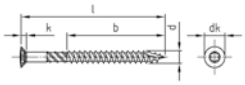
ART

Ürün 9043 A4 TX
T-Drill mercimek havşa başlı teras vida, kesici uç

Item 9043 A4 TX
T-Drill, RSD CSK head terrace screws, cutting point

Art. 9043
A4





- Güçlendirilmiş kafa
- Döner kesme kaburga
- Stabilize şaft
- Diş yüzeyi Roman aranjman
- Kesme çentik
- Başlık altında Kesme kaburga
- TX-hexalobular sürücü
- Özel sürtünme önleyici kaplama

- *Reinforced head*
- *milling ribs*
- *Stabilised shaft*
- *New kind of threaded flank arrangement*
- *cutting point*
- *ribs under the head*
- *TX drive*
- *Anti-Friction-coating*

CE 13
EN 14592:2008

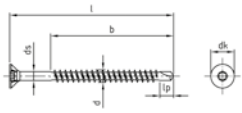
ART

Art. 9044
A2

Ürün 9044 A2 TX
S+P Drill Havşa başlı torks sunta vidası

Item 9044 A2 TX
SP-Drill, CSK head timber screws with drilling point





d	
	Ürün no./*Item no.*

b = talep üzere
- Avrupa Teknik Ruhsatı ETA 11/0283
- UK Agrément Technique UKTA 22/6473
- Matkap ucu
- Baş altında freze dişleri
- TX torkslu tahrik

b = on demand
- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *drilling point*
- *ribs under the head*
- *TX drive*

ETA - 11/0283

BBA

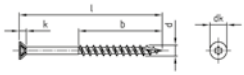
ART

Ürün 9142 A2 TX
SK-Drill havşa başlı teras yapı vida,kesici çentik

Item 9142 A2 TX
SK-DRILL, CSK head terrace screws, cutting point

Art. 9142
A2





- Cıvatalar, polietilen plastik kutularda teslim edilmektedir.
- TX20 bit'leri her P.B. içinde bulunmaktadır
- Sorunlu ağaç türlerinde, sabitlenecek yapı parçasının önceden delinmesini tavsiye etmekteyiz.
- Havşa baş 80°
- Baş altında freze dişleri
- Kesici çentik
- Kalın diş
- Kısaltılmış diş

- *The screws are supplied in PEHD plastic boxes.*
- *Every unit features BIT TX20*
- *If working with problematic timbers, we recommend predrilling the component to be fastened.*
- *80° countersunk head*
- *ribs under the head*
- *cutting point*
- *coarse thread*
- *truncated thread*

CE 13
EN 14592:2008

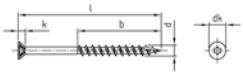
ART

Art. 9142
A4

Ürün 9142 A4 TX
SK-Drill havşa başlı teras yapı vida,kesici çentik

Item 9142 A4 TX
SK-DRILL, CSK head terrace screws, cutting point





- Cıvatalar, polietilen plastik kutularda teslim edilmektedir.
- TX20 bit'leri her P.B. içinde bulunmaktadır
- Sorunlu ağaç türlerinde, sabitlenecek yapı parçasının önceden delinmesini tavsiye etmekteyiz.
- Havşa baş 80°
- Baş altında freze dişleri
- Kesici çentik
- Kalın diş
- Kısaltılmış diş

- *The screws are supplied in PEHD plastic boxes.*
- *Every unit features BIT TX20*
- *If working with problematic timbers, we recommend predrilling the component to be fastened.*
- *80° countersunk head*
- *ribs under the head*
- *cutting point*
- *coarse thread*
- *truncated thread*

CE 13
EN 14592:2008

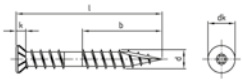
ART

Ürün 9143 A2 TX
TBS-Drill havşa başlı teras yapı vidaları, kesici çentik

Item 9143 A2 TX
TBS-Drill CSK head terrace screws, cutting point

Art. 9143
A2





- Küçük havşa baş (sadece 7,5mm Ø)
- Baş altında ek diş
- Stabilize edilmiş şaft
- Kesme ucu
- Baş altında freze dişleri
- TX torkslu tahrik

- *Small countersunk head (diameter just 7,5 mm)*
- *Additional thread under the head*
- *Stabilised shaft*
- *cutting point*
- *ribs under the head*
- *TX drive*

CE 13
EN 14592:2008

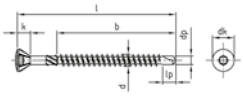
ART

Art. 9241
C1

Artikel 9241 1.4006 TX
Delici uçlu süs bş. ahşap yapı vidal., freze dişli

Item 9241 1.4006 TX
RSD csk head timber screws, drilling point, milling ribs





d	
	Ürün no./*Item no.*

b = makale numarasına bakınız
- Avrupa Teknik Onayı ETA 11/0283
- Birleşik Krallık Teknik Onayı UKTA 22/6473
- 60° süslü baş
- Matkap ucu
- Sıyırma dişleri
- Baş altında freze dişleri
- TX torkslu tahrik
- Martensitli paslanmaz çelik, sertleştirilmiş (1.4006)
- Özel kaydırma kaplaması

b = Item Number
- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *60° Ornamental head*
- *drilling point*
- *milling ribs*
- *ribs under the head*
- *TX drive*
- *Martensitic stainless steel hardened (1.4006)*
- *Anti-Friction-coating*

ETA - 11/0283

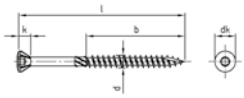
ART

Artikel 9242 1.4006 TX
Kesici çentikli ve sıyırma dişlili süs başlı ahşap vidalar

Item 9242 1.4006 TX
RSD csk head timber screws, cutting point, milling ribs

d	
	Ürün no./*Item no.*





b = makale numarasına bakınız
- Avrupa Teknik Onayı ETA 11/0283
- Birleşik Krallık Teknik Onayı UKTA 22/6473
- 60° süslü baş
- Kesici uç
- Sıyırma dişleri
- Baş altında freze dişleri
- TX torkslu tahrik
- Özel kaydırma kaplaması

b = Item Number
- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *60° Ornamental head*
- *cutting point*
- *milling ribs*
- *ribs under the head*
- *TX drive*
- *Anti-Friction-coating*

ETA - 11/0283

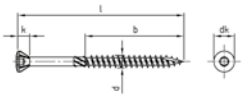
Art. 9242
A2

Art. 9242 A2 TX
Kesici çentikli ve sıyırma dişlili süs başlı ahşap vidalar

Item 9242 A2 TX
RSD csk head timber screws, cutting point, milling ribs

d	
	Ürün no./*Item no.*





b = makale numarasına bakınız
- Avrupa Teknik Onayı ETA 11/0283
- Birleşik Krallık Teknik Onayı UKTA 22/6473
- 60° süslü baş
- Kesici uç
- Sıyırma dişleri
- Baş altında freze dişleri
- TX torkslu tahrik
- Özel kaydırma kaplaması

b = Item Number
- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *60° Ornamental head*
- *cutting point*
- *milling ribs*
- *ribs under the head*
- *TX drive*
- *Anti-Friction-coating*

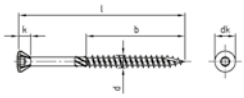
ETA - 11/0283

Art. 9242 A4 TX
Kesici çentikli ve sıyırma dişlili süs başlı ahşap vidalar

Item 9242 A4 TX
RSD csk head timber screws, cutting point, milling ribs

d	
	Ürün no./*Item no.*





b = makale numarasına bakınız
- Avrupa Teknik Onayı ETA 11/0283
- Birleşik Krallık Teknik Onayı UKTA 22/6473
- 60° süslü baş
- Kesici uç
- Sıyırma dişleri
- Baş altında freze dişleri
- TX torkslu tahrik
- Özel kaydırma kaplaması

b = Item Number
- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *60° Ornamental head*
- *cutting point*
- *milling ribs*
- *ribs under the head*
- *TX drive*
- *Anti-Friction-coating*

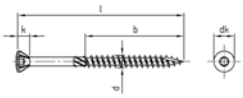
ETA - 11/0283

Art. 9242
A2

Ürün 9242 A2 TX kahverengi açkili
Kesici çentikli ve sıyırma dişlili süs başlı ahşap vidalar

Item 9242 A2 TX burnished finish
Timber screws RSD CSK head with cutting point and milling ribs





d	
	Ürün no./*Item no.*

b = makale numarasına bakınız
- Avrupa Teknik Onayı ETA 11/0283
- Birleşik Krallık Teknik Onayı UKTA 22/6473
- 60° süslü baş
- Kesici uç
- Sıyırma dişleri
- Baş altında freze dişleri
- TX torkslu tahrik
- Özel kaydırma kaplaması

b = Item Number
- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *60° Ornamental head*
- *cutting point*
- *milling ribs*
- *ribs under the head*
- *TX drive*
- *Anti-Friction-coating*
- *burnished finish*

ETA - 11/0283

ART

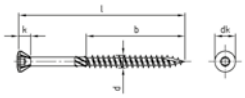
Ürün 9242 A4 TX kahverengi açkili
Kesici çentikli ve sıyırma dişlili süs başlı ahşap vidalar

Item 9242 A4 TX burnished finish
Timber screws RSD CSK head with cutting point and milling ribs

Art. 9242
A4

d	
	Ürün no./*Item no.*





b = makale numarasına bakınız
- Avrupa Teknik Onayı ETA 11/0283
- Birleşik Krallık Teknik Onayı UKTA 22/6473
- 60° süslü baş
- Kesici uç
- Sıyırma dişleri
- Baş altında freze dişleri
- TX torkslu tahrik
- Özel kaydırma kaplaması

b = Item Number
- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *60° Ornamental head*
- *cutting point*
- *milling ribs*
- *ribs under the head*
- *TX drive*
- *Anti-Friction-coating*
- *burnished finish*

ETA - 11/0283

ART

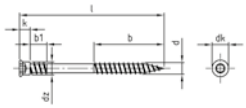
Art. 9243
C1

Ürün 9243 1.4006 TX
TBS-Drill torks silindir basli sunta vidasi

Item 9243 1.4006 TX
TBS-Drill, cyl. head terrace screws

d	
	Ürün no./*Item no.*





b = makale numarasına bakınız
- Avrupa Teknik Onayı ETA 11/0283
- Birleşik Krallık Teknik Onayı UKTA 22/6473
- Silindir baş
- Baş altında diş
- Standart uç
- TX torkslu tahrik
- Özel kaydırma kaplaması

b = Item Number
- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *Cylinder head*
- *Additional thread under the head*
- *Standard tip*
- *TX drive*
- *Anti-Friction-coating*

ETA - 11/0283

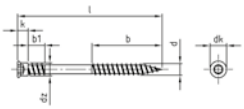
Ürün 9243 A4 TX
TBS-Drill torks silindir basli sunta vidasi

Item 9243 A4 TX
TBS-Drill, cyl. head terrace screws

d	
	Ürün no./*Item no.*

Art. 9243
A4





b = makale numarasına bakınız
- Avrupa Teknik Onayı ETA 11/0283
- Birleşik Krallık Teknik Onayı UKTA 22/6473
- Silindir baş
- Baş altında diş
- Standart uç
- TX torkslu tahrik
- Özel kaydırma kaplaması

b = Item Number
- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *Cylinder head*
- *Additional thread under the head*
- *Standard tip*
- *TX drive*
- *Anti-Friction-coating*

ETA - 11/0283

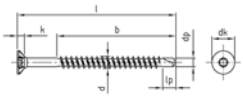
Art. 9244
C1

Ürün 9244 1.4006 TX
Matkap uçlu havşa başlı ahşap vidaları

Item 9244 1.4006 TX
CSK head timber screws with drilling point

d	
	Ürün no./*Item no.*





b = Ürün Numarası
- Avrupa Teknik Değerlendirmesi ETA 11/0283
- Birleşik Krallık Teknik Değerlendirmesi UKTA 22/6473
- 90° havşa baş
- Matkap ucu
- Baş altında freze dişleri
- TX torkslu tahrik
- Martensitli paslanmaz çelik, sertleştirilmiş (1.4006)
- Özel kaydırma kaplaması

b = Item Number
- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *countersunk 90°*
- *drilling point*
- *ribs under the head*
- *TX drive*
- *Martensitic stainless steel hardened (1.4006)*
- *Anti-Friction-coating*

ETA - 11/0283

ART

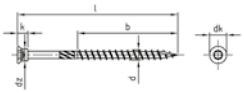
Ürün 9245 1.4006 TX
TBS-Drill torks silindir basli sunta vidasi, matkap uclu

Artikel 9245 1.4006 TX
TBS-Drill, cyl. head terrace screws, cutting point

Art. 9245
C1

d	
	Ürün no./*Item no.*





b = makale numarasına bakınız
- Avrupa Teknik Onayı ETA 11/0283
- Birleşik Krallık Teknik Onayı UKTA 22/6473
- Silindir baş
- Sıyırma dişleri
- Kesici uç
- TX torkslu tahrik
- Martensitli paslanmaz çelik, sertleştirilmiş (1.4006)
- Özel kaydırma kaplaması

b = Item Number
- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *Cylinder head*
- *milling ribs*
- *cutting point*
- *TX drive*
- *Martensitic stainless steel hardened (1.4006)*
- *Anti-Friction-coating*

ETA - 11/0283

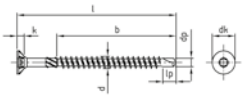
ART

Art. 9246
C1

Artikel 9246 1.4006 TX
SP-Drill, matkap uçlu ve sıyırma dişlili havşa başlı ahşap yapı vidaları

Item 9246 1.4006 TX
CSK head timber screws, drilling point, milling ribs





d	
	Ürün no./*Item no.*

b = makale numarasına bakınız
- Avrupa Teknik Onayı ETA 11/0283
- Birleşik Krallık Teknik Onayı UKTA 22/6473
- 90° havşa baş
- Matkap ucu
- Baş altında freze dişleri
- Sıyırma dişleri
- TX torkslu tahrik
- Martensitli paslanmaz çelik, sertleştirilmiş (1.4006)
- Özel kaydırma kaplaması

b = Item Number
- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *countersunk 90°*
- *drilling point*
- *ribs under the head*
- *milling ribs*
- *TX drive*
- *Martensitic stainless steel hardened (1.4006)*
- *Anti-Friction-coating*

ETA - 11/0283

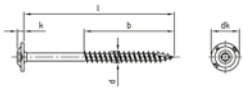
ART

Ürün 9250 A2 TX
Havşa başlı torks sunta vidası

Item 9250 A2 TX
Pan washer head timber screws with cutting point

d	
	Ürün no./*Item no.*





b = bkz. ürün numarası
- Avrupa Teknik Ruhsatı ETA 11/0283
- UK Technical Assessment UKTA 22/6473
- Pul başı - Ahşap yapı vidası
- Kesme ucu
- Özel kaydırma kaplaması
- TX torkslu tahrik

b = Item Number
- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *Pan washer head timber screws*
- *cutting point*
- *Anti-Friction-coating*
- *TX drive*

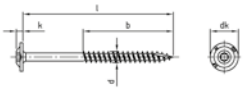
ETA - 11/0283

Art. 9250
A4

Artikel 9250 A4 TX
Havşa başlı torks sunta vidası

Item 9250 A4 TX
Pan washer head timber screws with cutting point





d	
	Ürün no./*Item no.*

b = Item Number
- European Technical Assessment ETA 11/0283
- UK Technical Assessment UKTA 22/6473
- Pul başı - Ahşap yapı vidası
- Kesme ucu
- Özel kaydırma kaplaması
- TX torkslu tahrik

b = Item Number
- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *Pan washer head timber screws*
- *cutting point*
- *Anti-Friction-coating*
- *TX drive*

ETA - 11/0283

ART

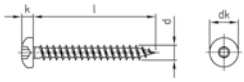
Ürün 9045 A2 TX
Mantar başlı torks sunta vidası ve tam dişli

Item 9045 A2 TX
Double pan head timber screws with fullthread

Art. 9045
A2

d	
	Ürün no./*Item no.*





- Avrupa Teknik Ruhsatı ETA 11/0283
- UK Technical Assessment UKTA 22/6473
- Kısmi diş
- Yuvarlak baş
- Baş altı güçlendirilmiş
- TX torkslu tahrik
- Standart uç

- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *fullthread*
- *pan head*
- *double pan head*
- *TX drive*
- *standard tip*

ETA - 11/0283

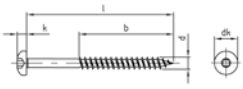
ART

Art. 9045
A2

Ürün 9045 A2 TX
Mantar başlı torks sunta vidası ve yarim disli

Item 9045 A2 TX
Double pan head timber screws with partial thread





d	
	Ürün no./*Item no.*

b = bkz. ürün numarası
- Avrupa Teknik Ruhsatı ETA 11/0283
- UK Technical Assessment UKTA 22/6473
- Tam diş
- Yuvarlak baş
- Baş altı güçlendirilmiş
- TX torkslu tahrik
- Standart uç

b = Item Number
- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *partial thread*
- *pan head*
- *double pan head*
- *TX drive*
- *standard tip*

ETA - 11/0283

ART

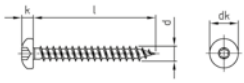
Ürün 9045 A4 TX
Mantar başlı torks sunta vidası ve tam dişli

Item 9045 A4 TX
Double pan head timber screws with fullthread

Art. 9045
A4

d	
	Ürün no./*Item no.*





- Avrupa Teknik Ruhsatı ETA 11/0283
- UK Technical Assessment UKTA 22/6473
- Kısmi diş
- Yuvarlak baş
- Baş altı güçlendirilmiş
- TX torkslu tahrik
- Standart uç

- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *fullthread*
- *pan head*
- *double pan head*
- *TX drive*
- *standard tip*

ETA - 11/0283

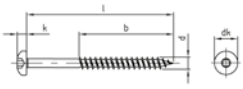
ART

Art. 9045
A4

Ürün 9045 A4 TX
Mantar başlı torks sunta vidası ve yarim disli

Item 9045 A4 TX
Double pan head timber screws with partial thread





d	
	Ürün no./*Item no.*

b = bkz. ürün numarası
- Avrupa Teknik Ruhsatı ETA 11/0283
- UK Technical Assessment UKTA 22/6473
- Tam diş
- Yuvarlak baş
- Baş altı güçlendirilmiş
- TX torkslu tahrik
- Standart uç

b = Item Number
- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *partial thread*
- *pan head*
- *double pan head*
- *TX drive*
- *standard tip*

ETA - 11/0283

ART

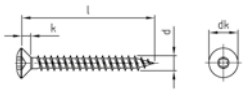
Ürün 9046 A2 TX
Kabarık Gömme başlı torks sunta vidası ve tam dişli

Item 9046 A2 TX
Double raised countersunk head timber screws with fullthread

Art. 9046
A2

d	
	Ürün no./*Item no.*





- Avrupa Teknik Ruhsatı ETA 11/0283
- UK Technical Assessment UKTA 22/6473
- Tam diş
- Mercimek havşa baş
- Baş altı güçlendirilmiş
- TX torkslu tahrik
- Standart uç

- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *fullthread*
- *raised countersunk head*
- *double raised countersunk head*
- *TX drive*
- *standard tip*

ETA - 11/0283

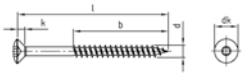
ART

Art. 9046
A2

Ürün 9046 A2 TX
Kabarık Gömme başlı torks sunta vidası ve yarim disli

Item 9046 A2 TX
Double raised countersunk head timber screws with partial thread





d	
	Ürün no./*Item no.*

- European Technical Assessment ETA 11/0283
- UK Technical Assessment UKTA 22/6473
- yarim disli
- Mercimek havşa baş
- Baş altı güçlendirilmiş
- TX torkslu tahrik
- Standart uç

- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *partial thread*
- *raised countersunk head*
- *double raised countersunk head*
- *TX drive*
- *standard tip*

ETA - 11/0283

ART

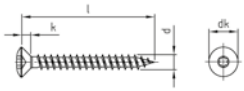
Ürün 9046 A4 TX
Kabarık Gömme başlı torks sunta vidası ve tam dişli

Item 9046 A4 TX
Double raised countersunk head timber screws with fullthread

Art. 9046
A4

d	
	Ürün no./*Item no.*





- Avrupa Teknik Ruhsatı ETA 11/0283
- UK Technical Assessment UKTA 22/6473
- Tam diş
- Mercimek havşa baş
- Baş altı güçlendirilmiş
- TX torkslu tahrik
- Standart uç

- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *fullthread*
- *raised countersunk head*
- *double raised countersunk head*
- *TX drive*
- *standard tip*

ETA - 11/0283

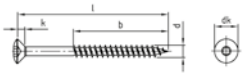
ART

Art. 9046
A4

Ürün 9046 A4 TX
Kabarık Gömme başlı torks sunta vidası ve yarim disli

Item 9046 A4 TX
Double raised countersunk head timber screws with partial thread





d	
	Ürün no./*Item no.*

b = bkz. ürün numarası
- Avrupa Teknik Ruhsatı ETA 11/0283
- UK Technical Assessment UKTA 22/6473
- Kısmi diş
- Mercimek havşa baş
- Baş altı güçlendirilmiş
- TX torkslu tahrik
- Standart uç

b = Item Number
- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *partial thread*
- *raised countersunk head*
- *double raised countersunk head*
- *TX drive*
- *standard tip*

ETA - 11/0283

ART

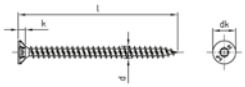
Ürün 9047 A2 TX
Havşa başlı torks sunta vidası ve tam dişli

Item 9047 A2 TX
Double countersunk head timber screws with fullthread

Art. 9047
A2

d	
	Ürün no./*Item no.*





- European Technical Assessment ETA 11/0283
- UK Technical Assessment UKTA 22/6473
- Sağlam iplik
- 90° havşa baş
- Baş altı güçlendirilmiş
- TX torkslu tahrik
- Standart uç
- çap 10, 8 ve kafa altındaki 6 x 140 mm freze nervürlerinden

- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *fullthread*
- *countersunk 90°*
- *double countersunk head*
- *TX drive*
- *standard tip*
- *at Diameter 10, 8 and at 6 x 140mm ribs under the head*

ETA - 11/0283

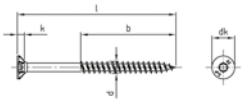
ART

Art. 9047
A2

Ürün 9047 A2 TX
Havşa başlı torks sunta vidası ve yarim disli

Item 9047 A2 TX
Double countersunk head timber screws with partial thread





d	
	Ürün no./*Item no.*

b = viz číslo článku
- Evropské technické schválení ETA 11/0283
- Technické schválení UK UKTA 22/6473
- Kısmi diş
- 90° havşa baş
- Baş altı güçlendirilmiş
- TX torkslu tahrik
- Standart uç
- Çap 10, 8 ve 6 x 140 mm'den itibaren baş altında freze dişleri bulunmaktadır

b = Item Number
- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *partial thread*
- *countersunk 90°*
- *double countersunk head*
- *TX drive*
- *standard tip*
- *at Diameter 10, 8 and at 6 x 140mm ribs under the head*

ETA - 11/0283

ART

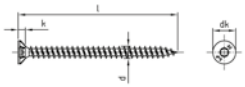
Ürün 9047 A4 TX
Havşa başlı torks sunta vidası ve tam dişli

Item 9047 A4 TX
Double countersunk head timber screws with fullthread

Art. 9047
A4

d	
	Ürün no./*Item no.*





- European Technical Assessment ETA 11/0283
- UK Technical Assessment UKTA 22/6473
- Sağlam iplik
- 90° havşa baş
- Baş altı güçlendirilmiş
- TX torkslu tahrik
- Standart uç
- çap 10, 8 ve kafa altındaki 6 x 140 mm freze nervürlerinden

- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *fullthread*
- *countersunk 90°*
- *double countersunk head*
- *TX drive*
- *standard tip*
- *at Diameter 10, 8 and at 6 x 140mm ribs under the head*

ETA - 11/0283

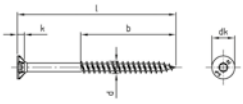
ART

Art. 9047
A4

Ürün 9047 A4 TX
Havşa başlı torks sunta vidası ve yarim disli

Item 9047 A4 TX
Double countersunk head timber screws with partial thread





d	
	Ürün no./*Item no.*

b = makale numarasına bakınız
- Avrupa Teknik Onayı ETA 11/0283
- Birleşik Krallık Teknik Onayı UKTA 22/6473
- Kısmi diş
- 90° havşa baş
- Baş altı güçlendirilmiş
- TX torkslu tahrik
- Standart uç
- Çap 10, 8 ve 6 x 140 mm'den itibaren baş altında freze dişleri bulunmaktadır

b = Item Number
- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *partial thread*
- *countersunk 90°*
- *double countersunk head*
- *TX drive*
- *standard tip*
- *at Diameter 10, 8 and at Diameter 6 x 140mm ribs under the head*

ETA - 11/0283

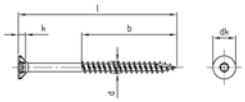
ART

Art. 9147 1.4006
Havşa başlı torks sunta vidası, cus

Item 9147 1.4006 TX
Double CSK head timber screws with ribs, cutting point

d	
	Ürün no./*Item no.*





b = bkz. ürün numarası
- Avrupa Teknik Ruhsatı ETA 11/0283
- UK Technical Assessment UKTA 22/6473
- Havşa baş 90°
- Baş altı güçlendirilmiş
- TX torkslu tahrik
- Kesme ucu
- Baş altında freze dişleri

b = Item Number
- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *countersunk 90°*
- *double countersunk head*
- *TX drive*
- *cutting point*
- *ribs under the head*

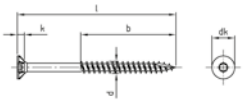
ETA - 11/0283

Art. 9147
A2

Ürün 9147 A2 TX
Havşa başlı torks sunta vidası, cus

Item 9147 A2 TX
Double CSK head timber screws with ribs, cutting point





d	
	Ürün no./*Item no.*

b = bkz. ürün numarası
- Avrupa Teknik Ruhsatı ETA 11/0283
- UK Technical Assessment UKTA 22/6473
- Havşa baş 90°
- Baş altı güçlendirilmiş
- TX torkslu tahrik
- Kesme ucu
- Baş altında freze dişleri

b = Item Number
- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *countersunk 90°*
- *double countersunk head*
- *TX drive*
- *cutting point*
- *ribs under the head*

ETA - 11/0283

ART

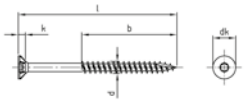
Ürün 9147 A4 TX
Havşa başlı torks sunta vidası, cus

Item 9147 A4 TX
Double CSK head timber screws with ribs, cutting point

Art. 9147
A4

d	
	Ürün no./*Item no.*





b = bkz. ürün numarası
- Avrupa Teknik Ruhsatı ETA 11/0283
- UK Technical Assessment UKTA 22/6473
- Havşa baş 90°
- Baş altı güçlendirilmiş
- TX torkslu tahrik
- Kesme ucu
- Baş altında freze dişleri

b = Item Number
- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *countersunk 90°*
- *double countersunk head*
- *TX drive*
- *cutting point*
- *ribs under the head*

ETA - 11/0283

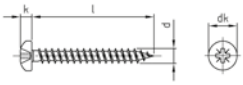
ART

Art. 9048
A2

Ürün 9048 A2 PZ
Baş kısmı takviyeli, yuvarlak başlı sunta vidaları ve tam dişli

Item 9048 A2 PZ
Double pan head timber screws with fullthread





d	
	Ürün no./*Item no.*

- Avrupa Teknik Ruhsatı ETA 11/0283
- UK Technical Assessment UKTA 22/6473
- Tam diş
- Yuvarlak baş
- Baş altı güçlendirilmiş
- PZ
- Standart uç

- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *fullthread*
- *raised pan head*
- *double pan head*
- *PZ Pozidrive*
- *standard tip*

ETA - 11/0283

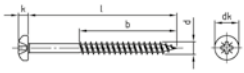
Ürün 9048 A2 PZ
Baş kısmı takviyeli, yuvarlak başlı sunta vidaları ve yarim disli

Item 9048 A2 PZ
Double pan head timber screws with partial thread

Art. 9048 A2

d	
	Ürün no./*Item no.*





b = bkz. ürün numarası
- Avrupa Teknik Ruhsatı ETA 11/0283
- UK Technical Assessment UKTA 22/6473
- Kısmi diş
- Yuvarlak baş
- Baş altı güçlendirilmiş
- PZ Pozidrive
- Standart uç

b = Item Number
- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *partial thread*
- *raised pan head*
- *double pan head*
- *PZ Pozidrive*
- *standard tip*

ETA - 11/0283

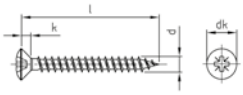
ART

Art. 9049
A2

Ürün 9049 A2 PZ
Yıldız mercimek başlı sunta vidası ve tam dişli

Item 9049 A2 PZ
Double raised countersunk head timber screws with fullthread





d	
	Ürün no./*Item no.*

- Avrupa Teknik Ruhsatı ETA 11/0283
- UK Technical Assessment UKTA 22/6473
- Tam diş
- Mercimek havşa baş
- Baş altı güçlendirilmiş
- PZ Pozidrive
- Standart sivri uç

- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *fullthread*
- *raised countersunk head*
- *double raised countersunk head*
- *PZ Pozidrive*
- *standard tip*

ETA - 11/0283

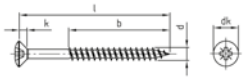
ART

Ürün 9049 A2 PZ
Yıldız mercimek başlı sunta vidası ve yarim disli

Item 9049 A2 PZ
Double raised countersunk head timber screws with partial thread

d	
	Ürün no./*Item no.*





b = bkz. ürün numarası
- Avrupa Teknik Ruhsatı ETA 11/0283
- UK Technical Assessment UKTA 22/6473
- Kısmi diş
- Mercimek havşa baş
- Baş altı güçlendirilmiş
- PZ Pozidrive
- Standart sivri uç

b = Item Number
- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *partial thread*
- *raised countersunk head*
- *double raised countersunk head*
- *PZ Pozidrive*
- *standard tip*

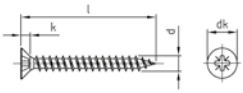
ETA - 11/0283

Art. 9050
A2

Ürün 9050 A2 PZ
Yıldız Havşa başlı sunta vidası ve tam dişli

Item 9050 A2 PZ
Double countersunk head timber screws with fullthread





d	
	Ürün no./*Item no.*

- Avrupa Teknik Ruhsatı ETA 11/0283
- UK Technical Assessment UKTA 22/6473
- Tam diş
- 90° havşa baş
- Baş altı güçlendirilmiş
- PZ Pozidrive
- Standart sivri uç

- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *fullthread*
- *countersunk head 90°*
- *double countersunk head*
- *PZ Pozidrive*
- *standard tip*

ETA - 11/0283

ART

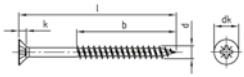
Ürün 9050 A2 PZ
Yıldız Havşa başlı sunta vidası ve yarim disli

Item 9050 A2 PZ
Double countersunk head timber screws with partial thread

Art. 9050 A2

d	
	Ürün no./*Item no.*





b = bkz. ürün numarası
- Avrupa Teknik Ruhsatı ETA 11/0283
- UK Technical Assessment UKTA 22/6473
- Kısmi diş
- 90° havşa baş
- PZ Pozidrive
- Standart uç
- Çap 10, 8 ve 6 x 140 mm'den itibaren baş altında freze dişleri bulunmaktadır

b = Item Number
- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *partial thread*
- *countersunk head 90°*
- *PZ Pozidrive*
- *standard tip*
- *at Diameter 10, 8 and at 6 x 140mm ribs under the head*

ETA - 11/0283

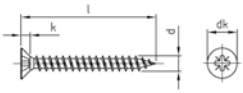
ART

Art. 9050
A4

Ürün 9050 A4 PZ
Yıldız Havşa başlı sunta vidası ve tam dişli

Item 9050 A4 PZ
Double countersunk head timber screws with fullthread





d	
	Ürün no./*Item no.*

- Avrupa Teknik Ruhsatı ETA 11/0283
- UK Technical Assessment UKTA 22/6473
- Tam diş
- 90° havşa baş
- Baş altı güçlendirilmiş
- PZ Pozidrive
- Standart sivri uç

- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *fullthread*
- *countersunk head 90°*
- *double countersunk head*
- *PZ Pozidrive*
- *ribs under the head*
- *standard tip*

ETA - 11/0283

ART

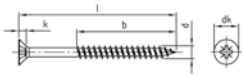
Ürün 9050 A4 PZ
Yıldız Havşa başlı sunta vidası ve yarim disli

Item 9050 A4 PZ
Double countersunk head timber screws with partial thread

Art. 9050
A4

d	
	Ürün no./*Item no.*





b = bkz. ürün numarası
- Avrupa Teknik Ruhsatı ETA 11/0283
- UK Technical Assessment UKTA 22/6473
- Kısmi diş
- 90° havşa baş
- PZ Pozidrive
- Standart uç
- Çap 10, 8 ve 6 x 140 mm'den itibaren baş altında freze dişleri bulunmaktadır

b = Item Number
- *European Technical Assessment ETA 11/0283*
- *UK Technical Assessment UKTA 22/6473*
- *partial thread*
- *countersunk head 90°*
- *double countersunk head*
- *PZ Pozidrive*
- *standard tip*
- *at Diameter 10, 8 and at 6 x 140mm ribs under the head*

ETA - 11/0283

BBA

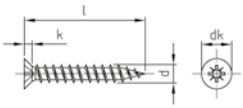
ART

Art. 9063
A4

Ürün 9063 A4
Kafa çapları 5 mm olan menteşe bandı vidaları

Item 9063 A4
Hinge tape chipboardscrews with head diameter 5 mm



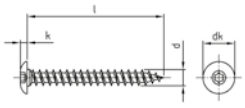


Ürün 9083 A2 TX
Menteşe vidalar

Item 9083 A2 TX
Pan head hinge strip screws with six lobe drive

Art. 9083
A2



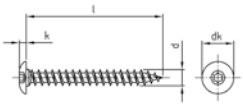


Art. 9083
A4

Art. 9083 A4 TX
Menteşe vidalar

Item 9083 A4 TX
Pan head hinge strip screws with six lobe drive





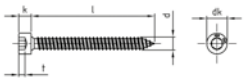
Ürün 9051 A2
ISO 4762'ye uygun başlı kılavuz çekme vidaları

Item 9051 A2
Tapping screws with head according to ISO 4762

Art. 9051 A2

d		
	(Inch)	Ürün no./*Item no.*





- Sac dişi
- Allen
- Baş ISO 4762'ye uygun

- *Sheet thread*
- *ISK*
- *Head according to ISO 4762*

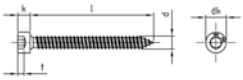
ART

Art. 9051
A4

Ürün 9051 A4
ISO 4762'ye uygun başlı kılavuz çekme vidaları

Item 9051 A4
Tapping screws with head according to ISO 4762





- Sac dişi
- Allen
- Baş ISO 4762'ye uygun

- *Sheet thread*
- *ISK*
- *Head according to ISO 4762*

d	
(Inch)	Ürün no./*Item no.*

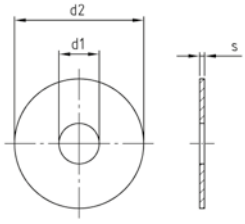
ART

Ürün 9054 A2
Rondela

Item 9054 A2
Penny washers

Art. 9054
A2



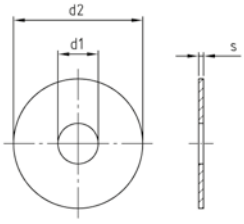


Art. 9054
A4

Ürün 9054 A4
Rondela

Item 9054 A4
Penny washers



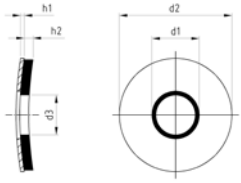


Ürün 9055 A2 bombeli
Altıköşe civatalar için conta pulu

Item 9055 A2 arched
Sealing washers with EPDM coating

Art. 9055
A2



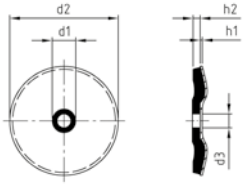


Art. 9055 A2

Ürün 9055 A2 havşalı Altıköşe civatalar için conta pulu

Item 9055 A4 sunk
Sealing washers with EPDM coating





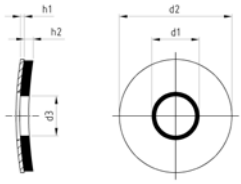
ART

Madde 9055 A4 kavisli
Altıköşe civatalar için conta pulu

Item 9055 A4 arched
Sealing washers with EPDM coating

Art. 9055
A4





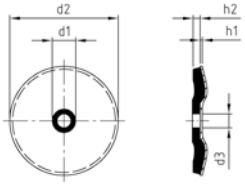
ART

Art. 9055
A4

Madde 9055 A4 havşa başlı
Altıköşe civatalar için conta pulu

Item 9055 A4 sunk
Sealing washers with EPDM coating





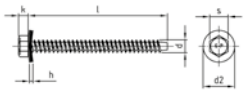
ART

Ürün 9057 A2 6,3 BZ
Kendinden yalıtımlı giydirme vidası BZ

Item 9057 A2 6,3 BZ
Cladding screws with cone point sealing washer 16 mm

Art. 9057 BZ
A2





- Şekil BZ
- Çelik alt konstrüksiyonlar > 3 mm için konik uçlu ince diş
- ETA-13/0178, U 75 mm'den itibaren geçerli
- Sandviç paneller için sabitleme vidaları

- *type BZ*
- *Fine thread with cone point for steel substructures > 3mm*
- *ETA-13/0178 valid from L 75 mm*
- *Fastening screws for sandwich panels*

ETA - 12/0086
ETA - 13/0178

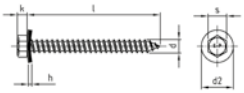
ART

Art. 9057 A A2

Ürün 9057 A2 6,5 A Kendinden yalıtımlı giydirme vidası A

Item 9057 A2 6,5 A
Cladding screws with point sealing washer 16 mm





- Şekil A
- Ahşap alt konstrüksiyonları ve ince cidarlı saclar < 3 mm için sivri uçlu kalın diş
- ETA -13/0178, U 75 mm'den itibaren geçerli
- Sandviç paneller için sabitleme vidaları

- *type A*
- *Coarse thread with tip for timber substructures and thin sheet metal < 3mm*
- *ETA-13/0178 valid from L 75 mm*
- *Fastening screws for sandwich panels*

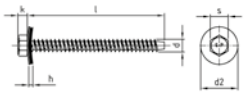
ETA - 12/0086
ETA - 13/0178

Ürün 9059 A2 6,3 BZ
Konik uçlu,contalı dış cephe montaj vidaları,19 mm

Item 9059 A2 6,3 BZ
Cladding screws with cone point sealing washer 19 mm

Art. 9059 BZ
A2





- Şekil BZ
- Çelik alt konstrüksiyonlar > 3 mm için konik uçlu ince diş
- ETA-13/0178, U 75 mm'den itibaren geçerli
- Sandviç paneller için sabitleme vidaları

- *type BZ*
- *Fine thread with cone point for steel substructures > 3mm*
- *ETA-13/0178 valid from L 75 mm*
- *Fastening screws for sandwich panels*

ETA - 12/0086
ETA - 13/0178

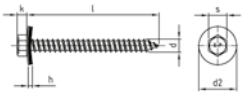
ART

Art. 9059 A A2

Ürün 9059 A2 6,5 A
Sivri uçlu,contalı dış cephe montaj vidaları,19 mm

Item 9059 A2 6,5 A
Cladding screws with point sealing washer 19 mm





- Şekil A
- Ahşap alt konstrüksiyonları ve ince cidarlı saclar < 3 mm için sivri uçlu kalın diş
- ETA -13/0178, U 75 mm'den itibaren geçerli
- Sandviç paneller için sabitleme vidaları

- *type A*
- *Coarse thread with tip for timber substructures and thin sheet metal < 3mm*
- *ETA-13/0178 valid from L 75 mm*
- *Fastening screws for sandwich panels*

ETA - 12/0086
ETA - 13/0178

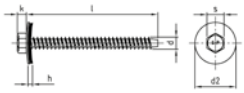
ART

Ürün 9098 A2 6,3 BZ
Konik uçlu,contalı dış cephe montaj vidaları,22 mm

Item 9098 A2 6,3 BZ
Cladding screws with cone point sealing washer 22 mm

Art. 9098 BZ
A2





- Şekil BZ
- Çelik alt konstrüksiyonlar > 3 mm için konik uçlu ince diş
- ETA-13/0178, U 75 mm'den itibaren geçerli
- Sandviç paneller için sabitleme vidaları

- *type BZ*
- *Fine thread with cone point for steel substructures > 3mm*
- *ETA-13/0178 valid from L 75 mm*
- *Fastening screws for sandwich panels*

ETA - 12/0086
ETA - 13/0178

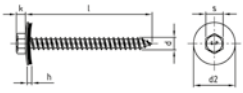
ART

Art. 9098 A
A2

Ürün 9098 A2 6,5 A
Sivri uçlu, contalı dış cephe montaj vidaları, 22 mm

Item 9098 A2 6,5 A
Cladding screws with point sealing washer 22 mm





- Şekil A
- Ahşap alt konstrüksiyonları ve ince cidarlı saclar < 3 mm için sivri uçlu kalın diş
- ETA -13/0178, U 75 mm'den itibaren geçerli
- Sandviç paneller için sabitleme vidaları

- *type A*
- *Coarse thread with tip for timber substructures and thin sheet metal < 3mm*
- *ETA-13/0178 valid from L 75 mm*
- *Fastening screws for sandwich panels*

ETA - 12/0086
ETA - 13/0178

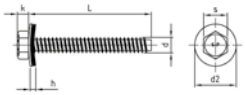
ART

Ürün 9098 A2 8,0 BZ
Konik uçlu,contalı dış cephe montaj vidaları,22 mm

Item 9098 A2 8,0 BZ
Cladding screws with cone point sealing washer 22 mm

Art. 9098 A
A2





- Şekil BZ
- Çelik alt konstrüksiyonlar > 3 mm için konik uçlu ince diş
- Ø5,5mm veya 6,3mm değiştirme için tamir vidası

- *type BZ*
- *Fine thread with cone point for steel substructures > 3mm*
- *repair screw for replacing screws with Ø5,5mm or 6,3mm*

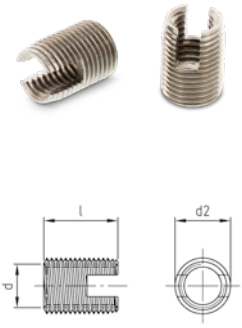
ETA - 12/0086
ETA - 13/0178

ART

Art. 9058 A2

Ürün 9058 A2
Iç dış dişli yarıklı somun

Item 9058 A2
Selftapping inserts

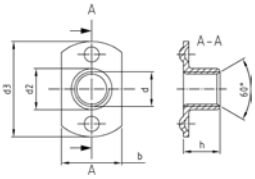


Ürün 9060 A2 tip A
Tip A kaynak somunları, 2 kaynak noktalı

Item 9060 A2 - Type A
Weld-on nuts type A with 2 welding points

Art. 9060 A
A2



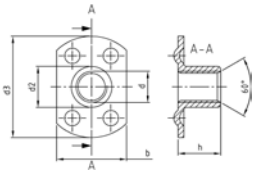


Art. 9060 A A2

Ürün 9060 A2 tip A
Tip A kaynak somunları, 4 kaynak noktalı

Item 9060 A2 - Type A
Weld-on nuts type A with 4 welding points





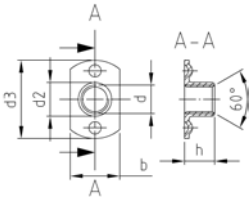
ART

Ürün 9060 A2 tip B
Tip A kaynak somunları, 2 kaynak noktalı

Item 9060 A2 - Type B
Weld-on nuts type B with 2 welding points

Art. 9060 B
A2



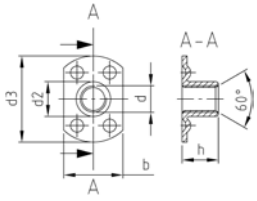


Art. 9060 B
A2

Ürün 9060 A2 tip B
Tip A kaynak somunları, 4 kaynak noktalı

Item 9060 A2 - Type B
Weld-on nuts type B with 4 welding points



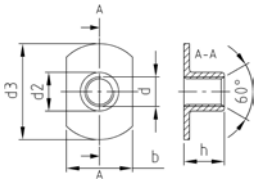


Ürün 9060 A2 tip C
Tip C kaynak somunları, kaynak noktasız

Item 9060 A2 - Type C
Weld-on nuts typ C without welding points

Art. 9060 C
A2



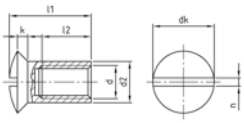


Art. 9061
A1

Ürün 9061 1.4305
Mercimek havşa başlı ve düz yarıklı kovanlı somun

Item 9061 1.4305
Raised countersunk head sleeve nuts with slot





- Mercimek havşa baş
- Düz yarık

- *raised countersunk*
- *slot*

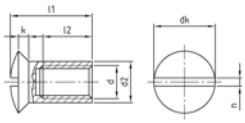
ART

Ürün 9061 A4
Mercimek havşa başlı ve düz yarıklı kovanlı somun

Item 9061 A4
Raised countersunk head sleeve nuts with slot

Art. 9061 A4





- Mercimek havşa baş
- Düz yarık

- raised countersunk
- slot

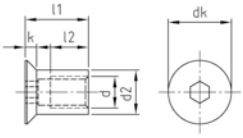
ART

Art. 9062
A1

Artikel 9062 1.4305
Havşa başı ve iç altı köşe olan kovanlı somunlar

Item 9062 1.4305
Hexagon socket countersunk head sleeve nuts





- Havşa baş
- İç altı köşe

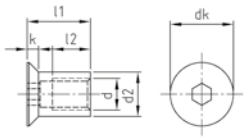
- *Countersunk*
- *Hexagon*

ART

Artikel 9062 A4
Havşa başı ve iç altı köşe olan kovanlı somunlar

Item 9062 A4
Hexagon socket countersunk head sleeve nuts





- Havşa baş
- İç altı köşe

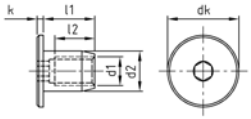
- *Countersunk*
- *Hexagon*

Art. 9262
A1

Art. 9262 1.4305
Düz başı ve iç altı köşe olan kovanlı somunlar

Item 9262 1.4305
Hexagon socket flat head sleeve nuts





- Düz kafa
- Altıgen soket

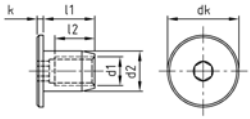
- flat head
- Hexagon

ART

Art. 9262 A4
Düz başı ve iç altı köşe olan kovanlı somunlar

Item 9262 A4
Hexagon socket flat head sleeve nuts





- Düz kafa
- Altıgen soket

- flat head
- Hexagon

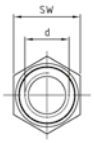
Art. 9064 A2

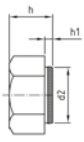
Ürün 9064 A2
Altı köşeli baskı somunları

Item 9064 A2
Insert-press nuts









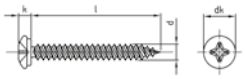
Ürün 9065 A2 PH
Silindir başlı sac vidaları, DIN 7981 benzeri

Item 9065 A2 PH
Tapping screws with caphead, similar DIN 7981

Art. 9065
A2

d		
	(Inch)	Ürün no./*Item no.*



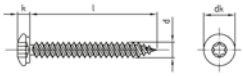


Art. 9065
A2

Ürün 9065 A2 TX
Silindir başlı sac vidaları, DIN 7981 benzeri

Item 9065 A2 TX
Tapping screws with caphead, similar DIN 7981





d		
	(Inch)	Ürün no./*Item no.*

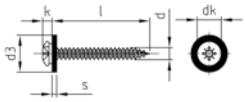
Ürün 9066 A2 işlenmemiş BG PZ
Polyamid pullu pencere parapeti vidaları, doğal

Item 9066 A2 uncoated BG PZ
Tapping screws with caphead polyamid washer nature

Art. 9066
A2

d		
	(Inch)	Ürün no./*Item no.*





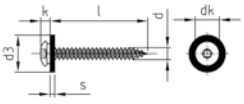
ART

Art. 9066
A2

Ürün 9066 A2 işlenmemiş BG TX
Polyamid pullu pencere parapeti vidaları, doğal

Item 9066 A2 uncoated BG TX
Tapping screws with caphead polyamid washer nature





d		
	(Inch)	Ürün no./*Item no.*

ART

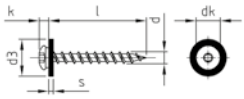
Ürün 9066 A2 işlenmemiş GG TX
Polyamid pullu pencere parapeti vidaları, doğal

Item 9066 A2 uncoated GG TX
Tapping screws with caphead polyamid washer nature

Art. 9066
A2

d		
	(Inch)	Ürün no./*Item no.*





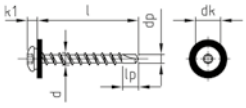
ART

Art. 9066
A2

Ürün 9066 A2 işlenmemiş GG TX
Doğal poliamid diskli ve matkap uçlu pencere eşiği vidaları

Item 9066 A2 uncoated GG TX
Tapping screws with caphead polyamid washer nature and drilling point





d		
	(Inch)	Ürün no./*Item no.*

- Matkap ucu

- *drilling point*

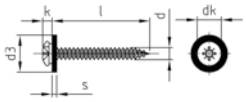
Ürün 9066 A2 beyaz BG PZ
Polyamid pullu pencere parapeti vidaları, beyaz

Item 9066 A2 white BG PZ
Tapping screws with caphead polyamid washer white

Art. 9066
A2

d		
	(Inch)	Ürün no./*Item no.*



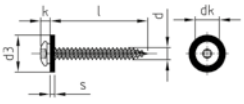


Art. 9066
A2

Ürün 9066 A2 beyaz BG TX
Polyamid pullu pencere parapeti vidaları, beyaz

Item 9066 A2 white BG TX
Tapping screws with caphead polyamid washer white





d		
	(Inch)	Ürün no./*Item no.*

ART

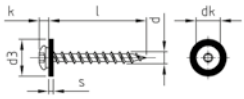
Ürün 9066 A2 beyaz GG TX
Polyamid pullu pencere parapeti vidaları, beyaz

Item 9066 A2 white GG TX
Tapping screws with caphead polyamid washer white

Art. 9066
A2

d		
	(Inch)	Ürün no./*Item no.*





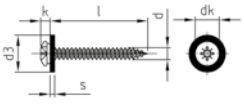
ART

Art. 9066 A2

Ürün 9066 A2 kahverengi BG PZ
Polyamid pul pencere parapeti vidaları, kahverengi

Item 9066 A2 brown BG PZ
Tapping screws with caphead polyamid washer brown





d		
	(Inch)	Ürün no./*Item no.*

ART

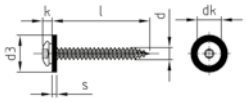
Ürün 9066 A2 kahverengi BG TX
Polyamid pul pencere parapeti vidaları, kahverengi

Item 9066 A2 brown BG TX
Tapping screws with caphead polyamid washer brown

Art. 9066
A2

d		
	(Inch)	Ürün no./*Item no.*



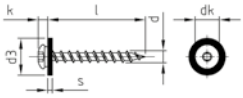


Art. 9066
A2

Ürün 9066 A2 kahverengi GG TX
Polyamid pul pencere parapeti vidaları, kahverengi

Item 9066 A2 brown GG TX
Tapping screws with caphead polyamid washer brown





d		
	(Inch)	Ürün no./*Item no.*

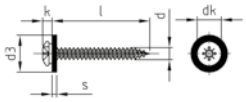
ART

Art. 9066 A2 RAL 7016 BG PZ
Polyamid pul pencere parapeti vidaları, RAL 7016

Item 9066 A2 RAL 7016 BG PZ
Window board caphead screws polyamid washer grey

d		
	(Inch)	Ürün no./*Item no.*





- RAL 7016

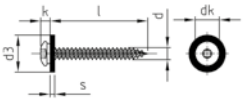
- RAL 7016

Art. 9066
A2

Art. 9066 A2 RAL 7016 BG TX
Polyamid pul pencere parapeti vidaları, RAL 7016

Item 9066 A2 RAL 7016 BG TX
Window board caphead screws polyamid washer grey





d		
	(Inch)	Ürün no./*Item no.*

- RAL 7016

- RAL 7016

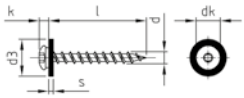
ART

Art. 9066 A2 RAL 7016 GG TX
Polyamid pul pencere parapeti vidaları, RAL 7016

Item 9066 A2 RAL 7016 GG TX
Window board caphead screws polyamid washer grey

d		
	(Inch)	Ürün no./*Item no.*





- RAL 7016

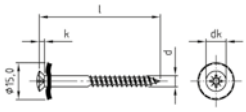
- *RAL 7016*

Art. 9067
A2

Ürün 9067 A2 PZ
2 parçalı, rondelalı ahşap vidaları 15 mm

Item 9067 A2 PZ
RSD CSK woodscrews, bonded sealing washer 15 mm





paketleme ünitesi 100 olarak da mevcuttur

also available in packing unit 100

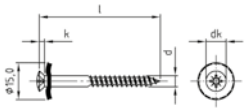
ART

Ürün 9067 A2/Cu PZ
2 parçalı, rondelalı ahşap vidaları 15 mm

Item 9067 A2/Cu PZ
RSD CSK woodscrews, bonded sealing washer 15 mm

Art. 9067 A2/Cu





paketleme ünitesi 100 olarak da mevcuttur

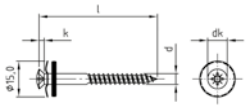
also available in packing unit 100

Art. 9067 A2

Ürün 9067 A2 PZ
3 parçalı, rondelalı ahşap vidaları 15 mm

Item 9067 A2 PZ
RSD CSK woodscrews, separated sealing washer 15 mm





paketleme ünitesi 100 olarak da mevcuttur

also available in packing unit 100

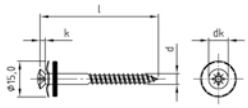
ART

Ürün 9067 A2/Cu PZ
3 parçalı, rondelalı ahşap vidaları 15 mm

Item 9067 A2/Cu PZ
RSD CSK woodscrews, separated sealing washer 15 mm

Art. 9067 A2/Cu





paketleme ünitesi 100 olarak da mevcuttur

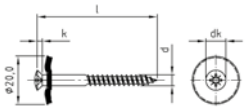
also available in packing unit 100

Art. 9068 A2

Ürün 9068 A2 PZ
2 parçalı, rondelalı ahşap vidaları 20 mm

Item 9068 A2 PZ
RSD CSK woodscrews, bonded sealing washer 20 mm





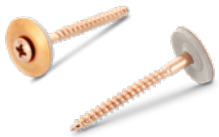
paketleme ünitesi 100 olarak da mevcuttur

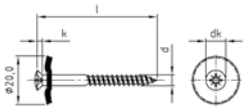
also available in packing unit 100

Ürün 9068 A2/Cu PZ
2 parçalı, rondelalı ahşap vidaları 20 mm

Artikel 9068 A2/Cu PZ
RSD CSK woodscrews, bonded sealing washer 20 mm

Art. 9068 A2/Cu





paketleme ünitesi 100 olarak da mevcuttur

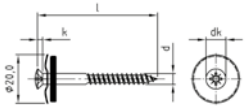
also available in packing unit 100

Art. 9068 A2

Ürün 9068 A2 PZ
3 parçalı, rondelalı ahşap vidaları 20 mm

Item 9068 A2 PZ
RSD CSK woodscrews, separated sealing washer 20 mm





paketleme ünitesi 100 olarak da mevcuttur

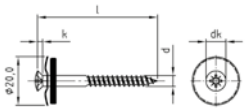
also available in packing unit 100

Ürün 9068 A2/Cu PZ
3 parçalı, rondelalı ahşap vidaları 20 mm

Item 9068 A2/Cu PZ
RSD CSK woodscrews, separated sealing washer 20 mm

Art. 9068 A2/Cu





paketleme ünitesi 100 olarak da mevcuttur

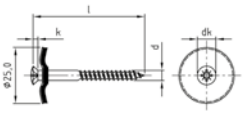
also available in packing unit 100

Art. 9069 A2

Ürün 9069 A2 PZ
2 parçalı, rondelalı ahşap vidaları 25 mm

Item 9069 A2 PZ
RSD CSK woodscrews, bonded sealing washer 25 mm





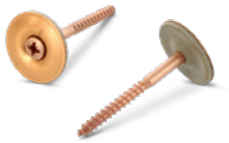
paketleme ünitesi 100 olarak da mevcuttur

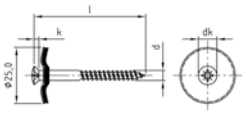
also available in packing unit 100

Ürün 9069 A2/Cu PZ
2 parçalı, rondelalı ahşap vidaları 25 mm

Item 9069 A2/Cu PZ
RSD CSK woodscrews, bonded sealing washer 25 mm

Art. 9069 A2/Cu





paketleme ünitesi 100 olarak da mevcuttur

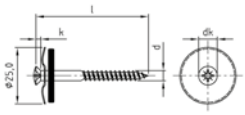
also available in packing unit 100

Art. 9069 A2

Ürün 9069 A2 PZ
3 parçalı, rondelalı ahşap vidaları 25 mm

Item 9069 A2 PZ
RSD CSK woodscrews, separated sealing washer 25 mm





paketleme ünitesi 100 olarak da mevcuttur

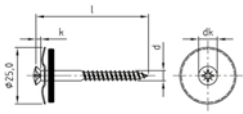
also available in packing unit 100

Ürün 9069 A2/Cu PZ
3 parçalı, rondelalı ahşap vidaları 25 mm

Item 9069 A2/Cu PZ
RSD CSK woodscrews, separated sealing washer 25 mm

Art. 9069 A2/Cu





paketleme ünitesi 100 olarak da mevcuttur

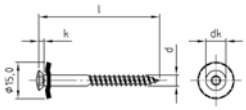
also available in packing unit 100

Art. 9087
A2

Ürün 9087 A2 TX 20
2 parçalı, rondelalı ahşap vidaları 15 mm

Item 9087 A2 TX 20
RSD CSK woodscrews, bonded sealing washer 15 mm





paketleme ünitesi 100 olarak da mevcuttur

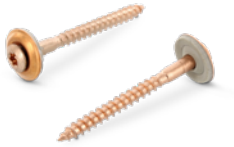
also available in packing unit 100

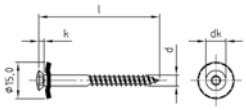
ART

Ürün 9087 A2/Cu TX 20
2 parçalı, rondelalı ahşap vidaları 15 mm

Item 9087 A2/Cu TX 20
RSD CSK woodscrews, bonded sealing washer 15 mm

Art. 9087 A2/Cu





paketleme ünitesi 100 olarak da mevcuttur

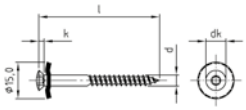
also available in packing unit 100

Art. 9087
A2

Art. 9087 A2 2tlg. TX 20 RAL 3009
2 parçalı, rondelalı ahşap vidaları 15 mm

Item 9087 A2 2tlg. TX 20 RAL 3009 Oxide red
RSD CSK woodscrews, bonded sealing washer 15 mm





paketleme ünitesi 100 olarak da mevcuttur
- Kafa lake
- RAL 3009

also available in packing unit 100
- painted head
- RAL 3009

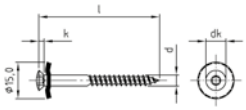
ART

Art. 9087 A2 2tlg. TX 20 RAL 7016
2 parçalı, rondelalı ahşap vidaları 15 mm

Item 9087 A2 2tlg. TX 20 RAL 7016 Anthracite grey
RSD CSK woodscrews, bonded sealing washer 15 mm

Art. 9087
A2





paketleme ünitesi 100 olarak da mevcuttur
- Kafa lake
- RAL 7016

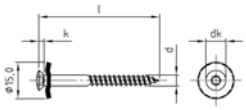
also available in packing unit 100
- painted head
- RAL 7016

Art. 9087
A2

Art. 9087 A2 2tlg. TX 20 RAL 8004 Copper brown
2 parçalı, rondelalı ahşap vidaları 15 mm

Item 9087 A2 2tlg. TX 20 RAL 8004 Copper brown
RSD CSK woodscrews, bonded sealing washer 15 mm





paketleme ünitesi 100 olarak da mevcuttur
- Kafa lake
- RAL 8004

also available in packing unit 100
- painted head
- RAL 8004

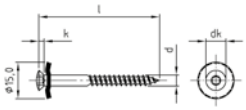
ART

Art. 9087 A2 2tlg. TX 20 RAL 9010 Pure white
2 parçalı, rondelalı ahşap vidaları 15 mm

Item 9087 A2 2tlg. TX 20 RAL 9010 Pure white
RSD CSK woodscrews, bonded sealing washer 15 mm

Art. 9087
A2





paketleme ünitesi 100 olarak da mevcuttur
- Lake kafa
- RAL 9010

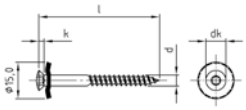
also available in packing unit 100
- painted head
- RAL 9010

Art. 9087
A2

Art. 9087 A2 TX 20 RAL 7005
2 parçalı, rondelalı ahşap vidaları 15 mm

Item 9087 A2 TX 20 RAL 7005 Mouse gray
RSD CSK woodscrews, bonded sealing washer 15 mm





paketleme ünitesi 100 olarak da mevcuttur
- Kafa lake
- RAL 7005

also available in packing unit 100
- painted head
- RAL 7005

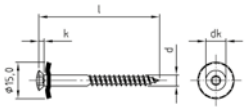
ART

Art. 9087 A2 2tlg. TX 20 RAL 7030
2 parçalı, rondelalı ahşap vidaları 15 mm

Item 9087 A2 2tlg. TX 20 RAL 7030 stone grey
RSD CSK woodscrews, bonded sealing washer 15 mm

Art. 9087
A2





paketleme ünitesi 100 olarak da mevcuttur
- Kafa lake
- RAL 7030

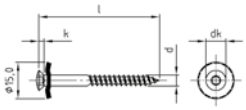
also available in packing unit 100
- painted head
- RAL 7030

Art. 9087
A2

Art. 9087 A2 TX20 RAL 8011 nut brown
2 parçalı, rondelalı ahşap vidaları 15 mm

Item 9087 A2 TX20 RAL 8011 nut brown
RSD CSK woodscrews, bonded sealing washer 15 mm





paketleme ünitesi 100 olarak da mevcuttur
- Kafa lake
- RAL 8011

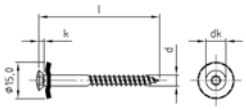
also available in packing unit 100
- painted head
- RAL 8011

ART

Art. 9087 A2 TX20 RAL 8014 sepia brown
2 parçalı, rondelalı ahşap vidaları 15 mm

Item 9087 A2 TX20 RAL 8014 sepia brown
RSD CSK woodscrews, bonded sealing washer 15 mm





paketleme ünitesi 100 olarak da mevcuttur
- Kafa lake
- RAL 8014

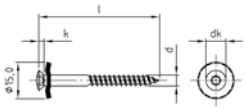
also available in packing unit 100
- painted head
- RAL 8014

Art. 9087
A2

Art. 9087 A2 TX20 RAL 9005 dark black
2 parçalı, rondelalı ahşap vidaları 15 mm

Item 9087 A2 TX20 RAL 9005 dark black
RSD CSK woodscrews, bonded sealing washer 15 mm





paketleme ünitesi 100 olarak da mevcuttur
- Kafa lake
- RAL 9005

also available in packing unit 100
- painted head
- RAL 9005

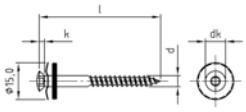
ART

Ürün 9087 A2 TX 20
3 parçalı, rondelalı ahşap vidaları 15 mm

Item 9087 A2 TX 20
RSD CSK woodscrews, separated sealing washer 15 mm

Art. 9087
A2





paketleme ünitesi 100 olarak da mevcuttur

also available in packing unit 100

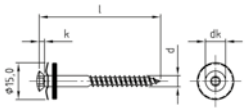
ART

Art. 9087 A2/Cu

Ürün 9087 A2/Cu TX 20
3 parçalı, rondelalı ahşap vidaları 15 mm

Item 9087 A2/Cu TX 20
RSD CSK woodscrews, separated sealing washer 15 mm





paketleme ünitesi 100 olarak da mevcuttur

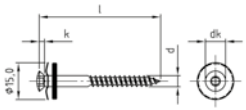
also available in packing unit 100

Art. 9087 A2 3tlg. TX 20 RAL 3009 Oxid red
3 parçalı, rondelalı ahşap vidaları 15 mm

Item 9087 A2 3tlg. TX 20 RAL 3009 Oxid red
RSD CSK woodscrews, separated sealing washer 15 mm

Art. 9087
A2





paketleme ünitesi 100 olarak da mevcuttur
- Kafa lake
- RAL 3009

also available in packing unit 100
- painted head
- RAL 3009

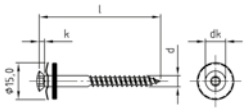
ART

Art. 9087
A2

Art. 9087 A2 3tlg. TX 20 RAL 7016 Anthracite grey
3 parçalı, rondelalı ahşap vidaları 15 mm

Item 9087 A2 3tlg. TX 20 RAL 7016 Anthracite grey
RSD CSK woodscrews, separated sealing washer 15 mm





paketleme ünitesi 100 olarak da mevcuttur
- Kafa lake
- RAL 7016

also available in packing unit 100
- painted head
- RAL 7016

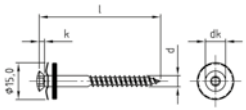
ART

Art. 9087 A2 3tlg. TX 20 RAL 8004 Copper brown
3 parçalı, rondelalı ahşap vidaları 15 mm

Item 9087 A2 3tlg. TX 20 RAL 8004 Copper brown
RSD CSK woodscrews, separated sealing washer 15 mm

Art. 9087
A2





paketleme ünitesi 100 olarak da mevcuttur
- Kafa lake
- RAL 8004

also available in packing unit 100
- painted head
- RAL 8004

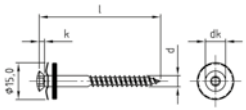
ART

Art. 9087
A2

Art. 9087 A2 3tlg. TX 20 RAL 9010 Pure white
3 parçalı, rondelalı ahşap vidaları 15 mm

Item 9087 A2 3tlg. TX 20 RAL 9010 Pure white
RSD CSK woodscrews, separated sealing washer 15 mm





paketleme ünitesi 100 olarak da mevcuttur
- Lake kafa
- RAL 9010

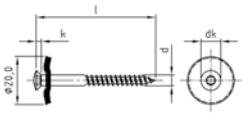
also available in packing unit 100
- painted head
- RAL 9010

Ürün 9088 A2 TX 20
2 parçalı, rondelalı ahşap vidaları 20 mm

Item 9088 A2 TX 20
RSD CSK woodscrews, bonded sealing washer 20 mm

Art. 9088
A2



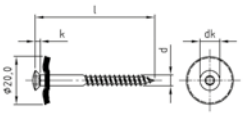


Art. 9088 A2/Cu

Ürün 9088 A2/Cu TX 20
2 parçalı, rondelalı ahşap vidaları 20 mm

Item 9088 A2/Cu TX 20
RSD CSK woodscrews, bonded sealing washer 20 mm





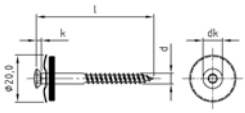
ART

Ürün 9088 A2 TX 20
3 parçalı, rondelalı ahşap vidaları 20 mm

Item 9088 A2 TX 20
RSD CSK woodscrews, separated sealing washer 20 mm

Art. 9088
A2



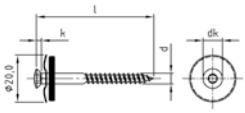


Art. 9088 A2/Cu

Ürün 9088 A2/Cu TX 20
3 parçalı, rondelalı ahşap vidaları 20 mm

Item 9088 A2/Cu TX 20
RSD CSK woodscrews, separated sealing washer 20 mm





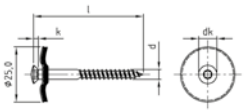
ART

Ürün 9089 A2 TX 20
2 parçalı, rondelalı ahşap vidaları 25 mm

Item 9089 A2 TX 20
RSD CSK woodscrews, bonded sealing washer 25 mm

Art. 9089
A2



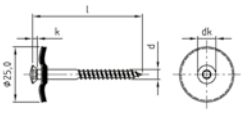


Art. 9089
A2/Cu

Ürün 9089 A2/Cu TX 20
2 parçalı, rondelalı ahşap vidaları 25 mm

Artikel 9089 A2/Cu TX 20
RSD CSK woodscrews, bonded sealing washer 25 mm





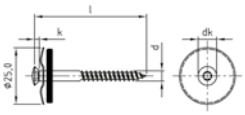
ART

Ürün 9089 A2 TX 20
3 parçalı, rondelalı ahşap vidaları 25 mm

Item 9089 A2 TX 20
RSD CSK woodscrews, separated sealing washer 25 mm

Art. 9089
A2



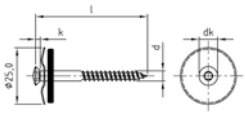


Art. 9089
A2/Cu

Ürün 9089 A2/Cu TX 20
3 parçalı, rondelalı ahşap vidaları 25 mm

Item 9089 A2/Cu TX 20
RSD CSK woodscrews, separated sealing washer 25 mm





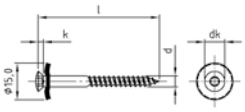
ART

Ürün 9287 A2 TX 25
2 parçalı, rondelalı ahşap vidaları 15 mm

Item 9287 A2 TX 25
RSD CSK woodscrews, bonded sealing washer 15 mm

Art. 9287
A2



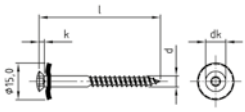


Art. 9287
A2/Cu

Ürün 9287 A2/Cu TX 25
2 parçalı, rondelalı ahşap vidaları 15 mm

Item 9287 A2/Cu TX 25
RSD CSK woodscrews, bonded sealing washer 15 mm





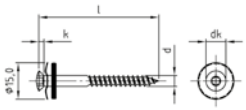
ART

Ürün 9287 A2 TX 25
3 parçalı, rondelalı ahşap vidaları 15 mm

Item 9287 A2 TX 25
RSD CSK woodscrews, separated sealing washer 15 mm

Art. 9287
A2



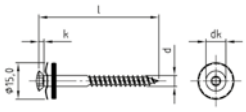


Art. 9287
A2/Cu

Ürün 9287 A2/Cu TX 25
3 parçalı, rondelalı ahşap vidaları 15 mm

Item 9287 A2/Cu TX 25
RSD CSK woodscrews, separated sealing washer 15 mm





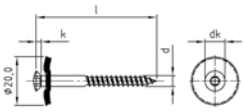
ART

Ürün 9288 A2 TX 25
2 parçalı, rondelalı ahşap vidaları 20 mm

Item 9288 A2 TX 25
RSD CSK woodscrews, bonded sealing washer 20 mm

Art. 9288
A2



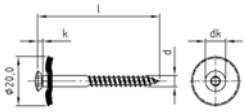


Art. 9288 A2/Cu

Ürün 9288 A2/Cu TX 25
2 parçalı, rondelalı ahşap vidaları 20 mm

Item 9288 A2/Cu TX 25
RSD CSK woodscrews, bonded sealing washer 20 mm





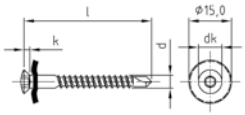
ART

Ürün 9387 A2 TX
2 parçalı, rondelalı ahşap vidaları 15 mm

Item 9387 A2 TX
RSD CSK woodscrews, bonded sealing, DS 15 mm with drilling point

Art. 9387
A2

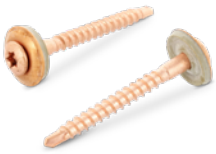


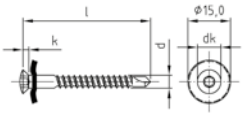


Art. 9387
A2/Cu

Ürün 9387 A2/Cu TX
2 parçalı, rondelalı ahşap vidaları 15 mm

Item 9387 A2/Cu TX
RSD CSK woodscrews, bonded sealing, DS 15 mm with drilling point





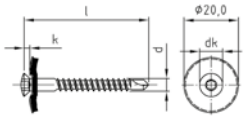
ART

Ürün 9388 A2 TX
2 parçalı, rondelalı ahşap vidaları 20 mm

Item 9388 A2 TX
RSD CSK woodscrews, bonded sealing, DS 20 mm with drilling point

Art. 9388
A2



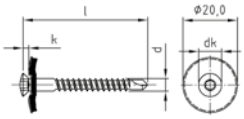


Art. 9388 A2/Cu

Ürün 9388 A2/Cu TX
2 parçalı, rondelalı ahşap vidaları 20 mm

Item 9388 A2/Cu TX
RSD CSK woodscrews, bonded sealing, DS 20 mm with drilling point



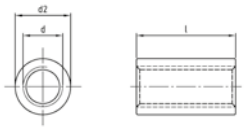


Ürün 9070 A2
Yuvarlak sıkıştırma somunu

Item 9070 A2
Round coupler nuts

Art. 9070 A2



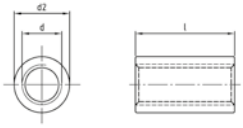


Art. 9070 A4

Ürün 9070 A4
Yuvarlak sıkıştırma somunu

Item 9070 A4
Round coupler nuts

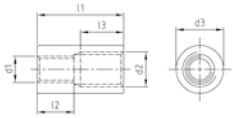




Art. 9170 A2
Redüksiyon manşonları, yuvarlak, dişi dişli

Art. 9170 A2
Round reducing coupler nuts, inner thread





- yuvarlak
- İki farklı iç diş

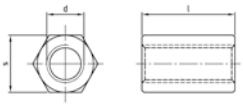
- round
- two internal threads

Art. 9071 A2

Ürün 9071 A2
Altıgen sıkıştırma somunu

Item 9071 A2
Hexagon coupler nuts



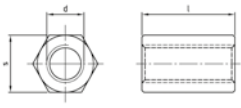


Ürün 9071 A4
Altıgen sıkıştırma somunu

Item 9071 A4
Hexagon coupler nuts

Art. 9071
A4



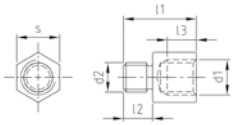


Art. 9171 A2

Art. 9171 A2
Altıgen redüksiyon valfleri, iç ve dış dişli

Item 9171 A2
Hex reducing nuts, internal and external thread





- Altıgen
- İç ve dış diş

- *hexagon*
- *internal and external thread*

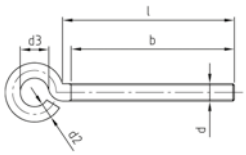
ART

Ürün 9078 A2
Metrik piton

Item 9078 A2
Screw eyes with metric thread

Art. 9078
A2





- Metrik diş
- Hafif açık halka

- metric thread
- Slightly open eye

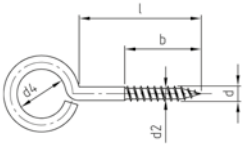
ART

Art. 9079 A2

Ürün 9079 A2
Ahşap vida dişli piton vidalar

Item 9079 A2
Screw eyes with wood thread





- Ahşap vida dişi
- hafif açık halka

- *wood thread*
- *Slightly open eye*

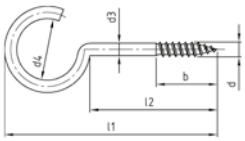
ART

Ürün 9080 A2
Açık ahşap piton

Item 9080 A2
Cup hooks with wood thread

Art. 9080 A2





- Ahşap vida dişi
- bükülmüş vidalı kancalar

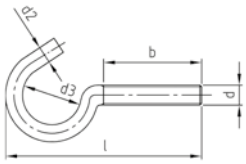
- *wood thread*
- *Bent screw hooks*

Art. 9081 A2

Ürün 9081 A2
Metrik dişli bükülmüş vidalı kancalar

Item 9081 A2
Cup hooks with metric thread





- Metrik diş
- Bükülmüş vidalı kancalar

- *metric thread*
- *Bent screw hooks*

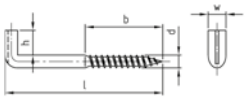
ART

Ürün 9084 A2
Ahşap vida dişli yarıklı vidalı kancalar

Item 9084 A2
Square hooks with slit and wood thread

Art. 9084
A2





- Ahşap vida dişi
- Düz yarık
- Düz vidalı kancalar

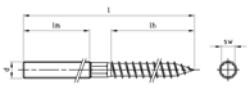
- *wood thread*
- *slit*
- *straight screw hooks*

Art. 9082
A2

Ürün 9082 A2
trifon vidalar anahtarlı/anahtarsız askı cıvataları

Item 9082 A2
Hanger bolts with/without across flat





- Ø10 ve Ø12 harici izlemeli olarak mevcuttur.
- Talep üzerine harici izlemeli Ø6 ve Ø8 mevcuttur.

* dişler arasında altı köşe yok

- *quality inspection at Ø10 and Ø12 available.*
- *quality inspection at Ø6 and Ø8 available on demand.*

** No drive between the threads*



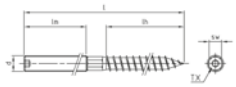
ART

Ürün 9082 A2 TX
Anahtar yüzeyli trifon vidalar

Item 9082 A2 TX
Hanger bolts with six lobe drive

Art. 9082
A2





- Ø6 dişler arasında altıgen yok
- Ø8 dişler arasında altıgen yok: - Uzunluk 50-70mm / 150-160mm
- Dişler arasında altıgen (SW6) olan Ø8: - Uzunluk 80-140mm
- Ø10 dişler arasında altıgen yok: - Uzunluk 60mm
- Dişler arasında altıgen (SW8) olan Ø10: - Uzunluk 80-160mm

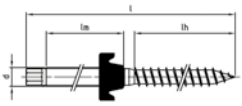
- *Ø6 no spanner surface between the threads*
- *Ø8 no spanner surface between the threads: - lengths 50-70mm and 150-160mm*
- *Ø8 with spanner surface (AF6) between the threads: - lengths 80-140mm*
- *Ø10 no spanner surface between the threads: - lengths 60mm*
- *Ø10 with spanner surface (AF8) between the threads: - lengths 80-160mm*

Art. 9082 A2

Ürün 9082 A2
Siyah EPDM conta ile monte edilmiş askı cıvataları

Item 9082 A2
Hanger bolts assembled with EPDM seal black





- Ø10 ve Ø12 harici olarak izlenebilir.

- *quality inspection at Ø10 and Ø12 available.*



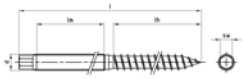
ART

Ürün 908220 A2
Dibi altı köşeli trifon vidalar

Item 908220 A2
Hanger bolts with hexagon end

Art. 9082
A2







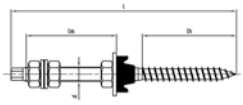
ART

Art. 9082
A2

Ürün 908221 A2
Trifon vidalar, DIN 125 + 9021 + 934 + EPDM

Item 908221 A2
Hanger bolts with DIN 125 + 9021 + 934 + EPDM





- Ø10 ve Ø12 harici izlemeli olarak mevcuttur.
- Ø8, talep üzerine üçüncü taraf izleme özelliğiyle mevcuttur.

* dişler arasında altı köşe yok

- quality inspection at Ø10 and Ø12 available.
- quality inspection at Ø8 available on demand.

** No drive between the threads*

Schäfer + Peters GmbH
74613 Öhringen

Z - 14.4 - 602

VERSUCHSANSTALT

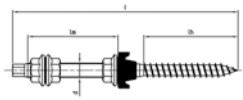
ART

Ürün 908222 A2
Trifon vidalar, DIN 6923 + EPDM

Item 908222 A2
Hanger bolts with DIN 6923 + EPDM

Art. 9082
A2





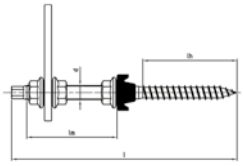


Art. 9082
A2

Ürün 908223 A2
Adaptör plakalı trifon vidalar + DIN 6923 + EPDM

Item 908223 A2
Hanger bolts with adapter plate + DIN 6923 + EPDM





Adaptör sacı (Art. 9035) 82x40x5, uzun delik 11mm, DIN 6923, EPDM conta ile komple monte edilmiş

Completely assembled with adapter sheet (Art. 9035) 82x40x5, long hole 11mm, DIN 6923 und EPDM – sealing washers



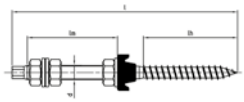
ART

Ürün 908224 A2
Trifon vidalar, DIN 125 + 934 + EPDM

Item 908224 A2
Hanger bolts with DIN 125 + 934 + EPDM

Art. 9082
A2







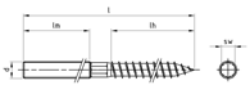
ART

Art. 9082
A4

Ürün 9082 A4
Anahtar yüzeyli trifon vidalar

Item 9082 A4
Hanger bolts





- Ø10 harici izleme ile mevcuttur.
- Talep üzerine harici izlemeli Ø6 ve Ø8 mevcuttur.

* dişler arasında altı köşe yok

- *quality inspection at Ø10 available.*
- *quality inspection at Ø6 and Ø8 available on demand.*

** No drive between the threads*



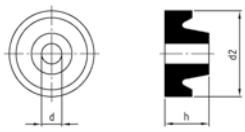
ART

Ürün 9082
EPDM conta, siyah

Item 9082
EPDM-Seal black

Art. 9082
EPDM





Çok iyi elektriksel yalıtım özellikleri, ozon ve güneş ışığına karşı mükemmel direnç ve iyi yaşlanma direnci. Isıya, kimyasallara, sıcak suya ve su buharına karşı iyi direnç. Yağlara ve benzine karşı direnç yoktur.
- T- 40°C - + 100°C sıcaklık aralığında sıcaklığa dayanıklı
- Sertlik Shore A: 60°
- Hava koşullarına karşı dayanıklı
- Kükürtle temas edebilir

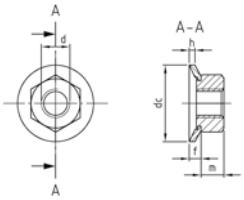
Very good electric insulating qualities, excellent ozone and sunlight permanence and good ageing permanence. Good permanence against heat, chemicals, hot waters and steam. No permanence by oils and petrol.
- *Resistant from - 40°C to + 100°C*
- *Shore A hardness: 60°*
- *Weatherproof*
- *sulphure cured*

Art. 9085 A2

Ürün 9085 A2
Hareketli pullu kombine somunlar

Item 9085 A2
Comby-nuts with washer



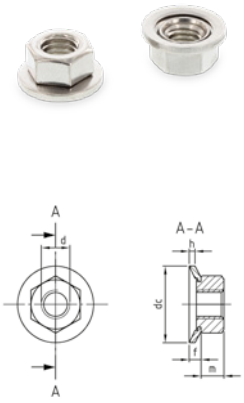


ART

Ürün 9085 A2
Kombine somun, küçük hareketli pul ile

Item 9085 A2
Comby-nuts with small washer

Art. 9085
A2

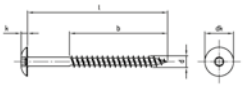


Art. 9086 A2

Ürün 9086 A2 TX
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A2 TX
Truss head wood screws with six lobe drive





- boş

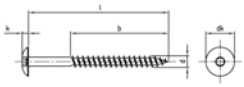
- blanc

Ürün 9086 A2 TX RAL 1013
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A2 TX RAL 1013 oyster white
Truss head wood screws with six lobe drive

Art. 9086
A2





- Toz boya kaplı
- RAL 1013

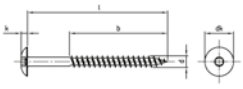
- Powder-coated
- RAL 1013

Art. 9086
A2

Art. 9086 A2 TX RAL 3009
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A2 TX RAL 3009 oxidred
Truss head wood screws with six lobe drive





- Toz boya kaplı
- RAL 3009

- Powder-coated
- RAL 3009

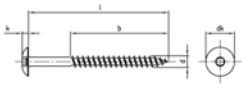
ART

Ürün 9086 A2 TX RAL 5002
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A2 TX RAL 5002 ultramarine blue
Truss head wood screws with six lobe drive

Art. 9086
A2





- Toz boya kaplı
- RAL 5002

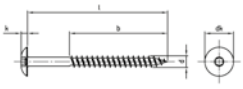
- Powder-coated
- RAL 5002

Art. 9086 A2

Ürün 9086 A2 TX RAL 6009
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A2 TX RAL 6009 fir green
Truss head wood screws with six lobe drive





- Toz boya kaplı
- RAL 6009

- Powder-coated
- RAL 6009

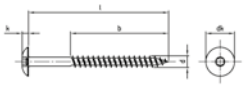
ART

Ürün 9086 A2 TX RAL 7012
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A2 TX RAL 7012 basalt grey
Truss head wood screws with six lobe drive

Art. 9086
A2





- Toz boya kaplı
- RAL 7012

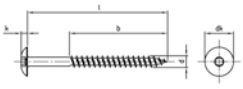
- Powder-coated
- RAL 7012

Art. 9086 A2

Ürün 9086 A2 TX RAL 7016
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A2 TX RAL 7016 anthracite grey
Truss head wood screws with six lobe drive





- Toz boya kaplı
- RAL 7016

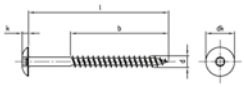
- Powder-coated
- RAL 7016

Ürün 9086 A2 TX RAL 7037
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A2 TX RAL 7037 dusty grey
Truss head wood screws with six lobe drive

Art. 9086
A2





- Toz boya kaplı
- RAL 7037

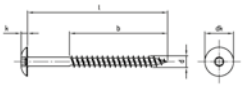
- Powder-coated
- RAL 7037

Art. 9086 A2

Ürün 9086 A2 TX RAL 7038
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A2 TX RAL 7038 agate grey
Truss head wood screws with six lobe drive





- Toz boya kaplı
- RAL 7038

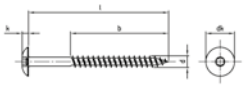
- Powder-coated
- RAL 7038

ART

Art. 9086 A2 TX RAL 7047
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A2 TX RAL 7047 telegrey
Truss head wood screws with six lobe drive





- Toz boya kaplı
- RAL 7047

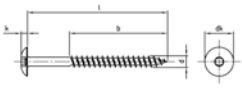
- Powder-coated
- RAL 7047

Art. 9086 A2

Ürün 9086 A2 TX RAL 8014
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A2 TX RAL 8014 sepia brown
Truss head wood screws with six lobe drive





- Toz boya kaplı
- RAL 8014

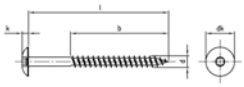
- Powder-coated
- RAL 8014

Ürün 9086 A2 TX RAL 9001
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A2 TX RAL 9001 cream white
Truss head wood screws with six lobe drive

Art. 9086
A2





- Toz boya kaplı
- RAL 9001

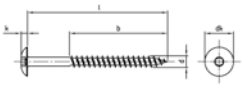
- Powder-coated
- RAL 9001

Art. 9086 A2

Ürün 9086 A2 TX RAL 9005
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A2 TX RAL 9005 jet black
Truss head wood screws with six lobe drive





- Toz boya kaplı
- RAL 9005

- Powder-coated
- RAL 9005

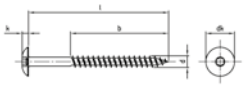
ART

Ürün 9086 A2 TX RAL 9010
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A2 TX RAL 9010 pure white
Truss head wood screws with six lobe drive

Art. 9086
A2





- Toz boya kaplı
- RAL 9010

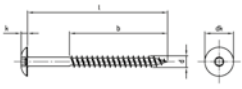
- Powder-coated
- RAL 9010

Art. 9086
A4

Art. 9086 A4 TX
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A4 TX
Truss head wood screws with six lobe drive





- boş

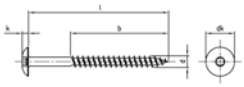
- blanc

Ürün 9086 A2 TX RAL 1013
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A4 TX RAL 1013 oyster white
Truss head wood screws with six lobe drive

Art. 9086
A4





- Toz boya kaplı
- RAL 1013

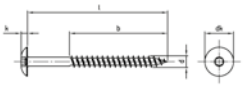
- Powder-coated
- RAL 1013

Art. 9086
A4

Art. 9086 A4 TX RAL 3009
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A4 TX RAL 3009 oxidred
Truss head wood screws with six lobe drive





- Toz boya kaplı
- RAL 3009

- Powder-coated
- RAL 3009

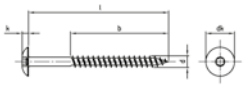
ART

Ürün 9086 A4 TX RAL 5002
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A4 TX RAL 5002 ultramarine blue
Truss head wood screws with six lobe drive

Art. 9086
A4





- Toz boya kaplı
- RAL 5002

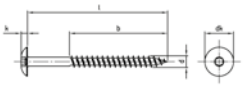
- Powder-coated
- RAL 5002

Art. 9086
A4

Ürün 9086 A4 TX RAL 6009
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A4 TX RAL 6009 fir green
Truss head wood screws with six lobe drive





- Toz boya kaplı
- RAL 6009

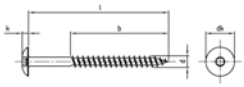
- Powder-coated
- RAL 6009

Ürün 9086 A4 TX RAL 7012
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A2 TX RAL 7012 basalt grey
Truss head wood screws with six lobe drive

Art. 9086
A4





- Toz boya kaplı
- RAL 7012

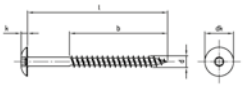
- Powder-coated
- RAL 7012

Art. 9086
A4

Ürün 9086 A4 TX RAL 7016
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A4 TX RAL 7016 anthracite grey
Truss head wood screws with six lobe drive





- Toz boya kaplı
- RAL 7016

- Powder-coated
- RAL 7016

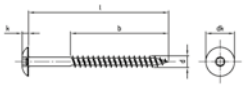
ART

Ürün 9086 A4 TX RAL 7037
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A4 TX RAL 7037 dusty grey
Truss head wood screws with six lobe drive

Art. 9086
A4





- Toz boya kaplı
- RAL 7037

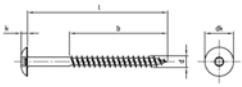
- Powder-coated
- RAL 7037

Art. 9086
A4

Ürün 9086 A4 TX RAL 7038
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A4 TX RAL 7038 agate grey
Truss head wood screws with six lobe drive





- Toz boya kaplı
- RAL 7038

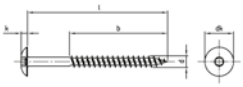
- Powder-coated
- RAL 7038

ART

Art. 9086 A4 TX RAL 7047
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A4 TX RAL 7047 telegrey
Truss head wood screws with six lobe drive





- Toz boya kaplı
- RAL 7047

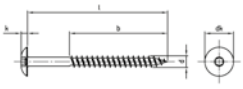
- Powder-coated
- RAL 7047

Art. 9086
A4

Ürün 9086 A4 TX RAL 8014
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A4 TX RAL 8014 sepia brown
Truss head wood screws with six lobe drive





- Toz boya kaplı
- RAL 8014

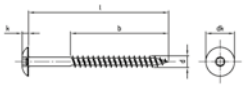
- Pulverbeschichtet
- RAL 8014

Ürün 9086 A4 TX RAL 9001
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A4 TX RAL 9001 cream white
Truss head wood screws with six lobe drive

Art. 9086
A4





- Toz boya kaplı
- RAL 9001

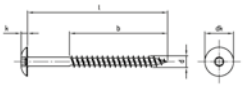
- Powder-coated
- RAL 9001

Art. 9086
A4

Ürün 9086 A4 TX RAL 9005
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A4 TX RAL 9005 jet black
Truss head wood screws with six lobe drive





- Toz boya kaplı
- RAL 9005

- Powder-coated
- RAL 9005

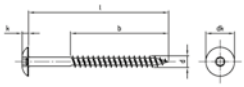
ART

Ürün 9086 A4 TX RAL 9010
Trespo torkslu, düz yuvarlak başlı ağaç vidaları

Item 9086 A4 TX RAL 9010 pure white
Truss head wood screws with six lobe drive

Art. 9086
A4





- Toz boya kaplı
- RAL 9010

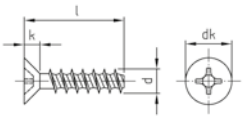
- powder-coated
- RAL 9010

Art. 9090 A2

Ürun 9090 A2 PH
Termoplastikler için havşa başlı vidalar

Item 9090 A2 PH
Countersunk head screws for thermo plastics





d	
	Ürün no./*Item no.*

- Havşa başlı
- PH

- *countersunk*
- *PH*

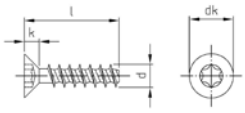
ART

Ürun 9090 A2 TX
Termoplastikler için havşa başlı vidalar

Item 9090 A2 TX
Countersunk head screws for thermo plastics

d	
	Ürün no./*Item no.*





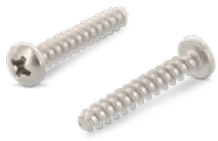
- Havşa başlı
- TX sürücü

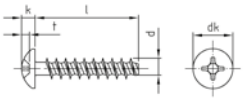
- *countersunk*
- *TX drive*

Art. 9091 A2

Ürün 9091 A2 PH
Termoplastikler için yuvarlak başlı vidalar

Item 9091 A2 PH
Pan head screws for thermo plastics





d	
	Ürün no./*Item no.*

- Yuvarlak kafa
- PH

- *pan head*
- *PH*

ART

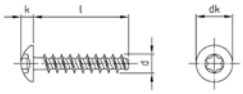
Ürün 9091 A2 TX
Termoplastikler için yuvarlak başlı vidalar

Item 9091 A2 TX
Pan head screws for thermo plastics

d	
	Ürün no./*Item no.*

Art. 9091
A2





- Yuvarlak kafa
- TX sürücü

- pan head
- TX drive

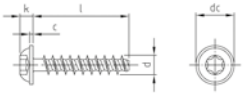
ART

Art. 9191
A2

Ürün 9191 A2 TX
Flanşlı, termoplastikler için yuvarlak başlı vidalar

Item 9191 A2 TX
Pan head screws for thermo plastics with flange





d	
	Ürün no./*Item no.*

- Yuvarlak kafa
- TX sürücü
- Flanş

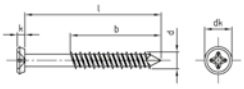
- *pan head*
- *TX drive*
- *with flange*

Ürün 9092 A2
Yük.-Al. vida dişli uçlu dış cephe montaj vidaları

Item 9092 A2
Cladding screws with Hi-Lo thread and center point

Art. 9092
A2





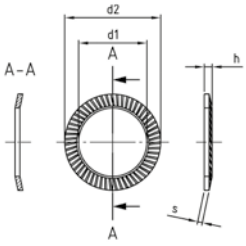
ART

Art. 9093 A2

Ürün 9093 A2
Emniyet segmanları, Tip S

Item 9093 A2
Safety washers type S



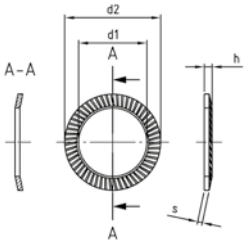


ART

Emniyet segmanları, Tip S

Item 9093 A4
Safety washers type S



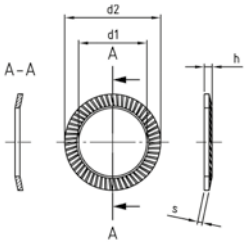


Art. 9093
A2

Ürün 9093 A2
Schnorr emniyet segmanları, Tip S

Item 9093 A2
Schnorr safety washers type S





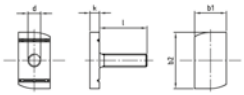
ART

Ürün 9019 A2
Çekiç başlı cıvatalar, Tip 41/41, kısmi dişli

Item 9019 A2
Hammer head bolts type 41/41 with partial serration

Art. 9019
A2



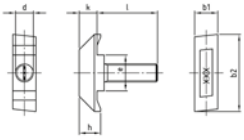


Art. 9094
A4

Ürün 9094 A4
Çekiç başlı cıvatalar, Tip 50/30

Item 9094 A4
Hammer head bolts, type 50/30





d	M
	Ürün no./*Item no.*

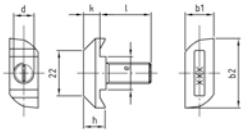
Ürün 9095 A4
Çekiç başlı cıvatalar, Tip 40/22

Item 9095 A4
Hammer head bolts, type 40/22

Art. 9095 A4

d	M
	Ürün no./*Item no.*

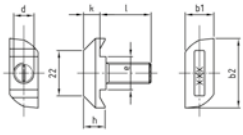




Ürün 9095 1.4571
Çekiç başlı cıvatalar, Tip 40/22

Item 9095 1.4571
Hammer head bolts, type 40/22

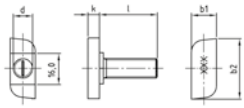




Ürün 9096 A2
Çekiç başlı cıvatalar, Tip 38/17 dibi dört köşeli

Item 9096 A2
Hammer head bolts, type 38/17

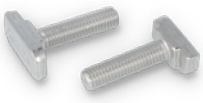


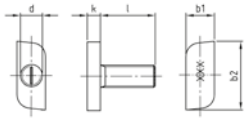


Art. 9096
A4

Ürün 9096 A4
Çekiç başlı cıvatalar, Tip 38/17

Item 9096 A4
Hammer head bolts, type 38/17





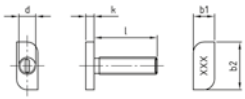
d	M
	Ürün no./*Item no.*

Ürün 9097 A2
Çekiç başlı cıvatalar, Tip 28/15

Item 9097 A2
Hammer head bolts type 28/15

d	M
	Ürün no./*Item no.*



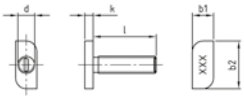


Art. 9097
A4

Ürün 9097 A4
Çekiç başlı cıvatalar, Tip 28/15

Item 9097 A4
Hammer head bolts, type 28/15





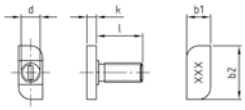
d	M
	Ürün no./*Item no.*

Ürün 9097 A2
Dibi dört köşeli çekiç başlı cıvatalar, Tip 28/15

Item 9097 A2
Hammer head square neck bolts, type 28/15

Art. 9097
A2



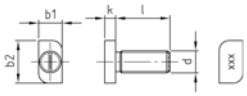


Art. 9197 A2

Ürün 9197 A2
Çekiç başlı cıvatalar, Tip 20/12

Item 9197 A2
Hammer head bolts, type 20/12



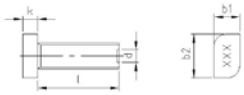


ART

Art. 9397 A2
Çekiç başlı vidalar 17.3X10.3X6

Item 9397 A2
Hammer head bolts 17,3X10,3X6



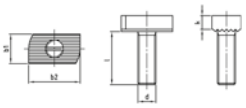


Art. 9595
A4

Ürün 9595 A4
Metrik dişli, çekiç başlı cıvata

Item 9595 A4
Hammer head bolts with serration





41/41 profilleri için

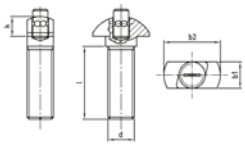
for profiles 41/41

Ürün 9099 A2
EPDM ilaveli, çekiç başlı cıvatalar

Item 9099 A2
Hammer head bolts with EPDM insert

Art. 9099
A2



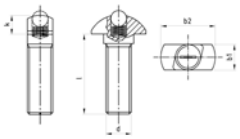


Art. 9099 A2

Ürün 9099 A2
Bilyeli yaylı, çekiç başlı cıvatalar

Item 9099 A2
Hammer head bolts with spring ball





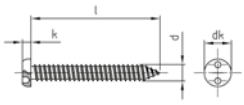
Ürün 9100 A2
Silindir başlı emniyet cıvataları, iki delikli tahrik

Item 9100 A2
Cheese head security screws with two hole drive

Art. 9100 A2

d	
	Ürün no./*Item no.*





- Sac dişi
- İki delik tahriki
- Havşa baş

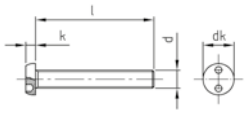
- *Sheet thread*
- *Two hole drive*
- *Cheese head*

Art. 9101 A2

Ürün 9101 A2
Silindir başlı emniyet cıvataları, iki delikli tahrik

Item 9101 A2
Cheese head security screws with two hole drive





d	M
	Ürün no./*Item no.*

- Metrik diş
- İki delik tahriki
- Silindir baş

- *Metric thread*
- *Two hole drive*
- *Cheese head*

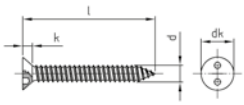
Ürün 9102 A2
İki delik tahrikli, havşa başlı emniyet cıvataları

Item 9102 A2
Countersunk head security screws with two hole drive

Art. 9102 A2

d	
	Ürün no./*Item no.*





- Sac dişi
- İki delik tahriki
- Havşa baş

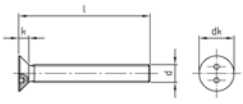
- *Sheet thread*
- *Two hole drive*
- *Countersunk head*

Art. 9103 A2

Ürün 9103 A2
İki delik tahrikli, havşa başlı emniyet cıvataları

Item 9103 A2
Countersunk head security screws with two hole drive





d	M
	Ürün no./*Item no.*

- Metrik diş
- İki delik tahriki
- Havşa baş

- *Metric thread*
- *Two hole drive*
- *Countersunk head*

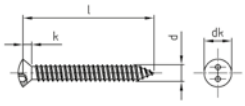
Ürün 9104 A2
İki delik tahrikli, mercimek havşa başlı emniyet cıvataları

Item 9104 A2
Raised CSK head security screws with two hole drive

Art. 9104 A2

d	
	Ürün no./*Item no.*





- Sac dişi
- İki delik tahriki
- Mercimek havşa başı

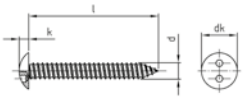
- *Sheet thread*
- *Two hole drive*
- *Raised countersunk head*

Art. 9105 A2

Ürün 9105 A2
İki delik tahrikli, yuvarlak başlı emniyet cıvataları

Item 9105 A2
Pan head security screws with two hole drive





d	
	Ürün no./*Item no.*

- Sac dişi
- İki delik tahriki
- Yuvarlak baş

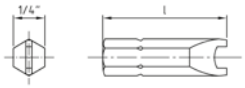
- *Sheet thread*
- *Two hole drive*
- *Pan head*

Ürün 9109
İki delikli tahrik için emniyet Bit uçları

Item 9109
Security bits for two hole drive

Art. 9109
CV



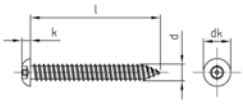


Art. 9110 A2

Ürün 9110 A2
Düz yuvarlak başlı emniyet cıvataları, allen + pin

Item 9110 A2
Button head security screws hex socket drive + pin





d	
	Ürün no./*Item no.*

- Sac dişi
- Allen + Pim
- Yassı yuvarlak baş

- *Sheet thread*
- *ISK + PIN*
- *Button head*

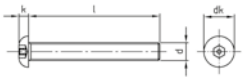
Ürün 9111 A2
Düz yuvarlak başlı emniyet cıvataları, allen + pin

Item 9111 A2
Button head security screws hex socket drive + pin

Art. 9111 A2

d	M
	Ürün no./*Item no.*





- Metrik diş
- Allen + Pim
- Yassı yuvarlak baş

- *Metric thread*
- *ISK + PIN*
- *Button head*

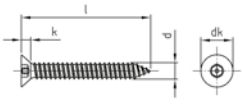
ART

Art. 9112 A2

Ürün 9112 A2
Havşa başlı emniyet cıvataları, allen + pin

Item 9112 A2
CSK head security screws hex socket drive + pin





d	
	Ürün no./*Item no.*

- Sac dişi
- Allen + Pim
- Havşa baş

- *Sheet thread*
- *ISK + PIN*
- *Countersunk head*

ART

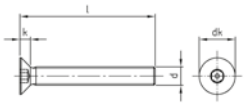
Ürün 9113 A2
Havşa başlı emniyet cıvataları, allen + pin

Item 9113 A2
CSK head security screws hex socket drive + pin

Art. 9113
A2

d	M
	Ürün no./*Item no.*





- Metrik diş
- Allen + Pim
- Havşa baş

- *Metric thread*
- *ISK + PIN*
- *Countersunk head*

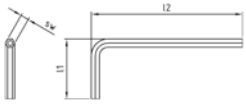
ART

Art. 9118
CV

Ürün 9118
Allen pimli tahrik için emniyet dirsekli anahtarlar

Item 9118
Security wrenches for hexagon socket drive + pin





l1	l2	Boyutu *Drive size*	Ürün nosu *Item Number*	
20,5	58,5	SW 2	91182	1
	58,5	SW 2,5	911825	1
22,5	63,5	SW 1/8"	911818	1
23	66	SW 3	91183	1
29	74	SW 4	91184	1
33	85	SW 5	91185	1
38	96	SW 6	91186	1

- İki tarafta delikler
- *Hole on both sides*

Ürün 9119
Allen pim tahriki için emniyet Bit uçları

Item 9119
Security bits for hexagon socket drive + pin

Art. 9119
CV





- 1/4" altı köşe

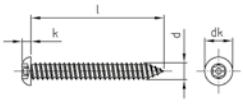
- 1/4" hexagon

Art. 9120 A2

Ürün 9120 A2
Düz yuvarlak başlı emniyet cıvataları, torks + pin

Item 9120 A2
Button head security screws with six lobe drive + pin





d	
	Ürün no./*Item no.*

- Sac dişi
- Torks + Pim
- Yassı yuvarlak baş

- *Sheet thread*
- *ISR + PIN*
- *Button head*

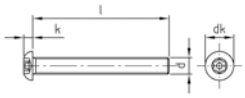
Ürün 9121 A2
Düz yuvarlak başlı emniyet cıvataları, torks + pin

Item 9121 A2
Button head security screws with six lobe drive + pin

Art. 9121 A2

d	M
	Ürün no./*Item no.*





- Metrik diş
- Torks + Pim
- Yassı yuvarlak baş

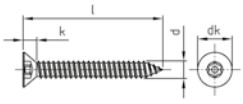
- *Metric thread*
- *ISR + PIN*
- *Button head*

Art. 9122 A2

Ürün 9122 A2
Havşa başlı emniyet cıvataları, torks + pin

Item 9122 A2
CSK head security screws with six lobe drive + pin





d	
	Ürün no./*Item no.*

- Sac diş
- Torks + Pim
- Havşa baş

- *Sheet thread*
- *ISR + PIN*
- *Countersunk head*

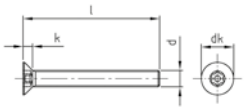
Ürün 9123 A2
Havşa başlı emniyet cıvataları, torks + pin

Item 9123 A2
CSK head security screws with six lobe drive + pin

Art. 9123 A2

d	M
	Ürün no./*Item no.*





- Metrik diş
- Torks + Pim
- Havşa baş

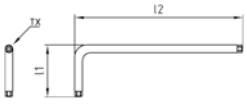
- *Metric thread*
- *ISR + PIN*
- *Countersunk head*

Art. 9128
CV

Ürün 9128
Torks pimli tahrik için emniyet dirsekli anahtarlar

Item 9128
Security wrenches for six lobe drive + pin





- İki tarafta delikler

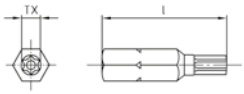
- *Hole on both sides*

Ürün 9129
Torks pim tahriki için emniyet Bit uçları

Item 9129
Security bits for six lobe drive + pin

Art. 9129
CV





- 1/4" altı köşe

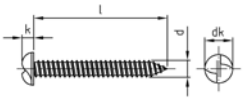
- 1/4" hex

Art. 9130 A2

Ürün 9130 A2
Bombe başlı emniyet cıvataları, tek taraflı

Item 9130 A2
Pan head security screws with oneway drive





d	
	Ürün no./*Item no.*

- Sac dişi
- Tek yönlü tahrik
- Yarı yuvarlak baş

- *Sheet thread*
- *Oneway drive*
- *Pan head*

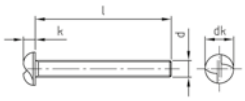
Ürün 9131 A2
Bombe başlı emniyet cıvataları, tek taraflı

Item 9131 A2
Pan head security screws with oneway drive

Art. 9131 A2

d	M
	Ürün no./*Item no.*





- Metrik diş
- Tek yönlü tahrik
- Yarı yuvarlak baş

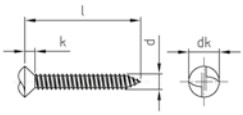
- *Metric thread*
- *Oneway drive*
- *Pan head*

Art. 9132
A2

Ürün 9132 A2
Mercimek havşa başlı emniyet cıvataları, tek taraflı

Item 9132 A2
Raised CSK head security screws with oneway drive





d	
	Ürün no./*Item no.*

- Sac dişi
- Tek yönlü tahrik
- Mercimek havşa başı

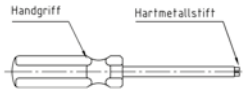
- *Sheet thread*
- *Oneway drive*
- *Raised countersunk head*

Ürün 9139
Tek yönlü vidalar için emniyet vidası sökme aleti

Item 9139
One way screw remover

Art. 9139
CV



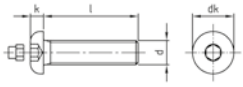


Art. 9140 A2

Ürün 9140 A2
Düz yuvarlak başlı emniyet cıvataları, tapalı allen

Item 9140 A2
Hexagon socket button head screws with plug





d	M
	Ürün no./*Item no.*

- Metrik diş
- Tapalı allen
- Yassı yuvarlak baş

- *Metric screws*
- *ISK with plug*
- *Button head*

ART

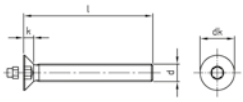
Ürün 9141 A2
Havşa başlı emniyet cıvataları, tapalı allen

Item 9141 A2
Hexagon socket CSK head security screws with plug

Art. 9141 A2

d	M
	Ürün no./*Item no.*





- Metrik diş
- Tapalı allen
- Havşa baş

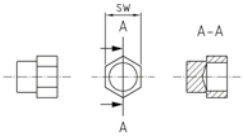
- *Metric thread*
- *ISK with plug*
- *Countersunk head*

Art. 9145 A1

Ürün 9145 A1
Allen tahriki için emniyet tapaları

Item 9145 A1
Security plugs for hexagon socket drive





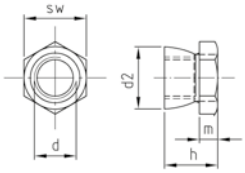
ART

Ürün 9150 A2
ayrılıkçı fındık

Item 9150 A2
breakaway nuts

Art. 9150
A2



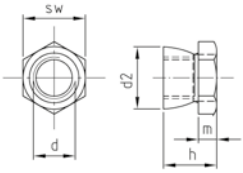


Art. 9150 A4

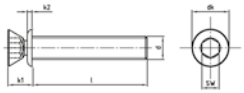
Ürün 9150 A2 ayrılıkçı fındık

Item 9150 A4 breakaway nuts







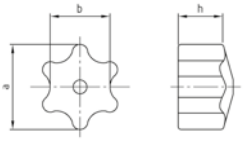


Art. 9156
çinko

Ürün 9156 Zn
Torks tahriki için emniyet yıldızları

Item 9156 Zn
Security stars for six lobe drive





- Çinko-Basınçlı döküm
- Açılamayan bağlantı

- *Die-cast zinc*
- *Insoluble connection*

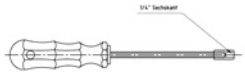
ART

Ürün 9159
El tipi tornavida, manyetik

Item 9159
Magnetic hand screwdriver for bits

Art. 9159





- 1/4" altı köşe

- 1/4" Hex

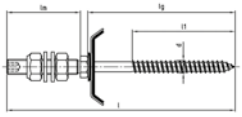
ART

Art. 9182
A2

Ürün 9182 A2 tip A DS
Sivri uçlu ve contalı güneş paneli, 19 mm

Item 9182 A2 type A DS
Solar fastener with point and sealing washer 19 mm







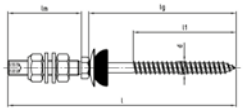
ART

Ürün 9182 A2 tip A FZD
Sivri uçlu ve fiber contalı güneş paneli tespit

Item 9182 A2 type A FCS
Solar fastener with point and umbrella washer

Art. 9182
A2







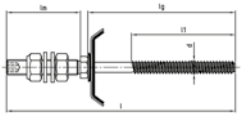
ART

Art. 9182
A2

Ürün 9182 A2 tip BZ DS
Konik uçlu ve contalı güneş paneli, 19 mm

Item 9182 A2 type BZ DS
Solar fastener cone point and sealing washer 19 mm







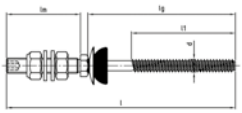
ART

Ürün 9182 A2 tip BZ FZD
Konik uçlu ve fiber contalı güneş paneli tespit

Item 9182 A2 type BZ FCS
Solar fastener with cone point and umbrella washer

Art. 9182
A2







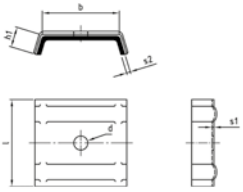
ART

Art. 9183
Alüminyum

Ürün 9183 Alu-blank 17° / 40 mm
Semerler, EPDM contalı Tip H

Item 9183 Aluminium 17° / 40 mm
Saddle washers with EPDM seal type H





- Malzeme: EPDM contalı alüminyum
- Yüzey: parlak
- Uygulama: polyester çatı kaplamasının yüksek boncuk montajı için
- Tasarım: Çeşitli trapez sac şekilleri için

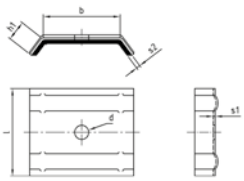
- *Material: aluminium with EPDM seal*
- *Surface: uncoated*
- *Use: for fitting raised beads on polyester roof*
- *Versions: for various cap shapes*

Ürün 9183 Alu-blank 36° / 40 mm
Semerler, EPDM contalı Tip I

Item 9183 Aluminium 36° / 40 mm
Saddle washers with EPDM seal type I

Art. 9183
Alüminyum





- Malzeme: EPDM contalı alüminyum
- Yüzey: parlak
- Uygulama: polyester çatı kaplamasının yüksek boncuk montajı için
- Tasarım: Çeşitli trapez sac şekilleri için

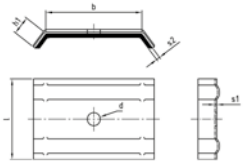
- *Material: aluminium with EPDM seal*
- *Surface: uncoated*
- *Use: for fitting raised beads on polyester roof*
- *Versions: for various cap shapes*

Art. 9183
Alüminyum

Ürün 9183 Aluminium 32° / 54 mm Semerler, EPDM contalı Tip M

Item 9183 Aluminium 32° / 54 mm
Saddle washers with EPDM seal type M





- Malzeme: EPDM contalı alüminyum
- Yüzey: parlak
- Uygulama: polyester çatı kaplamasının yüksek boncuk montajı için
- Tasarım: Çeşitli trapez sac şekilleri için

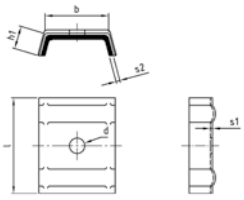
- *Material: aluminium with EPDM seal*
- *Surface: uncoated*
- *Use: for fitting raised beads on polyester roof*
- *Versions: for various cap shapes*

Ürün 9183 Aluminium 15° / 25 mm Semerler, EPDM contalı Tip O

Item 9183 Aluminium 15° / 25 mm Saddle washers with EPDM seal type O

Art. 9183 Alüminyum





- Malzeme: EPDM contalı alüminyum
- Yüzey: parlak
- Uygulama: polyester çatı kaplamasının yüksek boncuk montajı için
- Tasarım: Çeşitli trapez sac şekilleri için

- *Material: aluminium with EPDM seal*
- *Surface: uncoated*
- *Use: for fitting raised beads on polyester roof*
- *Versions: for various cap shapes*

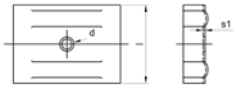
Art. 9183
Alüminyum

Art. 9183 Aluminium 48° / 33 mm Semerler, EPDM contalı Tip T

Item 9183 Aluminium 48° / 33 mm
Saddle washers with EPDM seal type T







- Malzeme: EPDM contalı alüminyum
- Yüzey: parlak
- Uygulama: polyester çatı kaplamasının yüksek boncuk montajı için
- Tasarım: Çeşitli trapez sac şekilleri için

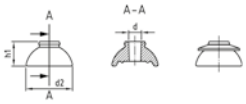
- *Material: aluminium with EPDM seal*
- *Surface: uncoated*
- *Use: for fitting raised beads on polyester roof*
- *Versions: for various cap shapes*

Ürün 9184 A2 + EPDM 8,4X25
Fiber contalar

Item 9184 A2 + EPDM 8,4X25
Umbrella washers with black EPDM

Art. 9184
A2





- Paslanmaz çelik diskli EPDM
- *EPDM with stainless steel washer*

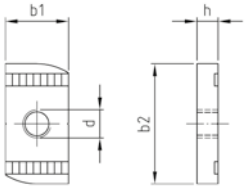
ART

Art. 9199 A2

Ürün 9199 A2
Kayıcı somunlar, Tip 41/41, kısmi dişli

Item 9199 A2
Sliding nuts type 41/41



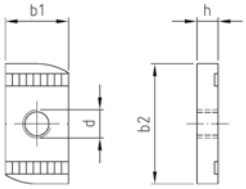


Ürün 9199 A4
Kayıcı somunlar, Tip 41/41, kısmi dişli

Item 9199 A4
Sliding nuts type 41/41

Art. 9199
A4



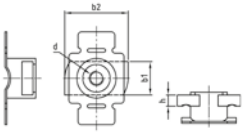


Art. 9199
A2

Ürün 6199 A2
Kayıcı somunlar, Tip 41/41, kısmi dişli, sabit. yardım.

Item 9199 A2
Sliding nuts type 41/41 partial serration and fixing help



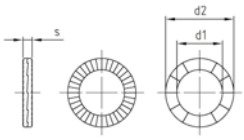


ART

Art. 9210 A4
Kama kilit pulları, dar

Item 9210 A4
Wedge lock washers, standard





- Twin-Lock

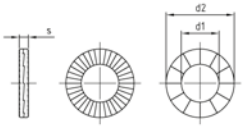
- Twin-Lock

Art. 9211
A4

Art. 9211 A4
Kama kilit pulları, geniş

Item 9211 A4
Wedge lock washers, large





- Twin-Lock

- Twin-Lock

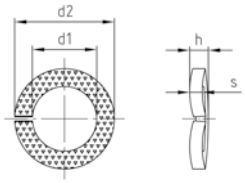
Art. 9215 1.4310
DIN 128'e benzer geçme halkalar

Item 9215 1.4310
Serrated curved spring lock washers

Art. 9215
A1

Alt. Norm
benzer DIN 128





- Engelleme kenarları
- Dönüşümlü olarak eğimli tel profili
- 135° - 150° arasında kamber apeksi
- 5 kez bükülmüş

- *Locking edges*
- *Wire profile inclined one way and then the other*
- *Peak of curve between 135° - 150°*
- *Wound in itself 5 times*

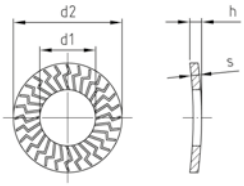
Art. 9217 M
A2

Alt. Norm
benzer NF E 25-511

Art. 9217 A2
Kilitleme diskleri M

Item 9217 A2
Serrated conical spring washers type M





- Tipi M
- Özel yüzey
- Yeniden kullanılabilir

- *Type M*
- *Special surface*
- *Reuseable*

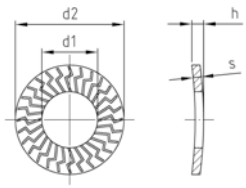
Art. 9217 A4
Kilitleme diskleri M

Item 9217 A4
Serrated conical spring washers type M

Art. 9217 M
A4

Alt. Norm
benzer NF E 25-511





- Tipi M
- Özel yüzey
- Yeniden kullanılabilir

- *Type M*
- *Special surface*
- *Reuseable*

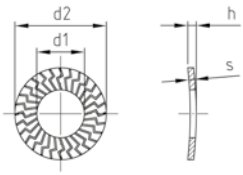
Art. 9219 S
A4

Alt. Norm
benzer NF E 25-511

Art. 9219 A4
Kilitleme diskleri S

Item 9219 A4
Serrated conical spring washers type S





- Tipi S
- Özel yüzey
- Yeniden kullanılabilir

- *Type S*
- *Special surface*
- *Reuseable*

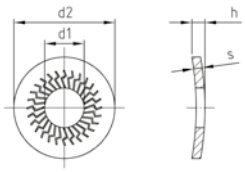
Art. 9221 A4
Kilitleme diskleri L

Item 9221 A4
Serrated conical spring washers type L

Art. 9221 L
A4

Alt. Norm
benzer NF E 25-511





- Tipi L
- Özel yüzey
- Yeniden kullanılabilir

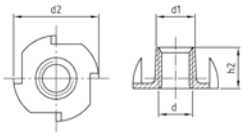
- *Type L*
- *Special surface*
- *Reuseable*

Art. 9260 A2

Art. 9260 A2
Çakma somun

Item 9260 A2
Drive-in nuts / T-Nuts





- Dönmeyi önleyici kilit olarak 4 tutma tırnağı

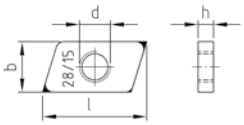
- 4 sharp knock with anti rotation

Ürün 9297 A2
Dişli plakalar

Item 9297 A2
Threaded plates

Art. 9297
A2





28/38, 28/28, 28/15, 28/12, 26/26 profilleri için

for profiles 28/38, 28/28, 28/15, 28/12, 26/26

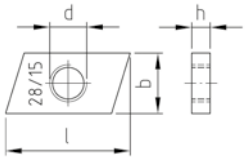
ART

Art. 9297 A2

Ürün 9297 A2 keskin kenarlı Dişli plakalar

Artikel 9297 A2 sharp-edged Threaded plates





- keskin kenarlı

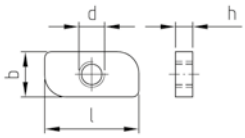
- sharp-edged

Item 9297 A2 according drawing
Dişli plakalar

Item 9297 A2 type 22X10,5X4
Threaded plates

Art. 9297
A2





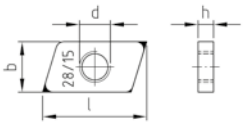
- çizime göre
- *according drawing*

Art. 9297 A4

Ürun 9297 A4 Dişli plakalar

Item 9297 A4
Threaded plates





28/38, 28/28, 28/15, 28/12, 26/26 profilleri için

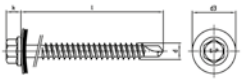
For profiles 28/38, 28/28, 28/15, 28/12, 26/26

Ürün 9504 SP-B2-2-6,0
Bimetal matkap uçlu vida

Item 9504 SP-B2-2-6,0
BI-Metal-Self drilling screws

Art. 9504
BI-Metal A2





- Bimetal - Özel bir kaynak yöntemi paslanmaz çelik vidasını sertleştirilmiş karbon çelik uçla birleştirmektedir
- Altı köşe tahrik - Optimum kuvvet aktarımı ve iyi bir görsellik için
- Hava koşullarına dayanıklı - Vulkanize edilmiş elastomerli paslanmaz çelik conta

- *BI-Metal - a special welding process joins the stainless steel screw to the hardened carbon steel tip*
- *Hex drive - an attractive solution for optimum power transmission*
- *Weatherproof - stainless steel sealing washer with vulcanised-on elastomer*

ETA - 12/0086

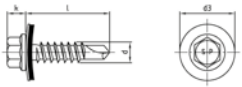
ART

Art. 9504
Bl-Metal A2

Ürün 9504 SP-B2-2H-5,5
Bimetal matkap uçlu vida

Item 9504 SP-B2-2H-5,5
Bl-Metal-Self drilling screws





- Bimetal - Özel bir kaynak yöntemi paslanmaz çelik vidasını sertleştirilmiş karbon çelik uçla birleştirmektedir
- Altı köşe tahrik - Optimum kuvvet aktarımı ve iyi bir görsellik için
- Hava koşullarına dayanıklı - Vulkanize edilmiş elastomerli paslanmaz çelik conta

- *Bl-Metal - a special welding process joins the stainless steel screw to the hardened carbon steel tip*
- *Hex drive - an attractive solution for optimum power transmission*
- *Weatherproof - stainless steel sealing washer with vulcanised-on elastomer*

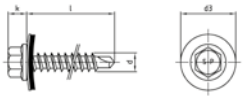
ETA - 12/0086

Ürün 9504 SP-B2-2-4,8
Bimetal matkap uçlu vida

Item 9504 SP-B2-2-4,8
BI-Metal-Self drilling screws

Art. 9504
BI-Metal A2





- Bimetal - Özel bir kaynak yöntemi paslanmaz çelik vidasını sertleştirilmiş karbon çelik uçla birleştirmektedir
- Altı köşe tahrik - Optimum kuvvet aktarımı ve iyi bir görsellik için
- Hava koşullarına dayanıklı - Vulkanize edilmiş elastomerli paslanmaz çelik conta

- *BI-Metal - a special welding process joins the stainless steel screw to the hardened carbon steel tip*
- *Hex drive - an attractive solution for optimum power transmission*
- *Weatherproof - stainless steel sealing washer with vulcanised-on elastomer*

ETA - 12/0086

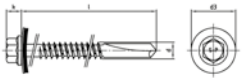
ART

Art. 9504
Bl-Metal A2

Ürün 9504 SP-B2-12-5,5
Bimetal matkap uçlu vida

Item 9504 SP-B2-12-5,5
Bl-Metal-Self drilling screws





- ETA-13/0178, U 75 mm'den itibaren geçerli
- Bimetal - Özel bir kaynak yöntemi paslanmaz çelik vidasını sertleştirilmiş karbon çelik uçla birleştirmektedir
- Altı köşe tahrik - Optimum kuvvet aktarımı ve iyi bir görsellik için
- Hava koşullarına dayanıklı - Vulkanize edilmiş elastomerli paslanmaz çelik conta

- *ETA-13/0178 valid from L 75 mm*
- *Bl-Metal - a special welding process joins the stainless steel screw to the hardened carbon steel tip*
- *Hex drive - an attractive solution for optimum power transmission*
- *Weatherproof - stainless steel sealing washer with vulcanised-on elastomer*

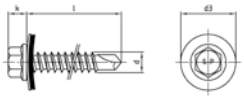
ETA - 12/0086
ETA - 13/0178

Ürün 9504 SP-B2-3-5,5
Bimetal matkap uçlu vida

Item 9504 SP-B2-3-5,5
BI-Metal-Self drilling screws

Art. 9504
BI-Metal A2





- Bimetal - Özel bir kaynak yöntemi paslanmaz çelik vidasını sertleştirilmiş karbon çelik uçla birleştirmektedir
- Altı köşe tahrik - Optimum kuvvet aktarımı ve iyi bir görsellik için
- Hava koşullarına dayanıklı - Vulkanize edilmiş elastomerli paslanmaz çelik conta

- *BI-Metal - a special welding process joins the stainless steel screw to the hardened carbon steel tip*
- *Hex drive - an attractive solution for optimum power transmission*
- *Weatherproof - stainless steel sealing washer with vulcanised-on elastomer*

ETA - 12/0086

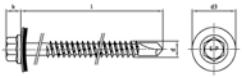
ART

Art. 9504
Bl-Metal A2

Ürün 9504 SP-B2-6-5,5
Bimetal matkap uçlu vida

Item 9504 SP-B2-6-5,5
Bl-Metal-Self drilling screws





- ETA-13/0178, U 75 mm'den itibaren geçerli
- Bimetal - Özel bir kaynak yöntemi paslanmaz çelik vidasını sertleştirilmiş karbon çelik uçla birleştirmektedir
- Altı köşe tahrik - Optimum kuvvet aktarımı ve iyi bir görsellik için
- Hava koşullarına dayanıklı - Vulkanize edilmiş elastomerli paslanmaz çelik conta

- *ETA-13/0178 valid from L 75 mm*
- *Bl-Metal - a special welding process joins the stainless steel screw to the hardened carbon steel tip*
- *Hex drive - an attractive solution for optimum power transmission*
- *Weatherproof - stainless steel sealing washer with vulcanised-on elastomer*

ETA - 12/0086
ETA - 13/0178

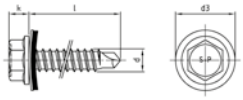
ART

Ürün 9504 SP-B2-2-6,3
Bimetal matkap uçlu vida

Item 9504 SP-B2-2-6,3
BI-Metal-Self drilling screws

Art. 9504
BI-Metal A2





- Bimetal - Özel bir kaynak yöntemi paslanmaz çelik vidasını sertleştirilmiş karbon çelik uçla birleştirmektedir
- Altı köşe tahrik - Optimum kuvvet aktarımı ve iyi bir görsellik için
- Hava koşullarına dayanıklı - Vulkanize edilmiş elastomerli paslanmaz çelik conta

- *BI-Metal - a special welding process joins the stainless steel screw to the hardened carbon steel tip*
- *Hex drive - an attractive solution for optimum power transmission*
- *Weatherproof - stainless steel sealing washer with vulcanised-on elastomer*

ETA - 12/0086

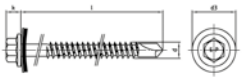
ART

Art. 9504
Bl-Metal A2

Ürün 9504 SP-B2-6-6,3
Bimetal matkap uçlu vida

Item 9504 SP-B2-6-6,3
Bl-Metal-Self drilling screws





- Bimetal - Özel bir kaynak yöntemi paslanmaz çelik vidasını sertleştirilmiş karbon çelik uçla birleştirmektedir
- Altı köşe tahrik - Optimum kuvvet aktarımı ve iyi bir görsellik için
- Hava koşullarına dayanıklı - Vulkanize edilmiş elastomerli paslanmaz çelik conta

- *Bl-Metal - a special welding process joins the stainless steel screw to the hardened carbon steel tip*
- *Hex drive - an attractive solution for optimum power transmission*
- *Weatherproof - stainless steel sealing washer with vulcanised-on elastomer*

CE
ETA - 12/0086

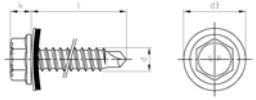
ART

Art. 9504 SP-B2-2-6,5
Bimetal matkap uçlu vida

Item 9504 SP-B2-2-6,5
Bi-Metal-Self drilling screws

Art. 9504
Bi-Metal A2





- Bimetal - Özel bir kaynak yöntemi paslanmaz çelik vidasını sertleştirilmiş karbon çelik uçla birleştirmektedir
- Altı köşe tahrik - Optimum kuvvet aktarımı ve iyi bir görsellik için
- Hava koşullarına dayanıklı - Vulkanize edilmiş elastomerli paslanmaz çelik conta

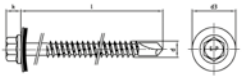
- *Bi-Metal - a special welding process joins the stainless steel screw to the hardened carbon steel tip*
- *Hex drive - an attractive solution for optimum power transmission*
- *Weatherproof - stainless steel sealing washer with vulcanised-on elastomer*

Art. 9504
Bl-Metal A4

Ürün 9504 SP-B4-6-5,5
Bimetal matkap uçlu vida

Item 9504 SP-B4-6-5,5
Bl-Metal-Self drilling screws





- ETA-13/0178, U 75 mm'den itibaren geçerli
- Bimetal - Özel bir kaynak yöntemi paslanmaz çelik vidasını sertleştirilmiş karbon çelik uçla birleştirmektedir
- Altı köşe tahrik - Optimum kuvvet aktarımı ve iyi bir görsellik için
- Hava koşullarına dayanıklı - Vulkanize edilmiş elastomerli paslanmaz çelik conta

- *ETA-13/0178 valid from L 75 mm*
- *Bl-Metal - a special welding process joins the stainless steel screw to the hardened carbon steel tip*
- *Hex drive - an attractive solution for optimum power transmission*
- *Weatherproof - stainless steel sealing washer with vulcanised-on elastomer*

ETA - 12/0086
ETA - 13/0178

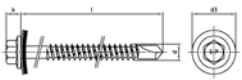
ART

Ürün 9504 SP-B4-6-6,3
Bimetal matkap uçlu vida

Item 9504 SP-B4-6-6,3
BI-Metal-Self drilling screws

Art. 9504
BI-Metal A4





- Bimetal - Özel bir kaynak yöntemi paslanmaz çelik vidasını sertleştirilmiş karbon çelik uçla birleştirmektedir
- Altı köşe tahrik - Optimum kuvvet aktarımı ve iyi bir görsellik için
- Hava koşullarına dayanıklı - Vulkanize edilmiş elastomerli paslanmaz çelik conta

- *BI-Metal - a special welding process joins the stainless steel screw to the hardened carbon steel tip*
- *Hex drive - an attractive solution for optimum power transmission*
- *Weatherproof - stainless steel sealing washer with vulcanised-on elastomer*

ETA - 12/0086

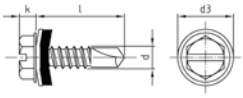
ART

Art. 9504
A2

Art. 9504 A2/CV slotted
Kayar gümüş kaplamalı bi-metal delme vidaları

Art. 9504 A2/CV slotted
BI-Metal-Self drilling screws with silver slide coating





d	4,2	4,8
l/mm	Ürün no./*Item no.*	Ürün no./*Item no.*
16	95042BL042 16	95042BL048 16
19	95042BL042 19	95042BL048 19
25		95042BL048 25

	500	500
d3	8.8	11
k	4.25	4.45
Boyutu *Drive size*	SW 7	SW 8

- Yuvalı dış altıgen
- Çinko pul kaplama Tuz püskürtme testi 1.000 saat
- EPDM sızdırmazlık diski Ø12mm

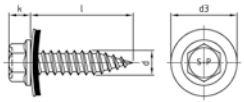
- *outer hex with slot*
- *Zinc flake coating salt spray test 1.000 hrs.*
- *EPDM sealing washer Ø12mm*

Ürün 9505 A2
Sızdırmazlık rondelalı BI-Metal ince sac vidaları

Item 9505 A2
BI-Metal thin sheet screw with washer

Art. 9505
BI-Metal A2





- %50 daha yüksek tutma kuvveti
- %50 zaman tasarrufu
- daha az sabitleme noktası gerekli olmaktadır
- neredeyse hiç delme talaşı oluşmamaktadır
- Avrupa Teknik Onayı ETA 23/1031

- *50% higher hold strengt*
- *50% of saving of time*
- *less connection points urgently*
- *nearly no drilling filings*
- *European Technical Assessment ETA 23/1031*

ETA - 23/1031

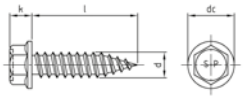
ART

Art. 9505
Bl-Metal A2

Ürün 9505 A2
Bl-Metal ince sac vidaları, sızdırmazlık pulu olmadan

Item 9505 A2
Bl-Metal thin sheet screw without washer





- %50 daha yüksek tutma kuvveti
- %50 zaman tasarrufu
- daha az sabitleme noktası gerekli olmaktadır
- neredeyse hiç delme talaşı oluşmamaktadır
- Avrupa Teknik Onayı ETA 23/1031

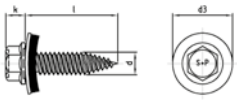
- *50% higher hold strengt*
- *50% of saving of time*
- *less connection points urgently*
- *nearly no drilling filings*
- *European Technical Assessment ETA 23/1031*

ETA - 23/1031

Art. 9506 A2
BI-Metal ince sac vidaları, sızdırmazlık rondelası ve ince adımlı diş ile

Item 9506 A2
Bi-Metal thin sheet screws with washer and fine thread





- Avrupa Teknik Onayı ETA 23/1031
- 50 daha yüksek tutma kuvveti
- 50 zaman tasarrufu
- daha az sabitleme noktası gerekir
- Neredeyse hiç delme talaşı yok
- ince iplik
- Avrupa Teknik Onayı ETA 23/1031

- *European Technical Assessment ETA 23/1031*
- *50% higher hold strengt*
- *50% of saving of time*
- *less connection points urgently*
- *nearly no drilling filings*
- *fine thread*
- *European Technical Assessment ETA 23/1031*

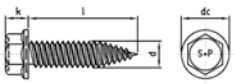
ETA - 23/1031

Art. 9506
Bl-Metal A2

Art. 9505 A2
İnce dişli Bl-Metal ince sac vidaları

Item 9506 A2
Bl-Metal thin sheet screw with fine thread





- Avrupa Teknik Onayı ETA 23/1031
- 50 daha yüksek tutma kuvveti
- 50 zaman tasarrufu
- daha az sabitleme noktası gerekir
- Neredeyse hiç delme talaşı yok
- ince iplik
- Avrupa Teknik Onayı ETA 23/1031

- *European Technical Assessment ETA 23/1031*
- *50% higher hold strengt*
- *50% of saving of time*
- *less connection points urgently*
- *nearly no drilling filings*
- *fine thread*
- *European Technical Assessment ETA 23/1031*

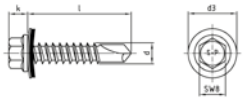
ETA - 23/1031

Ürün 9604 SP-A2-6-5,5
Altıgen başlı delme vidaları

Item 9604 SP-A2-6-5,5
Self-drilling screw

Art. 9604
A2





- Altı köşe tahrik - Optimum kuvvet aktarımı ve iyi görsellik için
- Hava koşullarına dayanıklı - Vulkanize edilmiş elastomerli paslanmaz çelik conta

- *Hex drive - an attractive solution for optimum power transmission*
- *Weatherproof - stainless steel sealing washer with vulcan-ised-on elastomer*

ETA - 12/0086

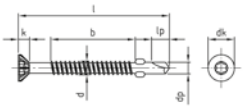
ART

Art. 9510
Bl-Metal A2

Ürün 9510 B2-3-4,2
Havşa başlı bimetal kanatlı matkap uçlu vidalar

Item 9510 SP-B2-3-4,2
Bl-Metal countersunk wing drilling screws





- Bimetal -Özel bir kaynak yöntemi paslanmaz çelik vidasını sertleştirilmiş karbon çelik uca bağlamaktadır
- Havşa baş
- Kanatlar - bunlar zorlamalı ileri itişi önlemektedir
- Freze dişleri
- Matkap ucu

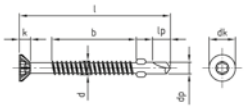
- *Bl-Metal - a special welding process joins the stainless steel screw to the hardened carbon steel tip*
- *countersunk head*
- *wing - these prevent a positive feed*
- *rips*
- *drill bit*

Ürün 9510 B2-4-4,8
Havşa başlı bimetal kanatlı matkap uçlu vidalar

Item 9510 SP-B2-4-4,8
BI-Metal countersunk wing drilling screws

Art. 9510
BI-Metal A2





- Bimetal -Özel bir kaynak yöntemi paslanmaz çelik vidasını sertleştirilmiş karbon çelik uca bağlamaktadır
- Havşa baş
- Kanatlar - bunlar zorlamalı ileri itişi önlemektedir
- Freze dişleri
- Matkap ucu

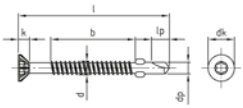
- *BI-Metal - a special welding process joins the stainless steel screw to the hardened carbon steel tip*
- *countersunk head*
- *wing - these prevent a positive feed*
- *rips*
- *drill bit*

Art. 9510
Bl-Metal A2

Ürün 9510 B2-6-5,5
Havşa başlı bimetal kanatlı matkap uçlu vidalar

Item 9510 SP-B2-6-5,5
Bl-Metal countersunk wing drilling screws





- Bimetal -Özel bir kaynak yöntemi paslanmaz çelik vidasını sertleştirilmiş karbon çelik uca bağlamaktadır
- Havşa baş
- Kanatlar - bunlar zorlamalı ileri itişi önlemektedir
- Freze dişleri
- Matkap ucu

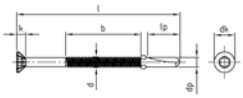
- *Bl-Metal - a special welding process joins the stainless steel screw to the hardened carbon steel tip*
- *countersunk head*
- *wing - these prevent a positive feed*
- *rips*
- *drill bit*

Ürün 9510 B2-12-5,5
Havşa başlı bimetal kanatlı matkap uçlu vidalar

Item 9510 SP-B2-12-5,5
BI-Metal countersunk wing drilling screws

Art. 9510
BI-Metal A2





- Bimetal -Özel bir kaynak yöntemi paslanmaz çelik vidasını sertleştirilmiş karbon çelik uca bağlamaktadır
- Havşa baş
- Kanatlar - bunlar zorlamalı ileri itişi önlemektedir
- Freze dişleri
- Matkap ucu

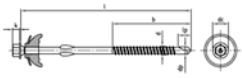
- *BI-Metal - a special welding process joins the stainless steel screw to the hardened carbon steel tip*
- *countersunk head*
- *wing - these prevent a positive feed*
- *rips*
- *drill bit*

Art. 9520 K A2

Ürün 9520 A2
Alti köse bas. kanat. del. vida., ely. conta 22 mm

Item 9520 A2 type K
Hexagon head self drilling wing screws, FCS 22mm





- Altıgen tahrik - Optimum güç aktarımı ve güzel görünüm için
- Paslanmaz çelik pullu FZD 22mm
- Uzay kanadı
- Matkap ucu

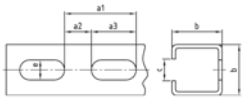
- *Hex drive - an attractive solution for optimum power transmission*
- *FCS 22mm*
- *wing - these prevent a positive feed*
- *drill bit*

Ürün 9550 A2
Montaj profili, delikli tip 28/28

Item 9550 A2
Mounting profile type 28/28

Art. 9550 A2



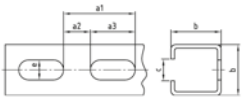


Art. 9550
A4

Ürün 9550 A4
Montaj profili, delikli tip 28/28

Item 9550 A4
Mounting profile type 28/28



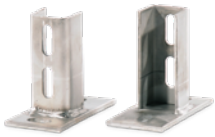


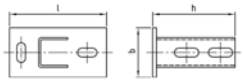
ART

Ürün 9551 A4
Profil tablası

Item 9551 A4
Profile base

Art. 9551
A4



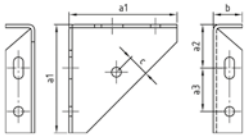


Art. 9552
A4

Ürün 9552 A4
Çerçeve dirseği

Item 9552 A4
Frame bracket





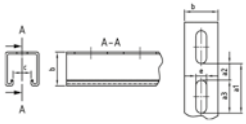
ART

Ürün 9560 A4
Montaj profili, delikli tipi 41/41

Item 9560 A4
Mounting profile type 41/41

Art. 9560
A4



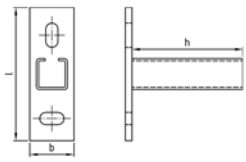


Art. 9570 A4

Ürün 9570 A4
Destek konsolu

Item 9570 A4
Support bracket type 28/28



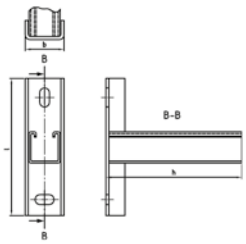


Ürün 9590 A4
Destek konsolu tipi 41/41

Item 9590 A4
Support bracket type 41/41

Art. 9590
A4



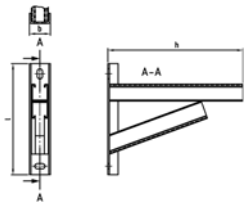


Art. 9592
A4

Ürün 9592 A4
Çapraz taşıyıcılı destek konsolu

Item 9592 A4
Support bracket type 41/41 with crossbeam





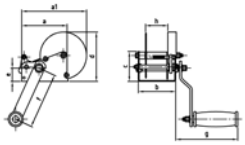
ART

Ürün 9597 A2
Konsol montajlı halatlı vinç

Item 9597 A2
Classic console-mounted winch

Art. 9597
A2



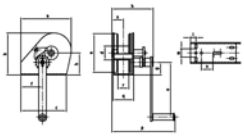


Art. 9598 A2

Ürün 9598 A2
Konsol montajlı halatlı vinç

Item 9598 A2
Premium console-mounted winch



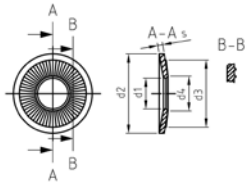


ART

NFE 25-511 A2
AFNOR kontak rondelaları, Tip L

NF E 25-511 A2
AFNOR serrated conical spring washers type L



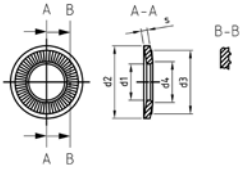


NF E 25-511 M A2

NFE 25-511 A2
AFNOR kontak rondelaları, Tip M

NF E 25-511 A2
AFNOR serrated conical spring washers type M





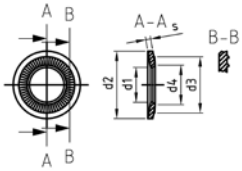
ART

NFE 25-511 A2
AFNOR kontak rondelaları, Tip S

NF E 25-511 A2
AFNOR serrated conical spring washers type S

NF E 25-511 S
A2





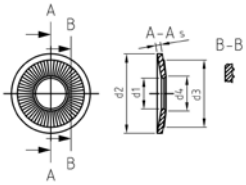
ART

NF E 25-511 L
A4

NFE 25-511 A4
AFNOR kontak rondelaları, Tip L

NF E 25-511 A4
AFNOR serrated conical spring washers type L





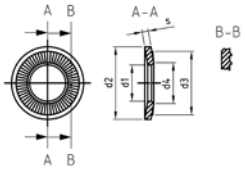
ART

NFE 25-511 A4
AFNOR kontak rondelaları, Tip M

NF E 25-511 A4
AFNOR serrated conical spring washers type M

NF E 25-511 M
A4





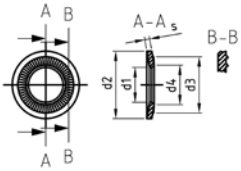
ART

NF E 25-511 S
A4

NFE 25-511 A4
AFNOR kontak rondelaları, Tip S

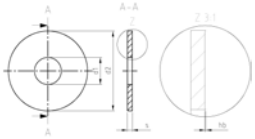
NF E 25-511 A4
AFNOR serrated conical spring washers type S





ART



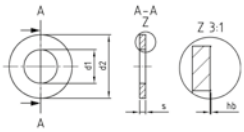


NF E 25-513 M A2

NFE 25-513 A2
AFNOR diskleri Form M

NF E 25-513 A2
AFNOR washers type M

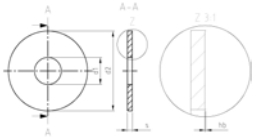




ART

NF E 25-513 A4
AFNOR washers type LL



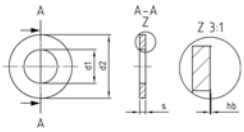


NF E 25-513 M A4

NF E 25-513 A4

NF E 25-513 A4
AFNOR washers type M



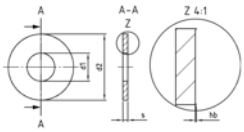


ART

NFE 25-514 A2
AFNOR rondelalar, Tip L

NF E 25-514 A2
AFNOR washers type L



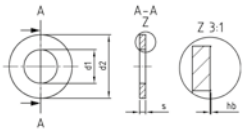


NF E 25-514 M A2

NFE 25-514 A2
AFNOR rondelalar, Tip M

NF E 25-514 A2
AFNOR washers type M





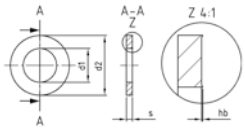
ART

NFE 25-514 A2
AFNOR rondelalar, Tip Z

NF E 25-514 A2
AFNOR washers type Z

NF E 25-514 Z
A2





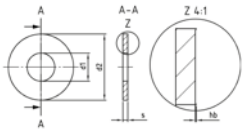
ART

NF E 25-514 L A4

NFE 25-514 A4
AFNOR rondelalar, Tip L

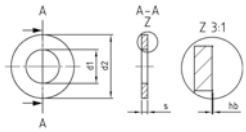
NFE 25-514 A4
AFNOR washers type L





ART



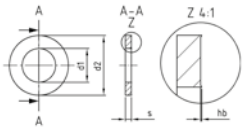

A
A
A–A
Z
Z 3:1
s
hb

NF E 25-514 Z A4

NFE 25-514 A4
AFNOR rondelalar, Tip Z

NFE 25-514 A4
AFNOR washers type Z





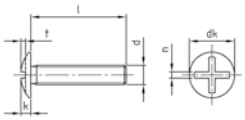
ART

NF E 25-129 A2
Büyük basli,düz yuvarlak basli vidalar,çift yarik

NF E 25-129 A2
Mushroom head bolts with large head, double slot

d	
	Ürün no./*Item no.*



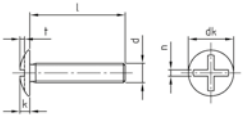


NF E 25-129 A4

NF E 25-129 A4
Büyük basli,düz yuvarlak basli vidalar,çift yarik

NF E 25-129 A4
Mushroom head bolts with large head, double slot





d	
	Ürün no./*Item no.*

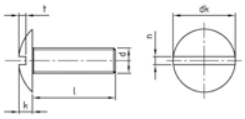
ART

NF E 27-128 A2
Geniş çaplı ve düz yarıklı düz yuvarlak başlı vidalar

NF E 27-128 A2
Slotted mushroom head screws

d	M
	Ürün no./*Item no.*



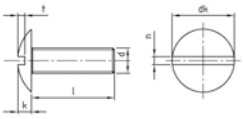


NF E 27-128
A4

NF E 27-128 A4
Geniş çaplı ve düz yarıklı düz yuvarlak başlı vidalar

NF E 27-128 A4
Slotted mushroom head screws



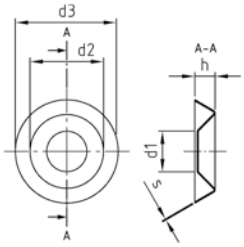


ART

Tas rondelalar, zımbalı

NF E 27-619 A2
Stamped cup washers



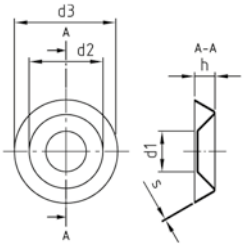


NF E 27-619

NF E 27-619 A4
Tas rondelalar, zımbalı

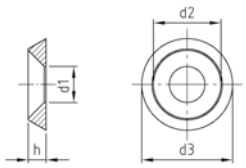
NF E 27-619 A4
Stamped cup washers





ART



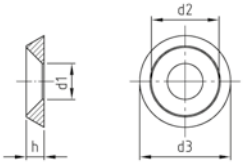

d2
d1
h
d3

NF E 27-619
A4

NF E 27-619 A4
Tas rondelalar, içi dolu metalden burgulu

NF E 27-619 A4
Turned cup washers





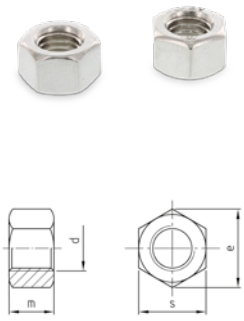
ART

UNI 5587 A2
Altıköşe somun

UNI 5587 A2
Hexagon nuts

UNI 5587
A2

Alt. Norm tarafından değiştirildi ISO 4033



ART

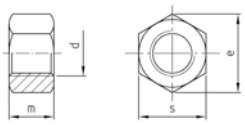
UNI 5587
A4

Alt. Norm tarafından değiştirildi ISO 4033

UNI 5587 A4
Altıköşe somun

UNI 5587 A4
Hexagon nuts





ART

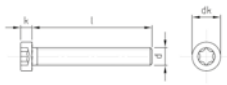
Art. 14580 A2
Silindir başlı cıvatalar, torks, ince kafalı, tırtıllı

Item 14580 A2
Hexalobular socket cheese head screws

Art. 14580 A2

Alt. Norm
eskiden DIN 7984







Competence in Stainless Steel

ART

TEKNIK BILGILER
TECHNICAL INFORMATION

EN

Teknik bilgiler
pas ve aside dayanıklı bağlantı elemanları

I. DIN - ISO standartları ve anlamları

a) Terim standardizasyonu
b) Standartların organizasyonu ve yayıncısı
► *Tab. 1 - Standartların çeşitliliği*
c) DIN standardı ne diyor?
d) Yüksek sıcaklıklarda paslanmaz çelik vidaların özellikleri
► *Tablo 2 - Standartlardaki değişikliklere genel bakış*
► *Tab. 3 - Altıgen cıvata ve somunlarda yapılan değişiklikler*
► *Tab. 4 - Altıgen cıvata ve somunların boyutlarındaki değişiklikler*
► *Tab. 5 - Küçük metrik vidalarda yapılan değişiklikler*
► *Tab. 6 - Pimlerde ve cıvatalarda yapılan değişiklikler*
► *Tab. 7 - Kendinden kılavuzlu vidalarda yapılan değişiklikler*
► *Tab. 8 - Vidalı millerde yapılan değişiklikler*
► *Tab. 9 - Teknik teslimat koşulları ve temel standartlar1*

II. Paslanmaz çeliğin mekanik özellikleri

a) ISO'ya göre östenitik çelik grubunun tanımlama sistemi
► *Tablo 10 - Yaygın paslanmaz çelikler ve bileşimleri*
b) Paslanmaz çelik vidaların mukavemetinin sınıflandırılması
► *Tab. 11 - DIN EN ISO 3506-1'den alıntı*
c) Şaft cıvataları için akma noktası yükleri
► *Tab. 12 - Şaft cıvataları için akma noktası yükleri*
d) Yüksek sıcaklıklarda paslanmaz çelik vidaların özellikleri
► *Tab. 13 - Güç sınıfı 70*
e) Sıkma torkları ve sürtünme katsayıları için referans değerler
► *Tab. 14 - Sıkma torkları için referans değerler*
► *Tablo 15 - Paslanmaz ve aside dayanıklı çelikten yapılmış vidalar için sürtünme katsayıları μG ve μK*
► *Tab. 16 - Paslanmaz çelik cıvata ve somunlar için sürtünme katsayıları μG ve μK*
f) Östenitik paslanmaz çeliğin manyetik özellikleri

III. A2 ve A4 paslanmaz çeliğin korozyon direnci

a) Dış pas ve oluşumu
b) Stres korozyon çatlaması
c) Yüzey aşındırıcı korozyon
d) Çukur korozyonu
e) İletişim korozyonu
f) A2 ve A4 ile birlikte aşındırıcı medya
► *Tab. 17 - A2 ve A4'ün kimyasal direncine genel bakış*
► *Tab. 18 - Farklı gruplarda direnç derecesinin sınıflandırılması*

IV. Ağustos 2020 tarihli Z-30.3-6 sayılı bina yetkilisi onayından alıntı "Paslanmaz çelikten mamul ürünler, bağlantı elemanları ve bileşenler"

► *Tablo 19 - Çelik kalitelerinin mukavemet sınıflarına ve korozyon direnci sınıflarına göre sınıflandırılması*
► *Tab. 20 - Atmosfere maruz kalma için malzeme seçimi*
► *Tab. 21 - DIN EN ISO 3506 bölüm 1 ve 2'ye göre çelik gruplarına atama ile bağlantı elemanları için çelik kaliteleri ve bölüm 2.2.2'ye göre etiketleme ve maksimum nominal çaplar*

V. Paslanmaz vida ve somunların etiketlenmesi

Pas ve aside dayanıklı bağlantı elemanları hakkında teknik bilgiler

EN

I. DIN - ISO standartları ve anlamları

a) Terim standardizasyonu

"Standardizasyon" terimi, standartlaÇtırılmıÇ bileÇenlerin birbirleriyle değiÇtirilebilmeleri nedeniyle daha kolay çalıÇılabilir olmalarını ifade etmektedir. Bu, standartlaştırılmış parçaların temel özelliklerinin merkezi bir kurum tarafından tanımlanmasını ve üreticiler ve perakendeciler tarafından kullanılmasını gerektirir.

b) Standartları yayınlayan kuruluşlar ve yayıncılar Tablo 1: Standartların çeşitliliği

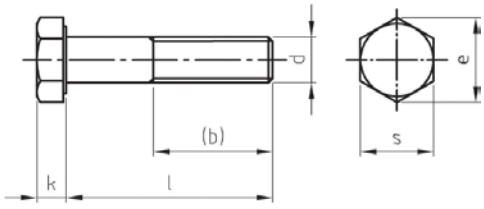
Standart	Bilgi
DIN standardı	Yayıncı: Alman Standardizasyon Enstitüsü = ulusal, Alman standardı Bağlantı elemanlarının yanı sıra, elektrikli bileşenler veya organizasyonel yöntemler için de DIN standartları yayınlanmaktadır. DIN standartları Almanya'da hala "yaygındır", ancak ISO standartlarına geçiş geçerli olacaktır. DIN standartları, ISO/EN'ye göre standardize edilmemiş veya standardizasyona ihtiyaç duyulmayan parçalar için var olmaya devam edecektir.
ISO standardı	Yayıncı: ISO (Uluslararası Standardizasyon Örgütü). = uluslararası standart "ISO" terimi Yunanca "eşit" kelimesinden gelmektedir. ISO standartları dünya çapında geçerlidir ve bu nedenle küresel ticarette kullanıma uygundur. ISO standardizasyonu giderek daha önemli hale gelse de, Alman DIN standardı uzun süre küresel standart olmuştur.
EN standardı	Yayınlayan: Avrupa Standardizasyon Komitesi = Avrupa standardı EN'nin amacı Avrupa iç ticareti için "eşit bir oyun alanı" yaratmaktı. ISO standartlarının aksine EN standartları sadece Avrupa Birliği içerisinde geçerlidir. CEN, EN ve ISO standartları arasında standart özdeşliği yaratmaya çalışmaktadır. Prensip olarak, mevcut ISO standartları EN ISO standart numarası ile EN standartları olarak değiştirilmeden kabul edilmelidir. Eğer Avrupa standardizasyon düzeyinde bu mümkün değilse, ISO'dan farklı EN standart numaraları ile bağımsız EN standartları oluşturulur.
DIN-EN-Standart	= değişmemiş bir EN standardının ulusal Almanca baskısı standartların bir karışımıdır, yani standart numarası (örneğin 12345) hem DIN standardında hem de EN standardında aynı nesneyi belirtir.
DIN-EN-ISO standardı	= değişmemiş bir EN standardının ulusal Almanca baskısı Bu, standartların bir karışımıdır, yani standart numarası (örneğin 12345) DIN standardında, EN standardında ve ISO standardında aynı nesneyi belirtir.
DIN-ISO-EN	= Değişmemiş bir ISO standardının Ulusal Almanca baskısı.

c) DIN standardı ne diyor?

Her standart gibi DIN standardı da standardizasyon ve basitlik getirir. Örneğin, çok sayıda özelliği belirtmek için bir talepte bulunurken "DIN 933, M12 x 40, A4-70" demek yeterlidir. Bu, bir ürün için gereklilikleri kontrol etmenin her zaman gerekli olmadığı ve müşterinin tam olarak sipariş ettiği ürünleri alacağından emin olabileceği anlamına gelir.

Standartlar aşağıdaki özelliklerden en az birini tanımlar:

Kafa şekli (örn. dış altıgen, iç altıgen, yükseltilmiş havşa başlı) Diş
tipi (örn. ISO metrik standart diş M, sac metal diş) Diş
uzunluğu
İplik aralığı
Malzeme ve mukavemet sınıfı
Olası kaplamalar veya mukavemet özellikleri



b = Dişi başa kadar uzanmayan vidalar için diş uzunluğu (kısmi dişli vidalar)

d = mm cinsinden diş çapı

e = baştaki köşe

boyutu k = baş

yüksekliği

l = vidanın nominal uzunluğu - bir vidanın uzunluğunun nasıl ölçüldüğünü de gösterir.

S = anahtar genişliği

Bir örnek, aşağıdaki bilgilerle neyin ifade edildiğini açıklamalıdır:

DIN 931, M 12 x 40, A4-70

DIN 931	=	Şaftlı altıgen başlı vida
M	=	metrik ISO dişi
12	=	d... 12 mm vidanın diş çapı
X 40	=	l... mm cinsinden nominal uzunluk
A4	=	Malzeme sınıfı, paslanmaz çelik A4
- 70	=	Güç sınıfı 70
P	=	Diş aralığı bir sayı ile gösterilir. Bu sayı eksikse, standart bir diş gösterilir. (M 12 x 40). Hatve sadece farklı bir standart dişe sahip vidalar için belirtilir, örneğin M 12 x 1 x 40 standart bir dişi belirtir.

d) Standartlardaki değişim (DIN > EN > ISO)

Daha önceki DIN standartları sadece Alman standardizasyon düzenlemeleri olarak kabul edilirken, EN ve ISO standartları artık Avrupa ve küresel düzeyde uygulamaya konulmuştur. Birçok ISO standardı DIN standartlarına göre modellenmiştir; ancak birçok standart sadece ISO standardı ile tanıtılmıştır (örneğin ISO 7380). Ticaretteki değişim, DIN ve ISO ürünlerinin yan yana üretilmesiyle sorunsuz bir şekilde gerçekleşmektedir.

Tablo 2: Standartlarda yapılan değişikliklere genel bakış:

DIN →
(Karşılaştırmalı karşılaştırma)

ISOISO → DIN
(Karşılaştırmalı karşılaştırma)

DIN	ISO	DIN	ISO	DIN	ISO	ISO	DIN	ISO	DIN	ISO	DIN
1	2339	916	4029	1481	8752	1051	660/661	4036	439	8673	934
7	2338	931	4014	6325	8734	1207	84	4161	6923	8673	971
84	1207	933	4017	6914	7412	1234	94	4762	912	8673	971-1
85	1580	934	4032	6915	7414	1479	7976	4766	551	8674	971-2
94	1234	934	8673	6916	7416	1481	7971	7038	937	8676	961
125	7089	937	7038	6921	1665	1482	7972	7040	982	8677	603
125	7090	960	8765	6923	1661	1483	7973	7040	6924	8733	7979
126	7091	961	8676	6924	7041	1580	85	7042	980	8734	6325
417	7435	963	2009	6925	7042	2009	963	7042	6925	8735	7979
427	2342	964	2010	6926	1663	2010	964	7045	7985	8736	7978
433	7092	965	7046	7343	8750	2338	7	7046	965	8737	7977
438	7436	966	7047	7343	8751	2339	1	7047	966	8738	1440
439-1	4036	971-1	8673	7344	8748	2341	1434	7049	7981	8740	1473
439-2	4035	971-2	8674	7346	13337	2341	1444	7050	7982	8741	1474
440	7094	980	7042	7971	1481	2342	427	7051	7983	8742	1475
551	4766	980	10513	7972	1482	2936	911	7072	11024	8744	1471
553	7434	982	7040	7973	1483	3266	580	7089	125	8745	1472
555	4034	982	10512	7976	1479	4014	931	7090	125	8746	1476
558	4018	985	10511	7977	8737	4016	601	7091	126	8747	1477
580	3266	1434	2341	7978	8736	4017	933	7092	433	8748	7344
601	4016	1440	8738	7979	8733	4018	558	7093	9021	8749	7346
603	8677	1444	2341	7979	8735	4026	913	7094	440	8750	7343
660	1051	1471	8744	7981	7049	4027	914	7412	6914	8751	7343
661	1051	1472	8745	7982	7050	4028	915	7414	6915	8752	1481
911	2936	1473	8740	7983	7051	4029	916	7416	6916	8765	960
912	4762	1474	8741	7985	7045	4032	934	7434	553	10642	7991
913	4026	1475	8742	7991	10642	4032	932	7435	417	10511	985
914	4027	1476	8746	9021	7093	4034	555	7436	438	10512	982
915	4028	1477	8747	11024	7072	4035	439	8102	6921	10513	980

6-ct. anahtar genişlikleri	DIN	ISO
M 10	17 mm	16 mm
M 12	19 mm	18 mm
M 14	22 mm	21 mm
M 22	32 mm	34 mm

Tablo 3: Altı köşe başlı cıvata ve somunlarda yapılan değişiklikler

DIN	ISO → (DIN ISO)	EN (DIN EN)	Boyut aralığı[1]	Değişiklikler[2]
558	**4018**	24018	Ø M 10, 12, 14, 22	Yeni ISO anahtar boyutları
931	**4014**	24014		
933	**4017**	24017		
960	**8765**	28765	diğer tüm Ø	yok = DIN ve ISO aynıdır
961	**8676**	28676		
601	**4016**	24016	Ø M 10, 12, 14, 22	Vidalar: yeni ISO anahtar genişlikleri Somunlar: yeni ISO-SW + ISO yükseklikleri
m. Mu. 555	m. Mu. 4034	24034		
28030	**4014**	24014	M 39'a kadar diğer Ø	Vidalar: yok = DIN ve ISO aynı Somunlar: yeni ISO yükseklikleri
m. Mu. 555	m. Mu. 4032	24032	M 39 üzerinden diğer	yok = DIN ve ISO aynıdır
561	-	-	Ø M 12, 16	Yeni ISO anahtar boyutları
564	-	-	diğer tüm Ø	Hiçbiri
609	-	-	Ø M 10, 12, 14, 22	Yeni ISO anahtar boyutları
610	-	-	diğer tüm Ø	Hiçbiri
7968 Mu	Schrb: -	-	M 12, 22	Vidalar: yeni ISO anahtar boyutları
7990 Mu	Mu. acc. ISO 4034	24034		Somunlar: yeni ISO-SW + ISO yükseklikleri
			diğer tüm Ø	Vidalar: yok Fındık: yeni ISO zirveleri
186/261 **525** **603** **604**	Schrb: - Mu. acc. ISO	24034	Ø M 10, 12, 14, 22	Vidalar: yok Somunlar: yeni ISO-SW + ISO yükseklikleri
605 **607** **608** **7969** **11014**			diğer tüm Ø	Vidalar: yok Fındık: yeni ISO zirveleri
439 T1 (A = eğimsiz)	**4036**	24036	Ø M 10, 12, 14, 22	Yeni ISO anahtar genişlikleri (yükseklikte değişiklik yok)
439 Tz (B = eğimli)	**4035** = Standart ağırlık	24035	diğer tüm Ø	yok = DIN ve ISO aynı (yükseklikte değişiklik yok)
	8675 = İnce ağırlık.	28675		
555	**4034** (ISO tip 1)	24034	Ø M 10, 12, 14, 22	yeni ISO-SW + yeni ISO yükseklikleri
934 6, 8, 10. Yol	**4032** = Standart ağırlık (ISO tip 1)	24032		
Fkl. 12	**4033** = Standart ağırlık (ISO tip 2)	24033	M 39'a kadar diğer Ø	Yeni ISO yükseklikleri (SW değişikliği yok)
Fkl. 6, 8, 10	= İnce ağırlık. (ISO tip 1)	28673	Ø M 39 üzerinden	DIN ve ISO aynı değil
557	-	-	Ø M 10, 12, 14, 22	Yeni ISO anahtar boyutları
917	-	-		
935	-	-		

Devam Tab. 3: Altıgen cıvata ve somunlarda yapılan değişiklikler,

DIN	ISO → (DIN ISO)	EN (DIN EN)	Boyut aralığı[1]	Değişiklikler[2]
986	-	-	diğer tüm Ø	Hiçbiri
1587	-	-		

[1] Anahtar genişliklerinin ve somun yüksekliklerinin karşılaştırılması DIN: ISO bkz. tablo C
[2] Standartların atanması, çelik somunlar için mekanik özellikler tablo C'ye bakınız

Tablo 4: Altıgen cıvata ve somunlar için boyut değişiklikleri

Nominal boyut d	Daireler arası genişlik s		Somun yüksekliği m min-maks			
kaçınılması gereken boyutlar	DIN	ISO	DIN 555	ISO 4034 ISO tip 1	DIN 934	ISO 4032 (RG) 8673 (FG) ISO tip 1
M 1	2,5	-	-	0,55-0,8	-	-
M 1,2	3		-	-	0,75-1	-
M 1,4	3		-	-	0,95-1,2	-
M 1,6	3,2		-	-	1,05-1,3	1,05-1,3
M 2	4		-	-	1,35-1,6	1,35-1,6
M 2,5	5		-	-	1,75-2	1,75-2
M 3	5,5		-	-	2,15-2,4	2,15-2,4
(M 3,5)	6		-	-	2,55-2,8	2,55-2,8
M 4	7		-	-	2,9-3,2	2,9-3,2
M 5	8		3,4-4,6	4,4-5,6	3,7-4	4,4-4,7
M 6	10		4,4-5,6	4,6-6,1	4,7-5	4,9-5,2
(M 7)	11		-	-	5,2-5,5	-
M 8	13		5,75-7,25	6,4-7,9	6,14-6,5	6,44-6,8
M 10	17	16	7,25-8,75	8-9,5	7,64-8	8,04-8,4
M 12	19	18	9,25-10,75	10,4-12,2	9,64-10	10,37-10,8
(M 14)	22	21	-	12,1-13,9	10,3-11	12,1-12,8
M 16	24		12,1-13,9	14,1-15,9	12,3-13	14,1-14,8
(M 18)	28		-	15,1-16,9	14,3-15	15,1-15,8
M 20	30		15,1-16,9	16,9-19	14,9-16	16,9-18
(M 22)	32	34	17,1-18,9	18,1-20,2	16,9-18	18,1-19,4
M 24	36		17,95-20,05	20,2-22,3	17,7-19	20,2-21,5
(M 27)	41		20,95-23,05	22,6-24,7	20,7-22	22,5-23,8
M 30	46		22,95-25,05	24,3-26,4	22,7-24	24,3-25,6
(M 33)	50		24,95-27,05	27,4-29,5	24,7-26	27,4-28,7
M 36	55		27,95-30,05	28-31,5	27,4-29	29,4-31
(M 39)	60		29,75-32,25	31,8-34,3	29,4-31	31,8-33,4
M 42	65		32,75-35,25	32,4-34,9	32,4-34	32,4-34
(M 45)	70		34,75-37,25	34,4-36,9	34,4-36	34,4-36
M 48	75		36,75-39,25	36,4-38,9	36,4-38	36,4-38
(M 52)	80		40,75-43,25	40,4-42,9	40,4-42	40,4-42
M 56	85		43,75-46,25	43,4-45,9	43,4-45	43,4-45
(M 60)	90		46,75-49,25	46,4-48,9	46,4-48	46,4-48
M 64	95		49,5-52,5	49,4-52,4	49,1-51	49,1-51
> M 64	-		M 100 x 6'ya kadar	-	M 160 x 6'ya kadar	-/-

Devamı Tab. 4: Altıgen cıvata ve somunların boyutlarındaki değişiklikler

Nominal boyut d	Daireler arası genişlik s		Somun yüksekliği m min-maks			
Kaçınılması gereken boyutlar	**DIN**	**ISO**	**DIN**	**ISO**	**DIN**	**ISO**
			555	4034	934	4032 (RG)
						8673 (FG)
				ISO tip 1		ISO tip 1
Anne yükseklik faktörü	**m**	≤ M 4	-	-		0,8
	d yaklaşık.	M 5-M 39	0,8	0,83-1,12	0,8	0,84-0,93
		≥ M 42		~ 0,8		0,8
Ürün sınıfı			C (kaba)		≤ M 16 = A (orta) > M 16 = B (orta kaba)	
İplik toleransı			7 H		6 H	
Mukavemet sınıfı çelik		Çekirdek alan	5		6, 8,10	
		~ M 5-39	**M 16 < d ≤ M 39 = 4,5**		(ISO 8673 = Fkl. 10 ≤ M 16)	
		> M 39	anlaşmaya göre		anlaşmaya göre	
Standartlara göre mekanik özellikler			DIN 267	ISO 898	DIN 267	ISO 898
			Bölüm 4	Bölüm 2	Bölüm 4	Bölüm 2 (RG)
						Bölüm 6 (FG)

Tablo 5: Küçük metrik vidalarda yapılan değişiklikler

DIN (eski)	ISO	DIN (yeni veya DIN EN)	Başlık	Değişiklikler
84	1207	DIN EN 21207	Oluklu kapak vidaları; ürün sınıfı A (ISO 1207: 1992)	kısmi baş yüksekliği ve -çap
85	1580	DIN EN 21580	Yuvalı düz başlı vidalar; ürün sınıfı A	kısmi baş yüksekliği ve -çap
963	2009	DIN EN 22009	Yuvalı havşa başlı vidalar, form A	kısmi baş yüksekliği ve -çap
964	2010	DIN EN 22010	Yuvalı havşa başlı vidalar, form A	kısmi baş yüksekliği ve -çap
965	7046-1	DIN EN 27046-1	Çapraz girintili havşa başlı vidalar (standart başlı): Ürün sınıfı A, özellik sınıfı 4.8	kısmi baş yüksekliği ve -çap
965	7046-2	DIN EN 27046-2	Çapraz girintili havşa başlı vidalar (standart başlı): Ürün sınıfı A, özellik sınıfı 4.8	kısmi baş yüksekliği ve -çap
966	7047	DIN EN 27047	Çapraz yuvalı havşa başlı pan başlı vidalar (standart başlı): Ürün sınıfı A	kısmi baş yüksekliği ve -çap
7985	7045	DIN EN 27045	Çapraz girintili düz başlı vidalar; ürün sınıfı A	kısmi baş yüksekliği ve -çap

Tablo 6: Pim ve cıvatalarda yapılan değişiklikler

DIN (eski)	ISO	DIN (yeni veya DIN EN)	Başlık	Değişiklikler
1	2339	DIN EN 22339	Konik pimler; sertleştirilmemiş (ISO 2339: 1986)	Uzunluk l kretler dahil
7	2338	DIN EN 22338	Paralel pimler; sertleştirilmemiş (ISO 2338: 1986)	Uzunluk l kretler dahil
1440	8738	DIN EN 28738	Cıvatalar için pullar; ürün sınıfı A (ISO 8738: 1986)	Kısmi dış çap
1443	2340	DIN EN 22340	Başsız cıvata (ISO 2340: 1986)	Bahsetmeye değer bir şey yok
1444	2341	DIN EN 22341	Başlı cıvata (ISO 2341: 1986)	Bahsetmeye değer bir şey yok
1470	8739	DIN EN 28739	Uçlu silindirik yivli pimler (ISO 8739: 1986)	Artan kesme kuvvetleri
1471	8744	DIN EN 28744	Konik yivli pimler (ISO 8744: 1986)	Artan kesme kuvvetleri
1472	8745	DIN EN 28745	Dübel pimleri	Artan kesme kuvvetleri
1473	8740	DIN EN 28740	Pahlı silindirik yivli dübel pimleri (ISO 8740: 1986)	Artan kesme kuvvetleri
1474	8741	DIN EN 28741	Fiş pimleri (ISO 8741: 1986)	Artan kesme kuvvetleri
1475	8742	DIN EN 28742	Çentikli tommy pimleri - uzunluğun 1/3'ü kadar çentikli (ISO 8742: 1986)	Artan kesme kuvvetleri
1476	8746	DIN EN 28746	Yarım daire çentikli çiviler (ISO 8746: 1986)	kayda değer bir şey yok
1477	8747	DIN EN 28747	Havşa başlı dübel çivileri (ISO 8747: 1986)	Bahsetmeye değer bir şey yok
1481	8752	DIN EN 28752	Dübel pimleri; oluklu (ISO 8752: 1987)	kayda değer bir şey yok
6325	8734	DIN EN 28734	Paralel pimler; sertleştirilmiş (ISO 8734: 1987)	kayda değer bir şey yok
7977	8737	DIN EN 28737	Dişli pimli konik pimler; sertleştirilmemiş (ISO 8737: 1986)	kayda değer bir şey yok
7978	8736	DIN EN 28736	İç dişli konik pimler; sertleştirilmemiş (ISO 8736: 1986)	kayda değer bir şey yok
7979	8733	DIN EN 28733	İç dişli paralel pimler; sertleştirilmemiş (ISO 8733: 1986)	kayda değer bir şey yok
7979	8735	DIN EN 28735	İç dişli paralel pimler; sertleştirilmiş (ISO 8735: 1987)	kayda değer bir şey yok

Tablo 7: Kendinden kılavuzlu vidalarda yapılan değişiklikler

DIN (eski)	ISO	DIN (yeni veya DIN EN)	Başlık	Değişiklikler
7971	1481	DIN ISO 1481	Yuvalı düz başlı kılavuz vidalar (ISO 1481: 1983)	kısmi baş yüksekliği ve - çap
7972	1482	DIN ISO 1482	Yuvalı, havşa başlı kılavuz çekme vidaları	kısmi baş yüksekliği ve - çap
7973	1483	DIN ISO 1483	Yuvalı, havşa başlı kılavuz çekme vidaları	kısmi baş yüksekliği ve - çap
7976	1479	DIN ISO 1479	Altıgen başlı kendinden kılavuzlu vidalar	Kısmi kafa yüksekliği
7981	7049	DIN ISO 7049	Çapraz girintili kılavuz vidalar, pan başlı	kısmi baş yüksekliği ve - çap
7982	7050	DIN ISO 7050	Çapraz girintili, havşa başlı sac metal vidalar	kısmi baş yüksekliği ve - çap
7983	7051	DIN ISO 7051	Çapraz girintili, havşa başlı sac metal vidalar	kısmi baş yüksekliği ve - çap

Tablo 8: Vidalı millerde yapılan değişiklikler

DIN (eski)	ISO	DIN (yeni veya DIN EN)	Başlık	Değişiklikler
417	7435	DIN EN 27435	Oluklu ve diş açılmış vidalar (ISO 7431: 1983)	kayda değer bir şey yok
438	7436	DIN EN 27436	Fincan uçlu oluklu vidalar (ISO 7436: 1983)	kayda değer bir şey yok
551	4766	DIN EN 24766	Konik başlı oluklu vidalar (ISO 4766: 1983)	Bahsetmeye değer bir şey yok
553	7434	DIN EN 27434	Uçlu oluklu vidalar (ISO 7431: 1983)	Bahsetmeye değer bir şey yok
913	4026	DIN 913	Altıgen soketli ve konik başlı saplama vidaları	Bahsetmeye değer bir şey yok
914	4027	DIN 914	Uçlu altıgen soket ayar vidaları	Bahsetmeye değer bir şey yok
915	4028	DIN 915	Altıgen soketli ve tanglı saplama vidaları	Bahsetmeye değer bir şey yok
916	4029	DIN 916	Altıgen soketli ve çanak uçlu ayar vidaları	kayda değer bir şey yok

Tablo 9: Teknik teslim koşulları ve temel standartlar

DIN (eski)	ISO	DIN (yeni veya DIN EN)	Başlık	Değişiklikler
267 Bölüm 20	-	DIN EN 493	Bağlantı elemanları, yüzey kusurları, somunlar	Hiçbiri
267 Bölüm 21	-	DIN EN 493	Bağlantı elemanları, yüzey kusurları, somunlar	Hiçbiri
DIN ISO 225	225	DIN EN 20225	Mekanik. Bağlantı elemanları, cıvatalar ve somunlar, boyutlandırma (ISO 225: 1991)	Hiçbiri
DIN ISO 273	273	DIN EN 20273	Mekanik. Bağlantı Elemanları Vidalar için delikler (ISO 273: 1991)	Hiçbiri
DIN ISO 898 Bölüm 1	898 1	DIN EN 20898 Bölüm 1	Mekanik. Bağlantı elemanları, vidaların özellikleri (ISO 898-1: 1988)	Hiçbiri
267 Bölüm 4	898 2	DIN ISO 898 Bölüm 2	Mekanik. Bağlantı elemanları, somun ve sabit test yüklerinin özellikleri Test yükleri (ISO 898-2: 1992)	Hiçbiri
DIN ISO 898 Bölüm 6	898 6	DIN EN 20898 Bölüm 6	Mekanik. Bağlantı elemanları, somun ve sabit test yüklerinin özellikleri Test yükleri (ISO 898-6: 1988)	Hiçbiri
267 Bölüm 19	6157-1	DIN EN 26157 Bölüm 1	Bağlantı elemanları, yüzey kusurları, genel gereksinimler için vidalar	Hiçbiri
267 Bölüm 19	6157-3	DIN EN 26157 Bölüm 3	(ISO 6157-1:1988)	Hiçbiri
DIN ISO 7721	7721	DIN EN 27721	Bağlantı elemanları, yüzey kusurları, genel gereksinimler için vidalar	Hiçbiri
267 Bölüm 9	-	DIN ISO 4042	(ISO 6157-3:1988)	Hiçbiri
267 Bölüm 1	-	DIN ISO 8992	Havşa başlı vidalar; havşa başlarının tasarımı ve testi	Hiçbiri
267 Bölüm 5	-	DIN ISO 3269	(ISO 7721: 1983)	Hiçbiri
267 Bölüm 11	-	DIN ISO 3506	Dişli parçalar - Galvanik kaplamalar	Hiçbiri
267 Bölüm 12	-	DIN EN ISO 2702	Vidalar ve somunlar için genel gereklilikler	Hiçbiri
267 Bölüm 18	8839	DIN EN 28839	Mekanik bağlantı elemanları - kabul testi	Hiçbiri
267 Bölüm 11	-	DIN ISO 3506	Paslanmaz çelik bağlantı elemanları - Teknik teslimat koşulları	Hiçbiri
267 Bölüm 12	-	DIN EN ISO 2702	Isıl işlem görmüş çelik kendinden kılavuzlu vida - Mekanik özellikler	Hiçbiri
267 Bölüm 18	8839	DIN EN 28839	Mekanik. Demir dışı metallerden yapılmış bağlantı elemanları, cıvatalar ve somunların özellikleri (ISO 8839:1986)	Hiçbiri

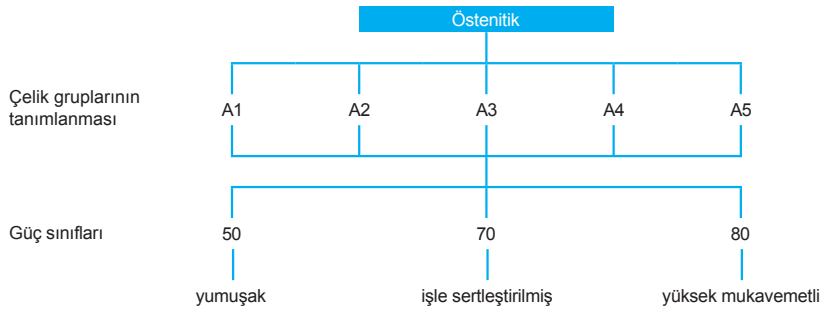
II. Paslanmaz çeliğin mekanik özellikleri

Paslanmaz çelikler üç çelik grubuna ayrılır - östenitik, ferritik ve martensitik - östenitik çelik en yaygın kullanılan ve en yaygın kullanılanıdır. Çelik grupları ve mukavemet sınıfları, örnekte gösterildiği gibi dört basamaklı bir harf ve rakam dizisi ile etiketlenir. DIN EN ISO 3506 ayrıca paslanmaz çelik cıvata ve somunları da düzenler.

Örnek:
A2 - 80
A = Östenitik çelik
2 = A grubu içindeki alaşım tipi
80 = Çekme mukavemeti en az 800 N/mm2, işle sertleştirilmiş

II.a) Paslanmaz çelik kaliteleri ve mukavemet sınıfları için tanımlama sistemi

Şekil A:



Tablo 10: Yaygın paslanmaz çelikler ve kimyasal bileşimleri

	Malzeme tanımı	Malzeme no.	C %	Si ≤ %	Mn ≤ %	Cr %	Mo %	Ni %	Altri %
A 2	X 5Cr Ni 1810	1.4301	≤ 0,07	1,0	2,0	17 19'a kadar	-	8,0 10, 5'e kadar	-
	X 2 Cr Ni 1811	1.4306	≤ 0,03	1,0	2,0	18,0 20. 0'a kadar	-	10,0 12. 0'a kadar	-
	X 8 Cr Ni 19/10	1.4303	≤ 0,12	0,75	2,0	17,0 19. 0'a kadar	-	11,0 13. 0'a kadar	-
A 3	X 6 Cr Ni Ti 1811	1.4541	≤ 0,10	1,0	2,0	17,0 19. 0'a kadar	-	9,0 12. 0'a kadar	Ti ≥ 5 X % C
A 4	X 5 Cr Ni Mo 1712	1.4401	≤ 0,07	1,0	2,0	16,5 18, 5'e kadar	2,0 2,5 'e kadar	10,0 13. 0'a kadar	-
	X 2 Cr Ni Mo 1712	1.4404 316L	≤ 0,03	1,0	2,0	16,5 18, 5'e kadar	2,0 2,5 'e kadar	10 13'e kadar	-
A 5	X 6 Cr Ni Mo Ti 1712	1.4571	≤ 0,10	1,0	2,0	16,5 18, 5'e kadar	2,0 2,5 'e kadar	10,5 13, 5'e kadar	Ti ≥ 5 X % C

II.b) Paslanmaz çelik vidaların mukavemetinin sınıflandırılması

DIN ISO 3506, bağlantı elemanları için önerilen çelik kalitelerini derlemiştir. Östenitik paslanmaz çelik A2 neredeyse sadece kullanılır. Ancak, A4 çelik grubundan krom-nikel çelikler çok yüksek korozyon gerilimleri için kullanılır. Tablo 11, östenitik çelikten yapılmış cıvatalı bağlantılar için mekanik mukavemet değerlerine dayanmaktadır.

Bağlantı elemanlarının mekanik özellikleri - Östenitik çelik kaliteleri

Tablo 11: DIN EN ISO 3506-1'den alıntı

Çelik grubu	Çelik sınıfı	Güç sınıfı	Vidalar		
			[1]Çekme dayanımı Rm) [2]N/mm min.	0,2 %- [1]Verim noktası RP 0,2) [2]N/mm min.	Kopma uzaması A2) mm min.
östenitik	A1, A2, A3 A4 ve A5	50	500	210	0,6 d
		70	700	450	0,4 d
		80	800	600	0,3 d

1) Çekme gerilimi, gerilme kesitine göre hesaplanır (bkz. DIN EN ISO 3506-1).

2) Kopma uzaması, işlenmiş numuneler üzerinde değil, vidanın ilgili uzunluğu üzerinde 7.2.4'e göre belirlenmelidir. d anma çapıdır.

II. c) Mil cıvataları için akma noktası yükleri

Östenitik krom-nikel çelikler sertleştirilemediğinden, daha yüksek bir akma dayanımı ancak soğuk şekillendirmenin (örn. ovalama) bir sonucu olarak ortaya çıkan iş sertleştirmesi ile elde edilebilir. Tablo 12, DIN EN ISO 3506 uyarınca şaft cıvataları için akma noktası yüklerini göstermektedir.

Tablo 12: Mil cıvataları için akma noktası yükleri

Nominal çap	DIN EN ISO 3506'ya göre östenitik çeliklerin akma noktası yükleri N'de A 2 ve A 4	
Güç sınıfı	50	70
M 5	2980	6390
M 6	4230	9060
M 8	7690	16480
M 10	12180	26100
M 12	17700	37920
M 16	32910	70510
M 20	51410	110200
M 24	74030	158700
M 27	96480	206800
M 30	117800	252300

II. d) Yüksek sıcaklıklarda paslanmaz çelik vidaların özellikleri

Tablo 13: Güç sınıfı 70

Nominal çap	N cinsinden sıcak akma dayanımı				
Güç sınıfı 70	+ 20 °C	+ 100 °C	+ 200 °C	+ 300 °C	+ 400 °C
M 5	6.390	5.432	5.112	4.793	4.473
M 6	9.045	7.688	7.236	6.784	6.332
M 8	16.740	14.000	13.176	12.353	11.529
M 10	26.100	22.185	20.880	19.575	18.270
M 12	37.935	32.245	30.348	28.451	26.555
M 16	70.650	60.053	56.520	52.988	49.455
M 20	110.250	93.713	88.200	82.688	77.175
M 24	88.250	75.013	70.600	66.188	61.775
M 27	114.750	97.538	91.800	86.063	80.325
M 30	140.250	119.213	112.200	105.188	98.175

DIN 17440 değerleri mukavemet sınıfı 50 için geçerlidir

II. e) Sıkma torkları için referans değerler

Östenitik paslanmaz çelikten yapılmış bağlantı elemanları, işleme sırasında optimum sıkma torku gerektirir. Bir kılavuz olarak, sürtünme katsayılarına bağlı olarak gerekli torku görebileceğiniz tablolar oluşturduk.

Ancak, tablolarda verilen değerlerin sadece kılavuz değerler olabileceği unutulmamalıdır, bkz VDI 2230.

Tablo 14a, sürtünme katsayılarını 0,10 ile 0,20 arasında tekrar kıran basitleştirilmiş bir versiyondur. Kullanılan yağlayıcıya bağlı olarak, kaplamalı vidaların sürtünme katsayısı 0,12 ile 0,18 arasında değişmektedir. Bu sürtünme katsayıları sadece yağlayıcıya bağlı olmadığından, torku belirlemek için çalışma koşulları altında bir test yapılması önemlidir.

Tab. 14a: DIN EN ISO 3506'ya göre vidaların sıkma torkları için basitleştirilmiş referans değerler (çoğunlukla kayar kaplamalı)

"Sürtünme katsayısı µges."	A2-70, A4-70 için sıkma torkları MA [Nm]							
	M4	M5	M6	M8	M10	M12	M16	M20
0,10	1,7	3,4	5,9	14,5	30,0	50,0	121,0	224,0
0,12	2,0	3,8	6,7	16,3	33,0	56,0	136,0	274,0
0,14	2,2	4,2	7,4	17,8	36,0	62,0	150,0	303,0
0,16	2,3	4,6	7,9	19,3	39,0	66,0	162,0	328,0
0,18	2,5	4,9	8,4	20,4	41,0	70,0	173,0	351,0
0,20	2,6	5,1	8,8	21,4	44,0	74,0	183,0	370,0

Tab. 14b: DIN EN ISO 3506'ya göre vidaların sıkma torkları için referans değerler

Sürtünme katsayısı µges. 0.10	Öngerme kuvvetleri Fvmax. [kN]			Sıkma torku MA [Nm]		
	50	70	80	50	70	80
M 3	0,9	1	1,2	0,85	1	1,3
M 4	1,08	2,97	3,96	0,8	1,7	2,3
M 5	2,26	4,85	6,47	1,6	3,4	4,6
M 6	3,2	6,85	9,13	2,8	5,9	8
M 8	5,86	12,6	16,7	6,8	14,5	19,3
M 10	9,32	20	26,6	13,7	30	39,4
M 12	13,6	29,1	38,8	23,6	50	67
M 14	18,7	40	53,3	37,1	79	106
M 16	25,7	55	73,3	56	121	161
M 18	32,2	69	92	81	174	232
M 20	41,3	88,6	118,1	114	224	325
M 22	50	107	143	148	318	424
M 24	58	142	165	187	400	534
M 27	75			328		
M 30	91			445		
M 33	114			506		
M 36	135			651		
M 39	162			842		

Tab. 14c: DIN EN ISO 3506'ya göre vidaların sıkma torkları için referans değerler

Sürtünme katsayısı µges. 0.20	Öngerme kuvvetleri Fvmax. [kN]			Sıkma torku MA [Nm]		
	50	70	80	50	70	80
M 3	0,6	0,65	0,95	1	1,1	1,6
M 4	1,12	2,4	3,2	1,3	2,6	3,5
M 5	1,83	3,93	5,24	2,4	5,1	6,9
M 6	2,59	5,54	7,39	4,1	8,8	11,8
M 8	4,75	10,2	13,6	10,1	21,5	28,7
M 10	7,58	16,2	21,7	20,3	44	58
M 12	11,1	23,7	31,6	34,8	74	100
M 14	15,2	32,6	43,4	56	119	159
M 16	20,9	44,9	59,8	86	183	245
M 18	26,2	56,2	74,9	122	260	346
M 20	33,8	72,4	96,5	173	370	494
M 22	41	88	118	227	488	650
M 24	47	101	135	284	608	810
M 27	61			502		
M 30	75			680		
M 33	94			779		
M 36	110			998		
M 39	133			1300		

Tab. 14d: DIN EN ISO 3506'ya göre vidaların sıkma torkları için referans değerler

Sürtünme katsayısı µges. 0.30	Öngerme kuvvetleri Fvmax. [kN]			Sıkma torku MA [Nm]		
	50	70	80	50	70	80
M 3	0,4	0,45	0,7	1,25	1,35	1,85
M 4	0,9	1,94	2,59	1,5	3	4,1
M 5	1,49	3,19	4,25	2,8	6,1	8
M 6	2,09	4,49	5,98	4,8	10,4	13,9
M 8	3,85	8,85	11	11,9	25,5	33,9
M 10	6,14	13,1	17,5	24	51	69
M 12	9	19,2	25,6	41	88	117
M 14	12,3	26,4	35,2	66	141	188
M 16	17	36,4	48,6	102	218	291
M 18	21,1	45,5	60,7	144	308	411
M 20	27,4	58,7	78,3	205	439	586
M 22	34	72	96	272	582	776
M 24	39	83	110	338	724	966
M 27	50			599		
M 30	61			809		
M 33	76			929		
M 36	89			1189		
M 39	108			1553		

Tab. 14e: DIN EN ISO 3506'ya göre vidaların sıkma torkları için referans değerler

Sürtünme katsayısı µges. 0.40	Öngerme kuvvetleri Fvmax. [kN]			Sıkma torku MA [Nm]		
	50	70	80	50	70	80
M 4	0,74	1,60	2,13	1,6	3,3	4,4
M 5	1,22	2,62	3,5	3,2	6,6	8,8
M 6	1,73	3,7	4,93	5,3	11,3	15,0
M 8	3,17	6,80	9,10	12,9	27,6	36,8
M 10	5,05	10,80	14,40	26,2	56,0	75,0
M 12	7,38	15,8	21,10	44,6	96,0	128,0
M 14	10,1	21,70	26,0	71,0	152,0	204,0
M 16	20,9	44,90	59,80	110	237	316
M 18	17,5	37,50	50,10	156	334	447
M 20	22,6	48,4	64,6	223	479	639
M 22	28,3			303		
M 24	32,6			385		
M 27	41,5			652		
M 30	50,3			881		
M 33	63,0			1013		
M 36	74,0			1296		
M 39	89,0			1694		

DIN 267 Bölüm 11'e göre sürtünme katsayıları µG ve µK

Tab. 15: Paslanmaz ve aside dayanıklı çelikten yapılmış vidalar için µG ve µK sürtünme katsayıları

Vida kapalı	Annemde n	µges. Yağlama koşulu için	
		yağlama olmadan	MoS2 macun/yağlayıcı
A 2 veya A 4	A 2 veya A 4	0,23 - 0,5	0,10 - 0,20
A 2 veya A 4	AlMgSi	0,28 - 0,35	0,08 - 0,16

Sürtünme katsayıları µges. dişte ve kafa veya somun desteğinin altında eşit bir sürtünme katsayısı olduğunu varsayar.

Tablo 16: Paslanmaz ve aside dayanıklı çelikten yapılmış vida ve somunlar için µG ve µK sürtünme katsayıları

Vida kapalı	Annemden	Yağlayıcı		Bağlantı esnekliği	Sürtünme katsayısı	
		başlıkta	başın altında		µG dizisinde	başın altında µK
A 2	A 2	olmadan	olmadan	Çok büyük	0,26 ila 0,50	0,35 ila 0,50
		Özel yağlayıcı (klorlu parafin bazlı)			0,12 ila 0,23	0,08 ila 0,12
		Korozyon önleyici gres			0,26 ila 0,45	0,25 ila 0,35
		olmadan	olmadan	küçük	0,23 ila 0,35	0,12 ila 0,16
		Özel yağlayıcı (klorlu parafin bazlı)			0,10 ila 0,16	0,08 ila 0,12
	AlMgSi	olmadan		Çok büyük	0,32 ila 0,43	0,08 ila 0,11
		Özel yağlayıcı (klorlu parafin bazlı)			0,28 ila 0,35	0,08 ila 0,11

Paslanmaz çelik bağlantı elemanları zaman zaman tutukluk yapma eğilimindedir. Bu durum sürtünme azaltıcı maddeler kullanılarak giderilebilir. Ancak bu durum sürtünme katsayılarında dikkate alınmalıdır.

II. f) Östenitik paslanmaz çeliğin manyetik özellikleri

Östenitik paslanmaz çeliklerden yapılan tüm bağlantı elemanları genellikle manyetik değildir; soğuk şekillendirmeden sonra belirli bir derecede mıknatıslanabilirlik mevcut olabilir.
Her malzeme, paslanmaz çelik için bile geçerli olan mıknatıslanma kabiliyeti ile karakterize edilir. Sadece vakumun tamamen manyetik olmaması muhtemeldir. Manyetik alandaki malzeme geçirgenliğinin ölçüsü, bu malzeme için vakuma göre manyetik geçirgenlik değeri µr'dir. Eğer µr değeri 1'e yakınsa malzeme düşük manyetik geçirgenliğe sahiptir.
Örnekler : A2: µr ~ 1.8 /A4 : µr ~ 1.015 /A4L : µr ~ 1.005 /AF1: µr ~ 5

Uluslararası malzeme karşılaştırması

W-No.	Kısa isim	AISI[1]	ABD[2]	SS[3]	AFNOR[4]	BS[5]
1.4006	X12Cr13	410		2302	Z 10 C 13	410 S 21
1.4016	X6Cr17	430		2320	Z 8 C 17	430 S 17
1.4301	X5CrNi18-10	304	S 30400	2332	Z 6 CN 18.09	304 S 15
1.4303	X10CrNiS18-9	305	S 30500	x	Z5CNI 8-11FF	305 S 17/19
1.4305	X 10 CrNiS 18-9	303	S 30300	2346	Z 8 CNF 18.09	304 S 31
1.4306	X 2 CrNi 19-11	304 L	S 30403	2352	Z 2 CN 18.10	304 S 11
1.4307	X2CrNi18-9	304L	S 30403			
1.4310	X 12 CrNi 17 7	301	S 30100	2331	Z 12 CN 18.08	301 S 22
1.4567	X3CrNiCu18-9-4	304	x	x	x	x
1.4541	X6CrNiTi18-10	321				
1.4401	X5CrNiMo17-12-2	316	S 31600	2347	Z 7 CND 17.02.02	316 S 31
1.4404	X2CrNiMo17-12-2	316 L	S 31603	2353	Z 3 CND 18.14.03	316 S 11
1.4578	X3CrNiCuMo17-11-3-2	x				
1.4571	X6CrNiMoTi17-12-2	316Ti	S 31635	2350	Z 6 CNDT 17.12	320 S 31
1.4439	X2CrNiMoN17-13-5	317 LMN	S 31726	2562	Z 1 NCDU 25.20	
1.4541	X6CrNiTi 18-10	321		2337	Z 6 CNT 18-10	x
1.4362	X2CrNiN32-4	2304				
1.4462	X2CrNiMoN22-5-3	2205	S 31600	2377	(Z 5 CNDU 21.08)	
1.4539	X1NiCrMoCu25-20-5	904 L	N 08904			
1.4565	X2CrNiMnMoNbN25-18-5-4	x				
1.4529	X1NiCrMoCuN25-20-7	x	N 08926			

1 AISI = Amerikan Demir ve Çelik Enstitüsü
2 UNS = Birleşik Numaralandırma Sistemi
3 SS = İsveç Standardı
4 AFNOR = Association Francaise de Normalisation
5 BS = İngiliz Standardı

ASTM = Amerikan Test ve Malzeme Derneği

III A2 ve A4'ün korozyon direnci

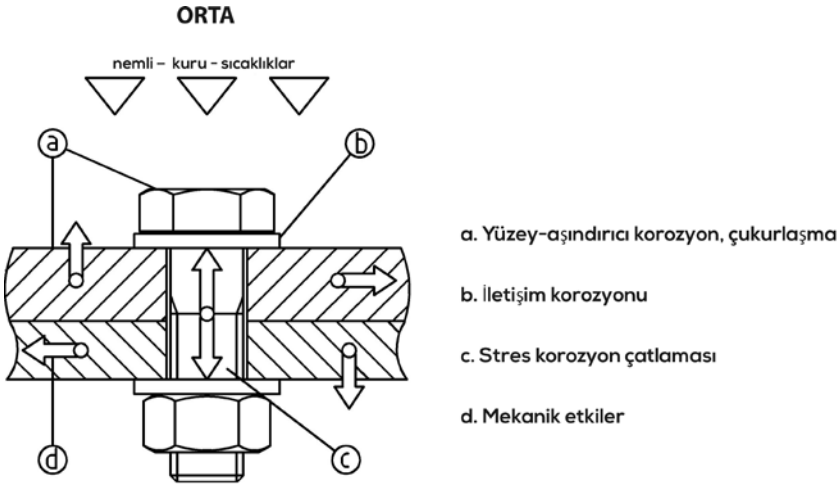
A2 ve A4 gibi östenitik paslanmaz çelikler, bileşenleri nedeniyle "aktif" korozyon koruması kategorisine girer.

Bu paslanmaz çelikler en az %16 krom (Cr) içermeli ve oksitleyici korozif maddelere karşı dirençli olmalıdır. Cr içeriğinin artırılması ve gerekirse nikel (Ni), molibden (Mo), titanyum (Ti) veya niyobyum (Nb) gibi diğer alaşım bileşenleri korozyon direncini artırır. Bu katkı maddeleri mekanik özellikleri de etkiler. Uygulamaya bağlı olarak bu durum dikkate alınmalıdır. Diğer alaşım bileşenleri sadece mekanik özellikleri, örneğin azotu (N) veya işlenebilirliği, örneğin sülfürü (S) iyileştirmek için eklenir.

Soğuk şekillendirme, bağlantı elemanlarında belirli bir mıknatıslanabilirliğe neden olabilir. Ancak genel olarak östenitik paslanmaz çelikler manyetik değildir. Ancak bu durum korozyon direncini etkilemez. İşle sertleştirme yoluyla mıknatıslanma, çelik parçanın bir mıknatısa yapışmasına kadar gidebilir.

Uygulamada, bir dizi farklı korozyon türünün meydana gelebileceği unutulmamalıdır. Paslanmaz çelikte en yaygın korozyon türleri aşağıdaki şekilde gösterilmiş ve aşağıda listelenmiştir:

Cıvatalı bağlantılarda en yaygın korozyon türlerinin gösterimi



Pas ve aside dayanıklı bağlantı elemanları hakkında teknik bilgiler

III. a) Dış pas ve oluşumu
Yapışan karbon çeliği parçacıkları ("normal çelik") paslanmaz çelik yüzeyinde yabancı pasa neden olur ve bu da oksijenin etkisiyle pasa dönüşür. Bu tür alanlar temizlenmez ve uzaklaştırılmazsa, bu pas östenitik paslanmaz çelik üzerinde elektrokimyasal çukur korozyonuna da neden olabilir.

Dış pasa örneğin şunlar neden olur
- Daha önce karbon çeliğinin işlendiği aletlerin kullanımı.
- Açılı taşlama makinesi veya taşlama tozu ile çalışırken veya kaynak işleri sırasında uçan kıvılcımlar.
- Paslanan nesnelerin paslanmaz çelik yüzeyle teması.
- Paslanmaz çelik yüzey üzerine pas geçirmiş su damlaması.

III. b) Gerilme korozyonu çatlaması
Kaynaktan kaynaklanan artık gerilmeler gerilme korozyonu çatlamasına yol açabilir. Bununla birlikte, kural olarak, gerilme korozyonu çatlaması, endüstriyel bir atmosferde, güçlü mekanik çekme ve eğilme gerilimi altında kullanılan bileşenlerde meydana gelir.
Östenitik çelikler, klor içeren bir atmosferde gerilme korozyonu çatlamasına karşı özellikle hassastır. Burada sıcaklığın etkisi büyüktür. Kritik sıcaklık 50 °C'dir.

III. c) Yüzey-aşındırıcı korozyon
Ablatif korozyon olarak da bilinen tek tip yüzey korozyonu, yüzeyin eşit bir şekilde aşınması ile karakterize edilir. Bu tür korozyon doğru malzemeler seçilerek önlenebilir.
Laboratuvar testlerine dayanarak, üreticiler çelik kalitelerinin farklı sıcaklıklarda ve konsantrasyonlarda ayrı ortamlardaki davranışları hakkında bilgi veren direnç tabloları yayınlamışlardır (bkz. Bölüm III f Tab.17 ve 18).

III. d) Çukur korozyonu
Çukur korozyonu, ek çukur ve delik oluşumuyla birlikte yoğun korozyon erozyonu ile karakterize edilir.

Pasif tabaka lokal olarak kırılır. Klor içeren aktif bir ortamla temas halindeki paslanmaz çelik durumunda, tek başına çukurlaşma da malzemede iğne benzeri girintilerle meydana gelir. Tortular ve pas da çukur korozyonu için başlangıç noktaları olabilir. Bu nedenle, tüm bağlantı elemanları kalıntıları ve tortuları gidermek için düzenli olarak temizlenmelidir. A2 ve A4 gibi östenitik çelikler, ferritik krom çeliklere göre çukurlaşmaya karşı daha dirençlidir.

III. e) Temas korozyonu
Farklı bileşimdeki iki bileşen metalik temas halinde olduğunda ve elektrolit formunda nem mevcut olduğunda, temas korozyonu meydana gelir. Daha az asil olan element saldırıya uğrar ve yok olur.

Temas korozyonunu önlemek için lütfen aşağıdaki noktalara dikkat edin:
- Bağlantının elektrolitik ortam ile temasından kaçının.
- z. Metaller, örneğin kauçuk, plastik veya boya ile izole edilmelidir, böylece temas noktasında temas akımı akamaz.
- Mümkünse eşit olmayan malzeme eşleştirmelerinden kaçının. Örneğin, cıvatalar, somunlar ve pullar birleştirilecek bileşenlerle eşleştirilmelidir.

III. f) A2 ve A4 ile bağlantılı olarak aşındırıcı ortam
Tablo 17 ve 18, çeşitli korozif ortamlarla birlikte A2 ve A4'ün direncine genel bir bakış sunmaktadır. Bu size karşılaştırma için optimum bir temel sağlar. Ancak, verilen değerlerin yalnızca bir kılavuz niteliğinde olduğu unutulmamalıdır.

Tablo 17: A2 ve A4'ün kimyasal direncine genel bakış

Saldırı araçları	Konsantrasyon	°C cinsinden sıcaklık	Direnç derecesi	
			A 2	A 4
Aseton	hepsi	hepsi	A 2	A 4
Etil eter	-	hepsi	A	A
Etil alkol	hepsi	20	A	A
Formik asit	10%	20 kaynama	A B	A B
Amonyak	hepsi	20 kaynama	A A	A A
Her türlü benzin	-	hepsi	A	A
Benzoik asit	hepsi	hepsi	A	A
Benzen	-	hepsi	A	A
Bira	-	hepsi	A	A
Hidrojen siyanür	-	20	A	A
Kan	-	20	A	A
Yapıştırıcı çözümü	-	98	A	A
"Klor: kuru. Gaz nemli gaz"	 - -	 20 hepsi	 A D	 A D
Kloroform	hepsi	hepsi	A	A
Kromik asit	"%10 saf 50 saf"	20 kaynar 20 kaynama	A C B D	A C B D
Geliştirici (photogr.)	-	20	A	A
Asetik asit	10%	20 kaynama	A A	A A
Yağ asidi	TEKNİK	150 180 200-235	A B C	A A A
Meyve suları	-	hepsi	A	A
Tanik asit	hepsi	hepsi	A	A
Gliserin	conc.	hepsi	A	A
Endüstriyel hava	-	-	A	A
Potasyum permanganat	10%	hepsi	A	A
Misket Limonu Sütü	-	hepsi	A	A
Karbondioksit	-	-	A	A
Bakır asetat	-	hepsi	A	A
Bakır nitrat	-	-	A	A
Bakır sülfat	hepsi	hepsi	A	A
Magnezyum sülfat	yaklaşık %26	hepsi	A	A
Deniz suyu	-	20	A	A
Metil alkol	hepsi	hepsi	A	A

Devam Tab. 17: A2 ve A4'ün kimyasal direncine genel bakış

Saldırı araçları	Konsantrasyon	°C cinsinden sıcaklık	Direnç derecesi	
			A 2	A 4
Laktik asit	1,5% 10%	hepsi 20 kaynama	A A C	A A A
Sodyum karbonat	soğuk doymuş	hepsi	A	A
Sodyum hidroksit	20% 50%	20 kaynar 120	A B C	A B C
Sodyum nitrat	-	hepsi	A	A
Sodyum perklorat	10%	hepsi	A	A
Sodyum sülfat	soğuk doymuş	hepsi	A	A
Meyve	-	-	A	A
Yağlar (mineral ve bitkisel)	-	hepsi	A	A
Oksalik asit	10% 50%	20 kaynar kaynar	B C D	A C C
Petrol	-	hepsi	A	A
Fenol	saf	kaynama	B	A
Fosforik asit	10% 50% 80% conc.	kaynar 20 kaynar 20 kaynar 20 kaynama	A A C B D B D	A A B A C A D
Merkür	-	50'ye kadar	A	A
Cıva nitrat	-	hepsi	A	A
Salisilik asit	-	20	A	A
Nitrik asit	40'a kadar 50% 90%	heps i 20 kaynar 20 kaynama	A A B A C	A A B A C
Hidroklorik asit	0,2% 2% 10'a kadar	20 50 20 50 20	B C D D D	B B D D D
1% Sülfürik asit	70'e kadar 2,5% 5% 10% 60%	B 70'e kadar kaynama 20'ye kadar kaynama > 70 20 70 hepsi	A B B C B C C D	 B A C A B B C D

Devam Tab. 17: A2 ve A4'ün kimyasal direncine genel bakış

Saldırı araçları	Konsantrasyon	°C cinsinden sıcaklık	Direnç derecesi	
			A 2	A 4
Sülfürlü asit	Sulu çözelti	20	A	A
Sülfür dioksit	-	100-500 900	C D	A C
Katran	-	Sıcak	A	A
Şarap	-	20 ve sıcak	A	A
Tartarik asit	10'a kadar 10'un üzerinde 50'ye kadar 75%	20 kaynar 20 kaynar kaynar	A B A C C	A A A C C
Limon suyu	-	20	A	A
Sitrik asit	10'a kadar 50%	heps i 20 kaynama	A A C	A A B
Şeker çözeltisi	-	hepsi	A	A

Tablo 18: Direnç derecesinin farklı gruplara sınıflandırılması

Direnç derecesi	Değerlendirme	G/m2h cinsinden ağırlık kaybı
A	tamamen dayanıklı	< 0,1
B	Pratik olarak dayanıklı	0,1 - 1,0
C	çok kararlı değil	1,0 - 10
D	dengesiz	> 10

IV. Ağustos 2020 tarihli Z-30.3-6 sayılı bina yetkilisi onayından alıntı "Paslanmaz çelikten mamul ürünler, bağlantı elemanları ve bileşenler"

Tablo 19: Çelik kalitelerinin mukavemet sınıflarına ve korozyon direnci sınıflarına göre sınıflandırılması

Hayır.	Çelik sınıfı[1]		Yapı[2]	[3]Mukavemet sınıfları ve ürün şekilleri[4]					[5]Korozyon direnç sınıfı[6]
	Kısa isim	W-No.		S 235	S 275	S 355	S 460	S 690	
1	X2CrNi12	1.4003	F	B, Ba, H, P	D, H, S, W	D, S	D, S	–	I / düşük
2	X6Cr17	1.4016	F	D, S, W	–	–	–	–	
3	X5CrNi18-10	1.4301	A	B, Ba, D, H, P, S, W	B, Ba, D, H, P, S	B, Ba, D, H, S	Ba, D, H, S	S	
4	X2CrNi18-9	1.4307	A	B, Ba, D, H, P, S, W	B, Ba, D, H, P, S	Ba, D, H, S	Ba, D, S	S	
5	X3CrNiCu18-9-4	1.4567	A	D, S, W	D, S	D, S	D, S	–	II / orta
6	X6CrNiTi18-10	1.4541	A	B, Ba, D, H, P, S, W	B, Ba, D H, P, S	Ba, D, H, S	Ba, D, H, S	–	
7	X2CrNiN18-7	1.4318	A	–	–	B, Ba, D, H, P, S	B, Ba, H	–	
8	X5CrNiMo17-12-2	1.4401	A	B, Ba, D, H, P, S, W	B, Ba, D, H, P, S	Ba, D, H, S	Ba, D, S	S	
9	X2CrNiMo17-12-2	1.4404	A	B, Ba, D, H, P, S, W	B, Ba, D, H, P, S	Ba, D, H, S	Ba, D, H, S	D, S	
10	X3CrNiCuMo17-11-3-2	1.4578	A	D, S, W	D, S	D, S	D, S	–	III / orta
11	X6CrNiMoTi17-12-2	1.4571	A	B, Ba, D, H, P, S, W	B, Ba, D, H, P, S	Ba, D, H, S	Ba, D, H, S	D, S	
12	X2CrNiHiMoN17-13-5	1.4439	A	–	B, Ba, D, H, S, W	–	–	–	
13	X2CrNiN23-4	1.4362	FA	–	–	–	B, Ba, D, S, W	D, S	
14	X2CrNiMN22-5-3	1.4462	FA	–	–	–	B, Ba, D, P, S, W	D, S	
15	X1NiCrMoCu25-20-5	1.4539	A	B, Ba, D, H, P, S, W	B, Ba, D, P, S	D, P, S	D, S	D, S	
16	X2CrNiMnMoNbN25-18-5-4	1.4565	A	–	–	–	B, Ba, D, S, W	–	IV / güçlü
17	X1NiCrMoCuN25-20-7	1.4529	A	–	B, D, S, W	B, D, H, P, S	D, P, S	D, S	
18	X1CrNiMoCuN20-18-7	1.4547	A	–	B, Ba	B, Ba	–	–	

1) DIN EN 10088-1:2005-09'a göre
2) A = östenit; F = ferrit; FA = ferrit-östenit (dubleks)
3) En düşük mukavemet sınıfını takip eden mukavemet sınıfları, soğuk şekillendirme yoluyla iş sertleştirmesi ile elde edilir.
4) B = sac metal; Ba = şerit ve bundan yapılmış levhalar; D = tel, çekilmiş; H = içi boş bölümler; P = profiller; S = çubuklar;
W = Tel çubuk
5) sadece çıplak metal yüzeyler için geçerlidir. Olası temas korozyonu durumunda, ana metal için bir risk söz konusudur.
6) gerekli korozyon direnci sınıfları için Tablo 11'e bakınız.

Tablo 20: Atmosfere maruz kalma için malzeme seçimi

Etki	Maruz kalma		Kriterler ve örnekler	Korozyon direnç sınıfı			
				I	II	III	IV
Nem, yıllık ortalama U nem oranı	SF0	kuru	U < 60%	X			
	SF1	Nadiren nemli	60% ≤ U < 80%	X			
	SF2	Genellikle nemli	80% ≤ U < 95%	X			
	SF3	Kalıcı olarak nemli	95% < U		X		
Çevrenin klorür içeriği, denize olan mesafe M, yol tuzu kullanılan yoğun yollara olan mesafe S	SC0	düşük	Ülke, Şehir, M > 10 km, S > 0.1 km	X			
	SC1	orta	Sanayi bölgesi, 10 km ≥ M > 1 km, 0,1 km ≥ S > 0,01 km		X		
	SC2	yüksek	M ≤ 1 km S ≤ 0,01 km			X[1]	
	SC3	Çok yüksek	Kapalı yüzme havuzları, yol tünelleri				X[2]
$_{2222}$Redoks etkili maddelere maruz kalma (örn. SO , HOCl, Cl , H O)	SR0	düşük	Ülke, şehir	X			
	SR1	orta	Endüstri			X[1]	
	SR2	yüksek	Kapalı yüzme havuzları, yol tünelleri				X[2]
Yüzeydeki pH değerleri	SH0	alkali (örn. beton ile temas)	9 < pH	X			
	SH1	Nötr	5 < pH ≤ 9	X			
	SH2	Hafif asidik (örn. ahşap ile temas)	3 < pH ≤ 5		X		
	SH3	Asit (asitlere maruz kalma)	pH ≤ 3			X	
Bileşenlerin konumu	SL0	içeride	Isıtmalı ve ısıtmasız iç mekanlar	X			
	SL1	dışarıda, serbestçe serpilmiş	Serbest duran yapılar		X[3]		
	SL2	dışarıda, çatılı	Kapalı yapılar		X[3]		
	SL3	[4]Dışarıda, erişilemez, ortam havasının erişimi var	havalandırmalı cepheler			X	
En yüksek korozyon direnci sınıfı (KWK) ile sonuçlanan etki belirleyicidir. Farklı etkilerin kombinasyonu daha yüksek gereksinimlerle sonuçlanmaz.							

1) **Erişilebilir** yapıların düzenli olarak temizlenmesi veya doğrudan yağmurlama korozyon yükünü önemli ölçüde azaltır, böylece bir CHP azaltılabilir. Yüzeylerde olası bir madde konsantrasyonu varsa, daha yüksek bir CHP seçilmelidir.
2) **Erişilebilir** yapıların düzenli olarak temizlenmesi korozyonu önemli ölçüde azaltabilir. Böylece bir CHP'nin azaltılması mümkün olur.
3) Hizmet ömrü 20 yıl ile sınırlıysa, 100 µm'lik çukur korozyonu tolere edilirse KWK I'e indirgeme mümkündür (optik gereklilikler yoktur).
4) Yapılar, bakımlarının zor veya imkansız olması durumunda erişilemez olarak sınıflandırılır. ve ancak yangın durumunda büyük masraflarla yenilenebilecek koşullara sahiptir.

Tablo 21: DIN EN ISO 3506 bölüm 1 ve 2'ye göre çelik gruplarına atanan bağlantı elemanları için çelik kaliteleri ve bölüm 2.2.2'ye göre etiketleme ve maksimum nominal çaplar

Çelik sınıfı				Korozyon direnç sınıfı[1]	Vidalar için etiketleme tarzında bir kafa ile DIN EN ISO 3506-1			Dişli çubuklar, saplama cıvataları, somunlar ve rondelalar için işaretleme DIN EN ISO 3506-1+2		
					Güç sınıfı			Güç sınıfı		
Hayır.	Kısa isim	W-No.	Grup		50	70	80	50	70	80
3	X5CrNi18-10	1.4301	A2	II / orta	≤ M 39	≤ M 24	≤ M 20	≤ M 64	≤ M 45	≤ M 24
4	X2CrNi18-9	1.4307	A2L		≤ M 39	≤ M 24	≤ M 20	≤ M 64	≤ M 45	≤ M 24
5	X3CrNiCu18-9-4	1.4567	A2L		≤ M 24	≤ M 16	≤ M 12	≤ M 24	≤ M 16	≤ M 12
6	X6CrNiTi18-10	1.4541	A3		≤ M 39	≤ M 20	≤ M 16	≤ M 64	≤ M 30	≤ M 24
8	X5CrNiMo17-12-2	1.4401	A4	III / orta	≤ M 39	≤ M 24	≤ M 20	≤ M 64	≤ M 45	≤ M 24
9	X2CrNiMo17-12-2	1.4404	A4L		≤ M 39	≤ M 24	≤ M 20	≤ M 64	≤ M 45	≤ M 24
10	X3CrNiCuMo17-11-3-2	1.4578	A4L		≤ M 24	≤ M 16	≤ M 12	≤ M 24	≤ M 16	≤ M 12
11	X6CrNiMoTi17-12-2	1.4571	A5		≤ M 39	≤ M 24	≤ M 20	≤ M 64	≤ M 45	≤ M 24
12	X2CrNiMoN17-13-5	1.4439	2)		≤ M 20	–	–	≤ M 64	–	–
13	X2CrNiN32-4	1.4362	2)		–	≤ M 24	≤ M 20	–	≤ M 64	≤ M 20
14	X2CrNiMoN22-5-3	1.4462	2)	IV / güçlü	–	≤ M 24	≤ M 20	–	≤ M 64	≤ M 20
15	X1NiCrMoCu25-20-5	1.4539	2) 3)		≤ M 39	≤ M 24	≤ M 20	≤ M 64	≤ M 45	≤ M 20
16	X2CrNiMnMoNbN25-18-5-4	1.4565	2) 3)		–	≤ M 24	≤ M 20	–	≤ M 64	≤ M 30
17	X1NiCrMoCuN25-20-7	1.4529	2) 3)			≤ M 24	≤ M 20	≤ M 64	≤ M 45	≤ M 45

1) Tablo 10'a göre

2) Şu anda standartlaştırılmış spesifikasyonlar bulunmadığından, bu çelikler malzeme numarası ile etiketlenmelidir.

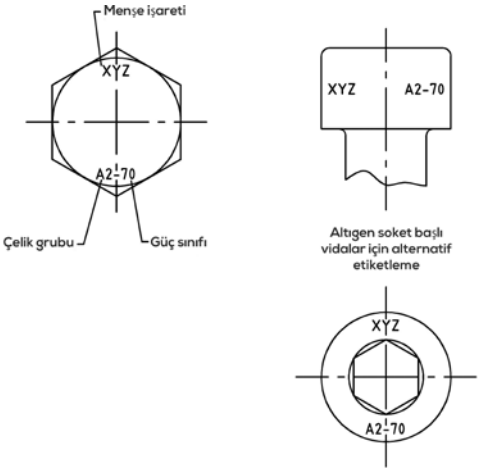
3) Ağustos 2020 tarihli Z-30-3.6 genel bina onayı Ek 7, Tablo 10, kapalı yüzme havuzu atmosferlerindeki bağlantı elemanları için geçerlidir.

V. Paslanmaz vida ve somunların etiketlenmesi

Paslanmaz vida ve somunların etiketinde çelik grubu, mukavemet sınıfı ve üretici işareti yer almalıdır.

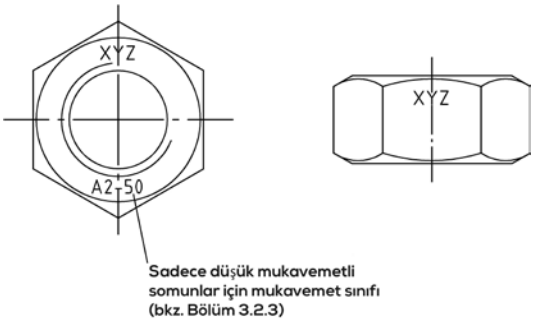
DIN ISO 3506-1'e göre vidaların etiketlenmesi

Nominal çapı M5 ve üzeri olan altıgen başlı vidalar ve altıgen soket başlı vidalar etiketleme sistemine uygun olarak açıkça etiketlenmelidir. Mümkünse, etiketleme vida başına yapıştırılmalıdır.
Şekil C: DIN EN ISO 3506-1'den alıntı



DIN EN ISO 3506-2'ye göre somunların etiketlenmesi

Nominal diş çapı 5 mm veya daha fazla olan somunlar, tanımlama sistemine uygun olarak açıkça etiketlenmelidir. Sadece bir yatak yüzeyinde etiketlemeye izin verilir ve sadece girintili olabilir. Anahtar düzlükleri üzerinde işaretlemeye de isteğe bağlı olarak izin verilir.
Şekil D: DIN EN ISO 3506-2'den alıntı



TECHNICAL INFORMATION
TEKNIK BILGILER

EN

Technical Information for stainless steel fasteners

I. DIN and ISO standards and what they mean

a) The term standardisation
b) The organisation and issuers of standards
   ► *Tab. 1 – The diversity of standards*
c) What does a DIN standard reveal?
d) Properties of stainless steel screws at increased temperatures
   ► *Tab. 2 – An overview of changes to standards*
   ► *Tab. 3 – Changes to hexagonal screws and nuts*
   ► *Tab. 4 – Changes to the dimensions of hexagonal screws and nuts*
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   ► *Tab. 6 – Changes to pins and bolts*
   ► *Tab. 7 – Changes to tapping screws*
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   ► *Tab. 9 – Technical terms of delivery and basic standards1*

II. Mechanical properties of special-grade stainless steel

a) The labelling system for the austenitic steel group according to ISO
   ► *Tab. 10 – Common stainless steels and their composition*
b) Classification of strength of stainless steel screws
   ► *Tab. 11 – Extract from DIN EN ISO 3506-1*
c) Yield strength loads for shoulder studs
   ► *Tab. 12 – Yield strength loads for shoulder studs*
d) Properties of stainless steel screws at increased temperatures
   ► *Tab. 13 – Strength class 70*
e) Reference values for tightening torques and their friction coefficients
   ► *Tab. 14 – Reference values for tightening torques*
   ► *Tab. 15 – Friction coefficients μG and μK for screws made from stainless steel and anti-corrosion steel*
   ► *Tab. 16 – Friction coefficients μG and μK for screws and nuts made from stainless steel and anti-corrosion steel*
f) Magnetic properties of austenitic stainless steel

III. Corrosion resistance of special grade A2 and A4 stainless steel

a) Extraneous rust and how it forms
b) Stress corrosion
c) Surface-eroding corrosion
d) Localised corrosion
e) Contact corrosion
f) Corrosive media in the presence of A2 and A4
   ► *Tab. 17 – Overview of the chemical resistance of A2 and A4*
   ► *Tab. 18 – Subdivision of level of resistance into various groups*

IV. Extract from building-authority approval Z-30.3-6 from 20 April 2009 „Products, fasteners and parts made from stainless steels“

► *Tab.19 - Subdivision of steel grades by strength class and corrosion resistance class*
► *Tab.20 - Material selection for atmospheric exposure*
► *Tab. 21 - Steel grades for fasteners with assignment to steel groups following DIN EN ISO 3506 Parts 1 and 2 and labelling following Section 2.2.2 and maximum nominal diameter*

V. Marking of stainless screws and nuts

I. DIN and ISO standards and what they mean

a) The term standardisation

When components are standardised they are easier to work with because such components are interchangeable. For this to be possible the fundamental characteristics of standard parts must be defined by a central body and used by manufacturers and retailers.

b) The organisation and issuers of standards
Tab. 1: The diversity of standards

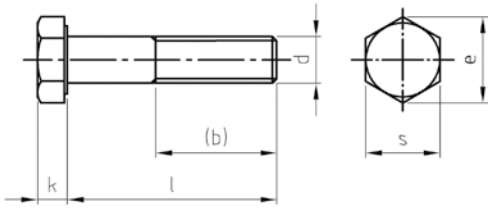
Standard	Information
DIN standard	Issuer: Deutsches Institut für Normung (German Institute for Standardisation) = national, German standard DIN standards are issued for electric components and organisational methods as well as fasteners. DIN standards remain common in Germany even though the changeover to ISO standards is gaining pace. DIN standards will remain in place for parts which do not have ISO/EN standards or for which there is no need for standardisation.
ISO standard	Issuer: ISO (International Organization for Standardization). = international standard The term „ISO“ comes from the Greek for „equal“. ISO standards apply around the world and are therefore suited for world trade. Even though ISO standardisation is gaining in importance, the German DIN standard was a world leader in standardisation for a long time.
EN standard	Issuer: European Committee for Standardization (CEN) = europäische Norm (European standard) The idea behind the EN standard was to establish „equal“ preconditions for trade within Europe. Unlike ISO standards, EN standards only apply within the European Union. The CEN endeavours to make EN and ISO standards the same. In principle existing ISO standards should be adopted unchanged as EN standards, retaining the same ISO standard number but starting with EN ISO. If this is not possible at European standardisation level, separate EN standards are produced with EN standard numbers different from the ISO numbers.
DIN-EN standard	= national German version of an EN standard adopted in unchanged form This is a combination of standards which indicates that the standard number (e.g. 12345) identifies the same object both in the DIN standard and the EN standard.
DIN-EN-ISO standard	= national German version of an EN standard adopted in unchanged form This is a combination of standards which indicates that the standard number (e.g. 12345) identifies the same object in the DIN standard, EN standard and ISO standard.
DIN-ISO-EN	= national German version of an ISO standard adopted in unchanged form.

c) What does a DIN standard reveal?

Just like any other standard, the DIN standard delivers standardisation and simplicity. For example, for a query it would suffice to say „DIN 933, M12 x 40, A4-70“ to define a multitude of features. This means that you don't always have to cross-check the requirements of a product and the customer can be sure that he or she receives precisely the goods they ordered.

Standards define at least one of the following features:

Head shape	(e.g. hexagon head, hexagonal socket, raised countersunk head)
Type of thread	(e.g. standard metric ISO thread M, sheet metal thread)
Thread length	
Thread pitch	
Material and strength class	
Possible coatings or strength characteristics	



b = thread length for screws whose thread does not extend to the head (partial thread screws)

d = thread diameter in mm

e = corner measurement on head

k = height of head

l = nominal length of screw – this also indicates how the length of a screw is measured.

S = width across flats

The example below should explain what the following details mean:

DIN 931, M 12 x 40, A4-70

DIN 931	=	hexagonal screw with shoulder
M	=	metric ISO thread
12	=	d… thread diameter of screw of 12 mm
X 40	=	l… nominal length in mm
A4	=	material class, stainless steel A4
- 70	=	strength class 70

P = the thread pitch is stated by a number. If this number is not provided, it is a standard thread. (M 12 x 40). The pitch is only stated for screws with a thread other than a standard thread, e.g. M 12 x 1 x 40 designates a

d) Change in standard (DIN > EN > ISO)

While the earlier DIN standards applied as standard specifications for Germany alone, the EN and ISO standards apply throughout Europe and the world. Many ISO standards were based on DIN standards; but many standards were only introduced when a relevant ISO standard was written (e.g. ISO 7380). Retailers are making a smooth changeover to ISO standards and DIN and ISO articles are manufactured side by side.

Tab. 2: An overview of changes to standards:

DIN → ISO
(one-to-one comparison)

ISO → DIN
(one-to-one comparison)

DIN	ISO	DIN	ISO	DIN	ISO	ISO	DIN	ISO	DIN	ISO	DIN
1	2339	916	4029	1481	8752	1051	660/661	4036	439	8673	934
7	2338	931	4014	6325	8734	1207	84	4161	6923	8673	971
84	1207	933	4017	6914	7412	1234	94	4762	912	8673	971-1
85	1580	934	4032	6915	7414	1479	7976	4766	551	8674	971-2
94	1234	934	8673	6916	7416	1481	7971	7038	937	8676	961
125	7089	937	7038	6921	1665	1482	7972	7040	982	8677	603
125	7090	960	8765	6923	1661	1483	7973	7040	6924	8733	7979
126	7091	961	8676	6924	7041	1580	85	7042	980	8734	6325
417	7435	963	2009	6925	7042	2009	963	7042	6925	8735	7979
427	2342	964	2010	6926	1663	2010	964	7045	7985	8736	7978
433	7092	965	7046	7343	8750	2338	7	7046	965	8737	7977
438	7436	966	7047	7343	8751	2339	1	7047	966	8738	1440
439-1	4036	971-1	8673	7344	8748	2341	1434	7049	7981	8740	1473
439-2	4035	971-2	8674	7346	13337	2341	1444	7050	7982	8741	1474
440	7094	980	7042	7971	1481	2342	427	7051	7983	8742	1475
551	4766	980	10513	7972	1482	2936	911	7072	11024	8744	1471
553	7434	982	7040	7973	1483	3266	580	7089	125	8745	1472
555	4034	982	10512	7976	1479	4014	931	7090	125	8746	1476
558	4018	985	10511	7977	8737	4016	601	7091	126	8747	1477
580	3266	1434	2341	7978	8736	4017	933	7092	433	8748	7344
601	4016	1440	8738	7979	8733	4018	558	7093	9021	8749	7346
603	8677	1444	2341	7979	8735	4026	913	7094	440	8750	7343
660	1051	1471	8744	7981	7049	4027	914	7412	6914	8751	7343
661	1051	1472	8745	7982	7050	4028	915	7414	6915	8752	1481
911	2936	1473	8740	7983	7051	4029	916	7416	6916	8765	960
912	4762	1474	8741	7985	7045	4032	934	7434	553	10642	7991
913	4026	1475	8742	7991	10642	4032	932	7435	417	10511	985
914	4027	1476	8746	9021	7093	4034	555	7436	438	10512	982
915	4028	1477	8747	11024	7072	4035	439	8102	6921	10513	980

Hex widths across flats	DIN	ISO
M 10	17 mm	16 mm
M 12	19 mm	18 mm
M 14	22 mm	21 mm
M 22	32 mm	34 mm

Tab. 3: Changes to hexagonal screws and nuts

DIN	ISO → (DIN ISO)	EN (DIN EN)	Range of dimensions[1]	Changes[2]
558	**4018**	24018	Ø M 10, 12, 14, 22	New ISO widths across flats
931	**4014**	24014		
933	**4017**	24017		
960	**8765**	28765	All other Ø	None = DIN and ISO are identical
961	**8676**	28676		
601	**4016**	24016	Ø M 10, 12, 14, 22	Screws: new ISO widths across flats Nuts: new ISO WAF + ISO heights
with 555 nuts	with 4034 nuts	24034		
28030	**4014**	24014	Other Ø up to M 39	Screws: none = DIN and ISO are identical Nuts: new ISO heights
with 555 nuts	with 4032 nuts	24032	Other Ø above M 39	None = DIN and ISO are identical
561	-	-	Ø M 12, 16	New ISO widths across flats
564	-	-	All other Ø	None
609	-	-	Ø M 10, 12, 14, 22	New ISO widths across flats
610	-	-	All other Ø	None
7968 Mu	Screws: -	-	M 12, 22	Screws: new ISO widths across flats
7990 Mu	Nuts acc. to ISO 4034	24034		Nuts: new ISO WAF + ISO heights
			All other Ø	Screws: none
				Nuts: new ISO heights
186/261	Screws: -		Ø M 10, 12, 14, 22	Screws: none
525	Nuts acc. to ISO 4034	24034		Nuts: new ISO WAF + ISO heights
603				
604				
605			All other Ø	Screws: none
607				Nuts: new ISO heights
608				
7969				
11014				
439 T1 (A=out bevel)	**4036**	24036	Ø M 10, 12, 14, 22	New ISO widths across flats (no change in height)
439 Tz (B=with evel)	**4035** = standard thread	24035	All other Ø	None = DIN and ISO are identical (no change in height)
	8675 = fine thread	28675		
555	**4034** (ISO-Typ 1)	24034	Ø M 10, 12, 14, 22	New ISO WAF + new ISO heights
934 Rd. 6, 8, 10	**4032** = standard thread (ISO-Typ 1)	24032		
Fkl. 12	**4033** = standard thread (ISO-Typ 2)	24033	All other Ø up to M 39	New ISO heights (no change to WAF)
Fkl. 6, 8, 10	= fine thread (ISO-Typ 1)	28673	Ø above M 39	None, DIN and ISO are identical
557	-	-	Ø M 10, 12, 14, 22	New ISO widths across flats
917	-	-		
935	-	-		

Continuation of Tab. 3: Changes to hexagonal screws and nuts

DIN	ISO → (DIN ISO)	EN (DIN EN)	Abmessungs-bereich[1]	Änderungen[2]
986	-	-	All other Ø	None
1587	-	-		

[1] For comparison of WAFs and nut heights between DIN and ISO, see Table C
[2] For assignment of standards, mechanical properties for nuts made of steel, see Table C

Tab. 4: Dimensional changes to hexagonal screws and nuts

Nominal measurement d	Width across flat s		Nut height m min-max			
Sizes to be avoided	DIN	ISO	DIN 555	ISO 4034	DIN 934	ISO 4032 (standard) 8673 (fine th.) ISO type 1
M 1	2,5	-	-	0,55-0,8	-	-
M 1,2	3		-	-	0,75-1	-
M 1,4	3		-	-	0,95-1,2	-
M 1,6	3,2		-	-	1,05-1,3	1,05-1,3
M 2	4		-	-	1,35-1,6	1,35-1,6
M 2,5	5		-	-	1,75-2	1,75-2
M 3	5,5		-	-	2,15-2,4	2,15-2,4
(M 3,5)	6		-	-	2,55-2,8	2,55-2,8
M 4	7		-	-	2,9-3,2	2,9-3,2
M 5	8		3,4-4,6	4,4-5,6	3,7-4	4,4-4,7
M 6	10		4,4-5,6	4,6-6,1	4,7-5	4,9-5,2
(M 7)	11		-	-	5,2-5,5	-
M 8	13		5,75-7,25	6,4-7,9	6,14-6,5	6,44-6,8
M 10	17	16	7,25-8,75	8-9,5	7,64-8	8,04-8,4
M 12	19	18	9,25-10,75	10,4-12,2	9,64-10	10,37-10,8
(M 14)	22	21	-	12,1-13,9	10,3-11	12,1-12,8
M 16	24		12,1-13,9	14,1-15,9	12,3-13	14,1-14,8
(M 18)	28		-	15,1-16,9	14,3-15	15,1-15,8
M 20	30		15,1-16,9	16,9-19	14,9-16	16,9-18
(M 22)	32	34	17,1-18,9	18,1-20,2	16,9-18	18,1-19,4
M 24	36		17,95-20,05	20,2-22,3	17,7-19	20,2-21,5
(M 27)	41		20,95-23,05	22,6-24,7	20,7-22	22,5-23,8
M 30	46		22,95-25,05	24,3-26,4	22,7-24	24,3-25,6
(M 33)	50		24,95-27,05	27,4-29,5	24,7-26	27,4-28,7
M 36	55		27,95-30,05	28-31,5	27,4-29	29,4-31
(M 39)	60		29,75-32,25	31,8-34,3	29,4-31	31,8-33,4
M 42	65		32,75-35,25	32,4-34,9	32,4-34	32,4-34
(M 45)	70		34,75-37,25	34,4-36,9	34,4-36	34,4-36
M 48	75		36,75-39,25	36,4-38,9	36,4-38	36,4-38
(M 52)	80		40,75-43,25	40,4-42,9	40,4-42	40,4-42
M 56	85		43,75-46,25	43,4-45,9	43,4-45	43,4-45
(M 60)	90		46,75-49,25	46,4-48,9	46,4-48	46,4-48
M 64	95		49,5-52,5	49,4-52,4	49,1-51	49,1-51
> M 64	-		Max. M 100 x 6	-	Max. M 160 x 6	-/-

Continuation of Tab. 4: Changes to the dimensions of hexagonal screws and nuts

Nominal measurement d	Width across flat s		Nut height m min-max			
Sizes to be avoided	DIN	ISO	DIN	ISO	DIN	ISO
			555	4034	934	4032 (standard)
						8673 (fine th.)
				ISO type 1		ISO type 1
Nut height factor	**m**	≤ M 4	-	-		0,8
	d approx.	M 5-M 39	0,8	0,83-1,12	0,8	0,84-0,93
		≥ M 42		~ 0,8		0,8
Product class			C (rough)		≤ M 16 = A (average) > M 16 = B (average roughness)	
Thread tolerance			7 H		6 H	
Strength class Steel		Core range	5		6, 8,10	
		~ M 5-39	**M 16 < d ≤ M 39 = 4,5**		(ISO 8673 = Fkl. 10 ≤ M 16)	
		> M 39	Following agreement		Following agreement	
Mechanical characteristics according to standard			DIN 267	ISO 898	DIN 267	ISO 898
			Part 4	Part 2	Part 4	Part 2 (standard thread)
						Part 6 (fine thread)

Tab. 5: Changes to small metric screws

DIN (old)	ISO	DIN (new or DIN EN)	Title	Changes
84	1207	DIN EN 21207	Socket cap screws with slot; product class A (ISO 1207: 1992)	Head height and diameter in places
85	1580	DIN EN 21580	Flat-headed screws with slot; product class A	Head height and diameter in places
963	2009	DIN EN 22009	Countersunk screws with slot, shape A	Head height and diameter in places
964	2010	DIN EN 22010	Countersunk oval head screws with slot, shape A	Head height and diameter in places
965	7046-1	DIN EN 27046-1	Countersunk screws with cross recess (common head): product class A, strength class 4.8	Head height and diameter in places
965	7046-2	DIN EN 27046-2	Countersunk screws with cross recess (common head): product class A, strength class 4.8	Head height and diameter in places
966	7047	DIN EN 27047	Countersunk oval head screws with cross recess (common head): product class A	Head height and diameter in places
7985	7045	DIN EN 27045	Flat-headed screws with cross recess; product class A	Head height and diameter in places

Tab. 6: Changes to pins and bolts

DIN (old)	ISO	DIN (new or DIN EN)	Title	Changes
1	2339	DIN EN 22339	Tapered pins; unhardened (ISO 2339: 1986)	Length l incl. round ends
7	2338	DIN EN 22338	Cylindrical pins; unhardened (ISO 2338: 1986)	Length l incl. round ends
1440	8738	DIN EN 28738	Washers for bolts; product class A (ISO 8738: 1986)	Outer diameter in places
1443	2340	DIN EN 22340	Bolt without head (ISO 2340:1986)	Nothing noteworthy
1444	2341	DIN EN 22341	Bolt with head (ISO 2341:1986)	Nothing noteworthy
1470	8739	DIN EN 28739	Full length parallel grooved cylindrical pins with pilot (ISO 8739: 1986)	Increased shearing forces
1471	8744	DIN EN 28744	Full length taper grooved pins (ISO 8744: 1986)	Increased shearing forces
1472	8745	DIN EN 28745	Half length taper grooved pins	Increased shearing forces
1473	8740	DIN EN 28740	Full length parallel grooved cylindrical pins with bevel (ISO 8740: 1986)	Increased shearing forces
1474	8741	DIN EN 28741	Half length reverse grooved pins (ISO 8741: 1986)	Increased shearing forces
1475	8742	DIN EN 28742	Groove pins - 1/3 of length grooved (ISO 8742: 1986)	Increased shearing forces
1476	8746	DIN EN 28746	Semi round grooved pins (ISO 8746: 1986)	Nothing noteworthy
1477	8747	DIN EN 28747	Countersunk grooved pins (ISO 8747: 1986)	Nothing noteworthy
1481	8752	DIN EN 28752	Dowel pins; slotted (ISO 8752: 1987)	Nothing noteworthy
6325	8734	DIN EN 28734	Cylindrical pins; hardened (ISO 8734: 1987)	Nothing noteworthy
7977	8737	DIN EN 28737	Tapered pins with threaded peg; unhardened (ISO 8737: 1986)	Nothing noteworthy
7978	8736	DIN EN 28736	Tapered pins with female thread; unhardened (ISO 8736: 1986)	Nothing noteworthy
7979	8733	DIN EN 28733	Cylindrical pins with female thread; unhardened (ISO 8733: 1986)	Nothing noteworthy
7979	8735	DIN EN 28735	Cylindrical pins with female thread; hardened (ISO 8735: 1987)	Nothing noteworthy

Tab. 7: Changes to tapping screws

DIN (old)	ISO	DIN (new or DIN EN)	Title	Changes
7971	1481	DIN ISO 1481	Flat head tapping screws with slot (ISO 1481: 1983)	Head height and diameter in places
7972	1482	DIN ISO 1482	Tapping screws with slot, countersunk head	Head height and diameter in places
7973	1483	DIN ISO 1483	Tapping screws with slot, raised countersunk head	Head height and diameter in places
7976	1479	DIN ISO 1479	Tapping screws with hexagon head	Head height in places
7981	7049	DIN ISO 7049	Tapping screws with cross recess, fillister head	Head height and diameter in places
7982	7050	DIN ISO 7050	Tapping screws with cross recess, countersunk head	Head height and diameter in places
7983	7051	DIN ISO 7051	Tapping screws with cross recess, raised countersunk head	Head height and diameter in places

Tab. 8: Changes to threaded pins

DIN (old)	ISO	DIN (new or DIN EN)	Title	Changes
417	7435	DIN EN 27435	Threaded pins with slot and peg (ISO 7431: 1983)	Nothing noteworthy
438	7436	DIN EN 27436	Threaded pins with slot and cup point (ISO 7436: 1983)	Nothing noteworthy
551	4766	DIN EN 24766	Threaded pins with slot and flat point (ISO 4766: 1983)	Nothing noteworthy
553	7434	DIN EN 27434	Threaded pins with slot and tip (ISO 7431: 1983)	Nothing noteworthy
913	4026	DIN 913	Threaded pins with hexagonal socket and flat point	Nothing noteworthy
914	4027	DIN 914	Threaded pins with hexagonal socket and tip	Nothing noteworthy
915	4028	DIN 915	Threaded pins with hexagonal socket and peg	Nothing noteworthy
916	4029	DIN 916	Threaded pins with hexagonal socket and cup point	Nothing noteworthy

Tab. 9: Technical terms of delivery and basic standards

DIN (old)	ISO	DIN (new or DIN EN)	Title	Changes
267 Part 20	-	DIN EN 493	Fasteners, surface defects, nuts	None
267 Part 21	-	DIN EN 493	Fasteners, surface defects, nuts	None
DIN ISO 225	225	DIN EN 20225	Mech. fasteners, screws and nuts, dimensioning (ISO 225: 1991)	None
DIN ISO 273	273	DIN EN 20273	Mech. fasteners, clearance holes for screws (ISO 273: 1991)	None
DIN ISO 898 Part 1	898 1	DIN EN 20898 Part 1	Mech. properties of fasteners, screws (ISO 898-1: 1988)	None
267 Part 4	898 2	DIN ISO 898 Part 2	Mech. properties of fasteners, nuts with fixed test forces (ISO 898-2: 1992)	None
DIN ISO 898 Part 6	898 6	DIN EN 20898 Part 6	Mech. properties of fasteners, nuts with fixed test forces (ISO 898-6: 1988)	None
267 Part 19	6157-1	DIN EN 26157 Part 1	Fasteners, surface defects, screws for general requirements (ISO 6157-1:1988)	None
267 Part 19	6157-3	DIN EN 26157 Part 3	Fasteners, surface defects, screws for general requirements (ISO 6157-3:1988)	None
DIN ISO 7721	7721	DIN EN 27721	Countersunk screws; design and testing of countersunk heads (ISO 7721: 1983)	None
267 Part 9	-	DIN ISO 4042	Parts with threads – galvanic coatings	None
267 Part 1	-	DIN ISO 8992	General requirements for screws and nuts	None
267 Part 5	-	DIN ISO 3269	Mechanical fasteners acceptance inspection	None
267 Part 11	-	DIN ISO 3506	Stainless steel fasteners technical terms of delivery	None
267 Part 12	-	DIN EN ISO 2702	Heat-treated steel tapping screw - mechanical properties	None
267 Part 18	8839	DIN EN 28839	Mech. properties of fasteners, screws and nuts made from non ferrous metals (ISO 8839: 1986)	None

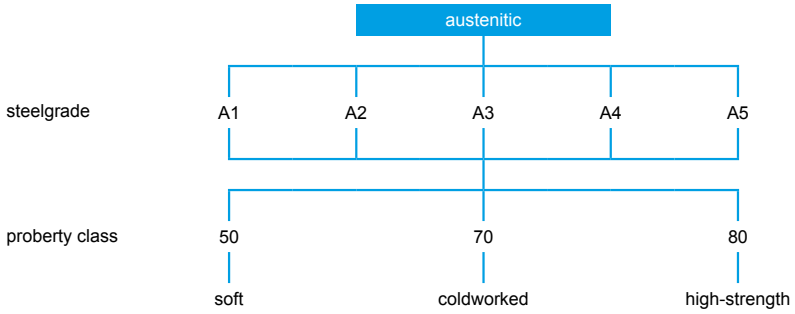
II. Mechanical properties of special-grade stainless steel

Stainless steels divide into three groups of steel - austenitic, ferritic and martensitic. Austenitic steel is by far the commonest and offers the greatest scope for use. The steel groups and strength classes are designated by a four-digit sequence of letters and numbers as shown in the following example. DIN EN ISO 3506 governs screws and nuts made from stainless steel.

Example:
A2 - 80
A = austenitic steel
2 = type of alloy within group A
80 = tensile strength of at least 800 N/mm2, cold work hardened

II. a) Labelling system for grades of stainless steels and their strength classes

Fig. A:



Tab. 10: Common stainless steels and their chemical composition

	Material designation	Material no.	C %	Si ≤ %	Mn ≤ %	Cr %	Mo %	Ni %	Altri %
A 2	X 5Cr Ni 1810	1.4301	≤ 0,07	1,0	2,0	17 bis 19	-	8,0 bis 10,5	-
	X 2 Cr Ni 1811	1.4306	≤ 0,03	1,0	2,0	18,0 bis 20,0	-	10,0 bis 12,0	-
	X 8 Cr Ni 19/10	1.4303	≤ 0,12	0,75	2,0	17,0 bis 19,0	-	11,0 bis 13,0	-
A 3	X 6 Cr Ni Ti 1811	1.4541	≤ 0,10	1,0	2,0	17,0 bis 19,0	-	9,0 bis 12,0	Ti ≥ 5 X % C
A 4	X 5 Cr Ni Mo 1712	1.4401	≤ 0,07	1,0	2,0	16,5 bis 18,5	2,0 bis 2,5	10,0 bis 13,0	-
	X 2 Cr Ni Mo 1712	1.4404 316L	≤ 0,03	1,0	2,0	16,5 bis 18,5	2,0 bis 2,5	10 bis 13	-
A 5	X 6 Cr Ni Mo Ti 1712	1.4571	≤ 0,10	1,0	2,0	16,5 bis 18,5	2,0 bis 2,5	10,5 bis 13,5	Ti ≥ 5 X % C

II. b) Subdivision of strengths of stainless steel screws

DIN ISO 3506 has summarised the recommended steel grades for fasteners. It is virtually only austenitic stainless steel A2 which is used here. On the other hand chrome nickel steels from steel group A4 tend to be used for very high corrosion requirements. Tab. 11 is based on screw connections made from austenitic steel in terms of mechanical strength values.

Mechanical properties of fasteners - austenitic steel grades

Tab. 11: Extract from DIN EN ISO 3506-1

Steel group	Steel grade	Strength class	Screws		
			Tensile strength Rm[1] N/mm² min.	0,2 %-yield strength RP 0,2[1] N/mm² min.	Elongation at fracture A2) mm min.
Austenitic	A1, A2, A3 A4 und A5	50	500	210	0,6 *d*
		70	700	450	0,4 *d*
		80	800	600	0,3 *d*

1) The tensile stress is calculated with reference to the tensile stress area (see DIN EN ISO 3506-1).

2) The elongation at fracture should be calculated according to 7.2.4 at the corresponding screw length and not on the turned samples. d is the nominal diameter.

II. c) Yield strength loads for shoulder studs

Since austenitic chrome nickel steels cannot be hardened, a higher yield strength is only achieved through cold work hardening resulting from cold working (e.g. using threaded rollers). The yield strength loads for shoulder studs according to DIN EN ISO 3506 can be taken from Table 12.

Tab. 12: Yield strength loads for shoulder studs

Nominal diameter	**Yield strength loads of austenitic steels according to DIN EN ISO 3506 A 2 and A 4 in N**	
Strength class	50	70
M 5	2980	6390
M 6	4230	9060
M 8	7690	16480
M 10	12180	26100
M 12	17700	37920
M 16	32910	70510
M 20	51410	110200
M 24	74030	158700
M 27	96480	206800
M 30	117800	252300

II. d) Properties of stainless steel screws at increased temperatures

Tab. 13: Strength class 70

Nominal diameter	Warm yield strengths in N				
Strength class 70	+ 20 °C	+ 100 °C	+ 200 °C	+ 300 °C	+ 400 °C
M 5	6.390	5.432	5.112	4.793	4.473
M 6	9.045	7.688	7.236	6.784	6.332
M 8	16.740	14.000	13.176	12.353	11.529
M 10	26.100	22.185	20.880	19.575	18.270
M 12	37.935	32.245	30.348	28.451	26.555
M 16	70.650	60.053	56.520	52.988	49.455
M 20	110.250	93.713	88.200	82.688	77.175
M 24	88.250	75.013	70.600	66.188	61.775
M 27	114.750	97.538	91.800	86.063	80.325
M 30	140.250	119.213	112.200	105.188	98.175

The values in DIN 17440 apply for strength class 50

II. e) Reference values for the tightening torque of screws per DIN EN ISO 3506.

Fastenings of stainless, austenitic steel, need an optimal tightening torque for the processing.
As a guideline, we created a table for you, from which you can infer all the necessary torques in mutually depend on the friction value.

Fundamentally, you have to observe, that the values, which are shown in the table, are only guidelines (see VDI 2230).

The table 14a is a simplified explanation, which only shows again, the friction values from 0,10 to 0,20.
Depending on the lubricant, the friction value of screws, move between 0,12 and 0,18. Since the friction value does not only depend on the lubricant, it is essential to carry out a test under preconditions.

Tab. 14a: Simplify reference values for tightening torques for screws according to DIN EN ISO 3506 (mostly slide coating)

"Friction coefficient µges."	Tightening torque MA [Nm] für A2-70, A4-70							
	M4	M5	M6	M8	M10	M12	M16	M20
0,10	1,7	3,4	5,9	14,5	30,0	50,0	121,0	224,0
0,12	2,0	3,8	6,7	16,3	33,0	56,0	136,0	274,0
0,14	2,2	4,2	7,4	17,8	36,0	62,0	150,0	303,0
0,16	2,3	4,6	7,9	19,3	39,0	66,0	162,0	328,0
0,18	2,5	4,9	8,4	20,4	41,0	70,0	173,0	351,0
0,20	2,6	5,1	8,8	21,4	44,0	74,0	183,0	370,0

Tab. 14b: Reference values for tightening torques for screws according to DIN EN ISO 3506

Friction coefficient μ_{total} 0.10	Pretensioning forces $F_{vmax.}$ [kN]			Tightening torque M_A [Nm]		
	50	70	80	50	70	80
M 3	0,9	1	1,2	0,85	1	1,3
M 4	1,08	2,97	3,96	0,8	1,7	2,3
M 5	2,26	4,85	6,47	1,6	3,4	4,6
M 6	3,2	6,85	9,13	2,8	5,9	8
M 8	5,86	12,6	16,7	6,8	14,5	19,3
M 10	9,32	20	26,6	13,7	30	39,4
M 12	13,6	29,1	38,8	23,6	50	67
M 14	18,7	40	53,3	37,1	79	106
M 16	25,7	55	73,3	56	121	161
M 18	32,2	69	92	81	174	232
M 20	41,3	88,6	118,1	114	224	325
M 22	50	107	143	148	318	424
M 24	58	142	165	187	400	534
M 27	75			328		
M 30	91			445		
M 33	114			506		
M 36	135			651		
M 39	162			842		

Tab. 14c: Reference values for tightening torques for screws according to DIN EN ISO 3506

Friction coefficient μ_{total} 0.20	Pretensioning forces $F_{vmax.}$ [kN]			Tightening torque M_A [Nm]		
	50	70	80	50	70	80
M 3	0,6	0,65	0,95	1	1,1	1,6
M 4	1,12	2,4	3,2	1,3	2,6	3,5
M 5	1,83	3,93	5,24	2,4	5,1	6,9
M 6	2,59	5,54	7,39	4,1	8,8	11,8
M 8	4,75	10,2	13,6	10,1	21,5	28,7
M 10	7,58	16,2	21,7	20,3	44	58
M 12	11,1	23,7	31,6	34,8	74	100
M 14	15,2	32,6	43,4	56	119	159
M 16	20,9	44,9	59,8	86	183	245
M 18	26,2	56,2	74,9	122	260	346
M 20	33,8	72,4	96,5	173	370	494
M 22	41	88	118	227	488	650
M 24	47	101	135	284	608	810
M 27	61			502		
M 30	75			680		
M 33	94			779		
M 36	110			998		
M 39	133			1300		

Tab. 14d: Reference values for tightening torques for screws according to DIN EN ISO 3506

Friction coefficient μ_{total} 0.30	Pretensioning forces $F_{vmax.}$ [kN]			Tightening torque M_A [Nm]		
	50	70	80	50	70	80
M 3	0,4	0,45	0,7	1,25	1,35	1,85
M 4	0,9	1,94	2,59	1,5	3	4,1
M 5	1,49	3,19	4,25	2,8	6,1	8
M 6	2,09	4,49	5,98	4,8	10,4	13,9
M 8	3,85	8,85	11	11,9	25,5	33,9
M 10	6,14	13,1	17,5	24	51	69
M 12	9	19,2	25,6	41	88	117
M 14	12,3	26,4	35,2	66	141	188
M 16	17	36,4	48,6	102	218	291
M 18	21,1	45,5	60,7	144	308	411
M 20	27,4	58,7	78,3	205	439	586
M 22	34	72	96	272	582	776
M 24	39	83	110	338	724	966
M 27	50			599		
M 30	61			809		
M 33	76			929		
M 36	89			1189		
M 39	108			1553		

Tab. 14e: Reference values for tightening torques for screws according to DIN EN ISO 3506

Friction coefficient μ_{total} 0.30	Pretensioning forces $F_{vmax.}$ [kN]			Tightening torque M_A [Nm]		
	50	70	80	50	70	80
M 4	0,74	1,60	2,13	1,6	3,3	4,4
M 5	1,22	2,62	3,5	3,2	6,6	8,8
M 6	1,73	3,7	4,93	5,3	11,3	15,0
M 8	3,17	6,80	9,10	12,9	27,6	36,8
M 10	5,05	10,80	14,40	26,2	56,0	75,0
M 12	7,38	15,8	21,10	44,6	96,0	128,0
M 14	10,1	21,70	26,0	71,0	152,0	204,0
M 16	20,9	44,90	59,80	110	237	316
M 18	17,5	37,50	50,10	156	334	447
M 20	22,6	48,4	64,6	223	479	639
M 22	28,3			303		
M 24	32,6			385		
M 27	41,5			652		
M 30	50,3			881		
M 33	63,0			1013		
M 36	74,0			1296		
M 39	89,0			1694		

Friction coefficients μ_G and μ_K according to DIN 267 Part 11

Tab. 15: Friction coefficients μG and μK for screws made from stainless steel and anti-corrosion steel

Screw made from	Nut made from	μ_{total} When lubricated	
		No lubrication	MoS2 paste/lubricant
A 2 oder A 4	A 2 oder A 4	0,23 - 0,5	0,10 - 0,20
A 2 oder A 4	AlMgSi	0,28 - 0,35	0,08 - 0,16

Friction coefficients μ_{total} require the same friction value in the thread and under the head / nut support.

Tab. 16: Friction coefficients μG and μK for screws and nuts made from stainless steel and anti-corrosion steel

Screw made from	Nut made from	Lubricant		Resilience of connection	Friction coefficient	
		in thread	under head		in thread μ_G	under head μ_K
A 2	A 2	none	none	very high	0,26 bis 0,50	0,35 bis 0,50
		Special lubricant (chloroparaffin base)			0,12 bis 0,23	0,08 bis 0,12
		Anticorrosive grease			0,26 bis 0,45	0,25 bis 0,35
		none	none	low	0,23 bis 0,35	0,12 bis 0,16
		Special lubricant (chloroparaffin base)			0,10 bis 0,16	0,08 bis 0,12
	AlMgSi	none		very high	0,32 bis 0,43	0,08 bis 0,11
		Special lubricant (chloroparaffin base)			0,28 bis 0,35	0,08 bis 0,11

Fasteners from stainless steels tend to seize because of the high thread flank pressure as the thread moulds into the clamping part. Using a friction-reducing agent can remedy the situation. But this should be taken into account accordingly for friction values.

II. f) Magnetic properties of austenitic stainless steel

All fasteners made from austenitic stainless steels are generally non-magnetic; a certain magnetisability may occur after cold processing.
Each material, including stainless steel, is labelled by its ability to be magnetisable. In all probability only vacuums will be fully non-magnetic. The gauge for the material permeability in a magnetic field is the magnetic permeability value μr for this material in relation to a vacuum. The material has a low magnetic permeability when μr near is equal to 1.
Examples: A2: μr ~ 1.8 / A4: μr ~ 1.015 / A4L: μr ~ 1.005 / AF1: μr ~ 5

International comparison of material

Mat. no.	Short name	AISI[1]	UNS[2]	SS[3]	AFNOR[4]	BS[5]
1.4006	X12Cr13	410		2302	Z 10 C 13	410 S 21
1.4016	X6Cr17	430		2320	Z 8 C 17	430 S 17
1.4301	X5CrNi18-10	304	S 30400	2332	Z 6 CN 18.09	304 S 15
1.4303	X10CrNiS18-9	305	S 30500	x	Z5CNI 8-11FF	305 S 17/19
1.4305	X 10 CrNiS 18-9	303	S 30300	2346	Z 8 CNF 18.09	304 S 31
1.4306	X 2 CrNi 19-11	304 L	S 30403	2352	Z 2 CN 18.10	304 S 11
1.4307	X2CrNi18-9	304L	S 30403			
1.4310	X 12 CrNi 17 7	301	S 30100	2331	Z 12 CN 18.08	301 S 22
1.4567	X3CrNiCu18-9-4	304	x	x	x	x
1.4541	X6CrNiTi18-10	321				
1.4401	X5CrNiMo17-12-2	316	S 31600	2347	Z 7 CND 17.02.02	316 S 31
1.4404	X2CrNiMo17-12-2	316 L	S 31603	2353	Z 3 CND 18.14.03	316 S 11
1.4578	X3CrNiCuMo17-11-3-2	x				
1.4571	X6CrNiMoTi17-12-2	316Ti	S 31635	2350	Z 6 CNDT 17.12	320 S 31
1.4439	X2CrNiMoN17-13-5	317 LMN	S 31726	2562	Z 1 NCDU 25.20	
1.4541	X6CrNiTi 18-10	321		2337	Z 6 CNT 18-10	x
1.4362	X2CrNiN32-4	2304				
1.4462	X2CrNiMoN22-5-3	2205	S 31600	2377	(Z 5 CNDU 21.08)	
1.4539	X1NiCrMoCu25-20-5	904 L	N 08904			
1.4565	X2CrNiMnMoNbN25-18-5-4	x				
1.4529	X1NiCrMoCuN25-20-7	x	N 08926			

1 AISI = American Iron and Steel Institute
2 UNS = Unified Numbering System
3 SS = Swedish Standard
4 AFNOR = Association Francaise de Normalisation
5 BS = British Standard
ASTM = American Society for Testing and Materials

III. Corrosion resistance of A2 and A4

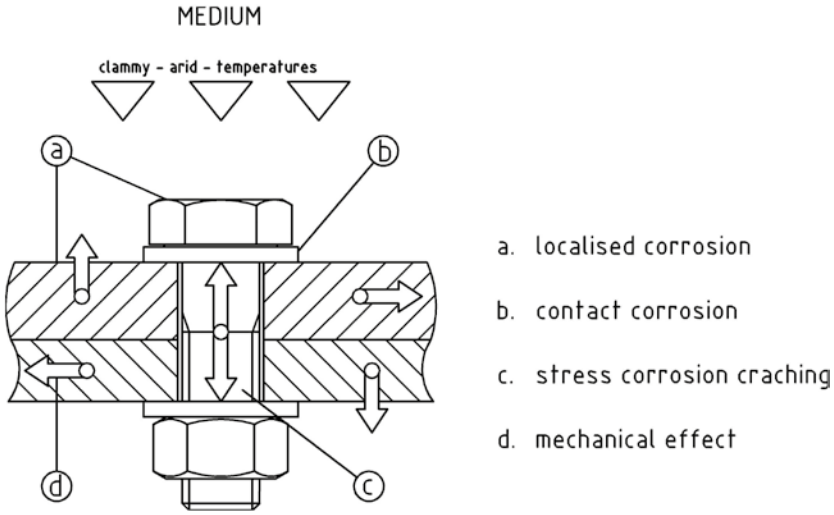
Because of their constituent parts, austenitic stainless steels such as A2 and A4 fall under the category of „active“ corrosion protection.

These high-grade stainless steels must contain at least 16 % chrome (Cr) and are resistant to oxidising corrosive agents. Increasing the Cr content and if necessary other alloy components such as nickel (Ni), molybdenum (Mo), titanium (Ti) and niobium (Nb) improves resistance to corrosion. These additives also affect the mechanical properties. Depending on use, this may have to be noted. Other alloy components are only added to improve the mechanical properties, e.g. nitrogen (N), or the chip-removing process, e.g. sulphur (S).

The fasteners may experience a certain degree of magnetisability during cold working. Austenitic stainless steels are not however generally magnetic. But the resistance to corrosion is not affected by this. The level of magnetisation produced by cold work hardening may even extend to the steel part sticking permanently to a magnet.

In practice it should be noted that a whole series of different types of corrosion may arise. The most common forms of corrosion for high-grade stainless steel are shown in the diagram below and detailed underneath:

Diagram of the most common types of corrosion in screw connections



III. a) Extraneous rust and how it forms

When particles of a carbon steel („normal steel“) adhere to a stainless steel surface, this produces extraneous rust on the surface of the stainless steel which turns into rust under the action of oxygen. If these areas are not cleaned or removed, this rust can cause electro-chemical localised corrosion in austenitic stainless steel.

Extraneous rust is produced for example by:

- using tools which have previously been used with carbon steel.
- sparks when working with an angle grinder or grinding dust or during welding.
- objects that rust coming into contact with a stainless steel surface.
- water containing rust dripping onto a stainless steel surface.

III. b) Stress corrosion

Internal stresses from welding may result in stress corrosion. However stress corrosion usually occurs in components used in an industrial atmosphere which are subject to high levels of mechanical tensile and bending stress.

Austenitic steels in an atmosphere containing chlorine are particularly sensitive to stress corrosion. The influence of temperature is a major factor. 50 °C is the critical temperature.

III. c) Surface-eroding corrosion

Uniform surface corrosion, also known as eroding corrosion, describes a condition where the surface is being eroded in a uniform manner. This type of corrosion can be prevented by selecting the right material in the first place.

Factories have published resistance tables based on lab tests, which provide information on how the steel grades behave at different temperatures and in different concentrations in the individual media (see Section III f Tab.17 & 18).

III. d) Localised corrosion

Localised corrosion appears as surface corrosion with the additional formation of hollows and holes.

The passive layer is penetrated locally. When high-grade stainless steel comes into contact with an active medium containing chlorine, localised corrosion also occurs alone with pinprick notches in the material. Deposits and rust may also trigger localised corrosion. All fasteners should therefore be regularly cleaned of residue and deposits.

Austenitic steels such as A2 and A4 are more resistant to localised corrosion than ferritic chrome steels.

III. e) Contact corrosion

When two components with different compositions make metallic contact and there is dampness present in the form of an electrolyte, contact corrosion will occur. The more base element is attacked and destroyed.

Please note the following to prevent contact corrosion:

- Prevent the connection from coming into contact with an electrolytic medium.
- For example, metals should be insulated using rubber, plastic or coatings such that contact current cannot flow to the point of contact.
- Avoid pairing up different materials wherever possible. For example, screws, nuts and washers should be adapted to the components being joined.

III. f) Corrosive media in the presence of A2 and A4

Tables 17 and 18 provide an overview of the resistance of A2 and A4 in the presence of various corrosive media. This provides an optimum means of comparison. Do however note that the values stated are simply rough indications.

Tab. 17: Overview of the chemical resistance of A2 and A4

Corrosive agent	Concentration	Temperature in °C	Level of resistance	
			A 2	A 4
Acetone	all	all	A	A
Ethyl aether	-	all	A	A
Ethyl alcohol	all	20	A	A
Formic acid	10%	20 boiling	A B	A A
Ammonia	all	20 boiling	A A	A A
Any kind of benzine	-	all	A	A
Benzoic acid	all	all	A	A
Benzol	-	all	A	A
Beer	-	all	A	A
Hydrocyanic acid	-	20	A	A
Blood	-	20	A	A
Binder solution	-	98	A	A
Chlorine: dry gas damp gas	 - -	 20 alle	 A D	A D
Chloroform	all	all	A	A
Chromic acid	10% pure 50% pure	20 boiling 20 boiling	A C B D	A C B D
Developer (photogr.)	-	20	A	A
Acetic acid	10%	20 boiling	A A	A A
Fatty acid	technical	150 180 200-235	A B C	A A A
Fruit juices	-	all	A	A
Tannic acid	all	all	A	A
Glycerine	conz.	all	A	A
Industrial air	-	-	A	A
Potassium permanganate	10%	all	A	A
Lime milk	-	all	A	A
Carbon dioxide	-	-	A	A
Cupric acetate	-	all	A	A
Copper nitrate	-	-	A	A
Copper sulphate	all	all	A	A
Magnesium sulphate	approx 26%	all	A	A
Sea water	-	20	A	A
Methyl alcohol	all	all	A	A

Continuation of Tab. 17: Overview of the chemical resistance of A2 and A4

Corrosive agent	Concentration	Temperature in °C	Level of resistance	
			A 2	A 4
Lactic acid	1,5% 10%	all 20 boiling	A A C	A A A
Sodium carbonate	kalt gesättigt	all	A	A
Sodium hydroxide	20% 50%	20 boiling 120	A B C	A B C
Sodium nitrate	-	all	A	A
Sodium perchlorate	10%	all	A	A
Sodium sulphate	cold saturated	all	A	A
Fruit	-	-	A	A
Oils (mineral and vegetable)	-	all	A	A
Oxalic acid	10% 50%	20 boiling boiling	B C D	A C C
Petroleum	-	all	A	A
Phenol	pure	boiling	B	A
Phosphoric acid	10% 50% 80% conc.	boiling 20 boiling 20 boiling 20 boiling	A A C B D B D	A A B A C A D
Mercury	-	up to 50	A	A
Mercury nitrate	-	all	A	A
Salicylic acid	-	20	A	A
Nitric acid	up to 40% 50% 90%	all 20 boiling 20 boiling	A A B A C	A A B A C
Hydrochloric acid	0,2% 2% up to 10%	20 50 20 50 20	B C D D D	B B D D D
1% Sulphuric acid	up to 70 2,5% 5% 10% 60%	B boiling bis 70 boiling 20 > 70 20 70 all	A B B C B B C C D	 B A C A B B C D

Continuation of Tab. 17: Overview of the chemical resistance of A2 and A4

Corrosive agent	Concentration	Temperature in °C	Level of resistance	
			A 2	A 4
Sulphurous acid	watery solution	20	A	A
Sulphur dioxide	-	100-500 900	C D	A C
Tar	-	hot	A	A
Wine	-	20 and hot	A	A
Tartaric acid	up to 10% above 10% up to 50% 75%	20 boiling 20 boiling boiling	A B A C C	A A A C C
Lemon juice	-	20	A	A
Citric acid	up to 10% 50%	all 20 boiling	A A C	A A B
Sugar solution	-	all	A	A

Tab. 18: Subdivision of level of resistance into various groups

Level of resistance	Evaluation	Weight loss in g/m2h
A	Totally resistant	< 0,1
B	Virtually resistant	0,1 - 1,0
C	Less resistant	1,0 - 10
D	not resistant	> 10

IV. Extract from building-authority approval Z-30.3-6 from 20 April 2009 „Products, fasteners and parts made from stainless steels“

Tab. 19: Subdivision of steel grades by strength class and corrosion resistance class

Serial Nr.	Steel grade[1]		Structure[2]	Strength classes[3] and product shapes[4]					Corrosion resistance class[5] [6]
	Short name	Mat. no.		S 235	S 275	S 355	S 460	S 690	
1	X2CrNi12	1.4003	F	B, Ba, H, P	D, H, S, W	D, S	D, S	--	I / low
2	X6Cr17	1.4016	F	D, S, W	--	--	--	--	
3	X5CrNi18-10	1.4301	A	B, Ba, D, H, P, S, W	B, Ba, D, H, P, S	B, Ba, D, H, S	Ba, D, H, S	S	
4	X2CrNi18-9	1.4307	A	B, Ba, D, H, P, S, W	B, Ba, D, H, P, S	Ba, D, H, S	Ba, D, S	S	
5	X3CrNiCu18-9-4	1.4567	A	D, S, W	D, S	D, S	D, S	--	II / moderate
6	X6CrNiTi18-10	1.4541	A	B, Ba, D, H, P, S, W	B, Ba, D H, P, S	Ba, D, H, S	Ba, D, H, S	--	
7	X2CrNiN18-7	1.4318	A	--	--	B, Ba, D, H, P, S	B, Ba, H	--	
8	X5CrNiMo17-12-2	1.4401	A	B, Ba, D, H, P, S, W	B, Ba, D, H, P, S	Ba, D, H, S	Ba, D, S	S	
9	X2CrNiMo17-12-2	1.4404	A	B, Ba, D, H, P, S, W	B, Ba, D, H, P, S	Ba, D, H, S	Ba, D, H, S	D, S	
10	X3CrNiCuMo17-11-3-2	1.4578	A	D, S, W	D, S	D, S	D, S	--	III / average
11	X6CrNiMoTi17-12-2	1.4571	A	B, Ba, D, H, P, S, W	B, Ba, D, H, P, S	Ba, D, H, S	Ba, D, H, S	D, S	
12	X2CrNHiMoN17-13-5	1.4439	A	--	B, Ba, D, H, S, W	--	--	--	
13	X2CrNiN23-4	1.4362	FA	--	--	--	B, Ba, D, S, W	D, S	
14	X2CrNiMN22-5-3	1.4462	FA	--	--	--	B, Ba, D, P, S, W	D, S	
15	X1NiCrMoCu25-20-5	1.4539	A	B, Ba, D, H, P, S, W	B, Ba, D, P, S	D, P, S	D, S	D, S	
16	X2CrNiMnMoNbN25-18-5-4	1.4565	A	--	--	--	B, Ba, D, S, W	--	IV / high
17	X1NiCrMoCuN25-20-7	1.4529	A	--	B, D, S, W	B, D, H, P, S	D, P, S	D, S	
18	X1CrNiMoCuN20-18-7	1.4547	A	--	B, Ba	B, Ba	--	--	

[1] According to DIN EN 10088-1:2005-09
[2] A = austenite; F = ferrite; FA = ferrite-austenite (duplex)
[3] The strength classes following the lowest strength in each case are achieved through cold work hardening by means of cold working.
[4] B = sheet; Ba = strip and sheets produced from it; D = wire, drawn; H = hollow profile; P = profile; S = bars; W = wire rod
[5] Applies to metallically bare surfaces only. The more base of the metals is at risk in the event of potential contact corrosion.
[6] For the corrosion resistance classes required, see Table 11.

Tab. 20: Material selection for atmospheric exposure

Impact	Exposure		Criteria and examples	Corrosion resistance class			
				I	II	III	IV
Dampness, annual average U of dampness	SF0	dry	U < 60%	X			
	SF1	rarely damp	60% ≤ U < 80%	X			
	SF2	frequently damp	80% ≤ U < 95%	X			
	SF3	permanently damp	95% < U		X		
Chloride content of surroundings, distance M from the sea, distance S from busy streets where road salt is used	SC0	low	Countryside, town, M > 10 km, S > 0,1 km	X			
	SC1	average	Industrial area, 10 km ≥ M > 1 km, 0,1 km ≥ S > 0,01 km		X		
	SC2	high	M ≤ 1 km S ≤ 0,01 km			X[1)]	
	SC3	very high	Indoor swimming pools, road tunnel				X[2)]
Pollution from redox active substances (e.g. SO_2, HOCl, Cl_2, H_2O_2)	SR0	low	Countryside, town	X			
	SR1	average	Industry			X[1)]	
	SR2	high	Indoor swimming pools, road tunnel				X[2)]
pH values on the surface	SH0	alkaline (e.g. contact with concrete)	9 < pH	X			
	SH1	neutral	5 < pH ≤ 9	X			
	SH2	slightly acidic (e.g. contact with wood)	3 < pH ≤ 5		X		
	SH3	acid (impact of acids)	pH ≤ 3			X	
Location of parts	SL0	inside	heated and unheated indoor rooms	X			
	SL1	outside, exposed to the rain	freestanding constructions		X[3)]		
	SL2	outside, roofed	constructions with roofs		X[3)]		
	SL3	outside, inaccessible[4)], influx of ambient air	facades with ventilation at rear			X	
The impact which produces the highest corrosion resistance class is definitive. Higher requirements do not result from a combination of different impacts.							

1) Regular cleaning of **accessible** construction or direct surface irrigation will significantly reduce exposure to corrosion such that the result can be reduced by one corrosion resistance class. If it is possible that the concentration of materials on the surfaces may increase, one corrosion resistance class higher should be selected.
2) Regular cleaning of **accessible** construction can significantly reduce exposure to corrosion such that one corrosion resistance class lower is possible.
3) If service life is limited to 20 years, reduction to corrosion resistance class I is possible if localised corrosion of 100 µm is tolerated (no visual requirements).
4) Constructions are graded as **inaccessible** if their condition cannot be monitored or is very hard to monitor and if they can only be reconditioned at great cost in the event of fire.

Tab. 21: Steel grades for fasteners with assignment to steel groups following DIN EN ISO 3506 Parts 1 and 2 and labelling following Section 2.2.2 and maximum nominal diameter

Steel grade				resistance class[1]	Labelling for screws with head based on DIN EN ISO 3506-1			Labelling for threaded rods, stud bolts, nuts and washers based on DIN EN ISO 3506-1+2		
					Strength class			Strength class		
Serial Nr.	Short name	Mat. no.	Group		50	70	80	50	70	80
3	X5CrNi18-10	1.4301	A2	II / moderate	≤ M 39	≤ M 24	≤ M 20	≤ M 64	≤ M 45	≤ M 24
4	X2CrNi18-9	1.4307	A2L		≤ M 39	≤ M 24	≤ M 20	≤ M 64	≤ M 45	≤ M 24
5	X3CrNiCu18-9-4	1.4567	A2L		≤ M 24	≤ M 16	≤ M 12	≤ M 24	≤ M 16	≤ M 12
6	X6CrNiTi18-10	1.4541	A3		≤ M 39	≤ M 20	≤ M 16	≤ M 64	≤ M 30	≤ M 24
8	X5CrNiMo17-12-2	1.4401	A4	III / average	≤ M 39	≤ M 24	≤ M 20	≤ M 64	≤ M 45	≤ M 24
9	X2CrNiMo17-12-2	1.4404	A4L		≤ M 39	≤ M 24	≤ M 20	≤ M 64	≤ M 45	≤ M 24
10	X3CrNiCuMo17-11-3-2	1.4578	A4L		≤ M 24	≤ M 16	≤ M 12	≤ M 24	≤ M 16	≤ M 12
11	X6CrNiMoTi17-12-2	1.4571	A5		≤ M 39	≤ M 24	≤ M 20	≤ M 64	≤ M 45	≤ M 24
12	X2CrNiMoN17-13-5	1.4439	[2]		≤ M 20	--	--	≤ M 64	--	--
13	X2CrNiN32-4	1.4362	[2]		--	≤ M 24	≤ M 20	--	≤ M 64	≤ M 20
14	X2CrNiMoN22-5-3	1.4462	[2]	IV / high	--	≤ M 24	≤ M 20	--	≤ M 64	≤ M 20
15	X1NiCrMoCu25-20-5	1.4539	[2] [3]		≤ M 39	≤ M 24	≤ M 20	≤ M 64	≤ M 45	≤ M 20
16	X2CrNiMnMoNbN25-18-5-4	1.4565	[2] [3]		--	≤ M 24	≤ M 20	--	≤ M 64	≤ M 30
17	X1NiCrMoCuN25-20-7	1.4529	[2] [3]			≤ M 24	≤ M 20	≤ M 64	≤ M 45	≤ M 45

[1] According to Table 10
[2] Since there are no standard definitions at present, these steels should be labelled with the material number.
[3] Appendix 7 of the general building-authority approval Z-30-3.6 from 20 April 2009 applies to fasteners in indoor swimming pool atmospheres. See Table 10.

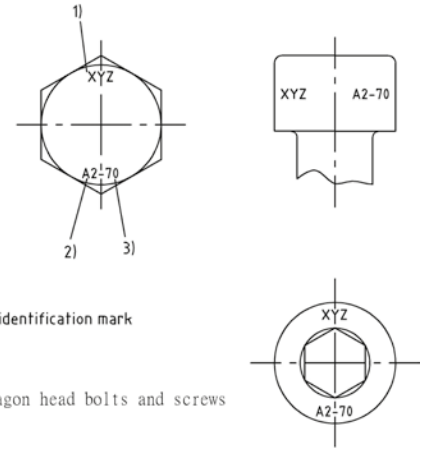
V. Marking of stainless screws and nuts

The marking of stainless screws and nuts must contain the steel group, strength class and manufacturer‘s sign.

Marking of screws according to DIN ISO 3506-1

Hexagonal screws and socket cap screws with hexagonal socket as of an M5 nominal diameter should be clearly marked according the marking system. Where at all possible, the marking should be placed on the screw head.

Fig. C: Extract from DIN EN ISO 3506-1



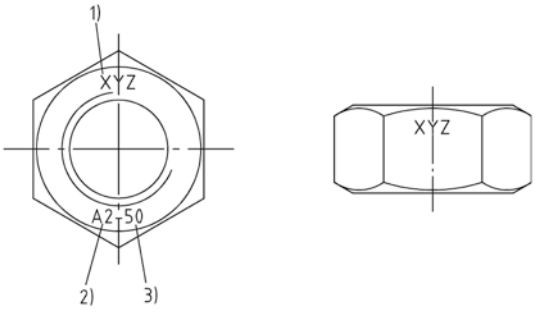
1) manufacturer´s identification mark
2) steel grade
3) property class

Marking of hexagon head bolts and screws

Marking of nuts according to DIN EN ISO 3506-2

Nuts with a thread nominal diameter as of 5 mm should be clearly marked according the following marking system. Marking on just one bearing surface is permitted and may only be used if recessed. Marking on the spanner flats is also possible.

Fig. D: Extract from DIN EN ISO 3506-2



1) manufacturer´s identification mark
2) steel grade
3) property class



Competence in Stainless Steel



Avrupa'nın en büyük paslanmaz çelik deposunda, vida ve somunların yanı sıra her şeyden önce bir şey bulacaksınız: hassas

Organizasyon, 37.000'den fazla bağlantı parçasını takip etmek için ihtiyacınız olan tek şeydir. Özellikle de en küçük parçaların çapı sadece 1 mm ve en büyüğü 52 mm'ye kadar olduğunda. Depomuz 300'den fazla DIN standardına göre tasnif edilmiştir, böylece çok çeşitli dinamiklere rağmen gerekli parçaları hızlı bir şekilde sağlayabiliriz. Dünya çapında sevkiyat için her gün depomuzdan ayrılan 1.000'den fazla sevkiyat, bunun ne kadar iyi çalıştığının kanıtıdır. Bilgisayarlı, kağıtsız bir toplama sistemi ile depoda yüksek hassasiyet sağlıyoruz.

Sektörlerinde lider şirketler arasında yer alan güvenilir lojistik ortaklarımızla, kıtadan bağımsız olarak en kısa teslimat sürelerini garanti ediyoruz. Sürekli dokümantasyon sayesinde teslimatlar A'dan Z'ye çevrimiçi olarak takip edilebiliyor.



Along with the nuts and bolts you would expect, one thing stands out in particular in Europe's largest stainless steel warehouse: precision

Organisation is key to maintaining an overview when working with a range of more than 37000 fastening items. Especially when the smallest parts are just 1 mm in diameter and the largest up to 52 mm. Our warehouse is sorted in line with more than 300 DIN standards to allow us to quickly find the parts we want despite the massive dynamism of our range. The 1000 plus shipments, which leave our warehouse every day for shipping around the world, are evidence that this works. We ensure high levels of precision in our warehouse by using a computer-assisted, paperless picking system.

Working with our reliable logistics partners, who in turn are leading companies in their own sectors, we ensure very short delivery times no matter where in the world we are shipping to. All our deliveries can be tracked online thanks to continuous documentation.

S+P kalite yönetimi

DIN EN ISO 9001:2015 kalite yönetim sistemimiz, gerekli kalite hedeflerini yerine getirmemizi sağlamaktadır. Bunlar arasında klasik kalite güvencesinin yanı sıra şirket genelinde iş süreçlerinin planlanması ve uygulanması da yer almaktadır.

Kalite güvencesi
Ürünlerimizin çoğu halihazırda tarafsız bir test enstitüsü tarafından izlenmekte ve harici izleme şartnamelerine uygun olarak düzenli testlere tabi tutulmaktadır. Bu, çeşitli ürünler için DIBt tarafından bina yetkilisi onayları ile desteklenmiştir.

Kalite güvence departmanımızda, geniş bir ölçüm ve test ekipmanı yelpazesi kullanarak kendi test laboratuvarımızda boyutsal doğruluk, torklar, vidalama süreleri, mukavemetler ve malzeme analizleri gibi testleri gerçekleştirme olanağına sahibiz.



Hitec ölçüm mikroskobu
Hitec-Measuring microscope

Bu test cihazı mesafelerin, açıların, alanların, dairelerin, yarıçapların ve çapların hassas bir şekilde ölçülmesini sağlar. Dijitalleştirme, ölçülen değerlerin her zaman belgelenmesini sağlar.

This test device allows distances, angles, areas, circles, radiuses and diameters to be measured with great accuracy. The measurements can be documented in a digital format at any time.



Schatz tork test cihazı
Schatz torque testing device

Schatz tork analizörü ile kırılma torklarını, vidalama torklarını veya dönme açısını kontrol etmek mümkündür.

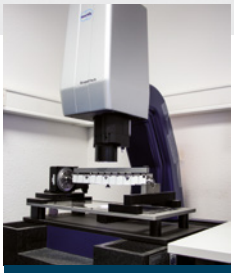
The Schatz torque analysis device allows ultimate torques, screw-in torques or even rotary angles to be checked.



Urban otomatik tornavida
Urban Screw unit

Bu otomatik tornavida, farklı ağırlıkların etkisi altında vidalama sürelerini ölçmek için kullanılabilir. Schatz tork sensörü ile birlikte bu, bir bağlantı elemanını analiz etmenin ideal yoludur.

This screw unit can be used to measure screw-in times under the influence of different weights. Perfect fastener analyses are possible when combined with the Schatz transmitter.



Werth ScopeCheck S
Werth ScopeCheck S

3D-CNC çok sensörlü koordinasyon ölçüm cihazı, bağlantı elemanlarımızı birkaç dakika içinde ölçer ve ilgili test raporunu yazdırır.

The 3D-CNC multi-sensor coordinate measuring machine measures our connecting elements and prints the corresponding test report within minutes.

S+P quality management

Our DIN EN ISO 9001:2015 quality management system guarantees our implementation of the necessary quality objectives. This includes traditional quality assurance as well as the planning and execution of operational procedures throughout the company.

Quality assurance
Many of our products are already checked by a neutral test institute and regularly inspected according to the requirements of external monitoring. For various products this has been confirmed by way of a building-authority approval from the DIBt.

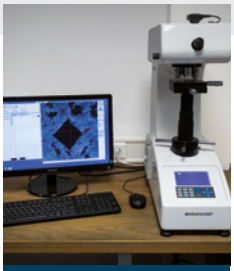
In our quality assurance, using a multitude of measurement and test devices we can perform tests of, for example, dimensional uniformity, torques, screw-in times, strength and even material analyses in our own test laboratory.



X-Ray
X-ışını analizörü
X-ray
analysis device

Paslanmaz çelik bağlantı elemanlarının malzeme bileşenlerini analiz etmenin ve bileşimlerini belirlemenin ideal yolu. Krom, nikel veya molibden içerip içermediklerine bakılmaksızın.

The optimum way of analysing the material components of the stainless steel fasteners and establishing their composition, regardless of whether they contain chrome, nickel or molybdenum.



Nexus Premium
sertlik test cihazı
Nexus premium
hardness testing device

Bu sertlik test cihazı, Vickers'a (ve Knopp / Brinell'e) göre yüksek hassasiyetli sertlik testleri yapmak için uygundur. Ölçüm aralığı 0,2 ila 30 kp'dir.

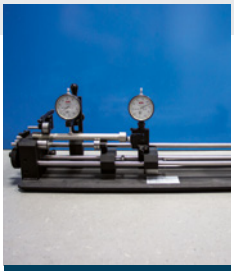
This hardness testing device can be used for high-precision hardness testing according to Vickers (and Knopp / Brinell). Its measurement range is 0.2 to 30 kp.



Karanlık
Oda
Dark
chamber

Bu test cihazı, sabitleme elemanlarına uygulanan sürtünme önleyici kaplamayı optik olarak tespit etmek için kullanılabilir.

It can be used to provide optical evidence of the smooth coating applied on the fastening elements.



Konsantriklik
test cihazı
Concentricity
test device

Bu test cihazı, vidaların düzlüğünü, kafanın vida eksenine eşmerkezliliğini ve montajın kafa çapına ve / veya vida eksenine eşmerkezliliğini 500 mm'lik bir vida uzunluğuna kadar belirlemek için kullanılabilir.

This test device can be used to determine screw straightness, the concentricity of the head to the screw axis, the concentricity of the drive to the head diameter and/or to the screw axis up to a screw length of 500 mm.



S+P - Paslanmaz Çelikte Yetkinlik

- 1982'den beri güvenilir ve yenilikçi bir ortak.
- 37.000'den fazla yüksek kaliteli bağlantı ürünüyle paslanmaz çelik bağlantı elemanları alanında pazar liderlerinden biriyiz.
- Pazardaki gelişmeler ve müşterilerimizin gereksinimleri doğrultusunda sürekli ürün yelpazesi dinamikleri.
- Kalite yönetimi ve modern lojistik alanlarında yeni standartlar belirliyoruz.
- Taahhüdümüz, depolama kapasitemiz ve deneyimli ekibimiz hizmetinizdedir.
- Hızlı teslimat hizmeti bizim için elbette bir konudur.
- Şirketimiz DIN EN ISO 9001:2015 uyarınca sertifikalandırılmıştır.
- Kalite ve hizmeti birleştiriyoruz - mükemmel "paslanmaz" bağlantılarımızdan yararlanın.



S+P - Competence in Stainless Steel

- *A reliable and innovative partner since 1982.*
- *With more than 37.000 quality products, we are one of the largest agents for special stainless steel fasteners in the industry.*
- *Constant product range dynamic – according to developments in the market and our customers` requirements.*
- *We set new standards in the field of quality management and modern logistics.*
- *Our readiness to operate, our warehouse capacity and an experienced team are at your service.*
- *For us, speed of delivery goes without saying.*
- *Our company is certified to DIN EN ISO 9001:2015.*
- *We combine quality and service – take advantage of our excellent business connections.*

Allgemeine Verkaufs- und Lieferbedingungen der Schäfer + Peters GmbH (künftig auch als „S + P“ bezeichnet) Stand 10/2022

I. Geltungsbereich

1. Die nachstehenden Verkaufsbedingungen gelten für alle zwischen dem Käufer und S + P geschlossenen Verträge über die Lieferung von Waren und damit in Verbindung stehenden Leistungen (wie z.B. Beratungsleistungen oder Auskünfte), soweit es sich bei dem Käufer um ein Unternehmen, eine juristische Person des öffentlichen Rechts oder ein öffentlich-rechtliches Sondervermögen handelt. Aufträge werden ausschließlich auf der Grundlage nachfolgender Bedingungen ausgeführt. Das Angebot, die Angebotsannahme, die Auftragsbestätigung sowie der Verkauf jeglicher Produkte unterliegen den vorliegenden Bedingungen. Entgegenstehende oder abweichende Bedingungen des Käufers erkennen wir nicht an, es sei denn, wir hätten ausdrücklich ihrer Geltung zugestimmt. Dieses Zustimmungserfordernis gilt in jedem Fall, insbesondere auch dann, wenn wir in Kenntnis entgegenstehender oder abweichender Bedingungen des Käufers die Bestellung des Käufers vorbehaltlos ausführen.
2. In den Verträgen sind alle Vereinbarungen, die zwischen dem Käufer und S + P zur Ausführung der Kaufverträge bis zum Zeitpunkt des jeweiligen Vertragsschlusses getroffen wurden, in Textform niedergelegt. Die Wirksamkeit nachträglich im Einzelfall getroffener Individualvereinbarungen bleibt unberührt.
3. Soweit S + P und der Käufer eine Rahmenvereinbarung getroffen haben, gelten diese Allgemeinen Verkaufsbedingungen sowohl für diese Rahmenvereinbarung als auch für den einzelnen Lieferungs- bzw. Kaufauftrag.
4. Die Allgemeinen Verkaufsbedingungen gelten auch für alle künftigen Geschäftsbeziehungen, auch wenn sie nicht noch einmal ausdrücklich vereinbart werden.

II. Angebot und Vertragsschluss

1. Eine Bestellung des Käufers, welche als rechtsverbindliches Angebot zum Abschluss eines Kaufvertrages zu qualifizieren ist, können wir innerhalb von zwei Wochen nach unserer Wahl durch Übersendung einer Auftragsbestätigung oder durch vorbehaltlose Erbringung der bestellten Lieferungen oder Leistungen annehmen.
2. Unsere Angebote sind freibleibend und unverbindlich, es sei denn, dass wir diese ausdrücklich als verbindlich bezeichnet haben. Angaben über unsere Waren (insbesondere technische Daten, Maße, Leistungs- und Verbrauchsdaten sowie die Beschreibungen in den jeweiligen Produktinformationen oder Werbematerialien u.a.) sind nur ungefähr und annähernd maßgeblich, soweit nicht die Verwendbarkeit zum vertraglich vorgesehenen Zweck eine genaue Übereinstimmung voraussetzt; sie sind keine garantierte Beschaffenheit, es sei denn, die Garantie erfolgt ausdrücklich und in Textform.
3. An allen Abbildungen, Kalkulationen, Zeichnungen sowie anderen Unterlagen behalten wir uns unsere Eigentums-, Urheber- sowie sonstige Schutzrechte vor. Der Käufer darf diese Gegenstände, unabhängig davon, ob wir sie als vertraulich gekennzeichnet haben, nur mit unserer Einwilligung in Textform als solche oder inhaltlich an Dritte weitergeben, sie bekannt geben, selbst oder durch Dritte nutzen oder vervielfältigen.
4. Angaben zu aktuellen Lagerbeständen sind stets unverbindlich. Werden Bestände dem Kunden mitgeteilt, so handelt es sich hierbei um speziell für Kunden- oder Absatzgruppen vorgehaltene Bestände, die nicht mit dem tatsächlichen Bestand identisch sein müssen.

III. Zahlungsbedingungen

1. Unsere Preise gelten für den in den Auftragsbestätigungen aufgeführten Leistungs- und Lieferungsumfang. Mehr- oder Sonderleistungen werden gesondert berechnet. Die Preise gelten ab Werk Öhringen zuzüglich Verpackung, Zoll, Versicherung und im Einzelfall zusätzlich anfallender Abgaben, wenn nichts anderes festgelegt wurde. In unseren Preisen ist die gesetzliche Mehrwertsteuer nicht eingeschlossen. Diese werden wir in der gesetzlichen Höhe am Tage der Rechnungsstellung in der Rechnung gesondert ausweisen.
2. Soweit nicht abweichend vereinbart, sind Rechnungen innerhalb von 30 Tagen ab Rechnungsdatum und Lieferung ohne Abzug zur Zahlung fällig. Bei Zahlungen innerhalb von 10 Tagen ab Rechnungsdatum, gewähren wir Skonto von 2%, es sei denn der Käufer befindet sich mit weiteren Zahlungsverpflichtungen uns gegenüber im Zahlungsverzug. Eine Zahlung gilt erst dann als erfolgt, wenn wir über den Betrag verfügen können. Im Falle von Scheckzahlungen gilt die Zahlung erst als erfolgt, wenn der Scheck eingelöst wird.
3. Zahlt der Käufer nicht innerhalb der vorgenannten Frist, so gerät er in Zahlungsverzug, ohne dass es einer erneuten Zahlungsaufforderung bedarf. Im Falle des Zahlungsverzugs ist der Kaufpreis zu dem für Unternehmer gesetzlich geltenden Verzugszinssatz zu verzinsen. Weitergehende Ansprüche bleiben vorbehalten. Leistet der Käufer auch auf eine nochmalige Zahlungsaufforderung nicht, so sind wir dazu berechtigt, alle gegenüber dem Käufer bestehenden Verbindlichkeiten, insbesondere auch gestundete oder in Raten zu zahlende Beträge, sofort fällig zu stellen und etwaige weitere Lieferungen zu versagen.
4. Der Käufer ist zur Aufrechnung und/oder Zurückbehaltung nur berechtigt, wenn die Gegenforderungen rechtskräftig festgestellt sind, von uns anerkannt wurden, unstreitig sind oder wenn die Gegenforderungen aus demselben konkreten Vertragsverhältnis wie die Hauptforderung herrühren und zu dieser in einem Gegenseitigkeitsverhältnis stehen.
5. Soweit S + P dem Käufer Ratenzahlung gewährt hat, wird der noch bestehende Restbetrag dann insgesamt zur Zahlung fällig, wenn der Käufer mit der Zahlung einer Rate länger als 8 Tage in Verzug gerät.
6. Preisänderungen sind zulässig, wenn zwischen Vertragsabschluss und vereinbartem Liefertermin mehr als vier Monate vergangen sind und die Preisänderung auf eine aktuelle Kostensteigerung zurückzuführen ist, welche wir nicht zu vertreten haben. Eine Kostensteigerung liegt vor, wenn sich bis zur Lieferung die Löhne, die Materialkosten, die Transportkosten, Transportnebenkosten oder die Vertriebskosten erhöhen. Dasselbe gilt, wenn sich Zölle erhöhen bzw. ein Zoll eingeführt wird oder sich Kostenänderungen aufgrund von Preiserhöhungen von Vorlieferanten oder wegen Wechselkursschwankungen ergeben. S + P ist in diesen Fällen berechtigt, den Preis angemessen entsprechend den Kostensteigerungen zu erhöhen.

IV. Liefer- und Leistungszeit, Höhere Gewalt, Haftung bei Lieferverzug

1. Liefertermine oder Fristen, die nicht ausdrücklich als verbindlich vereinbart oder ausdrücklich verbindlich von uns zugesagt worden sind, sind ausschließlich unverbindliche Angaben. Sie gelten nur annäherungsweise und beschreiben den voraussichtlichen Liefertermin. Hiervon abweichende Vereinbarungen oder Zusagen über eine verbindliche Lieferzeit müssen ausdrücklich und in Textform erfolgen. Die Lieferzeit beginnt erst dann zu laufen, wenn der Käufer die seinerseits geschuldeten Mitwirkungshandlungen ordnungsgemäß und vollständig erbracht hat.
2. Erhalten wir aus von uns nicht zu vertretenden Gründen Lieferungen oder Leistungen unserer Unterlieferanten oder von Subunternehmern trotz ordnungsgemäßer Eindeckung nicht, nicht richtig oder nicht rechtzeitig oder treten Ereignisse höherer Gewalt ein, so werden wir unseren Kunden rechtzeitig in Textform informieren und uns nach besten Kräften bemühen, die Liefer- oder Leistungsstörung oder die höhere Gewalt zu beheben und in ihren Auswirkungen soweit wie möglich zu beschränken. In diesem Fall sind wir berechtigt, die Lieferung bzw. Leistung um die Dauer einer nur vorübergehenden Behinderung herauszuschieben oder im Falle einer wesentlichen Behinderung von nicht nur vorübergehender Dauer wegen des noch nicht erfüllten Teils vom Vertrag ganz oder teilweise zurückzutreten, soweit wir unserer vorstehenden Informationspflicht nachgekommen sind und nicht das Beschaffungsrisiko bzw. Herstellungsrisiko übernommen haben. Der höheren Gewalt stehen gleich sonstige bei Vertragsabschluss nicht vorhersehbare Ereignisse wie rechtmäßige Streiks oder Aussperrungen, behördliche Eingriffe, Energie- und Rohstoffknappheit, unverschuldete Transportengpässe, unverschuldete Betriebsbehinderungen zum Beispiel durch Feuer, Wasser und Maschinenschäden, unerwartet auftretende Pandemien oder Epidemien, kriegs- und kriegsähnliche Handlungen, Wirtschaftssanktionen und alle sonstigen Behinderungen, die bei objektiver Betrachtungsweise nicht von uns schuldhaft herbeigeführt worden sind. Verzögert sich die Lieferung oder Leistung in Folge eines der vorstehend in Satz 1 und 3 genannten Fälle um mehr als einen Monat, so sind sowohl wir als auch der Kunde - unbeschadet des Fristsetzungserfordernisses für den Kunden und unter Ausschluss jeglicher Schadensersatzansprüche - berechtigt, hinsichtlich der von den Lieferstörungen betroffenen Menge vom Vertrag zurückzutreten. Zum Rücktritt vom gesamten Vertrag ist der Kunde berechtigt, wenn ihm die Annahme einer Teillieferung unzumutbar ist.
3. In jedem Falle geraten wir erst nach Ablauf einer vom Kunden gesetzten angemessenen Nachfrist in Lieferverzug, es sei denn, es handelt sich um ein Fixgeschäft im Sinne von § 286 Abs. 2 Nr. 4 BGB oder von § 376 HGB.
4. Unsere gesetzlichen Rechte, insbesondere bei einem Ausschluss der Leistungspflicht (z. B. aufgrund Unmöglichkeit oder Unzumutbarkeit der Leistung und/oder Nacherfüllung), bleiben unberührt. Schadensersatzansprüche aus Lieferverzug sind ausgeschlossen, soweit sie nicht auf einem vorsätzlichen, arglistigen oder grob fahrlässigen Handeln unsererseits oder unserer Erfüllungsgehilfen oder auf der schuldhaften Verletzung wesentlicher Vertragspflichten beruhen. Wesentlich sind diejenigen Vertragspflichten, die vertragswesentliche Rechtspositionen des Kunden schützen, die ihm der Vertrag nach seinem Inhalt und Zweck gerade zu gewähren hat; wesentlich sind ferner solche Vertragspflichten, deren Erfüllung die ordnungsgemäße Durchführung des Vertrages überhaupt erst ermöglicht und auf deren Einhaltung der Vertragspartner regelmäßig vertraut und auch vertrauen darf.
Der Haftungsausschluss gilt nicht für Schäden, welche aus der Verletzung des Lebens, des Körpers oder der Gesundheit herrühren oder Garantien betreffen. Im Falle einer einfach fahrlässigen Verletzung einer wesentlichen Vertragspflicht haften wir allerdings nur für den nach Art des Vertragsschlusses vorhersehbaren, vertragstypischen, unmittelbaren Durchschnittsschaden.
5. Wir sind zu Teillieferungen und Teilleistungen nur berechtigt, wenn
- die Teillieferung oder Teilleistung für den Kunden im Rahmen des vertraglichen Bestimmungszwecks verwendbar ist,
- die Lieferung der restlichen bestellten Waren bzw. die Erbringung der restlichen beauftragten Leistungen sichergestellt ist und
- dem Kunden hierdurch kein erheblicher Mehraufwand oder zusätzliche Kosten entstehen (es sei denn, wir erklären uns zur Übernahme dieser Kosten bereit).
6. Kommt der Käufer in Annahmeverzug, so sind wir berechtigt, Ersatz des entstehenden Schadens und etwaiger Mehraufwendungen zu verlangen. Gleiches gilt, wenn der Käufer Mitwirkungspflichten schuldhaft verletzt.

V. Erfüllungsort, Gefahrübergang, Versand, Verpackung

1. Die Lieferung erfolgt ab Lager in Öhringen, wo auch der Erfüllungsort für die Lieferung ist. Dies gilt auch für den Fall der Nacherfüllung. Auf Verlangen und Kosten des Käufers wird die Ware an einen anderen Bestimmungsort versandt (Versendungskauf).
2. Die Gefahr des zufälligen Untergangs und der zufälligen Verschlechterung der Ware geht spätestens mit der Übergabe auf den Käufer über. Beim Versendungskauf geht jedoch die Gefahr des zufälligen Untergangs und der zufälligen Verschlechterung der Ware sowie die Verzögerungsgefahr bereits mit Auslieferung der Ware an den Spediteur, den Frachtführer oder der sonst zur Ausführung der Versendung bestimmten Person oder Anstalt über. Der Übergabe steht es gleich, wenn der Käufer im Verzug der Annahme ist.
3. Wir werden uns bemühen, hinsichtlich Versandart und Versandweg Wünsche und Interessen des Käufers zu berücksichtigen; dadurch bedingte Mehrkosten - auch bei vereinbarter Frachtfreilieferung - gehen zu Lasten des Käufers.
4. Wir nehmen Transport- und alle sonstigen Verpackungen nach Maßgabe der Verpackungsverordnung nicht zurück; ausgenommen sind Paletten. Der Käufer hat für die Entsorgung der Verpackung, welche in sein Eigentum übergeht, auf eigene Kosten zu sorgen.
5. Wird der Versand auf Wunsch oder wegen Verschuldens des Käufers verzögert, so lagern wir die Waren auf Kosten und Gefahr des Käufers. In diesem Fall steht die Anzeige der Versandbereitschaft dem Versand gleich.
6. Auf Wunsch und Kosten des Käufers werden wir die Lieferung durch eine Transportversicherung absichern. Hierzu bedarf es einer ausdrücklichen Weisung des Käufers in Textform.

VI. Gewährleistung / Haftungsbegrenzung / Ersatz vergeblicher Aufwendungen

1. Mängelansprüche des Käufers bestehen nur, wenn der Käufer seinen gesetzlich geschuldeten Untersuchungs- und Rügepflichten, insbesondere gemäß § 377 HGB, ordnungsgemäß nachgekommen ist. Unbeschadet der gesetzlichen Anforderungen an eine ordnungsgemäße Untersuchung hat der Käufer die gelieferte Ware nach Ablieferung bei ihm oder dem von ihm bestimmten Dritten sorgfältig und in zumutbarem Umfang – gegebenenfalls stichprobeweise – mindestens auf Maßhaltigkeit, Material, Gewicht und Oberflächenbeschaffenheit zu untersuchen. Dabei erkennbar werdende Mängel sind uns innerhalb einer Woche nach Eingang der Ware in Textform anzuzeigen. Geschieht dies nicht, gilt die Ware als genehmigt. Versteckte Mängel sind S + P unverzüglich in Textform nach ihrer Entdeckung mitzuteilen. Eine ordnungsgemäße Mängelrüge hat die Bereitschaft des Käufers erkennen zu lassen, den beanstandeten Liefergegenstand auf Verlangen von S + P frachtfrei zurückzusenden. Bei berechtigter Mängelrüge vergütet S + P die Kosten des günstigsten Versandweges; dies gilt nicht, soweit die Kosten sich erhöhen, weil der Liefergegenstand sich an einem anderen Ort als dem Ort des bestimmungsgemäßen Gebrauchs befindet. Versäumt der Käufer die ordnungsgemäße Untersuchung und/oder Mängelanzeige, ist unsere Haftung für den nicht bzw. nicht rechtzeitig oder nicht ordnungsgemäß angezeigten Mangel nach den gesetzlichen Vorschriften ausgeschlossen. Bei einer zum Einbau, zur Anbringung oder Installation bestimmten Ware gilt dies auch dann, wenn der Mangel infolge der Verletzung einer dieser Pflichten erst nach der entsprechenden Verarbeitung offenbar wurde; in diesem Fall bestehen insbesondere keine Ansprüche des Käufers auf Ersatz entsprechender Kosten (Aus- und Einbaukosten).
2. Für die Rechte des Käufers bei Sach- und Rechtsmängeln (einschließlich Falsch- und Minderlieferung sowie unsachgemäßer Montage oder mangelhafter Montageanleitung) gelten die gesetzlichen Vorschriften, soweit nicht vorstehend oder nachfolgend ein anderes bestimmt ist.
3. Grundlage unserer Mängelhaftung ist vor allem die über die Beschaffenheit und die vorausgesetzte Verwendung der Ware (einschließlich Zubehör und Anleitungen) getroffene Vereinbarung. Als Beschaffenheitsvereinbarung in diesem Sinne gelten alle Produktbeschreibungen und Herstellerangaben, die Gegenstand des einzelnen Vertrages sind oder von uns (insbesondere in Katalogen oder auf unserer Internet-Homepage) zum Zeitpunkt des Vertragsschlusses öffentlich bekannt gemacht waren. Soweit die Beschaffenheit nicht vereinbart wurde, ist nach der gesetzlichen Regelung zu beurteilen, ob ein Mangel vorliegt oder nicht (§ 434 Abs. 3 BGB). Öffentliche Äußerungen des Herstellers oder in seinem Auftrag insbesondere in der Werbung oder auf dem Etikett der Ware gehen dabei Äußerungen sonstiger Dritter vor.
4. Unabhängig von den vorstehenden und nachstehenden Regelungen gelten die gesetzlichen Vorschriften in jedem Fall
- bei vorsätzlichem Handeln unsererseits oder arglistigem Verschweigen eines Mangels;
- bei Schäden aus der Verletzung des Lebens, des Körpers oder der Gesundheit;
- bei Ansprüchen nach dem Produkthaftungsgesetz;
- soweit von uns übernommene Garantien den abweichenden Regelungen entgegenstehen.

In allen Fällen unberührt bleiben die gesetzlichen Sondervorschriften zum Aufwendungsersatz bei Endlieferung der neu hergestellten Ware an einen Verbraucher (Lieferantenregress gem. §§ 478, 445a, 445b bzw. §§ 445c, 327 Abs. 5, 327u BGB), sofern nicht, z.B. im Rahmen einer Qualitätssicherungsvereinbarung, ein gleichwertiger Ausgleich vereinbart wurde.
5. Im Übrigen gelten für die Rechte des Käufers bei Sach- und Rechtsmängeln folgende Besonderheiten:

a) Haftung auf Schadensersatz und Ersatz vergeblicher Aufwendungen

Schadensersatzansprüche wegen Rechts- und Sachmängeln sind ausgeschlossen, soweit sie nicht
- auf einem grob fahrlässigen Handeln unsererseits oder unserer Erfüllungsgehilfen oder
- auf der schuldhaften Verletzung wesentlicher Vertragspflichten beruhen. Wesentlich sind diejenigen Vertragspflichten, die vertragswesentliche Rechtspositionen des Kunden schützen, die ihm der Vertrag nach seinem Inhalt und Zweck gerade zu gewähren hat; wesentlich sind ferner solche Vertragspflichten, deren Erfüllung die ordnungsgemäße Durchführung des Vertrages überhaupt erst ermöglicht und auf deren Einhaltung der Vertragspartner regelmäßig vertraut und auch vertrauen darf.

Im Falle einer einfach fahrlässigen Verletzung einer wesentlichen Vertragspflicht haften wir nur für den nach Art des Vertragsschlusses vorhersehbaren, typischerweise eintretenden Schaden.

Ansprüche auf Ersatz vergeblicher Aufwendungen nach § 284 BGB sind dann und insoweit abbedungen, als nach dem zuvor Gesagten ein Anspruch auf Ersatz des Schadens statt der Leistung in wirksamer Weise freigezeichnet worden ist.

b) Nacherfüllung
- Ist die gelieferte Sache mangelhaft, können wir zunächst wählen, ob wir Nacherfüllung durch Beseitigung des Mangels (Nachbesserung) oder durch Lieferung einer mangelfreien Sache (Ersatzlieferung) leisten. Ist die von uns gewählte Art der Nacherfüllung im Einzelfall für den Käufer unzumutbar, kann er sie ablehnen. Unser Recht, die Nacherfüllung unter den gesetzlichen Voraussetzungen zu verweigern, bleibt unberührt.
- Wurde die von S + P gelieferte Ware beim Käufer selbst bereits in eine andere Sache eingebaut oder an eine andere Sache angebracht, hat uns der Käufer, soweit dies für ihn zumutbar ist, zum Zwecke der Nacherfüllung Gelegenheit zu geben, die Ware selbst zu entfernen und die nachgebesserte oder nachgelieferte Ware selbst erneut einzubauen bzw. anzubringen und uns hierzu eine angemessene Frist zu bestimmen. Dies gilt unabhängig davon, ob wir ursprünglich zusätzlich zur Lieferung auch zum Einbau der Ware oder zu deren Montage verpflichtet waren; durch dieses Vorgehen wird der Einbau oder die Montage der gelieferten Ware auch nicht zum Teil der Nacherfüllung.
- Hat der Käufer die durch S + P gelieferte Ware bereits weiterverkauft, hat der Käufer gegenüber S + P auch dann eine vorherige und angemessene Frist zur Nacherfüllung zu setzen, wenn der Käufer die Ware von seinem Abnehmer in Folge der Mangelhaftigkeit zurücknehmen musste oder der Abnehmer des Käufers den Kaufpreis gemindert hat.
- Unser Recht, die Nacherfüllung unter den gesetzlichen Voraussetzungen zu verweigern, bleibt unberührt.

c) Ersatz von Aufwendungen zur Nacherfüllung
- Der Käufer ist erst berechtigt, bei ihm selbst zum Zwecke der Nacherfüllung erforderlich werdende Aufwendungen, insbesondere zum Aus- und Wiedereinbau der Sache bzw. zum Entfernen und Wiederanbringen derselben, unter den weiteren gesetzlichen Voraussetzungen von S + P ersetzt zu verlangen, wenn die vom Käufer hierzu bestimmte angemessene Frist fruchtlos verstrichen ist.
- Musste die durch S + P gelieferte Sache im Falle der Weiterveräußerung durch den Käufer zum Zwecke der Nacherfüllung bei dessen direktem oder einem weiteren Abnehmer in der Lieferkette aus- und wiedereingebaut bzw. entfernt und wiederangebracht werden, ist S + P dem Käufer gegenüber nicht zum Ersatz der hierfür angefallenen Aufwendungen verpflichtet.
- Stellt sich heraus, dass das Mangelbeseitigungsverlangen des Käufers unberechtigt war, kann S + P von ihm die entstandenen Kosten (insbesondere Prüf-, Ein- und Ausbau- sowie Transportkosten) ersetzt verlangen, es sei denn, die fehlende Mangelhaftigkeit war für den Käufer nicht erkennbar.

Die vorstehend unter lit. b) und c) genannten Besonderheiten gelten nicht im Falle von Aufwendungsersatz bei Endlieferung neu hergestellter Ware an einen Verbraucher (Lieferantenregress gem. §§ 478, 445a, 445b bzw. §§ 445c, 327 Abs. 5, 327u BGB), sofern nicht, z.B. im Rahmen einer Qualitätssicherungsvereinbarung, ein gleichwertiger Ausgleich vereinbart wurde.

6. In den Fällen der Lieferung von neu hergestellter Ware durch S + P, die am Ende der Lieferkette in unverarbeitetem Zustand durch einen Unternehmer an einen Verbraucher verkauft werden, auch wenn letzterer sie weiterverarbeitet hat, gelten für die Rechte des Käufers weiter folgende Besonderheiten:
- Die Ansprüche des Käufers aus § 478 BGB sind ausgeschlossen, soweit es sich um einen Mangel aufgrund von Werbeaussagen oder sonstigen vertraglichen Vereinbarungen handelt, die nicht von S + P herrühren, oder wenn der Käufer, sein unmittelbarer oder ein weiterer Abnehmer in der Lieferkette gegenüber dem Endverbraucher eine besondere Garantie abgegeben hat.
- Diese Ansprüche sind ebenfalls ausgeschlossen, wenn der Käufer, sein unmittelbarer oder ein weiterer Abnehmer in der Lieferkette selbst nicht aufgrund der gesetzlichen Regelungen zur Ausübung der Gewährleistungsrechte gegenüber dem Endverbraucher verpflichtet war oder diese Rüge gegenüber einem ihm gestellten Anspruch nicht vorgenommen hat. Dies gilt auch, wenn der Käufer, sein unmittelbarer oder ein weiterer Abnehmer in der Lieferkette gegenüber dem Endverbraucher Gewährleistungen übernommen hat, die über

das gesetzliche Maß hinausgehen.
- Die Ansprüche des Käufers aus § 478 BGB sind insgesamt ausgeschlossen, wenn der Käufer seinen gesetzlich geschuldeten Untersuchungs- und Rügepflichten nach näherer Maßgabe des Abschnitts VI Ziff. 1 nicht ordnungsgemäß nachgekommen ist.

VII. Sonstige Haftung
Schadensersatzansprüche wegen Verletzung einer außervertraglichen Pflicht (Haftung aus Delikt) oder wegen Verschuldens bei oder im Vorfeld des Vertragsschlusses (culpa in contrahendo) sowie aus sonstigen Rechtsgründen, insbesondere der Verletzung allgemeiner Rücksichtnahmepflichten (§ 241 Abs. 2 BGB), der fehlerhaften oder unterlassenen Ausführung von vor oder nach Vertragsschluss erfolgten Vorschlägen oder Beratungen oder der Verletzung sonstiger Vertragspflichten (§ 280 Abs. 1 BGB), soweit es sich nicht bereits um Gewährleistungsansprüche handelt, sind ausgeschlossen, soweit sie nicht auf ein vorsätzliches, arglistiges oder grob fahrlässiges Handeln unsererseits oder unserer Erfüllungsgehilfen oder auf der schuldhaften Verletzung wesentlicher Vertragspflichten beruhen.
Der Haftungsausschluss gilt nicht für Schäden, welche aus der Verletzung des Lebens, des Körpers oder der Gesundheit herrühren oder Garantien sowie Ansprüche aus dem Produkthaftungsgesetz betreffen.
Im Falle einer einfach fahrlässigen Verletzung einer wesentlichen Vertragspflicht haften wir allerdings nur für den nach Art des Vertragsschlusses vorhersehbaren, typischerweise eintretenden Schaden.

VIII. Verjährung
1. Abweichend von § 438 Abs. 1 Nr. 3 BGB beträgt die allgemeine Verjährungsfrist für Ansprüche aus Sach- und Rechtsmängeln einschließlich des Anspruchs auf Aufwendungsersatz in der Lieferkette nach § 445a Abs. 1, Abs. 3 BGB ein Jahr ab Ablieferung. Soweit eine Abnahme vereinbart ist, beginnt die Verjährung mit der Abnahme.
2. Handelt es sich bei der Ware jedoch um ein Bauwerk oder eine Sache, die entsprechend ihrer üblichen Verwendungsweise für ein Bauwerk verwendet worden ist und dessen Mangelhaftigkeit verursacht hat, beträgt die Verjährungsfrist gemäß der gesetzlichen Regelung fünf Jahre ab Ablieferung (§ 438 Abs. 1 Nr. 2 BGB). Unberührt bleiben auch weitere gesetzliche Sonderregelungen zur Verjährung (insbes. § 438 Abs. 1 Nr. 1, Abs. 3, §§ 444, 445b BGB).
3. Handelt es sich bei der Ware um solche Gegenstände, die für ein Bauwerk, aber auch für andere Dienst- und Werkleistungen verwendet werden können, verbleibt es bei der Verjährungsfrist gem. Ziff. 1, es sei denn, wenn der Einbau der Ware für das Bauwerk von wesentlicher Bedeutung war; dann gilt die Verjährungsfrist gem. Ziff. 2.
4. Abweichend von § 445b Abs. 2 S. 2 BGB endet im Falle der Weiterveräußerung der von S + P gelieferten Ware durch den Käufer gegenüber S + P die Ablaufhemmung hinsichtlich der Verjährung von Mängelansprüchen des Käufers drei Jahre nach Ablieferung der Ware.
5. Die vorstehenden Verjährungsfristen des Kaufrechts gelten auch für vertragliche und außervertragliche Schadensersatzansprüche des Käufers, die auf einem Mangel der Ware beruhen, es sei denn die Anwendung der regelmäßigen gesetzlichen Verjährung (§§ 195, 199 BGB) würde im Einzelfall zu einer kürzeren Verjährung führen. Schadensersatzansprüche des Käufers aus Vorsatz, grober Fahrlässigkeit, der Verletzung von Leben, Körper oder Gesundheit sowie aus Garantien oder dem Produkthaftungsgesetz verjähren jedoch ausschließlich nach den gesetzlichen Verjährungsfristen. Die Verkürzung der Verjährungsfrist bzw. der Ablaufhemmung gilt auch dann nicht, wenn es sich um einen Fall der Lieferung von Waren durch S + P handelt, die am Ende der Lieferkette in unverarbeitetem Zustand durch einen Unternehmer an einen Verbraucher verkauft werden (Rückgriff des Unternehmers - §§ 478, 479 BGB).

IX. Eigentumsvorbehalt
1. Die von uns gelieferte Ware bleibt bis zur Erfüllung sämtlicher bestehender oder künftig entstehender Forderungen, die uns aus irgendeinem Rechtsgrund aus der laufenden Geschäftsbeziehung und/oder dem konkreten Kaufvertrag gegenüber dem Käufer zustehen, unser Eigentum. Im Falle des vertragswidrigen Verhaltens des Käufers, z.B. Zahlungsverzug, haben wir nach vorheriger Setzung einer angemessenen Frist das Recht, die Vorbehaltsware zurückzunehmen. Nehmen wir die Vorbehaltsware zurück, stellt dies einen Rücktritt vom Vertrag dar. Pfänden wir die Vorbehaltsware, ist dies ein Rücktritt vom Vertrag. Wir sind berechtigt, die Vorbehaltsware nach der Rücknahme zu verwerten. Nach Abzug eines angemessenen Betrages für die Verwertungskosten, ist der Verwertungserlös mit den uns vom Käufer geschuldeten Beträgen zu verrechnen.
2. Der Käufer hat die Vorbehaltsware pfleglich zu behandeln und diese auf seine Kosten gegen Feuer-, Wasser- und Diebstahlschäden ausreichend zum Neuwert zu versichern. Wartungs- und Inspektionsarbeiten, die erforderlich werden, sind vom Käufer auf eigene Kosten rechtzeitig durchzuführen. Der Käufer ist außerdem verpflichtet, auf Verlangen von S + P, uns jederzeit über den Zustand der Ware Auskunft zu geben und den Aufbewahrungsort der Ware mitzuteilen.
3. Der Käufer ist berechtigt, die Vorbehaltsware im ordnungsgemäßen Geschäftsgang zu veräußern und/oder zu verwenden, solange er nicht in Zahlungsverzug ist. Verpfändungen oder Sicherungsübereignungen sind unzulässig. Die aus dem Weiterverkauf oder einem sonstigen Rechtsgrund (Versicherung, unerlaubte Handlung) bezüglich der Vorbehaltsware entstehenden Forderungen (einschließlich sämtlicher Saldoforderungen aus Kontokorrent) tritt der Käufer bereits jetzt sicherungshalber in vollem Umfang an uns ab; wir nehmen die Abtretung hiermit an. Wir ermächtigen den Käufer widerruflich, die an uns abgetretenen Forderungen für dessen Rechnung im eigenen Namen einzuziehen. Die Einzugsermächtigung kann jederzeit widerrufen werden, wenn der Käufer seinen Zahlungsverpflichtungen nicht ordnungsgemäß nachkommt. Zur Abtretung dieser Forderung ist der Käufer auch nicht zum Zwecke des Forderungseinzugs im Wege des Factoring befugt, es sei denn, es wird gleichzeitig die Verpflichtung des Factors begründet, die Gegenleistung in Höhe der Forderungen solange unmittelbar an uns zu bewirken, als noch Forderungen von uns gegen den Käufer bestehen. Der Käufer ist außerdem verpflichtet, uns von einer Pfändung oder einer anderen Beeinträchtigung durch Dritte unverzüglich zu benachrichtigen.
4. Eine Verarbeitung oder Umbildung der Vorbehaltsware durch den Käufer wird in jedem Fall für uns vorgenommen. Sofern die Vorbehaltsware mit anderen, uns nicht gehörenden Sachen verarbeitet wird, erwerben wir das Miteigentum an der neuen Sache im Verhältnis des Wertes der Vorbehaltsware (Rechnungsendbetrag inklusive der Mehrwertsteuer) zu den anderen verarbeiteten Sachen im Zeitpunkt der Verarbeitung. Im Falle der untrennbaren Vermischung der Vorbehaltsware mit anderen, uns nicht gehörenden Sachen erwerben wir Miteigentum an der neuen Sache im Verhältnis des Wertes der Vorbehaltsware (Rechnungsendbetrag inklusive der Mehrwertsteuer) zu den anderen vermischten Sachen im Zeitpunkt der Vermischung. Ist die Sache des Käufers in Folge der Vermischung als Hauptsache anzusehen, sind der Käufer und wir uns einig, dass der Käufer uns anteilmäßig Miteigentum an dieser Sache überträgt; die Übertragung nehmen wir hiermit an. Unser so entstandenes Allein- oder Miteigentum an einer Sache verwahrt der Käufer für uns. Für die durch Verarbeitung oder Umbildung entstehende neue Sache gilt das Gleiche wie für die Vorbehaltsware, allerdings mit der Einschränkung, dass der Käufer Forderungen Dritter lediglich in der Höhe an uns abtritt, als wir Miteigentum entsprechend dem zuvor Gesagten erworben haben.
5. Bei Zugriffen Dritter auf die Vorbehaltsware, insbesondere Pfändungen, wird der Käufer auf unser Eigentum hinweisen und uns unverzüglich benachrichtigen, damit wir unsere Eigentumsrechte durchsetzen können. Soweit der Dritte nicht in der Lage ist, uns die in diesem Zusammenhang entstehenden gerichtlichen oder außergerichtlichen Kosten zu erstatten, haftet hierfür der Käufer.
6. Wir sind verpflichtet, die uns zustehenden Sicherheiten insoweit freizugeben, als der realisierbare Wert unserer Sicherheiten die zu sichernden Forderungen um mehr als 10 % übersteigt, dabei obliegt uns die Auswahl der freizugebenden Sicherheiten.

X. Gerichtsstand, anzuwendendes Recht
1. Ist der Käufer Kaufmann i.S.d. Handelsgesetzbuchs, juristische Person des öffentlichen Rechts oder ein öffentlich-rechtliches Sondervermögen, ist ausschließlicher – auch internationaler – Gerichtsstand für alle sich aus dem Vertragsverhältnis unmittelbar oder mittelbar ergebenden Streitigkeiten Heilbronn, Deutschland. Entsprechendes gilt, wenn der Käufer Unternehmer i.S.v. § 14 BGB ist. Wir sind jedoch in allen Fällen auch berechtigt, Klage am Erfüllungsort der Lieferverpflichtung gem. diesen AVB bzw. einer vorrangigen Individualabrede oder am allgemeinen Gerichtsstand des Käufers zu erheben. Vorrangige gesetzliche Vorschriften, insbesondere zu ausschließlichen Zuständigkeiten, bleiben unberührt.2. Das Rechtsverhältnis zwischen uns und unseren Kunden oder zwischen uns und Dritten regelt sich ausschließlich nach dem in der Bundesrepublik Deutschland geltenden Recht unter Ausschluss internationalen Einheitsrechts, insbesondere des UN-Kaufrechts.

XI. Sonstiges
1. Sollten diese Bestimmungen teilweise rechtsunwirksam oder lückenhaft sein oder werden oder durch eine Sondervereinbarung ausgeschlossen sein, so wird hierdurch die Gültigkeit der übrigen Bestimmungen nicht berührt.
2. Wir weisen darauf hin, dass wir Daten unserer Kunden im Rahmen unserer gegenseitigen Geschäftsbeziehungen nach den geltenden datenschutzrechtlichen Bestimmungen, insbesondere der Europäischen Datenschutz-Grundverordnung und dem Bundesdatenschutzgesetz speichern.

Schäfer + Peters GmbH

General Terms of Sale and Delivery of Schäfer + Peters GmbH (hereinafter referred to as “S + P”) Version 10/2022

I. Scope of Validity

1. The terms of sale given hereinafter apply to all contracts concluded between the Purchaser and S + P concerning the delivery of goods, provided that the Purchaser is a company, legal entity under public law or special fund under public law. Contracts are executed exclusively on the basis of the following conditions. The quotation, the quotation acceptance and the order confirmation, as well as the sale of any product, are subject to these conditions. We shall not recognise any contradictory or deviating conditions of purchase, unless we have expressly agreed to apply these conditions. This consent requirement shall always apply, particularly if we carry out the Purchaser’s order without qualification and in full knowledge of these contradictory or deviating conditions of the Purchaser.
2. In the contracts, all agreements that have been made between the Purchaser and S + P about the execution of the purchasing contracts up to the time of the respective conclusion of the contract are documented in writing. The effectiveness of individual agreements made retroactively in individual cases remains unaffected.
3. If S + P and the Purchaser have arranged a framework agreement, these General Terms of Sale shall apply both to this framework agreement and to the individual delivery or purchase order.
4. The General Terms of Sale shall also apply to all future business relationships, even if these terms are never agreed on expressly.

II. Offer and Contract Conclusion

1. We can accept an order from the Purchaser which is to be qualified as a legally binding offer for the conclusion of a purchasing contract within two weeks by sending an order confirmation or by rendering the deliveries or services ordered without qualification, with the choice being ours.
2. Our quotations are non-binding, unless we have expressly designated them as binding. Information about our goods (particularly technical data, dimensions, performance and consumption data, as well as the descriptions in the respective product information or advertising materials, etc.) is only approximate and roughly representative, provided that usability for the contractually intended purpose does not require an exact match; this information does not guarantee the condition, unless this guarantee is made expressly and in writing.
3. We retain our property right, copyright and other protective rights on all figures, calculations, drawings and other documents. The Purchaser may only pass on these items, regardless of whether we have marked them as confidential, to third parties in text form as such or in terms of content, disclose them, use them themselves or have them used by third parties or reproduce them with our consent.
4. Information about current warehouse inventory is always non-binding. If inventory is communicated to the customer, this is considered inventory that is specifically reserved for customer or volume groups and does not need to be identical to the actual inventory.

III. Terms of Payment

1. Our prices apply to the scope of service and delivery indicated in the order confirmations. Additional or special services are billed separately. Prices shall apply ex works in Öhringen, plus packaging, duties, insurance and, in individual cases, additional taxes and duties, if not otherwise specified. The statutory value added tax is not included in our prices. We list this in the invoice separately in the statutory amount on the date the invoice is issued.
2. Unless otherwise agreed, invoices shall be due and payable without deduction within 30 days from the date of invoicing and delivery. We grant a discount of 2% for payments made within 10 days of the date of invoice, unless the Purchaser is in default of payment for other payment obligations towards us. Payment is only considered to have occurred once the funds are available to us. In the case of cheque payments, payment is only considered to have occurred once the cheque has cleared.
3. If the Purchaser does not pay within the defined period, the Purchaser shall be in default of payment, without a new payment request needing to be made. In the case of late payment, interest is to be paid on the purchase price at the legally applicable late payment interest rate for business owners. Further claims shall remain unaffected. If the Purchaser does not render payment upon further request, we are entitled to make all existing obligations of the Purchaser due and payable, in particular also deferred or instalment payments, and to deny any further deliveries.
4. The Purchaser shall be authorised to offset and/or withhold payment only if the counter-claims have been determined as legally valid, have been recognised by us, are indisputable or if the counter-claims arise from the same specific contractual relationship as the principal claim and are in a mutual relationship with this claim.
5. If S + P has granted instalment payments for the Purchaser, the remaining amount shall be due and payable in full if the Purchaser is in default of payment of an instalment by more than 8 days.
6. Price changes are permitted if more than four months have passed between the contract conclusion and the agreed delivery date and if the price change can be traced back to a recent cost increase for which we are not liable. A cost increase has occurred if wages, material costs, transport costs ancillary transport costs or sales costs increase before delivery. The same applies if duties increase or a duty is introduced, or cost changes result due to price increases of upstream suppliers or due to exchange rate fluctuations. In these cases, S + P is authorised to increase the price appropriately in accordance with the cost increases.

IV. Delivery and Service Period, Liability in Case of Late Delivery

1. Delivery dates or deadlines that are not agreed upon or promised by us expressly as binding are exclusively non-binding specifications. They shall only be considered approximations and describe a likely delivery date. Agreements or promises about a binding delivery date deviating from this must be made expressly and in writing. The delivery period only begins when the Purchaser has properly and completely performed those cooperation activities that are obligatory on its part.
2. If we do not receive deliveries or services from our sub-suppliers or subcontractors, or do not receive correct or timely deliveries or services for reasons for which we are not responsible despite proper coverage, or if an event of force majeure occurs, we shall inform our customer in writing in a timely manner. In this case, we are authorised to extend the delivery or service period by the duration of the temporary hindrance or, in the case of a significant hindrance whose duration is not temporary, to withdraw from the part of the contract that has not yet been fulfilled, entirely or in part, if we have performed the above obligation of notification and have not assumed the procurement risk or production risk. Force majeure includes any other unforeseeable event upon contract conclusion, such as legal strikes or lockouts, government interventions, energy and resource shortages, transport bottlenecks or operational disturbances through no fault of our own, such as those due to fire, water and machine damage, unexpectedly occurring pandemics or epidemics, acts of war and war-like acts, economic sanctions and all other hindrances for which we objectively cannot be held responsible. If the delivery or service is delayed by more than one month as a result of one of the cases named above in Clauses 1 and 3, both we and the customer regardless of the deadline requirement for the customer and excluding any claims for damages¬ are authorised to withdraw from the contract with regard to the volume affected by the delivery disturbances. The customer is authorised to withdraw from the entire contract if a partial delivery is unacceptable for the customer.
3. In any case, we shall enter into default of delivery only after an appropriate grace period set by the customer has passed, unless time is of the essence for the transaction as defined by § 286 para. 2 No. 4 of the German Civil Code (BGB) or § 376 of the German Commercial Code (HGB).
4. Our legal rights, particularly in the case of an exclusion of the duty to perform (e.g. due to impossibility or unreasonableness of performance and/or supplementary performance), remain unaffected. Claims for damages due to delayed delivery are excluded, provided that they are not based on any intentional or grossly negligent actions on our part or on the part of our subcontractors, or based on the culpable violation of essential contractual duties. Essential contractual duties are any that protect the essential legal positions of the customer, the guarantee of which is the very essence and purpose of the contract; these also include those contractual duties whose performance enables the proper completion of the contract in the first place and those whose observance the contract partner frequently trusts and may reasonably trust.
The exclusion of liability does not apply to damages caused by injury to life, limb and health or damages affecting warranties.
In the case of a simple negligent violation of an essential contractual duty, however, we shall only accept liability for typical, immediate, average damage foreseeable at the time that the contract was concluded.
5. We are only authorised to perform partial deliveries and partial services if:
- the partial delivery or partial service is usable for the customer as part of the intended purpose of the contract,
-the delivery of the remaining ordered goods or the rendering of the remaining commissioned services is ensured, and
-this does not cause any significant added outlay or extra costs for the customer (unless we have agreed to accept these costs).
6. If the Purchaser is in default of acceptance, we are then entitled to demand compensation for accrued damages and any extra expenses. The same applies if the Purchaser culpably violates its cooperation duties.

V. Place of Fulfilment, Transfer of Risk, Shipping, Packaging

1. Delivery shall be ex warehouse in Öhringen, which is also the place of performance for the delivery. This shall also apply in the event of subsequent performance. At the request and expense of the Purchaser, the goods will be shipped to another destination (sale by delivery to a place other than the place of performance).
2. The risk of accidental loss and accidental deterioration of the goods shall transfer to the Purchaser upon handover at the latest. In the case of sales shipment, however, the risk of accidental destruction and accidental deterioration of the goods, as well as the risk of delay, passes to the shipper, freight carrier or other person or institution assigned to complete the shipment upon handover of the goods for shipment. Handover is still considered to have taken place if the Purchaser is in default of acceptance.
3. With regard to the shipment method and shipping route, we shall try to take into consideration the wishes and interests of the Purchaser; added costs cau-

sed by this – even in the case of agreed free delivery – shall be borne by the Purchaser.
4. We do not take back transport packaging or any other packaging in accordance with the packaging ordinance; this excludes pallets. The Purchaser shall take care of disposal of the packaging, which becomes its property, at the Purchaser's own expense.
5. If the shipping is delayed on the request of or due to fault of the Purchaser, we shall store the goods at the Purchaser's risk and expense. In this case, the notice of readiness to ship shall be deemed equivalent to shipment.
6. On request and at the expense of the Purchaser, we shall insure the delivery using transport insurance. This requires an instruction from the Purchaser given expressly and in writing.

VI. Warranty/Limitation of Liability/Compensation for Wasted Expenditures

1. There shall only be claims for defects from the Purchaser if the Purchaser has properly fulfilled its legally required examination and notification duties, particularly in accordance with § 377 HGB. Regardless of the legal requirements for proper examination, the Purchaser shall at least examine the supplied goods after delivery at its location or that of a third party designated by the Purchaser carefully and in a reasonable scope – if applicable, through random checks – at least for dimensional accuracy, material, weight and surface condition. Defects that are revealed in this way shall be indicated to us in writing within one week of receipt of goods. If this does not occur, the goods shall be considered accepted. Hidden defects shall be communicated to S + P immediately after their discovery in writing. A proper notification of a defect shall indicate the willingness of the Purchaser to send back the rejected delivered goods on the request of S + P with freight prepaid. In the case of a justified notification of a defect, S + P shall compensate the Purchaser for the cost of the most economical shipping route; this shall not apply if costs increase because the delivered goods are located somewhere other than the place of intended use. If the Purchaser fails to carry out a proper inspection and/or to give notice of a defect, our liability for the defect which was not notified or not notified in time or not notified properly shall be excluded in accordance with the statutory provisions. In the case of goods intended for installation or mounting, this shall also apply if the defect only became apparent after the corresponding processing as a result of the breach of one of these obligations; in this case, the Purchase shall, in particular, have no claims for reimbursement of the corresponding costs (dismantling and installation costs).
2. The legal regulations apply to the rights of Purchaser in the case of quality defects and defects of title (including incorrect and under delivery as well as improper assembly or defective assembly instructions), if not otherwise specified in preceding or following provisions.
3. The basis of our liability for defects is above all the agreement reached on the quality and the presupposed use of the goods (including any accessories and instructions). All product descriptions and manufacturer's specifications which are the subject of the individual contract or which were publicly announced by us (in particular in catalogues or on our Internet homepage) at the time of the conclusion of the contract shall be deemed to be an agreement on quality in this sense. Insofar as the quality was not agreed, it shall be assessed in accordance with the statutory regulation whether a defect exists or not (§ 434 para. 3 BGB (German Civil Code)). Public statements made by the manufacturer or on its behalf, in particular in advertising or on the label of the goods, take precedence over statements made by other third parties.
4. Independent of the preceding and following provisions, the legal regulations shall apply in the following cases:
- intentional actions on our part;
- damage due to injury to life, limb and health;
- claims in accordance with product liability law;
- if warranties taken over by us are excluded by deviating provisions.

In all cases, the special statutory provisions on the reimbursement of expenses in the case of final delivery of the newly manufactured goods to a consumer (supplier's recourse pursuant to §§ 478, 445a, 445b or §§ 445c, 327 para. 5, 327u BGB (German Civil Code)) shall remain unaffected, unless equivalent compensation has been agreed, e.g. within the scope of a quality assurance agreement.
5. Otherwise, the following aspects apply to the rights of the Purchaser in the case of quality defects and defects of title:
a) Liability for compensation for damages and compensation for wasted expenditures
Claims for damages due to defects of title and quality defects are excluded, provided that they are not
- based on grossly negligent actions on our part or on the part of our subcontractors, or
- based on the culpable violation of essential contractual duties Essential contractual duties are any that protect the essential legal positions of the customer, the guarantee of which is the very essence and purpose of the contract; these also include those contractual duties, the performance of which enables the proper completion of the contract in the first place and on the observance of which the contracting partner frequently trusts and may reasonably trust.

In the event of a simple negligent breach of an essential contractual obligation, we shall only be liable for the typically foreseeable damage according to the type of contract conclusion.
Claims for compensation for wasted expenditures in accordance with § 284 BGB (German Civil Code) shall be waived if and insofar as, as stated previously, a claim for compensation for damages in place of performance has been effectively disclaimed.
b) Supplementary performance
- If the delivered item is defective, we can initially choose whether we shall provide subsequent performance by remedying the defect (rectification) or by delivering an item free of defects (replacement delivery). If the type of subsequent performance chosen by us is unreasonable for the Purchaser in the individual case, he may reject it. Our right to refuse subsequent performance under the statutory preconditions remains unaffected.
- If the Purchaser has already installed the goods delivered by S + P into another object or attached them to another object at its location, the Purchaser must offer us the opportunity to remove the goods ourselves and reinstall or reattach improved or additional goods ourselves, provided that this is reasonable for the Purchaser, for the purposes of supplementary performance, and to define an appropriate period for this. This shall apply regardless of whether we were originally required to install or assemble goods in addition to their delivery; using this approach, the installation or assembly of delivered goods does not become part of supplementary performance.
- If the Purchaser has already resold the goods delivered by S + P, the Purchaser shall set a prior and appropriate period for S + P for supplementary performance if the Purchaser has to take back the goods from its customer as a result of the defect or if the Purchaser's customer has reduced the purchase price.
- Our right to refuse supplementary performance in accordance with the legal requirements remains unaffected.

c) Compensation for expenses for supplementary performance
- The Purchaser is only entitled to demand compensation from S + P for expenses incurred by it for the purpose of subsequent performance, in particular for the removal and reinstallation of the item or for the removal and reinstallation of the same, under the further statutory conditions, if the reasonable period of time set by the Purchaser for this purpose has elapsed without success.
- If, in the case of resale by the Purchaser, the object delivered by S + P needed to be removed and reinstalled or removed and reattached at the location of a direct customer of the Purchaser or a different customer in the supply chain for the purposes of supplementary performance, S + P is not required to compensate the Purchaser for the expenses that arise from this.
- If it is revealed that the request for rectification from the Purchaser is unjustified, S + P can demand compensation from the Purchaser for the costs arising (particularly testing, installation, removal and transport costs), unless the lack of defect was not able to be determined by the Purchaser.

The special aspects mentioned above under items b) and c) do not apply in the case of reimbursement of expenses in the case of final delivery of newly manufactured goods to a consumer (supplier recourse according to §§ 478, 445a, 445b or §§ 445c, 327 para. 5, 327u BGB (German Civil Code)), unless equivalent compensation has been agreed, e.g. within the framework of a quality assurance agreement.
6. In case of delivery of newly produced goods by S + P that are sold at the end of the supply chain in unprocessed form by a business owner to a consumer, even if the latter has further processed it, the following additional aspects apply to the rights of the Purchaser:
- Claims of the Purchaser based on § 478 BGB are excluded, provided that they involve a defect based on advertising statements or other contractual agreements not originating from S + P, or if the Purchaser, its immediate customer or another customer in the supply chain has provided a special guarantee to the end user.
- Claims are also excluded if the Purchaser itself, its immediate customer or another customer in the supply chain was not required to exercise warranty rights toward the end user in accordance with legal regulations or if the Purchaser has not objected to a claim asserted against it. This also applies if the Purchaser, its immediate customer or another customer in the supply chain has taken over warranties vis-a-vis the end user that exceed the legal requirements.
- The claims of the Purchaser based on § 478 BGB (German Civil Code) are excluded as a whole if the Purchaser has not properly fulfilled its legally required examination and notification duties in accordance with the detailed specifications of Section VI No. 1.

VII. Other Liability

Claims for damages due to a violation of a non-contractual duty (liability based on tort) or due to fault during or before the conclusion of the contract (culpa in contrahendo) as well as any other legal basis, particularly the violation of general duties arising from an obligation (§ 241 para. 2 BGB (German Civil Code)) or other contractual duties (§ 280 para. 1 BGB), provided that this does not involve warranty claims, are excluded, provided that they are not based on intentional, fraudulent or grossly negligent actions on our part or on the part of our subcontractors or based on culpable violation of essential contractual duties.
The exclusion of liability does not apply to damages caused by injury to life, limb and health or damages affecting warranties and claims in accordance with

product liability law.
In the case of a simple negligent violation of an essential contractual duty, however, we shall only accept liability for typical, immediate, average damage foreseeable at the time that the contract was concluded.

VIII. Limitation
1. Deviating from § 438 para. 1 No. 3 BGB (German Civil Code), the general limitation period for claims due to quality defects and defects of title, including the claim for reimbursement for expenses in the supply chain in accordance with § 445a para. 1, para. 3 BGB, is one year from delivery. If an acceptance has been agreed, the limitation begins upon acceptance.
2. However, if the goods constitute a building or an object that has been used as a building in the typical manner and has resulted in its defectiveness (building material), the limitation period is 5 years from delivery in accordance with the legal regulation (§ 438 para. 1 No. 2 BGB). Other legal special provisions on limitation remain unaffected (particularly § 438 para. 1 No. 1, para. 3, §§ 444, 445b BGB).
3. If the goods are items that can be used for a building, but also for other services and works, the limitation period pursuant to Clause 1 shall apply, unless the installation of the goods was of essential importance for the building. In that case, the limitation period pursuant to Clause 2 shall apply.
4. Deviating from § 445b Par. 2 S. 2 BGB, in the case of resale of the goods delivered by S + P by the Purchaser, the suspension of expiration regarding the limitation of defect claims from the Purchaser toward S + P ends three years after delivery of the goods.
5. The present limitation periods from the sale of goods law shall also apply to contractual and non-contractual claims for damages from the Purchaser based on a defect of the goods, unless the application of the regular legal limitation (§§ 195, 199 BGB) would lead to a shorter limitation in this individual case. However, claims for damages from the Purchaser due to wilful intent, gross negligence, injury to life, limb and health as well as warranties or product liability law expire by limitation only after the legal limitation periods. The shortening of the limitation period or the suspension of expiration shall also not apply if the matter involves the delivery of goods by S + P that are sold at the end of the supply chain in an unprocessed state by a business owner to a consumer (Recourse of the entrepreneur – §§ 478, 479 BGB).

IX. Retention of Title
1. The goods delivered by us shall remain our property up to the fulfilment of all existing claims or claims arising in future owed to us on any legal basis from the ongoing business relationship and/or specific purchasing contract with the Purchaser. In the case of the Purchaser behaviour that is contrary to the contract (e.g. payment default), we have the right to take back the reserved goods after first setting an appropriate period. If we take back the reserved goods, this represents a withdrawal from the contract. If we seize the reserved goods, this is a withdrawal from the contract. We are authorised to utilize the reserved goods after taking them back. After withdrawing an appropriate amount for the utilisation costs, the proceeds of utilisation shall offset the amounts owed to us by the Purchaser.
2. The Purchaser shall treat the reserved goods with care and insure them against damage due to fire, water and theft sufficiently at original value at its own expense. The maintenance and inspection work that is required shall be performed by the Purchaser at its own expense in a timely manner. Furthermore, upon request by S + P, the Purchaser shall at any time notify us of the state of the goods and communicate the storage place of the goods.
3. The Purchaser is authorised to dispose of or use the reserved goods in the normal course of business, provided that the Purchaser is not in default of payment. Pledges or assignments as security are not permitted. The Purchaser shall assign claims arising from resale or another legal basis (insurance, tort) regarding the reserved goods (including all current account balance claims) to us in full scope as security; this statement constitutes our acceptance of the assignment. We revocably authorise Purchaser to collect claims assigned to us for Purchaser's account and in its own name. This collection authorisation can be revoked at any time if Purchaser does not properly fulfil its payment obligations. Purchaser shall also not be authorised to assign this claim for the purposes of debt collection by way of factoring, unless the obligation of the factor is simultaneously established to effect the consideration in the amount of the debts directly to us for as long as we still have claims against the Purchaser. The Purchaser shall furthermore obligated notify us immediately of any seizure or other interference by a third party.
4. Any transformation of the reserved goods by the Purchaser is always carried out on our behalf. If the reserved goods are processed with other items which do not belong to us, we shall acquire co-ownership of the new item in proportion to the value of the reserved goods (total invoice amount including value-added tax) to the other processed items at the time of the processing. In the case of inseparable combination of the reserved goods with other items that do not belong to us, we shall acquire co-ownership of the new item in proportion to the value of the reserved goods (total invoice amount including value-added tax) to the other combined items at the time of the combination. If the Purchaser's item is to be considered the main item as a result of combination, we and the Purchaser agree that the Purchaser shall transfer co-ownership of this item to us on a proportional basis; this statement constitutes our acceptance of this transfer. Our sole or co-ownership of an item arising from this shall be kept for us by the Purchaser. The same applies to the new item created through processing or transformation as to the reserved goods, but with the limitation that the Purchaser shall only assign claims of third parties to us in the amount that we have acquired through co-ownership according to the previous statement.
5. In case of access of third parties to the reserved goods, particularly seizures, the Purchaser shall indicate our property to the third parties and immediately notify us so that we may assert our property rights. If the third party is not able to reimburse us for the legal or out-of-court costs arising in this context, the Purchaser shall be liable for this.
6. We shall release the securities due to us insofar as the realisable value of our securities exceeds the secured claims by more than 10%, in which process we are at liberty to select the securities to be released.

X. Place of Fulfilment, Jurisdiction, Applicable Law
1. If the Purchaser is a merchant within the meaning of the German Commercial Code, a legal entity under public law or a special fund under public law, the exclusive – including international – place of jurisdiction for all disputes arising directly or indirectly from the contractual relationship shall be Heilbronn, Germany. The same shall apply if the buyer is an entrepreneur within the meaning of § 14 BGB (German Civil Code). However, we are also entitled in all cases to bring an action at the place of performance of the delivery obligation in accordance with these general terms of sale and delivery or a prior individual agreement or at the general place of jurisdiction of the buyer. Priority statutory provisions, in particular regarding exclusive jurisdiction, shall remain unaffected.
2. The legal relationship between us and our customers or between us and third parties shall be governed exclusively by applicable law in the Federal Republic of Germany, excluding international uniform law, particularly the UN Convention on Contracts for the International Sale of Goods.

XI. Other
1. If these provisions are or become partially void or incomplete or are excluded by a special agreement, the validity of the remaining provisions shall not be affected by this.
2. We would like to note that we store data of our customers as part of our mutual business relationships in accordance with applicable data protection regulations, particularly the European General Data Protection Regulation and the German Data Protection Act.

Schäfer + Peters GmbH



Competence in Stainless Steel

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