

EuroMetal Paslanmaz Çelik olarak uluslararası standartlarda, Avrupa'nın ve dünyanın en iyi üreticilerinin ürettiği mamul ve yarı mamul ürünlerde kaliteli ürün ve iyi hizmet anlayışını şiar edinen firmamız fiyat politikasıyla da üreticimizi ve sanayicimizi desteklemeyi hedeflemektedir.

EuroMetal olarak vizyonumuz kaliteli ürün ve hizmeti anlayışının ön planda olduğu, müşteri memnuniyetini en üst seviyeye çıkaracak ve fiyat politikasıyla rakiplerinin önünde yer alacak yapılanmayı sağlamaktır.

Bu vizyon doğrultusunda dünya paslanmaz çelik piyasasını ve gelişen teknolojileri takip ederek ekonomik gelişmelere paralel fiyat politikası belirlemek ve sanayicimizi desteklemek ana hedeflerimizdendir.



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KULLANIM ALANLARI

PASLANMAZ ÇELİKLERİN KİMYASAL KOMPOZİSYONLARI (DÖKÜM ANALİZLERİ)

		En normunda numarası	A/S/ASTM İsmi	C	Si	Mn	P max	S	N	Cr	Mo	Ni	Diğerleri	
GENEL AMAÇLI KULLANIM	FERRİTİK	1.4512	409	≤0.030	≤1.00	≤1.00	0.040	≤0.015		10.50-12.50				
		1.4003		≤0.030	≤1.00	≤1.50	0.040	≤0.015	≤0.030	10.50-12.50		0.30-1.00	Ti.min: (6x(C+N)): max: 0.65	
		1.4000	4105	≤0.08	≤1.00	≤1.00	0.040	≤0.015		12.00-14.00				
		1.4016	430	≤0.08	≤1.00	≤1.00	0.040	≤0.015		16.00-18.00				
		1.4509	441	≤0.030	≤1.00	≤1.00	0.040	≤0.015		17.50-18.50			Ni.min: (3x(C)+0.30): max: 1.00; Ti: 0.10-0.60	
		1.4521	444	≤0.025	≤1.00	≤1.00	0.040	≤0.015	≤0.030	17.00-20.00	1.80-2.50			Ti.min: ((4x(C+N)+0.15)): max: 0.80 (5)
	MARTENSİTİK	1.4006	410	0.08-0.15	≤1.00	≤1.50	0.040	≤0.015		11.50-13.50			≤0.75	
		1.4021	420	0.16-0.25	≤1.00	≤1.50	0.040	≤0.015		12.00-14.00				
		1.4028	420	0.26-0.35	≤1.00	≤1.50	0.040	≤0.015		12.00-14.00				
		1.4313		≤0.05	≤0.70	≤1.50	0.040	≤0.015	≤0.020	12.00-14.00	0.30-0.70	3.50-4.50		
		1.4418		≤0.06	≤0.70	≤1.50	0.040	≤0.015	≤0.020	15.00-17.00	0.80-1.50	4.00-6.00		
	DUPLEX	1.4162	2101	≤0.040	≤1.00	4.00-6.00	0.040	≤0.030	0.20-0.25	21.00-23.00	0.10-0.80	3.50-1.70		Cu: 0.10-0.80
		1.4362	2304	≤0.030	≤1.00	≤2.00	0.035	≤0.015	0.05-0.20	22.00-24.00	0.10-0.60	3.50-5.50		Cu: 0.10-0.60
		1.4462	2205	≤0.030	≤1.00	≤2.00	0.035	≤0.015	0.10-0.22	21.00-23.00	2.50-3.50	4.50-6.50		Cu: 0.50-1.00; W: 0.50-1.00
		1.4501		≤0.030	≤1.00	≤1.00	0.035	≤0.015	0.20-0.30	24.00-26.00	3.00-4.00	6.00-8.00		
		1.4410	2507	≤0.030	≤1.00	≤2.00	0.035	≤0.015	0.24-0.35	24.00-26.00	3.00-4.50	6.00-8.00		
	ÖSTENİTİK	1.4310	301	0.05-0.15	≤2.00	≤2.00	0.045	≤0.015	≤0.11	16.00-19.00	≤0.80	6.00-9.50		
		1.4318	301LN	≤0.030	≤1.00	≤2.00 5.50-	0.045	≤0.015	0.10-0.20	16.50-18.50		6.00-8.00		
		1.4372	201	≤0.015	≤1.00	7.50	0.045	≤0.015	0.05-0.25	16.00-18.00		3.50-5.50		
		1.4568	631	≤0.09	≤0.70	≤1.00	0.040	≤0.015		16.00-18.00		6.50-7.80(4)		Al: 0.70-1.50
		1.4301	304	≤0.07	≤1.00	≤2.00	0.045	≤0.015	≤0.11	17.50-19.50		8.00-10.50		
		1.4307	304L	≤0.030	≤1.00	≤2.00	0.045	≤0.015	≤0.11	17.50-19.50		8.00-10.00		
		1.4311	304LN	≤0.030	≤1.00	≤2.00	0.045	≤0.015	0.12-0.22	17.50-19.50		8.5-11.50		
		1.4541	321	≤0.08	≤1.00	≤2.00	0.045	≤0.015		17.00-19.00		9.00-12.00		
		1.4305	303	≤0.10	≤1.00	≤2.00	0.045	0.15-0.35	≤0.11	17.00-19.00		8.00-10.00		
		1.4303	305	≤0.06	≤1.00	≤2.00	0.045	≤0.015	≤0.11	17.00-19.00		11.00-13.00		Ti.min: (5xC) max: 0.70
		1.4306	304L	≤0.030	≤1.00	≤2.00	0.045	≤0.015	≤0.11	18.00-20.00		10.00-12.00		Cu: 1.00
		1.4401	316	≤0.07	≤1.00	≤2.00	0.045	≤0.015	≤0.11	16.50-18.50		10.00-13.00		
		1.4404	316L	≤0.030	≤1.00	≤2.00	0.045	≤0.015	≤0.11	16.50-18.50		10.00-13.00		
		1.4436	316	≤0.05	≤1.00	≤2.00	0.045	≤0.015	≤0.11	16.50-18.50		10.50-13.00		
		1.4432	316L	≤0.030	≤1.00	≤2.00	0.045	≤0.015	≤0.11	16.50-18.50	2.00-2.50	10.50-13.00		
		1.4406	316LN	≤0.030	≤1.00	≤2.00	0.045	≤0.015	0.12-0.22	16.50-18.50	2.00-2.50	10.00-12.50		
		1.4429	316LN	≤0.030	≤1.00	≤2.00	0.045	≤0.015	0.12-0.22	16.50-18.50	2.50-3.00	11.00-14.00		
		1.4571	316Ti	≤0.08	≤1.00	≤2.00	0.045	≤0.015		17.00-19.00	2.50-3.00	10.50-13.50		Ti.min: (5xC) max: 0.70
		1.4435	316L	≤0.030	≤1.00	≤2.00	0.045	≤0.015	≤0.11	17.00-19.00	2.00-2.50	12.50-15.00		
		1.4439	317LMN	≤0.030	≤1.00	≤2.00	0.045	≤0.015	0.12-0.22	16.50-18.50	2.50-3.00	12.50-14.50		
1.4466	310MoLN	≤0.020	≤0.70	≤2.00	0.025	≤0.010	0.10-0.16	24.00-26.00	2.00-2.50	21.00-23.00				
1.4539	904L	≤0.020	≤0.70	≤2.00	0.030	≤0.010	≤0.15 0.15-	19.00-21.00	2.50-3.00	24.00-26.00				
1.4529		≤0.020	≤0.50	≤1.00	0.030	≤0.010	0.22	19.00-21.00	4.00-5.00	24.00-26.00		Cu 1.20-2.00 Cu: 0.50-1.50		
1.4547		≤0.020	≤0.70	≤1.00 5.00-	0.030	≤0.010	0.18-0.25	19.50-20.50	2.00-2.50	17.50-18.50		Cu: 0.50-1.00		
1.4565		≤0.030	≤1.00	7.00	0.030	≤0.015	0.30-0.60	24.00-26.00	4.00-5.00	16.00-19.00		Ni: ≤0.15		
İSİYA DAYANIKLI	FERRİTİK	1.4713		≤0.12	0.50-1.00	≤1.00	0.040	≤0.015		6.00-8.00	6.00-7.00		Al: 0.50-1.00	
		1.4724		≤0.12	0.70-1.40	≤1.00	0.040	≤0.015		12.00-14.00	6.00-7.00		Al: 0.70-1.20	
		1.4762		≤0.12	0.70-1.40	≤1.00	0.040	≤0.015		23.00-26.00	4.00-5.00		Al: 1.20-1.70	
	ÖSTENİTİK	1.4948	304H	0.04-0.08	≤1.00	≤2.00	0.035	≤0.015	≤0.11	17.00-19.00		8.00-11.00		
		1.4878	321H	≤0.10	≤1.00	≤2.00	0.045	≤0.015		17.00-19.00		9.00-12.00		Ti.min: (5xC) max: 0.80
		1.4818		0.04-0.08	1.00-2.00	≤1.00	0.045	≤0.015	0.12-0.20	18.00-20.00		9.00-11.00		
		1.4833	3095	≤0.15	≤1.00	≤2.00	0.045	≤0.015	≤0.11	22.00-24.00		12.00-14.00		Ce: 0.03-0.08
		1.4828		≤0.20	1.50-2.50	≤2.00	0.045	≤0.015	≤0.11	19.00-21.00		11.30-13.00		
		1.4835		0.05-0.12	1.40-2.50	≤1.00	0.045	≤0.015	0.12-0.20	20.00-22.00		10.00-12.00		
1.4845	3105	≤0.10	≤1.50	≤2.00	0.045	≤0.015	≤0.11	24.00-26.00		19.00-22.00		Ce: 0.03-0.08		
1.4841	314	≤0.20	1.50-2.50	≤2.00	0.045	≤0.015	≤0.11	24.00-26.00		19.00-22.00				

PASLANMAZ ÇELİK KALİTELERİ VE KİMYASAL BİLEŞİMLERİ

Feritik Paslanmaz Çelikler

Kimyasal Bileşim, ağırlık % max											
ASTM	En Malzeme No.	C	Mn	Si	P	S	Cr	Ni	Mo	N	Diğer
409	1.4512	0.08	1.0	1.00	0.045	0.03	11.5-11.75	-	-	-	[6xC]Ti
430	1.4016	0.12	1.0	1.00	0.04	0.03	16.0-18.0	-	-	-	-
430	[1.450]	0.10	1.0	1.00	0.04	0.03	16.0-19.5	0.75	-	-	[5xC]Ti
439	1.4510	0.07	1.0	1.00	0.04	0.03	17.0-19.0	0.5	-	-	0.2+4[C+N]Ti

Martenzitik Paslanmaz Çelikler

Kimyasal Bileşim, ağırlık % max											
ASTM	En Malzeme No.	C	Mn	Si	P	S	Cr	Ni	Mo	N	Diğer
410	1.4006	0.15	1.0	1.00	0.04	0.03	11.5-13.0	-	-	-	-
420	1.4021	0.1	1.0	1.00	0.04	0.03	12.0-14.0	-	-	-	-
440	-	0.6-0.75	1.0	1.00	0.04	0.03	16.0-19.5	-	0.75	-	-
440	1.4125	0.95-1.2	1.0	1.00	0.04	0.03	16.0-18.0	-	0.75	-	-

Duplex Paslanmaz Çelikler

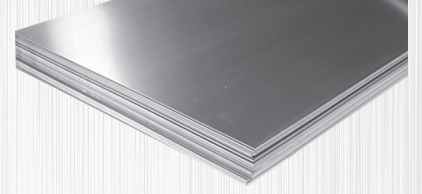
Kimyasal Bileşim, ağırlık % max											
ASTM	En Malzeme No.	C	Mn	Si	P	S	Cr	Ni	Mo	N	Diğer
2205*)	1.4462	0.03	2.0	1.00	0.03	0.02	21.0-23.0	4.5-6.5	2.5-3.5	0.80-0.2	-
329	1.4460	0.20	1.0	0.75	0.04	0.03	23.0-28.0	2.5-5.0	1.0-2.0	-	-

Östenitik Paslanmaz Çelikler

Kimyasal Bileşim, ağırlık % max											
ASTM	En Malzeme No.	C	Mn	Si	P	S	Cr	Ni	Mo	N	Diğer
201	1.4372	0.15	5.5-7.5	1.00	0.06	0.03	16.0-18.0	3.5-5.5	-	0.25	-
301	1.4310	0.15	2.0	1.00	0.045	0.03	16.0-18.0	6.8-8.0	-	-	-
304	1.4301	0.08	2.0	1.00	0.045	0.03	18.0-20.0	8.0-10.5	-	-	-
304L	1.4306	0.03	2.0	1.00	0.045	0.03	18.0-20.0	8.0-12.0	-	-	-
304LN	1.4311	0.03	2.0	1.00	0.045	0.03	18.0-20.0	8.0-12.0	-	0.1-0.16	-
309	1.4828	0.20	2.0	1.00	0.045	0.03	22.0-24.0	12.0-15.0	-	-	-
309S	1.4833	0.08	2.0	1.00	0.045	0.03	22.0-24.0	12.0-15.0	-	-	-
310	1.4841	0.25	2.0	1.50	0.045	0.03	24.0-26.0	19.0-22.0	-	-	-
310S	1.4845	0.08	2.0	1.50	0.045	0.03	24.0-26.0	19.0-22.0	-	-	-
316	1.4401	0.08	2.0	1.00	0.045	0.03	16.0-18.0	10.0-14.0	2.0-3.0	-	-
316L	1.4404	0.03	2.0	1.00	0.045	0.03	16.0-18.0	10.0-14.0	2.0-3.0	-	-
316LN	1.4406	0.03	2.0	1.00	0.045	0.03	16.0-18.0	10.0-14.0	2.0-3.0	0.1-0.16	-
316Ti	1.4571	0.08	2.0	1.00	0.045	0.03	16.0-18.0	10.0-14.0	2.0-3.0	-	5x[C+N]Ti
321	1.4541	0.08	2.0	1.00	0.045	0.03	17.0-19.0	9.0-12.0	-	-	[5xC]Ti
347	1.4550	0.08	2.0	1.00	0.045	0.03	17.0-19.0	9.0-13.0	-	-	[10xC]Nb

Çökelme Sertleşme Uygulanabilir Paslanmaz Çelikler

Kimyasal Bileşim, ağırlık % max											
ASTM	En Malzeme No.	C	Mn	Si	P	S	Cr	Ni	Mo	N	Diğer
1.4568	0.09	2.0	1.00	0.04	0.04	16.0-18.0	6.5-7.5	6.5-7.5	-	-	0.75-1.5 Al
1.4532	0.09	2.0	1.00	0.04	0.03	14.0-16.0	6.5-7.5	6.5-7.5	2.0-3.0	-	0.75-1.5 Al



PASLANMAZ ÇELİKLER SEÇİM ve KULLANIM TABLOSU

PASLANMAZ ÇELİK STANDARTLARI

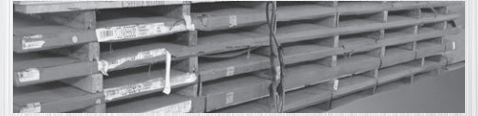
304 - 304L - 304LN - 309/309S

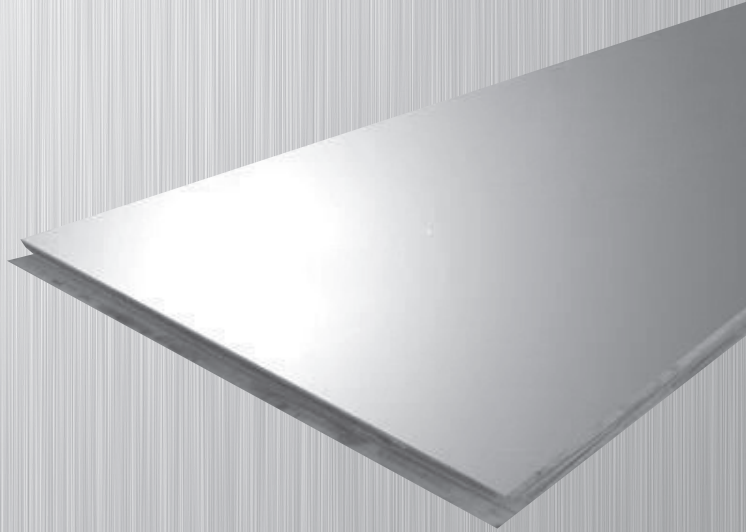
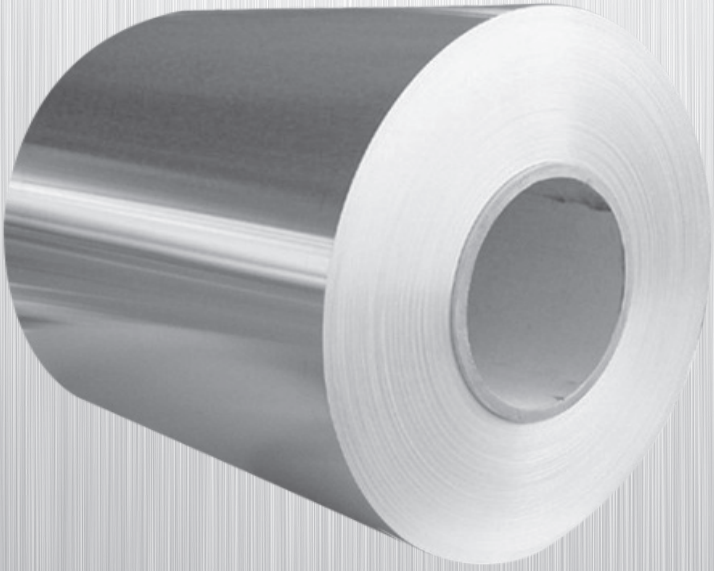
ASTM Standardı	304	304L	304 LN	309/309 S
En Standardı	1,4301	1,4306	1,4311	1,4828/1,4833
UNS Standardı	S30400	S30403	S30453	S30900/S30908
Sınıfı	Östenitik	Östenitik	Östenitik	Östenitik
%0.2 Akma Dayanımı (Mpa)	En az 200 (tavlanmış) 500'e kadar (soğuk had.)	En az 190 (tavlanmış) 500'e kadar (soğuk had.)	En az 270 (tavlanmış)	En az 230 (309) En az 210 (309S)
Çekme Dayanımı (Mpa)	500 (tavlanmış) 700 (soğuk had.)	470 (tavlanmış) 660 (soğuk had.)	550-750	500-750 (309) 500-750 (309S)
Sertlik (HRB)	130-180	130-170	150-210	223 (309) / 192 (309S)
Tavlama Sıcaklığı(°C)	1000-1100	1000-1080	1000-1100	1050-1100
Sıcak Şek. Verme Sıc.(°C)	1150-850	1150-850	1150-850	1050-850
Soğuk Şekil Verme Özelliği	Çok iyi	Çok iyi	Çok iyi	Çok iyi
Talaşlı İmalat Özelliği	Uygun takım ve soğutma ile	Uygun takım ve soğutma ile	Uygun takım ve soğutma ile	Uygun takım ve soğutma ile
Kaynak Kabiliyeti	Gaz eritme dışındaki yöntemler için mükemmel	Gaz eritme dışındaki yöntemler için mükemmel	Gaz eritme dışındaki yöntemler için mükemmel	Gaz eritme dışındaki yöntemler için mükemmel
Korozyon Dayanımı	Atmosferde kuru havada korozyona dayanımı mükemmel. Nemli olmayan nötr ortamlarda iyi.	Korozyon dayanımı 304'e benzerdir. Ek olarak taneler arası korozyona ve gerilme korozyon çatlamasına da dayanıklı	Korozyon dayanımı 304'e benzerdir. Ek olarak azot katkısıyla mekanik özellikler iyileştirilmemiştir	Kükürtlü gazlara karşı : orta (309), az (309S). Azotlu gazlara karşı mükemmel (309), az (309S)
Yüksek Sıcaklıkta	870 (°C)'ye kadar tufal oluşumu görülmez. Oksitleyici ve nemli klorürlü ortamlarda gerilme korozyonu çatlaması görülebilir.	Nitrik aside dayanımı iyi. 900 °C'ye kadar tufal oluşumu görülmez.	900 °C'ye kadar tufal oluşumu görülmez. 400 °C'ye kadar taneler arası korozyona iyi direnç gösterir. Mekanik zorlama altında 500 °C'ye kadar.	Yüksek sıcaklık malzemesidir. 1000 °C'ye kadar tufal oluşumu görülmez. Çekme dayanımı ve sürünme özelliği iyidir.
Kullanım Alanları	En yaygın olarak kullanılan paslanmaz çelik türü. Ev eşyaları, mutfak cihazları, mimari ve otomotiv uygulamalar. Düşük sıcaklıklarda da kullanılabilir.	304'ye benzer ancak kaynak sonrasında tavlanması mümkün olmayan parçalarda kullanılır. Özellikle değişik nitrik asitli ortamlar içindir.	304L'e benzer ancak mekanik özellikleri daha iyi. 400 °C'a kadar sürekli işletme koşullarında kullanılabilir. Kimya - süt ve fermentasyon tesislerindeki basınçlı kaplarda.	Isıya dayanıklı uygulamalarda kullanılır. Fırın yapımı, ısıtıcılar, sementasyon kutuları, tav kalıpları vs.

PASLANMAZ ÇELİK STANDARTLARI

310/310S - 316 - 316L - 316Ti

ASTM Standardı	310/310S	316	316L	316Ti
En Standardı	1.4841/1.4845	1.44041	1.4404	1.4571
UNS Standardı	S31000/S31008	S31600	S31603	S31635
Sınıfı	Ostenitik	Ostenitik	Ostenitik	Ostenitik
%0.2 Akma Dayanımı (Mpa)	En az 230 (310)	En az 210 (tavlanmış)	En az 200 (tavlanmış) 450'e kadar (Soğuk had.)	En az 220 (tavlanmış)
Çekme Dayanımı (Mpa)	En az 230 (310S) 550 - 800 (310)	500'e kadar (Soğuk had.) 510 (tavlanmış) 610 (Soğuk had.)	500 (tavlanmış) 600 (Soğuk had.)	700'e kadar (Soğuk had.) 540 - 700 (tavlanmış) 700'e kadar (Soğuk had.)
Sertlik (HRB)	500 - 750 (310S)	160 - 200	155 - 190	160 - 200
Tavlama Sıcaklığı(°C)	223/309/192/309S	1030 - 1120	1030 - 1100	1030 - 1120
Sıcak Şek. Verme Sıc.(°C)	1050 - 1100	1150 - 850	1150 - 850	1150 - 800
Soğuk Şekil Verme Özelliği	Çok iyi	Çok iyi	Çok iyi	Çok iyi
Talaşlı İmalat Özelliği	Uygun takım ve soğutma ile gaz eritme dışındaki yöntemler için iyi	Uygun takım ve soğutma ile gaz eritme dışındaki yöntemler için çok iyi	Uygun takım ve soğutma ile gaz eritme dışındaki yöntemler için çok iyi	Uygun takım ve soğutma ile gaz eritme dışındaki yöntemler için çok iyi
Kaynak Kabiliyeti	Kükürtlü gazlara karşı: az (310), az-orta (310S). Azotlu gazlara karşı: Mükemmel	Molibden katkısı ile korozyon dayanımı gelişmiştir. Ilık ve klorür içeren ortamlarda noktasal ve aralık korozyonu daha iyidir. Hava-da, sanayi atmosferlerinde, deniz suyunda rahatlıkla kullanılabilir.	316'ya benzerdir. Ancak ek olarak taneler arası korozyon hassasiyeti oluşmaz. İndirgeyici asitler, deniz suyu ve diğer noktasal korozyon oluşacak yerlerde kullanılabilir.	316'ya benzerdir. Titanyum ile iç yapı stabilize edildiğinden, taneler arası korozyon hassasiyeti oluşmaz. Kaynaklı durumda dahi 400 °C'ye kadarsürekli kullanılabilir.
Korozyon Dayanımı				
Yüksek Sıcaklıkta	Yüksek sıcaklık malzemesidir. 1000-1050 (°C)'ye kadar tufal oluşumu görülmez. Çekmedayanımı ve sürünme özellikleri iyidir.	Molibden ilavesi, yüksek sıcaklık dayanımını artırır. 1000°C'ye kadar tufal oluşumu görülmez. 425-860°C aralığında sürekli kullanılırsa taneler arası korozyon! Çok agresif ortamlar için uygundur.	316'ya benzerdir. Ancak karbon miktarı düşüktür ve karbür çökelmeyeceğinden 425-860°C aralığında kullanılabilir.	Yüksek sıcaklık malzemesidir. 1000 °C'ye kadar tufal oluşumu görülmez. Çekme dayanımı ve sürünme özellikleri iyidir.
Kullanım Alanları	Isıya dayanıklı uygulamalarda kullanılır. Fırın yapımı, buhar kazanları, petrol tesisleri termo eleman kılıfları.	Kimya, petrokimya ve gıda sanayinde kullanılır. 300°C'ye kadar sürekli kullanılabilir. Isı değiştiricilerinde, buhar kazanlarında, mutfaklarda, gıda tesislerinde, cephe kaplamalarında kullanılır.	316'ya benzerdir. 316L kaynak sonrasında ısıtıl işlem yapılmayacak parçalarda tercih edilir.	316'ya benzerdir. Ek olarak yüksek sıcaklık özellikleri daha iyidir. 400 °C'ye kadar taneler arası korozyon tehlikesi olmadan sürekli kullanılabilir. Kimya, petrokimya kömür, selüloz, tekstil, boya, fotoğraf reçine ve lastik sanayi gibi yerlerde kullanılır.

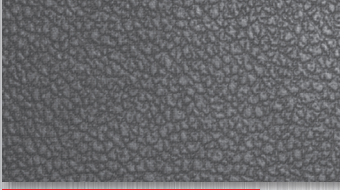




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RULO VE SAC LEVHALAR

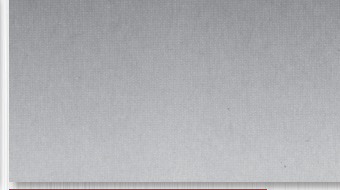
DESENLİ YÜZEYLER / PATTERNED SURFACES



DERİ DESEN



MİKRO NOKTA DESEN



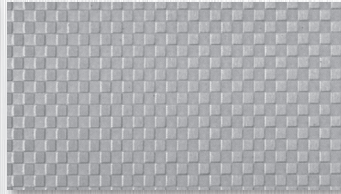
MAT



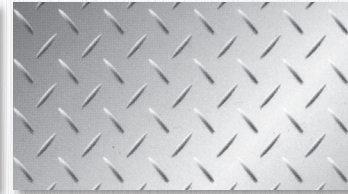
SCOTCHBRITE FIRÇA YÜZÜ



TAŞLI



KARE DESEN



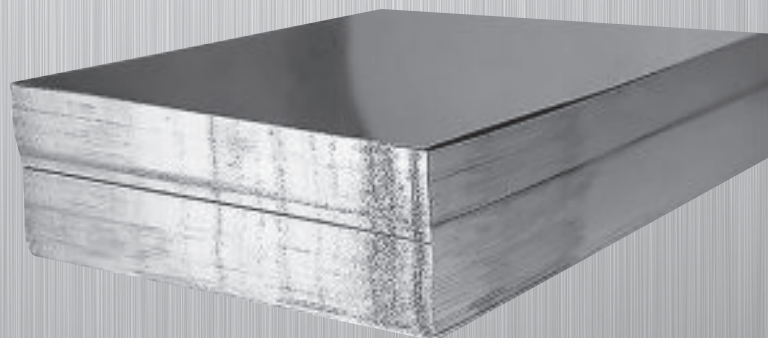
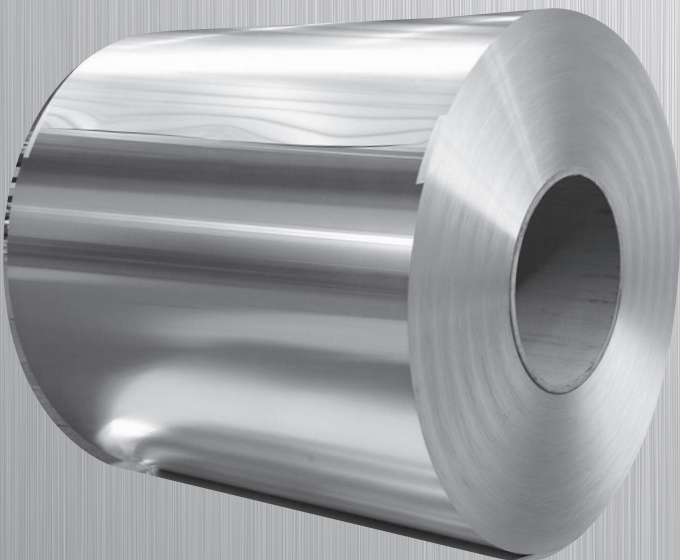
BAKLAVA DESEN

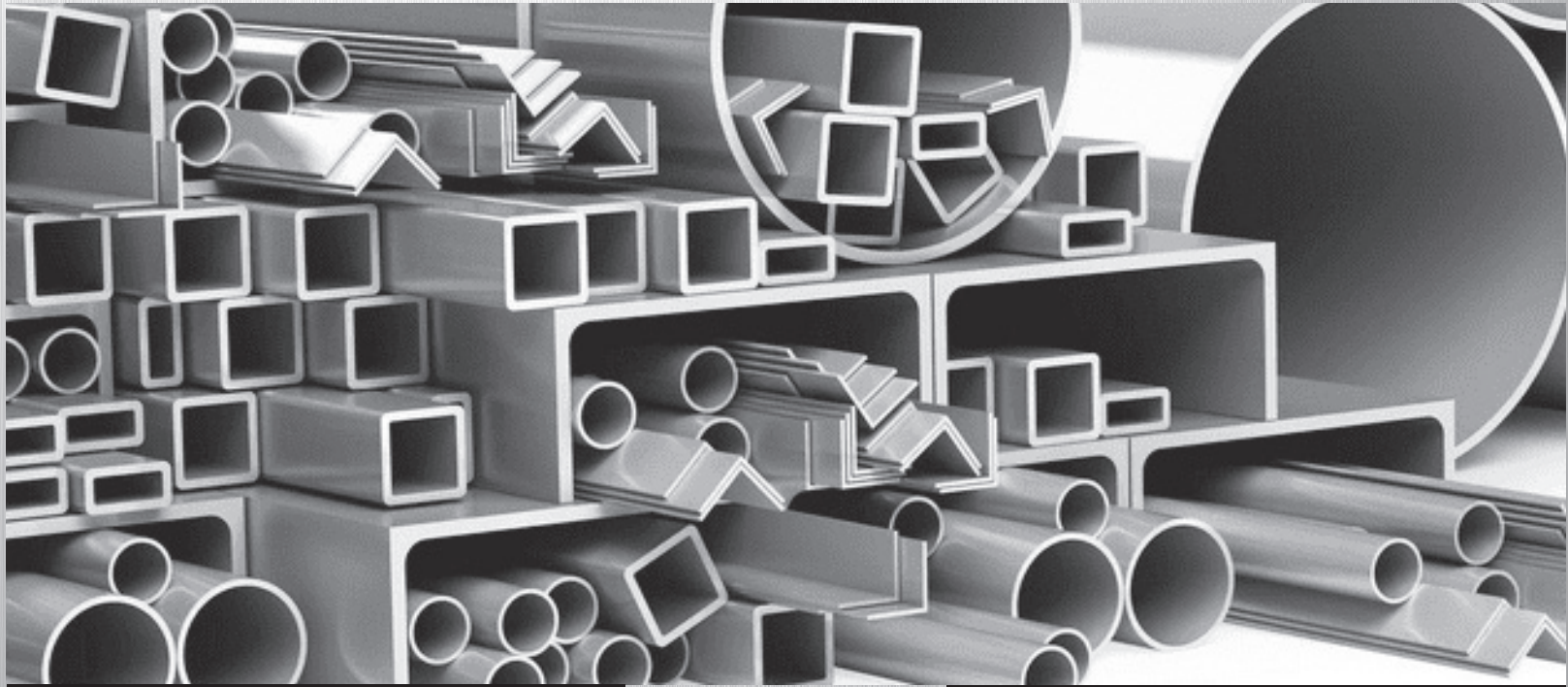
SAC LEVHALAR

BOY KESME 0,40'tan 12 mm. kalınlığa kadar
DİLME 0,40'tan 5 mm. kalınlığa kadar
PLAZMA KESİM 1 mm.'den 100 mm. kalınlığa kadar
TAŞLAMA 1 mm.'den 3 mm.'ye kadar

LEVHA AĞIRLIKLARI (Kg/Plaka)

Kalınlık	1000x2000	1250x2500	1500x3000	2000x6000
0.30	4.8	7.5		
0.40	6.4	10		
0.50	8.0	12.5	18	
0.60	9.6	15	21.6	
0.70	11.2	17.5	25.2	
0.80	12.8	20.0	28.8	
1	16.0	25.0	36.0	
1.25	20.0	31.3	45.0	
1.5	24.0	37.5	54.0	
2.0	32.0	50.0	72.0	
2.5	40.0	62.5	90.0	
3.0	48.0	75.0	108.0	288
4.0	64.0	100.0	144.0	284
5.0	80.0	125.0	180.0	480
6.0	96.0	150.0	216.0	576
8.0	128.0	200.0	288.0	768
10.0	160.0	250.0	360.0	960
12.0	192.0	300.0	432.0	1152





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BORU VE PROFİLLER

PASLANMAZ DİKİŞLİ BORU ÖLÇÜ ve BİRİM AĞIRLIKLARI

DIN 2463

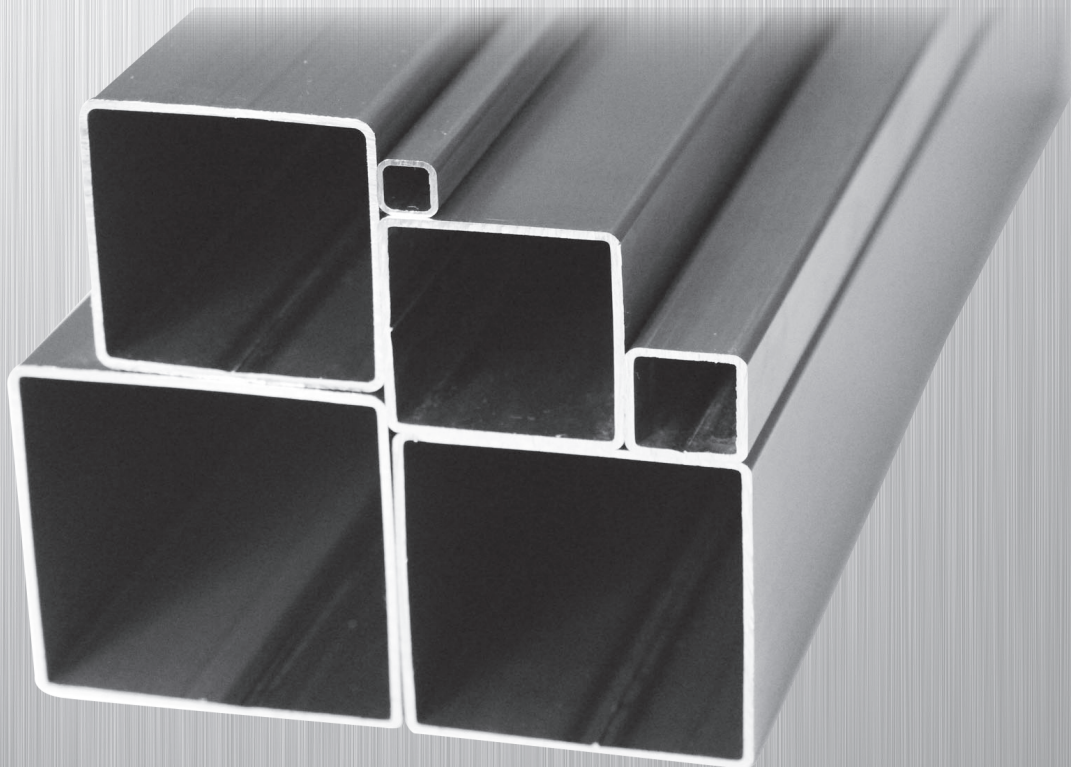


DIŞ ÇAP		1,0	1,2	1,5	2,0	2,5	3,0	4,0	5,0	6,0
10		0,225	0,264	0,319						
12		0,275	0,325	0,394	0,500					
14		0,326	0,385	0,470	0,601					
15		0,351	0,415	0,507	0,651					
16		0,376	0,445	0,545	0,701					
17,2	3/8"	0,406	0,481	0,590	0,761	0,921				
18		0,426	0,505	0,620	0,801					
19		0,452	0,536	0,659	0,854					
20		0,476	0,565	0,695	0,901					
21,3	1/2"	0,508	0,604	0,744	0,967	1,177				
22		0,526	0,625	0,770	1,002					
23		0,551	0,655	0,808	1,051					
25		0,601	0,715	0,883	1,152	1,409				
26,9	3/4"	0,649	0,772	0,954	1,247	1,527	1,795	1,795		
28		0,676	0,805	0,995	1,302	1,596	1,878	1,878		
30		0,726	0,865	1,070	1,402	1,722	2,028	2,028		
32		0,776	0,925	1,146	1,502	1,847	2,178	2,178		
33,0				1,184						
33,7	1"	0,819	0,977	1,209	1,588	1,953	2,306	2,306		
35		0,851	1,016	1,258	1,653	2,035	2,404	2,404		
38		0,929	1,109	1,375	1,808	2,229	2,637	2,637		
40		0,977	1,116	1,446	1,903	2,348	2,779	2,779		
42,4	1 1/4"	1,037	1,238	1,536	2,023	2,498	2,960	2,960		
45		1,102	1,316	1,634	2,153	2,661	3,155	3,155		
48,3	1 1/2"	1,184	1,415	1,758	2,319	2,867	3,403	3,403		
50		1,227	1,466	1,822	2,404	2,974	3,531	3,531		
50,8		1,247	1,490	1,852	2,444		3,591	3,591		
51		1,252	1,496	1,859	2,454	3,036				
52		1,277	1,526	1,897	2,504	3,099	3,681	3,681		
54		1,327	1,587	1,972	2,604	3,224	3,831	3,831		
57				2,085	2,754	3,412	4,057	4,057		
60,3	2"	1,485	1,776	2,209	2,920	3,618	4,304	4,304		
63,5		1,565		2,329	3,080	3,819	4,545	4,545		
70		1,728	2,067	5,573	3,405	4,226	5,033	5,033		
76,1	2 1/2"	1,881	2,251	2,802	3,711	4,607	5,491	5,491		
80		1,978	2,368	2,948	3,906	4,852	5,784	5,784		
84					4,107					
88,9	3"			3,283	4,352	5,409	6,453	6,453		
101,6	3 1/2"			3,760	4,988	6,204	7,407	7,407	12,094	14,363
104				3,850	5,108	6,354	7,587	7,587	12,395	14,724
114,3	4"			4,237	5,624	6,999	8,361	8,361	13,984	16,271
129	4 1/2"			4,789	6,360	7,919	9,465	9,465	15,525	18,480
139,7	5"			5,191	6,896	8,589	10,269	10,269	16,864	20,087
154				5,728	7,612	9,484	11,343	11,343	18,655	22,236
168,3	6"			6,245	8,328	10,397	12,417	12,417	20,445	24,384

PASLANMAZ PROFİL AĞIRLIK CETVELİ

KARE PROFİL

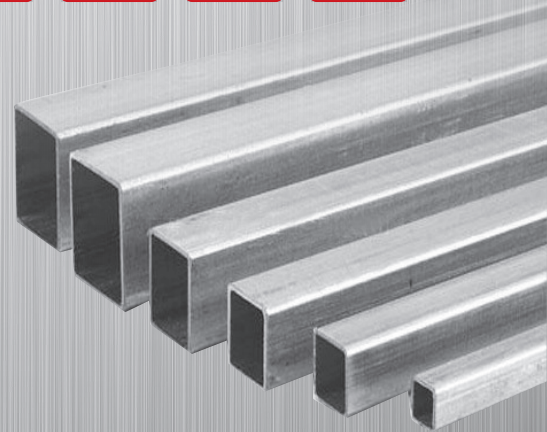
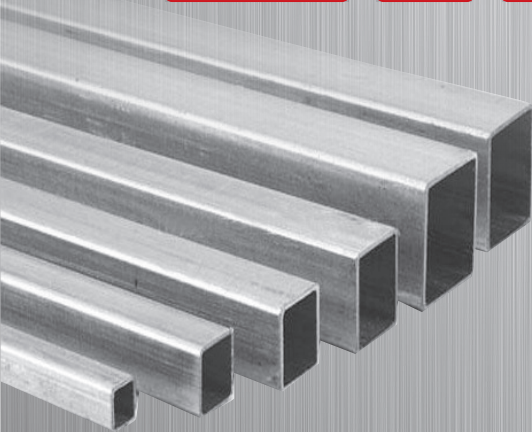
EBAT (mm)	1,0	1,2	1,5	2,0	2,5	3,0	4,0	5,0	6,0
12*12	0,358	0,415	0,508						
15*15	0,453	0,538	0,661						
16*16	0,485	0,576	0,709	0,920					
20*20	0,613	0,729	0,900	1,175					
25*25	0,772	0,921	1,140	1,494	1,846	2,179			
30*30	0,932	1,112	1,379	1,813	2,222	2,245			
35*35	1,091	1,303	1,618	2,132	2,629	3,118			
40*40	1,251	1,495	1,857	2,451	3,036	3,602	4,708		
45*45	1,410	1,686	2,097	2,770	3,433	4,081	5,309		
50*50	1,570	1,878	2,336	3,089	3,818	4,559	5,960		
60*60			2,814	3,727	4,607	5,516	7,222		
70*70			3,293	4,365	5,408	6,473	8,504		
80*80			3,771	5,003	6,203	7,430	9,807	12,095	
100*100		4,728	6,279	7,918	9,343	12,358	15,322	18,236	18,236
120*120			7,555		11,257	14,910	18,512	22,064	22,064

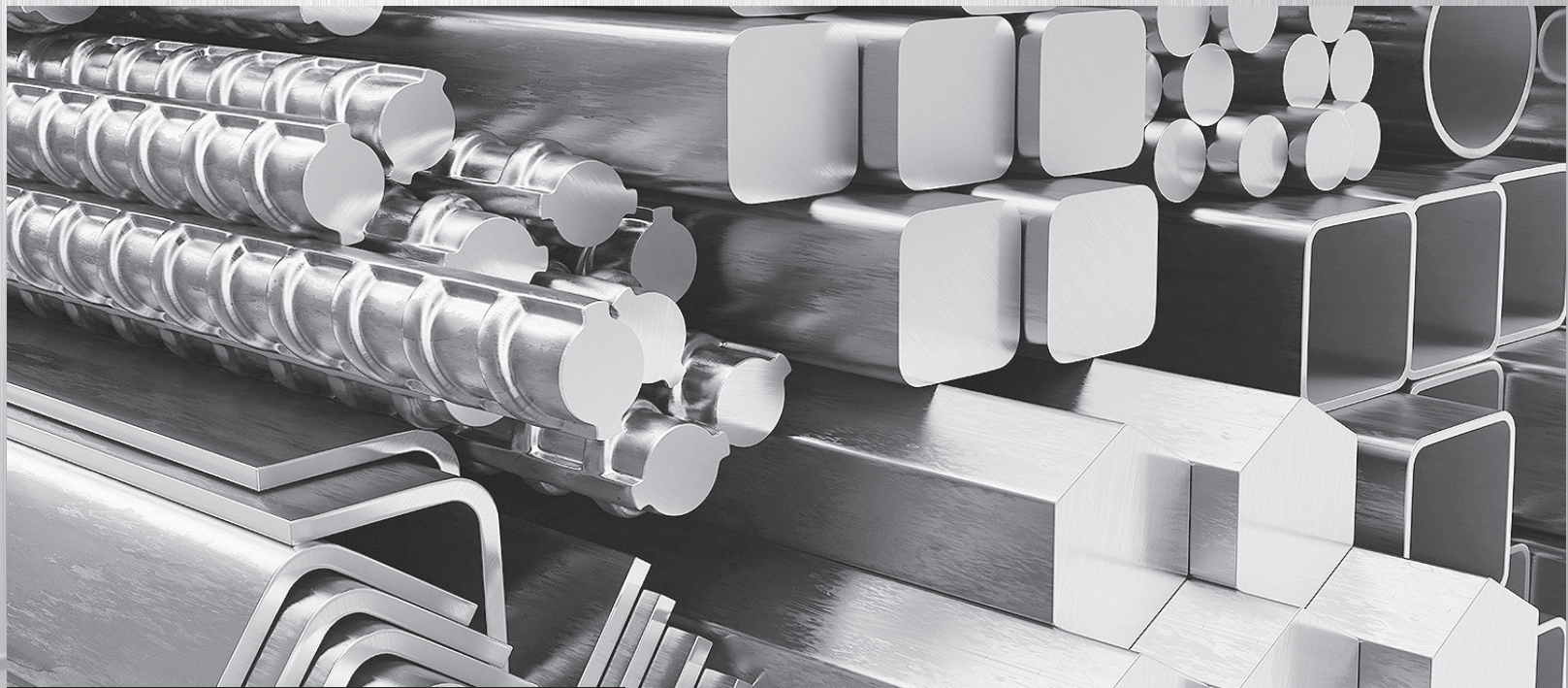


PASLANMAZ PROFİL AĞIRLIK CETVELİ

DİKDÖRTGEN PROFİL

EBAT (mm)	1,0	1,2	1,5	2,0	2,5	3,0	4,0	5,0	6,0
20*10	0,453	0,538	0,661						
20*15	0,533	0,634	0,781						
25*15	0,613	0,729	0,900	1,175					
30*10	0,613	0,729	0,900						
30*15	0,693	0,825	1,020	1,335					
30*20	0,852	0,921	1,140	1,494					
35*20	0,852	1,017	1,259	1,654					
40*15	0,852	1,017	1,259	1,654					
40*20	0,926	1,112	1,379	1,813					
40*30	1,091	1,303	1,618	2,132	2,661	3,156			
50*20	1,091	1,303	1,618	2,132					
50*25		1,399	1,738	2,292					
50*30	1,251	1,495	1,857	2,451					
50*40		1,686	2,097	2,770	3,412	4,081			
60*20		1,495	1,857	2,451					
60*30		1,686	2,097	2,770	3,421	4,081			
60*40		1,878	2,336	3,089	3,819	4,559	5,960		
80*40		2,261	2,814	3,727	4,600	5,516	7,222		
80*60			3,293	4,365	5,408	6,473	8,504		
100*40			3,293	4,365	5,408	6,473	8,504		
100*50				4,684	5,790	6,952	9,115	11,268	
100*60				5,003		7,430	9,807	12,095	
120*40				5,003		7,430	9,807		
120*60				5,642		8,387	11,083	13,728	16,324
120*80				6,279		9,343	12,358	15,322	18,236
150*50				6,279		9,343	12,358	15,322	18,236





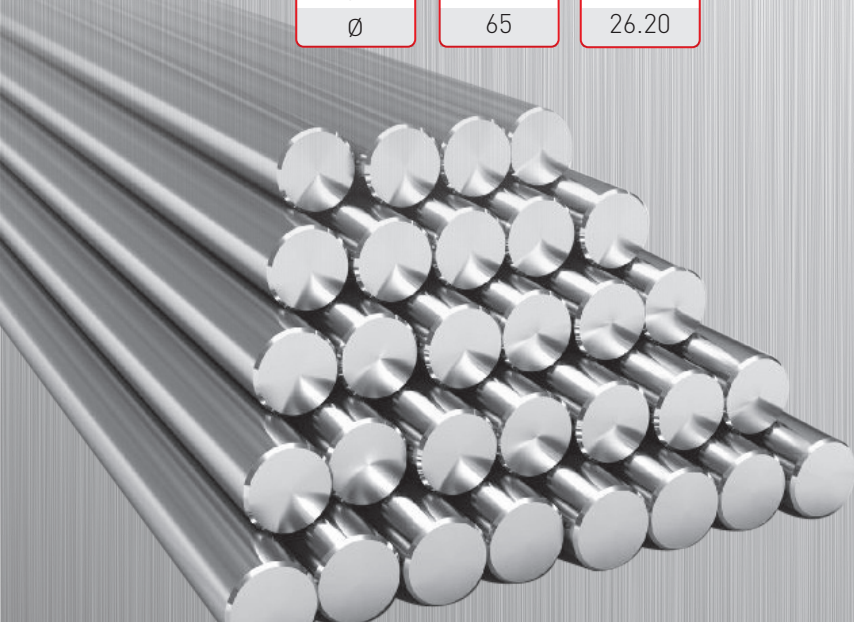
EMSS[®]
EURO METAL STAINLESS STEEL

ÇUBUK - LAMA - KÖŞEBENT
ALTIKÖŞE ve KARE

ÇUBUK ve MİL TEORİK AĞIRLIKLARI (KG9/MT)

Ø	mm	kg/mt
Ø	3	0.06
Ø	4	0.10
Ø	5	0.16
Ø	6	0.22
Ø	7	0.30
Ø	8	0.40
Ø	9	0.50
Ø	10	0.62
Ø	11	0.75
Ø	12	0.89
Ø	13	1.05
Ø	14	1.21
Ø	15	1.39
Ø	16	1.59
Ø	17	1.79
Ø	18	2.01
Ø	19	2.24
Ø	20	2.48
Ø	21	2.73
Ø	22	2.99
Ø	24	3.57
Ø	25	3.88
Ø	26	4.19
Ø	28	4.86
Ø	30	5.58
Ø	32	6.31
Ø	35	7.55
Ø	38	8.91
Ø	40	9.92
Ø	45	12.50
Ø	50	15.50
Ø	55	18.76
Ø	60	22.30
Ø	65	26.20

Ø	mm	kg/mt
Ø	70	30.38
Ø	75	34.88
Ø	80	39.60
Ø	85	44.80
Ø	90	50.22
Ø	95	55.90
Ø	100	62.00
Ø	105	68.30
Ø	110	75.00
Ø	115	81.60
Ø	120	89.00
Ø	125	96.50
Ø	130	104.78
Ø	135	113.00
Ø	140	121.00
Ø	150	139.50
Ø	160	158.22
Ø	165	168.80
Ø	170	179.18
Ø	180	200.88
Ø	185	212.20
Ø	190	223.82
Ø	200	248.00
Ø	210	273.42
Ø	220	300.08
Ø	230	327.98
Ø	240	357.12
Ø	250	387.50
Ø	260	419.12
Ø	280	486.06
Ø	285	503.60
Ø	300	558.0
Ø	340	716.72
Ø	400	992.00



ALTI KÖŞE DIN 176

Ebat (ws/mm)	Ağırlık (kg/M)
11	0.82
13	1.15
14	1.33
15	1.53
17	1.97
19	2.45
22	3.29
24	3.92
27	4.96
30	6.12
32	6.96
36	8.81
41	11.43
45	13.77
50	17.00

KARE DIN 178

Ebat (ws/mm)	Ağırlık (kg/M)
6x6	0.28
8x8	0.51
10x10	0.79
12x12	1.14
14x14	1.55
15x15	1.78
16x16	2.02
18x18	2.56
20x20	3.16
22x22	3.82
25x25	4.94
30x30	7.11
35x35	9.68
40x40	12.64
50x50	19.75
60x60	28.46
80x80	50.56
100x100	79.00

KÖŞEBENT DIN 1028

Ebat (ws/mm)	Ağırlık (kg/M)
20 x 20 x 3	0.880
25 x 25 x 3	1.120
25 x 25 x 4	1.450
30 x 30 x 3	1.360
30 x 30 x 4	1.780
30 x 30 x 5	2.180
35 x 35 x 4	2.100
40 x 40 x 3	1.813
40 x 40 x 4	2.420
40 x 40 x 5	2.970
50 x 50 x 3	2.284
50 x 50 x 4	3.014
50 x 50 x 5	3.770
50 x 50 x 6	4.470
60 x 60 x 6	5.420
70 x 70 x 7	.380
80 x 80 x 8	9.660
100 x 100 x 10	15.000



LAMA (KG/MT)
DIN 1016, 1017, 1543

KALINLIK EBAT	2	3	4	5	6	8	10	12	15
10	0.16	0.24	0.32	0.40					
15	0.25	0.36	0.48	0.60					
20	0.32	0.48	0.64	0.80	0.95	1.27			
25	0.40	0.60	0.80	0.99	1.19	1.59			
30	0.48	0.72	0.95	1.19	1.43	1.91	2.29		
35	0.56	0.83	1.11	1.39	1.67	2.23	2.78		
40	0.64	0.95	1.27	1.59	1.91	2.54	3.18	3.82	
45	0.72	1.07	1.43	1.79	2.15	2.86	3.58	4.29	
50	0.80	1.19	1.59	1.99	2.39	3.18	3.98	4.77	
60		1.43	1.91	2.39	2.86	3.82	4.77	5.72	
70		1.67	2.23	2.78	3.34	4.45	5.57	6.68	
80		1.91	2.54	3.18	3.82	5.09	6.36	7.63	
90		2.15	2.66	3.58	4.29	5.72	7.16	8.59	
100		2.39	3.18	3.98	4.77	6.36	7.95	9.54	11.93
110			3.50	4.37	5.25	7.00	8.75	10.49	13.12
120			3.82	4.77	5.72	7.63	9.54	11.45	14.31
130				5.17	6.20	8.27	10.34	12.40	15.50
140				5.57	6.68	8.90	11.13	13.36	16.70
150				5.96	7.16	9.54	11.93	14.31	17.89
160				6.36	7.63	10.18	12.72	15.26	19.08
180				7.16	8.59	11.45	14.31	17.17	21.47
200				7.95	9.54	12.72	15.90	19.08	23.85
250				9.94	11.94	15.90	19.88	23.85	29.81



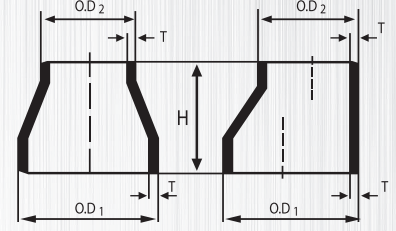


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BAĞLANTI ELEMANLARI

KAYNAK AĞIZLI REDÜKSİYON ISO VE AVRUPA STANDARTLARI

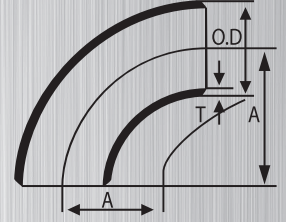
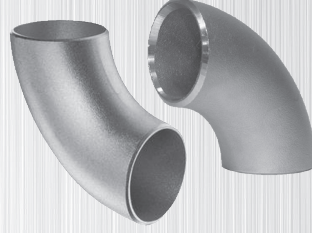
Redüksiyon konsantrik ve eksantrik ANSI ve MSS standartlarına uygundur.



Norm	Dış Çap Büyük Taraf O.D.1 mm	Dış Çap Küçük Taraf O. D. 2 mm	Uzunluk H mm	Schedule Kalınlık T	5 S Ağırlık kg	Schedule Kalınlık T	10 S Ağırlık kg	Schedule Kalınlık T	40 S Ağırlık kg	Schedule Kalınlık T	80 S Ağırlık kg
3/4" x 1/2"	26.7	21.3	50.8	T 1.65 t 1.65	0.08	T 2.11 t 2.11	0.10	T 2.87 t 2.77	0.10	T 3.91 t 3.73	0.18
1" x 1/2"	33.7	21.3	50.8	T 1.65 t 1.65	0.07	T 2.77 t 2.11	0.12	T 3.38 t 2.77	0.12	T 4.55 t 3.73	0.20
1" x 3/4"	33.7	26.7	50.8	T 1.65 t 1.65	0.08	T 2.77 t 2.11	0.13	T 3.38 t 2.87	0.13	T 4.55 t 3.91	0.22
1" 1/4" x 3/4"	42.4	26.7	50.8	T 1.65 t 1.65	0.10	T 2.77 t 2.11	0.18	T 2.56 t 2.87	0.18	T 4.85 t 3.51	0.25
1" 1/4" x 1"	42.4	33.7	50.8	T 1.65 t 1.65	0.10	T 2.77 t 2.77	0.18	T 3.56 t 3.36	0.18	T 4.85 t 4.55	0.27
1" 1/2" x 1"	48.3	33.7	63.5	T 1.65 t 1.65	0.11	T 2.77 t 2.77	0.20	T 3.68 t 3.38	0.20	T 5.08 t 4.55	0.34
1" 1/2" x 1 1/4"	48.3	42.4	63.5	T 1.65 t 1.65	0.12	T 2.77 t 2.77	0.21	T 3.68 t 3.56	0.21	T 5.05 t 4.85	0.36
2" x 1"	60.3	33.7	76.2	T 1.65 t 1.65	0.17	T 2.77 t 2.77	0.28	T 3.91 t 3.38	0.28	T 5.54 t 4.55	0.54
2" x 1" 1/4"	60.3	42.4	76.2	T 1.65 t 1.65	0.18	T 2.77 t 2.77	0.30	T 3.91 t 3.56	0.30	T 5.54 t 4.85	0.58
2" x 1 1/2"	60.3	48.3	76.2	T 1.65 t 1.65	0.19	T 2.77 t 2.77	0.31	T 3.91 t 3.68	0.31	T 5.54 t 5.08	0.59
2" 1/2" x 1 1/4"	76.1	42.4	88.9	T 2.11 t 1.65	0.29	T 3.05 t 2.77	0.43	T 5.16 t 3.56	0.43	T 7.01 t 4.85	0.90
2" 1/2" x 1 1/2"	76.1	48.3	88.9	T 2.11 t 1.65	0.30	T 3.05 t 2.77	0.44	T 5.16 t 3.68	0.44	T 7.01 t 5.08	0.94
2" 1/2" x 2"	76.1	60.3	88.9	T 2.11 t 1.65	0.32	T 3.05 t 2.77	0.47	T 5.16 t 3.81	0.47	T 7.01 t 5.54	1.03
3" x 1 1/2"	88.9	48.3	88.9	T 2.11 t 1.65	0.35	T 3.05 t 2.77	0.51	T 5.49 t 3.68	0.51	T 7.62 t 5.08	1.21
3" x 2"	88.9	60.3	88.9	T 2.11 t 1.65	0.38	T 3.05 t 2.77	0.55	T 5.46 t 3.91	0.55	T 7.62 t 5.54	1.29
3" x 2 1/2"	88.9	76.1	88.9	T 2.11 t 1.65	0.41	T 3.05 t 3.05	0.59	T 5.49 t 5.16	0.59	T 7.62 t 7.01	1.49
4" x 2"	114.3	60.3	101.6	T 2.11 t 1.65	0.55	T 3.05 t 2.77	0.78	T 6.02 t 3.91	0.78	T 8.56 t 5.54	1.95
4" x 2 1/2"	114.3	76.1	101.6	T 2.11 t 2.11	0.58	T 3.05 t 3.05	0.83	T 6.02 t 5.18	0.83	T 8.56 t 7.01	2.19
4" x 3"	114.3	88.9	101.6	T 2.11 t 2.11	0.61	T 3.05 t 3.05	0.87	T 6.02 t 5.49	0.87	T 8.56 t 7.62	2.33
5" x 2 1/2"	139.7	76.1	127.0	T 2.77 t 2.11	1.16	T 3.40 t 3.05	1.40	T 6.65 t 5.16	1.40	T 9.58 t 7.01	3.60
5" x 3"	139.7	88.9	127.0	T 2.77 t 2.11	1.20	T 3.40 t 3.05	1.45	T 6.65 t 5.49	1.45	T 9.53 t 7.62	3.88
5" x 4"	139.7	114.3	127.0	T 2.77 t 2.11	1.25	T 3.40 t 3.05	1.49	T 6.65 t 6.02	1.49	T 8.53 t 8.56	4.13
6" x 3"	168.3	88.9	139.7	T 2.77 t 2.11	1.51	T 3.40 t 3.05	1.82	T 7.11 t 5.49	1.82	T 10.97 t 7.62	5.51
6" x 4"	168.3	114.3	139.7	T 2.77 t 2.11	1.55	T 3.40 t 3.05	1.95	T 7.11 t 6.02	1.95	T 10.97 t 8.56	5.96
8" x 4"	219.1	114.3	152.4	T 2.77 t 2.11	2.16	T 3.76 t 3.05	3.01	T 6.18 t 6.02	3.01	T 12.70 t 8.56	9.24
8" x 5"	219.1	139.7	152.4	T 2.77 t 2.77	2.21	T 3.76 t 3.40	3.08	T 8.18 t 6.55	3.08	T 12.70 t 9.53	9.67
8" x 6"	219.1	168.3	152.4	T 2.77 t 2.77	2.29	T 3.76 t 3.40	3.19	T 8.18 t 7.11	3.19	T 12.70 t 10.97	10.10
10" x 6"	273.1	168.3	177.8	T 3.40 t 2.77	4.00	T 4.19 t 3.40	5.00	T 9.27 t 7.11	5.00	T 12.70 t 10.97	14.70
10" x 8"	273.1	219.1	177.8	T 3.40 t 2.77	4.16	T 4.19 t 3.76	5.20	T 9.27 t 8.18	5.20	T 12.70 t 12.70	15.50
12" x 8"	323.9	219.1	203.2	T 3.96 t 2.77	6.55	T 4.57 t 3.76	7.67	T 9.53 t 8.18	7.67	T 12.70 t 12.70	20.80
12" x 10"	323.9	273.1	203.2	T 3.96 t 3.40	6.82	T 4.57 t 4.19	7.98	T 9.53 t 9.27	7.98	T 12.70 t 12.70	21.60
14" x 6"	355.6	168.3	330.2	T 3.96 t 2.77	10.79	T 4.98 t 3.40	13.15	T 9.53 t 7.11	13.15	T 12.70 t 10.97	35.20
14" x 8"	355.6	219.1	330.2	T 3.96 t 2.77	11.39	T 4.78 t 3.76	13.88	T 9.53 t 8.18	13.88	T 12.70 t 12.70	36.80
14" x 10"	355.6	273.1	330.2	T 3.96 t 3.40	11.82	T 4.78 t 4.19	14.41	T 9.53 t 9.27	14.41	T 12.70 t 12.70	38.70
14" x 12"	355.6	323.9	330.2	T 3.96 t 3.96	12.54	T 4.78 t 4.57	15.29	T 9.53 t 9.53	15.29	T 12.70 t 12.70	40.30
16" x 8"	406.4	219.1	355.6	T 4.19 t 2.77	14.68	T 4.78 t 3.76	16.70	T 9.53 t 8.18	16.70	T 12.70 t 12.70	44.20
16" x 10"	406.4	273.1	355.6	T 4.19 t 3.40	15.59	T 4.78 t 4.19	17.72	T 9.53 t 9.27	17.72	T 12.70 t 12.70	46.27
16" x 12"	406.4	323.9	355.6	T 4.19 t 3.96	16.16	T 4.78 t 4.57	18.35	T 9.53 t 9.53	18.35	T 12.70 t 12.70	47.63
18" x 10"	457.2	273.1	381.0	T 4.19 t 3.40	18.50	T 4.78 t 4.19	21.02	T 9.53 t 9.27	21.02	T 12.70 t 12.70	54.53
18" x 12"	457.2	323.9	381.0	T 4.19 t 3.96	18.90	T 4.78 t 4.57	21.48	T 9.53 t 9.53	21.48	T 12.70 t 12.70	57.15
18" x 14"	457.2	355.6	381.0	T 4.19 t 3.96	19.27	T 4.78 t 4.78	21.9	T 9.53 t 9.53	21.9	T 12.70 t 12.70	57.61

KAYNAK AĞIZLI DİRSEK ISO VE AVRUPA STANDARTLARI

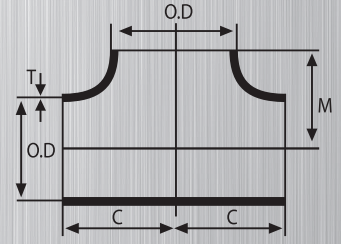
Kaynak Dirsek 3d, 90° ISO DIN 2605 standartlarına uygundur.



Norm Pipe Size	Dış Çap Outside Diameter O. D mm	Center To Face A. mm	Schedule Kalınlık Thickness T. mm	5 S. Wall Ağırlık Weights kg.	Schedule Kalınlık Thickness T. mm	10 S. Wall Ağırlık Weights kg.	Schedule Kalınlık Thickness T. mm	40 S. Wall Ağırlık Weights kg.	Schedule Kalınlık Thickness T. mm	80 S. Wall Ağırlık Weights kg.	Schedule Kalınlık Thickness T. mm	160 S. Wall Ağırlık Weights kg.
1/2"	21.3	25.4	1.65	0.09	2.11	0.10	2.77	0.18	3.73	0.21	4.75	0.27
3/4"	26.7	28.6	1.65	0.13	2.11	0.13	2.87	0.25	3.91	0.29	5.54	0.39
1"	33.7	38.1	1.65	0.22	2.77	0.29	3.38	0.29	4.55	0.39	6.35	0.54
1 1/4"	42.4	47.6	1.65	0.34	2.77	0.50	3.56	0.59	4.85	0.68	6.35	0.89
1 1/2"	48.3	57.2	1.65	0.50	2.77	0.68	3.68	0.86	5.08	1.02	7.14	1.43
2"	60.3	63.5	1.65	0.68	2.77	0.85	3.91	1.28	5.54	1.59	8.71	2.49
2 1/2"	76.1	76.2	2.11	1.20	3.05	1.41	5.16	2.20	7.01	3.13	9.53	4.25
3"	88.9	85.7	2.11	1.54	3.05	1.77	5.49	3.31	7.62	4.45	11.13	6.49
3 1/2"	101.6	95.3	2.11	2.49	3.05	2.67	5.74	4.08	8.08	5.44	-	-
4"	114.3	104.8	2.11	3.27	3.05	3.46	6.02	5.28	8.56	7.71	13.49	2.18
5"	139.7	123.8	2.77	5.90	3.40	6.10	6.55	9.41	9.53	11.34	15.88	18.94
6"	168.3	142.9	2.77	7.80	3.40	8.07	7.11	11.00	10.97	13.61	18.24	22.59
8"	219.1	177.8	2.77	14.06	3.76	15.65	8.18	20.91	12.70	28.12	23.01	50.80
10"	273.1	215.9	3.40	24.95	4.19	26.76	9.27	35.38	12.70	49.89	28.57	112.04
12"	323.9	254.0	3.96	37.65	4.57	39.46	9.53	62.14	12.70	83.91	33.32	219.54
14"	355.6	279.4	3.96	40.37	4.78	48.53	9.53	79.38	12.70	95.25	-	-
16"	406.4	304.8	4.19	52.16	4.78	58.97	9.53	99.79	12.70	120.20	-	-
18"	457.2	342.9	4.19	67.58	4.78	76.66	9.53	129.73	12.70	156.03	-	-
20"	508.2	381.0	4.78	77.56	5.54	103.42	9.53	162.39	12.70	195.04	-	-
24"	609.6	431.8	5.54	135.9	6.35	155.58	9.53	225.89	12.70	272.15	-	-

KAYNAK AĞIZLI TEE ISO VE AVRUPA STANDARTLARI

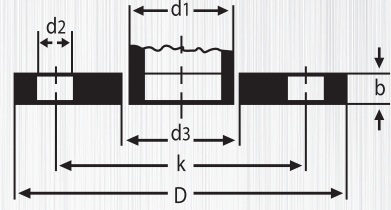
EŞİT TEE



Norm Pipe Size	Dış Çap Outside Diameter O. D mm	Center To Face A. mm	Schedule Kalınlık Thickness T. mm	5 S. Wall Ağırlık Weights kg.	Schedule Kalınlık Thickness T. mm	10 S. Wall Ağırlık Weights kg.	Schedule Kalınlık Thickness T. mm	40 S. Wall Ağırlık Weights kg.	Schedule Kalınlık Thickness T. mm	80 S. Wall Ağırlık Weights kg.	Schedule Kalınlık Thickness T. mm	160 S. Wall Ağırlık Weights kg.
1/2"	21.3	25.4	1.65	0.09	2.11	0.10	2.77	0.18	3.73	0.21	4.75	0.27
3/4"	26.7	28.6	1.65	0.13	2.11	0.13	2.87	0.25	3.91	0.29	5.54	0.39
1"	33.7	38.1	1.65	0.22	2.77	0.29	3.38	0.29	4.55	0.39	6.35	0.54
1 1/4"	42.4	47.6	1.65	0.34	2.77	0.50	3.56	0.59	4.85	0.68	6.35	0.89
1 1/2"	48.3	57.2	1.65	0.50	2.77	0.68	3.68	0.86	5.08	1.02	7.14	1.43
2"	60.3	63.5	1.65	0.68	2.77	0.85	3.91	1.28	5.54	1.59	8.71	2.49
2 1/2"	76.1	76.2	2.11	1.20	3.05	1.41	5.16	2.20	7.01	3.13	9.53	4.25
3"	88.9	85.7	2.11	1.54	3.05	1.77	5.49	3.31	7.62	4.45	11.13	6.49
3 1/2"	101.6	95.3	2.11	2.49	3.05	2.67	5.74	4.08	8.08	5.44	-	-
4"	114.3	104.8	2.11	3.27	3.05	3.46	6.02	5.28	8.56	7.71	13.49	2.18
5"	139.7	123.8	2.77	5.90	3.40	6.10	6.55	9.41	9.53	11.34	15.88	18.94
6"	168.3	142.9	2.77	7.80	3.40	8.07	7.11	11.00	10.97	13.61	18.24	22.59
8"	219.1	177.8	2.77	14.06	3.76	15.65	8.18	20.91	12.70	28.12	23.01	50.80
10"	273.1	215.9	3.40	24.95	4.19	26.76	9.27	35.38	12.70	49.89	28.57	112.04
12"	323.9	254.0	3.96	37.65	4.57	39.46	9.53	62.14	12.70	83.91	33.32	219.54
14"	355.6	279.4	3.96	40.37	4.78	48.53	9.53	79.38	12.70	95.25	-	-
16"	406.4	304.8	4.19	52.16	4.78	58.97	9.53	99.79	12.70	120.20	-	-
18"	457.2	342.9	4.19	67.58	4.78	76.66	9.53	129.73	12.70	156.03	-	-
20"	508.2	381.0	4.78	77.56	5.54	103.42	9.53	162.39	12.70	195.04	-	-
24"	609.6	431.8	5.54	135.9	6.35	155.58	9.53	225.89	12.70	272.15	-	-

DÜZ FLANŞ PN6

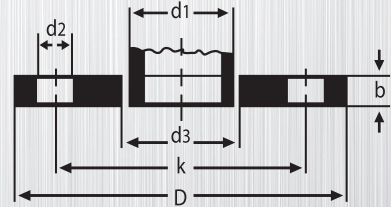
DIN 2573



Tube DN	d1 mm	Flange d5 mm	D mm	b mm	k mm	Drilling Number	Template Thread		d2 mm	weight kg
10	14 17,2	14,5 17,7	75	12	50	4	M10	-	11,5	0,363
15	20 21,3	20,5 21,8	80	12	55	4	M10	-	11,5	0,410
20	25 26,9	25,5 27,4	90	14	65	4	M10	-	11,5	0,600
25	30 33,7	30,5 34,2	100	14	75	4	M10	-	11,5	0,740
32	38 42,4	38,5 42,9	120	16	90	4	M12	(1/2")	14	1,19
40	44,5 48,3	45 48,8	130	16	100	4	M12	(1/2")	14	1,39
50	57 60,3	57,5 60,8	140	16	110	4	M12	(1/2")	14	1,53
65	76,1	76,6	160	16	130	4	M12	(1/2")	14	1,89
80	88,9	89,4	190	18	150	4	M16	(5/8")	18	2,98
100	108 114,3	108,95 114,8	210	18	170	4	M16	(5/8")	18	3,46
125	133 139,7	133,5 140,2	240	20	200	8	M16	(5/8")	18	4,60
150	159 168,3	159,5 168,8	265	20	225	8	M16	(5/8")	18	5,22
200	216 219,1	217 220,1	320	22	280	8	M16	(5/8")	18	7,15
250	267 273	268 274	375	24	335	12	M16	(5/8")	18	9,61
300	318 323,9	319 324,9	440	24	395	12	M20	(3/4")	23	12,6
350	355,6 368	356,6 369	490	26	445	12	M20	(3/4")	23	15,6
400	406,4 419	407,4 420	540	28	495	16	M20	(3/4")	23	18,4
500	508 521	509 522	645	30	600	20	M20	(3/4")	23	24,6

DÜZ FLANŞ PN10

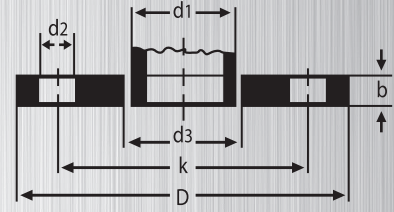
DIN 2576



Tube DN	d1 mm	Flange d5 mm	D mm	b mm	k mm	Drilling Number	Template Thread		d2 mm	weight kg
10	14 17,2	14,5 17,7	90	14	60	4	M12	(1/2")	14	0,613 0,605
15	20 21,3	20,5 21,8	95	14	65	4	M12	(1/2")	14	0,675 0,669
20	25 26,9	25,5 27,4	105	16	75	4	M12	(1/2")	14	0,947 0,936
25	30 33,7	30,5 34,2	115	16	85	4	M12	(1/2")	14	1,14 1,11
32	38 42,4	38,5 42,9	140	16	100	4	M16	(5/8")	14	1,66 1,62
40	44,5 48,3	45 48,8	150	16	110	4	M16	(5/8")	14	1,89 1,86
50	57 60,3	57,5 60,8	165	18	125	4	M16	(5/8")	14	2,51 2,47
65	76,1	76,6	185	18	145	4	M16	(5/8")	18	3,00
80	88,9	89,4	200	20	160	4	M16	(5/8")	18	3,79
100	108 114,3	108,95 114,8	220	20	180	4	M16	(5/8")	18	4,20 4,03
125	133 193,7	133,5 140,2	250	22	210	8	M16	(5/8")	18	5,71 5,46
150	159 168,3	159,5 168,8	285	22	240	8	M20	(3/4")	23	6,72 6,57
200	216 219,1	217 220,1	340	24	295	8	M20	(3/4")	23	9,50 9,31
250	267 273	268 274	395	26	350	12	M20	(3/4")	23	12,5 11,9
300	318 323,9	319 324,9	445	26	400	12	M20	(3/4")	23	14,4 13,8
350	355,6 368	356,6 369	505	28	460	12	M20	(3/4")	23	20,6 19,0
400	406,4 419	407,4 420	565	32	515	16	M24	(7/24")	27	27,9 25,9
500	508 521	509 522	670	38	620	20	M24	(7/24")	27	41,1 37,9

DÜZ FLANŞ PN16

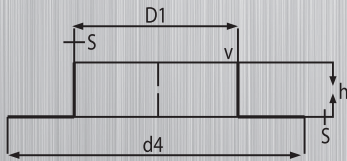
DIN 18697



Tube DN	d1 mm	Flange d5 mm	D mm	b mm	k mm	Drilling Number	Template Thread		d2 mm	weight kg
10	13,5 17,2	14 17,5	90	12	60	4	M12	1/2"	14	0,526 0,518
15	20 21,3	20,5 22	95	12	65	4	M12	1/2"	14	0,675 0,670
20	25 26,9	25,5 27,5	105	14	75	4	M12	1/2"	14	0,828 0,818
25	30 33,7	30,5 34,5	115	4	85	4	M12	1/2"	14	1,03 1,01
32	38 42,4	38,5 43	140	16	100	4	M16	5/8"	18	1,66 1,63
40	44,5 48,3	45 49	150	16	110	4	M16	5/8"	18	1,89 1,85
50	57 60,3	57,5 61	165	18	125	4	M16	5/8"	18	2,51 2,46
65	76,1	77	185	18	145	4	M16	5/8"	18	3,00
80	88,9	90	200	20	160	8	M16	5/8"	18	3,61
100	108 114,3	109 115	220	22	180	8	M16	5/8"	18	4,60 4,42
125	133 139,7	134 141	250	24	210	8	M16	5/8"	18	6,21 5,92
150	159 168,3	160 169	285	24	240	8	M16	5/8"	18	7,66 7,22
200	219,1	220	340	26	295	12	M20	3/4"	22	9,84
250	267 273	268 274	405	32	355	12	M24	7/8"	26	16,6 16,0
300	323,9	325	460	32	410	12	M24	7/8"	26	19,2
350	355,6 368	356,5 369	520	36	470	16	M24	7/8"	26	29,5 27,4
400	406,4 419	407,5 420	580	38	525	16	M27	1"	30	36,7 34,1
500	508	509	715	44	650	20	M30	1 1/8"	33	62,5
600	09,6	611	840	48	770	20	M33	1 1/4"	36	90,6

YAKA

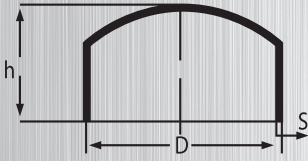
(ANSI B 36.19 - DIN 2642)



NW	D1 mm	S mm	d ₄	B min.	+/- Kg st. pc.
15	21,3	2	45	7	0,02
20	25,0 26,9 26,9	2 2 3	58 58 58	8 7 8	0,04 0,04 0,06
25	33,7 33,7	2 3	68 68	10 10	0,05 0,08
32	42,4 42,4	2 3	78 78	10 12	0,07 0,15
40	48,3 48,3	2 3	88 88	12 15	0,09 0,18
50	60,3 60,3	2 3	102 102	15 18	0,11 0,18
65	76,1 76,1	2 3	122 122	15 18	0,15 0,24
80	88,9 88,9 88,9	2 3 4	138 138 138	15 22 23	0,19 0,30 0,44
100	114,3 114,3 114,3	2 3 4	158 158 158	20 22 25	0,23 0,36 0,50
125	139,7 139,7 139,7	2 3 4	188 188 188	20 22 30	0,30 0,46 0,68
150	168,3 168,3 168,3	2 3 4	212 212 212	22 25 25	0,33 0,55 0,72
200	204,0 219,1 219,1 219,1	2 2 3 4	268 268 268 268	23 23 25 25	0,56 0,48 0,74 1,00
250	273,0 273,0	3 4	320 320	26 27	0,92 1,26
300	323,9 323,9	3 4	370 370	26 27	1,07 1,47
350	356,0	3	430	26	1,61
400	406,4	3	480	30	1,96
450	456,0	3	530	30	2,16
500	508,0	4	580	40	3,74

KEP

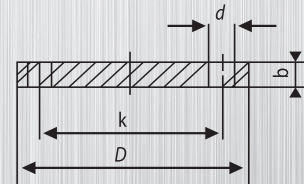
[ASTMA 403 - ANSI B16.9]



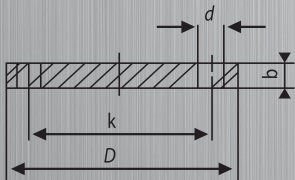
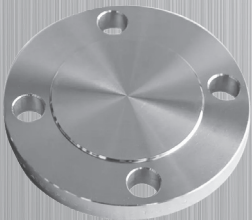
Inch Size	D mm	S mm	B min.	+/- Kg st. pc.
1/2" Sch 10S	21,34	2,11	25,4	0,03
1/2" Sch 40S STD	21,34	2,77	25,4	0,03
3/4" Sch 10S	26,67	2,11	25,4	0,04
3/4" Sch 40S STD	26,67	2,11	25,4	0,05
1" Sch 10S	33,40	2,77	38,1	0,09
1" Sch 40S STD	33,40	3,38	38,1	0,11
1.1/4" Sch 10S	42,16	2,77	38,1	0,11
1.1/4" Sch 40S STD	42,16	3,56	38,1	0,17
1.1/2" Sch 10S	48,26	2,77	38,1	0,13
1.1/2" Sch 40S STD	48,26	3,68	38,1	0,17
2" Sch 10S	60,33	2,77	38,1	0,17
2" Sch 40S STD	60,33	3,91	38,1	0,17
2.1/2" Sch 10S	76,01	3,05	38,1	0,23
2.1/2" Sch 40S STD	76,01	5,16	38,01	0,39
3" Sch 10S	88,90	3,05	50,8	0,37
3" Sch 40S STD	88,90	5,49	50,8	0,66
4" Sch 10S	114,30	3,05	63,5	0,59
4" Sch 40S STD	114,30	6,02	63,5	1,17
5" Sch 10S	141,30	3,40	76,2	0,99
5" Sch 40S STD	141,30	6,55	76,2	1,91
6" Sch 10S	168,28	3,40	88,9	1,39
6" Sch 40S STD	168,28	7,11	88,9	2,90
8" Sch 10S	219,08	3,76	101,6	2,38
8" Sch 40S STD	219,08	8,18	101,6	5,19
10" Sch 10S	273,05	4,19	127,	4,14
10" Sch 40S STD	273,05	9,27	127,0	9,15
12" Sch 10S	323,85	4,75	152,4	6,39
12" Sch 40S STD	323,85	9,53	152,4	13,30
14" Sch 10S	355,60	4,78	165,1	7,98
16" Sch 10S	406,40	4,78	177,8	10,00

NW	D	b	k	Delik Sayısı Holes No	d
10	75	12	50	4	11
15	80	12	55	4	11
20	90	14	65	4	11
25	100	14	75	4	11
32	120	14	90	4	14
40	130	14	100	4	14
50	140	14	110	4	14
65	180	14	130	4	14
80	190	16	150	4	18
100	210	16	170	4	18
125	240	18	200	8	18
150	265	18	225	8	18
200	320	20	280	8	18
250	375	22	335	12	18
300	440	22	395	12	22
350	490	22	445	12	22
400	540	22	495	16	22
500	645	24	600	20	22

KÖR FLANŞ PN6 DIN 2527

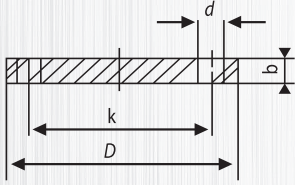
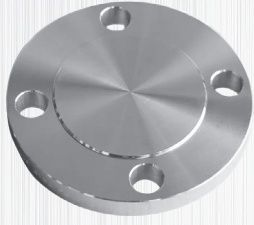


KÖR FLANŞ PN10 DIN 2527



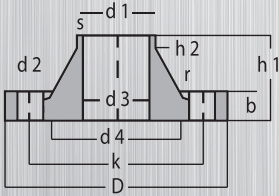
NW	D	b	k	Delik Sayısı Holes No	d
200	340	24	295	8	22
250	395	26	350	12	22
300	445	26	400	12	22
350	505	26	460	16	22
400	565	26	460	16	22
500	670	28	620	20	26

KÖR FLANŞ PN16 DIN 2527



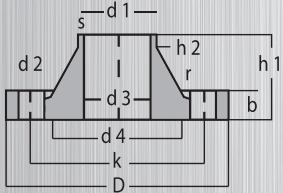
NW	D	b	k	Delik Sayısı Holes No	d
10	90	14	60	4	14
15	95	14	65	4	14
20	105	16	75	4	14
25	115	16	85	4	14
32	140	16	100	4	18
40	150	16	110	4	18
50	165	18	125	4	18
65	185	18	145	4	18
80	200	20	160	4	18
100	220	20	180	4	18
125	250	22	210	8	18
150	285	22	240	8	22
200	340	24	295	8	22
250	405	26	355	12	26
300	460	28	410	12	26
350	520	30	470	12	26
400	580	32	525	16	30
500	715	36	650	20	33

KAYNAK BOYUNLU FLANŞ PN16 DIN 2633



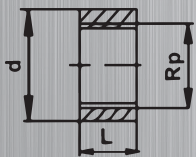
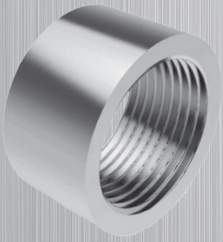
NW	d ₁	D	b	k	h ₁	d ₃	s	r	h ₂	d ₄	f	Delik Sayısı Holes No	x	d ₁	kg
10	14	90	14	60	35	25	1,8	4	6	40	2	4	x	14	0,580
10	17,2	90	14	60	35	28	1,8	4	6	40	2	4	x	14	0,580
15	20	95	14	65	35	30	2	4	6	45	2	4	x	14	0,648
15	21,3	95	14	65	35	32	2	4	6	45	2	4	x	14	0,648
20	25	105	16	75	38	38	2,3	4	6	58	2	4	x	14	0,952
20	26,9	105	16	75	38	40	2,3	4	6	58	2	4	x	14	0,952
25	30	115	16	85	38	42	2,6	4	6	68	2	4	x	14	1,14
25	33,7	115	16	85	38	45	2,6	6	6	68	2	4	x	14	1,14
32	38	140	16	100	40	52	2,6	6	6	78	2	4	x	18	1,69
32	42,4	140	16	100	40	56	2,6	6	6	78	2	4	x	18	1,69
40	44,5	150	16	110	42	60	2,6	6	7	88	3	4	x	18	1,86
40	48,3	150	16	110	42	64	2,6	6	7	88	3	4	x	18	1,86
50	57	165	18	125	45	72	2,9	6	8	102	3	4	x	18	2,53
50	60,3	165	18	125	45	75	2,9	6	8	102	3	4	x	18	2,53
65	76,1	185	18	145	45	90	2,9	6	10	122	3	4	x	18	3,00
80	88,9	200	20	160	50	105	3,2	8	10	138	3	4	x	18	3,70
100	108	220	20	180	52	125	3,6	8	12	158	3	8	x	18	4,62
100	114,3	220	20	180	52	131	3,6	8	12	158	3	8	x	18	4,62
125	133	250	22	210	55	150	4	8	12	188	3	8	x	18	6,30
125	139,7	250	22	210	55	156	4	8	12	188	3	8	x	18	6,30
150	159	285	22	240	55	175	4,5	10	12	212	3	8	x	22	,75
150	168,3	285	22	240	55	184	4,5	10	12	212	3	8	x	22	,75
175	193,7	315	24	270	60	210	5,4	10	12	242	3	8	x	22	9,85
200	219,1	340	24	295	62	235	5,9	10	16	268	3	12	x	22	11,0
250	267	405	26	355	70	285	6,3	12	16	320	3	12	x	26	15,8
250	273	405	26	355	70	292	6,3	12	16	320	4	12	x	26	15,8
300	323,9	460	28	410	78	344	7,1	12	16	378	4	12	x	26	22,0
350	355,6	520	30	470	82	390	8	12	16	438	4	16	x	26	31,2
350	368	520	30	470	82	390	8	12	16	438	4	16	x	26	28,8
400	406,4	580	32	525	85	445	8	12	16	490	4	16	x	30	39,3
400	419	580	32	525	85	445	8	12	16	490	4	16	x	30	36,3
500	508	715	34	650	90	548	8	12	16	610	4	20	x	33	61,0
600	610	840	36	770	95	652	8,0	12	18	725	5	20	x	36	75,4
700	711	910	36	840	100	755	8,8	12	18	795	5	24	x	36	77,0
800	813	1028	38	950	405	855	10	12	20	900	5	24	x	38	101
900	914	1125	40	1050	110	955	10	12	20	1000	5	28	x	42	122
1000	1016	1255	42	1170	120	1058	10	16	22	1115	5	28	x	48	162
1200	1220	1485	48	1390	130	1262	12,5	16	30	1330	5	32	x	48	243
1400	1420	1685	52	1590	145	1465	14,2	16	30	1530	5	36	x	56	323
1600	1620	1930	58	1820	160	1668	16	16	35	1750	5	40	x	56	479
1800	1820	2130	62	2020	170	1870	17,5	16	35	1950	5	44	x	62	599
2000	2020	2345	66	2230	180	2072	20	16	40	2150	5	48	x	62	719

KAYNAK BOYUNLU FLANŞ PN40 DIN 2635



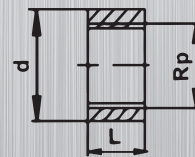
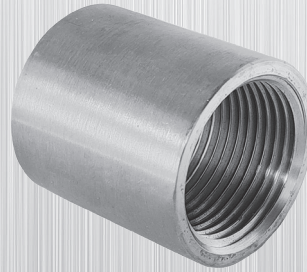
NW	d ₁	D	b	k	h ₁	d ₃	s	r	h ₂	d ₄	f	Delik Sayısı Holes No	x	d ₁	kg
10	14	90	16	60	35	25	1,8	4	6	40	2	4	x	14	0,661
10	17,2	90	16	60	35	28	1,8	4	6	40	2	4	x	14	0,661
15	20	95	16	65	38	30	2	4	6	45	2	4	x	14	0,745
15	21,3	95	16	65	38	32	2	4	6	45	2	4	x	14	0,745
20	25	105	18	75	40	38	2,3	4	6	58	2	4	x	14	1,06
20	26,9	105	18	75	40	40	2,3	4	6	58	2	4	x	14	1,06
25	30	115	18	85	40	42	2,6	4	6	68	2	4	x	14	1,29
25	33,7	115	18	85	40	46	2,6	4	6	68	2	4	x	14	1,29
32	38	140	18	100	42	52	2,6	6	6	78	2	4	x	16	1,88
32	42,4	140	18	100	42	58	2,6	6	6	78	2	4	x	16	1,88
40	44,5	150	18	110	45	60	2,6	6	7	88	3	4	x	18	2,33
40	48,3	150	18	110	45	64	2,6	6	7	88	3	4	x	18	2,33
50	57	165	20	125	48	72	2,9	6	8	102	3	4	x	18	2,82
50	60,3	165	20	125	48	75	2,9	6	8	102	3	4	x	18	2,82
65	76,1	185	18	145	45	90	2,9	6	10	122	3	4	x	18	3,00
80	88,9	200	20	160	50	105	3,2	8	10	138	3	8	x	18	4,75
100	114,3	235	24	190	65	128	3,6	8	12	162	3	8	x	22	6,52
100	114,3	235	24	190	65	134	3,6	8	12	162	3	8	x	22	6,52
125	133	270	26	220	68	155	4	8	12	188	3	8	x	26	9,07
125	139,7	270	26	220	68	162	4	8	12	188	3	8	x	26	9,07
150	159	300	28	250	75	182	4,5	10	12	218	33	8	x	26	11,8
150	168,3	300	28	250	75	192	4,5	10	12	218	3	8	x	26	11,8
175	193,7	350	32	295	82	218	5,6	10	15	260	3	12	x	30	18,2
200	219,1	375	34	320	88	244	6,3	10	16	285	3	12	x	30	21,5
250	267	450	38	385	105	298	7,1	12	18	345	3	12	x	33	34,9
250	273	450	38	385	115	306	7,1	12	18	345	3	12	x	33	34,9
300	323,9	515	42	450	115	362	8	12	18	410	4	16	x	33	49,7
350	355,8	580	46	510	125	408	8,8	12	20	465	4	16	x	36	68,1
350	368	580	46	510	125	408	8,8	12	20	465	4	16	x	36	68,1
400	406,4	660	50	585	135	462	11	12	20	535	4	16	x	39	96,5
400	419	660	50	585	135	462	11	12	20	535	4	16	x	39	96,5
500	506	755	52	670	140	562	14,2	12	20	615	4	20	x	42	117

YARIM MANŞON DIN 2999



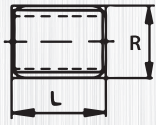
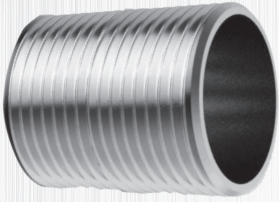
DIŞ ÇAP RP-DIN 2999	d	L mm
1/8"	14	7,5
1/4"	17,5	11
3/8"	21,3	11,5
1/2"	26,4	15
3/4"	31,8	16,5
1"	39,5	19
1 1/4"	48,3	21,5
1 1/2"	54,5	21,5
2"	66,3	26
2 1/2"	82	30
3"	95	33
4"	122	39
5"	150	44
6"	180	44

MANŞON DIN 2986



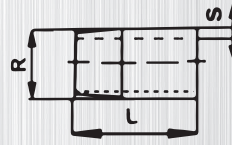
DIŞ ÇAP RP-DIN 2999	d	L mm
1/8"	14	17
1/4"	17,5	25
3/8"	21,3	26
1/2"	26,4	34
3/4"	31,8	36
1"	39,5	43
1 1/4"	48,3	48
1 1/2"	54,5	48
2"	66,3	56
2 1/2"	82	65
3"	95	71
4"	122	83
5"	150	92
6"	180	92

PARALEL DİŞLİ NİPEL DIN 2982



DİŞ ÇAP RP-DIN 2999	L mm
1/8"	16
1/4"	18
3/8"	22
1/2"	25
3/4"	30
1"	5
1 1/4"	38
1 1/2"	38
2"	45
2 1/2"	55
3"	60
4"	70
5"	85
6"	100

TEK TARAFLI NİPEL DIN 2982



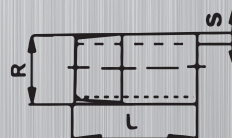
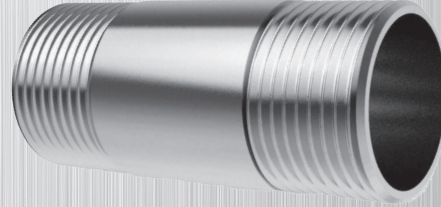
DİŞ ÇAP RP-DIN 2999	L mm	SW
1/8"	2	30
1/4"	2.3	30
3/8"	2.3	30
1/2"	2.6	35
3/4"	2.6	40
1"	3.2	40
1 1/4"	3.2	50
1 1/2"	3.2	50
2"	3.6	50
2 1/2"	3.6	50
3"	4	70
4"	4.5	80
5"	5.0	90
6"	7.1	120

REDÜKSİYON NİPEL DIN 2999



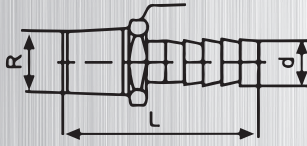
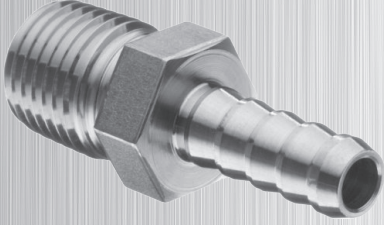
DİŞ ÇAP RP-DIN 2999	d	L mm
1/4" x 1/8"	35	20
3/8" x 1/8"	35	21
3/8" x 1/4"	35	21
1/2" x 1/8"	39	26
1/2" x 1/4"	39	26
1/2" x 3/8"	39	26
3/4" x 1/8"	44	32
3/4" x 1/4"	44	32
3/4" x 3/8"	44	32
3/4" x 1/2"	44	32
1" x 3/8"	50	38
1" x 1/2"	50	38
1" x 3/4"	50	38
1.1/4" x 1/2"	56	46
1.1/4" x 3/4"	56	46
1.1/4" x 1"	56	46
1.1/2" x 3/4"	58	50
1.1/2" x 1"	58	50
1.1/2" x 1.1/4"	58	50
2" x 3/4"	65	65
2" x 1"	65	65
2" x 1.1/4"	65	65
2" x 1.1/2"	65	65
2.1/2" x 2"	74	80
2.1/2" x 1.1/4"	74	80
2.1/2" x 1.1/4"	74	80

ÇİFT TARAFLI NİPEL DIN 2982



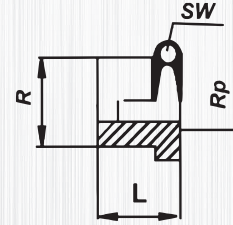
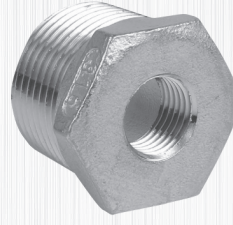
DİŞ ÇAP RP-DIN 2999	L mm
1/8"	40
1/4"	40
3/8"	40
1/2"	60
3/4"	60
1"	60
1.1/4"	80
1.1/2"	80
2"	100
2.1/2"	100
3"	120
4"	120
5"	150

HEX HORTUM UCU



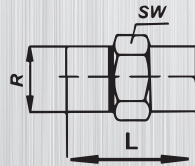
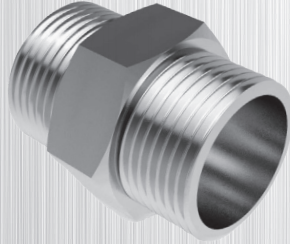
DİŞ ÇAP RP-DIN 2999	L mm	d mm	SW
1/8"	50	7	14
1/4"	50	9	14
3/8"	53	11	19
1/2"	65	14	22
3/4"	70	20	30
1"	75	26	36
1 1/4"	80	33	46
1 1/2"	95	39	50
2"	100	51	60
2 1/2"	110	63	80
3"	120	76	95

HEX REDÜKSİYON (BUSHING) DIN 2990



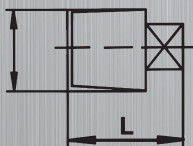
DİŞ ÇAP RP-DIN 2999	L mm	SW
1/4' x 1/8'	18	12
3/4' x 1/4'	26	30
3/4' x 3/8'	26	30
3/4' x 1/2'	26	30
1' x 1/2'	28	38
1' x 3/4'	28	38
1 1/4' x 1/2'	30	48
1 1/4' x 3/4'	30	48
1 1/4' x 1'	30	48
1 1/2' x 1/2'	32	55
1 1/2' x 3/4'	32	55
1 1/2' x 1'	32	55
1 1/2' x 1 1/4'	32	55
2' x 3/4'	37	65
2' x 1'	37	65
2' x 1 1/4'	37	65
2' x 1 1/2'	32	65
2 1/2' x 2'	40	80
3' x 1 1/2'	46	95
3' x 2'	46	95
3' x 2 1/2'	46	95
4' x 2'	51	120
4' x 2 1/2'	51	120
4' x 3'	51	120

HEX NİPEL DIN 2990



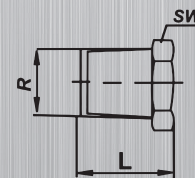
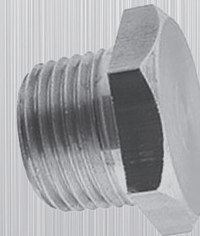
DİŞ ÇAP RP-DIN 2999	L mm	SW
1/8'	22	12
1/4'	28	14
3/8'	35	19
1/2'	42	24
3/4'	47	32
1'	52	38
1 1/4'	56	46
1 1/2'	59	55
2'	66	65
2 1/2'	72	80
3'	80	95
4'	83	120

KARE ERKEK KÖRTAPA KONİK DİŞLİ



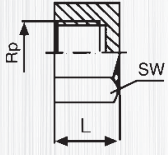
DİŞ ÇAP RP-DIN 2999	SW
1/8'	15
1/4'	19
3/8'	21
1/2'	25
3/4'	28
1'	31
1 1/4'	35
1 1/2'	36
2'	41
2 1/2'	48
3'	53
4'	60

HEX ERKEK KÖRTAPA



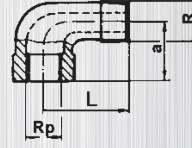
DİŞ ÇAP RP-DIN 2999	L mm	SW
1/8'	16	11
1/4'	19	14
3/8'	22	19
1/2'	24	22
3/4'	27	27
1'	30	36
1 1/4'	37	46
1 1/2'	38	52
2'	41	66
2 1/2'	51	80
3'	54	95
4'	57	120

HEX DIŞİ KÖRTAPA



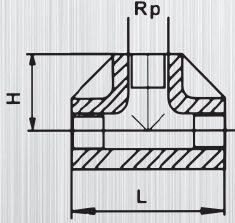
DIŞ ÇAP RP-DIN 2999	L mm	SW
1/8"	15	7.5
1/4"	17	11
3/8"	18	11.5
1/2"	21	15
3/4"	21	16.5
1"	26	19
1 1/4"	29	21.5
1 1/2"	29	21.5
2"	33	26
2 1/2"	35	30
3"	46	33
4"	46	39

KUYRUKLU DİRSEK İÇ VE DIŞ DIŞLI 90°



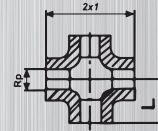
DIŞ ÇAP RP-DIN 2999	L mm	SW
1/8"	20	26
1/4"	21	28
3/8"	25.5	32
1/2"	27.5	37
3/4"	31	43
1"	37.5	52
1 1/4"	44	60
1 1/2"	50	65
2"	56	74
2 1/3"	67	90
3"	81	116

EŞİT TEE DIN 2987



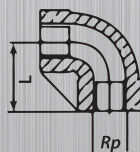
DIŞ ÇAP RP-DIN 2999	L mm	SW
1/8"	38	20
1/4"	42	21
3/8"	50	25.5
1/2"	56	27.5
3/4"	67.5	31
1"	76	37.5
1 1/4"	90	44
1 1/2"	100	50
2"	116	56
2 1/2"	150	67
3"	160	81

ISTAVROZ DIN 2987



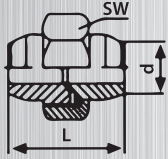
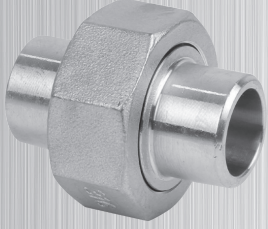
DIŞ ÇAP RP-DIN 2999	L mm
3/8"	24
1/2"	28
3/4"	33
1"	38
1 1/4"	45
1 1/2"	49
2"	57
2 1/2"	66
3"	78

DIŞLI DİRSEK 90° DIN 2987



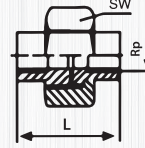
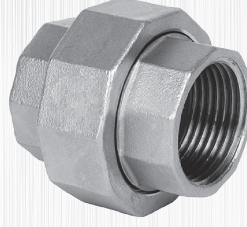
DIŞ ÇAP RP-DIN 2999	SW
1/8"	20
1/4"	21
3/8"	25
1/2"	28
3/4"	33
1"	38
1 1/4"	45
1 1/2"	50
2"	58
2 1/2"	75
3"	85
4"	96

KAYNAKLI RAKOR



DİŞ ÇAP RP-DIN 2999	L mm	SW
102,	37	30
13.2	37	30
17.2	40	36
21.3	46	41
26.9	48	46
33.7	52	50
42.4	60	65
48.3	71	75
60.3	76	90
76.1	90	110
88.9	90	120
114.3	115	155

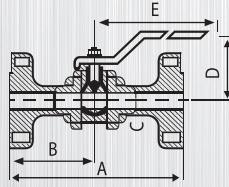
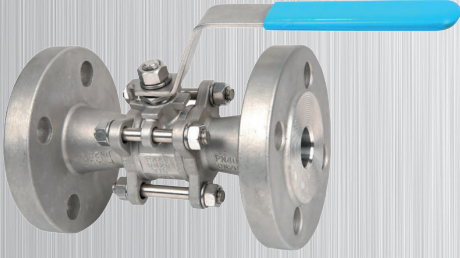
DİŞLİ RAKOR



DİŞ ÇAP RP-DIN 2999	L mm	SW
1/8"	37	30
1/4"	37	30
3/8"	40	36
1/2"	46	41
3/4"	48	46
1"	52	50
1.1/4	60	65
1.1/2	71	75
2"	76	90
2.2/2	90	110
3"	90	120
4"	115	155

KÜRESEL VANA PN 16

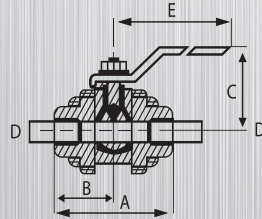
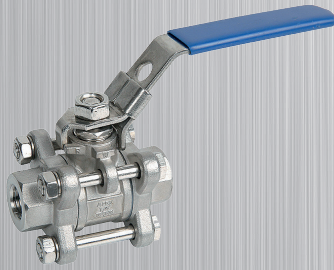
DIN 2633'e göre tam geçişli 3parçalı flanşlı



Ebatlar F	C	A	B	D	E
3/8	12,6	135,0	67,5	55	97,5
1/2	16,0	141,0	70,5	64	125,5
3/4	20,0	161,0	80,5	67	125,5
1"	25,0	171,0	85,5	83	143,5
1 1/4"	32,0	192,0	96,0	89	143,5
1 1/2"	38,1	207,0	103,5	100	203,5
2"	50,8	230,6	115,3	108	203,5
2 1/2"	65,0	263,0	131,5	150	251,5
3"	80,0	292,0	146,0	161	251,5
4"	100,0	330,0	165,0	180	291,5

KÜRESEL VANA 3 PARÇALI

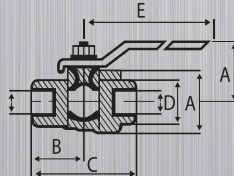
PIN 25/55 DIN 2999 Dişli Tam Geçişli



Ebatlar Rp	A	B	C	D	E
1/42'	65,0	32,5	11,2	55	97,5
3/8'	65,0	32,5	12,6	5	97,5
1/2'	71,0	35,5	16,0	64	125,5
3/4'	85,0	42,5	20,0	67	125,5
1'	95,0	7,5	25,0	83	143,5
1 1/4'	112,0	58,0	32,0	89	143,5
1 1/2'	123,0	61,5	38,1	100	203,5
2'	140,6	70,3	50,8	108	203,5
2 1/2'	173,0	86,5	65,0	150	251,5
3'	192,0	96,0	80,0	161	251,5
4'	226,0	113,0	100,0	180	291,5

KÜRESEL VANA 2 PARÇALI

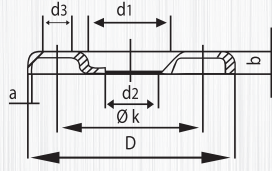
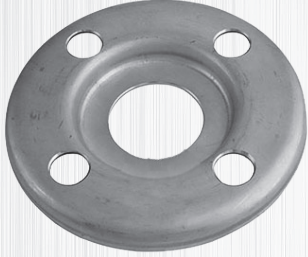
PIN 25/55 DIN 2999 Dişli Tam Geçişli



Ebatlar Rp	A	B	C	D	E
1/4'	11,2	27	54	55	97,5
3/8'	12,6	27	54	55	97,5
1/2'	16,0	34	64	64	125,5
3/4'	20,0	38	76	67	125,5
1"	25,0	44	88	83	143,5
1 1/4'	32,0	49	98	89	143,5
1 1/2'	38,1	60	120	100	203,5
2"	50,8	67	134	108	203,5

BASKILI FLANŞ PN10

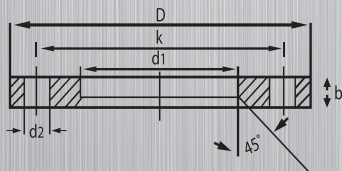
DIN 2642



DIN	ISO	DIN		k	a	b	d ₁	d ₂	d ₂	d ₃	Delik Sayısı Holes No
15	21,3	20	95	65	3	11,6	38	24	23	13,5	4
20	26,9	26	105	75	3	14,0	48	30	28	13,5	4
25	33,7	30	115	85	3	16,5	53	37	33	13,5	4
32	42,4	38	140	100	3	17,0	68	46	42	17,5	4
40	48,3	44,5	150	110	4	17,5	77	54	50	17,5	4
50	60,3	54/57	165	125	4	18,5	91	65	62	17,5	4
65	76,1	69	185	145	4	21,0	108	81	74	17,5	4
80	88,9	84	200	160	5	22,0	123	94	89	17,5	8
100	114,3	104/108	220	180	6	23,0	141	119	113	17,5	8
125	139,7	128/133	250	210	7	25,0	168	148	138	17,5	8
150	168,3	154/159	285	240	8	27,0	192	178	164	21,5	8
200	219,1	-	340	295	8	31,0	245	225	-	21,5	8
250	273,0	-	395	380	8	34,0	295	279	-	21,5	12
300	323,8	-	445	400	8	38,0	345	329	-	21,5	12

SERBEST FLANŞ PN10

DIN 2642



NW	ISO	d ₁	b	D	k	Delik Sayısı Holes No	x	d ₂
10	14	16	14	90	60	4	*	14
	17,2	19	14			4	*	14
15	20	22	14	95	65	4	*	14
	21,3	24	14			4	*	14
20	25	28	14	105	75	4	*	14
	26,9	30	14			4	*	14
25	30	33	16	115	85	4	*	14
	26,9	30	14			4	*	14
32	38	42	16	140	100	4	*	18
	42,4	46	46			4	*	18
40	44,5	50	16	150	110	4	*	18
	48,3	54	16			4	*	18
50	57	62	16	165	125	4	*	18
	60,3	65	16			4	*	18
65	76,1	81	16	185	145	4	*	18
80	88,9	94	18	200	160	8	*	18
100	108	113	18	220	180	8	*	18
	114,3	119	18			8	*	18
125	133	138	18	250	210	8	*	18
	139,7	145	18			8	*	18
200	219,1	225	20	340	295	8	*	18
250	267	273	22	395	350	12	*	22
	273	279	22			12	*	22
300	323,9	329	26	445	400	12	*	22
350	355,6	362	28	505	460	16	*	22
400	406,4	413	32	565	515	16	*	26
	419,0	426	32			16	*	26
500	508	517	38	670	620	20	*	26
600	610	618	44	780	725	20	*	30
700	711	721	50	895	840	24	*	30
800	813	824	56	1015	950	24	*	33

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