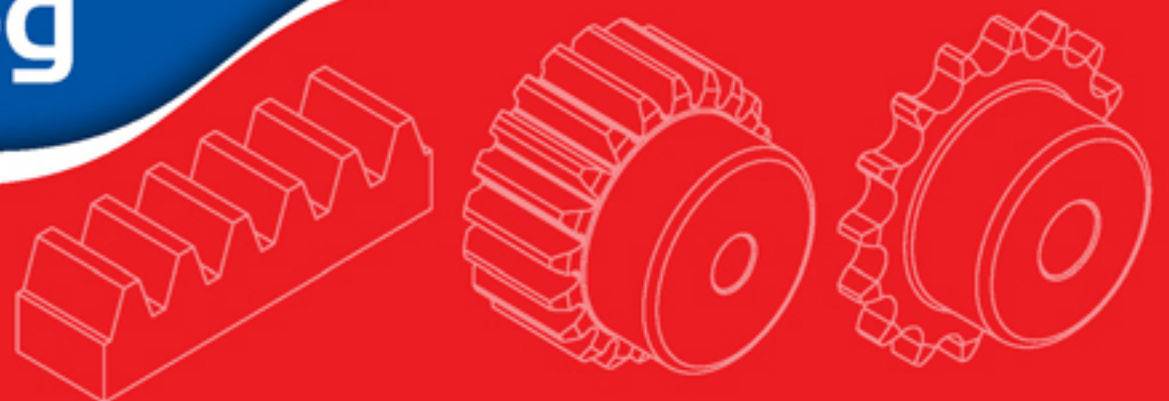
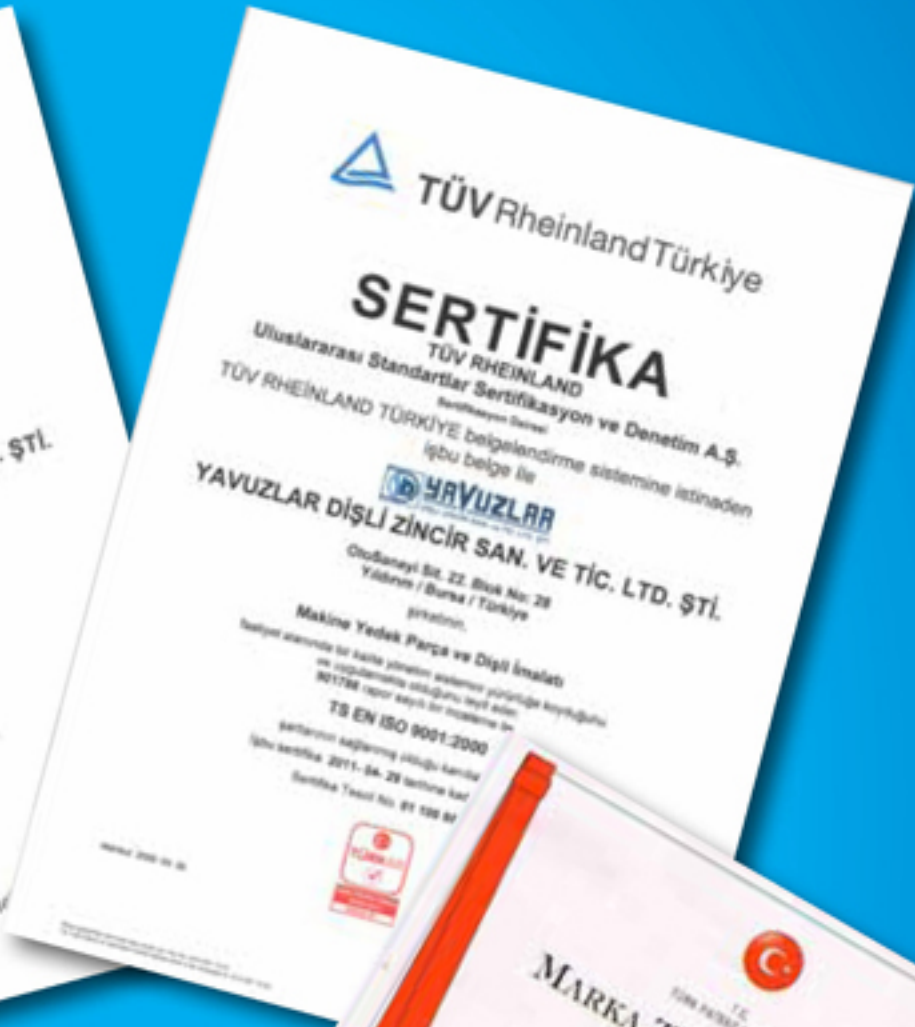


# Genel Katalog

Rev. No: 00  
B.T.: Eylül 2009







Hazırlayan  
Teknik Öğretmen  
Serdar SAĞLAM

Yavuzlar Dişli 1996 yılında kurulmasına karşın, bunun öncesinden günümüze kadar, firma kurucuları dişli ve makinecilik konusunda 25 yılı aşan tecrübe ve bilgi birikimine sahiptirler. 2008 yılında imalat ve kalite çalışmalarını hızlandıran firmamız YDS tescilli markasıyla, markalaşma çalışmalarına başlamış, yıl içersinde de çift akreditasyonlu ISO 9001:2000 kalite yönetim sistemi belgesini almaya hak kazanmıştır.

YDS günümüz şartlarında çok zor olsa da Türk İmalat Sanayisini ve Milli unsurları düşünerek, konusunda ithalata karşı sonuna kadar direnmiş ve direnmeye de devam etmektedir. YDS bu şartlar karşısında yenilmemiş, modern üretim araçlarını makine parkına katarak kapasitesini arttırılmış, %100 Türk Malı ürünler imal ederek yurtiçi kullanıcılara sunulmuş, yoğun dış pazar rekabetine rağmen imalatımız olan dişlileri ihraç etme başarısı gerçekleştirilmiştir. Ayrıca YDS ülkemizde kendi kulvarında bu işin önderliğini sürdürmektedir.

Standart imalatı yakalamak, müşterilerimizin ürünlerimize daha kolay erişebilmeleri ve kullanabilmeleri için katalogumuzu yenilemenin şart olduğuna inandık. Bu amaçla, elinizdeki katalogla sizlere ürünlerimizle ilgili faydalı bilgiler verebilmeyi ve daha detaylı tanıtabilmeyi düşünerek Türk Makinecilik sektörüne katkı sağlamayı amaçladık.

Geniş kapsamlı bu katalog çalışması ile ilgili yapıcı eleştiri ve önerilerinizi her zaman bekliyoruz. Zira bu çalışma tamamen YDS'ye has bir oluşumdur. Katalogumuz hazırlanırken tamamen kendi imalatımızı yansıtmaya çalıştık ve hiçbir şekilde kopyalanmış bir katalog hazırlamadık. Katalogumuz hazırlanırken bir takım hatalar olmuş olabilir. Tespit ettiğiniz hatalar varsa ve bunları bize bildirirseniz seviniriz.

İmalatçı olan firmamız alanında uzman personeliyle birlikte sizin için en uygun ürünü, en uygun fiyata ve en kısa sürede imal edip sizin kullanımınıza sunacaktır.

YDS her zaman kendisini yenileyen, araştıran, geliştiren, Ar-Ge çalışmalarına inanan ve önem veren bir yapıda olmuştur. YDS sadece hedefler belirlemenin bir başarı olmadığını, asıl başarının bu hedeflerin yakalanması olduğunun bilincinde ve inancındadır.

### Değerli Müşterilerimiz;

Firmamızın sürekli güncellenen web sayfasını takip etmenizin çok faydalı olacağı inancındayız. İhtiyaç duyduğunuz ürünlerle ilgili çok yararlı bilgiler, ürünlere ait fiyat listeleri ve zaman zaman fırsat ürünleri ile ilgili yayınlar web sayfamızda bilgilerinize sunulacaktır.

Karşılıklı olarak verimli bir çalışma ortamı yaratabilmek düşüncesi ile işlerinizde başarılar diliyor, her zaman ihtiyaç duyduğumuz öneri ve yol gösterici tenkitlerinizi bekliyoruz.

**YAVUZLAR DIŞLI ZİNCİR SAN. VE TİC. LTD. ŞTİ.** Üç girişimcinin güçlerini birleştirerek, Bursa makine yan sanayindeki bir boşluğu doldurmak amacı ile, 1996 yılında “Önce Hizmet Ve Kalite” anlayışı ile kurulmuştur.

YAVUZLAR DIŞLI, başlangıçta makine imalatçıların çokça kullandığı, ancak şehir dışından temin ettikleri ya da hiç ekonomik olmayan şartlarda kendilerinin imal ettiği, zincir dişlileri standart ve amaçlara uygun biçimlerde üreterek imalata başlamıştır.

Kalite hedefli imalatı ile kulvarında kendini kabul ettiren YAVUZLAR DIŞLI, zamanla mevcut makine yedek parça imalatını çeşitlendirmiş, buna ilave olarak da kremayer ve diğer dişlileri de imalat programına almıştır. Ürün kalitesinin artırılması, imalat kapasitesinin yükseltilmesi ve düşük maliyetli ürün hedefleri teknolojik yatırımları da beraberinde getirmiştir. Bu doğrultuda üç boyutlu imalat tasarım programlarını, bilgisayar destekli CNC tezgahları, universal ve özel amaçlı makineleri makine parkına katmıştır.

Hizmet ve Kaliteye yönelik çalışmaların artması ve yerleşmesi sonucu 2008 yılında TÜRKAK ve DAR akreditasyonlu ISO 9001:2000 kalite yönetim sistemi belgesini almaya hak kazanmıştır. Yine 2008 yılında markalaşma çalışmalarımız hız kazanmış ve YDS markası ürünlerimizde kullanacağımız Tescilli Markamız haline gelmiştir.

YAVUZLAR DIŞLI günümüzde makine, demir-çelik, mermer, taşıma sistemleri ve tekstil dallarına hizmet sunmakta, her türlü özel siparişe de cevap verebilmektedir. YDS standart ürünlerin yanında AR-GE çalışmalarını da devam ederek, müşterilerine daha faydalı, kullanım kolaylığı sağlayacak ürünlerin araştırmasını sürdürmektedir. Firmamız AR-GE çalışmaları sonucunda oluşan buluşları için, tescil işlemlerini de yaptırmaktadır.

Firmamız hem kendini hem de imalatını yapmış olduğu teknolojik ürünleri tanıtmak amacıyla yaklaşık 2000 yılından buyana yurtiçi ve yurtdışı fuar katılımları gerçekleştirmekte ve ürünlerini ülkemizde ve ülke dışında tanıtmaya çalışmaktadır. Firmamız son yıllarda dolaylı ve direkt olarak ihracata başlamış, ihracat oranlarını da günden güne artırarak devam ettirmektedir.

YDS, yıllık 100.000 adet dişli 15.000 metre kremayer dişli imalat kapasitesine sahiptir. Final kontrolleri yapılmış, kullanıma hazır standart zincir dişli, kremayer dişli ve pinyon dişli çeşitlerimiz adetli olarak müşterilerimizin hemen tedariki için stoklarımızda bulundurulmaktadır.

YDS günümüzde 1200 m<sup>2</sup> bir alanda, 40'a yakın CNC, universal ve özel makineden oluşan makine parkı ve 30 civarında alanlarında uzman personeli ile orta ölçekli sanayicilerin yoğun olarak bulunduğu Otosansit bölgesinde faaliyetlerine devam etmektedir.



## VİZYONUMUZ

YAVUZLAR DİŞLİ Ailesi Olarak Vizyonumuz;

Öncelikle yurtiçi ve yurtdışı pazarında sektörü yönlendirebilecek konuma ulaşmak, kaliteli ürünleri, zamanında teslimatı, müşteri memnuniyetini kendine ilke edinmiş, personeli ile kendini sürekli geliştirmeye odaklanmış ve pazarda lider firma haline gelerek, müşterilerin isteklerini fazlasıyla karşılayabilen örnek ve öncü kuruluş olmaktır.

## MİSYONUMUZ

YAVUZLAR DİŞLİ Ailesi Olarak Misyonumuz;

Vizyonumuz doğrultusunda her türlü ticari, ahlaki, hukuki kurallara saygılı ve bu kuralları harfiyen yerine getiren; müşterilerine, çalışanlarına ve ilişki içerisinde bulunduğu tüm kesimlere katkılarını sürekli olarak geliştiren dinamik bir organizasyon olmak,

Toplam Kalite Yönetimi felsefesini ve sürekli gelişim anlayışını ilke edinerek mükemmele yolculukta devamlı mesafe kaydetmek,

Kaliteyi her zaman garanti altına almak ve her aşamada sürekliliğini sağlayarak rekabet gücü yüksek, aranan ürünler sunmak,

Taahhütlerimizi zamanında eksiksiz olarak teslim etmek, üretim sırasında israfı ortadan kaldırarak, yapılan işleri bir defada eksiksiz olarak; en kısa zaman, en düşük maliyet, en iyi kalite anlayışı ile yapmak,

Personelin eğitimini ve motivasyonunu yüksek tutarak, ekip ruhunu ve işbirliğini geliştirmek, kaliteyi tüm faaliyetlere yaymak ve çevreye saygılı olmaktır.

## DEĞERLERİMİZ

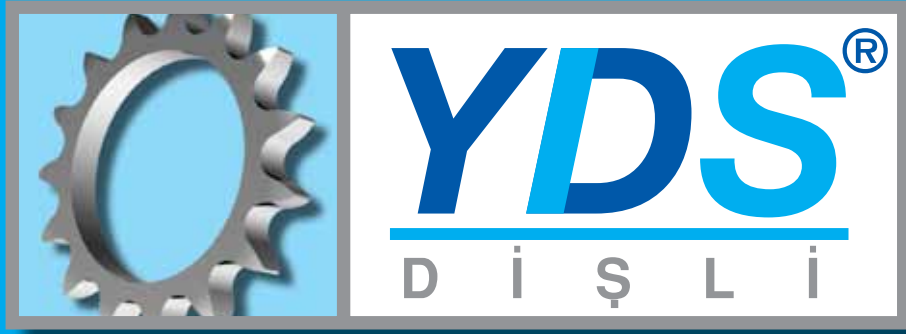
Müşterilerimiz bizim velinimetimizdir. Çalışanlarımız kurumumuzun temel taşlarıdır. Kaliteli ürün ve hizmetler tüm müşterilerimizin hakkıdır. Üstün iş ahlakı, adil ve dürüst davranış şekli ile örnek kuruluş olmaya özen göstermek, verimliliği, etkinliği, üretkenliği ve kaliteyi en ön planda tutmak, tüm iletişim araçlarının sonuna kadar kullanarak şeffaf modern ve dinamik bir yapıda faaliyetlerimizi sürdürmek. Her çalışanımızı takımımızın aktif bir parçası olarak görmek.

## KALİTE POLİTİKAMIZ

- Yavuzlar Dişli Zincir San. ve Tic. Ltd. Şti.'nin Kalite Politikası şöyledir;
- Kalite yönetim sistemine uygun olarak sürekli gözden geçirmelerle iyileştirmeyi, geliştirmeyi sağlamak ve 'ilk defada doğru üretim' ilkesiyle hareket etmek,
- Müşterilerimizin isteklerini en iyi şekilde karşılamak,
- Teknolojideki yenilikleri yakalayıp, etkin ekip çalışması ile üretim verimliliğimizi artırarak ekonomik, kaliteli dişliler ve makine yedek parça üretmek,
- Çalışanlarımızın eğitimine ve her düzeyde açık iletişime önem vermek,
- Yeni ürün çeşitlerimizle birlikte müşteri sayımızı artırmak ve onların taleplerine cevap vermek,
- Topluma, doğal çevreye ve insanlığa yararlı olmaya çalışmaktır.

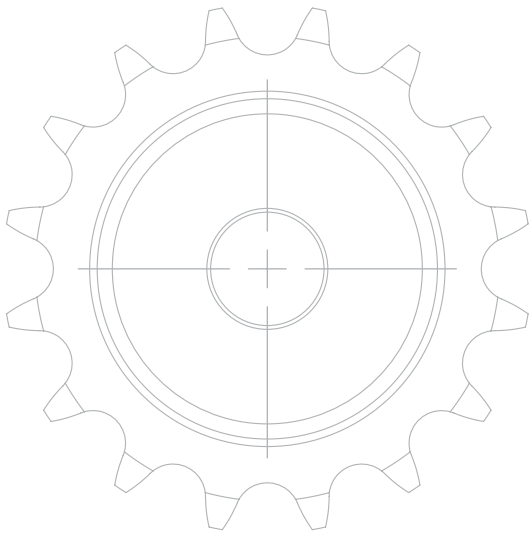
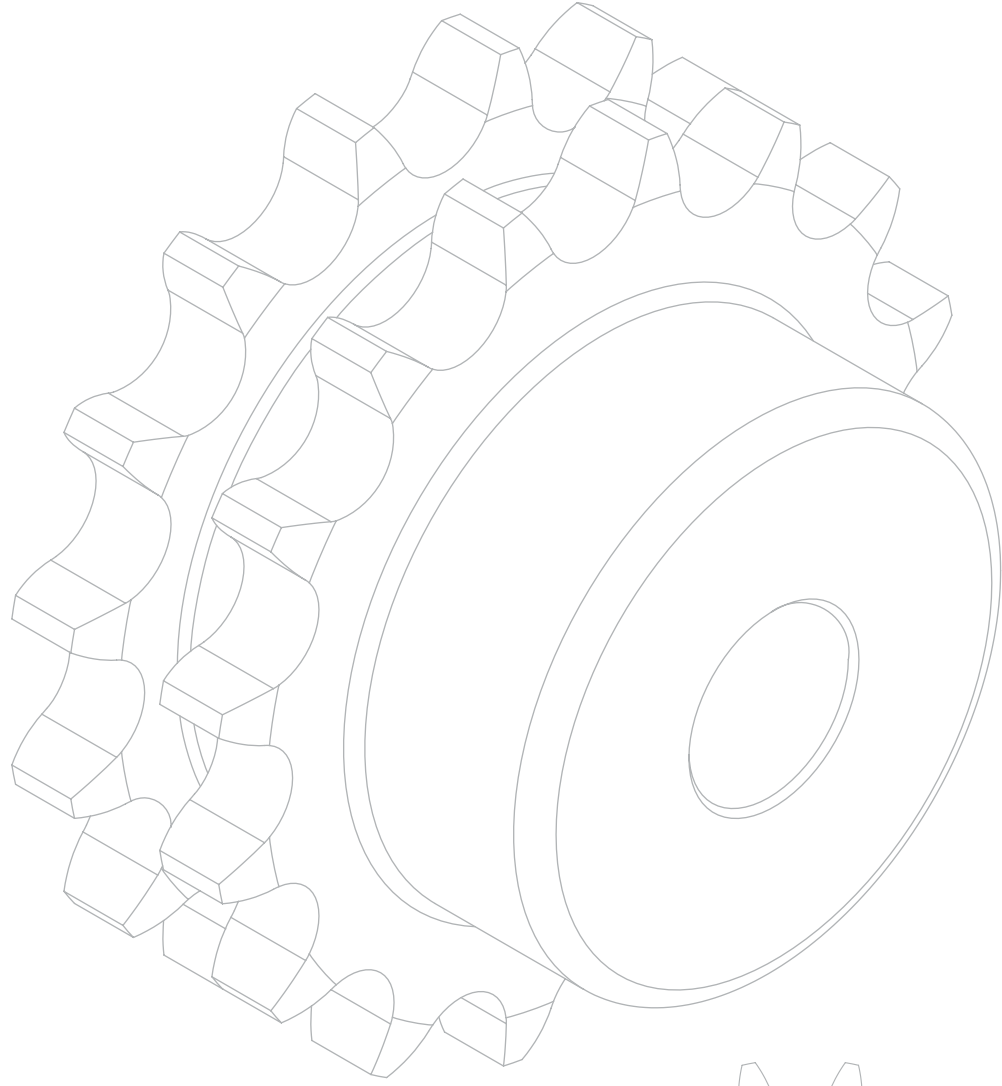
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# Zincir Dişli



Zincir Dişli Grubu

**ZİNCİR DİŞLİ HESAPLARI (DIN8187-ISO/R606)**

<b>t</b>	: Adım
<b>Z</b>	: Diş Sayısı
<b>da</b>	: Diş Üstü Çapı
<b>do</b>	: Bölüm Dairesi Çapı
<b>df</b>	: Diş Dibi Çapı
<b>ds</b>	: Sürtünme Çapı
<b>D</b>	: Makara Çapı
<b>dgmax</b>	: Maksimum Göbek Çapı (Ara çap)
<b>n</b>	: Bölüm Dairesi İçin 'n' Değeri (Tablodan)
<b>q</b>	: Diş Dibi Kontrolü İçin 'q' Değeri (Tablodan)
<b>B1,B2,B3,b1</b>	: Diş Kalınlıkları
<b>W</b>	: Zincir Ara Genişliği
<b>k</b>	: Maksimum Göbek Çapı İçin Kat Sayı
<b>C</b>	: Dişli Yanak Radyus Derinliği
<b>r</b>	: Diş Yanak Radyusu
<b>MRC, MRT</b>	: Pim Üstü Kontrolü (Diş sayısı çift/tek)
<b>MDC, MDT</b>	: Diş Dibi Kontrolü (Diş sayısı çift/tek)
<b>Ce</b>	: Zincir Dişli Eksenler Arası Mesafe
<b>CL</b>	: Bulunan Zincire En Uygun Eksenler Arası Mesafe
<b>Z1, Z2</b>	: Diş Sayısı (Büyük/Küçük)
<b>Lbakla</b>	: Toplam Zincir Bakla Sayısı (Zincir Uzunluğu)

**Bölüm Dairesi Çapı**

$$do = \frac{t}{\sin(180^\circ / Z)} = t \cdot n$$

**Diş Üstü Çapı**

$$da_{max} = do + 1,25t - D$$

$$da_{min} = do + (1 - \frac{1,6}{Z})t - D$$

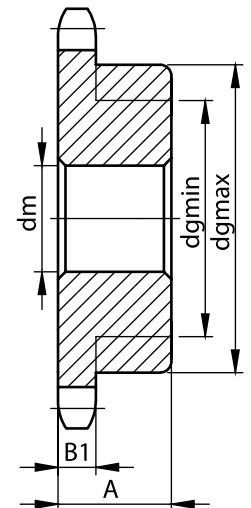
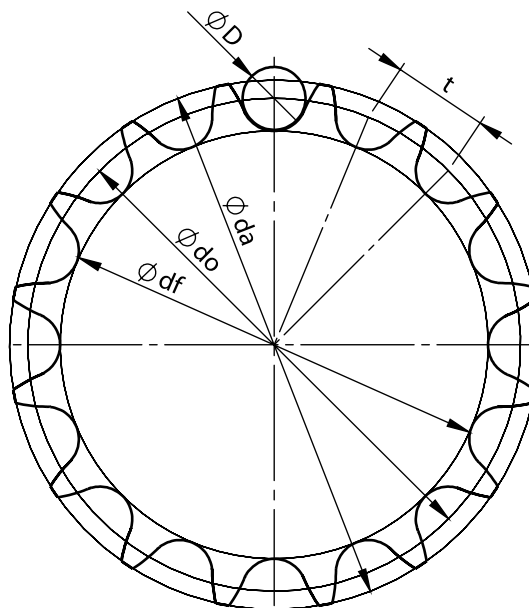
$$da \sim = do + (0,8 \cdot D)$$

**Diş Dibi Çapı**

$$df = do - D$$

**Maksimum Göbek Çapı**

$$dg_{max} \sim = do - k$$



Adım (mm/inç)	k	Adım (mm/inç)	k	Adım (mm/inç)	k
5mm	6	1/2"	15,3	1" 1/4	32,4
6mm	7	5/8"	18,7	1" 1/2	40
8mm	10	3/4"	20,6	1" 3/4	45,1
3/8"	12	1"	26,3	2"	52,3

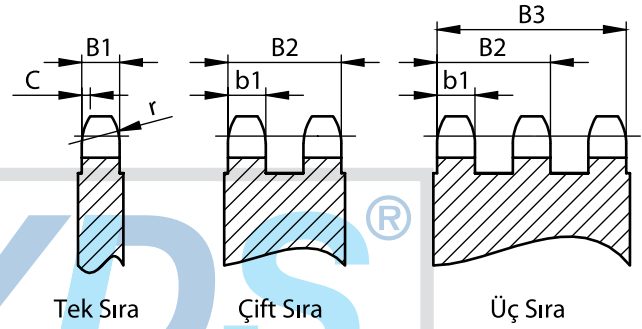
Diş Kalınlığı	t≤12,7	t≥12,7
Tek Sıra Dişlide B1	0,93.W	0,95.W
Çift ve Üç Sıra Dişlide b1	0,91.W	0,93.W
Üç Sıradan Fazla Dişlide b1	0,88.W	0,93.W

**Dişli Yanak Radyus Derinliği**

$$C_{\min} = 0,1t \quad C_{\max} = 0,15t$$

**Diş Yanak Radyusu**

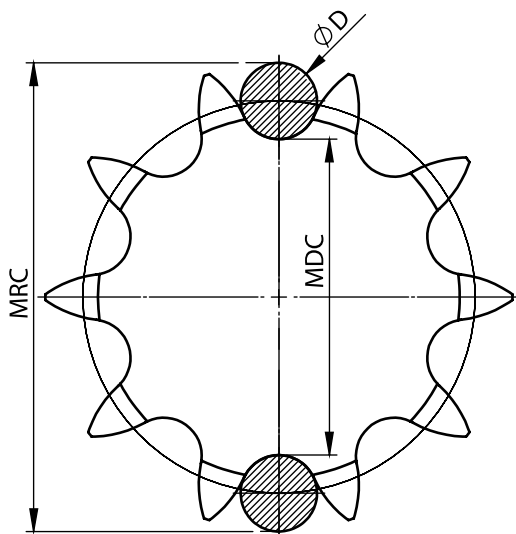
$$r \geq t$$

**Pim Üstü Kontrolü**

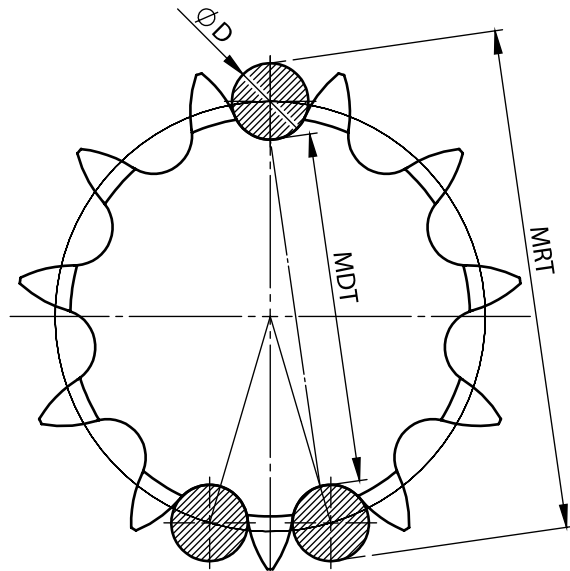
$$MRC = do + D \quad MRT = do \cdot \cos \frac{90^\circ}{Z} + D = do \cdot q + D$$

**Diş Dibi Kontrolü**

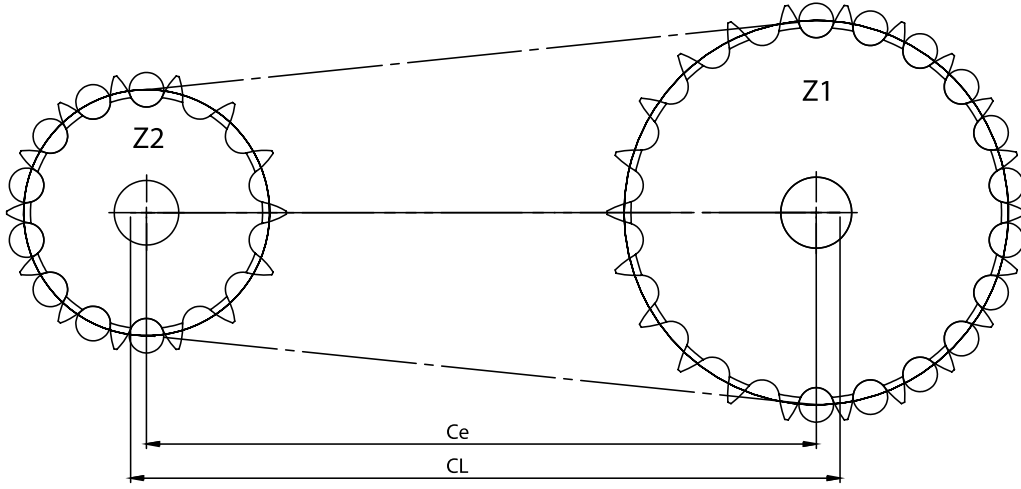
$$MDC = df \quad MDT = df \cdot \cos \frac{90^\circ}{Z} = df \cdot q$$



Z ÇİFT



Z TEK


**Toplam Zincir Bakla Sayısı (Zincir Uzunluğu) Hesaplama**

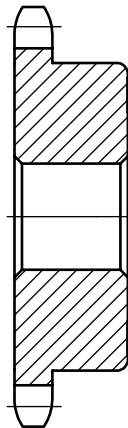
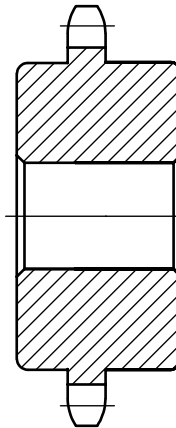
$$L_{bakla} = 2 \cdot \frac{Ce}{t} + \frac{Z_1 + Z_2}{2} + \frac{(Z_1 - Z_2)^2}{4 \cdot \pi^2 \cdot (Ce/t)} \quad (\text{Sonucu yukarı tam sayıya yuvarla, bu değer zincir bakla sayısıdır})$$

Not: Lbakla değeri yukarı tam sayıya yuvarlandıktan sonra adım(t) ile çarpılırsa kullanılacak zincir uzunluğu bulunmuş olur.

$$CL = \frac{L_{bakla} - \frac{Z_1 + Z_2}{2} + \sqrt{\left(L_{bakla} - \frac{Z_1 + Z_2}{2}\right)^2 - 8 \cdot \frac{(Z_1 - Z_2)^2}{4 \cdot \pi^2}}}{4} \cdot t$$

Not: CL verilen değerlere ve bulunan zincir baklasına en uygun eksenler arası mesafeyi verir.  
(CL formülünde Lbakla değeri olarak yukarı yuvarlanmış tam sayıyı kullanınız.)

**GENEL ZİNCİR DİŞLİ TİPLERİ**

**TİP A**

**TİP B**

**TİP C**

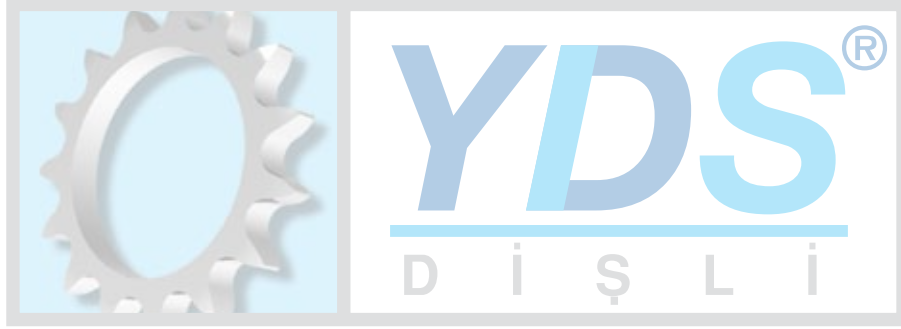


## ZİNCİR DİŞLİ GENEL TOLERANSLAR

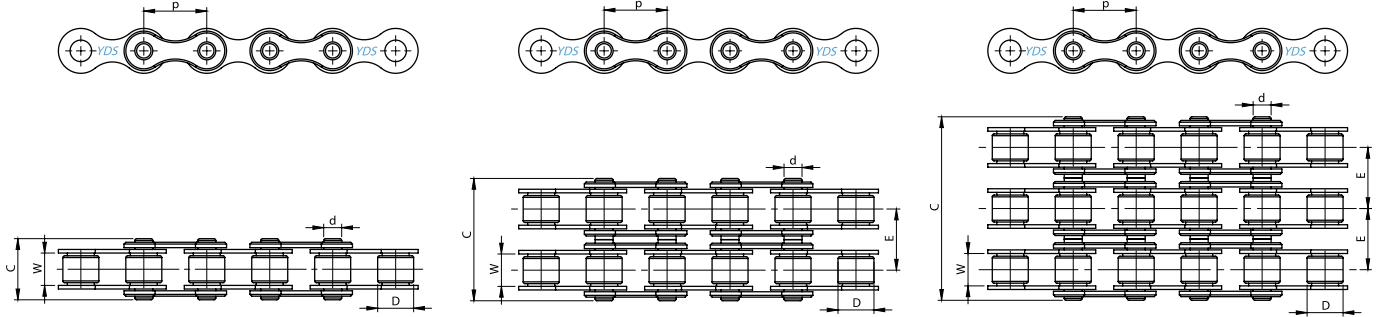
Diş dibi çapı	: h11
Diş üstü çapı	: +/-3mm
Diş kalınlığı	: h14
Delik çapı (dm)	: H8
Göbek çapı (dg)	: +/-3mm
Delik-Diş dibi eksenel kaçıklık	: 0,0008.df+(0,08 yada 0,15) maksimum kaçıklık=0,76mm
Yanal yalpalama	: 0,0009.df+0,08 maksimum yalpalama=1,14mm (Kaynaklı Göbekte)
Toplam kalınlık (A)	: +/-1mm (kaynaklı göbeklerde +/-2mm)

\*Farklılık Gösteren Toleranslar Ürünlerimizin İlgili Kısımlarında Belirtilmiştir.

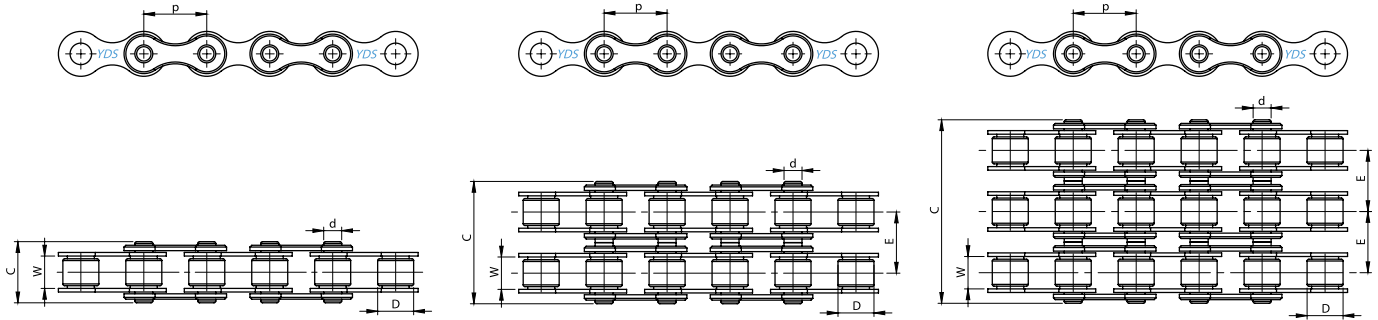
\*Tüm Ürünlerimizin İmalatında TS 1845 ve TS 1980 Tolerans Standartları Kullanılmaktadır.



Z	n	q	Z	n	q	Z	n	q	Z	n	q
6	2.00000	-	55	17.51657	0.99959	104	33.10926	-	153	48.70483	0.99995
7	2.30476	0.97493	56	17.83471	-	105	33.42753	0.99989	154	49.02312	-
8	2.61313	-	57	18.15285	0.99962	106	33.74579	-	155	49.34141	0.99995
9	2.92380	0.98481	58	18.47100	-	107	34.06405	0.99989	156	49.65970	-
10	3.23607	-	59	18.78916	0.99965	108	34.38232	-	157	49.97799	0.99995
11	3.54947	0.98982	60	19.10732	-	109	34.70058	0.99990	158	50.29628	-
12	3.86370	-	61	19.42549	0.99967	110	35.01885	-	159	50.61457	0.99995
13	4.17858	0.99271	62	19.74366	-	111	35.33711	0.99990	160	50.93285	-
14	4.49396	-	63	20.06184	0.99969	112	35.65538	-	161	51.25114	0.99995
15	4.80973	0.99452	64	20.38002	-	113	35.97365	0.99990	162	51.56943	-
16	5.12583	-	65	20.69820	0.99971	114	36.29192	-	163	51.88772	0.99995
17	5.44219	0.99573	66	21.01639	-	115	36.61019	0.99991	164	52.20601	-
18	5.75877	-	67	21.33458	0.99973	116	36.92846	-	165	52.52430	0.99995
19	6.07553	0.99658	68	21.65277	-	117	37.24673	0.99991	166	52.84260	-
20	6.39245	-	69	21.97097	0.99974	118	37.56500	-	167	53.16089	0.99996
21	6.70951	0.99720	70	22.28917	-	119	37.88328	0.99991	168	53.47918	-
22	7.02667	-	71	22.60738	0.99976	120	38.20155	-	169	53.79747	0.99996
23	7.34394	0.99767	72	22.92559	-	121	38.51982	0.99992	170	54.11576	-
24	7.66130	-	73	23.24380	0.99977	122	38.83810	-	171	54.43405	0.99996
25	7.97873	0.99803	74	23.56201	-	123	39.15637	0.99992	172	54.75234	-
26	8.29623	-	75	23.88022	0.99978	124	39.47465	-	173	55.07064	0.99996
27	8.61379	0.99831	76	24.19844	-	125	39.79292	0.99992	174	55.38893	-
28	8.93140	-	77	24.51666	0.99979	126	40.11120	-	175	55.70722	0.99996
29	9.24907	0.99853	78	24.83489	-	127	40.42948	0.99992	176	56.02552	-
30	9.56677	-	79	25.15311	0.99980	128	40.74776	-	177	56.34381	0.99996
31	9.88452	0.99872	80	25.47134	-	129	41.06603	0.99993	178	56.66210	-
32	10.20230	-	81	25.78957	0.99981	130	41.38431	-	179	56.98039	0.99996
33	10.52011	0.99887	82	26.10780	-	131	41.70259	0.99993	180	57.29869	-
34	10.83795	-	83	26.42603	0.99982	132	42.02087	-	181	57.61698	0.99996
35	11.15582	0.99899	84	26.74426	-	133	42.33915	0.99993	182	57.93528	-
36	11.47371	-	85	27.06250	0.99983	134	42.65743	-	183	58.25357	0.99996
37	11.79163	0.99910	86	27.38074	-	135	42.97571	0.99993	184	58.57186	-
38	12.10957	-	87	27.69898	0.99984	136	43.29399	-	185	58.89016	0.99996
39	12.42752	0.99919	88	28.01722	-	137	43.61228	0.99993	186	59.20845	-
40	12.74549	-	89	28.33546	0.99984	138	43.93056	-	187	59.52675	0.99996
41	13.06348	0.99927	90	28.65371	-	139	44.24884	0.99994	188	59.84504	-
42	13.38149	-	91	28.97195	0.99985	140	44.56712	-	189	60.16334	0.99997
43	13.69951	0.99933	92	29.29020	-	141	44.88541	0.99994	190	60.48163	-
44	14.01754	-	93	29.60845	0.99986	142	45.20369	-	191	60.79993	0.99997
45	14.33559	0.99939	94	29.92670	-	143	45.52198	0.99994	192	61.11823	-
46	14.65364	-	95	30.24495	0.99986	144	45.84026	-	193	61.43652	0.99997
47	14.97171	0.99944	96	30.56320	-	145	46.15854	0.99994	194	61.75482	-
48	15.28979	-	97	30.88146	0.99987	146	46.47683	-	195	62.07311	0.99997
49	15.60788	0.99949	98	31.19971	-	147	46.79512	0.99994	196	62.39141	-
50	15.92597	-	99	31.51797	0.99987	148	47.11340	-	197	62.70971	0.99997
51	16.24408	0.99953	100	31.83623	-	149	47.43169	0.99994	198	63.02800	-
52	16.56219	-	101	32.15448	0.99988	150	47.74997	-	199	63.34630	0.99997
53	16.88031	0.99956	102	32.47274	-	151	48.06826	0.99995	200	63.66460	-
54	17.19843	-	103	32.79100	0.99988	152	48.38655	-	201	63.98289	0.99997

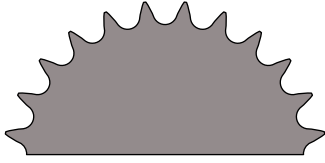


DIN / ISO No	Std. Gösterim	p mm	W mm	D mm	d mm	E mm	Cmax mm
03 B-1	5 x 2,5 mm	5.00	2.50	3.20	1.49	-	7.40
04 B-1	6 x 2,8 mm	6.00	2.80	4.00	1.85	-	8.30
05 B-1	8 x 3 mm	8.00	3.00	5.00	2.31	-	8.60
05 B-2	8 x 3 mm	8.00	3.00	5.00	2.31	5.64	14.30
05 B-3	8 x 3 mm	8.00	3.00	5.00	2.31	5.64	19.90
06 B-1	3/8" x 7/32"	9.525	5.72	6.35	3.28	-	13.50
06 B-2	3/8" x 7/32"	9.525	5.72	6.35	3.28	10.24	23.80
06 B-3	3/8" x 7/32"	9.525	5.72	6.35	3.28	10.24	34.00
081-1	1/2" x 1/8"	12.70	3.48	7.75	3.68	-	11.00
083-1	1/2" x 3/16"	12.70	4.90	7.75	4.09	-	16.30
08 B-1	1/2" x 5/16"	12.70	7.75	8.51	4.45	-	20.50
08 B-2	1/2" x 5/16"	12.70	7.75	8.51	4.45	13.92	31.20
08 B-3	1/2" x 5/16"	12.70	7.75	8.51	4.45	13.92	45.10
10 B-1	5/8" x 3/8"	15.875	9.65	10.16	5.08	-	19.60
10 B-2	5/8" x 3/8"	15.875	9.65	10.16	5.08	16.59	36.20
10 B-3	5/8" x 3/8"	15.875	9.65	10.16	5.08	16.59	52.80
12 B-1	3/4" x 7/16"	19.05	11.68	12.07	5.72	-	22.70
12 B-2	3/4" x 7/16"	19.05	11.68	12.07	5.72	19.46	42.20
12 B-3	3/4" x 7/16"	19.05	11.68	12.07	5.72	19.46	61.70
16 B-1	1" x 17,02 mm	25.40	17.02	15.88	8.28	-	36.10
16 B-2	1" x 17,02 mm	25.40	17.02	15.88	8.28	31.88	68.00
16 B-3	1" x 17,02 mm	25.40	17.02	15.88	8.28	31.88	99.90
20 B-1	1" 1/4 x 3/4"	31.75	19.56	19.05	10.19	-	43.20
20 B-2	1" 1/4 x 3/4"	31.75	19.56	19.05	10.19	36.45	79.00
20 B-3	1" 1/4 x 3/4"	31.75	19.56	19.05	10.19	36.45	116.00
24 B-1	1" 1/2 x 1"	38.10	25.40	25.40	14.63	-	53.40
24 B-2	1" 1/2 x 1"	38.10	25.40	25.40	14.63	48.36	101.70
24 B-3	1" 1/2 x 1"	38.10	25.40	25.40	14.63	48.36	150.10
28 B-1	1" 3/4 x 1" 1/4	44.45	30.99	27.94	15.90	-	65.10
28 B-2	1" 3/4 x 1" 1/4	44.45	30.99	27.94	15.90	59.56	124.60
28 B-3	1" 3/4 x 1" 1/4	44.45	30.99	27.94	15.90	59.56	184.20
32 B-1	2" x 1" 1/4	50.80	30.99	29.21	17.81	-	67.40
32 B-2	2" x 1" 1/4	50.80	30.99	29.21	17.81	58.55	126.00
32 B-3	2" x 1" 1/4	50.80	30.99	29.21	17.81	58.55	184.20

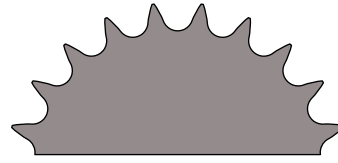


ASA / ANSI No	DIN / ISO No	Std. Gösterim	p mm	W mm	D mm	d mm	E mm	Cmax mm
25-1	04 C-1	1/4" x 1/8"	6.35	3.18	3.30	2.31	-	9.10
35-1	06 C-1	3/8" x 3/16"	9.525	4.77	5.08	3.58	-	13.20
35-2	06 C-2	3/8" x 3/16"	9.525	4.77	5.08	3.58	10.13	22.50
35-3	06 C-3	3/8" x 3/16"	9.525	4.77	5.08	3.58	10.13	32.70
40-1	08 A-1	1/2" x 5/16"	12.70	7.94	7.94	3.96	-	17.80
40-2	08 A-2	1/2" x 5/16"	12.70	7.94	7.94	3.96	14.38	32.30
40-3	08 A-3	1/2" x 5/16"	12.70	7.94	7.94	3.96	14.38	46.70
50-1	10 A-1	5/8" x 3/8"	15.875	9.52	10.16	5.08	-	21.80
50-2	10 A-2	5/8" x 3/8"	15.875	9.52	10.16	5.08	18.11	39.90
50-3	10 A-3	5/8" x 3/8"	15.875	9.52	10.16	5.08	18.11	57.90
60-1	12 A-1	3/4" x 1/2"	19.05	12.70	11.91	5.94	-	26.90
60-2	12 A-2	3/4" x 1/2"	19.05	12.70	11.91	5.94	22.78	49.80
60-3	12 A-3	3/4" x 1/2"	19.05	12.70	11.91	5.94	22.78	75.50
80-1	16 A-1	1" x 5/8"	25.40	15.88	15.88	7.92	-	33.50
80-2	16 A-2	1" x 5/8"	25.40	15.88	15.88	7.92	29.29	63.00
80-3	16 A-3	1" x 5/8"	25.40	15.88	15.88	7.92	29.29	92.00
100-1	20 A-1	1" 1/4 x 3/4"	31.75	19.05	19.05	9.53	-	41.10
100-2	20 A-2	1" 1/4 x 3/4"	31.75	19.05	19.05	9.53	35.76	77.00
100-3	20 A-3	1" 1/4 x 3/4"	31.75	19.05	19.05	9.53	35.76	113.00
120-1	24 A-1	1" 1/2 x 1"	38.10	25.40	22.22	11.10	-	52.00
120-2	24 A-2	1" 1/2 x 1"	38.10	25.40	22.22	11.10	45.44	99.50
120-3	24 A-3	1" 1/2 x 1"	38.10	25.40	22.22	11.10	45.44	144.40
140-1	28 A-1	1" 3/4 x 1"	44.45	25.40	25.40	12.70	-	54.90
140-2	28 A-2	1" 3/4 x 1"	44.45	25.40	25.40	12.70	48.87	104.00
140-3	28 A-3	1" 3/4 x 1"	44.45	25.40	25.40	12.70	48.87	152.40
160-1	32 A-1	2" x 1" 1/4	50.80	31.75	28.58	14.28	-	65.50
160-2	32 A-2	2" x 1" 1/4	50.80	31.75	28.58	14.28	58.55	124.00
160-3	32 A-3	2" x 1" 1/4	50.80	31.75	28.58	14.28	58.55	182.50

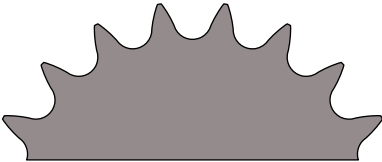




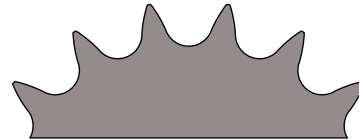
5 mm



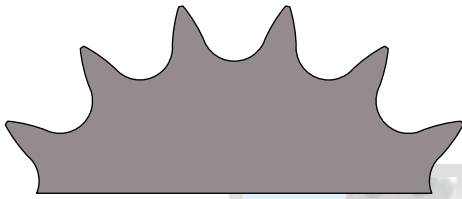
6 mm



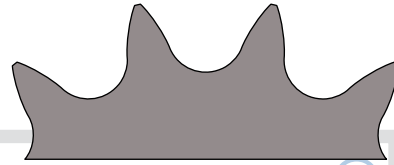
8 mm



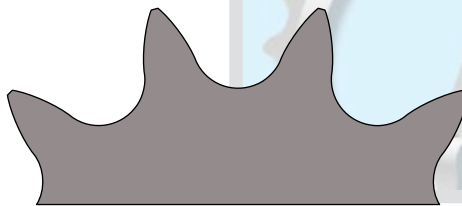
3/8"



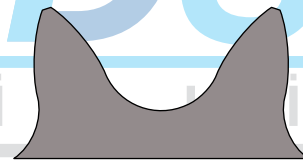
1/2"



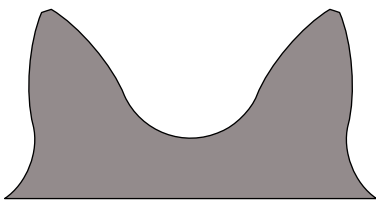
5/8"



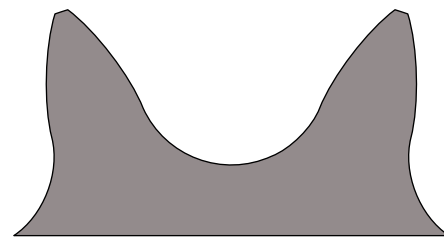
3/4"



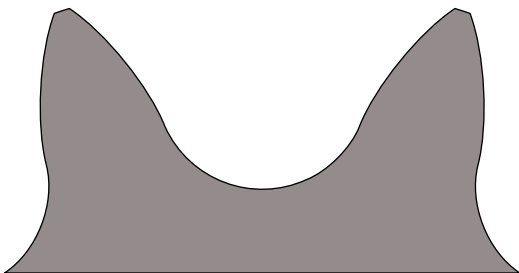
1"



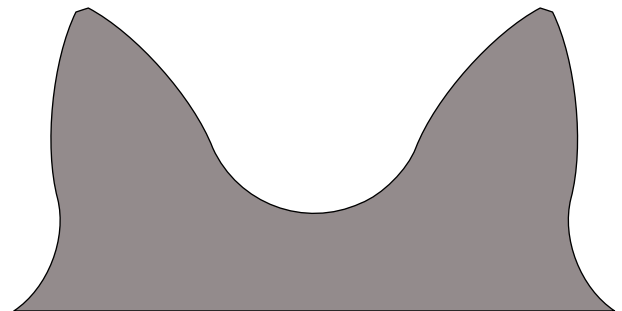
1 1/4"



1 1/2"



1 3/4"



2"

Not: Dişliler Maksimum Dış Çapta Çizilmiştir, %1 Baskı Hatası Olabilir.

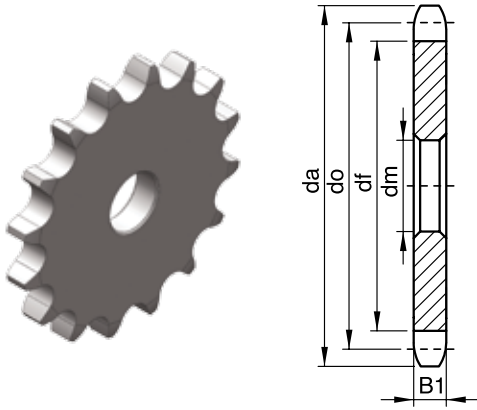
Diş Sayısı Z	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Delik Çapı dm	Göbek Çapı dgmax	Tek Sıra	
						A	Göbek Çapı dgmin
8	15.2	13.07	9.87	-	7	10	6
9	16.8	14.62	11.42	-	9	10	8
10	18.3	16.18	12.98	-	10	10	9
11	19.9	17.75	14.55	-	12	10	11
12	21.5	19.32	16.12	-	13	10	12
13	23.0	20.89	17.69	-	15	10	14
14	24.6	22.47	19.27	-	16	10	15
15	26.2	24.05	20.85	-	18	10	16
16	27.8	25.63	22.43	8	20	13	18
17	29.4	27.21	24.01	8	21	13	18
18	30.9	28.79	25.59	8	23	13	18
19	32.5	30.38	27.18	8	24	13	18
20	34.1	31.96	28.76	8	26	13	18
21	35.7	33.55	30.35	8	28	13	20
22	37.3	35.13	31.93	8	29	13	20
23	38.9	36.72	33.52	8	31	13	20
24	40.5	38.31	35.11	8	32	13	20
25	42.0	39.89	36.69	8	34	13	20
26	43.6	41.48	38.28	8	35	15	25
27	45.2	43.07	39.87	8	37	15	25
28	46.8	44.66	41.46	8	39	15	25
29	48.4	46.25	43.05	8	40	15	25
30	50.0	47.83	44.63	10	42	15	25
31	51.6	49.42	46.22	10	43	15	30
32	53.2	51.01	47.81	10	45	15	30
33	54.8	52.60	49.40	10	47	15	30
34	56.3	54.19	50.99	10	48	15	30
35	57.9	55.78	52.58	10	50	15	30
36	59.5	57.37	54.17	10	51	15	30
37	61.1	58.96	55.76	10	53	15	30
38	62.7	60.55	57.35	10	55	15	30
39	64.3	62.14	58.94	10	56	15	30
40	65.9	63.73	60.53	10	58	15	30
41	67.5	65.32	62.12	10	59	18	40
42	69.1	66.91	63.71	10	61	18	40
43	70.6	68.50	65.30	10	62	18	40
44	72.2	70.09	66.89	10	64	18	40
45	73.8	71.68	68.48	10	66	18	40
46	75.4	73.27	70.07	10	67	18	40
47	77.0	74.86	71.66	12	69	18	40
48	78.6	76.45	73.25	12	70	18	40
49	80.2	78.04	74.84	12	72	18	40
50	81.8	79.63	76.43	12	74	18	40
51	83.4	81.22	78.02	12	75	18	40
52	85.0	82.81	79.61	12	77	18	40
53	86.6	84.40	81.20	12	78	18	40
54	88.1	85.99	82.79	12	80	18	40
55	89.7	87.58	84.38	12	82	18	40
56	91.3	89.17	85.97	12	83	18	40
57	92.9	90.76	87.56	12	85	18	40
58	94.5	92.36	89.16	12	86	20	50
59	96.1	93.95	90.75	12	88	20	50
60	97.7	95.54	92.34	12	90	20	50
62	100.9	98.72	95.52	12	93	20	50
64	104.1	101.90	98.70	12	96	20	50
65	105.6	103.49	100.29	12	97	20	50
66	107.2	105.08	101.88	12	99	20	50
68	110.4	108.26	105.06	12	102	20	50
70	113.6	111.45	108.25	12	105	20	50
72	116.8	114.63	111.43	12	109	20	50
75	121.6	119.40	116.20	12	113	20	50
76	123.1	120.99	117.79	12	115	20	50
78	126.3	124.17	120.97	12	118	25	70
80	129.5	127.36	124.16	12	121	25	70
85	137.5	135.31	132.11	12	129	25	70
90	145.4	143.27	140.07	14	137	25	70
95	153.4	151.22	148.02	14	145	30	75*
100	161.3	159.18	155.98	14	153	30	75*
110	177.2	175.09	171.89	14	169	30	75*
114	183.6	181.46	178.26	14	175	30	80*
120	193.2	191.01	187.81	14	185	30	80*
125	201.1	198.96	195.76	14	193	30	80*

5 x 2,5 mm

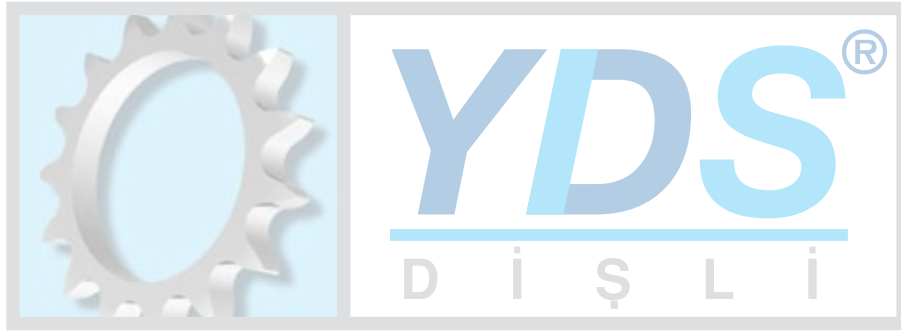
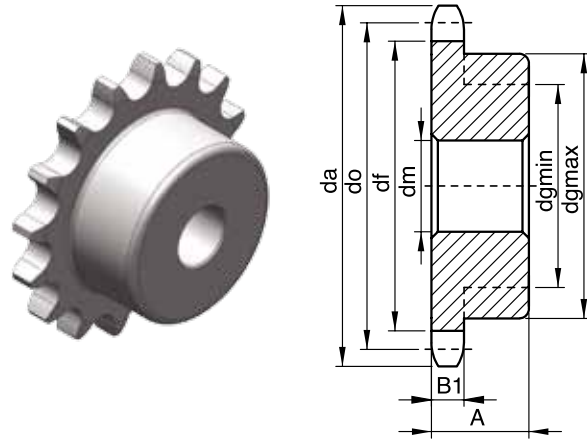
DIN 8187 ISO/R 606

STANDART ZİNCİR DİŞLİ  
03 A / B 1

TİP A



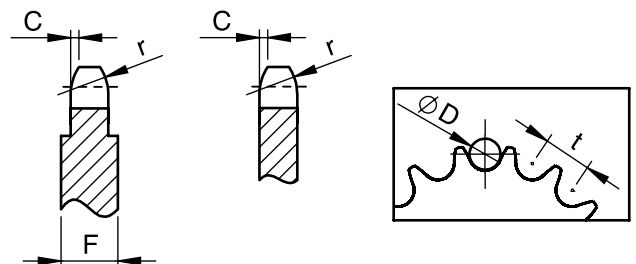
TİP B



DİŞLİ	mm
r	5
C	0.6
B1	2.3
03A Z>50 ise F	4
03B Z>79 ise F	4

ZİNCİR	mm
Adım	5
Zincir Ara Genişliği	2.5
Makara Çapı Ø D	3.2

\* Kaynaklı Göbek



Diş Sayısı Z	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Delik Çapı dm	Göbek Çapı d <sub>gmax</sub>	Tek Sıra	
						A	Göbek Çapı d <sub>gmin</sub>
8	18.0	15.68	11.68	-	9	10	8
9	19.9	17.54	13.54	-	11	10	10
10	21.7	19.42	15.42	-	12	10	11
11	23.6	21.30	17.30	-	14	10	13
12	25.4	23.18	19.18	-	16	10	15
13	27.3	25.07	21.07	-	18	10	17
14	29.2	26.96	22.96	8	20	10	19
15	31.0	28.86	24.86	8	22	10	20
16	33.0	30.75	26.75	8	24	13	20
17	35.0	32.65	28.65	8	26	13	20
18	36.9	34.55	30.55	8	28	13	20
19	38.8	36.45	32.45	8	29	13	20
20	40.7	38.35	34.35	8	31	13	20
21	42.6	40.26	36.26	8	33	13	25
22	44.5	42.16	38.16	8	35	13	25
23	46.4	44.06	40.06	8	37	13	25
24	48.3	45.97	41.97	8	39	13	25
25	50.2	47.87	43.87	8	41	13	25
26	52.1	49.78	45.78	8	43	15	30
27	54.0	51.68	47.68	8	45	15	30
28	55.9	53.59	49.59	8	47	15	30
29	57.8	55.49	51.49	8	48	15	30
30	59.8	57.40	53.40	8	50	15	30
31	61.7	59.31	55.31	8	52	15	30
32	63.6	61.21	57.21	8	54	15	30
33	65.5	63.12	59.12	8	56	15	30
34	67.4	65.03	61.03	8	58	15	30
35	69.3	66.93	62.93	8	60	15	30
36	71.2	68.84	64.84	8	62	15	30
37	73.1	70.75	66.75	8	64	15	30
38	75.0	72.66	68.66	8	66	15	30
39	76.9	74.57	70.57	8	68	15	30
40	78.9	76.47	72.47	8	69	15	30
41	80.8	78.38	74.38	10	71	18	40
42	82.7	80.29	76.29	10	73	18	40
43	84.7	82.20	78.20	10	75	18	40
44	86.6	84.11	80.11	10	77	18	40
45	88.5	86.01	82.01	10	79	18	40
46	90.4	87.92	83.92	10	81	18	40
47	92.3	89.83	85.83	10	83	18	40
48	94.2	91.74	87.74	10	85	18	40
49	96.1	93.65	89.65	10	87	18	40
50	98.0	95.56	91.56	10	89	18	40
51	99.9	97.46	93.46	12	90	18	40
52	101.8	99.37	95.37	12	92	18	40
53	103.7	101.28	97.28	12	94	18	40
54	105.6	103.19	99.19	12	96	18	40
55	107.6	105.10	101.10	12	98	18	40
56	109.5	107.01	103.01	12	100	18	40
57	111.4	108.92	104.92	12	102	18	40
58	113.3	110.83	106.83	12	104	20	50
59	115.2	112.73	108.73	12	106	20	50
60	117.1	114.64	110.64	12	108	20	50
62	120.9	118.46	114.46	14	111	20	50
64	124.7	122.28	118.28	14	115	20	50
65	126.6	124.19	120.19	14	117	20	50
66	128.5	126.10	122.10	14	119	20	50
68	132.4	129.92	125.92	14	123	20	50
70	136.2	133.74	129.74	14	127	20	50
72	140.0	137.55	133.55	16	131	20	50
75	145.7	143.28	139.28	16	136	20	50
76	147.6	145.19	141.19	16	138	20	50
78	151.5	149.01	145.01	16	142	30	75*
80	155.3	152.83	148.83	16	146	30	75*
85	164.8	162.38	158.38	16	155	30	75*
90	174.4	171.92	167.92	16	165	30	75*
95	183.9	181.47	177.47	16	174	30	80*
100	193.5	191.02	187.02	16	184	30	80*
110	212.6	210.11	206.11	16	203	30	85*
114	220.2	217.75	213.75	16	211	30	85*
120	231.7	229.21	225.21	16	222	30	85*
125	241.2	238.76	234.76	16	232	30	85*

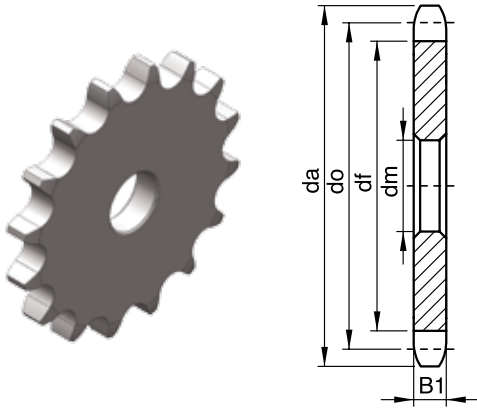


6 x 2,8 mm

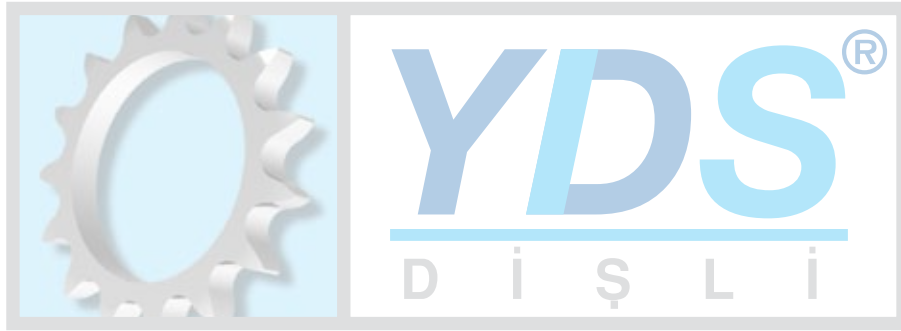
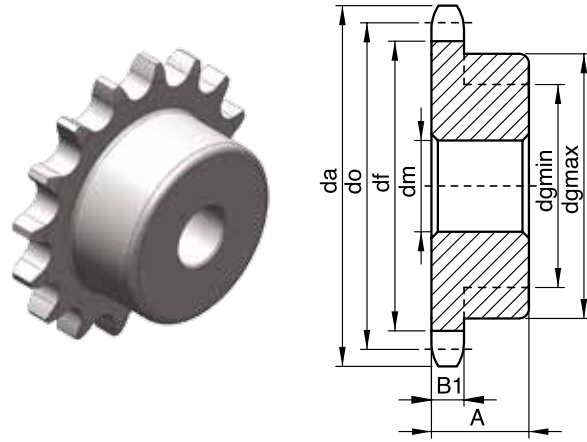
DIN 8187 ISO/R 606

STANDART ZİNCİR DİŞLİ  
04 A / B 1

TİP A



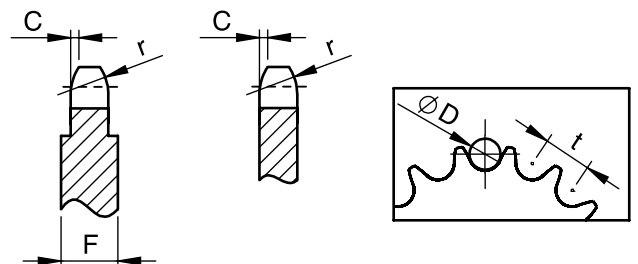
TİP B



DİŞLİ	mm
r	6
C	0.7
B1	2.6
04A Z>50 ise F	4
04B Z>65 ise F	4

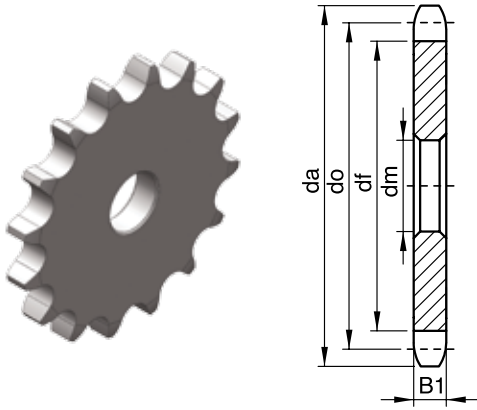
ZİNCİR	mm
Adım	6
Zincir Ara Geniřlięi	2.8
Makara apı Ø D	4

\* Kaynaklı Gbk

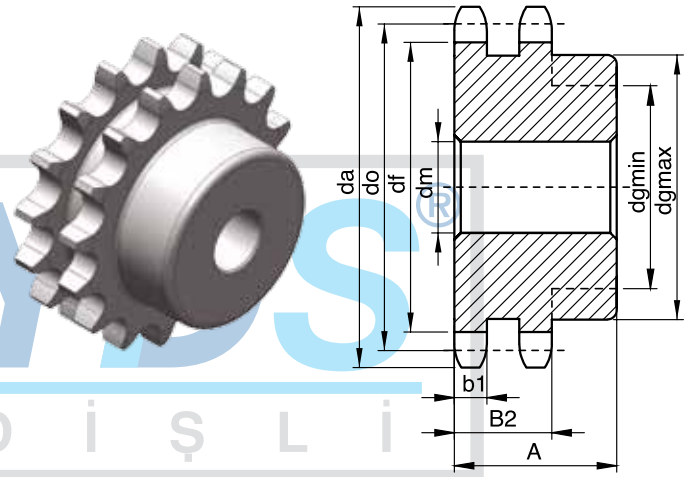
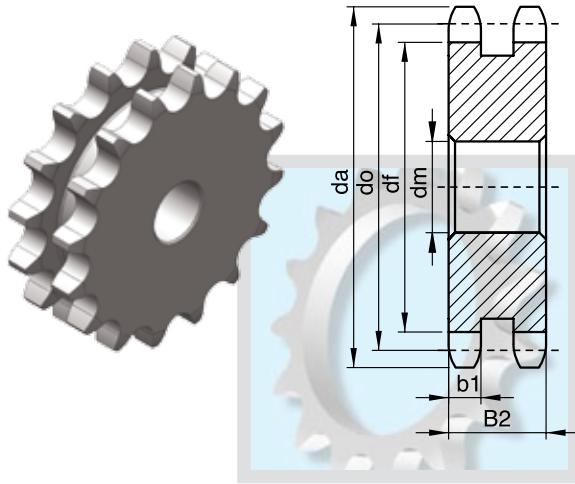
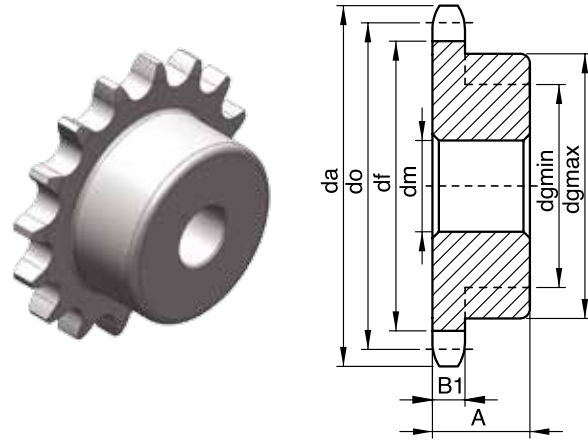


Diş Sayısı Z	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Delik Çapı dm	Göbek Çapı dgm <sub>max</sub>	Tek Sıra		Çift Sıra	
						A	Göbek Çapı dgm <sub>min</sub>	A	Göbek Çapı dgm <sub>min</sub>
8	24.0	20.91	15.91	-	11	12	10	18	10
9	26.6	23.39	18.39	-	13	12	12	18	12
10	29.2	25.89	20.89	-	16	12	15	18	15
11	31.7	28.40	23.40	8	18	13	17	20	17
12	34.2	30.91	25.91	8	21	13	20	20	20
13	36.7	33.43	28.43	8	23	13	22	20	22
14	39.2	35.95	30.95	8	26	13	25	20	25
15	41.7	38.48	33.48	8	28	13	27	20	27
16	44.3	41.01	36.01	8	31	14	30	20	30
17	46.8	43.54	38.54	8	34	14	30	20	30
18	49.3	46.07	41.07	8	36	14	30	20	35
19	51.9	48.60	43.60	10	39	14	30	20	38
20	54.4	51.14	46.14	10	41	14	30	20	40
21	57.0	53.68	48.68	10	44	14	35	20	40
22	59.5	56.21	51.21	10	46	14	35	20	40
23	62.0	58.75	53.75	10	49	14	35	20	40
24	64.6	61.29	56.29	10	51	14	35	20	40
25	67.5	63.83	58.83	10	54	14	35	20	40
26	69.5	66.37	61.37	10	56	16	40	22	50
27	72.2	68.91	63.91	10	59	16	40	22	50
28	74.8	71.45	66.45	10	61	16	40	22	50
29	77.3	73.99	68.99	10	64	16	40	22	50
30	79.8	76.53	71.53	10	67	16	40	22	50
31	82.4	79.08	74.08	10	69	16	40	22	60
32	84.9	81.62	76.62	10	72	16	40	22	60
33	87.5	84.16	79.16	10	74	16	40	22	60
34	90.0	86.70	81.70	10	77	16	40	22	60
35	92.5	89.25	84.25	10	79	16	40	22	60
36	95.0	91.79	86.79	10	82	16	40	22	60
37	97.6	94.33	89.33	10	84	16	40	22	60
38	100.2	96.88	91.88	10	87	16	40	22	60
39	102.7	99.42	94.42	10	89	16	40	22	60
40	105.3	101.96	96.96	10	92	16	40	22	60
41	107.8	104.51	99.51	12	95	20	60	35	75
42	110.4	107.05	102.05	12	97	20	60	35	75
43	112.9	109.60	104.60	12	100	20	60	35	75
44	115.5	112.14	107.14	12	102	20	60	35	75
45	118.0	114.68	109.68	12	105	20	60	35	75
46	120.6	117.23	112.23	12	107	20	60	35	75
47	123.1	119.77	114.77	12	110	20	60	35	75
48	125.6	122.32	117.32	12	112	20	60	35	75
49	128.2	124.86	119.86	12	115	20	60	35	75
50	130.7	127.41	122.41	12	117	20	60	35	75
51	133.3	129.95	124.95	14	120	20	70	35	75
52	135.8	132.50	127.50	14	122	20	70	35	75
53	138.4	135.04	130.04	14	125	20	70	35	75
54	140.9	137.59	132.59	14	128	20	70	35	75
55	143.5	140.13	135.13	14	130	20	70	35	75
56	146.0	142.68	137.68	14	133	20	70	35	75
57	148.6	145.22	140.22	14	135	20	70	35	75
58	151.0	147.77	142.77	14	138	30	75*	38	75*
59	153.6	150.31	145.31	14	140	30	75*	38	75*
60	156.2	152.86	147.86	14	143	30	75*	38	75*
62	162.0	157.95	152.95	16	148	30	75*	38	75*
64	167.1	163.04	158.04	16	153	30	75*	38	75*
65	169.6	165.59	160.59	16	156	30	75*	38	75*
66	172.2	168.13	163.13	16	158	30	75*	38	75*
68	177.3	173.22	168.22	16	163	30	75*	38	75*
70	182.4	178.31	173.31	16	168	30	80*	38	80*
72	187.5	183.40	178.40	20	173	30	80*	38	80*
75	195.1	191.04	186.04	20	181	30	80*	38	80*
76	197.7	193.59	188.59	20	184	30	80*	38	80*
78	202.8	198.68	193.68	20	189	30	85*	38	85*
80	207.9	203.77	198.77	20	194	30	85*	38	85*
85	220.6	216.50	211.50	20	207	30	85*	38	85*
90	233.4	229.23	224.23	20	219	30	85*	38	85*
95	246.1	241.96	236.96	20	232	30	85*	38	85*
100	258.9	254.69	249.69	20	245	30	85*	38	85*
110	284.3	280.15	275.15	20	270	30	85*	38	85*
114	294.5	290.34	285.34	20	280	30	85*	38	85*
120	310.0	305.61	300.61	20	296	30	85*	38	85*
125	322.5	318.34	313.34	20	308	30	85*	38	85*

TİP A



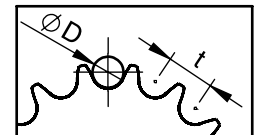
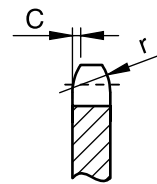
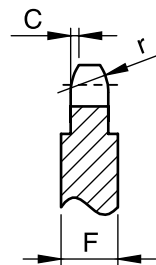
TİP B



DİŞLİ	mm
r	8
C	1
B1	2.8
b1	2.7
B2	8.3
05B Z>45 ise F	4

ZİNCİR	mm
Adım	8
Zincir Ara Genişliği	3
Makara Çapı Ø D	5

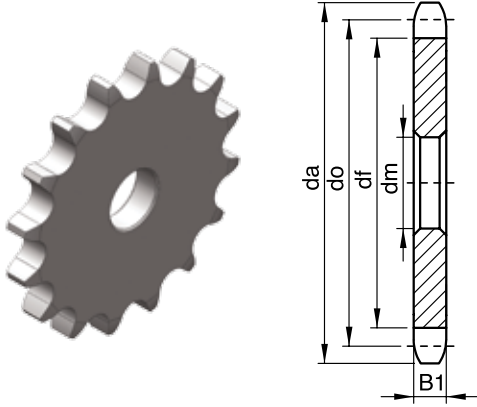
\* Kaynaklı Göbek



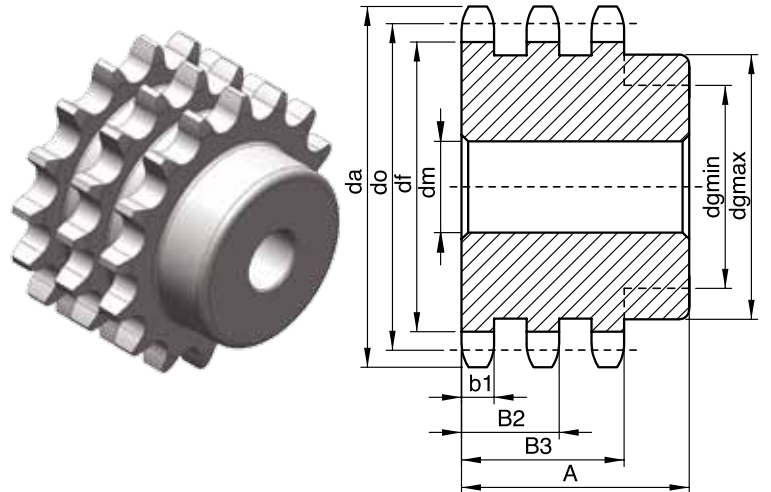
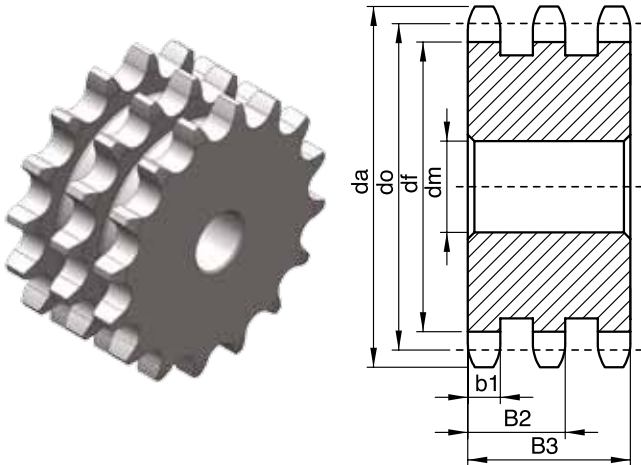
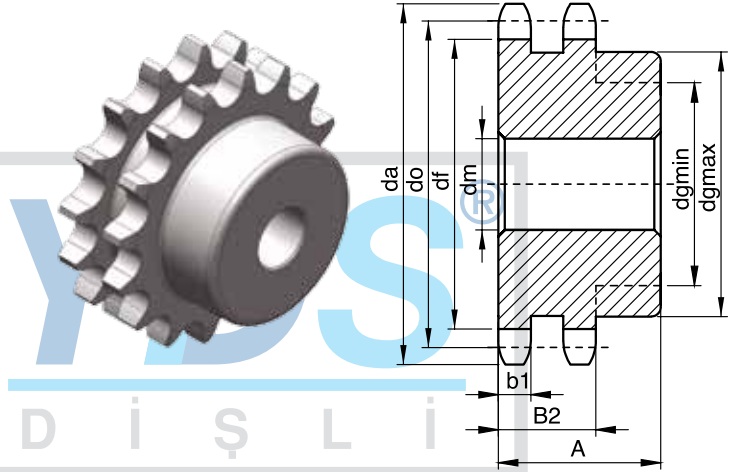
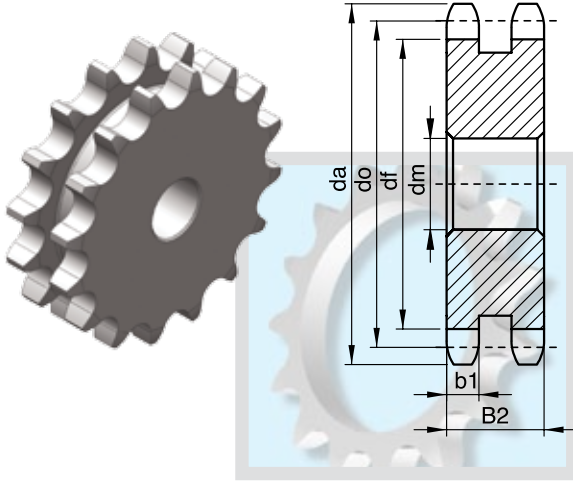
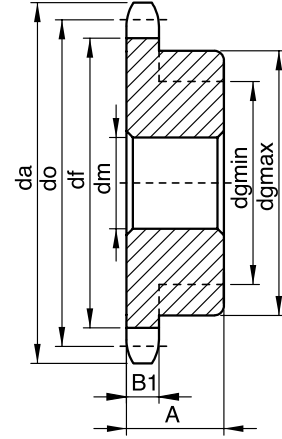
Dış Sayısı Z	Dış Üstü Çapı da	Bölüm Dairesi Çapı do	Dış Dibi Çapı df	Delik Çapı dm	Göbek Çapı dgmax	Tek Sıra		Çift Sıra		Üç Sıra	
						A	Göbek Çapı dgmin	A	Göbek Çapı dgmin	A	Göbek Çapı dgmin
8	28.0	24.89	18.54	-	13	20	12	22	12	32	12
9	31.0	27.85	21.50	-	16	20	15	22	15	32	15
10	34.0	30.82	24.47	8	19	20	18	22	18	32	18
11	37.0	33.81	27.46	10	22	25	21	25	21	35	21
12	40.0	36.80	30.45	10	25	25	23	25	23	35	23
13	43.0	39.80	33.45	10	28	25	27	25	26	35	26
14	46.3	42.80	36.45	10	31	25	30	25	30	35	30
15	49.3	45.81	39.46	10	34	25	30	25	30	35	30
16	52.3	48.82	42.47	12	37	25	32	30	32	35	32
17	55.3	51.84	45.49	12	40	25	35	30	35	35	35
18	58.3	54.85	48.50	12	43	25	38	30	38	35	38
19	61.3	57.87	51.52	12	46	25	40	30	41	35	41
20	64.3	60.89	54.54	12	49	25	40	30	44	35	44
21	68.0	63.91	57.56	12	52	25	43	30	47	40	47
22	71.0	66.93	60.58	12	55	25	43	30	50	40	50
23	73.5	69.95	63.60	12	58	25	47	30	53	40	53
24	77.0	72.97	66.62	12	61	25	49	30	56	40	56
25	80.0	76.00	69.65	12	64	25	52	30	59	40	59
26	83.0	79.02	72.67	14	67	25	55	30	62	40	62
27	86.0	82.05	75.70	14	70	25	55	30	65	40	65
28	89.0	85.07	78.72	14	73	25	55	30	68	40	68
29	92.0	88.10	81.75	14	76	25	55	30	71	40	71
30	94.7	91.12	84.77	14	79	25	55	30	74	40	74
31	98.3	94.15	87.80	14	82	25	60	30	75	40	75
32	101.3	97.18	90.83	14	85	25	60	30	75	40	75
33	104.3	100.20	93.85	14	88	25	60	30	75	40	75
34	107.3	103.23	96.88	14	91	25	60	30	75	40	75
35	110.4	106.26	99.91	14	94	25	60	30	75	40	75
36	113.4	109.29	102.94	14	97	25	65	30	85	40	85
37	116.4	112.32	105.97	16	100	25	65	30	85	40	85
38	119.5	115.34	108.99	16	103	25	65	30	85	40	85
39	122.5	118.37	112.02	16	106	25	65	30	85	40	85
40	125.5	121.40	115.05	16	109	25	65	30	85	40	85
41	128.5	124.43	118.08	16	112	25	73	35	85	45	85
42	131.6	127.46	121.11	16	115	25	73	35	85	45	85
43	134.6	130.49	124.14	16	118	25	73	35	85	45	85
44	137.6	133.52	127.17	16	122	25	73	35	85	45	85
45	140.7	136.55	130.20	16	125	25	73	35	85	45	85
46	143.7	139.58	133.23	16	128	25	73	35	85	45	85
47	146.7	142.61	136.26	16	131	25	73	35	85	45	85
48	149.7	145.64	139.29	18	134	32	75*	40	75*	55	75*
49	152.7	148.67	142.32	18	137	32	75*	40	75*	55	75*
50	155.7	151.69	145.34	18	140	32	75*	40	75*	55	75*
51	158.7	154.72	148.37	18	143	32	75*	40	75*	55	75*
52	161.8	157.75	151.40	18	146	32	75*	40	75*	55	75*
53	164.8	160.78	154.43	20	149	32	75*	40	75*	55	75*
54	167.8	163.82	157.47	20	152	32	75*	40	75*	55	75*
55	170.8	166.85	160.50	20	155	32	75*	40	75*	55	75*
56	173.8	169.88	163.53	20	158	32	75*	40	75*	55	75*
57	176.9	172.91	166.56	20	161	32	75*	40	75*	55	75*
58	179.9	175.94	169.59	20	164	32	75*	40	75*	55	75*
59	183.0	178.97	172.62	20	167	32	80*	40	80*	55	80*
60	186.0	182.00	175.65	20	170	32	80*	40	80*	55	80*
62	192.1	188.06	181.71	20	176	32	80*	40	80*	55	80*
64	198.2	194.12	187.77	20	182	32	80*	40	80*	55	80*
65	201.6	197.15	190.80	20	185	32	85*	40	85*	55	85*
66	204.6	200.18	193.83	20	188	32	85*	40	85*	55	85*
68	210.7	206.24	199.89	20	194	32	85*	40	85*	55	85*
70	216.7	212.30	205.95	20	200	32	85*	40	85*	55	85*
72	222.8	218.37	212.02	20	206	32	85*	40	85*	55	85*
75	231.9	227.46	221.11	20	215	32	85*	40	85*	55	85*
76	234.9	230.49	224.14	20	218	32	85*	40	85*	55	85*
78	241.0	236.55	230.20	20	225	32	85*	40	85*	55	85*
80	247.1	242.61	236.26	20	231	32	85*	40	85*	55	85*
85	262.2	257.77	251.42	20	246	32	85*	40	85*	55	85*
90	277.4	272.93	266.58	20	261	32	85*	40	85*	55	85*
95	292.5	288.08	281.73	20	276	32	85*	40	85*	55	85*
100	307.7	303.24	296.89	20	291	32	90*	40	90*	55	90*
110	338.0	333.55	327.20	20	322	32	90*	40	90*	55	90*
114	349.5	345.68	339.33	20	334	32	90*	40	90*	55	90*
120	368.3	363.87	357.52	20	352	32	90*	40	90*	55	90*
125	383.5	379.03	372.68	20	367	32	90*	40	90*	55	90*



TİP A



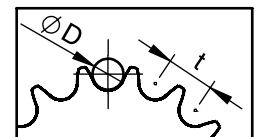
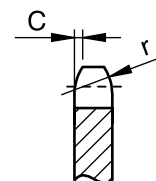
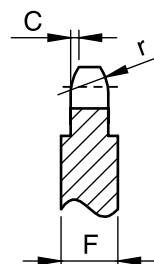
TİP B



DİŞLİ	mm
r	10
C	1
B1	5.3
b1	5.2
B2	15.4
B3	25.6
06A Z>99 ise F	7

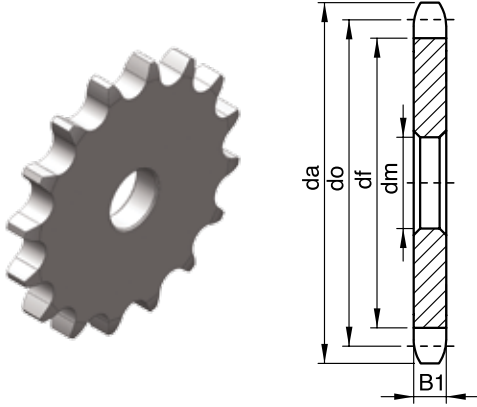
ZİNCİR	mm
Adım	9.525
Zincir Ara Genişliği	5.72
Makara Çapı Ø D	6.35

\* Kaynaklı Göbek

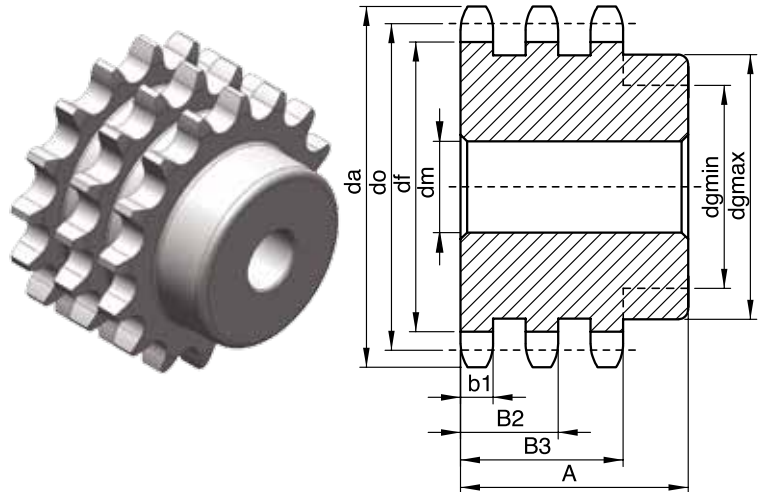
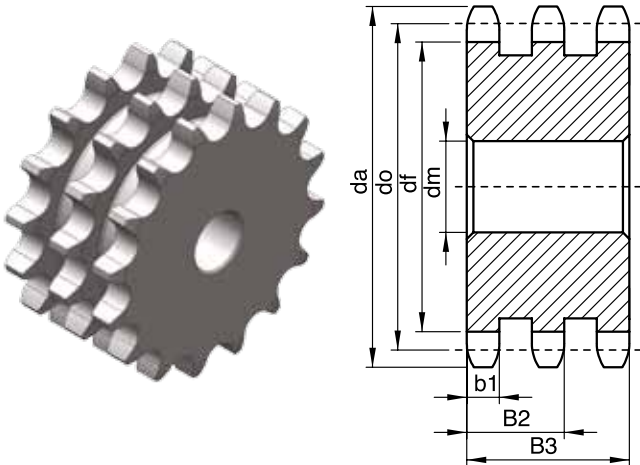
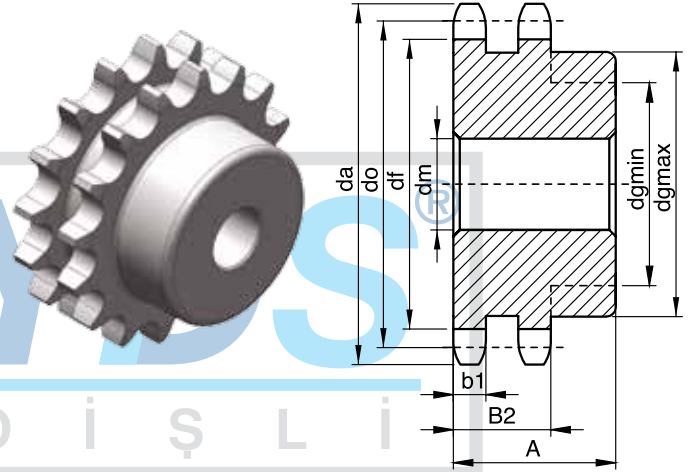
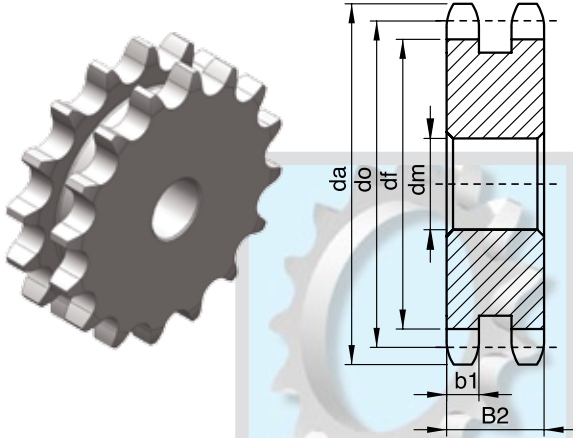
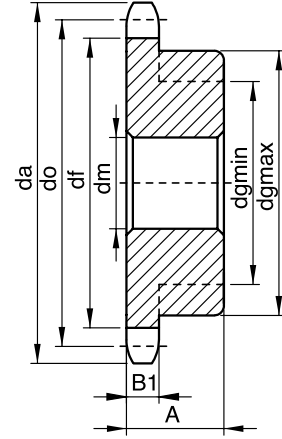


Diş Sayısı Z	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Delik Çapı dm	Göbek Çapı dgmax	Tek Sıra		Çift Sıra		Üç Sıra	
						A	Göbek Çapı dgmin	A	Göbek Çapı dgmin	A	Göbek Çapı dgmin
8	37.2	33.19	24.68	10	18	25	17	32	17	46	17
9	41.0	37.13	28.62	10	22	25	21	32	21	46	21
10	45.2	41.10	32.59	10	26	25	25	32	25	46	25
11	48.7	45.08	36.57	10	30	25	28	35	28	50	28
12	53.0	49.07	40.56	10	34	26	32	35	32	50	32
13	57.4	53.07	44.56	10	38	26	34	35	34	50	34
14	61.8	57.07	48.56	10	42	26	36	35	39	50	39
15	65.5	61.08	52.57	10	46	26	40	35	41	50	41
16	69.5	65.10	56.59	12	50	26	45	35	45	50	45
17	73.6	69.12	60.61	12	54	26	47	35	49	50	49
18	77.8	73.14	64.63	12	58	26	51	35	53	50	53
19	81.7	77.16	68.65	12	62	26	55	35	57	50	57
20	85.8	81.18	72.67	12	66	26	59	40	61	50	61
21	89.7	85.21	76.70	12	70	26	63	40	65	55	65
22	93.8	89.24	80.73	12	74	26	65	40	65	55	65
23	98.2	93.27	84.76	14	78	26	65	40	65	55	65
24	101.8	97.30	88.79	14	82	26	65	40	70	55	70
25	105.8	101.33	92.82	14	86	26	65	40	75	55	75
26	110.0	105.36	96.85	14	90	26	65	40	80	55	80
27	114.0	109.40	100.89	14	94	26	65	40	80	55	80
28	118.0	113.43	104.92	14	98	26	65	40	85	55	85
29	122.0	117.46	108.95	14	102	26	75	40	90	55	90
30	126.1	121.50	112.99	14	106	26	75	40	95	55	95
31	130.2	125.53	117.02	16	110	26	85	40	95	55	105
32	134.3	129.57	121.06	16	114	26	85	40	95	55	105
33	138.4	133.61	125.10	16	118	26	85	40	95	55	105
34	142.6	137.64	129.13	16	122	26	85	40	95	55	105
35	146.7	141.68	133.17	16	126	26	85	40	95	55	95
36	151.0	145.72	137.21	18	130	35	80*	50	80*	65	80*
37	154.6	149.75	141.24	18	134	35	80*	50	80*	65	80*
38	158.6	153.79	145.28	18	138	35	80*	50	80*	65	80*
39	162.7	157.83	149.32	18	143	35	80*	50	80*	65	80*
40	166.8	161.87	153.36	20	147	35	80*	50	80*	65	80*
41	171.4	165.91	157.40	20	151	35	80*	50	80*	65	80*
42	175.4	169.94	161.43	20	155	35	80*	50	80*	65	80*
43	179.7	173.98	165.47	20	159	35	80*	50	80*	65	80*
44	183.8	178.02	169.51	20	163	35	80*	50	80*	65	80*
45	188.0	182.06	173.55	20	167	35	80*	50	80*	65	80*
46	192.1	186.10	177.59	20	171	35	80*	50	80*	65	80*
47	196.2	190.14	181.63	20	175	35	80*	50	80*	65	80*
48	200.3	194.18	185.67	20	179	35	90*	50	90*	65	90*
49	204.3	198.22	189.71	20	183	35	90*	50	90*	65	90*
50	208.3	202.26	193.75	20	187	35	90*	50	90*	65	90*
51	212.1	206.30	197.79	20	191	35	90*	50	90*	65	90*
52	216.1	210.34	201.83	20	195	35	90*	50	90*	65	90*
53	220.2	214.38	205.87	20	199	35	90*	50	90*	65	90*
54	224.1	218.42	209.91	20	203	35	90*	50	90*	65	90*
55	228.1	222.46	213.95	20	207	35	90*	50	90*	65	90*
56	232.2	226.50	217.99	20	211	35	90*	50	90*	65	90*
57	236.4	230.54	222.03	20	215	35	90*	50	90*	65	90*
58	240.5	234.58	226.07	20	219	35	90*	50	90*	65	90*
59	244.5	238.62	230.11	20	223	35	90*	50	90*	65	90*
60	248.6	242.66	234.15	20	227	35	90*	50	90*	65	90*
62	256.9	250.74	242.23	20	235	35	90*	50	90*	65	90*
64	265.1	258.83	250.32	20	244	35	90*	50	90*	65	90*
65	269.0	262.87	254.36	20	248	35	90*	50	90*	65	90*
66	273.0	266.91	258.40	20	252	35	90*	50	90*	65	90*
68	281.0	274.99	266.48	20	260	35	90*	50	90*	65	90*
70	289.0	283.07	274.56	20	268	35	90*	50	90*	65	90*
72	297.2	291.15	282.64	20	276	35	90*	50	90*	65	90*
75	309.2	303.28	294.77	20	288	35	95*	50	95*	65	95*
76	313.2	307.32	298.81	20	292	35	95*	55	95*	65	95*
78	321.4	315.40	306.89	20	300	35	95*	55	95*	65	95*
80	329.4	323.49	314.98	20	308	35	95*	55	95*	65	95*
85	349.0	343.69	335.18	20	328	35	95*	55	95*	65	95*
90	369.9	363.90	355.39	20	349	35	95*	55	95*	65	95*
95	390.1	384.11	375.60	20	369	35	95*	55	95*	65	95*
100	410.3	404.32	395.81	25	389	35	105*	55	105*	65	105*
110	450.7	444.74	436.23	25	429	35	105*	55	105*	65	105*
114	466.9	460.91	452.40	25	446	35	105*	55	105*	65	105*
120	491.2	485.16	476.65	25	470	35	105*	55	105*	65	105*
125	511.3	505.37	496.86	25	490	35	105*	55	105*	65	105*

TİP A



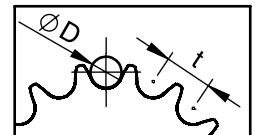
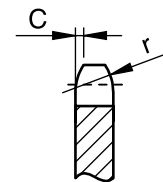
TİP B



DİŞLİ	mm
r	13
C	1.3
B1	7.2
b1	7
B2	21
B3	34.9

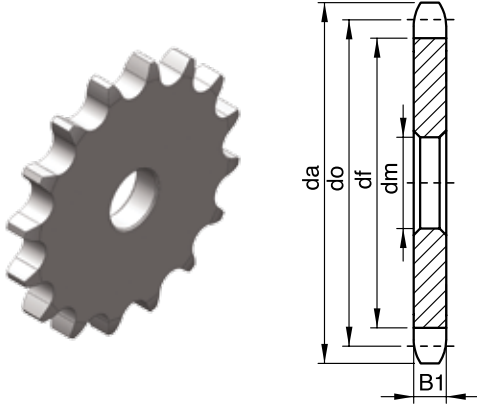
ZİNCİR	mm
Adım	12.7
Zincir Ara Genişliği	7.75
Makara Çapı Ø D	8.51

\* Kaynaklı Göbek

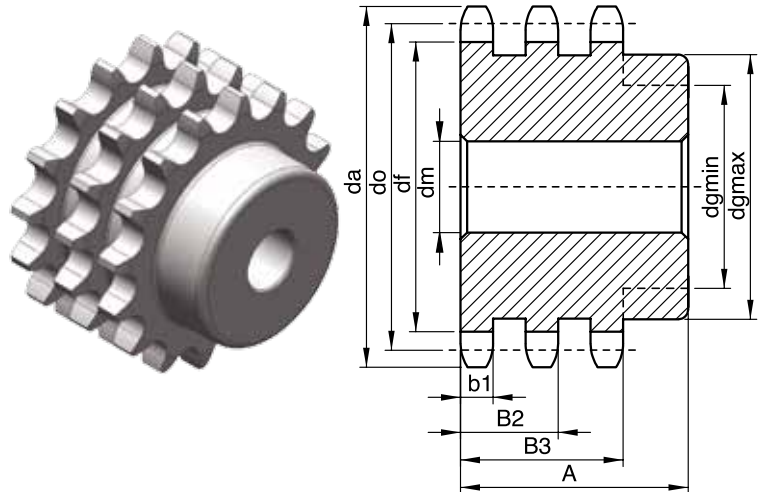
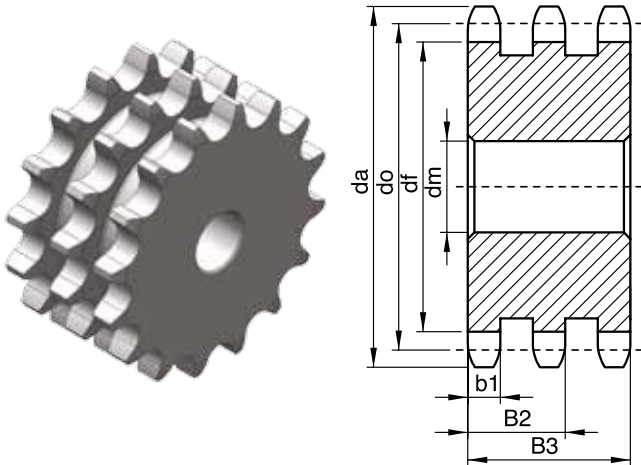
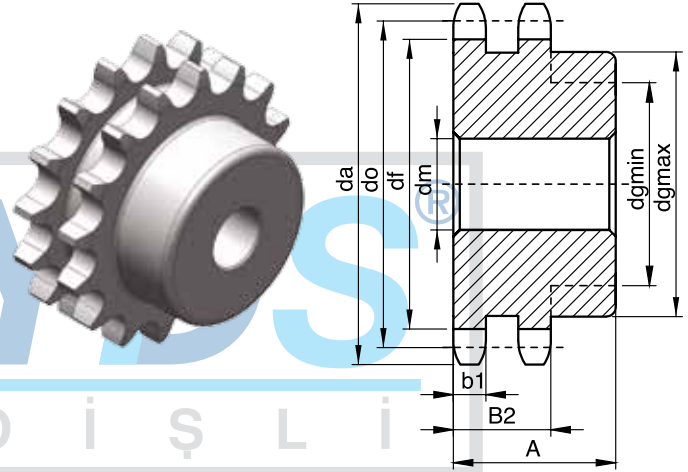
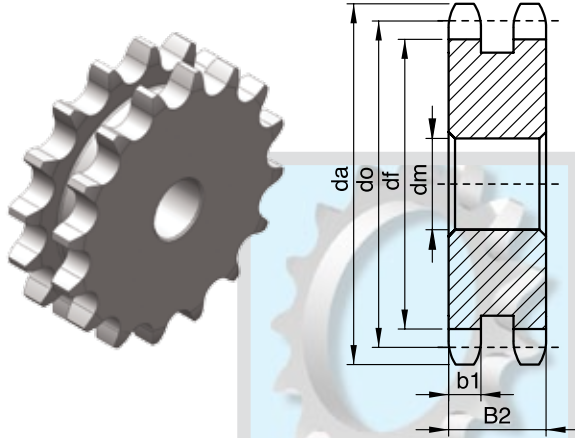
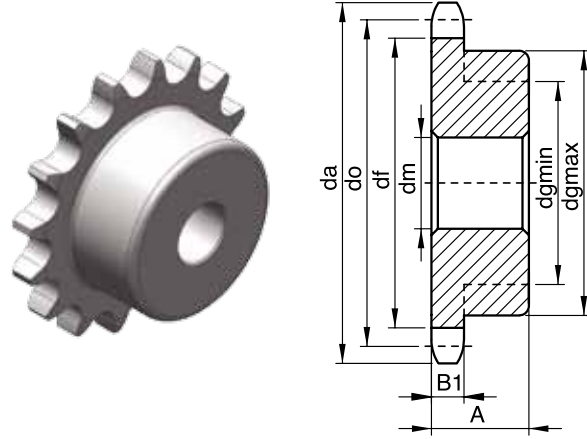


Diş Sayısı Z	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Delik Çapı dm	Göbek Çapı dgmax	Tek Sıra		Çift Sıra		Üç Sıra	
						A	Göbek Çapı dgmin	A	Göbek Çapı dgmin	A	Göbek Çapı dgmin
8	47.0	41.48	31.32	10	23	25	22	40	22	55	22
9	52.6	46.42	36.26	10	28	25	27	40	27	55	27
10	57.5	51.37	41.21	10	33	25	32	40	32	55	32
11	63.0	56.35	46.19	12	38	28	35	40	37	55	37
12	68.0	61.34	51.18	12	43	28	38	40	40	55	40
13	73.0	66.33	56.17	12	48	28	42	40	44	55	44
14	78.0	71.34	61.18	14	53	28	47	40	49	55	49
15	83.0	76.35	66.19	14	58	28	52	40	54	55	54
16	88.0	81.37	71.21	14	63	28	55	45	59	60	59
17	93.0	86.39	76.23	14	68	28	55	45	64	60	64
18	98.3	91.42	81.26	16	73	28	65	45	69	60	69
19	103.3	96.45	86.29	16	78	28	65	45	74	60	74
20	108.4	101.48	91.32	16	83	28	70	45	79	60	79
21	113.4	106.51	96.35	16	88	28	70	45	80	60	80
22	118.0	111.55	101.39	16	93	28	75	45	85	60	85
23	123.5	116.59	106.43	18	98	28	75	45	90	60	90
24	128.3	121.62	111.46	18	103	28	75	45	95	60	95
25	134.0	126.66	116.50	18	108	28	75	45	100	60	100
26	139.0	131.70	121.54	18	113	28	80	45	105	60	105
27	144.0	136.74	126.58	18	118	28	80	45	105	60	105
28	148.7	141.79	131.63	18	123	28	80	45	110	60	110
29	153.8	146.83	136.67	20	128	38	80*	50	80*	70	80*
30	158.8	151.87	141.71	20	133	38	80*	50	80*	70	80*
31	163.9	156.92	146.76	20	138	38	80*	50	80*	70	80*
32	168.9	161.96	151.80	20	143	38	80*	50	80*	70	80*
33	174.5	167.01	156.85	20	148	38	80*	50	80*	70	80*
34	179.0	172.05	161.89	20	153	38	80*	50	80*	70	80*
35	184.1	177.10	166.94	20	158	38	80*	50	80*	70	80*
36	189.1	182.15	171.99	20	163	38	80*	50	80*	70	80*
37	194.2	187.19	177.03	20	168	38	80*	50	80*	70	80*
38	199.2	192.24	182.08	20	174	38	80*	50	80*	70	80*
39	204.2	197.29	187.13	20	179	38	90*	50	90*	70	90*
40	209.3	202.33	192.17	20	184	38	90*	50	90*	70	90*
41	214.8	207.38	197.22	20	189	38	90*	50	90*	70	90*
42	219.9	212.43	202.27	20	194	38	90*	50	90*	70	90*
43	224.9	217.48	207.32	20	199	38	90*	50	90*	70	90*
44	230.0	222.53	212.37	20	204	38	90*	50	90*	70	90*
45	235.0	227.58	217.42	20	209	38	90*	50	90*	70	90*
46	240.1	232.63	222.47	20	214	38	90*	50	90*	70	90*
47	245.1	237.68	227.52	20	219	38	90*	50	90*	70	90*
48	250.2	242.73	232.57	20	224	38	90*	50	90*	70	90*
49	255.2	247.78	237.62	20	229	38	105*	50	105*	70	105*
50	260.3	252.82	242.66	20	234	38	105*	50	105*	70	105*
51	265.3	257.87	247.71	20	239	38	105*	50	105*	70	105*
52	270.4	262.92	252.76	20	244	40	105*	50	105*	70	105*
53	275.4	267.97	257.81	20	249	40	105*	50	105*	70	105*
54	280.5	273.03	262.87	20	254	40	105*	50	105*	70	105*
55	285.5	278.08	267.92	20	259	40	105*	50	105*	70	105*
56	290.6	283.13	272.97	20	264	40	105*	50	105*	70	105*
57	296.0	288.18	278.02	20	269	40	105*	50	105*	70	105*
58	300.7	293.23	283.07	25	274	40	105*	50	105*	70	105*
59	305.7	298.28	288.12	25	280	40	105*	55	105*	70	105*
60	310.8	303.33	293.17	25	285	40	105*	55	105*	70	105*
62	321.4	313.43	303.27	25	295	40	105*	55	105*	70	105*
64	331.5	323.53	313.37	25	305	40	105*	55	105*	70	105*
65	336.5	328.58	318.42	25	310	40	105*	55	105*	70	105*
66	341.6	333.64	323.48	25	315	45	105*	55	105*	70	105*
68	351.7	343.74	333.58	25	325	45	105*	55	105*	70	105*
70	361.8	353.84	343.68	25	335	45	115*	55	115*	70	115*
72	371.9	363.94	353.78	25	345	45	115*	55	115*	70	115*
75	387.1	379.10	368.94	25	360	45	115*	55	115*	70	115*
76	392.1	384.15	373.99	25	365	45	115*	55	115*	70	115*
78	402.2	394.25	384.09	25	376	45	115*	55	115*	70	115*
80	412.3	404.36	394.20	25	386	45	115*	55	115*	70	115*
85	437.6	429.62	419.46	25	411	45	115*	55	115*	70	115*
90	462.8	454.88	444.72	25	436	45	125*	55	125*	70	125*
95	488.5	480.14	469.98	25	461	45	125*	55	125*	70	125*
100	513.4	505.40	495.24	30	487	45	125*	55	125*	70	125*
110	563.9	555.92	545.76	30	537	45	125*	55	125*	70	125*
114	584.1	576.13	565.97	30	557	45	125*	55	125*	70	125*
120	614.4	606.45	596.29	30	588	45	125*	55	125*	70	125*
125	639.7	631.71	621.55	30	613	45	125*	55	125*	70	125*

TİP A



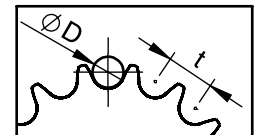
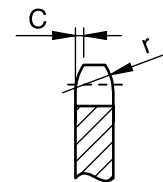
TİP B



DİŞLİ	mm
r	16
C	1.6
B1	9.1
b1	9
B2	25.5
B3	42.1

ZİNCİR	mm
Adım	15.875
Zincir Ara Genişliği	9.65
Makara Çapı Ø D	10.16

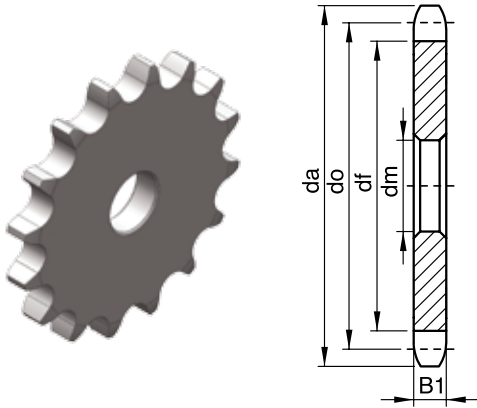
\* Kaynaklı Göbek



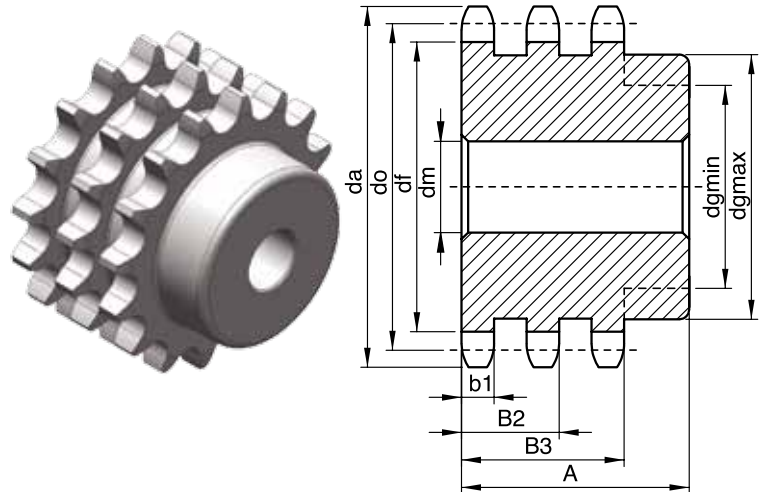
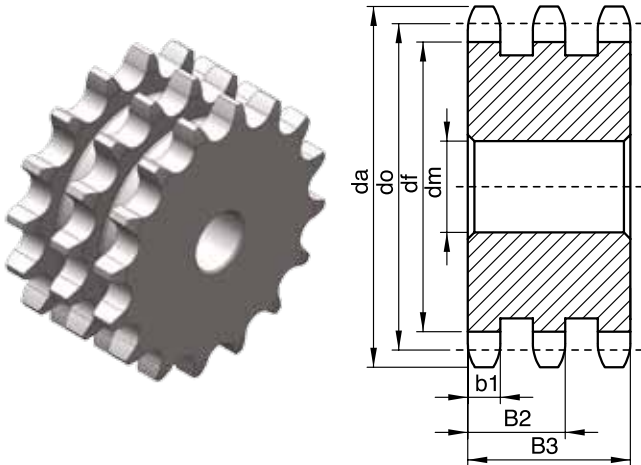
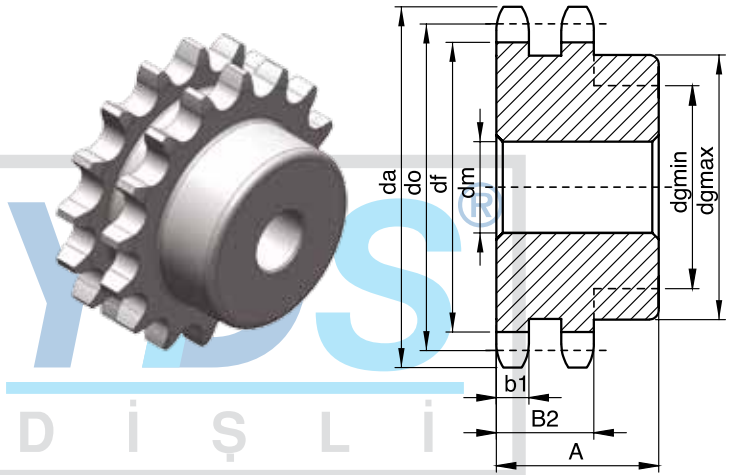
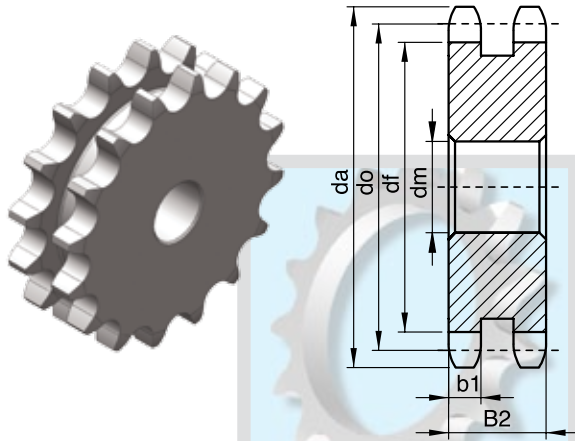
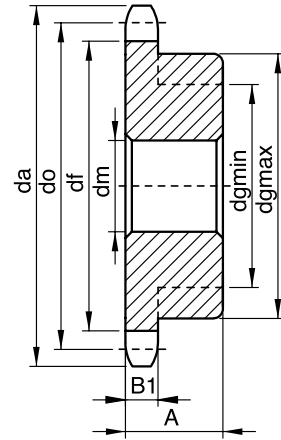


Diş Sayısı Z	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Delik Çapı dm	Göbek Çapı dgmax	Tek Sıra		Çift Sıra		Üç Sıra	
						A	Göbek Çapı dgmin	A	Göbek Çapı dgmin	A	Göbek Çapı dgmin
8	57.6	49.78	37.71	14	29	30	28	45	28	65	28
9	62.0	55.70	43.63	14	35	30	34	45	34	65	34
10	69.0	61.65	49.58	14	41	30	40	45	40	65	40
11	75.0	67.62	55.55	14	47	30	41	50	42	70	42
12	81.5	73.60	61.53	14	53	30	47	50	48	70	48
13	87.5	79.60	67.53	14	59	30	53	50	54	70	54
14	93.6	85.61	73.54	14	65	30	59	50	60	70	60
15	99.8	91.63	79.56	14	71	30	65	50	66	70	66
16	105.5	97.65	85.58	18	77	30	70	50	72	70	72
17	111.5	103.67	91.60	18	83	30	75	50	78	70	78
18	118.0	109.70	97.63	18	89	30	75	50	84	70	84
19	124.2	115.74	103.67	18	95	30	75	50	90	70	90
20	129.7	121.78	109.71	18	101	30	75	50	95	70	95
21	136.0	127.82	115.75	20	107	30	85	50	95	70	95
22	141.0	133.86	121.79	20	113	30	85	50	95	70	95
23	149.0	139.90	127.83	20	119	30	85	50	105	70	105
24	153.9	145.95	133.88	20	125	40	80*	60	80*	80	80*
25	160.0	151.99	139.92	20	131	40	80*	60	80*	80	80*
26	165.9	158.04	145.97	20	137	40	80*	60	80*	80	80*
27	172.3	164.09	152.02	20	143	40	80*	60	80*	80	80*
28	178.0	170.14	158.07	20	150	40	80*	60	80*	80	80*
29	184.1	176.19	164.12	20	156	40	80*	60	80*	80	80*
30	190.5	182.25	170.18	20	162	40	80*	60	80*	80	80*
31	196.3	188.30	176.23	20	168	40	80*	60	80*	80	80*
32	203.3	194.35	182.28	20	174	40	90*	60	90*	80	90*
33	209.3	200.41	188.34	20	180	40	90*	60	90*	80	90*
34	214.6	206.46	194.39	20	186	40	90*	60	90*	80	90*
35	221.0	212.52	200.45	20	192	40	90*	60	90*	80	90*
36	226.8	218.57	206.50	20	198	40	90*	60	90*	80	90*
37	232.9	224.63	212.56	20	204	40	90*	60	90*	80	90*
38	239.0	230.69	218.62	20	210	40	90*	60	90*	80	90*
39	245.1	236.74	224.67	20	216	40	90*	60	90*	80	90*
40	251.3	242.80	230.73	20	222	40	90*	60	90*	80	90*
41	257.3	248.86	236.79	20	228	40	90*	60	90*	80	90*
42	264.5	254.92	242.85	20	234	40	90*	60	90*	80	90*
43	270.5	260.98	248.91	20	240	40	90*	60	90*	80	90*
44	276.5	267.03	254.96	20	246	40	90*	60	90*	80	90*
45	282.5	273.09	261.02	20	252	40	90*	60	90*	80	90*
46	287.9	279.15	267.08	20	259	40	90*	60	90*	80	90*
47	294.0	285.21	273.14	20	265	40	90*	60	90*	80	90*
48	300.1	291.27	279.20	25	271	45	90*	60	90*	80	90*
49	306.2	297.33	285.26	25	277	45	105*	60	105*	80	105*
50	312.3	303.39	291.32	25	283	45	105*	60	105*	80	105*
51	318.4	309.45	297.38	25	289	45	105*	60	105*	80	105*
52	324.5	315.51	303.44	25	295	45	105*	60	105*	80	105*
53	330.5	321.57	309.50	25	301	45	105*	60	105*	80	105*
54	336.6	327.63	315.56	25	307	45	105*	60	105*	80	105*
55	342.7	333.69	321.62	25	313	45	105*	60	105*	80	105*
56	348.7	339.75	327.68	25	319	45	105*	60	105*	80	105*
57	355.4	345.81	333.74	25	325	45	115*	60	115*	80	115*
58	361.5	351.87	339.80	25	331	45	115*	60	115*	80	115*
59	367.5	357.93	345.86	25	337	45	115*	60	115*	80	115*
60	373.0	363.99	351.92	25	343	45	115*	60	115*	80	115*
62	385.1	376.12	364.05	25	355	45	115*	60	115*	80	115*
64	397.2	388.24	376.17	25	368	45	115*	60	115*	80	115*
65	403.2	394.30	382.23	25	374	45	125*	60	125*	80	125*
66	409.3	400.36	388.29	25	380	45	125*	60	125*	80	125*
68	421.4	412.49	400.42	25	392	45	125*	60	125*	80	125*
70	433.6	424.61	412.54	25	404	45	125*	60	125*	80	125*
72	447.0	436.73	424.66	25	416	45	125*	60	125*	80	125*
75	463.9	454.92	442.85	25	434	45	125*	60	125*	80	125*
76	469.9	460.98	448.91	25	440	45	125*	60	125*	80	125*
78	482.1	473.10	461.03	25	452	45	125*	60	125*	80	125*
80	494.2	485.23	473.16	25	465	45	125*	60	125*	80	125*
85	524.5	515.54	503.47	30	495	45	135*	60	135*	80	135*
90	554.8	545.85	533.78	30	525	45	135*	60	135*	80	135*
95	585.1	576.17	564.10	30	556	45	135*	60	135*	80	135*
100	615.4	606.48	594.41	30	586	50	135*	60	135*	80	135*
110	676.1	667.11	655.04	30	646	50	135*	60	135*	80	135*
114	700.6	691.36	679.29	30	671	50	135*	60	135*	80	135*
120	736.7	727.74	715.67	30	707	50	135*	60	135*	80	135*
125	767.0	758.06	745.99	30	737	50	135*	60	135*	80	135*

TİP A



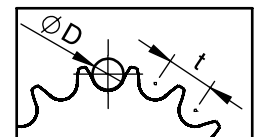
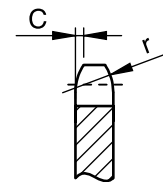
TİP B



DİŞLİ	mm
r	19
C	2
B1	11.1
b1	10.8
B2	30.3
B3	49.8

ZİNCİR	mm
Adım	19.05
Zincir Ara Genişliği	11.68
Makara Çapı Ø D	12.07

\* Kaynaklı Göbek



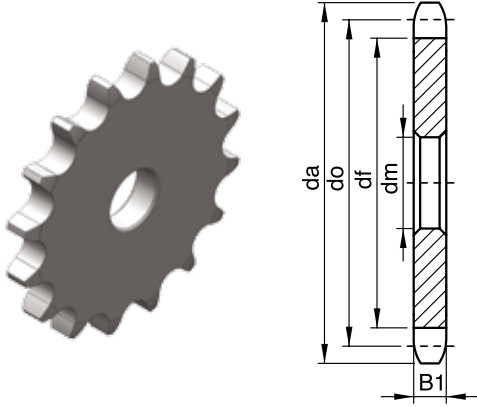
Diş Sayısı Z	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Delik Çapı dm	Göbek Çapı dgmax	Tek Sıra		Çift Sıra		Üç Sıra	
						A	Göbek Çapı dgmin	A	Göbek Çapı dgmin	A	Göbek Çapı dgmin
8	77.0	66.37	50.49	18	40	35	39	65	39	95	39
9	85.0	74.26	58.38	18	48	35	47	65	47	95	47
10	93.0	82.20	66.32	20	56	35	50	68	51	95	51
11	101.5	90.16	74.28	20	64	36	56	68	59	100	59
12	109.0	98.14	82.26	20	72	36	64	68	67	100	67
13	117.0	106.14	90.26	20	80	36	73	68	75	100	75
14	125.0	114.15	98.27	20	88	36	79	68	83	100	83
15	133.0	122.17	106.29	20	96	36	87	68	91	100	91
16	141.0	130.20	114.32	20	104	36	95	68	99	100	99
17	149.0	138.23	122.35	20	112	36	95	68	107	100	107
18	157.0	146.27	130.39	20	120	45	80*	75	80*	110	80*
19	165.2	154.32	138.44	20	128	45	80*	75	80*	110	80*
20	173.2	162.37	146.49	20	136	45	80*	75	80*	110	80*
21	181.2	170.42	154.54	20	144	45	80*	75	80*	110	80*
22	189.3	178.48	162.60	20	152	45	80*	75	80*	110	80*
23	197.5	186.54	170.66	20	160	45	80*	75	80*	110	80*
24	205.5	194.60	178.72	20	168	45	90*	75	90*	120	90*
25	213.5	202.66	186.78	20	176	45	90*	75	90*	120	90*
26	221.6	210.72	194.84	25	184	45	90*	75	90*	120	90*
27	229.6	218.79	202.91	25	192	45	90*	75	90*	120	90*
28	237.7	226.86	210.98	25	201	45	90*	75	90*	120	90*
29	245.8	234.93	219.05	25	209	45	90*	75	90*	120	90*
30	254.0	243.00	227.12	25	217	45	105*	75	105*	120	105*
31	262.0	251.07	235.19	25	225	45	105*	75	105*	120	105*
32	270.0	259.14	243.26	25	233	45	105*	75	105*	120	105*
33	278.5	267.21	251.33	25	241	45	105*	75	105*	120	105*
34	287.0	275.28	259.40	25	249	45	105*	75	105*	120	105*
35	296.2	283.36	267.48	25	257	45	105*	75	105*	120	105*
36	304.6	291.43	275.55	25	265	45	105*	75	105*	130	105*
37	312.6	299.51	283.63	25	273	45	115*	75	115*	130	115*
38	320.7	307.58	291.70	25	281	45	115*	75	115*	130	115*
39	328.8	315.66	299.78	25	289	45	115*	75	115*	130	115*
40	336.9	323.74	307.86	25	297	45	115*	75	115*	130	115*
41	345.0	331.81	315.93	25	306	50	115*	75	115*	130	115*
42	353.0	339.89	324.01	25	314	50	125*	75	125*	130	125*
43	361.1	347.97	332.09	25	322	50	125*	75	125*	130	125*
44	369.1	356.05	340.17	25	330	50	125*	75	125*	130	125*
45	377.1	364.12	348.24	25	338	50	125*	75	125*	130	125*
46	385.2	372.20	356.32	25	346	50	125*	75	125*	130	125*
47	393.2	380.28	364.40	25	354	50	125*	75	125*	130	125*
48	401.3	388.36	372.48	25	362	50	135*	75	135*	130	135*
49	409.3	396.44	380.56	25	370	50	135*	75	135*	130	135*
50	417.4	404.52	388.64	25	378	50	135*	75	135*	130	135*
51	425.5	412.60	396.72	25	386	50	135*	75	135*	130	135*
52	433.6	420.68	404.80	25	394	50	135*	75	135*	130	135*
53	441.7	428.76	412.88	25	402	50	135*	75	135*	130	135*
54	448.3	436.84	420.96	25	411	50	135*	75	135*	130	135*
55	457.9	444.92	429.04	25	419	50	145*	75	145*	130	145*
56	466.0	453.00	437.12	25	427	50	145*	75	145*	130	145*
57	474.0	461.08	445.20	25	435	50	145*	75	145*	130	145*
58	482.1	469.16	453.28	25	443	50	145*	75	145*	130	145*
59	490.2	477.24	461.36	25	451	50	145*	75	145*	130	145*
60	498.3	485.33	469.45	25	459	50	145*	75	145*	130	145*
62	514.5	501.49	485.61	30	475	60	150*	80	150*	130	150*
64	530.7	517.65	501.77	30	491	60	150*	80	150*	130	150*
65	538.8	525.73	509.85	30	499	60	150*	80	150*	130	150*
66	546.8	533.82	517.94	30	508	60	150*	80	150*	130	150*
68	562.9	549.98	534.10	30	524	60	150*	80	150*	130	150*
70	579.2	566.15	550.27	30	540	60	150*	80	150*	130	150*
72	595.4	582.31	566.43	30	556	60	150*	80	150*	130	150*
75	619.7	606.56	590.68	30	580	65	180*	80	180*	130	180*
76	627.0	614.64	598.76	30	588	65	180*	80	180*	130	180*
78	643.3	630.81	614.93	30	605	65	180*	80	180*	130	180*
80	660.0	646.97	631.09	30	621	65	180*	80	180*	130	180*
85	699.9	687.39	671.51	30	661	65	180*	80	180*	130	180*
90	740.3	727.80	711.92	35	702	65	200*	80	200*	130	200*
95	781.1	768.22	752.34	35	742	65	200*	80	200*	130	200*
100	821.1	808.64	792.76	35	782	65	200*	80	200*	130	200*
110	902.0	889.48	873.60	35	863	65	200*	80	200*	130	200*
114	934.3	921.81	905.93	35	896	65	200*	80	200*	130	200*
120	982.8	970.32	954.44	35	944	65	200*	80	200*	130	200*
125	1023.3	1010.74	994.86	40	984	70	250*	85	250*	135	250*

1" x 17,02 mm

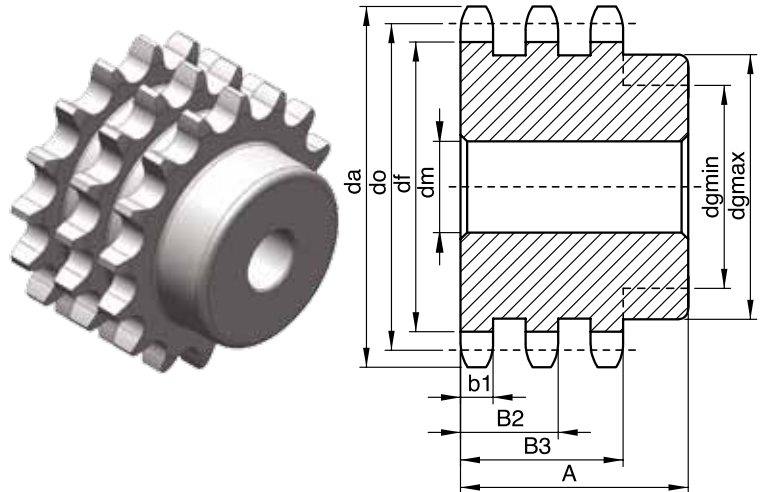
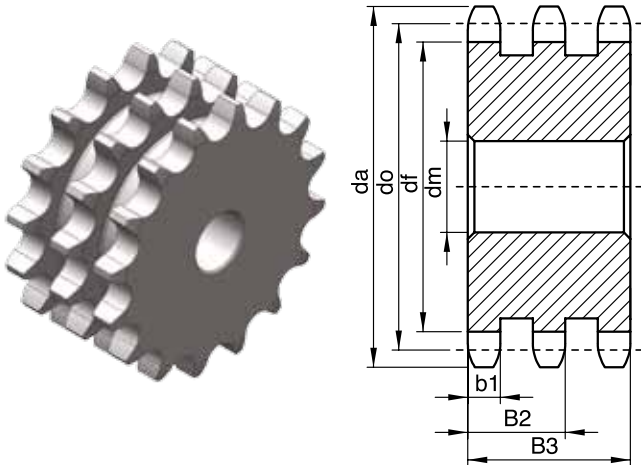
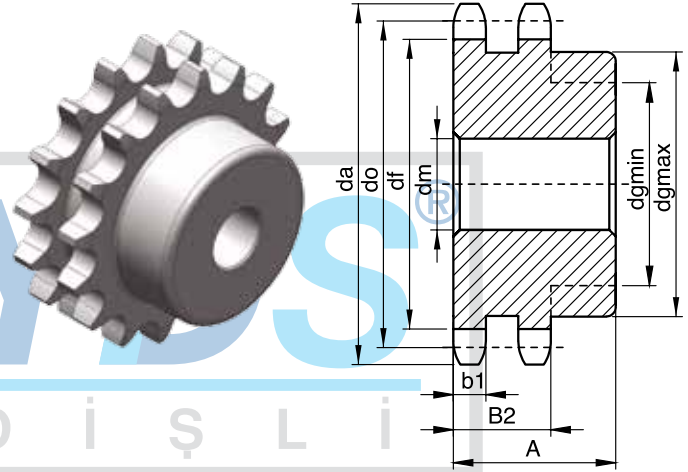
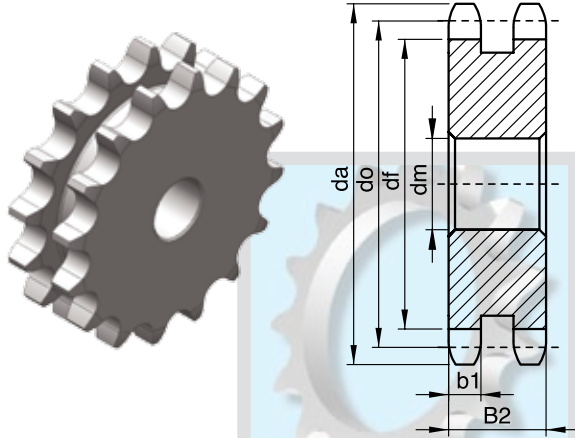
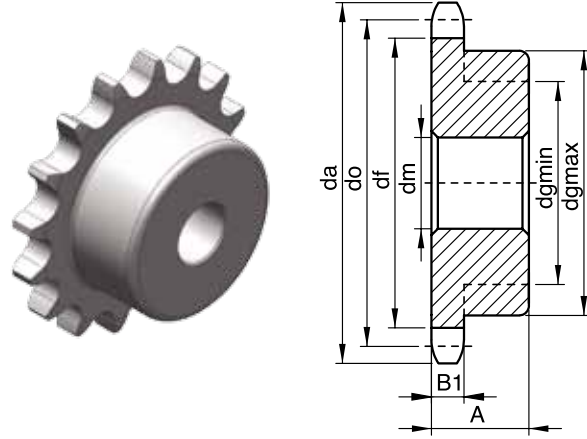
DIN 8187 ISO/R 606

STANDART ZİNCİR DİŞLİ  
16 A / B 1-2-3

TİP A



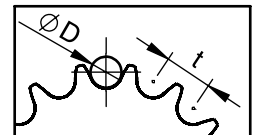
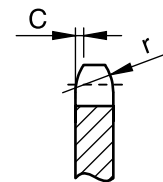
TİP B



DİŞLİ	mm
r	26
C	2.5
B1	16.2
b1	15.8
B2	47.7
B3	79.6

ZİNCİR	mm
Adım	25.4
Zincir Ara Genişliği	17.02
Makara Çapı Ø D	15.88

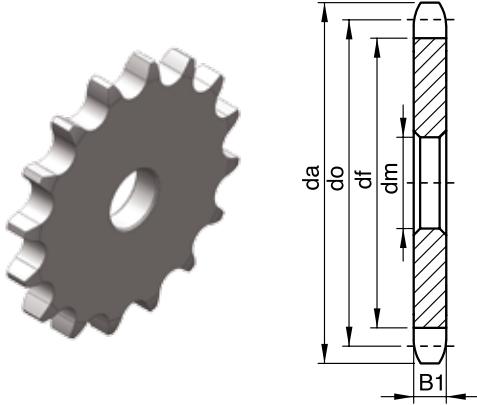
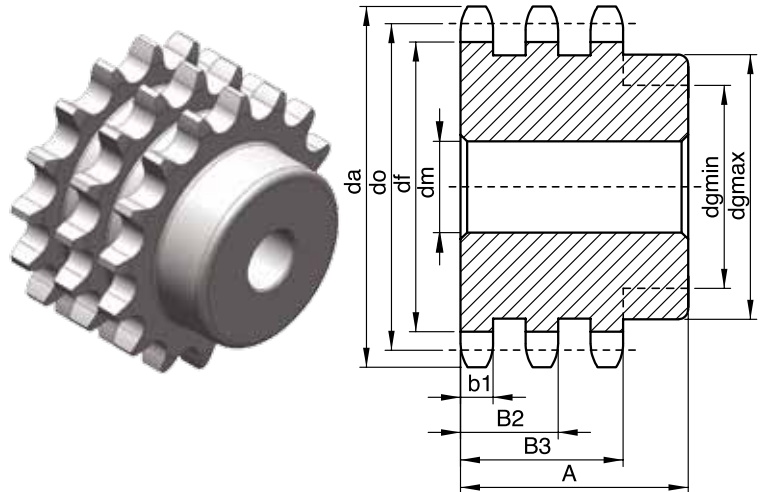
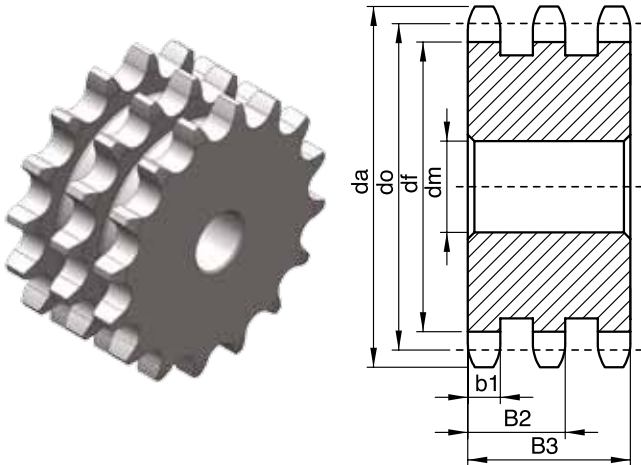
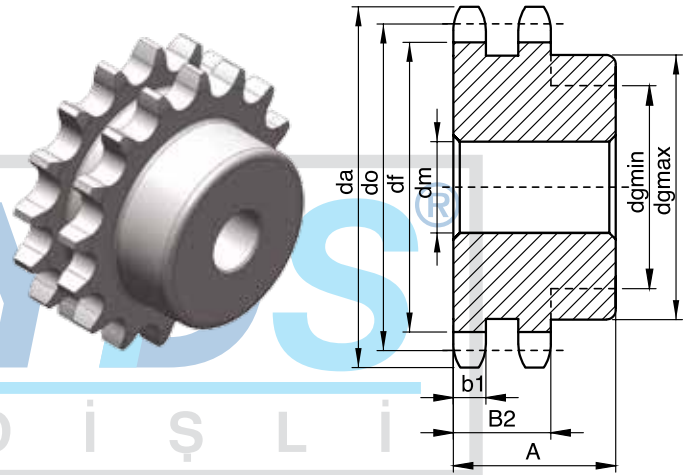
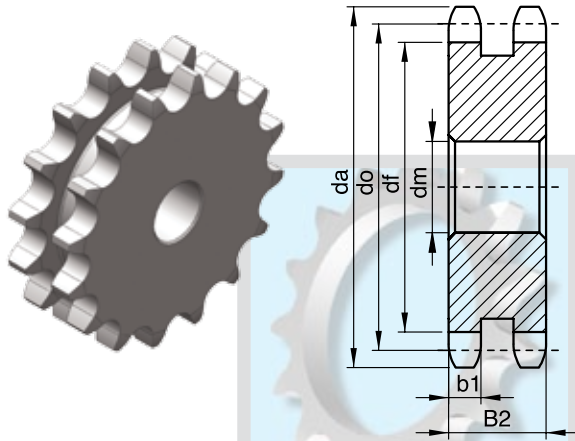
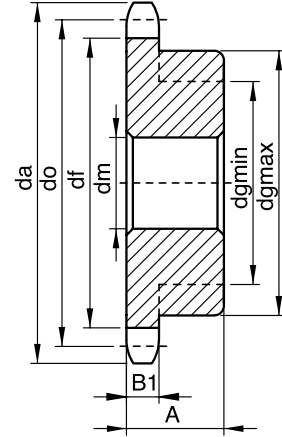
\* Kaynaklı Göbek





Diş Sayısı Z	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Delik Çapı dm	Göbek Çapı dgmax	Tek Sıra		Çift Sıra		Üç Sıra	
						A	Göbek Çapı dgmin	A	Göbek Çapı dgmin	A	Göbek Çapı dgmin
8	98.1	82.97	63.92	20	51	40	50	75	50	110	50
9	108.0	92.83	73.78	20	60	40	59	75	59	110	59
10	117.9	102.75	83.70	20	70	40	65	75	65	110	65
11	127.8	112.70	93.65	20	80	45	72	75	75	115	75
12	137.8	122.67	103.62	20	90	45	83	75	85	115	85
13	147.8	132.67	113.62	20	100	45	93	75	95	115	95
14	157.8	142.68	123.63	20	110	50	85*	85	85*	120	85*
15	167.9	152.71	133.66	20	120	50	85*	85	85*	120	85*
16	177.9	162.75	143.70	20	130	50	85*	85	85*	120	85*
17	187.9	172.79	153.74	25	140	50	85*	85	85*	120	85*
18	198.0	182.84	163.79	25	150	50	85*	85	85*	120	85*
19	208.1	192.90	173.85	25	160	50	90*	85	90*	125	90*
20	218.1	202.96	183.91	25	171	50	90*	85	90*	125	90*
21	228.2	213.03	193.98	25	181	50	90*	85	90*	125	90*
22	238.3	223.10	204.05	25	191	50	90*	85	90*	125	90*
23	248.3	233.17	214.12	25	201	50	90*	85	90*	125	90*
24	258.4	243.25	224.20	25	211	50	115*	85	115*	125	115*
25	268.5	253.32	234.27	25	221	50	115*	85	115*	125	115*
26	278.6	263.41	244.36	25	231	50	115*	85	115*	125	115*
27	288.6	273.49	254.44	25	241	50	115*	85	115*	125	115*
28	298.7	283.57	264.52	25	251	50	115*	85	115*	125	115*
29	308.8	293.66	274.61	30	261	55	125*	85	125*	130	125*
30	318.9	303.75	284.70	30	271	55	125*	85	125*	130	125*
31	329.0	313.83	294.78	30	281	55	125*	85	125*	130	125*
32	339.1	323.92	304.87	30	292	55	125*	85	125*	130	125*
33	349.2	334.01	314.96	30	302	55	125*	85	125*	130	125*
34	359.3	344.10	325.05	30	312	55	135*	85	135*	130	135*
35	369.4	354.20	335.15	30	322	55	135*	85	135*	130	135*
36	379.5	364.29	345.24	30	332	55	135*	85	135*	130	135*
37	389.5	374.38	355.33	30	342	55	135*	85	135*	130	135*
38	399.6	384.48	365.43	30	352	55	135*	85	135*	130	135*
39	409.7	394.57	375.52	30	362	55	145*	90	145*	130	145*
40	419.8	404.67	385.62	30	372	55	145*	90	145*	130	145*
41	429.9	414.77	395.72	30	382	55	145*	90	145*	130	145*
42	440.0	424.86	405.81	30	392	55	145*	90	145*	130	145*
43	450.1	434.96	415.91	30	403	55	145*	90	145*	130	145*
44	460.2	445.06	426.01	30	413	55	145*	90	145*	130	145*
45	470.3	455.15	436.10	30	423	55	145*	90	145*	130	145*
46	480.4	465.25	446.20	30	433	55	145*	90	145*	130	145*
47	490.5	475.35	456.30	30	443	55	145*	90	145*	130	145*
48	500.6	485.45	466.40	30	453	60	150*	100	150*	140	150*
49	510.7	495.55	476.50	30	463	60	150*	100	150*	140	150*
50	520.8	505.65	486.60	30	473	60	150*	100	150*	140	150*
51	530.9	515.75	496.70	30	483	60	150*	100	150*	140	150*
52	541.0	525.85	506.80	30	493	65	150*	100	150*	140	150*
53	551.1	535.95	516.90	30	504	65	150*	100	150*	140	150*
54	561.2	546.05	527.00	30	514	65	150*	100	150*	140	150*
55	571.3	556.15	537.10	30	524	65	150*	100	150*	140	150*
56	581.4	566.25	547.20	30	534	65	150*	100	150*	140	150*
57	591.5	576.35	557.30	30	544	65	150*	100	150*	140	150*
58	601.6	586.45	567.40	30	554	65	180*	105	180*	140	180*
59	611.7	596.56	577.51	30	564	65	180*	105	180*	140	180*
60	621.8	606.66	587.61	30	574	65	180*	105	180*	140	180*
62	642.0	626.86	607.81	30	594	65	180*	105	180*	140	180*
64	662.2	647.07	628.02	30	615	65	180*	105	180*	140	180*
65	672.3	657.17	638.12	30	625	65	180*	105	180*	140	180*
66	682.4	667.27	648.22	30	635	65	180*	105	180*	140	180*
68	702.6	687.48	668.43	35	655	65	200*	105	200*	140	200*
70	722.8	707.68	688.63	35	675	65	200*	105	200*	140	200*
72	743.1	727.89	708.84	35	695	65	200*	105	200*	140	200*
75	773.3	758.20	739.15	35	726	65	200*	105	200*	140	200*
76	783.3	768.30	749.25	35	736	75	200*	105	200*	140	200*
78	803.5	788.51	769.46	35	756	75	200*	105	200*	140	200*
80	823.9	808.71	789.66	35	776	75	200*	105	200*	140	200*
85	874.4	859.23	840.18	35	827	75	200*	105	200*	140	200*
90	924.9	909.76	890.71	35	877	75	200*	105	200*	140	200*
95	975.2	960.28	941.23	35	928	75	200*	105	200*	140	200*
100	1026.0	1010.80	991.75	40	978	80	250*	110	250*	145	250*
110	1127.0	1111.85	1092.80	40	1079	80	250*	110	250*	145	250*
114	1167.4	1152.27	1133.22	40	1120	80	250*	110	250*	145	250*
120	1228.0	1212.90	1193.85	40	1180	80	250*	110	250*	145	250*
125	1278.5	1263.43	1244.38	40	1231	80	250*	110	250*	145	250*

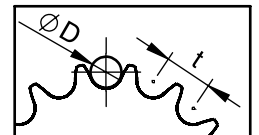
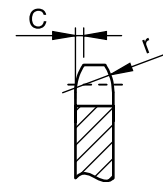


**TİP A****TİP B**

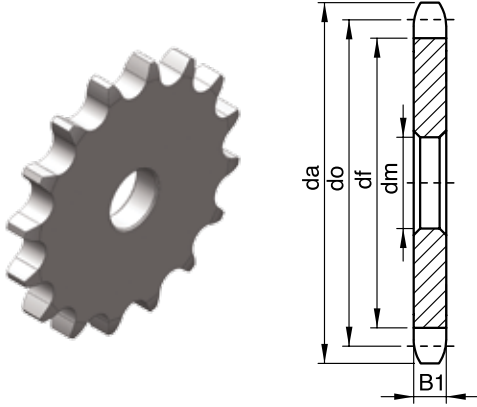
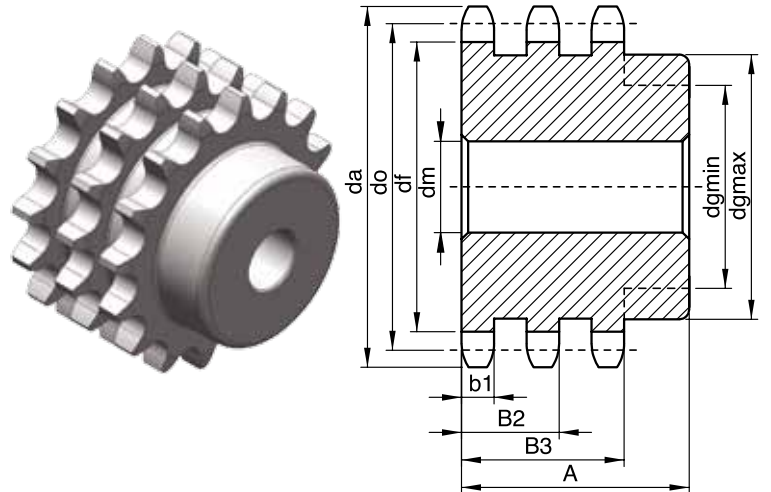
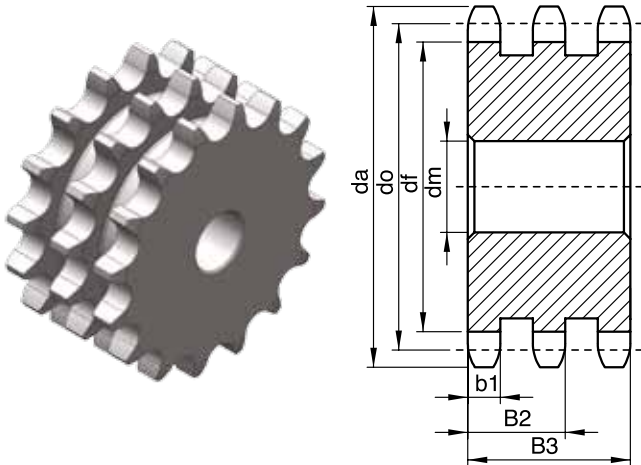
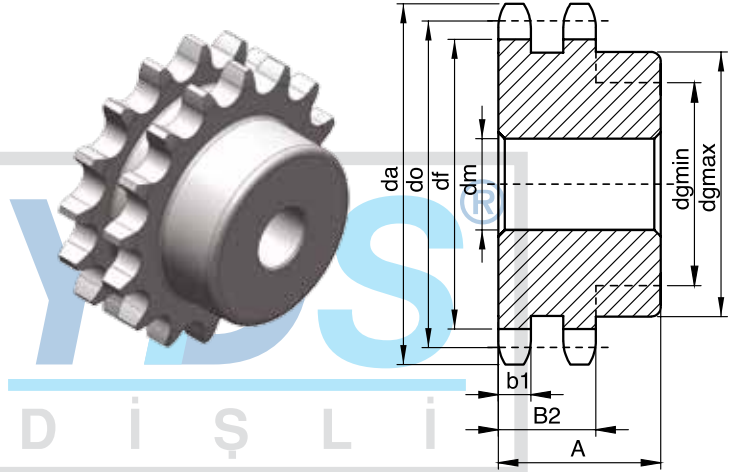
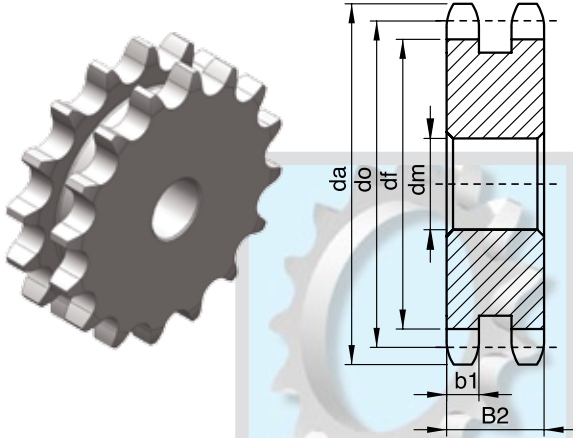
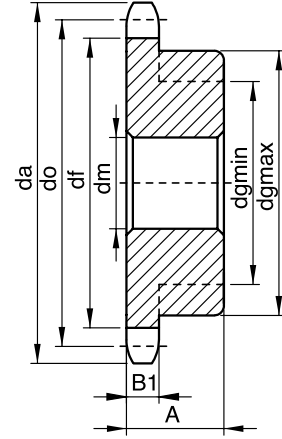
DİŞLİ	mm
r	32
C	3.5
B1	18.5
b1	18.2
B2	54.6
B3	91

ZİNCİR	mm
Adım	31.75
Zincir Ara Genişliği	19.56
Makara Çapı Ø D	19.05

\* Kaynaklı Göbek



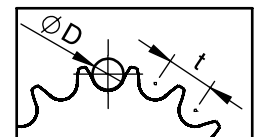
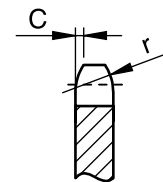
Diş Sayısı Z	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Delik Çapı dm	Göbek Çapı dgmax	Tek Sıra		Çift Sıra		Üç Sıra	
						A	Göbek Çapı dgmin	A	Göbek Çapı dgmin	A	Göbek Çapı dgmin
8	115.0	99.56	74.16	20	59	45	58	95	58	140	58
9	126.4	111.40	86.00	20	71	45	70	95	70	140	70
10	138.0	123.29	97.89	20	83	45	80	95	80	140	80
11	150.0	135.23	109.83	25	95	55	75*	100	75*	150	75*
12	162.0	147.21	121.81	25	107	55	85*	100	85*	150	85*
13	174.2	159.20	133.80	25	119	55	85*	100	85*	150	85*
14	186.2	171.22	145.82	25	131	55	95*	100	95*	150	95*
15	198.2	183.25	157.85	25	143	55	95*	100	95*	150	95*
16	210.3	195.29	169.89	25	155	55	105*	105	105*	150	105*
17	222.3	207.35	181.95	25	167	55	105*	105	105*	150	105*
18	234.3	219.41	194.01	25	179	55	115*	105	115*	150	115*
19	246.5	231.48	206.08	25	191	55	115*	105	115*	150	115*
20	258.6	243.55	218.15	25	203	55	125*	105	125*	150	125*
21	270.6	255.63	230.23	25	215	60	125*	105	125*	150	125*
22	282.7	267.72	242.32	25	227	60	125*	105	125*	150	125*
23	294.8	279.80	254.40	25	239	60	125*	105	125*	150	125*
24	306.8	291.90	266.50	30	251	60	135*	110	135*	155	135*
25	319.0	303.99	278.59	30	264	60	135*	110	135*	155	135*
26	331.0	316.09	290.69	30	276	60	135*	110	135*	155	135*
27	343.2	328.19	302.79	30	288	60	135*	110	135*	155	135*
28	355.2	340.29	314.89	30	300	60	145*	110	145*	155	145*
29	367.3	352.39	326.99	30	312	60	145*	110	145*	155	145*
30	379.5	364.49	339.09	30	324	60	145*	110	145*	155	145*
31	391.6	376.60	351.20	30	336	60	145*	110	145*	155	145*
32	403.7	388.71	363.31	30	348	60	180*	115	180*	160	180*
33	415.8	400.82	375.42	30	360	60	180*	115	180*	160	180*
34	427.8	412.93	387.53	30	373	60	180*	115	180*	160	180*
35	440.0	425.04	399.64	30	385	60	180*	115	180*	160	180*
36	452.0	437.15	411.75	30	397	60	180*	115	180*	160	180*
37	464.2	449.26	423.86	30	409	60	180*	115	180*	160	180*
38	476.2	461.37	435.97	30	421	60	180*	115	180*	160	180*
39	488.5	473.49	448.09	30	433	60	180*	115	180*	160	180*
40	500.6	485.60	460.20	30	445	60	200*	120	200*	165	200*
41	512.6	497.72	472.32	30	457	75	200*	120	200*	165	200*
42	524.7	509.83	484.43	30	469	75	200*	120	200*	165	200*
43	536.8	521.95	496.55	30	482	75	200*	120	200*	165	200*
44	549.0	534.07	508.67	30	494	75	200*	120	200*	165	200*
45	561.2	546.19	520.79	30	506	75	200*	120	200*	165	200*
46	573.3	558.30	532.90	30	518	75	200*	120	200*	165	200*
47	585.4	570.42	545.02	30	530	75	200*	120	200*	165	200*
48	597.4	582.54	557.14	30	542	75	200*	120	200*	165	200*
49	609.5	594.66	569.26	30	554	75	200*	120	200*	165	200*
50	621.7	606.78	581.38	30	566	75	200*	120	200*	165	200*
51	633.8	618.90	593.50	30	578	75	200*	120	200*	165	200*
52	646.0	631.02	605.62	30	591	75	200*	120	200*	165	200*
53	658.0	643.14	617.74	30	603	75	200*	120	200*	165	200*
54	670.2	655.26	629.86	30	615	75	200*	120	200*	165	200*
55	682.3	667.38	641.98	30	627	75	200*	120	200*	165	200*
56	694.4	679.50	654.10	30	639	75	200*	120	200*	165	200*
57	706.5	691.62	666.22	35	651	75	200*	120	200*	165	200*
58	718.6	703.75	678.35	35	663	75	200*	120	200*	165	200*
59	730.7	715.87	690.47	35	675	75	200*	120	200*	165	200*
60	742.8	727.99	702.59	35	688	75	200*	120	200*	165	200*
62	767.2	752.23	726.83	35	712	75	200*	120	200*	165	200*
64	791.3	776.48	751.08	35	736	75	200*	120	200*	165	200*
65	803.4	788.60	763.20	35	748	75	250*	120	250*	165	250*
66	815.6	800.72	775.32	35	760	75	250*	120	250*	165	250*
68	839.8	824.97	799.57	35	785	75	250*	120	250*	165	250*
70	864.2	849.22	823.82	35	809	75	250*	120	250*	165	250*
72	888.4	873.46	848.06	35	833	75	250*	120	250*	165	250*
75	924.8	909.84	884.44	35	869	75	250*	120	250*	165	250*
76	936.9	921.96	896.56	35	882	75	250*	120	250*	165	250*
78	961.0	946.21	920.81	35	906	75	250*	120	250*	165	250*
80	985.4	970.46	945.06	35	930	75	250*	120	250*	165	250*
85	1046.0	1031.08	1005.68	40	991	80	300*	125	300*	170	300*
90	1106.5	1091.71	1066.31	40	1051	80	300*	125	300*	170	300*
95	1167.3	1152.33	1126.93	40	1112	80	300*	125	300*	170	300*
100	1227.8	1212.96	1187.56	40	1173	80	300*	125	300*	170	300*
110	1349.0	1334.22	1308.82	40	1294	80	300*	125	300*	170	300*
114	1397.5	1382.72	1357.32	40	1342	80	300*	125	300*	170	300*
120	1471.0	1455.48	1430.08	40	1415	80	300*	125	300*	170	300*
125	1531.0	1516.11	1490.71	40	1476	80	300*	125	300*	170	300*

**TİP A****TİP B**

DİŞLİ	mm
r	38
C	4
B1	24.1
b1	23.6
B2	72
B3	120.3

ZİNCİR	mm
Adım	38.1
Zincir Ara Genişliği	25.4
Makara Çapı Ø D	25.4

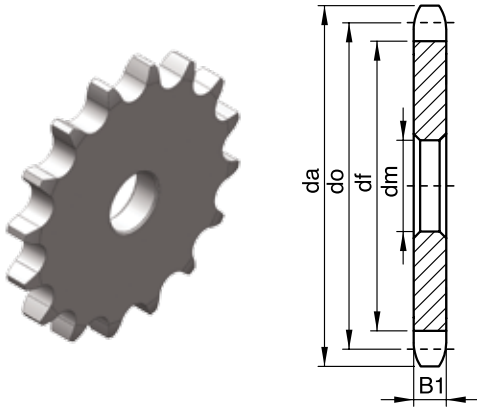
\* Kaynaklı Göbek



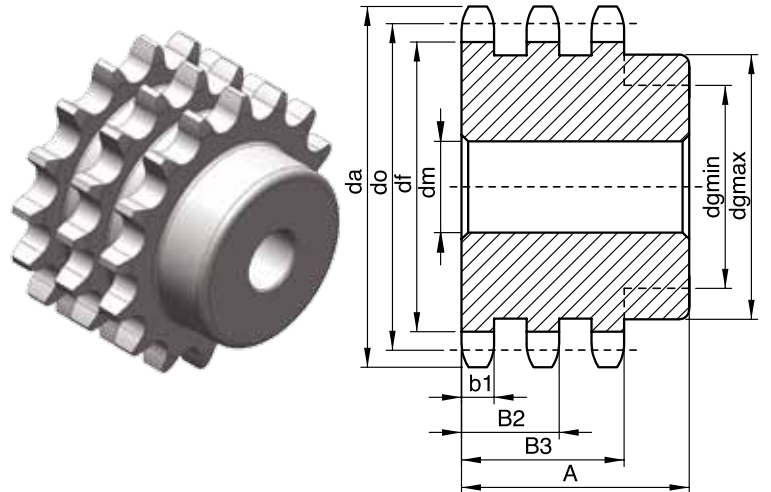
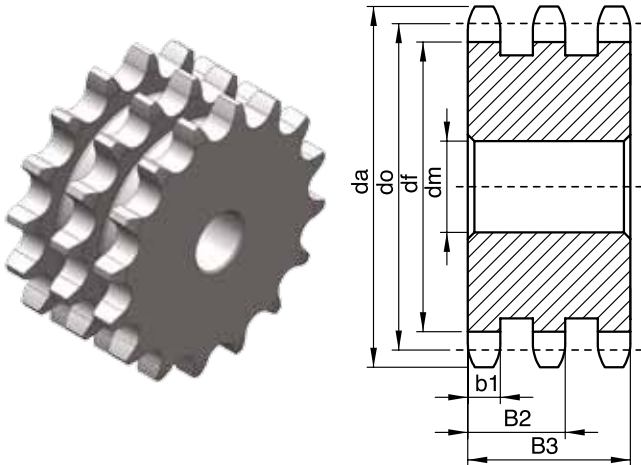
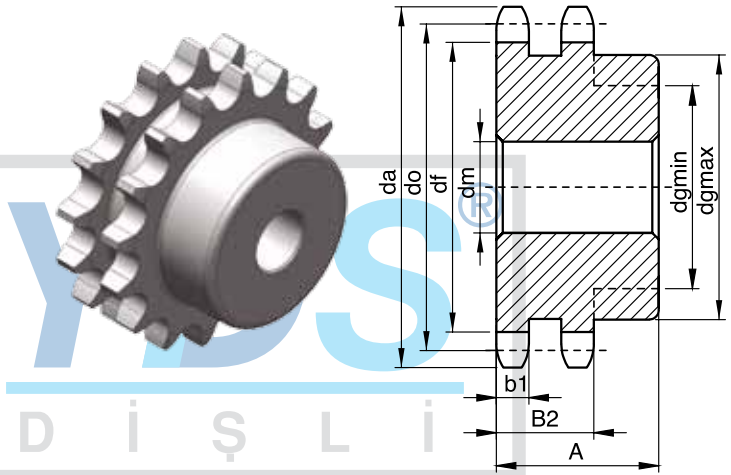
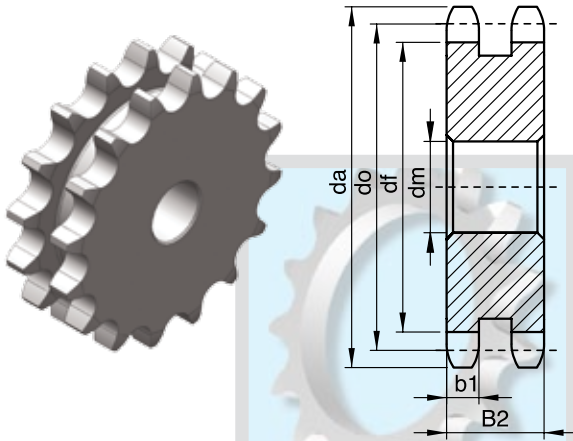
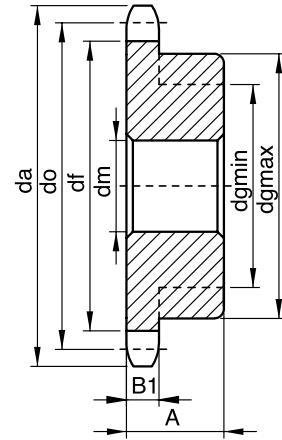
Diş Sayısı Z	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Delik Çapı dm	Göbek Çapı dgmax	Tek Sıra		Çift Sıra		Üç Sıra	
						A	Göbek Çapı dgmin	A	Göbek Çapı dgmin	A	Göbek Çapı dgmin
8	132.0	116.15	88.21	25	71	70	70	120	70	180	70
9	148.4	129.96	102.02	25	85	70	84	120	84	180	84
10	162.3	143.84	115.90	25	99	60	75*	120	75*	180	75*
11	176.3	157.77	129.83	25	113	60	90*	120	90*	180	90*
12	189.5	171.74	143.80	25	127	60	105*	120	105*	180	105*
13	204.2	185.74	157.80	25	141	60	105*	120	105*	180	105*
14	218.2	199.76	171.82	25	155	60	105*	120	105*	180	105*
15	232.3	213.79	185.85	25	169	60	105*	120	105*	180	105*
16	246.3	227.84	199.90	30	183	60	105*	120	105*	180	105*
17	260.3	241.91	213.97	30	197	65	115*	125	115*	185	115*
18	274.0	255.98	228.04	30	211	65	115*	125	115*	185	115*
19	289.0	270.06	242.12	30	225	65	115*	125	115*	185	115*
20	303.0	284.14	256.20	30	239	65	125*	125	125*	185	125*
21	317.0	298.24	270.30	30	253	65	125*	125	125*	185	125*
22	331.0	312.34	284.40	30	267	65	125*	125	125*	185	125*
23	345.0	326.44	298.50	30	281	65	125*	125	125*	185	125*
24	359.0	340.54	312.60	30	295	70	135*	130	135*	190	135*
25	373.0	354.65	326.71	30	310	70	135*	130	135*	190	135*
26	387.0	368.77	340.83	30	324	70	135*	130	135*	190	135*
27	401.4	382.88	354.94	30	338	70	145*	130	145*	190	145*
28	416.0	397.00	369.06	30	352	70	145*	130	145*	190	145*
29	430.0	411.12	383.18	30	366	70	145*	130	145*	190	145*
30	444.0	425.24	397.30	30	380	70	145*	130	145*	190	145*
31	458.0	439.37	411.43	30	394	70	180*	130	180*	190	180*
32	472.0	453.49	425.55	30	408	70	180*	130	180*	190	180*
33	486.0	467.62	439.68	30	423	70	180*	130	180*	190	180*
34	500.0	481.75	453.81	30	437	75	180*	135	180*	195	180*
35	514.0	495.88	467.94	30	451	75	200*	135	200*	195	200*
36	529.0	510.01	482.07	30	465	75	200*	135	200*	195	200*
37	543.0	524.14	496.20	30	479	75	200*	135	200*	195	200*
38	557.0	538.27	510.33	30	493	75	200*	135	200*	195	200*
39	571.0	552.40	524.46	30	507	75	200*	135	200*	195	200*
40	585.0	566.54	538.60	30	521	75	200*	135	200*	195	200*
41	599.0	580.67	552.73	30	536	80	200*	135	200*	195	200*
42	613.0	594.81	566.87	30	550	80	200*	135	200*	195	200*
43	628.0	608.94	581.00	30	564	80	200*	135	200*	195	200*
44	642.0	623.08	595.14	30	578	80	200*	135	200*	195	200*
45	656.0	637.22	609.28	30	592	80	200*	135	200*	195	200*
46	670.0	651.35	623.41	30	606	80	200*	135	200*	195	200*
47	685.0	665.49	637.55	30	620	80	200*	135	200*	195	200*
48	699.0	679.63	651.69	30	635	80	200*	135	200*	195	200*
49	713.0	693.77	665.83	35	649	80	200*	135	200*	195	200*
50	726.0	707.91	679.97	35	663	80	200*	135	200*	195	200*
51	740.0	722.05	694.11	35	677	80	200*	135	200*	195	200*
52	755.0	736.19	708.25	35	691	80	250*	135	250*	195	250*
53	769.0	750.33	722.39	35	705	80	250*	135	250*	195	250*
54	784.0	764.47	736.53	35	719	80	250*	135	250*	195	250*
55	798.0	778.61	750.67	35	734	80	250*	135	250*	195	250*
56	812.0	792.75	764.81	35	748	80	250*	135	250*	195	250*
57	825.0	806.89	778.95	35	762	80	250*	135	250*	195	250*
58	839.0	821.04	793.10	35	776	80	250*	135	250*	195	250*
59	853.0	835.18	807.24	35	790	80	250*	135	250*	195	250*
60	869.0	849.32	821.38	35	804	80	250*	135	250*	195	250*
62	898.0	877.61	849.67	35	833	80	250*	135	250*	195	250*
64	926.0	905.89	877.95	35	861	80	250*	135	250*	195	250*
65	940.0	920.03	892.09	35	875	80	250*	135	250*	195	250*
66	954.0	934.18	906.24	35	889	80	250*	135	250*	195	250*
68	983.0	962.47	934.53	35	917	80	250*	135	250*	195	250*
70	1011.0	990.75	962.81	40	946	85	300*	140	300*	200	300*
72	1039.0	1019.04	991.10	40	974	85	300*	140	300*	200	300*
75	1082.0	1061.48	1033.54	40	1016	85	300*	140	300*	200	300*
76	1095.0	1075.62	1047.68	40	1031	85	300*	140	300*	200	300*
78	1123.0	1103.91	1075.97	40	1059	85	300*	140	300*	200	300*
80	1151.0	1132.20	1104.26	40	1087	85	300*	140	300*	200	300*
85	1222.0	1202.93	1174.99	40	1158	85	300*	140	300*	200	300*
90	1294.0	1273.66	1245.72	40	1229	85	300*	140	300*	200	300*
95	1364.0	1344.39	1316.45	40	1299	85	300*	140	300*	200	300*
100	1435.0	1415.12	1387.18	40	1370	85	300*	140	300*	200	300*
110	1577.0	1556.59	1528.65	45	1512	85	300*	140	300*	200	300*
114	1633.0	1613.18	1585.24	45	1568	85	300*	140	300*	200	300*
120	1718.0	1698.06	1670.12	45	1653	85	300*	140	300*	200	300*
125	1789.0	1768.80	1740.86	45	1724	85	300*	140	300*	200	300*



TİP A



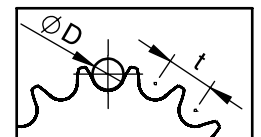
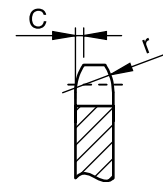
TİP B



DİŞLİ	mm
r	44
C	5
B1	29.4
b1	28.8
B2	88.4
B3	148

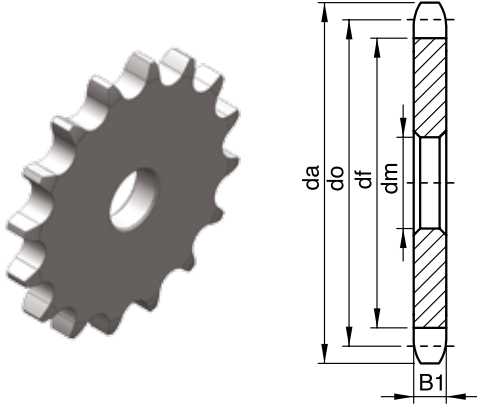
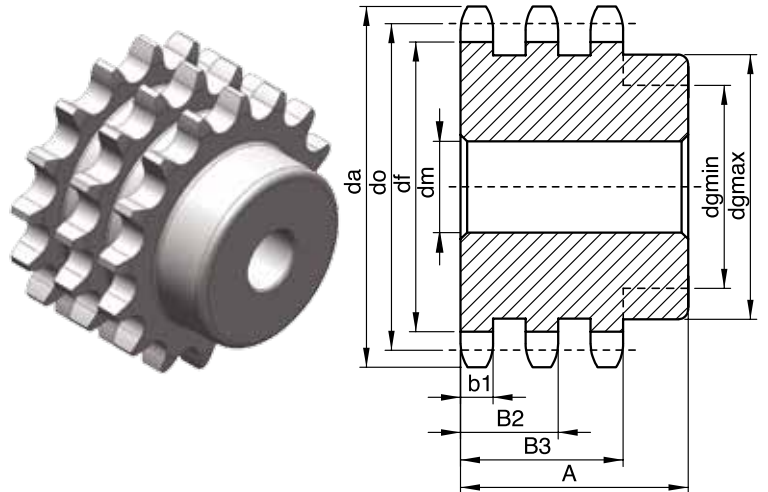
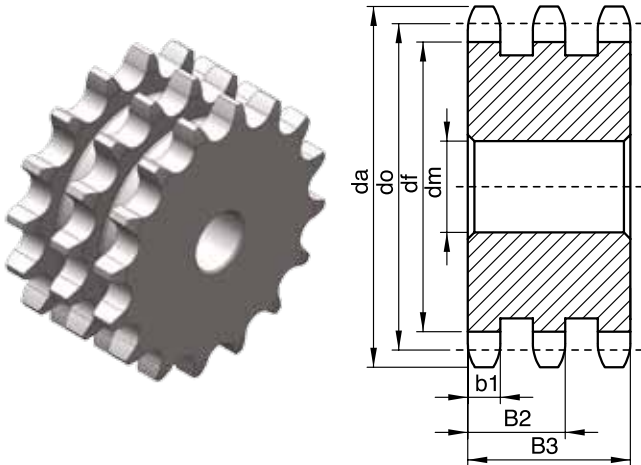
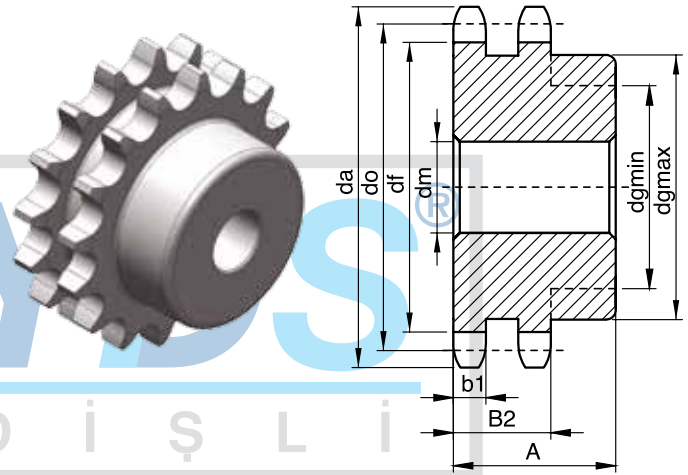
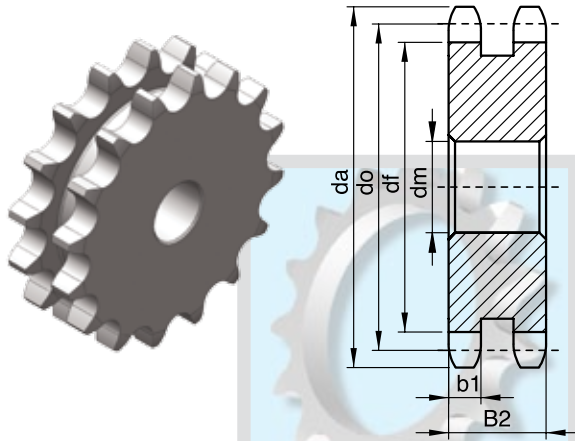
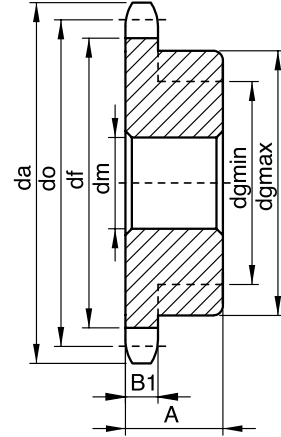
ZİNCİR	mm
Adım	44.45
Zincir Ara Genişliği	30.99
Makara Çapı Ø D	27.94

\* Kaynaklı Göbek





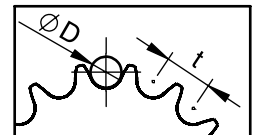
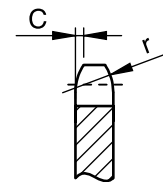
Diş Sayısı Z	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Delik Çapı dm	Göbek Çapı dgmax	Tek Sıra		Çift Sıra		Üç Sıra	
						A	Göbek Çapı dgmin	A	Göbek Çapı dgmin	A	Göbek Çapı dgmin
8	153.2	132.75	103.54	25	80	60	60*	120	60*	180	60*
9	169.0	148.53	119.32	25	96	60	75*	120	75*	180	75*
10	185.0	164.39	135.18	25	112	60	85*	120	85*	180	85*
11	200.8	180.31	151.10	30	128	60	95*	120	95*	180	95*
12	216.8	196.28	167.07	30	144	60	105*	120	105*	180	105*
13	232.8	212.27	183.06	30	160	60	115*	120	115*	180	115*
14	248.8	228.29	199.08	30	176	60	125*	120	125*	180	125*
15	264.8	244.33	215.12	30	192	65	125*	125	125*	185	125*
16	280.9	260.39	231.18	30	208	65	125*	125	125*	185	125*
17	296.9	276.46	247.25	30	224	65	125*	125	125*	185	125*
18	313.0	292.55	263.34	30	240	65	135*	125	135*	185	135*
19	329.1	308.64	279.43	30	256	65	135*	125	135*	185	135*
20	345.2	324.74	295.53	30	272	65	135*	125	135*	185	135*
21	361.3	340.84	311.63	30	288	65	145*	125	145*	185	145*
22	377.5	356.96	327.75	30	305	65	145*	125	145*	185	145*
23	393.6	373.07	343.86	30	321	65	145*	125	145*	185	145*
24	409.7	389.19	359.98	30	337	70	180*	130	180*	190	180*
25	425.8	405.32	376.11	30	353	70	180*	130	180*	190	180*
26	441.9	421.45	392.24	30	369	70	180*	130	180*	190	180*
27	458.1	437.58	408.37	30	385	70	180*	130	180*	190	180*
28	474.2	453.72	424.51	30	401	70	180*	130	180*	190	180*
29	490.4	469.85	440.64	30	418	70	180*	130	180*	190	180*
30	506.5	485.99	456.78	30	434	70	200*	130	200*	190	200*
31	523.0	502.13	472.92	30	450	70	200*	130	200*	190	200*
32	538.8	518.28	489.07	30	466	70	200*	130	200*	190	200*
33	556.0	534.42	505.21	30	482	70	200*	130	200*	190	200*
34	572.0	550.57	521.36	30	498	75	200*	135	200*	195	200*
35	589.5	566.72	537.51	30	514	75	200*	135	200*	195	200*
36	605.0	582.86	553.65	30	531	75	250*	135	250*	195	250*
37	621.0	599.01	569.80	30	547	75	250*	135	250*	195	250*
38	635.5	615.17	585.96	30	563	75	250*	135	250*	195	250*
39	654.0	631.32	602.11	30	579	75	250*	135	250*	195	250*
40	670.3	647.47	618.26	30	595	75	250*	135	250*	195	250*
41	686.0	663.63	634.42	30	611	75	250*	135	250*	195	250*
42	703.0	679.78	650.57	35	627	75	250*	135	250*	195	250*
43	719.0	695.94	666.73	35	644	75	250*	135	250*	195	250*
44	734.0	712.09	682.88	35	660	75	250*	135	250*	195	250*
45	751.0	728.25	699.04	35	676	75	250*	135	250*	195	250*
46	767.0	744.41	715.20	35	692	75	250*	135	250*	195	250*
47	783.0	760.56	731.35	35	708	75	250*	135	250*	195	250*
48	800.0	776.72	747.51	35	724	75	250*	135	250*	195	250*
49	816.0	792.88	763.67	35	741	75	250*	135	250*	195	250*
50	831.8	809.04	779.83	35	757	75	250*	135	250*	195	250*
51	848.0	825.20	795.99	35	773	75	250*	135	250*	195	250*
52	864.0	841.36	812.15	35	789	75	250*	135	250*	195	250*
53	880.0	857.52	828.31	35	805	75	250*	135	250*	195	250*
54	896.0	873.68	844.47	35	821	75	250*	135	250*	195	250*
55	913.0	889.84	860.63	35	838	75	250*	135	250*	195	250*
56	929.0	906.00	876.79	35	854	75	250*	135	250*	195	250*
57	945.0	922.16	892.95	35	870	75	250*	135	250*	195	250*
58	961.0	938.33	909.12	35	886	75	250*	135	250*	195	250*
59	977.0	954.49	925.28	35	902	75	250*	135	250*	195	250*
60	993.4	970.65	941.44	35	918	75	250*	135	250*	195	250*
62	1026.0	1002.98	973.77	40	951	80	300*	140	300*	200	300*
64	1058.0	1035.30	1006.09	40	983	80	300*	140	300*	200	300*
65	1074.0	1051.47	1022.26	40	999	80	300*	140	300*	200	300*
66	1090.0	1067.63	1038.42	40	1015	80	300*	140	300*	200	300*
68	1123.0	1099.96	1070.75	40	1048	80	300*	140	300*	200	300*
70	1155.0	1132.29	1103.08	40	1080	80	300*	140	300*	200	300*
72	1187.0	1164.62	1135.41	40	1112	80	300*	140	300*	200	300*
75	1236.0	1213.12	1183.91	40	1161	80	300*	140	300*	200	300*
76	1252.0	1229.28	1200.07	40	1177	80	300*	140	300*	200	300*
78	1284.0	1261.61	1232.40	40	1209	80	300*	140	300*	200	300*
80	1317.0	1293.94	1264.73	40	1242	80	300*	140	300*	200	300*
85	1398.0	1374.78	1345.57	40	1322	80	300*	140	300*	200	300*
90	1478.0	1455.61	1426.40	40	1403	80	300*	140	300*	200	300*
95	1559.0	1536.44	1507.23	45	1484	80	300*	140	300*	200	300*
100	1640.0	1617.28	1588.07	45	1565	80	300*	140	300*	200	300*
110	1802.0	1778.96	1749.75	45	1727	80	300*	140	300*	200	300*
114	1866.0	1843.63	1814.42	45	1791	80	300*	140	300*	200	300*
120	1963.0	1940.64	1911.43	45	1888	80	300*	140	300*	200	300*
125	2044.0	2021.48	1992.27	50	1969	85	300*	145	300*	205	300*

**TİP A****TİP B**

DİŞLİ	mm
r	51
C	5
B1	29.4
b1	28.8
B2	87.4
B3	146

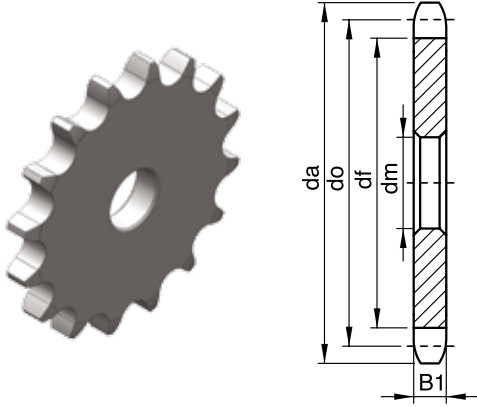
ZİNCİR	mm
Adım	50.8
Zincir Ara Genişliği	30.99
Makara Çapı Ø D	29.21

\* Kaynaklı Göbek

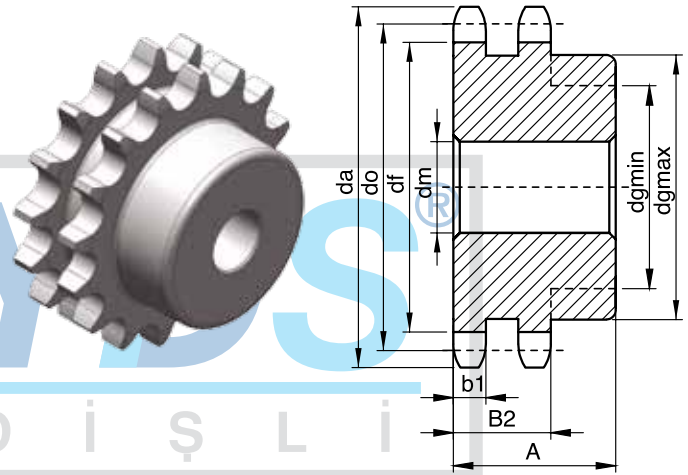
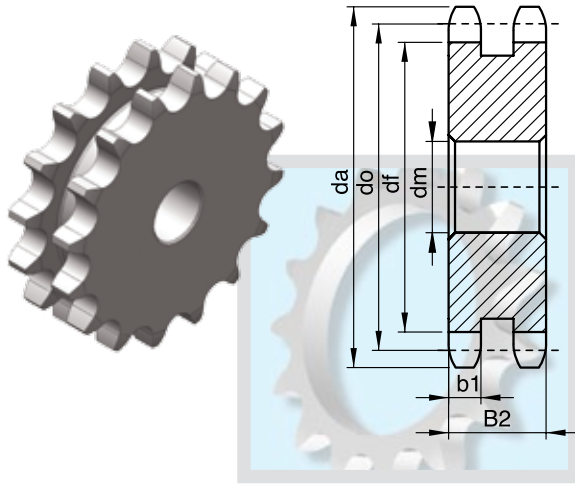
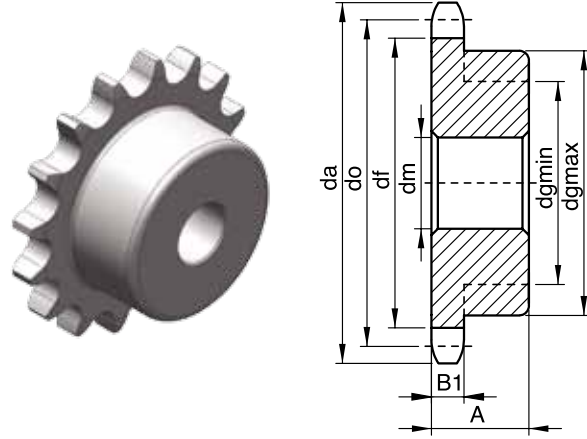


Diş Sayısı Z	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Delik Çapı dm	Göbek Çapı dgmax	Tek Sıra		Çift Sıra	
						A	Göbek Çapı dgmin	A	Göbek Çapı dgmin
10	35.7	30.82	25.74	8	18	20	17	22	17
11	38.7	33.81	28.73	10	21	25	20	25	20
12	41.7	36.80	31.72	10	24	25	23	25	23
13	44.7	39.80	34.72	10	27	25	26	25	26
14	47.7	42.80	37.72	10	30	25	29	25	29
15	50.7	45.81	40.73	10	33	25	30	25	30
16	53.7	48.82	43.74	12	36	25	32	30	32
17	56.7	51.84	46.76	12	39	25	35	30	35
18	59.7	54.85	49.77	12	42	25	38	30	38
19	62.8	57.87	52.79	12	45	25	40	30	41
20	65.8	60.89	55.81	12	48	25	40	30	44
21	68.8	63.91	58.83	12	51	25	43	30	47
22	71.8	66.93	61.85	12	54	25	43	30	50
23	74.8	69.95	64.87	12	57	25	47	30	53
24	77.9	72.97	67.89	12	60	25	49	30	56
25	80.9	76.00	70.92	12	63	25	52	30	59
26	83.9	79.02	73.94	14	66	25	55	30	62
27	86.9	82.05	76.97	14	69	25	55	30	65
28	90.0	85.07	79.99	14	72	25	55	30	68
30	96.0	91.12	86.04	14	78	25	55	30	74
32	102.1	97.18	92.10	14	84	25	60	30	75
34	108.1	103.23	98.15	14	90	25	60	30	75
35	111.1	106.26	101.18	14	93	25	60	30	75
36	114.2	109.29	104.21	14	96	25	65	30	85
38	120.2	115.34	110.26	16	103	25	65	30	85
40	126.3	121.40	116.32	16	109	25	75	30	85
45	141.4	136.55	131.47	16	124	25	65	35	85
48	150.5	145.64	140.56	18	133	32	75*	40	75*
51	159.6	154.72	149.64	18	142	32	75*	40	75*
57	177.8	172.91	167.83	20	160	32	75*	40	75*
60	186.9	182.00	176.92	20	169	32	80*	40	80*
65	202.0	197.15	192.07	20	184	32	80*	40	80*
70	217.2	212.30	207.22	20	200	32	85*	40	85*
76	235.4	230.49	225.41	20	218	32	85*	40	85*

TİP A



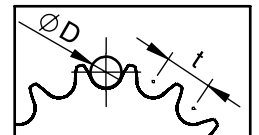
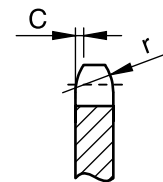
TİP B



DİŞLİ	mm
r	10
C	1.2
B1	4.4
b1	4.3
B2	14.4
B3	24.5

ZİNCİR	mm
Adım	9.525
Zincir Ara Genişliği	4.77
Makara Çapı Ø D	5.08

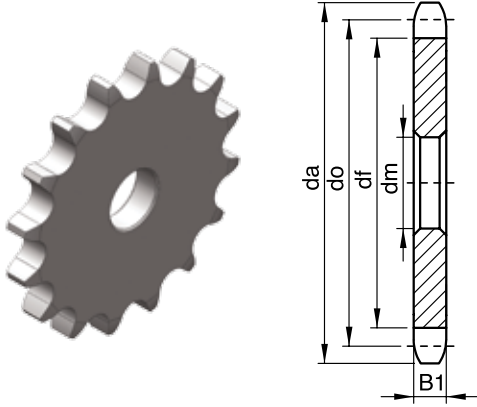
\* Kaynaklı Göbek



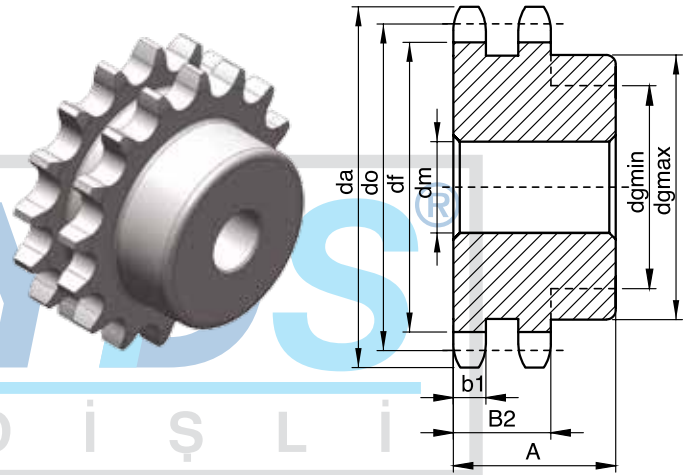
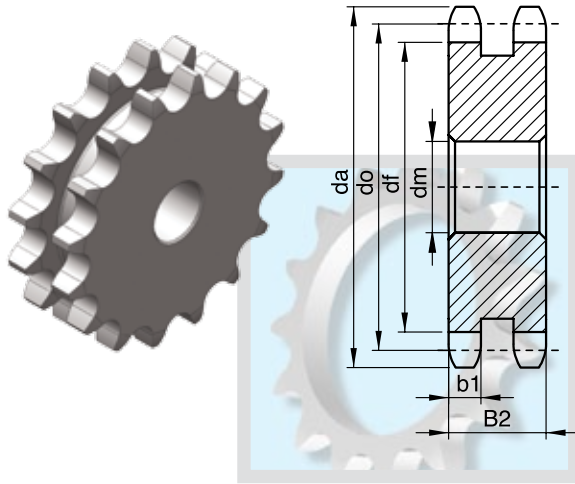
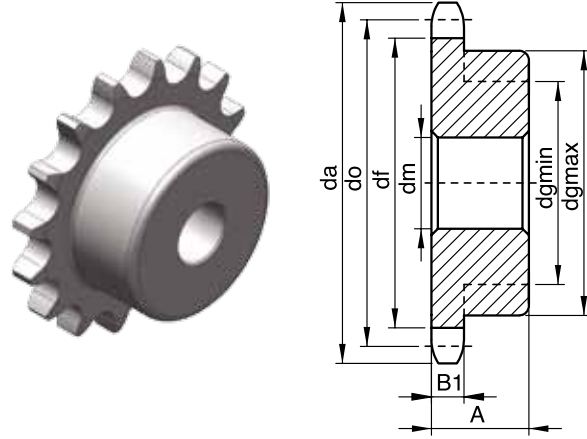
Diş Sayısı Z	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Delik Çapı dm	Göbek Çapı dgmax	Tek Sıra		Çift Sıra	
						A	Göbek Çapı dgmin	A	Göbek Çapı dgmin
10	47.7	41.10	33.16	10	25	25	24	32	24
11	51.6	45.08	37.14	10	29	25	28	35	28
12	55.6	49.07	41.13	10	33	26	32	35	32
13	59.6	53.07	45.13	10	37	26	34	35	34
14	63.6	57.07	49.13	10	41	26	36	35	39
15	67.6	61.08	53.14	10	45	26	40	35	41
16	71.7	65.10	57.16	12	49	26	45	35	45
17	75.7	69.12	61.18	12	53	26	47	35	49
18	79.7	73.14	65.20	12	57	26	51	35	53
19	83.7	77.16	69.22	12	61	26	55	35	57
20	87.7	81.18	73.24	12	65	26	59	40	61
21	91.8	85.21	77.27	12	69	26	63	40	65
22	95.8	89.24	81.30	12	73	26	65	40	65
23	99.8	93.27	85.33	14	77	26	65	40	65
24	103.9	97.30	89.36	14	81	26	65	40	70
25	107.9	101.33	93.39	14	85	26	65	40	75
26	111.9	105.36	97.42	14	89	26	65	40	80
27	116.0	109.40	101.46	14	93	26	65	40	80
28	120.0	113.43	105.49	14	97	26	65	40	85
30	128.1	121.50	113.56	14	105	26	75	40	95
32	136.1	129.57	121.63	16	113	26	85	40	95
34	144.2	137.64	129.70	16	122	26	85	40	95
35	148.2	141.68	133.74	16	126	26	85	40	95
36	152.3	145.72	137.78	18	130	35	80*	50	80*
38	160.4	153.79	145.85	18	138	35	80*	50	80*
40	168.4	161.87	153.93	20	146	35	80*	50	80*
45	188.6	182.06	174.12	20	166	35	80*	50	80*
48	200.7	194.18	186.24	20	178	35	90*	50	90*
51	212.9	206.30	198.36	20	190	35	90*	50	90*
57	237.1	230.54	222.60	20	214	35	90*	50	90*
60	249.2	242.66	234.72	20	227	35	90*	50	90*
65	269.4	262.87	254.93	20	247	35	90*	50	90*
70	289.6	283.07	275.13	20	267	35	90*	50	90*
76	313.9	307.32	299.38	20	291	35	95*	55	95*



TİP A



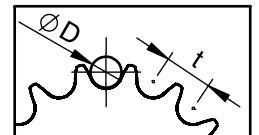
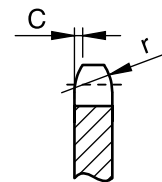
TİP B



DİŞLİ	mm
r	13.5
C	1.6
B1	7.4
b1	7.2
B2	21.6
B3	36

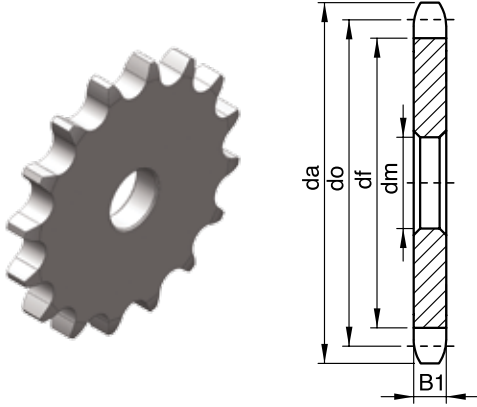
ZİNCİR	mm
Adım	12.7
Zincir Ara Geniřlięi	7.938
Makara apı Ø D	7.94

\* Kaynaklı Gbk

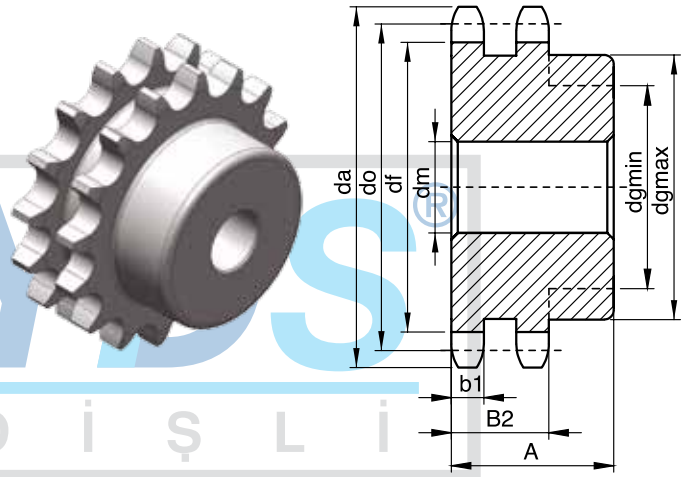
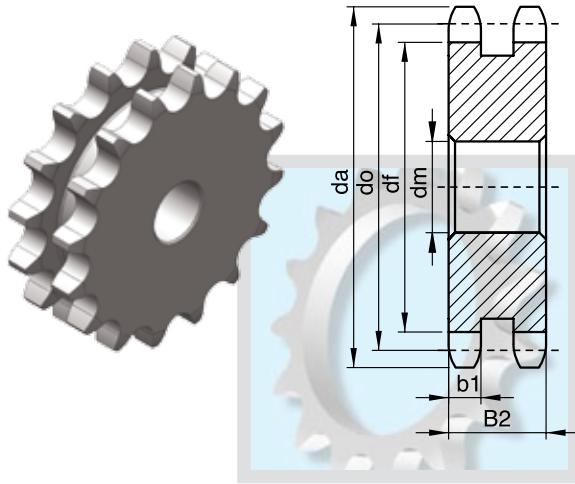
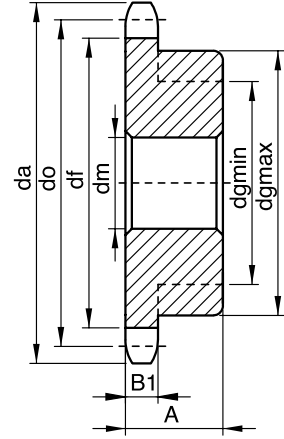


Diş Sayısı Z	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Delik Çapı dm	Göbek Çapı dgmax	Tek Sıra		Çift Sıra	
						A	Göbek Çapı dgmin	A	Göbek Çapı dgmin
10	57.5	51.37	41.21	10	32	25	31	40	31
11	63.0	56.35	46.19	12	37	28	35	40	36
12	68.0	61.34	51.18	12	42	28	38	40	40
13	73.0	66.33	56.17	12	47	28	42	40	44
14	78.0	71.34	61.18	14	52	28	47	40	49
15	83.0	76.35	66.19	14	57	28	52	40	54
16	88.0	81.37	71.21	14	62	28	55	45	59
17	93.0	86.39	76.23	14	67	28	55	45	64
18	98.3	91.42	81.26	16	72	28	65	45	69
19	103.3	96.45	86.29	16	77	28	65	45	74
20	108.4	101.48	91.32	16	82	28	70	45	79
21	113.4	106.51	96.35	16	87	28	70	45	80
22	118.0	111.55	101.39	16	92	28	75	45	85
23	123.4	116.59	106.43	18	97	28	75	45	90
24	128.3	121.62	111.46	18	103	28	75	45	95
25	134.0	126.66	116.50	18	108	28	75	45	100
26	139.0	131.70	121.54	18	113	28	80	45	105
27	144.0	136.74	126.58	18	118	28	80	45	105
28	148.7	141.79	131.63	18	123	28	80	45	110
30	158.8	151.87	141.71	20	133	38	80*	50	80*
32	168.9	161.96	151.80	20	143	38	80*	50	80*
34	179.0	172.05	161.89	20	153	38	80*	50	80*
35	184.1	177.10	166.94	20	158	38	80*	50	80*
36	189.1	182.15	171.99	20	163	38	80*	50	80*
38	199.2	192.24	182.08	20	173	38	80*	50	80*
40	209.3	202.33	192.17	20	183	38	90*	50	90*
45	234.0	227.58	217.42	20	208	38	90*	50	90*
48	249.0	242.73	232.57	20	224	38	90*	50	90*
51	264.0	257.87	247.71	20	239	38	105*	50	105*
57	295.0	288.18	278.02	20	269	40	105*	50	105*
60	310.0	303.33	293.17	25	284	40	105*	55	105*
65	335.0	328.58	318.42	25	309	40	105*	55	105*
70	360.0	353.84	343.68	25	335	45	115*	55	115*
76	391.0	384.15	373.99	25	365	45	115*	55	115*

TİP A



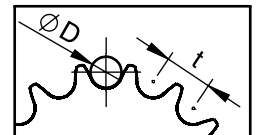
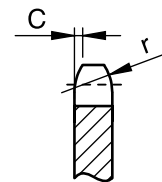
TİP B



DİŞLİ	mm
r	17
C	2
B1	9
b1	8.8
B2	26.9
B3	45

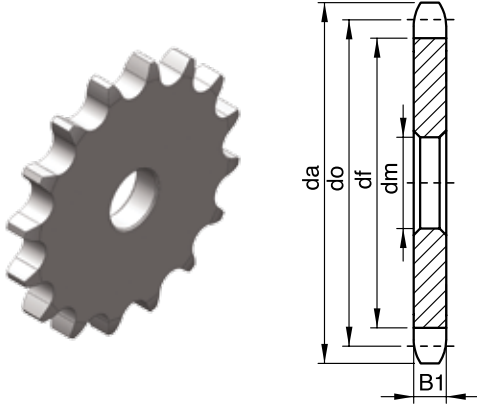
ZİNCİR	mm
Adım	15.875
Zincir Ara Genişliği	9.52
Makara Çapı Ø D	10.16

\* Kaynaklı Göbek

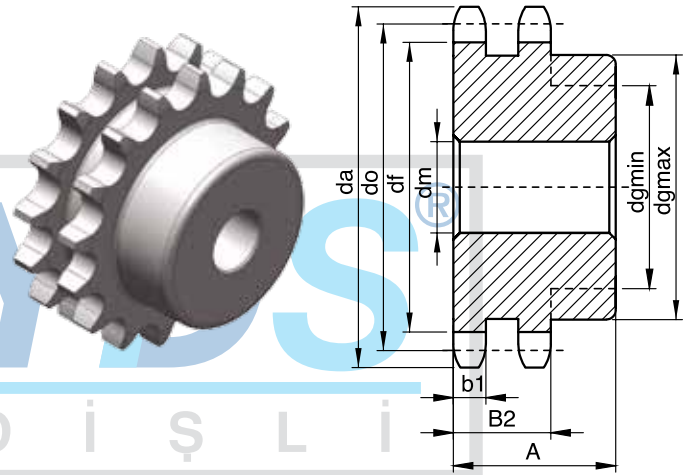
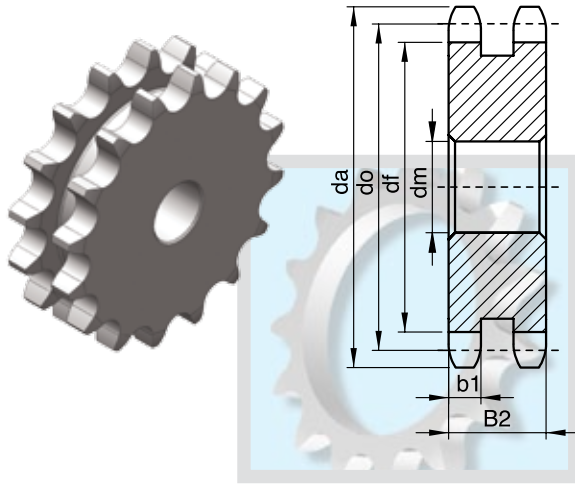
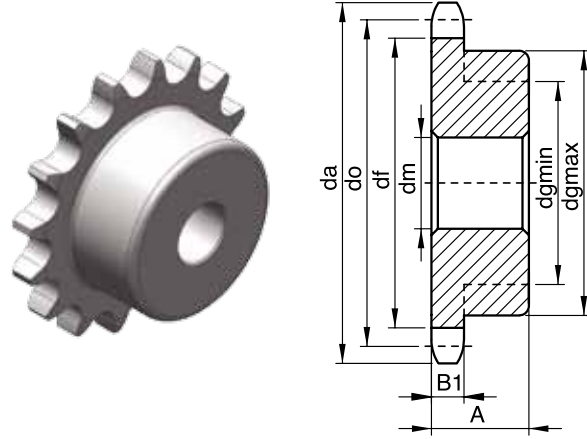


Diş Sayısı Z	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Delik Çapı dm	Göbek Çapı dgmax	Tek Sıra		Çift Sıra	
						A	Göbek Çapı dgmin	A	Göbek Çapı dgmin
10	71.5	61.65	49.74	14	39	30	38	45	38
11	77.5	67.62	55.71	14	45	30	41	50	42
12	83.5	73.60	61.69	14	51	30	47	50	48
13	89.5	79.60	67.69	14	57	30	53	50	54
14	95.5	85.61	73.70	14	63	30	59	50	60
15	101.5	91.63	79.72	14	69	30	65	50	66
16	107.5	97.65	85.74	18	75	30	70	50	72
17	113.6	103.67	91.76	18	81	30	75	50	78
18	119.6	109.70	97.79	18	87	30	75	50	84
19	125.6	115.74	103.83	18	93	30	75	50	90
20	131.7	121.78	109.87	18	99	30	75	50	95
21	137.7	127.82	115.91	20	105	30	85	50	95
22	143.8	133.86	121.95	20	111	30	85	50	95
23	149.8	139.90	127.99	20	117	30	85	50	105
24	155.8	145.95	134.04	20	123	40	80*	60	80*
25	161.9	151.99	140.08	20	129	40	80*	60	80*
26	167.9	158.04	146.13	20	135	40	80*	60	80*
27	174.0	164.09	152.18	20	142	40	80*	60	80*
28	180.0	170.14	158.23	20	148	40	80*	60	80*
30	192.1	182.25	170.34	20	160	40	80*	60	80*
32	204.2	194.35	182.44	20	172	40	90*	60	90*
34	216.4	206.46	194.55	20	184	40	90*	60	90*
35	222.4	212.52	200.61	20	190	40	90*	60	90*
36	228.5	218.57	206.66	20	196	40	90*	60	90*
38	240.6	230.69	218.78	20	208	40	90*	60	90*
40	252.7	242.80	230.89	20	220	40	90*	60	90*
45	283.0	273.09	261.18	20	251	40	90*	60	90*
48	301.2	291.27	279.36	25	269	45	90*	60	90*
51	319.3	309.45	297.54	25	287	45	105*	60	105*
57	355.7	345.81	333.90	25	323	45	115*	60	115*
60	373.9	363.99	352.08	25	341	45	115*	60	115*
65	404.2	394.30	382.39	25	372	45	125*	60	125*
70	434.5	424.61	412.70	25	402	45	125*	60	125*
76	470.9	460.98	449.07	25	438	45	125*	60	125*

TİP A



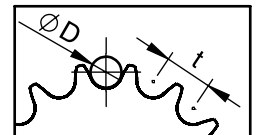
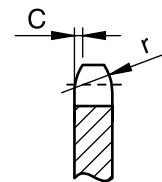
TİP B



DİŞLİ	mm
r	20
C	2.4
B1	12
b1	11.8
B2	34.6
B3	57.4

ZİNCİR	mm
Adım	19.05
Zincir Ara Geniřlięi	12.7
Makara apı Ø D	11.91

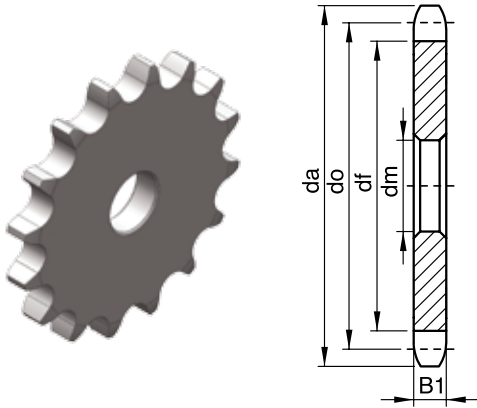
\* Kaynaklı Gbk



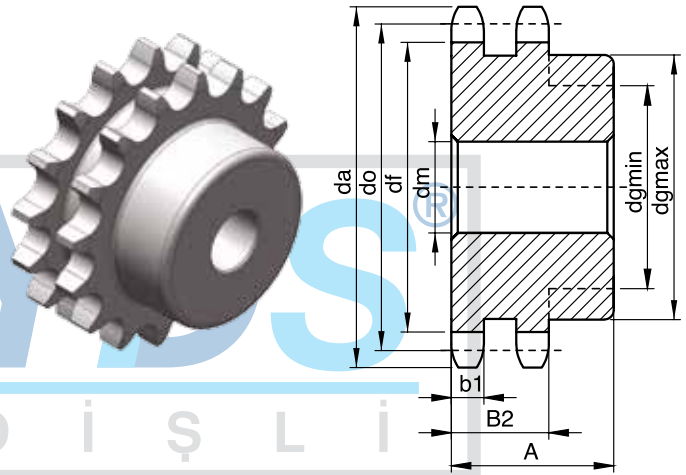
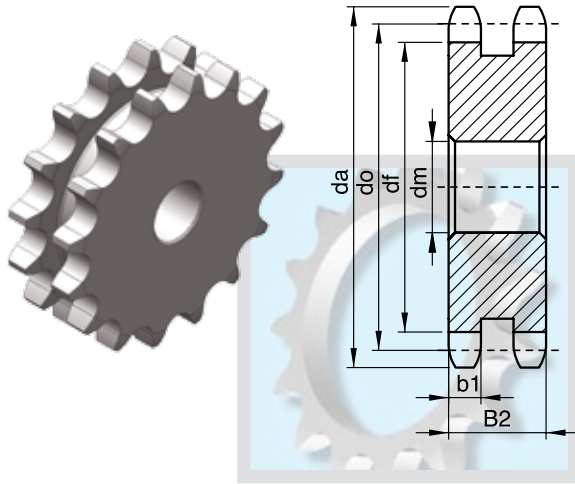
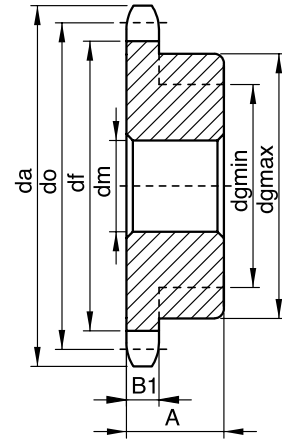


Diş Sayısı Z	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Delik Çapı dm	Göbek Çapı dgmax	Tek Sıra		Çift Sıra	
						A	Göbek Çapı dgmin	A	Göbek Çapı dgmin
10	95.3	82.20	66.32	20	53	35	50	68	51
11	103.3	90.16	74.28	20	61	36	56	68	59
12	111.3	98.14	82.26	20	69	36	64	68	67
13	119.3	106.14	90.26	20	77	36	73	68	75
14	127.3	114.15	98.27	20	85	36	79	68	83
15	135.3	122.17	106.29	20	93	36	87	68	91
16	143.3	130.20	114.32	20	101	36	95	68	99
17	149.0	138.23	122.35	20	109	36	95	68	107
18	159.4	146.27	130.39	20	117	45	80*	75	80*
19	167.4	154.32	138.44	20	125	45	80*	75	80*
20	175.5	162.37	146.49	20	133	45	80*	75	80*
21	183.5	170.42	154.54	20	141	45	80*	75	80*
22	191.6	178.48	162.60	20	149	45	80*	75	80*
23	199.7	186.54	170.66	20	157	45	80*	75	80*
24	207.7	194.60	178.72	20	165	45	90*	75	90*
25	215.8	202.66	186.78	20	174	45	90*	75	90*
26	223.8	210.72	194.84	25	182	45	90*	75	90*
27	231.9	218.79	202.91	25	190	45	90*	75	90*
28	240.0	226.86	210.98	25	198	45	90*	75	90*
30	256.1	243.00	227.12	25	214	45	105*	75	105*
32	272.3	259.14	243.26	25	230	45	105*	75	105*
34	288.4	275.28	259.40	25	246	45	105*	75	105*
35	296.5	283.36	267.48	25	254	45	105*	75	105*
36	304.6	291.43	275.55	25	262	45	105*	75	105*
38	320.7	307.58	291.70	25	278	45	115*	75	115*
40	336.9	323.74	307.86	25	295	45	115*	75	115*
45	377.2	364.12	348.24	25	335	50	125*	75	125*
48	401.5	388.36	372.48	25	359	50	135*	75	135*
51	425.7	412.60	396.72	25	383	50	135*	75	135*
57	474.2	461.08	445.20	25	432	50	145*	75	145*
60	498.5	485.33	469.45	25	456	50	145*	75	145*
65	538.9	525.73	509.85	30	497	60	150*	80	150*
70	579.3	566.15	550.27	30	537	60	150*	80	150*
76	627.8	614.64	598.76	30	586	65	180*	80	180*

TİP A



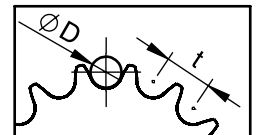
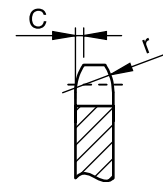
TİP B



DİŞLİ	mm
r	27
C	3.2
B1	15
b1	14.7
B2	44
B3	7.3

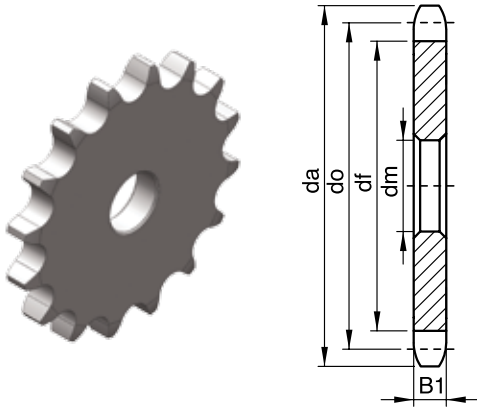
ZİNCİR	mm
Adım	25.4
Zincir Ara Geniřlięi	15.88
Makara apı Ø D	15.88

\* Kaynaklı Gbk

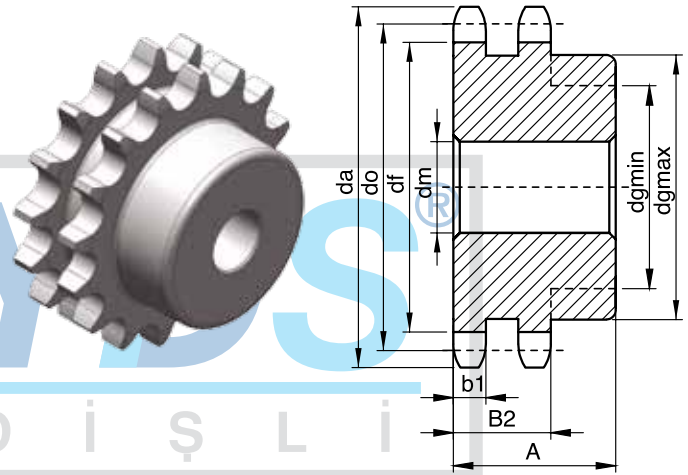
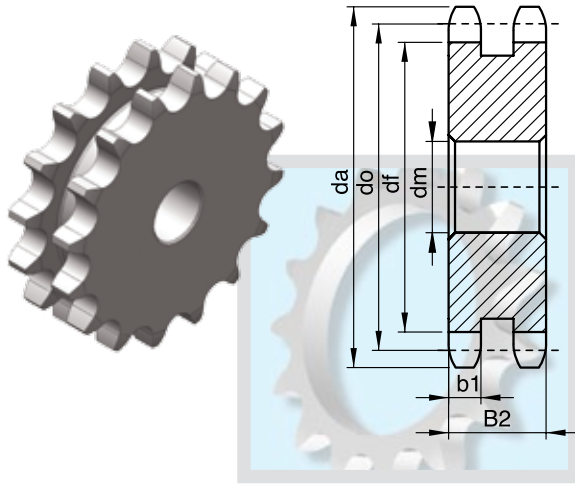
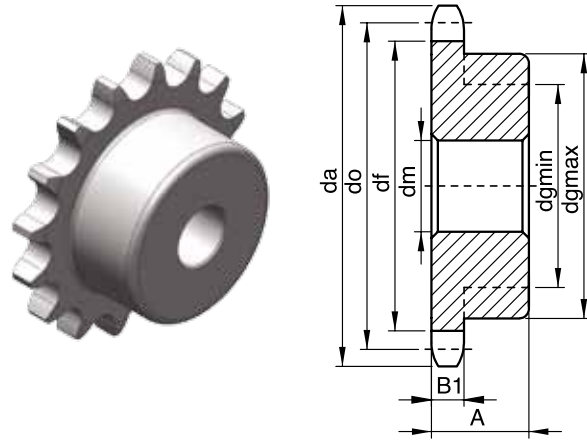


Diş Sayısı Z	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Delik Çapı dm	Göbek Çapı dgmax	Tek Sıra		Çift Sıra	
						A	Göbek Çapı dgmin	A	Göbek Çapı dgmin
10	117.9	102.75	83.70	20	67	40	65	75	65
11	127.8	112.70	93.65	20	77	45	72	75	75
12	137.8	122.67	103.62	20	86	45	83	75	85
13	147.8	132.67	113.62	20	96	45	93	75	95
14	157.8	142.68	123.63	20	107	50	85*	85	85*
15	167.9	152.71	133.66	20	117	50	85*	85	85*
16	177.9	162.75	143.70	20	127	50	85*	85	85*
17	187.9	172.79	153.74	25	137	50	85*	85	85*
18	198.0	182.84	163.79	25	147	50	85*	85	85*
19	208.1	192.90	173.85	25	157	50	90*	85	90*
20	218.1	202.96	183.91	25	167	50	90*	85	90*
21	228.2	213.03	193.98	25	177	50	90*	85	90*
22	238.3	223.10	204.05	25	187	50	90*	85	90*
23	248.3	233.17	214.12	25	197	50	90*	85	90*
24	258.4	243.25	224.20	25	207	50	115*	85	115*
25	268.5	253.32	234.27	25	217	50	115*	85	115*
26	278.6	263.41	244.36	25	227	50	115*	85	115*
27	288.6	273.49	254.44	25	237	50	115*	85	115*
28	298.7	283.57	264.52	25	247	50	115*	85	115*
30	318.9	303.75	284.70	30	268	55	125*	85	125*
32	339.1	323.92	304.87	30	288	55	125*	85	125*
34	359.3	344.10	325.05	30	308	55	135*	85	135*
35	369.4	354.20	335.15	30	318	55	135*	85	135*
36	379.5	364.29	345.24	30	328	55	135*	85	135*
38	399.6	384.48	365.43	30	348	55	135*	85	135*
40	419.8	404.67	385.62	30	368	55	145*	90	145*
45	470.3	455.15	436.10	30	419	55	145*	90	145*
48	500.6	485.45	466.40	30	449	60	145*	100	145*
51	530.9	515.75	496.70	30	480	60	150*	100	150*
57	591.5	576.35	557.30	30	540	65	150*	100	150*
60	621.8	606.66	587.61	30	570	65	180*	105	180*
65	672.3	657.17	638.12	30	621	65	180*	105	180*
70	722.8	707.68	688.63	35	672	65	200*	105	200*
76	783.5	768.30	749.25	35	732	75	200*	105	200*

TİP A



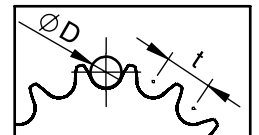
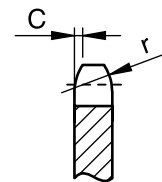
TİP B



DİŞLİ	mm
r	33.5
C	4
B1	18
b1	17.7
B2	53.5
B3	89.2

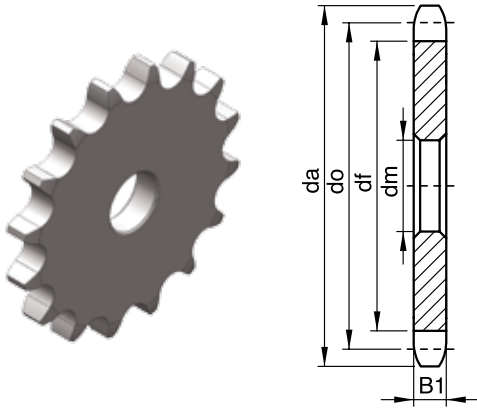
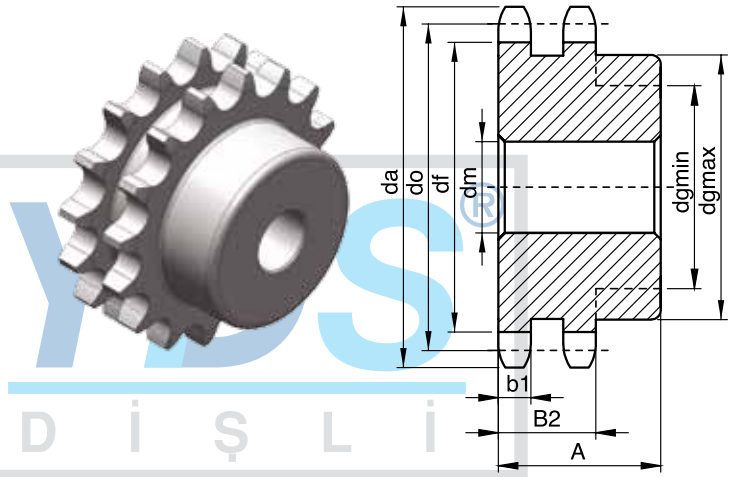
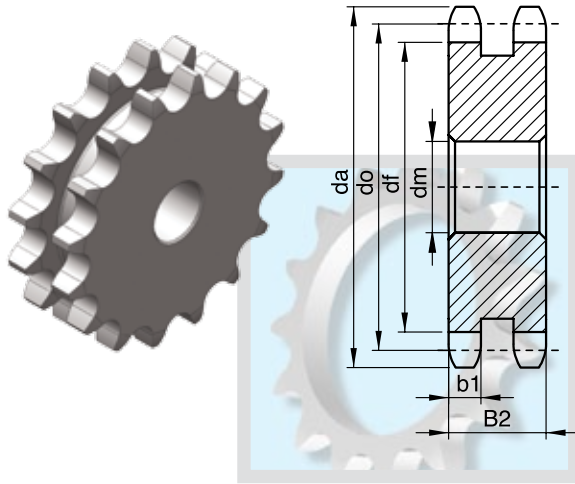
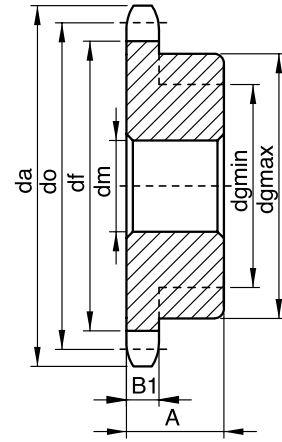
ZİNCİR	mm
Adım	31.75
Zincir Ara Genişliği	19.05
Makara Çapı Ø D	19.05

\* Kaynaklı Göbek



Diş Sayısı Z	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Delik Çapı dm	Göbek Çapı dgmax	Tek Sıra		Çift Sıra	
						A	Göbek Çapı dgmin	A	Göbek Çapı dgmin
10	142.8	123.29	101.07	20	80	45	79	95	79
11	154.7	135.23	113.01	25	92	55	75*	100	75*
12	166.7	147.21	124.99	25	104	55	85*	100	85*
13	178.7	159.20	136.98	25	116	55	85*	100	85*
14	190.7	171.22	149.00	25	128	55	95*	100	95*
15	202.7	183.25	161.03	25	140	55	95*	100	95*
16	214.8	195.29	173.07	25	152	55	105*	105	105*
17	226.8	207.35	185.13	25	164	55	105*	105	105*
18	238.9	219.41	197.19	25	176	55	115*	105	115*
19	251.0	231.48	209.26	25	188	55	115*	105	115*
20	263.0	243.55	221.33	25	200	55	125*	105	125*
21	275.1	255.63	233.41	25	212	60	125*	105	125*
22	287.2	267.72	245.50	25	224	60	125*	105	125*
23	299.3	279.80	257.58	25	236	60	125*	105	125*
24	311.4	291.90	269.68	30	248	60	135*	110	135*
25	323.5	303.99	281.77	30	260	60	135*	110	135*
26	335.6	316.09	293.87	30	273	60	135*	110	135*
27	347.7	328.19	305.97	30	285	60	135*	110	135*
28	359.8	340.29	318.07	30	297	60	145*	110	145*
30	384.0	364.49	342.27	30	321	60	145*	110	145*
32	408.2	388.71	366.49	30	345	60	180*	115	180*
34	432.4	412.93	390.71	30	369	60	180*	115	180*
35	444.5	425.04	402.82	30	382	60	180*	115	180*
36	456.6	437.15	414.93	30	394	60	180*	115	180*
38	480.9	461.37	439.15	30	418	60	180*	115	180*
40	505.1	485.60	463.38	30	442	60	200*	120	200*
45	565.7	546.19	523.97	30	503	75	200*	120	200*
48	602.0	582.54	560.32	30	539	75	200*	120	200*
51	638.4	618.90	596.68	30	575	75	200*	120	200*
57	711.1	691.62	669.40	35	648	75	200*	120	200*
60	747.5	727.99	705.77	35	684	75	200*	120	200*
65	808.1	788.60	766.38	35	745	75	250*	120	250*
70	868.7	849.22	827.00	35	806	75	250*	120	250*
76	941.4	921.96	899.74	35	878	75	250*	120	250*

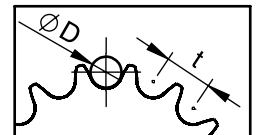
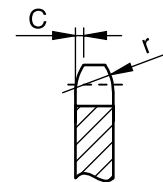


**TİP A****TİP B**

DİŞLİ	mm
r	40.5
C	4.8
B1	24.1
b1	23.6
B2	69
B3	114.4

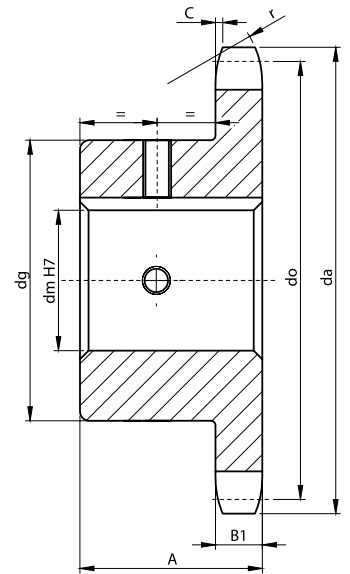
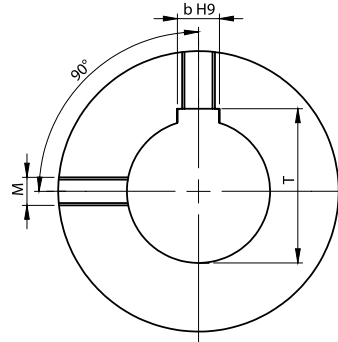
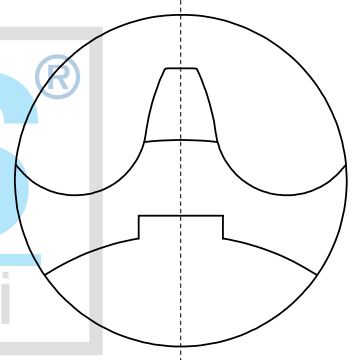
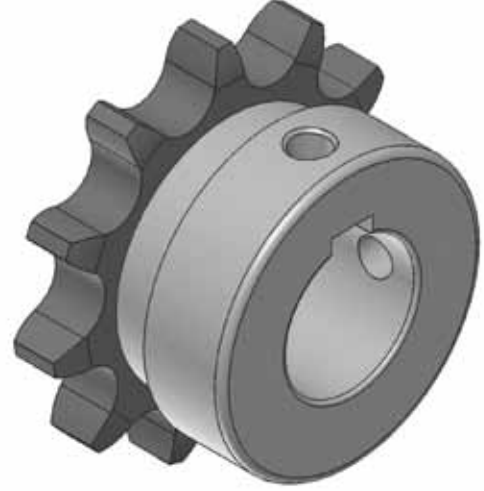
ZİNCİR	mm
Adım	38.1
Zincir Ara Genişliği	25.4
Makara Çapı Ø D	22.22

\* Kaynaklı Göbek



**Delik, Kama ve Setskur Vida Ölçü Tablosu**

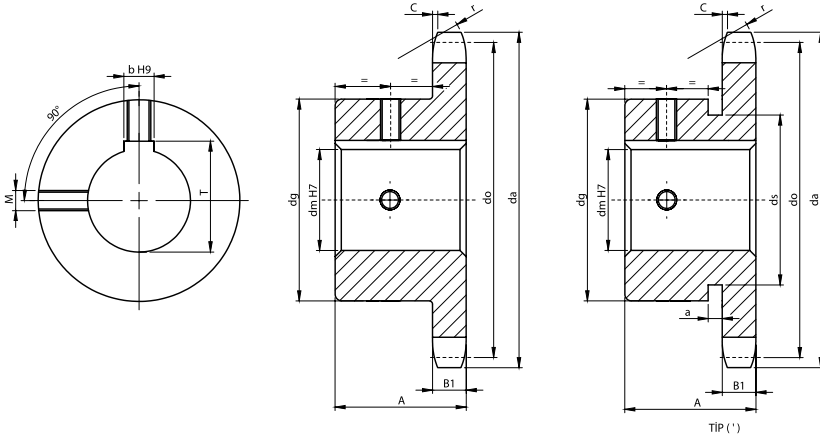
dm (H7)	b (H9)	T	M
10 <sup>+0,015</sup> <sub>-0</sub>	4	D + 1,8 (+0,1/0)	M3
11 <sup>+0,018</sup> <sub>-0</sub>	4	D + 1,8 (+0,1/0)	M3
12 <sup>+0,018</sup> <sub>-0</sub>	4	D + 1,8 (+0,1/0)	M3
14 <sup>+0,018</sup> <sub>-0</sub>	5	D + 2,3 (+0,1/0)	M4
16 <sup>+0,018</sup> <sub>-0</sub>	5	D + 2,3 (+0,1/0)	M4
18 <sup>+0,018</sup> <sub>20</sub>	6	D + 2,8 (+0,1/0)	M5
19 <sup>+0,021</sup> <sub>-0</sub>	6	D + 2,8 (+0,1/0)	M5
20 <sup>+0,021</sup> <sub>-0</sub>	6	D + 2,8 (+0,1/0)	M5
22 <sup>+0,021</sup> <sub>-0</sub>	6	D + 2,8 (+0,1/0)	M5
24 <sup>+0,021</sup> <sub>-0</sub>	8	D + 3,3 (+0,2/0)	M6
25 <sup>+0,021</sup> <sub>-0</sub>	8	D + 3,3 (+0,2/0)	M6
28 <sup>+0,021</sup> <sub>-0</sub>	8	D + 3,3 (+0,2/0)	M6
29 <sup>+0,021</sup> <sub>-0</sub>	8	D + 3,3 (+0,2/0)	M6
30 <sup>+0,021</sup> <sub>-0</sub>	8	D + 3,3 (+0,2/0)	M6
32 <sup>+0,025</sup> <sub>-0</sub>	10	D + 3,3 (+0,2/0)	M8
35 <sup>+0,025</sup> <sub>-0</sub>	10	D + 3,3 (+0,2/0)	M8
38 <sup>+0,025</sup> <sub>-0</sub>	10	D + 3,3 (+0,2/0)	M8
40 <sup>+0,025</sup> <sub>-0</sub>	12	D + 3,3 (+0,2/0)	M10
42 <sup>+0,025</sup> <sub>-0</sub>	12	D + 3,3 (+0,2/0)	M10
45 <sup>+0,025</sup> <sub>-0</sub>	14	D + 3,8 (+0,2/0)	M12
48 <sup>+0,025</sup> <sub>-0</sub>	14	D + 3,8 (+0,2/0)	M12
50 <sup>+0,025</sup> <sub>-0</sub>	14	D + 3,8 (+0,2/0)	M12
60 <sup>+0,030</sup> <sub>-0</sub>	18	D + 4,4 (+0,2/0)	M12
65 <sup>+0,030</sup> <sub>-0</sub>	18	D + 4,4 (+0,2/0)	M12
70 <sup>+0,030</sup> <sub>-0</sub>	20	D + 4,9 (+0,2/0)	M12
85 <sup>+0,035</sup> <sub>-0</sub>	22	D + 5,4 (+0,2/0)	M16



\*Kullanıma hazır dişlilerde 90°x2 adet setskur vida ve kama kanalı bulunmaktadır.

\*Bu ürünlerimizde müşteri isteğiyle modifikasyon yapılmaktadır.

\*Kullanıma hazır dişlilerdeki ısıl işlem ve kaplama işlemleri müşteri isteği doğrultusunda yapılmaktadır.



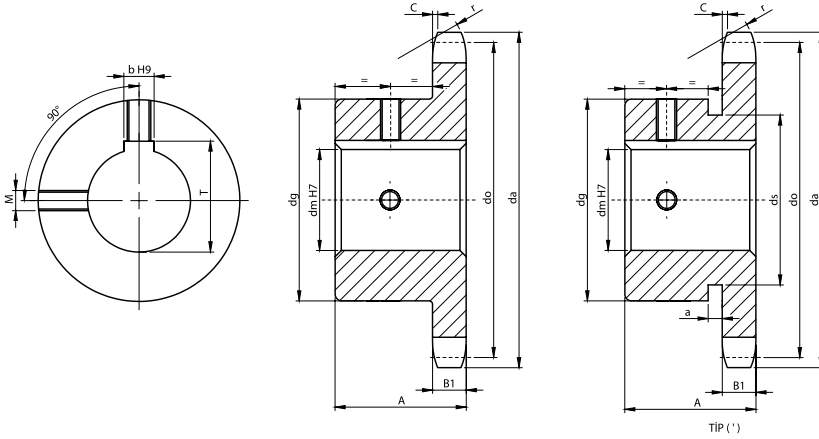
DİŞLİ	mm
r	10
C	1
B1	5.3
a	5.5
ds	df-2
ZİNCİR	mm
Adım	9.525
Zincir Ara Geniřlięi	5.72
Makara apı Ø D	6.35

' Tip

Dış Sayısı Z	Dış Üstü apı da	Delik apı dm	A	Göbek apı dg
10	34.0	10	20	24'
		11		26'
		12		29'
		14		31'
11	37.0	10	25	24
		12		26'
		14		29'
		15		30'
		16		31'
		18		35'
12	40.0	10	25	25
		12		26
		14		29'
		16		31'
13	43.0	10	25	28
		12		29
		14		31'
		16		35'
		18		35'
		20		35'
14	46.3	12	25	31
		14		35'
		16		35'
		18		35'
		19		35'
		20		35'
15	49.3	12	25	34
		14		35
		16		36
		18		38'
		19		42'
		20		42'
		22		42'
		24		42'
		25		42'
		26		42'
16	52.3	12	25	37
		14		37
		16		37
		18		37
		19		37
		20		37
		22		37
		24		37
		25		37
		26		37

Dış Sayısı Z	Dış Üstü apı da	Delik apı dm	A	Göbek apı dg
17	55.3	12	25	40
		14		40
		16		40
		18		40
		19		40
		20		40
		22		40
		24		40
		25		40
		26		40
18	58.3	12	25	43
		14		43
		16		43
		18		43
		19		43
		20		43
		22		43
		24		43
		25		43
		26		43
19	61.3	12	25	45
		14		45
		16		45
		18		45
		19		45
		20		45
		22		45
		24		45
		25		45
		26		45
20	64.3	12	25	46
		14		46
		16		46
		18		46
		19		46
		20		46
		22		46
		24		46
		25		46
		26		46
21	68.0	16	25	48
		18		48
		19		48
		20		48
		22		48
		24		48
		25		48
		26		48
		27		48
		28		48

Dış Sayısı Z	Dış Üstü apı da	Delik apı dm	A	Göbek apı dg
22	71.0	16	25	50
		18		50
		19		50
		20		50
		22		50
		24		50
23	73.5	16	25	52
		18		52
		19		52
		20		52
		22		52
		24		52
24	77.0	16	25	54
		18		54
		19		54
		20		54
		22		54
		24		54
25	80.0	16	25	57
		18		57
		19		57
		20		57
		22		57
		24		57
30	94.7	20	25	60
		22		60
		24		60
		25		60
		28		60
		30		60



DİŞLİ	mm
r	13
C	1.3
B1	7.2
a	6.5
ds	df-3,5

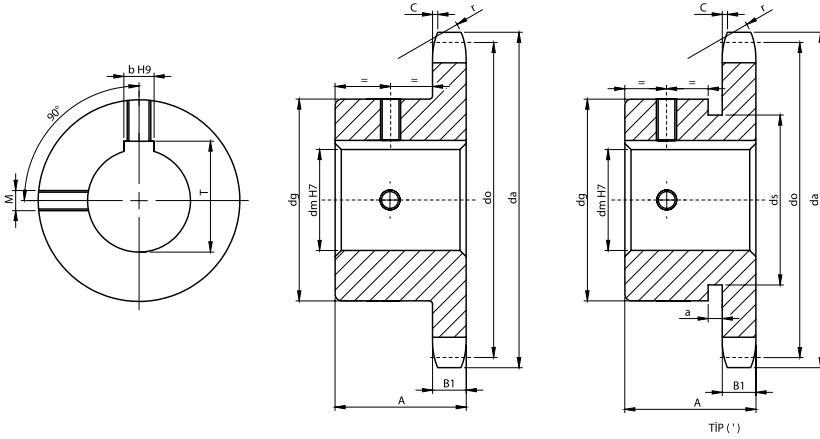
ZİNCİR	mm
Adım	12.7
Zincir Ara Genişliği	7.75
Makara Çapı Ø D	8.51

' Tip

Dış Sayısı Z	Dış Üstü Çapı da	Delik Çapı dm	A	Göbek Çapı dg
10	45.2	12	25	26
		14		29'
		15		30'
		16		31'
		16		31'
11	48.7	12	25	29
		14		30
		15		31
		16		34'
		18		35'
12	53.0	12	26	33
		14		35
		16		36
		18		38'
		19		41'
		20		42'
		22		42'
		24		45'
		25		45'
		28		45'
13	57.4	12	26	37
		14		42'
		16		45'
		18		45'
		19		45'
		20		45'
		22		45'
		24		45'
		25		45'
		28		45'
14	61.8	12	26	41
		14		45'
		16		45'
		18		45'
		19		45'
		20		45'
		22		45'
		24		45'
		25		45'
		28		45'
15	65.5	12	26	45
		14		45
		16		45
		18		45
		19		45
		20		45
		22		45
		24		45
		25		45
		28		45
16	69.5	16	26	50
		18		50
		19		50
		20		50
		22		50
		24		50
		25		50
		28		50
		30		50
		32		53'

Dış Sayısı Z	Dış Üstü Çapı da	Delik Çapı dm	A	Göbek Çapı dg
17	73.6	16	26	52
		18		52
		19		52
		20		52
		22		52
		24		52
		25		52
		28		52
		30		52
		32		52
18	77.8	16	26	56
		18		56
		19		56
		20		56
		22		56
		24		56
		25		56
		28		56
		30		56
		32		56
19	81.7	16	26	60
		18		60
		19		60
		20		60
		22		60
		24		60
		25		60
		28		60
		30		60
		32		60
20	85.8	16	26	64
		18		64
		19		64
		20		64
		22		64
		24		64
		25		64
		28		64
		30		64
		32		64
21	89.7	16	26	68
		18		68
		19		68
		20		68
		22		68
		24		68
		25		68
		28		68
		30		68
		32		68

Dış Sayısı Z	Dış Üstü Çapı da	Delik Çapı dm	A	Göbek Çapı dg
22	93.8	16	26	70
		18		70
		19		70
		20		70
		22		70
		24		70
		25		70
		28		70
		30		70
		32		70
23	98.2	16	26	70
		18		70
		19		70
		20		70
		22		70
		24		70
		25		70
		28		70
		30		70
		32		70
24	101.8	16	26	70
		18		70
		19		70
		20		70
		22		70
		24		70
		25		70
		28		70
		30		70
		32		70
25	105.8	16	26	70
		18		70
		19		70
		20		70
		22		70
		24		70
		25		70
		28		70
		30		70
		32		70
30	126.1	16	26	80
		18		80
		19		80
		20		80
		22		80
		24		80
		25		80
		28		80
		30		80
		32		80



DİŞLİ	mm
r	16
C	1.6
B1	9.1
a	7
ds	df-5

ZİNCİR	mm
Adım	15.875
Zincir Ara Genişliği	9.65
Makara Çapı Ø D	10.16

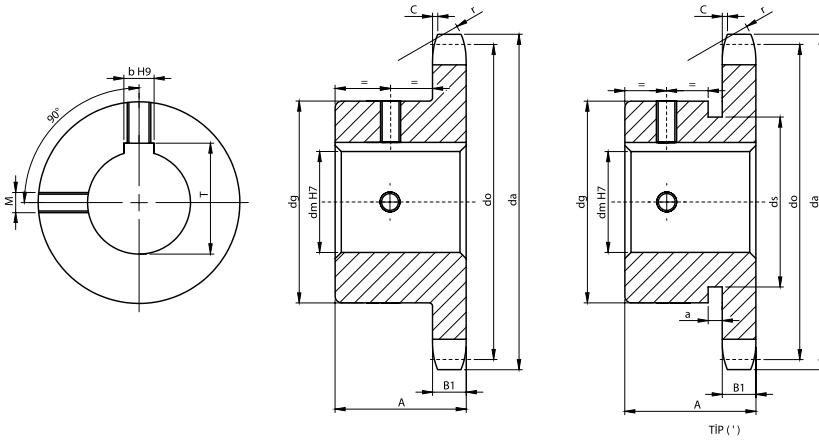
' Tip

Dış Sayısı Z	Dış Üstü Çapı da	Delik Çapı dm	A	Göbek Çapı dg
10	57.5	16	25	35
		19		
		20		
		24		
11	63.0	16	28	37
		18		
		19		
		20		
		24		42'
		25		
		28		
		28		
12	68.0	16	28	42
		18		
		19		
		20		
		22		44
		24		
		25		
		28		
		30		
		32		
13	73.0	16	28	47
		18		
		19		
		20		
		22		49
		24		
		25		
		28		
		30		
		32		
14	78.0	16	28	52
		18		
		19		
		20		
		22		57
		24		
		25		
		28		
15	83.0	19	28	57
		20		
		22		
		24		
		25		60
		28		
		30		
		32		
16	88.0	19	28	60
		20		
		22		
		24		
		25		60
		28		
		30		
		32		

Dış Sayısı Z	Dış Üstü Çapı da	Delik Çapı dm	A	Göbek Çapı dg
17	93.0	19	28	60
		20		
		22		
		24		
		25		
		28		
		30		
		32		
		35		
		38		
18	98.3	19	28	70
		20		
		22		
		24		
		25		
		28		
		30		
		32		
		35		
		38		
19	103.3	19	28	70
		20		
		22		
		24		
		25		
		28		
		30		
		32		
		35		
		38		
20	108.4	19	28	75
		20		
		22		
		24		
		25		
		28		
		30		
		32		
		35		
		38		
21	113.4	19	28	75
		20		
		22		
		24		
		25		
		28		
		30		
		32		
		35		
		38		

Dış Sayısı Z	Dış Üstü Çapı da	Delik Çapı dm	A	Göbek Çapı dg
22	118.0	19	28	80
		20		
		22		
		24		
		25		
		28		
		30		
		32		
		35		
		38		
23	123.5	19	28	80
		20		
		22		
		24		
		25		
		28		
		30		
		32		
		35		
		38		
24	128.3	19	28	80
		20		
		22		
		24		
		25		
		28		
		30		
		32		
		35		
		38		
25	134.0	19	28	80
		20		
		22		
		24		
		25		
		28		
		30		
		32		
		35		
		38		





DİŞLİ	mm
r	19
C	2
B1	11.1
a	8
ds	df-4,5
ZİNCİR	mm
Adım	19.05
Zincir Ara Genişliği	11.68
Makara Çapı Ø D	12.07

' Tip

\* Kaynaklı Göbek

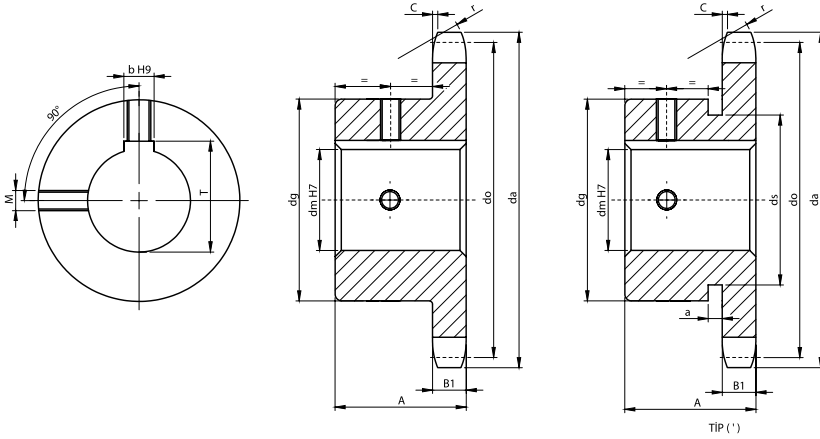
Dış Sayısı Z	Dış Üstü Çapı da	Delik Çapı dm	A	Göbek Çapı dg
10	69.0	19	30	42
		20		
		24		
		25		
		28		
		30		
		32		
11	75.0	19	30	48
		20		
		24		
		25		
		28		
		30		
		32		
12	81.5	19	30	52
		20		
		22		
		24		
		25		
		28		
		30		
13	87.5	19	30	58
		20		
		22		
		24		
		25		
		28		
		30		
14	93.6	19	30	64
		20		
		22		
		24		
		25		
		28		
		30		
15	99.8	19	30	70
		20		
		22		
		24		
		25		
		28		
		30		

Dış Sayısı Z	Dış Üstü Çapı da	Delik Çapı dm	A	Göbek Çapı dg
16	105.5	19	30	75
		20		
		22		
		24		
		25		
		28		
		30		
17	115.5	19	30	80
		20		
		22		
		24		
		25		
		28		
		30		
18	118.0	19	30	80
		20		
		22		
		24		
		25		
		28		
		30		
19	124.2	19	30	80
		20		
		22		
		24		
		25		
		28		
		30		
20	129.7	19	30	80
		20		
		22		
		24		
		25		
		28		
		30		

Dış Sayısı Z	Dış Üstü Çapı da	Delik Çapı dm	A	Göbek Çapı dg
21	136.0	25	30	90
		28		
		30		
		32		
		35		
		38		
		40		
22	141.0	25	30	90
		28		
		30		
		32		
		35		
		38		
		40		
23	149.0	25	30	90
		28		
		30		
		32		
		35		
		38		
		40		
24	153.9	25	40	80*
		28		
		30		
		32		
		35		
		38		
		40		
25	160.0	25	40	80*
		28		
		30		
		32		
		35		
		38		
		40		

1" x 17,02 mm

DIN 8187 ISO/R 606

KULLANIMA HAZIR ZİNCİR DİŞLİ  
16 B-1

DİŞLİ	mm
r	26
C	2.5
B1	16.2
a	12
ds	df-6

ZİNCİR	mm
Adım	25.4
Zincir Ara Geniřlięi	17.02
Makara apı Ø D	15.88

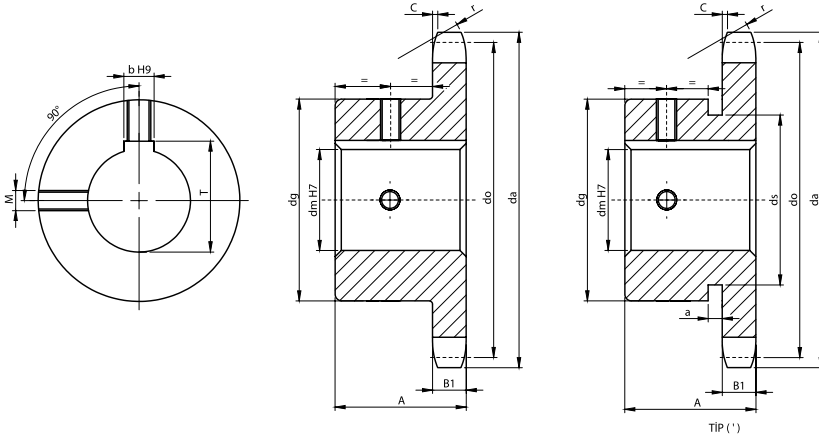
' Tip

\* Kaynaklı Gbk

Dış Sayısı Z	Dış Üstü apı da	Delik apı dm	A	Gbek apı dg
11	101.5	25	36	61
		28		
		30		
		32		
		35		
		38		
		40		
		42		
12	109.0	25	36	69
		28		
		30		
		32		
		35		
		38		
		40		
		42		
13	117.0	25	36	78
		28		
		30		
		32		
		35		
		38		
		40		
		42		
14	125.0	25	36	84
		28		
		30		
		32		
		35		
		38		
		40		
		42		
15	133.0	25	36	92
		28		
		30		
		32		
		35		
		38		
		40		
		42		

Dış Sayısı Z	Dış Üstü apı da	Delik apı dm	A	Gbek apı dg
16	141.0	25	36	100
		28		
		30		
		32		
		35		
		38		
		40		
		42		
17	149.0	25	36	100
		28		
		30		
		32		
		35		
		38		
		40		
		42		
18	157.0	25	45	80*
		28		
		30		
		32		
		35		
		38		
		40		
		42		
19	165.2	25	45	80*
		28		
		30		
		32		
		35		
		38		
		40		
		42		
20	173.2	25	45	80*
		28		
		30		
		32		
		35		
		38		
		40		
		42		

Dış Sayısı Z	Dış Üstü apı da	Delik apı dm	A	Gbek apı dg
21	181.2	25	45	80*
		28		
		30		
		32		
		35		
		38		
		40		
		42		
22	189.3	25	45	80*
		28		
		30		
		32		
		35		
		38		
		40		
		42		
23	197.5	25	45	80*
		28		
		30		
		32		
		35		
		38		
		40		
		42		
24	205.5	25	45	90*
		28		
		30		
		32		
		35		
		38		
		40		
		42		
25	213.5	25	45	90*
		28		
		30		
		32		
		35		
		38		
		40		
		42		



DİŞLİ	mm
r	32
C	3.5
B1	18.5
a	13
ds	df-8

ZİNCİR	mm
Adım	31.75
Zincir Ara Geniřlięi	19.56
Makara apı Ø D	19.05

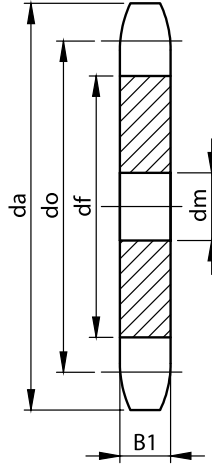
' Tip

\* Kaynaklı Gbk

Dış Sayısı Z	Dış Üstü apı da	Delik apı dm	A	Gbek apı dg
9	108.0	25	45	63
		30		
		32		
		35		
		38		
10	117.9	25	45	70
		30		
		32		
		35		
		38		
11	127.8	25	45	77
		28		
		30		
		32		
		35		
		38		
		40		
		42		
		45		
		50		82
12	137.8	25	45	88
		28		
		30		
		32		
		35		
		38		
		40		
		42		
		45		
		50		93

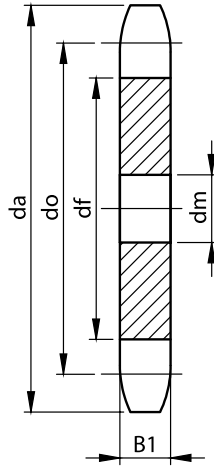
Dış Sayısı Z	Dış Üstü apı da	Delik apı dm	A	Gbek apı dg
13	147.8	25	45	98
		28		
		30		
		32		
		35		
14	157.8	38	50	85*
		40		
		42		
		45		
		50		
		60		
		32		
		35		
		38		
		40		
15	167.9	32	50	85*
		35		
		38		
		40		
		42		
		45		
		48		
		50		
		32		
		35		
16	177.9	38	50	85*
		40		
		42		
		45		
		48		
		50		
		50		

Dış Sayısı Z	Dış Üstü apı da	Delik apı dm	A	Gbek apı dg
17	187.9	38	50	85*
		40		
		42		
		45		
		48		
18	198.0	48	50	85*
		50		
		38		
		40		
		42		
19	208.1	45	50	90*
		48		
		50		
		60		
		38		
20	218.1	40	50	90*
		42		
		45		
		48		
		50		
		60		
		60		



Diş Sayısı Z	Makara Çapı 25				Makara Çapı 28				Makara Çapı 31			
	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Delik Çapı dm	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Delik Çapı dm	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Delik Çapı dm
6	115	100.00	75.00	20	120	100.00	72.00	20	116	100.00	69.00	20
7	133	115.24	90.24	20	135	115.24	87.24	20	134	115.24	84.24	20
8	148	130.66	105.66	20	150	130.66	102.66	20	152	130.66	99.66	20
9	164	146.19	121.19	20	166	146.19	118.19	20	168	146.19	115.19	20
10	179	161.80	136.80	20	181	161.80	133.80	20	184	161.80	130.80	20
11	195	177.47	152.47	25	197	177.47	149.47	25	199	177.47	146.47	25
12	211	193.19	168.19	25	213	193.19	165.19	25	212	193.19	162.19	25
13	226	208.93	183.93	25	229	208.93	180.93	25	231	208.93	177.93	25
14	242	224.70	199.70	25	244	224.70	196.70	25	246	224.70	193.70	25
15	258	240.49	215.49	25	260	240.49	212.49	25	262	240.49	209.49	25
16	274	256.29	231.29	30	276	256.29	228.29	30	278	256.29	225.29	30
17	290	272.11	247.11	30	292	272.11	244.11	30	294	272.11	241.11	30
18	305	287.94	262.94	30	308	287.94	259.94	30	310	287.94	256.94	30
19	321	303.78	278.78	30	323	303.78	275.78	30	326	303.78	272.78	30
20	337	319.62	294.62	30	339	319.62	291.62	30	341	319.62	288.62	30
21	353	335.48	310.48	30	355	335.48	307.48	30	357	335.48	304.48	30
22	369	351.33	326.33	30	371	351.33	323.33	30	373	351.33	320.33	30
23	385	367.20	342.20	30	387	367.20	339.20	30	389	367.20	336.20	30
24	400	383.06	358.06	30	403	383.06	355.06	30	405	383.06	352.06	30
25	416	398.94	373.94	30	419	398.94	370.94	30	420	398.94	367.94	30
26	432	414.81	389.81	30	434	414.81	386.81	30	437	414.81	383.81	30
27	448	430.69	405.69	30	450	430.69	402.69	30	452	430.69	399.69	30
28	464	446.57	421.57	30	466	446.57	418.57	30	468	446.57	415.57	30
29	480	462.45	437.45	30	482	462.45	434.45	30	484	462.45	431.45	30
30	496	478.34	453.34	30	498	478.34	450.34	30	500	478.34	447.34	30
32	528	510.11	485.11	30	530	510.11	482.11	30	532	510.11	479.11	30
35	575	557.79	532.79	30	577	557.79	529.79	30	580	557.79	526.79	30
38	623	605.48	580.48	30	625	605.48	577.48	30	627	605.48	574.48	30
40	655	637.27	612.27	30	657	637.27	609.27	30	659	637.27	606.27	30
50	814	796.30	771.30	30	816	796.30	768.30	30	818	796.30	765.30	30

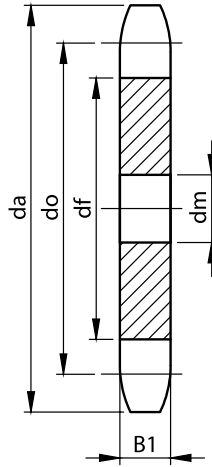
Dişli / Zincir	mm	Dişli / Zincir	mm	Dişli / Zincir	mm
Adım	50	Adım	50	Adım	50
Zincir Ara Genişliği	11.5	Zincir Ara Genişliği	15	Zincir Ara Genişliği	15
Makara Çapı Ø	25	Makara Çapı Ø	28	Makara Çapı Ø	31
B1	10.5	B1	13.8	B1	13.8



Diş Sayısı Z	Makara Çapı 25				Makara Çapı 31			
	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Delik Çapı dm	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Delik Çapı dm
6	168	150.00	125.00	25	172	150.00	119.00	25
7	190	172.86	147.86	25	195	172.86	141.86	25
8	213	195.98	170.98	25	218	195.98	164.98	25
9	237	219.29	194.29	25	241	219.29	188.29	25
10	260	242.71	217.71	30	264	242.71	211.71	30
11	284	266.21	241.21	30	288	266.21	235.21	30
12	307	289.78	264.78	30	312	289.78	258.78	30
13	331	313.39	288.39	30	334	313.39	282.39	30
14	355	337.05	312.05	30	359	337.05	306.05	30
15	378	360.73	335.73	30	382	360.73	329.73	30
16	402	384.44	359.44	30	406	384.44	353.44	30
17	426	408.16	383.16	30	430	408.16	377.16	30
18	449	431.91	406.91	30	454	431.91	400.91	30
19	473	455.67	430.67	30	477	455.67	424.67	30
20	497	479.43	454.43	30	501	479.43	448.43	30
21	521	503.21	478.21	30	525	503.21	472.21	30
22	545	527.00	502.00	30	549	527.00	496.00	30
23	568	550.80	525.80	30	572	550.80	519.80	30
24	592	574.60	549.60	30	596	574.60	543.60	30
25	616	598.40	573.40	30	620	598.40	567.40	30
26	640	622.22	597.22	30	644	622.22	591.22	30
27	664	646.03	621.03	30	668	646.03	615.03	30
28	687	669.86	644.86	30	692	669.86	638.86	30
29	711	693.68	668.68	30	715	693.68	662.68	30
30	735	717.51	692.51	30	739	717.51	686.51	30
32	783	765.17	740.17	30	787	765.17	734.17	30
35	854	836.69	811.69	30	858	836.69	805.69	30
38	926	908.22	883.22	30	930	908.22	877.22	30
40	973	955.91	930.91	30	978	955.91	924.91	30
50	1212	1194.45	1169.45	30	1216	1194.45	1163.45	30

Dişli / Zincir	mm
Adım	75
Zincir Ara Geniřlięi	11.5
Makara Çapı Ø	25
B1	10.5

Dişli / Zincir	mm
Adım	75
Zincir Ara Geniřlięi	15
Makara Çapı Ø	31
B1	13.8



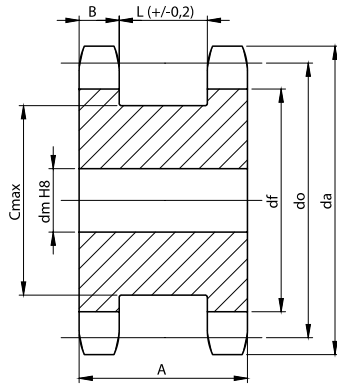
Diş Sayısı Z	Makara Çapı 25				Makara Çapı 31				Makara Çapı 40			
	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Delik Çapı dm	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Delik Çapı dm	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Delik Çapı dm
6	218	200.00	175.00	25	222	200.00	169.00	25	223	200.00	160.00	25
7	248	230.48	205.48	25	252	230.48	199.48	25	253	230.48	190.48	25
8	279	261.31	236.31	30	283	261.31	230.31	30	283	261.31	221.31	30
9	310	292.38	267.38	30	314	292.38	261.38	30	314	292.38	252.38	30
10	341	323.61	298.61	30	345	323.61	292.61	30	345	323.61	283.61	30
11	373	354.95	329.95	30	377	354.95	323.95	30	378	354.95	314.95	30
12	404	386.37	361.37	30	408	386.37	355.37	30	409	386.37	346.37	30
13	435	417.86	392.86	30	440	417.86	386.86	30	441	417.86	377.86	30
14	467	449.40	424.40	30	471	449.40	418.40	30	473	449.40	409.40	30
15	499	480.97	455.97	30	503	480.97	449.97	30	504	480.97	440.97	30
16	530	512.58	487.58	30	534	512.58	481.58	30	536	512.58	472.58	30
17	562	544.22	519.22	30	566	544.22	513.22	30	567	544.22	504.22	30
18	593	575.88	550.88	30	598	575.88	544.88	30	599	575.88	535.88	30
19	625	607.55	582.55	30	629	607.55	576.55	30	631	607.55	567.55	30
20	657	639.25	614.25	30	661	639.25	608.25	30	663	639.25	599.25	30
21	689	670.95	645.95	30	693	670.95	639.95	30	694	670.95	630.95	30
22	720	702.67	677.67	30	724	702.67	671.67	30	726	702.67	662.67	30
23	752	734.39	709.39	30	756	734.39	703.39	30	757	734.39	694.39	30
24	784	766.13	741.13	30	788	766.13	735.13	30	789	766.13	726.13	30
25	815	797.87	772.87	30	820	797.87	766.87	30	821	797.87	757.87	30
26	847	829.62	804.62	30	851	829.62	798.62	30	853	829.62	789.62	30
27	879	861.38	836.38	30	883	861.38	830.38	30	884	861.38	821.38	30
28	911	893.14	868.14	30	915	893.14	862.14	30	916	893.14	853.14	30
29	942	924.91	899.91	30	947	924.91	893.91	30	948	924.91	884.91	30
30	974	956.68	931.68	30	978	956.68	925.68	30	980	956.68	916.68	30
32	1038	1020.23	995.23	30	1042	1020.23	989.23	30	1043	1020.23	980.23	30
35	1133	1115.58	1090.58	30	1137	1115.58	1084.58	30	1139	1115.58	1075.58	30
38	1229	1210.96	1185.96	30	1233	1210.96	1179.96	30	1234	1210.96	1170.96	30
40	1292	1274.55	1249.55	30	1296	1274.55	1243.55	30	1298	1274.55	1234.55	30
50	1610	1592.60	1567.60	30	1614	1592.60	1561.60	30	1616	1592.60	1552.60	30

Dişli / Zincir	mm
Adım	100
Zincir Ara Genişliği	11.5
Makara Çapı Ø	25
B1	10.5

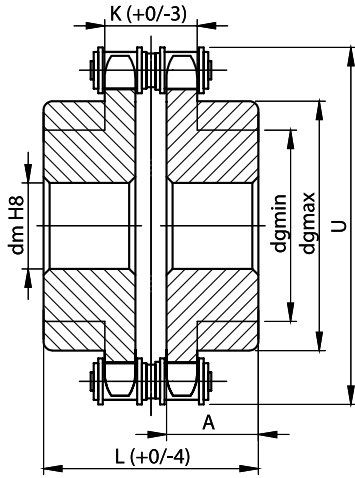
Dişli / Zincir	mm
Adım	100
Zincir Ara Genişliği	15
Makara Çapı Ø	31
B1	13.8

Dişli / Zincir	mm
Adım	100
Zincir Ara Genişliği	22
Makara Çapı Ø	40
B1	20

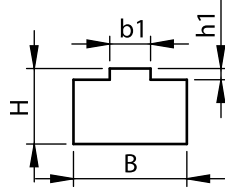




Adım	Diş Sayısı Z	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Ara Çap Cmax	Delik Çapı dm	B	L	A
<b>3/8"</b> <b>9,525 mm</b> <b>06B-1</b>	12	40.0	36.80	30.45	25	10	5.3	15.0	25.6
	15	49.3	45.81	39.46	34	10	5.3	15.0	25.6
	18	58.3	54.85	48.50	43	12	5.3	15.0	25.6
	20	64.3	60.89	54.54	49	12	5.3	15.0	25.6
	22	71.0	66.93	60.58	55	12	5.3	15.0	25.6
	25	80.0	76.00	69.65	64	12	5.3	15.0	25.6
	26	83.0	79.02	72.67	67	14	5.3	15.0	25.6
	30	94.7	91.12	84.77	79	14	5.3	15.0	25.6
<b>1/2"</b> <b>12,7 mm</b> <b>08B-1</b>	12	53.0	49.07	40.56	34	10	7.2	17.6	32
	15	65.5	61.08	52.57	46	10	7.2	17.6	32
	18	77.8	73.14	64.63	58	12	7.2	17.6	32
	20	85.8	81.18	72.67	66	12	7.2	17.6	32
	22	93.8	89.24	80.73	74	12	7.2	17.6	32
	25	105.8	101.33	92.82	86	14	7.2	17.6	32
	26	110.0	105.36	96.85	90	14	7.2	17.6	32
	30	126.1	121.50	112.99	106	14	7.2	17.6	32
<b>5/8"</b> <b>15,875 mm</b> <b>10B-1</b>	12	68.0	61.34	51.18	43	12	9.1	18.8	37
	15	83.0	76.35	66.19	58	14	9.1	18.8	37
	18	98.3	91.42	81.26	73	16	9.1	18.8	37
	20	108.4	101.48	91.32	83	16	9.1	18.8	37
	22	118.0	111.55	101.39	93	16	9.1	18.8	37
	25	134.0	126.66	116.50	108	18	9.1	18.8	37
	26	139.0	131.70	121.54	113	18	9.1	18.8	37
	30	158.8	151.87	141.71	133	20	9.1	18.8	37
<b>3/4"</b> <b>19,05 mm</b> <b>12B-1</b>	12	81.5	73.60	61.53	53	14	11.1	22.8	45
	15	99.8	91.63	79.56	71	14	11.1	22.8	45
	18	118.0	109.70	97.63	89	18	11.1	22.8	45
	20	129.7	121.78	109.71	101	18	11.1	22.8	45
	22	141.0	133.86	121.79	113	20	11.1	22.8	45
	25	160.0	151.99	139.92	131	20	11.1	22.8	45
	26	165.9	158.04	145.97	137	20	11.1	22.8	45
	30	190.5	182.25	170.18	162	20	11.1	22.8	45
<b>1"</b> <b>25,4 mm</b> <b>16B-1</b>	12	109.0	98.14	82.26	72	20	16.2	31.6	64
	15	133.0	122.17	106.29	96	20	16.2	31.6	64
	18	157.0	146.27	130.39	120	20	16.2	31.6	64
	20	173.2	162.37	146.49	136	20	16.2	31.6	64
	22	189.3	178.48	162.60	152	20	16.2	31.6	64
	25	213.5	202.66	186.78	176	20	16.2	31.6	64
	26	221.6	210.72	194.84	184	25	16.2	31.6	64
	30	254.0	243.00	227.12	217	25	16.2	31.6	64

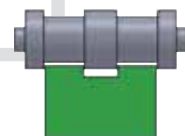
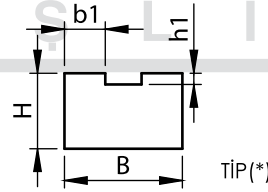
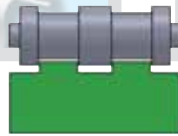
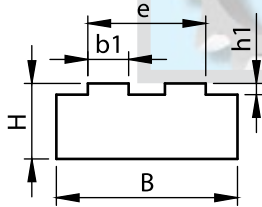


ISO Zincir No.	Diş Sayısı Z	Delik Çapı dm	Göbek Çapı		A	L	U	K
			dgmax	dgmin				
06B-2	14	10	31	30	25	55.36	52	15.96
06B-2	16	12	37	32	25	55.36	58	15.96
06B-2	18	12	43	38	25	55.36	64	15.96
06B-2	20	12	49	40	25	55.36	70	15.96
08-B2	14	10	42	36	26	59.27	70	21.67
08-B2	16	12	50	45	26	59.27	78	21.67
08-B2	18	12	58	51	26	59.27	86	21.67
08-B2	20	12	66	59	26	59.27	94	21.67
10B-2	16	14	63	55	28	64.04	97	26.24
10B-2	18	16	73	65	28	64.04	107	26.24
10B-2	20	16	83	70	28	64.04	117	26.24
10B-2	22	16	93	75	28	64.04	127	26.24
12-B2	18	18	89	75	30	68.94	127	31.14
12-B2	20	18	101	75	30	68.94	139	31.14
12-B2	22	20	113	80	30	68.94	151	31.14
12-B2	24	20	125	80*	40	88.94	163	31.14
16B-2	18	20	120	80*	45	106.50	170	48.90
16B-2	20	20	136	80*	45	106.50	187	48.90
16B-2	22	20	152	80*	45	106.50	203	48.90
16B-2	24	20	168	90*	45	106.50	219	48.90
20-B2	18	25	150	85*	50	119.01	211	56.01
20-B2	20	25	171	90*	50	119.01	231	56.01
20-B2	22	25	191	90*	50	119.01	250	56.01
20-B2	24	25	211	115*	50	119.01	271	56.01
24B-2	18	25	179	115*	55	135.56	254	73.76
24B-2	20	25	203	125*	55	135.56	278	73.76
24B-2	22	25	227	125*	60	145.56	302	73.76
24B-2	24	30	251	135*	60	145.56	327	73.76
28-B2	18	30	211	115*	65	161.75	295	90.55
28-B2	20	30	239	125*	65	161.75	323	90.55
28-B2	22	30	267	125*	65	161.75	351	90.55
28-B2	24	30	295	135*	70	171.75	380	90.55
32B-2	20	30	272	135*	65	160.74	369	89.54
32B-2	22	30	305	145*	65	160.74	402	89.54
32B-2	24	30	337	180*	70	170.74	433	89.54
32B-2	26	30	369	180*	70	170.74	465	89.54


**TA1 MODELİ ZİNCİR KIZAĞI**

Sıra No	ISO Zincir No	Adım	B (+/-0,2)	H (+/-0,2)	b1	h1	L (+/-10)
1	06 B1	3/8"	15.0	10.0	5.4	1.5	1300
2	08 B1	1/2"	20.0	10.0	7.4	2.2	1300
3	08 B1	1/2"	20.0	15.0	7.4	2.2	1300
4	08 B1	1/2"	20.0	20.0	7.4	2.2	1300
5	08 B1	1/2"	20.0	30.0	7.4	2.2	1300
6	10 B1	5/8"	20.0	10.0	9.3	2.6	1300
7	10 B1	5/8"	20.0	15.0	9.3	2.6	1300
8	10 B1	5/8"	20.0	20.0	9.3	2.6	1300
9	10 B1	5/8"	20.0	30.0	9.3	2.6	1300
10	12 B1	3/4"	25.0	10.0	11.3	2.4	1300
11	12 B1	3/4"	25.0	15.0	11.3	2.4	1300
12	12 B1	3/4"	25.0	20.0	11.3	2.4	1300
13	12 B1	3/4"	25.0	30.0	11.3	2.4	1300
14	16 B1	1"	40.0	15.0	16.0	3.5	1300
15	16 B1	1"	40.0	20.0	16.0	3.5	1300
16	16 B1	1"	40.0	30.0	16.0	3.5	1300
17	20 B1	1 1/4"	45.0	15.0	18.0	4.2	1300
18	20 B1	1 1/4"	45.0	20.0	18.0	4.2	1300
19	24 B1	1 1/2"	60.0	15.0	24.0	5.5	1300
20	28 B1	1 3/4"	75.0	20.0	30.0	6.8	1300
21	32 B1	2"	80.0	20.0	30.0	7.7	1300

• Malzeme ALPOLEN 1000 (Yeşil)



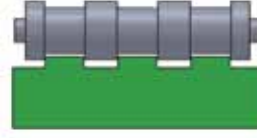
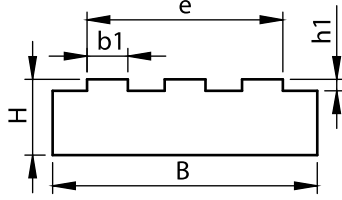
TİP(\*)

**TA2 MODELİ ZİNCİR KIZAĞI**

Sıra No	ISO Zincir No	Adım	B (+/-0,2)	H (+/-0,2)	b1	h1	e	L (+/-10)
1	06 B2	3/8"	25.0	10.0	5.4	1.5	15.6	1300
2	08 B2	1/2"	35.0	10.0	7.4	2.2	21.2	1300
3	08 B2	1/2"	35.0	15.0	7.4	2.2	21.2	1300
4	08 B2	1/2"	35.0	20.0	7.4	2.2	21.2	1300
5	08 B2	1/2"	35.0	30.0	7.4	2.2	21.2	1300
6	10 B2	5/8"	40.0	10.0	9.3	2.6	25.7	1300
7	10 B2	5/8"	40.0	15.0	9.3	2.6	25.7	1300
8	12 B2	3/4"	45.0	10.0	11.3	2.4	30.7	1300
9	12 B2	3/4"	45.0	15.0	11.3	2.4	30.7	1300
10	16 B2*	1"	48.0	15.0	16.0	3.5	-	1300
11	16 B2*	1"	48.0	20.0	16.0	3.5	-	1300
12	20 B2*	1 1/4"	55.0	15.0	18.0	4.2	-	1300
13	20 B2*	1 1/4"	55.0	20.0	18.0	4.2	-	1300
14	24 B2*	1 1/2"	72.0	20.0	24.0	5.5	-	1300
15	28 B2*	1 3/4"	89.0	20.0	30.0	6.8	-	1300
16	28 B2*	1 3/4"	89.0	25.0	30.0	6.8	-	1300
17	32 B2*	2"	89.0	20.0	30.0	7.7	-	1300
18	32 B2*	2"	89.0	30.0	30.0	7.7	-	1300

• Malzeme ALPOLEN 1000 (Yeşil)

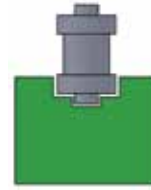
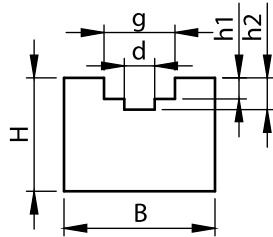
(\*) TİP



TA3 MODELİ ZİNCİR KIZAĞI

Sıra No	ISO Zincir No	Adım	B (+/-0,2)	H (+/-0,2)	b1	h1	e	L (+/-10)
1	06 B3	3/8"	35.0	10.0	5.4	1.5	25.9	1300
2	08 B3	1/2"	45.0	10.0	7.4	2.2	35.3	1300
3	08 B3	1/2"	45.0	15.0	7.4	2.2	35.3	1300
4	08 B3	1/2"	45.0	20.0	7.4	2.2	35.3	1300
5	10 B3	5/8"	55.0	10.0	9.2	2.6	42.5	1300
6	12 B3	3/4"	65.0	10.0	11.3	2.4	50.3	1300
7	16 B3	1"	95.0	15.0	16.5	3.5	80.3	1300
8	20 B3	1 1/4"	92.0	15.0	19.0	4.3	92.0	1300
9	24 B3	1 1/2"	121.0	20.0	24.6	5.6	121.5	1300
10	28 B3	1 3/4"	149.0	25.0	30.0	6.9	149.3	1300
11	32 B3	2"	149.0	30.0	30.0	7.8	149.3	1300

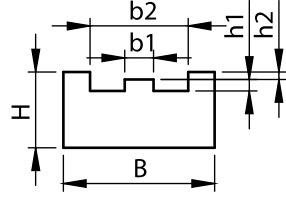
• Malzeme ALPOLEN 1000 (Yeşil)



U MODELİ ZİNCİR KIZAĞI

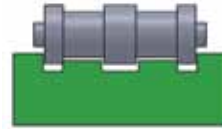
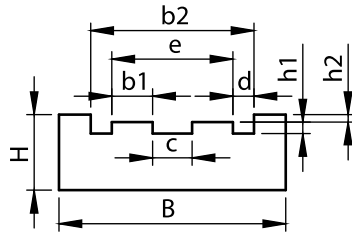
Sıra No	ISO Zincir No	Adım	B (+/-0,2)	H (+/-0,2)	d	g (+/-0,1)	h1	h2	L (+/-10)
1	06 B1	3/8"	20.0	15.0	4.0	9.4	2.8	4.2	1300
2	08 B1	1/2"	25.0	15.0	5.0	12.8	3.5	5.0	1300
3	10 B1	5/8"	25.0	15.0	6.0	15.4	3.6	5.0	1300
4	12 B1	3/4"	25.0	20.0	7.0	17.0	3.9	5.7	1300
5	16 B1	1"	33.0	25.0	10.0	24.0	8.4	10.6	1300
6	20 B1	1 1/4"	55.0	25.0	11.0	28.0	10.0	12.2	1300
7	24 B1	1 1/2"	60.0	30.0	16.0	36.6	13.0	16.0	1300
8	28 B1	1 3/4"	65.0	30.0	17.0	40.0	16.0	18.0	1300
9	32 B1	2"	70.0	30.0	19.0	44.6	16.0	18.7	1300

• Malzeme ALPOLEN 1000 (Yeşil)


**TY1 MODELİ ZİNCİR KIZAĞI**

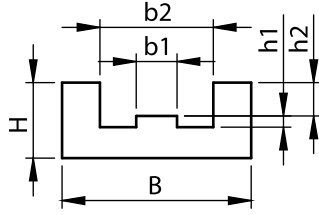
Sıra No	ISO Zincir No	Adım	B (+/-0,2)	H (+/-0,2)	b1	b2	h1	h2	L (+/-10)
1	06 B1	3/8"	20.0	10.0	3.8	13.0	1.5	1.0	1300
2	08 B1	1/2"	25.0	15.0	5.7	16.3	2.2	1.5	1300
3	10 B1	5/8"	28.0	15.0	7.4	19.2	2.6	2.0	1300
4	12 B1	3/4"	30.0	20.0	9.2	21.8	2.4	2.5	1300
5	16 B1	1"	42.0	25.0	15.0	33.8	3.5	3.0	1300
6	20 B1	1 1/4"	50.0	25.0	16.8	40.0	4.2	3.5	1300

• Malzeme ALPOLEN 1000 (Yeşil)


**TY2 MODELİ ZİNCİR KIZAĞI**

Sıra No	ISO Zincir No	Adım	B (+/-0,2)	H (+/-0,2)	b1	b2	h1	h2	d	c	e	L (+/-10)
1	06 B2	3/8"	30.0	10	5.4	21.6	1.5	1	2.80	5.2	16.0	1300
2	08 B2	1/2"	39.0	15	7.4	28.4	2.2	1.5	3.70	6.2	21.0	1300
3	10 B2	5/8"	44.0	15	9.2	33.7	2.6	2	3.85	7.6	26.0	1300
4	12 B2	3/4"	49.0	20	11.3	39.1	2.4	2.5	4.05	8.4	31.0	1300
5	16 B2	1"	75.0	25	16.5	64.8	3.5	3	8.20	15.4	48.4	1300

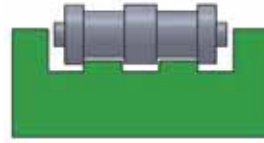
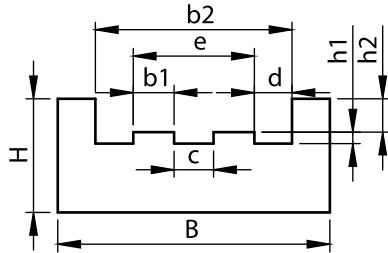
• Malzeme ALPOLEN 1000 (Yeşil)



TK1 MODELİ ZİNCİR KIZAĞI

Sıra No	ISO Zincir No	Adım	B (+/-0,2)	H (+/-0,2)	b1	b2	h1	h2	L (+/-10)
1	06 B1	3/8"	25.0	10.0	5.4	15.0	1.5	4.4	1300
2	08 B1	1/2"	30.0	15.0	7.4	20.0	2.2	7.2	1300
3	10 B1	5/8"	33.0	20.0	9.2	23.0	2.6	9.5	1300
4	12 B1	3/4"	38.0	20.0	11.3	28.0	2.4	11.1	1300
5	16 B1	1"	51.0	25.0	16.5	41.0	3.5	16.5	1300
6	20 B1	1 1/4"	56.0	30.0	19.0	46.0	4.3	20.7	1300

• Malzeme ALPOLEN 1000 (Yeşil)



TK2 MODELİ ZİNCİR KIZAĞI

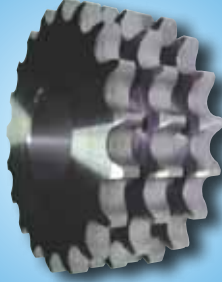
Sıra No	ISO Zincir No	Adım	B (+/-0,2)	H (+/-0,2)	b1	b2	h1	h2	d	c	e	L (+/-10)
1	06 B2	3/8"	36.0	15.0	5.4	26.0	1.5	4.4	5.0	5.2	16.0	1300
2	08 B2	1/2"	45.0	20.0	7.4	35.0	2.2	7.2	7.0	6.2	21.0	1300
3	10 B2	5/8"	50.0	25.0	9.2	40.0	2.6	9.5	7.0	7.6	26.0	1300
4	12 B2	3/4"	56.0	25.0	11.3	46.0	2.4	11.1	7.5	8.4	31.0	1300
5	16 B2	1"	85.0	30.0	16.5	75.0	3.5	16.5	13.3	15.4	48.4	1300

• Malzeme ALPOLEN 1000 (Yeşil)

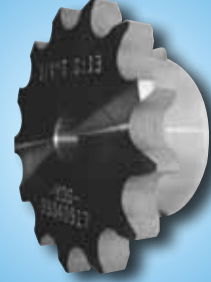




1



2



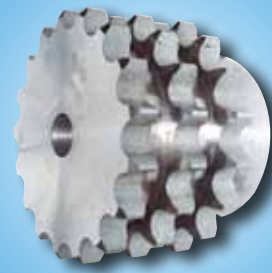
3



4



5



6



7



8



9



10



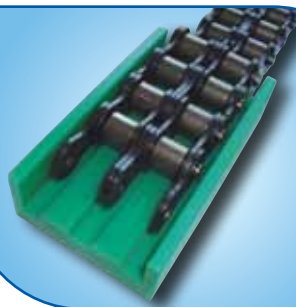
11



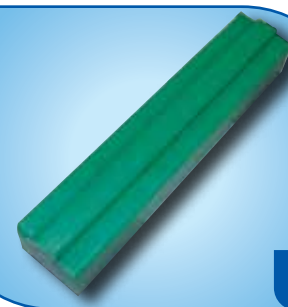
12



13



14

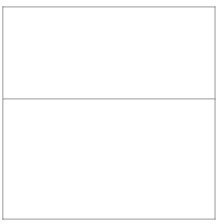
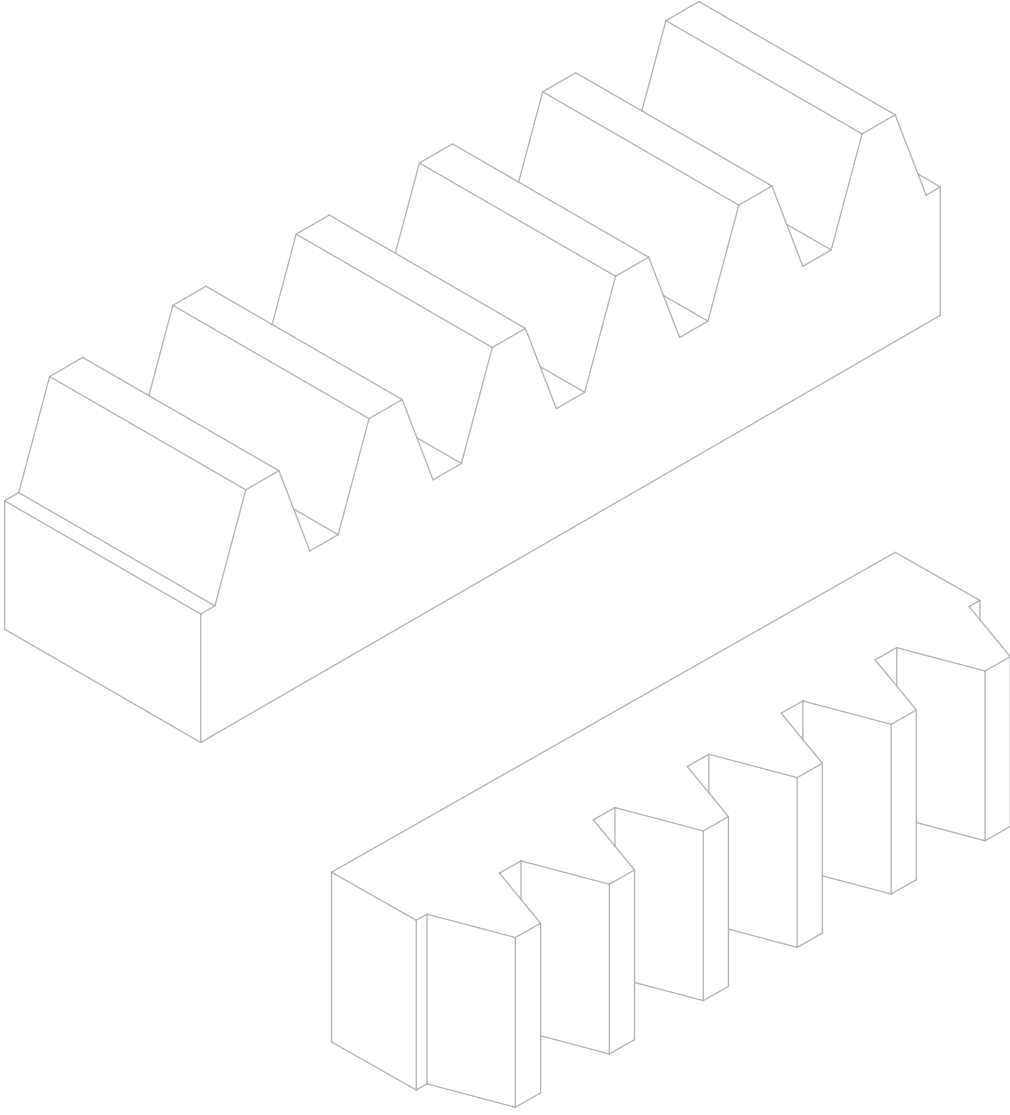


15





# Kremayer Dišli



Kremayer Dišli Grubu

**KREMAYER DİŞLİ HESAPLARI (DIN782/867)**

<b>m/mn</b>	: Modül/Normal Modül
<b>ms</b>	: Sanal Modül
<b>t/tn</b>	: Adım/Normal Adım
<b>ts</b>	: Sanal Adım
<b>Z</b>	: Diş Sayısı
<b><math>\beta</math></b>	: Helis Açısı
<b><math>\alpha</math></b>	: Profil Açısı (Genellikle 20°)
<b>B</b>	: Diş Kalınlığı
<b>A/D</b>	: Tam Yükseklik/Çap
<b>H</b>	: Diş Derinliği
<b>ho</b>	: Kremayer Dişli Çalışma Yüksekliği
<b>L</b>	: Boy
<b>E</b>	: Çalışma Eksen Mesafesi
<b>T</b>	: Kremayer Tabanından Pinyon Dişli Eksen Mesafesi
<b>do</b>	: Pinyon Dişli Bölüm Dairesi Çapı

**Modül**

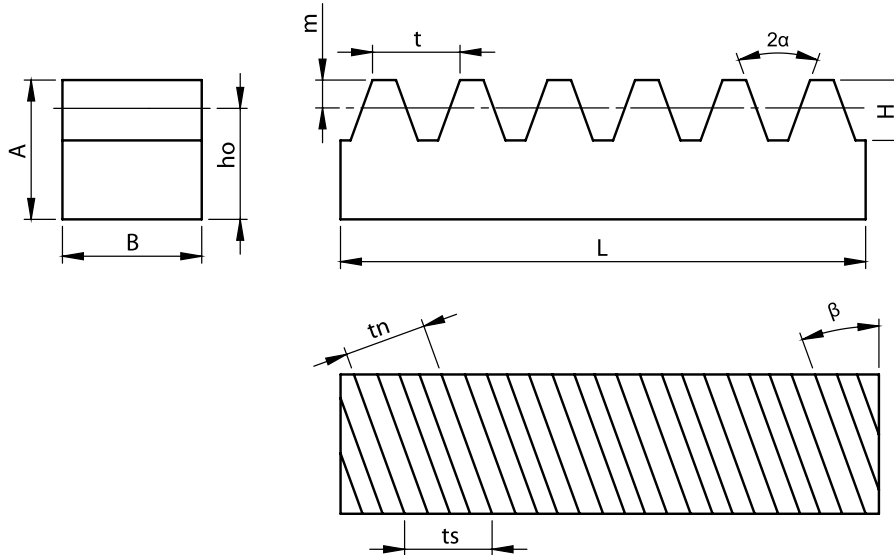
$$m = mn \quad ms = \frac{mn}{\cos \beta} \quad \beta = 0 \rightarrow ms = mn = m$$

**Adım**

$$t = tn \quad tn = mn \cdot \pi \quad ts = ms \cdot \pi \quad \beta = 0 \rightarrow ts = tn = t \quad \pi = 3,14159265...$$

**Diş Derinliği**

$$H = 2,166 \cdot m \text{ veya } H = 2,25 \cdot m$$



**Kremayer Dişli Çalışma Yüksekliği**

$$ho = A - m \quad ho = D - m$$

**Çalışma Eksen**

$$E = do / 2$$

**Kremayer Tabanından Pinyon Dişli Eksen Mesafesi**

$$T = ho + \frac{do}{2}$$

**Boydaki Diş Sayısı Hesabı**

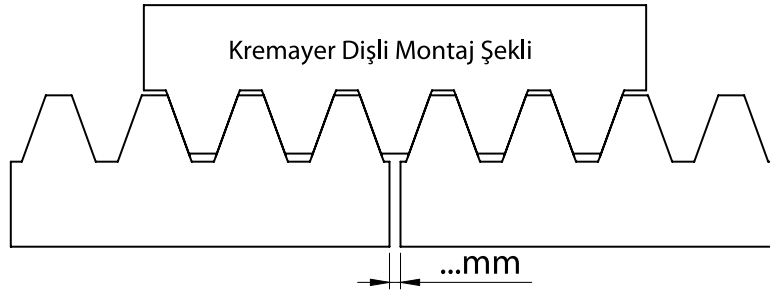
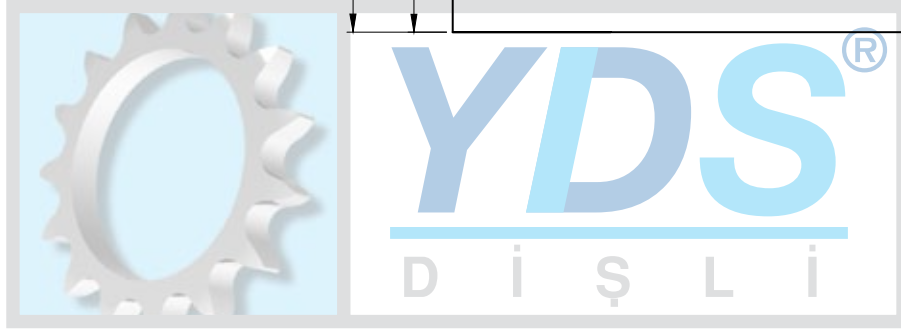
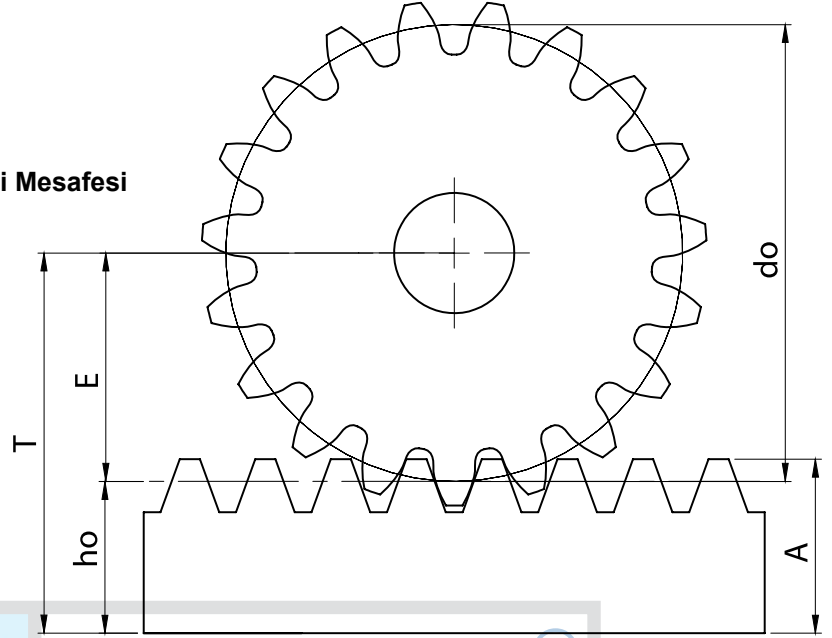
$$Z \sim = L / t$$

**Diş Kalınlığı**

$$B \sim = 2,5 \text{ veya } 3 \cdot ts$$

**Tam Yükseklik**

$$A / D \sim = 3 \cdot H$$

**KREMAYER DİŞLİ GENEL TOLERANSLAR**

Diş derinliği (H) : +0,4/-0mm

\*Farklılık Gösteren Toleranslar Ürünlerimizin İlgili Kısımlarında Belirtilmiştir.

\*Tüm Ürünlerimizin İmalatında TS 1845 ve TS 1980 Tolerans Standartları Kullanılmaktadır.





1 Modül



1,5 Modül



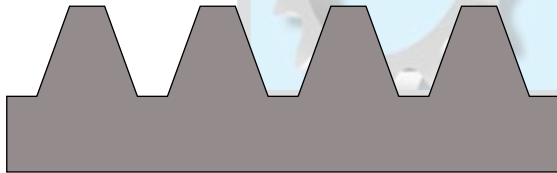
2,5 Modül



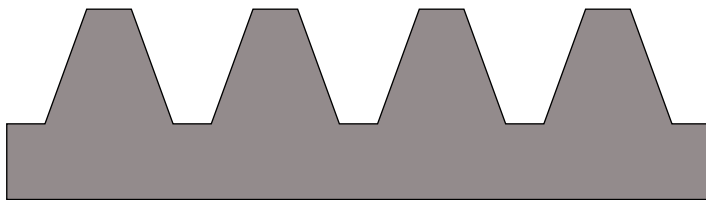
3,5 Modül



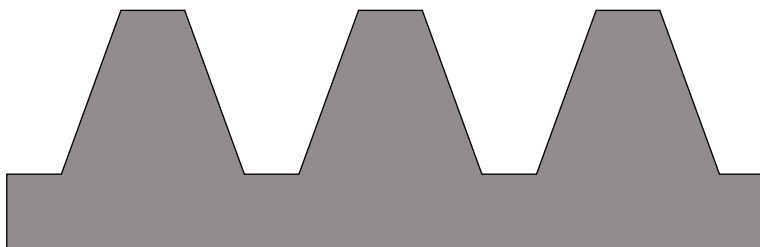
4,5 Modül



5,5 Modül



7 Modül



10 Modül



1,25 Modül



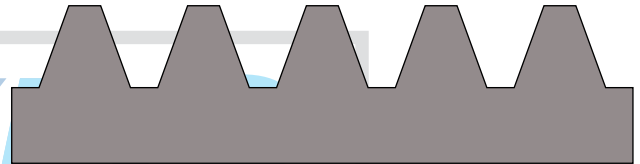
2 Modül



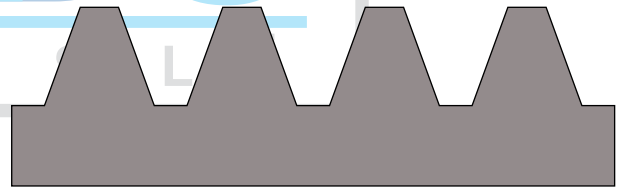
3 Modül



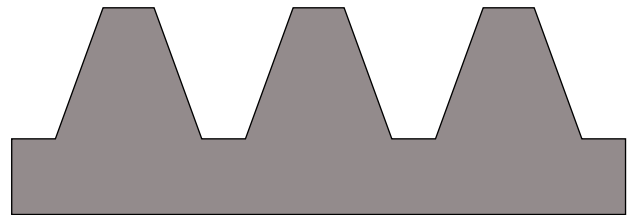
4 Modül



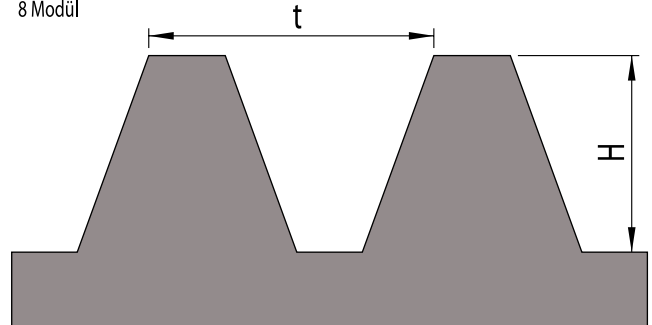
5 Modül



6 Modül

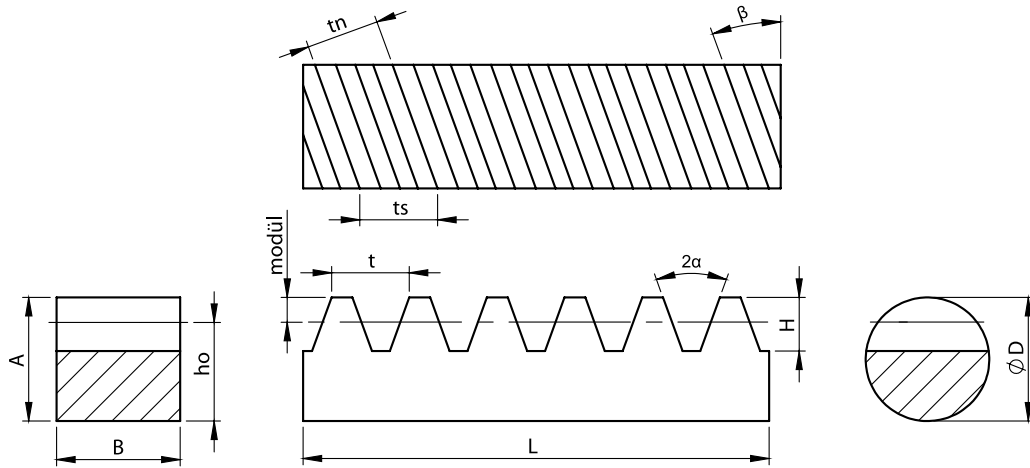


8 Modül

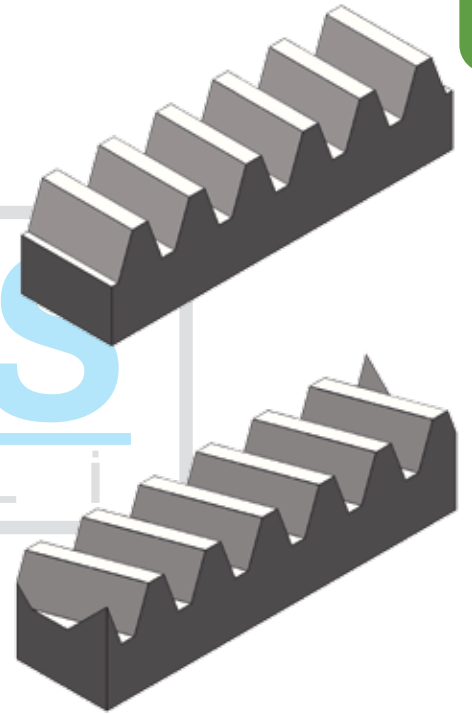


12 Modül

NOT: Profil Açısı  $\alpha = 20^\circ$  Helis Açısı  $\beta = 0^\circ$   
%1 Baskı Hatası Olabilir.



Modül	Normal Adım tn	Sanal Adım ts	Dış Derinliği H	□ ho	□ Ax B	Ø ho	Ø D
1	3.142	3.343	2.17	17.0	18x18	9	10
				19.0	20x20		
				21.0	22x22		
1.5	4.712	5.015	3.25	16.5	18x18	13.5	15
				18.5	20x20		
				20.5	22x22		
				23.5	25x25		
2	6.283	6.686	4.33	16.0	18x18	18	20
				18.0	20x20		
				20.0	22x22		
				23.0	25x25		
2.5	7.854	8.358	5.42	17.5	20x20	17.5	20
				19.5	22x22		
				22.5	25x25		
				27.5	30x30		
3	9.425	10.029	6.50	19.0	22x22	17	20
				22.0	25x25		
				27.0	30x30		
				32.0	35x35		
4	12.566	13.372	8.66	18.0	22x22	21	25
				21.0	25x25		
				26.0	30x30		
				31.0	35x35		
				36.0	40x40		
5	15.708	16.716	10.83	25.0	30x30	25	30
				30.0	35x35		
				35.0	40x40		
				40.0	45x45		
6	18.849	20.059	13.00	45.0	50x50	29	35
				29.0	35x35		
				34.0	40x40		
				39.0	45x45		
				44.0	50x50		
7	21.991	23.402	15.16	49.0	55x55	33	40
				53.0	60x60		
				33.0	40x40		
				38.0	45x45		
				43.0	50x50		
8	25.132	26.745	17.33	48.0	55x55	32	40
				52.0	60x60		
				57.0	65x65		
				37.0	45x45		
				42.0	50x50		
10	31.415	33.431	21.66	47.0	55x55	40	50
				52.0	60x60		
				57.0	65x65		
				50.0	60x60		
				55.0	65x65		
				60.0	70x70		
				65.0	75x75		
				70.0	80x80		

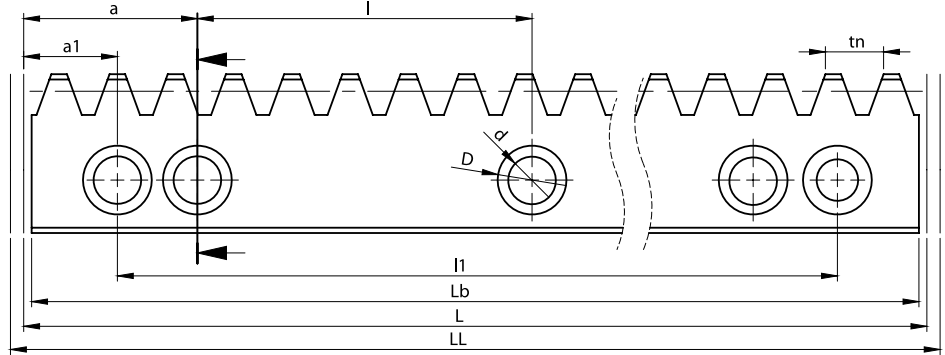
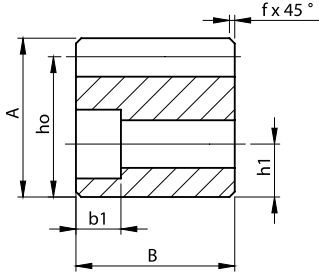


Profil Açısı:  $\alpha$  20°  
Helis Açısı:  $\beta$  20° (Helis Dişli için)  
Sağ / Sol Helis

max. Boy (L): 6000 mm  
max. Modül (m): 20  
max. Helis Açısı ( $\beta$ ): 30°

- Kare Malzemeler Sıcak Çekme, Yuvarlak Malzemeler Transmisyon Malzemesidir.
- Bu Ürünlerimizde Yüzey İşlemi Yoktur.

AxB : +/-0,6  
D : +/-0,2  
Boy (L) : +2t/-5 (Boy Tamamlamasız)



Modül	Adım tn	LL	L	Lb	Z	A	B	ho	f+1	a	l	h1	d	D	b1	a1	l1
1	3.142	512	502.65	502.05	160	18	18	17	2	62.83	125.66	7	7	12	7	28.0	446.65
		1015	1005.31	1004.71	320	18	18	17	2	62.83	125.66	7	7	12	7	28.0	949.31
1.5	4.712	514	499.51	498.91	106	18	18	16.5	2	62.44	124.88	7	7	12	7	28.0	443.51
		1013	999.03	998.43	212	18	18	16.5	2	62.44	124.88	7	7	12	7	28.0	943.03
2	6.283	515	502.65	502.00	80	25	25	23	2	62.83	125.66	9	7	12	7	28.0	446.65
		1018	1005.31	1004.66	160	25	25	23	2	62.83	125.66	9	7	12	7	28.0	949.31
2.5	7.854	518	502.65	501.95	64	26	26	23.5	2	62.83	125.66	9	7	12	7	28.0	446.65
		1021	1005.31	1004.61	128	26	26	23.5	2	62.83	125.66	9	7	12	7	28.0	949.31
3	9.425	528	508.94	508.19	54	30	30	27	2	63.62	127.23	11	10	16	9	27.0	454.94
		1037	1017.88	1017.13	108	30	30	27	2	63.62	127.23	11	10	16	9	27.0	963.88
4	12.566	528	502.65	501.80	40	37	37	33	2	62.83	125.66	13	10	16	9	27.0	448.65
		1030	1005.31	1004.46	80	37	37	33	2	62.83	125.66	13	10	16	9	27.0	951.31
5	15.708	534	502.65	501.75	32	42	42	37	3	62.83	125.66	15	14	20	13	26.0	450.65
		1037	1005.31	1004.41	64	42	42	37	3	62.83	125.66	15	14	20	13	26.0	953.31
6	18.850	547	508.94	507.94	27	52	52	46	3	63.62	127.23	19	18	26	17	25.0	458.94
		1056	1017.88	1016.88	54	52	52	46	3	63.62	127.23	19	18	26	17	25.0	967.88
7	21.991	550	505.80	504.60	23	60	60	53	3	63.22	126.45	20	18	26	17	25.0	455.80
		1056	1011.59	1010.39	46	60	60	53	3	63.22	126.45	20	18	26	17	25.0	961.59
8	25.133	528	502.65	501.35	20	75	75	67	3	62.83	125.66	26	22	33	21	23.0	456.65
		1030	1005.31	1004.01	40	75	75	67	3	62.83	125.66	26	22	33	21	23.0	959.31
10	31.416	534	502.65	501.15	16	95	95	85	4	62.83	125.66	34	33	48	32	-	-
		1037	1005.31	1003.81	32	95	95	85	4	62.83	125.66	34	33	48	32	-	-

\* Isıl işlem ve kaplama işlemleri isteğe bağlı olarak yapılmaktadır. Isıl işlemlerden sonra ölçüsel ve şekilsel değişim olabilir.

\* Müşteri isteği doğrultusunda bu ürünlere pim deliği konulabilmekte ve montaj delikleri değişik tipte yapılabilmektedir.

\* Bu ürünlerimiz için kullanılan pinyon dişlilere ilgili bölümden bakınız.

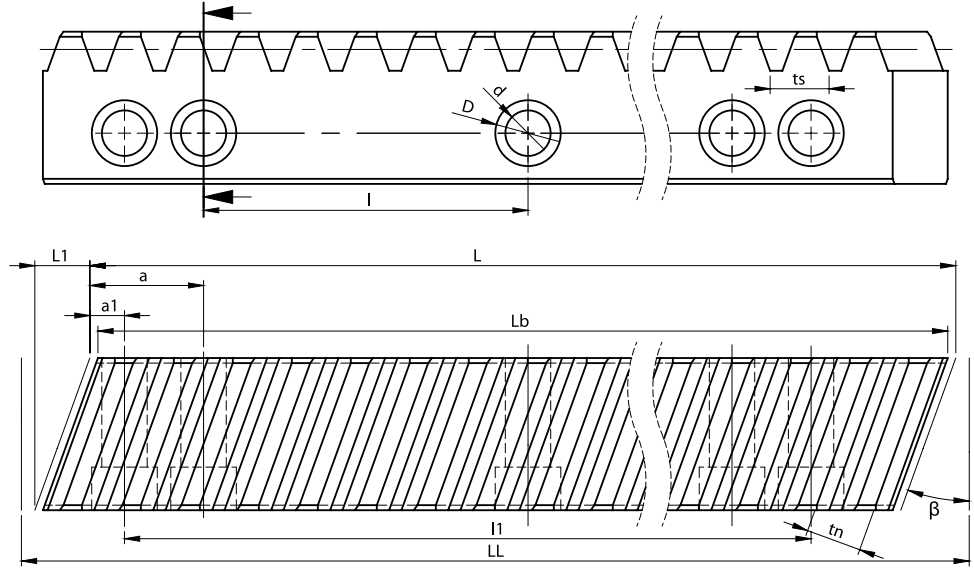
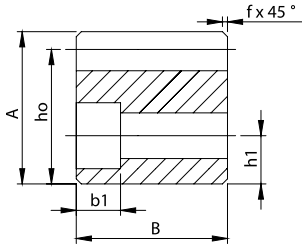
\* Kullanılabilecek pimleri teknik bilgi kısmında bulabilirsiniz.



LL : Kesim Boyu  
L : Gerçek Boy  
Lb : Boşluklu Boy  
Z : Diş Sayısı  
Fpmax : Boydaki Toplam Hata Miktarı (mm)  
tn : Normal Adım

A : +/-0,1  
B : +/-0,2  
Lb : +/-0,2  
a : +/-0,1  
l : +/-0,2  
Fpmax : +/-0,5

•Profil Açısı:  $\alpha=20^\circ$  Helis Açısı  $\beta=0^\circ$



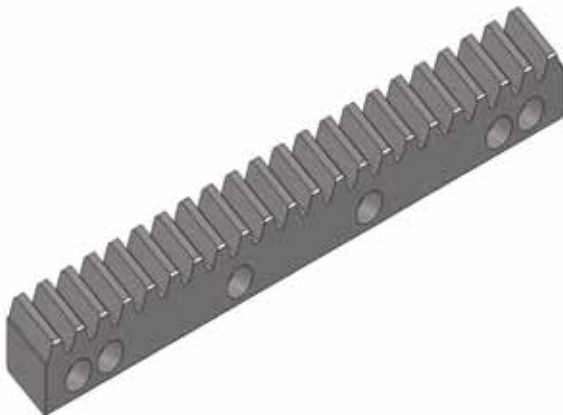
Modül	Helis Açısı (Sağ) β°	Adım tn	Adım ts	LL	L	Lb	L1	Z	A	B	ho	f+1	a	l	h1	d	D	b1	a1	l1
1	20°	3.142	3.343	517	501.48	500.88	6.55	150	18	18	17	2	62.69	125.37	7	7	12	7	29.0	443.48
				1019	1002.96	1002.36	6.55	300	18	18	17	2	62.69	125.37	7	7	12	7	29.0	944.96
1.5	22°	4.712	5.083	525	503.17	502.57	7.27	99	18	18	16.5	2	62.90	125.79	7	7	12	7	29.0	445.17
				1028	1006.33	1005.73	7.27	198	18	18	16.5	2	62.90	125.79	7	7	12	7	29.0	948.33
2	24°	6.283	6.878	526	502.08	501.43	11.13	73	25	25	23	2	62.76	125.52	9	7	12	7	29.0	444.08
				1028	1004.16	1003.51	11.13	146	25	25	23	2	62.76	125.52	9	7	12	7	29.0	946.16
2.5	15°	7.854	8.131	527	504.12	503.42	6.96	62	26	26	23.5	2	63.02	126.03	9	7	12	7	29.0	446.12
				1031	1008.25	1007.55	6.96	124	26	26	23.5	2	63.02	126.03	9	7	12	7	29.0	950.25
3	17°	9.425	9.855	531	502.63	501.88	9.17	51	30	30	27	2	62.83	125.66	11	10	16	9	28.0	446.63
				1033	1005.25	1004.50	9.17	102	30	30	27	2	62.83	125.66	11	10	16	9	28.0	949.25
4	25°	12.566	13.866	542	499.16	498.31	17.25	36	37	37	33	2	62.39	124.79	13	10	16	9	28.0	443.16
				1041	998.31	997.46	17.25	72	37	37	33	2	62.39	124.79	13	10	16	9	28.0	942.31
5	15°	15.708	16.262	547	504.12	503.22	11.25	31	42	42	37	3	63.02	126.03	15	14	20	13	26.0	452.12
				1051	1008.25	1007.35	11.25	62	42	42	37	3	63.02	126.03	15	14	20	13	26.0	956.25
6	17°	18.850	19.711	566	512.48	511.48	15.90	26	52	52	46	3	64.06	128.12	19	18	26	17	28.0	456.48
				1079	1024.96	1023.96	15.90	52	52	52	46	3	64.06	128.12	19	18	26	17	28.0	968.96
7	20°	21.991	23.402	581	514.86	513.66	21.84	22	60	60	53	3	64.36	128.71	20	18	26	17	33.0	448.86
				1096	1029.71	1028.51	21.84	44	60	60	53	3	64.36	128.71	20	18	26	17	33.0	963.71
8	21°	25.133	26.921	565	511.50	510.20	28.79	19	75	75	67	3	63.94	127.87	26	22	33	21	-	-
				1077	1022.99	1021.69	28.79	38	75	75	67	3	63.94	127.87	26	22	33	21	-	-
10	21°	31.416	33.651	573	504.77	503.27	36.47	15	95	95	85	4	63.10	126.19	34	33	48	32	-	-
				1077	1009.53	1008.03	36.47	30	95	95	85	4	63.10	126.19	34	33	48	32	-	-

\* Isıl işlem ve kaplama işlemleri isteğe bağlı olarak yapılmaktadır. Isıl işlemlerden sonra ölçüsel ve şekilsel değişim olabilir.

\* Müşteri isteği doğrultusunda bu ürünlere pim deliği konulabilmekte ve montaj delikleri değişik tipte yapılabilmektedir.

\* Bu ürünlerimiz için kullanılan pinyon dişlilere ilgili bölümden bakınız.

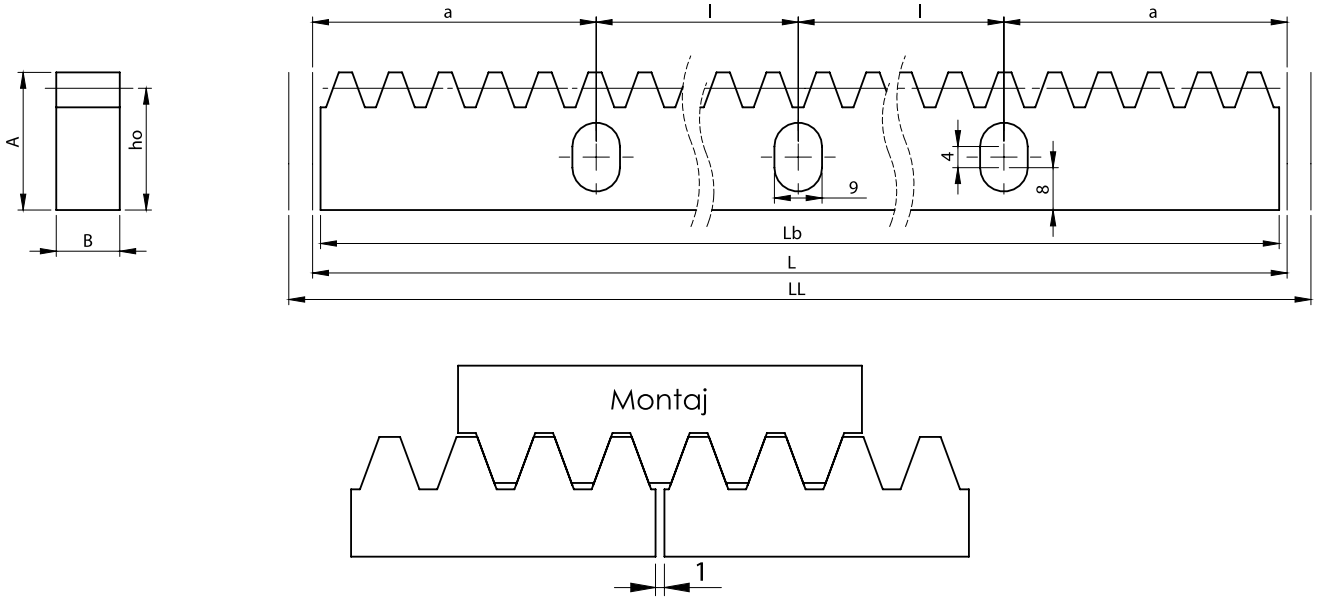
\* Kullanılabilecek pimleri teknik bilgi kısmında bulabilirsiniz.



LL : Kesim Boyu  
L : Gerçek Boy  
Lb : Boşluklu Boy  
Z : Diş Sayısı  
Fpmax : Boydaki Toplam Hata Miktarı (mm)  
tn : Normal Adım  
ts : Sanal Adım

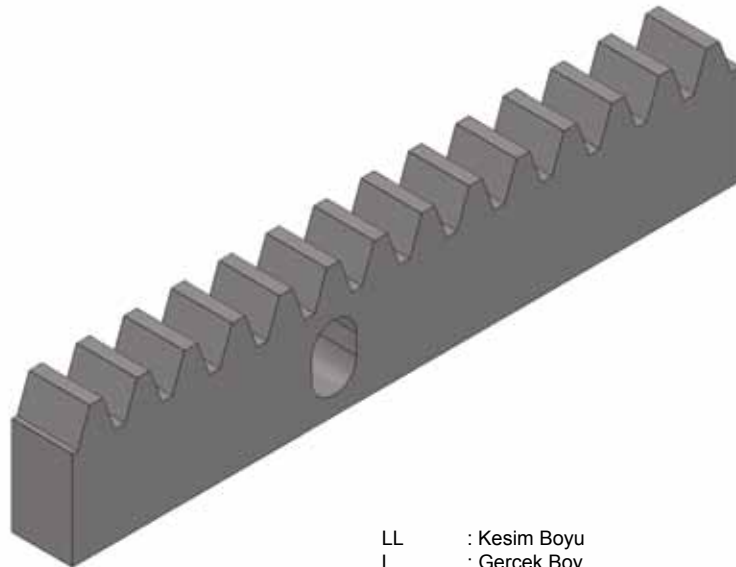
A : +/-0,1  
B : +/-0,2  
Lb : +/-0,2  
a : +/-0,1  
l : +/-0,2  
Fpmax : +/-0,5

•Profil Açısı: α=20° Helis Açısı β=(Sağ)



Modül	LL	L	Lb	Z	A	B	ho	a	l
3	528	508.94	507.9	54	26	12	23	52	202.5
	1037	1017.88	1016.9	108				52	456.9
4	528	502.65	501.7	40	35	12	31	52	199.3
	1030	1005.31	1004.3	80				52	450.7
5	534	502.65	501.7	32	35	16	30	52	199.3
	1037	1005.31	1004.3	64				52	450.7

\*Bu Ürünlerimiz Galvaniz Kaplıdır.



LL : Kesim Boyu  
L : Gerçek Boy  
Lb : Boşluklu Boy  
Z : Diş Sayısı

A : +/-0,2  
B : +/-0,2  
Lb : +/-0,2  
a : +/-0,3  
l : +/-0,3

•Profil Açısı:  $\alpha=20^\circ$  Helis Açısı  $\beta=0^\circ$

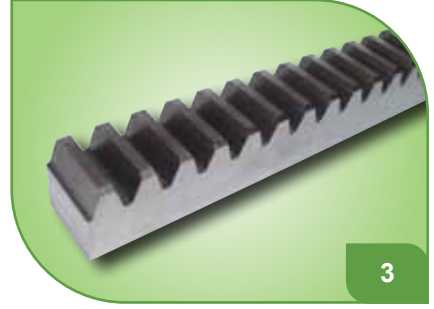




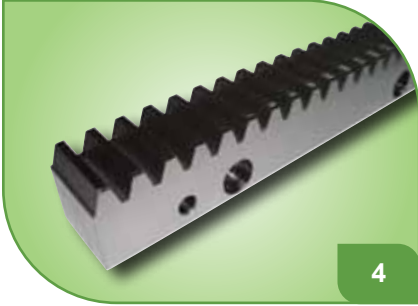
1



2



3



4



5



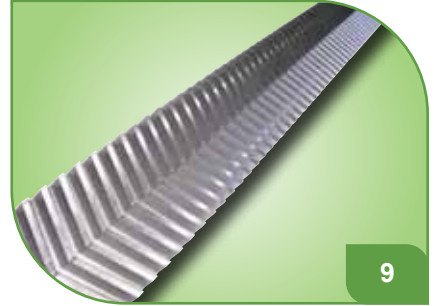
6



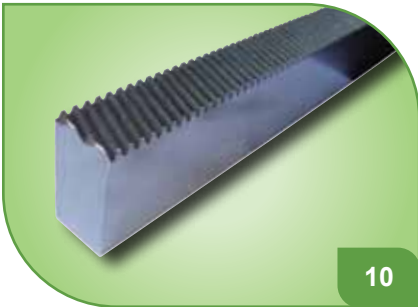
7



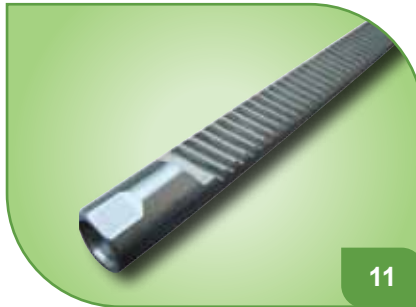
8



9



10



11



12



13

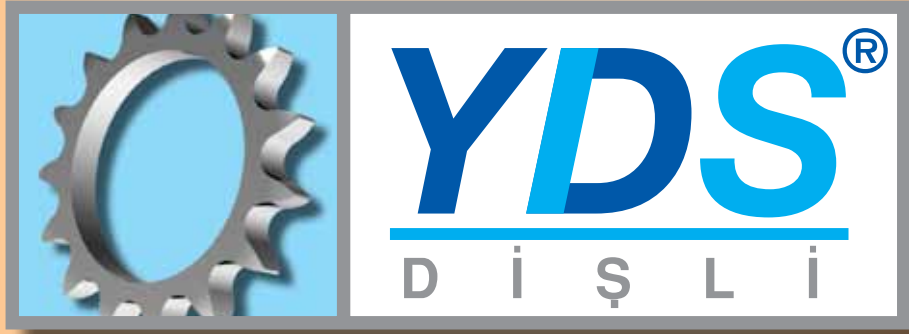


14

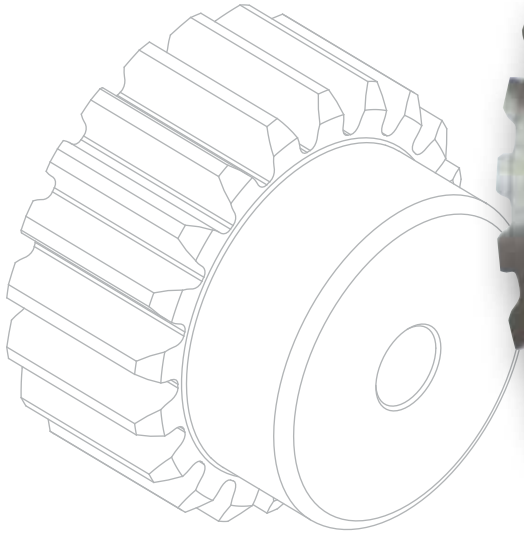
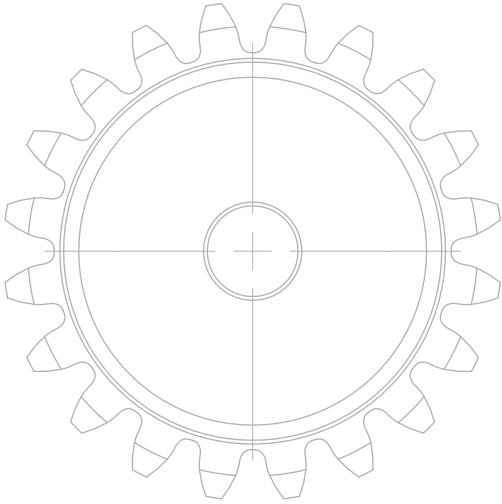
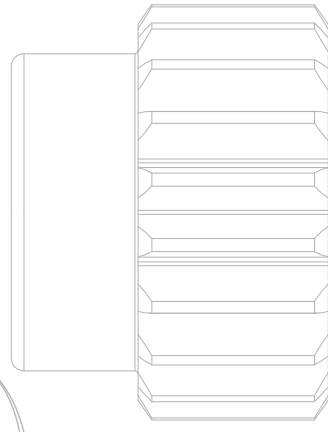
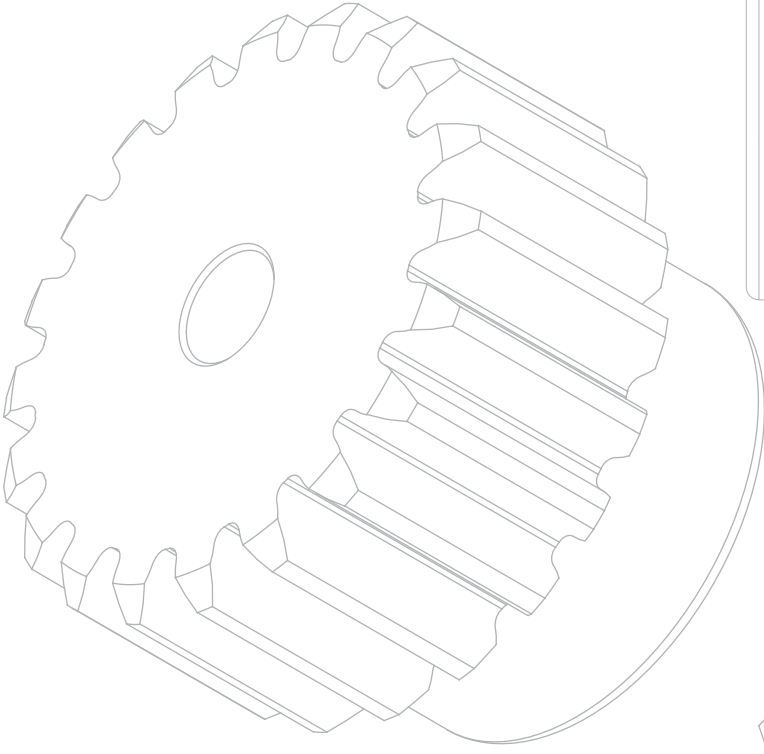


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# İnşaat Pinyon Dişli



Düz ve Helis Dişli Grubu

**DÜZ/HELİS DİŞLİ HESAPLARI (DIN867)**

<b>m/mn</b>	: Modül/Normal Modül
<b>ms</b>	: Sanal Modül
<b>Z</b>	: Diş Sayısı
<b>da</b>	: Diş Üstü Çapı
<b>do</b>	: Bölüm Dairesi Çapı
<b>df</b>	: Diş Dibi Çapı
<b>β</b>	: Helis Açısı
<b>α</b>	: Profil Açısı (Genellikle 20°)
<b>B</b>	: Diş Kalınlığı
<b>E</b>	: Eksenler Arası

**Modül**

$$m = mn \quad ms = \frac{mn}{\cos \beta} \quad \beta = 0 \rightarrow ms = mn = m$$

**Bölüm Dairesi Çapı**

Düz Dişli :  $do = mn.Z$       Helis Dişli :  $do = ms.Z$

**Diş Üstü Çapı**

$$da = do + 2.mn$$

**Diş Dibi Çapı**

$$df = do - (2,332.mn) \quad \text{veya} \quad df = do - (2,5.mn)$$

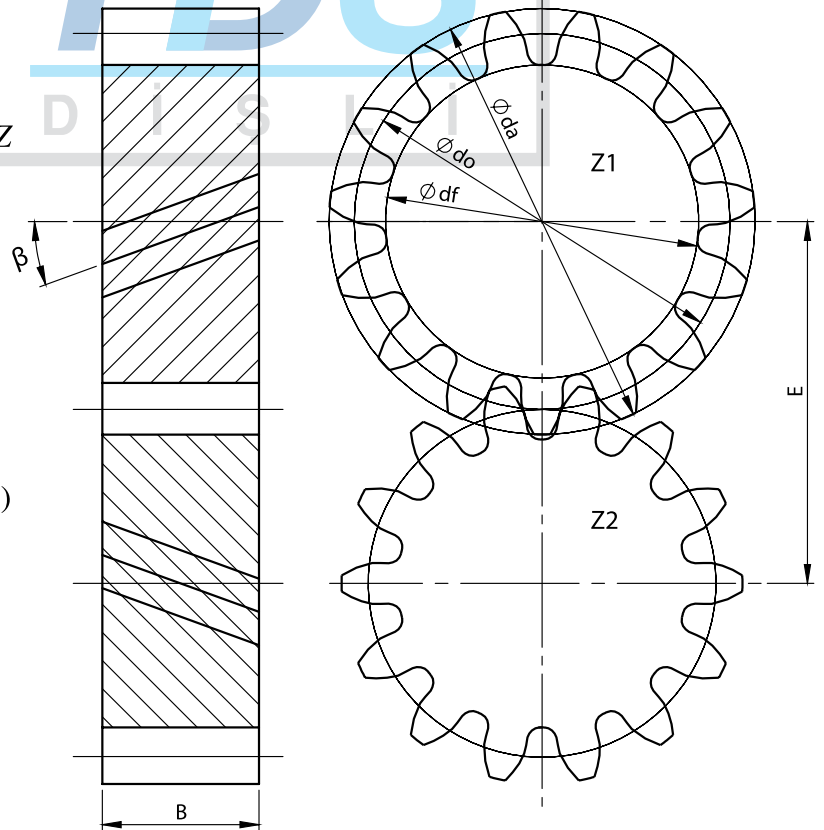
**Diş Kalınlığı**

Az Yüklerde :  $B = (6 \sim 8).m$

Çok Yüklerde :  $B = (8 \sim 12).m$

**Eksenler Arası**

$$E = \frac{do1 + do2}{2} = \frac{ms(Z1 + Z2)}{2}$$



## COSINUS TABLOSU

Açı °	Cos Değeri	Açı °	Cos Değeri	Açı °	Cos Değeri	Açı °	Cos Değeri
0	1.00000	23	0.92050	46	0.69466	69	0.35837
1	0.99985	24	0.91355	47	0.68200	70	0.34202
2	0.99939	25	0.90631	48	0.66913	71	0.32557
3	0.99863	26	0.89879	49	0.65606	72	0.30902
4	0.99756	27	0.89101	50	0.64279	73	0.29237
5	0.99619	28	0.88295	51	0.62932	74	0.27564
6	0.99452	29	0.87462	52	0.61566	75	0.25882
7	0.99255	30	0.86603	53	0.60182	76	0.24192
8	0.99027	31	0.85717	54	0.58779	77	0.22495
9	0.98769	32	0.84805	55	0.57358	78	0.20791
10	0.98481	33	0.83867	56	0.55919	79	0.19081
11	0.98163	34	0.82904	57	0.54464	80	0.17365
12	0.97815	35	0.81915	58	0.52992	81	0.15643
13	0.97437	36	0.80902	59	0.51504	82	0.13917
14	0.97030	37	0.79864	60	0.50000	83	0.12187
15	0.96593	38	0.78801	61	0.48481	84	0.10453
16	0.96126	39	0.77715	62	0.46947	85	0.08716
17	0.95630	40	0.76604	63	0.45399	86	0.06976
18	0.95106	41	0.75471	64	0.43837	87	0.05234
19	0.94552	42	0.74314	65	0.42262	88	0.03490
20	0.93969	43	0.73135	66	0.40674	89	0.01745
21	0.93358	44	0.71934	67	0.39073	90	0.00000
22	0.92718	45	0.70711	68	0.37461	91	-0.01745

## DÜZ/HELİS DİŞLİ GENEL TOLERANSLAR

Diş üstü çapı (da)	: +/-1mm
Diş kalınlığı (B)	: +/-1mm
Delik çapı (dm)	: H8
Göbek çapı (dg)	: +/-2mm
Diş Dibi Çapı (df)	: +0/-0,4mm
Toplam kalınlık (A)	: +/-1,5mm

\*Farklılık Gösteren Toleranslar Ürünlerimizin İlgili Kısımlarında Belirtilmiştir.

\*Tüm Ürünlerimizin İmalatında TS 1845 ve TS 1980 Tolerans Standartları Kullanılmaktadır.



1 Modül



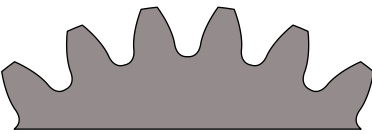
1,5 Modül



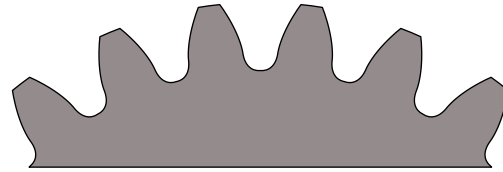
2 Modül



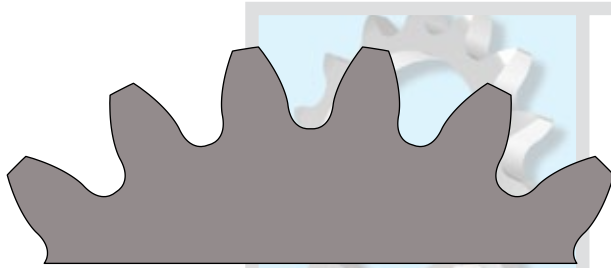
2,5 Modül



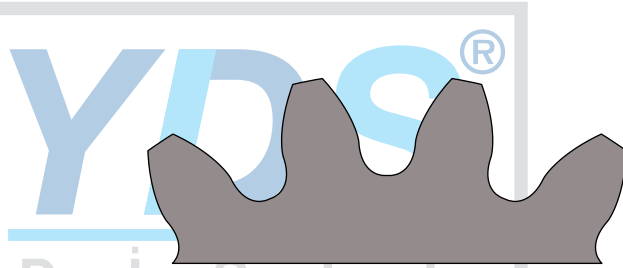
3 Modül



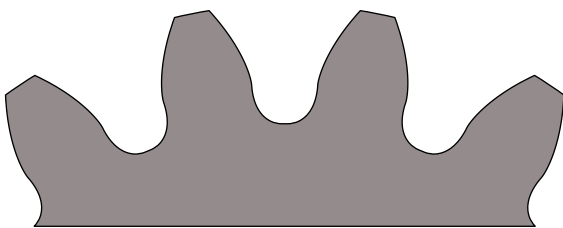
4 Modül



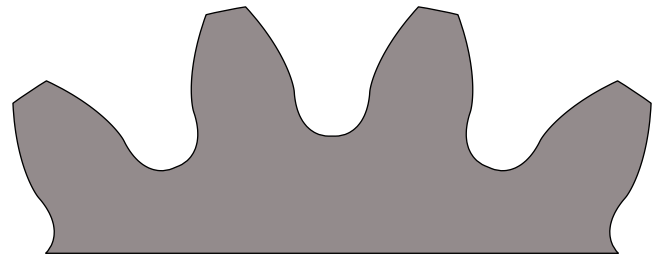
5 Modül



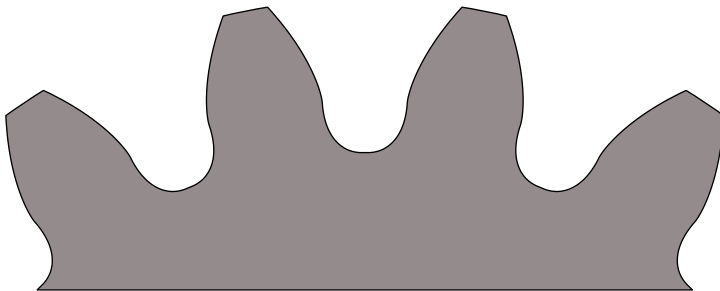
6 Modül



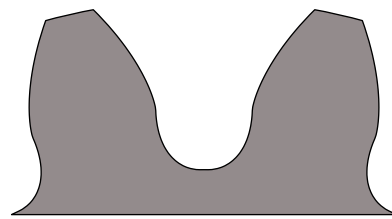
7 Modül



8 Modül



9 Modül



10 Modül

NOT: Profil Açısı  $\alpha = 20^\circ$  Helis Açısı  $\beta = 0^\circ$   
%1 Baskı Hatası Olabilir.

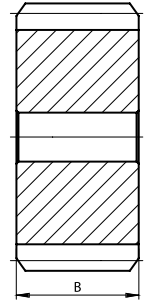
## DÜZ DİŞLİLER

DIN 867

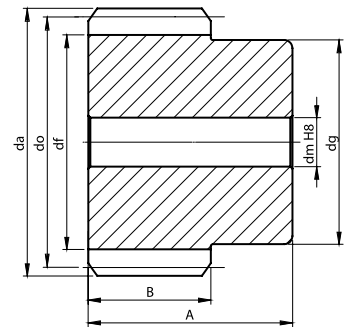
STANDART  
DÜZ ve HELİS DİŞLİLER

Diş Sayısı Z	1 Modül					1,5 Modül					2 Modül				
	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Göbek Çapı dg	Delik Çapı dm	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Göbek Çapı dg	Delik Çapı dm	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Göbek Çapı dg	Delik Çapı dm
10	12	10	7.7	-	-	18.0	15.0	11.5	-	-	24	20	15.3	12	-
11	13	11	8.7	-	-	19.5	16.5	13.0	-	-	26	22	17.3	14	-
12	14	12	9.7	-	-	21.0	18.0	14.5	12	-	28	24	19.3	16	-
13	15	13	10.7	-	-	22.5	19.5	16.0	14	-	30	26	21.3	18	8
14	16	14	11.7	-	-	24.0	21.0	17.5	15	-	32	28	23.3	20	8
15	17	15	12.7	-	-	25.5	22.5	19.0	17	-	34	30	25.3	22	8
16	18	16	13.7	12	-	27.0	24.0	20.5	18	-	36	32	27.3	24	8
17	19	17	14.7	13	-	28.5	25.5	22.0	20	8	38	34	29.3	26	10
18	20	18	15.7	14	-	30.0	27.0	23.5	21	8	40	36	31.3	28	10
19	21	19	16.7	15	-	31.5	28.5	25.0	23	8	42	38	33.3	30	10
20	22	20	17.7	16	-	33.0	30.0	26.5	24	8	44	40	35.3	32	10
21	23	21	18.7	17	-	34.5	31.5	28.0	26	10	46	42	37.3	34	12
22	24	22	19.7	18	-	36.0	33.0	29.5	27	10	48	44	39.3	36	12
23	25	23	20.7	19	-	37.5	34.5	31.0	29	10	50	46	41.3	38	12
24	26	24	21.7	20	8	39.0	36.0	32.5	30	10	52	48	43.3	40	12
25	27	25	22.7	21	8	40.5	37.5	34.0	32	10	54	50	45.3	42	12
26	28	26	23.7	22	8	42.0	39.0	35.5	33	12	56	52	47.3	44	12
27	29	27	24.7	23	8	43.5	40.5	37.0	35	12	58	54	49.3	46	12
28	30	28	25.7	24	8	45.0	42.0	38.5	36	12	60	56	51.3	48	14
29	31	29	26.7	25	8	46.5	43.5	40.0	38	12	62	58	53.3	50	14
30	32	30	27.7	26	8	48.0	45.0	41.5	39	12	64	60	55.3	52	14
31	33	31	28.7	27	8	49.5	46.5	43.0	41	12	66	62	57.3	54	14
32	34	32	29.7	28	10	51.0	48.0	44.5	42	12	68	64	59.3	56	14
33	35	33	30.7	29	10	52.5	49.5	46.0	44	12	70	66	61.3	58	14
34	36	34	31.7	30	10	54.0	51.0	47.5	45	12	72	68	63.3	60	14
35	37	35	32.7	31	10	55.5	52.5	49.0	47	12	74	70	65.3	62	14
36	38	36	33.7	32	10	57.0	54.0	50.5	48	12	76	72	67.3	64	14
37	39	37	34.7	33	10	58.5	55.5	52.0	50	12	78	74	69.3	66	14
38	40	38	35.7	34	10	60.0	57.0	53.5	51	12	80	76	71.3	68	14
39	41	39	36.7	35	10	61.5	58.5	55.0	53	12	82	78	73.3	70	14
40	42	40	37.7	36	10	63.0	60.0	56.5	54	12	84	80	75.3	72	14
41	43	41	38.7	37	10	64.5	61.5	58.0	56	14	86	82	77.3	74	16
42	44	42	39.7	38	10	66.0	63.0	59.5	57	14	88	84	79.3	76	16
43	45	43	40.7	39	10	67.5	64.5	61.0	59	14	90	86	81.3	78	16
44	46	44	41.7	40	10	69.0	66.0	62.5	60	14	92	88	83.3	80	16
45	47	45	42.7	41	10	70.5	67.5	64.0	62	14	94	90	85.3	82	16
46	48	46	43.7	42	10	72.0	69.0	65.5	63	14	96	92	87.3	84	16
47	49	47	44.7	43	10	73.5	70.5	67.0	65	14	98	94	89.3	86	16
48	50	48	45.7	44	10	75.0	72.0	68.5	66	14	100	96	91.3	88	16
49	51	49	46.7	45	10	76.5	73.5	70.0	68	14	102	98	93.3	90	16
50	52	50	47.7	46	10	78.0	75.0	71.5	69	14	104	100	95.3	92	16
51	53	51	48.7	47	12	79.5	76.5	73.0	71	16	106	102	97.3	94	18
52	54	52	49.7	48	12	81.0	78.0	74.5	72	16	108	104	99.3	96	18
53	55	53	50.7	49	12	82.5	79.5	76.0	74	16	110	106	101.3	98	18
54	56	54	51.7	50	12	84.0	81.0	77.5	75	16	112	108	103.3	100	18
55	57	55	52.7	51	12	85.5	82.5	79.0	77	16	114	110	105.3	102	18
56	58	56	53.7	52	12	87.0	84.0	80.5	78	16	116	112	107.3	104	18
57	59	57	54.7	53	12	88.5	85.5	82.0	80	16	118	114	109.3	106	18
58	60	58	55.7	54	12	90.0	87.0	83.5	81	18	120	116	111.3	108	18
59	61	59	56.7	55	12	91.5	88.5	85.0	83	18	122	118	113.3	110	18
60	62	60	57.7	56	12	93.0	90.0	86.5	84	18	124	120	115.3	112	18
61	63	61	58.7	57	12	94.5	91.5	88.0	86	18	126	122	117.3	114	20
62	64	62	59.7	58	12	96.0	93.0	89.5	87	18	128	124	119.3	116	20
63	65	63	60.7	59	12	97.5	94.5	91.0	89	18	130	126	121.3	118	20
64	66	64	61.7	60	12	99.0	96.0	92.5	90	18	132	128	123.3	120	20
65	67	65	62.7	61	12	100.5	97.5	94.0	92	18	134	130	125.3	122	20
66	68	66	63.7	62	12	102.0	99.0	95.5	93	18	136	132	127.3	124	20
67	69	67	64.7	63	12	103.5	100.5	97.0	95	18	138	134	129.3	126	20
68	70	68	65.7	64	12	105.0	102.0	98.5	96	18	140	136	131.3	128	20
69	71	69	66.7	65	12	106.5	103.5	100.0	98	18	142	138	133.3	130	20
70	72	70	67.7	66	12	108.0	105.0	101.5	99	18	144	140	135.3	132	20
75	77	75	72.7	71	12	115.5	112.5	109.0	107	18	154	150	145.3	-	20
80	82	80	77.7	76	12	123.0	120.0	116.5	114	18	164	160	155.3	-	20
90	92	90	87.7	86	12	138.0	135.0	131.5	129	20	184	180	175.3	-	20
95	97	95	92.7	91	12	145.5	142.5	139.0	137	20	194	190	185.3	-	20
100	102	100	97.7	96	12	153.0	150.0	146.5	-	20	204	200	195.3	-	20
105	107	105	102.7	101	12	160.5	157.5	154.0	-	20	214	210	205.3	-	20
110	112	110	107.7	106	12	168.0	165.0	161.5	-	20	224	220	215.3	-	20
115	117	115	112.7	111	12	175.5	172.5	169.0	-	20	234	230	225.3	-	20
125	127	125	122.7	121	12	190.5	187.5	184.0	-	20	254	250	245.3	-	25

TİP A



TİP B

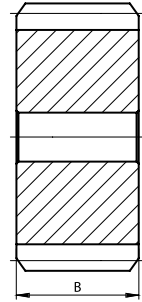
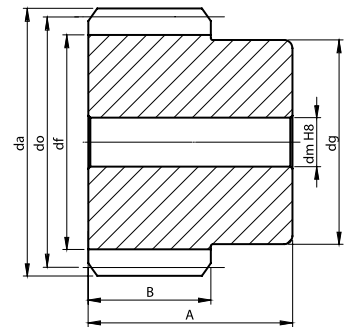


Modül	A	B
1	30	20
1.5	30	20
2	40	25
2.5	40	25
3	50	30
4	60	40
5	65	45
6	75	55
7	85	60
8	100	75
9	115	85
10	125	95

Profil Açısı  $\alpha=20^\circ$ Helis Açısı  $\beta=0^\circ$



Diş Sayısı Z	2,5 Modül					3 Modül					4 Modül				
	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Göbek Çapı dg	Delik Çapı dm	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Göbek Çapı dg	Delik Çapı dm	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Göbek Çapı dg	Delik Çapı dm
10	30.0	25.0	19.2	16	-	36	30	23.0	20	10	48	40	30.7	27	12
11	32.5	27.5	21.7	18	10	39	33	26.0	23	10	52	44	34.7	31	12
12	35.0	30.0	24.2	21	10	42	36	29.0	26	10	56	48	38.7	35	12
13	37.5	32.5	26.7	23	10	45	39	32.0	29	10	60	52	42.7	39	12
14	40.0	35.0	29.2	26	10	48	42	35.0	32	10	64	56	46.7	43	12
15	42.5	37.5	31.7	28	10	51	45	38.0	35	10	68	60	50.7	47	12
16	45.0	40.0	34.2	31	12	54	48	41.0	38	10	72	64	54.7	51	14
17	47.5	42.5	36.7	33	12	57	51	44.0	41	12	76	68	58.7	55	14
18	50.0	45.0	39.2	36	12	60	54	47.0	44	12	80	72	62.7	59	14
19	52.5	47.5	41.7	38	12	63	57	50.0	47	12	84	76	66.7	63	14
20	55.0	50.0	44.2	41	14	66	60	53.0	50	12	88	80	70.7	67	14
21	57.5	52.5	46.7	43	14	69	63	56.0	53	12	92	84	74.7	71	14
22	60.0	55.0	49.2	46	14	72	66	59.0	56	12	96	88	78.7	75	14
23	62.5	57.5	51.7	48	14	75	69	62.0	59	12	100	92	82.7	79	14
24	65.0	60.0	54.2	51	14	78	72	65.0	62	12	104	96	86.7	83	16
25	67.5	62.5	56.7	53	14	81	75	68.0	65	12	108	100	90.7	87	16
26	70.0	65.0	59.2	56	14	84	78	71.0	68	14	112	104	94.7	91	16
27	72.5	67.5	61.7	58	14	87	81	74.0	71	14	116	108	98.7	95	16
28	75.0	70.0	64.2	61	14	90	84	77.0	74	14	120	112	102.7	99	16
29	77.5	72.5	66.7	63	14	93	87	80.0	77	14	124	116	106.7	103	16
30	80.0	75.0	69.2	66	16	96	90	83.0	80	14	128	120	110.7	107	16
31	82.5	77.5	71.7	68	16	99	93	86.0	83	14	132	124	114.7	111	16
32	85.0	80.0	74.2	71	16	102	96	89.0	86	14	136	128	118.7	115	16
33	87.5	82.5	76.7	73	16	105	99	92.0	89	14	140	132	122.7	119	16
34	90.0	85.0	79.2	76	16	108	102	95.0	92	14	144	136	126.7	123	16
35	92.5	87.5	81.7	78	16	111	105	98.0	95	14	148	140	130.7	127	16
36	95.0	90.0	84.2	81	16	114	108	101.0	98	14	152	144	134.7	-	18
37	97.5	92.5	86.7	83	16	117	111	104.0	101	14	156	148	138.7	-	18
38	100.0	95.0	89.2	86	16	120	114	107.0	104	14	160	152	142.7	-	18
39	102.5	97.5	91.7	88	16	123	117	110.0	107	14	164	156	146.7	-	18
40	105.0	100.0	94.2	91	16	126	120	113.0	110	14	168	160	150.7	-	18
41	107.5	102.5	96.7	93	18	129	123	116.0	113	16	172	164	154.7	-	18
42	110.0	105.0	99.2	96	18	132	126	119.0	116	16	176	168	158.7	-	18
43	112.5	107.5	101.7	98	18	135	129	122.0	119	16	180	172	162.7	-	18
44	115.0	110.0	104.2	101	18	138	132	125.0	122	16	184	176	166.7	-	18
45	117.5	112.5	106.7	103	18	141	135	128.0	125	16	188	180	170.7	-	18
46	120.0	115.0	109.2	106	18	144	138	131.0	128	16	192	184	174.7	-	18
47	122.5	117.5	111.7	108	18	147	141	134.0	131	16	196	188	178.7	-	18
48	125.0	120.0	114.2	111	18	150	144	137.0	-	16	200	192	182.7	-	18
49	127.5	122.5	116.7	113	18	153	147	140.0	-	16	204	196	186.7	-	18
50	130.0	125.0	119.2	116	18	156	150	143.0	-	16	208	200	190.7	-	20
51	132.5	127.5	121.7	118	20	159	153	146.0	-	18	212	204	194.7	-	20
52	135.0	130.0	124.2	121	20	162	156	149.0	-	18	216	208	198.7	-	20
53	137.5	132.5	126.7	123	20	165	159	152.0	-	18	220	212	202.7	-	20
54	140.0	135.0	129.2	126	20	168	162	155.0	-	18	224	216	206.7	-	20
55	142.5	137.5	131.7	128	20	171	165	158.0	-	18	228	220	210.7	-	20
56	145.0	140.0	134.2	131	20	174	168	161.0	-	18	232	224	214.7	-	20
57	147.5	142.5	136.7	133	20	177	171	164.0	-	18	236	228	218.7	-	20
58	150.0	145.0	139.2	-	20	180	174	167.0	-	18	240	232	222.7	-	20
59	152.5	147.5	141.7	-	20	183	177	170.0	-	18	244	236	226.7	-	20
60	155.0	150.0	144.2	-	20	186	180	173.0	-	20	248	240	230.7	-	20
61	157.5	152.5	146.7	-	20	189	183	176.0	-	20	252	244	234.7	-	25
62	160.0	155.0	149.2	-	20	192	186	179.0	-	20	256	248	238.7	-	25
63	162.5	157.5	151.7	-	20	195	189	182.0	-	20	260	252	242.7	-	25
64	165.0	160.0	154.2	-	20	198	192	185.0	-	20	264	256	246.7	-	25
65	167.5	162.5	156.7	-	20	201	195	188.0	-	20	268	260	250.7	-	25
66	170.0	165.0	159.2	-	20	204	198	191.0	-	20	272	264	254.7	-	25
67	172.5	167.5	161.7	-	20	207	201	194.0	-	20	276	268	258.7	-	25
68	175.0	170.0	164.2	-	20	210	204	197.0	-	20	280	272	262.7	-	25
69	177.5	172.5	166.7	-	20	213	207	200.0	-	20	284	276	266.7	-	25
70	180.0	175.0	169.2	-	20	216	210	203.0	-	20	288	280	270.7	-	25
75	192.5	187.5	181.7	-	20	231	225	218.0	-	25	308	300	290.7	-	25
80	205.0	200.0	194.2	-	20	246	240	233.0	-	25	328	320	310.7	-	25
90	230.0	225.0	219.2	-	20	276	270	263.0	-	25	368	360	350.7	-	25
95	242.5	237.5	231.7	-	20	291	285	278.0	-	25	388	380	370.7	-	25
100	255.0	250.0	244.2	-	25	306	300	293.0	-	25	408	400	390.7	-	30
105	267.5	262.5	256.7	-	25	321	315	308.0	-	25	428	420	410.7	-	30
110	280.0	275.0	269.2	-	25	336	330	323.0	-	25	448	440	430.7	-	30
115	292.5	287.5	281.7	-	25	351	345	338.0	-	25	468	460	450.7	-	30
125	317.5	312.5	306.7	-	25	381	375	368.0	-	25	508	500	490.7	-	30

**TİP A**

**TİP B**


Modül	A	B
1	30	20
1.5	30	20
2	40	25
2.5	40	25
3	50	30
4	60	40
5	65	45
6	75	55
7	85	60
8	100	75
9	115	85
10	125	95

Profil Açısı  $\alpha = 20^\circ$ 

Helis Açısı  $\beta = 0^\circ$

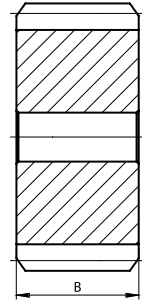
## DÜZ DİŞLİLER

DIN 867

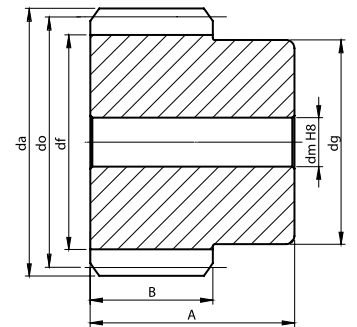
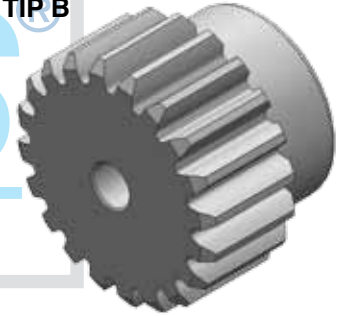
STANDART  
DÜZ ve HELİS DİŞLİLER

Diş Sayısı Z	5 Modül					6 Modül					7 Modül				
	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Göbek Çapı dg	Delik Çapı dm	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Göbek Çapı dg	Delik Çapı dm	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Göbek Çapı dg	Delik Çapı dm
10	60	50	38.3	34	16	72	60	46.0	41	20	84	70	53.7	48	20
11	65	55	43.3	39	16	78	66	52.0	47	20	91	77	60.7	55	20
12	70	60	48.3	44	16	84	72	58.0	53	20	98	84	67.7	62	20
13	75	65	53.3	49	16	90	78	64.0	59	20	105	91	74.7	69	20
14	80	70	58.3	54	18	96	84	70.0	65	20	112	98	81.7	76	20
15	85	75	63.3	59	18	102	90	76.0	71	20	119	105	88.7	83	20
16	90	80	68.3	64	18	108	96	82.0	77	20	126	112	95.7	90	25
17	95	85	73.3	69	18	114	102	88.0	83	20	133	119	102.7	97	25
18	100	90	78.3	74	18	120	108	94.0	89	20	140	126	109.7	104	25
19	105	95	83.3	79	18	126	114	100.0	95	20	147	133	116.7	111	25
20	110	100	88.3	84	18	132	120	106.0	101	20	154	140	123.7	-	25
21	115	105	93.3	89	20	138	126	112.0	107	20	161	147	130.7	-	25
22	120	110	98.3	94	20	144	132	118.0	113	20	168	154	137.7	-	25
23	125	115	103.3	99	20	150	138	124.0	-	25	175	161	144.7	-	25
24	130	120	108.3	104	20	156	144	130.0	-	25	182	168	151.7	-	25
25	135	125	113.3	109	20	162	150	136.0	-	25	189	175	158.7	-	25
26	140	130	118.3	114	25	168	156	142.0	-	25	196	182	165.7	-	25
27	145	135	123.3	119	25	174	162	148.0	-	25	203	189	172.7	-	25
28	150	140	128.3	-	25	180	168	154.0	-	25	210	196	179.7	-	25
29	155	145	133.3	-	25	186	174	160.0	-	25	217	203	186.7	-	25
30	160	150	138.3	-	25	192	180	166.0	-	25	224	210	193.7	-	25
31	165	155	143.3	-	25	198	186	172.0	-	25	231	217	200.7	-	25
32	170	160	148.3	-	25	204	192	178.0	-	25	238	224	207.7	-	25
33	175	165	153.3	-	25	210	198	184.0	-	25	245	231	214.7	-	25
34	180	170	158.3	-	25	216	204	190.0	-	25	252	238	221.7	-	30
35	185	175	163.3	-	25	222	210	196.0	-	25	259	245	228.7	-	30
36	190	180	168.3	-	25	228	216	202.0	-	25	266	252	235.7	-	30
37	195	185	173.3	-	25	234	222	208.0	-	25	273	259	242.7	-	30
38	200	190	178.3	-	25	240	228	214.0	-	25	280	266	249.7	-	30
39	205	195	183.3	-	25	246	234	220.0	-	25	287	273	256.7	-	30
40	210	200	188.3	-	25	252	240	226.0	-	30	294	280	263.7	-	30
41	215	205	193.3	-	25	258	246	232.0	-	30	301	287	270.7	-	30
42	220	210	198.3	-	25	264	252	238.0	-	30	308	294	277.7	-	30
43	225	215	203.3	-	25	270	258	244.0	-	30	315	301	284.7	-	30
44	230	220	208.3	-	25	276	264	250.0	-	30	322	308	291.7	-	30
45	235	225	213.3	-	25	282	270	256.0	-	30	329	315	298.7	-	30
46	240	230	218.3	-	25	288	276	262.0	-	30	336	322	305.7	-	30
47	245	235	223.3	-	25	294	282	268.0	-	30	343	329	312.7	-	30
48	250	240	228.3	-	30	300	288	274.0	-	30	350	336	319.7	-	30
49	255	245	233.3	-	30	306	294	280.0	-	30	357	343	326.7	-	30
50	260	250	238.3	-	30	312	300	286.0	-	30	364	350	333.7	-	30
51	265	255	243.3	-	30	318	306	292.0	-	30	371	357	340.7	-	30
52	270	260	248.3	-	30	324	312	298.0	-	30	378	364	347.7	-	30
53	275	265	253.3	-	30	330	318	304.0	-	30	385	371	354.7	-	30
54	280	270	258.3	-	30	336	324	310.0	-	30	392	378	361.7	-	30
55	285	275	263.3	-	30	342	330	316.0	-	30	399	385	368.7	-	30
56	290	280	268.3	-	30	348	336	322.0	-	30	406	392	375.7	-	35
57	295	285	273.3	-	30	354	342	328.0	-	30	413	399	382.7	-	35
58	300	290	278.3	-	30	360	348	334.0	-	30	420	406	389.7	-	35
59	305	295	283.3	-	30	366	354	340.0	-	30	427	413	396.7	-	35
60	310	300	288.3	-	30	372	360	346.0	-	30	434	420	403.7	-	35
61	315	305	293.3	-	30	378	366	352.0	-	30	441	427	410.7	-	35
62	320	310	298.3	-	30	384	372	358.0	-	30	448	434	417.7	-	35
63	325	315	303.3	-	30	390	378	364.0	-	30	455	441	424.7	-	35
64	330	320	308.3	-	30	396	384	370.0	-	30	462	448	431.7	-	35
65	335	325	313.3	-	30	402	390	376.0	-	35	469	455	438.7	-	35
66	340	330	318.3	-	30	408	396	382.0	-	35	476	462	445.7	-	35
67	345	335	323.3	-	30	414	402	388.0	-	35	483	469	452.7	-	35
68	350	340	328.3	-	30	420	408	394.0	-	35	490	476	459.7	-	35
69	355	345	333.3	-	30	426	414	400.0	-	35	497	483	466.7	-	35
70	360	350	338.3	-	30	432	420	406.0	-	35	504	490	473.7	-	35
75	385	375	363.3	-	30	462	450	436.0	-	35	539	525	508.7	-	35
80	410	400	388.3	-	35	492	480	466.0	-	35	574	560	543.7	-	35
90	460	450	438.3	-	35	552	540	526.0	-	35	644	630	613.7	-	35
95	485	475	463.3	-	35	582	570	556.0	-	35	679	665	648.7	-	35
100	510	500	488.3	-	35	612	600	586.0	-	35	714	700	683.7	-	40
105	535	525	513.3	-	35	642	630	616.0	-	35	749	735	718.7	-	40
110	560	550	538.3	-	35	672	660	646.0	-	35	784	770	753.7	-	40
115	585	575	563.3	-	35	702	690	676.0	-	35	819	805	788.7	-	40
125	635	625	613.3	-	35	762	750	736.0	-	35	889	875	858.7	-	40

TİP A



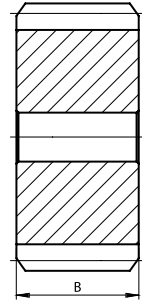
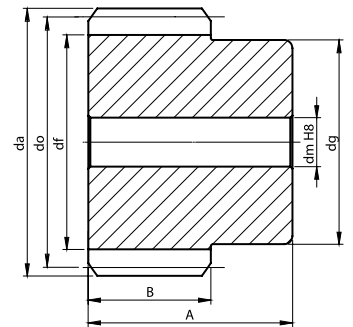
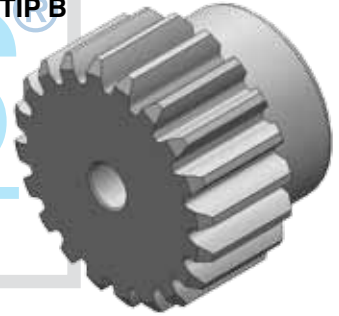
TİP B



Modül	A	B
1	30	20
1.5	30	20
2	40	25
2.5	40	25
3	50	30
4	60	40
5	65	45
6	75	55
7	85	60
8	100	75
9	115	85
10	125	95

Profil Açısı  $\alpha = 20^\circ$ Helis Açısı  $\beta = 0^\circ$

Diş Sayısı Z	8 Modül					9 Modül					10 Modül				
	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Göbek Çapı dg	Delik Çapı dm	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Göbek Çapı dg	Delik Çapı dm	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Göbek Çapı dg	Delik Çapı dm
10	96	80	61.3	55	20	108	90	69.0	63	25	120	100	76.7	70	25
11	104	88	69.3	63	20	117	99	78.0	72	25	130	110	86.7	80	25
12	112	96	77.3	71	20	126	108	87.0	81	25	140	120	96.7	90	25
13	120	104	85.3	79	20	135	117	96.0	90	25	150	130	106.7	-	30
14	128	112	93.3	87	20	144	126	105.0	99	25	160	140	116.7	-	30
15	136	120	101.3	95	20	153	135	114.0	-	25	170	150	126.7	-	30
16	144	128	109.3	103	20	162	144	123.0	-	25	180	160	136.7	-	30
17	152	136	117.3	-	25	171	153	132.0	-	25	190	170	146.7	-	30
18	160	144	125.3	-	25	180	162	141.0	-	25	200	180	156.7	-	30
19	168	152	133.3	-	25	189	171	150.0	-	25	210	190	166.7	-	30
20	176	160	141.3	-	25	198	180	159.0	-	25	220	200	176.7	-	30
21	184	168	149.3	-	25	207	189	168.0	-	30	230	210	186.7	-	30
22	192	176	157.3	-	25	216	198	177.0	-	30	240	220	196.7	-	30
23	200	184	165.3	-	25	225	207	186.0	-	30	250	230	206.7	-	30
24	208	192	173.3	-	25	234	216	195.0	-	30	260	240	216.7	-	30
25	216	200	181.3	-	25	243	225	204.0	-	30	270	250	226.7	-	30
26	224	208	189.3	-	25	252	234	213.0	-	30	280	260	236.7	-	30
27	232	216	197.3	-	25	261	243	222.0	-	30	290	270	246.7	-	30
28	240	224	205.3	-	25	270	252	231.0	-	30	300	280	256.7	-	35
29	248	232	213.3	-	25	279	261	240.0	-	30	310	290	266.7	-	35
30	256	240	221.3	-	30	288	270	249.0	-	30	320	300	276.7	-	35
31	264	248	229.3	-	30	297	279	258.0	-	30	330	310	286.7	-	35
32	272	256	237.3	-	30	306	288	267.0	-	35	340	320	296.7	-	35
33	280	264	245.3	-	30	315	297	276.0	-	35	350	330	306.7	-	35
34	288	272	253.3	-	30	324	306	285.0	-	35	360	340	316.7	-	35
35	296	280	261.3	-	30	333	315	294.0	-	35	370	350	326.7	-	35
36	304	288	269.3	-	30	342	324	303.0	-	35	380	360	336.7	-	35
37	312	296	277.3	-	30	351	333	312.0	-	35	390	370	346.7	-	35
38	320	304	285.3	-	30	360	342	321.0	-	35	400	380	356.7	-	35
39	328	312	293.3	-	30	369	351	330.0	-	35	410	390	366.7	-	35
40	336	320	301.3	-	30	378	360	339.0	-	35	420	400	376.7	-	35
41	344	328	309.3	-	30	387	369	348.0	-	35	430	410	386.7	-	35
42	352	336	317.3	-	30	396	378	357.0	-	35	440	420	396.7	-	35
43	360	344	325.3	-	30	405	387	366.0	-	35	450	430	406.7	-	35
44	368	352	333.3	-	30	414	396	375.0	-	35	460	440	416.7	-	35
45	376	360	341.3	-	30	423	405	384.0	-	35	470	450	426.7	-	35
46	384	368	349.3	-	30	432	414	393.0	-	35	480	460	436.7	-	35
47	392	376	357.3	-	30	441	423	402.0	-	35	490	470	446.7	-	35
48	400	384	365.3	-	30	450	432	411.0	-	35	500	480	456.7	-	35
49	408	392	373.3	-	35	459	441	420.0	-	35	510	490	466.7	-	40
50	416	400	381.3	-	35	468	450	429.0	-	35	520	500	476.7	-	40
51	424	408	389.3	-	35	477	459	438.0	-	35	530	510	486.7	-	40
52	432	416	397.3	-	35	486	468	447.0	-	35	540	520	496.7	-	40
53	440	424	405.3	-	35	495	477	456.0	-	35	550	530	506.7	-	40
54	448	432	413.3	-	35	504	486	465.0	-	40	560	540	516.7	-	40
55	456	440	421.3	-	35	513	495	474.0	-	40	570	550	526.7	-	40
56	464	448	429.3	-	35	522	504	483.0	-	40	580	560	536.7	-	40
57	472	456	437.3	-	35	531	513	492.0	-	40	590	570	546.7	-	40
58	480	464	445.3	-	35	540	522	501.0	-	40	600	580	556.7	-	40
59	488	472	453.3	-	35	549	531	510.0	-	40	610	590	566.7	-	40
60	496	480	461.3	-	35	558	540	519.0	-	40	620	600	576.7	-	40
61	504	488	469.3	-	35	567	549	528.0	-	40	630	610	586.7	-	40
62	512	496	477.3	-	35	576	558	537.0	-	40	640	620	596.7	-	40
63	520	504	485.3	-	35	585	567	546.0	-	40	650	630	606.7	-	40
64	528	512	493.3	-	35	594	576	555.0	-	40	660	640	616.7	-	40
65	536	520	501.3	-	35	603	585	564.0	-	40	670	650	626.7	-	40
66	544	528	509.3	-	35	612	594	573.0	-	40	680	660	636.7	-	40
67	552	536	517.3	-	35	621	603	582.0	-	40	690	670	646.7	-	40
68	560	544	525.3	-	35	630	612	591.0	-	40	700	680	656.7	-	40
69	568	552	533.3	-	35	639	621	600.0	-	40	710	690	666.7	-	40
70	576	560	541.3	-	35	648	630	609.0	-	40	720	700	676.7	-	40
75	616	600	581.3	-	35	693	675	654.0	-	40	770	750	726.7	-	40
80	656	640	621.3	-	35	738	720	699.0	-	40	820	800	776.7	-	40
90	736	720	701.3	-	40	828	810	789.0	-	40	920	900	876.7	-	40
95	776	760	741.3	-	40	873	855	834.0	-	40	970	950	926.7	-	40
100	816	800	781.3	-	40	918	900	879.0	-	40	1020	1000	976.7	-	50
105	856	840	821.3	-	40	963	945	924.0	-	40	1070	1050	1026.7	-	50
110	896	880	861.3	-	40	1008	990	969.0	-	50	1120	1100	1076.7	-	50
115	936	920	901.3	-	40	1053	1035	1014.0	-	50	1170	1150	1126.7	-	50
125	1016	1000	981.3	-	40	1143	1125	1104.0	-	50	1270	1250	1226.7	-	50

**TİP A**

**TİP B**


Modül	A	B
1	30	20
1.5	30	20
2	40	25
2.5	40	25
3	50	30
4	60	40
5	65	45
6	75	55
7	85	60
8	100	75
9	115	85
10	125	95

Profil Açısı  $\alpha = 20^\circ$  Helis Açısı  $\beta = 0^\circ$



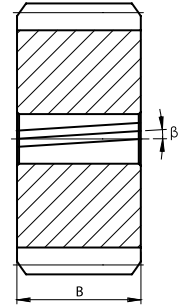
## HELİS DİŞLİLER

DIN 867

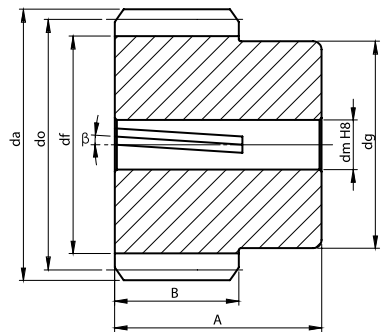
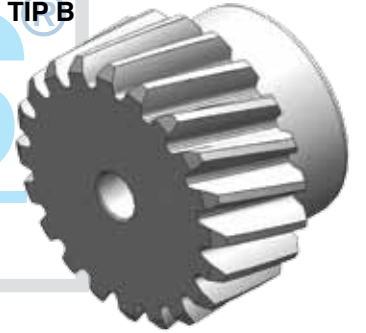
STANDART  
DÜZ ve HELİS DİŞLİLER

Diş Sayısı Z	1 Modül					1,5 Modül					2 Modül				
	Diş Üstü Çapı da	Bölüm Çapı do	Diş Dibi Çapı df	Göbek Çapı dg	Delik Çapı dm	Diş Üstü Çapı da	Bölüm Çapı do	Diş Dibi Çapı df	Göbek Çapı dg	Delik Çapı dm	Diş Üstü Çapı da	Bölüm Çapı do	Diş Dibi Çapı df	Göbek Çapı dg	Delik Çapı dm
10	12.6	10.64	8.3	-	-	19.0	15.96	12.5	-	-	25.3	21.28	16.6	14	-
11	13.7	11.71	9.4	-	-	20.6	17.56	14.1	12	-	27.4	23.41	18.7	16	-
12	14.8	12.77	10.4	-	-	22.2	19.16	15.7	13	-	29.5	25.54	20.9	18	-
13	15.8	13.83	11.5	-	-	23.8	20.75	17.3	15	-	31.7	27.67	23.0	20	8
14	16.9	14.90	12.6	-	-	25.3	22.35	18.8	17	-	33.8	29.80	25.1	22	8
15	18.0	15.96	13.6	12	-	26.9	23.94	20.4	18	-	35.9	31.93	27.3	24	8
16	19.0	17.03	14.7	13	-	28.5	25.54	22.0	20	-	38.1	34.05	29.4	26	8
17	20.1	18.09	15.8	14	-	30.1	27.14	23.6	21	8	40.2	36.18	31.5	29	10
18	21.2	19.16	16.8	15	-	31.7	28.73	25.2	23	8	42.3	38.31	33.6	31	10
19	22.2	20.22	17.9	16	-	33.3	30.33	26.8	25	8	44.4	40.44	35.8	33	10
20	23.3	21.28	19.0	17	-	34.9	31.93	28.4	26	8	46.6	42.57	37.9	35	10
21	24.3	22.35	20.0	19	-	36.5	33.52	30.0	28	10	48.7	44.70	40.0	37	12
22	25.4	23.41	21.1	20	-	38.1	35.12	31.6	29	10	50.8	46.82	42.2	39	12
23	26.5	24.48	22.1	21	-	39.7	36.71	33.2	31	10	53.0	48.95	44.3	41	12
24	27.5	25.54	23.2	22	8	41.3	38.31	34.8	33	10	55.1	51.08	46.4	43	12
25	28.6	26.60	24.3	23	8	42.9	39.91	36.4	34	10	57.2	53.21	48.5	46	12
26	29.7	27.67	25.3	24	8	44.5	41.50	38.0	36	12	59.3	55.34	50.7	48	12
27	30.7	28.73	26.4	25	8	46.1	43.10	39.6	37	12	61.5	57.47	52.8	50	12
28	31.8	29.80	27.5	26	8	47.7	44.70	41.2	39	12	63.6	59.59	54.9	52	14
29	32.9	30.86	28.5	27	8	49.3	46.29	42.8	40	12	65.7	61.72	57.1	54	14
30	33.9	31.93	29.6	28	8	50.9	47.89	44.4	42	12	67.9	63.85	59.2	56	14
31	35.0	32.99	30.7	29	8	52.5	49.48	46.0	44	12	70.0	65.98	61.3	58	14
32	36.1	34.05	31.7	30	10	54.1	51.08	47.6	45	12	72.1	68.11	63.4	60	14
33	37.1	35.12	32.8	31	10	55.7	52.68	49.2	47	12	74.2	70.24	65.6	63	14
34	38.2	36.18	33.9	32	10	57.3	54.27	50.8	48	12	76.4	72.36	67.7	65	14
35	39.2	37.25	34.9	33	10	58.9	55.87	52.4	50	12	78.5	74.49	69.8	67	14
36	40.3	38.31	36.0	34	10	60.5	57.47	54.0	52	12	80.6	76.62	72.0	69	14
37	41.4	39.37	37.0	36	10	62.1	59.06	55.6	53	12	82.7	78.75	74.1	71	14
38	42.4	40.44	38.1	37	10	63.7	60.66	57.2	55	12	84.9	80.88	76.2	73	14
39	43.5	41.50	39.2	38	10	65.3	62.25	58.8	56	12	87.0	83.01	78.3	75	14
40	44.6	42.57	40.2	39	10	66.9	63.85	60.4	58	12	89.1	85.13	80.5	77	14
41	45.6	43.63	41.3	40	10	68.4	65.45	61.9	60	14	91.3	87.26	82.6	80	16
42	46.7	44.70	42.4	41	10	70.0	67.04	63.5	61	14	93.4	89.39	84.7	82	16
43	47.8	45.76	43.4	42	10	71.6	68.64	65.1	63	14	95.5	91.52	86.9	84	16
44	48.8	46.82	44.5	43	10	73.2	70.24	66.7	64	14	97.6	93.65	89.0	86	16
45	49.9	47.89	45.6	44	10	74.8	71.83	68.3	66	14	99.8	95.78	91.1	88	16
46	51.0	48.95	46.6	45	10	76.4	73.43	69.9	68	14	101.9	97.90	93.2	90	16
47	52.0	50.02	47.7	46	10	78.0	75.02	71.5	69	14	104.0	100.03	95.4	92	16
48	53.1	51.08	48.7	47	10	79.6	76.62	73.1	71	14	106.2	102.16	97.5	94	16
49	54.1	52.14	49.8	48	10	81.2	78.22	74.7	72	14	108.3	104.29	99.6	97	16
50	55.2	53.21	50.9	49	10	82.8	79.81	76.3	74	14	110.4	106.42	101.8	99	16
51	56.3	54.27	51.9	50	12	84.4	81.41	77.9	76	16	112.5	108.55	103.9	101	18
52	57.3	55.34	53.0	52	12	86.0	83.01	79.5	77	16	114.7	110.67	106.0	103	18
53	58.4	56.40	54.1	53	12	87.6	84.60	81.1	79	16	116.8	112.80	108.1	105	18
54	59.5	57.47	55.1	54	12	89.2	86.20	82.7	80	16	118.9	114.93	110.3	107	18
55	60.5	58.53	56.2	55	12	90.8	87.79	84.3	82	16	121.1	117.06	112.4	109	18
56	61.6	59.59	57.3	56	12	92.4	89.39	85.9	84	16	123.2	119.19	114.5	112	18
57	62.7	60.66	58.3	57	12	94.0	90.99	87.5	85	16	125.3	121.32	116.7	114	18
58	63.7	61.72	59.4	58	12	95.6	92.58	89.1	87	18	127.4	123.44	118.8	116	18
59	64.8	62.79	60.5	59	12	97.2	94.18	90.7	88	18	129.6	125.57	120.9	118	18
60	65.9	63.85	61.5	60	12	98.8	95.78	92.3	90	18	131.7	127.70	123.0	120	18
61	66.9	64.91	62.6	61	12	100.4	97.37	93.9	92	18	133.8	129.83	125.2	122	20
62	68.0	65.98	63.6	62	12	102.0	98.97	95.5	93	18	136.0	131.96	127.3	124	20
63	69.0	67.04	64.7	63	12	103.6	100.56	97.1	95	18	138.1	134.09	129.4	126	20
64	70.1	68.11	65.8	64	12	105.2	102.16	98.7	96	18	140.2	136.21	131.6	129	20
65	71.2	69.17	66.8	65	12	106.8	103.76	100.3	98	18	142.3	138.34	133.7	131	20
66	72.2	70.24	67.9	66	12	108.4	105.35	101.9	100	18	144.5	140.47	135.8	133	20
67	73.3	71.30	69.0	67	12	109.9	106.95	103.5	101	18	146.6	142.60	137.9	135	20
68	74.4	72.36	70.0	69	12	111.5	108.55	105.0	103	18	148.7	144.73	140.1	-	20
69	75.4	73.43	71.1	70	12	113.1	110.14	106.6	104	18	150.9	146.86	142.2	-	20
70	76.5	74.49	72.2	71	12	114.7	111.74	108.2	106	18	153.0	148.98	144.3	-	20
75	81.8	79.81	77.5	76	12	122.7	119.72	116.2	114	18	163.6	159.63	155.0	-	20
80	87.1	85.13	82.8	81	12	130.7	127.70	124.2	122	18	174.3	170.27	165.6	-	20
90	97.8	95.78	93.4	92	12	146.7	143.66	140.2	138	20	195.6	191.55	186.9	-	20
95	103.1	101.10	98.8	97	12	154.6	151.65	148.1	-	20	206.2	202.19	197.5	-	20
100	108.4	106.42	104.1	103	12	162.6	159.63	156.1	-	20	216.8	212.84	208.2	-	20
105	113.7	111.74	109.4	108	12	170.6	167.61	164.1	-	20	227.5	223.48	218.8	-	20
110	119.1	117.06	114.7	113	12	178.6	175.59	172.1	-	20	238.1	234.12	229.5	-	20
115	124.4	122.38	120.0	119	12	186.6	183.57	180.1	-	20	248.8	244.76	240.1	-	20
125	135.0	133.02	130.7	129	12	202.5	199.53	196.0	-	20	270.0	266.04	261.4	-	25

TİP A



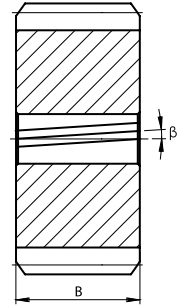
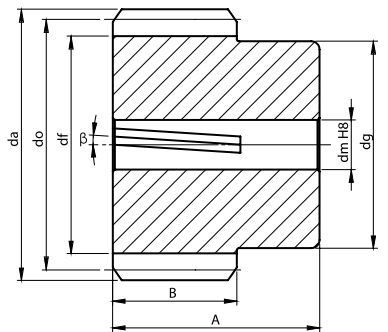
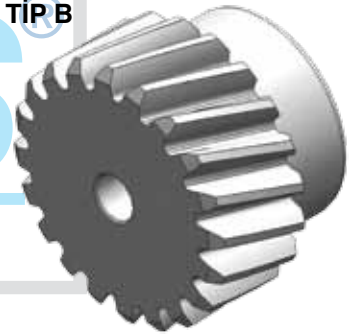
TİP B



Modül	A	B
1	30	20
1.5	30	20
2	40	25
2.5	40	25
3	50	30
4	60	40
5	65	45
6	75	55
7	85	60
8	100	75
9	115	85
10	125	95

Profil Açısı  $\alpha = 20^\circ$  Helis Açısı  $\beta = 20^\circ$  Sağ / Sol Helis

Diş Sayısı Z	2,5 Modül					3 Modül					4 Modül				
	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Göbek Çapı dg	Delik Çapı dm	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Göbek Çapı dg	Delik Çapı dm	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Göbek Çapı dg	Delik Çapı dm
10	31.6	26.60	20.8	17	-	37.9	31.93	24.9	21	10	50.6	42.57	33.2	29	12
11	34.3	29.26	23.4	20	10	41.1	35.12	28.1	25	10	54.8	46.82	37.5	33	12
12	36.9	31.93	26.1	23	10	44.3	38.31	31.3	28	10	59.1	51.08	41.8	38	12
13	39.6	34.59	28.8	25	10	47.5	41.50	34.5	31	10	63.3	55.34	46.0	42	12
14	42.2	37.25	31.4	28	10	50.7	44.70	37.7	34	10	67.6	59.59	50.3	46	12
15	44.9	39.91	34.1	31	10	53.9	47.89	40.9	37	10	71.9	63.85	54.5	51	12
16	47.6	42.57	36.7	33	12	57.1	51.08	44.1	41	10	76.1	68.11	58.8	55	14
17	50.2	45.23	39.4	36	12	60.3	54.27	47.3	44	12	80.4	72.36	63.0	59	14
18	52.9	47.89	42.1	39	12	63.5	57.47	50.5	47	12	84.6	76.62	67.3	63	14
19	55.5	50.55	44.7	41	12	66.7	60.66	53.7	50	12	88.9	80.88	71.5	68	14
20	58.2	53.21	47.4	44	14	69.9	63.85	56.9	53	12	93.1	85.13	75.8	72	14
21	60.9	55.87	50.0	47	14	73.0	67.04	60.0	57	12	97.4	89.39	80.1	76	14
22	63.5	58.53	52.7	49	14	76.2	70.24	63.2	60	12	101.6	93.65	84.3	80	14
23	66.2	61.19	55.4	52	14	79.4	73.43	66.4	63	12	105.9	97.90	88.6	85	14
24	68.9	63.85	58.0	55	14	82.6	76.62	69.6	66	12	110.2	102.16	92.8	89	16
25	71.5	66.51	60.7	57	14	85.8	79.81	72.8	69	12	114.4	106.42	97.1	93	16
26	74.2	69.17	63.3	60	14	89.0	83.01	76.0	73	14	118.7	110.67	101.3	97	16
27	76.8	71.83	66.0	63	14	92.2	86.20	79.2	76	14	122.9	114.93	105.6	102	16
28	79.5	74.49	68.7	65	14	95.4	89.39	82.4	79	14	127.2	119.19	109.9	106	16
29	82.2	77.15	71.3	68	14	98.6	92.58	85.6	82	14	131.4	123.44	114.1	110	16
30	84.8	79.81	74.0	71	16	101.8	95.78	88.8	85	14	135.7	127.70	118.4	114	16
31	87.5	82.47	76.6	73	16	105.0	98.97	92.0	88	14	140.0	131.96	122.6	119	16
32	90.1	85.13	79.3	76	16	108.2	102.16	95.2	92	14	144.2	136.21	126.9	123	16
33	92.8	87.79	82.0	79	16	111.4	105.35	98.4	95	14	148.5	140.47	131.1	127	16
34	95.5	90.46	84.6	81	16	114.5	108.55	101.6	98	14	152.7	144.73	135.4	-	16
35	98.1	93.12	87.3	84	16	117.7	111.74	104.7	101	14	157.0	148.98	139.7	-	16
36	100.8	95.78	89.9	87	16	120.9	114.93	107.9	104	14	161.2	153.24	143.9	-	18
37	103.4	98.44	92.6	89	16	124.1	118.12	111.1	108	14	165.5	157.50	148.2	-	18
38	106.1	101.10	95.3	92	16	127.3	121.32	114.3	111	14	169.8	161.76	152.4	-	18
39	108.8	103.76	97.9	95	16	130.5	124.51	117.5	114	14	174.0	166.01	156.7	-	18
40	111.4	106.42	100.6	97	16	133.7	127.70	120.7	117	14	178.3	170.27	160.9	-	18
41	114.1	109.08	103.2	100	18	136.9	130.89	123.9	120	16	182.5	174.53	165.2	-	18
42	116.7	111.74	105.9	103	18	140.1	134.09	127.1	124	16	186.8	178.78	169.5	-	18
43	119.4	114.40	108.6	105	18	143.3	137.28	130.3	127	16	191.0	183.04	173.7	-	18
44	122.1	117.06	111.2	108	18	146.5	140.47	133.5	130	16	195.3	187.30	178.0	-	18
45	124.7	119.72	113.9	111	18	149.7	143.66	136.7	-	16	199.6	191.55	182.2	-	18
46	127.4	122.38	116.6	113	18	152.9	146.86	139.9	-	16	203.8	195.81	186.5	-	18
47	130.0	125.04	119.2	116	18	156.0	150.05	143.1	-	16	208.1	200.07	190.7	-	18
48	132.7	127.70	121.9	119	18	159.2	153.24	146.2	-	16	212.3	204.32	195.0	-	18
49	135.4	130.36	124.5	121	18	162.4	156.43	149.4	-	16	216.6	208.58	199.3	-	18
50	138.0	133.02	127.2	124	18	165.6	159.63	152.6	-	16	220.8	212.84	203.5	-	20
51	140.7	135.68	129.9	127	20	168.8	162.82	155.8	-	18	225.1	217.09	207.8	-	20
52	143.3	138.34	132.5	129	20	172.0	166.01	159.0	-	18	229.3	221.35	212.0	-	20
53	146.0	141.00	135.2	132	20	175.2	169.20	162.2	-	18	233.6	225.61	216.3	-	20
54	148.7	143.66	137.8	-	20	178.4	172.40	165.4	-	18	237.9	229.86	220.5	-	20
55	151.3	146.32	140.5	-	20	181.6	175.59	168.6	-	18	242.1	234.12	224.8	-	20
56	154.0	148.98	143.2	-	20	184.8	178.78	171.8	-	18	246.4	238.38	229.0	-	20
57	156.6	151.65	145.8	-	20	188.0	181.97	175.0	-	18	250.6	242.63	233.3	-	20
58	159.3	154.31	148.5	-	20	191.2	185.17	178.2	-	18	254.9	246.89	237.6	-	20
59	162.0	156.97	151.1	-	20	194.4	188.36	181.4	-	18	259.1	251.15	241.8	-	20
60	164.6	159.63	153.8	-	20	197.6	191.55	184.6	-	20	263.4	255.40	246.1	-	20
61	167.3	162.29	156.5	-	20	200.7	194.74	187.7	-	20	267.7	259.66	250.3	-	25
62	169.9	164.95	159.1	-	20	203.9	197.94	190.9	-	20	271.9	263.92	254.6	-	25
63	172.6	167.61	161.8	-	20	207.1	201.13	194.1	-	20	276.2	268.17	258.8	-	25
64	175.3	170.27	164.4	-	20	210.3	204.32	197.3	-	20	280.4	272.43	263.1	-	25
65	177.9	172.93	167.1	-	20	213.5	207.51	200.5	-	20	284.7	276.69	267.4	-	25
66	180.6	175.59	169.8	-	20	216.7	210.71	203.7	-	20	288.9	280.94	271.6	-	25
67	183.2	178.25	172.4	-	20	219.9	213.90	206.9	-	20	293.2	285.20	275.9	-	25
68	185.9	180.91	175.1	-	20	223.1	217.09	210.1	-	20	297.5	289.46	280.1	-	25
69	188.6	183.57	177.7	-	20	226.3	220.28	213.3	-	20	301.7	293.71	284.4	-	25
70	191.2	186.23	180.4	-	20	229.5	223.48	216.5	-	20	306.0	297.97	288.6	-	25
75	204.5	199.53	193.7	-	20	245.4	239.44	232.4	-	25	327.3	319.25	309.9	-	25
80	217.8	212.84	207.0	-	20	261.4	255.40	248.4	-	25	348.5	340.54	331.2	-	25
90	244.4	239.44	233.6	-	20	293.3	287.33	280.3	-	25	391.1	383.10	373.8	-	25
95	257.7	252.74	246.9	-	20	309.3	303.29	296.3	-	25	412.4	404.39	395.1	-	25
100	271.0	266.04	260.2	-	25	325.3	319.25	312.3	-	25	433.7	425.67	416.3	-	30
105	284.3	279.35	273.5	-	25	341.2	335.22	328.2	-	25	455.0	446.95	437.6	-	30
110	297.6	292.65	286.8	-	25	357.2	351.18	344.2	-	25	476.2	468.24	458.9	-	30
115	311.0	305.95	300.1	-	25	373.1	367.14	360.1	-	25	497.5	489.52	480.2	-	30
125	337.6	332.56	326.7	-	25	405.1	399.07	392.1	-	25	540.1	532.09	522.8	-	30

**TİP A**

**TİP B**


Modül	A	B
1	30	20
1.5	30	20
2	40	25
2.5	40	25
3	50	30
4	60	40
5	65	45
6	75	55
7	85	60
8	100	75
9	115	85
10	125	95

Profil Açısı  $\alpha = 20^\circ$  Helis Açısı  $\beta = 20^\circ$  Sağ / Sol Helis

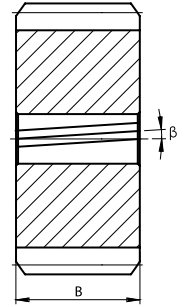
## HELİS DİŞLİLER

DIN 867

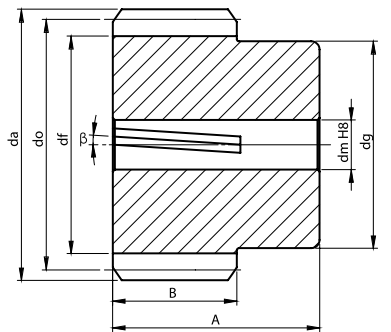
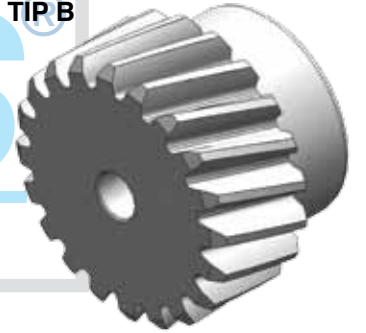
STANDART  
DÜZ ve HELİS DİŞLİLER

Diş Sayısı Z	5 Modül					6 Modül					7 Modül				
	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Göbek Çapı dg	Delik Çapı dm	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Göbek Çapı dg	Delik Çapı dm	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Göbek Çapı dg	Delik Çapı dm
10	63.2	53.21	41.5	37	16	75.9	63.85	49.9	45	20	88.5	74.49	58.2	53	20
11	68.5	58.53	46.9	42	16	82.2	70.24	56.2	51	20	95.9	81.94	65.6	60	20
12	73.9	63.85	52.2	48	16	88.6	76.62	62.6	58	20	103.4	89.39	73.1	68	20
13	79.2	69.17	57.5	53	16	95.0	83.01	69.0	64	20	110.8	96.84	80.5	75	20
14	84.5	74.49	62.8	58	18	101.4	89.39	75.4	70	20	118.3	104.29	88.0	82	20
15	89.8	79.81	68.2	64	18	107.8	95.78	81.8	77	20	125.7	111.74	95.4	90	20
16	95.1	85.13	73.5	69	18	114.2	102.16	88.2	83	20	133.2	119.19	102.9	97	25
17	100.5	90.46	78.8	74	18	120.5	108.55	94.6	90	20	140.6	126.64	110.3	105	25
18	105.8	95.78	84.1	80	18	126.9	114.93	100.9	96	20	148.1	134.09	117.8	112	25
19	111.1	101.10	89.4	85	18	133.3	121.32	107.3	102	20	155.5	141.54	125.2	-	25
20	116.4	106.42	94.8	90	18	139.7	127.70	113.7	109	20	163.0	148.98	132.7	-	25
21	121.7	111.74	100.1	96	20	146.1	134.09	120.1	115	20	170.4	156.43	140.1	-	25
22	127.1	117.06	105.4	101	20	152.5	140.47	126.5	-	20	177.9	163.88	147.6	-	25
23	132.4	122.38	110.7	106	20	158.9	146.86	132.9	-	25	185.3	171.33	155.0	-	25
24	137.7	127.70	116.0	112	20	165.2	153.24	139.2	-	25	192.8	178.78	162.5	-	25
25	143.0	133.02	121.4	117	20	171.6	159.63	145.6	-	25	200.2	186.23	169.9	-	25
26	148.3	138.34	126.7	122	25	178.0	166.01	152.0	-	25	207.7	193.68	177.4	-	25
27	153.7	143.66	132.0	-	25	184.4	172.40	158.4	-	25	215.1	201.13	184.8	-	25
28	159.0	148.98	137.3	-	25	190.8	178.78	164.8	-	25	222.6	208.58	192.3	-	25
29	164.3	154.31	142.6	-	25	197.2	185.17	171.2	-	25	230.0	216.03	199.7	-	25
30	169.6	159.63	148.0	-	25	203.6	191.55	177.6	-	25	237.5	223.48	207.2	-	25
31	174.9	164.95	153.3	-	25	209.9	197.94	183.9	-	25	244.9	230.93	214.6	-	25
32	180.3	170.27	158.6	-	25	216.3	204.32	190.3	-	25	252.4	238.38	222.1	-	25
33	185.6	175.59	163.9	-	25	222.7	210.71	196.7	-	25	259.8	245.83	229.5	-	25
34	190.9	180.91	169.3	-	25	229.1	217.09	203.1	-	25	267.3	253.27	237.0	-	30
35	196.2	186.23	174.6	-	25	235.5	223.48	209.5	-	25	274.7	260.72	244.4	-	30
36	201.6	191.55	179.9	-	25	241.9	229.86	215.9	-	25	282.2	268.17	251.8	-	30
37	206.9	196.87	185.2	-	25	248.2	236.25	222.3	-	25	289.6	275.62	259.3	-	30
38	212.2	202.19	190.5	-	25	254.6	242.63	228.6	-	25	297.1	283.07	266.7	-	30
39	217.5	207.51	195.9	-	25	261.0	249.02	235.0	-	25	304.5	290.52	274.2	-	30
40	222.8	212.84	201.2	-	25	267.4	255.40	241.4	-	30	312.0	297.97	281.6	-	30
41	228.2	218.16	206.5	-	25	273.8	261.79	247.8	-	30	319.4	305.42	289.1	-	30
42	233.5	223.48	211.8	-	25	280.2	268.17	254.2	-	30	326.9	312.87	296.5	-	30
43	238.8	228.80	217.1	-	25	286.6	274.56	260.6	-	30	334.3	320.32	304.0	-	30
44	244.1	234.12	222.5	-	25	292.9	280.94	267.0	-	30	341.8	327.77	311.4	-	30
45	249.4	239.44	227.8	-	25	299.3	287.33	273.3	-	30	349.2	335.22	318.9	-	30
46	254.8	244.76	233.1	-	25	305.7	293.71	279.7	-	30	356.7	342.67	326.3	-	30
47	260.1	250.08	238.4	-	25	312.1	300.10	286.1	-	30	364.1	350.11	333.8	-	30
48	265.4	255.40	243.7	-	30	318.5	306.48	292.5	-	30	371.6	357.56	341.2	-	30
49	270.7	260.72	249.1	-	30	324.9	312.87	298.9	-	30	379.0	365.01	348.7	-	30
50	276.0	266.04	254.4	-	30	331.3	319.25	305.3	-	30	386.5	372.46	356.1	-	30
51	281.4	271.37	259.7	-	30	337.6	325.64	311.6	-	30	393.9	379.91	363.6	-	30
52	286.7	276.69	265.0	-	30	344.0	332.02	318.0	-	30	401.4	387.36	371.0	-	30
53	292.0	282.01	270.3	-	30	350.4	338.41	324.4	-	30	408.8	394.81	378.5	-	30
54	297.3	287.33	275.7	-	30	356.8	344.79	330.8	-	30	416.3	402.26	385.9	-	30
55	302.6	292.65	281.0	-	30	363.2	351.18	337.2	-	30	423.7	409.71	393.4	-	30
56	308.0	297.97	286.3	-	30	369.6	357.56	343.6	-	30	431.2	417.16	400.8	-	35
57	313.3	303.29	291.6	-	30	375.9	363.95	350.0	-	30	438.6	424.61	408.3	-	35
58	318.6	308.61	297.0	-	30	382.3	370.33	356.3	-	30	446.1	432.06	415.7	-	35
59	323.9	313.93	302.3	-	30	388.7	376.72	362.7	-	30	453.5	439.51	423.2	-	35
60	329.3	319.25	307.6	-	30	395.1	383.10	369.1	-	30	461.0	446.95	430.6	-	35
61	334.6	324.57	312.9	-	30	401.5	389.49	375.5	-	30	468.4	454.40	438.1	-	35
62	339.9	329.90	318.2	-	30	407.9	395.87	381.9	-	30	475.9	461.85	445.5	-	35
63	345.2	335.22	323.6	-	30	414.3	402.26	388.3	-	30	483.3	469.30	453.0	-	35
64	350.5	340.54	328.9	-	30	420.6	408.64	394.7	-	30	490.8	476.75	460.4	-	35
65	355.9	345.86	334.2	-	30	427.0	415.03	401.0	-	35	498.2	484.20	467.9	-	35
66	361.2	351.18	339.5	-	30	433.4	421.41	407.4	-	35	505.7	491.65	475.3	-	35
67	366.5	356.50	344.8	-	30	439.8	427.80	413.8	-	35	513.1	499.10	482.8	-	35
68	371.8	361.82	350.2	-	30	446.2	434.18	420.2	-	35	520.5	506.55	490.2	-	35
69	377.1	367.14	355.5	-	30	452.6	440.57	426.6	-	35	528.0	514.00	497.7	-	35
70	382.5	372.46	360.8	-	30	459.0	446.95	433.0	-	35	535.4	521.45	505.1	-	35
75	409.1	399.07	387.4	-	30	490.9	478.88	464.9	-	35	572.7	558.69	542.4	-	35
80	435.7	425.67	414.0	-	35	522.8	510.81	496.8	-	35	609.9	595.94	579.6	-	35
90	488.9	478.88	467.2	-	35	586.7	574.66	560.7	-	35	684.4	670.43	654.1	-	35
95	515.5	505.48	493.8	-	35	618.6	606.58	592.6	-	35	721.7	707.68	691.4	-	35
100	542.1	532.09	520.4	-	35	650.5	638.51	624.5	-	35	758.9	744.92	728.6	-	40
105	568.7	558.69	547.0	-	35	682.4	670.43	656.4	-	35	796.2	782.17	765.8	-	40
110	595.3	585.30	573.6	-	35	714.4	702.36	688.4	-	35	833.4	819.42	803.1	-	40
115	621.9	611.90	600.2	-	35	746.3	734.28	720.3	-	35	870.7	856.66	840.3	-	40
125	675.1	665.11	653.5	-	35	810.1	798.13	784.1	-	35	945.2	931.16	914.8	-	40

TİP A



TİP B

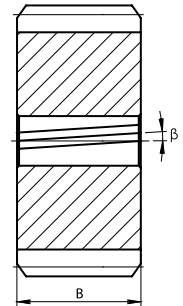
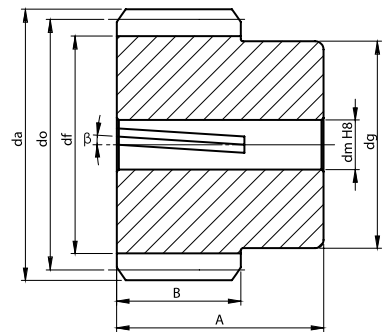
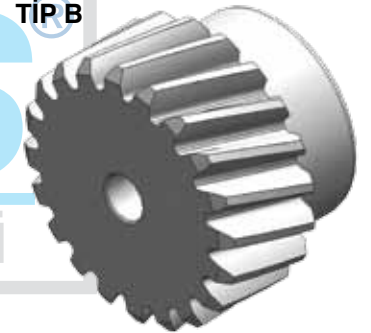


Modül	A	B
1	30	20
1.5	30	20
2	40	25
2.5	40	25
3	50	30
4	60	40
5	65	45
6	75	55
7	85	60
8	100	75
9	115	85
10	125	95

Profil Açısı  $\alpha = 20^\circ$  Helis Açısı  $\beta = 20^\circ$  Sağ / Sol Helis



Diş Sayısı Z	8 Modül					9 Modül					10 Modül				
	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Göbek Çapı dg	Delik Çapı dm	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Göbek Çapı dg	Delik Çapı dm	Diş Üstü Çapı da	Bölüm Dairesi Çapı do	Diş Dibi Çapı df	Göbek Çapı dg	Delik Çapı dm
10	101.1	85.13	66.5	60	20	113.8	95.78	74.8	68	25	126.4	106.42	83.1	76	25
11	109.6	93.65	75.0	69	20	123.4	105.35	84.4	78	25	137.1	117.06	93.7	87	25
12	118.2	102.16	83.5	78	20	132.9	114.93	93.9	87	25	147.7	127.70	104.4	97	25
13	126.7	110.67	92.0	86	20	142.5	124.51	103.5	97	25	158.3	138.34	115.0	-	30
14	135.2	119.19	100.5	95	20	152.1	134.09	113.1	-	25	169.0	148.98	125.7	-	30
15	143.7	127.70	109.0	103	20	161.7	143.66	122.7	-	25	179.6	159.63	136.3	-	30
16	152.2	136.21	117.6	-	20	171.2	153.24	132.3	-	25	190.3	170.27	146.9	-	30
17	160.7	144.73	126.1	-	25	180.8	162.82	141.8	-	25	200.9	180.91	157.6	-	30
18	169.2	153.24	134.6	-	25	190.4	172.40	151.4	-	25	211.6	191.55	168.2	-	30
19	177.8	161.76	143.1	-	25	200.0	181.97	161.0	-	25	222.2	202.19	178.9	-	30
20	186.3	170.27	151.6	-	25	209.6	191.55	170.6	-	25	232.8	212.84	189.5	-	30
21	194.8	178.78	160.1	-	25	219.1	201.13	180.1	-	30	243.5	223.48	200.2	-	30
22	203.3	187.30	168.6	-	25	228.7	210.71	189.7	-	30	254.1	234.12	210.8	-	30
23	211.8	195.81	177.2	-	25	238.3	220.28	199.3	-	30	264.8	244.76	221.4	-	30
24	220.3	204.32	185.7	-	25	247.9	229.86	208.9	-	30	275.4	255.40	232.1	-	30
25	228.8	212.84	194.2	-	25	257.4	239.44	218.5	-	30	286.0	266.04	242.7	-	30
26	237.3	221.35	202.7	-	25	267.0	249.02	228.0	-	30	296.7	276.69	253.4	-	30
27	245.9	229.86	211.2	-	25	276.6	258.60	237.6	-	30	307.3	287.33	264.0	-	30
28	254.4	238.38	219.7	-	25	286.2	268.17	247.2	-	30	318.0	297.97	274.6	-	35
29	262.9	246.89	228.2	-	25	295.8	277.75	256.8	-	30	328.6	308.61	285.3	-	35
30	271.4	255.40	236.7	-	30	305.3	287.33	266.3	-	30	339.3	319.25	295.9	-	35
31	279.9	263.92	245.3	-	30	314.9	296.91	275.9	-	30	349.9	329.90	306.6	-	35
32	288.4	272.43	253.8	-	30	324.5	306.48	285.5	-	35	360.5	340.54	317.2	-	35
33	296.9	280.94	262.3	-	30	334.1	316.06	295.1	-	35	371.2	351.18	327.9	-	35
34	305.5	289.46	270.8	-	30	343.6	325.64	304.7	-	35	381.8	361.82	338.5	-	35
35	314.0	297.97	279.3	-	30	353.2	335.22	314.2	-	35	392.5	372.46	349.1	-	35
36	322.5	306.48	287.8	-	30	362.8	344.79	323.8	-	35	403.1	383.10	359.8	-	35
37	331.0	315.00	296.3	-	30	372.4	354.37	333.4	-	35	413.7	393.75	370.4	-	35
38	339.5	323.51	304.9	-	30	381.9	363.95	343.0	-	35	424.4	404.39	381.1	-	35
39	348.0	332.02	313.4	-	30	391.5	373.53	352.5	-	35	435.0	415.03	391.7	-	35
40	356.5	340.54	321.9	-	30	401.1	383.10	362.1	-	35	445.7	425.67	402.4	-	35
41	365.1	349.05	330.4	-	30	410.7	392.68	371.7	-	35	456.3	436.31	413.0	-	35
42	373.6	357.56	338.9	-	30	420.3	402.26	381.3	-	35	467.0	446.95	423.6	-	35
43	382.1	366.08	347.4	-	30	429.8	411.84	390.8	-	35	477.6	457.60	434.3	-	35
44	390.6	374.59	355.9	-	30	439.4	421.41	400.4	-	35	488.2	468.24	444.9	-	35
45	399.1	383.10	364.4	-	30	449.0	430.99	410.0	-	35	498.9	478.88	455.6	-	35
46	407.6	391.62	373.0	-	30	458.6	440.57	419.6	-	35	509.5	489.52	466.2	-	35
47	416.1	400.13	381.5	-	30	468.1	450.15	429.2	-	35	520.2	500.16	476.8	-	35
48	424.6	408.64	390.0	-	30	477.7	459.72	438.7	-	35	530.8	510.81	487.5	-	35
49	433.2	417.16	398.5	-	35	487.3	469.30	448.3	-	35	541.4	521.45	498.1	-	40
50	441.7	425.67	407.0	-	35	496.9	478.88	457.9	-	35	552.1	532.09	508.8	-	40
51	450.2	434.18	415.5	-	35	506.5	488.46	467.5	-	35	562.7	542.73	519.4	-	40
52	458.7	442.70	424.0	-	35	516.0	498.04	477.0	-	35	573.4	553.37	530.1	-	40
53	467.2	451.21	432.6	-	35	525.6	507.61	486.6	-	35	584.0	564.01	540.7	-	40
54	475.7	459.72	441.1	-	35	535.2	517.19	496.2	-	40	594.7	574.66	551.3	-	40
55	484.2	468.24	449.6	-	35	544.8	526.77	505.8	-	40	605.3	585.30	562.0	-	40
56	492.8	476.75	458.1	-	35	554.3	536.35	515.4	-	40	615.9	595.94	572.6	-	40
57	501.3	485.27	466.6	-	35	563.9	545.92	524.9	-	40	626.6	606.58	583.3	-	40
58	509.8	493.78	475.1	-	35	573.5	555.50	534.5	-	40	637.2	617.22	593.9	-	40
59	518.3	502.29	483.6	-	35	583.1	565.08	544.1	-	40	647.9	627.86	604.5	-	40
60	526.8	510.81	492.1	-	35	592.7	574.66	553.7	-	40	658.5	638.51	615.2	-	40
61	535.3	519.32	500.7	-	35	602.2	584.23	563.2	-	40	669.1	649.15	625.8	-	40
62	543.8	527.83	509.2	-	35	611.8	593.81	572.8	-	40	679.8	659.79	636.5	-	40
63	552.3	536.35	517.7	-	35	621.4	603.39	582.4	-	40	690.4	670.43	647.1	-	40
64	560.9	544.86	526.2	-	35	631.0	612.97	592.0	-	40	701.1	681.07	657.8	-	40
65	569.4	553.37	534.7	-	35	640.5	622.54	601.6	-	40	711.7	691.72	668.4	-	40
66	577.9	561.89	543.2	-	35	650.1	632.12	611.1	-	40	722.4	702.36	679.0	-	40
67	586.4	570.40	551.7	-	35	659.7	641.70	620.7	-	40	733.0	713.00	689.7	-	40
68	594.9	578.91	560.3	-	35	669.3	651.28	630.3	-	40	743.6	723.64	700.3	-	40
69	603.4	587.43	568.8	-	35	678.9	660.85	639.9	-	40	754.3	734.28	711.0	-	40
70	611.9	595.94	577.3	-	35	688.4	670.43	649.4	-	40	764.9	744.92	721.6	-	40
75	654.5	638.51	619.9	-	35	736.3	718.32	697.3	-	40	818.1	798.13	774.8	-	40
80	697.1	681.07	662.4	-	35	784.2	766.21	745.2	-	40	871.3	851.34	828.0	-	40
90	782.2	766.21	747.6	-	40	880.0	861.98	841.0	-	40	977.8	957.76	934.4	-	40
95	824.8	808.78	790.1	-	40	927.9	909.87	888.9	-	40	1031.0	1010.97	987.6	-	40
100	867.3	851.34	832.7	-	40	975.8	957.76	936.8	-	40	1084.2	1064.18	1040.9	-	50
105	909.9	893.91	875.3	-	40	1023.6	1005.65	984.7	-	40	1137.4	1117.39	1094.1	-	50
110	952.5	936.48	917.8	-	40	1071.5	1053.54	1032.5	-	50	1190.6	1170.60	1147.3	-	50
115	995.0	979.04	960.4	-	40	1119.4	1101.42	1080.4	-	50	1243.8	1223.80	1200.5	-	50
125	1080.2	1064.18	1045.5	-	40	1215.2	1197.20	1176.2	-	50	1350.2	1330.22	1306.9	-	50

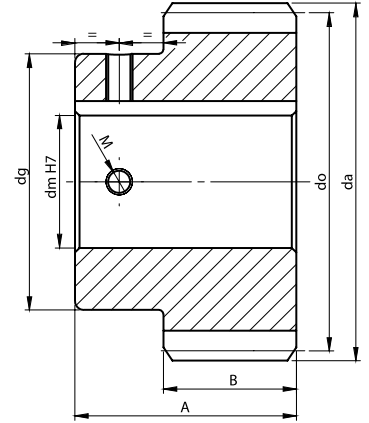
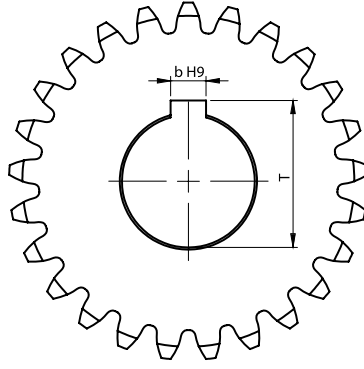
**TİP A**

**TİP B**


Modül	A	B
1	30	20
1.5	30	20
2	40	25
2.5	40	25
3	50	30
4	60	40
5	65	45
6	75	55
7	85	60
8	100	75
9	115	85
10	125	95

Profil Açısı  $\alpha = 20^\circ$  Helis Açısı  $\beta = 20^\circ$  Sağ / Sol Helis

## DÜZ PİNYON DİŞLİ

DIN 867

KULLANIMA HAZIR  
PİNYON DİŞLİLER

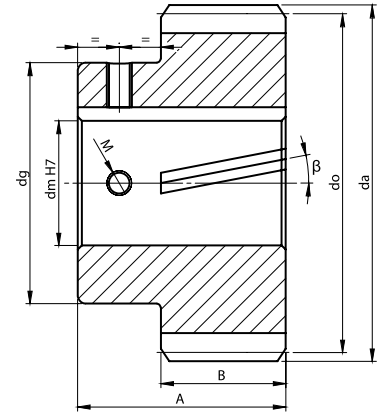
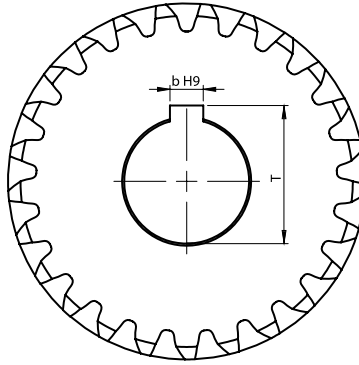
Modül	Dış Sayısı Z	Dış Üstü Çapı da	Bölüm Dairesi Çapı do	Göbek Çapı dg	Delik Çapı dm	A	B	b	T	M
1	25	27	25	21	11	30	20	4	12.8	M3
	32	34	32	28	16			5	18.3	M4
	40	42	40	36	22			6	24.8	M5
1.5	20	33	30	25	11	30	20	4	12.8	M3
					14			5	16.3	M4
					16			5	18.3	M4
	25	40.5	37.5	30	16			5	18.3	M4
	32	51	48	36	22			6	24.8	M5
	40	63	60		22			6	24.8	M5
2	20	44	40	34	16	40	25	5	18.3	M4
					22			6	24.8	M5
	25	54	50	36	16			5	18.3	M4
					22			6	24.8	M5
	28	60	56	50	30			8	33.3	M6
					30			5	18.3	M4
					16			6	24.8	M5
	32	68	64	50	30			8	33.3	M6
					32			10	35.3	M8
	36	76	72	62	40			12	43.3	M10
					32			10	35.3	M8
	40	84	80	62	40			12	43.3	M10
2.5	50	104	100	68	45	40	25	14	48.8	M12
					22			14	48.8	M12
	20	55	50	40	25			6	24.8	M5
					30			8	28.3	M6
	22	60	55	36	22			8	33.3	M6
	28	75	70	55	32			6	24.8	M5
3	36	95	90	62	40	50	30	10	35.3	M8
					22			12	43.3	M10
	20	66	60	40	25			6	24.8	M5
					30			8	28.3	M6
					30			8	33.3	M6
					22			6	24.8	M5
	22	72	66	44	25			8	28.3	M6
					30			8	33.3	M6
					32			10	35.3	M8
					35			10	38.3	M8
	25	81	75	62	40			12	43.3	M10
					22			6	24.8	M5
					25			8	28.3	M6
					30			8	33.3	M6
					32			10	35.3	M8
					35			10	38.3	M8
	28	90	84	68	45			14	48.8	M12
					40			12	43.3	M10
	32	102	96	62	40			14	48.8	M12
	36	114	108	68	45			14	48.8	M12

Modül	Dış Sayısı Z	Dış Üstü Çapı da	Bölüm Dairesi Çapı do	Göbek Çapı dg	Delik Çapı dm	A	B	b	T	M
4	20	88	80	65	32	60	40	10	35.3	M8
					35			10	38.3	M8
					40			12	43.3	M10
	22	96	88	68	45			14	48.8	M12
					55			10	35.3	M8
	25	108	100	55	32			10	38.3	M8
					35			12	43.3	M10
					40			16	59.3	M12
	28	120	112	68	45			14	48.8	M12
	32	136	128	80	55			16	59.3	M12
5	40	168	160	110*	75	65	45	20	79.9	M12
					40			20	79.9	M12
	20	110	100	85	45			12	43.3	M10
					55			14	48.8	M12
	21	115	105	68	45			16	59.3	M12
					80			14	48.8	M12
	25	135	125	80	55			16	59.3	M12
					110			20	79.9	M12
	20	132	120	104	55	75	55	16	59.3	M12
					75			20	79.9	M12
6	21	138	126	80	55			16	59.3	M12
					110			20	79.9	M12
	25	162	150	80*	55			16	59.3	M12
					110*			20	79.9	M12
7	20	154	140	110*	75	85	60	20	79.9	M12
	22	168	154	110*	75			20	79.9	M12
	25	189	175	120*	85			22	90.4	M16
8					55	100	75	16	59.3	M12
					75			20	79.9	M12
					85			22	90.4	M16
10					55	125	95	16	59.3	M12
					75			20	79.9	M12
					85			22	90.4	M16

Profil Açısı  $\alpha = 20^\circ$  Helis Açısı  $\beta = 0^\circ$ 

\* Kaynaklı Göbek

- Isıl işlem ve kaplama işlemleri isteğe bağlı olarak yapılmaktadır. Isıl işlemlerden sonra ölçüsel ve şekilsel değişim olabilir.
- Kullanıma hazır dişlilerde  $90^\circ \times 2$  adet setskur vida ve kama kanalı bulunmaktadır.



Modül	Helis Açısı (Sol) β°	Dış Sayısı Z	Dış Üstü Çapı da	Bölüm Dairesi Çapı do	Göbek Çapı dg	Delik Çapı dm	A	B	b	T	M
1	20°	25	28.6	26.6	23	11	30	20	4	12.8	M3
		32	36.1	34.1	30	16			5	18.3	M4
		40	44.6	42.6	39	22			6	24.8	M5
1.5	22°	20	35.4	32.4	27	11	30	20	4	12.8	M3
						14			5	16.3	M4
						16			5	18.3	M4
		25	43.4	40.4	34	16			5	18.3	M4
						22			6	24.8	M5
						22			6	24.8	M5
2	24°	20	47.8	43.8	37	16	40	25	5	18.3	M4
						22			6	24.8	M5
						22			5	18.3	M4
		25	58.7	54.7	40	16			5	18.3	M4
						22			6	24.8	M5
						22			6	24.8	M5
		28	65.3	61.3	52	30			8	33.3	M6
						30			5	18.3	M4
						36			6	24.8	M5
		32	74.1	70.1	50	30			8	33.3	M6
						32			10	35.3	M8
						32			12	43.3	M10
2.5	15°	20	56.8	51.8	40	22	40	25	6	24.8	M5
						25			8	28.3	M6
						30			8	33.3	M6
		22	61.9	56.9	36	22			6	24.8	M5
						32			10	35.3	M8
						32			12	43.3	M10
3	17°	20	68.7	62.7	40	22	50	30	6	24.8	M5
						25			8	28.3	M6
						30			8	33.3	M6
						36			6	24.8	M5
						44			8	28.3	M6
						50			8	33.3	M6
		22	75.0	69.0	50	30			10	35.3	M8
						32			10	35.3	M8
						35			12	43.3	M10
						36			6	24.8	M5
						44			8	28.3	M6
						50			8	33.3	M6
		25	84.4	78.4	62	40			10	35.3	M8
						40			10	35.3	M8
						45			12	43.3	M10
						45			14	48.8	M12
						55			12	43.3	M10
						55			14	48.8	M12
		28	93.8	87.8	68	45			14	48.8	M12
						45			12	43.3	M10
						45			14	48.8	M12
						45			14	48.8	M12
						45			14	48.8	M12
						45			14	48.8	M12

Modül	Helis Açısı (Sol) β°	Dış Sayısı Z	Dış Üstü Çapı da	Bölüm Dairesi Çapı do	Göbek Çapı dg	Delik Çapı dm	A	B	b	T	M
4	25°	20	96.3	88.3	65	32	60	40	10	35.3	M8
						35			10	38.3	M8
						40			12	43.3	M10
		22	105.1	97.1	68	45			14	48.8	M12
						55			10	35.3	M8
						55			10	38.3	M8
		25	118.3	110.3	70	40			12	43.3	M10
						62			16	59.3	M12
						80			14	48.8	M12
		28	131.6	123.6	75	45			16	59.3	M12
						80			16	59.3	M12
						110			20	79.9	M12
5	15°	20	113.5	103.5	85	45	65	45	12	43.3	M10
						55			14	48.8	M12
						55			16	59.3	M12
		21	118.7	108.7	80	55			14	48.8	M12
						80			16	59.3	M12
						80			16	59.3	M12
		25	139.4	129.4	90	55			16	59.3	M12
						110			20	79.9	M12
						110			20	79.9	M12
		20	137.5	125.5	104	55			16	59.3	M12
						75			20	79.9	M12
						80			16	59.3	M12
6	17°	21	143.8	131.8	110	75	75	55	20	79.9	M12
						80*			16	59.3	M12
						110*			20	79.9	M12
		25	168.9	156.9	110*	75			16	59.3	M12
						110*			20	79.9	M12
						110*			20	79.9	M12
7	20°	20	163.0	149.0	110*	75	85	60	20	79.9	M12
		22	177.9	163.9	110*	75			20	79.9	M12
		25	200.2	186.2	120*	85			22	90.4	M16
8	21°	20	187.4	171.4	120*	55	100	75	16	59.3	M12
						75			20	79.9	M12
						85			22	90.4	M16
10	21°	20	234.2	214.2	150*	55	125	95	16	59.3	M12
						75			20	79.9	M12
						85			22	90.4	M16

Profil Açısı α=20° Helis Açısı β=(Sol)

\* Kaynaklı Göbek

- Isıl işlem ve kaplama işlemleri isteğe bağlı olarak yapılmaktadır.
- Isıl işlemlerden sonra ölçüsel ve şekilsel değişim olabilir.
- Kullanıma hazır dişlilerde 90° x 2 adet setskur vida ve kama kanalı bulunmaktadır.





1



2



3



4



5



6



7



8



9



10



11



12



13

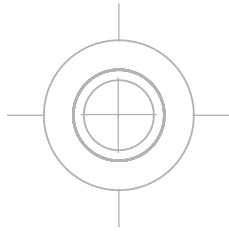
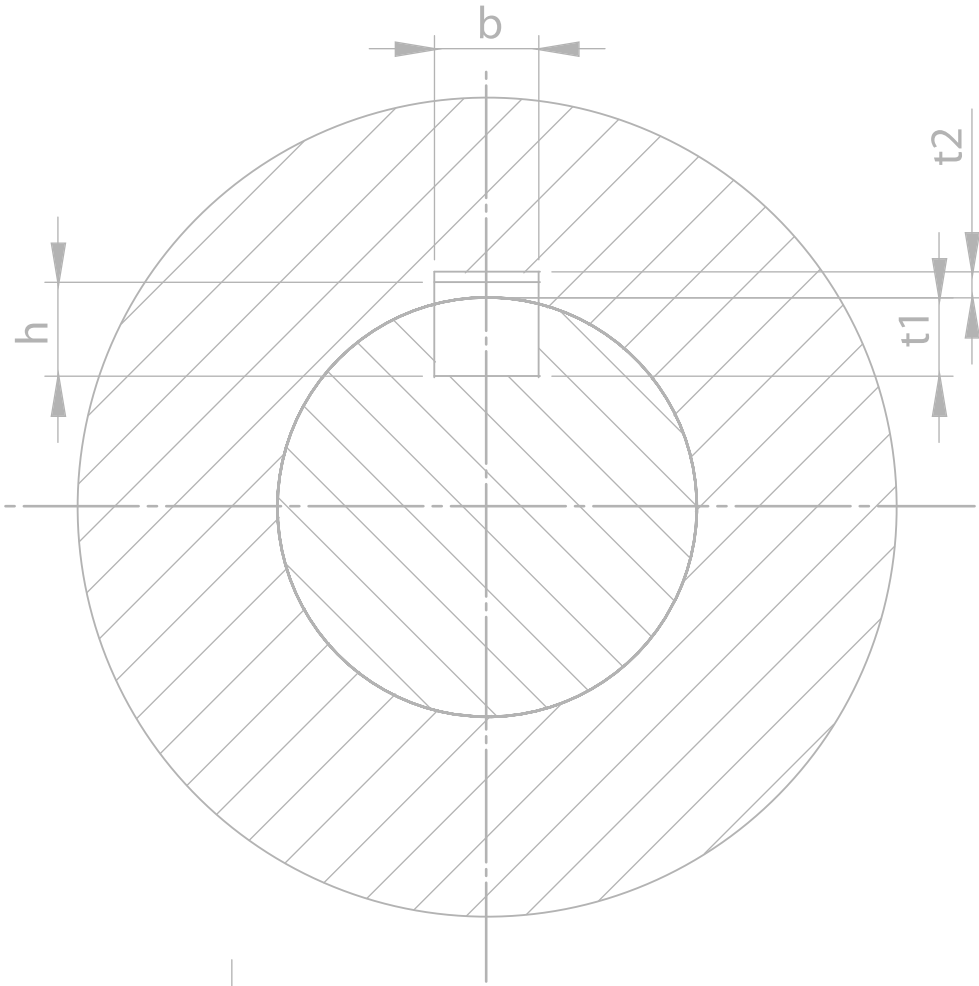


14



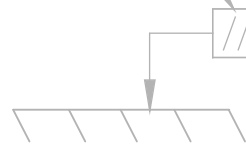
15



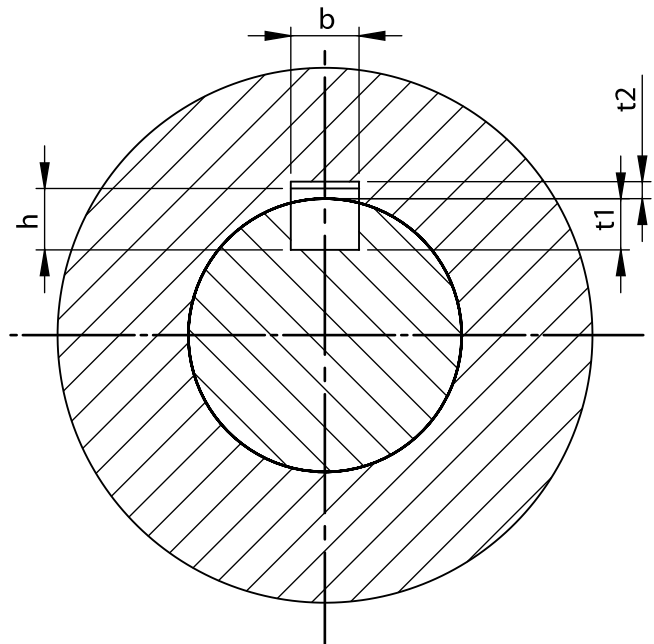
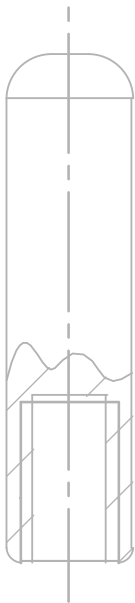


Tolerans Sembolü

Referans Noktası



Tolerans Değeri





**İMALATTA KULLANDIĞIMIZ MALZEMELER****Zincir Dişli Grubu**

Dişlilerde : Ç1040, Ç1050, Ç1060, St37, St44, St52

Dişli Göbeklerinde : Ç1020, Ç1030, Ç1040, Ç1050, Ç1060, St37, St52

Zincir Kızağı : Alpolen 1000 (Yeşil)

**Düz/Helis/Pinyon Dişli Grubu**

Dişlilerde : Ç1040, Ç1050, Ç1060, St37, St44, St52

Dişli Göbeklerinde : Ç1020, Ç1030, Ç1040, Ç1050, Ç1060, St37, St52

**Kremayer Dişli Grubu**

Dişlilerde : Ç1030, Ç1040, Ç1050, Ç1060, Transmisyon

**Özel İmalat Grubu**

Bu malzemeler müşteri isteği doğrultusunda kullanılmaktadır; sementasyon çelikleri, ıslah çelikleri, tüm imalat çelikleri, paslanmaz çelikler, otomat çelikleri, dövme malzemeler, döküm malzemeler, alüminyum, polyamid, kestamid, fiber, bronz, derlin vb.

**MÜŞTERİ İSTEĞİ İLE İMALATTA KULLANDIĞIMIZ DİĞER ÖZEL İŞLEMLER****Isıl İşlem**

İndüksiyon, meneviş, normalizasyon, nitrasyon, vakum, sementasyon vb.

**Kaplama**

Galvaniz kaplama, fosfat kaplama, çinko kaplamalar, nikel kaplama, krom kaplama vb.

**Özel/Hassas İmalat İşlemleri**

Dişli taşlama, delik taşlama, yüzey taşlama, diğer tüm imalat yöntem ve çeşitleri, montaj işlemleri vb.



## ÇEKTİRMELİ DÜZ PİM ÖLÇÜ TABLOSU

Ø (Çap) (+0/-0,02 veya +0,02/-0)	L (Boy)														
Ø6	20	25	30	35	40	45	50	55	60						
Ø8	20	25	30	35	40	45	50	55	60	70	80	90	100		
Ø10	20	25	30	35	40	45	50	55	60	70	80	90	100	120	
Ø12	20	25	30	35	40	45	50	55	60	70	80	90	100	120	
Ø14			30	35	40	45	50	55	60	70	80	90	100	120	
Ø16			30	35	40	45	50	55	60	70	80	90	100	120	130
Ø20					40	45	50	55	60	70	80	90	100	120	130

## KILAVUZLAR İÇİN KULLANILMASI GEREKEN MATKAP ÇAPLARI

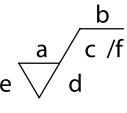
Metrik ISO Vida DIN 13				Whitworth Vida DIN 11	
Anma Çapı (inç)	Matkap Çapı (mm)	Anma Çapı (inç)	Matkap Çapı (mm)	Anma Çapı (inç)	Matkap Çapı (mm)
M 1x0,25	0.75	M 10x1,5	8.5	1/16"	1.15
M 1,1x0,25	0.85	M 11x1,5	9.5	1/8"	2.55
M 1,2x0,25	0.95	M 12x1,75	10.2	3/16"	3.7
M 1,4x0,3	1.1	M 14x2	12	1/4"	5.1
M 1,6x0,35	1.25	M 16x2	14	5/16"	6.5
M 1,7x0,35	1.3	M 18x2,5	15.5	3/8"	7.9
M 1,8x0,35	1.45	M 20x2,5	17.5	7/16"	9.3
M 2x0,4	1.6	M 22x2,5	19.5	1/2"	10.5
M 2,2x0,45	1.75	M 24x3	21	9/16"	12.1
M 2,3x0,4	1.9	M 27x3	24	5/8"	13.5
M 2,5x0,45	2.05	M 30x3,5	26.5	11/16"	15
M 2,6x0,45	2.1	M 33x3,5	29.5	3/4"	16.25
M 3x0,5	2.5	M 36x4	32	13/16"	18
M 3,5x0,6	2.9	M 39x4	35	7/8"	19.25
M 4x0,7	3.3	M 42x4,5	37.5	15/16"	21
M 4,5x0,75	3.7	M 45x4,5	40.5	1"	22
M 5x0,8	4.2	M 48x5	43	1 1/8"	24.75
M 5,5x0,9	4.6	M 52x5	47	1 1/4"	28
M 6x1	5	M 56x5,5	50.5	1 3/8"	30
M 7x1	6	M 60x5,5	54.5	1 1/2"	33.5
M 8x1,25	6.8	M 64x6	58	1 5/8"	35.5
M 9x1,25	7.8	M 68x6	62	1 3/4"	39
				1 7/8"	41.5
				2"	44.5

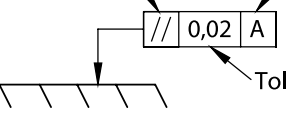
Örnek: M 12x1,25

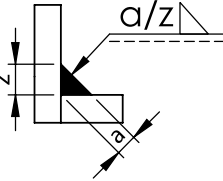
Vida anma çapından	Ø12
Hatve çıkarılarak (h)	1,25
= Matkap çapı bulunur	Ø10,75

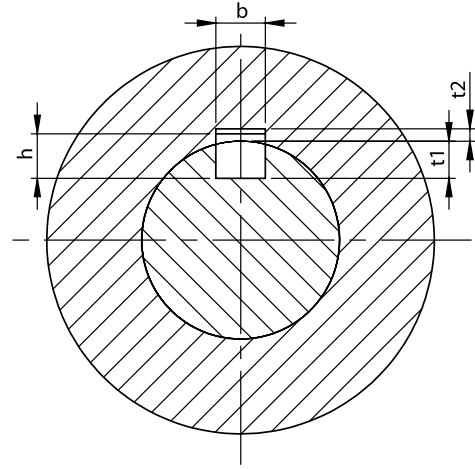
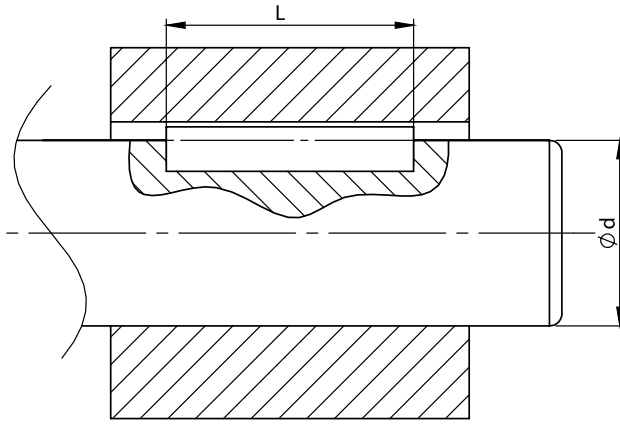
Vida Türü	Profil Açısı α
Metrik Vida	60°
Whitworth Vida	55°

ŞEKİL VE KONUM TOLERANSLARI				BAZI ŞEKİL VE SEMBOLLERİN ANLAMLARI	
Eleman Cinsi	Özellği	Adı	Sembol	Sembol	Anlamı
Tek Elemanlar	Şekil	Doğrusallık		$\varnothing 50$	Çap 50
		Düzlemsellik		$\square 50$	Kare 50x50
		Dairesellik		R50	Yarı Çap 50
		Silindiriklik		$\textcircled{2}$	2 Numaralı Ölçme Yeri
		Çizginin Şekli		$\nabla 1:10$	Koniklik veya sivrilik 1:10
		Yüzeyin Şekli		$\nabla 15\%$	Eğim %15
		Paralellik		$\square A$	Referans Noktası
Birbirleriyle İlgili Elemanlar	Yön	Diklik		$\textcircled{\varnothing 5}$ A1	5 mm Çapında A1 Referans Yeri
		Eğiklik		$\textcircled{M}$	En Çok Malzeme Şartı
	Konum	Bir Eksenin Konumu			Özel İşlem (Isıl İşlem, Kaplama)
		Eş Merkezlilik		H7,N6...vb	Delik Alıştırma Toleransı
		Simetriklik		h9,p5...vb	Mil Alıştırma Toleransı
	Yalpalama	Yalpalama		IT01...18	ISO IT Temel Toleransı
		Toplam Yalpalama			

YÜZEY İŞLEME SEMBOLLERİ				
		a: Yüzeyin talaş kaldırma sonucu Ra veya Rz olarak kalitesi b: Yüzeyin son şekli için işlem şekli c: Pürüzlülüğün ölçüldüğü esas uzunluğu (mm) d: İşleme izleri yönü e: İşlenecek aşırı kalınlık f: Yüzeylerin diğer pürüzlülük değerleri		
0.025 / $\nabla$	0.1 / $\nabla$	Honlama vb.	3.2 / $\nabla$	25 / $\nabla$
0.2 / $\nabla$	1.6 / $\nabla$	Çok İnce İşlem (Taşlama)	$\nabla$	
1.6 / $\nabla$	6.3 / $\nabla$	İnce İşlem (Tornalama)	$\nabla$	
				Yüzey Durumunun Belirli Özelliklerinin Gösterilmesi İçin

ÖRNEK GÖSTERİM	
	Referans Noktası Tolerans Sembolü Tolerans Değeri

KAYNAKLI BİRLEŞTİRME

z: Kaynak kenar uzunluğu a: Kaynak kalınlığı



Mil Çapı Ø d		b	h	t (Mile)	t2 (Dişliye)	Tolerans		Kama Boyu L	
Hariç	Dahil					t1	t2	min	max
6	8	2	2	1.2	1	+0,1/-0		6	32
8	10	3	3	1.8	1.4			6	36
10	12	4	4	2.5	1.8			8	45
12	17	5	5	3	2.3			10	56
17	22	6	6	3.5	2.8			14	70
22	30	8	7	4	3.3	+0,2/-0		18	90
30	38	10	8	5	3.3			20	110
38	44	12	8	5	3.3			28	140
44	50	14	9	5.5	3.8			36	160
50	58	16	10	6	4.3			45	180
58	65	18	11	7	4.4			50	200
65	75	20	12	7.5	4.9			56	200
75	85	22	14	9	5.4			63	250
85	95	25	14	9	5.4			70	280
95	110	28	16	10	6.4			80	320
110	130	32	18	11	7.4	+0,3/-0		90	360
130	150	36	20	12	8.4			100	400
150	170	40	22	12	9.4			110	400

## Ölçüler mm Olarak Verilmiştir

Mil Yuvası (b) : Sıkı geçme P9, Boşluklu geçme N9

Göbek Yuvası (b) : Sıkı geçme P9, Boşluklu geçme JS9

Kama Boy Basamakları (L) : 6, 8, 10, 12, 14, 16, 18, 20, 22, 25, 28, 32, 36, 40, 45, 50, 56, 63, 70, 80, 90, 100, 110, 125, 140, 160, 180, 200, 220, 250, 280, 320, 360, 400 mm

Kelime	Anlamı
Angle	Açı
Ball	Bilye
Bearing	Rulman
Belt	Kayış
Bevel Gear	Konik Dişli
Bolt	Cıvata
Bore	Delik
Burring	Pürüz, çapak almak
Bush	Burç
Cam	Kam
Cast	Döküm
Chain	Zincir
Chamfer	Pah
Circle	Daire
Cleft	Çatlak, yarık
Coefficient	Katsayı
Conveyor	Konveyör
Corner	Köşe
Couplings	Kaplin
Customer	Müşteri
Depth	Derinlik, dip
Diameter	Çap
Dimensions	Ölçü, boyut, ebat
Draw	Çizmek, çizim
Drill	Delmek, matkaplamak
Duplex	İkili
Edge	Kenar
Equipment	Ekipman
Face	Yüz, ön yüz
Flat	Yüzey, düzlük
Formula	Formül
Friction	Sürtünme
Gear	Dişli
Gear Belt Pulleys	Kayış Dişli
Gearbox	Vites kutusu
Grind	Taşlamak
Hardness	Sertleştirme
Heat treatment	Isıl İşlem
Helical Gear	Helis Dişli
Hub	Göbek
Induction	İndüksiyon
Intersection	Ara kesit
Iron	Demir
Keyway	Kama
Layer	Kat, katman
Left	Sol
Material	Malzeme
Mean	Ortalama, orta
Measure	Ölçmek, tartmak
Middle	Orta, ara
Mill	Frezelemek
Mirror	Ayna, aynalamak, simetrik
Mold/Mould	Kalıp
Move	Taşımak, değiştirmek
Nummer	Rakam, sayı
Oil	Yağ

Kelime	Anlamı
Pack/Package	Ambalaj
Pattern	Dağıtmak, çoğaltmak
Pin	Pim
Pitch	Adım
Pivot	Eksen, önemli nokta
Plate	Plaka, kaplamak
Point	Nokta
Pressure	Baskı, zorlama
Product	İmalat
Quadruple	Dörtlü
Rack Gear	Kremayer Dişli
Radius	Radyus
Rasp	Raspalamak
Ratio	Oran, orantı
Ream	Raybalamak
Rectangle	Dikdörtgen
Reducer	Redüktör
Right	Sağ
Ring	Segman
Roller	Makara
Root	Dip, diş dibi
Rotate	Döndürmek
Scale	Ölçek
Screw	Vida, Setskur
Section	Kesit
Shaft	mil
Shimmy	Yalpa
Simplex	Tekli
Side	Yan
Solid	Katı, kütük
Space	Boşluk, ara
Speed	Hız, devir
Spline	Eğri, yiv
Sprockets	Zincir Dişli
Spur Gear	Düz Dişli
Square	Kare
Standard	Standart, normal
Steel	Çelik
Strike/Stroke	Vuruş
Teeth	Diş
Tension	Gerilim, gergi
Thread	Vida dişi
Tip	Uç, dış ölçü
Tolerance	Tolerans
Tooth	Dişler
Transmission	Aktarma organı
Triplex	Üçlü
Triangle	Üçgen
Turn	Tornalamak
Volume	Hacim
Weight	Ağırlık, tartma, yük
Weld	Kaynak
Wheels	Çark etmek, döndürmek, kasnak
Width	Genişlik, kalınlık
Works	Çalışma, işler, fabrika
Worm Gear	Sonzuz Vida Dişlisi



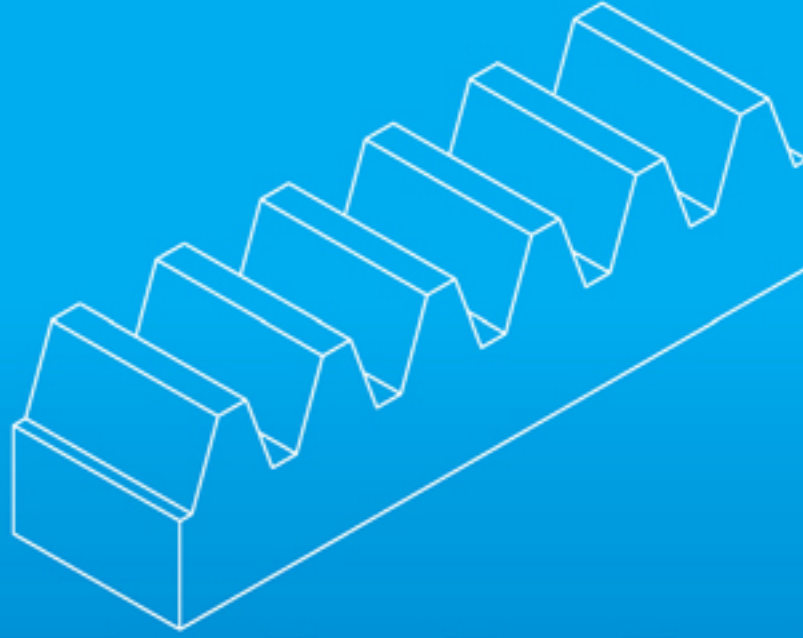
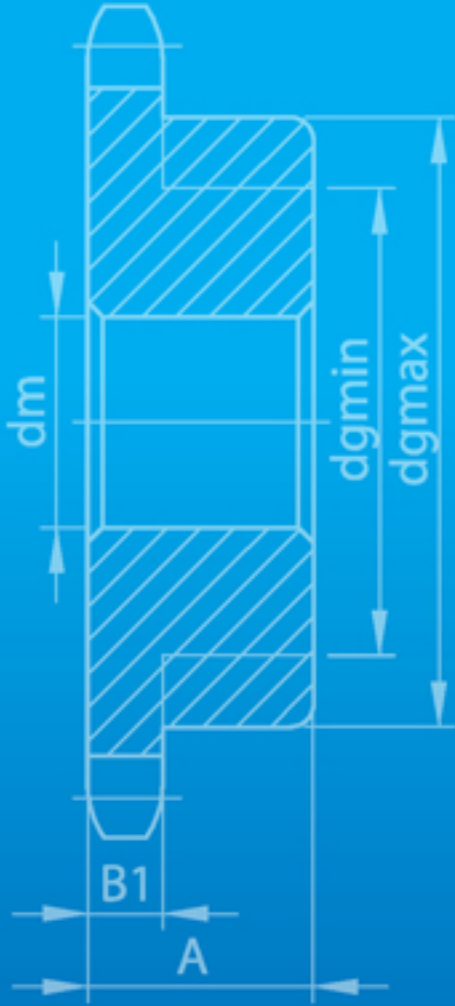
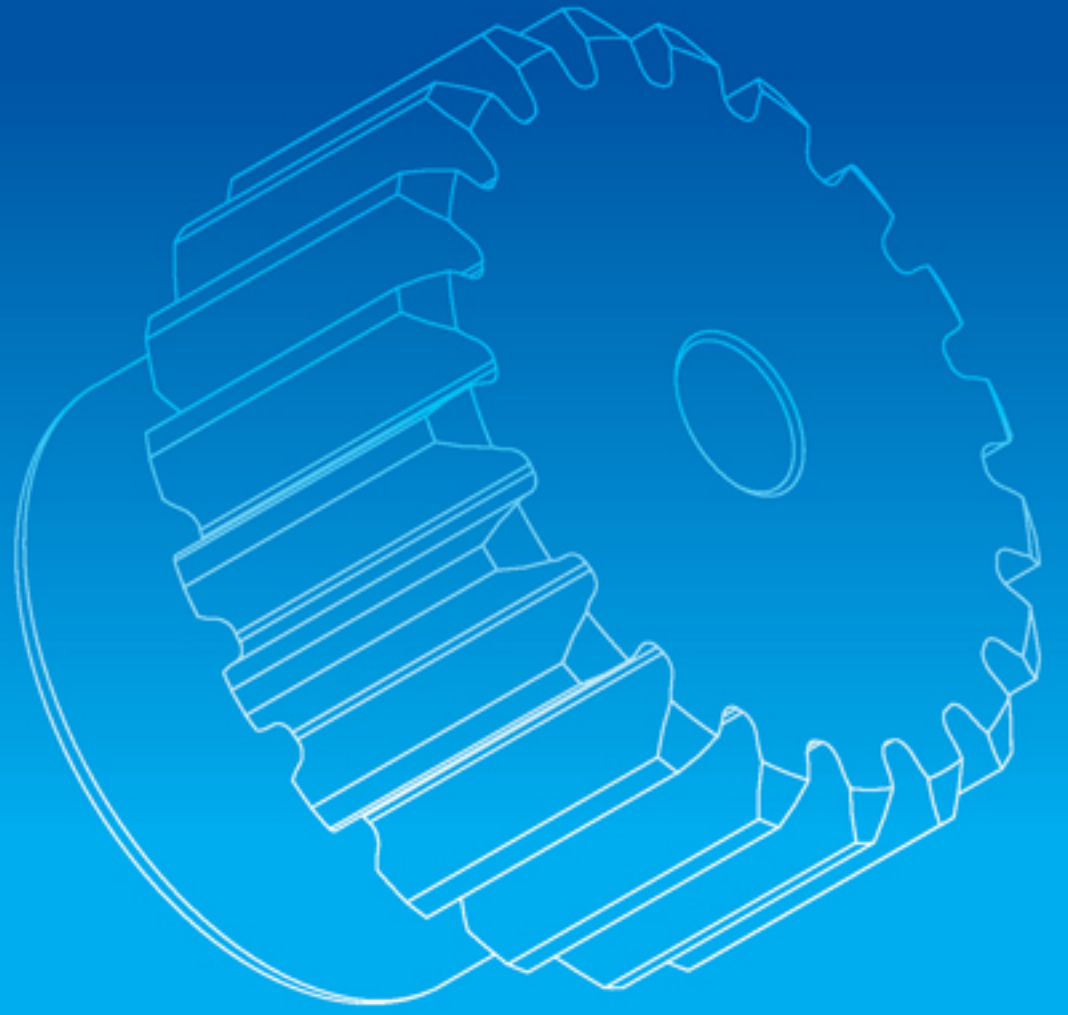
*Sayın Müşterilerimiz,*

İmalatı yapılmış ürünlerin ölçüleri ile katalogda yer alan ölçü değerleri birebir uyuşmayabilir. Bunun nedeni ise, daha önce stokta bulunan ürünlerimizin şuan ki katalog değerlerimizle farklılık göstermesidir. Bir diğer neden ise imalatı kullanılan malzeme tedarikinde yaşanan sıkıntılardır.

Ancak imalatı yapılan ürünlerimizin tamamında ilgili ürün standardının ve tolerans sınırlarının dışına çıkılmamaktadır. Katalogumuzun ilgili kısımlarında ürünlerimizin kullanımı için en uygun tolerans değerleri verilmiştir.

Katalog değerlerimize göre sizin için kritik değerler varsa bunu sipariş öncesi belirtmenizi rica ederiz.





YAVUZLAR DIŞLİ'nin Tescilli Markasıdır.

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