KUŞDOĞAN

STEEL & MOORING ROPE

ÜRÜN KATALOĞU

PRODUCT CATALOGUE

kusdogancelikhalat.com

1962 yılında İslam KUŞDOĞAN ve Oğulları Kollektif Şirketi olarak kurulan firmamız **KUŞDOĞAN ÇELİK HALAT SAN ve TİC. LTD. ŞTİ** olarak 2002 yılından itibaren faaliyetlerine devam etmektedir.

Firmamız hizmetlerine kuruluştaki ilke ve prensiplerini dahada geliştirip genişleterek devam etmiş ve bugünlere başarı ile gelmiş bulunmaktadır.

Firmamız stoğunda bulunan geniş ürün yelpazesi ve yurtiçi-yurtdışı dünyanın önde gelen markaları ile müşterilerimize hizmet vermektedir. Stoğumuzda bulunan 1mm'den 90mm'e kadar geniş çap ve kompozisyon aralığındaki yüksek kopma dayanımına sahip Çelik Halatlar, GRADE 80 ve GRADE 100 kalitesinde Zincir ve Zincir Aksesuarları, Kaldırma aparatları, Gemi Bağlama Halatları, Kablo Taşıma Sistemleri, Paslanmaz Yat ve Tekne Malzemeleri, Polyester Yük Sapanları ve Gemi Güverte Ekipmanlarını müşterilerimize buluşturan firmamız; **TSE EN 9001-2008** ve **OHSAS 18001-2007** yönetim sistem belgelerine sahiptir.

Firmamız profesyonel ekibi ile tüm Türkiye ve yurtdışı firmalarına ihracat ve Dünyanın çeşitli yerlerinde Limanlara ve Gemilere sevkiyat ve servis hizmeti sunmaktadır.

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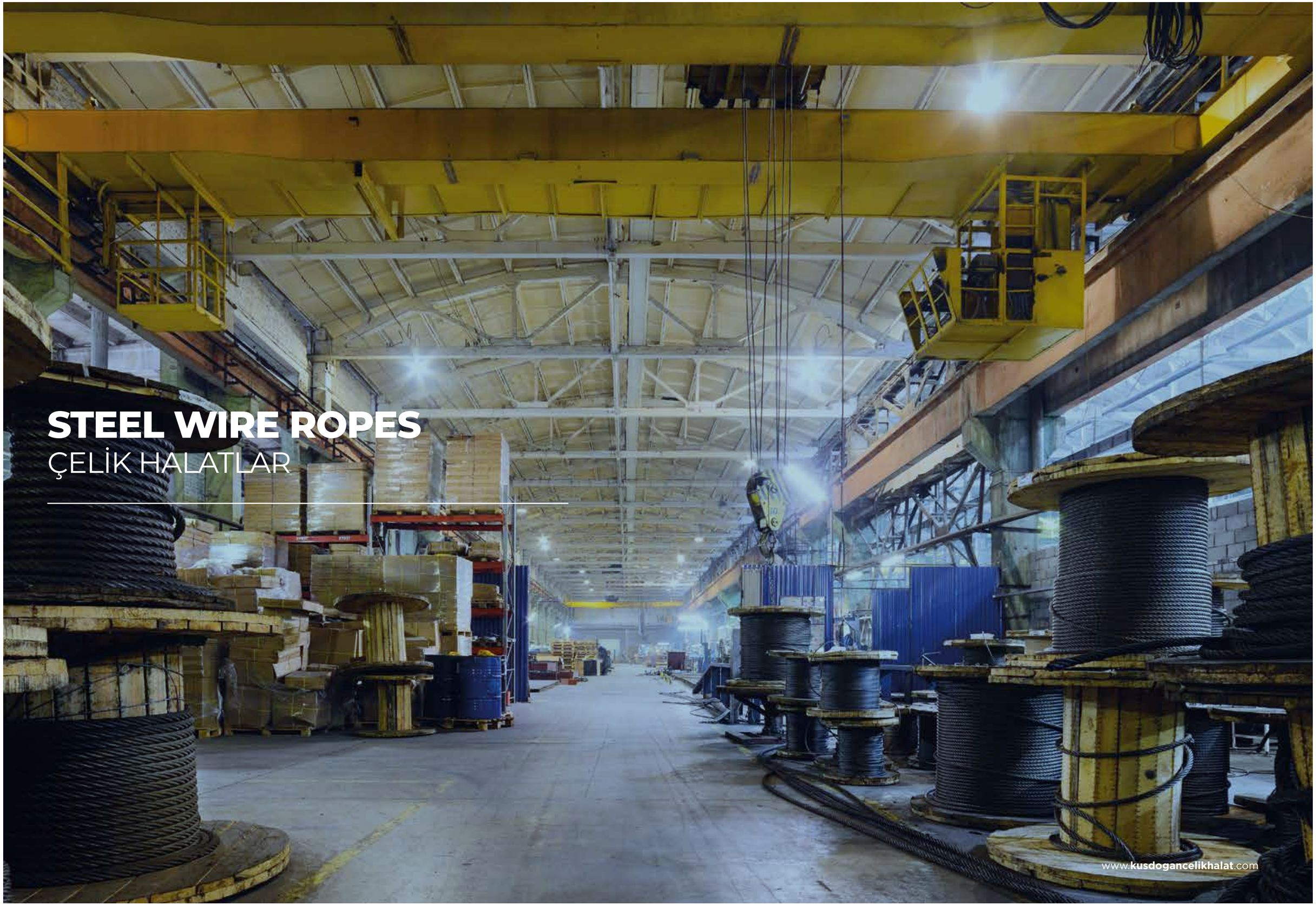


STEEL WIRE ROPES
ÇELİK HALATLAR

Verilen siparişlerinizde size daha iyi hizmet verebilmemiz ve her türlü yanlış anlaşılmayı önlemek için sipariş formunuzda aşağıdaki maddeleri lüt-fen tarafımıza bildiriniz.

When ardering steel wire ropes, please clarify fol-lowing specifications.

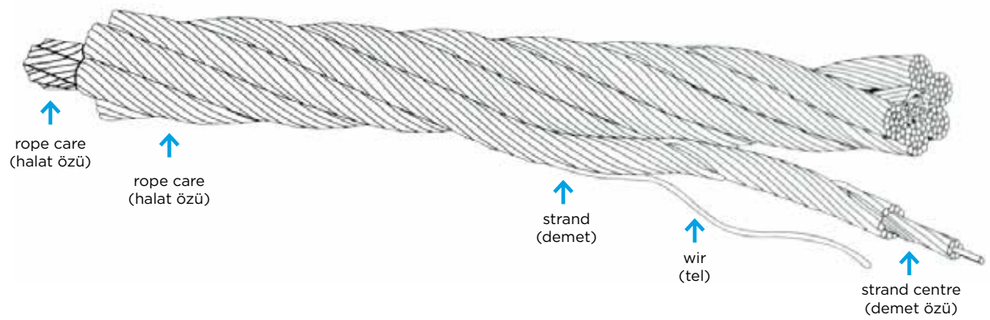
1	Halat çapı (- / + tolerans) / **Diameter of rope (- / + tolerances)**
2	Halat uzunluğu (- / + tolerans) / **Wire rape length (- / + tolerances)**
3	Halat yapısı (kompozisyonu) / **Construction of wire rope**
4	Halatın teorik / minimum kopma yükü / **Construction of wire rope**
5	Halat ve toron sarım yönü / **Additional breaking load / minimum breaking load**
6	Kaplama şekli (galvanizli veya siyah) / **Type of laying**
7	Yağlama şekli / **Kind of lubricant**
8	Paketleme şekli / **Packing**
9	Termin süresi / **Delivery Terms**
10	Sevk adresi / **Delivery address**

Özel siparişleriniz ve istekleriniz için aşağıdaki telefon ve fax numaralarını arayabilirsiniz.

If you haber any specific inquiry please contact us these information will enable us to clear your inqyiry.

Tellerin çeşitli kompozisyonlara göre örülm-esiyle meydana gelmiş en az 4 adet damarın bir öz etrafına (p.p.c, sısal, çelik) helisel olarak sarılmasıyla imal edilen bi üründür.

The wire rope is made up of wrapping at least 4 strands araund core which is made p.p.c, steel, fiber. Every strands and steels wrapped like helix in a different composition.



HALAT YÖNÜ / LAY OF WIRE ROPE

Halat Sarım yönü olarak genel manada ikiye ayrılır. Çapraz halatlar ve düz halatlar olmak üzere.

In general meaning: The wire rope laid in two manners, regular lay and langlay wire rope.

ÇAPRAZ SARIMLI HALATLAR/ REGULAR LAY WIRE ROPE

Halat yönü ile damar yönü birbirinin tersi yönünde sarımlı halatlardır. Sağ çapraz ve sol çapraz olmak üzere ikiye ayrılırlar. Sağ çapraz halatlar “s/Z” , sol çapraz halatlar “z/S” olarak aşağıdaki şekildeki gibi yapılanırlar.

The direction of the wire lay in the strand is op-posite to the direction of the lay in the rope. It is two kind; right regular lay “s/Z”, and left regular lay “z/S” these are constructed like below shapes.

DÜZ SARIMLI HALATLAR / LANG LAY WIRE ROPE

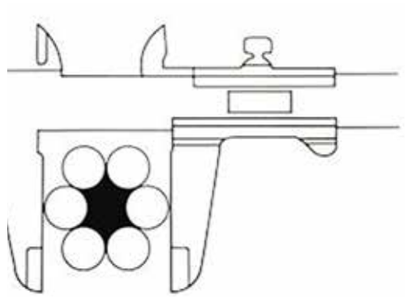
Damar ve halat yönü birbiririn aynı yönünde sarımlı halatlardır. Sağ düz ve sol düz sarımlı halatlar olmak üzere ikiye ayrılır. Sağ düz halatlar “z/Z” , sol düz halatlar “s/S” olarak aşağıdaki şekildeki gibi yapılanırlar.

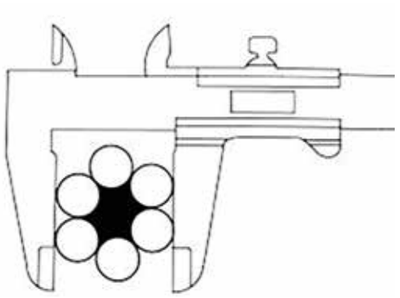
Both strand lay and rope lay are in the same direction. There are two types; right lang lay lay “z/Z” and left lang lay “s/S” these are constructedlike bellow shapes.

HALAT ÇAPININ ÖLÇÜLMESİ / MEASURING THE WIRE ROPE

Halat çapı ölçümü yapılırken halat numunesi düz ve yüksüz olarak tutulur en az iki komşu damara değecek şekilde uçtan itibaren 1.5 mt. den başlamak üzere ve en az 1.5 mt. aralıklı iki noktadan ve her nokta birbirine dikey olarak ölçülür. Bu dört ölçümün ortalaması gerçek çap olarak tanımlanır. Aşağıdaki şekillerde görüldüğü gibi 1. Şekil doğru bir ölçüm 2. Şekil yanlış bir halat ölçümüdür. Standart bir halat çapında (-%0, + %5) tolerans payı vardır.

In order to measure the diameter of the steel wire rapes, the following certain instructions should be followed; First, a sample of wire rope is holded straight and without any load exerted on it second, it should be begin at least. 1.5 mt. from the end, while measuring the diameter of the rape. Third, two measurements are done 1.5 mt. intervals from the two points. Every measurements point should be vertical to each other. Last, real diameter of the steel wire ropesis defined as the average of these four measurements. As seen below diagrams (1 st diagram is a correct measurement of the diameter and 2 nd. Diagram is an incorrect measurement of the diameter of the steel wire ropes). Diameter tolerances for the standard wire rope vary from -%0, + %5 (lower tolerance is -%0, and upper tolerance +%5)

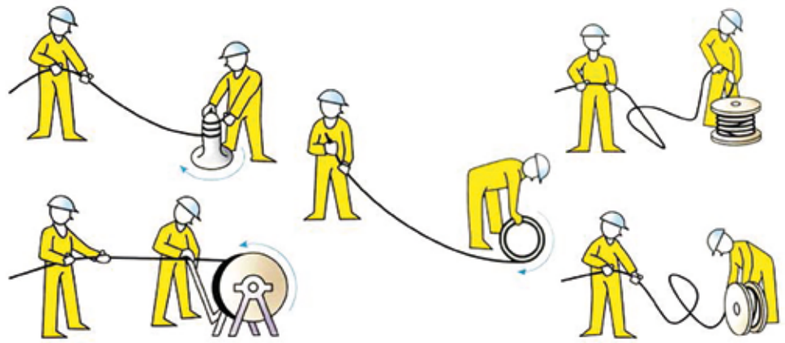




DÜZ SARIMLI HALATLAR / LANG LAY WIRE ROPE

Halat açımı ve sarımı dikkat edilmesi gereken önemli hususlardan biridir. Halatın dolaşıklığını ve hasar oluşmasını önlemek için aşağıdaki şekiller göz önüne alınmalıdır.

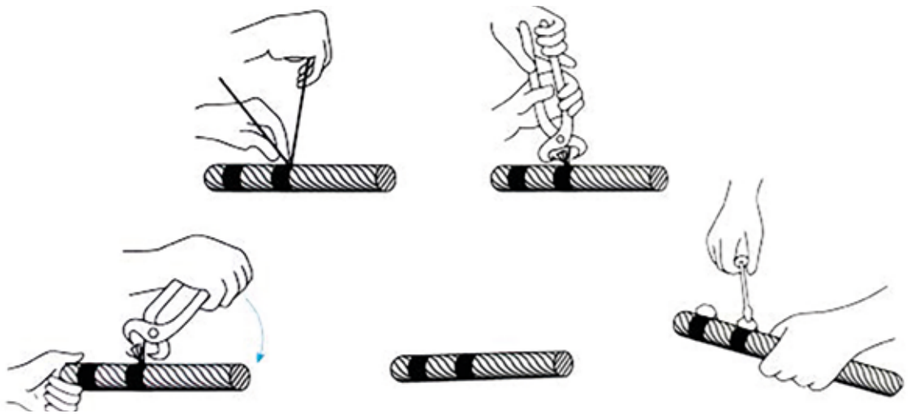
The uncoiling and rewinding is the most important thing finished wire rope. If we want to avaid kinks and defects in to the rope it should be considered below illustration.

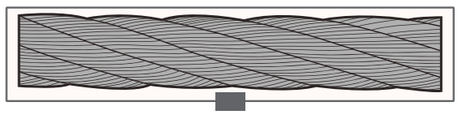


HALAT KESME/ HOW TO CUT ROPE

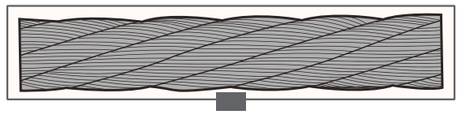
Halat kesilecek noktanın iki tarafının yumuşak bir telle veya kelepçe ile şekilde görüldüğü gibi sıkıca sarılarak kesim işlemi yapılır.

When we cut the rope we have to wrap both side of rope with low carbon steel wire or pipe clip as shown at the following illustrations.

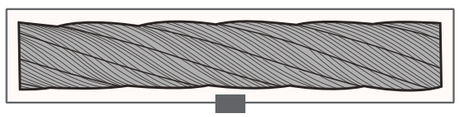




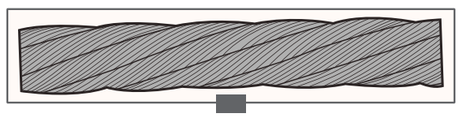
Sağ Çapraz Sarım
Right Hand Regular Lay (RHRL/RHO/sZ)



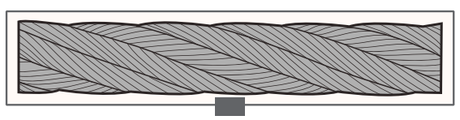
Sol Çapraz Sarım
Left Hand Regular Lay (LHRL/RHO/zS)



Sağ Düz Sarım
Right Hand Langs Lay (RHLL/RHL/zZ)



Sol Düz Sarım
Left Hand Langs Lay (LHLL/LHL/sS)



Alternatif Sarım
Special Alternate Lay (2 Langs 1 Regular)

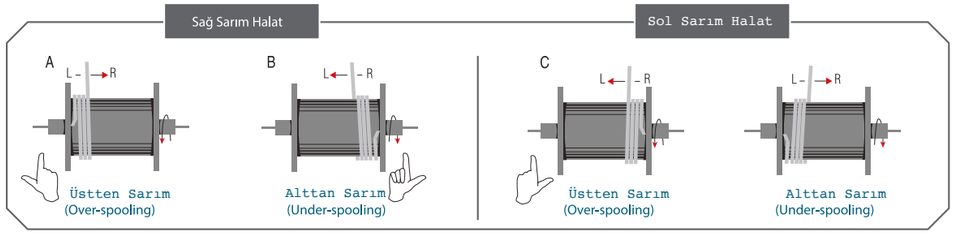
/ **HALATLARIN TAMBURA SABİTLENMESİ VE SARILMASI |** SPOOLİNG/ANCHORAGE OF ROPE ON DRUM

Halatlar sıfır iç gerilme ile üretilmektedir.
Tambur üzerinde düzensiz sarım işlemi, iç gerilmeleri arttırır. Bu durumda halatın ömrü kısalır.

A. Üstten sarım - soldan sağa - Sağ sarım halat kullanılmalıdır.
B. Alttan sarım - sağdan sola - Sağ sarım halat kullanılmalıdır.
C. Üstten sarım sağdan sola - Sol sarım halat kullanılmalıdır.
D. Alttan sarım - soldan sağa - Sol sarım halat kullanılmalıdır.

Wires are produced with no inner stress.
Inappropriate spooling causes stress and decreases life time of the wire.

Right hand regular lay - Over-spooling should be right to left.
Right hand regular lay - Under-spooling should be left to right.
Left hand regular lay - Over-spooling should be right to left.
Left hand regular lay - Under-spooling should be left to right.



TEL ÇIKMASI
WIRE PROTRUSION

ÖZ ÇIKMASI
CORE PROTRUSION

HALAT ÇAPINDAKİ BÖLGESEL DÜŞME
LOCAL REDUCTION IN ROPE DIAMETER

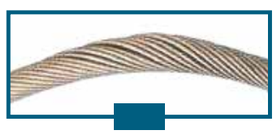
DAMAR BÜKÜLMESİ YADA DIŞARI ÇIKMASI
STAND PROTRUSION OR DISTORTION

DÜZLEŞMİŞ KISIM
FLATTENED PROTION

DIŞA DOĞRU GAM
KİNK (POSITIVE)

İÇE DOĞRU GAM
KINK (NEGATIVE)

DALGALANMA
WAVINESS



KAFES OLUŞUMU
BASKER DEFORMATION

DIŞ AŞINMA
EXTERNAL WEAR

DIŞ KOROZYON
EXTERNAL CORROSION

DIŞ KOROZYONUN BÜYÜMÜŞ HALİ
ENLARGEMENT OF EXTERNAL CORROSION

TEPE TEL KIRIKLARI
CROWN WIRE BREAKS

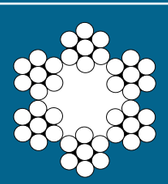
VADİ TİPİ TEL KIRIĞI
VALLEY WIRE BREAKS

DÖNMEZ TİP HALATLARDA ÖZ PÜSKÜRMESİ
PROTRUSION OF İNNER ROPE OF ROTATİONRESİSTANT ROPE

ÖZ HASARLANMASINDAN KAYNAKLI ÇAP ARTIŞI
LOCAL İNCREASE İN ROPE DİAMETER DUE TO CORE DİSTORTİON

GAM
KINK

DÜZLEŞMEŞ KISIM
FLATTENED PORTION



6x7 = 6X(1+6)
FC / KÖ

KULLANIM ALANLARI

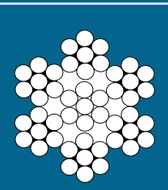
EN 12385

TRAMWAY

DENİZCİLİK

MADENCİLİK

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile	
		1770 N/mm²	1960 N/mm²
		Minimum Breaking Load (MBL) kN	
8.00	0.221	37.6	41.6
9.00	0.279	47.6	52.7
10.00	0.345	58,8	65.1
11.00	0.417	71.1	78.7
12.00	0.497	84.6	93.7
13.00	0.583	99.3	110
14.00	0.676	115	128
15.00	0.776	132	146
16.00	0.883	150	167
17.00	0.997	170	188
18.00	1.118	190	211
19.00	1.245	212	235
20.00	1.380	235	260



6x7 = 6X(1+6)
IWRC / ÇÖ

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile	
		1770 N/mm²	1960 N/mm²
		Minimum Breaking Load (MBL) kN	
8.00	0.246	40.7	45.0
9.00	0.311	51.5	57.0
10.00	0.384	63.5	70.4
11.00	0.465	76.9	85.1
12.00	0.553	91.5	101
13.00	0.649	107	119
14.00	0.753	125	138
15.00	0.864	143	158
16.00	0.983	163	180
17.00	1.110	184	203
18.00	1.244	206	228
19.00	1.386	229	254
20.00	1.536	254	281

6x24+7FC= 6x(FC+9+15)
FC / KÖ

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile
		1770 N/mm²
		Minimum Breaking Load (MBL) kN
10.00	0.381	49.6
11.00	0.385	60.0
12.00	0.458	71.4
13.00	0.537	83.8
14.00	0.623	97.1
15.00	0.716	111.5
16.00	0.814	126.9
17.00	0.919	143.2
18.00	1.030	160.6
19.00	1.148	178.9
20.00	1.272	198.2

KULLANIM ALANLARI

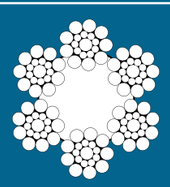
EN 12385

GERGİ SİSTEMLERİ

GENEL MÜHENDİSLİK

6x12+7FC= 6x(FC+12)
FC / KÖ

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile	
		1570 N/mm²	1770 N/mm²
		Minimum Breaking Load (MBL) kN	
10.00	0.251	32.7	36.8
11.00	0.304	39.5	44.5
12.00	0.361	47.0	53.0
13.00	0.424	55.2	62.2
14.00	0.492	64.0	72.2
15.00	0.565	73.5	82.2
16.00	0.643	83.6	94.2
17.00	0.725	94.4	106.4
18.00	0.813	105.8	119.3
19.00	0.906	117.9	132.9
20.00	1.004	130.6	147.3



6x19 Seale =
6x(1+9+9) FC / KÖ

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile	
		1770 N/mm²	1960 N/mm²
		Minimum Breaking Load (MBL) kN	
8.00	0.230	37.4	41.4
9.00	0.291	47.3	52.4
10.00	0.359	58.4	64.7
11.00	0.434	70.7	78.3
12.00	0.517	84.1	93.1
13.00	0.607	98.7	109.3
14.00	0.704	114	127
15.00	0.808	131	146
16.00	0.919	150	166
17.00	1.038	169	187
18.00	1.163	189	210
19.00	1.296	211	233
20.00	1.436	234	259
21.00	1.538	258	285
22.00	1.738	283	313
23.00	1.899	309	342
24.00	2.068	336	373
25.00	2.244	365	404
26.00	2.427	395	437
27.00	2.617	426	472
28.00	2.815	458	507
29.00	3.019	491	544
30.00	3.231	526	582
31.00	3.450	561	617
32.00	3.676	598	657
33.00	3.910	636	699
34.00	4.150	675	742
35.00	4.398	716	787

KULLANIM ALANLARI

EN 12385

BALIKÇILIK

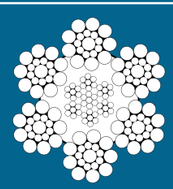
MADENCİLİK

VİNÇ

PETROL KUYULARI

AĞIR YÜK DONANIMI

GENEL MÜHENDİSLİK



6x19 Seale =
6x(1+9+9)IWRC / ÇÖ

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile	
		1770 N/mm²	1960 N/mm²
		Minimum Breaking Load (MBL) kN	
8.00	0.256	40.3	44.7
9.00	0.324	51.0	56.5
10.00	0.400	63.0	69.8
11.00	0.484	76.2	84.4
12.00	0.576	90.7	100.5
13.00	0.676	106.5	117.9
14.00	0.784	124	137
15.00	0.900	142	157
16.00	1.024	161	179
17.00	1.156	182	202
18.00	1.296	204	226
19.00	1.444	277	252
20.00	1.600	252	279
21.00	1.764	278	308
22.00	1.936	305	338
23.00	2.116	333	369
24.00	2.304	363	402
25.00	2.500	394	436
26.00	2.704	426	472
27.00	2.916	459	509
28.00	3.136	494	547
29.00	3.364	530	587
30.00	3.600	567	628
31.00	3.844	606	671
32.00	4.096	645	715
33.00	4.356	686	760
34.00	4.624	728	807
35.00	4.900	772	855

KULLANIM ALANLARI

EN 12385

BALIKÇILIK

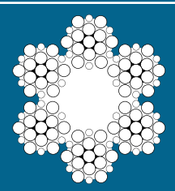
MADENCİLİK

VİNÇ

PETROL KUYULARI

AĞIR YÜK DONANIMI

GENEL MÜHENDİSLİK



6x19 W =
6x[1+6+(6+6)] FC / KÖ

KULLANIM ALANLARI

EN 12385

TRAMWAY

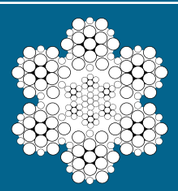
PETROL KUYULARI

VİNÇ

AĞIR YÜK DONANIMI

GENEL MÜHENDİSLİK

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile	
		1770 N/mm²	1960 N/mm²
		Minimum Breaking Load (MBL) kN	
8.00	0.230	37.4	41.4
9.00	0.291	47.3	52.4
10.00	0.359	58.4	64.7
11.00	0.434	70.7	78.3
12.00	0.517	84.1	93.1
13.00	0.607	98.7	109.3
14.00	0.704	114	127
15.00	0.808	131	146
16.00	0.919	150	166
17.00	1.038	169	187
18.00	1.163	189	210
19.00	1.296	211	233
20.00	1.436	234	259
21.00	1.538	258	285
22.00	1.738	283	313
23.00	1.899	309	342
24.00	2.068	336	373
25.00	2.244	365	404
26.00	2.427	395	437
27.00	2.617	246	472
28.00	2.815	458	507
30.00	3.231	526	582
32.00	3.676	598	662
34.00	4.150	675	748
36.00	4.653	757	838
38.00	5.184	843	934
40.00	5.744	935	1028
42.00	6.333	1030	1133
44.00	6.950	1131	1244



6x19 W =
6x[1+6+(6+6)] IWRC / ÇÖ

KULLANIM ALANLARI

EN 12385

TRAMWAY

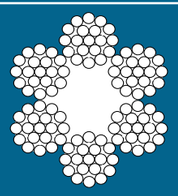
PETROL KUYULARI

VİNÇ

AĞIR YÜK DONANIMI

GENEL MÜHENDİSLİK

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile	
		1770 N/mm²	1960 N/mm²
		Minimum Breaking Load (MBL) kN	
8.00	0.256	40.3	44.7
9.00	0.324	51.0	56.5
10.00	0.400	63.0	69.8
11.00	0.484	76.2	84.4
12.00	0.576	90.7	100.5
13.00	0.676	106.5	117.9
14.00	0.784	124	137
15.00	0.900	142	157
16.00	1.024	161	179
17.00	1.156	182	202
18.00	1.296	204	226
19.00	1.444	227	252
20.00	1.600	252	279
21.00	1.764	278	308
22.00	1.936	305	338
23.00	2.116	333	369
24.00	2.304	363	402
25.00	2.500	394	436
26.00	2.704	426	472
27.00	2.916	459	509
28.00	3.136	494	547
30.00	3.600	567	628
32.00	4.096	645	715
34.00	4.624	728	807
36.00	5.184	817	904
38.00	5.776	910	1008
40.00	6.400	1008	1108
42.00	7.056	1112	1223
44.00	7.744	1220	1342



6x19 FILLER = 6x(1+6+6F+12)
FC / KÖ

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile	
		1770 N/mm²	1960 N/mm²
		Minimum Breaking Load (MBL) kN	
10.00	0.359	58.4	64.7
11.00	0.434	70.7	78.3
12.00	0.517	84.1	93.1
13.00	0.607	98.7	109.3
14.00	0.704	114	127
15.00	0.808	131	146
16.00	0.919	150	166
17.00	1.038	169	187
18.00	1.163	189	210
19.00	1.296	211	233
20.00	1.436	234	259
21.00	1.583	258	285
22.00	1.738	283	313
23.00	1.899	309	342
24.00	2.068	336	373
25.00	2.244	365	404
26.00	2.427	395	437
27.00	2.617	426	472
28.00	2.815	458	507
30.00	3.231	526	582
32.00	3.676	598	662
34.00	4.150	675	748
36.00	4.653	169	187
38.00	5.184	843	934
40.00	5.744	935	1035
42.00	6.333	1030	1133
44.00	6.950	1131	1244
46.00	7.596	1236	1359

KULLANIM ALANLARI

EN 12385

MADENCİLİK

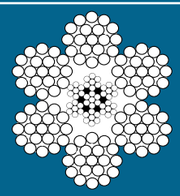
VİNÇ

DENİZCİLİK

ORMANCILIK

AĞIR YÜK DONANIMLARI

GENEL MÜHENDİSLİK



6x19 Filler = 6x(1+6+6F+12)
IWRC / ÇÖ

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile	
		1770 N/mm²	1960 N/mm²
		Minimum Breaking Load (MBL) kN	
10.00	0.400	63.0	69.8
11.00	0.484	76.2	84.4
12.00	0.576	90.7	100.5
13.00	0.676	106.5	117.9
14.00	0.784	124	137
15.00	0.900	142	157
16.00	1.024	161	179
17.00	1.156	182	202
18.00	1.296	204	226
19.00	1.444	227	252
20.00	1.600	252	279
21.00	1.764	278	308
22.00	1.936	305	338
23.00	2.116	333	369
24.00	2.304	363	402
25.00	2.500	394	436
26.00	2.704	426	472
27.00	2.916	459	509
28.00	3.136	494	547
30.00	3.600	567	628
32.00	4.096	645	715
34.00	4.624	728	807
36.00	5.184	817	904
38.00	5.776	910	1008
40.00	6.400	1008	1116
42.00	7.056	1112	1223
44.00	7.744	1220	1342
46.00	8.464	1333	1466

KULLANIM ALANLARI

EN 12385

MADENCİLİK

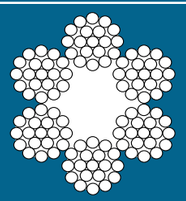
VİNÇ

DENİZCİLİK

ORMANCILIK

AĞIR YÜK DONANIMLARI

GENEL MÜHENDİSLİK



6x19 ST= 6x(1+6+12)
FC / KÖ

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile	
		1770 N/mm²	1960 N/mm²
		Minimum Breaking Load (MBL) kN	
8.00	0.221	34.8	38.5
9.00	0.280	44.0	48.7
10.00	0.346	54.3	60.2
11.00	0.419	65.8	72.8
12.00	0.498	78.2	86.6
13.00	0.585	91.8	101.7
14.00	0.678	107	118
15.00	0.779	122	135
16.00	0.886	139	154
17.00	1.000	157	174
18.00	1.121	176	195
19.00	1.249	196	217
20.00	1.384	217	241
21.00	1.526	240	265
22.00	1.675	263	291
23.00	1.830	287	318
24.00	1.993	313	347
25.00	2.163	340	376
26.00	2.339	367	407
27.00	2.522	396	439
28.00	2.713	426	472
30.00	3.114	489	542
32.00	3.543	556	616
34.00	4.000	628	696
36.00	4.484	704	780
38.00	4.996	785	869
40.00	5.536	869	963
42.00	6.103	959	1054
44.00	6.699	1052	1157

KULLANIM ALANLARI

EN 12385

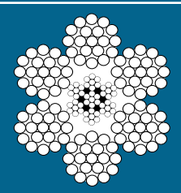
MADENCİLİK

VİNÇ

AĞIR YÜK DONANIMLARI

DENİZCİLİK

GENEL YÜK KALDIRMA



6x19 ST = 6x(1+6+12)
IWRC / ÇÖ

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile	
		1770 N/mm²	1960 N/mm²
		Minimum Breaking Load (MBL) kN	
8.00	0.244	37.6	41.6
9.00	0.309	47.6	52.7
10.00	0.381	58.8	65.1
11.00	0.461	71.1	78.7
12.00	0.549	84.6	93.7
13.00	0.644	99.3	110.0
14.00	0.747	115	128
15.00	0.857	132	146
16.00	0.975	150	167
17.00	1.101	170	188
18.00	1.234	190	211
19.00	1.375	212	235
20.00	1.524	235	260
21.00	1.680	259	287
22.00	1.844	284	315
23.00	2.015	311	344
24.00	2.195	338	375
25.00	2.381	367	407
26.00	2.576	397	440
27.00	2.777	428	474
28.00	2.987	461	510
30.00	3.429	529	586
32.00	3.901	602	666
34.00	4.404	679	752
36.00	4.938	762	843
38.00	5.502	849	940
40.00	6.096	940	1041
42.00	6.721	1037	1140
44.00	7.376	1138	1251

KULLANIM ALANLARI

EN 12385

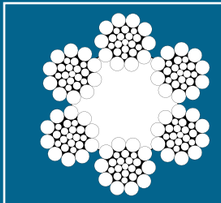
MADENCİLİK

VİNÇ

AĞIR YÜK DONANIMLARI

DENİZCİLİK

GENEL YÜK KALDIRMA



6x26WS = 6x[1+5+(5+5)+10]
FC / KÖ

KULLANIM ALANLARI

EN 12385

MADENCİLİK

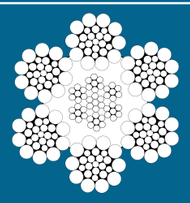
VİNÇ

PETROL KUYULARI

AĞIR YÜK DONANIMI

GENEL MÜHENDİSLİK

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile	
		1770 N/mm²	1960 N/mm²
		Minimum Breaking Load (MBL) kN	
8.00	0.235	37.4	41.4
9.00	0.297	47.3	52.4
10.00	0.367	58.4	64.7
11.00	0.444	70.7	78.3
12.00	0.528	84.1	93.1
13.00	0.620	98.7	109.3
14.00	0.719	114	127
15.00	0.826	131	146
16.00	0.940	150	166
17.00	1.061	169	187
18.00	1.189	189	210
19.00	1.325	211	233
20.00	1.468	234	259
21.00	1.618	258	285
22.00	1.776	283	313
23.00	1.941	309	342
24.00	2.114	336	373
25.00	2.294	365	404
26.00	2.481	395	437
27.00	2.675	426	472
28.00	2.877	458	507
30.00	3.303	526	582
32.00	3.758	598	662
34.00	4.243	675	748
36.00	4.756	757	838
38.00	5.299	843	934
40.00	5.872	935	1035
42.00	6.474	1030	1133
44.00	7.105	1131	1246



6x26WS = 6x[1+5+(5+5)+10]
IWRC / ÇÖ

KULLANIM ALANLARI

EN 12385

MADENCİLİK

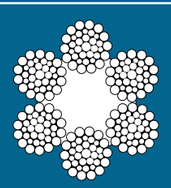
VİNÇ

PETROL KUYULARI

AĞIR YÜK DONANIMI

GENEL MÜHENDİSLİK

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile	
		1770 N/mm²	1960 N/mm²
		Minimum Breaking Load (MBL) kN	
8.00	0.262	40.3	44.7
9.00	0.331	51.0	56.5
10.00	0.409	63.0	69.8
11.00	0.495	76.2	84.4
12.00	0.589	90.7	100.5
13.00	0.691	106.5	117.9
14.00	0.802	124	137
15.00	0.920	142	157
16.00	1.047	161	179
17.00	1.182	182	202
18.00	1.325	204	226
19.00	1.476	227	252
20.00	1.636	252	279
21.00	1.804	278	308
22.00	1.980	305	338
23.00	2.164	333	369
24.00	2.356	363	402
25.00	2.556	394	436
26.00	2.765	426	472
27.00	2.982	459	509
28.00	3.207	494	547
30.00	3.681	567	628
32.00	4.188	645	715
34.00	4.728	728	807
36.00	5.301	817	904
38.00	5.906	910	1008
40.00	6.544	1008	1116
42.00	7.215	1112	1223
44.00	7.918	1220	1342



6x36WS = 6x[1+7+(7+7)+14]
FC / KÖ

KULLANIM ALANLARI

EN 12385

MADENCİLİK

VİNÇ

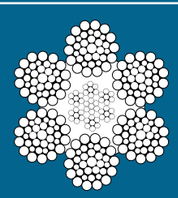
DENİZCİLİK

PETROL KUYULARI

AĞIR YÜK DONANIMI

GENEL MÜHENDİSLİK

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile	
		1770 N/mm²	1960 N/mm²
		Minimum Breaking Load (MBL) kN	
8.00	0.235	37.4	41.4
9.00	0.297	47.3	52.4
10.00	0.367	58.4	64.7
11.00	0.444	70.7	78.3
12.00	0.528	84.1	93.1
13.00	0.620	98.7	109.3
14.00	0.719	114	127
15.00	0.826	131	146
16.00	0.940	150	166
17.00	1.061	169	187
18.00	1.189	189	210
19.00	1.325	211	233
20.00	1.468	234	259
21.00	1.618	258	285
22.00	1.776	283	313
23.00	1.941	309	342
24.00	2.114	336	373
25.00	2.294	365	404
26.00	2.481	395	437
27.00	2.675	426	472
28.00	2.877	458	507
30.00	3.303	526	582
32.00	3.758	598	662
34.00	4.243	675	748
36.00	4.756	757	838
38.00	5.299	843	934
40.00	5.872	935	1035
42.00	6.474	1030	1141
44.00	7.105	1131	1252
46.00	7.766	1236	1369
48.00	8.456	1346	1490
50.00	9.175	1460	1617
52.00	9.924	1579	1749
56.00	11.509	1832	2015
60.00	12.122	2140	2284
64.00	13.62	2375	2516



6x36WS = 6x[1+7+(7+7)+14]
IWRC / ÇÖ

KULLANIM ALANLARI

EN 12385

MADENCİLİK

VİNÇ

DENİZCİLİK

PETROL KUYULARI

AĞIR YÜK DONANIMI

GENEL MÜHENDİSLİK

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile	
		1770 N/mm²	1960 N/mm²
		Minimum Breaking Load (MBL) kN	
8.00	0.262	40.3	44.7
9.00	0.331	51.0	56.5
10.00	0.409	63.0	69.8
11.00	0.495	76.2	84.4
12.00	0.589	90.7	100.5
13.00	0.691	106.5	117.9
14.00	0.802	124	137
15.00	0.920	142	157
16.00	1.047	161	179
17.00	1.182	182	202
18.00	1.325	204	226
19.00	1.476	227	252
20.00	1.636	252	279
21.00	1.804	278	308
22.00	1.980	305	338
23.00	2.164	333	369
24.00	2.356	363	402
25.00	2.556	394	436
26.00	2.765	426	472
27.00	2.982	459	509
28.00	3.207	494	547
30.00	3.681	567	628
32.00	4.188	645	715
34.00	4.728	728	807
36.00	5.301	817	904
38.00	5.906	910	1008
40.00	6.544	1008	1116
42.00	7.215	1112	1231
44.00	7.918	1220	1351
46.00	8.654	1333	1476
48.00	9.423	1452	1608
50.00	10.225	1575	1744
52.00	11.059	1704	1887
56.00	12.826	1976	2173
60.00	13.211	2268	2410
64.00	14.80	2522	2712

6x37M = 6x[(1+6+12)+18]
FC / KÖ

KULLANIM ALANLARI

EN 12385

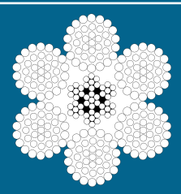
MADENCİLİK

DENİZCİLİK

PETROL KUYULARI

GENEL MÜHENDİSLİK

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile	
		1770 N/mm²	1960 N/mm²
		Minimum Breaking Load (MBL) kN	
8.00	0.221	33.4	37.0
9.00	0.280	42.3	46.8
10.00	0.346	52.2	57.8
11.00	0.419	63.2	70.0
12.00	0.498	75.2	83.3
13.00	0.585	88.2	97.7
14.00	0.678	102.3	113.3
15.00	0.779	117	130
16.00	0.886	134	148
17.00	1.000	151	167
18.00	1.121	169	187
19.00	1.249	188	209
20.00	1.384	209	231
21.00	1.526	230	255
22.00	1.675	253	280
23.00	1.830	276	306
24.00	1.993	301	333
25.00	2.163	326	361
26.00	2.339	353	391
27.00	2.522	381	422
28.00	2.713	409	453
30.00	3.114	470	520
32.00	3.543	535	592
34.00	4.000	604	668
36.00	4.484	677	749
38.00	4.996	754	835
40.00	5.536	835	925
42.00	6.103	921	1020
44.00	6.699	1011	1119
46.00	7.321	1105	1223
48.00	7.972	1203	1332
52.00	9.356	1412	1563
56.00	10.851	1637	1813
60.00	12.456	1880	2082
64.00	14.172	2139	2352
66.00	15.072	2274	2501



6x37M = 6x[(1+6+12)+18]
IWRC / ÇÖ

KULLANIM ALANLARI

EN 12385

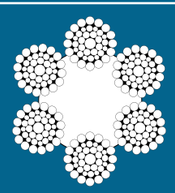
MADENCİLİK

DENİZCİLİK

PETROL KUYULARI

GENEL MÜHENDİSLİK

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile	
		1770 N/mm²	1960 N/mm²
		Minimum Breaking Load (MBL) kN	
8.00	0.244	36.1	40.0
9.00	0.309	45.7	50.6
10.00	0.381	56.5	62.5
11.00	0.461	68.3	75.7
12.00	0.549	81.3	90.0
13.00	0.644	95.4	105.7
14.00	0.747	110.7	122.5
15.00	0.857	127.0	140.7
16.00	0.975	144.5	160.1
17.00	1.101	163.2	180.7
18.00	1.234	182.9	202.6
19.00	1.375	203.8	225.7
20.00	1.524	225.9	250.1
21.00	1.680	249.0	275.7
22.00	1.844	273.3	302.6
23.00	2.015	298.7	330.8
24.00	2.195	325.2	360.1
25.00	2.381	352.9	390.8
26.00	2.576	381.7	422.7
27.00	2.777	411.6	455.8
28.00	2.987	442.7	490.2
30.00	3.429	508.2	562.7
32.00	3.901	578.2	640.2
34.00	4.404	652.7	722.8
36.00	4.938	731.8	810.3
38.00	5.502	815.3	902.8
40.00	6.096	903.4	1000.4
42.00	6.721	996.0	1102.9
44.00	7.376	1093.1	1210.5
46.00	8.062	1194.8	1323.0
48.00	8.778	1300.9	1440.6
52.00	10.302	1526.8	1690.6
56.00	11.948	1770.7	1960.8
60.00	13.716	2032.7	2250.9
64.00	15.606	2312.7	2543
66.00	16.596	2459.5	2704



6x41WS = 6x[1+8+(8+8)+16]
FC / KÖ

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile	
		1770 N/mm²	1960 N/mm²
		Minimum Breaking Load (MBL) kN	
18.00	1.189	189	210
19.00	1.325	211	233
20.00	1.468	234	259
21.00	1.618	258	285
22.00	1.776	283	313
23.00	1.941	309	342
24.00	2.114	336	373
25.00	2.294	365	404
26.00	2.481	395	437
27.00	2.675	426	472
28.00	2.877	458	507
30.00	3.303	526	582
32.00	3.758	598	662
34.00	4.243	675	748
36.00	4.756	757	838
38.00	5.299	843	934
40.00	5.872	935	1035
42.00	6.474	1030	1141
44.00	7.105	1131	1252
46.00	7.766	1236	1369
48.00	8.456	1346	1490
50.00	9.175	1460	1617
52.00	9.924	1579	1749
54.00	10.702	1703	1886
56.00	11.509	1832	2028
58.00	12.346	1965	2161
60.00	13.212	2103	2313
62.00	14.107	2245	2469

KULLANIM ALANLARI

EN 12385

MADENCİLİK

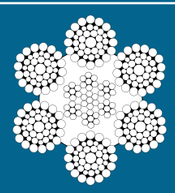
VİNÇ

DENİZCİLİK

PETROL KUYULARI

GENEL YÜK KALDIRMA

GENEL MÜHENDİSLİK



6x41WS = 6x[1+8+(8+8)+16]
IWRC / ÇÖ

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile	
		1770 N/mm²	1960 N/mm²
		Minimum Breaking Load (MBL) kN	
18.00	1.325	204	226
19.00	1.476	227	252
20.00	1.636	252	279
21.00	1.804	278	308
22.00	1.980	305	338
23.00	2.164	333	369
24.00	2.356	363	402
25.00	2.556	394	436
26.00	2.765	426	472
27.00	2.982	459	509
28.00	3.207	494	547
30.00	3.681	567	628
32.00	4.188	645	715
34.00	4.728	728	807
36.00	5.301	817	904
38.00	5.906	910	1008
40.00	6.544	1008	1116
42.00	7.215	1112	1231
44.00	7.918	1220	1351
46.00	8.654	1333	1476
48.00	9.423	1452	1608
50.00	10.225	1575	1744
52.00	11.059	1704	1887
54.00	11.926	1837	2035
56.00	12.826	1976	2188
58.00	13.759	2120	2332
60.00	14.724	2268	2268
62.00	15.722	2422	2664

KULLANIM ALANLARI

EN 12385

MADENCİLİK

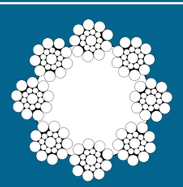
VİNÇ

DENİZCİLİK

PETROL KUYULARI

GENEL YÜK KALDIRMA

GENEL MÜHENDİSLİK



8x19 Seale = 8x(1+9+9)
FC / KÖ

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile	
		1770 N/mm²	1960 N/mm²
		Minimum Breaking Load (MBL) kN	
8.00	0.218	33.2	36.8
9.00	0.275	42.0	46.5
10.00	0.340	51.9	57.4
11.00	0.411	62.8	69.5
12.00	0.490	74.7	82.7
13.00	0.575	87.6	97.1
14.00	0.666	101.6	112.6
15.00	0.765	117	129
16.00	0.870	133	147
17.00	0.983	150	166
18.00	1.102	168	186
19.00	1.227	187	207
20.00	1.360	207	230
21.00	1.499	229	253
22.00	1.646	251	278
23.00	1.799	274	304
24.00	1.958	299	331
25.00	2.125	324	359
26.00	2.298	351	388
27.00	2.479	378	419
28.00	2.666	407	450
30.00	3.060	467	517
32.00	3.482	531	588
34.00	3.930	600	664
36.00	4.406	672	744
38.00	4.910	749	829
40.00	5.440	830	919
42.00	5.998	915	1013
44.00	6.582	1004	1112
46.00	7.194	1097	1206
48.00	7.834	1195	1314
50.00	8.500	1297	1426

KULLANIM ALANLARI

EN 12385

ASANSÖR

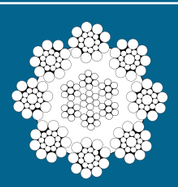
VİNÇ

DENİZCİLİK

TRAMWAY

AĞIR YÜK DONANIMI

GENEL MÜHENDİSLİK



8x19 Seale = 8x(1+9+9)
IWRC / ÇÖ

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile	
		1770 N/mm²	1960 N/mm²
		Minimum Breaking Load (MBL) kN	
8.00	0.260	40.3	44.7
9.00	0.330	51.0	56.5
10.00	0.407	63.0	69.8
11.00	0.492	76.2	84.4
12.00	0.586	90.7	100.5
13.00	0.688	106	118
14.00	0.798	124	137
15.00	0.916	142	157
16.00	1.042	161	179
17.00	1.176	182	202
18.00	1.319	204	226
19.00	1.469	227	252
20.00	1.628	252	279
21.00	1.795	278	308
22.00	1.970	305	338
23.00	2.153	333	369
24.00	2.344	363	402
25.00	2.544	394	436
26.00	2.751	426	472
27.00	2.967	459	509
28.00	3.191	494	547
30.00	3.663	567	628
32.00	4.168	645	715
34.00	4.705	728	807
36.00	5.275	817	904
38.00	5.877	910	1008
40.00	6.512	1008	1116
42.00	7.179	1112	1231
44.00	7.880	1220	1351
46.00	8.612	1333	1206
48.00	9.377	1452	1314
50.00	10.175	1575	1426

KULLANIM ALANLARI

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ASANSÖR

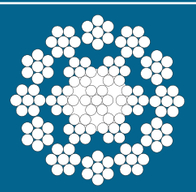
VİNÇ

DENİZCİLİK

TRAMWAY

AĞIR YÜK DONANIMI

GENEL MÜHENDİSLİK



18x7 = 6x(1+6)+12x(1+6)
FC / KÖ

KULLANIM ALANLARI

EN 12385

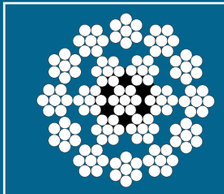
MADENCİLİK

VİNÇ

DENİZCİLİK

GENEL MÜHENDİSLİK

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile	
		1770 N/mm²	1960 N/mm²
		Minimum Breaking Load (MBL) kN	
10.00	0.382	58.1	64.3
11.00	0.462	70.2	77.8
12.00	0.550	83.6	92.6
13.00	0.646	98.1	108.6
14.00	0.749	113.8	126.0
15.00	0.860	131	145
16.00	0.978	149	165
17.00	1.104	168	186
18.00	1.238	188	208
19.00	1.379	210	232
20.00	1.528	232	257
21.00	1.685	256	284
22.00	1.849	281	311
23.00	2.021	307	340
24.00	2.200	334	370
25.00	2.388	363	402
26.00	2.582	392	435
27.00	2.785	423	469
28.00	2.995	455	504
29.00	3.213	488	541
30.00	3.438	523	579
31.00	3.671	558	618
32.00	3.912	594	658
33.00	4.160	632	700
34.00	4.416	671	743
35.00	4.680	711	788
36.00	4.951	752	833
37.00	5.230	795	880
38.00	5.516	838	928
39.00	5.810	883	971
40.00	6.112	929	1021



18x7 = 6x(1+6)+12x(1+6)
IWRC / ÇÖ

KULLANIM ALANLARI

EN 12385

MADENCİLİK

VİNÇ

DENİZCİLİK

GENEL MÜHENDİSLİK

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile	
		1770 N/mm²	1960 N/mm²
		Minimum Breaking Load (MBL) kN	
10.00	0.401	58.1	64.3
11.00	0.485	70.2	77.8
12.00	0.577	83.6	92.6
13.00	0.678	98.1	108.6
14.00	0.786	113.8	126.0
15.00	0.902	131	145
16.00	1.027	149	165
17.00	1.159	168	186
18.00	1.299	188	208
19.00	1.448	210	232
20.00	1.604	232	257
21.00	1.768	256	284
22.00	1.941	281	311
23.00	2.121	307	340
24.00	2.310	334	370
25.00	2.506	363	402
26.00	2.711	392	435
27.00	2.923	423	469
28.00	3.144	455	504
29.00	3.372	488	541
30.00	3.609	523	579
31.00	3.854	558	618
32.00	4.106	594	658
33.00	4.367	632	700
34.00	4.636	671	743
35.00	4.912	711	788
36.00	5.197	752	833
37.00	5.490	795	880
38.00	5.790	838	928
39.00	6.099	883	971
40.00	6.416	929	1021

34(M)x7
6x(1+6)+11x(1+6)+17x(1+6)
FC / KÖ

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile	
		1770 N/mm²	1960 N/mm²
		Minimum Breaking Load (MBL) kN	
14.00	0.749	110	122
16.00	0.978	144	160
18.00	1.238	182	202
20.00	1.528	225	249
22.00	1.849	272	302
24.00	2.200	324	359
26.00	2.582	380	421
28.00	2.995	441	489
30.00	3.438	507	561
32.00	3.912	576	638
34.00	4.416	651	721
36.00	4.951	729	808
38.00	5.516	813	900
40.00	6.112	901	997
42.00	6.738	993	1099
44.00	7.396	1090	1207
46.00	8.083	1191	1319
48.00	8.801	1297	1436
50.00	9.550	1407	1558
52.00	10.329	1522	1685

KULLANIM ALANLARI

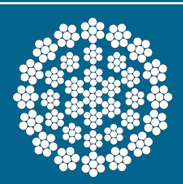
EN 12385

VİNÇ

DENİZCİLİK

AĞIR YÜK DONANIMI

GENEL MÜHENDİSLİK



34(M)x7
6x(1+6)+11x(1+6)+17x(1+6)
IWRC / ÇÖ

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile	
		1770 N/mm²	1960 N/mm²
		Minimum Breaking Load (MBL) kN	
14.00	0.786	110	122
16.00	1.027	144	160
18.00	1.299	182	202
20.00	1.604	225	249
22.00	1.941	272	302
24.00	2.310	324	359
26.00	2.711	380	421
28.00	3.144	441	489
30.00	3.609	507	561
32.00	4.106	576	638
34.00	4.636	651	721
36.00	5.197	729	808
38.00	5.790	813	900
40.00	6.416	901	997
42.00	7.074	993	1099
44.00	7.763	1090	1207
46.00	8.485	1191	1319
48.00	9.239	1297	1436
50.00	10.025	1407	1558
52.00	10.843	1522	1685

KULLANIM ALANLARI

EN 12385

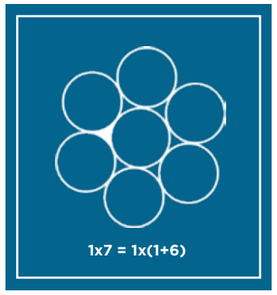
VİNÇ

DENİZCİLİK

AĞIR YÜK DONANIMI

GENEL MÜHENDİSLİK

SINGLE STRANDED ROPES
MONOTRON HALATLAR



KULLANIM ALANLARI
EN 12385

SERACILIK

OTOMOTİV

KABLO

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile		
		1180 N/mm²	1570 N/mm²	1770 N/mm²
		Minimum Breaking Load (MBL) kN		
2.00	0.020	2.5	3.3	3.8
2.50	0.031	3.9	5.2	5.9
3.00	0.045	5.7	7.5	8.5
3.50	0.061	7.7	10.3	11.6
4.00	0.080	10.1	13.4	15.1
4.50	0.101	12.7	16.9	19.1
5.00	0.125	15.7	20.9	23.6
5.50	0.151	19.0	25.3	28.5
6.00	0.180	22.6	30.1	34.0
6.50	0.211	26.6	35.4	39.9
7.00	0.245	30.8	41.0	46.2
7.50	0.281	35.4	47.1	53.1
8.00	0.320	40.3	53.6	60.4
8.50	0.361	45.4	60.5	68.2
9.00	0.405	50.9	67.8	76.4
9.50	0.451	56.8	75.5	85.1
10.00	0.500	62.9	83.7	94.3
10.50	0.551	69.3	92.3	104.0
11.00	0.605	76.1	101.3	114.2
11.50	0.661	83.2	110.7	124.8
12.00	0.720	90.6	120.5	135.9

1x19 = 1x(1+6+12)

KULLANIM ALANLARI

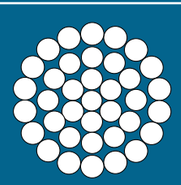
EN 12385

SERACILIK

OTOMOTİV

KABLO

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile		
		1180 N/mm²	1570 N/mm²	1770 N/mm²
		Minimum Breaking Load (MBL) kN		
2.00	0.020	2.5	3.3	3.8
2.50	0.031	3.9	5.2	5.8
3.00	0.045	5.6	7.5	8.4
3.50	0.061	7.6	10.2	11.4
4.00	0.080	10.0	13.3	15.0
4.50	0.101	12.6	16.8	18.9
5.00	0.125	15.6	20.7	23.4
5.50	0.151	18.8	25.1	28.3
6.00	0.180	22.4	29.8	33.6
6.50	0.211	26.3	35.0	39.5
7.00	0.245	30.5	40.6	45.8
7.50	0.281	35.0	46.6	52.6
8.00	0.320	39.9	53.1	59.8
8.50	0.361	45.0	59.9	67.5
9.00	0.405	50.5	67.1	75.7
9.50	0.451	56.2	74.8	84.3
10.00	0.500	62.3	82.9	93.5
10.50	0.551	68.7	91.4	103.0
11.00	0.605	75.4	100.3	113.1
11.50	0.661	82.4	109.6	123.6
12.00	0.720	89.7	119.4	134.6
12.50	0.781	97.4	129.5	146.0
13.00	0.845	105.3	140.1	157.9
13.50	0.911	113.5	151.1	170.3
14.00	0.980	122.1	162.5	183.2
14.50	1.051	131.0	174.3	196.5
15.00	1.125	140.2	186.5	210.3
15.50	1.201	149.7	199.2	224.5
16.00	1.280	159.5	212.2	239.2
16.50	1.361	169.6	225.7	254.4
17.00	1.445	180.1	239.6	270.1
17.50	1.531	190.8	253.9	286.2
18.00	1.620	201.9	268.6	302.8



1x37 = 1x(1+6+12+18)

KULLANIM ALANLARI

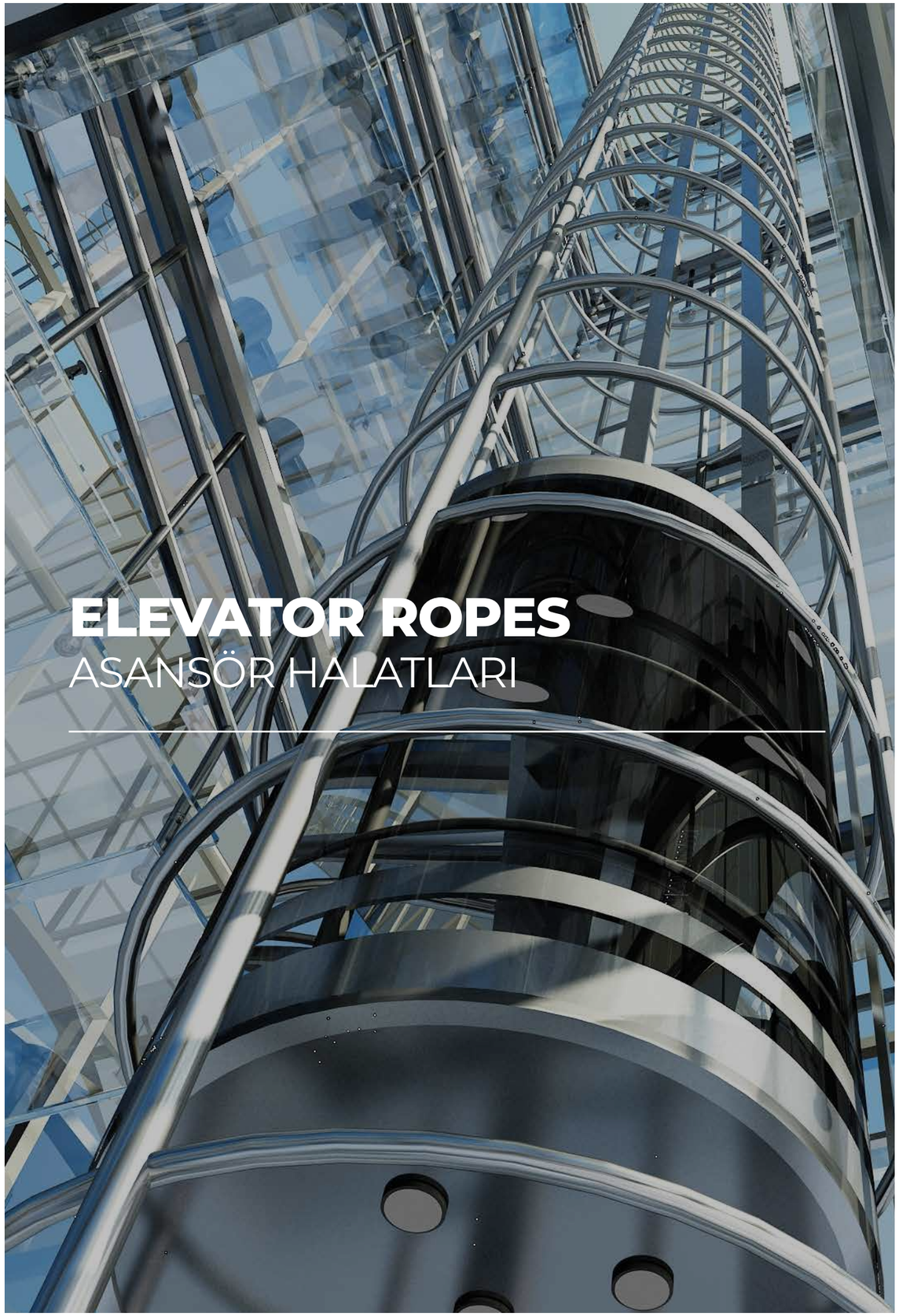
EN 12385

SERACILIK

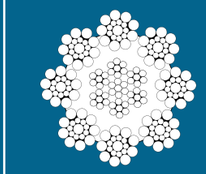
OTOMOTİV

KABLO

Halat Çapı Rope Dia. mm	Birim Ağırlık Unit Weight kg/m	Wire Tensile		
		1180 N/mm²	1570 N/mm²	1770 N/mm²
		Minimum Breaking Load (MBL) kN		
3.00	0.044	5.4	7.2	8.2
3.50	0.061	7.4	9.9	11.1
4.00	0.080	9.7	12.9	14.5
4.50	0.101	12.3	16.3	18.4
5.00	0.125	15.1	20.1	22.7
5.50	0.151	18.3	24.4	27.5
6.00	0.180	21.8	29.0	32.7
6.50	0.211	25.6	34.0	38.4
7.00	0.245	29.7	39.5	44.5
7.50	0.281	34.1	45.3	51.1
8.00	0.320	38.7	51.5	58.1
8.50	0.361	43.7	58.2	65.6
9.00	0.405	49.0	65.2	73.5
9.50	0.451	54.6	72.7	81.9
10.00	0.500	60.5	80.5	90.8
11.00	0.605	73.2	97.5	109.9
12.00	0.720	87.2	116.0	130.8
13.00	0.845	102.3	136.1	153.5
14.00	0.980	118.6	157.9	178.0
15.00	1.125	136.2	181.2	204.3
16.00	1.280	155.0	206.2	232.5
17.00	1.445	174.9	232.8	262.4
18.00	1.620	196.1	261.0	294.2
19.00	1.805	218.5	290.8	327.8
20.00	2.000	242.1	322.2	363.2
21.00	2.205	267.0	355.2	400.4
22.00	2.420	293.0	389.8	439.5
23.00	2.645	320.2	426.1	480.3
24.00	2.880	348.7	463.9	523.0



ELEVATOR ROPES
ASANSÖR HALATLARI



8x19 W+IWRC

Nominal ÇAP Nominal Dia (mm)	Yaklaşık Birim Ağırlık Approx Weight (kg/m)	Minimum Kopma Yükü / Minimum Breaking Load (kN)	
		IWRC	
		1180 N/mm²	1770 N/mm²
6,5	**0,18**	**-**	**31,4**
8	**0,27**	**43,2**	**46,5**
9	**0,34**	**54,6**	**-**
10	**0,42**	**67,6**	**72,5**
11	**0,51**	**81,8**	**-**
12	**0,61**	**97,3**	**-**
13	**0,72**	**113,9**	**-**
14	**0,83**	**132,8**	**-**
16	**1,08**	**172,8**	**-**

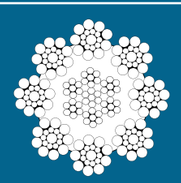
KULLANIM ALANLARI
EN 12385/5

YÜKSEK HIZLI ASANSÖR HALATI

OTOMOTİV

YÜKSEK KATLI BİNALAR

YÜKSEK MBL



8x19 S NFC
8x19 S IWRC

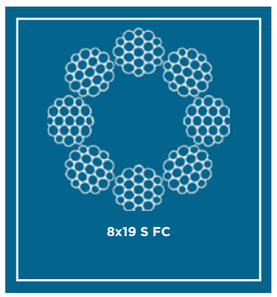
KULLANIM ALANLARI

EN 12385/5

ASANSÖR HALATI

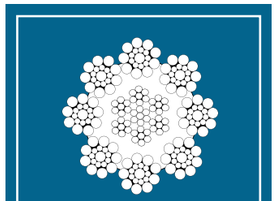
ASANSÖR FREN HALATI

Nominal ÇAP Nominal Dia (mm)	Yaklaşık Birim Ağırlık Approx Weight (kg/m)	Minimum Kopma Yükü / Minimum Breaking Load (kN)
		IWRC
		1370/1770 N/mm²
8	0,26	38,0
9	0,33	48,2
10	0,41	59,5
11	0,49	71,9
12	0,59	85,6
13	0,69	100,0
14	0,80	117,0
15	0,92	134,0
16	1,04	152,0
18	1,32	193,0
19	1,47	215,0
20	1,63	238,0



8x19 S FC

Nominal ÇAP Nominal Dia (mm)	Yaklaşık Birim Ağırlık Approx Weight (kg/m)	Minimum Kopma Yükü / Minimum Breaking Load (kN)
		Lif Öz / FC Core
		1370/1770 N/mm²
8	0,22	28,1
9	0,28	35,6
10	0,34	44,0
11	0,41	53,2
12	0,49	63,3
13	0,58	74,3
14	0,67	86,1
15	0,77	98,9
16	0,87	113,0
18	1,10	142,0
19	1,23	159,0
20	1,36	176,0



8x19 S MIX

KULLANIM ALANLARI

EN 12385/5

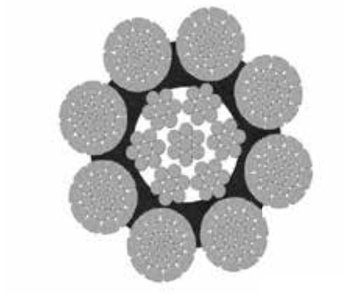
ASANSÖR HALATI

ASANSÖR FREN HALATI

Nominal ÇAP Nominal Dia (mm)	Yaklaşık Birim Ağırlık Approx Weight (kg/m)	Minimum Kopma Yükü / Minimum Breaking Load (kN)
		Karma Öz/ M x Core
		1370/1770 N/mm²
8	0,25	37,4
9	0,32	47,4
10	0,39	58,5
11	0,47	70,8
12	0,56	84,2
13	0,66	98,9
14	0,76	114,7
15	0,88	131,6
16	1,00	149,8
18	1,26	189,5
19	1,41	211,2
20	1,56	234,0

NEW GENERATION ROPES
YENİ NESİL ÇELİK HALATLAR
www.kusdogancelikhalat.com

H 8K PI



ÖZELLİKLER / PROPERTIES

UYGULAMA ALANI / APPLICATIONS

Yönlendirilmiş yükler, çift kaldırma sistemleri (sağ ve sol) köprülü vinçler, konteynır vinçleri, luffing bom sistemlerinde kullanılır.

Used in directed loads, double lifting systems (right and left), bridge cranes, container cranes, luffing boom systems

HALATA GENEL BAKIŞ / OVERVIEW

8 Kollu compact halatlarda düze sarım kazanç sağlamaz.
Flat winding does not provide gain in 8-strand compact ropes.

Önerilen Konstrükyon;

8x K26 Ws:16mm-28,6mm
8x K31 WS:30mm-42mm
8x K3635WS:44mm-52mm

Konstrüksiyon | Construction	**8 Adet Compact Toron+IWRC Plastik dolgu**		
Minimum Maksimum Çap | Min. Max. Diameter	**Ømin: 10mm Ø Max: 52mm**		
Yön | Lay	**Çapraz Sarım - Cross Winding (Sağ veya Sol - Right or left Lay)**		
Toplam Tel sayısı | Total Number Of Wires	**8 x K 26: 257**	**8 x K 31: 297**	**8 x K 36: 337**
Taşıyışı Tel sayısı | Number Of Carrier Wires	**8 x K 26: 208**	**8 x K 31: 248**	**8 x K 36: 288**
Öz Tipleri | IWRC Or Plastic	**IWRC+Plastik Dolgu**		
Dolgu Faktörü | Fill Factor	**8 x K 26=0,668**	**8 x K 31=0,672**	**8 x K 36=0,682**
Kaplama | Covering	**Galvanizli veya Siyah Halat | Galvanized Or Black Rope**		
Iskartaya Ayırma | To Scrap	**ISO 4309**		

Diam mm	Diam Inch	Steel Cross Section mm²	Approx Mass kg/m	Class 1960 (1) MBL kN	Class 2160 MBL kN
10		53	0,45	90	93,5
11		64	0,55	108	113
12		76	0,65	130	134
12,7		83	0,71	142	147
13		89,5	0,77	153	158
14		104	0,90	177	184
15		119	1,03	202	210
16	5/8	132,6	1,15	220	229
18		170,9	1,48	283	295
19		188,4	1,63	312	325
20		212,5	1,84	352	367
22	7/8	251,0	2,17	416	434
24		305,5	2,55	507	528
25,4	1	334,1	2,88	554	578
26		353,0	3,05	585	610
28		411,1	3,55	682	711
28,6	1 1/8	424,1	3,67	704	734
30		476,2	4,13	790	823
32	1 1/4	542,6	4,70	900	938
34		610,0	5,26	1012	1055
35	1 3/8	634,1	5,50	1052	1096
36		688,3	5,97	1142	1190
38	1 1/2	716,6	6,61	1190	1240
40		845,1	7,30	1402	
41	1 5/8	877,7	7,58	1456	
42		922,1	7,98	1530	
44		1040	9,00	1726	
44,5	1 3/4	1045	9,06	1734	
46		1129	9,78	1874	
48	1 7/8	1232	10,66	2045	
50		1350	11,70	2240	
50,8	2	1368	11,87	2270	
52		1454	12,60	2413	
54	2 1/8	1562	13,54	2592	
56		1681	14,60	2790	
58		1810	15,70	3004	
60		1932	16,70	3205	

(1) MBL Ortalama 2060 N/mm2 mukavemete göre hesaplanmıştır. MBL Calculated based on average strength of 2060 N/mm2.

Bu tablo bilgilendirme amaçlıdır. Bu belgede tanımlanan ürünlerin önceden haber verilmeksizin değiştirilme hakkı saklıdır.
Özel konstrüksiyon ve çaplar için lütfen bizimle iletişime geçin.

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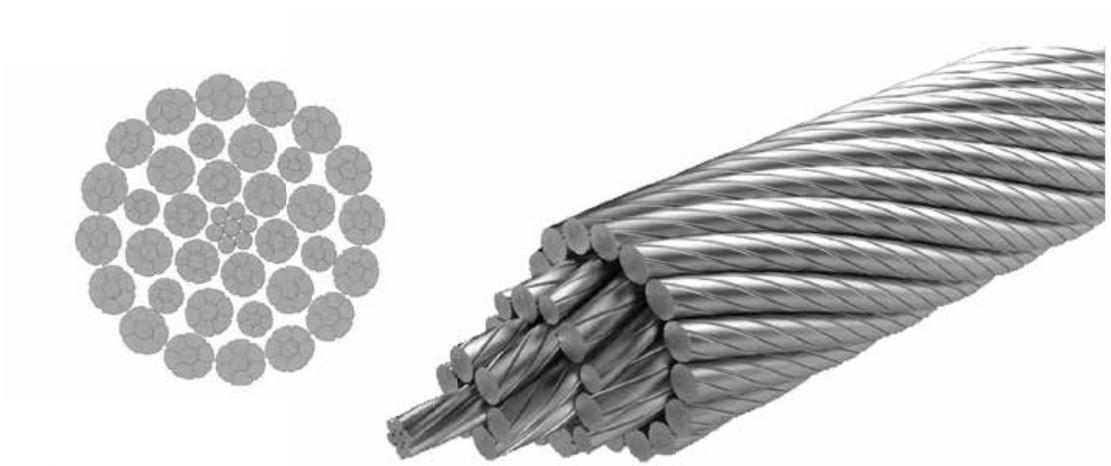
For special constructions and diameters please contact us.

H 35 NRK



ÖZELLİKLER / PROPERTIES

UYGULAMA ALANI / APPLICATIONS

Yüksek Kaldırmanın riskli olduğu ve kesinlikle dönme istenmeyen operasyonlarda ideal bir halattır.
It is an ideal rope in operations where high lifting is risky and rotation is definitely not desired.

HALATA GENEL BAKIŞ / OVERVIEW

Warrington kapama sayesinde daha uzun ömür elde edilir.
Tel kırıması durumunda ilk dış tellerde görülür ve bu durum güvenliği arttırır. Bu halatın plastik dolgulu modeli H35NRK PI'dır.

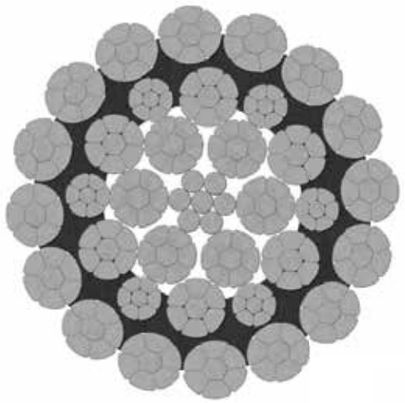
Longer life is achieved thanks to Warrington closure.
In case of wire breakage, it is first seen on the outer wires and this situation
increases security. The plastic filled model of this rope is H35NRK PI.

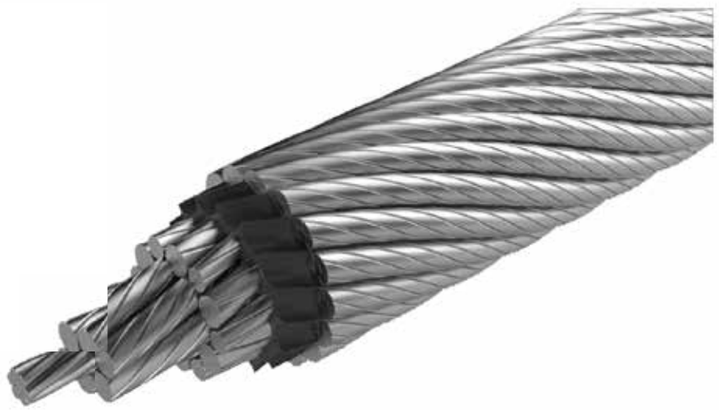
Konstrüksiyon | Construction	**Dönmez Halat-35 adet Compact Toron**
Minimum Maksimum Çap | Min. Max. Diameter	**Ømin: 16mm Ø Max: 42mm**
Yön | Lay	**Düz Sarım - Flat (Sağ veya Sol - Right or left Lay)**
Toplam Tel sayısı | Total Number Of Wires	**245**
Taşıyışı Tel sayısı | Number Of Carrier Wires	**112**
Öz Tipleri | IWRC	**IWRC**
Dolgu Faktörü | Fill Factor	**0,729**
Kaplama | Covering	**Galvanizli veya Siyah Halat | Galvanized Or Black Rope**
Iskartaya Ayırma | To Scrap	**ISO 4309 RCN:23-2**

Diam mm	Steel Cross Section mm²	Approx Mass kg/m	Class 1960 (2) MBL kN	Class 2160 MBL kN
16	**157,7**	**1,23**	**223,2**	**246**
17	**178,2**	**1,39**	**252**	**278**
18	**200,0**	**1,56**	**282,5**	**311**
19	**221,8**	**1,73**	**314,8**	**347**
20	**257,7**	**2,01**	**357**	**394**
22	**309,0**	**2,41**	**430**	**474**
24	**364,1**	**2,84**	**505**	**551**
26	**429,5**	**3,35**	**598**	**652**
28	**501,3**	**3,91**	**696**	**760**
30	**571,8**	**4,46**	**794**	**866**
32	**644,9**	**5,03**	**896**	**977**
34	**735,9**	**5,74**	**1023**	**1105**
36	**823,1**	**6,42**	**1141**	**1235**
38	**920,5**	**7,18**	**1279**	**1381**
40	**1.016,7**	**7,93**	**1412**	**1525**
42	**1.115,4**	**8,70**	**1549**	**1673**

(1) MBL Ortalama 2060 N/mm2 mukavemete göre hesaplanmıştır.
MBL Calculated based on average strength of 2060 N/mm2

H 35 NRK PI





ÖZELLİKLER / PROPERTIES

UYGULAMA ALANI / APPLICATIONS

Yüksek Kaldırmanın riskli olduğu ve kesinlikle dönme istenmeyen operasyonlarda ideal bir halattır.

It is an ideal rope in operations where high lifting is risky and rotation is definitely not desired.

HALATA GENEL BAKIŞ / OVERVIEW

Warrington kapama sayesinde daha uzun ömür elde edilir.
Tel kırıması durumunda ilk dış tellerde görülür ve bu durum güvenliği arttırır.

Longer life is achieved thanks to Warrington closure.
In case of wire breakage, it is first seen on the outer wires and this situation
increases security.

Konstrüksiyon | Construction	**Dönmez Halat-35 adet Non-Rotating Compact Toron+PI**
Minimum Maksimum Çap | Min. Max. Diameter	**Ømin: 16mm Ø Max: 42mm**
Yön | Lay	**Düz Sarım - Flat (Sağ veya Sol - Right or left Lay)**
Toplam Tel sayısı | Total Number Of Wires	**245**
Taşıyışı Tel sayısı | Number Of Carrier Wires	**112**
Öz Tipleri | IWRC+PI	**IWRC+PI**
Dolgu Faktörü | Fill Factor	**0,729**
Kaplama | Covering	**Galvanizli veya Siyah Halat | Galvanized Or Black Rope**
Iskartaya Ayırma | To Scrap	**ISO 4309 RCN 23-2**

Diam mm	Steel Cross Section mm²	Approx Mass kg/m	Class 1960 (2) MBL kN	Class 2160 MBL kN
16	**157,7**	**1,23**	**223,2**	**246**
17	**178,2**	**1,39**	**252**	**278**
18	**200,0**	**1,56**	**282,5**	**311**
19	**221,8**	**1,73**	**314,8**	**347**
20	**257,7**	**2,01**	**357**	**394**
22	**309,0**	**2,41**	**430**	**474**
24	**364,1**	**2,84**	**505**	**551**
26	**429,5**	**3,35**	**598**	**652**
28	**501,3**	**3,91**	**696**	**760**
30	**571,8**	**4,46**	**794**	**866**
32	**644,9**	**5,03**	**896**	**977**
34	**735,9**	**5,74**	**1023**	**1105**
36	**823,1**	**6,42**	**1141**	**1235**
38	**920,5**	**7,18**	**1279**	**1381**
40	**1.016,7**	**7,93**	**1412**	**1525**
42	**1.115,4**	**8,70**	**1549**	**1673**

(1) MBL Ortalama 2060 N/mm2 mukavemete göre hesaplanmıştır.
MBL Calculated based on average strength of 2060 N/mm2.

Bu tablo bilgilendirme amaçlıdır. Bu belgede tanımlanan ürünlerin önceden haber verilmeksizin değiştirilme hakkı saklıdır.
Özel konstrüksiyon ve çaplar için lütfen bizimle iletişime geçin.

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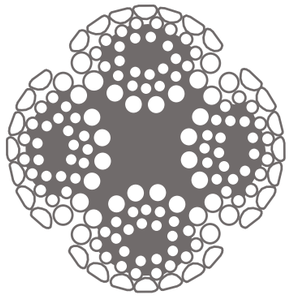
For special constructions and diameters please contact us

4X39 SES SWAGE GALVANİZ ÇELİK HALAT



KULLANIM YERLERİ / APPLICATION AREA

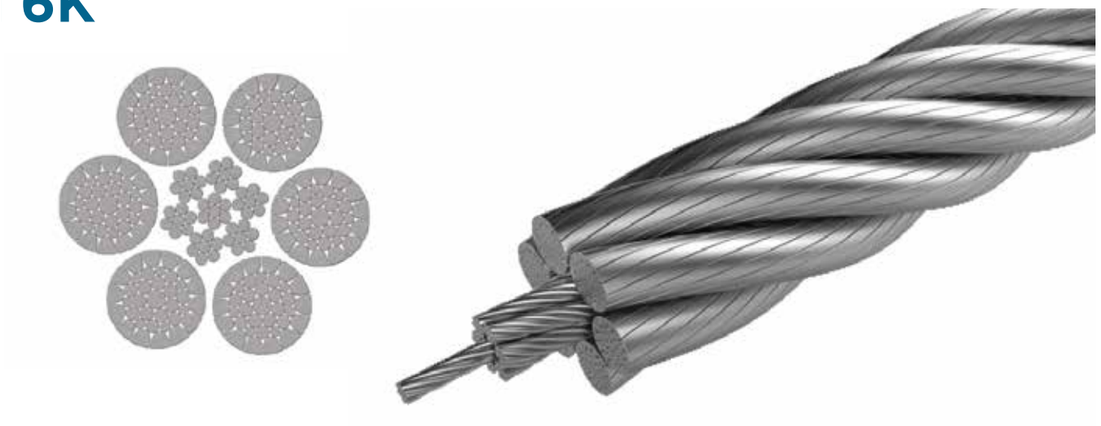
VİNÇ
(Cranes)

KALDIRMA
(Hoist)

KENDİR ÖZLÜ HALAT / FIBER CORE

4X39 SES TS EN 12385-4						
Halat Anma Çapı Diameter of Wire Rope	**Min. Kopma Kuvveti** Min. Breaking Load				**Yaklaşık Ağırlık** Weight	**Maksimum Uzunluk** Max. Length
	200 kg/mm2		**220 kg/mm2**			
mm	**kN**	**Ton**	**kN**	**Ton**	**kg/m**	**m**
10	63.9	6.52	69.2	7.06	0.41	2,000
11.2	80.3	8.19	87.0	8.87	0.51	1,500
12	89.0	9.08	96.5	9.84	0.59	1,000
12.5	100.0	10.20	108.9	11.10	0.63	1,000
14	125.7	12.82	136.3	13.90	0.80	2,500
16	163.8	16.70	177.5	18.10	1.04	2,200
18	208.7	21.28	225.6	23.00	1.34	3,500
19	231.4	23.60	251.1	25.60	1.49	2,500
20	256.0	26.10	277.5	28.30	1.63	2,500
22.4	321.7	32.80	348.1	35.50	2.05	2,500
24	356.0	36.30	385.4	39.30	2.35	1,800
25	399.1	40.70	432.5	44.10	2.55	1,800
26	431.5	44.00	466.8	47.60	2.76	1,800
28	502.1	51.20	543.3	55.40	3.25	3,000
30	575.7	58.70	623.7	63.60	3.73	2,700
31.5	634.5	64.70	687.5	70.10	4.11	1,900
32	655.1	66.80	709.0	72.30	4.24	1,900
33.5	717.8	73.20	777.7	79.30	4.65	1,900
35.5	806.1	82.20	872.8	89.00	5.22	1,900
37.5	899.3	91.70	973.8	99.30	5.82	1,400
40	1,000.3	102.00	1,078.7	110.00	6.63	1,400
42.5	1,127.8	115.00	1,225.8	125.00	7.48	1,100
45	1,255.3	115.00	1,372.9	140.00	8.38	1,100

H 6K



ÖZELLİKLER / PROPERTIES

UYGULAMA ALANI / APPLICATIONS

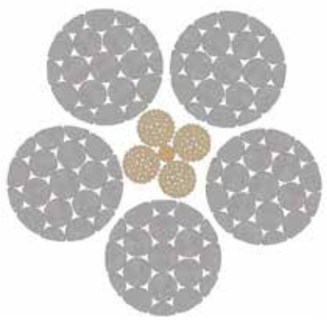
HALATA GENEL BAKIŞ / OVERVIEW

Konstrüksiyon | Construction	6 Adet- Pcs Compact Toron	
Minimum Maksimum Çap | Min. Max. Diameter	Ømin: 10mm Ø Max: 40mm	
Yön | Lay	Düz veya Çapraz Sarım - Flat Or Cross (Sağ veya Sol - Right Or Left)	
Toplam Tel sayısı | Total Number Of Wires	265	
Taşıyışı Tel sayısı | Number Of Carrier Wires	112	
Öz Tipleri | IWRC	IWRC	
Dolgu Faktörü | Fill Factor	0,682	
Kaplama | Covering	Galvanizli veya Siyah Halat | Galvanized Or Black Rope	
Iskartaya Ayırma | To Scrap	ISO 4309	

H 6K

Diam mm	Steel cross Section mm²	Approx Mass kg/m	Class 1960 MBL kN	Class 2160 MBL kN
10	53,5	0,46	86	91,5
11	65,1	0,56	99	113
12	77,9	0,67	114	127
13	90,7	0,78	147	157
14	105,8	0,91	170	183
15	120,9	1,04	195	208
16	138,4	1,19	218	228
17	155,8	1,34	246	270
18	174,4	1,50	276	298
19	195,3	1,68	304	323
20	216,3	1,86	335	355
22	261,6	2,25	400	423
24	310,5	2,67	489	518
25	326,7	2,81	512	546
26	365,1	3,14	578	610
28	423,3	3,64	657	700
30	486,0	4,18	757	806
32	552,3	4,75	846	914
34	602,3	5,18	916	960
36	675,6	5,81	1065	1120
38	752,3	6,47	1165	1190
40	833,7	7,17	1295	1320
42	918,6	7,90	1425	
44	1008,1	8,67	1505	
46	1102,3	9,48	1665	
48	1200,0	10,32	1885	

H 5K



ÖZELLİKLER / PROPERTIES

UYGULAMA ALANI / APPLICATIONS

Gondollar, askı platformlar, tüm çekme cihazları..
Orman vinçleri, çeneli çekme cihazları...

Gondolas, suspended platforms, all towing devices..
Forest cranes, grapple pulling devices...

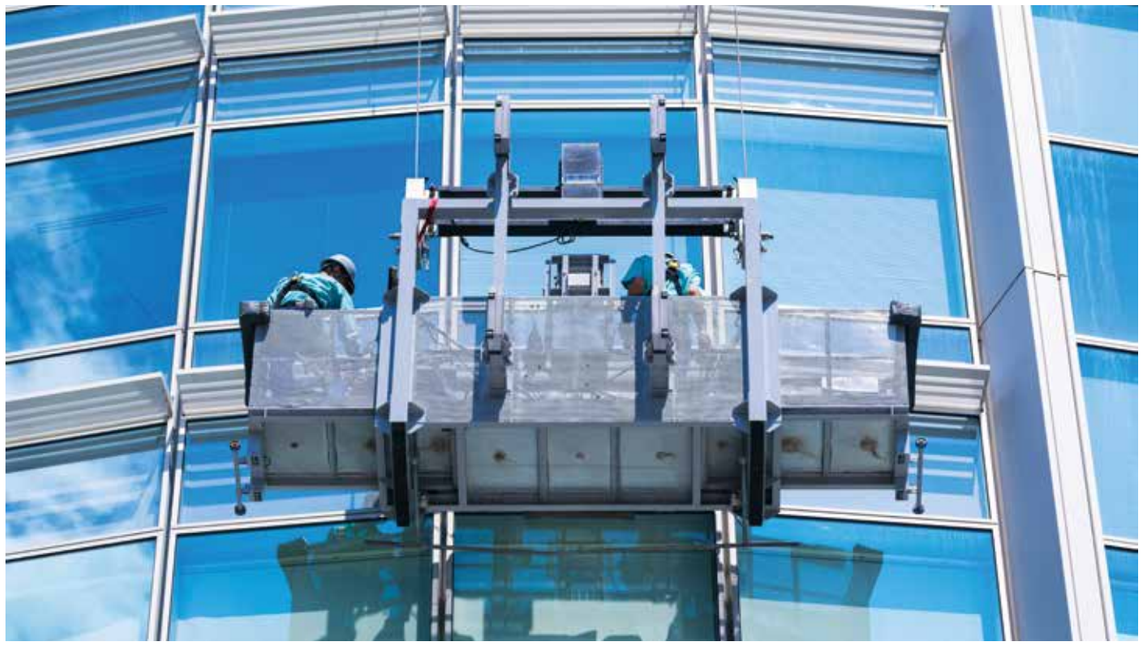
HALATA GENEL BAKIŞ /OVERVIEW

Test sonuçları ve deneyimlerden yola çıkılarak, tamamen yağsız halat yağlı olan halata göre ve iç kısmında korozyon sonucu fark edilemeyen tel kırılması potansiyeli ile servis ömrünü 2/3 oranında kısalttığı için tavsiye edilemez.

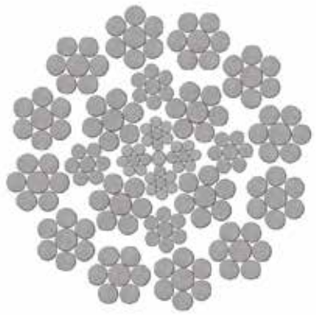
According to test results and experiences, completely oil-free rope is more durable than oiled rope and its inner part is more durable. Because it shortens the service life by 2/3 due to the potential for unnoticed wire breakage as a result of corrosion. cannot be recommended.

Konstrüksiyon | Construction	**5 Adet Özel Compact Toron**		
Minimum Maksimum Çap | Min. Max. Diameter	**Ømin: 8,3mm Ø Max: 16,3mm**		
Yön | Lay	**Çapraz Sarım - Cross Winding (Sağ-Right)**		
Toplam Tel sayısı | Total Number Of Wires	**5XK19W: 95**	**5XK26WS: 130**	**5XK31WS: 155**
Taşıyışı Tel sayısı | Number Of Carrier Wires	**5XK19W: 95**	**5XK26WS: 130**	**5XK31WS: 155**
Öz Tipleri | Condensed PP	**Yoğunlaştırılmış PP Öz**		
Dolgu Faktörü | Fill Factor	**0,54**		
Kaplama | Covering	**Galvanizli Halat | Galvanized Rope**		
Iskartaya Ayırma | To Scrap	**ISO 4309**		

Construction Diam. Mm	Cross Section mm^2	Mass Kg/m	Tensile	
			1960 MBL kN	2160 MBL kN
5 x K19 W				
8,3	**29,90**	**0,26**		**54,30**
9	**36,90**	**0,32**		**66,90**
9,5	**38,10**	**0,34**		**69,10**
10,3	**45,20**	**0,40**		**82,00**
5 x K26 WS				
11,5	**56,40**	**0,50**	**95,20**	
14	**87,00**	**0,77**		**158**
5 x K31 WS				
16,3	**111**	**0,98**	**188**	



H 24 LRC



ÖZELLİKLER / PROPERTIES

UYGULAMA ALANI / APPLICATIONS

Kule vinçleri, mobil vinçler, RT vinçler
Güverte yük vinci, yüksek overhead vinçler,
Konteynırlar için iskele vinci(1Sağ+1Sol)

Tower cranes, mobile cranes, RT cranes
Deck cargo crane, high overhead cranes
Pier crane for containers (1Right+1Left)

HALATA GENEL BAKIŞ /OVERVIEW

Swiwel ile kullanılabilir. (Minimum 2 salım)
H24 LRC Neden 18x07 Halattan daha iyidir? 12 Toronlu Warrington kapama özü sayesinde dönme direnci ve yorulma direnci 18x07'den çok daha yüksektir.

Can be used with Swivel. (Minimum 2 releases)
Why is H24 LRC better than 18x07 Rope? Rotation resistance thanks to Warrington sealing core with 12 Toron and the fatigue resistance is much higher than 18x07.

Konstrüksiyon | Construction	**Dönmeye Dirençli 24 Adet Kalibreli Toron**
Minimum Maksimum Çap | Min. Max. Diameter	**Ømin: 9mm Ø Max: 32mm**
Yön | Lay	**Düz Sarım (Sağ veya Sol)**
Toplam Tel sayısı | Total Number Of Wires	**176**
Taşıyışı Tel sayısı | Number Of Carrier Wires	**84**
Öz Tipleri | Condensed PP	**IWRC**
Dolgu Faktörü | Fill Factor	**0,678**
Kaplama | Covering	**Galvanizli veya Siyah Halat - Galvanized Or Black Rope**
Iskartaya Ayırma | To Scrap	**ISO 4309**

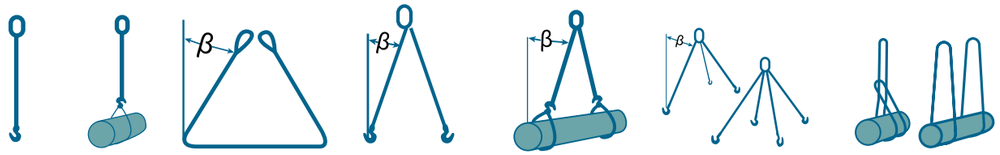
Diam mm	Diam Inch	Steel cross Section mm²	Mass kg/m	Class 1960 (2) MBL kN
8	5/16	30,8	0,26	52,1
9		38,5	0,33	65,1
9,5	3/8	42,6	0,37	72,0
10		49,5	0,43	83,7
11	7/16	59,1	0,51	99,9
12		70,7	0,61	119,5
12,7	1/2	79,3	0,69	134,0
13		83,8	0,73	141,6
14	9/16	95,6	0,84	161,6
15		110,8	0,96	187,3
16	5/8	124	1,09	209,6
18		159,6	1,38	269,7
19	3/4	176	1,53	297,4
20		198,2	1,72	335,0
22	7/8	237	2,06	400,5
24		283	2,45	478,3
25,4	1	319	2,75	539,1
26		335,2	2,92	566,5
28		382,4	3,36	646,3
30		443,2	3,84	749,0
31,8	1 1/4	489,8	4,31	827,8
32		496	4,36	838,2

EN 13414-1

ÇELİK ÖZLÜ ÇELİK BASKI SAPANLAR - IWRC WIRE PRESSED SLINGS

Çelik Özlü çelik halat baskı sapanlar için halat grupları: 6x19, 6x36, 8x36 **Sapan Standardı: DIN** 3088 FORM P, PK, EP

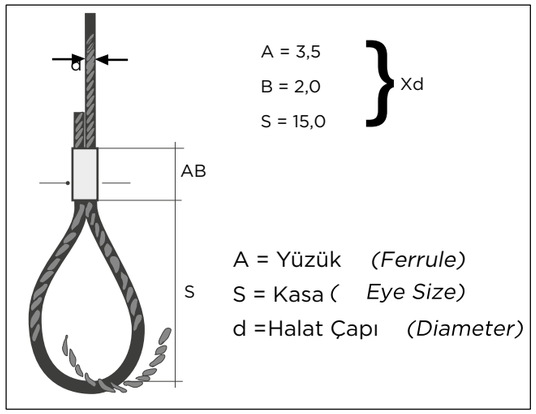
Working load limits for slings using "I.W.R.C' rope of classes: 6x19, 6x36, 8x36 Sling Standard: **DIN 3088** FORM P, PK, EP



Halat Çapı Wire Rope Diameter	Tek Bacak Slings with 1 Leg	Boğdurma Choker Hitch	Sepet Sapan Basket Sling		2 Bacaklı Slings with 2 Legs		Boğdurma 2 Bacaklı Choker Hitch with 2 legs		3 - 4 Bacaklı Slings with 3-4 Legs		Sonsuz Sapan Endless Sling	
Açı Angle			0° - 45° 45° - 60°		0° - 45° 45° - 60°		0° - 45° 45° - 60°		0° - 45° 45° - 60°			
Bacak Faktörü Leg Factor	1.0	0,8	1,4	1,0	1,4	1,0	1,2	0,8	2,1	1,5	2x2	1,6
mm	kg											
8	750	600	1050	750	1050	750	840	600	1550	1100	3000	1200
10	1150	920	1600	1150	1600	1150	1260	920	2400	1700	4600	1350
12	1700	1360	2300	1700	2300	1700	1860	1360	3550	2500	6800	2700
13	2000	1600	2800	2000	2800	2000	2160	1600	4150	3000	8000	3150
14	2250	1800	3150	2250	3150	2250	2550	1800	4800	3400	9000	3700
16	3000	2400	4200	3000	4200	3000	3240	2400	6300	4500	12000	4800
18	3700	2960	5200	3700	5200	3700	4100	2960	7800	5650	14800	6000
20	4600	3680	6500	4600	6500	4600	5200	3680	9800	6900	18400	7350
22	5650	4520	7800	5650	7800	5650	6240	4520	11800	8400	22600	9000
24	6700	5360	9400	6700	9400	6700	7560	5360	14000	10000	26800	10600
26	7800	6240	11000	7800	11000	7800	8640	6240	16400	11500	31200	12500
28	9000	7200	12600	9000	12600	9000	10080	7200	19000	13500	36000	14500
32	11800	9440	16500	11800	16500	11800	13200	9440	25000	17500	47200	19000
36	15000	12000	21000	15000	21000	15000	16800	12000	31500	22500	60000	23500
40	18500	14800	26000	18500	26000	18500	20400	14800	39000	28000	74000	30000
44	22500	18000	31500	22500	31500	22500	25200	18000	47000	33500	90000	36000
48	26000	20800	37000	26000	37000	26000	30000	20800	55000	40000	104000	42000
52	31500	25200	44000	31500	44000	31500	34800	25200	66000	47000	126000	50000
56	36000	28800	50000	36000	50000	36000	40200	28800	76000	54000	144000	58000
60	42000	33600	58000	42000	58000	42000	46800	33600	88000	63000	168000	67000

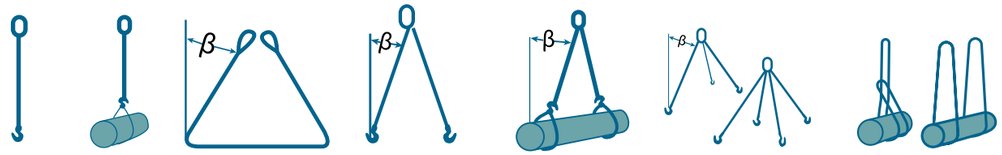
EN 13414-1

KENDİR ÖZLÜ ÇELİK BASKI SAPANLAR - FIBRE CORE WIRE PRESSED SLINGS



Lif Özlü çelik halat baskı sapanlar için halat grupları: 6x19, 6x36, 8x36 Sapan Standardı: DIN 3088 FORM P, PK, EP

Working load limits for slings using "Fibre Core" rope of classes: 6x19, 6x36, 8x36 Sling Standard: **DIN 3088** FORM P, PK, EP

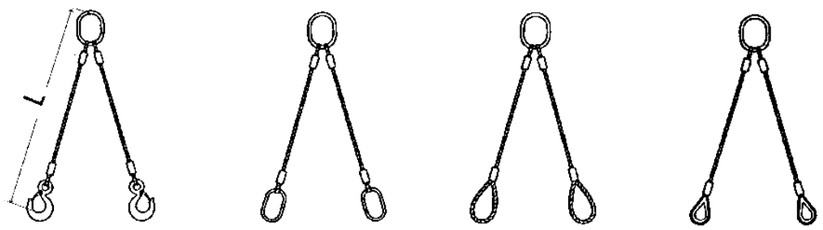


Halat Çapı Wire Rope Diameter	Tek Bacak Slings with 1 Leg	Boğdurma Choker Hitch	Sepet Sapan Basket Sling		2 Bacaklı Slings with 2 Legs		Boğdurma 2 Bacaklı Choker Hitch with 2 legs		3 - 4 Bacaklı Slings with 3-4 Legs		Sonsuz Sapan Endless Sling	
Açı Angle			0° - 45° 45° - 60°		0° - 45° 45° - 60°		0° - 45° 45° - 60°		0° - 45° 45° - 60°			
Bacak Faktörü Leg Factor	1.0	0,8	1,4	1,0	1,4	1,0	1,2	0,8	2,1	1,5	2x2	1,6
mm												
8	700	560	980	700	980	700	840	560	1500	1050	2800	1100
10	1050	840	1470	1050	1470	1050	1260	840	2250	1600	4200	1700
12	1550	1240	2170	1550	2170	1550	1860	1240	3300	2300	6200	2500
13	1800	1440	2520	1800	2520	1800	2160	1440	3850	2700	7200	2900
14	2120	1700	2970	2120	2970	2120	2550	1700	4350	3150	8480	3300
16	2700	2160	3780	2700	3780	2700	3240	2160	5650	4200	10800	4350
18	3400	2720	4760	3400	4760	3400	4100	2720	7200	5200	13600	5650
20	4350	3480	6100	4350	6100	4350	5200	3480	9000	6500	17400	6900
22	5200	4160	7280	5200	7280	5200	6240	4160	11000	7800	20800	8400
24	6300	5040	8820	6300	8820	6300	7560	5040	13500	9400	25200	10000
26	7200	5760	10080	7200	10080	7200	8640	5760	15000	11000	28800	11800
28	8400	6720	11760	8400	11760	8400	10080	6720	18000	12500	33600	13500
32	11000	8800	15400	11000	15400	11000	13200	8800	23500	16500	44000	18000
36	14000	11200	19600	14000	19600	14000	16800	11200	29000	21000	56000	22500
40	17000	13600	23800	17000	23800	17000	20400	13600	36000	26000	68000	28000
44	21000	16800	29400	21000	29400	21000	25200	16800	44000	31500	84000	33500
48	25000	20000	35000	25000	35000	25000	30000	20000	52000	37000	100000	40000
52	29000	23200	40600	29000	40600	29000	34800	23200	62000	44000	116000	47000
56	33500	26800	46900	33500	46900	33500	40200	26800	71000	50000	134000	54000
60	39000	31200	54600	39000	54600	39000	46800	31200	81000	58000	156000	63000

- **TEK KOLLU SAPANLAR** / ONE LEG SLINGS

Ç -1 Ç -2 Ç -3 Ç -4 Ç -5

- **ÇİFT KOLLU SAPANLAR** / TWO LEG SLINGS

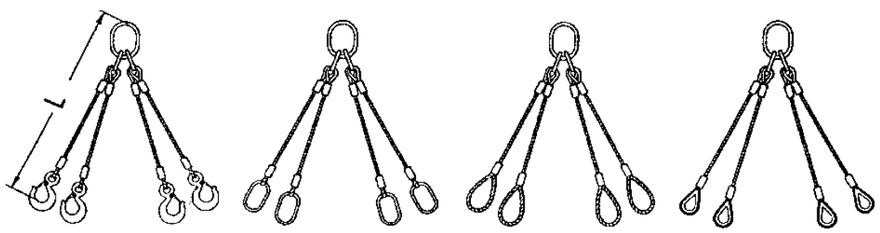


Ç -6 Ç -7 Ç -8 Ç -9

- **ÜÇLÜ KOLLU SAPANLAR** / THREE LEG SLINGS

Ç -10 Ç -11 Ç -12 Ç -13

- **DÖRT KOLLU SAPANLAR** / FOUR LEG SLINGS



Ç -14 Ç -15 Ç -16 Ç -17

EN 13414-3

Grommet

	Sonsuz Sapan	
Düşey ile açı	0°	0°
	Doğrudan	Doğma ilmekli
Sonsuz Sapan anma çapı		
mm	tt	t
24	**9,00**	**7,00**
27	**11,5**	**9,00**
30	**14,0**	**11,0**
33	**17,0**	**13,5**
36	**20,0**	**16,0**
39	**23,5**	**19,00**
42	**27,0**	**21,5**
48	**35,5**	**28,5**
54	**45,0**	**36,0**
60	**55,5**	**44,5**
Sınıflanma faktör	**1**	**0,8**

Şema 1 - Kalite sınıfı 6x19 ve 6x36 olan çelik özlü tel halatlardan yapılmış sonsuz sapanlar için çalışma yük sınırları.

Schema 1: Working load limits for grommet slings made by wire ropes 6x19 and 6x36 with steel core.

	Sonsuz Sapan	
Düşey ile açı	0°	0°
	Doğrudan	Doğma ilmekli
	Çalışma yükü sınırları (ÇYS)	
Sonsuz Sapan anma çapı		
mm	tt	t
66	**69,0**	**55,0**
72	**84,0**	**68,0**
78	**102**	**81,0**
84	**121**	**97,0**
90	**144**	**115**
96	**168**	**135**
102	**196**	**157**
108	**227**	**182**
114	**262**	**210**
120	**300**	**240**
126	**344**	**275**
132	**392**	**314**
144	**505**	**404**
Sınıflanma faktör	**1**	**0,8**

Şema 1 - Kalite sınıfı 6x36 olan çelik özlü tel halatlardan yapılmış sonsuz sapanlar için çalışma yük sınırları.

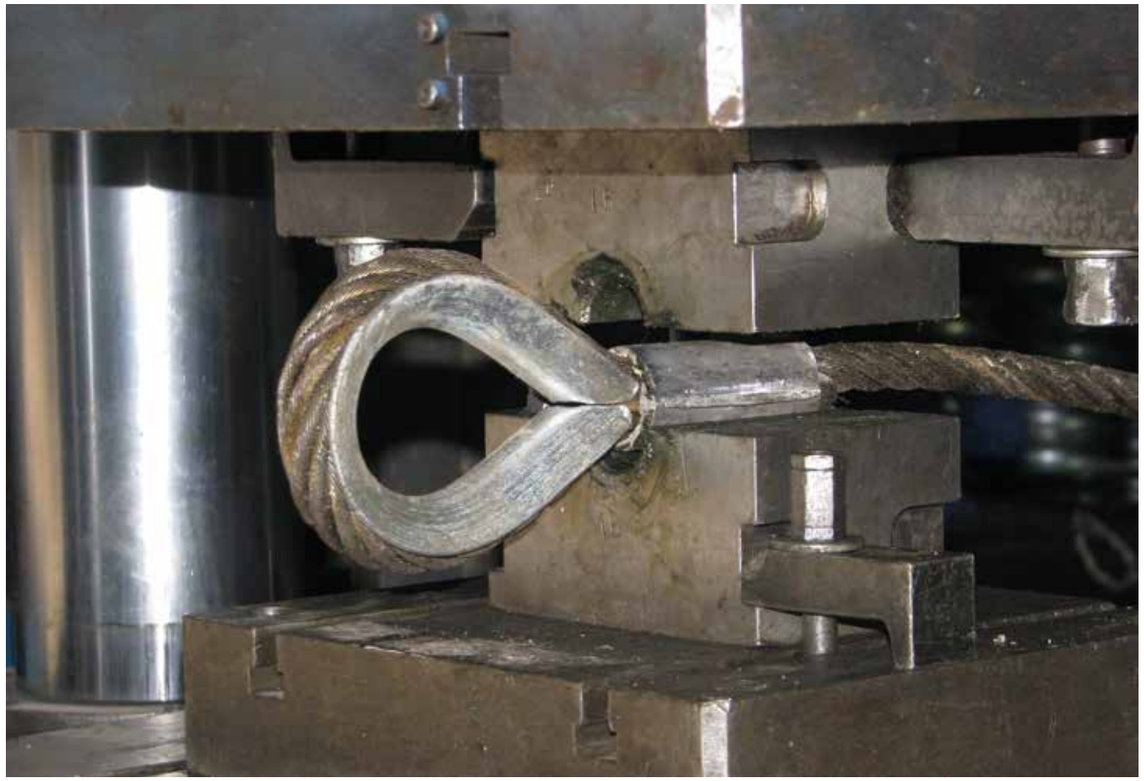
Schema 1: Working load limits for grommet slings made by wire rope 6x36 with steel core.

GÜVENİLİR BİR ÇELİK HALAT SAPAN İMALATI

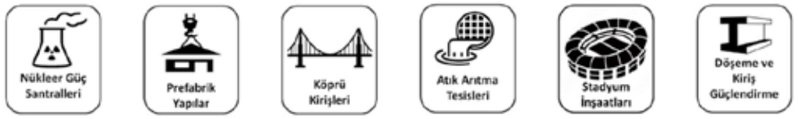
Şirketimiz bünyesinde bulunan bir adet **1000 tonluk**, bir adet **200 tonluk** hidrolik pres makinalarımız ve uzman kadromuz ile **2 mm'den 72 mm' e** kadar **EN 13414-1'e** uygun çelik halat sapan imal edilmektedir.

İmal ettiğimiz tüm çelik halat sapanlar izlenebilir özellikle olup, her biri kalite kontrolden geçerek seri numaralarına göre etiketlendirilip sertifikalandırılmaktadır.

Şirketimiz bünyesinde bulunan TSE Kalibrasyon sertifikalı yatay çekme test makinasında ayrıca yük ve kopma testi yapılarak TSE onaylı sapan test sertifikası verilmektedir.



UYGULAMA ALANI / APPLICATIONS



KALİTE / QUAILTY

EN10138-3 ASTM A416/A 416M, TS5680

BETON ÖNGERME DEMETİ

MEKANİK ÖZELLİKLER / MECHANICAL PROPERTIES

Mekanik Özellikleri												1000 Saat Sonunda Max. Gevşeme	
Mechanical Properties												Max. Relaxation	
Çap Noninal Diameter		Kopma Mukavemeti Breaking Strength		Kesit Alanı Steel Area Of Strand		Birim Ağırlık Weight Of Strand		Başlangıç Yükü Inital Load		%1'Lik Uzamadaki Minimum Yük Minimum Load At 1.0%Extension		70% of BL	80% of BL
in	mm	IBF	kN	in²	mm²	lb/1000ft	kg/1000m	ıbf	kN	ıbf	kN	%	%
Grader 250 (1725)													
0,250	6,35	9000	40	0,036	23	122	182	900	4	8100	36	2,5	3,5
0,313	7,95	14500	64,5	0,058	37	197	294	1450	6,5	13050	58,1	2,5	3,5
0,375	9,53	20000	89	0,08	52	272	405	2000	8,9	18000	80,1	2,5	3,5
0,438	11,13	27000	120	0,108	69,7	367	548	2700	12	24300	108,1	2,5	3,5
0,5	12,70	36000	160	0,144	92,9	490	730	3600	16	32400	144,1	2,5	3,5
0,6	15,24	54000	240	0,216	139	737	1090	5400	24	48600	216,2	2,5	3,5
Grade 270 (1860)													
0,375	9,53	23000	102	0,085	55	290	430	2300	10,2	20700	92,1	2,5	3,5
0,438	11,13	31000	138	0,115	74,2	390	580	3100	13,8	27900	124,1	2,5	3,5
0,5	12,7	41300	184	0,153	98,7	520	780	1430	18,4	37170	165,3	2,5	3,5
0,52	13,2	45000	200	0,167	108	570	840	4500	20	40500	180,1	2,5	3,5
0,563	14,3	51700	230	0,192	124	650	970	5170	23	46530	207	2,5	3,5
0,6	15,24	58600	261	0,217	140	740	1100	5860	26,1	52740	234,6	2,5	3,5
0,62	15,75	62800	279	0,231	150	780	1200	6280	27,9	56520	251,4	2,5	3,5
0,7	17,78	79400	353	0,294	190	1000	1500	7940	35,3	71500	318	2,5	3,5

PAKET ÖLÇÜLERİ / COIL SIZE

Ağırlık/ Weight
2500 - 4000 (kg)

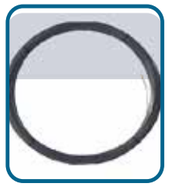
Endüstriyel Yaylı Teller | Industrial Spring Wires

UYGULAMA ALANI / APPLICATIONS

İnşaattan Otomotive, İç Giyimden Endüstriyel Sanayiye, Beyaz Eşyadan Mobilyaya Aklınıza Gelebilecek Her Sektörde Kullanım Alanları Mevcuttur. Çelik Teller Firmamızda, Bronz Kaplı, Bakır Kaplı, Galvaniz Kaplı ve Kaplamasız Olarak 0,25 mm'den 13,00 mm'ye Kadar Üretilebilmektedir. İstediğiniz Mukavemet Sınıfında Tercih Edeceğiniz Z2, Z3, Kangal veya Makaralı Ambalaj Şeklinde Kullanım Alanınıza Göre Tüm İhtiyaçlarınızı Karşılayabiliriz.

Everything you can think of, from construction to automotive, from underwear to industrial industry, from white goods to furniture. There are areas of use in the sector. Steel Wires In Our Company, Bronze Coated, Copper Coated, Galvanized and It can be produced uncoated from 0.25 mm to 13.00 mm. In the Strength Class You Want You Can Meet All Your Needs According to Your Area of Use in the Z2, Z3, Coil or Reel Packaging Form You Prefer We can afford it.

PAKETLEME EBATLARI / PACKAGING SIZE



	Bobin - Coil	**Kangal** - Ring	**Z2**	**Z3**	**Z5**
Yanak Çapı Inside Dimension **mm**	205	130mm Min. 350mm Max	350	550	550
Göbek Çapı Outer Dimension **mm**	259	370mm Min. 1200 Max	750	850	1250
İçten İçeUzunluk Inside Length **mm**	155		295	510	600
Kapasite Capacity Kg	25	40kg Min. 350Kg Max.	400	1000	2300

Endüstriyel Yaylı Teller | Industrial Spring Wires

TS-EN 10270-1

- Siyah Fosfatlı Teller | Black Phosphate Wires 0,30mm-13,00mm
- Galvanizli Teller | Galvanized Wires 0,30mm-4,00mm
- Bronz Bakır Kaplı Teller | Bronze Copper Coated Wires0,30mm-4,00mm

Tel Çapı mm	Mukavemet aralığı (Mpa)			Ambalaj*
	SL	SM	SH	
0,30		2370-2650	2660-2940	B
0,40		2270-2550	2560-2830	B
0,50		2200-2470	2480-2740	B
0,60		2140-2400	2410-2670	B
0,70		2090-2350	2360-2610	B
0,80		2050-2300	2310-2560	B
0,90		2010-2260	2270-2510	K-Z2
1,00	1720-1970	1980-2220	2230-2470	K-Z2
1,25	1660-1900	1910-2140	2150-2380	K-Z2
1,50	1600-1840	1850-2080	2090-2310	K-Z2
1,70	1570-1800	1810-2030	2040-2260	K-Z2
2,00	1520-1750	1760-1970	1980-2200	K-Z2
2,25	1490-1710	1720-1930	1940-2150	K-Z2
2,50	1460-1680	1690-1890	1900-2110	K-Z2-Z3
3,00	1410-1620	1630-1830	1840-2040	K-Z2-Z3
3,60	1350-1560	1570-1760	1770-1970	K-Z3
4,00	1320-1520	1530-1730	1740-1930	K-Z3
4,50	1290-1490	1500-1680	1690-1880	K-Z3
5,00	1260-1450	1460-1650	1660-1840	K-Z3
5,60	1230-1420	1430-1610	1620-1800	K-Z5
6,00	1210-1390	1400-1580	1590-1770	K-Z5
6,50	1180-1370	1380-1550	1560-1740	K-Z5
7,00	1160-1340	1350-1530	1540-1710	K-Z5
7,50	1140-1320	1330-1500	1510-1680	K-Z5
8,00	1110-1280	1290-1460	1470-1630	K-Z5
9,00	1090-1260	1270-1440	1450-1610	K-Z5
9,50	1070-1250	1260-1420	1430-1590	K-Z5
10,00	1060-1230	1240-1400	1410-1570	K-Z5
11,00	1040-1190	1210-1370		K-Z5
12,00	1030-1170	1180-1340		K
13,00	1010-1130			K
14,00	1000-1110			K

Galvaniz Miktarı	
Tel Çap Aralığı mm	g/m²
0,2<d≤0,25	20
0,25<d≤0,40	25
0,40<d≤0,50	30
0,50<d≤0,60	35
0,60<d≤0,70	40
0,70<d≤0,80	45
0,80<d≤0,90	50
0,90<d≤1,00	55
1,00<d≤1,20	60
1,20<d≤1,40	65
1,40<d≤1,65	70
1,65<d≤1,85	75
1,85<d≤2,15	80
2,15<d≤2,50	85
2,50<d≤2,80	95
2,80<d≤3,20	100
3,20<d≤3,80	105
3,80<d≤10,00	110

Telin Çap Aralığı (mm)	çap toleransı (mm)
0,28<d≤0,63	± 0,008
0,63<d≤0,75	±0,01
0,75<d≤1,00	±0,015
1,0<d≤1,70	±0,02
1,7,0<d≤2,60	±0,025
2,60<d≤4,00	±0,03
4,0<d≤5,30	±0,035
5,30<d≤7,00	±0,04
7,0<d≤9,00	±0,045
9,0<d≤10,00	±0,05
10,0<d≤11,00	±0,07
11,0<d≤13,00	±0,08

* **B** Bobin **K** Kangal **Z2** Z2 Kangal **Z3** Z3 Makara **Z5** Z5 Makara

MOORING ROPE
GEMİ BAĞLAMA HALATI

3 KOLLU HDPE / PP ROPE | 3 STRAND HDPE / PP ROPE

TEKNİK ÖZELLİKLER | TECHNICAL SPECIFICATIONS

Halat Ölçüsü Rope Size (mm)	**PE HALAT -** PE ROPE		**PP HALAT -** PP ROPE	
	Ağırlık - Weight	**Kopma Kuveti** Breaking Force	**Ağırlık -** Weight	**Kopma Kuveti** Breaking Force
	Kgs / 100 Mtr.	**Kgf.**	**Kgs/100mtr**	**Kgf.**
4	0.81	200	0.74	214
6	1.82	400	1.70	602
8	3.27	700	3.00	1060
10	4.90	1100	4.55	1560
12	7.20	1500	6.59	2210
14	9.50	2100	9.00	3050
16	12.80	2800	11.59	3770
18	16.10	3500	14.80	4810
20	20.00	4300	18.00	5800
22	24.30	5100	22.00	6960
24	29.50	6100	26.00	8130
26	34.25	7100	30.60	9400
28	39.30	8200	35.50	10700
30	45.65	9400	40.46	12220
32	52.50	10700	46.00	13500
36	66.00	13500	58.50	16930
40	78.50	16300	72.00	20510

Tolerans: >> 14 mm'ye kadar=+/-%8 >> 16 mm ve üstü = +/-%5

Tolarence: >> up to 14mm=+/-8% >> 16mm & above = +/-5%

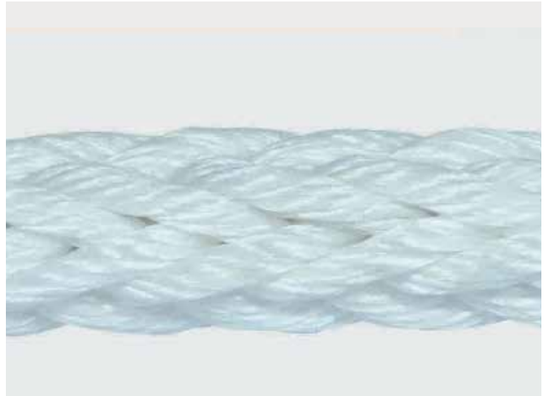
Bobin Uzunluğu: Bu halatlar minimum 100 metre ve 100 Yard uzunluğunda olup istek üzerine temin edilmektedir.

Coil Length: These ropes are minimum length of 100 meters and 100 Yards and are available on request.

Renk: Sarı, Mavi, Yeşil, Turuncu, Kırmızı, Beyaz ve diğer özel renkler.

Color: Yellow, Blue,Green,Orange,Red,White and other special colors.

12 KOLLU POLİPROPİLEN HALAT
12 STRAND POLYPROPYLENE ROPE



Dia. MM	Weight Kgs. / 220M	Minimum Breaking Load **KgF** (kilogram-force)
40	158.40	26300
44	193.70	31900
48	229.00	37500
52	270.70	45300
56	312.40	53100
60	359.70	60900
64	407.00	68700
72	514.80	86000
80	638.00	105800
88	772.00	124000
96	918.00	140000

12 KOLLU PP VE POLYESTER KARIŞIMLI HALAT
12 STRAND PP | POLYESTER MIXED ROPE

Dia. MM	Weight Kgs. / 220M	Minimum Breaking Load **KgF** (kilogram-force)
40	194.50	30000
44	238.05	38145
48	281.60	46290
52	330.00	55545
56	378.40	62800
60	436.70	72700
64	495.00	82600
72	627.00	102000
80	774.40	125500
88	858.20	144000
96	1045.10	168500

* TANKERLER İÇİN MIX ANTI KIVILCIM

12 KOLLU PP VE POLYESTER KARIŞIMLI HALAT
12 STRAND PP | POLYESTER MIXED ROPE

Dia. MM	Weight Kgs. / 220M	Minimum Breaking Load **KgF** (kilogram-force)
40	174.00	29100
44	213.00	36750
48	252.00	44400
52	297.50	51.800
56	343.00	59200
60	395.00	67550
64	448.00	75900
72	566.00	91600
80	701.00	116000
88	799.00	129600
96	995.00	154100

* TANKERLER İÇİN MIX ANTI KIVILCIM

3 KOLLU TIGER ROPE
3 STRAND TIGER ROPE

3 KOLLU SIZAL-JUT HALAT
3 STRAND SISAL ROPE

BAĞLAMA HALATI | MOORING TAIL

Bağlama halatlarında ilave esneklik gerektiğinde bağlama kuyruklarının kullanılmasını öneririz. Kuyruklar, amortisör görevi görerek daha fazla esneklik sağlayabilir ve geminin güçlü gelgitler veya şiddetli rüzgarlar gibi zorlu koşullara maruz kaldığında daha olumlu tepki vermesine olanak tanır.

We recommend the use of mooring tails when additional flexibility is required in the mooring ropes. Tails can provide greater flexibility by working as shock absorbers, allowing the ship to react more positively when exposed to harsh conditions such as strong tides or high winds.

Çap Diameter		Boyut Size	Kilo Weight		Kopma Yükü Breaking Load		
mm	inches	inches	Kg	Lbs	kgf	Lbf	kN
56	2-1/4	7	33	72	56.100	123.677	549.8
64	2-5/8	8	43	94	72.350	159.502	709.0
72	3	9	54	120	90.500	199.515	886.9
80	3-1/4	10	67	148	110.200	242.945	1080.0
88	3-5/8	11	81	179	132.650	292.438	1300.0
96	4	12	97	213	156.100	344.136	1529.8

standart uzunluk 11 m'dir (36 ft) ve her iki ucu da yumuşak gözlere sahiptir; Bir ucu 2 metre (6 ft) ve diğer ucu 1 metre (3 ft).

standart lenght is 11 m (36ft) with soft eyes both ends; 2 meters (6ft) one end and 1 meter (3ft) other end.

8 KOLLU POLİPROPİLEN HALAT
8 STRAND POLYPROPYLENE ROPE

Dia. MM	Cir. Inch	Weight Kgs. / 220M	Minimum Breaking Load **KgF** (kilogram-force)
40	5	158.00	26300
48	6	229.00	37500
56	7	312.00	53100
64	8	407.00	68700
72	9	515.00	86000
80	10	638.00	105800
96	12	917.00	150200
112	14	1254.00	203500
120	15	1430.00	232800
144	18	2068.00	324800

8 KOLLU PLUS POLİPROPİLEN HALAT
8 STRAND POLYPROPYLENE PLUS ROPE

Dia. MM	Cir. Inch	Weight Kgs. / 220M	Minimum Breaking Load **KgF** (kilogram-force)
40	5	158.00	32200
48	6	229.00	44200
56	7	312.00	60700
64	8	407.00	77800
72	9	515.00	98500
80	10	638.00	123600
96	12	917.00	171100
112	14	1254.00	234000
120	15	1430.00	265500
144	18	2068.00	373700

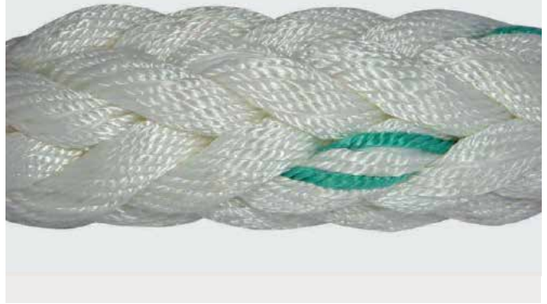
8 KOLLU NAYLON POLYAMID HALAT
8 STRAND NYLON MULTIFILAMENT ROPE

Dia. MM	Cir. Inch	Weight Kgs. / 220M	Minimum Breaking Load **KgF** (kilogram-force)
40	5	217.80	30700
48	6	312.40	42800
56	7	424.60	57100
64	8	554.40	73300
72	9	701.90	91500
80	10	866.80	111700
96	12	1249.60	156200
112	14	1698.40	212800
120	15	1951.40	243200
144	18	2816.00	347700

8 KOLLU PP / POLYESTER KARIŞIMLI TANKER HALATI
8 STRAND PP / POLYESTER MIXED ROPE

Dia. MM	Cir. Inch	Weight Kgs. / 220M	Minimum Breaking Load **KgF** (kilogram-force)
40	5	174.00	29100
48	6	252.00	44400
56	7	343.00	59200
64	8	448.00	75900
72	9	566.00	91600
80	10	701.00	116000
96	12	1007.00	165500
112	14	1189.00	192800
120	15	1584.00	255100
144	18	2280.00	364600

8 KOLLU PP / POLYESTER KARIŞIMLI TANKER HALATI
8 STRAND PP / POLYESTER MIXED ROPE



Dia. MM	Cir. Inch	Weight Kgs. / 220M	Minimum Breaking Load **KgF** (kilogram-force)
40	5	195.00	30700
48	6	282.00	47200
56	7	378.00	64100
64	8	495.00	84100
72	9	627.00	103800
80	10	775.00	127700
96	12	1315.00	187800
112	14	1540.00	219200
120	15	2050.00	289600
144	18	2959.00	409000

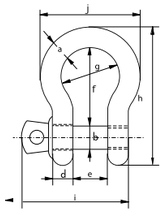
8 KOLLU PP / POLYESTER KARIŞIMLI TANKER HALATI PLUS
8 STRAND HIGH TENACITY PP / POLYESTER MIXED ROPE

Dia. MM	Cir. Inch	Weight Kgs. / 220M	Minimum Breaking Load **KgF** (kilogram-force)
40	5	216.00	42900
48	6	310.00	62000
56	7	422.00	84600
64	8	552.00	107800
72	9	700.00	137400
80	10	862.00	167400
88	11	1045.00	201500
96	12	1243.00	238000
104	13	1459.00	279100
120	15	1943.00	364500

STEEL ROPE ACCESSORIES

ÇELİK HALAT AKSESUARLARI

G- 209

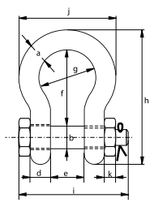


working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	mm
0.33	5	6	12	5	9.5	22	16	36	29.5	26	0.02
0.5	7	8	16.5	7	12	29	20	48.5	38	34	0.05
0.75	9	10	20	9	13.5	32	22	56	46.5	40	0.1
1	10	11	22.5	10	17	36.5	26	63.5	54	46	0.14
1.5	11	13	26.5	11	19	43	29	74	59.5	51	0.19
2	13.5	16	34	13	22	51	32	89	73	58	0.36
3.25	16	19	40	16	27	64	43	110	89	75	0.63
4.75	19	22	46	19	31	76	51	129	103	89	1.01
6.5	22	25	52	22	36	83	58	144	119	102	1.5
8.5	25	28	59	25	43	95	68	164	137	118	2.21
9.5	28	32	66	28	47	108	75	185	153	131	3.16
12	32	35	72	32	51	115	83	201	170	147	4.31
13.5	35	38	80	35	57	133	92	227	186	162	5.55
17	38	42	88	38	60	146	99	249	203	175	7.43
25	45	50	103	45	74	178	126	300	243	216	12.84
35	50	57	111	50	83	197	138	331	272	238	18.15
42.5	57	65	130	57	95	222	160	377	310	274	26.29
55	65	70	145	65	105	260	180	433	344	310	37.6

OMEGA KİLİTLER | OMEGA SHACKLES

- **MALZEME /** MATERIAL: Gözde ve pim yüksek mukavemetli kalite sınıfı 6 çelikten dövme. Bow and pin high tensile steel, grade 6, quenched and tempered.
- **EMNİYET FAKTÖRÜ /** SAFETY FACTOR: Emniyet katsayısı 6 x WLL. MBL equals 6 x WLL
- **KAPLAMA /** FINISH: Sıcak daldırma galvanizli. Hot dipped galvanized.

G- 2130

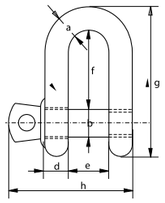


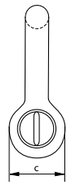
working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	thinckness nut	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	k mm	mm
0.5	7	8	16.5	7	12	29	20	48.5	42	34	4	0.06
0.75	9	10	20	9	13.5	32	22	56	50	40	5	0.11
1	10	11	22.5	10	17	36.5	26	63.5	60	46	8	0.16
1.5	11	13	26.5	11	19	43	29	74	67	51	11	0.22
2	13.5	16	34	13	22	51	32	89	82	58	13	0.42
3.25	16	19	40	16	27	64	43	110	98	75	17	0.74
4.75	19	22	46	19	31	76	51	129	114	89	19	1.18
6.5	22	25	52	22	36	83	58	144	130	102	22	1.77
8.5	25	28	59	25	43	95	68	164	150	118	25	2.58
9.5	28	32	66	28	47	108	75	185	166	131	27	3.66
12	32	35	72	32	51	115	83	201	178	147	30	4.91
13.5	35	38	80	35	57	133	92	227	197	162	33	6.54
17	38	42	88	38	60	146	99	249	202	175	19	8.19
25	45	50	103	45	74	178	126	300	249	216	23	14.22
35	50	57	111	50	83	197	138	331	269	238	26	19.53
42.5	57	65	130	57	95	222	160	377	301	274	29	28.33
55	65	70	145	65	105	260	180	433	330	310	32	39.59
85	75	83	162	73	127	329	190	527	380	340	39	62

OMEGA SOMONLU KİLİTLER | OMEGA BOLT SHACKLES

- **MALZEME /** MATERIAL: Gözde ve pim yüksek mukavemetli kalite sınıfı 6 çelikten dövme. bow and pin high tensile steel, grade 6, quenched and tempered.
- **EMNİYET FAKTÖRÜ /** SAFETY FACTOR: Emniyet katsayısı 6 x WLL. MBL equals 6 x WLL
- **KAPLAMA /** FINISH: Sıcak daldırma galvanizli. Hot dipped galvanized.

G- 210

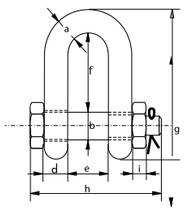




working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	length	length bolt	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	kg
0.33	5	6	12	5	9.5	19	33	29.5	0.02
0.5	7	8	16.5	7	12	22	41.5	38	0.05
0.75	9	10	20	9	13.5	26	50	46.5	0.09
1	10	11	22.5	10	17	32	59	54	0.14
1.5	11	13	26.5	11	19	37	68	59.5	0.19
2	13.5	16	34	13	22	43	81	73	0.32
3.25	16	19	40	16	27	51	97	89	0.54
4.75	19	22	46	19	31	59	112	103	0.87
6.5	22	25	52	22	36	73	134	119	1.34
8.5	25	28	59	25	43	85	154	137	2.08
9.5	28	32	66	28	47	90	167	153	2.77
12	32	35	72	32	51	94	180	170	3.72
13.5	35	38	80	35	57	115	209	186	5.14
17	38	42	88	38	60	127	230	203	6.85
25	45	50	103	45	74	149	271	243	11.45
35	50	57	111	50	83	171	305	272	16.86
42.5	57	65	130	57	95	190	345	310	24.61
55	65	70	145	65	105	203	376	344	32.65

DÜZ TONAJLI KİLİTLER | G210 SHACKLE

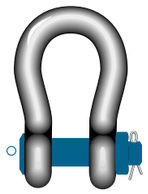
- **MALZEME /** MATERIAL: Gözde ve pim yüksek mukavemetli kalite sınıfı 6 çelikten dövme. Bow and pin high tensile steel, grade 6, quenched and tempered.
- **EMNİYET FAKTÖRÜ /** SAFETY FACTOR: Emniyet katsayısı 6 x WLL. MBL equals 6 x WLL
- **KAPLAMA /** FINISH: Sıcak daldırma galvanizli. Hot dipped galvanized.

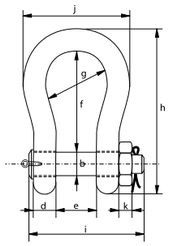


working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	length	length bolt	thinckness nut	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	kg
2	13.5	16	34	13	22	43	81	82	13	0.39
3.25	16	19	40	16	27	51	97	98	17	0.67
4.75	19	22	46	19	31	59	112	114	19	1.08
6.5	22	25	52	22	36	73	134	130	22	1.66
8.5	25	28	59	25	43	85	154	150	25	2.46
9.5	28	32	66	28	47	90	167	166	27	3.4
12	32	35	72	32	51	94	180	178	30	4.51
13.5	35	38	80	35	57	115	209	197	33	6.1
17	38	42	88	38	60	127	230	202	19	7.63
25	45	50	103	45	74	149	271	249	23	12.88
35	50	57	111	50	83	171	305	269	26	17.35
42.5	57	65	130	57	95	190	345	301	29	25.94
55	65	70	145	65	105	203	376	330	32	35.33
85	75	83	162	73	127	229	427	380	39	52.97

DÜZ TONAJLI KİLİTLER | G2150 SHACKLE

- **MALZEME /** MATERIAL: Gözde ve pim yüksek mukavemetli kalite sınıfı 6 çelikten dövme. Bow and pin high tensile steel, grade 6, quenched and tempered.
- **EMNİYET FAKTÖRÜ /** SAFETY FACTOR: Emniyet katsayısı 6 x WLL. MBL equals 6 x WLL
- **KAPLAMA /** FINISH: Sıcak daldırma galvanizli. Hot dipped galvanized.





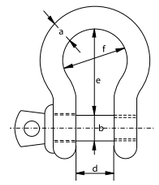
working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	thinckness nut	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	k mm	kg
120	95	95	208	95	147	400	238	647	453	428	50	110
150	105	108	238	105	169	410	275	688	496	485	50	160
200	120	130	279	120	179	513	290	838	564	530	70	235
250	130	140	299	130	205	554	305	904	614	565	70	295
300	140	150	325	140	205	618	305	996	644	585	80	368
400	170	175	376	164	231	668	325	1114	690	665	70	560
500	180	185	398	164	256	718	350	1190	720	710	70	685
600	200	205	444	189	282	718	375	1243	810	775	70	880
700	210	215	454	204	308	718	400	1263	870	820	70	980
800	210	220	464	204	308	718	400	1270	870	820	70	1100
900	220	230	485	215	328	718	420	1296	920	860	70	1280
1000	240	240	515	215	349	718	420	1336	940	900	70	1460
1250	260	270	585	230	369	768	450	1456	1025	970	70	1990
1500	280	290	625	230	369	818	450	1556	1025	1010	70	2400

AĞIR TİP RONAJLI KİLİTLER | HEAVY TYPE OMEGA SHACKLE

- **MALZEME /** MATERIAL: Gözde ve pim yüksek mukavemetli kalite sınıfı 6 çelikten dövme. Bow and pin high tensile steel, grade 6, quenched and tempered.
- **EMNİYET FAKTÖRÜ /** SAFETY FACTOR: Emniyet katsayısı 6 x WLL. MBL equals 6 x WLL
- **KAPLAMA /** FINISH: Sıcak daldırma galvanizli. Hot dipped galvanized.

working load limit	diameter bow	diameter pin	diameter eye	width eye	width inside	length inside	width bow	length	length bolt	width	thinckness nut	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	k mm	kg
120	3 3/4	3 3/4	8 3/16	3 3/4	5 25/32	15 3/4	9 3/8	25 15/32	17 27/32	16 27/32	1 31/32	243
150	4 1/8	4 1/4	9 3/8	4 1/8	6 21/32	16 5/32	10 13/16	27 3/32	19 17/32	19 3/32	1 31/32	353
200	4 23/32	5 1/8	10 31/32	4 23/32	7 1/16	20 3/16	11 13/32	33	22 3/16	20 7/8	2 3/4	518
250	5 1/8	5 1/8	11 25/32	5 1/8	8 1/16	21 13/16	12	35 19/32	24 5/32	22 1/4	2 3/4	650
300	5 1/2	5 29/32	12 25/32	5 1/2	8 1/16	24 11/32	12	39 7/32	25 11/32	23 1/32	3 5/32	811
400	6 11/16	6 7/8	14 13/16	6 15/32	9 3/32	26 5/16	12 25/32	43 27/32	27 5/32	26 3/16	2 3/4	1235
500	7 3/32	7 9/32	15 21/32	6 15/32	10 3/32	28 9/32	13 25/32	46 27/32	28 11/32	27 15/16	2 3/4	1510
600	7 7/8	8 1/16	17 15/32	7 7/16	11 3/32	28 9/32	14 3/4	48 15/16	31 17/8	30 1/2	2 3/4	1940
700	8 9/32	8 15/32	17 7/8	8 1/32	12 1/8	28 9/32	15 3/4	49 23/32	34 1/4	32 9/32	2 3/4	2161
800	8 9/32	8 21/32	18 9/32	8 1/32	12 1/8	28 9/32	15 3/4	50	34 1/4	32 9/32	2 3/4	2425
900	8 21/32	9 1/16	19 3/32	8 15/32	12 29/32	28 9/32	16 17/32	51 1/32	36 7/32	33 27/32	2 3/4	2822
1000	9 7/16	9 7/16	20 9/32	8 15/32	13 3/4	28 9/32	16 17/32	52 19/32	37	35 7/16	2 3/4	3219
1250	10 1/4	10 5/8	23 1/32	9 1/16	14 17/32	31 1/4	17 23/32	57 5/16	40 11/32	38 3/16	2 3/4	4387
1500	11 1/32	11 13/32	24 19/32	9 1/16	14 17/32	32 7/32	17 23/32	61 1/4	40 11/32	39 3/4	2 3/4	5291

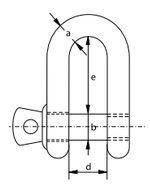
- **FOR SHACKLES ≥ WLL 150 T**



diameter bow	diameter pin	diameter eye	width inside	length inside	width bow	weight per 100 pcs
a mm	b mm	c mm	d mm	e mm	f mm	kg
5	5	10	10	20	15	1.4
6	6	12	12	24	18	2.4
8	8	16	16	32	24	5.4
10	10	20	20	40	30	10.6
11	11	22	22	44	33	16.4
12	12	24	24	48	36	19.4
14	14	28	28	56	42	44
16	16	32	32	64	48	44.2
19	19	38	38	76	57	82.8
22	22	44	44	88	66	116
25	25	50	50	100	75	168
28	28	56	56	112	84	232
32	32	64	64	128	96	382
38	38	76	76	152	114	623

OMEGA KİLİTLER | OMEGA SHACKLES

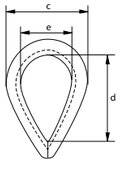
- **MALZEME /** MATERIAL: Sert çelik. mild steel, untreated, grade 3
- **KAPLAMA /** FINISH: Elektro galvaniz. Electro-galvanized

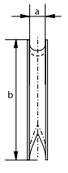


diameter bow	diameter pin	diameter eye	width inside	length inside	weight per 100 pcs
a mm	b mm	c mm	d mm	e mm	kg
5	5	10	10	20	1.4
6	6	12	12	24	2.2
8	8	16	16	32	5.2
10	10	20	20	40	11.8
11	11	22	22	44	14
12	12	24	24	48	20.5
14	14	28	28	56	29.4
16	16	32	32	64	42.6
19	19	38	38	76	72.6
22	22	44	44	88	108
25	25	50	50	100	185
28	28	56	56	112	226
32	32	64	64	128	358
38	38	76	76	152	602

DÜZ KİLİTLER | DEE SHACKLES

- **MALZEME /** MATERIAL: Sert çelik. mild steel, untreated, grade 3
- **KAPLAMA /** FINISH: Elektro galvaniz. Electro-galvanized

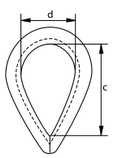


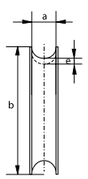


diameter rope	width groove	length	width	length inside	width inside	weight per 100 pcs
mm	a mm	b mm	c mm	d mm	e mm	kg
3	3	24	18	15	10	0.4
4	4	25	19	16	11	0.5
5	5	31	22	22	16	0.8
6	6	37	29	26	19	1.4
8	8	51	38	34	24	2.8
9	9	57	42	38	29	3
10	10	64	44	42	32	4.8
11	11	70	51	48	35	7.5
12	12	76	57	51	38	8
14	14	82	60	57	40	10
16	16	89	64	60	42	15
18	18	102	69	67	45	22
20	20	115	79	76	51	25
22	22	127	89	83	54	32
24	24	140	102	88	64	46
26	26	152	105	102	68	66
28	28	165	115	110	73	77
30	30	178	121	115	79	80
32	32	203	133	140	93	130

RADANSA | THIMBLE

- **MALZEME /** MATERIAL: Sert çelik. Mild steel
- **KAPLAMA /** FINISH: Elektro galvaniz. Electro-galvanized

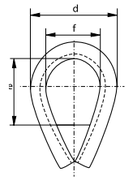


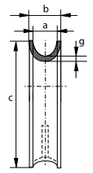


diameter rope	width groove	length	width	length inside	width inside	weight per 100 pcs
mm	a mm	b mm	c mm	d mm	e mm	kg
8	9	51	37	23	4	6
10	11	64	53	31	4	7
12	13	76	60	36	5	14
14	15	89	68	46	6	22
16	17	102	79	51	6	24
18	19	114	90	55	8	43
20	21	127	98	62	9	65
22	23	140	112	67	10	93
24	25	152	119	72	10	102
28	29	178	135	82	10.5	135
32	33	203	163	102	10.5	162
36	37	229	185	117	12	363
40	42	254	205	122	12	376
44	46	280	220	133	15	608
50	52	305	221	143	20	960
56	58	356	252	163	20	1400
64	67	407	286	185	20	1700

AĞIR TİP RADANSA | HEAVY DUTY THIMBLE

- **MALZEME /** MATERIAL: Sert çelik. Mild steel
- **KAPLAMA /** FINISH: Elektro galvaniz. Electro-galvanized

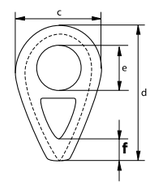


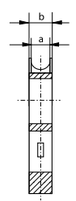


width groove	width overall	length	width	length inside	width inside	thinckness nut	weight per 100 pcs
a mm	b mm	c mm	d mm	e mm	f mm	g mm	kg
35	55	220	150	100	80	10	3.2
40	65	245	160	120	90	12	5.1
50	80	290	200	125	110	16	9.2
62	100	360	250	160	140	20	17.4
72	115	390	265	175	160	20	19.4
85	125	470	300	245	190	20	29
100	150	540	370	290	200	25	39
115	165	570	380	300	210	25	52

TAKVİYELİ RADANSA | REINFORCED THIMBLE

- **MALZEME /** MATERIAL: Sert çelik. Mild steel
- **KAPLAMA /** FINISH: Ağır tip galvaniz. Hot dipped galvanized.

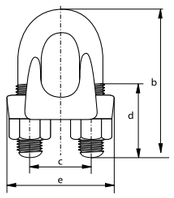


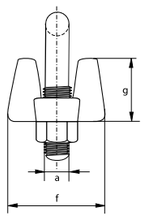


diameter rope	width groove	width overall	width	length	diameter	length	weight per 100 pcs
mm	a mm	b mm	c mm	d mm	e mm	f mm	kg
8	9	15	40	66	14	-	18
10	11	17.5	50	82	18	-	32
12	13	20	60	98	21	-	52
14	16	23.5	70	114	25	-	80
16	18	26	80	130	28	16	90
18	20	28.5	90	145	31	18	121
20	22	31	100	161	35	20	161
22	24	33.5	110	177	38	22	211
24	26	36	120	193	41	24	271
26	29	39.5	130	209	44	26	355
28	31	42	140	224	47	28	420
32	35	47	160	256	53	32	630
36	40	53	180	288	59	36	884
40	44	58	200	320	65	40	1100
44	48	63	220	352	70	44	1500
48	53	69	240	384	76	48	2000
52	57	74	260	416	81	52	2500
56	62	80	280	448	86	56	3200
64	70	90	320	512	95	64	4600
72	79	101	360	576	140	72	6600

DOLU RADANSA | SOLID THIMBLE

- **MALZEME /** MATERIAL: Sert çelik. cast mild steel, (GTW 40)
- **KAPLAMA /** FINISH: Kaplamasız. Self coloured



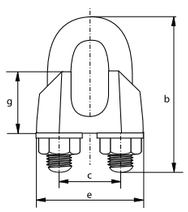


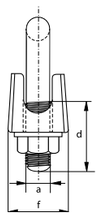
diameter wire rope	diameter	length bow	width inside	length thread	length base	thickness base	height base	weight per 100 pcs
mm	a mm	b mm	c mm	d mm	e mm	f mm	g mm	kg
3 - 4	5	24	12	11	24	21	10	2
5	6	31	15	13	29	24	13	4
6 - 7	8	34	19	13	37	30	18	8
8	10	45	22	19	43	33	19	14
9 - 10	11	49	26	19	49	42	25	19
11	12	60	30	25	58	46	26	31
12 - 13	13	61	30	25	58	48	31	34
14 - 15	14	72	33	32	63	52	31	36
16	14	74	33	32	64	54	36	45
18 - 20	16	86	38	37	72	57	38	68
22	19	98	45	41	80	62	40	108
24 - 26	19	108	48	46	88	67	47	113
28 - 30	19	117	51	51	91	73	48	140
32 - 34	22	130	59	54	105	79	56	207
36	22	140	60	59	108	79	58	234
38 - 40	22	147	66	60	112	85	64	266
41 - 42	25	161	70	67	121	92	67	329
44 - 46	29	174	78	70	134	97	76	441
48 - 52	32	195	86	78	150	113	85	603
56 - 58	32	213	98	81	162	116	100	707
62 - 65	32	227	105	87	168	119	113	806
68 - 72	32	243	112	91	174	127	124	1000
75 - 78	38	271	121	98	194	135	136	1440

ÇELİK HALAT KLEMENSİ | WIRE ROPE CLIPS

- **MALZEME /** MATERIAL: Yüksek mukavemetli çelik . Drop forged high tensile steel.
- **KAPLAMA /** FINISH: Ağır tip galvaniz. Hot dipped galvanized.

DIM - 741

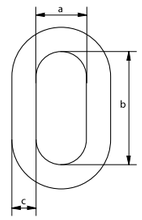


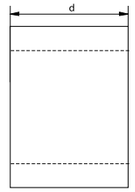


diameter wire rope	diameter	length bow	width inside	length thread	length base	thickness base	height base	weight per 100 pcs
mm	a mm	b mm	c mm	d mm	e mm	f mm	g mm	kg
3	4	20	9	12	21	10	10	1.4
5	5	24	11	13	23	11	10	1.5
6	5	28	13	15	26	12	11	1.6
8	6	34	16	19	30	14	15	4.1
10	8	42	19	22	34	18	17	6
11	8	44	20	22	36	19	18	7
13	10	55	24	30	42	23	21	11.8
14	10	57	25	30	44	23	22	12.4
16	12	63	29	33	50	26	26	21
19	12	75	32	38	54	29	30	23.6
22	14	85	37	44	61	33	34	23.8
26	14	95	41	45	65	35	37	41
30	16	110	48	50	74	37	43	62
34	16	120	52	55	80	42	50	75
40	16	140	58	60	88	45	55	104
45	18	163	65	75	97	49	60	134
50	20	170	72	77	106	51	65	175

ÇELİK HALAT KLEMENSİ | WIRE ROPE CLIPS

- **MALZEME /** MATERIAL: Döküm U-bolt-sert çelik. bridge: casted U- bolt: mild steel.
- **KAPLAMA /** FINISH: Elektro galvaniz. Electro-galvanized.

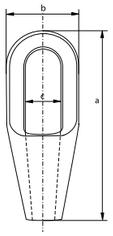


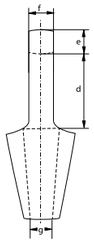


size	diameter	width	thickness	length	weight per 1000 pcs
	a mm	b mm	c mm	d mm	kg
1	1.2	2.4	0.65	5	0.1
1.5	1.7	3.4	0.75	6	0.21
2	2.2	4.4	0.85	7	0.24
2.5	2.7	5.4	1.05	9	0.5
3	3.3	6.6	1.25	11	0.84
3.5	3.8	7.6	1.5	13	1.32
4	4.4	8.8	1.7	14	2
4.5	4.9	9.8	1.9	16	2.61
5	5.5	11.0	2.1	18	5
6	6.6	13.2	2.5	21	5
6.5	7.2	14.4	2.7	23	7.55
7	7.8	15.6	2.9	25	9.53
8	8.8	17.6	3.3	28	15
9	9.9	19.8	3.7	32	19.8
10	10.9	21.8	4.1	35	25
11	12.1	24.2	4.5	39	35.8
12	13.2	26.4	4.9	42	45.8
13	14.2	28.4	5.4	46	59.7
14	15.3	30.6	5.8	49	73.5
16	17.5	35.0	6.7	56	111
18	19.6	39.2	7.6	63	159
20	21.7	43.4	8.4	70	220
22	24.3	48.6	9.2	77	280
24	26.4	52.8	10.0	84	376
26	28.5	57.0	10.9	91	481
28	31.0	62.0	11.7	98	603
30	33.1	66.2	12.5	105	735
32	35.2	70.4	13.4	112	897
34	37.8	75.6	14.2	119	1080
36	39.8	79.6	15.0	126	1275
38	41.9	83.8	15.8	133	1490
40	44.0	88.0	16.6	140	1734
42	46.2	92.4	17.5	147	1940
44	48.4	96.8	18.3	154	2314
46	50.6	101.2	19.2	161	2557
48	52.8	105.6	20.0	168	3010
50	55.0	110.0	20.8	175	3400
52	57.2	114.4	21.6	182	3813
54	59.4	118.8	22.5	189	4120
56	61.6	123.2	23.3	196	4772
58	63.8	127.6	24.2	203	5200
60	66.0	132.0	25.0	210	5880

ALÜMİNYUM YÜZÜK | ALUMINIUM FERRULE

- **MALZEME /** MATERIAL: Alüminyum, aluminium
- **KAPLAMA /** FINISH: Çelik halat. Self coloured.

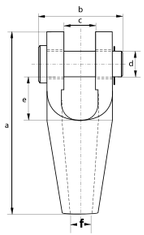


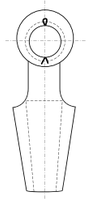


number	minimum breaking load	diameter wire rope	length	width	width inside bow	length inside bow	thickness bow	thickness bow	opening	weight each
	t	mm	a mm	b mm	c mm	d mm	e mm	f mm	g mm	kg
296	8	6 - 7	101	37	22	40	11	13	9	0.3
297	12	8 - 10	119	43	25	48	14	17.5	12	0.5
298	20	11 - 13	140	52	30	58	18	23.5	15	0.75
299	25	14 - 16	162	68	37	66	21	26	17.5	1.5
200	40	18 - 19	194	76	42	78	27	32	21.5	2.4
201	55	20 - 22	224	92	47	90	33	38	24	3.6
204	75	23 - 26	253	104	57	103	36	44	28	5.8
207	90	27 - 30	282	114	63	116	39	51	32	7
212	125	31 - 36	312	127	70	130	43	57	38	10.5
215	150	37 - 39	358	136	79	155	51	63	41	13
217	170	40 - 42	390	146	83	171	54	70	44	17
219	225	43 - 48	443	171	93	198	55	76	51	26
222	280	49 - 54	502	193	100	224	62	82	57	37.5
224	360	55 - 60	548	216	112	247	73	92	63	50
226	425	61 - 68	597	241	140	270	79	102	73	65
227	460	69 - 75	644	273	159	286	79	124	79	94
228	560	76 - 80	686	292	171	298	83	133	86	115
229	625	81 - 86	743	311	184	311	102	146	92	145
230	720	87 - 93	788	330	197	330	102	159	99	168
231	875	94 - 102	845	362	216	356	108	178	108	210
233	1200	108 - 115	1000	405	235	425	125	190	125	330
240	1300	120 - 130	1150	450	260	525	125	200	143	500

KAPALI TİP SOKET | CLOSED SPELTER SOCKET

- **MALZEME /** MATERIAL: Yüksek mukavemetli çelik . Drop forged high tensile steel.
- **KAPLAMA /** FINISH: Ağır tip galvaniz. Hot dipped galvanized.

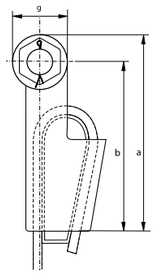


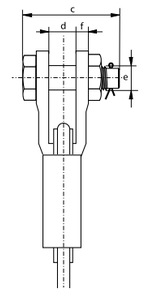


number	minimum breaking load	diameter wire rope	length	width	width inside	diameter pin	length inside	opening	weight each
	t	mm	a mm	b mm	c mm	d mm	e mm	f mm	kg
196	8	6 - 7	109	51	19	16	33	9	0.4
197	12	8 - 10	124	62	21	21	34	12	0.7
198	20	11 - 13	143	66	26	25	37	15	1
199	25	14 - 16	172	82	33	30	49	18	1.8
100	40	18 - 19	205	95	38	35	58	21	3
104	55	20 - 22	235	110	44	41	68	24	4.6
108	75	23 - 26	275	130	51	51	75	28	8
111	90	27 - 30	306	144	57	57	85	32	11
115	125	31 - 36	338	155	63	64	95	38	16
118	150	37 - 39	394	178	76	70	127	41	22
120	170	40 - 42	418	187	76	76	127	44	27
125	225	43 - 48	468	213	89	89	134	51	41
128	280	49 - 54	552	240	101	95	181	57	64
130	360	55 - 60	598	270	113	108	196	63	88
132	425	61 - 68	654	303	127	121	213	73	125
135	460	69 - 75	696	349	133	127	216	79	155
138	560	76 - 80	737	371	146	133	220	86	187
140	625	81 - 86	788	391	159	140	228	92	230
142	720	87 - 93	852	411	171	152	242	99	265
144	875	94 - 102	914	447	191	178	254	108	400
146	1200	108 - 115	1160	489	206	193	369	125	660

AÇIK TİP SOKET | OPEN TYPE SPELTER SOCKET

- **MALZEME /** MATERIAL: Yüksek mukavemetli çelik . Drop forged high tensile steel.
- **KAPLAMA /** FINISH: Ağır tip galvaniz. Hot dipped galvanized.

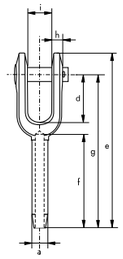


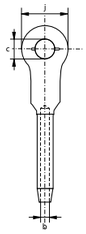


number	minimum breaking load	diameter wire rope	length	length to center pin	width	width inside	diameter pin	thickness side plates	diameter eye	weight each
	t	mm	a mm	b mm	c mm	d mm	e mm	f mm	g mm	kg
0.25	8	7 - 8	128	110	69	18	16	9	36	0.8
0.5	12	9 - 10	165	142	83	20.5	20	11	46	1.5
1	20	11 - 13	175	146	101	25	25	12	57	2.4
2	25	14 - 16	211	176	124	31	30	15	70	4.8
3	40	18 - 19	252	212	138	38	35	16	80	8.3
4	55	20 - 22	288	240	148	44	41	19	95	11
5	75	24 - 26	329	274	176	51	50	22	110	17.9
6	90	27 - 29	375	310	193	57	57	25	130	21
7	110	30 - 32	423	350	210	63	63	28	146	33
8	125	34 - 36	474	400	216	69	65	28	148	42
9	150	37 - 39	527	450	230	76	70	30	153	52
10	170	40 - 42	580	500	244	76	77	33	160	73

AÇIK TİP KAMALI SOKET | OPEN TYPE WEDGE SOCKET

- **MALZEME /** MATERIAL: Yüksek gerilimli çelik. High tensile steel
- **KAPLAMA /** FINISH: Sıcak daldırma galvanizli. Hot dipped galvanized.

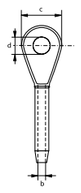


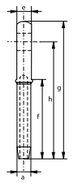


diameter rope	diameter before swage	diameter after swage		diameter inside	diameter pin	length	length	length	length	thickness	width inside	width eye	weight each
		min	max										
t	a mm	a mm	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	kg
6	13	10.9	11.7	7	17	38	121	54	102	8	17	35	0.25
8	20	17.2	18.0	9	21	44	159	81	135	10	21	41	0.57
10	20	17.2	18.0	10	21	44	159	81	135	10	21	41	0.56
11	25	22.0	23.1	12	25	51	198	108	169	13	25	51	1.11
13	25	22.0	23.1	14	25	51	198	108	169	13	25	51	1.08
14	32	28.3	29.5	15	30	57	243	135	206	16	32	63	2.11
16	32	28.3	29.5	17	30	57	243	135	206	16	32	63	2.06
19	39	34.7	36.1	20	35	70	297	162	254	19	38	76	3.68
22	43	37.8	39.4	24	41	83	346	189	295	23	44	86	5.38
25	50	44.2	45.7	27	51	95	397	216	340	26	51	102	5.45
28	57	50.5	52.1	30	57	108	444	243	381	30	57	114	12
32	64	56.9	58.4	34	64	121	494	270	419	30	63	127	16.2
35	71	63.2	65.0	37	64	133	540	297	460	33	63	133	20.5
38	78	69.6	71.4	40	70	146	591	324	502	37	76	146	29.5
44	86	75.9	77.7	47	89	171	689	378	584	43	89	178	42.2
51	100	88.6	90.4	54	95	203	798	432	679	46	102	203	65.8
57	113	100.3	102.1	60	108	171	835	486	705	65	114	222	93.4
63	125	110.5	112.3	67	108	171	879	498	749	65	114	222	103
76	151	133.1	134.9	80	133	219	1045	603	905	76	146	241	181

AÇIK TİP PRESLİ SOKET | OPEN TYPE SWAGE SOCKET

- **MALZEME /** MATERIAL: Sıcak dövme çelik C-1035 . Drop forged steel C-1035.
- **KAPLAMA /** FINISH: Kendinden renkli. Self coloured

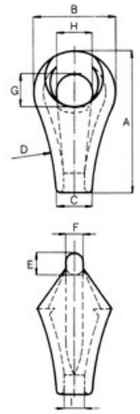




diameter rope	diameter before swage	diameter after swage		diameter inside	diameter	diameter eye	thickness	length	length	length	weight each
mm	a mm	a mm	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	kg
6	13	10.9	11.7	7	37	19	13	54	111	89	0.15
8	20	17.2	18.0	9	43	22	17	81	140	114	0.35
10	20	17.2	18.0	10	43	22	17	81	140	114	0.33
11	25	22.0	23.1	12	51	27	22	108	176	146	0.66
13	25	22.0	23.1	14	51	27	22	108	176	146	0.62
14	32	28.3	29.5	15	63	32	29	135	222	184	1.35
16	32	28.3	29.5	17	63	32	29	135	222	184	1.31
19	39	34.7	36.1	20	76	37	33	162	264	219	2.3
22	43	37.8	39.4	24	89	43	38	189	308	257	3.40
25	50	44.2	45.7	27	102	52	44	216	349	292	4.97
28	57	50.5	52.1	30	114	59	51	243	387	324	7.17
32	64	56.9	58.4	34	127	65	57	270	438	365	10.4
35	71	63.2	65.0	37	133	65	57	297	479	400	13.3
38	78	69.6	71.4	40	140	71	63	324	518	432	17.7
44	86	75.9	77.7	47	171	91	76	378	610	508	23.6
51	100	88.6	90.4	54	197	97	83	432	698	584	40.8
57	113	100.3	102.1	60	219	110	102	486	756	632	55.3
63	125	110.5	112.3	67	219	110	102	498	791	667	64.4
76	151	133.1	134.9	80	235	135	137	603	959	816	114

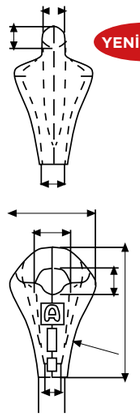
KAPALI TİP PRESLİ SOKET | CLOSED TYPE SWAGE SOCKET

- **MALZEME /** MATERIAL: Sıcak dövme çelik C-1035 . Drop forged steel C-1035.
- **KAPLAMA /** FINISH: Kendinden renkli. Self coloured



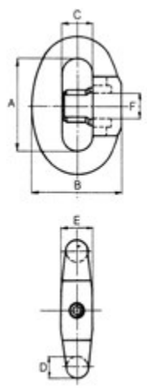
Ölçü Size	Halat Çapı Rope Dia.	Güvenli Çalışma Yükü Working Load Limit	Kopma Yükü Breaking Load	Ölçüler / Dimensions									Birim Ağırlığı Weight Per Piece
				A	B	C	D	E	F	G	H	I	
	mm	kg	kg	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
1	10-11	1500	10000	81	48	22	195	12	11,5	20	24	12	0,4
2	12-13	2000	14000	94	56	25	195	15,5	13,5	22	25	14	0,5
3	14-15	2500	17500	108	64	28	220	17,5	15,5	24	29	16	0,6
4	16-17	3000	22500	122	70	31	220	19,5	17,5	26	31	18	0,9
5	18-19	4500	27500	135	84	33	245	21	19	30	42	20	1,3
6	20-21	5000	35000	152	84	36	310	23	21	33	38	23	1,7
7	22-24	7000	42500	166	100	40	310	26	23	37	48	26	2,3
8	25-27	8000	52500	186	100	43	350	28	25	39	44	29	3,2
9	28-30	11000	70000	202	120	45	350	31	27	40	58	32	4,1
10	31-33	13000	85000	222	120	52	445	32	28,5	45	56	35	5,2
11	34-36	15000	95000	239	142	55	445	36	31,5	50	70	38	6,4
12	37-39	17000	110000	264	142	60	495	39	34,5	51	64	41	7,9
13	40-42	21000	125000	285	166	63	555	43	36,5	59	80	44	9,5
14	43-45	26000	155000	312	166	68	595	47	40	62	72	48	11,2
15	46-48	30000	180000	337	170	75	595	51	44	66	68	51	13
17	52-56	42500	240000	400	220	84	880	60	54	75	90	59	23

ARMUT TİP SOKET | ROPE PEAR SOCKET



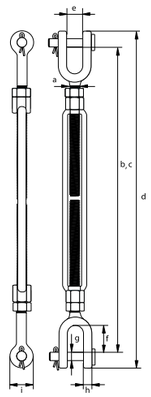
Ölçü Size	Halat Çapı Rope Dia.	Güvenli Çalışma Yükü Working Load Limit	Kopma Yükü Breaking Load	Ölçüler / Dimensions									Birim Ağırlığı Weight Per Piece
				A	B	C	D	E	F	G	H	I	
	mm	kg	kg	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
924	22-24	11000	70000	202	132	40	325	31	27	40	58	27	4
1026	25-27	13000	85000	222	143	43	375	32	28,5	46	66	30	5
1130	28-30	15000	95000	239	156	45	400	36	31,5	50	70	33	7
1232	31-33	17000	110000	249	165	52	425	39	34,5	52	72	36	8,5
1336	34-36	21000	125000	285	184	55	450	43	36,5	60	80	40	9,5
1440	37-40	26000	155000	297	192	60	475	47	40	62	80	44	12
3221	42-44	32500	189000	314	204	66	425	53	46	70	80	47	13,5
1548	46-48	30000	180000	329	192	67	575	51	44	66	80	52	12,5
1648	46-48	36000	215000	343	218	70	500	56	50	75	90	52	18

ARMUT TİP SOKET TİP S | ROPE PEAR SOCKET TYPE S



Ölçü Size	Güvenli Çalışma Yükü Working Load Limit	Kopma Yükü Breaking Load	Ölçüler / Dimensions						Birim Ağırlığı Weight Per Piece
			A	B	C	D	E	F	
	kg	kg	mm	mm	mm	mm	mm	mm	kg
4	3000	25000	76	76	24,5	19	30	21	0,9
5	4500	33000	84	84	27	21	33	23	1,2
6	5000	37500	92	92	29,5	23	35	25	1,5
7	7000	49000	100	100	32	25	38	28	2
8	8000	54000	108	108	34,5	27	41	31	2,5
9	9500	60000	116	116	37	29	44	34	3,1
10	12000	75000	128	128	40,5	32	48	37	4,4
11	15000	95000	140	140	44	35	53	40	5,7
12	17000	110000	152	152	27	38	57	43	7,2
13	21000	135000	164	164	51	41	62	46	8,7
14	26000	160000	176	173	54	44	66	50	11
15	30000	175000	188	188	58	47	71	52	13,5
17	42500	260000	222	222	68	56	84	62	23

ARMUT TİP SOKET KİLİDİ | QUICK RELEASE LINK

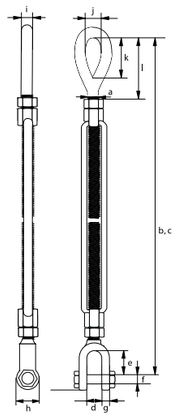


working load limit	diameter thread	take up	length closed position	length open position	length closed position	opening jaw	length inside	diameter pin	thickness jaw eye	diameter jaw eye	weight each
t	a inch	inch	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	kg
2.36	¾	6	369	487	439	24	38	16	16	41	2.59
2.36	¾	9	444	640	514	24	38	16	16	41	3.13
2.36	¾	12	520	792	590	24	38	16	16	41	3.42
2.36	¾	18	670	1096	740	24	38	16	16	41	4.51
3.27	⅞	12	561	826	638	27	42	19	19	48	4.93
3.27	⅞	18	713	1132	790	27	42	19	19	48	6.41
4.54	1	6	447	554	532	31	50	22	20	54	5.18
4.54	1	12	598	859	683	31	50	22	20	54	6.43
4.54	1	18	750	1168	835	31	50	22	20	54	8.4
4.5	1	24	903	1470	988	31	50	22	20	54	8.9
6.9	1 ¼	12	641	914	748	44	71	29	26	68	11.2
6.9	1 ¼	18	803	1228	910	44	71	29	26	68	13.6
6.9	1 ¼	24	962	1539	1069	44	71	29	26	68	15
9.71	1 ½	12	675	942	806	52	71	35	28	80	17
9.71	1 ½	18	825	1244	956	52	71	35	28	80	19.3
9.71	1 ½	24	980	1551	1111	52	71	35	28	80	20.7
12.7	1 ¾	18	938	1316	1092	60	86	41	33	90	25
12.7	1 ¾	24	1089	1621	1243	60	86	41	33	90	28.7
16.8	2	24	1151	1671	1338	63	93	51	40	107	45.4
27.2	2 ½	24	1255	1831	1480	75	114	57	41	143	88
34	2 ¾	24	1348	1882	1604	90	110	70	41	158	98

ÇATAL-ÇATAL DÖVME GERDİME | JAW-JAW FORCED TURNBUCKLE

- **MALZEME /** MATERIAL: Yüksek mukavemetli çelik. Drop forged high tensile.
- **KAPLAMA /** FINISH: Ağır tip galvaniz. Hot dipped galvanized.

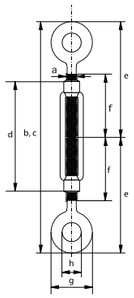
working load limit	diameter thread	take up	length closed position	length open position	length closed position	opening jaw	length inside	diameter pin	thickness jaw eye	diameter jaw eye	weight each
t	a inch	inch	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	lbs
2.36	¾	6	14 17/32	19 3/16	17 5/16	15/16	1 17/32		⅝	1 ⅝	5.71
2.36	¾	9	17 17/32	25 3/16	20 ¼	15/16	1 17/32	⅝	⅝	1 ⅝	6.90
2.36	¾	12	20 ½	31 5/32	23 ¼	15/16	1 17/32	⅝	⅝	1 ⅝	7.54
2.36	¾	18	26 11/32	43 5/32	29 ⅛	15/16	1 17/32	⅝	⅝	1 ⅝	9.94
3.27	⅞	12	22 3/32	32 17/32	25 ⅛	1 3/32	1 11/16	¾	¾	1 29/32	10.87
3.27	⅞	18	28 1/32	44 9/16	31 3/32	1 3/32	1 11/16	¾	¾	1 29/32	14.13
4.54	1	6	17 5/8	21 13/16	20 15/16	1 ¼	1 31/32	⅞	25/32	2 ⅛	11.42
4.54	1	12	23 9/16	33 13/16	26 ⅞	1 ¼	1 31/32	⅞	25/32	2 ⅛	14.18
4.54	1	18	29 17/32	46	32 ⅞	1 ¼	1 31/32	⅞	25/32	2 ⅛	18.52
4.5	1	24	35 9/16	57 ⅞	38 29/32	1 ¼	1 31/32	⅞	25/32	2 ⅛	19.62
6.9	1 ¼	12	25 ¼	35 31/32	29 7/16	1 ¾	2 25/32	1 5/32	1 1/32	2 11/16	24.7
6.9	1 ¼	18	31 ⅝	48 11/32	35 13/16	1 ¾	2 25/32	1 5/32	1 1/32	2 11/16	30.0
6.9	1 ¼	24	37 ⅞	60 19/32	42 3/32	1 ¾	2 25/32	1 5/32	1 1/32	2 11/16	33.1
9.71	1 ½	12	26 9/16	37 3/32	31 ¾	2 1/32	2 25/32	1 ⅜	1 ⅛	3 5/32	37.5
9.71	1 ½	18	32 ½	48 31/32	37 ⅝	2 1/32	2 25/32	1 ⅜	1 ⅛	3 5/32	42.5
9.71	1 ½	24	38 19/32	61 1/16	43 ¾	2 1/32	2 25/32	1 ⅜	1 ⅛	3 5/32	45.6
12.7	1 ¾	18	36 29/32	51 13/16	43	2 11/32	3 ⅜	1 ⅝	1 5/16	3 9/16	55.1
12.7	1 ¾	24	42 ⅞	63 13/16	48 15/16	2 11/32	3 ⅜	1 ⅝	1 5/16	3 9/16	63.3
16.8	2	24	45 5/16	65 25/32	52 11/16	2 ½	3 11/16	2	1 19/32	4 3/16	100.1
27.2	2 ½	24	49 13/32	72 3/32	58 9/32	2 15/16	4 ½	2 ¼	1 ⅝	5 ⅝	194.0
34	2 ¾	24	53 3/32	74 3/32	63 5/32	3 9/16	4 5/16	2 ¾	1 ⅝	6 3/16	216.1



working load limit	diameter thread	take up	length closed position	length open position	opening jaw	length inside jaw	diameter pin jaw	thickness eye jaw	diameter eye jaw	diameter eye	width inside eye	length inside eye	length closed position	weight each
t	a inch	inch	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	k mm	l mm	kg
0.54	⅜	6	283	418	12	21	8	9	21	10	13	29	49	0.52
1	½	6	315	446	16	26	10	11	25	12	18	36	58	0.88
1	½	9	390	598	16	26	10	11	25	12	18	36	57	1.13
1	½	12	466	751	16	26	10	11	25	12	18	36	57	1.37
1.59	⅝	6	363	486	18	32	13	14	33	14	21	45	79	1.55
1.59	⅝	9	438	639	18	32	13	14	33	14	21	45	78	1.84
1.59	⅝	12	514	790	18	32	13	14	33	14	21	45	78	2.17
2.36	¾	6	391	510	24	38	16	16	41	17	26	54	89	2.28
2.36	¾	9	467	663	24	38	16	16	41	17	26	54	89	2.82
2.36	¾	12	542	815	24	38	16	16	41	17	26	54	88	2.95
2.36	¾	18	694	1120	24	38	16	16	41	17	26	54	89	3.30
3.27	⅞	12	583	848	27	42	19	19	48	20	32	61	101	4.35
3.27	⅞	18	735	1153	27	42	19	19	48	20	32	61	101	5.46
4.54	1	6	473	579	31	50	22	20	54	24	37	76	118	4.66
4.54	1	12	624	884	31	50	22	20	54	24	37	76	117	5.94
4.54	1	18	776	1190	31	50	22	20	54	24	37	76	117	7.98
4.5	1	24	928	1494	31	50	22	20	54	24	37	76	116	8.35
6.9	1 ¼	12	677	950	44	71	29	26	68	29	47	91	145	10.4
6.9	1 ¼	18	833	1258	44	71	29	26	68	29	47	91	144	11
6.9	1 ¼	24	989	1566	44	71	29	26	68	29	47	91	144	12.9
9.71	1 ½	12	716	983	52	71	35	28	80	32	55	106	156	13.1
9.71	1 ½	18	871	1290	52	71	35	28	80	32	55	106	160	14.7
9.71	1 ½	24	1023	1594	52	71	35	28	80	32	55	106	158	17.8
12.7	1 ¾	18	979	1356	60	86	41	33	90	38	61	120	197	22.3
12.7	1 ¾	24	1130	1662	60	86	41	33	90	38	61	120	196	27.5
16.8	2	24	1208	1728	63	93	51	40	107	46	69	147	230	42.9
27.2	2 ½	24	1343	1899	75	114	57	41	143	51	80	165	274	68
34	2 ¾	24	1399	1953	90	110	70	41	158	57	84	178	284	91

GÖZ-ÇATAL DÖVME GERDİME | JAW-EYE FORCED TURNBUCKLE

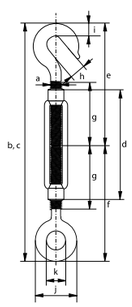
- **MALZEME /** MATERIAL: Sıcak dövme yüksek gerilimli çelik 1035 veya 1045. Drop forged high tensile steel 1035 or 1045
- **KAPLAMA /** FINISH: Ağır tip galvaniz. Hot dipped galvanized.



diameter thread	length closed position	length open position	length body	length end fitting	length thread	diameter eye outside	diameter eye inside	weight each
a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	kg
5	114	170	70	57	35	16	8	0.07
6	160	246	110	80	55	20	9	0.11
8	168	248	110	84	57	22	10	0.2
10	210	300	125	105	68	31	14	0.28
12	222	305	125	110	70	35	16	0.43
14	244	334	140	123	75	40	18	0.61
16	300	416	170	143	88	47	22	1
20	334	466	200	165	105	52	24	1.6
22	372	527	220	185	118	60	27	2.2
24	410	587	255	208	135	65	27	2.8
30	440	605	255	220	135	71	31	4.1
33	490	690	295	245	148	88	36	6
36	554	740	295	277	158	94	38	8.5
42	600	800	330	300	170	110	49	11

GÖZ-GÖZ GERDİRME | RIGGING SCREWS EYE-EYE

- **MALZEME /** MATERIAL: Dövülmüş yumuşak çelik. Drop forged mild steel.
- **KAPLAMA /** FINISH: Elektro-galvanized.

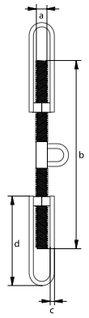


diameter thread	length closed position	length open position	length body	length end fitting	length end fitting	length thread	opening hook	thickness hook	diameter eye outside	diameter eye inside	weight each
a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	k mm	kg
5	125	180	70	56	57	35	7	12	16	8	0.07
6	172	258	110	77	80	55	8	15	20	9	0.11
8	184	264	110	85	84	57	10.5	15	22	10	0.2
10	222	311	125	106	105	68	13	11	31	14	0.28
12	241	324	125	117	111	70	16	13	35	16	0.43
14	261	351	140	124	122	75	18	15	40	18	0.61
16	311	427	170	144	150	88	20	17	47	22	1
20	358	490	200	170	167	105	21	21	52	24	1.6
22	414	559	220	200	186	118	24	28	60	27	2.2
24	453	630	255	215	205	135	26	33	65	27	2.8
30	495	660	255	240	220	135	34	35	71	31	4.1
33	545	744	295	260	245	148	38	40	88	36	6
36	597	782	295	275	277	158	46	45	94	38	8.4

KANCA-GÖZ GERDİRME | RIGGING SCREWS EYE-HOOK

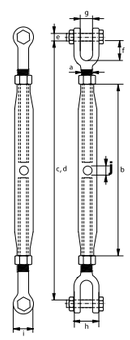
- **MALZEME /** MATERIAL: Dövülmüş yumuşak çelik. Drop forged mild steel.
- **KAPLAMA /** FINISH: Elektro-galvanized.

minimum breaking load	diameter thread	length thread	diameter bow	length bow	weight each
t	a mm	b mm	c mm	d mm	kg
13	24	400	16	210	2.8
13	24	500	16	260	3.8
18	27	400	18	210	4.4
18	27	500	18	260	5.5
20	30	400	20	210	5
20	30	500	20	260	6.3
21	36	400	20	210	7
21	36	500	20	260	8.8



HAMBURGER GERDİRME | HAMBURGER TURNBUCKLE

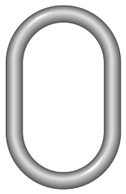
- **MALZEME /** MATERIAL: Dövülmüş yumuşak çelik. Mild steel.
- **KAPLAMA /** FINISH: Kendinden renkli . Self coloured.

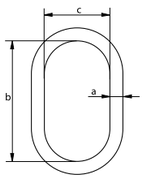


working load limit	diameter thread	length body	length closed position	length open position	diameter pin	length inside	opening jaw	width jaw	diameter jaw eye	diameter hole	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	kg
0.2	6	100	170	250	5	16	7	20	13	6	0.15
0.32	8	108	199	279	6	22	9	24	14	8	0.26
0.5	10	125	222	312	8	22	10.5	28	19	8	0.45
0.7	12	195	315	470	10	27	13	34	23	10	0.85
1.2	16	230	388	568	12	33	18	42	29	11	1.51
1.5	20	270	449	654	16	38	20	51	33	12	2.62
2.2	22	295	490	715	20	45	25	55	38	12	3.94
3.2	24	325	538	793	22	52	30	70	46	12	5.16
4.8	33	370	680	965	30	70	38	82	60	14	11.6
6	39	400	707	1002	33	70	45	85	76	15	14.2
8.5	45	400	761	1011	39	86	50	94	85	16	20.8
11	48	400	780	1005	45	97	58	98	92	16	24

ÇATAL-ÇATAL BORU TİP GERDİRME | CLOSED BODY SCREWS JAW-JAW

- **MALZEME /** MATERIAL: Yumuşak çelik. Mild steel.
- **KAPLAMA /** FINISH: Kendinden renkli. Self coloured.

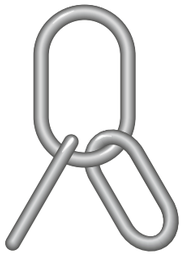


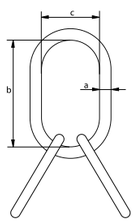


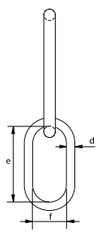
working load limit	diameter	length inside	width inside	weight each
t	a mm	b mm	c mm	kg
4.1	16	150	75	0.72
5.8	22	270	140	2.3
8.83	26	270	140	3.3
14.5	28	200	110	3
14.5	28	270	140	3.8
17.1	32	270	140	5.1
23.0	36	270	140	6.5
28.1	40	280	155	8.5
38.3	45	320	175	12.2
45	50	350	195	16.6
75	65	410	220	33.2
100	75	450	250	49.3

SAPAN HALKASI | MASTER LINK

- **MALZEME /** MATERIAL: Alaşımlı çelik. Alloy steel, grade 8
- **KAPLAMA /** FINISH: Boyalı turuncu. Painted orange.



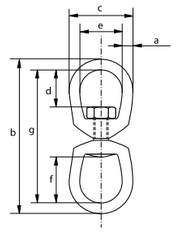




working load limit	diameter	length inside	width inside	diameter	length inside	width inside	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	kg
4.1	16	150	75	14.5	125	60	1.3
5.8	22	270	140	16	150	75	3.8
8.83	26	270	140	20	140	70	5.3
11.8	28	270	140	20	140	70	5.9
17.1	32	270	140	26	190	102	9.7
23	36	270	140	28	190	100	11.9
28.1	40	280	155	32	270	140	18.6
38.3	45	320	175	36	270	140	25.4
45	50	350	195	40	260	130	32.3
65	60	410	220	50	350	195	62
100	75	450	250	65	410	220	116

ÇİFTLİ SAPAN HALKASI | MASTER LINK ASSEMBLIES

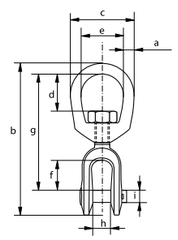
- **MALZEME /** MATERIAL: Alaşımlı çelik. Alloy steel, grade 8
- **KAPLAMA /** FINISH: Boyalı turuncu. Painted orange.



working load limit	diameter	length outside	width outside	length inside	width inside	length inside	length	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	kg
0.39	6	87	32	18	19	27	75	0.1
0.57	8	106	41	21	25	32	90	0.18
1.02	10	129	51	24	32	38	109	0.3
1.6	13	164	64	33	38	51	138	0.6
2.4	16	199	76	40	44	60	167	1
3.3	19	221	89	44	51	67	183	1.82
4.5	22	257	102	52	57	78	213	2.55
5.7	25	295	114	59	64	89	245	4.06
8.2	32	337	143	68	80	94	273	7.43
20.5	38	501	178	102	102	150	425	20.8

GÖZ-GÖZ FIRDÖNDÜ | EYE-EYE SWIVELS

- **MALZEME /** MATERIAL: Yüksek mukavemetli çelik. High tensile steel, quenched and tempered.
- **KAPLAMA /** FINISH: Sıcak daldırma galvanizli. Hot dipped galvanized.

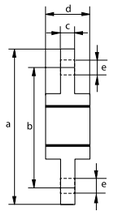


working load limit	diameter	length	width outside	length inside	width inside	length inside	length	width inside	diameter pin	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	kg
0.39	6	84	32	18	19	22	67	12	6	0.09
0.57	8	98	41	21	25	22	75	13	8	0.16
1.02	10	121	51	24	32	27	92	16	10	0.32
1.6	13	154	64	33	38	33	114	19	13	0.57
2.4	16	186	76	40	44	38	135	24	16	1.12
3.3	19	211	89	44	51	44	154	29	19	1.76
4.5	22	242	102	52	57	52	178	30	22	2.66
5.7	25	290	114	59	64	71	217	44	29	4.02
8.2	32	329	143	68	80	71	230	52	35	7.14
20.5	38	501	178	106	102	113	364	73	50	24.8

GÖZ-ÇATAL FIRDÖNDÜ | EYE-JAW SWIVELS

- **MALZEME /** MATERIAL: Alaşımlı çelik. Alloy steel, grade 8
- **KAPLAMA /** FINISH: Boyalı turuncu. Painted orange.

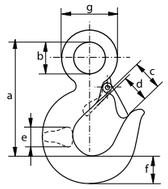
working load limit	length	length	thickness	diameter	diameter hole	weight each
t	a mm	b mm	c mm	d mm	e mm	kg
1	174	128	12.5	49	21	1.4
2	223	173	19	68	22	3.5
3	278	210	26	79	29	6.4
5	290	222	26	89	31	7.9
8	366	276	40	106	43	15.2
10	390	300	40	118	49	19.1
15	457	355	40	128	49	26.6
20	474	372	40	118	51	25
30	612	472	64	138	59	50
40	760	600	68	168	65	-



RULMANLI TOP FIRDÖNDÜ | BEARING BALL SWIVEL

- **MALZEME /** MATERIAL: Alaşımlı çelik. Alloy steel, grade 8
- **KAPLAMA /** FINISH: Boyalı turuncu. Painted orange.

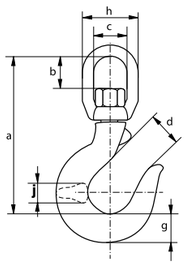
working load limit	length	diameter eye inside	opening hook	opening hook	thickness	width	diameter eye outside	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	kg
1.25	81	19	24	20	16	19	37	0.3
1.6	91	22	26	22	18	22	45	0.44
2.5	105	27	32	27	20	27	52	0.63
3.2	124	32	34	30	24	31	62	1.27
5.4	147	39	44	37	31	36	74	1.76
8.2	190	50	55	48	37	48	96	3.6
12.8	230	64	64	53	48	61	126	7.7
16	254	70	70	60	58	69	139	10.8
22	316	89	91	77	63	81	169	16.7

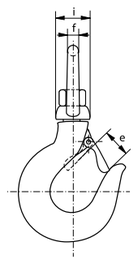


KUŞGÖZ KANCA | HOOK

- **MALZEME /** MATERIAL: Alaşımlı çelik. Alloy steel, grade 8
- **KAPLAMA /** FINISH: Boyalı kırmızı. Painted red.

working load limit	length	length inside	width inside	opening hook	opening hook	diameter	width	width	width	width	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	kg
1.25	118	28	31	24	20	11	19	52	30	16	0.49
1.6	145	35	40	26	22	14	23	68	37	18	0.95
2.5	167	43	47	32	27	17	27	81	43	20	1.48
3.2	180	47	47	34	30	17	31	81	43	24	1.79
5.4	217	54	64	44	37	21	37	106	64	31	3.8
8.2	276	69	78	55	48	26	48	130	77	37	7.4
11.5	310	68	82	58	53	22	60	136	82	43	9.7
16	352	84	92	66	58	24	67	154	92	52	14.9
22	434	107	115	87	78	29	80	191	108	64	27
31.5	512	117	132	97	87	34	94	222	132	80	46

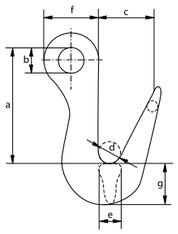




FIRDÖNDÜ KANCA | SWIVELS HOOK

- **MALZEME /** MATERIAL: Alaşımlı çelik. Alloy steel, grade 8
- **KAPLAMA /** FINISH: Boyalı kırmızı. Painted red.

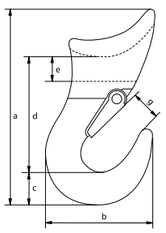
working load limit at hook		length	diameter eye inside	opening hook	diameter	thickness	diameter eye outside	width	weight each
top t	bottom t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	kg
2	7.5	167	35	74	30	31	73	57	2.65

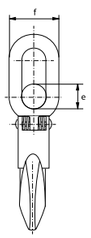


BORU KANCASI | PIPE LINE HOOK

- **MALZEME /** MATERIAL: Alaşımlı çelik. Alloy steel.
- **KAPLAMA /** FINISH: Boyalı kırmızı. Painted red.

working load limit	diameter rope	length	width	thicknesss	length	diameter	thickness	opening hook	weight each
t	mm	a mm	b mm	c mm	d mm	e mm	f mm	g mm	kg
0.8	6 - 11	112	63	19	65	14	30	16	0.4
1.6	10 - 13	143	82	26	83	17	30	19	0.8
2.5	14 - 16	170	98	30	97	19	33	25	1.2
3.2	16 - 20	196	115	36	110	22	40	28	1.9
5.4	22 - 26	260	142	46	145	36	60	35	4.2

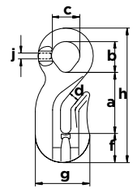


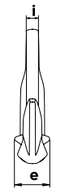


KAYAR ÇELİK KANCA | SLIDING CHOKER HOOK

- **MALZEME /** MATERIAL: Alaşımlı çelik. Alloy steel, grade 8
- **KAPLAMA /** FINISH: Boyalı kırmızı. Painted red.

for chain diameter		working load limit	length	inside length eye	inside width eye	opening	thickness	width	width outside	length outside	width	thickness	weight each
mm	inch	t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	j mm	kg
6	7/32	1.12	41	24	23	8	24	20	42	94	9	6	0.25
7 - 8	1/4 - 5/16	2	53	27	26	10	33	23	53	115	10	8	0.45
10	3/8	3.2	65	38	36	12	40	29	66	146	14	10	0.91
13	1/2	5.4	83	42	41	15	56	40	88	183	16	12	1.99
16	5/8	8.2	103	44	41	18	66	43	96	211	20	20	2.49
20	3/4	12.8	130	37	37	22	75	48	128	241	26	26	4.3
22	7/8	15.5	120	44	44	25	77	57	132	247	26	26	8.5
26	1	21.6	158	46	46	30	100	82	177	320	32	32	14.7
32	1 1/4	32.8	210	57	57	38	91	88	215	395	39	39	18

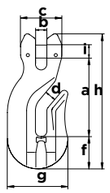


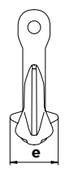


GÖZLÜ KEPÇE KANCASI | EYE GRAB HOOK

- **MALZEME /** MATERIAL: Alaşımlı çelik. Alloy steel, grade 8, quenched and tempered.
- **KAPLAMA /** FINISH: Boyalı sarı (J), kırmızı (R) veya beyaz. Painted yellow (J), red (R) or white.

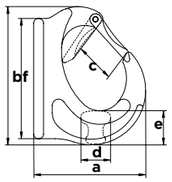
for chain diameter		working load limit	length	width	width outside	opening	thickness	width	width outside	length outside	diameter pin	weight each
mm	inch	t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	i mm	kg
6	7/32	1.12	52	7	28	7	24	19	42	86	8	0.28
7 - 8	1/4 - 5/16	2	64	9	32	10	33	23	53	104	9	0.45
10	3/8	3.2	75	12	42	12	40	29	66	127	13	0.88
13	1/2	5.4	103	15	54	15	56	40	88	173	16	2.17
16	5/8	8.2	127	19	68	18	65	43	96	208	20	2.81





PİMLİ KEPÇE KANCASI | CLEVIS GRAB HOOK

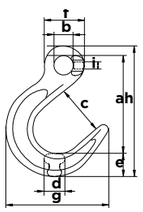
- **MALZEME /** MATERIAL: Alaşımlı çelik. Alloy steel, grade 8, quenched and tempered
- **KAPLAMA /** FINISH: Boyalı sarı (J), kırmızı (R) veya beyaz. Painted yellow (J), red (R) or white.



working load limit	width	length	width opening	thickness	width	length	width	width	weight each
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	h mm	kg
1	72	78	25	19	28	108	31	26	0.52
2	91	83	33	20	28	113	31	34	0.7
3	105	105	33	26	32	129	31	34	1.15
4	121	130	35	27	37	148	41	38	1.66
5	138	149	43	28	45	167	41	44	2.36
8	145	148	43	41	52	173	41	51	3.32
10	178	197	60	46	61	227	50	66	6.44
15	185	223	65	60	70	251	55	80	9.7

KAYNAKLI KANCA | WELD-OM HOOK

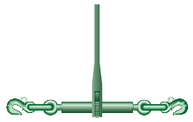
- **MALZEME /** MATERIAL: Alaşımlı çelik. Alloy steel, grade 8
- **KAPLAMA /** FINISH: Boyalı kırmızı. Painted red.



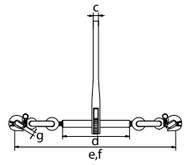
for chain diamater		working load limit	length	diameter eye inside	width opening	thickness	width	diameter eye outside	width outside	length	thickness	weight each
t	inch	a mm	b mm	c mm	d mm	e mm	d mm	f mm	g mm	h mm	i mm	kg
6	7/32	1.12	93	18	47	17	22	38	97	125	7	0.33
7 - 8	1/4 - 5/16	2	124	24	63	22	30	51	129	166	9	0.78
10	3/8	3.2	157	33	79	28	36	66	160	208	11	1.5
13	1/2	5.4	190	44	93	36	46	85	198	256	14	3
16	5/8	8.2	205	35	95	45	52	88	204	284	24	4.2
18 - 20	3/4	12.8	235	40	111	53	55	92	228	315	25	7.8
22	7/8	15.5	265	46	123	66	71	110	258	268	32	9.9
26	1	21.6	305	54	133	65	81	120	277	420	33	13.8
32	1 1/4	32.8	327	60	155	84	96	131	333	459	35	24.5

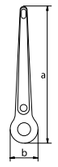
AÇIK AĞIZLI KANCA | FOUNDRY HOOK

- **MALZEME /** MATERIAL: Alaşımlı çelik. Alloy steel, grade 8 quenched and tempered.
- **KAPLAMA /** FINISH: Boyalı sarı (J), kırmızı (R) veya beyaz. Painted yellow (J), red (R) or white.



chain size	length handle	diameter	thickness	length barrel	length open position	length closed position	width	take-up	lashing capacity	proof load	minimum breaking load	weight each
mm	a mm	b mm	c mm	d mm	e mm	f mm	g mm	mm	t	t	t	kg
8	387	65	15	255	735	575	11	160	4	5	8	4.9
10	387	65	15	255	760	595	13	165	6.3	7.9	12.6	5.4
13	387	65	15	260	840	690	16	150	10	12.5	21.2	7.7
16	387	65	15	260	840	690	19	150	16	20	32.2	10.2

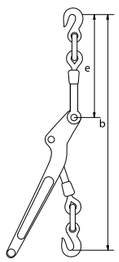


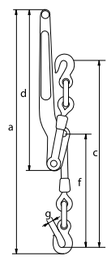


chain size	length handle	diameter	thickness	length barrel	length open position	length closed position	width	take-up	lashing capacity	proof load	minimum breaking load	weight each
inch	a inch	b inch	c inch	d inch	e inch	f inch	g inch	inch	t	t	t	lbs
5/16	15 1/4	2 9/16	19/32	10 1/32	28 29/32	22 5/8	7/16	6 5/32	4	5	8	10.80
3/8	15 1/4	2 9/16	19/32	10 1/32	29 1/32	23 7/16	1/2	6 1/2	6.3	7.9	12.6	11.90
1/2	15 1/4	2 9/16	19/32	10 1/4	33 3/32	27 5/32	5/8	5 29/32	10	12.5	21.2	16.98
5/8	15 1/4	2 9/16	19/32	10 1/4	33 3/32	27 5/32	3/4	5 29/32	16	20	32.2	22.5

DİŞLİ TİP ZİNCİR GERME | RATCHET LOADBINDER

- **MALZEME /** MATERIAL: Alaşımlı çelik. Drop forged, grade 8.
- **KAPLAMA /** FINISH: Boyalı kırmızı. Painted red.



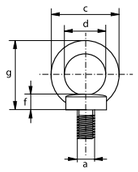


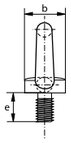
chain size	length handle	length open position	length closed position	length handle	length	length	width	take-up	lashing capacity	poof load	minimum breaking load	weight each
mm	a mm	b mm	c mm	d mm	e mm	f mm	g mm	mm	t	t	t	kg
8 - 10	610	592	488	408	287	287	12	104	2.45	4.9	8.62	2.81
10 - 13	768	680	550	458	325	325	16	130	4.175	8.35	14.97	5.08

chain size	length	length open position	length closed position	length handle	length	length	width	take-up	lashing capacity	poof load	minimum breaking load	weight each
mm	a inch	b inch	c inch	d inch	e inch	f inch	g inch	inch	t	t	t	lbs
5/16 - 3/8	24	23 5/16	19 1/4	16 3/32	11 5/16	11 5/16	15/32	4 3/32	2.45	4.9	8.62	6.19
3/8 - 1/2	30 3/16	26 3/4	21 3/4	17 1/32	12 25/32	12 25/32	5/8	5 1/8	4.175	8.35	14.97	5.08

ZİNCİR GERME | LEVER LOADBINDER

- **MALZEME /** MATERIAL: Dövülmüş/dökme çelik. Drop forged/cast steel.
- **KAPLAMA /** FINISH: Boyalı gri. Painted green.

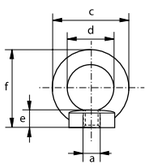


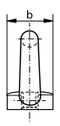


working load limit	diameter thread	diameter base	diameter eye outside	diameter eye inside	length	thickness base	height	weight per 100 pcs
t	a mm	b mm	c mm	d mm	e mm	f mm	g mm	kg
0.07	M 6 x 1.00	20	36	20	13	6	36	5.1
0.14	M 8 x 1.25	20	36	20	13	6	36	5.5
0.23	M 10 x 1.50	25	45	25	17	8	45	10.3
0.34	M 12 x 1.75	30	54	30	20.5	10	53	16.9
0.49	M 14 x 2.00	35	63	35	27	12	60	29.9
0.7	M 16 x 2.00	35	63	35	27	12	62	30.7
0.9	M 18 x 2.50	40	72	40	30	14	71	42.8
1.2	M 20 x 2.50	40	72	40	30	14	71	42.4
1.5	M 22 x 2.50	45	81	45	39	14	80	62.8
1.8	M 24 x 3.00	50	90	50	36	18	90	90.8
2.5	M 27 x 3.00	50	90	50	39	18	90	88.3
3.2	M 30 x 3.50	65	108	60	45	22	109	159
4.3	M 33 x 3.50	65	108	60	45	22	110	167
4.6	M 36 x 4.00	75	126	70	54	26	128	235
6.1	M 39 x 4.00	75	126	70	54	26	130	266
6.3	M 42 x 4.50	85	144	80	63	30	147	403
8	M 45 x 4.50	85	144	80	63	35	150	521
8.6	M 48 x 5.00	100	166	90	68	35	168	632
11.5	M 56 x 5.50	110	184	100	78	38	187	879
16	M 64 x 6.00	120	206	110	90	42	208	1240
20	M 72 x 6.00	150	260	140	100	50	260	2293
28	M 80 x 6.00	170	296	160	112	55	298	3200
40	M 100 x 6.00	190	330	180	130	60	330	4800

ERKEK AYBOLT | EYE BOLT

- **MALZEME /** MATERIAL: Karbon çeliği C15. Carbon steel, C15
- **KAPLAMA /** FINISH: Elektro-galvanized. Electro-galvenized.

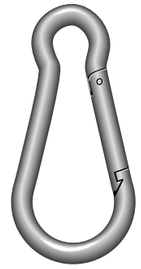


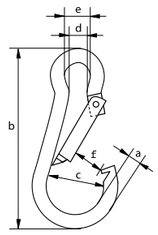


working load limit	diameter thread	diameter base	diameter eye outside	diameter eye inside	thickness base	height	weight per 100 pcs
t	a mm	b mm	c mm	d mm	e mm	f mm	kg
0.07	M 6 x 1.00	20	36	20	8.5	36	5.1
0.14	M 8 x 1.25	20	36	20	8.5	36	5.2
0.23	M 10 x 1.50	25	45	25	10	45	9.4
0.34	M 12 x 1.75	30	54	30	11	53	16
0.49	M 14 x 2.00	35	63	35	13	60	25.5
0.7	M 16 x 2.00	35	63	35	13	62	24
0.9	M 18 x 2.50	40	72	40	16	71	36
1.2	M 20 x 2.50	40	72	40	16	71	35.2
1.5	M 22 x 2.50	45	81	45	18	80	51.7
1.8	M 24 x 3.00	50	90	50	20	90	75.4
2.5	M 27 x 3.00	50	90	50	20	90	102
3.2	M 30 x 3.50	65	108	60	25	109	125
4.3	M 33 x 3.50	65	108	60	25	110	131
4.6	M 36 x 4.00	75	126	70	30	128	208
6.1	M 39 x 4.00	75	126	70	30	130	210
6.3	M 42 x 4.50	85	144	80	35	147	305
8	M 45 x 4.50	85	144	80	35	150	407
8.6	M 48 x 5.00	100	166	90	40	168	502
8.6	M 52 x 5.00	110	184	100	45	187	830
11.5	M 56 x 5.50	110	184	100	45	187	669
16	M 64 x 6.00	120	206	110	50	208	930
21	M 72 x 6.00	150	260	140	60	260	1500

DİŞİ AYBOLT | EYE NUT

- **MALZEME /** MATERIAL: Karbon çeliği C15. Carbon steel, C15
- **KAPLAMA /** FINISH: Elektro-galvanized. Electro-galvenized.

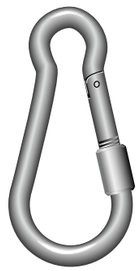


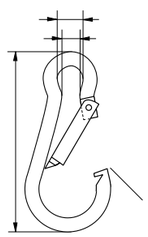


diameter	length	width	width inside	width inside	width opening	minimum breaking load	weight per 100 pcs
a mm	b mm	c mm	d mm	e mm	f mm	kg	kg
4	40	14	5	7	6	-	0.6
5	50	16	7	8	6	100	0.8
6	60	18	7	9	7	120	2.4
7	70	22	9	10	8	180	2.6
8	80	24	11	12	9	300	4.4
9	90	26	11	12	10	330	6.4
10	100	30	12	15	11	460	12.1
11	120	36	14	18	15	600	12.5
12	140	40	16	20	19	680	24.7
13	160	44	20	22	24	800	25
14	180	48	20	22	28	860	35
15	200	60	20	22	35	1370	57.2

KARABİNA | SNAP HOOK

- **MALZEME /** MATERIAL: Karbon çeliği C15. Mild steel.
- **KAPLAMA /** FINISH: Elektro-galvanized. Electro-galvenized.

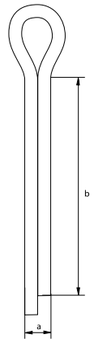




diameter	length	width inside	width inside	minimum breaking load	weight per 100 pcs
a mm	b mm	c mm	d mm	kg	kg
4	40	4	7	-	1.7
5	50	5	7	100	1.9
6	60	6	8	120	2.7
7	70	7	10	180	4.5
8	80	10	12	300	6.5
9	90	12	12	330	10.3
10	100	13	15	460	13.4
11	120	13	16	600	19
12	140	15	19	680	26.5
13	160	17	28	800	37
14	180	17	28	860	52

VİDALI KARABİNA | SNAP HOOK WITH SCREW NUTS

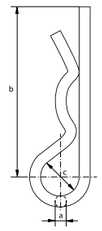
- **MALZEME /** MATERIAL: Karbon çeliği C15. Mild steel.
- **KAPLAMA /** FINISH: Elektro-galvanized. Electro-galvenized.

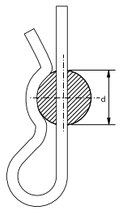


diameter	length	weight per 100 pcs
a mm	b mm	c mm
2.5	20	0.08
4	32	0.3
5	36	0.6
6	45	1.2
8	63	2.8
8	80	4.4
8	100	4.4
8	125	5.5
8	150	6.6
10	71	5
10	90	6
10	100	6.6
10	120	4.4
12	140	7
12	160	7
12	180	7
13	110	12.1
16	160	16
16	200	20
20	230	30
20	265	17.6

KOPİLYA

- **MALZEME /** MATERIAL: Karbon çeliği C15. Mild steel.
- **KAPLAMA /** FINISH: Elektro-galvanized. Electro-galvenized.

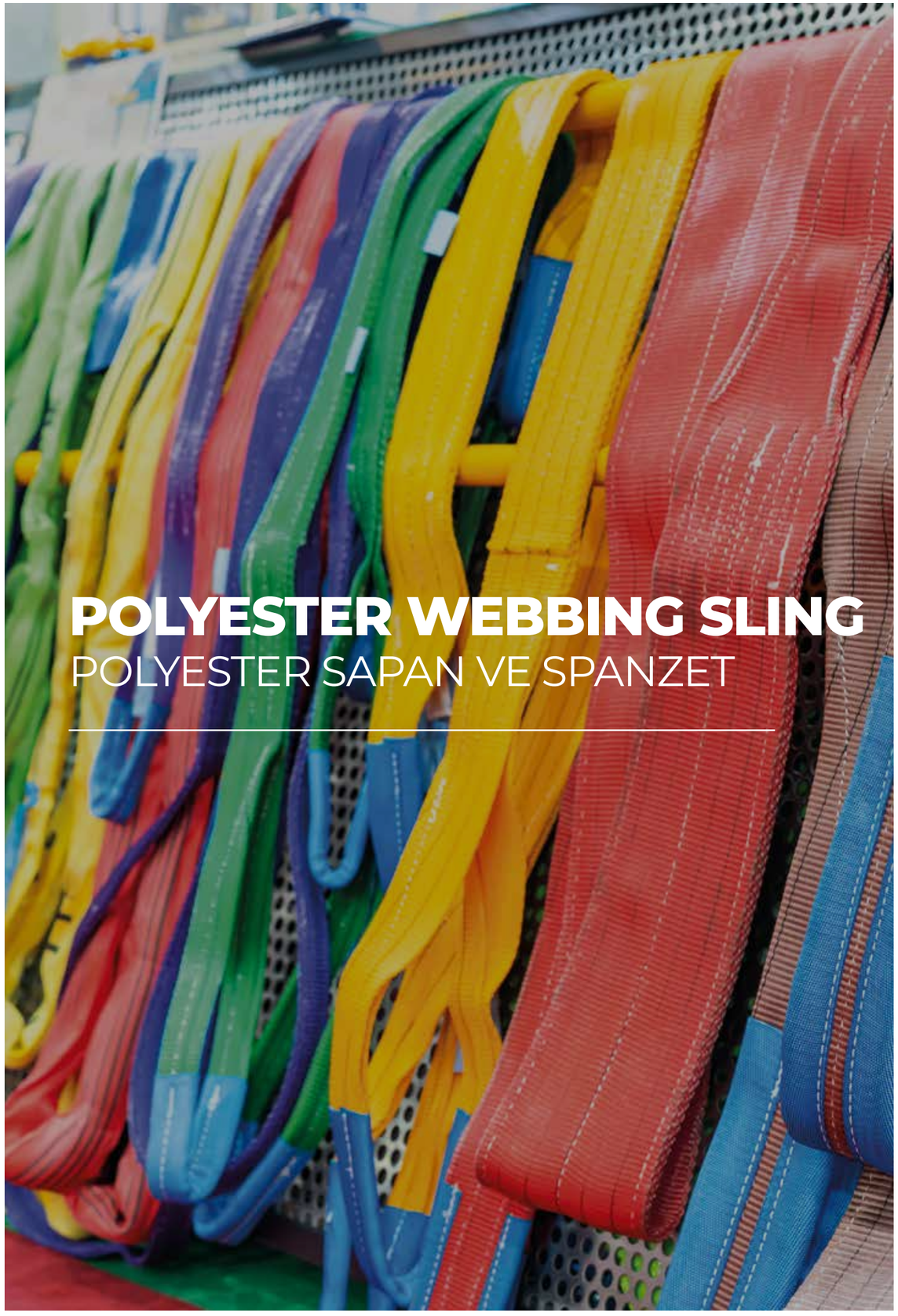




diameter	length	diameter	diameter	weight per100 pcs
a mm	b mm	c mm	d mm	kg
2	50	10	9 - 14	0.3
3	60	18	10 - 16	0.9
4	60	20	16 - 20	1.6
5	85	24	20 - 28	3.3
6	105	30	28 - 40	6.2
7	105	30	28 - 45	8.3
8	110	28	30 - 45	10.5

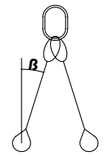
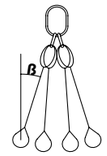
KOPİLYA

- **MALZEME /** MATERIAL: Karbon çeliği C15. Mild steel.
- **KAPLAMA /** FINISH: Elektro-galvanized. Electro-galvenized.



POLYESTER WEBBING SLING

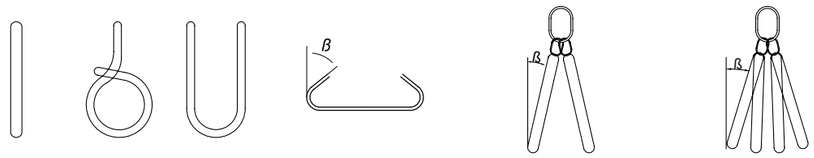
POLYESTER SAPAN VE SPANZET

Tonaj (ton)	Sapan Genişliği (mm)	Çalışma Yük Sınırları (ton)								
		Düz Kaldırma	Boğma Bağlı Kaldırma	Sepet Bağ			İki Kollu Sapan		3 veya 4 Kollu Sapan	
										
				Paralel	ß = 0˚- 45˚	ß = 45˚- 60˚	ß = 0˚- 45˚	ß = 45˚- 60˚	ß = 0˚- 45˚	ß = 45˚- 60˚
		M = 1	M = 0,8	M = 2	M = 1,4	M = 1	M = 1,4	M = 1	M = 2,1	M = 1,5
1	25	1,0	0,8	2,0	1,4	1,0	1,4	1,0	2,1	1,5
2	50	2,0	1,6	4,0	2,8	2,0	2,8	2,0	4,2	3,0
3	75	3,0	2,4	6,0	4,2	3,0	4,2	3,0	6,3	4,5
4	100	4,0	3,2	8,0	5,6	4,0	5,6	4,0	8,4	6,0
5	125	5,0	4,0	10,0	7,0	5,0	7,0	5,0	10,5	7,5
6	150	6,0	4,8	12,0	8,4	6,0	8,4	6,0	12,6	9,0
8	200	8,0	6,4	16,0	11,2	8,0	11,2	8,0	16,8	12,0
10	250	10,0	8,0	20,0	14,0	10,0	14,0	10,0	21,0	15,0
10-50 TON		-	-	-	-	-	-	-	-	-

TEKNİK ÖZELLİKLER | TECHNICIAL SPECIFICATIONS

- Türkiyede imal edilmiş olup, 6:1 ve 7:1 emniyet katsayılıdır.
- EN 1492-1 standardına uygun üretimi yapılmaktadır.
- Yüksek kalite polyesterden üretilmiştir.
- Çalışma yük sınırı; 0,5 ton'dan 50 ton'a kadar ve bant kalınlığı ise 25 mm'den 1.200 mm'ye kadar üretimi yapılmaktadır.
- Talep üzerine farklı uzunluk veya tasarımlar ile imalatı yapılabilir.

- It is produced in Turkey and has safety coefficients of 6:1 and 7:1.
- It is produced in accordance with EN 1492-1 standard.
- Made from high quality polyester.
- Working load limit; It is produced in sizes from 0.5 tons to 50 tons and band thickness from 25 mm to 1,200 mm.
- It can be manufactured in different lengths or designs upon request.

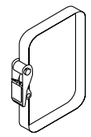
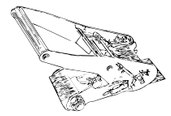
Tonaj (ton)	Renk kodu	Çalışma Yük Sınırları (ton)								
		Düz Kaldırma	Boğma Bağ-ı Kaldırma	Sepet Bağ			İki Kollu Sapan		3 veya 4 Kollu Sapan	
										
				Paralel	ß = 0˚- 45˚	ß = 45˚- 60˚	ß = 0˚- 45˚	ß = 45˚- 60˚	ß = 0˚- 45˚	ß = 45˚- 60˚
		M = 1	M = 0,8	M = 2	M = 1,4	M = 1	M = 1,4	M = 1	M = 2,1	M = 1,5
1	Mor	1,0	0,8	2,0	1,4	1,0	1,4	1,0	2,1	1,5
2	Yeşil	2,0	1,6	4,0	2,8	2,0	2,8	2,0	4,2	3,0
3	Sarı	3,0	2,4	6,0	4,2	3,0	4,2	3,0	6,3	4,5
4	Gri	4,0	3,2	8,0	5,6	4,0	5,6	4,0	8,4	6,0
5	Kırmızı	5,0	4,0	10,0	7,0	5,0	7,0	5,0	10,5	7,5
6	Kahverengi	6,0	4,8	12,0	8,4	6,0	8,4	6,0	12,6	9,0
8	Mavi	8,0	6,4	16,0	11,2	8,0	11,2	8,0	16,8	12,0
10	Turuncu	10,0	8,0	20,0	14,0	10,0	14,0	10,0	21,0	15,0
10-200 TON	Turuncu	-	-	-	-	-	-	-	-	-

TEKNİK ÖZELLİKLER | TECHNICIAL SPECIFICATIONS

- Türkiyede imal edilmiş olup, 6:1 ve 7:1 emniyet katsayılıdır.
- EN 1492-2 standardına uygun üretimi yapılmaktadır.
- Sonsuz sapanlar yüksek kaliteli polyester iplikten üretilmiştir.
- Keskin köşelere daha fazla dayanım sağlayan balık sırtı dokuma ile üretilmiştir.
- Aşınmalara karşı üstün dayanıklılık gösterir.
- Çalışma yük sınırı 1 ton'dan 200 ton'a kadar ve 40 m'ye kadar çalışma uzunluğunda üretilebilir.
- Talep üzerine farklı uzunluk veya tasarımlar ile imalatı yapılabilir.

- It is produced in Turkey and has safety coefficients of 6:1 and 7:1.
- It is produced in accordance with EN 1492-2 standard.
- Endless slings are made of high quality polyester thread.
- It is produced with herringbone webbing, which provides greater resistance to sharp corners.
- It shows superior resistance to abrasions.
- It can be produced with working load limits from 1 ton to 200 tons and working lengths up to 40 m.
- It can be manufactured in different lengths or designs upon request.

SPANZET | RATCHET STRAP

EN 12195-2'e Göre Gerdirme Kapasiteleri			
Bant Genişliği (mm)	Düz Kullanım (kg)	Dairesel Kullanım (kg)	Uygulanan Kuvvet (daN)
			
2,8	300,0	600,0	30,0
25,0	500,0	1.000	50,0
35,0	1.000	2.000	100
50,0	2.000	4.000	320
50,0	2.000	4.000	420
50,0	2.500	5.000	350
50,0	2.500	5.000	450
75,0	5.000	10.000	500

TEKNİK ÖZELLİKLER | TECHNICIAL SPECIFICATIONS

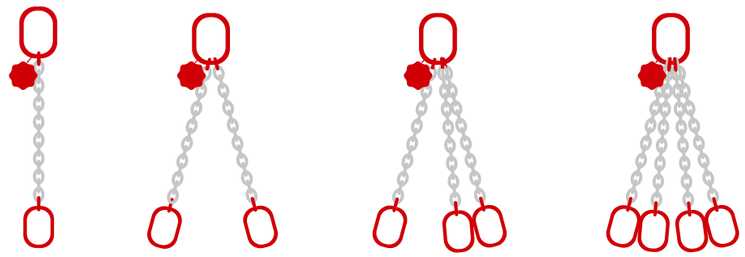
- Spanzet, yükün üstünden geçerek, yükün taşınacağı yüzeye sabitlenen ve üzerinde "gırgır" olarak bilinen gergimekanizmasıyla gerilerek yükü sabitlemekte kullanılır.
- Bu aparatlar kullanılarak sabitlenen yükler taşıma ve depolama esnasında zarar görmez ve etraflarına hasarvermez. Yaralanmalara ve sakatlanmalara neden olmaz. Kullanımı kolay ve ekonomik olan bu aparatlar yükgüvenliğini sağlamak için oldukça uygun ürünlerdir.
- Etikette belirtilen yüke uygun gerdirme işlemi yapılmalıdır.
- Gergi bantları yük kaldırmaya uygun değildir. Sadece gergi işlemi için kullanılmalıdır.
- Polyester banttan üretildiği için -40 °C ile 100 °C arasında çalışma sıcaklığına sahiptir.
- Etiketi olmayan, kesik veya hasarlı, renk kaybına uğrayan, kimyasal ve ısıl hasarlanma olan ürünler kullanılmamalıdır.

- Ratchet Strap is a device known as a "ratchet" that passes over the load and is fixed to the surface on which the load will be carried. It is used to fix the load by tensioning it with a tensioning mechanism.
- Loads fixed using these apparatus will not be damaged during transportation and storage and will not harm the environment. It does not cause injuries or injuries. These easy-to-use and economical devices ensure load safety. These are very suitable products for.
- Tensioning should be done in accordance with the load specified on the label.
- Tension straps are not suitable for lifting loads. Should only be used for tensioning.
- Since it is produced from polyester tape, it has an operating temperature between -40 °C and 100 °C.
- Products that do not have labels, are cut or damaged, have discoloration, or have chemical or thermal damage should not be used.

CHAIN & ACCESSORIES

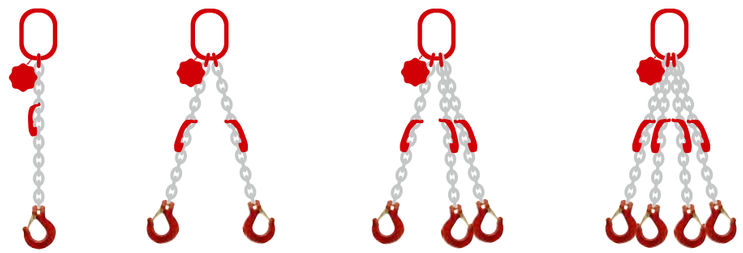
ZİNCİR VE ZİNCİR EKİPMANLARI

- **HALKALI ZİNCİR SAPANLAR I** CHAIN SLING WITH TERMINAL LINK

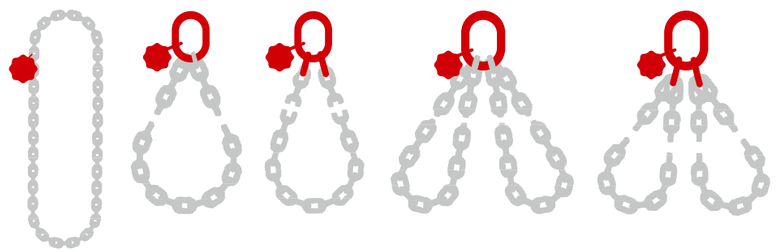


- **KANCALI ZİNCİR SAPANLAR |** CHAIN SLING WITH HOOK

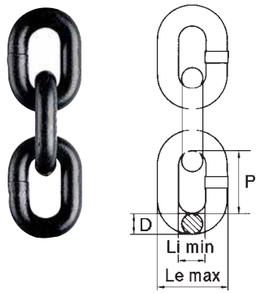
- **KISALTMALI VE KANCALI ZİNCİR SAPANLAR |** CHAIN SLING HOOK AND SHORTENING CLUTCH



- **SONSUZ ZİNCİR SAPANLAR |** ENDLESS CHAIN SLING

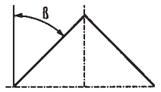
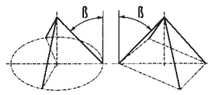


Super Alloy chain acc. EN 818-2 measurements, load values, weights
Yüksek kalite zincir acc. EN 818-2 ölçümler, yük değerleri ve ağırlıklar



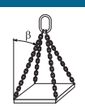
Chain D		Tolerance	P	Tolerance	min. XXXXXX	max. XXXXXX	Weight	Working load limit	Breaking load
mm	inch	mm	mm	mm	mm	mm	kg/m	kg	KN
6	1/4	± 0.24	18	± 0.5	7,8	22.2	0,8	1.120	45,2
7	9/32	± 0.28	21	± 0.6	9,1	25,9	1,1	1.500	61,6
8	5/16	± 0.32	24	± 0.7	10,4	29,6	1,4	2.000	80,4
10	3/8	± 0.40	30	± 0.9	13	37	2,2	3.150	126
13	1/2	± 0.52	39	± 1.2	16,9	48,1	3,8	5.300	212
16	5/8	± 0.64	48	± 1.4	20,8	59,2	5,7	8.000	322
18	11/16	± 0.90	54	± 1.6	23,4	66,6	7,3	10.000	407
20	3/4	± 1.00	60	± 1.8	26	74	9	12.500	503
22	7/8	± 1.10	66	± 2.0	28,6	81,4	10,9	15.000	608
26	1	± 1.30	78	± 2.3	33,8	96,2	15,2	21.200	849
32	1 1/4	± 1.60	96	± 2.9	41,6	118	23	31.500	1.290

Maximum working load limit for sling chains
Sapan zincirleri için maksimum çalışma yükü sınırı

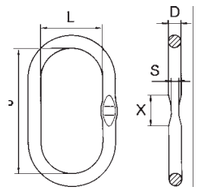
Chain	Single Legs a 1 braccio	Double Legs		3-4-Legs		Endless sling chains
Ø						
						
		0°<ß≤45°	0°<ß≤60°	0°<ß≤45°	0°<ß≤60°	
mm	kg	kg		kg		kg
6	1.120	1.600	1.120	2.360	1.700	1.800
7	1.500	2.120	1.500	3.150	2.240	2.500
8	2.000	2.800	2.000	4.250	3.000	3.150
10	3.150	4.250	3.150	6.700	4.750	5.000
13	5.300	7.500	5.300	11.200	8.000	8.500
16	8.000	11.200	8.000	17.000	11.800	12.500
18	10.000	14.000	10.000	21.200	15.000	16.000
20	12.500	17.000	12.500	26.500	19.000	20.000
22	15.000	21.200	15.000	31.500	22.400	23.600
26	21.200	30.000	21.200	45.000	31.500	33.500
32	31.500	45.000	31.500	67.000	47.500	50.000

If the chains are used in more demanding conditions (e.g. high temperature, asymmetric load distribution edge loads, impacts) the maximum load capacities in the table must be reduced. Please use the load factors below and refer to the specification in the user information.

Zincirler daha zorlu koşullarda kullanılıyorsa (örn. yüksek sıcaklık, asimetrik yük dağılımı kenar yükleri, darbeler), tablodaki maksimum yük kapasiteleri aynı olmalıdır. azaltılabilir. Lütfen aşağıdaki yük faktörlerini kullanın ve kullanıcı bilgilerindeki spesifikasyona bakın.

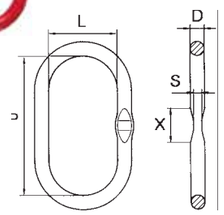
Temperature load	-40 up too 200 °C		above 200 °C up to 300 °C		adobe 300 ° up to 400 °C	
	1		0,9		0,75	
Asymmetric load distribution						
Load factor	up to 45°	45°-60°	up to 45°	45°-60°	up to 45°	45°-60°
	0,7	1	0,7	1	0,5	0,7
Edge loading	R = larger than 2x chain-Ø		R = larger than chain-Ø		R = chain-Ø or smaller	
Load Factor	1		0,7		0,5	
Load factor	light impact		medium impact		strong impact	
	1		0,7		impermissible	

Master Link A / Oval Halka



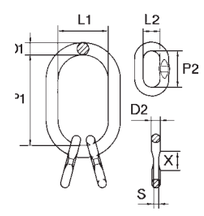
Chain ⊥ ∧ Ø		Code	Commercial Code	Measurements D	P	L	SxX	Weight	Working load limit 0-45°*
mm				mm				kg	kg
6+7	6	A 06/76.8	A13	13	110	60	10x30	0,34	2.300
8	7	A 87.8	A16	16,5	110	60	14x25	0,53	3.500
10	8	A 108.8	A18	19	135	75	14x35	0,92	5.000
13	10	A 1310.8	A22	23	160	90	17x35	1,60	7.600
16	13	A 1613.8	A26	27	180	100	20x46	2,46	9.600
18	16	A 1816.8	A32	33	200	110	20x46	4,16	11.800
20	18	A 2018.8	A36	36	260	140	-	6,22	25.100
22	20	A 2220.8	A36						
26	22	A 2622.8	A/T 45	45	340	180	-	12,82	30.800
32	26	A 3226.8	A/T 50	50	350	190	-	16,55	40.000
36	32	A 3632.8	A/T 56	60	400	200	-	27,01	60.000
40	36	A 4036.8	A/T 56						

Special Master Link T / Special Oval Halka



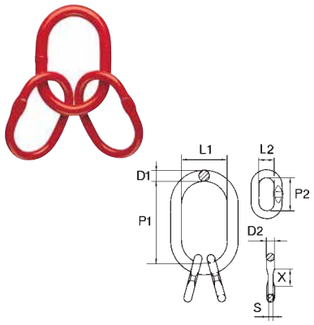
Chain ⊥ ∧ Ø		Code	Commercial Code	Measurements D	P	L	SxX	Weight	Working load limit 0-45°*
mm				mm				kg	kg
6+7+8	6+7	T 87.8	T 13	14	120	70	10x25	0,44	2.300
10	8	T 108.8	T 16	16,5	140	80	14x25	0,67	3.200
13	10	T 1310.8	T 20	20	160	95	14x35	1,21	5.400
16	13	T 1613.8	T 26	27	190	110	20x45	2,65	10.100
18+20	16	T 2016.8	T 32	33	230	130	26x65	4,78	15.700
22	18+20	T 2220.8	T 38	38	275	150	29x50	7,48	20.500
26	22	T 2622.8	A/T 45	45	340	180	-	12,82	30.800
32	26	T 3226.8	A/T 50	50	350	190	-	16,55	40.000
36	32	T 3632.8	A/T 56	60	400	200	-	27,01	60.000

Sub-assembly G / Küpeli Halka



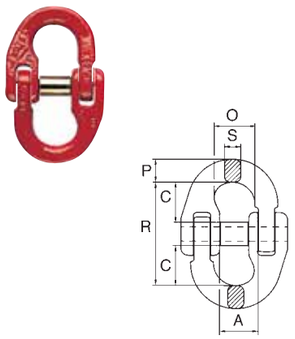
Chain ⋀ Ø	Code	Commercial Code	Measurements D1	P1	L1	D2	P2	L2	SxX	Weight	Working load limit 0-45°*
mm			mm							kg	kg
6+7	G 06/7.8	G 06/7.8	19	135	75	13	60	38	10x25	1,32	4.200
8	G 08.8	G 08.8	23	160	90	16,5	70	34	14x25	2,32	7.600
10	G 10.8	G 10.8	27	180	100	18,5	85	40	14x35	3,52	9.600
13	G 13.8	G 13.8	33	200	110	23	115	50	17x35	6,26	11.800
16	G 16.8	G 16.8	36	260	140	27	140	65	20x45	9,86	19.700
18	G 18.8	G 18.8	45	340	180	33	150	70	-	18,92	30.700
20	G 20.8	G 20.8	50	350	190	33	150	70	-	22,65	34.100
22	G 22.8	G 22.8	50	350	190	36	170	75	-	25,19	40.000
26	G 26.8	G 26.8	60	400	200	40	170	80	-	38,01	54.000
32	G 32.8	G 32.8	70	460	250	50	200	100	-	66,6	76.000

Special Sub-assembly TG / Special Küpeli Halka



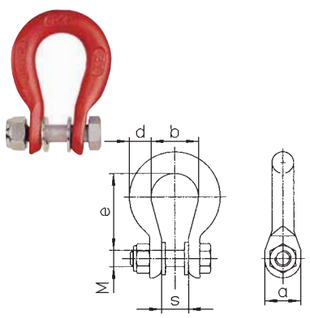
Chain ⌀	Code	Commercial Code	Measurements D1	P1	L1	D2	P2	L2	SxX	Weight	Working load limit 0-45°*
mm			mm							kg	kg
7	TG 07.8	TG 07.8	20	160	95	14	120	70	10x25	2,09	3.150
8	TG 08.8	TG 08.8	23	160	110	16,5	140	80	13x25	3,11	4.250
10	TG 10.8	TG 10.8	27	190	110	20	160	95	14x25	5,08	7.000
13	TG 13.8	TG 13.8	33	230	130	27	190	110	20x25	10,09	13.200
16	TG 16.8	TG 16.8	38	275	150	33	230	130	26x45	17,05	20.500
20	TG 20.8	TG 20.8	45	340	180	38	275	150	29x50	27,79	26.900
22	TG 22.8	TG 22.8	50	350	190	45	340	180	-	42,19	40.000
26	TG 26.8	TG 26.8	60	400	200	50	350	190	-	60,12	52.500

Connecting Link V / Bağlantı Ek Kilidi



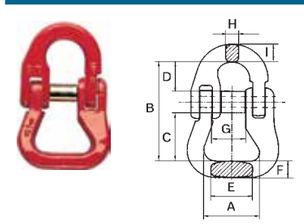
Chain mm	Chain inch	Code	Measurements A	C	O	R	P	S	Weight	Working load limit
mm	inch		mm						kg	kg
6	1/4	V 06. 8 U	14,1	18	18	44,4	7,8	7,6	0,06	1.120
7	9/32	V 07. 8 U	16,3	20	20	51	10	9	0,12	1.500
8	5/16	V 08. 8 U	18,35	25	23	61,5	11,5	10	0,18	2.000
10	3/8	V 10. 8 U	23	30	27	72	12,6	12,6	0,33	3.150
13	1/2	V 13. 8 U	27,6	36	34	88	19	16,7	0,7	5.300
16	5/8	V 16. 8 U	33	40	39	103	21	21	1,14	8.000
18+20	11/16+3/4	V 20. 8 U	41,7	48	47	115	29,6	24,5	2,1	12.500
22	7/8	V 22.8	49	51	55	133	26,5	26,5	2,2	15.000
26	1	V 26.8	61	68	67	164	32	30	5,1	21.200
32	1 1/4	V 32. 8 U	80	80	86	194	40	32	8,5	31.500

Omega Shackle VU / Omega Kilit VU



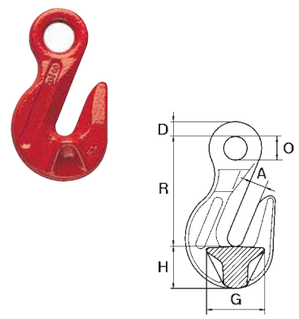
Chain mm	Chain inch	Code	Measurements e	b	d	s	a	M	Weight	Working load limit
mm	inch		mm						kg	kg
6	1/4	VU 06.8	33,5	21	9,3	11	16	7	0,07	1.120
7	9/32	VU 07.8	48,5	28	13	16	22	8	0,2	1.500
8	5/16	VU 08.8	48	28	13	16	22	10	0,22	2.000
10	3/8	VU 10.8	60	35	16	20	26,5	12	0,38	3.150
13	1/2	VU 13.8	72	39	18	24	34	16	0,67	5.300
16	5/8	VU 16.8	80	47	23	32	44	20	1,21	8.000
20	3/4	VU 20.8	96	56	26	36	52	24	1,97	12.500
26	1	VU 26.8	132	77	33	49	66	30	4,06	21.200

Webbing Coupling Link RSK / Polyester Sapan Bağlantı Ek Kilidi



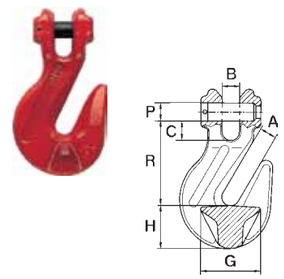
Chain mm	Chain inch	Code	Measurements A	B	C	D	E	F	G	H	I	Weight	Working load limit
mm	inch		mm									kg	kg
8	5/16	RSK 08.8 U	40	66	29	25	18	12,5	18,35	10	11,5	0,3	2000
10	3/8	RSK 10.8 U	50	81	39	30	21	16	23	12,6	12,6	0,5	3.150
13	1/2	RSK 13.8 U	60	104	52	36	27,5	20	27,6	16,7	19	1,10	5.300
16	5/8	RSK 16.8 U	66,5	112,5	50	40	40	30	33	21	21	2	8.000

Eye Grab Hook P / Gözlü Kısaltma Kancası P



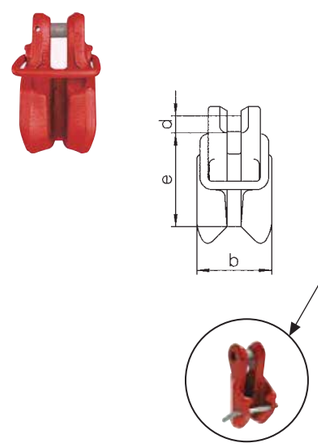
Chain mm	Chain inch	Code	Measurements A	D	O	R	G	H	Weight	Working load limit 0-45°*
mm	inch		mm						kg	kg
6	1/4	P 06.8	8	7	12	51	24	15	0,12	1.200
7+8	9/32+5/16	P 07/8.8	10	10	16	60	30	24	0,23	2.000
10	3/8	P 10.8	13	11	21	80	44	31	0,59	3.150
13	1/2	P 13.8	16,5	15,5	26	100	57	41	1,38	5.300
16	5/8	P 16.8	20	19	30	116	64	44	2,01	8.000
18+20	11/16+3/4	P 20.8	23,5	22	36	135	85	53	3,75	12.500
22	7/8	P 22.8	27	25	38	157	97	62	5,35	15.000
26	1	P 26.8	30	30	55	210	85	80	9,62	21.200
32	1 1/4	P 32.8	39	40	60	240	93	90	18,62	31.500

Clevis Grab Hook PK / Pimli Kısaltma Kancası PK



Chain mm	Chain inch	Code	Measurements A	B	C	P	R	G	H	Weight	Working load limit 0-45°*
mm	inch		mm							kg	kg
6	1/4	P 06.8	8	6,7	8	7,4	42	24	15	0,1	1.120
7+8	9/32+5/16	P 07/8.8	10	9	10	9	50	30	24	0,27	2.000
10	3/8	P 10.8	13	13	14	13	72	44	31	0,75	3.150
13	1/2	P 13.8	17	17	17	16	88	53	38	1,35	5.300
16	5/8	P 16.8	20	21	20	21	102	64	44	2,3	8.000
20	3/4	P 20.8	23,5	23,5	24	24	117	85	53	4,1	12.500
22	7/8	P 22.8	27	27	26	26	139	97	62	5,65	15.000

Clevis Shortening Clutch VKL / Kısaltma Kancası VKL



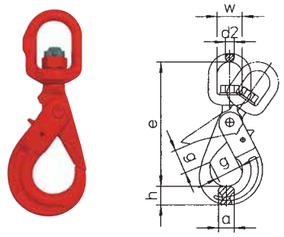
Chain mm	Chain inch	Code	Measurements e	b	d	Weight	Working load limit 0-45°*
mm	inch		mm			kg	kg
6	1/4	VKL 06.8	45	36	7,4	0,27	1.120
7	9/32	VKL 07.8	58	44	9	0,5	1.500
8	5/16	VKL 08.8	58	44	10	0,5	2.000
10	3/8	VKL 10.8	70	55	12,5	0,8	3.150
13	1/2	VKL 13.8 [1)]	90	70	16	1,53	5.300

PLEASE NOTE:

- only load inlying chain
- only use with safety device

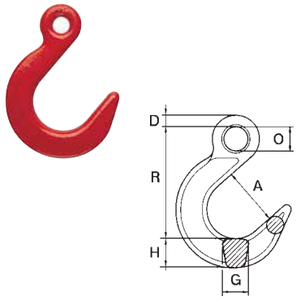
1. with cotter pin as securing part

Swivel Safety Hook WSB / Fırdöndülü Kendinden Emniyetli Kanca WSB



Chain		Code	Measurements						Weight	Working load limit
			e	h	d2	w	a	g		
mm	inch		mm						kg	kg
6	1/4	WSB 06.8	160	20	13	35	16	28	0,6	1200
7+8	9/32+5/16	WSB 07.8.8	181	26	13	35	23	34	1,1	2.000
10	3/8	WSB 10.8	281	30	16	42	25	45	2,0	3.150
13	1/2	WSB 13.8	269	40	20	49	34	52	4,0	5.300
16	5/8	WSB 16.8	139	50	24	60	35	60	6,8	8.000

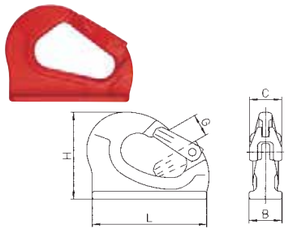
Clevis Foundry Hook GH / Pimli Dökümcü Kancası GH



Chain		Code	Measurements						Weight	Working load limit
			A	D	O	R	G	H		
mm	inch		mm						kg	kg
7+8	9/32+5/16	GH 07/8.8	64	13,5	18	123	26	31	1,14	2.000
10	3/8	GH 10.8	78	16	22	149	32	36	1,77	3.150
13	1/2	GH 13.8	89	19	27	174	39	43	2,82	5.300
16	5/8	GH 16.8	102	22	47	224	46	50	5,03	8.000
18+20	11/16+3/4	GH 20.8	114	28	56	260	54	61	7,6	12.500
22	7/8	GH 22.8	127	32	47	265	65	69	13,78	15.000
26	1	GH 26.8	136	34	54	305	72	80	19,21	21.200
32	11/4	GH 32.8	165	37	60	327	83	95	24,8	31.500

SPECIAL ACCESSORIES (NOTE WORKING LOAD LIMITS!)

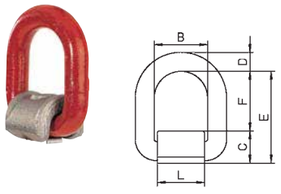
Weld-on Hook Has



Chain	Measurements					Weight	Working load limit
	L	H	G	B	C		
	mm					kg	kg
HAS 1,3	95	71	25	25	34	0,6	1.300
HAS 3,8	132	105	29	35	40	1,3	3.800
HAS 6,3	167	130	34	45	49	2,8	6.300
HAS 10	175	133	34	50	49	3,7	10.000

Safety hook to be welded on to excavator bucket. Meets safety specifications. Observer welding instructions!

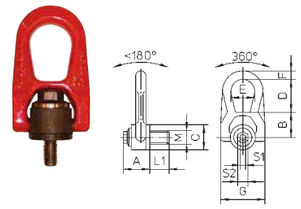
Weldable Lashing Point ASPF



Chain		Code	Measurements						Weight	Working load limit
			B	C	D	E	F	L		
mm	inch		mm						kg	kg
6	1/4	ASPF 01	40	28,5	13	67	38,5	36	0,4	1.120
10	3/8	ASPF 03	45	34,4	17	83	48,6	43	0,7	3.150
13	1/2	ASPF 05	55	44	22	101	57	50	1,5	5.300
16	5/8	ASPF 08	70	51	26	181	67	65	2,5	8.000
22	7/8	ASPF 15	97	65,5	34	159	93,5	90	5,9	15.000

For welding on/to truck borders or machine parts. Suitable for lashing and hooking. Only load centre axis. Please observe welding instructions + user informations.

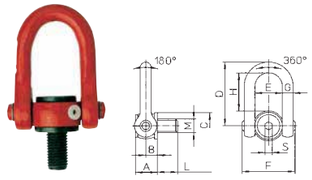
Lifting Point APD SR



Rotatable 350°, tiltable 180° with metric screw thread. Can be loaded with 100% load capacity, lengthwise at an angle across the screw axis.

Code	Measurements										Weight	Working load limit
	L1	S1	S2	A	B	C	D	E	F	G		
	mm										kg	kg
APD SR M8	14	8	16	33	30	30	32	26	14	53	0,32	300
APD SR M10	17	8	16	33	30	30	32	26	14	53	0,32	600
APD SR M12	21	8	16	33	30	30	32	26	14	53	0,33	1.000
APD SR M14	23	8	20	45	42	45	48	38	17	76	0,83	1.000
APD SR M16	27	8	20	45	42	45	48	38	17	76	0,85	1.600
APD SR M18	27	8	20	45	42	45	48	38	17	76	0,86	1.600
APD SR M20	30	8	20	45	42	45	48	38	17	76	0,86	2.500
APD SR M22	33	14	24	63	55	60	72	52	25	107	2,44	2.500
APD SR M24	36	14	24	63	55	60	72	52	25	107	2,45	4.000
APD SR M30	45	14	24	63	55	60	72	52	25	107	2,66	6.300

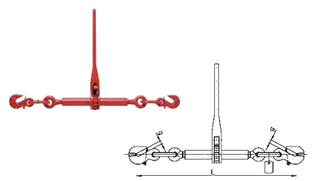
Ratchet Load Binder with Grab Hooks RLSP



Rotatable 350°, tiltable 180° with metric screw thread. Can be loaded with 100% load capacity, lengthwise at an angle across the screw axis.

Code	Measurements											Weight	Working load limit
	A	B	C	D	E	F	G	H	L	S	M		
	mm											kg	kg
APD SS M36	61	31	70	171	73	145	29	104	54	14	36x4	5,08	10.000
APD SS M42	61	31	70	171	73	145	29	104	63	14	42x4,5	5,3	12.500
APD SS M48	79	38	90	205	91	176	33	125	68	19	48x5	10,5	20.000
APD SS M56	79	38	90	205	91	176	33	125	78	19	56x5,5	11	25.000
APD SS M64	72	38	94	205	91	176	33	125	90	19	64x6	11,5	32.100

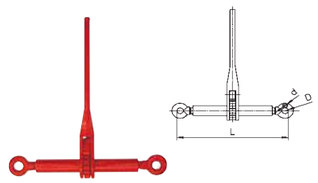
Ratchet Load Binder RLS



Code	max. Lashing capacity LC	STF - normal	Length closed L	Length open L	Tension range	Width opening	Weigth
	kN	daN	mm	mm	mm	mm	kg
RLSP 08	40	-	595	750	155	1,2	4,6
RLSP 10	63	-	635	790	155	1,5	5,5
RLSP 13	100	2.700	715	850	135	19,5	8,1

Only for lasging. Not for lifting purposes!

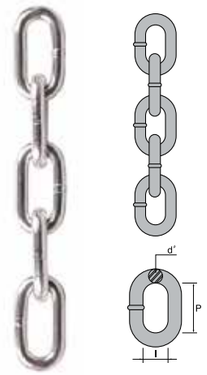
Ratchet Load Binder RLS



Code Codice	max. Lashing capacity LC	STF - normal	Length closed L	Length open L	Tension range	D	d	Weigth
	kN	daN	mm	mm	mm	mm	mm	kg
RLS 08	40	-	355	510	155	20	17	3,5
RLS 10	63	-	355	510	155	21	17	3,5
RLS 13	100	2.700	365	500	135	26	19,4	4

Only for lasging. Not for lifting purposes!

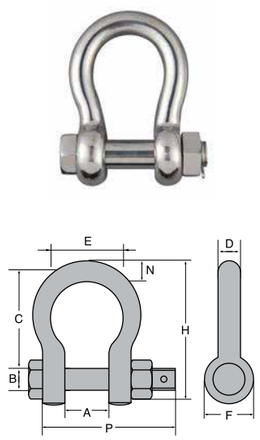
STAINLESS STEEL PRODUCTS
PASLANMAZ ÜRÜNLER



KP 6010

Diameter (mm)	Pitch (mm)	Inside Width (mm)	Weight / M (kg)
3	22	5	0.15
4	24	7	0.28
5	25	9	0.48
6	30	10	0.68
7	32	11	0.95
8	35	12	1.23
9	39	13	1.55
10	40	14	1.96
11	44	17	2.41
12	52	18	2.77
13	52	20	3.36
15	64	24	4.39
16	64	24	5.07
19	76	29	7.17
22	90	32	8.35

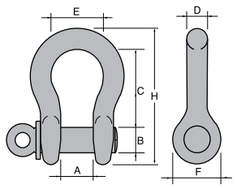
PASLANMAZ ZİNCİR | STAINLESS CHAIN



KP 6013

Size (in)	Dimensions(mm)									Tolerance + / - (in)
	A	B	C	D	E	F	H	L	N	A
3/16	0.38	0.25	0.88	0.19	0.60	0.56	1.47	0.98	0.19	0.06
1/4	0.47	0.31	1.13	0.25	0.78	0.61	1.84	1.28	0.25	0.06
5/16	0.53	0.38	1.22	0.31	0.84	0.75	2.09	1.47	0.31	0.06
3/8	0.66	0.44	1.44	0.38	1.03	0.91	2.49	1.78	0.38	0.06
7/16	0.75	0.50	1.69	0.44	1.16	1.06	2.91	2.03	0.44	0.06
1/2	0.81	0.63	1.88	0.50	1.31	1.19	3.28	2.31	0.50	0.06
5/8	1.06	0.75	2.38	0.63	1.69	1.50	4.19	2.94	0.69	0.06
3/4	1.25	0.88	2.81	0.75	2.00	1.81	4.97	3.50	0.81	0.06
7/8	1.44	1.00	3.31	0.88	2.28	2.09	5.83	4.03	0.97	0.06
1	1.69	1.13	3.75	1.00	2.69	2.38	6.56	4.69	1.06	0.06
1 1/8	1.81	1.25	4.25	1.13	2.91	2.69	7.47	5.16	1.25	0.06
1 1/4	2.03	1.38	4.69	1.25	3.25	3.00	8.25	5.75	1.38	0.06
1 3/8	2.25	1.50	5.25	1.38	3.63	3.31	9.16	6.38	1.50	0.13
1 1/2	2.38	1.63	5.75	1.50	3.88	3.63	10.00	6.88	1.62	0.13
1 3/4	2.88	2.00	7.00	1.75	5.00	4.19	12.34	8.86	2.25	0.13

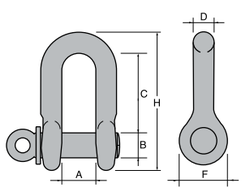
PASLANMAZ OMEGA SOMONLU KİLİT | STAINLESS OMEGA BOLT SHACKLES



KP 6011

Size (in)	Dimensions(mm)							Tolerance + / - (in)	Weight Each (kg)
	A	B	C	D	E	F	H	A	
1/8	7	3.5	19	3	13.5	9.5	29	0.06	0.018
3/16	9	6	22	4	15	14	37	0.06	0.03
1/4	12	8	28	6	19	15	46	0.06	0.05
5/16	13	9	31	7	21	19	53	0.06	0.09
3/8	16	11	36	9	26	23	63	0.06	0.14
1/2	20	16	48	12	33	30	83	0.06	0.33
5/8	27	19	60	16	43	38	106	0.06	0.62
3/4	32	22	71	19	50	45	126	0.06	1.07
7/8	36	25	84	22	58	53	148	0.06	1.64
1	42	28	95	25	68	60	166	0.06	2.28
1⅛	46	31	108	29	74	68	189	0.06	3.36
1¼	51	35	119	32	82	76	209	0.06	4.31
1½	60	41	146	39	98	92	254	0.13	7.81

PASLANMAZ OMEGA KİLİT | STAINLESS OMEGA SHACKLES



KP 6012

Size (in)	Dimensions(mm)						Tolerance + / - (in)	Weight Each (kg)
	A	B	C	D	F	H		
1/8	7	4	15	3	10	26	0.06	-
3/16	10	6	20	5	13	34	0.06	-
1/4	12	7	15	6	15	40	0.06	0.05
5/16	13	9	19	8	19	48	0.06	0.08
3/8	16	11	23	9	23	58	0.06	0.13
1/2	20	16	30	12	30	77	0.06	0.27
5/8	27	19	38	16	38	95	0.06	0.57
3/4	31	22	46	19	46	115	0.06	1.19
7/8	36	25	53	22	53	135	0.06	1.43
1	43	28	60	25	60	150	0.06	2.16
1⅛	46	31	68	28	68	172	0.06	3.06
1¼	51	35	76	31	76	190	0.06	4.11
1½	61	42	122	37.5	81	220	0.06	6.7

PASLANMAZ DÜZ KİLİT | STAINLESS DEE SHACKLES

KP 6035

Size (mm)	B	C	D	L	L1	d	N.W / (kg)
6	16	6	17	41	10	6	0.03
8	20	8	20	48	13	8	0.035
10	25	10	25	62	17	10	0.065
12	30	12	30	75	21	12	0.13
16	35	16	35	90	27	16	0.25
20	40	20	40	102	30	20	0.43
24	50	24	50	126	36	24	0.85
36	70	28	68	178	54	36	0.98

CROM ERKEK EYE BOLT | STAINLESS EYE BOLT

KP 6036

Size (mm)	B	C	D	L	d	N.W / (kg)
6	16	5	13	31	6	0.03
8	20.5	6	16	40	8	0.035
10	24	8	20	49	10	0.065
12	30	10	25	61	12	0.13
16	35	12	30	72	16	0.25
20	40	16	35	71	20	0.46
24	50	20	38	88	24	0.87

PASLANMAZ DIŞI EYE BOLT | STAINLESS EYE NUT

KP 6029

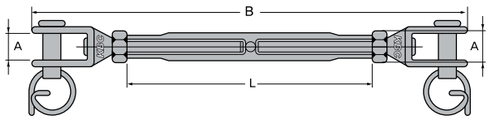
Size (mm)	L	A	B
12x52	52	12	9
16x66	66	16	12
22x96	96	22	16

PASLANMAZ FLOK KİLİDİ | STAINLESS STEEL SHOOTING HOOK

KP 6030

Size (mm)	A	B	C	d
12x70	70	12	12	-
16x87	87	16	16	5.5
22x128	120	16	22	8

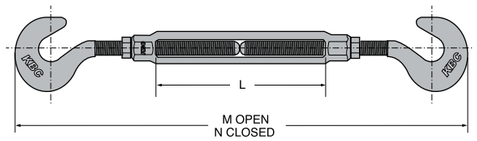
PASLANMAZ FIRDÖNDÜLÜ FLOK KİLİDİ | STAINLESS SHOOTING SWIVEL HOOK



Size (in)	A (mm)	B (mm)	L (mm)	Weight (mm)
8	13	180	90	0.17
10	14	200	100	0.26
12	17	242	140	0.44
16	21	335	200	1.08
20	26	425	230	2
22	31	550	280	3.72

PASLANMAZ ZİNCİR BORU TİP GERDİRME | STAINLESS PIPE TYPE TURNBUCKLE

KP 6019



Size (in)	MO (mm)	NC (mm)	L (mm)	Weight (mm)
1/4 x 4	288	189	100	0.12
5/16 X 41/2	330	220	110	0.18
3/8 X 6	450	295	150	0.32
1/2 X 6	486	334	150	0.58
5/8 X 6	496	350	150	0.98
3/4 X 6	557	404	150	1.56
3/4 X 12	840	543	300	2.1
7/8 X 12	875	575	300	3.08
1 X 12	880	604	300	4.1

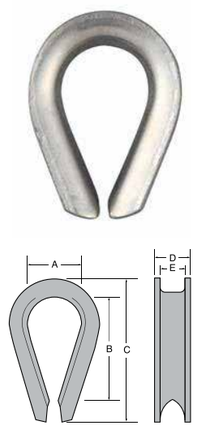
PASLANMAZ GERDİRME | STAINLESS FORGED TYPE TURNBUCKLE

KP 60181

KP 6022

Size (D X R)	Weight / 100PC	Size (D X R)	Weight / 100PC
5 x 25	1.45	9 x 70	12.4
5 x 30	1.7	9 x 80	13
5 x 40	2.18	10 x 50	11.62
6 x 40	3.21	10 x 60	13.56
6 x 50	3.91	10 x 70	15.5
6 x 60	4.6	10 x 80	17.44
6 x 70	5.3	10 x 90	19.37
7 x 40	4.46	12 x 60	20.09
7 x 50	5.41	12 x 70	22.88
7 x 60	6.36	12 x 80	25.67
7 x 70	7.31	12 x 90	28.46
8 x 40	5.95	12 x 100	31.25
8 x 50	7.19	13 x 80	27.18
8 x 60	8.43	13 x 120	43.55
8 x 70	9.67	13 x 125	45
9 x 50	9.26	16 x 100	50
9 x 60	10.83	16 x 125	69.93

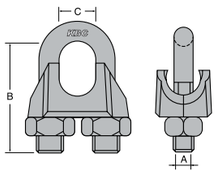
PASLANMAZ HALKA | STAINLESS ROUND RING



KP 6023

Size (mm)	C	D	A	E	B
2	26	6	10.5	4	17
3	32.5	7.5	9.5	6	22
5	50	9	12	6.5	27
6	50	10	19.5	8	35
8	57	12	23.5	11	40
10	73	14	29	12.5	52.5
12	88	20	36	15	64
16	101	25.5	42	19	75.5
20	113	30	42	23	83.5
22	128	34.5	53	27	84
25	137	37.5	59	28	106
28	156	41	66	33	117
32	163	46	73	36	126
35	177	51.5	80	38	128
38	200	52.5	83.5	41	154
42	202	56.5	85	43	160
50	277	68.5	120	54	212

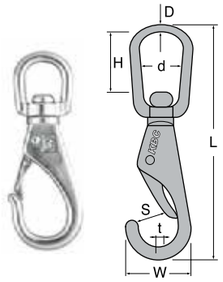
PASLANMAZ RADANSA | STAINLESS THIMBLE



KP 6024

Size (mm)	A	B	C	Weight / 100 (kg)
3	M15	20	6.5	1.5
5	M6	24	9.5	3
6	M8	31	10	5.2
8	M8	34	11.5	5.9
10	M10	41	13.5	10
12	M12	53	16.5	17.4
16	M14	59	20.5	24.8
19	M14	68	22	36.5
22	M16	78	26.5	53.2
25	M16	87	31	68.3

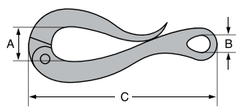
PASLANMAZ KLEMENS | STAINLESS WIRE ROPE CLIPS



KP 6039

Size (mm)	D	L	W	S	H	d	t
# 0	3	64	18	8	14	16	5
# 1	5	85	30	10	19	21	6.5
# 2	5	98	38	12	20	22	7.5
# 3	7	118	46	14	23	23	10

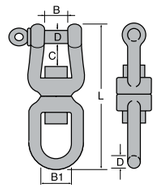
PASLANMAZ FIRDÖNDÜLÜ KANCA | STAINLESS FAST SWIVEL SNAP HOOK



KP 6032

Size (mm)	A	B	C
4	0.75	0.39	4
6	0.97	0.51	6

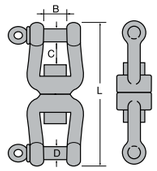
PASLANMAZ PELİKAN KANCA | STAINLESS PELICAN HOOK



KP 6048

Size (mm)	L	B	C	D	B1
10	118	20	22	10	24
13	152	26	28	13	32
16	188	32	37	16	39
19	229	38	45	19	41

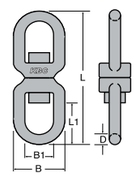
PASLANMAZ FIRDÖNDÜ GÖZ-ÇATAL | STAINLESS EYE/JAW SWIVEL



KP 6049

Size (mm)	L	B	C	D
10	118	20	22	10
13	152	26	28	13
16	188	32	37	16
19	229	38	45	19

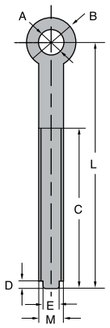
PASLANMAZ FIRDÖNDÜ ÇATAL-ÇATAL | STAINLESS JAW/JAW SWIVEL



KP 6047

Size (mm)	D	L	L1	B	B1
5	5	60	13	23	13
6	6	65	15	21	15
8	8	90	22	35	20
9	10	115	27	44	24
7/16	11	134	42	48	26
13	13	154	35	57	32
16	16	188	45	71	39
19	19	231	50	84	41
22	22	254	52	95	47
25	25	295	67	115	63
32	32	385	87	144	80
38	38	345	92	154	86

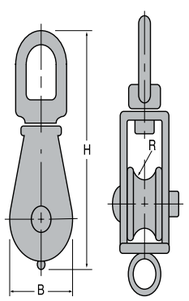
PASLANMAZ GÖZ/GÖZ FIRDÖNDÜ | STAINLESS EYE/EYE SWIVEL



KP 6037

Size (mm)	A	B	C	D	E	L	M
10x60	10.2	20	40	3	6.5	60	10
10x70	10.2	20	45	3	6.5	70	10
10x80	10.2	20	52	3	6.5	80	10
10x100	10.2	20	65	3	6.5	100	10
12x60	12.2	24	40	3	8.5	60	12
12x70	12.2	24	45	3	8.5	70	12
12x80	12.2	24	52	3	8.5	80	12
12x100	12.2	24	65	3	8.5	100	12
12x120	12.2	24	80	3	8.5	120	12
12x150	12.2	24	100	3	8.5	150	12
16x70	16.5	32	45	3	10.5	70	16
16x80	16.5	32	52	3	10.5	80	16
16x100	16.5	32	65	3	10.5	100	16
16x120	16.5	32	80	3	10.5	120	16
16x150	16.5	32	100	3	10.5	150	16
20x80	20.5	40	52	5	13	80	20
20x90	20.5	40	58	5	13	90	20
20x100	20.5	40	65	5	13	100	20
20x120	20.5	40	80	5	13	120	20
20x130	20.5	40	85	5	13	130	20
20x140	20.5	40	90	5	13	140	20
20x150	20.5	40	100	5	13	150	20
22x120	22.5	44	80	5	13	120	22
22x150	22.5	44	100	5	13	150	22
24x150	24.5	50	100	5	13	150	24

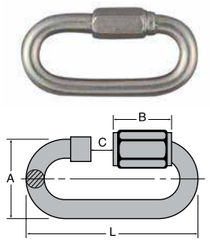
PASLANMAZ SAPLAMA | STAINLESS EYE BOLT



KP 6054

Size (mm)	R (mm)	B (mm)	H (mm)	Weight(kg)	
				Single	Double
20	7.5	24	73	0.06	-
25	10	30	85	0.12	0.22
32	10.5	36	97	0.16	0.34
50	14.5	54	126	0.4	0.56

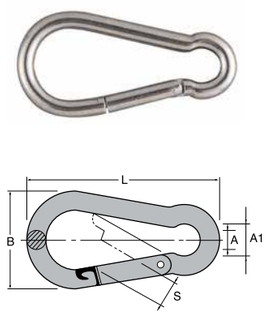
PASLANMAZ MAKARA | STAINLESS PULLEY



KP 6040

Size (mm)	L	A	B	C	Weight / 100PC (kg)
3.5	32	18	13	5.5	0.81
4	40	19	14	5.5	1.1
5	49	24	16.5	7.5	2.03
6	59	27	19	8	3.1
7	60	31	21	9	5
8	74.5	35	25	10.5	7.3
9	80	38.5	27	10.5	9.9
10	89.5	42	29	13	12.8
12	106	49	33	15	21.4

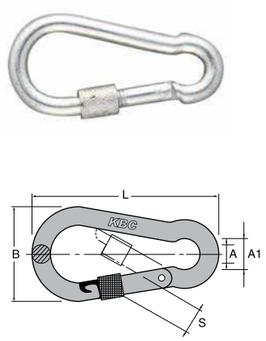
PASLANMAZ QUICK KARABİNA | STAINLESS QUICK LINK



KP 6041

Size (mm)	L	A1	A	S	B	Weight / 100PC (kg)
4	40	6	5.5	7	20	0.8
5	50	9	6	8.5	25	1.6
6	60	9	6.5	8.5	30	2.5
7	70	11.5	8.5	10	34.5	4
8	80	12.5	10.5	11	39	6.1
9	90	15	12	13	45	8.7
10	100	15.5	12	14	50.5	12.3
11	120	19.5	16.5	18.5	58	17.3
12	140	20	18	20	65	-
13	156.5	23	20	25	76	32.4

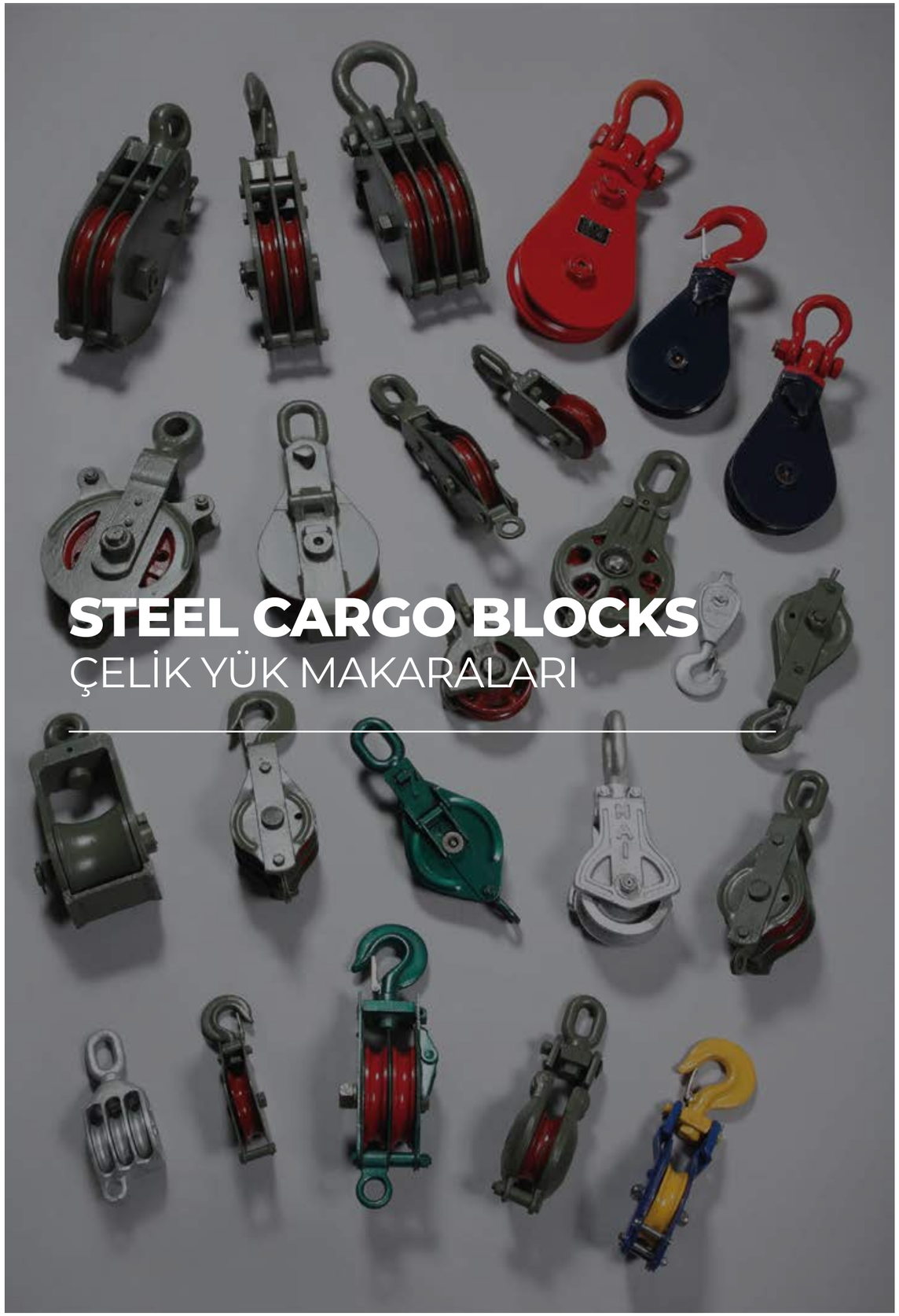
PASLANMAZ KARABİNA | STAINLESS SNAP HOOK



KP 6042

Size (mm)	L	A1	A	S	B	Weight / 100PC (kg)
5	50	8	7	6.5	24	1.7
6	60	9	7	9.5	29.5	2.8
7	70	11.5	8	11	35	4.4
8	80	12.5	10	11	39	6.6
9	90	13	11	13	44.5	9.3
10	100	17	13.5	13	50	12.7
11	120	19	14.5	19	57.5	18.3
12	140	21	17.5	21	67.5	24.4

PASLANMAZ KARABİNA | STAINLESS SNAP HOOK



STEEL CARGO BLOCKS
ÇELİK YÜK MAKARALARI

Type	Dia. Of Rope (mm)	S.W.L (T)	Shackle
340 - 1AR	20	3.5	SB34 or BB34
340 - 1BR	20	3.5	SB42 or BB42
410 - 1AR	24	5	SB40 or BB40
410 - 1BR	24	5	SB50 or BB50
430 - 1AR	25	5.5	SB42 or BB42
430 - 1BR	25	5.5	SB55 or BB55
460 - 1AR	26	6.5	SB46 or BB46
460 - 1BR	26	6.5	SB60 or BB60
480 - 1AR	28	7	SB48 or BB48
480 - 1BR	28	7	SB60 or BB60

TEKLİ MAKARA / SINGLE SHEAVE

Type	Dia. Of Rope (mm)	S.W.L (T)	Shackle
340 - 1AR	20	13	SB46 or BB46
340 - 1BR	20	16	SB55 or BB55
410 - 1AR	24	14	SB55 or BB55
410 - 1BR	24	23	SB60 or BB60
430 - 1AR	25	21	SB60 or BB60
430 - 1BR	25	25	SB65 or BB65
460 - 1AR	26	24	SB65 or BB65
460 - 1BR	26	29	SB70 or BB70
480 - 1AR	28	28	SB70 or BB70
480 - 1BR	28	34	SB75 or BB75

ÇİFT DİLLİ MAKARA / DOUBLE SHEAVE

Type	Dia. Of Rope (mm)	S.W.L (T)	Shackle
410 - 1AR	24	29	SB70 or BB70
410 - 1BR	24	33	SB75 or BB75
430 - 1AR	25	32	SB75 or BB75
430 - 1BR	25	36	SB80 or BB80
460 - 1AR	26	34	SB75 or BB75
460 - 1BR	26	38	SB80 or BB80
480 - 1AR	28	39	SB80 or BB80
480 - 1BR	28	45	SB85 or BB85

ÜÇ DİLLİ MAKARA | TRIPLE SHEAVE

Type	Dia. Of Rope (mm)	S.W.L (T)	Shackle
220 - 1A	12.5	1.4	SB26 or BB26
220 - 1B	12.5	1.4	SB30 or BB30
240 - 1A	14	1.75	SB26 or BB26
240 - 1B	14	1.75	SB30 or BB30
280 - 1A	16	2.25	SB30 or BB30
280 - 1B	16	2.25	SB34 or BB34
340 - 1A	20	3.5	SB34 or BB34
340 - 1B	20	3.5	SB42 or BB42
410 - 1A	24	5	SB40 or BB40
410 - 1B	24	5	SB50 or BB50
430 - 1A	25	5.5	SB42 or BB42
430 - 1B	25	5.5	SB55 or BB55
460 - 1A	26	6.5	SB48 or BB48
460 - 1B	26	6.5	SB60 or BB60
460T - 1A	33.5	11	SB60
460T - 1B	33.5	11	SB75
480 - 1A	28	7	SB48 or BB48
480 - 1B	28	7	SB60 or BB60

TEKLİ MAKARA / SINGLE SHEAVE

Type	Dia. Of Rope (mm)	S.W.L (T)	Shackle
240 - 2A	14	6.5	SB34 or BB34
240 - 2B	14	8	SB38 or BB38
280 - 2A	16	8.5	SB38 or BB38
280 - 2B	16	10	SB40 or BB40
340 - 2A	20	13	SB46 or BB46
340 - 2B	20	16	SB56 or BB56
410 - 2A	24	19	SB55 or BB55
410 - 2B	24	23	SB60 or BB60
430 - 2A	25	21	SB60 or BB60
430 - 2B	25	25	SB65 or BB65
460 - 2A	26	24	SB70 or BB70
460 - 2B	26	29	SB75 or BB75
460T - 2A	33.5	42	SB85
460T - 2B	33.5	50	SB90
480 - 2A	28	28	SB70 or BB70
480 - 2B	28	34	SB75 or BB75

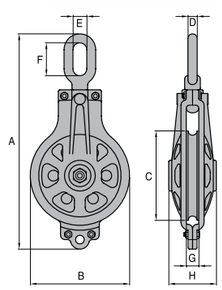
ÇİFT DİLLİ MAKARA / DOUBLE SHEAVE

Type	Dia. Of Rope (mm)	S.W.L (T)	Shackle
410 - 3A	24	29	SB75 or BB75
410 - 3B	24	33	SB80 or BB80
430 - 3A	25	32	SB70 or BB70
430 - 3B	25	36	SB75 or BB75
460 - 3A	26	34	SB75 or BB75
460 - 3B	26	38	SB80 or BB80
480 - 3A	28	39	SB80 or BB80
480 - 3B	28	45	SB85 or BB85

ÜÇ DİLLİ MAKARA | TRIPLE SHEAVE

Type	Sheave	S.W.L (T)	Shackle
340 - 1RA	340	3.5	65
340 - 2RA	340	13	115
410 - 1RA	410	5	93
410 - 2RA	410	19	210
430 - 1RA	430	5.5	98
430 - 2RA	430	21	215
460 - 1RA	460	65	170

MAPALI YÜK MAKARASI | JIS TYPE CARGO BLOCK



Size (in)	S.W.L (T)	Dimensions (mm)								Weight (kg)
		A	B	C	D	E	F	G	H	
8	3	520	225	200	26	40	93	27	108	14
10	5	610	280	250	25	43	90	25	110	26.1
12	8	700	323	290	30	45	107	40	155	35.2
16	10	880	460	402	68	60	60	43	175	-
17	16	960	470	420	78	67	67	58	200	-

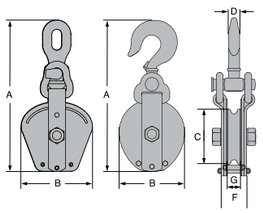
DÖKÜM YÜK MAKARASI | CASTING CARGO BLOCK

Size (in)	S.W.L (T)	A	B	C	D	E	F	G	Weight (kg)
3	0.5	265	94	69	16	24	48	26	1
4	1	322	112	90	20	28	49	29	3.5
5	2	397	139	120	26	32	57	33	4
6	5	460	190	147	36	46	75	33	12

TEKLİ TEKERLEK TİP MAKARA | KOREA TYPE BLOCK SINGLE WHEEL WITH HOOK

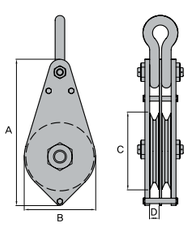
Size (in)	S.W.L (T)	A	B	C	D	E	F	G	H	I	Weight (kg)
8”1AH	8	566	246	200	40	60	98	48	-	-	24.4
8”1AE	10	542	246	200	29	-	90	48	107	45	27.2
8”2AH	25	523	230	200	53	-	158	48	54	54	-
10”1AE	15	676	318	230	40	-	110	54	95	45	-

AĞIR DONAM TEKLİ MAKARA | U.S TYPE BLOCK SINGLE WHEEL WITH HOOK



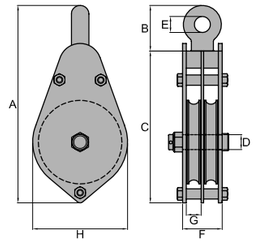
Size (in)	Sheave	A	B	C	D
200	2	375	220	200	39
200	3	375	220	200	39
200	4	375	220	200	39
250	2	460	270	250	42
250	3	460	270	250	42
250	4	460	270	250	42
300	2	534	310	300	48
300	3	534	310	300	48

Size (in)	Sheave	A	B	C	D
300	4	534	310	300	48
350	2	650	375	350	57
350	3	650	375	350	57
350	4	650	375	350	57
410	2	748	435	410	67
410	3	748	435	410	67
410	4	748	435	410	67
-	-	-	-	-	-



KİLİTLİ TİP YÜK MAKARASI | STEEL BLOCK SHACKLE TYPE

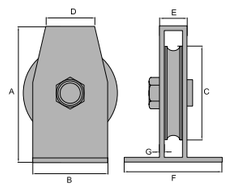
Size (in)	S.W.L (T)	A	B	C	D	E	F	G	H	Weight (kg)
220	2	520	120	400	38	42	105	39	250	33
220	3	520	120	400	38	42	150	39	250	43
220	4	535	135	400	38	50	200	39	250	57
240	2	520	120	400	50	45	110	42	270	59
240	3	600	135	465	50	55	160	42	270	66
240	4	600	135	465	50	55	215	42	270	73
300	2	650	150	500	50	55	135	48	310	88
300	3	650	150	500	50	55	190	48	310	107
300	4	650	150	500	50	55	240	48	310	



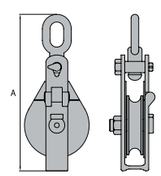
FIRDÖNDÜLÜ YÜK MAKARASI | STEEL BLOCK SWIVEL EYE TYPE

Size (in)	A	B	C	D	E	F	G
250	362	200	250	130	72	260	12
300	418	250	300	150	84	310	14.5

YAN SAÇLI MAKARA | STEEL BLOCK

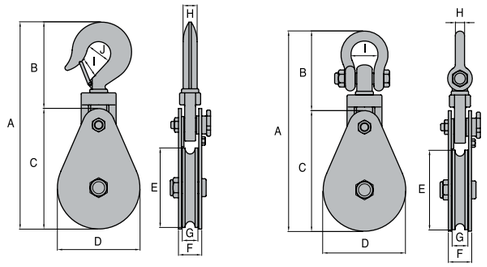


Type	Dia. of Wire Rope (in)	A	S.W.L (T)	Proof Load (T)	Weight (kg)
MS - 160	20	420	1	2	14
MS - 200	25	520	2	4	30
MS - 240	28	615	3	6	47
MS - 280	32	725	4	8	68



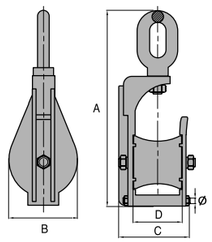
MANDIKAPAN MAKARA | JIS TYPE SNATCH BLOCK

AĞIR DONAM MAKARASI | SNATCH BLOCK HEAVY DUTY TYPE WITH HOOK



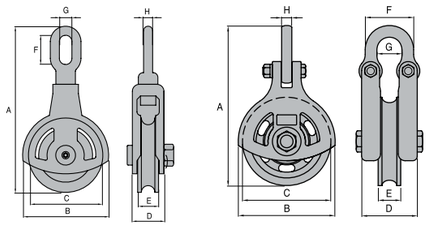
Size (in)	A	B	C	D	E	F	G	H	I	J	S.W.L (T)	Dia. of Wire Rope (in)	Weight (kg)
3	244	108	136	75.5	74	36.5	27	21.5	24	35.5	2	1-10mm	2.2
4 1/2 (1A)	355	165	190	109	100	51	34	29	40	49	4	1/2	-
4 1/2 (2A)	375	185	190	109	100	95	34	29	40	49	4	1/2	-
6	422	174	248	153	150	60	40	36	54	60	8	3/4	11.7
8	514	214	300	205	200	60	40	36	54	60	8	3/4	16
10	680	276	404	259	250	68	43	46	57	70	15	7/8	21
8	525	226	300	205	200	55	39	25	67	-	8	3/4	-
10	702	298	404	259	250	68	43	36	90	-	15	7/8	-

BÜYÜK AÇIK MAKARA | BIG WANI BLOCK



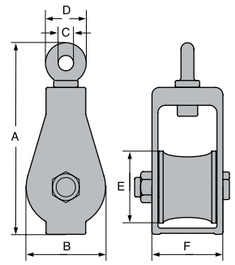
Size (in)	A	B	C	Ø	D
4	419	119	119	98	70
5	452	158	162	122	112

SAKURA MAKARASI | SAKURA BLOCK



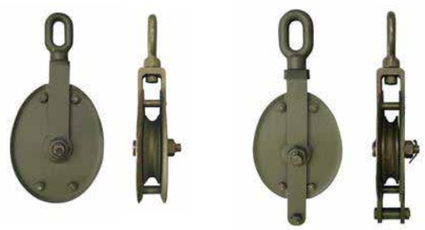
Size (in)	S.W.T (T)	A	B	C	D	E	F	G	H	Weight (kg)
6	5	280	177	148	92	37	75	26	24	4.6
8	7.5	356	218	196	122	50	104	50	26	8.4
6	3	358	185	160	68	45	63	27	19.5	-
8	5	445	220	200	82	55	70	32	25	-

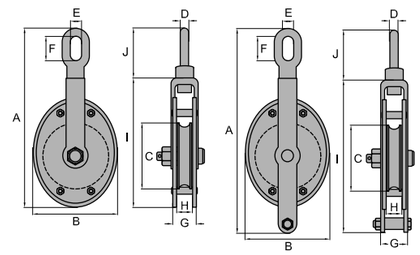
DÖNERLİ MAKARA | WIDE ROLLER BLOCK



Size (in)	S.W.L (T)	Sheave (mm) (mm)	Remark	A	B	C	D	E	F	Weight (kg)
3	3	145X100	SB24	385	149	35	80	136	119	
5	5	150X140	SB28	396	160	35	82	150	143	
7	7	170X140	SB34	516	170	40	100	150	171	
10	10	240x170	SB40	660	245	54	120	220	215	

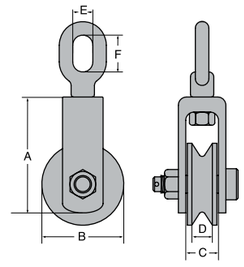
RAY MAKARA | GUY BLOCK





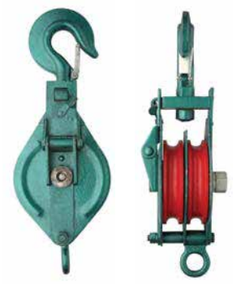
Size (T)	A	B	C	D	E	F	G	H	I	J
MS1A	435	205	160	20	27	60	55	39	313	122
MS2A	435	205	160	20	27	60	97	39	315	122
MS1B	493	205	160	20	27	60	65	39	371	122
MS2B	493	205	160	20	27	60	107	39	374	122

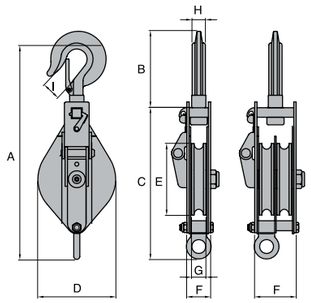
ÇEKME MAKARASI | TOWING BLOCK



S.W.L (t)	Size (in)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
2	4	247	100	58	34	24	44
3	5	332	125	70	46	27	62
5	6	378	140	70	45	31	69

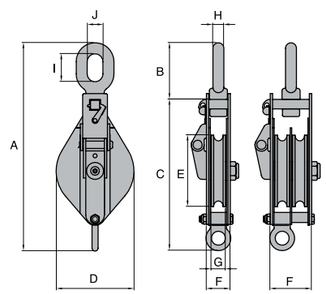
KANCALI AÇILIR MAKARA | SNATCH BLOCK WITH HOOK OPEN





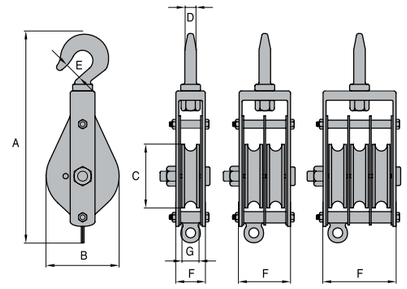
Size (in)	S.W.T (T)	Dia. of Wire Rope (in)	A	B	C	D	E	F	G	H	I	Weight (kg)
3” 1A	0.5	8	287	93	93	87	70	32	18	18	21	1.7
4” 1A	1.0	10	343	112	112	112	95	41	24	19	25	3.2
5” 1A	1.5	13	400	124	124	140	120	45	26	22	30	5
6” 1A	2.0	16	439	142	142	164	148	53	32	30	35	8
6” 2A	2.0	16	444	142	142	164	148	95	32	30	35	13.5
7” 2A	3.0	18	542	162	162	196	172	112	38	33	38	16.5
8” 2A	4.0	22	636	206	206	220	200	115	40	36	42	25
10” 2A	5.0	24	660	186	186	272	248	122	42	40	46	35

MAPALI AÇILIR MAKARA | SNATCH BLOCK OVAL EYE OPEN



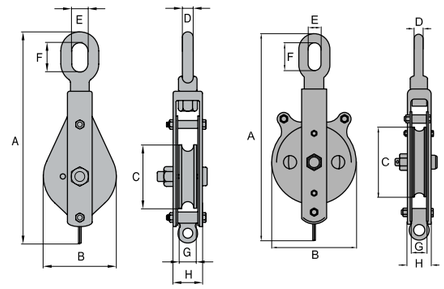
Size (in)	S.W.T (T)	Dia. of Wire Rope (in)	A	B	C	D	E	F	G	H	I	J	Weight (kg)
3” 1A	0.5	8	262	68	194	87	70	35	18	14	35	17	1.7
4” 1A	1.0	10	318	87	231	112	95	41	24	15	43	22	3.2
5” 1A	1.5	13	366	90	276	140	120	45	26	20	46	25	5
6” 1A	2.0	16	433	118	315	164	148	53	32	22	58	32	8.3
7” 1A	3.0	18	515	139	376	196	172	62	38	24	73	36	15
8” 1A	4.0	22	580	158	422	220	200	65	40	27	82	39	18

MAKARA | SNATCH BLOCK



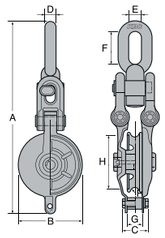
Size (in)	S.W.T (T)	Dia. of Wire Rope (in)	A	B	C	D	E	F	G	Weight (kg)
3” 1A	0.5	8	262	87	79	16	25	38	27	1.65
3” 2A	0.5	8	290	87	79	16	25	79	27	2.4
3” 3A	0.5	8	290	87	79	16	25	110	27	2.4
4” 1A	1.0	10	318	110	98	17	28	45	27	3.1
4” 2A	1.0	10	318	110	98	17	28	77	27	4.5
4” 3A	1.0	10	318	110	98	17	28	110	27	5.5
5” 1A	1.5	13	421	140	124	24	30	51	29	4.4
5” 2A	1.5	13	444	140	124	28	37	88	29	7.8
5” 3A	1.5	13	444	140	124	28	37	126	29	9.2
6” 1A	2.0	16	569	181	160	28	37	63	34	8.2
6” 2A	2.0	16	569	181	160	36	50	104	34	13.0
6” 3A	2.0	16	569	181	160	36	50	146	34	15

MAKARA | SNATCH BLOCK



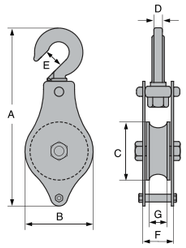
Size (in)	S.W.T (T)	Dia. of Wire Rope (in)	A	B	C	D	E	F	G	H	Weight (kg)
3” 1A	0.5	8	253	87	79	13	22	31	27	38	1.65
3” 2A	0.5	8	280	87	79	13	22	31	27	79	2.4
3” 3A	0.5	8	280	87	79	13	22	31	27	110	2.4
4” 1A	1.0	10	318	110	98	16	24	44	27	45	3.1
4” 2A	1.0	10	318	110	98	16	24	44	27	77	4.5
4” 3A	1.0	10	318	110	98	16	24	44	27	110	5.5
5” 1A	1.5	13	435	140	124	20	27	63	29	51	4.4
5” 2A	1.5	13	435	140	124	20	27	63	29	88	7.8
5” 3A	1.5	13	435	140	124	20	27	63	29	126	9.2
6” 1A	2.0	16	538	181	160	25	32	69	34	63	8.2
6” 2A	2.0	16	538	181	160	25	32	69	34	104	13.0
6” 3A	2.0	16	538	181	160	25	32	69	34	146	15
7” 1A	3.0	-	538	218	180	25	32	70	45	63	-
7” 2A	3.0	-	538	218	180	25	32	70	45	106	-

LASHING MAKARASI | LASHING BLOCK



Size (in)	S.W.T (T)	Dimensions (mm)									Weigth (kg)
		A	B	C	D	E	F	G	H	R	
5	3	370	140	98	20	25	50	32	98	15	7.2
6	5	487.5	168	128	26	40	85	38	125	15	13.8

TEKLİ KANCALI MAKARA | KOREA TYPE BLOCK SINGLE WHEEL WITH HOOK

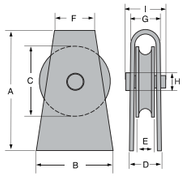


Size (in)	S.W.T (T)	A	B	C	D	E	F	G
3	1	228	88	75	15	25	40	30
4	1.5	264	105	90	15	25	40	30
5	2	293	130	115	16	26	45	30

MENDOZ MAKARASI | MALLEABLE IRON BLOCK

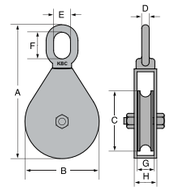
Size (in)	Head Load (T)	S.W.L (T)	For Rope Dia (mm)
3” (1A)	0.4	0.2	12
4” (1A)	0.8	0.4	16
5” (1A)	1.0	0.5	18
6” (1A)	2.0	1.0	24
7” (1A)	2.2	1.1	26
8” (1A)	2.4	1.2	28
10” (1A)	3.6	1.8	32
3” (2A)	0.4	0.4	12
4” (2A)	0.8	0.8	16
5” (2A)	1.0	1.0	18
6” (2A)	2.0	2.0	24
7” (2A)	2.2	2.2	26
8” (2A)	2.4	2.4	28
10” (2A)	3.6	3.6	32

KAYNAKLI MAKARA | GUIDE BLOCK



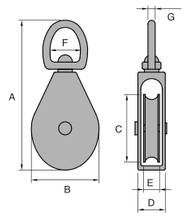
Size (mm)	Dimensions (mm)								
	A	B	C	D	E	F	G	H	I
	65	110	64	31	16	38	26	10	38

BAYRAK MAKARASI | SIGNAL BLOCK



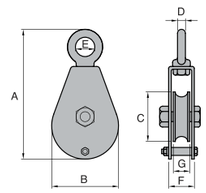
Size (mm)	Dimensions (mm)								S.W.L (kg)
	A	B	C	D	E	F	G	H	
65	143	80	64	8	19	28	17	24	200

DÖKÜM BAYRAK MAKARASI | DIE CASTING BLOCK



Size (in)	Dimensions (mm)						
	A	B	C	D	E	F	G
3/4	48	20	18	12	7	11	4
1	56	26	25	14	9	11	4
1 1/2	88	36	35	18	12	21	5
2	104	47	47	19	12	21	5

SARI PİRİNÇ MAKARA | PULLEY BLOCK



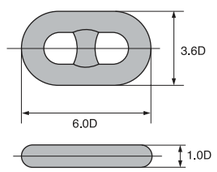
Size (mm)	Dimensions (mm)						
	A	B	C	D	E	F	G
38	110	47	38	5	14	21	13
50	132	67	50	8	21	26	17

DECK EQUIPMENT
GEMİ EKİPMANLARI

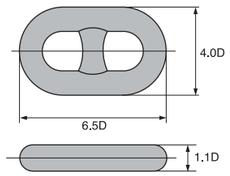
ÇAPA ZİNCİRİ | ANCHOR CHAIN

Size	Common Link		Grade2		Grade3		Weight / kg			Weigth / kg					
	Legth	Widht	PTL	PTL	PTL	BTL	1M/KG	27.5M	C	EL	E	J/S	A/S	A/SW	K/S
16	96	58	10.9	15.3	15.3	21.8	5.606	150	0.39	0.49	0.57	0.95	1.52	1.34	0.65
17.5	105	63	13.1	18.3	18.3	26.2	6.707	194	0.49	0.66	0.67	1.34	2.05	1.73	0.88
19	114	68	15.3	21.5	21.5	30.7	7.906	236	0.66	0.85	1.06	1.84	2.41	2.17	1.13
20.5	123	74	17.8	24.9	24.9	35.6	9.203	269	0.82	1.02	1.06	2.2	3.25	2.2	1.36
22	132	79	20.4	28.6	28.6	40.8	10.6	322	1.02	1.3	1.58	2.66	3.95	3.5	1.64
24	144	86	24.2	33.9	33.9	48.4	12.61	370	1.3	1.65	1.87	3.4	5.12	4.53	2.13
26	156	94	28.3	39.7	39.7	56.7	14.8	431	1.65	2.03	2.74	4.5	9.7	5.79	2.58
28	168	101	32.5	45.8	45.8	65.5	17.17	496	2.03	2.48	3.23	5.19	8.1	7.25	3.3
30	180	108	37.5	52.4	52.4	75	19.71	564	2.48	3.58	3.74	6.32	10	9	4.15
32	192	115	42.5	59.4	59.4	85	22.43	635	2.98	4.45	4.74	8.24	11.77	10.03	5.06
34	204	122	47.7	66.8	66.8	95.5	25.32	712	3.58	5.21	5.54	9.56	14.2	12.75	6.01
36	216	130	53.3	74.6	74.6	107	28.38	800	4.45	5.99	6.95	11.31	16.55	14.96	6.89
38	228	137	59.2	82.8	82.8	118	31.62	887	5.21	6.15	7.33	13.45	19.55	17.44	8.4
40	240	144	65.3	91.4	91.4	131	35.04	1032	5.99	8.01	8.2	15.5	23.5	20.25	9.63
42	252	151	71.7	100	100	144	38.63	1084	6.15	9.04	9.92	18.1	26	25.4	11
44	264	158	78.4	110	110	157	42.4	1197	8.01	10.25	11.42	20.25	29.71	26.6	12.45
46	276	166	85.3	119	119	170	46.34	1310	9.04	11.54	13.92	23.33	34.3	30.67	14.1
48	288	173	92.6	130	130	185	50.46	1438	10.25	14.44	15.67	27.5	38	35	16.7
50	300	180	100	140	140	200	54.75	1546	11.54	16.06	17.7	31.6	45.2	40.5	19
52	312	187	102	150	150	215	59.2	1661	13.07	17.85	18.97	34	50.9	49.5	20.3
54	324	194	116	162	162	232	63.9	1791	14.44	19.6	20.84	38.5	53.8	50.5	23.7
56	336	202	124	173	173	247	68.7	1926	16.06	21.69	23.55	46	63	55	26.7
58	348	209	132	185	185	265	73.7	2086	17.85	24	25.95	46.8	70	64.6	27.2
60	360	216	141	197	197	282	78.8	2249	19.6	26	28.48	51	77.5	71.3	27.7
62	372	223	150	210	210	300	84.2	2361	21.69	28.63	30.81	59.2	86.3	77.7	35
64	384	230	159	222	222	318	89.7	2516	24	31.13	32.7	62.7	96.3	83.3	38.4
66	396	238	169	236	236	337	95.4	2676	26	35	38.4	75	99.6	88.7	42.3
68	408	245	178	250	250	356	101.3	2885	28.63	39.72	39.5	76.7	102.6	100	46
70	420	252	188	263	263	376	107.3	3010	31.13	43.33	43.9	90	126.2	107.8	48.7
73	438	263	203	285	285	406	116.7	3274	35	48.3	49	95	138.2	125.6	53
76	456	274	219	306	306	438	126.5	3548	39.72	53.6	57.1	107	146	143.8	60.7
78	468	281	230	321	321	459	133.2	3737	43.33	59.9	62.3	116	164	154	65.5
81	486	292	246	344	344	492	143.7	4030	48.3	66	67.4	130	190	188	75
84	504	302	263	368	368	526	154.5	4334	53.6	69	74.4	136	212	198	90
87	522	313	280	392	392	561	165.8	4650	59.9	81.1	84.6	160	237	215	96
90	540	324	298	417	417	596	177.4	4976	66	88	91	176	245	238	108
92	552	331	310	434	434	621	185.4	5199	69	97.5	100	196	257	252	114
95	570	342	329	459	459	656	197.6	5544	76	101	109	215	300	269	128
98	588	353	347	486	486	694	210.3	5780	81.1	107	117	222	335	301	133
100	600	360	360	504	504	721	219	6143	88	120	127	252	353	330	146
102	612	367	373	522	522	746	277.8	6398	97.5	130	134	267	378	344	158
105	630	378	393	549	549	785	241.4	6773	101	139	150	294	385	387	160
108	648	389	412	577	577	825	255.4	7033	107	148	160	305	420	428	180
111	666	400	433	605	605	865	269.8	7569	120	161	171	325	463	448	198
114	684	410	453	634	634	907	284.6	7983	130	198	190	345	458	460	204
117	702	421	474	663	663	948	299.8	8409	139	177	209	365	528	475	225
120	720	432	495	693	693	991	315.4	8863	148	204	229	400	570	547	250
122	732	439	510	714	714	1019	326	9143	161	218	234	425	602	649	263
124	744	447	524	734	734	1048	335	9399	168	228	246	465	632	680	290
127	762	457	546	764	764	1092	351	9830	177	244	269	499	679	729	312
130	780	468	568	795	795	1136	367	10300	192	264	293	536	729	784	333
132	792	475	583	816	816	1165	378	10620	204	270	298	561	762	820	350
137	822	493	620	868	868	1240	408	11439	228	298	329	627	852	912	392
142	852	511	658	921	921	1316	437	12289	254	333	383	698	949	1012	436
147	882	529	697	975	975	1393	470	13170	281	377	419	774	1053	1124	485
152	912	547	736	1030	1030	1471	500	14081	311	416	458	856	1164	1238	537
157	942	565	775	1085	1085	1550	530	15023	343	450	499	943	1283	1360	591
162	972	583	814	1139	1139	1628	570	15995	377	496	542	1036	1410	1490	651

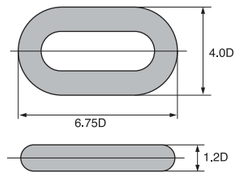
DETAILS



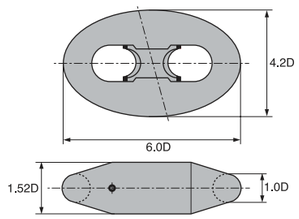
Common Link: C



Enlarged Link: EL

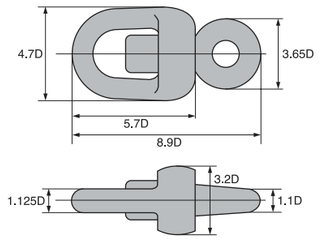


End Link: E

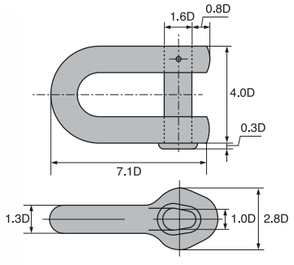


Kenter Shackle: K.S

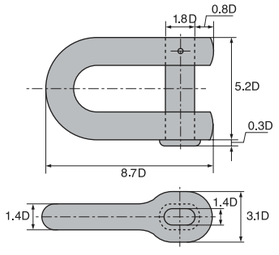
Swivel place



Swivel: SW

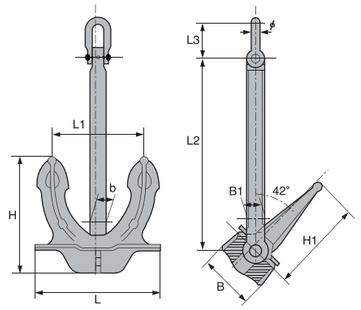


Joning Shackle ("D"Type)= J.S

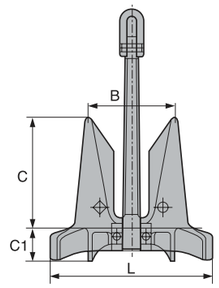


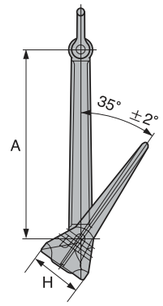
Anchor Shackle ("D"Type)= A.S

ÇAPA | ANCHOR



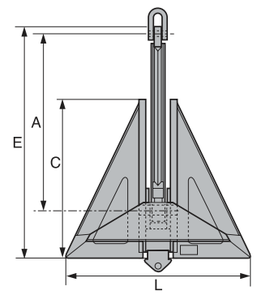
Total	Chain Size (mm)		Anchor Size (kg)	Dimensions (mm)									
	G-2	G-3		L	L1	L2	L3	H	H1	B	b	b1	Ø
220	12.5	-	180	650	459	910	153	591	480	280	87	103	36
220	14	-	240	720	510	1010	170	652	530	310	96	114	40
247.5	16	-	300	770	540	1080	179	701	570	331	103	122	42
247.5	17.5	-	360	820	580	1150	191	749	610	353	110	130	45
275	17.5	-	420	860	610	1200	200	786	640	370	115	137	47
275	19	-	480	900	640	1260	213	823	670	387	121	143	50
302.5	20.5	-	570	9500	670	1330	221	865	700	408	127	151	52
302.5	22	20.5	660	1000	710	1480	234	910	740	430	134	159	55
330	24	22	780	1060	750	1480	247	960	780	456	142	169	58
357.5	26	24	900	1110	780	1550	259	1009	820	477	149	176	61
357.5	28	24	1020	1160	820	1620	272	1047	860	500	156	184	64
385	30	26	1140	1200	850	1680	281	1094	890	520	161	191	66
385	32	28	1290	1250	880	1750	293	1132	920	540	168	199	69
415.5	34	30	1440	1300	920	1820	306	1181	960	560	174	207	72
415.5	34	30	1590	1340	950	1880	315	1218	990	580	180	213	74
440	36	32	1740	1380	980	1930	323	1255	1020	600	185	219	76
440	38	34	1920	1430	1010	2000	336	1303	1060	620	192	227	79
440	40	36	2100	1470	1040	2060	344	1340	1090	640	197	234	81
467.5	42	36	2280	1510	1070	2110	353	1377	1120	650	202	242	83
467.5	44	38	2460	1550	1100	2170	361	1414	1150	670	208	246	85
467.5	46	40	2640	1590	1120	2230	370	1450	1180	690	213	253	87
495.5	48	42	2850	1630	1150	2280	383	1487	1210	700	218	259	90
495.5	50	44	3060	1670	1180	2340	391	1524	1240	720	224	265	92
495.5	50	46	3300	1710	1210	2390	400	1561	1270	740	229	272	94
552.5	52	46	3540	1750	1240	2450	408	1588	1290	750	235	278	96
552.5	54	48	3780	1790	1260	2510	417	1624	1320	770	240	285	98
552.5	56	50	4050	1830	1290	2560	429	1661	1350	790	245	291	101
550	58	50	4320	1870	1320	2620	438	1698	1380	800	251	297	103
550	60	52	4590	1910	1350	2670	446	1735	1410	820	256	304	105
550	62	54	4890	1950	1380	2730	455	1772	1440	840	261	310	107
577.5	64	56	5250	2000	1410	2800	467	1820	1480	860	268	318	110
577.5	66	58	5610	2040	1440	2860	476	1857	1510	880	274	324	112
577.5	68	60	6000	2090	1480	2930	489	1895	1540	900	280	332	115
605	70	62	6450	2140	1510	3000	502	1944	1580	920	287	340	118
605	73	64	6900	2190	1550	3070	510	1992	1620	940	294	348	120
605	76	66	7350	2240	1580	3140	522	2030	1650	960	300	356	123
632.5	78	68	7800	2280	1610	3190	530	2068	1680	980	306	362	125
632.5	81	70	8300	2330	1650	3260	540	2116	1720	1000	312	370	128
632.5	84	73	8700	2370	1670	3320	550	2153	1750	1020	318	377	130
660	84	76	9300	2420	1710	3390	570	2201	1790	1040	324	385	133
660	87	78	9900	2470	1740	3460	580	2240	1820	1060	331	393	136
660	90	78	10500	2520	1780	3530	590	2288	1860	1080	338	400	139
687.5	92	81	11100	2570	1820	3600	600	2337	1900	1100	344	409	141
687.5	95	84	11700	2610	1840	3650	610	2374	1930	1120	350	415	144
687.5	97	87	12300	2650	1870	3710	620	2410	1960	1140	355	421	146

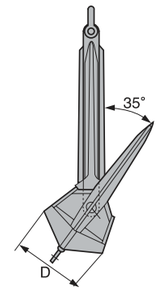




Size (kg)	Dimensions (mm)						Size (kg)	Dimensions (mm)					
	A	L	H	C	C1	B		A	L	H	C	C1	B
1000	1590	1425	440	968	275	764	7875	3162	1837	876	1925	547	1520
1140	1660	1490	460	1011	287	798	8325	3221	1890	893	1961	558	1548
1360	1761	1580	488	1072	305	846	8775	3278	1942	909	1996	567	1576
1440	1795	1610	497	1093	311	862	9225	3333	2991	924	2030	577	1602
1590	1855	1665	514	1130	321	892	9675	3386	3039	939	2062	586	1628
1820	1940	1741	538	1182	336	933	10125	3438	3085	953	2094	595	1652
2040	2016	1809	559	1227	349	969	10575	3488	3130	967	2124	604	1677
2270	2089	1874	579	1272	362	1004	10695	3501	3141	970	2132	606	1663
2720	2218	1991	615	1351	384	1066	11025	3537	3174	981	2154	612	1700
3040	2302	2066	638	1402	399	1107	11250	3561	3196	987	2169	616	1712
3240	2352	2110	652	1432	407	1130	11550	3592	3224	996	2188	622	1727
3445	2400	2154	665	1462	415	1154	11850	3623	3251	1004	2206	627	1742
3670	2451	2200	680	1493	424	1178	12075	3646	3272	1011	2220	631	1753
3940	2510	2252	696	1529	434	1207	12525	3691	3312	1023	2248	639	1774
4210	2566	2303	711	1563	444	1234	12675	3705	3325	1027	2256	641	1781
4500	2624	2355	727	1598	454	1261	13200	3756	3370	1041	2287	650	1805
4840	2688	2412	745	1637	465	1292	13350	3770	3383	1045	2293	653	1812
5175	2749	2467	762	1674	476	1321	13875	3819	3426	1059	2326	661	1836
5575	2808	2520	778	1710	486	1350	14100	3839	3445	1064	2338	665	1846
5850	2864	2570	794	1744	496	1376	15000	3919	3517	1086	2387	678	1884
6225	2923	2623	810	1780	506	1405	16125	4015	3603	1113	2445	695	1930
6525	2970	2665	823	1808	514	1428	17250	4106	3685	1138	2501	711	1974
6600	2981	2675	827	1815	516	1433	18375	4194	3763	1163	2554	726	2016
7015	3042	2730	843	1853	527	1462	19500	4278	3839	1186	2605	740	2056
7425	3100	2782	859	1888	537	1490							

H.H.P ÇAPA | H.H.P ANCHOR

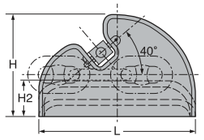




Size (kg)	Dimensions (mm)						Size (kg)	Dimensions (mm)					
	A	B	C	D	E	F		A	B	C	D	E	F
1000	1690	1940	1611	742	2202	149	7000	3235	3709	3082	1421	4211	285
1500	1935	2221	1844	850	2521	170	7500	3311	3795	3153	1454	2308	291
2000	2130	2445	2030	935	2775	187	8000	3383	3878	3222	1486	4402	298
2500	2294	2634	2187	1008	2989	202	8500	3452	3957	3288	1516	4492	304
3000	2430	2799	2324	1071	3176	215	9000	3518	4033	3351	1545	4579	310
3500	2568	2944	2446	1128	3342	226	9500	3582	4107	3412	1573	4662	315
4000	2685	3078	2557	1179	3494	236	10000	3644	4177	3471	6001	4742	321
4500	2792	3201	2660	1227	3634	246	11000	3762	4312	3583	1652	4895	331
5000	2892	3316	2755	1270	3764	255	12000	3872	4439	3688	1701	5039	341
5500	2986	3423	2844	1311	3885	263	13000	3977	4559	3788	1747	5176	350
6000	3073	3523	2927	1350	4000	270	14000	4076	4673	3883	1791	5305	359
6500	3175	3619	3007	1387	4108	278	15000	4171	4782	3973	1832	5429	367

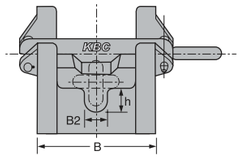
YÜKSEK TUTUCU ÇAPA | FLIPPER DELTA ANCHOR

BAR TİP ZİNCİR STOPER | BAR TYPE CHAIN CABLE STOPPER



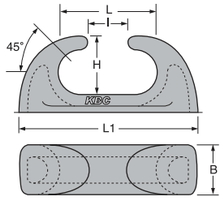
Nonimal No.	Cable DIA.	B	H	L	h	B2	Mass KSG
19	17 - 19	135	190	270	32	29	17
22	20 - 22	153	216	310	37	33	24
25	23 - 25	175	241	345	43	38	32
28	26 - 28	193	270	385	48	43	44
32	30 - 32	220	305	435	54	49	67
36	34 - 36	246	342	490	61	55	91

DÖKÜM TİP ZİNCİR STOPER |CAST STEEL BAR TYPE CHAIN CABLE STOPPER



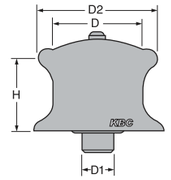
Nonimal Size	B	H	H2	L	h	B2	Mass KSG
38 - 40	336	378	130	540	68	65	110
42 - 44	366	412	142	590	75	72	138
46 - 48	397	450	155	640	82	78	177
50 - 52	428	491	170	695	88	85	214
54 - 56	457	528	182	745	95	92	261
58 - 60	488	465	195	795	102	98	319
62 - 64	517	600	208	850	109	104	396
66 - 68	547	635	220	900	116	110	482
70 - 73	582	675	233	960	125	117	609
76 - 78	617	715	245	1020	133	123	740

AÇIK LOÇA | OPEN CHOCK

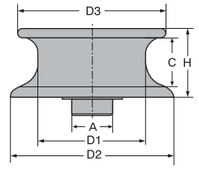


Nonimal Size	L	L1	B	H	I	Calculated Mass (kg)	Dia. Of Applicable Rope (Reference)		
							Wire Rope (6x42)	Home Rope	Synthetic Fibre Rope
150	150	280	80	90	60	10.7	12	32	20
200	200	380	110	116	84	18.1	14	38	24
250	250	460	130	136	114	29.2	16	42	28
300	300	540	150	160	140	44	18	50	32
350	350	620	170	180	170	64	20	55	36
400	400	700	200	200	200	98	22.4	60	42

DÖNEN FIRDÖNDÜ | FAIRLEAD ROLLER



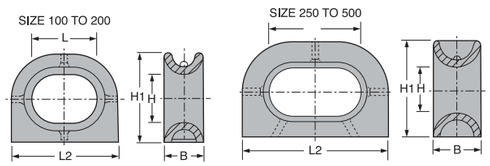
Nonimal Size	D2	H	D	D1
75	110	75	105	30
100	150	100	130	40
125	180	130	150	50
150	220	150	180	60
200	280	185	230	80
250	340	220	290	90
300	400	240	340	110
350	455	260	390	125
400	520	280	450	140



Nonimal Size	A	D1	C	D2	D3	H	Kg
300	-	300	-	440	400	197	-
350	117	350	150	500	460	215	135

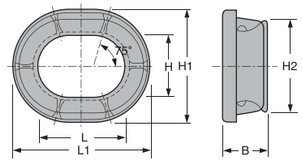
Nonimal Size	A	D1	C	D2	D3	H	Kg
300	99	300	180	450	400	240	-

KAPALI LOÇA | CLOSED CHOCK



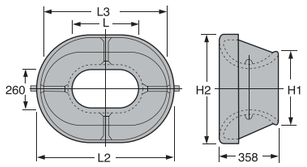
Nonimal Size	L	L2	B	H	H1	Mass KSG	Dia. Of Rope	
							Wire	Hemp
100	100	170	60	76	141	3.7	14	24
150	150	250	90	110	205	10.5	16	30
200	200	340	120	150	280	24	18	40
250	250	435	160	200	372	48	20	50
300	300	528	200	250	464	82	22	60
350	350	600	220	250	485	103	24	70
400	400	672	240	250	506	136	26	80
450	450	746	260	250	528	184	30	85
500	500	820	280	250	550	232	36	90

HALAT LOÇASI | MOORING PIPES

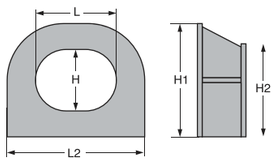


Nonimal No.	L	L1	H	H1	H2	B	Mass KSG	Dia. Of Rope Manila	Applied Wire
150	150	300	110	260	202	129	15	40	16
200	200	368	150	318	250	143	21	45	18
250	250	430	200	380	308	155	27	50	20
300	300	500	250	450	372	169	43	60	22
350	350	560	250	460	378	179	51	70	24
400	400	632	250	482	394	195	77	80	26
450	450	700	250	500	406	209	102	85	30
500	500	780	250	510	412	412	115	90	36

PANAMA LOÇASI | PANAMA CHOCKS

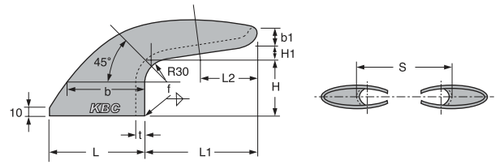


Nonimal No.	L	L2	L3	H1	H2	Mass KSG
310	310	734	652	462	684	276
360	360	788	701	464	688	305
400	400	832	750	470	692	344
450	450	886	802	474	696	385
500	500	940	854	478	700	422

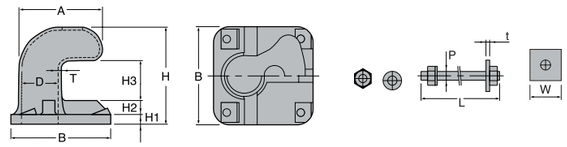


Nonimal No.	L	L2	H	H1	H2	Mass KSG
310	310	710	260	545	640	212
360	360	750	260	530	640	248
400	400	800	260	545	640	285
450	450	855	260	550	640	318

PANAMA LOÇASI | GUY CLEAT

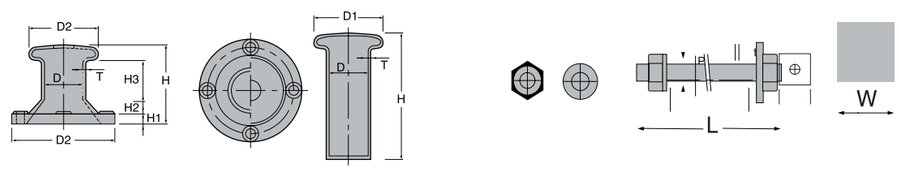


Nonimal Size	Dia. Of applicable Wire Rope	b	b1	H	H1	L	L1	L2	S	t	Leg Length Of weld f	Reference Calculated Mass (kg)
20	20 or less	95	20	70	20	120	140	70	400	10	7	5,8
25	22,4 ~ 25	125	25	90	30	165	170	80	600	12	8	12,2



HALAT BABASI | BOLLARD

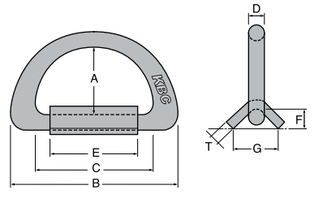
Capacity (Tons) S.W.L.	Bollard							Anchor Bolt			Anchor PL			Weight (kg)
	D	A	B	H	H1	H2	H3	T	d	L	QTY	W	t	
5	150	300	300	380	30	60	170	20	20	450	4	80	16	70
10	200	400	400	480	40	70	210	20	27	600	4	108	22	140
15	250	500	500	580	50	80	250	20	33	700	4	132	25	245
25	300	600	600	690	65	95	290	21	41	850	4	168	35	420
35	300	600	720	690	65	95	290	25	42	850	6	168	35	440
50	350	700	840	780	70	100	330	29	48	1000	6	192	40	665
70	400	800	1000	900	90	120	370	33	56	1150	6	225	45	1100
100	450	900	1200	990	95	128	410	39	64	1300	6	256	55	1670



Capacity (Tons) S.W.L.	Bollard							Anchor Bolt			Anchor PL			Weight (kg)
	D	A	B	H	H1	H2	H3	T	d	L	QTY	W	t	
5	120	240	-	1070	-	-	-	15	-	-	-	-	-	70
10	200	300	-	970	-	-	-	20	-	-	-	-	-	130
15	250	400	600	438	45	55	250	20	36	750	4	144	28	145
35	300	480	720	525	60	70	290	25	48	1000	6	192	40	240
50	350	560	840	613	70	90	330	27	56	1150	6	225	45	370
70	400	640	960	700	80	110	370	30	64	1300	6	256	55	850
100	450	720	1180	833	90	190	405	35	72	1450	6	288	60	900
150	550	880	1110	1818	100	640	400	40	80	1000	6	320	65	1495
200	650	1040	1700	1203	110	300	565	43	90	1800	6	360	75	-

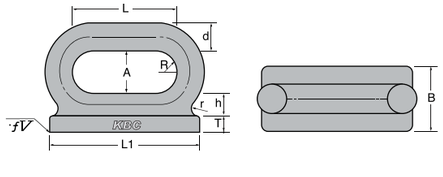
D-RING | D-RING

13mm



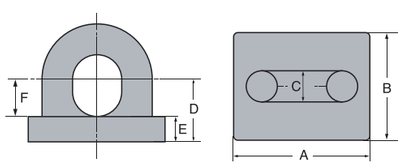
Size (mm)	B.T.L (mm)	Dimensions (mm)								Weight (mm)
		A	B	C	D	E	F	G	T	
13	10	50	100	80	13	50	20	20	5	0.85
16	20	70	170	120	16	90	20	50	9	1
19	25	70	168	110	19	90	22	50	9	1.3
22	50	90	230	140	22	125	29	67	16	3.74
25	60	90	233	150	27	125	29	67	16	4.4

D-RING | KBC TYPE EYE PLATE



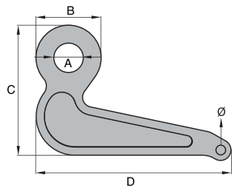
Size (mm)	S.W.L. (t)	A	d	L	R	L1	B	T	h	r	Mass (kg)
2	2	32	22	60	15	105	48	14	7	15	1.12
3	3	42	25	75	21	118	55	15	8	15	1.66
5	5	50	30	90	25	138	66	18	10	15	2.78
7.5	7.5	60	42	115	30	180	100	20	25	25	6.44
10	10	65	50	135	32	210	120	20	30	25	10.66
15	15	70	60	160	34	250	140	27	36	27	19.24

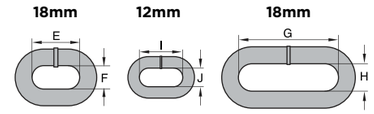
D-RING | EYE PLATE



Nominal Size (Kg)	A	B	C	D	E	F
28	220	175	49	100	40	60
35	370	170	55	100	40	60

PELİKAN KANCA | PELICAN HOOK



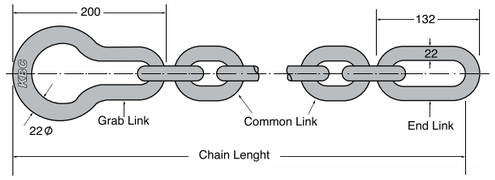


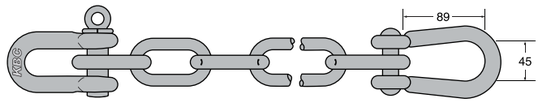
Size (mm)	Dimensions (mm)											Weight (mm)
	A	B	C	D	E	F	G	H	I	J	Ø	
13	23	56	112	169	52	26	113	31	44	21	7	1.78

LASHING ZİNCİR | DECK LASHING CHAIN

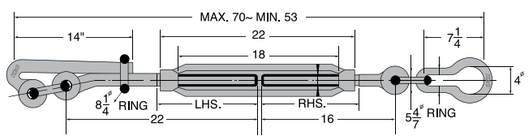
- Size: 19 mm dia. (JIS short link chain)
- Proof test load: 6 8 TONS
- Weight: 8Kg/m

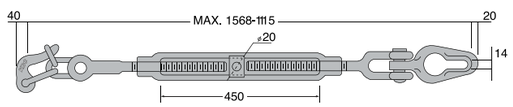
- Size: 13 mm dia. (JIS short link chain)
- Proof test load: 10 TONS
- Weight: 2.91Kg/m

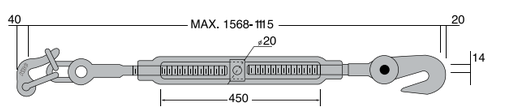


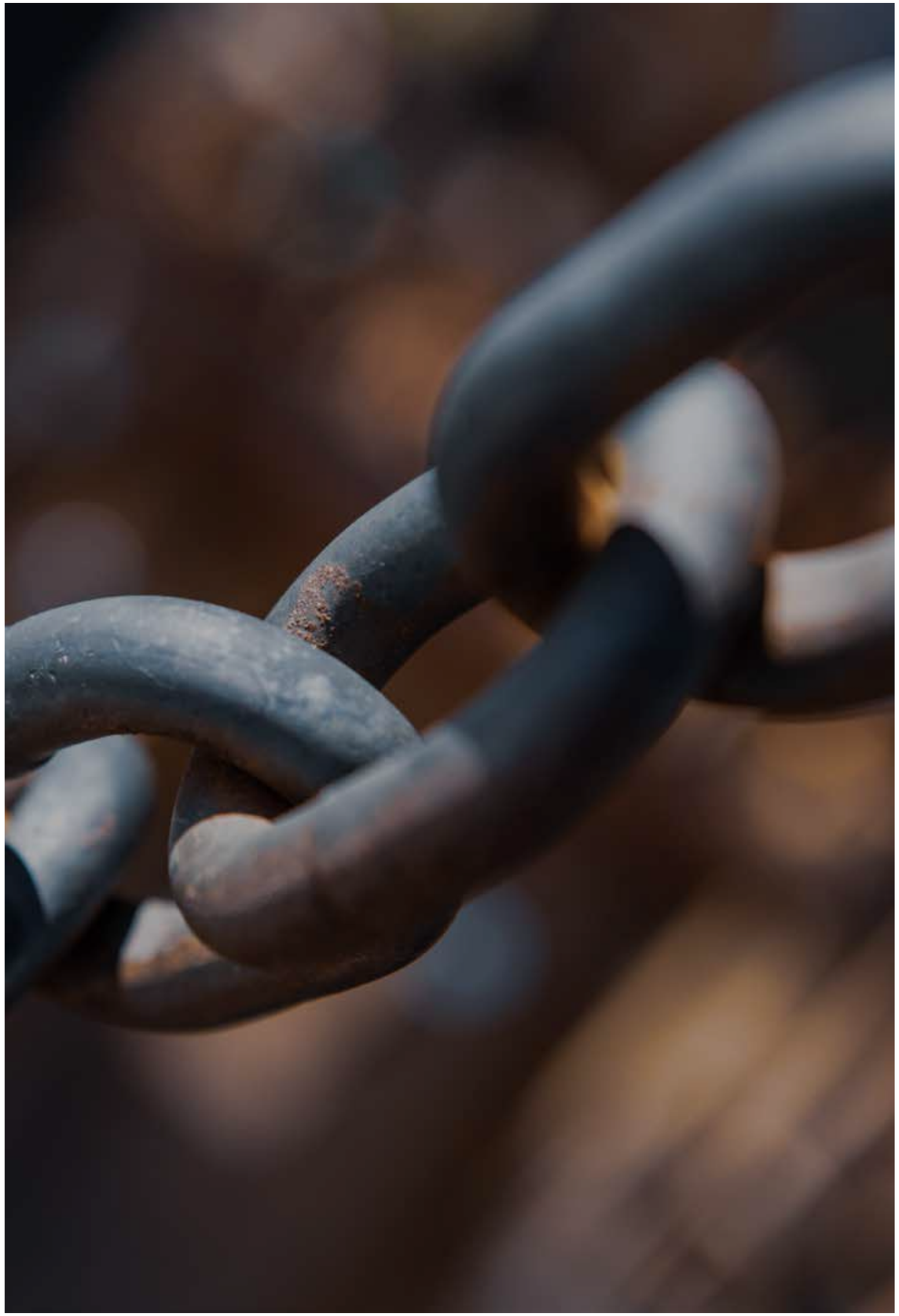


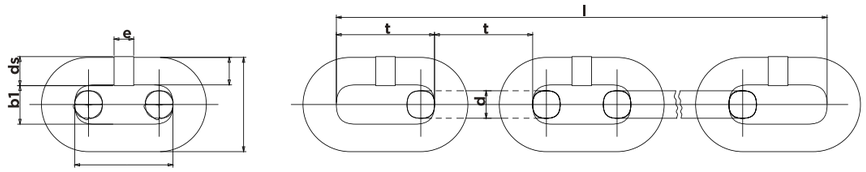
LASHING GERDİRMESİ | DECK LASHING TURNBUCKLE











DIN 764 KONVEYÖR ZİNCİRLERİ | DIN 764 CHAIN

Boyutlar ve Mekanik Özellikler

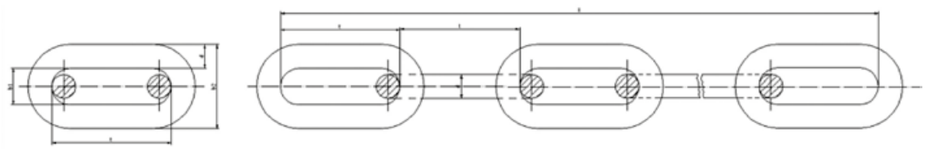
Nominal Çap ve Tolerans	İç Uzunluk ve Tolerans	İç Genişlik (Min.)	Dış Genişlik (Max.)	Ağırlık	Çalışma Yükü	Çalışma Yükü	Kopma Yükü	Kopma Yükü	11 x t Uzunluk
d mm	t mm	bi mm	Ba mm	Kg/m	kN Max. GK 2	kN Max. GK 3	kN Min. GK 2	kN Min. GK 3	mm
10 ±0,4	35 +0,6-0,3	14	36	2	10	12,5	40	50	385
13 ±0,5	45 +0,7-0,4	18	47	3,5	16	21,2	63	85	495
16 ±0,6	56 +0,9-0,5	22	58	5,2	25	32	100	125	616
18 ±0,9	63 +1,0-0,5	24	65	6,5	32	40	125	160	693
20 ±1,0	70 +1,1-0,6	27	72	8,2	40	50	160	200	770
23 ±1,2	80 +1,3-0,7	31	83	11	50	67	200	265	880
26 ±1,3	91 +1,5-0,8	35	94	14	63	85	250	340	1001
28 ±1,4	98 +1,6-0,9	36	101	16,5	75	100	300	400	1078
30 ±1,5	105 +1,7-0,9	39	108	19	85	112	340	450	1115
33 ±1,7	115 +1,9-1,0	43	119	22,5	100	132	400	530	1265
36 ±1,8	126 +2,1-1,1	47	130	26,5	125	160	500	630	1386
39 ±2,0	136 +2,2-1,2	51	140	31	140	190	560	750	1496
42 ±2,1	147 +2,4-1,3	55	151	36	170	224	680	900	1617

KALDIRMA AMAÇLI ZİNCİRLER | LIFTING CHAIN

DIN 763 normlarına uygun olarak üretilen zincirler kaldırma amaçlı kullanılır.

DIN 763 Uzun Baklalı Çelik Zincirler, Test Edilmiş Kalibre Edilmemiş

DIN 763 normuna uygun zincirler statik yük kaldırma uygulamalarında kullanılır.



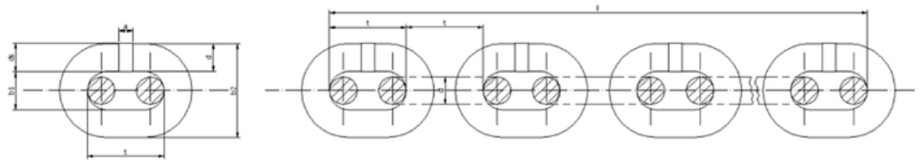
Nominal Çap ve Tolerans	Bakla Boyu İç ve Tolerans ve Tolerans	İç Genişlik (Min.)	Dış Genişlik (Max.)	Ağırlık	Çalışma Yükü	Test Yükü	Kopma Yükü
d mm	t mm	b1 mm	Ba mm	Kg/m	Kg Max.	kN Min.	kN Min
4 ±0,2	32 ±1,0	7,2	16,8	0,27	100	2,5	6,3
5 ±0,25	35 ±1,1	9	21	0,43	160	4	10
6 ±0,3	42 ±1,3	10,8	25,2	0,63	200	5	12,5
7 ±0,35	49 ±1,5	12,6	29,4	0,86	300	7,5	19
8 ±0,4	52 ±1,6	14,4	33,6	1,1	400	10	25
10 ±0,5	65 ±2,0	18	42	1,75	630	16	40
13 ±0,65	82 ±2,5	23,4	54,6	2,95	1000	25	63
16 ±0,8	100 ±3,0	28,8	67,2	4,45	1600	40	100

KALDIRMA AMAÇLI ZİNCİRLER | LIFTING CHAIN

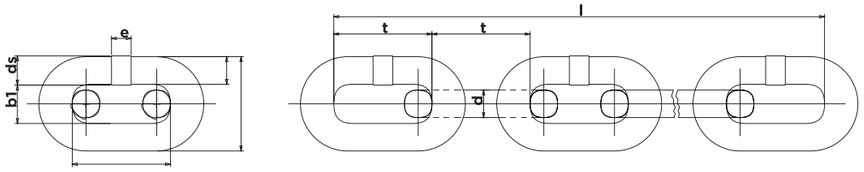
DIN 766 normlarına uygun olarak üretilen zincirler kaldırma amaçlı kullanılır.

DIN 766 Kısa Baklalı Çelik Zincirler, Test Edilmiş Kalibre Edilmiş

DIN 766 normuna uygun zincirler statik yük kaldırma uygulamalarında kullanılır.



Nominal Çap ve Tolerans	Bakla Boyu İç ve Tolerans ve Tolerans	İç Genişlik (Min.)	Dış Genişlik (Max.)	Ağırlık	Çalışma Yükü	Test Yükü	Kopma Yükü
d mm	t mm	b1 mm	Ba mm	Kg/m	Kg Max.	kN Min.	kN Min
4 ±0,2	16 +0,3 -0,2	4,8	13,6	0,32	200	5	8
5 ±0,2	18,5 +0,4 -0,2	6	17	0,5	320	8	12,5
6 ±0,2	18,5 +0,4 -0,2	7,2	20,4	0,8	400	10	16
7 ±0,3	22 +0,4 -0,2	8,4	23,8	1,1	630	16	25
8 ±0,3	24 +0,4 -0,2	9,6	27,2	1,4	800	20	32
9 ±0,4	27 +0,5 -0,3	10,8	30,6	1,8	1000	25	40
10 ±0,4	28 +0,5 -0,3	12	36	2,3	1250	32	50
11 ±0,4	31 +0,5 -0,3	13,2	40	2,7	1600	40	63
13 ±0,5	36 +0,6 -0,3	15,6	47	3,9	2000	50	80
14 ±0,6	41 +0,7 -0,4	16,8	50	4,4	2500	63	100
16 ±0,6	45 +0,8 -0,4	19,2	58	5,8	3200	80	125
18 ±0,9	50 +0,8 -0,4	21,6	65	7,4	4000	100	160
20 ±1,0	56 +1,0 -0,5	24	72	9	5000	125	200
23 ±1,2	64 +1,1 -0,5	27,6	83	12	6300	160	250
26 ±1,3	73 +1,2 -0,6	31,2	94	15	8000	200	320
28 ±1,4	78 +1,3 -0,6	33,6	101	18	10000	250	400
30 ±1,5	84 +1,4 -0,7	36	108	20	11200	280	450
32 ±1,6	90 +1,5 -0,7	38,4	115	23	12500	320	500
36 ±1,8	101 +1,7 -0,8	43,2	130	29	16000	400	630
40 ±2,0	112 +1,9 -0,8	48	144	35	20000	500	800
42 ±2,1	118 +2,0 -1,0	50	151	40	22400	560	900

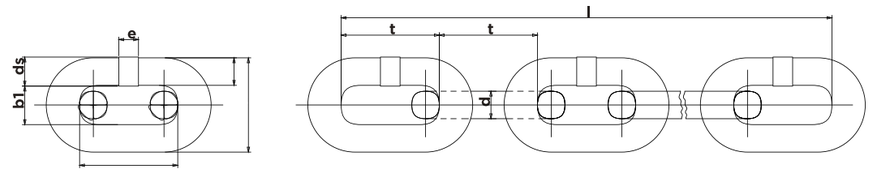


DIN 22252 YÜKSEK DAYANIMLI ZİNCİRLER | DIN 22252 HIGH RESISTANCE CHAIN

Boyutlar ve Mekanik Özellikler

Nominal Çap ve Tolerans	Bakla Boyu İç ve Tolerans	İç Genişlik (Min.)	Dış Genişlik (Max.)	Test Yükü	Test Yükü Altında Uzama	Kopma Yükü (Min.)	Kalite	Ağırlık
Vd mm	t mm	bi mm	ba mm	kN	Max.%	kN		Kg/m
14 ±0,4	50 ±0,5	17	48	150 185	1,4 1,6	190 246	1 2	4
18 ±0,5	64 ±0,6	21	60	260 305	1,4 1,6	320 407	1 2	6,6
19 ±0,5	64,5 ±0,6	22	63	283 340	1,4 1,6	357 454	1 2	7,6
22 ±0,7	86 ±0,9	26	73	380 490	1,6	480 610	1 2	9,5
24 ±0,7	86 ±0,9	28	79	460 580	1,6	570 720	1 2	11,6
24 ±0,7	87,5 ±0,9	28	79	460 580	1,6	570 720	1 2	11,5
26 ±0,8	92 ±0,9	30	85	540 680	1,6	670 850	1 2	13,7
30 ±0,9	108 ±1,1	34	97	710 900	1,6	890 1130	1 2	18
34 ±1,0	126 ±1,3	38	109	1090	1,6	1450	2	22,7
38 ±1,1	137 ±1,4	42	121	1360	1,6	1820	2	29
42 ±1,1	146 ±1,5	48	137	1660	1,6	2220	2	36,5

*Kopma Yükü Altında Min. Uzama: %14



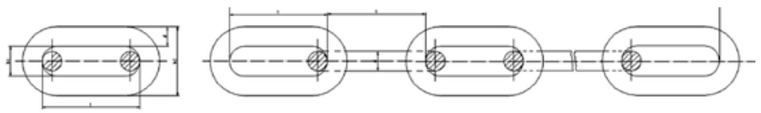
DIN 22252-2 YÜKSEK DAYANIMLI ZİNCİRLER (GRADE 100) | DIN 22252 HIGH RESISTANCE CHAIN (GRADE 100)

Boyutlar ve Mekanik Özellikler

Nominal Çap ve Tolerans	Bakla Boyu İç ve Tolerans	İç Genişlik (Min.)	Dış Genişlik (Max.)	Test Yükü	Test Yükü Altında Uzama	Kopma Yükü (Min.)	Kalite	Ağırlık
Vd mm	t mm	bi mm	ba mm	kN	Max.%	kN		Kg/m
14 ±0,4	50 ±0,5	17	48	250	1,9	310	Grade 100	4
18 ±0,5	64 ±0,6	21	60	410	1,9	510	Grade 100	6,6
22 ±0,7	86 ±0,9	26	73	610	1,9	760	Grade 100	9,5
24 ±0,7	86 ±0,9	28	79	720	1,9	900	Grade 100	11,6
24 ±0,7	87,5 ±0,9	28	79	720	1,9	900	Grade 100	11,5
26 ±0,8	92 ±0,9	30	85	850	1,9	1060	Grade 100	13,7
30 ±0,9	108 ±1,1	34	97	1130	1,9	1410	Grade 100	18
34 ±1,0	126 ±1,3	38	109	1450	1,9	1820	Grade 100	22,7
38 ±1,1	137 ±1,4	42	121	1820	1,9	2270	Grade 100	29

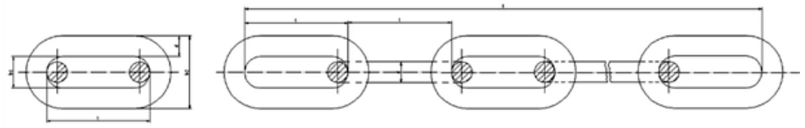
*Kopma Yükü Altında Min. Uzama: %14

DIN 5685 YUVARLAK ÇELİK BAKLALI ZİNCİRLER, TEST EDİLMEMİŞ | DIN 5685 CHAIN



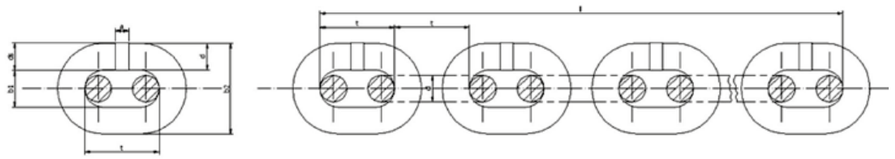
Nominal Çap ve Tolerans	Çap Toleransı	Bakla Boyu	B. Boyu İç Toleransı	İç Genişlik	Ağırlık	Bakla İşareti
d mm	mm	t mm	mm	Min. mm	Kg / m	
5	±0,30	35	±1,8	9	0,42	A uzun
6	±0,30	42	±2,1	11	0,61	A uzun
7	±0,40	49	±2,5	12	0,82	A uzun
8	±0,40	52	±2,6	14	1,1	A uzun
10	±0,50	65	±3,3	18	1,7	A uzun
13	±0,70	82	±4,1	23	2,9	A uzun

DIN 20637 MADENCİLİK SEKTÖRÜ İÇİN MONORAY ASKI ZİNCİRLERİ - TEST EDİLMİŞ UZUN BAKLALI | DIN 20637 CHAIN



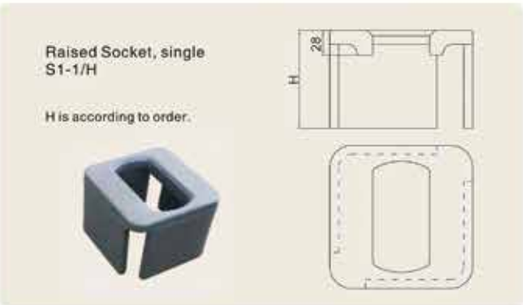
Nominal Çap ve Tolerans	Bakla Boyu İç ve Tolerans	İç Genişlik (Min.)	Ağırlık	Malzeme (DIN 17115)	Test Yükü	Kopma Yükü
d mm	t mm	b1 mm	Kg/m		kN Min.	kN Min
16 ± 0,6	80 ± 1,5	22 4 + 3	4,7	15Mn3Al	15Mn3Al	180
18 ± 0,9	90 ± 1,5	25 + 3	6	21Mn5	21Mn5	250

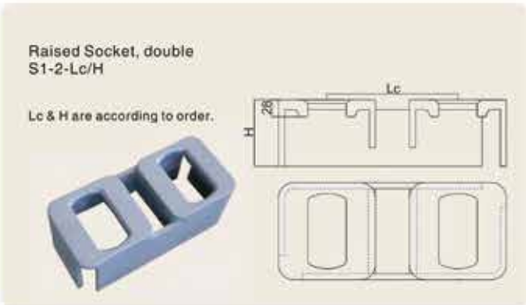
DIN 5684 KALDIRMA AMAÇLI YUVARLAK ÇELİK BAKLALI ZİNCİRLER, GRADE 5-6, TEST VE KALİBRE EDİLMİŞ | DIN 5684 CHAIN

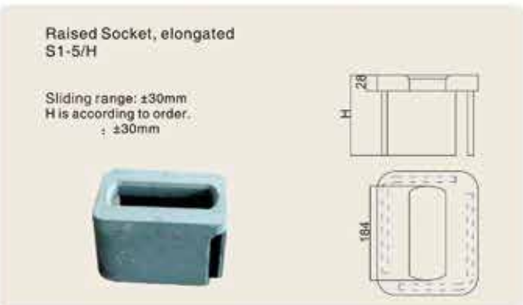


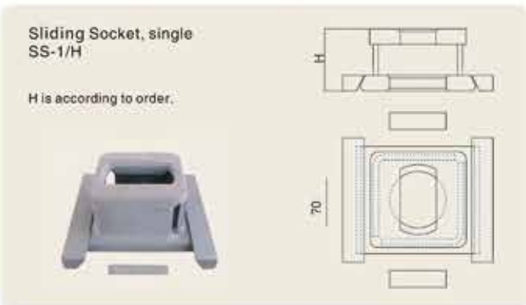
Nominal Çap ve Tolerans	Bakla Boyu İç ve Tolerans	İç Genişlik (Min.)	Dış Genişlik (Max.)	Ağırlık	Kalite	Çalışma Yükü Motorlu Kaldırma	Çalışma Yükü Manuel Kaldırma	Test Yükü	Kopma Yükü
d mm	t mm	b1 mm	b2 mm	Kg/m	Grade	Kg Max.	Kg Max.	kN Min.	kN Min
4 ± 0,2	12 + 0,15 -0,1	5	13,7	0,35	5	250	320	6,3	12,5
					6	320	400	8	16
5 ± 0,2	15 + 0,2 -0,1	6	16,9	0,54	5	400	500	10	20
					6	500	630	12,5	25
6 ± 0,2	18 + 0,25 -0,1	7,2	20,2	0,8	5	600	750	15	30
					6	750	900	18	37,5
7 ± 0,3	21 + 0,3 -0,15	8,4	23,6	1,1	5	800	1000	20	40
					6	1000	1250	25	50
8 ± 0,3	24 + 0,3 -0,15	9,6	27	1,4	5	1000	1250	25	50
					6	1250	1600	32	63
9 ± 0,4	27 + 0,35 -0,2	10,8	30,4	1,8	5	1250	1600	32	63
					6	1600	2000	40	80
10 ± 0,4	28 + 0,35 -0,2	12	34	2,2	5	1600	2000	40	80
					6	2000	2500	50	100
11 ± 0,4	31 + 0,4 -0,2	13,2	37,4	2,7	5	2000	2500	50	100
					6	2500	3000	60	125
13 ± 0,5	36 + 0,45 -0,25	15,6	44,2	3,8	5	2650	3350	67	132
					6	3200	4250	85	170
14 ± 0,6	41 + 0,5 -0,3	16,8	47,6	4,4	5	3200	4000	80	160
					6	4000	5000	100	200
16 ± 0,6	45+0,6 -0,3	19,2	54,4	5,7	5	4000	5000	100	200
					6	5000	6300	125	250
18 ± 0,9	50 + 0,65 -0,3	21,6	61,2	7,3	5	5000	6300	125	250
					6	6300	8000	160	320

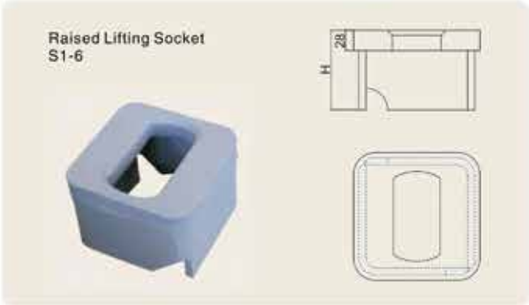
KONTEYNER EKİPMANLARI | CONTAINER EQUIPMENT

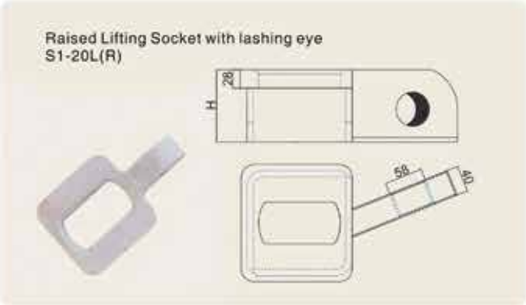


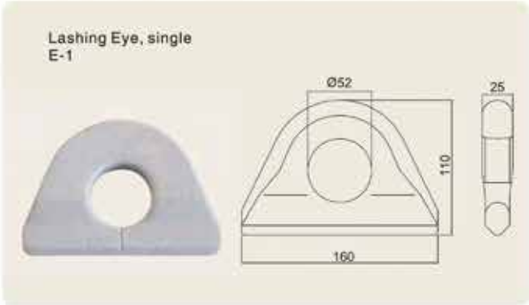


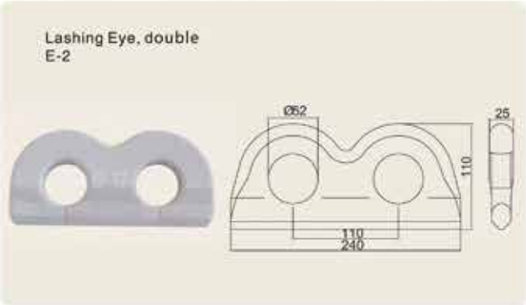


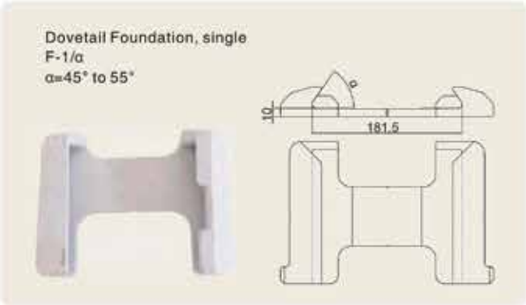


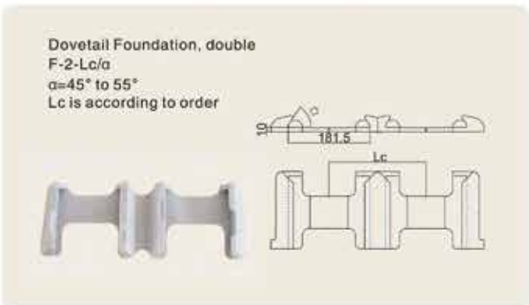


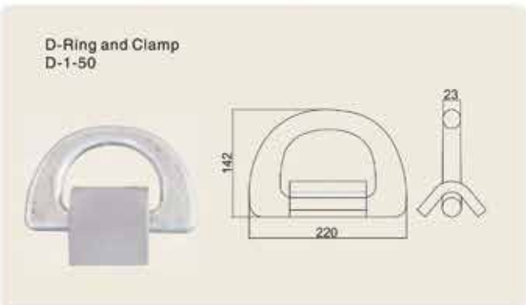




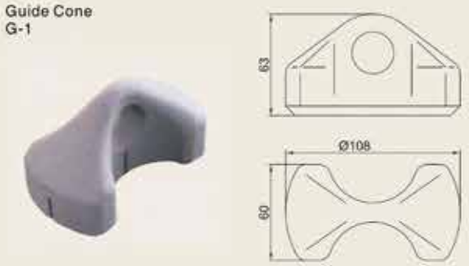




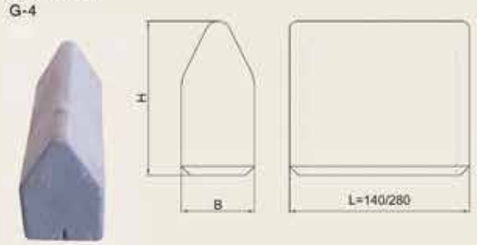




Guide Cone
G-1

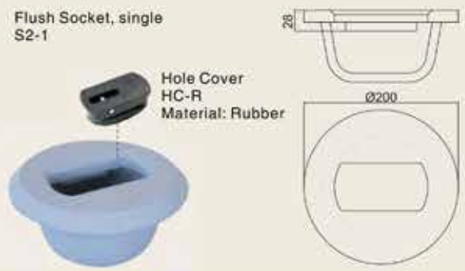


Guide Block
G-4



Flush Socket, single
S2-1

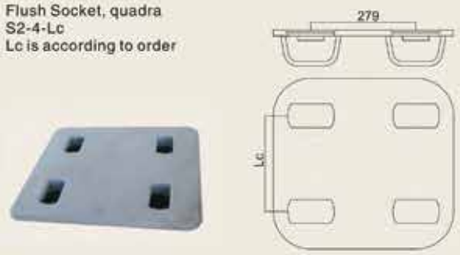
Hole Cover
HC-R
Material: Rubber



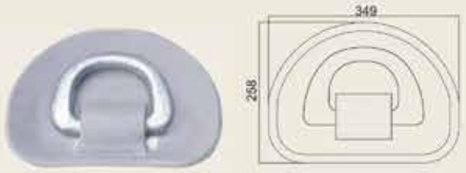
Flush Socket, double
S2-2-Lc
Lc is according to order

Flush Socket, double
S2-3

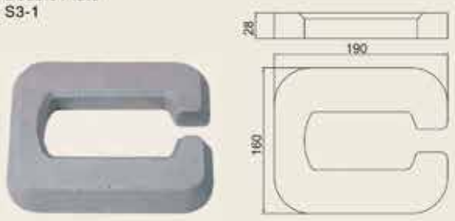
Flush Socket, quadra
S2-4-Lc
Lc is according to order



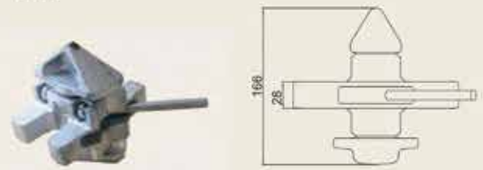
Flush D-Ring
D-3-50



Double Plate
S3-1

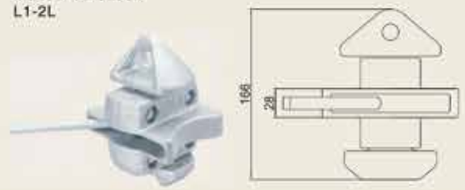


Manual Twistlock, basic
L1-1L

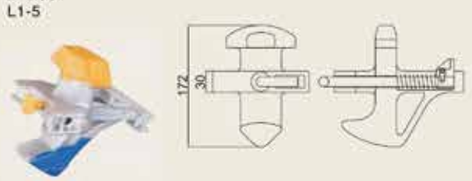


Semi-automatic Twistlock, basic
L1-3

Manual Twistlock
L1-2L



Midlock
L1-5

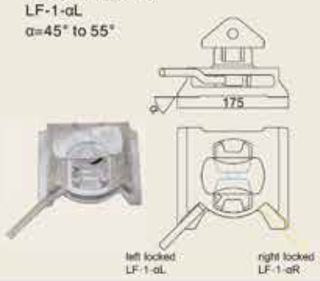


Semi-automatic Twistlock
L1-4

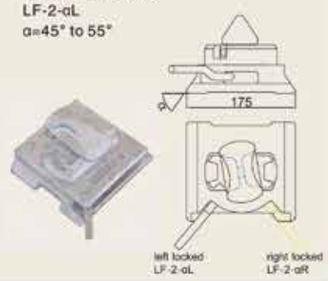
Operating Rod
U-1/L
for manual twistlock
L is according to order

Operating Rod
U-2/L
for semi automatic twistlock
L is according to order

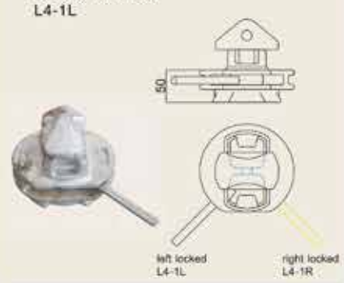
Dovetail Twistlock
LF-1-αL
α=45° to 55°



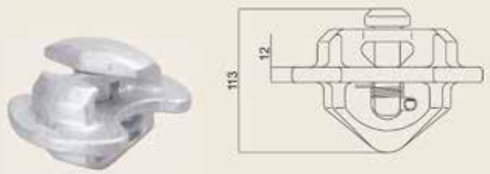
Dovetail Twistlock
LF-2-αL
α=45° to 55°



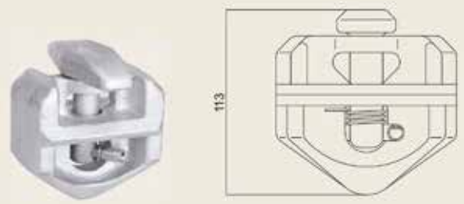
Breech Twistlock
L4-1L



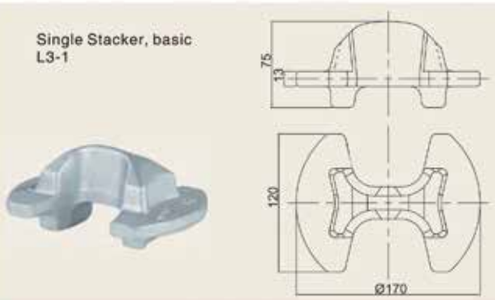
Twistcone, flange
C-1



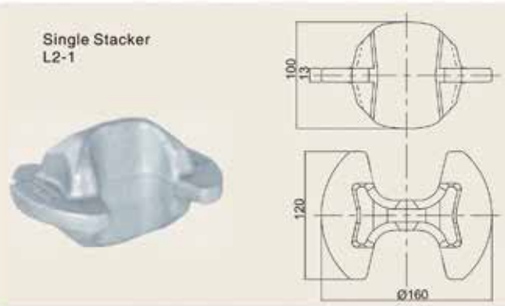
Twistcone, flangeless
C-2



Single Stacker, basic
L3-1



Single Stacker
L2-1

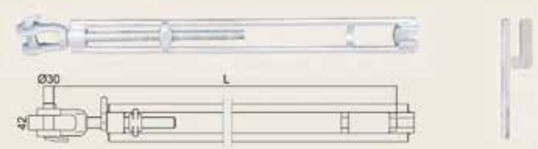


Doubel Stackers
L2-2-Lc
Lc is according to order

Bridge Fitting
BF-1
L is according to order

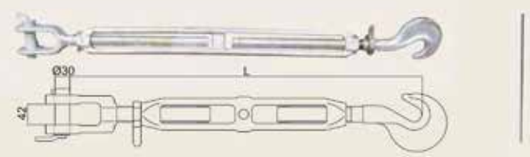
Turnbuckle, knob
TB-1/L
L is according to order

Handle for turnbuckle
HT-1
for TB-1

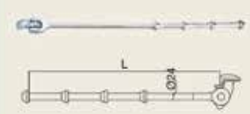


Turnbuckle, hook
TB-2/L
L is according to order

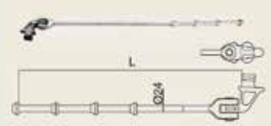
Handle for turnbuckle
HT-2
for TB-2



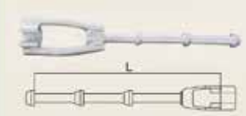
Lashing Rod, knob R-11/L
L is according to order



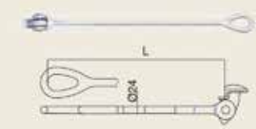
Lashing Rod, Vertical,knob R-13/L
L is according to order



Extension Rod,knob R-14/L
L is according to order

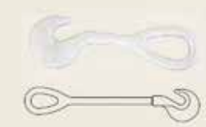


Lashing Rod, Hook R-21/L
L is according to order



Lashing Rod, Vertical,hook R-23/L
L is according to order

Extension Rod,Hook R-24/L
L is according to order



/ **NOTLAR |** NOTE

ÜRÜN KATALOĞU

PRODUCT CATALOGUE