



ÜRÜN KATALOĐU
PRODUCT CATALOGUE

HalatHayattır
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hakkımızda

1900'lü yılların başında İstanbul'da bir şahıs şirketi olarak kurulan firmamız; çelik halat ve bağlantı elemanlarının satışı konusunda hizmet vermekte olup, 1983 yılından bu yana Çelsan Çelik Halat Sanayi ve Ticaret A.Ş. adı ile faaliyet göstermektedir. Ayrıca **KISWIRE** firmasının Türkiye distribütörlüğünü yapmaktayız.

Stoğumuzdaki 1 mm'den 90 mm'e kadar geniş çap ve kompozisyon aralığındaki geleneksel çelik halatlar ve yüksek kopma dayanımına sahip orijinal vinç halatları "**HYROPE**" ile; Demir Çelik, Liman, İnşaat, Vinç, Petrol ve Maden Sanayi, Çimento, Asansör, Balıkçılık gibi sektörlerle hizmet vermekteyiz.

Firmamız, Çelik halatların yanı sıra, Grade 80, Grade 100 ve Grade 120 Zincir ve Zincir aksesuarları, Krom (Paslanmaz) Halat, PVC Kaplı (izoleli) Çelik Halat, TSE Belgili Örgü ve Kurşun Baskılı Sapanlar, Polyester Sapan ve Bağlantı Elemanlarının da (Kilit, Klemens, Gerdirme, Kanca, Halka, Radansa, Fırdöndü, Aybolt, Döner Yataklı Aybolttlar, Karabina) satışını yapmaktadır.

Kaliteli ve güvenli ürünler ile müşterileri buluşturup müşterilerini memnun etmeyi hedefleyen firmamız TSE EN ISO 9001-2008 ve OHSAS 18001-2007 yönetim sistemi belgelerine sahiptir.

Konusunda deneyimli mühendislerimiz yılların getirdiği tecrübe ve uzmanlaşma ile satış esnasında bizi size mahcup etmeyecek tercihleri önermeye özen göstermekte olup doğru tercihler ile firmamızı "**çözüm ortağınız**" yapmak öncelikli hedeflerimizdendir.

"HALATHAYATTIR"

*Our company was established as an individual firm in 1900s in Istanbul. We proudly provide steel wire rope and hardware ever since. The company name changed to Celsan Celik Halat Sanayi ve Ticaret A.S. in 1983. In addition, we are the Turkey distributor of **KISWIRE**.*

*We have a broad inventory of steel wire rope ranging from 1 mm to 90 mm diameters. Furthermore, we have both traditional ropes and special ropes that is high tensile and called "**HYROPE**". We also serve in other sectors including Iron and Steel, Port, Construction, Crane, Oil and Mining, Cement, Elevator and Fishing.*

We are proud to provide Grade 80, Grade 100, Grade 120 Chain, Chain Accessories, Stainless Steel Rope, PVC Coated Rope, TSE certified Wire Rope Sling, Polyester Webbing Sling and Wire Rope Accessories (Shackle, Clip, Turnbuckle, Hook, Master Link, Thimble, Swivel, Eye Bolt, Lifting Points, Snap Hook) as well as steel wire rope.

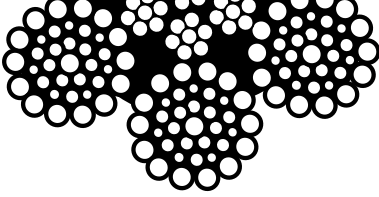
The company which aims at keeping customer satisfied by bringing quality and safety together with customer, has got TSE EN ISO 9001-2008 and OHSAS 18001-2007 admistrative system certificate.

The company pays attention of advicing choices which do not make us embrassed to you in sales period by skilled and experienced engineers. Herewith it is aimed at making Çelsan " your solution partner ".

about us

İçindekiler

06 GENEL BİLGİLER GENERAL INFORMATION



17 ÇELİK HALAT STEEL WIRE ROPE

32 YENİ NESİL ÇELİK HALATLAR NEW GENERATION ROPES

33

HYROPE
HYROPE



62

Yerüstü Madencilik Halatları
SURFACE MINING ROPES



72

Yeraltı Madencilik Halatları
UNDERGROUND MINING ROPES



88

**Neptune &
N2 Hyrope**



106

SAPANLAR

SLINGS



117

BAĞLANTI ELEMANLARI


HARDWARE



169

ZİNCİR VE ZİNCİR EKİPMANLARI

CHAIN AND CHAIN EQUIPMENTS

GRADE 80  **170**

GRADE 100  **176**

GRADE 120  **185**



191

KALDIRMA ATAÇMANLARI

LIFTING ATTACHMENTS



Halatlar Hakkında Önemli Bilgiler

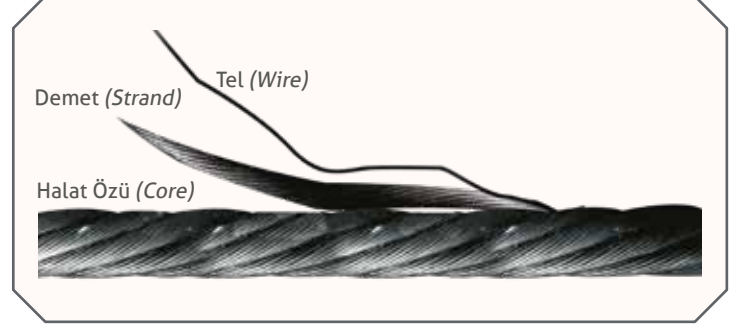
Important Things About Steel Wire Rope

Halatın Bileşenleri

Wire Rope Components

1. Demetleri meydana getiren teller
2. Bir öz etrafında helisel olarak sarılmış demetler
3. Halatın merkezinde, demetlere destek görevini yapan öz şeklindedir.

1. Wires forming the strand
2. Strands laid helically around a core
3. A core supporting the strands

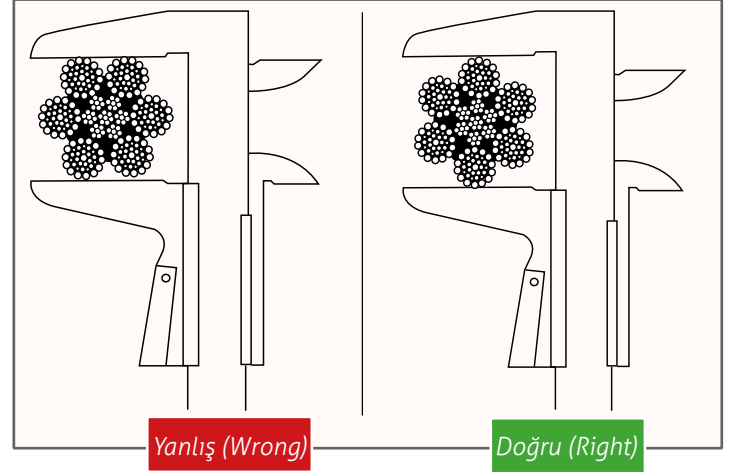


Halat çapı ölçümü

Measurement of the Diameter of Steel Wire Rope

Halat çapı, halat dış tel ve demetlerini çevreleyen ve tüm halat kesitini içine alan çemberin çapıdır. Halat çapı ölçümünde ölçü cihazı çenelerinin mutlaka en dış iki demete teması gereklidir.

The diameter of the steel wire rope encircles the outer wires and strands including the cross section. The measuring device must touch two strands.

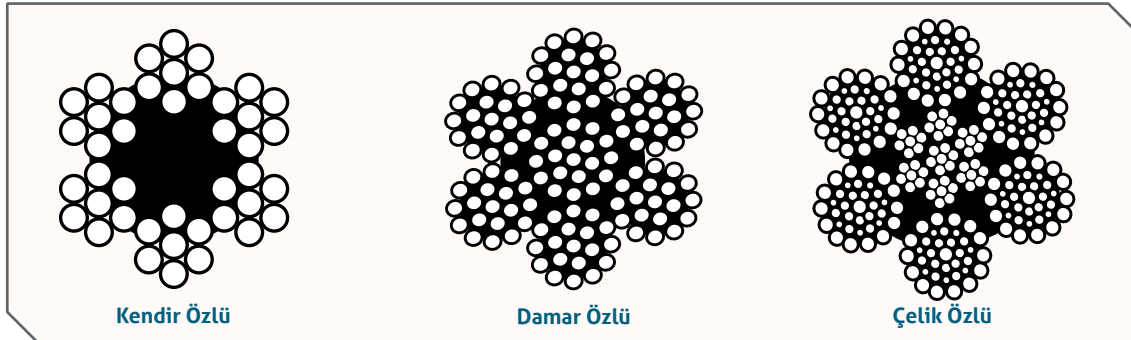


Halatın Özü

Wire Rope Core

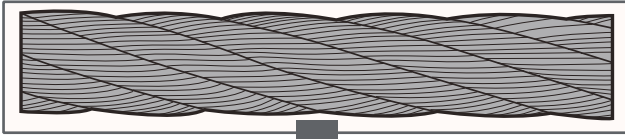
Halatlar Kendir öz, Çelik öz ve Damar öz olarak 3 gruba ayrılmaktadır.

Wire Ropes are divided into 3 different groups; Fiber core, Strand core and Steel core.

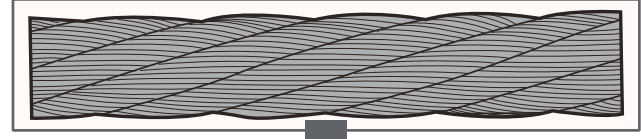


Halat Sarım Yönü ve Tambur Bağlantıları

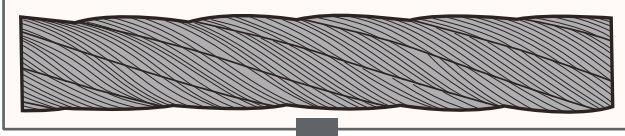
Direction of Wire and Strand Helix



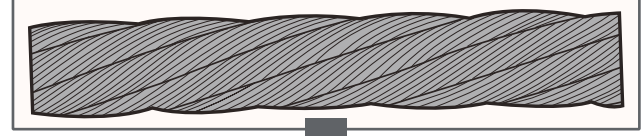
Sağ Çapraz Sarım
Right Hand Regular Lay (RHRL/RHO/sZ)



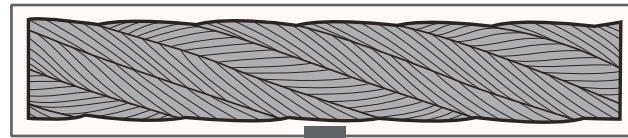
Sol Çapraz Sarım
Left Hand Regular Lay (LHRL/RHO/zS)



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)

Halatların Tambura Sabitlenmesi ve Sarılması

Spooling/Anchorage of Rope on Drum

Halatlar sıfır iç gerilme ile üretilmektedir.

Tambur üzerinde düzensiz sarım işlemi, iç gerilmeleri artırır. Bu durumda halatın ömrü kısalmır.

- 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.

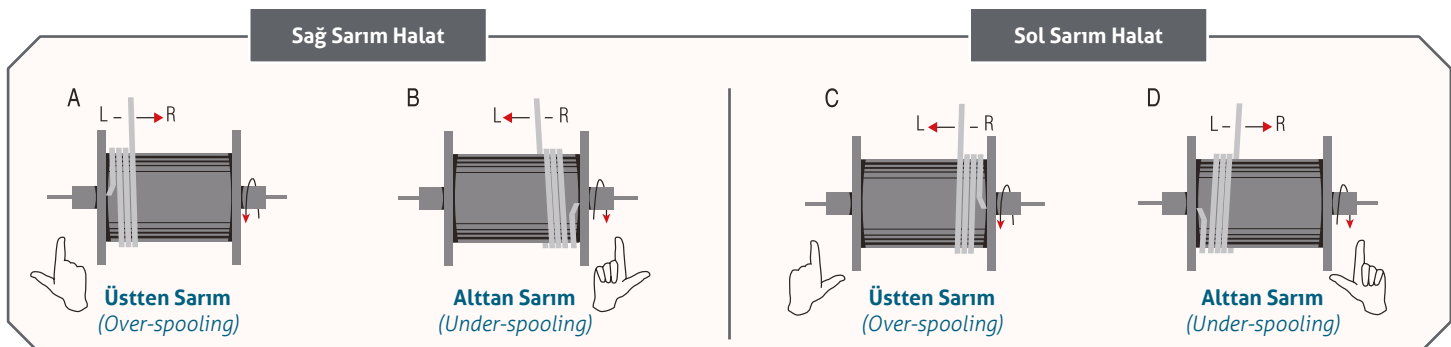
Inappropriate spooling causes stress and decreases life time of the wire.

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.



Halat Kompozisyonları ve Tambur Oranları

Steel Wire Rope Compositions and Pulley Ratios

İdeal Yiv Açıklığı

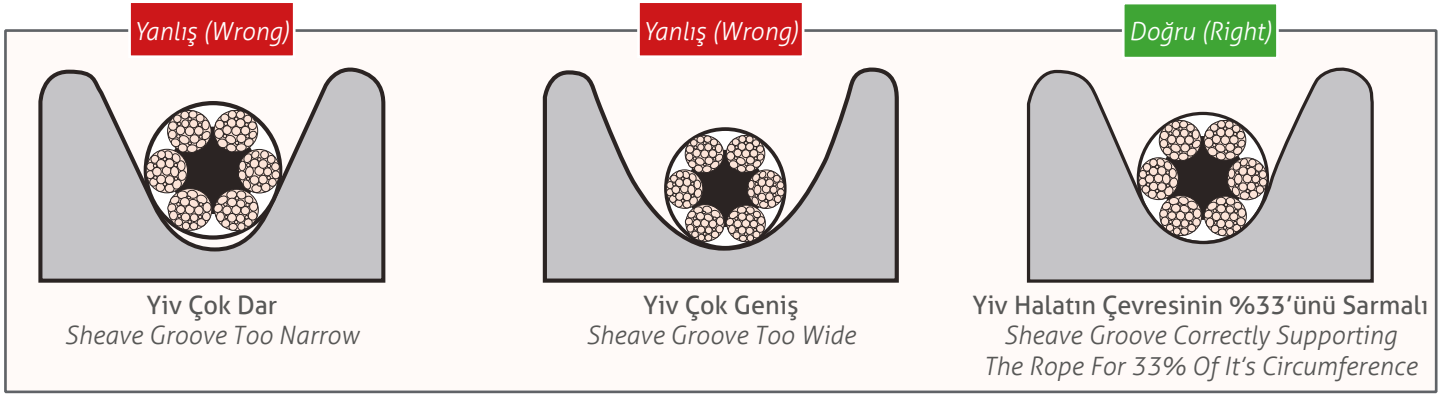
Ideal Pulley Groove

Halat ve yiv arasındaki temas yüzeyi arttıkça, aşınma azalır ve halatın servis ömrü artar. Halat yuvası çapı, çap mastarı kullanılarak ölçülür.

Halat toleransı %5 olarak düşünüldüğünde açılmış olan yivlerin min. halat anma çapından %5 daha büyük olması gerekmektedir.

Yiv toleransı ise max %5'dir.

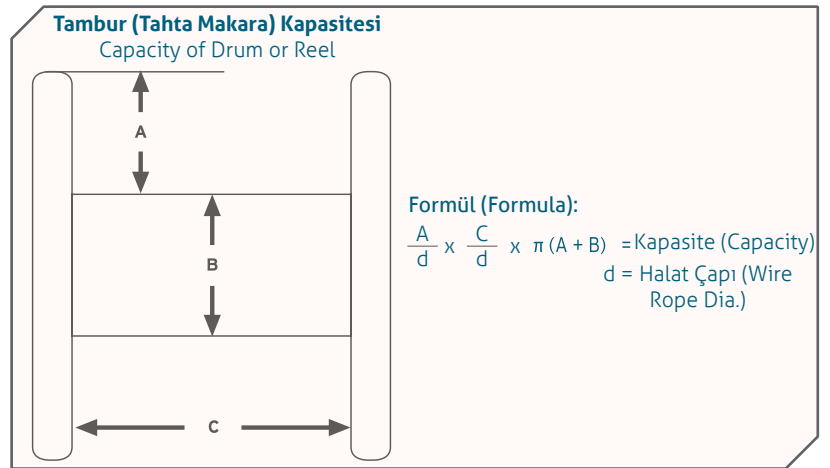
Greater contact area between the rope and the pulley reduces abrasion and increases service life of rope. The diameter of the groove is measured with diameter straightedge. If wire rope tolerance is considered 5% the ideal open chase groove should be 5% greater than the minimum nominal diameter of the rope. The maximum groove tolerance is 5%.



Tambur - Halat Çapı Oranları

Drum Rope Diameter Ratio

Const.	Optimized D/d	Min. D/d
6x7	72	42
19x7, 18x7	51	34
6x19 S	51	34
6x21 Fi	45	30
6x26 WS	45	30
35x7	41	27
6x25 Fi	39	26
6x31 WS	39	26
6x37	39	26
6x36 WS	35	23
6x41 WS	32	21
8x19 S	41	27
8X25 Filler	32	21



Sapma Açısı

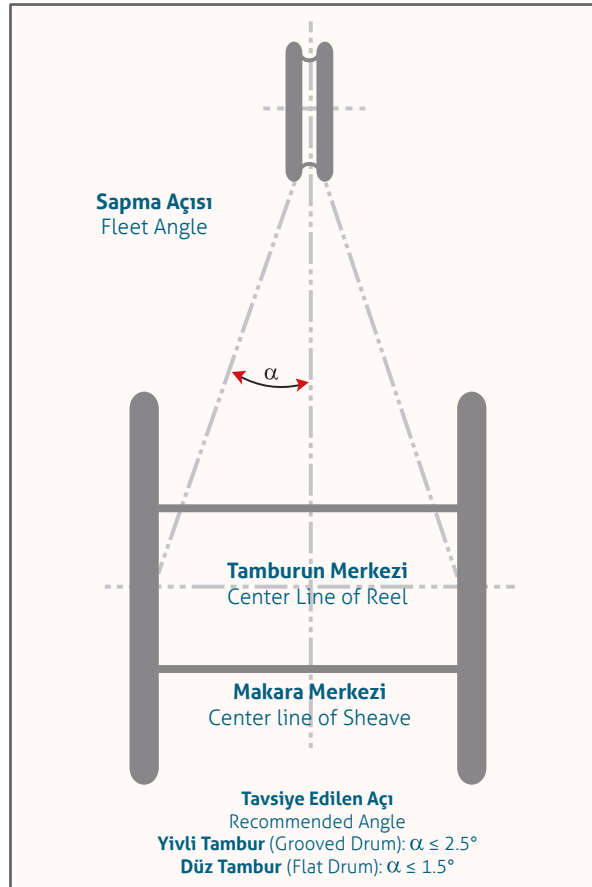
Fleet Angle

Sapma Açısı: Yiv merkezinden tambur flanşına ve tambur merkezine dik olarak çizilen iki çizgi arasındaki açıdır. Sağ ve sol olmak üzere iki çeşit sapma açısından bahsedilebilir. Bu açıların, belirtilen tolerans değerleri içerisinde olması istenir. Aksi durumda halatın kullanım ömrünü olumsuz etkiler.

Çalışma verimi ve halat ömrünün arttırılması için, sapma açısının düz tamburlarda $1,5^\circ$ yivli tamburlarda ise $2,5^\circ$ aşmaması gerekir.

Fleet Angle is the angle shown by the perpendicular line that goes from the center of the chase to the drum flange and the drum center. Categorized as left and right. The angle is expected to be in the recommended tolerance rates. Otherwise it affects the wire rope's service life adversely.

In order to increase the performance and service life of wire-rope, fleet of angle should be $1,5^\circ$ on flat drums, and should not be more than $2,5^\circ$ on grooved drums.



Halatların Yağlanması

Lubrication of Wire Rope

Çelik halatlar genelde imalat esnasında yağlanmakla birlikte imalat sırasındaki bu yağlama halatların çalışma koşullarında uzun süre korunmaları için yeterli değildir. Bu sebeple bakımları esnasında halatlar kontrol edilerek yağlanmalıdır.

Steel wire ropes are lubricated during production. However it is not sufficient for long term use. Therefore it should be inspected during maintenance and lubricated if necessary.

Halatları Yağlamanın Faydaları

Advantages of Lubrication

1. Aşınmayı önlemek.
 2. Kullanım ömrünü uzatmak.
 3. Korozyona karşı korumak.
 4. Çalışma esnasında tel ve demetlerin birbiri üzerinde düzgün olarak kaymalarını sağlamak.
1. *Preventing from abrasion.*
 2. *Increasing life time.*
 3. *Protecting against corrosion.*
 4. *Providing better slide of wires and strands during work.*



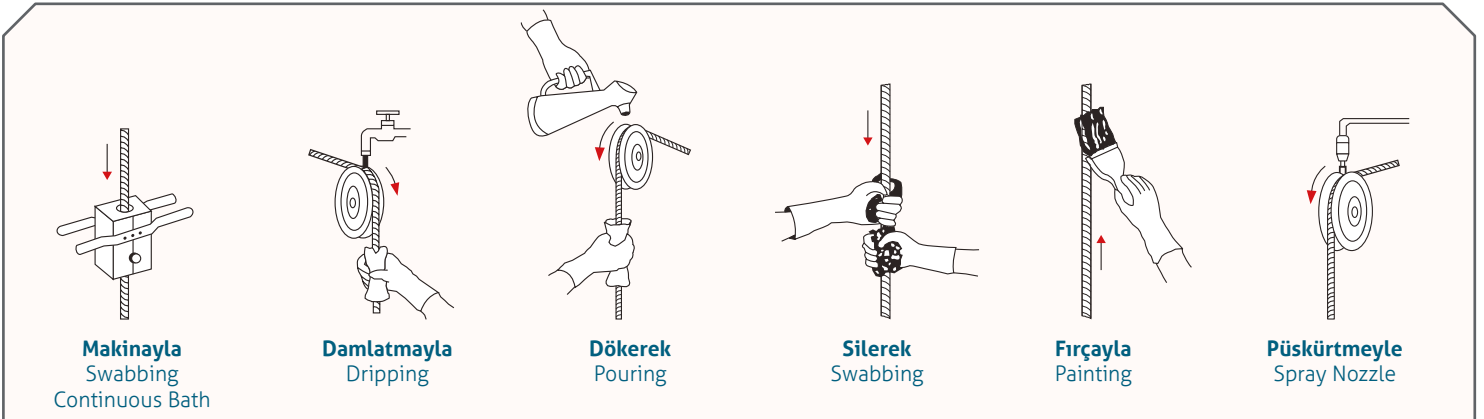
Halat Yağımızın Avantajları

Advantages of Our Lubricant

- ◊ Direkt tatbik edilebilir. (Ön ısıtmaya gerek yoktur.)
- ◊ Solvent bazlıdır.
- ◊ Kuruma süresi kısadır.
- ◊ Demetler arasına kolayca nüfuz eder
- ◊ Koruyucu, ince film tabakası oluşturur.
- ◊ Etrafa sıçramaz.
- ◊ Uzun halat ömrü sağlar.
- ◊ Paslanmayı önler.
- ◊ *Can be applied directly.*
- ◊ *Solvent based.*
- ◊ *Drying out quickly.*
- ◊ *Penetrating into strands easily.*
- ◊ *Unspattering in use.*
- ◊ *Does not spatter.*
- ◊ *Increasing the service life of the wire*
- ◊ *Preventing from oxidation/rust.*

Halat Yağlama Şekilleri

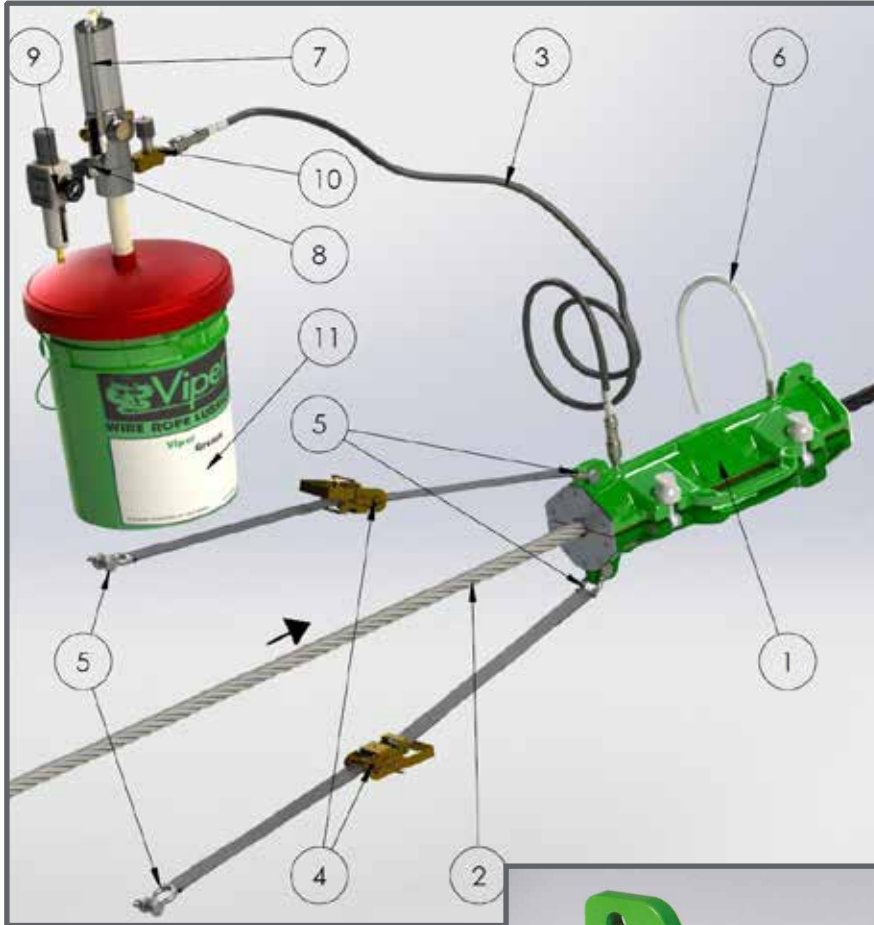
Types of Wire Rope Lubrications



Viper Yağlama Makinası Bileşenleri

Viper Lubricator Kit Components

Item	QTY	Tanım / Description
1	1	Kelepçe / Viper Collar
2	1	Çelik Halat / Wire Rope
3	1	Yüksek Basınç Ulaştırıcı Hortum / High Pressure Delivery Hose with Female Quick Connects
4	2	Mandallı Bantlar / Ratchet Straps
5	4	Omega Kilit / Bow Shackle
6	1	Temiz Yağ Tahliye Hortumu / Clear Lubricant Drain Hose
7	1	Kapaklı Yağ Pompası ve İzleyici / Viper Grease Pump with Drum Cover & Follower Plate
8	1	Hava Akışı Kontrol Valfi / Air Flow Control Valve
9	1	Ölçü Aletli Hava Basıncı Regülatörü / Air Pressure Regulator with Gauge
10	1	Yağ Akışı Kontrol Valfi / Grease Flow Control Valve
11	1	Yağlama Kovası / Viper Lubricant Pail

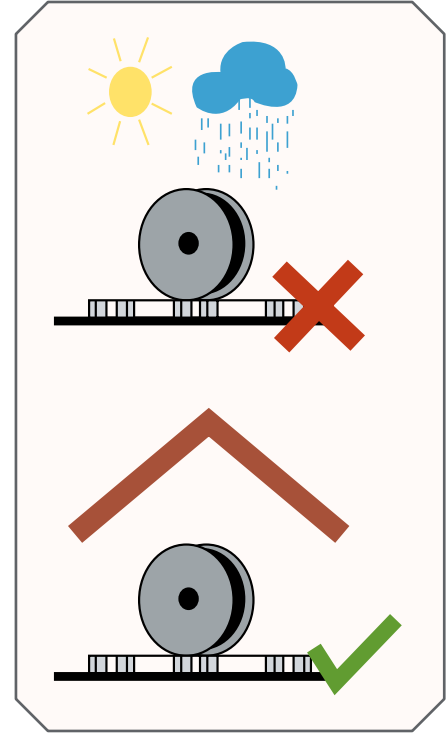


Halatların Depolanması

Storing Wire Ropes

Halatlar kuru, temiz ve güneş ışığına maruz kalmayacak şekilde saklanmalıdır. Halatlar kısa süreliğine dışarıda saklanacaksa; makaralar örtülerek, makara altından hava akımı alabilecek şekilde stoklanmalıdır.

Wherever possible, ropes should be stored on pallets in places that are clean, dry, and protected against strong solar radiation. If ropes are stored outdoors for a short term, the plastic foil covers should be checked for condensation and the ingress of air at regular intervals.

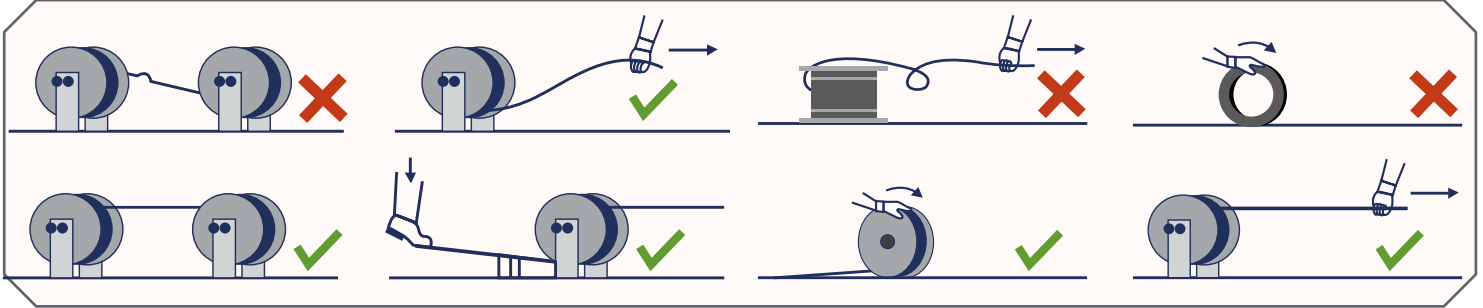


Halat Aktarma ve Sarım Şekilleri

Recoiling and Spooling of Wire Ropes

Halatın hasarlanmaması için belirtilen şekillere uygun aktarma yapılmalıdır.

Should be rolled as the figure right to prevent damages.

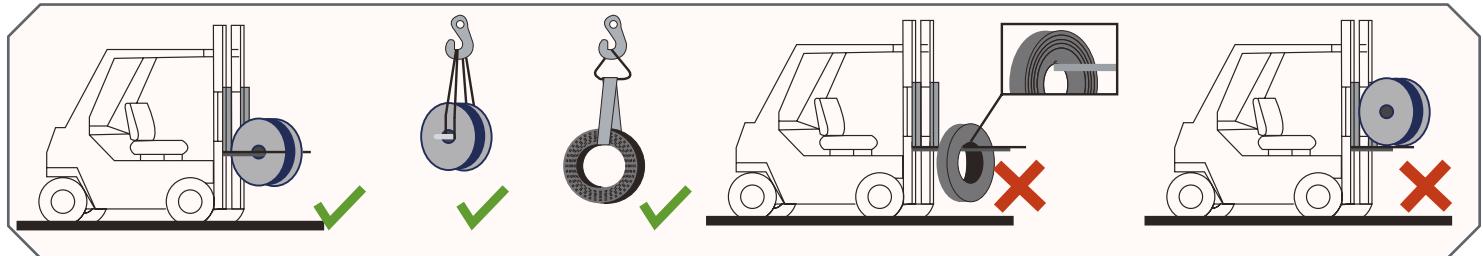


Halatların Taşınması

Transport of Ropes

Halatın makarada taşınması tercih edilmelidir. Makaranın güvenli bir şekilde taşınması için uygun araçlar kullanılmalıdır. Roda halindeki halatlar uygun polyester sapanlar ile taşınmalıdır. Halatın sert yüzeylere temasından kaçınılmalıdır. Şekilde görüldüğü gibi kendi ağırlığı üzerine binecek şekilde sevk edilmemelidir.

Transport the rope preferably on a reel. Use suitable means for a safe transport of the reel. Coiled rope sections are best transported by means of a lifting belt. Avoid contact of the rope with hard surfaces. The ropes should not be loaded on their own weight.



Çelik Halatların Iskartaya Alınma Kriterleri

Discard Criteria of Steel Wire Rope

Tek katmanlı paralel kapalı halatlar *Single-layer and paralel-closed ropes*

Tablo 1 — Tek katmanlı paralel kapalı halatın içerisinde iskartaya çıkarılmasını işaret eden görülebilir tel kırığı sayısı

Table 1 — Number of wire breaks, reached or exceeded, of visible broken wires occurring in single-layer and parallel-closed ropes, signalling discard of rope

Halat Kategorisi Numarası RCN <i>Rope category number RCN (see Annex G)</i>	Halatın dış demetlerinde yükü maruz kalan toplam tel sayısı ^a <i>Total number of load-bearing wires in the outer layer of strands in the rope n</i>	Görülebilir kırık dış tel sayısı ^b <i>Number of visible broken outer wires</i>					
		Tekli sarım tambur üzerinde ve/veya çelik makaralarda çalışan halatlar (Tel kırıkları rastgele dağıtılmıştır.) <i>Sections of rope working in steel sheaves and/or spooling on a single-layer drum (wire breaks randomly distributed)</i>				Çoklu sarım tambur üzerinde çalışan halat ^c <i>Sections of rope spooling on a multi-layer drum</i>	
		M1 den M4 e kadar t-yada bilinmeyen Sınıflar ^d <i>Classes M1 to M4 or class unknown</i>				Tüm Sınıflar <i>All classes</i>	
		Çapraz Sarım / <i>Ordinary lay</i>		Düz Sarım / <i>Langs lay</i>		Çapraz ve Düz Sarım / <i>Ordinary and Lang lay</i>	
		6 d uzunluk üzeri ^e <i>Over a length of 6d</i>	30 d uzunluk üzeri ^e <i>Over a length of 30d</i>	6 d uzunluk üzeri ^e <i>Over a length of 6d</i>	30 d uzunluk üzeri ^e <i>Over a length of 30d</i>	6 d uzunluk üzeri ^e <i>Over a length of 6d</i>	30 d uzunluk üzeri ^e <i>Over a length of 30d</i>
01	$n \leq 50$	2	4	1	2	4	8
02	$51 \leq n \leq 75$	3	6	2	3	6	12
03	$76 \leq n \leq 100$	4	8	2	4	8	16
04	$101 \leq n \leq 120$	5	10	2	5	10	20
05	$121 \leq n \leq 140$	6	11	3	6	12	22
06	$141 \leq n \leq 160$	6	13	3	6	12	26
07	$161 \leq n \leq 180$	7	14	4	7	14	28
08	$181 \leq n \leq 200$	8	16	4	8	16	32
09	$201 \leq n \leq 220$	9	18	4	9	18	36
10	$221 \leq n \leq 240$	10	19	5	10	20	38
11	$24 \leq n \leq 260$	10	21	5	10	20	42
12	$261 \leq n \leq 280$	11	22	6	11	22	44
13	$281 \leq n \leq 300$	12	24	6	12	24	48
	$n > 300$	$0,04 \times n$	$0,08 \times n$	$0,02 \times n$	$0,04 \times n$	$0,08 \times n$	$0,16 \times n$

NOT: Seale yapıdaki her bir damarı 19 yada daha az telden oluşan halatlar için (Ör: 6x19 Seale) tabloda normalde olduğu değer aralığından iki sıra üstteki değerler dikkate alınabilir.

NOTE: As for ropes having 19 wires or less for each strands (e.g 6x19 Seale), would be considered two row above than equals to itself in above table.

^a Uluslararası Standartlar gereğince, filler teller yük mukavemeti telleri olarak kabul edilmemektedir ve n değerlerine dahil edilmemektedir. / Based on International Standard, filler wires are not regarded as load-bearing wires and are not included in the values of n/

^b Bir kırık tel iki uca sahiptir (Tek tel olarak sayılmıştır) / A broken wire has two ends (counted as one wire)/

^c Halat sapma açısı etkilerinden dolayı sargılar arasındaki temas ve çapraz bölgede meydana gelen bozulmayı içeren değerler. (Bu ifade sadece tambura sarılan kısmı kastetmektedir.)
/ The values apply to deterioration that occurs at the cross-over zones and interference between wraps due to fleet angle effects (The phrase only means ropes on drum)./

^d M5 den M8 e kadar olan sınıflandırma mekanizmalarında tabloda belirtilen kırık tel sayısının 2 katı uygulanabilir.
Twice number of broken wires would be applied to ropes in classification M5 to M8.

^e d = Halat Çapı / nominal diameter of rope./

Dönmeye Karşı Dirençli Halatlar *Rotation-resistant ropes*

Tablo 2 — Dönmeye Karşı dirençli halatlar içerisinde halatın ıskartaya çıkarılmasını işaret eden görülebilir tel kırığı sayısı
 Table 2 — Number of wire breaks, reached or exceeded, of visible broken wires occurring in rotation-resistant rope, signalling discard of rope

Halat Kategorisi Numarası RCN Rope category number RCN (see Annex G)	Dış damar sayısı ve halatın dış demetlerinde yüke katlanan tellerin toplam sayısı ^a Number of outer strands and total number of loadbearing wires in the outer layer of strands in the rope n	Görülebilir kırık dış tel sayısı ^b Number of visible broken outer wires			
		Tekli sarım tambur üzerinde ve/veya çelik makaralarda çalışan halatlar Sections of rope working in steel sheaves and/or spooling on a singlelayer drum (wire breaks randomly distributed)		Çoklu sarım tambur üzerinde çalışan halatlar ^c Sections of rope spooling on a multi-layer drum	
		6 d uzunluk üzeri ^d Over a length of 6d	30 d uzunluk üzeri ^d Over a length of 30d	6 d uzunluk üzeri ^d Over a length of 6d	30 d uzunluk üzeri ^d Over a length of 30d
21	4 strands $n \leq 100$	2	4	2	4
22	3 or 4 strands $n \leq 100$	2	4	4	8
	At least 11 outer strands				
23-1	$71 \leq n \leq 100$	2	4	4	8
23-2	$101 \leq n \leq 120$	3	5	5	10
23-3	$121 \leq n \leq 140$	3	5	6	11
24	$141 \leq n \leq 160$	3	6	6	13
25	$161 \leq n \leq 180$	4	7	7	14
26	$181 \leq n \leq 200$	4	8	8	16
27	$201 \leq n \leq 220$	4	9	9	18
28	$221 \leq n \leq 240$	5	10	10	19
29	$241 \leq n \leq 260$	5	10	10	21
30	$261 \leq n \leq 280$	6	11	11	22
31	$281 \leq n \leq 300$	6	12	12	24
	$n > 300$	6	12	12	24

NOT: Seale yapıdaki her bir damarı 19 yada daha az telden oluşan halatlar için (Ör: 18x19 Seale- WSC) tabloda normalde olduğu değer aralığından iki sıra üstteki değerler dikkate alınmalıdır.

NOTE: As for ropes having 19 wires or less for each strands (e.g 18 x19 Seale - WSC), would be considered two row above than equals to itself in above table.

^a Uluslararası Standartlar gereğince ,filler teller yük mukavemeti telleri olarak kabul edilmemektedir ve n değerlerine dahil edilmemektedir. /Based on International Standard, filler wires are not regarded as load-bearing wires and are not included in the values of n./

^b Bir kırık tel iki uca sahiptir /A broken wire has two ends./

^c Halat sapma açısı etkilerinden dolayı sargılar arasındaki temas ve çapraz bölgede meydana gelen bozulmayı içeren değerler. (Bu ifade sadece tambura sarılan kısmı kastetmektedir.)
 /The values apply to deterioration that occurs at the cross-over zones and interference between wraps due to fleet angle effects. (The phrase only means ropes on drum.)/

^d d = Halat Çapı /nominal diameter of rope./

Tablo 3 — Halatın iskartaya çıkmasını işaret eden çaptaki azalma şeması – Tekli sarım tambur üzerinde çalışan ve/veya çelik makara içerisinden geçen halat

Table 3 — Decrease schema in diameter signalling discard of rope — Rope spooling on a single-layer drum and/or running through a steel sheave

Halat Çeşidi Rope type	Çaptaki azalma (Yüzdelik halat çapı olarak ifade edilmiştir.) Uniform decrease in diameter (expressed as % of nominal diameter)	Önem derecesi / Severity rating	
		Açıklama / Description	%
Kendir özlü tek katmanlı halat Single-layer rope with fibre core	%6'dan daha az / Less than 6 %	-	0
	%6 ve üstü %7'den daha az / 6 % and over but less than 7 %	Az / Slight	20
	%7 ve üstü %8'den daha az / 7 % and over but less than 8 %	Orta / Medium	40
	%8 ve üstü %9'dan daha az / 8 % and over but less than 9 %	Yüksek / High	60
	%9 ve üstü %10'dan daha az / 9 % and over but less than 10 %	Çok yüksek / Very high	80
	%10 ve üstü / 10 % and over	Iskarta / Discard	100
Paralel kapalı yada çelik özlü tek katmanlı halat Single-layer rope with steel core or parallel-closed rope	%3,5'den daha az / Less than 3,5 %	-	0
	%3,5 ve üstü %4,5'den daha az / 3,5 % and over but less than 4,5 %	Az / Slight	20
	%4,5 ve üstü %5,5'den daha az / 4,5 % and over but less than 5,5 %	Orta / Medium	40
	%5,5 ve üstü %6,5'den daha az / 5,5 % and over but less than 6,5 %	Yüksek / High	60
	%6,5 ve üstü %7,5'den daha az / 6,5 % and over but less than 7,5 %	Çok yüksek / Very high	80
	%7,5 ve üstü / 7,5 % and over	Iskarta / Discard	100
Dönme karşı dirençli halat Rotation-resistant rope	%1'den daha az / Less than 1 %	—	0
	%1 ve üstü %2'den daha az / 1 % and over but less than 2 %	Az / Slight	20
	%2 ve üstü %3'den daha az / 2 % and over but less than 3 %	Orta / medium	40
	%3 ve üstü %4'den daha az / 3 % and over but less than 4 %	Yüksek / High	60
	%4 ve üstü %5'den daha az / 4 % and over but less than 5 %	Çok yüksek / Very high	80
	%5 ve üstü / 5 % and over	Iskarta / Discard	100

Halat Hasarlanma Şekilleri

Typical Examples of Wire Rope Deterioration



Tel Çıkması
Wire protrusion



Öz Çıkması
Core protrusion



Halat çapındaki bölgesel düşme
Local reduction in rope diameter



Damar bükülmesi yada dışarı çıkması
Strand protrusion or distortion



Düzleşmiş kısım
Flattened portion



Dışa doğru gam
Kink (positive)



İçe doğru gam
Kink (negative)



Dalgalanma
Waviness



Kafes oluşumu
Basket deformation



Dış aşınma
External wear



Dış korozyon
External corrosion



Dış korozyonun büyümüş hali
Enlargement of external corrosion



Tepe tel kırıkları
Crown wire breaks



Vadi tipi tel kırığı
Valley wire breaks



Dönmez tip halatlarda öz püskürmesi
Protrusion of inner rope of rotation-resistant rope



Öz hasarlanmasından kaynaklı çap artışı
Local increase in rope diameter due to core distortion



Gam
Kink



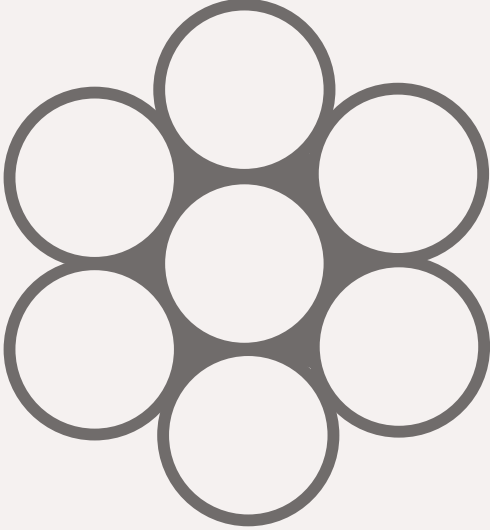
Düzleşmiş kısım
Flattened portion

ÇELİK HALAT

ÇELİK HALAT

STEEL WIRE ROPE

1X7 (1+6) Monotoron Monostrand



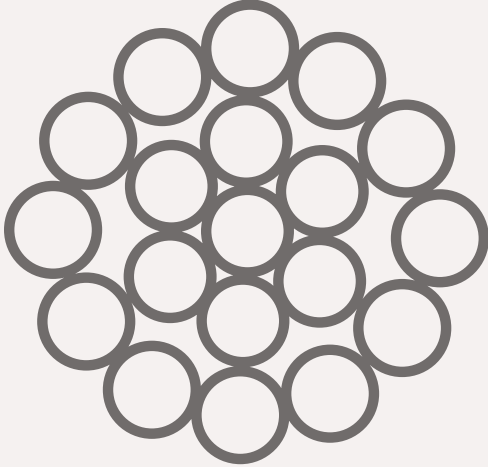
Kullanım Yerleri (Application Area)

- ◇ Gergi Halatı (Guy Rope)
- ◇ Otomotiv (Automotive)
- ◇ Kablo Üretimi (Cable Production)

1x7 TS EN 12385-4

Halat Anma Çapı Diameter of Wire Rope		Birim Ağırlık Unit Weight	En Küçük Kopma Kuvveti Min. Breaking Load
mm	Tolerans (%)	kg/m	Tel anma dayanımı (180 kgf/mm ²) Fmin kgf Tensile Strength
0,6	+5	0,002	35
0,8	-0	0,003	63
1		0,005	99
1,5		0,011	221
2		0,020	392
2,5		0,031	613
3		0,045	882
3,5		0,061	1206
4		0,080	1570
4,5		0,102	1980
5	+4	0,126	2450
6	-0	0,181	3530
7		0,246	4800
8		0,321	6270
9		0,407	7940
10		0,502	9800
12		0,723	14100
14		0,984	19200
16		1,290	25100

1X19 (1+6+12) Monotoron Monostrand



Kullanım Yerleri (Application Area)

- ◇ Gergi Halatı (Guy Rope)
- ◇ Otomotiv (Automotive)
- ◇ Kılavuz Halatı (Messenger Rope)

1x19 TS EN 12385-4

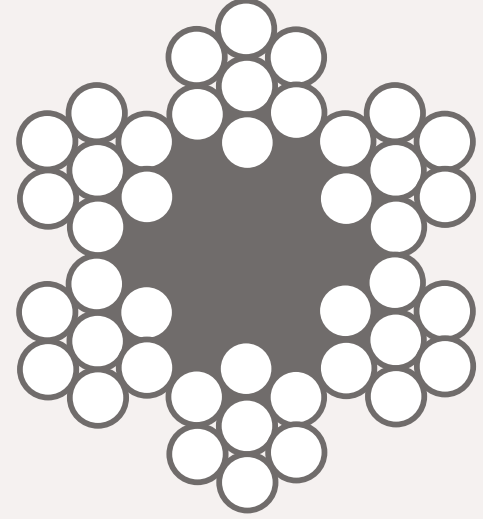
Halat Anma Çapı Diameter of Wire Rope		Birim Ağırlık Unit Weight	En Küçük Kopma Kuvveti Min. Breaking Load
mm	Tolerans (%)	kg/m	Tel anma dayanımı (180 kgf/mm ²) Fmin kgf Tensile Strength
1	+5	0,005	95
1,5	-0	0,011	213
2		0,019	378
2,5		0,031	591
3		0,044	851
3,5		0,060	1160
4		0,079	1510
5		0,124	2360
6		0,178	3400
7		0,243	4630
8	+4	0,317	6050
9	-0	0,401	7660
10		0,495	9450
11		0,599	11400
12		0,713	13600
13		0,837	16000
14		0,971	18500
15		1,110	21300
16		1,270	24200

6X7 = 6(1+6)

Kendir Özlü Halat *Fiber Core*

6X7 TS EN 12385-4

Halat Anma Çapı <i>Diameter of Wire Rope</i>		LÖ Birim Ağırlık <i>FC Unit Weight</i>	En Küçük Kopma Kuvveti <i>Min. Breaking Load</i>	
mm	Tolerans (%)	kg/m	Lif Öz Tel Anma Dayanımı <i>(180 kgf/mm²) F_{min} kgf</i> <i>Tensile Strength</i>	Lif Öz Tel Anma Dayanımı <i>(200 kgf/mm²) F_{min} kgf</i> <i>Tensile Strength</i>
2	+8	0.014	239,7	265,2
3	-0	0.032	539,58	597,72
4	+7	0.056	958,8	1060,8
5	-0	0.087	1499,4	1662,6
6	+6	0.124	2162,4	2386,8
7	-0	0.169	2937,6	3253,8
8		0.221	3830	4552
9		0.279	4840	5382
10		0.345	5980	6644
11		0.417	7240	8040
12		0.497	8610	9568
13		0.583	10100	11229
14		0.676	11700	13023
16	+5	0.883	15300	17010
18	-0	1.120	19400	21528
20		1.380	23900	26578
22		1.670	28900	32159
24		1.990	34400	38272
26		2.330	40452	44917
28		2.700	46883	52033
32		3.530	61235	68039



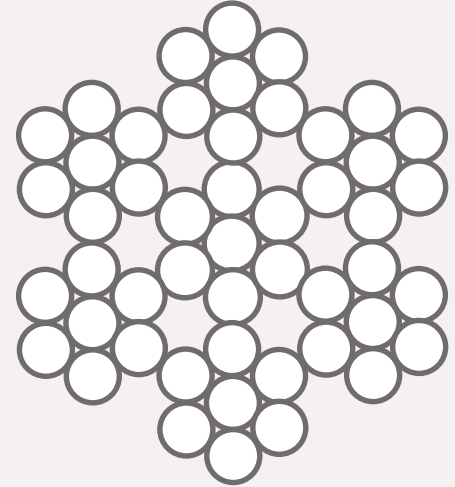
Kullanım Yerleri *(Application Area)*

- ◇ Balıkçılık *(Fishing)*
- ◇ Gergi Halatı *(Guy Rope)*
- ◇ Havai Halatı *(Aerial Line)*
- ◇ Telesiyej *(Chair Lift)*

Çelik Özlü Halat *IWRC*

6X7 TS EN 12385-4

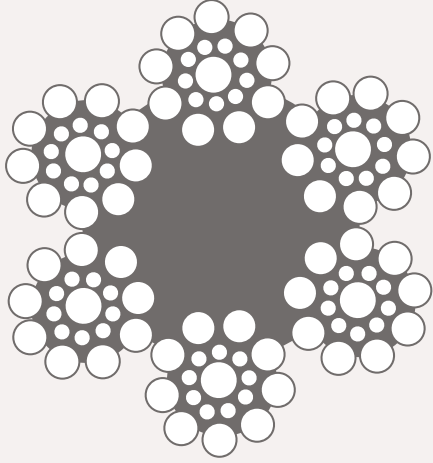
Halat Anma Çapı <i>Diameter of Wire Rope</i>		ÇÖ Birim Ağırlık <i>IWRC Unit Weight</i>	En Küçük Kopma Kuvveti <i>Min. Breaking Load</i>	
mm	Tolerans (%)	kg/m	Çelik Öz Tel Anma Dayanımı <i>(180 kgf/mm²) F_{min} kgf</i> <i>Tensile Strength</i>	Çelik Öz Tel Anma Dayanımı <i>(200 kgf/mm²) F_{min} kgf</i> <i>Tensile Strength</i>
2	+8	0.015	259,08	286,62
3	-0	0.035	583,44	645,66
4	+7	0.062	1040,4	1152,6
5	-0	0.096	1621,8	1795,6
6	+6	0.138	2335,8	2580,6
7	-0	0.180	3172,2	3519
8		0.246	4133	4592
9		0.311	5231	5812
10		0.384	6458	7176
11		0.465	7814	8683
12		0.553	9210	10333
13		0.649	10914	12127
14		0.753	12658	14064
16	+5	0.983	16533	18370
18	-0	1.240	20325	23249
20		1.540	25833	28703
22		1.860	31258	34731
24		2.210	37199	41332
26		2.600	43657	48508
28		3.010	50632	56258
32		3.930	64132	73480



Kullanım Yerleri *(Application Area)*

- ◇ Balıkçılık *(Fishing)*
- ◇ Gergi Halatı *(Guy Rope)*
- ◇ Havai Halatı *(Aerial Line)*
- ◇ Telesiyej *(Chair Lift)*

6 X 19 SEALE=6(1+9+9)



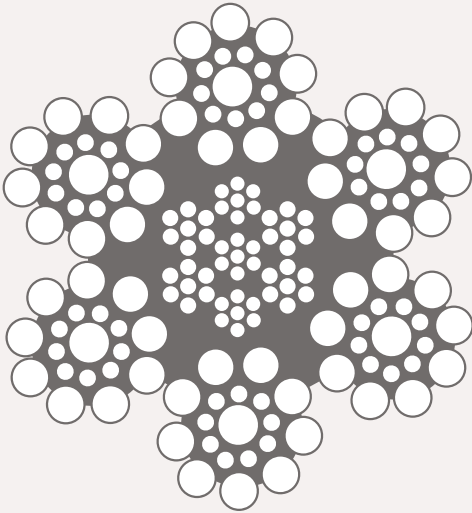
Kullanım Yerleri (Application Area)

- ◇ Madencilik (Mining)
- ◇ Balıkçılık (Fishing)
- ◇ Petrol Kuyuları (Oil Well)
- ◇ Telesiyej (Chair Lift)
- ◇ Genel Mühendislik (General Engineering)
- ◇ Asansör (Elevator)

Kendir Özlü Halat Fiber Core

6X19 SEALE TS EN 12385-4

Halat Anma Çapı Diameter of Wire Rope		LÖ Birim Ağırlık FC Unit Weight	En Küçük Kopma Kuvveti Min. Breaking Load	
mm	Tolerans (%)	kg/m	Lif Öz Tel Anma Dayanımı (180 kgf/mm ²) Fmin kgf Tensile Strength	Lif Öz Tel Anma Dayanımı (200 kgf/mm ²) Fmin kgf Tensile Strength
6		0.134	2140	3250
7		0.183	2920	2390
8		0.238	3810	4240
9		0.302	4830	5360
10		0.373	5960	6620
11	+6	0.451	7210	8010
12	-0	0.537	8580	9530
13		0.630	10100	11190
14		0.730	11700	12980
15		0.838	13400	14900
16		0.954	15300	16950
17		1.080	17200	19130
18		1.210	19300	21450
19		1.350	21500	23900
20	+5	1.490	23800	26480
22	-0	1.800	28800	32040
24		2.150	34300	38130
26		2.520	40300	44750
28		2.920	46700	51900
32		3.820	61300	67790
36		4.850	77200	85790



Kullanım Yerleri (Application Area)

- ◇ Madencilik (Mining)
- ◇ Balıkçılık (Fishing)
- ◇ Petrol Kuyuları (Oil Well)
- ◇ Telesiyej (Chair Lift)
- ◇ Genel Mühendislik (General Engineering)
- ◇ Asansör (Elevator)

Çelik Özlü Halat IWRC

6X19 SEALE TS EN 12385-4

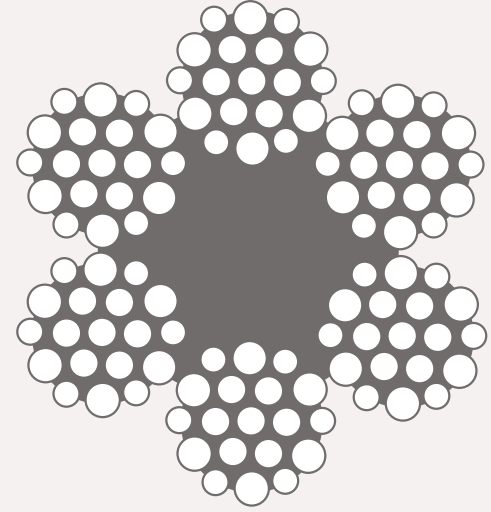
Halat Anma Çapı Diameter of Wire Rope		ÇÖ Birim Ağırlık IWRC Unit Weight	En Küçük Kopma Kuvveti Min. Breaking Load	
mm	Tolerans (%)	kg/m	Çelik Öz Tel Anma Dayanımı (180 kgf/mm ²) Fmin kgf Tensile Strength	Çelik Öz Tel Anma Dayanımı (200 kgf/mm ²) Fmin kgf Tensile Strength
6	+6	0.147	2310	2570
7	-0	0.201	3150	3500
8		0.262	4110	4575
9		0.332	5220	5790
10		0.410	6440	7150
11		0.496	7790	8650
12		0.591	9270	10300
13		0.693	10900	12080
14		0.803	12600	14010
15	+5	0.922	14500	16090
16	-0	1.050	16500	18300
17		1.190	18600	20660
18		1.330	20800	23160
19		1.490	23200	25810
20		1.640	25700	28600
22		1.980	31100	34600
24		2.370	37000	41180
26		2.770	43500	48330
28		3.210	50400	56050
32		4.200	65900	73200
36		5.310	83400	92650

6*19 WARRINGTON 6(1+6+(6+6))

Kendir Özlü Halat *Fiber Core*

6X19 WARRINGTON TS EN 12385-4

Halat Anma Çapı <i>Diameter of Wire Rope</i>		LÖ Birim Ağırlık <i>FC Unit Weight</i>	En Küçük Kopma Kuvveti <i>Min. Breaking Load</i>	
mm	Tolerans (%)	kg/m	Lif Öz Tel Anma Dayanımı <i>(180 kgf/mm²) Fmin kgf Tensile Strength</i>	Lif Öz Tel Anma Dayanımı <i>(200 kgf/mm²) Fmin kgf Tensile Strength</i>
6		0.134	2150	2385
7		0.183	2920	3245
8		0.238	3815	4235
9		0.302	4830	5365
10		0.373	5960	6620
11		0.451	7210	8000
12		0.537	8580	9535
13		0.630	10070	11190
14		0.730	11700	12975
15	+5	0.838	13400	14895
16	-0	0.954	15250	16945
17		1.077	17220	19130
18		1.207	19310	21450
19		1.345	21510	23900
20		1.490	23850	26475
22		1.803	28850	32040
24		2.146	34320	38130
26		2.519	40280	44750
28		2.921	46710	51900
32		3.815	61000	67785
36		4.829	77200	85790



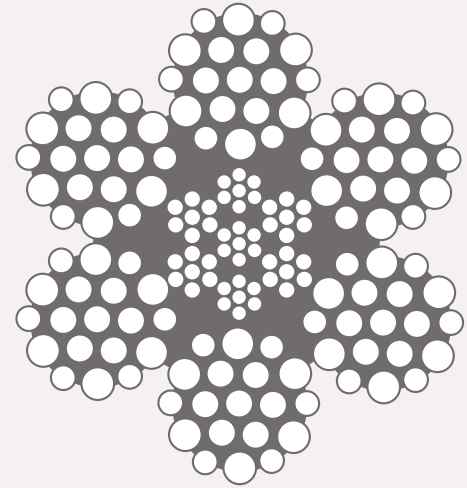
Kullanım Yerleri *(Application Area)*

- ◇ Madencilik *(Mining)*
- ◇ Balıkçılık *(Fishing)*
- ◇ Petrol Kuyuları *(Oil Well)*
- ◇ Telesiyej *(Chair Lift)*
- ◇ Genel Mühendislik
(General Engineering)
- ◇ Asansör *(Elevator)*

Çelik Özlü Halat *IWRC*

6X19 WARRINGTON TS EN 12385 - 4

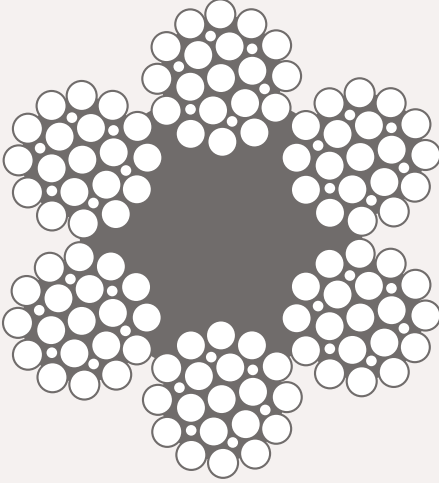
Halat Anma Çapı <i>Diameter of Wire Rope</i>		ÇÖ Birim Ağırlık <i>IWRC Unit Weight</i>	En Küçük Kopma Kuvveti <i>Min. Breaking Load</i>	
mm	Tolerans (%)	kg/m	Çelik Öz Tel Anma Dayanımı <i>(180 kgf/mm²) Fmin kgf Tensile Strength</i>	Çelik Öz Tel Anma Dayanımı <i>(200 kgf/mm²) Fmin kgf Tensile Strength</i>
6		0.148	2320	2575
7		0.201	3155	3505
8		0.263	4120	4575
9		0.332	5215	5790
10		0.410	6435	7150
11		0.496	7785	8650
12		0.591	9265	10300
13		0.693	10875	12085
14		0.804	12615	14015
15	+5	0.923	14480	16085
16	-0	1.050	16470	18300
17		1.186	18595	20660
18		1.329	20850	23165
19		1.481	23230	25810
20		1.641	25740	28600
22		1.986	31140	34600
24		2.363	37060	41180
26		2.774	43495	48330
28		3.217	50445	56050
32		4.202	65885	73210
36		5.318	83390	92650



Kullanım Yerleri *(Application Area)*

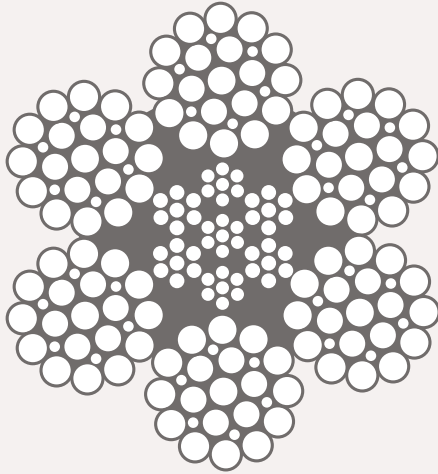
- ◇ Madencilik *(Mining)*
- ◇ Balıkçılık *(Fishing)*
- ◇ Petrol Kuyuları *(Oil Well)*
- ◇ Telesiyej *(Chair Lift)*
- ◇ Genel Mühendislik
(General Engineering)
- ◇ Asansör *(Elevator)*

6X19 FILLER 6(1+6+6dt+12)



Kullanım Yerleri (Application Area)

- ◇ Madencilik (Mining)
- ◇ Delme ve Sondaj (Drilling)
- ◇ Kum Ocakları (Sand Pit)
- ◇ Vinçler (Cranes)
- ◇ Darbeli Yükler (Shock Bads)
- ◇ Genel Mühendislik (General Engineering)



Kullanım Yerleri (Application Area)

- ◇ Madencilik (Mining)
- ◇ Delme ve Sondaj (Drilling)
- ◇ Kum Ocakları (Sand Pit)
- ◇ Vinçler (Cranes)
- ◇ Darbeli Yükler (Shock Bads)
- ◇ Genel Mühendislik (General Engineering)

Kendir Özlü Halat Fiber Core

6X19 FILLER TS EN 12385-4

Halat Anma Çapı Diameter of Wire Rope		LÖ Birim Ağırlık FC Unit Weight	En Küçük Kopma Kuvveti Min. Breaking Load	
mm	Tolerans (%)	kg/m	Lif Öz Tel Anma Dayanımı (180 kgf/mm ²) Fmin kgf Tensile Strenght	Lif Öz Tel Anma Dayanımı (200 kgf/mm ²) Fmin kgf Tensile Strenght
8		0.243	3890	4330
9		0.308	4920	5470
10		0.380	6080	6760
11		0.460	7360	8180
12		0.547	8750	9730
13		0.643	10300	11420
14		0.745	11900	13240
15		0.855	13700	15200
16		0.973	15600	17300
17	+5	1.100	17600	19520
18	-0	1.230	19700	21890
19		1.370	21900	24390
20		1.520	24300	27020
22		1.840	29400	32700
24		2.190	35000	38910
26		2.570	41100	45660
28		2.980	47700	52960
32		3.890	62200	69170
36		4.930	78800	87540

Çelik Özlü Halat IWRC

6X19 FILLER TS EN 12385-4

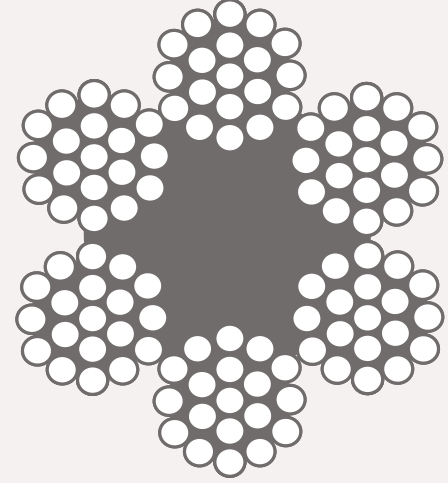
Halat Anma Çapı Diameter of Wire Rope		ÇÖ Birim Ağırlık IWRC Unit Weight	En Küçük Kopma Kuvveti Min. Breaking Load	
mm	Tolerans (%)	kg/m	Çelik Öz Tel Anma Dayanımı (180 kgf/mm ²) Fmin kgf Tensile Strenght	Çelik Öz Tel Anma Dayanımı (200 kgf/mm ²) Fmin kgf Tensile Strenght
8		0.267	4200	4670
9		0.339	5310	5910
10		0.418	6570	7300
11		0.506	7950	8830
12		0.602	9450	10510
13		0.707	11100	12330
14		0.820	12900	14300
15		0.941	14800	16420
16		1.070	16800	18680
17	+5	1.210	19000	21090
18	-0	1.350	21300	23640
19		1.510	23700	26340
20		1.670	26200	29180
22		2.020	31800	35310
24		2.410	37800	42020
26		2.830	44400	49320
28		3.280	51500	57200
32		4.280	67200	74670
36		5.420	85100	94540

6X19 STANDART 6(1+6+12)

Kendir Özlü Halat *Fiber Core*

6X19 STANDART TS EN 12385-4

Halat Anma Çapı <i>Diameter of Wire Rope</i>		LÖ Birim Ağırlık <i>FC Unit Weight</i>	En Küçük Kopma Kuvveti <i>Min. Breaking Load</i>	
mm	Tolerans (%)	kg/m	Lif Öz Tel Anma Dayanımı <i>(180 kgf/mm²) F_{min} kgf</i> <i>Tensile Strength</i>	Lif Öz Tel Anma Dayanımı <i>(200 kgf/mm²) F_{min} kgf</i> <i>Tensile Strength</i>
6		0.125	1990	2385
7		0.170	2710	3245
8		0.221	3540	3934
9		0.280	4481	4979
10		0.346	5532	6147
11		0.419	6694	7437
12		0.498	7699	8851
13		0.585	9349	10388
14		0.678	10842	12047
15	+5	0.778	12447	13830
16	-0	0.886	14162	15735
17		1.001	15987	17763
18		1.121	17923	19915
19		1.249	19970	22189
20		1.384	22127	24586
22		1.675	26774	29749
24		1.993	31864	35404
26		2.339	37395	41551
28		2.713	43370	48189
32		3.543	56646	62940
34		4.000	63948	71054
36		4.485	71693	79659



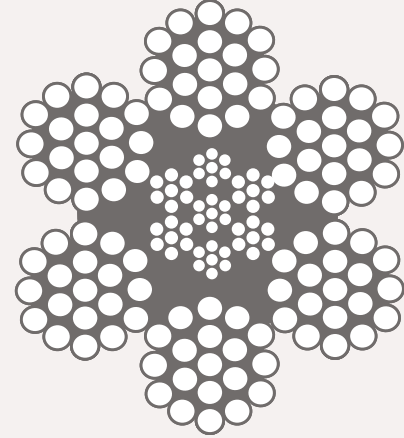
Kullanım Yerleri *(Application Area)*

- ◇ Sapan Yapımı *(Sling)*
- ◇ Çekme Halatı *(Pulling)*
- ◇ Genel Mühendislik *(General Engineering)*

Çelik Özlü Halat *IWRC*

6X19 STANDART TS EN 12385-4

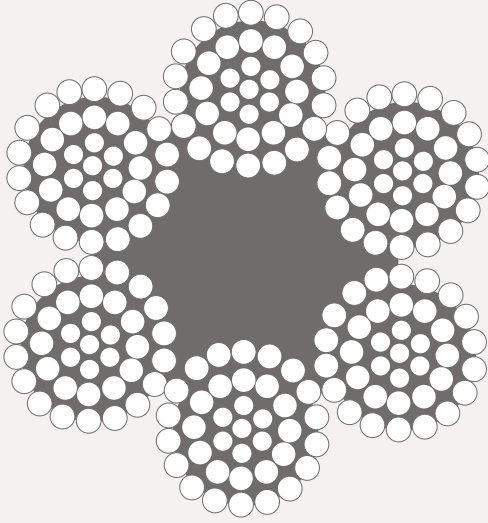
Halat Anma Çapı <i>Diameter of Wire Rope</i>		ÇÖ Birim Ağırlık <i>IWRC Unit Weight</i>	En Küçük Kopma Kuvveti <i>Min. Breaking Load</i>	
mm	Tolerans (%)	kg/m	Çelik Öz Tel Anma Dayanımı <i>(180 kgf/mm²) F_{min} kgf</i> <i>Tensile Strength</i>	Çelik Öz Tel Anma Dayanımı <i>(200 kgf/mm²) F_{min} kgf</i> <i>Tensile Strength</i>
8		0.243	3825	4250
9		0.308	4840	5380
10		0.381	5975	6640
11		0.461	7230	8035
12		0.548	8605	9560
13		0.643	10100	11220
14		0.746	11710	13010
15		0.856	13445	14940
16		0.974	15295	16995
17	+5	1.101	17270	19185
18	-0	1.233	19360	21510
19		1.374	21570	23965
20		1.522	23900	26555
22		1.842	28920	32130
24		2.192	34415	38240
26		2.570	40388	44875
28		2.980	46840	52045
32		3.900	61179	67977
34		4.400	69065	76739
36		4.930	77430	86033



Kullanım Yerleri *(Application Area)*

- ◇ Sapan Yapımı *(Sling)*
- ◇ Çekme Halatı *(Pulling)*
- ◇ Genel Mühendislik *(General Engineering)*

6X37 STANDART 6(1+6+12+18)



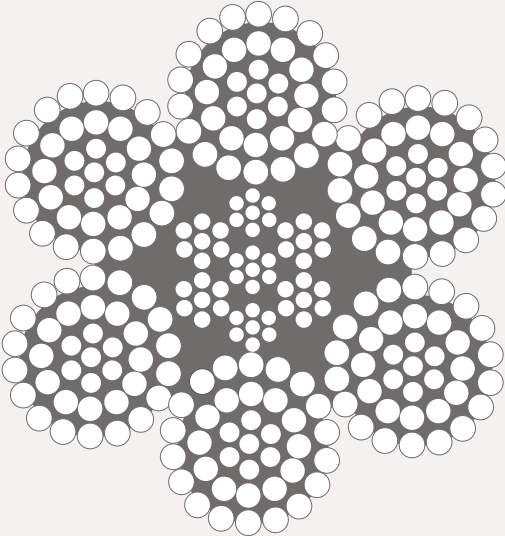
Kendir Özlü Halat *Fiber Core*

6X37 STANDART TS EN 12385-4

Halat Anma Çapı Diameter of Wire Rope		LÖ Birim Ağırlık FC Unit Weight	En Küçük Kopma Kuvveti Min. Breaking Load	
mm	Tolerans (%)	kg/m	Lif Öz Tel Anma Dayanımı (180 kgf/mm ²) Fmin kgf Tensile Strength	Lif Öz Tel Anma Dayanımı (200 kgf/mm ²) Fmin kgf Tensile Strength
8		0.221	3400	3775
10		0.346	5310	5900
12		0.498	7645	8490
13		0.585	8970	9965
14		0.678	10400	11560
16		0.886	13585	15095
18		1.121	17195	19105
20		1.384	21225	23590
22		1.675	25685	28540
24		1.993	30570	33965
26		2.339	35875	39860
28		2.713	41605	46230
30	+5	3.114	47760	53070
32	-0	3.543	54340	60380
34		4.001	61350	68165
36		4.484	68775	76420
38		4.996	76630	85145
40		5.536	84910	94345
42		6.103	93615	104015
44		6.698	102740	114155
46		7.321	112290	124770
48		7.972	122270	135855
50		8.650	132670	147410
52		9.356	143495	159440
54		10.089	154745	171940
56		10.850	166420	184910

■ Kullanım Yerleri (Application Area) ■

- ◇ Gemi Bağlama (Mooring)
- ◇ Sapan Yapımı (Sling)
- ◇ Denizcilik (Marine)
- ◇ Genel Mühendislik (General Engineering)



Çelik Özlü Halat *IWRC*

6X37 STANDART TS EN 12385-4

Halat Anma Çapı Diameter of Wire Rope		ÇÖ Birim Ağırlık IWRC Unit Weight	En Küçük Kopma Kuvveti Min. Breaking Load	
mm	Tolerans (%)	kg/m	Çelik Öz Tel Anma Dayanımı (180 kgf/mm ²) Fmin kgf Tensile Strength	Çelik Öz Tel Anma Dayanımı (200 kgf/mm ²) Fmin kgf Tensile Strength
8		0.244	3670	4075
10		0.381	5730	6370
12		0.548	8255	9170
14		0.746	11235	12480
16		0.974	14675	16305
18		1.233	18570	20635
20		1.522	22925	25475
22		1.842	27740	30825
24		2.192	33015	36680
26		2.573	38745	43050
28		2.984	44935	49930
30	+5	3.425	51580	57315
32	-0	3.897	58690	65210
34		4.400	66255	73615
36		4.932	74280	82530
38		5.496	82760	91955
40		6.089	91700	101890
42		6.713	101100	112335
44		7.368	110960	123290
46		8.053	121275	134750
48		8.769	132050	146720
50		9.515	143280	159200
52		10.291	154975	172195
54		11.098	167125	185695
56		11.935	179735	199700

■ Kullanım Yerleri (Application Area) ■

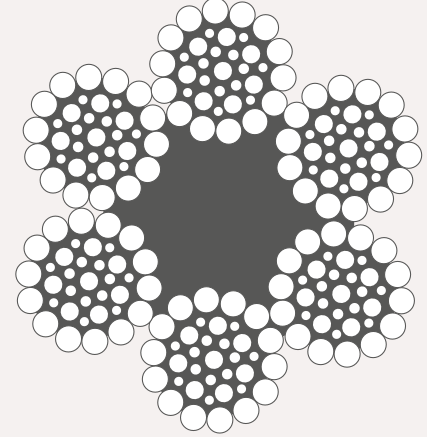
- ◇ Gemi Bağlama (Mooring)
- ◇ Sapan Yapımı (Sling)
- ◇ Denizcilik (Marine)
- ◇ Genel Mühendislik (General Engineering)

6X36 WARRINGTON SEALE = 6(1+7+(7+7)+14)

Kendir Özlü Halat *Fiber Core*

6X36 WARRINGTON - SEALE = TS EN 12385-4

Halat Anma Çapı <i>Diameter of Wire Rope</i>		LÖ Birim Ağırlık <i>FC Unit Weight</i>	En Küçük Kopma Kuvveti <i>Min. Breaking Load</i>	
mm	Tolerans (%)	kg/m	Lif Öz Tel Anma Dayanımı <i>(180 kgf/mm²) F_{min} kgf Tensile Strength</i>	Lif Öz Tel Anma Dayanımı <i>(200 kgf/mm²) F_{min} kgf Tensile Strength</i>
8		0.243	3800	4230
10		0.380	5940	6600
12		0.547	8550	9500
13		0.643	10000	11150
14		0.745	11600	12930
16		0.973	15200	16890
18		1.230	19200	21380
20		1.520	23800	26390
22	+5	1.840	28700	31930
24	-0	2.190	34200	38000
26		2.570	40100	44600
28		2.980	46600	51730
32		3.890	60800	67660
36		4.930	77000	85500
40		6.080	95000	105660
44		7.360	115000	127730
48		8.760	137000	152000
52		10.300	161000	178400
56		11.900	186000	206900



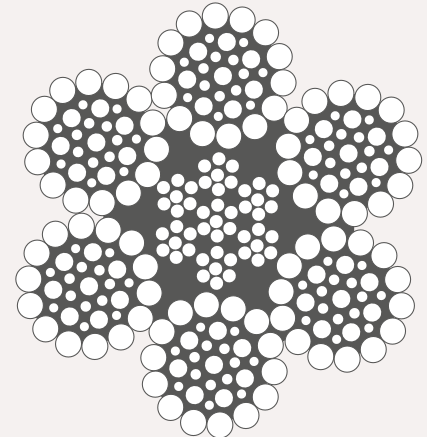
Kullanım Yerleri *(Application Area)*

- ◇ Vinçler *(Cranes)*
- ◇ Madencilik *(Mining)*
- ◇ Denizcilik *(Marine)*
- ◇ Genel Mühendislik *(General Engineering)*

Çelik Özlü Halat *IWRC*

6X36 WARRINGTON - SEALE TS EN 12385-4

Halat Anma Çapı <i>Diameter of Wire Rope</i>		ÇÖ Birim Ağırlık <i>IWRC Unit Weight</i>	En Küçük Kopma Kuvveti <i>Min. Breaking Load</i>	
mm	Tolerans (%)	kg/m	Çelik Öz Tel Anma Dayanımı <i>(180 kgf/mm²) F_{min} kgf Tensile Strength</i>	Çelik Öz Tel Anma Dayanımı <i>(200 kgf/mm²) F_{min} kgf Tensile Strength</i>
8		0.268	4110	4560
10		0.418	6420	7130
12		0.602	9230	10260
13		0.707	10800	12050
14		0.820	12600	13965
16		1.070	16400	18240
18		1.350	20800	23090
20		1.670	25600	28500
22	+5	2.020	31000	34490
24	-0	2.410	36900	41050
26		2.830	43300	48170
28		3.280	50300	55870
32		4.280	65700	72970
36		5.420	83100	92350
40		6.690	103000	114000
44		8.100	124000	137950
48		9.640	148000	164170
52		11.300	173000	192670
56		13.100	201000	223450

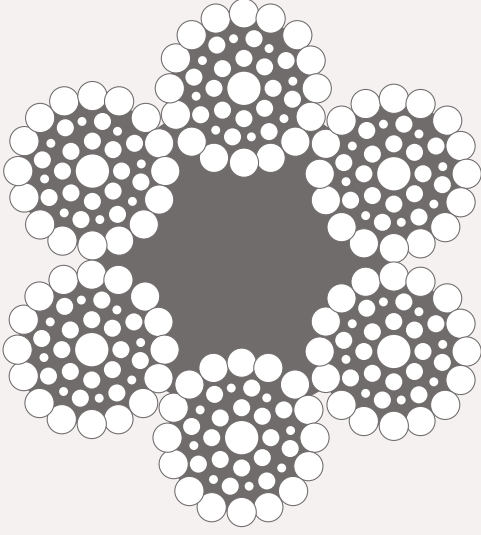


Kullanım Yerleri *(Application Area)*

- ◇ Vinçler *(Cranes)*
- ◇ Madencilik *(Mining)*
- ◇ Denizcilik *(Marine)*
- ◇ Genel Mühendislik *(General Engineering)*

6X41 WARRINGTON

SEALE = 6(1+8+(8+8)+16)



Kullanım Yerleri (Application Area)

- ◇ Vinçler (Cranes)
- ◇ Madencilik (Mining)
- ◇ Denizcilik (Marine)
- ◇ Genel Mühendislik (General Engineering)

Kendir Özlü Halat Fiber Core

6X41 WARRINGTON = TS EN 12385-4

Halat Anma Çapı Diameter of Wire Rope		LÖ Birim Ağırlık FC Unit Weight	En Küçük Kopma Kuvveti Min. Breaking Load	
mm	Tolerans (%)	kg/m	Lif Öz Tel Anma Dayanımı (180 kgf/mm ²) Fmin kgf Tensile Strength	Lif Öz Tel Anma Dayanımı (200 kgf/mm ²) Fmin kgf Tensile Strength
12		0.548	8550	9500
14		0.745	11640	12930
16		0.973	15200	16890
18		1.232	19240	21375
20		1.521	23750	26390
22		1.840	28740	31930
24		2.190	34200	38000
26		2.570	40140	44600
28		2.981	46550	51725
30		3.422	53440	59380
32	+5	3.893	60800	67555
34	-0	4.395	68640	76265
36		4.928	76950	85500
38		5.490	85740	95270
40		6.083	95000	105560
42		6.707	104740	116380
44		7.361	114955	127725
46		8.045	125640	139600
48		8.760	136805	152000
52		10.281	160555	178395
56		11.923	186200	206895

Çelik Özlü Halat IWRC

6X41 WARRINGTON - SEALE TS EN 12385-4

Halat Anma Çapı Diameter of Wire Rope		ÇÖ Birim Ağırlık IWRC Unit Weight	En Küçük Kopma Kuvveti Min. Breaking Load	
mm	Tolerans (%)	kg/m	Çelik Öz Tel Anma Dayanımı (180 kgf/mm ²) Fmin kgf Tensile Strength	Çelik Öz Tel Anma Dayanımı (200 kgf/mm ²) Fmin kgf Tensile Strength
12		0.602	9235	10260
13		0.707	10840	12045
14		0.820	12570	13965
15		0.941	14430	16035
16		1.071	16420	18240
18		1.355	20780	23090
20		1.673	25650	28500
22		2.024	31040	34490
24		2.409	36940	41045
26	+5	2.827	43350	48170
28	-0	3.279	50280	55865
30		3.764	57720	64130
32		4.283	65670	72965
34		4.835	74135	82370
36		5.420	83115	92345
38		6.039	92605	102890
40		6.692	102605	114010
42		7.377	113125	125695
44		8.097	124155	137950
46		8.850	135670	150775
48		9.636	147755	164170
50		10.456	160325	178135
52		11.309	173405	192670
54		12.195	187000	207780
56		13.115	201110	223455

Kullanım Yerleri (Application Area)

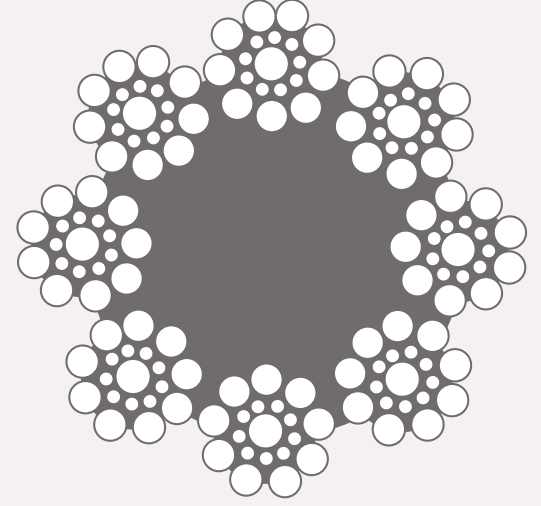
- ◇ Vinçler (Cranes)
- ◇ Madencilik (Mining)
- ◇ Denizcilik (Marine)
- ◇ Genel Mühendislik (General Engineering)

8X19 SEALE = 8(1+9+9)

Kendir Özlü Halat *Fiber Core*

8X19 SEALE TS EN 12385-5

Halat Anma Çapı <i>Diameter of Wire Rope</i>		En Küçük Kopma Kuvveti <i>Min. Breaking Load</i>		Yaklaşık Ağırlık <i>Weight</i>
inch	mm	1370/1770/1570 (kN)		kg/m
3/16	4.76	10.1		0.08
1/4	6.35	17.7		0.14
5/16	7.94	28.1		0.22
-	9.00	35.6		0.28
3/8	9.50	39.6		0.31
-	10.00	44.0		0.34
-	11.00	53.2		0.42
7/16	11.10	54.2		0.42
-	12.00	63.3		0.49
-	12.50	68.7		0.54
1/2	12.70	70.9		0.55
-	13.00	74.3		0.58
-	14.00	86.2		0.67
9/16	14.30	89.9		0.70
5/8	16.00	113.0		0.88



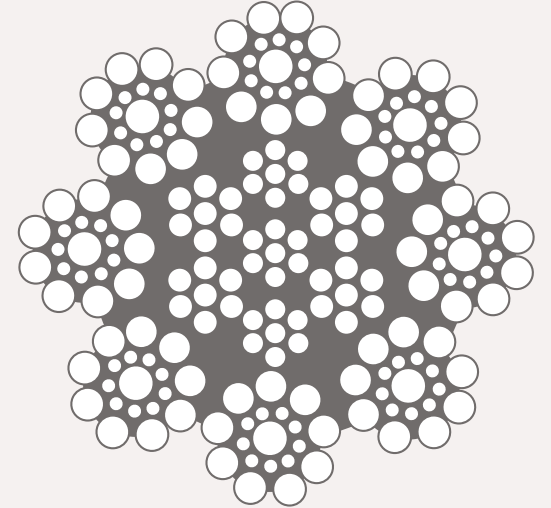
■ Kullanım Yerleri (*Application Area*) ■

- ◇ Asansör (*Elevators*)
- ◇ Vinçler (*Cranes*)

Çelik Özlü Halat *IWRC*

8X19 SEALE TS EN 12385-5

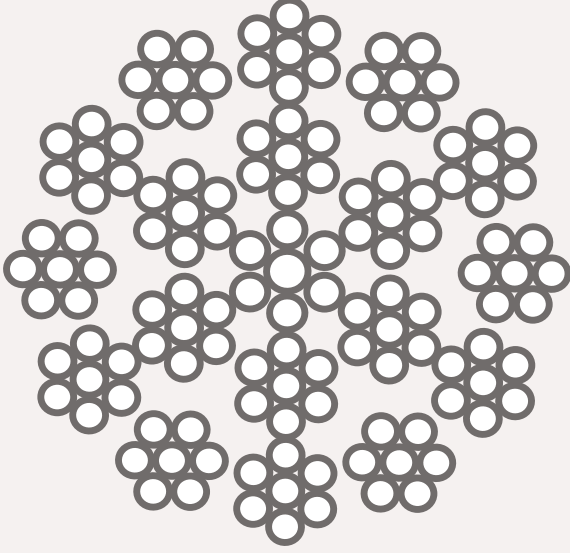
Halat Anma Çapı <i>Diameter of Wire Rope</i>		En Küçük Kopma Kuvveti <i>Min. Breaking Load</i>		Yaklaşık Ağırlık <i>Weight</i>
inch	mm	1370/1770/1570 (kN)	1770/1770/1570 (kN)	kg/m
5/16	7.94	36.2	40.8	0.26
-	9.00	46.6	52.5	0.34
3/8	9.50	51.9	58.5	0.38
-	10.00	57.5	64.8	0.42
-	11.00	69.7	78.6	0.51
7/16	11.10	71.0	80.1	0.52
-	12.00	83.0	93.6	0.61
-	12.50	89.9	101.0	0.66
1/2	12.70	92.8	105.0	0.68
-	13.00	97.0	109.0	0.71
-	14.00	113.0	128.0	0.83
9/16	14.30	118.0	133.0	0.86
5/8	16.00	148.0	167.0	1.08
11/16	17.50	177.0	200.0	1.29
-	18.00	186.0	210.0	1.36
3/4	19.10	208.0	234.0	1.52
-	22.00	279.0	315.0	2.03



■ Kullanım Yerleri (*Application Area*) ■

- ◇ Asansör (*Elevators*)
- ◇ Vinçler (*Cranes*)

19X7 YARI DÖNMEZ (ÖZ+6(1+6)+12(1+6))



Kullanım Yerleri (Application Area)

- ◇ Kule Vinçleri (Tower Crane)
- ◇ Yüksek Kaldırmalar (High Lifting)
- ◇ Vinçler (Cranes)
- ◇ Liman Vinçleri (Port Cranes)

Çelik Özlü Halat IWRC

19X7 YARI DÖNMEZ TS EN 12385-4

Halat Anma Çapı - ÇÖ Diameter of Wire Rope		ÇÖ Birim Ağırlık IWRC Unit Weight	En Küçük Kopma Kuvveti Min. Breaking Load
mm	ÇÖ Tolerans (%)	kg/m	Çelik Öz Tel Anma Dayanımı (180 kgf/mm ²) F _{min} kgf Tensile Strength
4	+7	0,064	945
5	-0	0,100	1480
6	+6	0,145	2130
7	-0	0,197	2890
8		0,257	3780
9		0,326	4780
10		0,402	5910
11		0,486	7150
12		0,579	8500
13		0,679	9980
14	+5	0,788	11600
16	-0	1,030	15100
18		1,300	19100
20		1,610	23600
22		1,950	28600
24		2,310	34000
26		2,720	39900
28		3,150	46300

Dönmez Halatlar

Non-Rotating Wires

Özellikle dönmez halatların aktarma, uç kesme ve kullanım sırasında diğer halatlardan daha hassas olduğu unutulmamalıdır. Bu nedenle;

- ◇ Dönmez halatların her iki ucu kesilmeden önce mutlaka sıkıca bağlanmalıdır yada uygun bir makinayla kesilmelidir.
- ◇ Aktarma ve boy kesme işlemleri bu işe uygun aktarma makinalarında kurallara uygun bir şekilde yapılmalıdır.
- ◇ Kullanım sırasında ani yüklerin uygulanmasından kaçınılmalı ve halatın küçük çaplı makaralardan geçmemesi ve keskin köşelere sürmemesi sağlanmalıdır.
- ◇ Dönmez halatlar çalışırken ani yük boşaltması yapılmamalıdır.
- ◇ Dönmez halatlar yük altında diğer dış kuvvetlerin etkisi ile döndürülmemelidir.

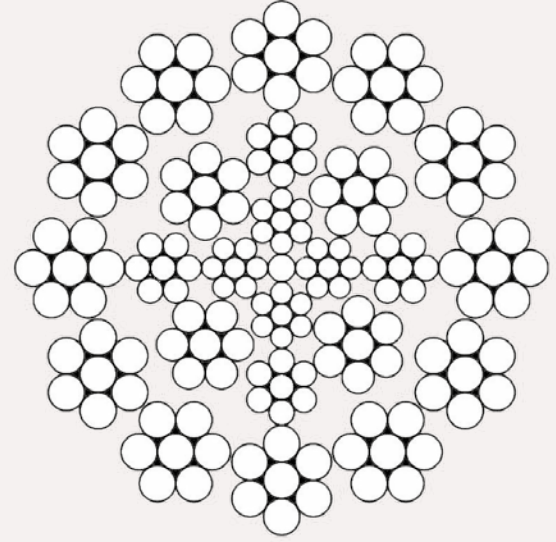
Non-rotating wires are more sensitive in terms of transfer, cut and usage. Therefore;

- ◇ Both ends should be tied tightly before cutting and should be cut by proper machines.
- ◇ Transfer and cut should be done by proper machines followed by regulations.
- ◇ Should not be loaded suddenly during use, used small diameter reels and contacted sharp corners.
- ◇ Should not be unloaded suddenly during use.
- ◇ Should not be rotated by external forces under load by external factors.

24X7 HALAT

24X7 HALAT

Dia (mm)	Halat Anma Çapı Diameter of Wire Rope (mm)		Birim Ağırlık Unit Weight (kg/m)	En Küçük Kopma Kuvveti Min. Breaking Load	
				1960 Grade	2160 Grade
8			0.314	50.4	55.2
9			0.398	63.7	69.8
10			0.491	78.7	86.2
11			0.594	95.2	104.3
12	+2	~+4	0.707	113.3	124.1
13			0.83	133	145.6
14			0.962	154.2	168.9
15			1.105	177	193.9
16			1.257	201.4	220.6



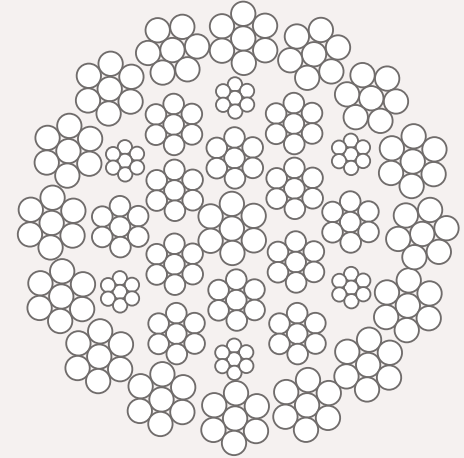
ÇELİK HALAT

35X7 WARRINGTON DÖNMEZ (ÖZ+6(1+6)+12(1+6)+16(1+6))

Çelik Özlü Halat IWRC

35X7 WARRINGTON DÖNMEZ TS EN 12385-4

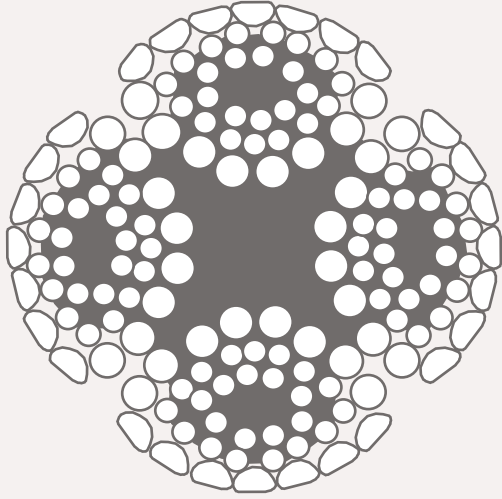
Halat Anma Çapı Diameter of Wire Rope		Birim Ağırlık Unit Weight kg/m	En Küçük Kopma Kuvveti Min. Breaking Load
mm	Tolerans (%)		
8		0,291	4605
9		0,368	5827
10		0,454	7195
11		0,549	8706
12		0,654	10361
13		0,767	12160
14		0,890	14102
16	+5	1,160	18419
18	-0	1,470	23311
20		1,820	28780
22		2,200	34824
24		2,620	41444
26		3,070	48639
28		3,560	56409
30		4,086	64756
32		4,650	73677
34		5,248	83175
36		5,880	93248



■ Kullanım Yerleri (Application Area) ■

- ◇ Kule Vinçleri (Tower Crane)
- ◇ Yüksek Kaldırmalar (High Lifting)
- ◇ Vinçler (Cranes)
- ◇ Liman Vinçleri (Port Cranes)

4X39 SES



Kullanım Yerleri (Application Area)

- ◇ Vinçler (Cranes)
- ◇ Kaldırma (Hoist)

Kendir Özlü Halat Fiber Core

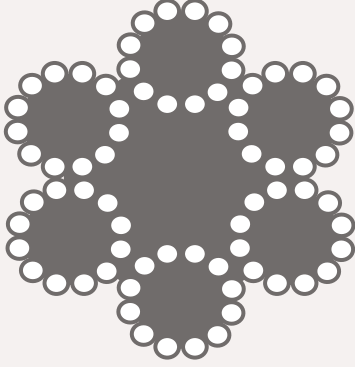
4X39 SES TS EN 12385-4

Halat Anma Çapı Diameter of Wire Rope	Min. Kopma Kuvveti Min. Breaking Load				Yaklaşık Ağırlık Weight	Maksimum Uzunluk Max. Length
	200 kg/mm ²		220 kg/mm ²			
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	128.00	1,372.9	140.00	8.38	1,100



6X12 + 7 GALVANİZLİ

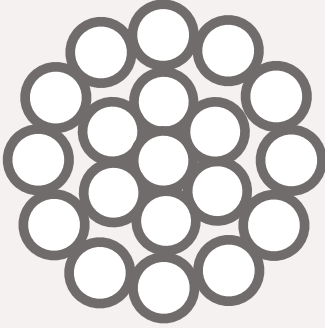
Kendir Özlü Halat *Fiber Core*



6X12 + 7 GALVANİZLİ

Halat Anma Çapı Diameter of Wire Rope mm	Tolerans(%)	Birim Ağırlık Unit Weight kg/m	En Küçük Kopma Kuvveti Min. Breaking Load
6		0,098	1270
8	+5	0,175	2290
10	-0	0,273	3670
12		0,393	5210

1X19 PASLANMAZ ÇELİK HALAT

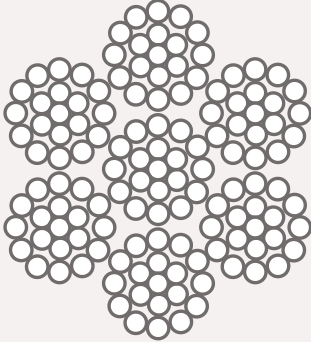


1X19 PASLANMAZ ÇELİK HALAT

Halat Anma Çapı Diameter of Wire Rope mm	Birim Ağırlık Unit Weight kg/m	En Küçük Kopma Kuvveti Min. Breaking Load
2	0,020	336
3	0,045	756
4	0,079	1340
5	0,124	2100
6	0,178	3030
8	0,317	5380
10	0,495	8400
12	0,713	12100

7X19 PASLANMAZ ÇELİK HALAT

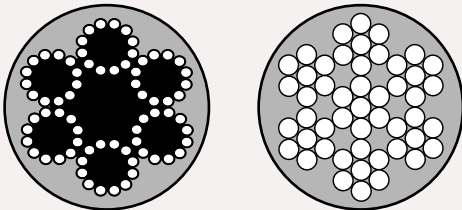
Çelik Özlü Halat *IWRC*



7X19 PASLANMAZ ÇELİK HALAT

Halat Anma Çapı Diameter of Wire Rope mm	Birim Ağırlık Unit Weight kg/m	En Küçük Kopma Kuvveti Min. Breaking Load
2	0,017	212
3	0,034	477
4	0,061	849
5	0,095	1326
6	0,138	1960
8	0,243	3400
10	0,381	5310
12	0,548	7650

PVC KAPLI ÇELİK HALAT

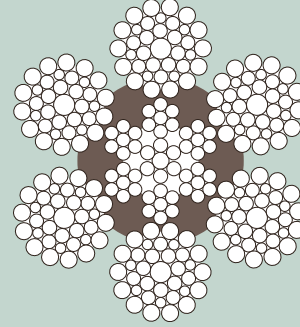
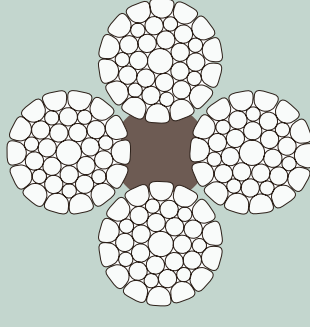
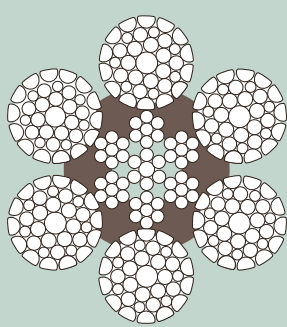
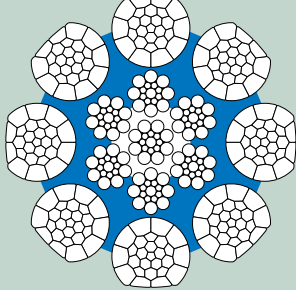
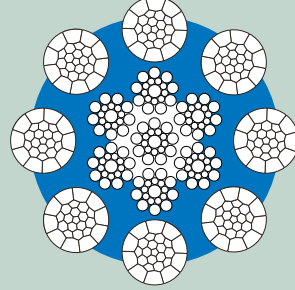
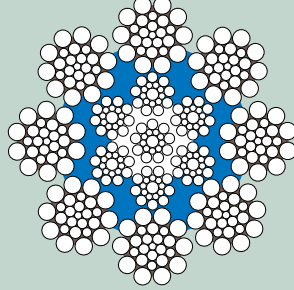
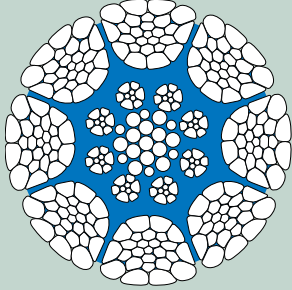
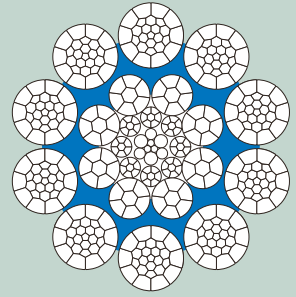
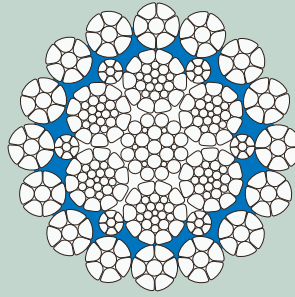
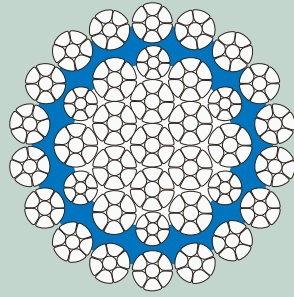
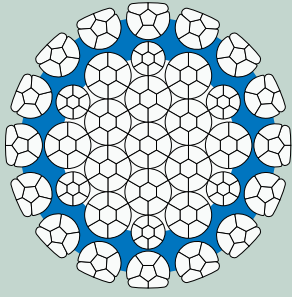


PVC KAPLI ÇELİK HALAT

Halat Anma Çapı Diameter of Wire Rope mm	Halat Cinsi Type of Wire	En Küçük Kopma Kuvveti Min. Breaking Load Ton
2/3	6x7	250
2/4	6x7	250
3/5	6x7	550
4/6	6x7	900
5/7	6x7	1500
6/8	6x12+7	2000
8/10	6x12+7	3600
10/12	6x12+7	5700

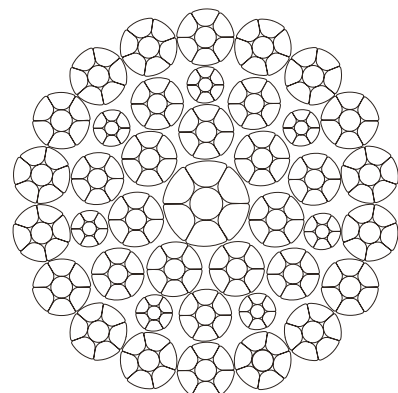
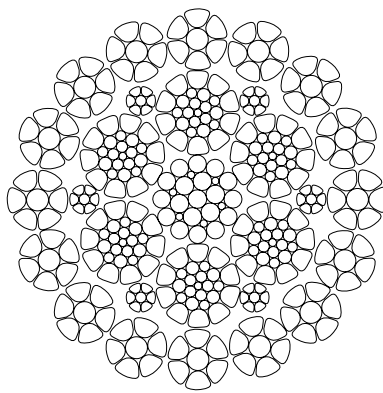
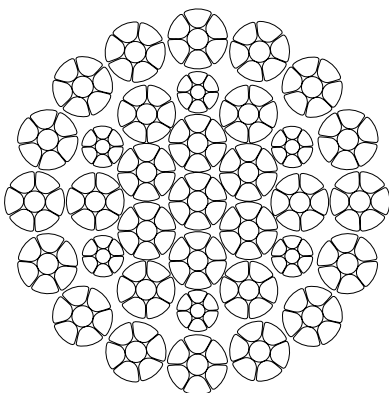


**YENİ NESİL
ÇELİK HALATLAR
NEW GENERATION
ROPES**



HYROPE

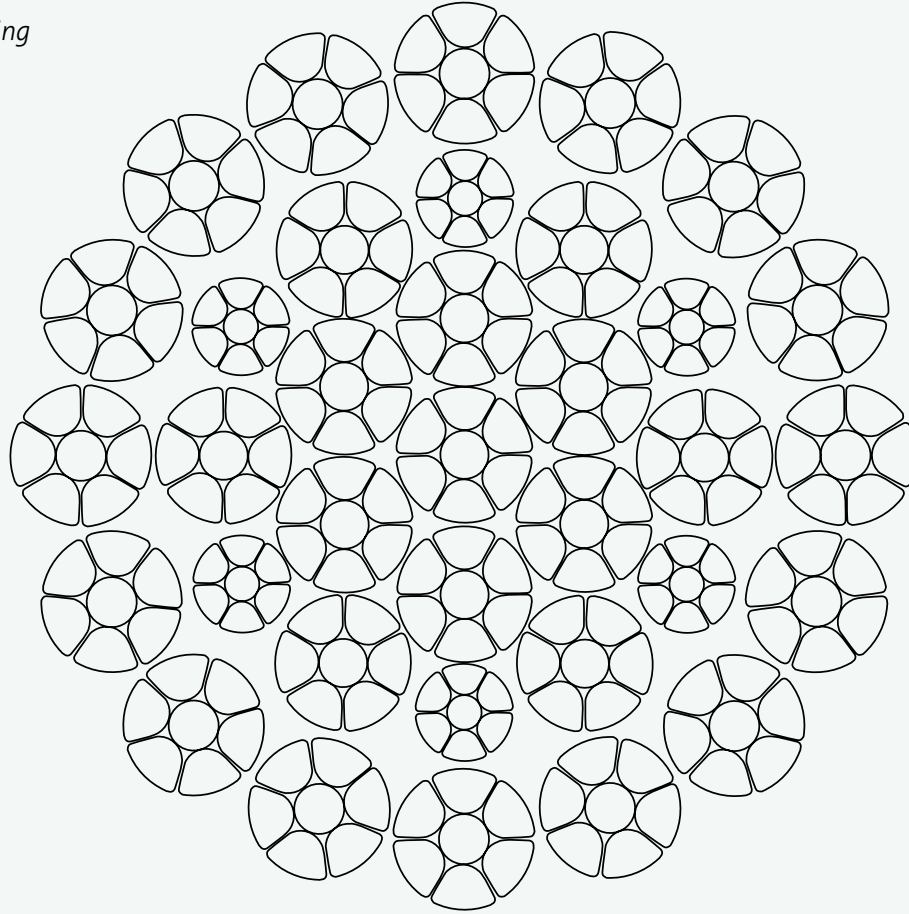
HYROPE



Hylift K16

Hylift K16'nın Özellikleri
Benefits of Hylift K16

- ◇ Yüksek mesafede çalışmaya uygunluk
- ◇ Kompakt iç ve dış damarlar
- ◇ Dönmeye karşı dirençli
- ◇ Galvanizli / Siyah
- ◇ Suitable for high lifting
- ◇ Compacted
- ◇ Rotation Resistance
- ◇ Galvanized / Bright



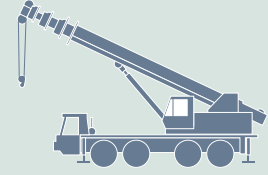
Teknik Bilgiler Technical Data

Çap Aralığı Diameter Range (mm)	Dış damardaki yüke binen tel sayısı Total number of load-bearing wires in the outer layer of strands	İskarta kriteri (Kırık tel sayısı) Discard criteria (Number of broken wires)			
		Tekli Sarım Tambur & Çelik Makaralar Single-layer drum & Steel sheaves		Çoklu Sarım Tambur Multi-layer drum	
		6xd	30xd	6xd	30xd
8-52	112	3	5	5	10

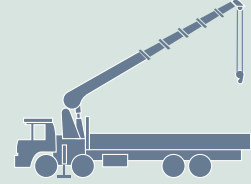
Çap Aralığı Diameter Range (mm)	Ortalama Dolgu Katsayısı Average Fill Factor	Ortalama Dönme Katsayısı Average Spin Factor			Ortalama Ağırlık Katsayısı Average Weight Factor	Sarım Yönü Lay Direction
		1770	1960	2160		
8-52	0.724	-	0.856	0.798	0.888	Regular Lay Lang's Lay

Halat Çapı Nominal Rope Diameter		Çap Toleransı Diameter Tolerance		Dış Tel Çapı Outer Wire Diameter	Kopma Kuvveti Hesaplamaları Metric unit.						
					Birim Ağırlık Unit Weight	Minimum Kopma Kuvveti MBL					
						1770 Grade		1960 Grade		2160 Grade	
mm	inches	mm	mm	mm	kg/m	kN	t(M)	kN	t(M)	kN	t(M)
8		8.16	8.32	0.42	0.313	52.84	5.39	61.08	6.23	62.75	6.40
9		9.18	9.36	0.48	0.397	66.88	6.82	77.30	7.88	79.42	8.10
10		10.20	10.40	0.53	0.490	82.56	8.42	95.43	9.73	98.04	10.00
11		11.22	11.44	0.58	0.593	99.9	10.19	115.5	11.77	118.6	12.10
12		12.24	12.48	0.64	0.705	118.9	12.12	137.4	14.01	141.2	14.40
12.7	1/2	12.95	13.21	0.67	0.790	133.2	13.58	153.9	15.70	158.1	16.13
13		13.26	13.52	0.69	0.828	139.5	14.23	161.3	16.45	165.7	16.90
14		14.28	14.56	0.74	0.960	161.8	16.50	187.0	19.07	192.2	19.60
14.3	9/16	14.59	14.87	0.76	1.002	168.5	17.18	195.1	19.90	200.5	20.44
15		15.30	15.60	0.80	1.102	185.8	18.95	214.7	21.89	220.6	22.49
15.9	5/8	16.22	16.54	0.84	1.238	208.7	21.28	241.3	24.60	247.9	25.27
16		16.32	16.64	0.85	1.254	211.4	21.56	244.3	24.91	251.0	25.59
17		17.34	17.68	0.90	1.415	238.6	24.33	275.8	28.12	283.3	28.89
18		18.36	18.72	0.96	1.587	267.5	27.28	309.2	31.53	317.7	32.39
19		19.38	19.76	1.01	1.768	298.1	30.40	344.5	35.13	353.9	36.09
19.1	3/4	19.48	19.86	1.01	1.787	301.2	30.71	348.1	35.50	357.7	36.47
20		20.40	20.80	1.06	1.959	330.2	33.67	381.7	38.92	392.2	39.99
21		21.42	21.84	1.12	2.160	364.1	37.13	420.8	42.91	432.4	44.09
22		22.44	22.88	1.17	2.371	399.6	40.75	461.9	47.10	474.5	48.39
22.2	7/8	22.64	23.09	1.18	2.414	407.8	41.58	470.3	47.96	483.2	49.27
23		23.46	23.92	1.22	2.591	436.8	44.54	504.8	51.48	518.6	52.89
24		24.48	24.96	1.27	2.821	475.6	48.50	549.7	56.05	564.7	57.59
25		25.50	26.00	1.33	3.061	516.0	52.62	596.4	60.82	612.8	62.49
25.4	1	25.91	26.42	1.35	3.160	532.7	54.32	615.7	62.78	632.5	64.50
26		26.52	27.04	1.38	3.311	558.1	56.91	645.1	65.78	662.8	67.58
27		27.54	28.08	1.43	3.571	601.9	61.38	695.7	70.94	714.7	72.88
28		28.56	29.12	1.49	3.840	647.3	66.01	748.2	76.29	768.7	78.38
28.6	1-1/8	29.17	29.74	1.52	4.006	674.1	68.74	780.6	79.60	802.0	81.78
29		29.58	30.16	1.54	4.119	694.3	70.80	802.6	81.84	824.5	84.08
30		30.60	31.20	1.59	4.408	743.1	75.78	858.9	87.58	882.4	89.98
31		31.62	32.24	1.65	4.707	793.4	80.90	917.1	93.52	942.2	96.08
31.8	1-1/4	32.44	33.07	1.69	4.953	832.3	84.87	965.0	98.40	991.5	101.1
32		32.64	33.28	1.70	5.015	845.4	86.21	977.2	99.65	1004	102.4
33		33.66	34.32	1.75	5.334	899.1	91.68	1039	106.0	1068	108.9
33.5		34.17	34.84	1.78	5.497	927.0	94.53	1071	109.2	1100	112.2
34		34.68	35.36	1.81	5.662	954.0	97.28	1103	112.5	1133	115.6
34.9	1-3/8	35.60	36.30	1.85	5.966	1006	102.6	1162	118.5	1194	121.8
35		35.70	36.40	1.86	6.000	1011	103.1	1169	119.2	1201	122.5
35.5		36.21	36.92	1.89	6.172	1040	106.1	1203	122.6	1236	126.0
36		36.72	37.44	1.91	6.348	1070	109.1	1237	126.1	1271	129.6
37		37.74	38.48	1.96	6.705	1130	115.2	1306	133.2	1342	136.9
37.5		38.25	39.00	1.99	6.888	1161	118.4	1342	136.8	1379	140.6
38		38.76	39.52	2.02	7.072	1192	121.6	1378	140.5	1416	144.4
38.1	1-1/2	38.86	39.62	2.02	7.110	1198	122.2	1385	141.3	1423	145.1
39		39.78	40.56	2.07	7.450	1256	128.1	1451	148.0	1491	152.1
40		40.80	41.60	2.12	7.837	1321	134.7	1527	155.7	1569	160.0
41		41.82	42.64	2.18	8.233	1388	141.5	1604	163.6	1648	168.1
41.3	1-5/8	42.13	42.95	2.19	8.354	1408	143.6	1628	166.0	1672	170.5
42		42.84	43.68	2.23	8.640	1456	148.5	1683	171.7	1729	176.4
42.5		43.35	44.20	2.26	8.847	1491	152.0	1724	175.8	1771	180.6
43		43.86	44.72	2.28	9.056	1527	155.7	1764	179.9	1813	184.9
44		44.88	45.76	2.34	9.482	1598	163.0	1848	188.4	1898	193.6
44.5	1-3/4	45.39	46.28	2.36	9.699	1635	166.7	1890	192.7	1941	198.0
45		45.90	46.80	2.39	9.918	1672	170.5	1932	197.1	1985	202.5
46		46.92	47.84	2.44	10.36	1747	178.1	2019	205.9	2075	211.5
47		47.94	48.88	2.50	10.82	1824	186.0	2108	215.0	2166	220.8
47.6	1-7/8	48.55	49.50	2.53	11.10	1871	190.8	2162	220.5	2221	226.5
48		48.96	49.92	2.55	11.29	1902	194.0	2199	224.2	2259	230.3
49		49.98	50.96	2.60	11.76	1982	202.1	2291	233.6	2354	240.0
50		51.00	52.00	2.66	12.25	2064	210.5	2386	243.3	2451	249.9
50.8	2	51.82	52.83	2.70	12.64	2131	217.3	2463	251.1	2530	258.0
51		52.02	53.04	2.71	12.74	2147	218.9	2482	253.1	2550	260.0
52		53.04	54.08	2.76	13.24	2232	227.6	2580	263.1	2651	270.3

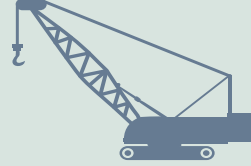
» Telescopic Crane



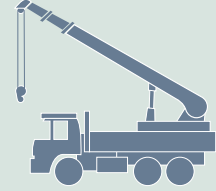
» Track Crane



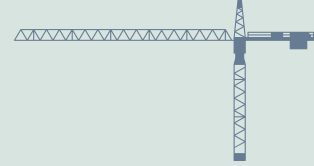
» Crawler Crane



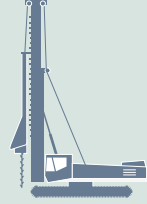
» Loader Crane



» Tower Crane



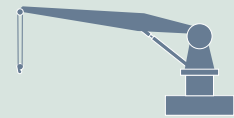
» Piledriving Equipment



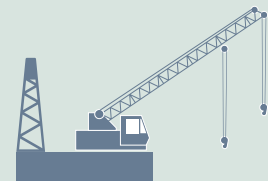
» Overhead Traveling Crane



» Deck Crane



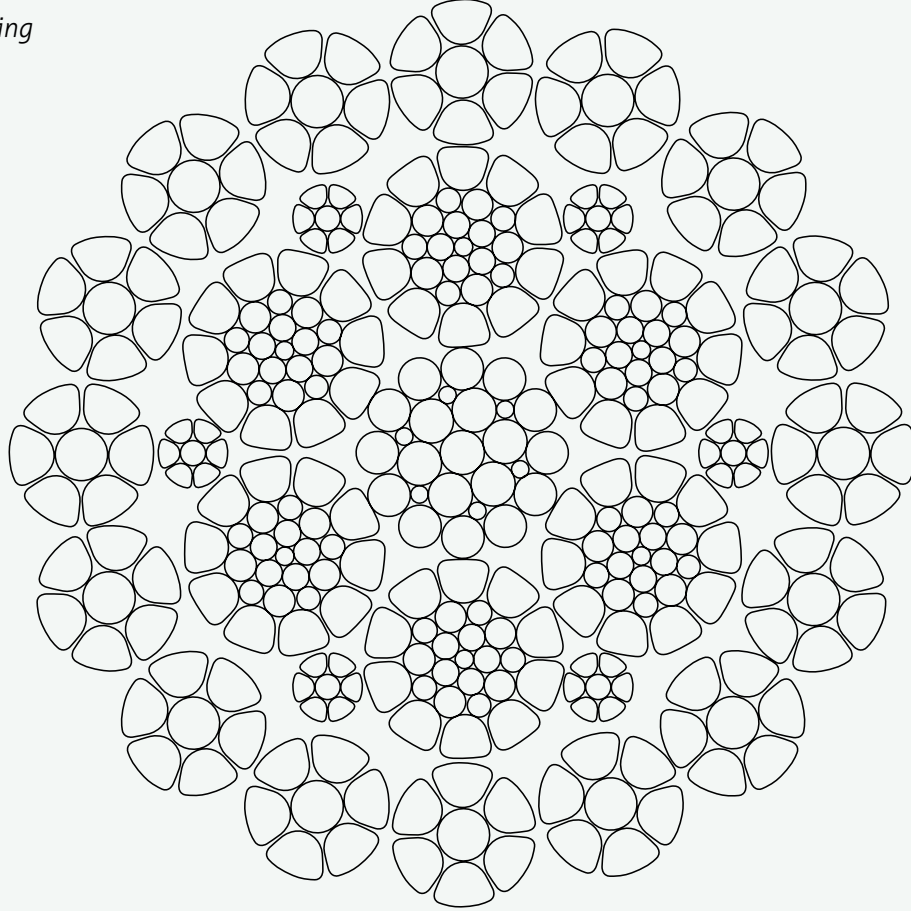
» Offshore Crane



Hylift K16S

Hylift K16S'nin Özellikleri
Benefits of Hylift K16S

- ◇ Yüksek mesafede çalışmaya uygunluk
- ◇ Kompakt iç ve dış damarlar
- ◇ Dönmeye karşı dirençli
- ◇ Galvanizli / Siyah
- ◇ Suitable for high lifting
- ◇ Compacted
- ◇ Rotation Resistance
- ◇ Galvanized / Bright

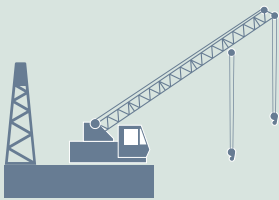


Teknik Bilgiler Technical Data

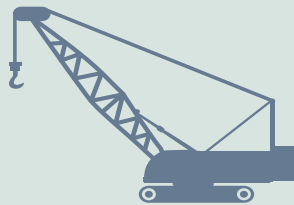
Çap Aralığı Diameter Range (mm)	Dış damardaki yüke binen tel sayısı Total number of load-bearing wires in the outer layer of strands	İskarta kriteri (Kırık tel sayısı) Discard criteria (Number of broken wires)			
		Tekli Sarım Tambur & Çelik Makaralar Single-layer drum & Steel sheaves		Çoklu Sarım Tambur Multi-layer drum	
		6xd	30xd	6xd	30xd
12-40	112	3	5	5	10

Çap Aralığı Diameter Range (mm)	Ortalama Dolgu Katsayısı Average Fill Factor	Ortalama Dönme Katsayısı Average Spin Factor			Ortalama Ağırlık Katsayısı Average Weight Factor	Sarım Yönü Lay Direction
		1770	1960	2160		
12-40	0.716	-	0.891	0.842	0.889	Regular Lay Lang's Lay

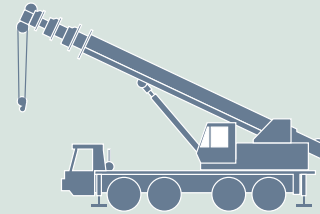
Halat Çapı Nominal Rope Diameter		Çap Toleransı Diameter Tolerance		Dış Tel Çapı Outer Wire Diameter	Kopma Kuvveti Hesaplamaları Metric unit.					
					Birim Ağırlık Unit Weight		Minimum Kopma Kuvveti MBL			
							1960 Grade		2160 Grade	
mm	inches	min. mm	max. mm	mm	kg/m	kN	t(M)	kN	t(M)	
12		12.24	12.48	0.63	0.722	141.4	14.42	147.3	15.02	
12.7	1/2	12.70	13.21	0.67	0.808	158.4	16.15	164.9	16.82	
13		13.00	13.52	0.68	0.847	166.0	16.92	172.8	17.62	
14		14.00	14.56	0.73	0.982	192.5	19.63	200.4	20.44	
14.3	9/16	14.30	14.87	0.75	1.025	200.8	20.48	209.1	21.32	
15		15.00	15.60	0.79	1.127	221.0	22.53	230.1	23.46	
15.9	5/8	15.90	16.54	0.83	1.267	248.3	25.32	258.5	26.36	
16		16.00	16.64	0.84	1.283	251.4	25.64	261.8	26.70	
17		17.00	17.68	0.89	1.448	283.8	28.94	295.5	30.14	
18		18.00	18.72	0.94	1.623	318.2	32.45	331.3	33.79	
19		19.00	19.76	1.00	1.809	354.5	36.15	369.2	37.64	
19.1	3/4	19.10	19.86	1.00	1.828	358.3	36.53	373.1	38.04	
20		20.00	20.80	1.05	2.004	392.8	40.06	409.0	41.71	
21		21.00	21.84	1.10	2.210	433.1	44.16	451.0	45.99	
22		22.00	22.88	1.15	2.425	475.3	48.47	494.9	50.47	
22.2	7/8	22.20	23.09	1.16	2.469	484.0	49.36	504.0	51.39	
23		23.00	23.92	1.21	2.651	519.5	52.98	541.0	55.16	
24		24.00	24.96	1.26	2.886	565.7	57.68	589.0	60.06	
25		25.00	26.00	1.31	3.132	613.8	62.59	639.1	65.17	
25.4	1	25.40	26.42	1.33	3.233	633.6	64.61	659.7	67.28	
26		26.00	27.04	1.36	3.387	663.9	67.70	691.3	70.49	
27		27.00	28.08	1.41	3.653	715.9	73.01	745.5	76.02	
28		28.00	29.12	1.47	3.928	770.0	78.51	801.7	81.75	
28.6	1-1/8	28.60	29.74	1.50	4.099	803.3	81.91	836.5	85.29	
29		29.00	30.16	1.52	4.214	825.9	84.22	860.0	87.70	
30		30.00	31.20	1.57	4.510	883.9	90.13	920.4	93.85	
31		31.00	32.24	1.62	4.815	943.8	96.24	982.7	100.2	
31.8	1-1/4	31.80	33.07	1.67	5.067	993.1	101.3	1034	105.4	
32		32.00	33.28	1.68	5.131	1006	102.5	1047	106.8	
33		33.00	34.32	1.73	5.457	1069	109.1	1114	113.6	
34		34.00	34.84	1.78	5.792	1135	115.8	1182	120.5	
34.9	1-3/8	34.90	36.30	1.83	6.103	1196	122.0	1246	127.0	
35		35.00	36.40	1.83	6.138	1203	122.7	1253	127.7	
36		36.00	37.44	1.89	6.494	1273	129.8	1325	135.1	
37		37.00	38.48	1.94	6.860	1344	137.1	1400	142.8	
38		38.00	39.52	1.99	7.235	1418	144.6	1477	150.6	
38.1	1-1/2	38.10	39.62	2.00	7.274	1426	145.4	1484	151.4	
39		39.00	40.56	2.04	7.621	1494	152.3	1555	158.6	
40		40.00	41.60	2.10	8.017	1571	160.2	1636	166.8	



» Offshore Crane



» Crawler Crane

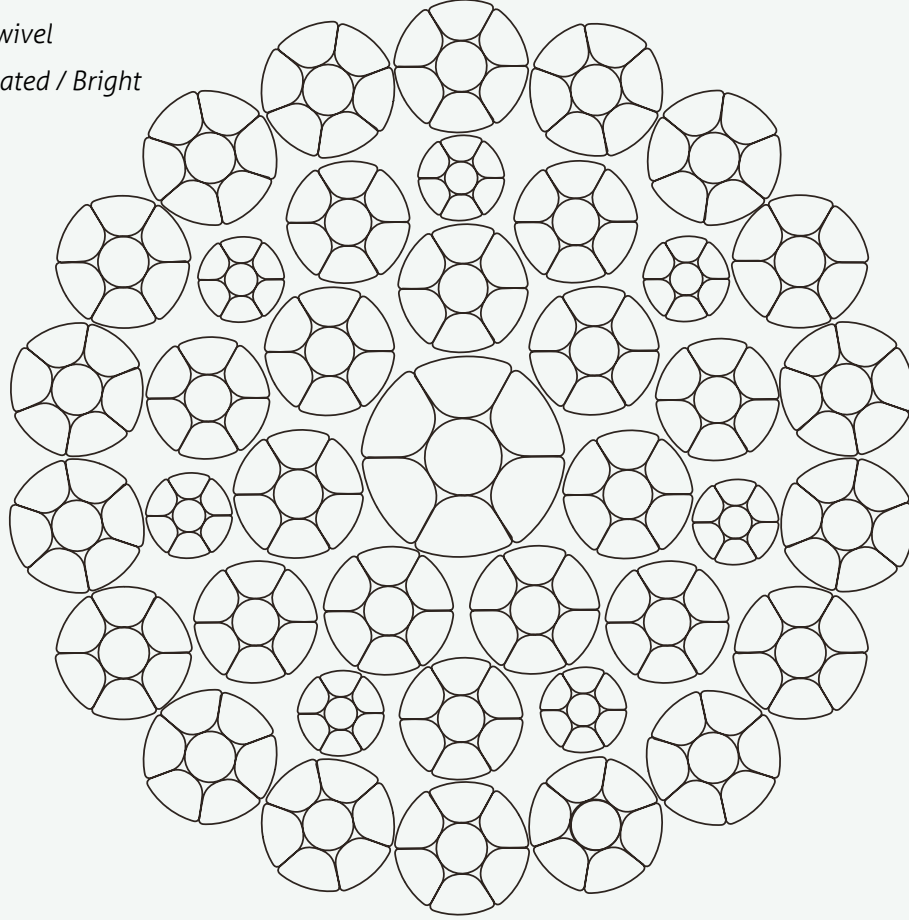


» Telescopic Crane

Hylift K18

Hylift K18'in Özellikleri
Benefits of Hylift K18

- ◇ Dönmeye karşı dirençli
- ◇ Fırdöndü ile kullanılmalıdır
- ◇ Galvanizli / Alumar kaplama / Siyah
- ◇ Kompakt
- ◇ *Rotation Resistance*
- ◇ *Should be used with a Swivel*
- ◇ *Zinc Coated / Alumar Coated / Bright*
- ◇ *Compacted*

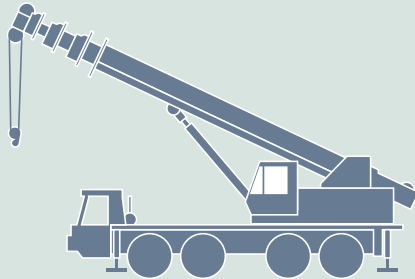


Teknik Bilgiler *Technical Data*

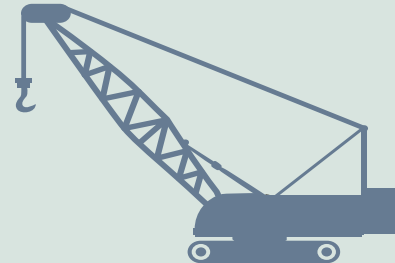
Çap Aralığı Diameter Range (mm)	Dış damardaki yüke binen tel sayısı Total number of load-bearing wires in the outer layer of strands	İskarta kriteri (Kırık tel sayısı) Discard criteria (Number of broken wires)			
		Tekli Sarım Tambur & Çelik Makaralar Single-layer drum & Steel sheaves		Çoklu Sarım Tambur Multi-layer drum	
		6xd	30xd	6xd	30xd
10-32	126	3	5	6	11

Çap Aralığı Diameter Range (mm)	Ortalama Dolgu Katsayısı Average Fill Factor	Ortalama Dönme Katsayısı Average Spin Factor			Ortalama Ağırlık Katsayısı Average Weight Factor	Sarım Yönü Lay Direction
		1770	1960	2160		
10-32	0.686	-	0.845	0.818	0.894	Regular Lay Lang's Lay

Halat Çapı Nominal Rope Diameter		Çap Toleransı Diameter Tolerance		Dış Tel Çapı Outer Wire Diameter	Kopma Kuvveti Hesaplamaları Metric unit.				
		min.	max.		Birim Ağırlık Unit Weight	Minimum Kopma Kuvveti MBL			
						1960 Grade		2160 Grade	
mm	inches	mm	mm	mm	kg/m	kN	t(M)	kN	t(M)
10		10.20	10.40	0.48	0.481	89.22	9.10	95.17	9.70
11		11.22	11.44	0.53	0.583	108.0	11.01	115.2	11.75
12		12.24	12.48	0.57	0.693	128.5	13.10	137.0	13.97
12.7	1/2	12.95	13.21	0.61	0.777	143.9	14.67	153.5	15.65
13		13.26	13.52	0.62	0.814	150.8	15.38	160.8	16.40
14		14.28	14.56	0.67	0.944	174.9	17.83	186.5	19.02
14.3	9/16	14.59	14.87	0.68	0.983	182.1	18.57	194.3	19.81
15		15.30	15.60	0.72	1.083	200.7	20.47	214.1	21.83
15.9	5/8	16.22	16.54	0.76	1.217	225.6	23.00	240.6	24.53
16		16.32	16.64	0.76	1.233	228.4	23.29	243.6	24.84
17		17.34	17.68	0.81	1.391	257.8	26.29	275.0	28.04
18		18.36	18.72	0.86	1.560	289.1	29.48	308.4	31.45
19		19.38	19.76	0.91	1.738	322.1	32.85	343.6	35.04
19.1	3/4	19.48	19.86	0.92	1.756	325.5	33.19	347.2	35.40
20		20.40	20.80	0.96	1.926	356.9	36.39	380.7	38.82
21		21.42	21.84	1.00	2.123	393.5	40.13	419.7	42.80
22		22.44	22.88	1.05	2.330	431.8	44.03	460.6	46.97
22.2	7/8	22.64	23.09	1.06	2.378	440.7	44.94	470.1	47.94
23		23.46	23.92	1.10	2.547	472.0	48.13	503.5	51.34
24		24.48	24.96	1.15	2.773	513.9	52.40	548.2	55.90
25		25.50	26.00	1.19	3.009	557.6	56.86	594.8	60.65
25.4	1	25.91	26.42	1.21	3.106	575.6	58.69	614.0	62.61
26		26.52	27.04	1.24	3.255	603.1	61.50	643.4	65.61
27		27.54	28.08	1.29	3.510	650.4	66.32	693.8	70.75
28		28.56	29.12	1.34	3.775	699.5	71.33	746.1	76.08
28.6	1-1/8	29.17	29.74	1.37	3.931	728.5	74.29	777.1	79.24
29		29.58	30.16	1.39	4.049	750.3	76.51	800.4	81.62
30		30.60	31.20	1.43	4.333	803.0	81.88	856.5	87.34
31		31.62	32.24	1.48	4.627	857.4	87.43	914.6	93.26
31.8	1-1/4	32.44	33.07	1.52	4.854	899.4	91.71	959.4	97.83
32		32.64	33.28	1.53	4.930	913.6	93.16	974.5	99.37



» Telescopic Crane

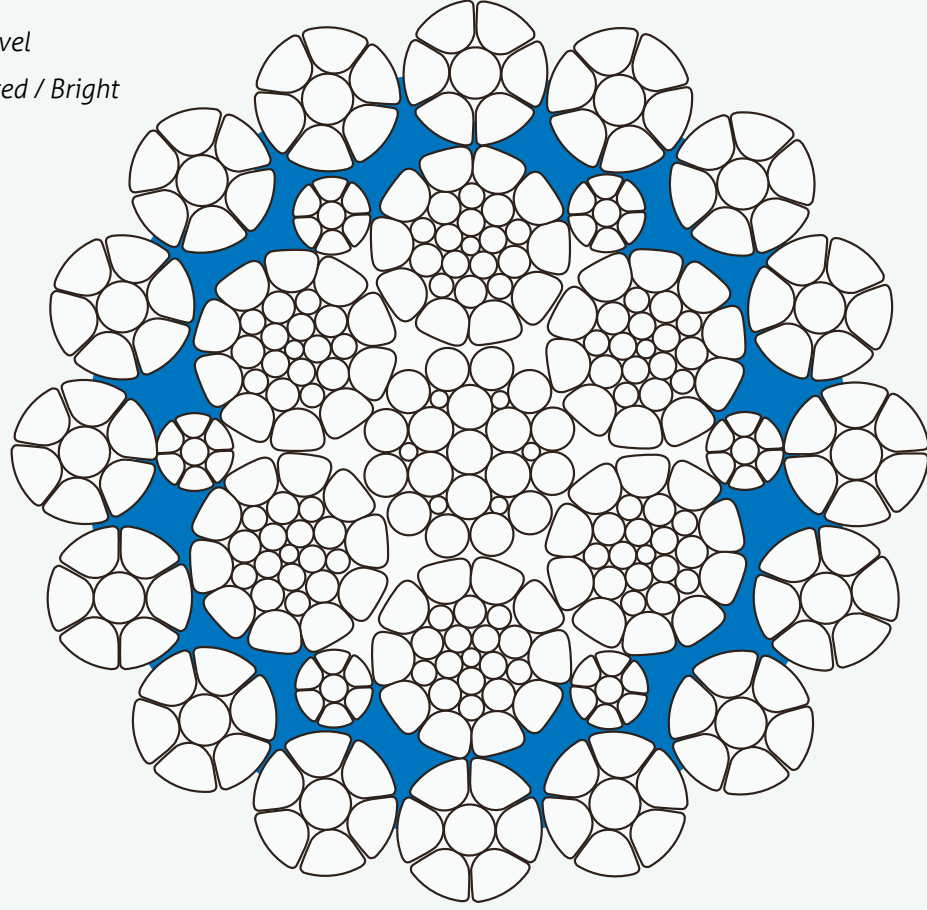


» Crawler Crane

Hyfil K16S

Hyfil K16S'nin Özellikleri
Benefits of Hyfil K16S

- ◇ Dönmeye karşı dirençli
- ◇ Fırdöndü ile kullanılmalıdır
- ◇ Galvanizli / Alumar kaplama / Siyah
- ◇ Kompakt
- ◇ Çelik-Plastik kombinasyon
- ◇ *Rotation Resistance*
- ◇ *Should be used with a Swivel*
- ◇ *Zinc Coated / Alumar Coated / Bright*
- ◇ *Compacted*
- ◇ *Steel-Plastic Combination*

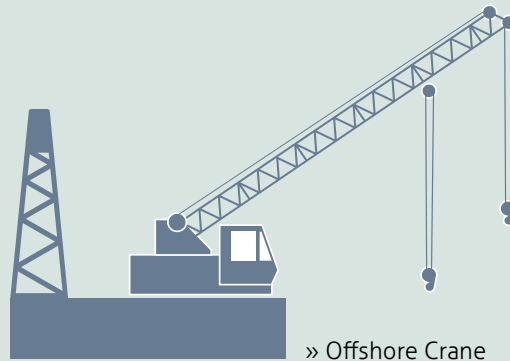


Teknik Bilgiler Technical Data

Çap Aralığı Diameter Range (mm)	Dış damardaki yüke binen tel sayısı Total number of load-bearing wires in the outer layer of strands	İskarta kriteri (Kırık tel sayısı) Discard criteria (Number of broken wires)			
		Tekli Sarım Tambur & Çelik Makaralar Single-layer drum & Steel sheaves		Çoklu Sarım Tambur Multi-layer drum	
		6xd	30xd	6xd	30xd
13-40	112	3	5	5	10

Çap Aralığı Diameter Range (mm)	Ortalama Dolgu Katsayısı Average Fill Factor	Ortalama Dönme Katsayısı Average Spin Factor			Ortalama Ağırlık Katsayısı Average Weight Factor	Sarım Yönü Lay Direction
		1770	1960	2160		
13-40	0.733	-	0.829	0.803	0.898	Regular Lay Lang's Lay

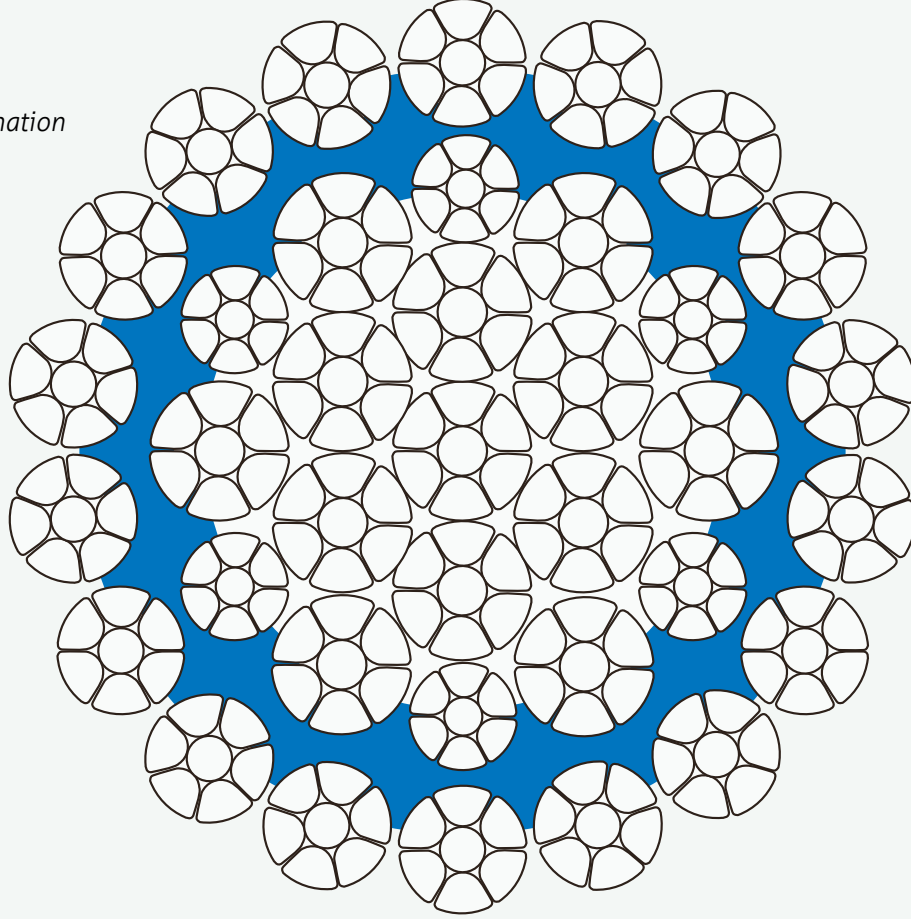
Halat Çapı Nominal Rope Diameter		Çap Toleransı Diameter Tolerance		Dış Tel Çapı Outer Wire Diameter	Kopma Kuvveti Hesaplamaları <i>Metric unit.</i>				
		min.	max.		Birim Ağırlık Unit Weight	Minimum Kopma Kuvveti <i>MBL</i>			
						1960 Grade		2160 Grade	
mm	inches	mm	mm	mm	kg/m	kN	t(M)	kN	t(M)
12		12.24	12.48	0.65	0.743	134.7	13.74	143.8	14.66
12.7	1/2	12.95	13.21	0.68	0.832	150.9	15.39	161.1	16.43
13		13.26	13.52	0.70	0.872	158.1	16.12	168.8	17.21
14		14.28	14.56	0.75	1.011	183.4	18.70	195.8	19.97
14.3	9/16	14.59	14.87	0.77	1.053	191.0	19.48	203.9	20.79
15		15.30	15.60	0.81	1.161	210.5	21.47	224.7	22.91
15.9	5/8	16.22	16.54	0.86	1.304	236.5	24.12	252.5	25.75
16		16.32	16.64	0.86	1.321	239.5	24.42	255.7	26.07
17		17.34	17.68	0.91	1.491	270.4	27.57	288.7	29.44
18		18.36	18.72	0.97	1.672	303.2	30.92	323.6	33.00
19		19.38	19.76	1.02	1.863	337.8	34.45	360.6	36.77
19.1	3/4	19.48	19.86	1.03	1.882	341.3	34.80	364.4	37.16
20		20.40	20.80	1.08	2.064	374.3	38.17	399.5	40.74
21		21.42	21.84	1.13	2.275	412.6	42.07	440.5	44.92
22		22.44	22.88	1.18	2.497	452.9	46.18	483.4	49.29
22.2	7/8	22.64	23.09	1.20	2.549	462.2	47.13	493.4	50.31
23		23.46	23.92	1.24	2.729	495.0	50.48	528.4	53.88
24		24.48	24.96	1.29	2.972	538.9	54.95	575.3	58.66
25		25.50	26.00	1.35	3.225	584.8	59.63	624.2	63.65
25.4	1	25.91	26.42	1.37	3.329	603.6	61.55	644.4	65.71
26		26.52	27.04	1.40	3.488	632.5	64.50	675.2	68.85
27		27.54	28.08	1.45	3.761	682.1	69.55	728.1	74.25
28		28.56	29.12	1.51	4.045	733.6	74.81	783.1	79.85
28.6	1-1/8	29.17	29.74	1.54	4.213	764.0	77.91	815.5	83.16
29		29.58	30.16	1.56	4.339	786.9	80.24	840.0	85.66
30		30.60	31.20	1.61	4.644	842.1	85.87	898.9	91.66
31		31.62	32.24	1.67	4.958	899.2	91.69	959.8	97.87
31.8	1-1/4	32.44	33.07	1.71	5.201	943.2	96.18	1007	102.7
32		32.64	33.28	1.72	5.283	958.1	97.70	1023	104.3
33		33.66	34.32	1.78	5.619	1019	103.9	1088	110.9
34		34.68	35.36	1.83	5.964	1082	110.3	1155	117.8
34.9	1-3/8	35.60	36.30	1.88	6.284	1140	116.2	1217	124.1
35		35.70	36.40	1.88	6.320	1146	116.9	1224	124.8
36		36.72	37.44	1.94	6.687	1213	123.7	1294	132.0
38		38.76	39.52	2.04	7.450	1351	137.8	1442	147.0
38.1	1-1/2	38.86	39.62	2.05	7.490	1358	138.5	1450	147.9
40		40.80	41.60	2.15	8.255	1497	152.7	1598	163.0



Hyfil K18

Hyfil K18'in Özellikleri
Benefits of Hyfil K18

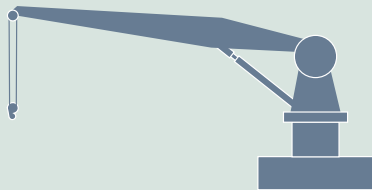
- ◇ Plastik dolgulu
- ◇ Kompakt
- ◇ Çelik-Plastik kombinasyon
- ◇ Galvanizli / Siyah
- ◇ *Plastic filled*
- ◇ *Compacted*
- ◇ *Steel-Plastic Combination*
- ◇ *Galvanized / Bright*



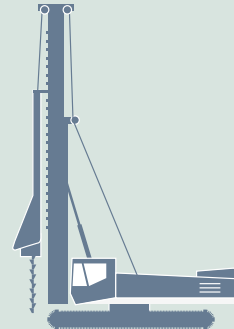
Teknik Bilgiler *Technical Data*

Çap Aralığı Diameter Range (mm)	Dış damardaki yüke binen tel sayısı Total number of load-bearing wires in the outer layer of strands	İskarta kriteri (Kırık tel sayısı) Discard criteria (Number of broken wires)				Sarım Yönü Lay Direction
		Tekli Sarım Tambur & Çelik Makaralar Single-layer drum & Steel sheaves		Çoklu Sarım Tambur Multi-layer drum		
		6xd	30xd	6xd	30xd	
12-52	126	3	5	6	11	
Çap Aralığı Diameter Range (mm)	Ortalama Dolgu Katsayısı Average Fill Factor	Ortalama Dönme Katsayısı Average Spin Factor			Ortalama Ağırlık Katsayısı Average Weight Factor	Sarım Yönü Lay Direction
		1770	1960	2160		
12-52	0.716	-	0.856	0.816	0.887	Regular Lay Lang's Lay

Halat Çapı Nominal Rope Diameter		Çap Toleransı Diameter Tolerance		Dış Tel Çapı Outer Wire Diameter	Kopma Kuvveti Hesaplamaları <i>Metric unit.</i>				
					Birim Ağırlık Unit Weight	Minimum Kopma Kuvveti MBL			
						1960 Grade		2160 Grade	
mm	inches	min.	max.	mm	kg/m	kN	t(M)	kN	t(M)
12		12.24	12.48	0.59	0.702	135.9	13.86	142.1	14.49
12.7	1/2	12.95	13.21	0.63	0.786	152.2	15.53	159.2	16.23
13		13.26	13.52	0.64	0.824	159.5	16.27	166.8	17.01
14		14.28	14.56	0.69	0.955	185.0	18.87	193.5	19.73
14.3	9/16	14.59	14.87	0.70	1.097	193.0	19.68	201.8	20.58
15		15.30	15.60	0.74	1.232	212.4	21.66	222.1	22.65
15.9	5/8	16.22	16.54	0.78	1.248	238.6	24.33	249.5	25.45
16		16.32	16.64	0.79	1.408	241.7	24.65	252.7	25.77
17		17.34	17.68	0.84	1.579	272.8	27.82	285.3	29.09
18		18.36	18.72	0.89	1.759	305.8	31.18	319.8	32.61
19		19.38	19.76	0.94	1.778	340.8	34.75	356.3	36.33
19.1	3/4	19.48	19.86	0.94	1.949	344.4	35.12	360.1	36.72
20		20.40	20.80	0.98	2.149	377.6	38.50	394.8	40.26
21		21.42	21.84	1.03	2.359	416.3	42.45	435.3	44.39
22		22.44	22.88	1.08	2.402	456.9	46.59	477.7	48.71
22.2	7/8	22.64	23.09	1.09	2.578	473.6	48.29	495.3	50.51
23		23.46	23.92	1.13	2.807	499.3	50.91	522.2	53.25
24		24.48	24.96	1.18	3.046	543.7	55.44	568.6	57.98
25		25.50	26.00	1.23	3.144	590.0	60.16	616.9	62.91
25.4	1	25.91	26.42	1.25	3.294	609.0	62.10	636.8	64.94
26		26.52	27.04	1.28	3.553	638.1	65.07	667.3	68.05
27		27.54	28.08	1.33	3.821	688.1	70.17	719.6	73.38
28		28.56	29.12	1.38	3.986	740.1	75.47	773.9	78.92
28.6	1-1/8	29.17	29.74	1.41	4.099	772.1	78.73	807.4	82.33
29		29.58	30.16	1.43	4.386	793.9	80.96	830.1	84.65
30		30.60	31.20	1.48	4.683	849.6	86.64	888.4	90.59
31		31.62	32.24	1.53	4.928	907.1	92.50	948.6	96.73
31.8	1-1/4	32.44	33.07	1.57	4.990	954.6	97.34	998.2	101.8
32		32.64	33.28	1.57	5.307	966.6	98.57	1011	103.1
33		33.66	34.32	1.62	5.634	1028	104.8	1075	109.6
34		34.68	35.36	1.67	5.936	1091	111.3	1141	116.3
34.9	1-3/8	35.60	36.30	1.72	5.970	1150	117.3	1202	122.6
35		35.70	36.40	1.72	6.316	1156	117.9	1209	123.3
36		36.72	37.44	1.77	7.037	1223	124.7	1279	130.4
38		38.76	39.52	1.87	7.074	1363	139.0	1425	145.3
38.1	1-1/2	38.86	39.62	1.88	7.797	1370	139.7	1433	146.1
40		40.80	41.60	1.97	8.313	1510	154.0	1579	161.0
41.3	1-5/8	42.13	42.95	2.03	8.597	1610	164.2	1684	171.7
42		42.84	43.68	2.07	9.011	1665	169.8	1741	177.5
43		43.86	44.72	2.12	9.435	1745	177.9	1825	186.1
44		44.88	45.76	2.17	9.651	1827	186.3	1911	194.9
44.5	1-3/4	45.39	46.28	2.19	9.869	1869	190.6	1955	199.4
45		45.90	46.80	2.21	10.31	1911	194.9	1999	203.8
46		46.92	47.84	2.26	11.04	1997	203.6	2089	213.0
47.6	1-7/8	48.55	49.50	2.34	11.23	2139	218.1	2236	228.0
48		48.96	49.92	2.36	12.18	2175	221.8	2274	231.9
50		51.00	52.00	2.46	13.18	2360	240.7	2468	251.7
52		53.04	54.08	2.56	13.49	2552	260.3	2669	272.2



» Deck Crane

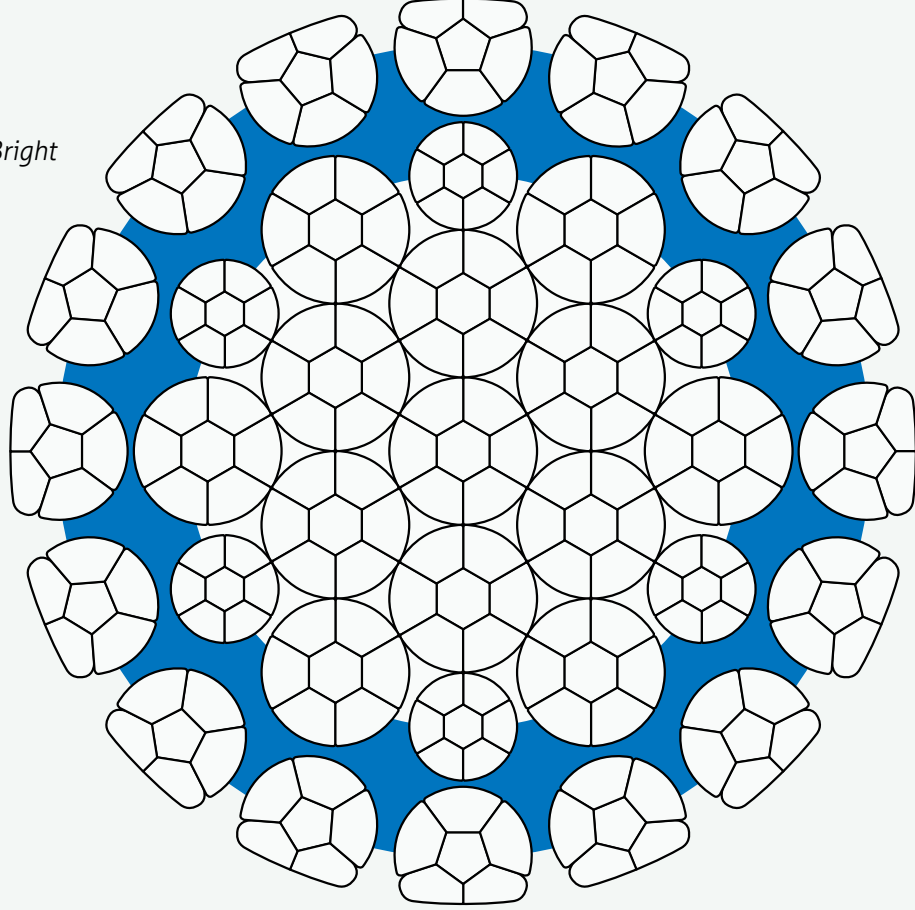


» Piledriving Equipment

Hyfil K16T

Hyfil K16T'nin Özellikleri
Benefits of Hyfil K16T

- ◇ Dönmeye karşı dirençli
- ◇ Fırdöndü ile kullanılmalıdır
- ◇ Galvanizli / Alumar kaplama / Siyah
- ◇ Kompakt
- ◇ Swage
- ◇ Çelik-Plastik kombinasyon
- ◇ *Rotation Resistance*
- ◇ *Should be used with a Swivel*
- ◇ *Zinc Coated / Alumar Coated / Bright*
- ◇ *Compacted*
- ◇ *Rotary Swaged*
- ◇ *Steel Plastic Combination*

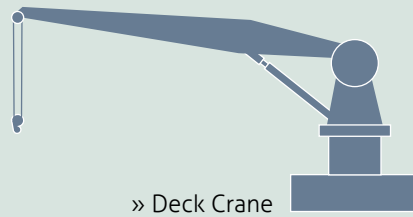
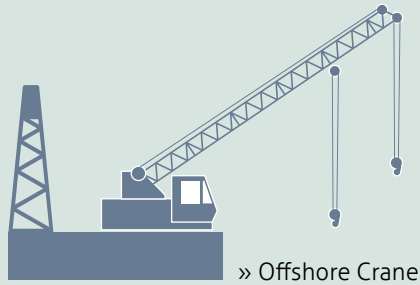


Teknik Bilgiler *Technical Data*

Çap Aralığı <i>Diameter Range</i> (mm)	Dış damardaki yüke binen tel sayısı <i>Total number of load-bearing wires in the outer layer of strands</i>	İskarta kriteri (Kırık tel sayısı) <i>Discard criteria (Number of broken wires)</i>			
		Tekli Sarım Tambur & Çelik Makaralar <i>Single-layer drum & Steel sheaves</i>		Çoklu Sarım Tambur <i>Multi-layer drum</i>	
		6xd	30xd	6xd	30xd
12-48	96	2	4	4	8

Çap Aralığı <i>Diameter Range</i> (mm)	Ortalama Dolgu Katsayısı <i>Average Fill Factor</i>	Ortalama Dönme Katsayısı <i>Average Spin Factor</i>			Ortalama Ağırlık Katsayısı <i>Average Weight Factor</i>	Sarım Yönü <i>Lay Direction</i>
		1770	1960	2160		
12-48	0.745	-	0.850	0.840	0.881	Regular Lay Lang's Lay

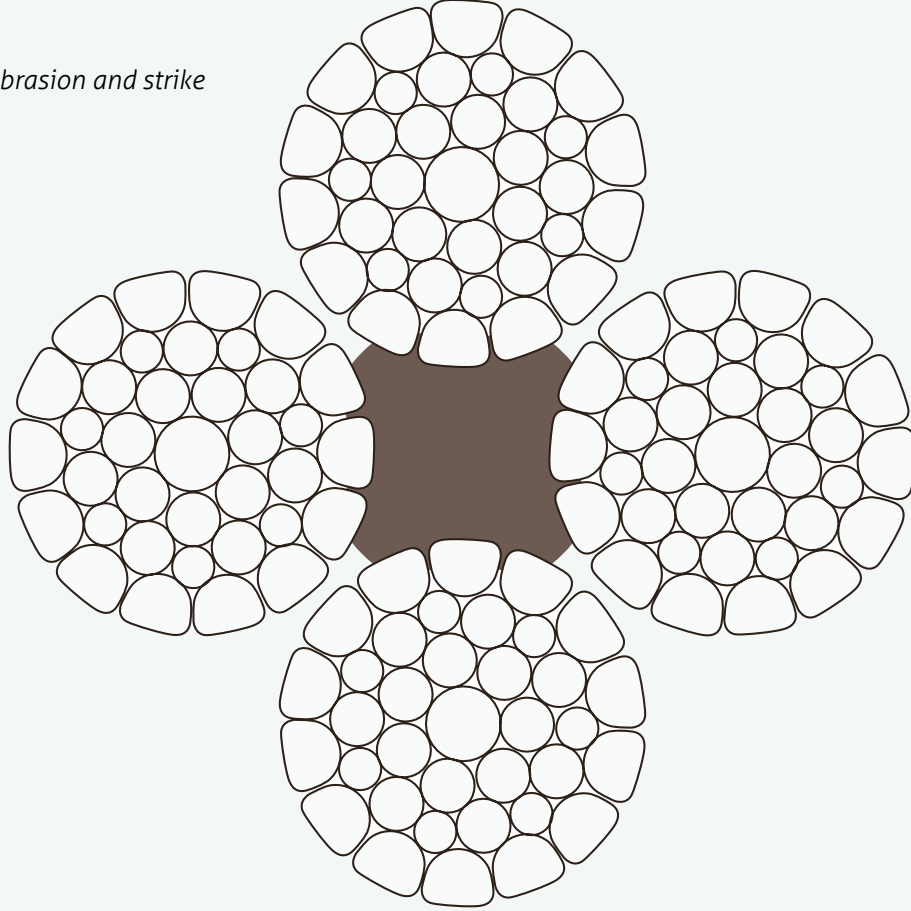
Halat Çapı Nominal Rope Diameter		Çap Toleransı Diameter Tolerance		Dış Tel Çapı Outer Wire Diameter	Kopma Kuvveti Hesaplamaları Metric unit.				
		min.	max.		Birim Ağırlık Unit Weight	Minimum Kopma Kuvveti MBL			
						1960 Grade		2160 Grade	
mm	inches	mm	mm	mm	kg/m	kN	t(M)	kN	t(M)
12		12.24	12.48	0.74	0.720	140.4	14.31	152.9	15.59
12.7	1/2	12.95	13.21	0.78	0.807	157.2	16.03	171.2	17.46
13		13.26	13.52	0.80	0.845	164.7	16.80	179.4	18.30
14		14.28	14.56	0.87	0.981	191.1	19.48	208.1	21.22
14.3	9/16	14.59	14.87	0.88	1.023	199.3	20.33	217.1	22.14
15		15.30	15.60	0.93	1.126	219.3	22.37	238.9	24.36
15.9	5/8	16.22	16.54	0.98	1.265	246.4	25.13	268.4	27.37
16		16.32	16.64	0.99	1.281	249.6	25.45	271.8	27.71
17		17.34	17.68	1.05	1.446	281.7	28.73	306.8	31.29
18		18.36	18.72	1.11	1.621	315.8	32.21	344.0	35.08
19		19.38	19.76	1.17	1.806	351.9	35.88	383.3	39.08
19.1	3/4	19.48	19.86	1.18	1.825	355.6	36.26	387.3	39.49
20		20.40	20.80	1.24	2.001	389.9	39.76	424.7	43.30
21		21.42	21.84	1.30	2.206	429.9	43.84	468.2	47.74
22		22.44	22.88	1.36	2.421	471.8	48.11	513.8	52.40
22.2	7/8	22.64	23.09	1.37	2.466	480.4	48.99	523.2	53.35
23		23.46	23.92	1.42	2.646	515.7	52.58	561.6	57.27
24		24.48	24.96	1.48	2.882	561.5	57.26	611.5	62.36
25		25.50	26.00	1.55	3.127	609.3	62.13	663.5	67.66
25.4	1	25.91	26.42	1.57	3.228	628.9	64.13	684.9	69.84
26		26.52	27.04	1.61	3.382	659.0	67.20	717.7	73.18
27		27.54	28.08	1.67	3.647	710.6	72.46	773.9	78.92
28		28.56	29.12	1.73	3.922	764.3	77.93	832.3	84.87
28.6	1-1/8	29.17	29.74	1.77	4.092	797.4	81.31	868.4	88.55
29		29.58	30.16	1.79	4.207	819.8	83.60	892.8	91.04
30		30.60	31.20	1.85	4.503	877.3	89.46	955.5	97.43
31		31.62	32.24	1.92	4.808	936.8	95.53	1020	104.0
31.8	1-1/4	32.44	33.07	1.97	5.059	985.8	100.5	1074	109.5
32		32.64	33.28	1.98	5.123	998.2	101.8	1087	110.9
33		33.66	34.32	2.04	5.448	1062	108.3	1156	117.9
34		34.68	35.36	2.10	5.783	1127	114.9	1227	125.1
34.9	1-3/8	35.60	36.30	2.16	6.093	1187	121.1	1293	131.9
35		35.70	36.40	2.16	6.128	1194	121.8	1301	132.6
36		36.72	37.44	2.22	6.484	1263	128.8	1376	140.3
38		38.76	39.52	2.35	7.224	1408	143.5	1533	156.3
38.1	1-1/2	38.86	39.62	2.35	7.262	1415	144.3	1541	157.1
40		40.80	41.60	2.47	8.004	1560	159.0	1699	173.2
41.3	1-5/8	42.13	42.95	2.55	8.533	1663	169.6	1811	184.7
42		42.84	43.68	2.60	8.825	1720	175.3	1873	191.0
43		43.86	44.72	2.66	9.250	1802	183.8	1963	200.2
44		44.88	45.76	2.72	9.685	1887	192.4	2055	209.6
44.5	1-3/4	45.39	46.28	2.75	9.907	1930	196.8	2102	214.4
45		45.90	46.80	2.78	10.13	1974	201.3	2150	219.2
46		46.92	47.84	2.84	10.59	2063	210.3	2246	229.1
47.6	1-7/8	48.55	49.50	2.94	11.34	2209	225.2	2405	245.3
48		48.96	49.92	2.97	11.53	2246	229.0	2446	249.4



Hylift K4

Hylift K4'ün Özellikleri
Benefits of Hylift K4

- ◇ Dönme karşı dirençli
- ◇ Kompakt
- ◇ Aşınma ve darbelere karşı direnç
- ◇ *Rotation Resistance*
- ◇ *Compacted*
- ◇ *Resistance against abrasion and strike*



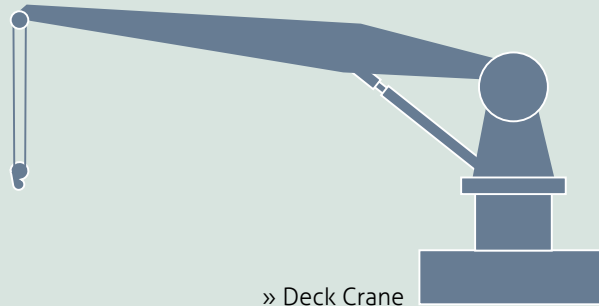
HYROPE

■ Teknik Bilgiler *Technical Data*

Çap Aralığı <i>Diameter Range</i> (mm)	Dış damardaki yüke binen tel sayısı <i>Total number of load-bearing wires in the outer layer of strands</i>	İskarta kriteri (Kırık tel sayısı) <i>Discard criteria (Number of broken wires)</i>			
		Tekli Sarım Tambur & Çelik Makaralar <i>Single-layer drum & Steel sheaves</i>		Çoklu Sarım Tambur <i>Multi-layer drum</i>	
		6xd	30xd	6xd	30xd
8-36	144	2	4	4	8

Çap Aralığı <i>Diameter Range</i> (mm)	Ortalama Dolgu Katsayısı <i>Average Fill Factor</i>	Ortalama Dönme Katsayısı <i>Average Spin Factor</i>			Ortalama Ağırlık Katsayısı <i>Average Weight Factor</i>	Sarım Yönü <i>Lay Direction</i>
		1770	1960	2160		
8-36	0.631	-	0.900	0.871	0.848	Regular Lay Lang's Lay

Halat Çapı Nominal Rope Diameter		Çap Toleransı Diameter Tolerance		Dış Tel Çapı Outer Wire Diameter	Birim Ağırlık Unit Weight	Kopma Kuvveti Hesaplamaları <i>Metric unit.</i>			
		min.	max.			Minimum Kopma Kuvveti <i>MBL</i>			
						1960 Grade		2160 Grade	
mm	inches	mm	mm	mm	kg/m	kN	t(M)	kN	t(M)
8		8.16	8.32	0.59	0.270	55.90	5.70	59.70	6.09
9		9.18	9.36	0.67	0.341	70.80	7.22	75.50	7.70
10		10.20	10.40	0.74	0.421	87.40	8.91	93.20	9.50
11		11.22	11.44	0.82	0.510	105.8	10.79	112.8	11.50
12		12.24	12.48	0.89	0.607	125.9	12.84	134.3	13.69
12.7	1/2	12.95	13.21	0.94	0.679	141.0	14.38	150.4	15.34
13		13.26	13.52	0.97	0.712	147.7	15.06	157.6	16.07
14		14.28	14.56	1.04	0.826	171.3	17.47	182.7	18.63
14.3	9/16	14.59	14.87	1.06	0.861	178.8	18.23	190.7	19.45
15		15.30	15.60	1.12	0.948	196.7	20.06	209.8	21.39
15.9	5/8	16.22	16.54	1.18	1.065	221.0	22.54	235.7	24.03
16		16.32	16.64	1.19	1.078	223.8	22.82	238.7	24.34
17		17.34	17.68	1.26	1.217	252.6	25.76	269.5	27.48
18		18.36	18.72	1.34	1.365	283.2	28.88	302.1	30.81
19.1	3/4	19.48	19.86	1.42	1.537	318.9	32.52	340.1	34.68
20		20.40	20.80	1.49	1.685	349.7	35.66	373.0	38.04
21		21.42	21.84	1.56	1.858	385.5	39.31	411.2	41.93
22		22.44	22.88	1.64	2.039	423.1	43.14	451.3	46.02
22.2	7/8	22.64	23.09	1.65	2.076	430.8	43.93	459.5	46.86
23		23.46	23.92	1.71	2.228	462.5	47.16	493.2	50.29
24		24.48	24.96	1.78	2.426	503.5	51.34	537.0	54.76
25		25.50	26.00	1.86	2.633	546.4	55.72	582.7	59.42
25.4	1	25.91	26.42	1.89	2.718	564.0	57.51	601.5	61.34
26		26.52	27.04	1.93	2.848	591.0	60.27	630.3	64.27
27		27.54	28.08	2.01	3.071	637.3	64.99	679.7	69.31
28		28.56	29.12	2.08	3.303	685.4	69.89	731.0	74.54
28.6	1-1/8	29.17	29.74	2.13	3.446	715.1	72.92	762.6	77.76
29		29.58	30.16	2.16	3.543	735.2	74.97	784.1	79.96
30		30.60	31.20	2.23	3.791	786.8	80.23	839.1	85.56
31		31.62	32.24	2.31	4.048	840.1	85.67	896.0	91.37
31.8	1-1/4	32.44	33.07	2.36	4.260	884.0	90.14	942.9	96.15
32		32.64	33.28	2.38	4.314	895.2	91.28	954.8	97.36
33		33.66	34.32	2.45	4.587	952.0	97.08	1015	103.5
33.5		34.17	34.84	2.49	4.727	981.1	100.0	1046	106.7
34		34.68	35.36	2.53	4.870	1011	103.1	1078	109.9
34.9	1-3/8	35.60	36.30	2.60	5.131	1065	108.6	1136	115.8
35		35.70	36.40	2.60	5.160	1071	109.2	1142	116.5
36		36.72	37.44	2.68	5.459	1133	115.5	1208	123.2

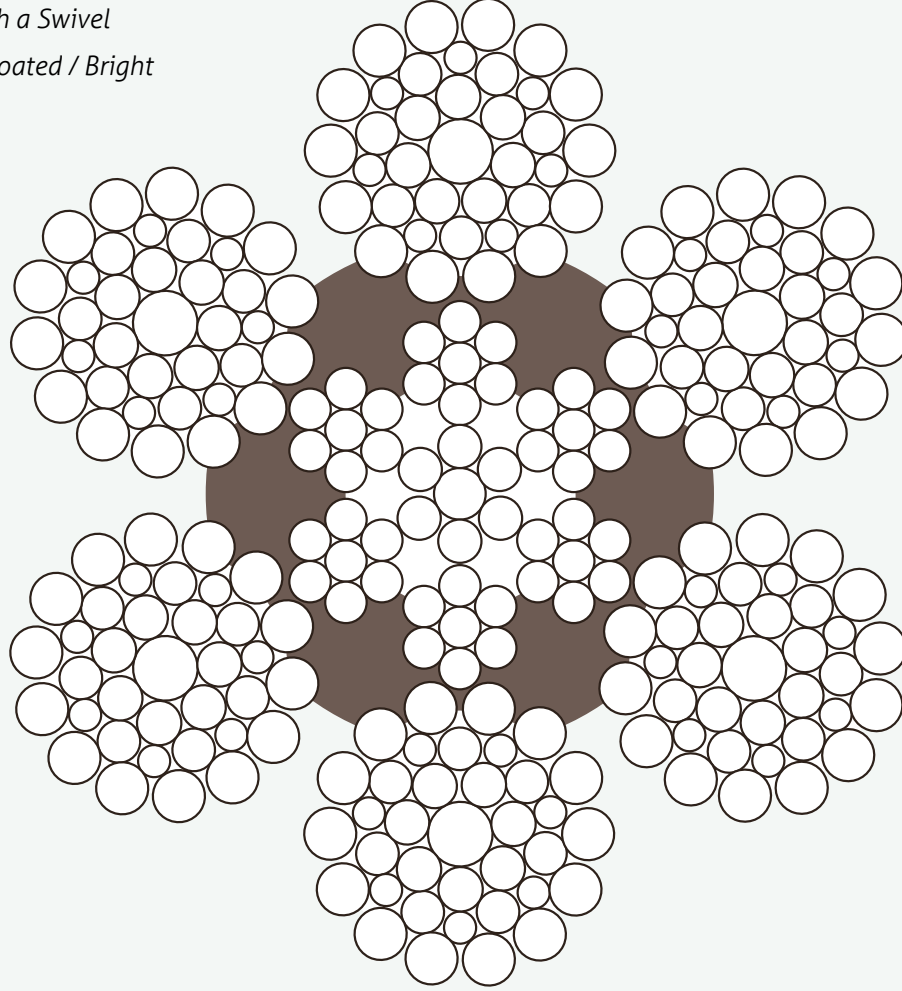


» Deck Crane

Hyfil R6F

Hyfil R6F'in Özellikleri Benefits of Hyfil R6F

- ◇ Fırdöndü ile kullanılmamalıdır
- ◇ Galvanizli / Alumar kaplama / Siyah
- ◇ Sentetik lif dolgulu
- ◇ *Should not be used with a Swivel*
- ◇ *Zinc Coated / Alumar Coated / Bright*
- ◇ *Synthetic fiber inserted*

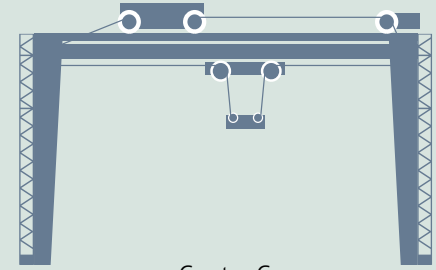


Teknik Bilgiler *Technical Data*

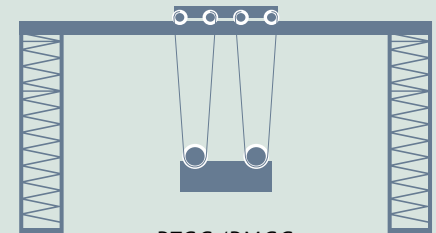
Çap Aralığı Diameter Range (mm)	Dış damardaki yüke binen tel sayısı Total number of load-bearing wires in the outer layer of strands	İskarta kriteri (Kırık tel sayısı) Discard criteria (Number of broken wires)					
		Tekli Sarım Tambur & Çelik Makaralar Single-layer drum & Steel sheaves				Çoklu Sarım Tambur Multi-layer drum	
		Classes M1 to M4				All classes	
		Ordinary Lay		Lang's Lay		Ordinary & Lang's Lay	
		6xd	30xd	6xd	30xd	6xd	30xd
8-36	156	6	13	3	6	12	26
37-39	186	8	16	4	8	16	32
40-64	216	9	18	4	9	18	36

Çap Aralığı Diameter Range (mm)	Ortalama Dolgu Katsayısı Average Fill Factor	Ortalama Dönme Katsayısı Average Spin Factor			Ortalama Ağırlık Katsayısı Average Weight Factor	Sarım Yönü Lay Direction
		1770	1960	2160		
8-64	0.622	0.784	0.743	-	0.901	Regular Lay Lang's Lay

Halat Çapı Nominal Rope Diameter		Çap Toleransı Diameter Tolerance		Dış Tel Çapı Outer Wire Diameter	Kopma Kuvveti Hesaplamaları <i>Metric unit.</i>						
		min.	max.		Birim Ağırlık Unit Weight	Minimum Kopma Kuvveti <i>MBL</i>					
						1770 Grade		1960 Grade		2160 Grade	
mm	inches	mm	mm	mm	kg/m	kN	t(M)	kN	t(M)	kN	t(M)
8		8.16	8.32	0.45	0.269	43.34	4.42	48.20	4.92	53.00	5.40
9		9.18	9.36	0.50	0.341	54.85	5.59	60.90	6.21	67.00	6.83
10		10.20	10.40	0.56	0.421	67.72	6.91	75.20	7.67	82.70	8.43
11		11.22	11.44	0.61	0.509	81.94	8.36	90.99	9.28	100.1	10.20
12		12.24	12.48	0.64	0.557	89.60	9.14	108.9	11.10	117.7	12.00
12.7	1/2	12.95	13.21	0.71	0.679	109.2	11.14	121.5	12.39	131.6	13.42
13		13.26	13.52	0.73	0.711	114.4	11.67	127.3	12.98	137.9	14.06
14		14.28	14.56	0.78	0.825	132.7	13.53	147.1	15.00	158.9	16.20
14.3	9/16	14.59	14.87	0.80	0.859	138.2	14.09	153.5	15.65	165.8	16.91
15		15.30	15.60	0.84	0.947	152.4	15.54	168.9	17.22	182.4	18.60
15.9	5/8	16.22	16.54	0.89	1.064	171.2	17.46	189.8	19.35	205.3	20.94
16		16.32	16.64	0.89	1.077	173.4	17.68	192.2	19.60	207.9	21.20
17		17.34	17.68	0.95	1.216	195.7	19.96	217.0	22.13	234.7	23.93
18		18.36	18.72	1.00	1.363	219.4	22.37	243.2	24.80	263.8	26.90
19		19.38	19.76	1.06	1.519	244.5	24.93	273.6	27.90	296.2	30.20
19.1	3/4	19.48	19.86	1.07	1.535	247.0	25.19	276.5	28.19	299.3	30.52
20		20.40	20.80	1.12	1.683	270.9	27.62	300.1	30.60	325.6	33.20
21		21.42	21.84	1.17	1.856	298.6	30.45	330.9	33.74	359.0	36.61
22		22.44	22.88	1.23	2.037	327.7	33.42	363.1	37.03	394.0	40.17
22.2	7/8	22.64	23.09	1.24	2.079	334.5	34.11	369.8	37.70	401.2	40.91
23		23.46	23.92	1.28	2.226	358.2	36.53	397.0	40.49	430.1	43.86
24		24.48	24.96	1.34	2.424	390.0	39.77	432.5	44.10	468.8	47.80
25		25.50	26.00	1.39	2.630	423.2	43.15	469.7	47.90	509.9	52.00
25.4	1	25.91	26.42	1.42	2.715	436.9	44.55	484.9	49.44	526.3	53.67
26		26.52	27.04	1.45	2.845	457.8	46.68	508.0	51.80	551.1	56.20
27		27.54	28.08	1.51	3.068	493.6	50.33	547.8	55.86	594.3	60.60
28		28.56	29.12	1.56	3.299	530.9	54.14	589.4	60.10	639.4	65.20
28.6	1-1/8	29.17	29.74	1.59	3.436	552.9	56.38	614.9	62.71	667.1	68.02
29		29.58	30.16	1.62	3.539	569.5	58.07	632.3	64.47	685.9	69.94
30		30.60	31.20	1.67	3.787	609.4	62.14	676.7	69.00	744.3	75.90
31		31.62	32.24	1.73	4.044	650.7	66.35	722.6	73.68	794.7	81.04
31.8	1-1/4	32.44	33.07	1.77	4.242	682.6	69.61	760.6	77.56	847.3	86.40
32		32.64	33.28	1.79	4.309	693.4	70.71	770.2	78.54	858.0	87.49
33		33.66	34.32	1.84	4.583	737.4	75.19	819.1	83.52	928.7	94.70
34		34.68	35.36	1.90	4.865	782.8	79.82	869.8	88.69	931.6	95.00
34.9	1-3/8	35.60	36.30	1.95	5.126	824.8	84.11	916.5	93.45	981.6	100.1
35		35.70	36.40	1.95	5.155	829.5	84.59	921.7	93.99	987.2	100.7
36		36.72	37.44	2.01	5.454	877.6	89.49	951.2	97.00	1072	109.3
38		38.76	39.52	2.12	6.077	978.0	99.73	1082	110.3	1194	121.8
38.1	1-1/2	38.86	39.62	2.13	6.109	983.0	100.2	1087	110.9	1201	122.4
40		40.80	41.60	2.23	6.733	1080	110.1	1198	122.2	1323	135.0
41.3	1-5/8	42.13	42.95	2.30	7.178	1155	117.8	1278	130.3	1411	143.9
42		42.84	43.68	2.34	7.423	1195	121.9	1285	131.0	1459	148.8
44		44.88	45.76	2.45	8.147	1311	133.7	1458	148.7	1601	163.3
44.5	1-3/4	45.39	46.28	2.48	8.333	1341	136.7	1492	152.1	1638	167.0
45		45.90	46.80	2.51	8.522	1370	139.7	1530	156.0	1675	170.8
46		46.92	47.84	2.57	8.905	1433	146.1	1599	163.0	1750	178.5
47.6	1-7/8	48.55	49.50	2.66	9.535	1534	156.4	1707	174.1	1874	191.1
48		48.96	49.92	2.68	9.696	1560	159.1	1736	177.0	1906	194.3
50		51.00	52.00	2.79	10.52	1693	172.6	1883	192.0	2068	210.9
50.8	2	51.82	52.83	2.83	10.86	1747	178.1	1944	198.2	2135	217.7
52		53.04	54.08	2.90	11.38	1831	186.7	2030	207.0	2237	228.1
54	2-1/8	55.08	56.16	3.01	12.27	1975	201.4	2158	220.0	2412	245.9
56		57.12	58.24	3.12	13.20	2120	216.2	2363	241.0	2594	264.5
57.2	2-1/4	58.34	59.49	3.18	13.77	2216	226.0	2466	251.4	2706	276.0
58		59.16	60.32	3.24	14.16	2278	232.3	2535	258.5	2782	283.7
60		61.20	62.40	3.35	15.15	2440	248.8	2713	276.7	2978	303.6
62		63.24	64.48	3.46	16.18	2603	265.4	2897	295.4	3180	324.2
64		65.28	66.56	3.57	17.24	2774	282.9	3087	314.8	3388	345.5



» Gantry Crane

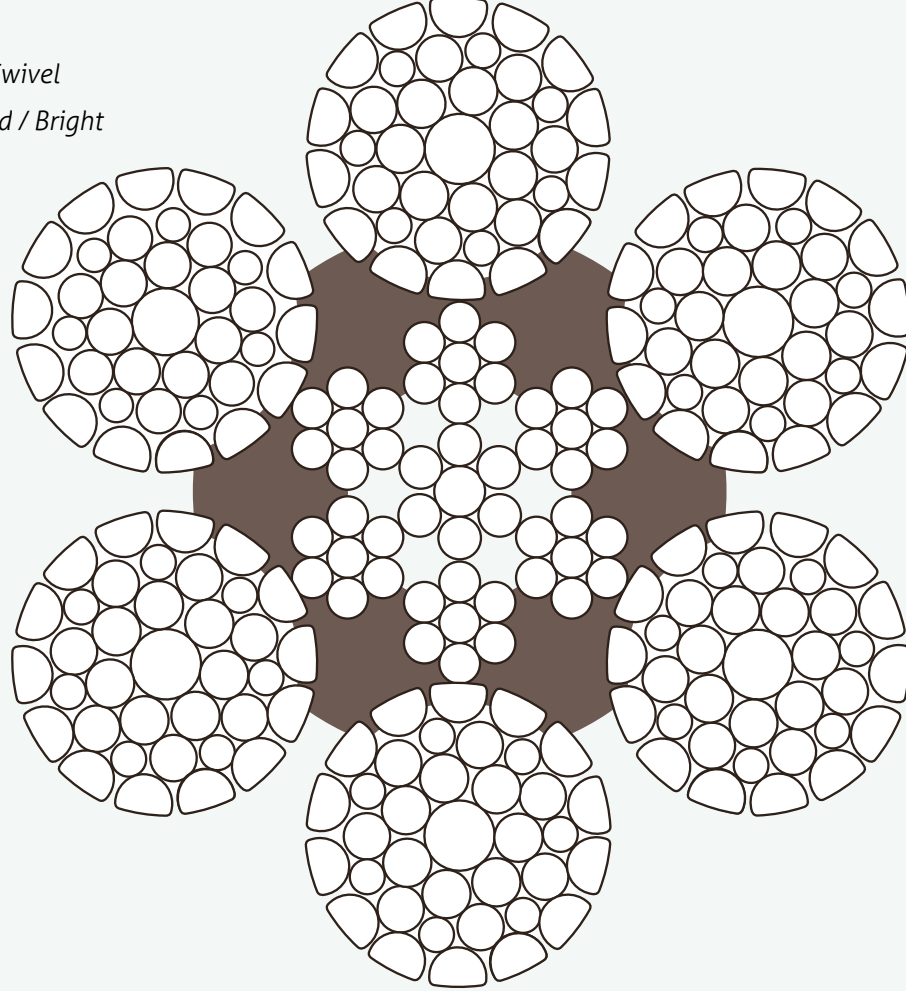


» RTGC /RMGC

Hyfil K6F

Hyfil K6F'in Özellikleri
Benefits of Hyfil K6F

- ◇ Fırdöndü ile kullanılmamalıdır
- ◇ Galvanizli / Alumar kaplama / Siyah
- ◇ Kompakt
- ◇ Sentetik lif dolgulu
- ◇ *Should not be used with a Swivel*
- ◇ *Zinc Coated / Alumar Coated / Bright*
- ◇ *Compacted*
- ◇ *Synthetic fiber inserted*

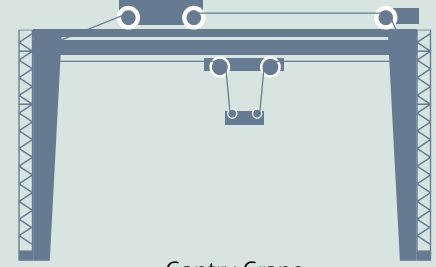


Teknik Bilgiler Technical Data

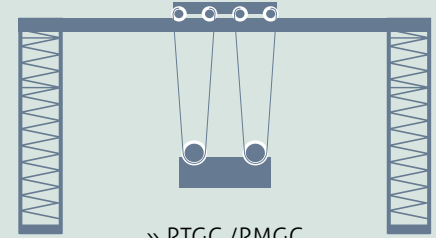
Çap Aralığı Diameter Range (mm)	Dış damardaki yüke binen tel sayısı Total number of load-bearing wires in the outer layer of strands	İskarta kriteri (Kırık tel sayısı) Discard criteria (Number of broken wires)					
		Tekli Sarım Tambur & Çelik Makaralar Single-layer drum & Steel sheaves				Çoklu Sarım Tambur Multi-layer drum	
		Classes M1 to M4				All classes	
		Ordinary Lay		Lang's Lay		Ordinary & Lang's Lay	
		6xd	30xd	6xd	30xd	6xd	30xd
8-35	156	6	13	3	6	12	26
36-39	186	8	16	4	8	16	32
40-50	216	9	18	4	9	18	36

Çap Aralığı Diameter Range (mm)	Ortalama Dolgu Katsayısı Average Fill Factor	Ortalama Dönme Katsayısı Average Spin Factor			Ortalama Ağırlık Katsayısı Average Weight Factor	Sarım Yönü Lay Direction
		1770	1960	2160		
8-50	0.663	0.840	0.821	-	0.884	Regular Lay Lang's Lay

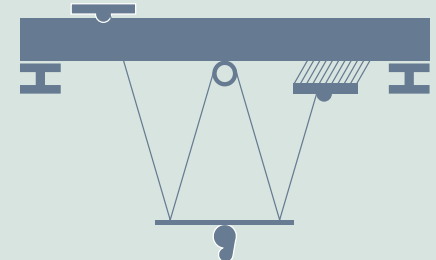
Halat Çapı Nominal Rope Diameter		Çap Toleransı Diameter Tolerance		Dış Tel Çapı Outer Wire Diameter	Kopma Kuvveti Hesaplamaları <i>Metric unit.</i>						
					Birim Ağırlık Unit Weight	Minimum Kopma Kuvveti MBL					
						1770 Grade		1960 Grade		2160 Grade	
mm	inches	mm	mm	mm	kg/m	kN	t(M)	kN	t(M)	kN	t(M)
8		8.16	8.32	0.47	0.294	49.52	5.05	53.63	5.47	57.40	5.85
9		9.18	9.36	0.52	0.373	62.67	6.39	67.87	6.92	72.60	7.40
10		10.20	10.40	0.58	0.460	77.37	7.89	83.80	8.55	89.60	9.14
11		11.22	11.44	0.64	0.557	93.62	9.55	101.4	10.34	105.1	10.72
12		12.24	12.48	0.70	0.662	111.4	11.36	120.7	12.31	126.0	12.85
12.7	1/2	12.95	13.21	0.74	0.742	124.8	12.73	135.2	13.79	140.0	14.28
13		13.26	13.52	0.76	0.777	130.8	13.34	141.6	14.44	147.0	14.99
14		14.28	14.56	0.81	0.901	151.6	15.46	164.2	16.74	171.6	17.50
14.3	9/16	14.59	14.87	0.83	0.939	157.9	16.10	171.1	17.45	179.0	18.25
15		15.30	15.60	0.87	1.035	174.1	17.75	188.5	19.22	197.0	20.08
15.9	5/8	16.22	16.54	0.92	1.163	195.6	19.95	211.8	21.60	221.2	22.56
16		16.32	16.64	0.93	1.177	198.1	20.20	214.5	21.87	224.0	22.84
17		17.34	17.68	0.99	1.329	223.6	22.80	242.2	24.70	252.9	25.79
18		18.36	18.72	1.05	1.490	250.7	25.56	271.5	27.69	283.0	28.86
19		19.38	19.76	1.11	1.660	279.3	28.48	302.5	30.85	315.7	32.19
19.1	3/4	19.48	19.86	1.11	1.678	282.2	28.78	305.7	31.17	319.0	32.53
20		20.40	20.80	1.16	1.840	309.5	31.56	335.2	34.18	349.0	35.59
21		21.42	21.84	1.22	2.028	341.2	34.79	369.5	37.68	384.8	39.24
22		22.44	22.88	1.28	2.226	374.5	38.19	405.6	41.36	424.0	43.24
22.2	7/8	22.64	23.09	1.29	2.272	382.2	38.97	413.9	42.21	436.0	44.46
23		23.46	23.92	1.34	2.433	409.3	41.74	443.3	45.20	468.0	47.72
24		24.48	24.96	1.40	2.649	445.6	45.44	482.7	49.22	504.0	51.39
25		25.50	26.00	1.45	2.875	483.6	49.31	523.7	53.40	547.0	55.78
25.4	1	25.91	26.42	1.48	2.967	499.1	50.89	540.6	55.13	565.0	57.61
26		26.52	27.04	1.51	3.109	523.0	53.33	566.5	57.77	592.0	60.37
27		27.54	28.08	1.57	3.353	564.0	57.51	610.9	62.29	638.4	65.10
28		28.56	29.12	1.63	3.606	606.6	61.86	657.0	67.00	686.0	69.95
28.6	1-1/8	29.17	29.74	1.66	3.756	631.7	64.42	684.2	69.77	717.0	73.11
29		29.58	30.16	1.69	3.868	650.7	66.35	704.7	71.86	737.2	75.17
30		30.60	31.20	1.74	4.139	696.3	71.00	754.2	76.91	788.0	80.35
31		31.62	32.24	1.80	4.420	743.5	75.82	805.3	82.12	842.9	85.96
31.8	1-1/4	32.44	33.07	1.85	4.636	779.9	79.53	844.7	86.14	887.0	90.45
32		32.64	33.28	1.86	4.710	792.2	80.78	858.1	87.50	897.0	91.47
33		33.66	34.32	1.92	5.009	842.5	85.91	912.5	93.05	953.9	97.27
34		34.68	35.36	1.98	5.317	894.4	91.20	968.7	98.78	1010	103.0
34.9	1-3/8	35.60	36.30	2.03	5.602	942.4	96.10	1021	104.1	1064	108.5
35		35.70	36.40	2.04	5.634	947.8	96.65	1027	104.7	1070	109.1
36		36.72	37.44	2.09	5.961	1000	102.0	1090	111.1	1132	115.5
38		38.76	39.52	2.21	6.641	1120	114.2	1210	123.4	1262	128.7
38.1	1-1/2	38.86	39.62	2.22	6.676	1126	114.8	1216	124.0	1268	129.3
40		40.80	41.60	2.33	7.359	1240	126.4	1340	136.6	1398	142.5
41.3	1-5/8	42.13	42.95	2.40	7.845	1320	134.6	1429	145.7	1490	152.0
42		42.84	43.68	2.44	8.113	1365	139.2	1478	150.7	1541	157.2
44		44.88	45.76	2.56	8.904	1500	153.0	1620	165.2	1691	172.5
44.5	1-3/4	45.39	46.28	2.59	9.108	1532	156.2	1659	169.2	1730	176.4
45		45.90	46.80	2.62	9.314	1570	160.1	1700	173.4	1769	180.4
46		46.92	47.84	2.68	9.732	1640	167.2	1770	180.5	1849	188.5
47.6	1-7/8	48.55	49.50	2.77	10.42	1753	178.8	1899	193.6	1980	201.9
48		48.96	49.92	2.79	10.60	1780	181.5	1930	196.8	2013	205.3
50		51.00	52.00	2.91	11.50	1930	196.8	2090	213.1	2184	222.7



» Gantry Crane



» RTGC / RMGC

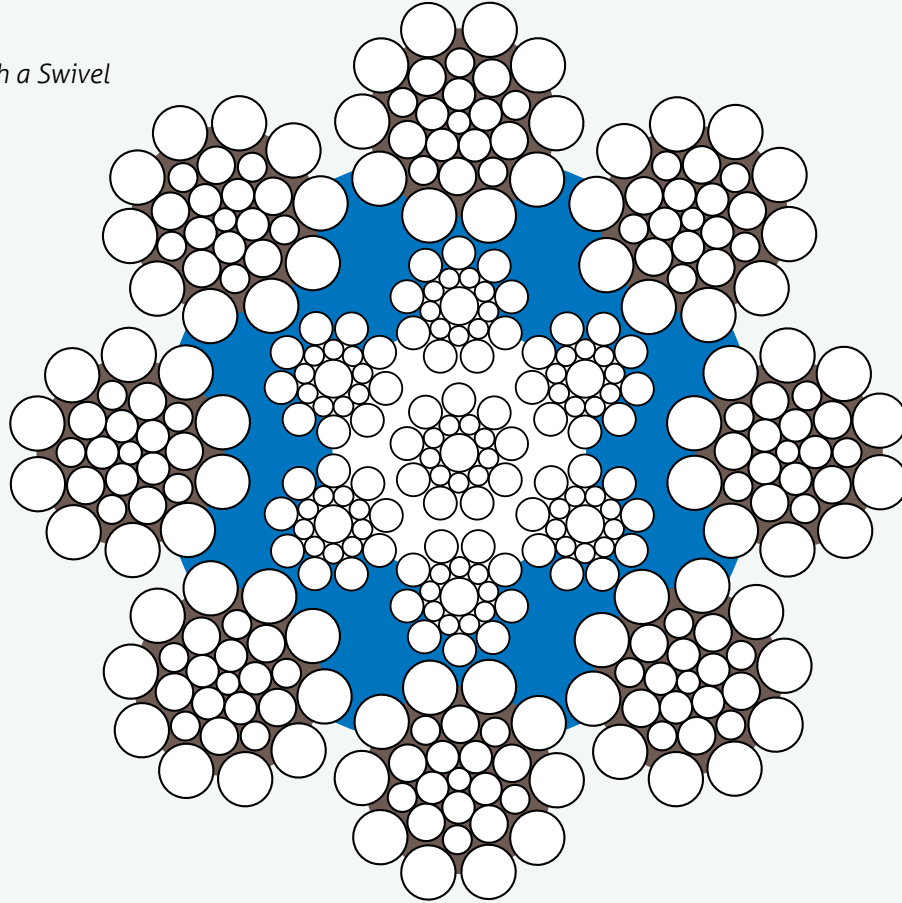


» Ladle Crane

Hyfil R8

Hyfil R8'in Özellikleri
Benefits of Hyfil R8

- ◇ Plastik dolgulu
- ◇ Galvanizli / Siyah
- ◇ Fırdöndü ile kullanılmamalıdır
- ◇ *Plastic filled*
- ◇ *Galvanized / Bright*
- ◇ *Should not be used with a Swivel*



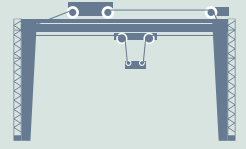
Teknik Bilgiler Technical Data

Çap Aralığı Diameter Range (mm)	Dış damardaki yüke binen tel sayısı Total number of load-bearing wires in the outer layer of strands	İskarta kriteri (Kırık tel sayısı) Discard criteria (Number of broken wires)					
		Tekli Sarım Tambur & Çelik Makaralar Single-layer drum & Steel sheaves				Çoklu Sarım Tambur Multi-layer drum	
		Classes M1 to M4					
		Ordinary Lay		Lang's Lay		Ordinary & Lang's Lay	
		6xd	30xd	6xd	30xd	6xd	30xd
8-42	208	9	18	4	9	18	36
43-48	248	10	21	5	10	20	42
49-60	288	12	24	6	12	24	48

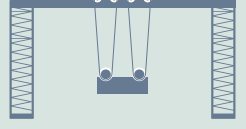
Çap Aralığı Diameter Range (mm)	Ortalama Dolgu Katsayısı Average Fill Factor	Ortalama Dönme Katsayısı Average Spin Factor			Ortalama Ağırlık Katsayısı Average Weight Factor	Sarım Yönü Lay Direction
		1770	1960	2160		
8-60	0.605	0.889	0.889	0.856	0.916	Regular Lay Lang's Lay

Halat Çapı Nominal Rope Diameter		Çap Toleransı Diameter Tolerance		Dış Tel Çapı Outer Wire Diameter	Kopma Kuvveti Hesaplamaları <i>Metric unit.</i>				
		min.	max.		Birim Ağırlık Unit Weight	Minimum Kopma Kuvveti <i>MBL</i>			
						1770 Grade		1960 Grade	
mm	inches	mm	mm	mm	kg/m	kN	t(M)	kN	t(M)
8		8.16	8.32	0.48	0.276	47.87	4.88	53.01	5.41
9		9.18	9.36	0.54	0.349	60.58	6.18	67.09	6.84
10		10.20	10.40	0.60	0.431	74.79	7.63	82.82	8.45
11		11.22	11.44	0.66	0.522	90.50	9.23	100.2	10.22
12		12.24	12.48	0.71	0.621	107.7	10.98	119.3	12.16
12.7	1/2	12.95	13.21	0.76	0.695	120.6	12.30	133.6	13.62
13		13.26	13.52	0.77	0.729	126.4	12.89	140.0	14.27
14		14.28	14.56	0.83	0.845	146.6	14.95	162.3	16.55
14.3	9/16	14.59	14.87	0.85	0.882	152.9	15.60	169.4	17.27
15		15.30	15.60	0.89	0.970	168.3	17.16	186.3	19.00
15.9	5/8	16.22	16.54	0.95	1.090	189.1	19.28	209.4	21.35
16		16.32	16.64	0.95	1.104	191.5	19.52	212.0	21.62
17		17.34	17.68	1.01	1.246	216.2	22.04	239.4	24.41
18		18.36	18.72	1.07	1.397	242.3	24.71	268.3	27.36
19		19.38	19.76	1.13	1.557	270.0	27.53	299.0	30.49
19.1	3/4	19.48	19.86	1.14	1.573	272.9	27.82	302.1	30.81
20		20.40	20.80	1.19	1.725	299.2	30.51	331.3	33.78
21		21.42	21.84	1.25	1.902	329.8	33.63	365.2	37.24
22		22.44	22.88	1.31	2.087	362.0	36.91	400.9	40.88
22.2	7/8	22.64	23.09	1.32	2.125	368.6	37.59	408.2	41.62
23		23.46	23.92	1.37	2.281	395.7	40.35	438.1	44.68
24		24.48	24.96	1.43	2.484	430.8	43.93	477.1	48.65
25		25.50	26.00	1.49	2.695	467.5	47.67	517.6	52.78
25.4	1	25.91	26.42	1.51	2.782	482.5	49.20	534.3	54.49
26		26.52	27.04	1.55	2.915	505.6	51.56	559.9	57.09
27		27.54	28.08	1.61	3.143	545.2	55.60	603.8	61.57
28		28.56	29.12	1.67	3.380	586.4	59.79	649.3	66.21
28.6	1-1/8	29.17	29.74	1.70	3.527	611.8	62.38	677.4	69.08
29		29.58	30.16	1.73	3.626	629.0	64.14	696.5	71.03
30		30.60	31.20	1.79	3.881	673.1	68.64	745.4	76.01
31		31.62	32.24	1.85	4.144	718.8	73.29	795.9	81.16
31.8	1-1/4	32.44	33.07	1.89	4.360	756.3	77.13	837.5	85.40
32		32.64	33.28	1.91	4.415	765.9	78.10	848.1	86.48
33		33.66	34.32	1.97	4.696	814.5	83.06	901.9	91.97
34		34.68	35.36	2.03	4.984	864.6	88.17	957.4	97.63
34.9	1-3/8	35.60	36.30	2.08	5.252	911.0	92.89	1009	102.9
35		35.70	36.40	2.08	5.282	916.2	93.43	1015	103.5
36		36.72	37.44	2.14	5.588	969.3	98.84	1073	109.5
38		38.76	39.52	2.26	6.226	1080	110.1	1196	122.0
38.1	1-1/2	38.86	39.62	2.27	6.259	1086	110.7	1202	122.6
40		40.80	41.60	2.38	6.899	1197	122.0	1325	135.1
41.3	1-5/8	42.13	42.95	2.46	7.355	1276	130.1	1413	144.1
42		42.84	43.68	2.50	7.606	1319	134.5	1461	149.0
44		44.88	45.76	2.27	8.348	1448	147.7	1603	163.5
44.5	1-3/4	45.39	46.28	2.30	8.539	1481	151.0	1640	167.2
45		45.90	46.80	2.33	8.731	1515	154.4	1677	171.0
46		46.92	47.84	2.38	9.124	1583	161.4	1753	178.7
47.6	1-7/8	48.55	49.50	2.46	9.770	1695	172.8	1877	191.4
48		48.96	49.92	2.48	9.934	1723	175.7	1908	194.6
50		51.00	52.00	2.28	10.78	1870	190.7	2071	211.1
50.8	2	51.82	52.83	2.32	11.13	1930	196.8	2137	217.9
52		53.04	54.08	2.37	11.66	2022	206.2	2240	228.4
54	2-1/8	55.08	56.16	2.46	12.57	2181	222.4	2415	246.3
56		57.12	58.24	2.55	13.52	2346	239.2	2597	264.8
57.2	2-1/4	58.34	59.49	2.61	14.11	2447	249.5	2710	276.3
58		59.16	60.32	2.64	14.51	2516	256.6	2786	284.1
60		61.20	62.40	2.73	15.52	2693	274.6	2982	304.0

» Gantry Crane



» RTGC /RMGC



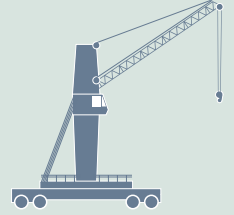
» Ladle Crane



» Tower Crane



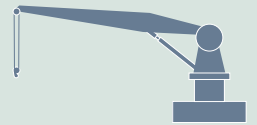
» Mobile Harbour Crane



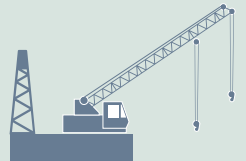
» Overhead Traveling Crane



» Deck Crane



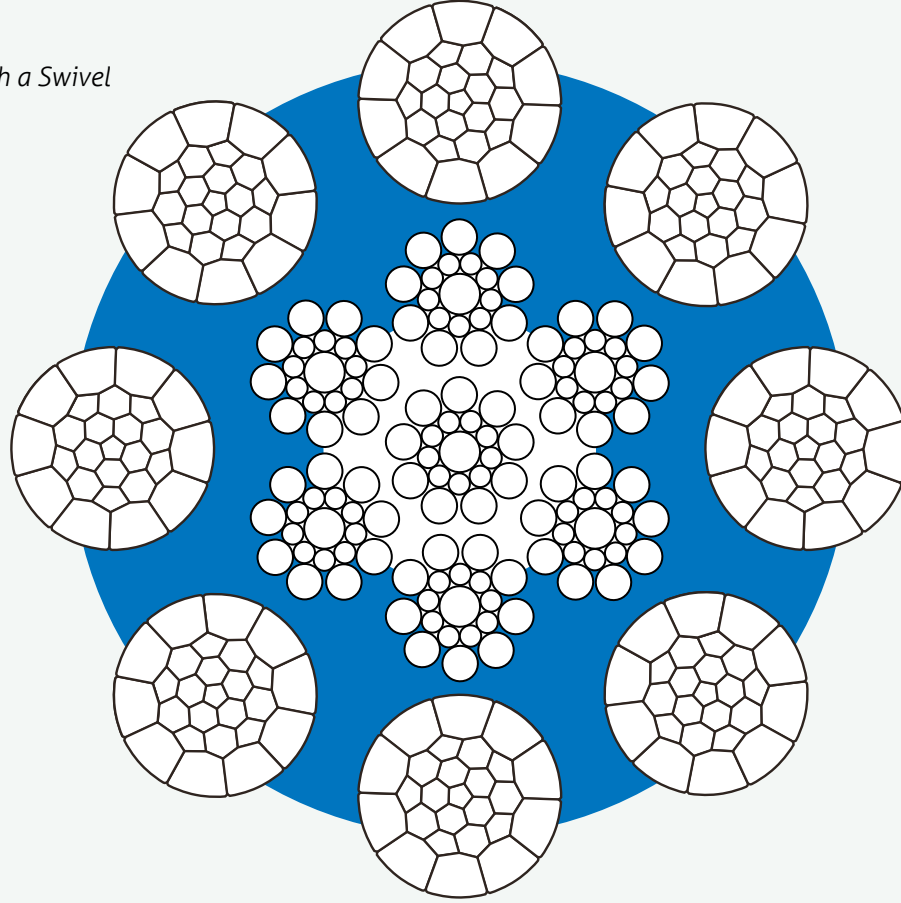
» Offshore Crane



Hyfil K8

Hyfil K8'in Özellikleri
Benefits of Hyfil K8

- ◇ Plastik dolgulu
- ◇ Galvanizli / Siyah
- ◇ Fırdöndü ile kullanılmamalıdır
- ◇ *Plastic filled*
- ◇ *Galvanized / Bright*
- ◇ *Should not be used with a Swivel*



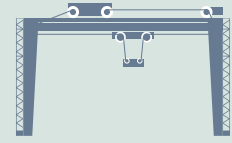
Teknik Bilgiler Technical Data

Çap Aralığı Diameter Range (mm)	Dış damardaki yüke binen tel sayısı Total number of load-bearing wires in the outer layer of strands	İskarta kriteri (Kırık tel sayısı) Discard criteria (Number of broken wires)					
		Tekli Sarım Tambur & Çelik Makaralar Single-layer drum & Steel sheaves				Çoklu Sarım Tambur Multi-layer drum	
		Classes M1 to M4					
		Ordinary Lay		Lang's Lay		Ordinary & Lang's Lay	
		6xd	30xd	6xd	30xd	6xd	30xd
8-42	208	9	18	4	9	18	36
43-48	248	10	21	5	10	20	42
49-60	288	12	24	6	12	24	48

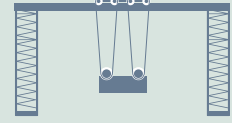
Çap Aralığı Diameter Range (mm)	Ortalama Dolgu Katsayısı Average Fill Factor	Ortalama Dönme Katsayısı Average Spin Factor			Ortalama Ağırlık Katsayısı Average Weight Factor	Sarım Yönü Lay Direction
		1770	1960	2160		
8-60	0.659	0.889	0.888	0.847	0.886	Regular Lay Lang's Lay

Halat Çapı Nominal Rope Diameter		Çap Toleransı Diameter Tolerance		Dış Tel Çapı Outer Wire Diameter	Kopma Kuvveti Hesaplamaları <i>Metric unit.</i>						
		min.	max.		Birim Ağırlık Unit Weight	Minimum Kopma Kuvveti <i>MBL</i>					
						1770 Grade		1960 Grade		2160 Grade	
mm	inches	mm	mm	mm	kg/m	kN	t(M)	kN	t(M)	kN	t(M)
8		8.16	8.32	0.50	0.288	52.10	5.31	57.70	5.88	60.6	6.18
9		9.18	9.36	0.57	0.364	66.00	6.73	73.00	7.44	76.7	7.82
10		10.20	10.40	0.63	0.450	81.50	8.31	90.10	9.19	94.7	9.66
11		11.22	11.44	0.69	0.544	98.60	10.05	109.1	11.13	114.6	11.69
12		12.24	12.48	0.75	0.648	117.3	11.96	129.8	13.24	136.3	13.90
12.7	1/2	12.95	13.21	0.80	0.726	131.4	13.40	145.4	14.83	152.7	15.57
13		13.26	13.52	0.82	0.760	137.7	14.04	152.3	15.53	160.0	16.32
14		14.28	14.56	0.88	0.882	159.7	16.28	176.7	18.02	185.6	18.93
14.3	9/16	14.59	14.87	0.90	0.920	166.6	16.99	184.3	18.79	193.6	19.74
15		15.30	15.60	0.94	1.012	183.3	18.69	202.8	20.68	213.0	21.72
15.9	5/8	16.22	16.54	1.00	1.137	206.0	21.01	227.9	23.24	239.4	24.41
16		16.32	16.64	1.01	1.152	208.6	21.27	230.7	23.52	242.4	24.72
17		17.34	17.68	1.07	1.300	235.5	24.01	260.5	26.56	273.6	27.90
18		18.36	18.72	1.13	1.457	264.0	26.92	292.0	29.78	306.8	31.28
19		19.38	19.76	1.19	1.624	294.2	30.00	325.4	33.18	341.8	34.85
19.1	3/4	19.48	19.86	1.20	1.641	297.3	30.32	328.8	33.53	345.4	35.22
20		20.40	20.80	1.26	1.799	325.9	33.23	360.5	36.76	378.7	38.62
21		21.42	21.84	1.32	1.984	359.3	36.64	397.5	40.53	417.5	42.57
22		22.44	22.88	1.38	2.177	394.4	40.22	436.2	44.48	458.3	46.73
22.2	7/8	22.64	23.09	1.40	2.217	401.6	40.95	444.2	45.30	466.6	47.58
23		23.46	23.92	1.45	2.380	431.0	43.95	476.8	48.62	500.9	51.08
24		24.48	24.96	1.51	2.591	469.3	47.86	519.1	52.93	545.4	55.62
25		25.50	26.00	1.57	2.812	509.3	51.93	563.3	57.44	591.8	60.35
25.4	1	25.91	26.42	1.60	2.902	525.7	53.61	581.5	59.30	610.8	62.28
26		26.52	27.04	1.63	3.041	550.8	56.17	609.3	62.13	640.0	65.26
27		27.54	28.08	1.70	3.279	594.0	60.57	657.0	67.00	690.2	70.38
28		28.56	29.12	1.76	3.527	638.8	65.14	706.6	72.05	742.3	75.69
28.6	1-1/8	29.17	29.74	1.80	3.680	666.5	67.96	737.2	75.17	774.5	78.98
29		29.58	30.16	1.82	3.783	685.3	69.88	758.0	77.29	796.3	81.20
30		30.60	31.20	1.89	4.049	733.4	74.79	811.1	82.71	852.1	86.89
31		31.62	32.24	1.95	4.323	783.1	79.85	866.1	88.32	909.9	92.78
31.8	1-1/4	32.44	33.07	2.00	4.549	824.0	84.02	911.4	92.94	957.5	97.64
32		32.64	33.28	2.01	4.606	834.4	85.09	922.9	94.11	969.5	98.86
33		33.66	34.32	2.07	4.899	887.4	90.49	981.5	100.1	1031	105.1
34		34.68	35.36	2.14	5.200	941.9	96.05	1042	106.3	1095	111.7
34.9	1-3/8	35.60	36.30	2.19	5.479	992.5	101.2	1098	112.0	1153	117.6
35		35.70	36.40	2.20	5.511	998.2	101.8	1104	112.6	1160	118.3
36		36.72	37.44	2.26	5.830	1056	107.7	1168	119.1	1227	125.1
38		38.76	39.52	2.39	6.496	1177	120.0	1301	132.7	1367	139.4
38.1	1-1/2	38.86	39.62	2.39	6.530	1183	120.6	1308	133.4	1374	140.1
40		40.80	41.60	2.51	7.198	1304	133.0	1442	147.0	1515	154.5
41.3	1-5/8	42.13	42.95	2.60	7.673	1390	141.7	1537	156.7	1615	164.7
42		42.84	43.68	2.64	7.935	1437	146.5	1590	162.1	1670	170.3
44		44.88	45.76	2.38	8.709	1578	160.9	1745	177.9	1833	186.9
44.5	1-3/4	45.39	46.28	2.40	8.908	1614	164.6	1785	182.0	1875	191.2
45		45.90	46.80	2.43	9.109	1650	168.3	1825	186.1	1917	195.5
46		46.92	47.84	2.48	9.519	1724	175.8	1907	194.5	2003	204.2
47.6	1-7/8	48.55	49.50	2.57	10.19	1846	188.2	2042	208.2	2145	218.7
48		48.96	49.92	2.59	10.36	1877	191.4	2077	211.8	2181	222.4
50		51.00	52.00	2.35	11.25	2037	207.7	2253	229.7	2367	241.4
50.8	2	51.82	52.83	2.39	11.61	2103	214.4	2326	237.2	2443	249.1
52		53.04	54.08	2.45	12.16	2203	224.6	2437	248.5	2560	261.0
54	2-1/8	55.08	56.16	2.54	13.12	2376	242.3	2628	268.0	2761	281.5
56		57.12	58.24	2.64	14.11	2555	260.5	2826	288.2		
57.2	2-1/4	58.34	59.49	2.69	14.72	2666	271.9	2949	300.7		
58		59.16	60.32	2.73	15.13	2741	279.5	3032	309.2		
60		61.20	62.40	2.82	16.19	2933	299.1	3245	330.9		

» Gantry Crane



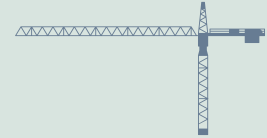
» RTGC /RMGC



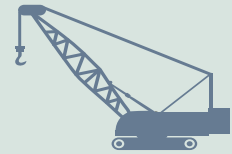
» Ladle Crane



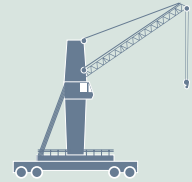
» Tower Crane



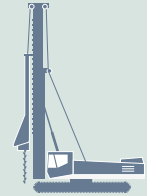
» Crawler Crane



» Mobile Harbour Crane



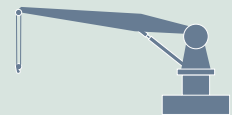
» Piledriving Equipment



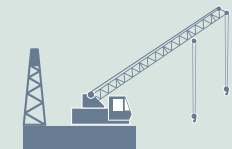
» Overhead Traveling Crane



» Deck Crane



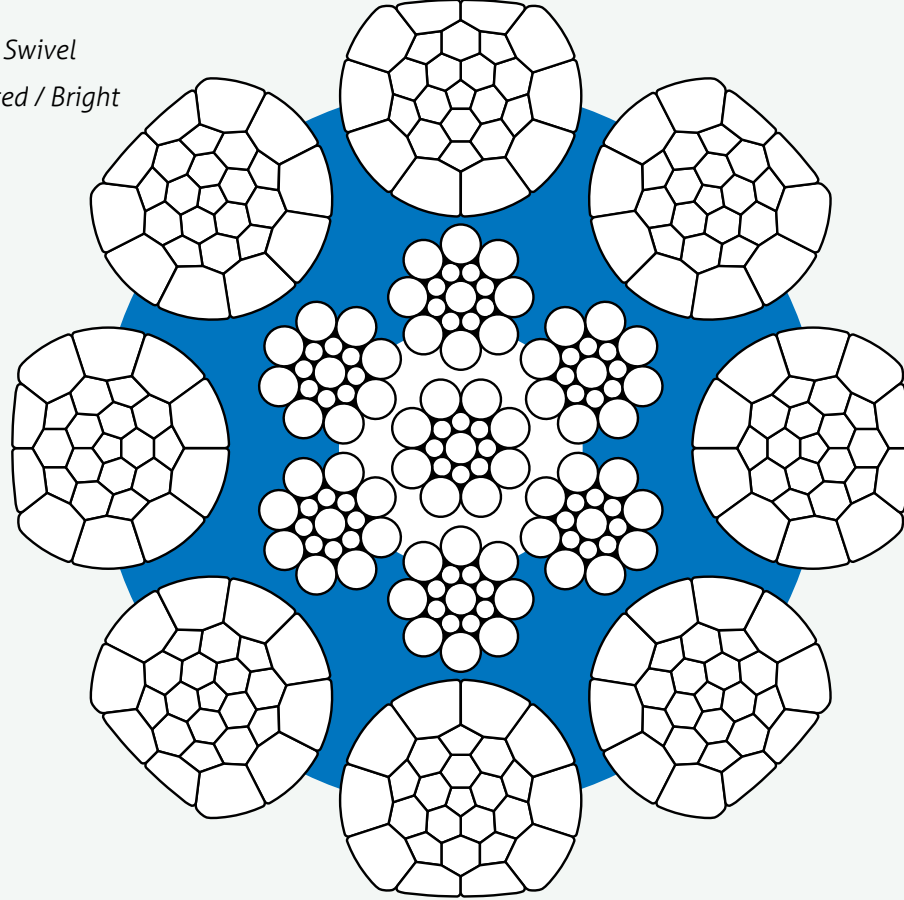
» Offshore Crane



Hyfil K8W

Hyfil K8W'in Özellikleri
Benefits of Hyfil K8W

- ◇ Fırdöndü ile kullanılmamalıdır
- ◇ Galvanizli / Alumar kaplama / Siyah
- ◇ Kompakt
- ◇ Swage
- ◇ Çelik-Plastik kombinasyon
- ◇ Should not be used with a Swivel
- ◇ Zinc Coated / Alumar Coated / Bright
- ◇ Compacted
- ◇ Rotary Swaged
- ◇ Steel Plastic Combination

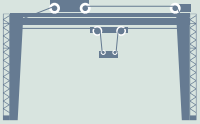


Teknik Bilgiler Technical Data

Çap Aralığı Diameter Range (mm)	Dış damardaki yüke binen tel sayısı Total number of load-bearing wires in the outer layer of strands	İskarta kriteri (Kırık tel sayısı) Discard criteria (Number of broken wires)					
		Tekli Sarım Tambur & Çelik Makaralar Single-layer drum & Steel sheaves				Çoklu Sarım Tambur Multi-layer drum	
		Classes M1 to M4					
		Ordinary Lay		Lang's Lay		Ordinary & Lang's Lay	
		6xd	30xd	6xd	30xd	6xd	30xd
12-40	208	9	18	-	-	18	36
41-46	248	10	21	-	-	20	42
47-48	288	12	24	-	-	24	48

Çap Aralığı Diameter Range (mm)	Ortalama Dolgu Katsayısı Average Fill Factor	Ortalama Dönme Katsayısı Average Spin Factor			Ortalama Ağırlık Katsayısı Average Weight Factor	Sarım Yönü Lay Direction
		1770	1960	2160		
12-48	0.685	-	0.885	0.865	0.882	Regular Lay

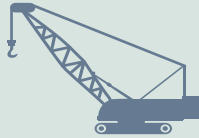
Halat Çapı Nominal Rope Diameter		Çap Toleransı Diameter Tolerance		Dış Tel Çapı Outer Wire Diameter	Kopma Kuvveti Hesaplamaları <i>Metric unit.</i>				
		min.	max.		Birim Ağırlık Unit Weight	Minimum Kopma Kuvveti <i>MBL</i>			
						1960 Grade		2160 Grade	
mm	inches	mm	mm	mm	kg/m	kN	t(M)	kN	t(M)
12		12.24	12.48	0.76	0.666	134.4	13.70	144.7	14.76
12.7	1/2	12.95	13.21	0.81	0.746	150.5	15.35	162.1	16.53
13		13.26	13.52	0.83	0.782	157.7	16.08	169.9	17.32
14		14.28	14.56	0.89	0.907	182.9	18.65	197.0	20.09
14.3	9/16	14.59	14.87	0.91	0.946	190.8	19.46	205.5	20.96
15		15.30	15.60	0.96	1.041	210.0	21.41	226.1	23.06
15.9	5/8	16.22	16.54	1.01	1.170	235.9	24.06	254.1	25.91
16		16.32	16.64	1.02	1.184	238.9	24.36	257.3	26.24
17		17.34	17.68	1.08	1.337	269.7	27.50	290.5	29.62
18		18.36	18.72	1.15	1.499	302.4	30.83	325.6	33.21
19.1	3/4	19.48	19.86	1.22	1.688	340.4	34.72	366.7	37.39
20		20.40	20.80	1.27	1.851	373.3	38.06	402.0	41.00
22		22.44	22.88	1.40	2.239	451.7	46.06	486.5	49.60
22.2	7/8	22.64	23.09	1.41	2.280	459.9	46.90	495.3	50.51
24		24.48	24.96	1.53	2.665	537.5	54.81	578.9	59.03
25.4	1	25.91	26.42	1.62	2.985	602.1	61.39	648.4	66.12
26		26.52	27.04	1.66	3.128	630.9	64.33	679.4	69.28
28		28.56	29.12	1.78	3.627	731.6	74.61	788.0	80.35
28.6	1-1/8	29.17	29.74	1.82	3.785	763.3	77.84	822.1	83.83
30		30.60	31.20	1.91	4.164	839.9	85.64	904.6	92.24
31.8	1-1/4	32.44	33.07	2.03	4.679	943.7	96.23	1016	103.6
32		32.64	33.28	2.04	4.738	955.6	97.44	1029	104.9
34		34.68	35.36	2.17	5.349	1079	110.0	1162	118.5
34.9	1-3/8	35.60	36.30	2.22	5.635	1137	115.9	1224	124.8
36		36.72	37.44	2.29	5.996	1209	123.3	1303	132.8
38		38.76	39.52	2.42	6.681	1348	137.4	1451	148.0
38.1	1-1/2	38.86	39.62	2.43	6.716	1355	138.1	1459	148.8
40		40.80	41.60	2.55	7.403	1493	152.3	1608	164.0
41.3	1-5/8	42.13	42.95	2.63	7.892	1592	162.3	1714	174.8
42		42.84	43.68	2.68	8.162	1646	167.9	1773	180.8
44		44.88	45.76	2.80	8.957	1807	184.2	1946	198.4
44.5	1-3/4	45.39	46.28	2.84	9.162	1848	188.4	1990	203.0
46		46.92	47.84	2.93	9.790	1975	201.4	2127	216.9
47.6	1-7/8	48.55	49.50	3.03	10.44	2114	215.6	2277	232.2
48		48.96	49.92	3.06	10.66	2150	219.3	2316	236.1



» Gantry Crane



» Ladle Crane



» Crawler Crane



» Piledriving Equipment



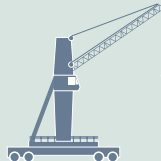
» Deck Crane



» RTGC /RMGC



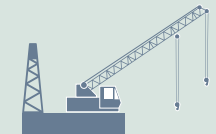
» Tower Crane



» Mobile Harbour Crane



» Overhead Traveling Crane

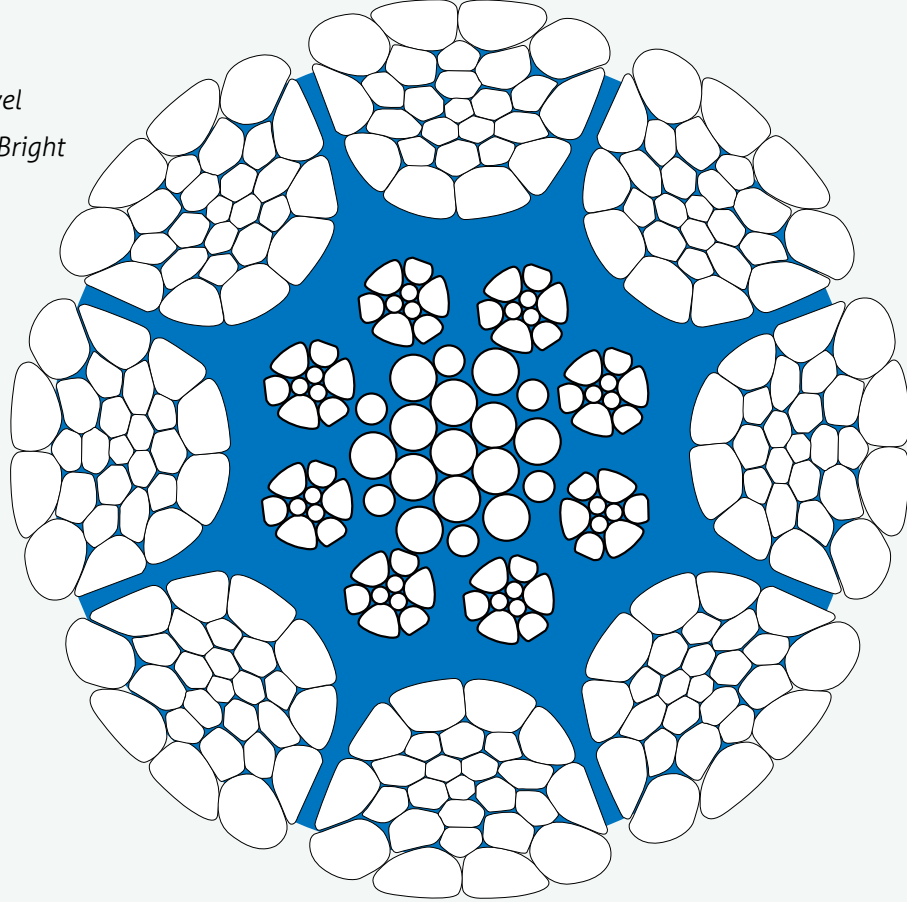


» Offshore Crane

Hyfil K8T

Hyfil K8T'in Özellikleri
Benefits of Hyfil K8T

- ◇ Firdöndü ile kullanılmamalıdır
- ◇ Galvanizli / Alumar kaplama / Siyah
- ◇ Kompakt
- ◇ Swage
- ◇ Çelik-Plastik kombinasyon
- ◇ Çift katlı paralel öz
- ◇ *Should not be used with a Swivel*
- ◇ *Zinc Coated / Alumar Coated / Bright*
- ◇ *Compacted*
- ◇ *Rotary Swaged*
- ◇ *Steel Plastic Combination*
- ◇ *Double Parallel Core*

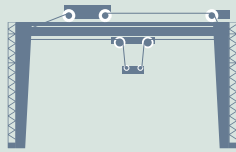


Teknik Bilgiler Technical Data

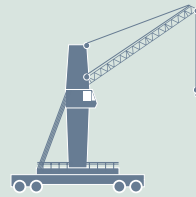
Çap Aralığı Diameter Range (mm)	Dış damardaki yüke binen tel sayısı Total number of load-bearing wires in the outer layer of strands	İskarta kriteri (Kırık tel sayısı) Discard criteria (Number of broken wires)					
		Tekli Sarım Tambur & Çelik Makaralar Single-layer drum & Steel sheaves				Çoklu Sarım Tambur Multi-layer drum	
		Classes M1 to M4					
		Ordinary Lay		Lang's Lay		Ordinary & Lang's Lay	
		6xd	30xd	6xd	30xd	6xd	30xd
12-40	208	9	18	-	-	18	36
41-46	248	10	21	-	-	20	42
47-48	288	12	24	-	-	24	48

Çap Aralığı Diameter Range (mm)	Ortalama Dolgu Katsayısı Average Fill Factor	Ortalama Dönme Katsayısı Average Spin Factor			Ortalama Ağırlık Katsayısı Average Weight Factor	Sarım Yönü Lay Direction
		1770	1960	2160		
12-48	0.743	-	0.895	0.875	0.856	Regular Lay

Halat Çapı Nominal Rope Diameter		Çap Toleransı Diameter Tolerance		Dış Tel Çapı Outer Wire Diameter	Kopma Kuvveti Hesaplamaları <i>Metric unit.</i>				
					Birim Ağırlık Unit Weight	Minimum Kopma Kuvveti <i>MBL</i>			
						1960 Grade		2160 Grade	
mm	inches	mm	mm	mm	kg/m	kN	t(M)	kN	t(M)
12		12.24	12.48	0.78	0.717	147.4	15.03	158.8	16.19
12.7	1/2	12.95	13.21	0.82	0.803	165.1	16.83	177.9	18.14
13		13.26	13.52	0.84	0.842	173.0	17.64	186.4	19.01
14		14.28	14.56	0.91	0.976	200.6	20.45	216.2	22.04
14.3	9/16	14.59	14.87	0.93	1.019	209.3	21.34	225.5	23.00
15		15.30	15.60	0.97	1.121	230.3	23.48	248.2	25.30
15.9	5/8	16.22	16.54	1.03	1.259	258.7	26.38	278.8	28.43
16		16.32	16.64	1.04	1.275	262.0	26.72	282.3	28.79
17		17.34	17.68	1.10	1.440	295.8	30.16	318.7	32.50
18		18.36	18.72	1.17	1.614	331.6	33.81	357.3	36.44
19		19.38	19.76	1.23	1.798	369.5	37.67	398.1	40.60
19.1	3/4	19.48	19.86	1.24	1.817	373.4	38.07	402.3	41.03
20		20.40	20.80	1.30	1.992	409.4	41.74	441.2	44.99
21		21.42	21.84	1.36	2.197	451.3	46.02	486.4	49.60
22		22.44	22.88	1.43	2.411	495.3	50.51	533.8	54.43
22.2	7/8	22.64	23.09	1.44	2.455	504.4	51.43	543.6	55.43
23		23.46	23.92	1.49	2.635	541.4	55.21	583.4	59.49
24		24.48	24.96	1.56	2.869	589.5	60.11	635.3	64.78
25		25.50	26.00	1.62	3.113	639.6	65.23	689.3	70.29
25.4	1	25.91	26.42	1.65	3.214	660.3	67.33	711.5	72.56
26		26.52	27.04	1.69	3.367	691.8	70.55	745.6	76.03
27		27.54	28.08	1.75	3.631	746.1	76.08	804.0	81.99
28		28.56	29.12	1.82	3.905	802.4	81.82	864.7	88.17
28.6	1-1/8	29.17	29.74	1.85	4.074	837.1	85.36	902.1	91.99
29		29.58	30.16	1.88	4.189	860.7	87.77	927.5	94.58
30		30.60	31.20	1.94	4.483	921.1	93.92	992.6	101.2
31		31.62	32.24	2.01	4.787	983.5	100.3	1060	108.1
31.8	1-1/4	32.44	33.07	2.06	5.037	1035	105.5	1115	113.7
32		32.64	33.28	2.07	5.101	1048	106.9	1129	115.2
33		33.66	34.32	2.14	5.424	1115	113.6	1201	122.5
34		34.68	35.36	2.20	5.758	1183	120.6	1275	130.0
34.9	1-3/8	35.60	36.30	2.26	6.067	1247	127.1	1343	137.0
35		35.70	36.40	2.27	6.102	1254	127.8	1351	137.8
36		36.72	37.44	2.33	6.455	1326	135.3	1429	145.8
38		38.76	39.52	2.46	7.193	1478	150.7	1593	162.4
38.1	1-1/2	38.86	39.62	2.47	7.230	1486	151.5	1601	163.3
40		40.80	41.60	2.59	7.970	1637	167.0	1765	179.9
41.3	1-5/8	42.13	42.95	2.33	8.496	1746	178.0	1881	191.8
42		42.84	43.68	2.37	8.787	1805	184.1	1946	198.4
44		44.88	45.76	2.49	9.643	1981	202.0	2135	217.7
44.5	1-3/4	45.39	46.28	2.51	9.864	2027	206.7	2184	222.7
45		45.90	46.80	2.54	10.09	2072	211.3	2233	227.7
46		46.92	47.84	2.60	10.54	2166	220.8	2334	238.0
47.6	1-7/8	48.55	49.50	2.37	11.29	2309	235.5	2488	253.7
48		48.96	49.92	2.39	11.48	2358	240.4	2541	259.1



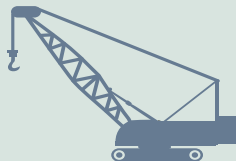
» Gantry Crane



» Mobile Harbour Crane



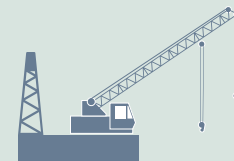
» Deck Crane



» Crawler Crane



» Overhead Traveling Crane

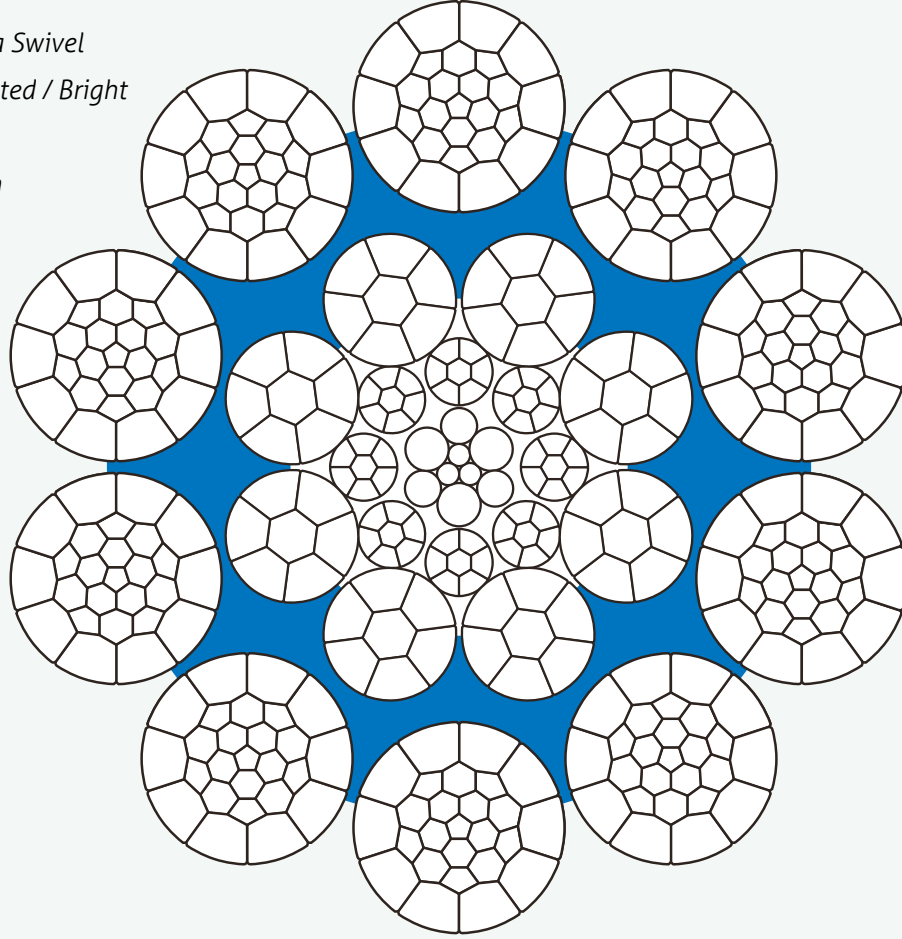


» Offshore Crane

Hyfil K10

Hyfil K10'in Özellikleri
Benefits of Hyfil K10

- ◇ Fırdöndü ile kullanılmamalıdır
- ◇ Galvanizli / Alumar kaplama / Siyah
- ◇ Kompakt
- ◇ Çelik-Plastik kombinasyon
- ◇ *Should not be used with a Swivel*
- ◇ *Zinc Coated / Alumar Coated / Bright*
- ◇ *Compacted*
- ◇ *Steel Plastic Combination*

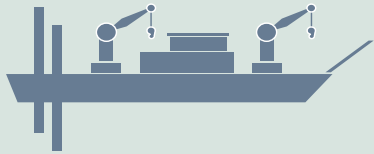


Teknik Bilgiler Technical Data

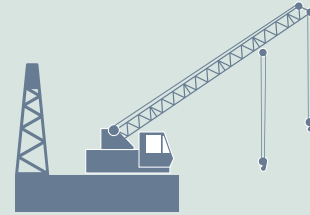
Çap Aralığı Diameter Range (mm)	Dış damardaki yüke binen tel sayısı Total number of load-bearing wires in the outer layer of strands	İskarta kriteri (Kırık tel sayısı) Discard criteria (Number of broken wires)					
		Tekli Sarım Tambur & Çelik Makaralar Single-layer drum & Steel sheaves				Çoklu Sarım Tambur Multi-layer drum	
		Classes M1 to M4				All classes	
		Ordinary Lay		Lang's Lay		Ordinary & Lang's Lay	
		6xd	30xd	6xd	30xd	6xd	30xd
30-49	260	10	21	5	10	20	42
50-56	310	12	25	6	12	25	50
57-70	360	14	29	7	14	29	58

Çap Aralığı Diameter Range (mm)	Ortalama Dolgu Katsayısı Average Fill Factor	Ortalama Dönme Katsayısı Average Spin Factor			Ortalama Ağırlık Katsayısı Average Weight Factor	Sarım Yönü Lay Direction
		1770	1960	2160		
30-70	0.683	-	0.875	0.855	30-49 mm: 0.882	Regular Lay Lang's Lay
					50-70 mm: 0.891	

Halat Çapı Nominal Rope Diameter		Çap Toleransı Diameter Tolerance		Dış Tel Çapı Outer Wire Diameter	Kopma Kuvveti Hesaplamaları Metric unit.				
		min.	max.		Birim Ağırlık Unit Weight	Minimum Kopma Kuvveti MBL			
						1960 Grade		2160 Grade	
mm	inches	mm	mm	mm	kg/m	kN	t(M)	kN	t(M)
30		30.60	31.20	1.62	4.152	828.0	84.43	891.6	90.92
31.8	1-1/4	32.44	33.07	1.72	4.665	930.3	94.87	1002	102.2
32		32.64	33.28	1.73	4.724	942.1	96.06	1014	103.4
34		34.68	35.36	1.84	5.333	1063	108.4	1145	116.8
34.9	1-3/8	35.60	36.30	1.89	5.619	1121	114.3	1207	123.0
36		36.72	37.44	1.95	5.979	1192	121.6	1284	130.9
38		38.76	39.52	2.06	6.662	1328	135.5	1431	145.9
38.1	1-1/2	38.86	39.62	2.06	6.697	1335	136.2	1438	146.6
40		40.80	41.60	2.17	7.381	1472	150.1	1585	161.6
41.3	1-5/8	42.13	42.95	2.24	7.869	1569	160.0	1690	172.3
42		42.84	43.68	2.27	8.138	1623	165.5	1748	178.2
44		44.88	45.76	2.38	8.931	1781	181.6	1918	195.6
44.5	1-3/4	45.39	46.28	2.41	9.135	1822	185.8	1962	200.0
46		46.92	47.84	2.49	9.762	1947	198.5	2096	213.8
47.6	1-7/8	48.55	49.50	2.58	10.45	2084	212.6	2245	228.9
48		48.96	49.92	2.60	10.63	2120	216.1	2283	232.8
50		51.00	52.00	2.30	11.53	2300	234.5	2477	252.6
50.8	2	51.82	52.83	2.34	11.91	2374	242.1	2557	260.7
52		53.04	54.08	2.40	12.47	2488	253.7	2679	273.2
54	2-1/8	55.08	56.16	2.49	13.45	2683	273.6	2889	294.6
56		57.12	58.24	2.58	14.47	2885	294.2	3107	316.8
57.2	2-1/4	58.34	59.49	2.64	15.09	3010	306.9	3241	330.5
58		59.16	60.32	2.67	15.52	3095	315.6	3333	339.8
60		61.20	62.40	2.77	16.61	3312	337.7	3566	363.7
62		63.24	64.48	2.86	17.73	3536	360.6	3808	388.3
64		65.28	66.56	2.95	18.90	3768	384.3	4058	413.8
66		67.32	68.64	3.04	20.10	4007	408.6	4315	440.0
68		69.36	70.72	3.13	21.33	4254	433.8	4581	467.1
70		71.40	72.80	3.23	22.61	4508	459.7	4854	495.0



» Dredge Vessel

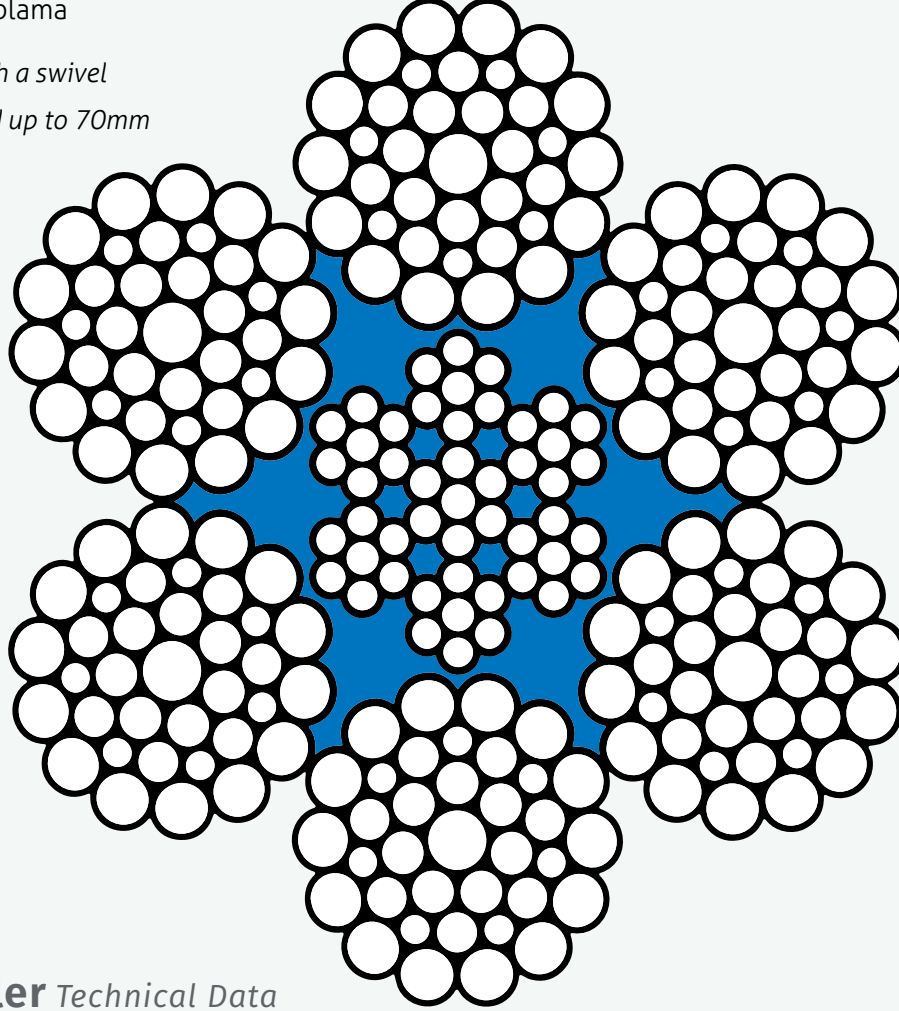


» Offshore Crane

K-MAX R6

K-Max R6'nın Özellikleri
Benefits of K- Max R6

- ◇ Fırdöndü ile kullanılmamalıdır.
- ◇ Opsiyonel 70mm'ye kadar plastik dolgulu
- ◇ Opsiyonel tam dış kaplama
- ◇ *Should not be used with a swivel*
- ◇ *Optional plastic infilled up to 70mm*
- ◇ *Optional full jacket*



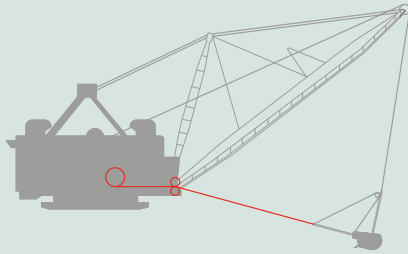
Teknik Bilgiler Technical Data

Sarıım Tipi / Lay Type		Sarıım Yönü / Lay Direction		Yüzey / Finish		Damar Tipi / Strand		Plastik Dolgulu Plastic Infilled
Çapraz Ordinary	Düz Langs	Sağ Right Hand	Sol Left Hand	Galvanizsiz Bright	Galvanizli Galvanized	Yuvarlak Round	Kompakt Compacted	
•	•	•	•	•	•	•	•	•
Toplam Tel Sayısı Total Number of Wire		Dış Damarlardaki Dış Tel Sayısı Number of Outer Wires in Outer Strand				Dış Tel Katsayısı Outer Wire Factor		
36-68mm : 265		36-68mm : 80				0.654 (1.0 vs R6)		
69-82mm : 349		69-82mm : 84						
83-121mm : 427		83-111mm : 96						
Çap Aralığı (mm) Size Range (mm)		Ortalama Dolgu Faktörü Average Fill Factor				Ortalama Tork Faktörü Average Torque Factor		
38-111		0.635				0.085		

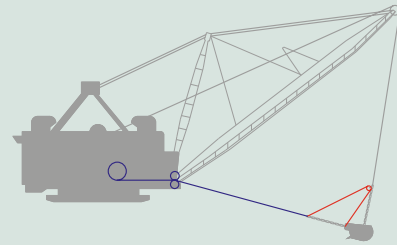
Halat Çapı Rope Nominal Diameter		Yaklaşık Ağırlık (Havada) Approx. Weight in Air		Yaklaşık Metalik Kesit Alanı Approx. Metallic Area	Minimum Kopma Kuvveti / Minimum Breaking Force			
mm	inches	kg/m	lb/ft		Grade 1770		Grade 1960	
				mm ²	kN	tonnes force	kN	tonnes force
38.1	1 1/2	6.25	4.19	724	1,089	111	1,206	123
41.3	1 5/8	7.35	4.92	851	1,280	131	1,417	145
44.5	1 3/4	8.53	5.71	988	1,486	152	1,646	168
47.6	1 7/8	9.76	6.54	1,130	1,700	173	1,883	192
50.8	2	11.12	7.45	1,287	1,937	197	2,144	219
54.0	2 1/8	12.55	8.41	1,453	2,186	223	2,421	247
57.2	2 1/4	14.07	9.43	1,629	2,451	250	2,714	277
60.3	2 3/8	15.67	10.50	1,815	2,731	278	3,024	308
63.5	2 1/2	17.37	11.64	2,011	3,026	309	3,351	342
66.7	2 5/8	19.15	12.83	2,217	3,336	340	3,694	377
69.9	2 3/4	21.01	14.08	2,434	3,661	373	4,054	413
73.0	2 7/8	22.97	15.39	2,660	4,002	408	4,431	452
76.2	3	25.01	16.76	2,896	4,357	444	4,825	492
79.4	3 1/8	27.14	18.18	3,143	4,728	482	5,236	534
82.6	3 1/4	29.35	19.66	3,399	5,114	521	5,663	577
85.7	3 3/8	31.65	21.21	3,666	5,515	562	6,107	623
88.9	3 1/2	34.04	22.81	3,942	5,931	605	6,567	670
92.1	3 5/8	36.53	24.48	4,231	6,365	649	7,049	719
95.3	3 3/4	39.08	26.18	4,525	6,808	694	7,539	769
98.4	3 7/8	41.70	27.94	4,830	7,266	741	8,046	820
101.6	4	44.46	29.79	5,149	7,746	790	8,578	875
104.8	4 1/8	47.30	31.69	5,478	8,242	840	9,127	931
108.0	4 1/4	50.24	33.66	5,818	8,753	893	9,693	988
111.1	4 3/8	53.16	35.62	6,157	9,263	945	10,257	1046

Bu tablo yalnızca referanstır. Farklı çap ve kopma kuvvetleri istek üzerine bilgilendirilecektir.
This table is for reference only. Additional sizes and breaking force are also available upon request.

DRAGLINE

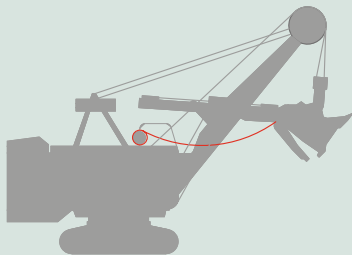


» Drag Rope

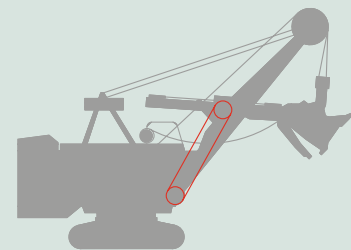


» Dump Rope

SHOVEL



» Trip Rope

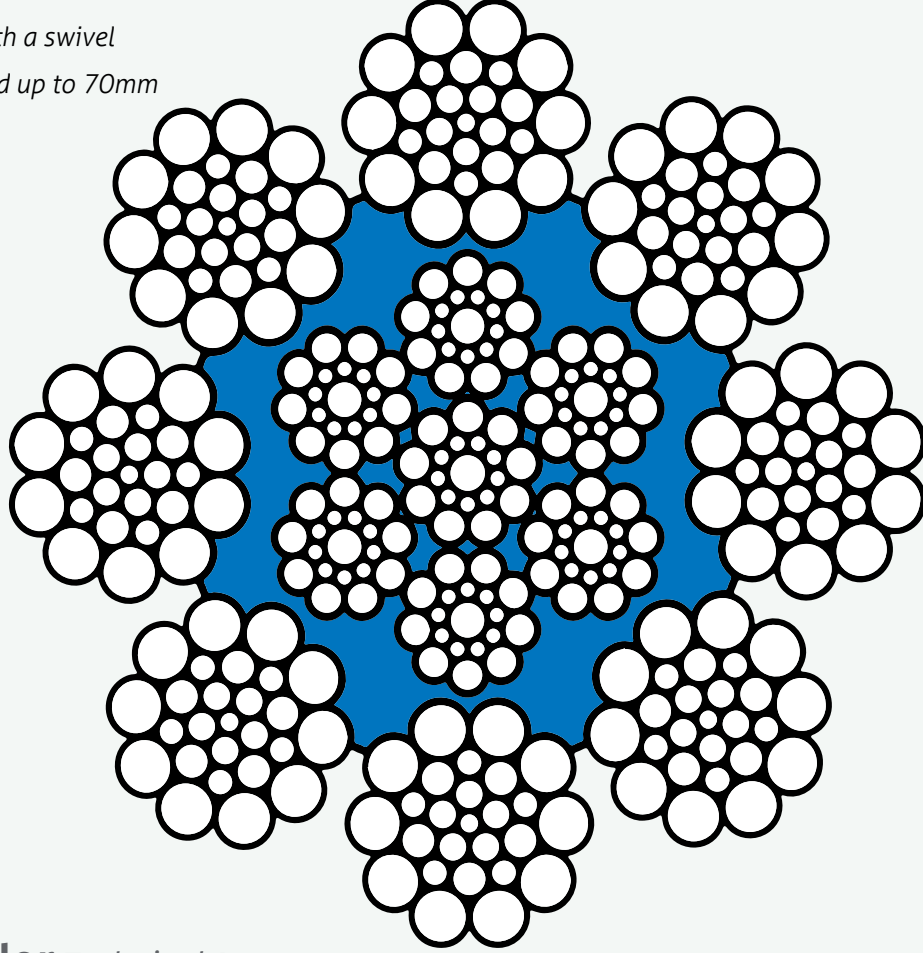


» Crowd-Retract Rope

K-MAX R8

K-Max R8'in Özellikleri
Benefits of K- Max R8

- ◇ Fırdöndü ile kullanılmamalıdır.
- ◇ 70mm'ye kadar plastik dolgulu
- ◇ Opsiyonel tam dış kaplama
- ◇ *Should not be used with a swivel*
- ◇ *Optional plastic infilled up to 70mm*
- ◇ *Optional full jacket*



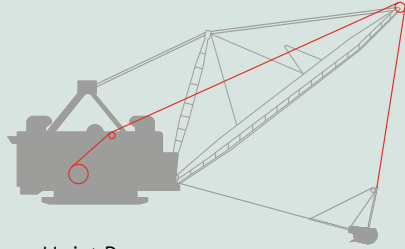
Teknik Bilgiler Technical Data

Sarıım Tipi / Lay Type		Sarıım Yönü / Lay Direction		Yüzey / Finish		Damar Tipi / Strand		Plastik Dolgulu Plastic Infilled
Çapraz Ordinary	Düz Langs	Sağ Right Hand	Sol Left Hand	Galvanizsiz Bright	Galvanizli Galvanized	Yuvarlak Round	Kompakt Compacted	
•	•	•	•	•	•	•	•	•
Toplam Tel Sayısı Total Number of Wire		Dış Damarlardaki Dış Tel Sayısı Number of Outer Wires in Outer Strand				Dış Tel Katsayısı Outer Wire Factor		
36-68mm : 257		36-68mm : 80				0.541 (0.827 vs R6)		
69-82mm : 421		69-82mm : 112						
83-127mm : 525		83-127mm : 128						
Çap Aralığı (mm) Size Range (mm)		Ortalama Dolgu Faktörü Average Fill Factor				Ortalama Tork Faktörü Average Torque Factor		
38-127		0.640				0.082		

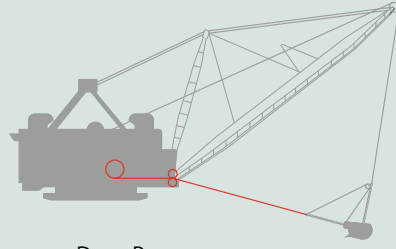
Halat Çapı Rope Nominal Diameter		Yaklaşık Ağırlık (Havada) Approx. Weight in Air		Yaklaşık Metalik Kesit Alanı Approx. Metallic Area	Minimum Kopma Kuvveti / Minimum Breaking Force			
					Grade 1770		Grade 1960	
mm	inches	kg/m	lb/ft	mm ²	kN	tonnes force	kN	tonnes force
38.1	1 1/2	6.30	4.22	730	1,098	112	1,216	124
41.3	1 5/8	7.40	4.96	857	1,290	132	1,429	146
44.5	1 3/4	8.60	5.76	996	1,498	153	1,659	169
47.6	1 7/8	9.84	6.59	1,139	1,714	175	1,898	193
50.8	2	11.20	7.51	1,297	1,952	199	2,161	220
54.0	2 1/8	12.65	8.47	1,465	2,203	225	2,440	249
57.2	2 1/4	14.18	9.50	1,642	2,470	252	2,735	279
60.3	2 3/8	15.80	10.58	1,829	2,752	281	3,048	311
63.5	2 1/2	17.50	11.73	2,027	3,050	311	3,377	344
66.7	2 5/8	19.30	12.93	2,235	3,362	343	3,723	380
69.9	2 3/4	21.18	14.19	2,453	3,690	376	4,086	417
73.0	2 7/8	23.15	15.51	2,681	4,033	411	4,466	455
76.2	3	25.21	16.89	2,919	4,392	448	4,863	496
79.4	3 1/8	27.35	18.32	3,167	4,765	486	5,277	538
82.6	3 1/4	29.58	19.82	3,426	5,154	526	5,707	582
85.7	3 3/8	31.90	21.37	3,694	5,558	567	6,155	628
88.9	3 1/2	34.31	22.99	3,973	5,978	610	6,619	675
92.1	3 5/8	36.82	24.67	4,264	6,416	654	7,104	724
95.3	3 3/4	39.38	26.39	4,561	6,862	700	7,599	775
98.4	3 7/8	42.03	28.16	4,868	7,323	747	8,109	827
101.6	4	44.81	30.02	5,189	7,807	796	8,645	882
104.8	4 1/8	47.68	31.94	5,521	8,307	847	9,199	938
108.0	4 1/4	50.63	33.92	5,864	8,822	900	9,769	996
111.1	4 3/8	53.58	35.90	6,205	9,336	952	10,338	1054
114.3	4 1/2	56.71	38.00	6,568	9,881	1008	10,942	1116
120.7	4 3/4	63.24	42.37	7,324	11,019	1124	12,202	1244
127.0	5	70.02	46.91	8,108	12,199	1244	13,509	1377

Bu tablo yalnızca referanstır. Farklı çap ve kopma kuvvetleri istek üzerine bilgilendirilecektir.
This table is for reference only. Additional sizes and breaking force are also available upon request.

DRAGLINE

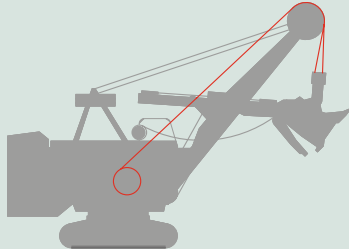


» Hoist Rope

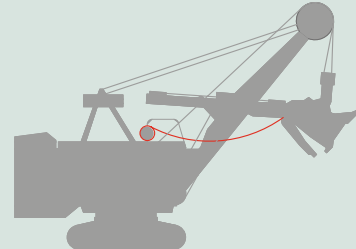


» Drag Rope

SHOVEL



» Hoist Rope

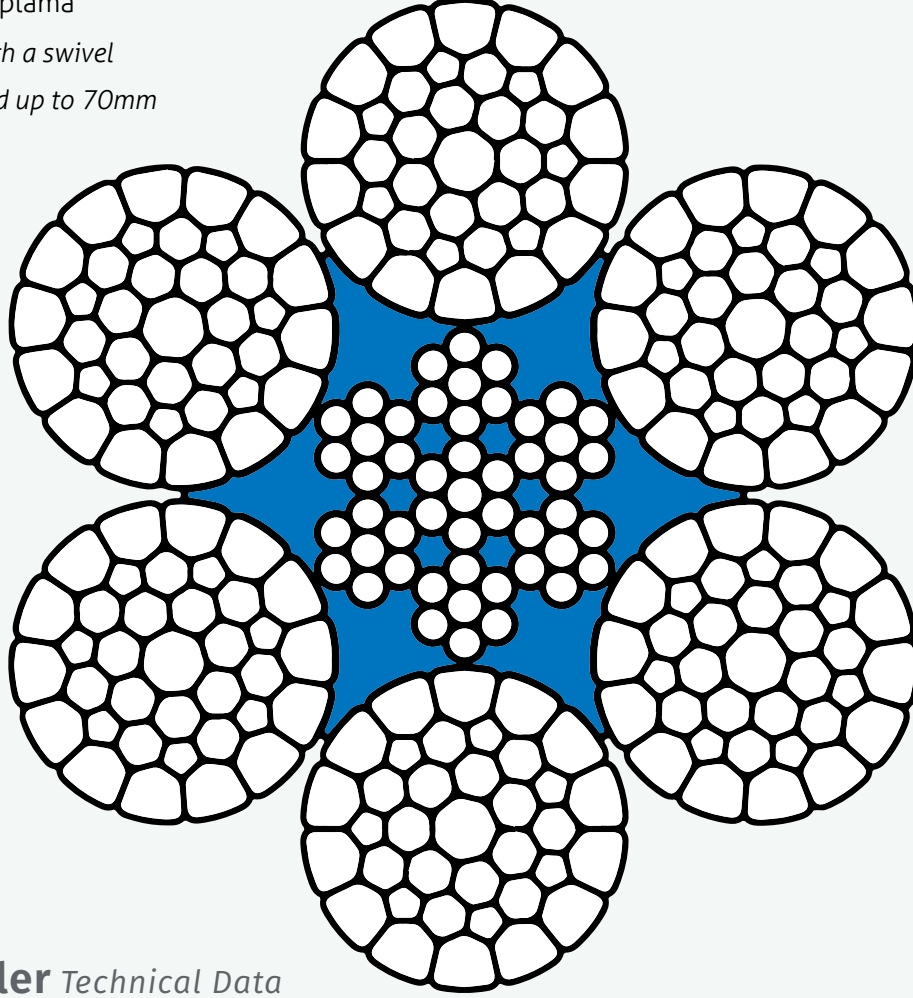


» Trip Rope

K-MAX K6

K-Max K6'nın Özellikleri
Benefits of K- Max K6

- ◇ Fırdöndü ile kullanılmamalıdır.
- ◇ 70mm'ye kadar plastik dolgulu
- ◇ Opsiyonel tam dış kaplama
- ◇ *Should not be used with a swivel*
- ◇ *Optional plastic infilled up to 70mm*
- ◇ *Optional full jacket*



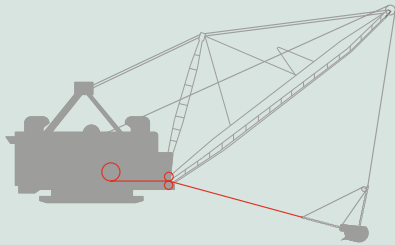
Teknik Bilgiler *Technical Data*

Sarıım Tipi / Lay Type		Sarıım Yönü / Lay Direction		Yüzey / Finish		Damar Tipi / Strand		Plastik Dolgulu Plastic Infilled
Çapraz Ordinary	Düz Langs	Sağ Right Hand	Sol Left Hand	Galvanizsiz Bright	Galvanizli Galvanized	Yuvarlak Round	Kompakt Compacted	
	•	•	•	•	•		•	•
Toplam Tel Sayısı Total Number of Wire		Dış Damarlardaki Dış Tel Sayısı Number of Outer Wires in Outer Strand				Dış Tel Katsayısı Outer Wire Factor		
36-68mm : 265		36-68mm : 84				0.654 (1.0 vs R6)		
69-82mm : 349		69-82mm : 84						
83-121mm : 427		83-111mm : 96						
Çap Aralığı (mm) Size Range (mm)		Ortalama Dolgu Faktörü Average Fill Factor				Ortalama Tork Faktörü Average Torque Factor		
38-111		0.660				0.084		

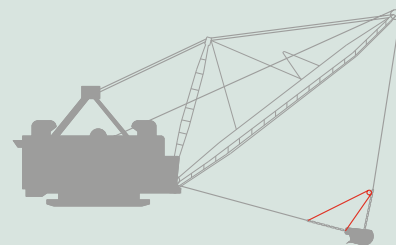
Halat Çapı Rope Nominal Diameter		Yaklaşık Ağırlık (Havada) Approx. Weight in Air		Yaklaşık Metalik Kesit Alanı Approx. Metallic Area	Minimum Kopma Kuvveti / Minimum Breaking Force			
mm	inches	kg/m	lb/ft		Grade 1770		Grade 1960	
				mm ²	kN	tonnes force	kN	tonnes force
38.1	1 1/2	6.50	4.35	753	1,132	115	1,254	128
41.3	1 5/8	7.64	5.12	884	1,330	136	1,473	150
44.5	1 3/4	8.86	5.94	1,027	1,545	157	1,710	174
47.6	1 7/8	10.14	6.80	1,175	1,767	180	1,957	200
50.8	2	11.55	7.74	1,338	2,013	205	2,229	227
54.0	2 1/8	13.04	8.74	1,510	2,272	232	2,516	257
57.2	2 1/4	14.62	9.80	1,693	2,548	260	2,821	288
60.3	2 3/8	16.29	10.91	1,887	2,838	289	3,143	320
63.5	2 1/2	18.05	12.09	2,090	3,145	321	3,483	355
66.7	2 5/8	19.90	13.33	2,305	3,467	354	3,840	392
69.9	2 3/4	21.84	14.63	2,529	3,806	388	4,214	430
73.0	2 7/8	23.87	15.99	2,765	4,159	424	4,606	470
76.2	3	25.99	17.42	3,010	4,529	462	5,015	511
79.4	3 1/8	28.20	18.90	3,266	4,914	501	5,442	555
82.6	3 1/4	30.51	20.44	3,533	5,315	542	5,886	600
85.7	3 3/8	32.90	22.04	3,810	5,732	584	6,347	647
88.9	3 1/2	35.38	23.70	4,097	6,164	629	6,826	696
92.1	3 5/8	37.97	25.44	4,398	6,616	675	7,326	747
95.3	3 3/4	40.61	27.21	4,703	7,076	722	7,836	799
98.4	3 7/8	43.35	29.04	5,020	7,552	770	8,363	853
101.6	4	46.21	30.96	5,352	8,051	821	8,916	909
104.8	4 1/8	49.17	32.94	5,694	8,567	874	9,486	967
108.0	4 1/4	52.22	34.98	6,047	9,098	928	10,074	1027
111.1	4 3/8	55.26	37.02	6,399	9,627	982	10,661	1087

Bu tablo yalnızca referanstır. Farklı çap ve kopma kuvvetleri istek üzerine bilgilendirilecektir.
This table is for reference only. Additional sizes and breaking force are also available upon request.

DRAGLINE

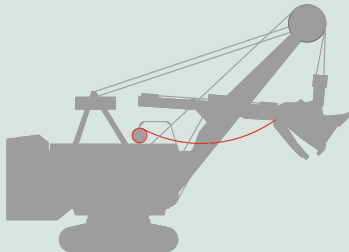


» Drag Rope

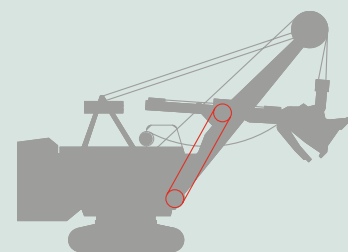


» Dump Rope

SHOVEL



» Trip Rope

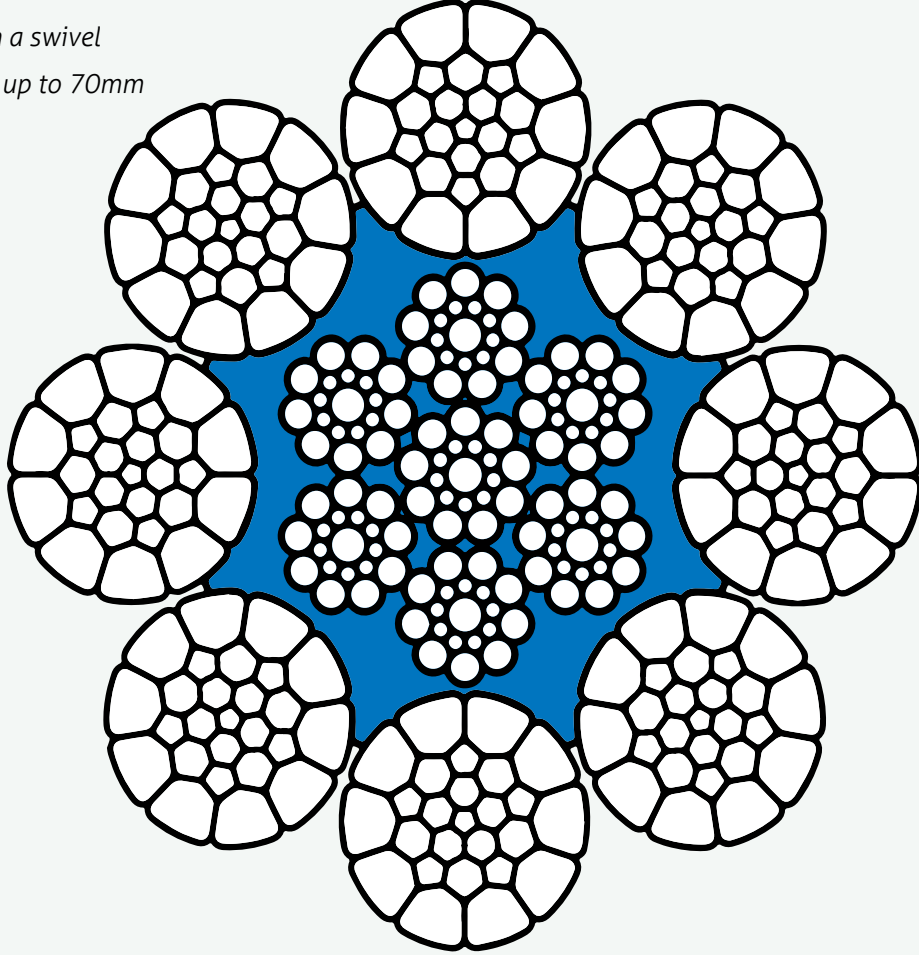


» Crowd-Retract Rope

K-MAX K8

K-Max K8'in Özellikleri
Benefits of K- Max K8

- ◇ Fırdöndü ile kullanılmamalıdır.
- ◇ 70mm'ye kadar plastik dolgulu
- ◇ Opsiyonel tam dış kaplama
- ◇ *Should not be used with a swivel*
- ◇ *Optional plastic infilled up to 70mm*
- ◇ *Optional full jacket*



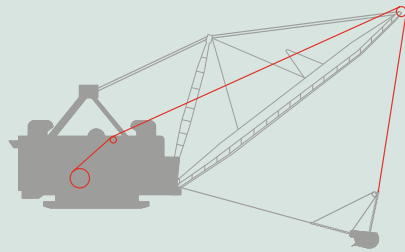
Teknik Bilgiler Technical Data

Sarıım Tipi / Lay Type		Sarıım Yönü / Lay Direction		Yüzey / Finish		Damar Tipi / Strand		Plastik Dolgulu Plastic Infilled
Çapraz Ordinary	Düz Langs	Sağ Right Hand	Sol Left Hand	Galvanizsiz Bright	Galvanizli Galvanized	Yuvarlak Round	Kompakt Compacted	
	•	•	•	•	•		•	•
Toplam Tel Sayısı Total Number of Wire		Dış Damarlardaki Dış Tel Sayısı Number of Outer Wires in Outer Strand				Dış Tel Katsayısı Outer Wire Factor		
36-68mm : 257		36-68mm : 80				0.541 (0.827 vs R6)		
69-82mm : 421		69-82mm : 112						
83-127mm : 525		83-127mm : 128						
Çap Aralığı (mm) Size Range (mm)		Ortalama Dolgu Faktörü Average Fill Factor				Ortalama Tork Faktörü Average Torque Factor		
38-127		0.660				0.081		

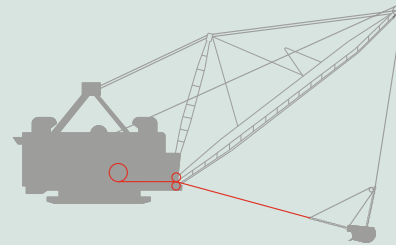
Halat Çapı Rope Nominal Diameter		Yaklaşık Ağırlık (Havada) Approx. Weight in Air		Yaklaşık Metalik Kesit Alanı Approx. Metallic Area	Minimum Kopma Kuvveti / Minimum Breaking Force			
mm	inches	kg/m	lb/ft		Grade 1770		Grade 1960	
				mm ²	kN	tonnes force	kN	tonnes force
38.1	1 1/2	6.50	4.35	753	1,132	115	1,254	128
41.3	1 5/8	7.64	5.12	884	1,330	136	1,473	150
44.5	1 3/4	8.86	5.94	1,027	1,545	157	1,710	174
47.6	1 7/8	10.14	6.80	1,175	1,767	180	1,957	200
50.8	2	11.55	7.74	1,338	2,013	205	2,229	227
54.0	2 1/8	13.04	8.74	1,510	2,272	232	2,516	257
57.2	2 1/4	14.62	9.80	1,693	2,548	260	2,821	288
60.3	2 3/8	16.29	10.91	1,887	2,838	289	3,143	320
63.5	2 1/2	18.05	12.09	2,090	3,145	321	3,483	355
66.7	2 5/8	19.90	13.33	2,305	3,467	354	3,840	392
69.9	2 3/4	21.84	14.63	2,529	3,806	388	4,214	430
73.0	2 7/8	23.87	15.99	2,765	4,159	424	4,606	470
76.2	3	25.99	17.42	3,010	4,529	462	5,015	511
79.4	3 1/8	28.20	18.90	3,266	4,914	501	5,442	555
82.6	3 1/4	30.51	20.44	3,533	5,315	542	5,886	600
85.7	3 3/8	32.90	22.04	3,810	5,732	584	6,347	647
88.9	3 1/2	35.38	23.70	4,097	6,164	629	6,826	696
92.1	3 5/8	37.97	25.44	4,398	6,616	675	7,326	747
95.3	3 3/4	40.61	27.21	4,703	7,076	722	7,836	799
98.4	3 7/8	43.35	29.04	5,020	7,552	770	8,363	853
101.6	4	46.21	30.96	5,352	8,051	821	8,916	909
104.8	4 1/8	49.17	32.94	5,694	8,567	874	9,486	967
108.0	4 1/4	52.22	34.98	6,047	9,098	928	10,074	1027
111.1	4 3/8	55.26	37.02	6,399	9,627	982	10,661	1087
114.3	4 1/2	58.49	39.18	6,773	10,190	1039	11,284	1151
120.7	4 3/4	65.22	43.70	7,553	11,363	1159	12,583	1283
127.0	5	72.20	48.38	8,362	12,580	1283	13,931	1420

Bu tablo yalnızca referanstır. Farklı çap ve kopma kuvvetleri istek üzerine bilgilendirilecektir.
This table is for reference only. Additional sizes and breaking force are also available upon request.

DRAGLINE

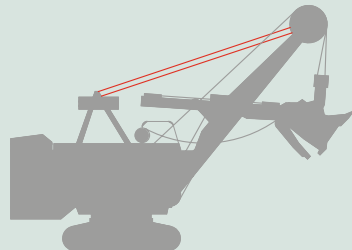


» Hoist Rope

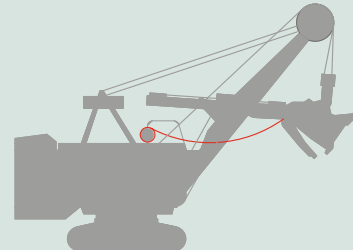


» Drag Rope

SHOVEL



» Hoist Rope

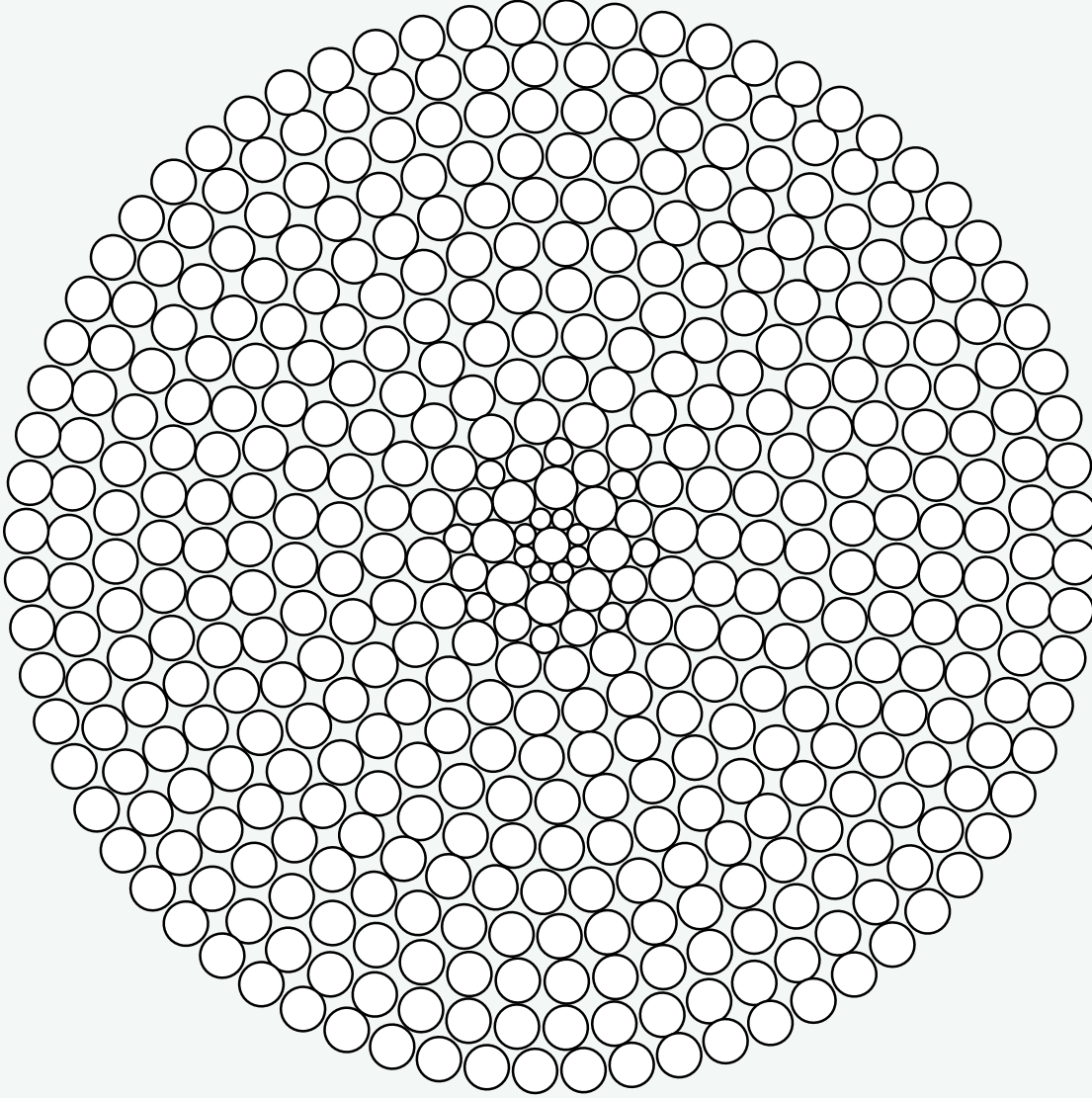


» Trip Rope

K-MAX SPIRAL

Askı Halatı / Pendant-Suspension Rope

K-Max Spiral Özellikleri
Benefits of K- Max Spiral



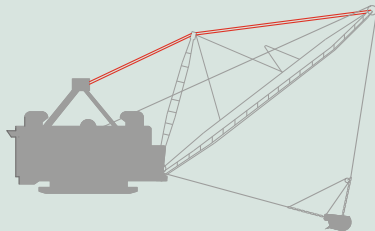
■ Teknik Bilgiler *Technical Data*

Sarıım Tipi / Lay Type		Sarıım Yönü / Lay Direction		Yüzey / Finish		Damar Tipi / Strand		Plastik Dolgulu Plastic Infilled
Çapraz Ordinary	Düz Langs	Sağ Right Hand	Sol Left Hand	Galvanizsiz Bright	Galvanizli Galvanized	Yuvarlak Round	Kompakt Compacted	
		•	•	•	•	•		

Halat Çapı Rope Nominal Diameter		Ürün Çapı Products Diameter	Yaklaşık Ağırlık Approximate Weight		Metalik Kesit Alanı Metallic Area	Minimum Kopma Kuvveti / Minimum Breaking Force			
mm	inches	mm	kg/m	lb/ft		Grade 1770		Grade 1960	
					mm ²	kN	tonnes force	kN	tonnes force
63.5	2 1/2	75.5	21.66	14.51	2,509	3,952	403	4,376	446
66.7	2 5/8	78.7	23.88	16.00	2,766	4,357	444	4,824	492
69.9	2 3/4	85.9	26.21	17.56	3,035	4,782	488	5,295	540
73.0	2 7/8	89.0	28.65	19.19	3,318	5,226	533	5,787	590
76.2	3	92.2	31.19	20.90	3,612	5,690	580	6,301	643
79.4	3 1/8	95.4	33.85	22.68	3,920	6,175	630	6,837	697
82.6	3 1/4	98.6	36.61	24.53	4,239	6,678	681	7,395	754
85.7	3 3/8	101.7	39.48	26.45	4,572	7,202	734	7,975	813
88.9	3 1/2	108.9	42.46	28.45	4,917	7,745	790	8,577	875
92.1	3 5/8	112.1	45.57	30.53	5,277	8,313	848	9,205	939
95.3	3 3/4	115.3	48.74	32.65	5,644	8,891	907	9,846	1,004
98.4	3 7/8	118.4	52.01	34.85	6,024	9,489	968	10,508	1,071
101.6	4	123.6	55.45	37.15	6,422	10,116	1,032	11,202	1,142
104.8	4 1/8	126.8	59.00	39.53	6,833	10,764	1,098	11,919	1,215
108.0	4 1/4	130.0	62.66	41.98	7,256	11,431	1,166	12,658	1,291
111.1	4 3/8	133.1	66.31	44.43	7,679	12,097	1,233	13,395	1,366
114.3	4 1/2	136.3	70.18	47.02	8,128	12,803	1,306	14,178	1,446
118.0	4 5/8	140.0	74.80	50.12	8,662	13,646	1,391	15,111	1,541
120.7	4 3/4	142.7	78.26	52.44	9,063	14,277	1,456	15,810	1,612
124.0	4 7/8	146.0	82.60	55.34	9,566	15,069	1,537	16,686	1,701
127.0	5	149.0	86.64	58.05	10,034	15,807	1,612	17,503	1,785
131.0	5 1/8	153.0	92.19	61.77	10,676	16,818	1,715	18,623	1,899
133.0	5 1/4	155.0	95.02	63.67	11,005	17,336	1,768	19,196	1,957
137.5	5 3/8	159.5	101.56	68.05	11,762	18,528	1,889	20,517	2,092
141.0	5 1/2	163.0	106.80	71.56	12,368	19,484	1,987	21,575	2,200
144.0	5 5/8	166.0	111.39	74.63	12,900	20,322	2,072	22,503	2,295
146.5	5 3/4	168.5	115.29	77.25	13,352	21,033	2,145	23,291	2,375
147.5	5 7/8	169.5	116.87	78.31	13,535	21,322	2,174	23,610	2,407
153.0	6	175.0	125.75	84.25	14,563	22,941	2,339	25,404	2,590

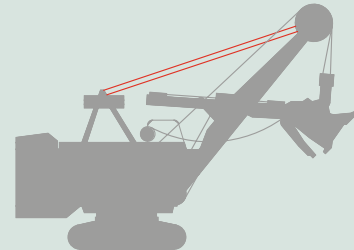
Bu tablo yalnızca referanstır. Farklı çap ve kopma kuvvetleri istek üzerine bilgilendirilecektir.
This table is for reference only. Additional sizes and breaking force are also available upon request.

DRAGLINE



» Pendant-Suspension Rope

SHOVEL

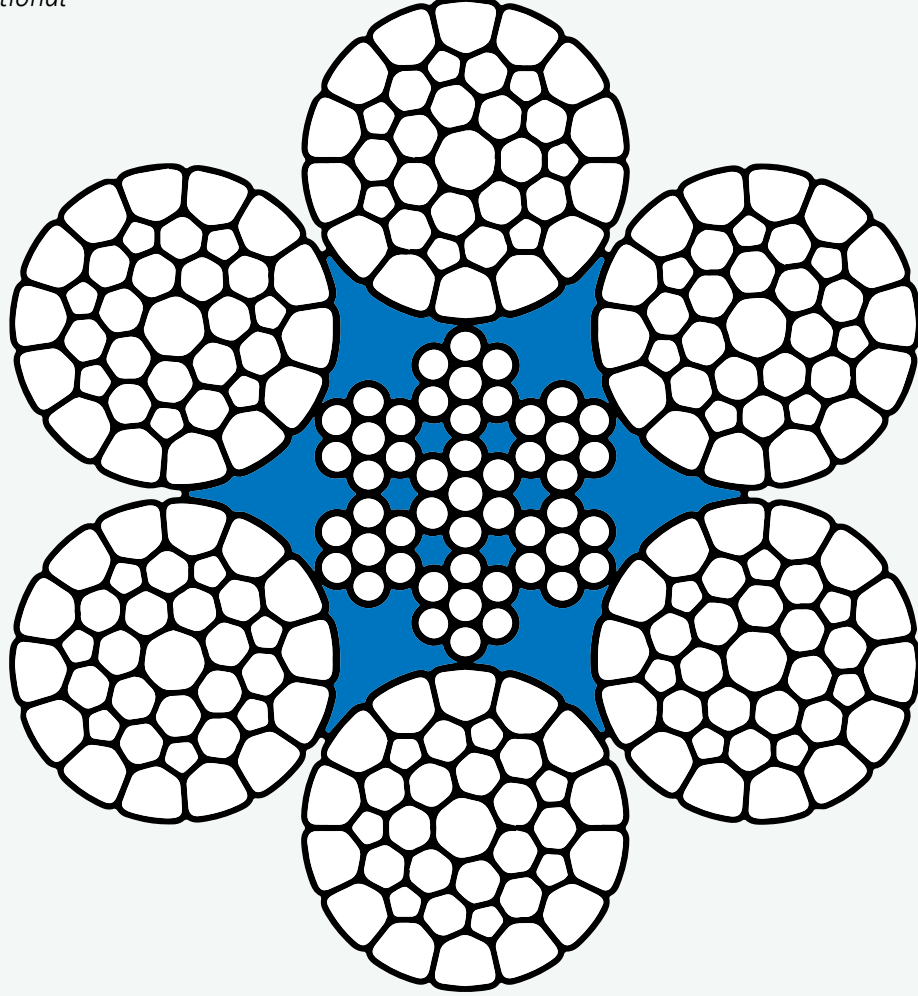


» Pendant-Suspension Rope

K-MAX K6

K-Max K6'nın Özellikleri
Benefits of K- Max K6

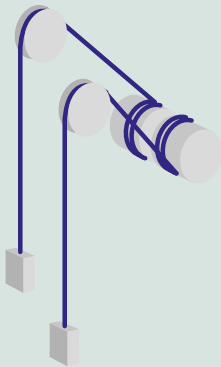
- ◇ Yuvarlak tel halatlar opsiyoneldir
- ◇ Round wire ropes are optional



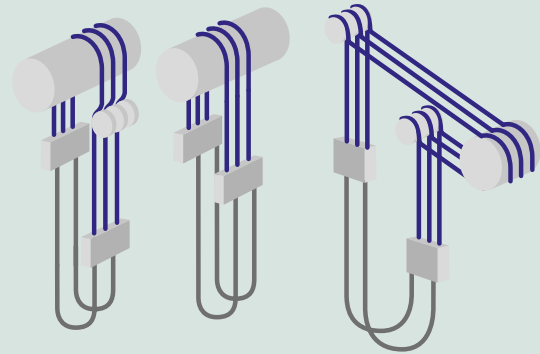
■ Teknik Bilgiler Technical Data

Sarım Tipi / Lay Type		Sarım Yönü / Lay Direction		Yüzey / Finish		Damar Tipi / Strand		Plastik Dolgulu Plastic Infilled
Çapraz Ordinary	Düz Langs	Sağ Right Hand	Sol Left Hand	Galvanizsiz Bright	Galvanizli Galvanized	Yuvarlak Round	Kompakt Compacted	
•	•	•	•	•	•		•	•
Toplam Tel Sayısı Total Number of Wire		Dış Damarlardaki Dış Tel Sayısı Number of Outer Wires in Outer Strand		Dış Tel Katsayısı Outer Wire Factor				
20-40mm : 205		20-40mm : 60		0.654				
41-64mm : 265		41-64mm : 84		1.0 vs K6)				
Çap Aralığı (mm) Size Range (mm)		Ortalama Dolgu Faktörü Average Fill Factor		Ortalama Tork Faktörü Average Torque Factor				
20-64		0.660		0.084				

Halat Çapı Rope Nominal Diameter		Yaklaşık Ağırlık (Havada) Approx. Weight in Air		Yaklaşık Metalik Kesit Alanı Approx. Metallic Area	Minimum Kopma Kuvveti / Minimum Breaking Force			
mm	inches	kg/m	lb/ft		Grade 1770		Grade 1960	
mm	inches	kg/m	lb/ft	mm ²	kN	tonnes force	kN	tonnes force
20		1.79	1.20	207	312	32	345	35
22		2.17	1.45	251	378	38	418	43
24		2.58	1.73	299	449	46	497	51
25.4	1	2.89	1.94	334	503	51	557	57
26		3.03	2.03	350	527	54	584	60
28		3.51	2.35	406	612	62	677	69
30		4.03	2.70	467	702	72	777	79
31.8	1 1/4	4.53	3.03	524	789	80	873	89
32		4.58	3.07	531	799	81	884	90
34		5.17	3.47	599	902	92	998	102
36		5.80	3.89	672	1,011	103	1,119	114
38.1	1 1/2	6.50	4.35	753	1,132	115	1,254	128
40		7.16	4.80	829	1,248	127	1,382	141
42		7.90	5.29	915	1,376	140	1,524	155
44		8.67	5.81	1,004	1,510	154	1,672	171
44.5	1 3/4	8.86	5.94	1,027	1,545	157	1,710	174
46		9.47	6.35	1,097	1,650	168	1,828	186
48		10.31	6.91	1,194	1,797	183	1,990	203
50		11.19	7.50	1,296	1,950	199	2,159	220
50.8	2	11.55	7.74	1,338	2,013	205	2,229	227
52.0		12.10	8.11	1,402	2,109	215	2,335	238
54.0		13.04	8.74	1,510	2,272	232	2,516	257
56.0		14.04	9.41	1,626	2,446	249	2,709	276
57.2	2 1/4	14.62	9.80	1,693	2,548	260	2,821	288
58.0		15.06	10.09	1,744	2,624	268	2,906	296
60.0		16.12	10.80	1,866	2,808	286	3,109	317
62.0		17.21	11.53	1,993	2,998	306	3,320	339
63.5	2 1/2	18.05	12.09	2,090	3,145	321	3,483	355
64.0		18.34	12.29	2,123	3,195	326	3,538	361



» Tambur Sistemi
» Drum Winder

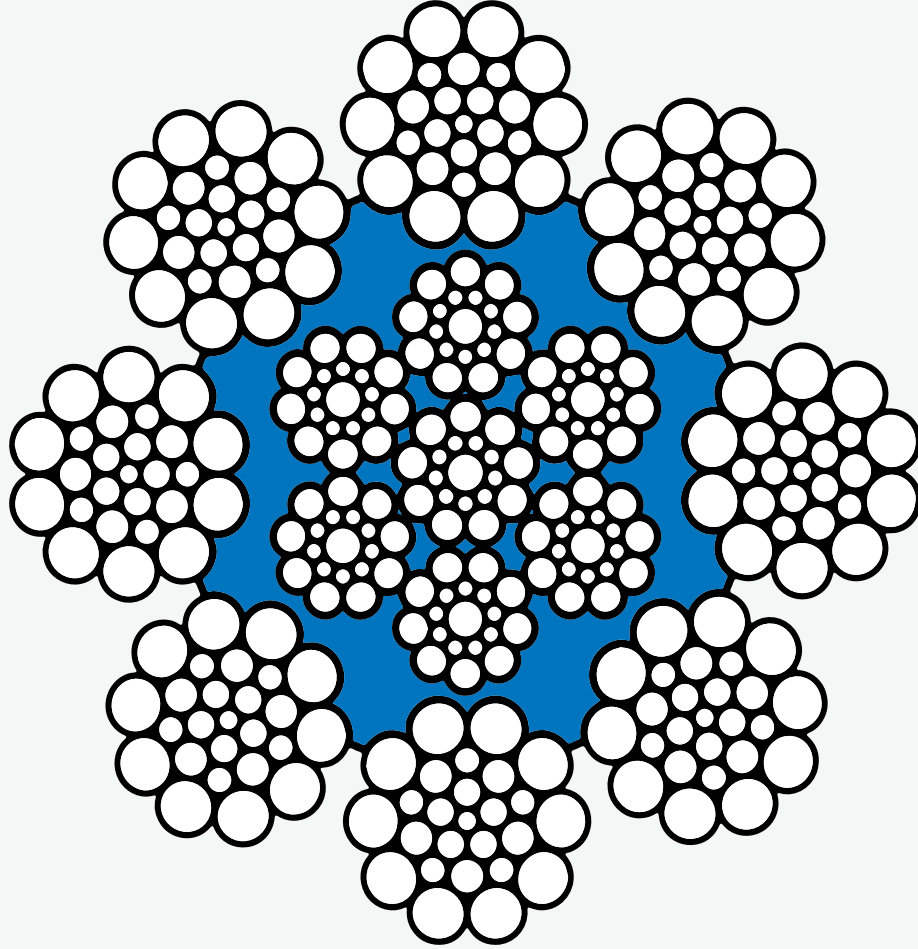


» Sürtünmeye Dayalı Sistem
» Friction Winder

K-MAX R8

K-Max R8'in Özellikleri
Benefits of K- Max R8

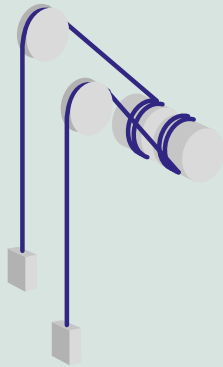
- ◇ Yuvarlak tel halatlar opsiyoneldir
- ◇ Round wire ropes are optional



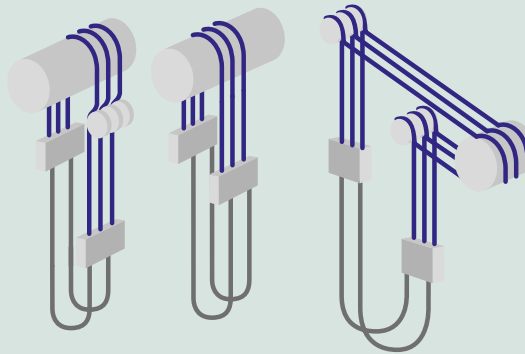
■ Teknik Bilgiler Technical Data

Sarım Tipi / Lay Type		Sarım Yönü / Lay Direction		Yüzey / Finish		Damar Tipi / Strand		Plastik Dolgulu Plastic Infilled
Çapraz Ordinary	Düz Langs	Sağ Right Hand	Sol Left Hand	Galvanizsiz Bright	Galvanizli Galvanized	Yuvarlak Round	Kompakt Compacted	
•	•	•	•	•	•	•		•
Toplam Tel Sayısı Total Number of Wire		Dış Damarlardaki Dış Tel Sayısı Number of Outer Wires in Outer Strand				Dış Tel Katsayısı Outer Wire Factor		
20-40mm : 257		20-40mm : 80				0.541 (0.827 vs K6)		
41-64mm : 421		41-64mm : 112						
Çap Aralığı (mm) Size Range (mm)		Ortalama Dolgu Faktörü Average Fill Factor				Ortalama Tork Faktörü Average Torque Factor		
20-68		0.640				0.082		

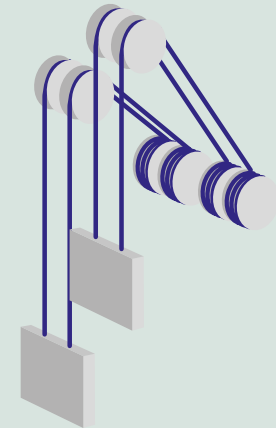
Halat Çapı Rope Nominal Diameter		Yaklaşık Ağırlık (Havada) Approx. Weight in Air		Yaklaşık Metalik Kesit Alanı Approx. Metallic Area	Minimum Kopma Kuvveti / Minimum Breaking Force			
mm	inches	kg/m	lb/ft		Grade 1770		Grade 1960	
				mm ²	kN	tonnes force	kN	tonnes force
20		1.74	1.16	201	303	31	335	34
22		2.10	1.41	243	366	37	405	41
24		2.50	1.68	290	436	44	482	49
25.4	1	2.80	1.88	324	488	50	540	55
26		2.93	1.97	340	511	52	566	58
28		3.40	2.28	394	593	60	657	67
30		3.91	2.62	452	681	69	754	77
31.8	1 1/4	4.39	2.94	508	765	78	847	86
32		4.45	2.98	515	774	79	858	87
34		5.02	3.36	581	874	89	968	99
36		5.63	3.77	652	980	100	1,085	111
38.1	1 1/2	6.30	4.22	730	1,098	112	1,216	124
40		6.95	4.65	804	1,210	123	1,340	137
42		7.66	5.13	887	1,334	136	1,477	151
44		8.40	5.63	973	1,464	149	1,621	165
44.5	1 3/4	8.60	5.76	996	1,498	153	1,659	169
46		9.19	6.15	1,064	1,600	163	1,772	181
48		10.00	6.70	1,158	1,743	178	1,930	197
50		10.85	7.27	1,257	1,891	193	2,094	214
50.8	2	11.20	7.51	1,297	1,952	199	2,161	220
52.0		11.74	7.86	1,359	2,045	209	2,265	231
54.0		12.65	8.47	1,465	2,203	225	2,440	249
56.0		13.61	9.12	1,577	2,372	242	2,626	268
57.2	2 1/4	14.18	9.50	1,642	2,470	252	2,735	279
58.0		14.60	9.78	1,691	2,544	259	2,817	287
60.0		15.63	10.47	1,810	2,723	278	3,015	307
62.0		16.69	11.18	1,932	2,907	296	3,219	328
63.5	2 1/2	17.50	11.73	2,027	3,050	311	3,377	344
64.0		17.78	11.91	2,059	3,098	316	3,431	350



» Tambur Sistemi
» Drum Winder



» Sürtünmeye Dayalı Sistem
» Friction Winder

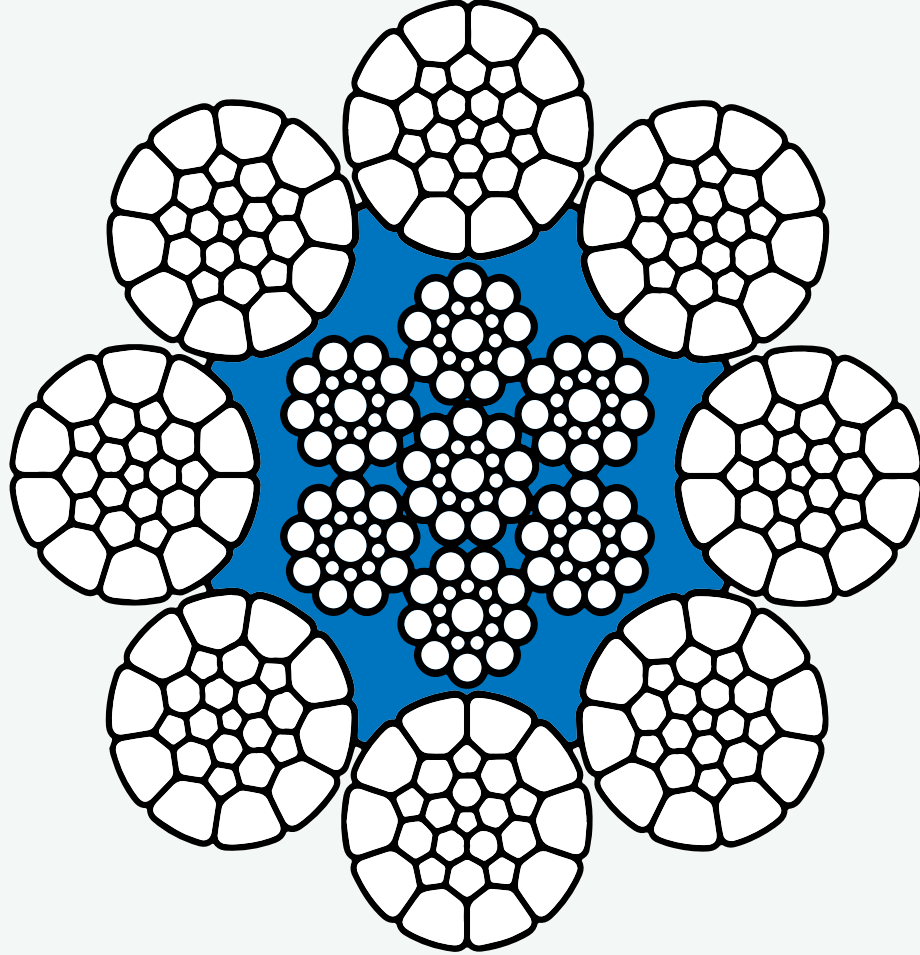


» Çoklu Halat Sistemi
» Blaire Multi Rope Winder

K-MAX K8

K-Max K8'in Özellikleri
Benefits of K- Max K8

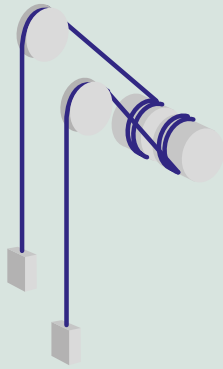
- ◇ Yuvarlak tel halatlar opsiyoneldir
- ◇ Round wire ropes are optional



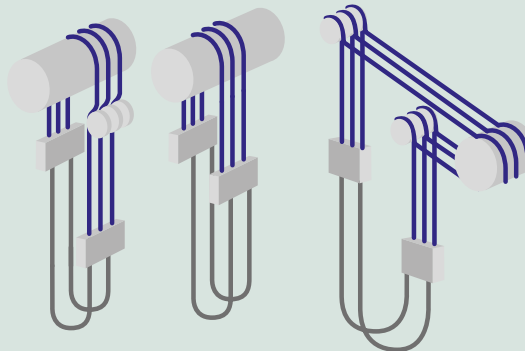
Teknik Bilgiler Technical Data

Sarımların Tipi / Lay Type		Sarımların Yönü / Lay Direction		Yüzey / Finish		Damar Tipi / Strand		Plastik Dolgulu Plastic Infilled
Çapraz Ordinary	Düz Langs	Sağ Right Hand	Sol Left Hand	Galvanizsiz Bright	Galvanizli Galvanized	Yuvarlak Round	Kompakt Compacted	
•	•	•	•	•	•		•	•
Toplam Tel Sayısı Total Number of Wire		Dış Damarlardaki Dış Tel Sayısı Number of Outer Wires in Outer Strand		Dış Tel Katsayısı Outer Wire Factor				
20-40mm : 257		20-40mm : 80		0.541				
41-64mm : 421		41-64mm : 112		(0.827 vs K6)				
Çap Aralığı (mm) Size Range (mm)		Ortalama Dolgu Faktörü Average Fill Factor		Ortalama Tork Faktörü Average Torque Factor				
20-68		0.660		0.081				

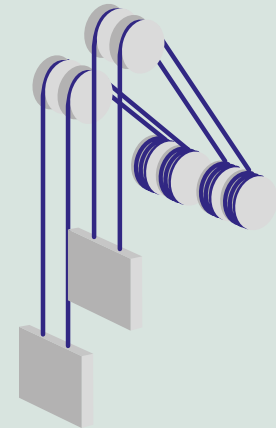
Halat Çapı Rope Nominal Diameter		Yaklaşık Ağırlık (Havada) Approx. Weight in Air		Yaklaşık Metalik Kesit Alanı Approx. Metallic Area	Minimum Kopma Kuvveti / Minimum Breaking Force			
mm	inches	kg/m	lb/ft		Grade 1770		Grade 1960	
				mm ²	kN	tonnes force	kN	tonnes force
20		1.79	1.20	207	312	32	345	35
22		2.17	1.45	251	378	38	418	43
24		2.58	1.73	299	449	46	497	51
25.4	1	2.89	1.94	334	503	51	557	57
26		3.03	2.03	350	527	54	584	60
28		3.51	2.35	406	612	62	677	69
30		4.03	2.70	467	702	72	777	79
31.8	1 1/4	4.53	3.03	524	789	80	873	89
32		4.58	3.07	531	799	81	884	90
34		5.17	3.47	599	902	92	998	102
36		5.80	3.89	672	1,011	103	1,119	114
38.1	1 1/2	6.50	4.35	753	1,132	115	1,254	128
40		7.16	4.80	829	1,248	127	1,382	141
42		7.90	5.29	915	1,376	140	1,524	155
44		8.67	5.81	1,004	1,510	154	1,672	171
44.5	1 3/4	8.86	5.94	1,027	1,545	157	1,710	174
46		9.47	6.35	1,097	1,650	168	1,828	186
48		10.31	6.91	1,194	1,797	183	1,990	203
50		11.19	7.50	1,296	1,950	199	2,159	220
50.8	2	11.55	7.74	1,338	2,013	205	2,229	227
52.0		12.10	8.11	1,402	2,109	215	2,335	238
54.0		13.04	8.74	1,510	2,272	232	2,516	257
56.0		14.04	9.41	1,626	2,446	249	2,709	276
57.2	2 1/4	14.62	9.80	1,693	2,548	260	2,821	288
58.0		15.06	10.09	1,744	2,624	268	2,906	296
60.0		16.12	10.80	1,866	2,808	286	3,109	317
62.0		17.21	11.53	1,993	2,998	306	3,320	339
63.5	2 1/2	18.05	12.09	2,090	3,145	321	3,483	355
64.0		18.34	12.29	2,123	3,195	326	3,538	361



» Tambur Sistemi
» Drum Winder



» Sürtünmeye Dayalı Sistem
» Friction Winder



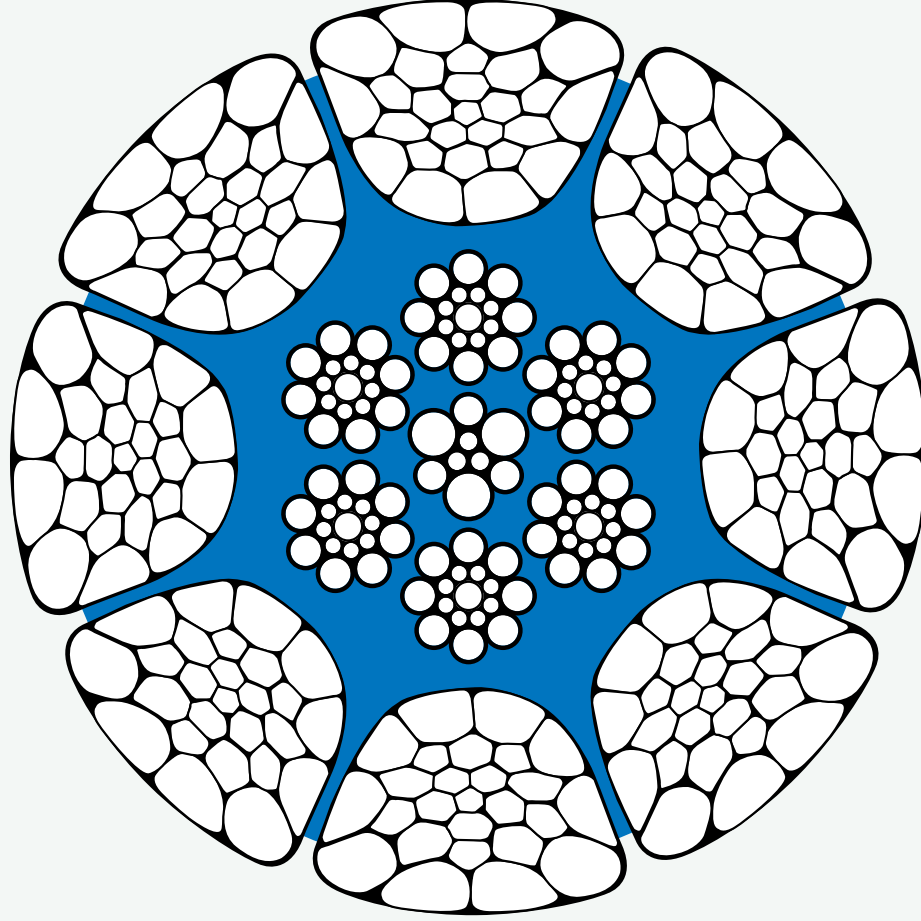
» Çoklu Halat Sistemi
» Blaire Multi Rope Winder

K-MAX K8RS

K-Max K8RS'in Özellikleri
Benefits of K-Max K8RS

YERALTI MARENÇİLİK HALATLARI
UNDERGROUND MINING ROPES

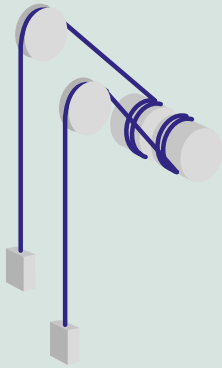
HYROPE



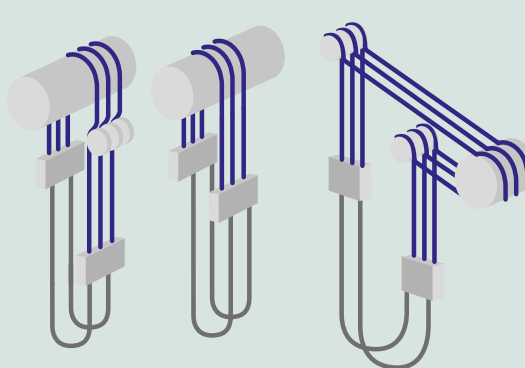
Teknik Bilgiler Technical Data

Sarım Tipi / Lay Type		Sarım Yönü / Lay Direction		Yüzey / Finish		Damar Tipi / Strand		Plastik Dolgulu Plastic Infilled
Çapraz Ordinary	Düz Langs	Sağ Right Hand	Sol Left Hand	Galvanizsiz Bright	Galvanizli Galvanized	Yuvarlak Round	Kompakt Compacted	
•	•	•	•	•	•	•	•	•
Toplam Tel Sayısı Total Number of Wire		Dış Damarlardaki Dış Tel Sayısı Number of Outer Wires in Outer Strand		Dış Tel Katsayısı Outer Wire Factor				
20-40mm : 299		20-40mm : 80		0.565				
41-64mm : 379		41-64mm : 112		(0.864 vs K6)				
Çap Aralığı (mm) Size Range (mm)		Ortalama Dolgu Faktörü Average Fill Factor		Ortalama Tork Faktörü Average Torque Factor				
20-64		0.720		0.078				

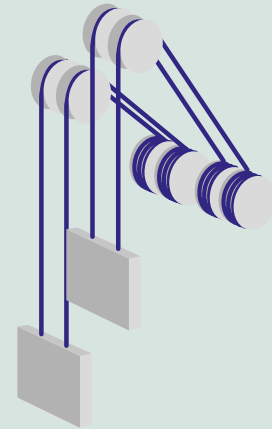
Halat Çapı Rope Nominal Diameter		Yaklaşık Ağırlık (Havada) Approx. Weight in Air		Yaklaşık Metalik Kesit Alanı Approx. Metallic Area	Minimum Kopma Kuvveti / Minimum Breaking Force			
mm	inches	kg/m	lb/ft		Grade 1770		Grade 1960	
mm	inches	kg/m	lb/ft	mm ²	kN	tonnes force	kN	tonnes force
20		1.90	1.27	226	340	35	377	38
22		2.30	1.54	274	412	42	456	47
24		2.74	1.83	326	490	50	543	55
25.4	1	3.06	2.05	365	549	56	608	62
26		3.21	2.15	382	575	59	637	65
28		3.72	2.50	443	667	68	739	75
30		4.28	2.86	509	766	78	848	86
31.8	1 1/4	4.80	3.22	572	860	88	953	97
32		4.86	3.26	579	871	89	965	98
34		5.49	3.68	654	984	100	1,089	111
36		6.16	4.12	733	1,103	112	1,221	125
38.1	1 1/2	6.90	4.62	821	1,235	126	1,368	139
40		7.60	5.09	905	1,361	139	1,508	154
42		8.38	5.61	998	1,501	153	1,662	169
44		9.20	6.16	1,095	1,647	168	1,824	186
44.5	1 3/4	9.41	6.30	1,120	1,685	172	1,866	190
46		10.05	6.73	1,197	1,800	184	1,994	203
48		10.94	7.33	1,303	1,960	200	2,171	221
50		11.88	7.96	1,414	2,127	217	2,356	240
50.8		12.26	8.21	1,460	2,196	224	2,432	248
52	2	12.85	8.61	1,529	2,301	235	2,548	260
54		13.85	9.28	1,649	2,481	253	2,748	280
56		14.90	9.98	1,774	2,668	272	2,955	301
57.2	2 1/4	15.54	10.41	1,850	2,784	284	3,083	314
58		15.98	10.71	1,903	2,862	292	3,170	323
60		17.10	11.46	2,036	3,063	312	3,392	346
62		18.26	12.23	2,174	3,271	334	3,622	369
63.5	2 1/2	19.15	12.83	2,280	3,431	350	3,799	387
64		19.46	13.04	2,317	3,485	355	3,859	394



» Tambur Sistemi
» Drum Winder



» Sürtünmeye Dayalı Sistem
» Friction Winder

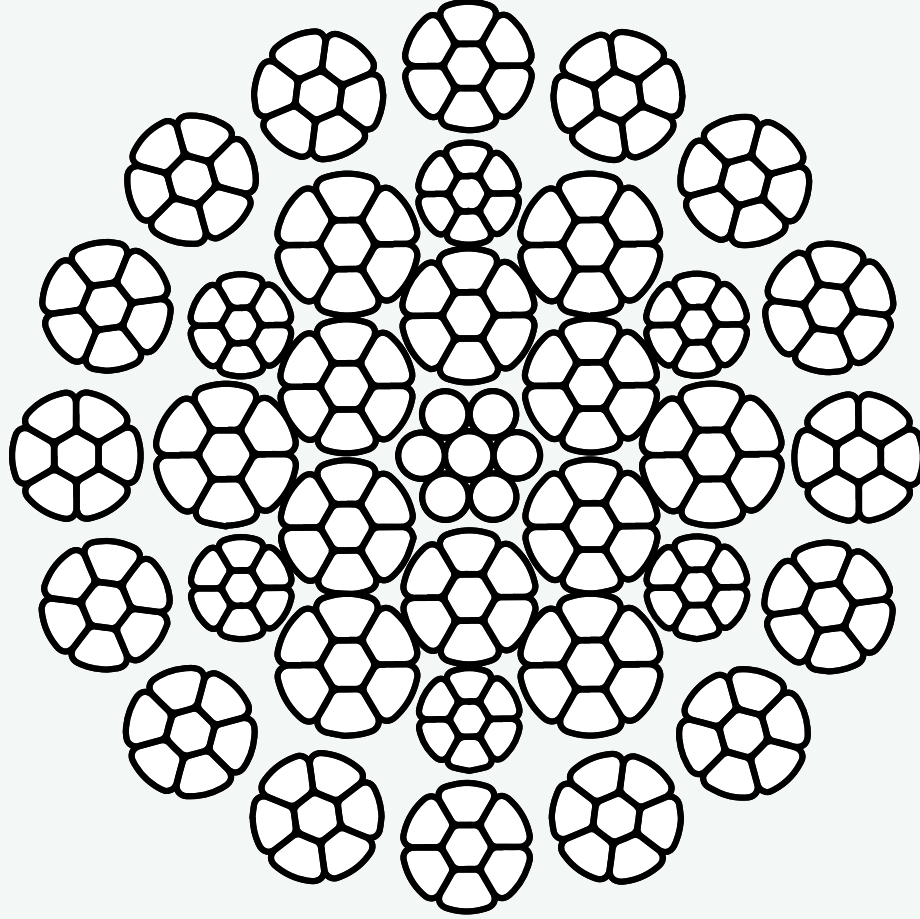


» Çoklu Halat Sistemi
» Blaire Multi Rope Winder

K-MAX K16

K-Max K16'nın Özellikleri
Benefits of K-Max K16

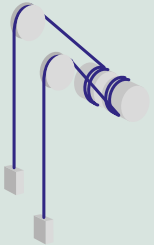
- ◇ Dönme Karşı Dirençli Halat
- ◇ *Rotation Resistant Rope*



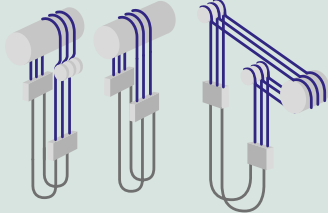
Teknik Bilgiler *Technical Data*

Sarıım Tipi / Lay Type		Sarıım Yönü / Lay Direction		Yüzey / Finish		Damar Tipi / Strand		Plastik Dolgulu <i>Plastic Infilled</i>
Çapraz <i>Ordinary</i>	Düz <i>Langs</i>	Sağ <i>Right Hand</i>	Sol <i>Left Hand</i>	Galvanizsiz <i>Bright</i>	Galvanizli <i>Galvanized</i>	Yuvarlak <i>Round</i>	Kompakt <i>Compacted</i>	
•	•	•	•	•	•		•	
Toplam Tel Sayısı <i>Total Number of Wire</i>			Dış Damarlardaki Dış Tel Sayısı <i>Number of Outer Wires in Outer Strand</i>			Dış Tel Katsayısı <i>Outer Wire Factor</i>		
245			112			0.531 (0.812 vs K6)		
Çap Aralığı (mm) <i>Size Range (mm)</i>			Ortalama Dolgu Faktörü <i>Average Fill Factor</i>			Ortalama Tork Faktörü <i>Average Torque Factor</i>		
20-64			0.680			0.012		

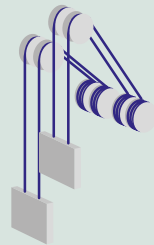
Halat Çapı Rope Nominal Diameter		Yaklaşık Ağırlık (Havada) Approx. Weight in Air		Yaklaşık Metalik Kesit Alanı Approx. Metallic Area	Minimum Kopma Kuvveti / Minimum Breaking Force			
					Grade 1770		Grade 1960	
mm	inches	kg/m	lb/ft	mm ²	kN	tonnes force	kN	tonnes force
20		1.84	1.24	214	308	31	341	35
22		2.23	1.50	259	373	38	413	42
24		2.66	1.78	308	444	45	491	50
25.4	1	2.98	1.99	345	497	51	550	56
26		3.12	2.09	361	521	53	577	59
28		3.62	2.42	419	604	62	669	68
30		4.15	2.78	481	693	71	768	78
31.8	1 1/4	4.66	3.12	540	779	79	863	88
32		4.72	3.16	547	789	80	874	89
34		5.33	3.57	617	891	91	986	101
36		5.98	4.00	692	999	102	1,106	113
38.1	1 1/2	6.70	4.49	775	1,118	114	1,239	126
40		7.38	4.94	855	1,233	126	1,365	139
42		8.14	5.45	942	1,359	139	1,505	153
44		8.93	5.98	1,034	1,492	152	1,652	168
44.5	1 3/4	9.13	6.12	1,058	1,526	156	1,690	172
46		9.76	6.54	1,130	1,630	166	1,805	184
48		10.63	7.12	1,231	1,775	181	1,966	200
50		11.53	7.73	1,335	1,926	196	2,133	218
50.8	2	11.90	7.97	1,378	1,988	203	2,202	225
52		12.47	8.36	1,444	2,083	212	2,307	235
54		13.45	9.01	1,558	2,247	229	2,488	254
56		14.46	9.69	1,675	2,416	246	2,676	273
57.2	2 1/4	15.09	10.11	1,748	2,521	257	2,792	285
58		15.52	10.40	1,797	2,592	264	2,870	293
60		16.60	11.12	1,923	2,774	283	3,072	313
62		17.73	11.88	2,053	2,962	302	3,280	334
63.5	2 1/2	18.60	12.46	2,154	3,107	317	3,440	351
64		18.89	12.66	2,188	3,156	322	3,495	356



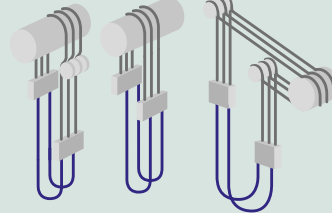
» Tambur Sistemi
» Drum Winder



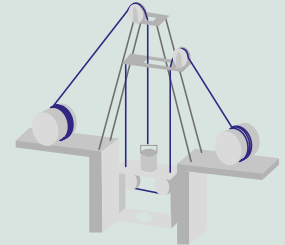
» Sürtünmeye Dayalı Sistem
» Friction Winder



» Çoklu Halat Sistemi
» Blaire Multi Rope Winder



» Denge Halatı
» Balance Rope

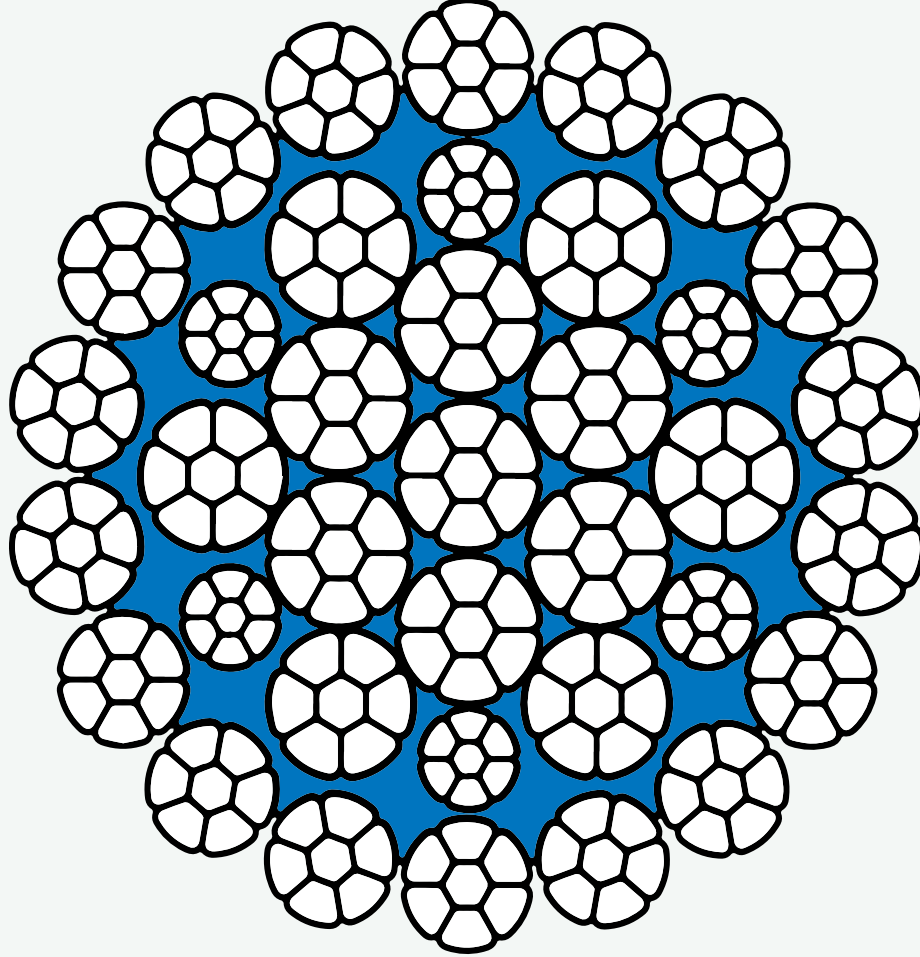


» İndirme/Batma İskele Sistemi
» Sinking Stage Winder

K-MAX K18

K-Max K18'inn Özellikleri
Benefits of K- Max K18

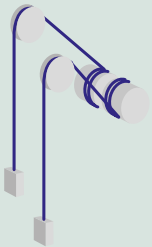
- ◇ Dönmeye Karşı Dirençli Halat
- ◇ Rotation Resistant Rope



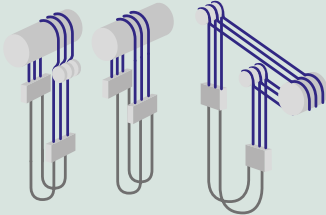
Teknik Bilgiler Technical Data

Sarım Tipi / Lay Type		Sarım Yönü / Lay Direction		Yüzey / Finish		Damar Tipi / Strand		Plastik Dolgulu Plastic Infilled
Çapraz Ordinary	Düz Langs	Sağ Right Hand	Sol Left Hand	Galvanizsiz Bright	Galvanizli Galvanized	Yuvarlak Round	Kompakt Compacted	
•	•	•	•	•	•		•	•
Toplam Tel Sayısı Total Number of Wire			Dış Damarlardaki Dış Tel Sayısı Number of Outer Wires in Outer Strand			Dış Tel Katsayısı Outer Wire Factor		
259			126			0.492 (0.752 vs K6)		
Çap Aralığı (mm) Size Range (mm)			Ortalama Dolgu Faktörü Average Fill Factor			Ortalama Tork Faktörü Average Torque Factor		
20-64			0.680			0.012		

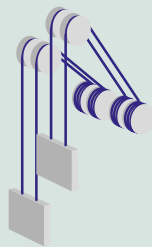
Halat Çapı Rope Nominal Diameter		Yaklaşık Ağırlık (Havada) Approx. Weight in Air		Yaklaşık Metalik Kesit Alanı Approx. Metallic Area	Minimum Kopma Kuvveti / Minimum Breaking Force			
					Grade 1770		Grade 1960	
mm	inches	kg/m	lb/ft	mm ²	kN	tonnes force	kN	tonnes force
20		1.84	1.24	214	308	31	341	35
22		2.23	1.50	259	373	38	413	42
24		2.66	1.78	308	444	45	491	50
25.4	1	2.98	1.99	345	497	51	550	56
26		3.12	2.09	361	521	53	577	59
28		3.62	2.42	419	604	62	669	68
30		4.15	2.78	481	693	71	768	78
31.8	1 1/4	4.66	3.12	540	779	79	863	88
32		4.72	3.16	547	789	80	874	89
34		5.33	3.57	617	891	91	986	101
36		5.98	4.00	692	999	102	1,106	113
38.1	1 1/2	6.70	4.49	775	1,118	114	1,239	126
40		7.38	4.94	855	1,233	126	1,365	139
42		8.14	5.45	942	1,359	139	1,505	153
44		8.93	5.98	1,034	1,492	152	1,652	168
44.5	1 3/4	9.13	6.12	1,058	1,526	156	1,690	172
46		9.76	6.54	1,130	1,630	166	1,805	184
48		10.63	7.12	1,231	1,775	181	1,966	200
50		11.53	7.73	1,335	1,926	196	2,133	218
50.8	2	11.90	7.97	1,378	1,988	203	2,202	225
52		12.47	8.36	1,444	2,083	212	2,307	235
54		13.45	9.01	1,558	2,247	229	2,488	254
56		14.46	9.69	1,675	2,416	246	2,676	273
57.2	2 1/4	15.09	10.11	1,748	2,521	257	2,792	285
58		15.52	10.40	1,797	2,592	264	2,870	293
60		16.60	11.12	1,923	2,774	283	3,072	313
62		17.73	11.88	2,053	2,962	302	3,280	334
63.5	2 1/2	18.60	12.46	2,154	3,107	317	3,440	351
64		18.89	12.66	2,188	3,156	322	3,495	356



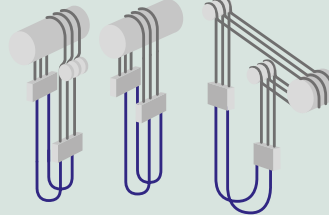
» Tambur Sistemi
» Drum Winder



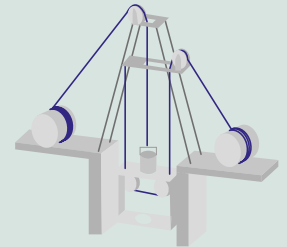
» Sürtünmeye Dayalı Sistem
» Friction Winder



» Çoklu Halat Sistemi
» Blaire Multi Rope Winder



» Denge Halatı
» Balance Rope

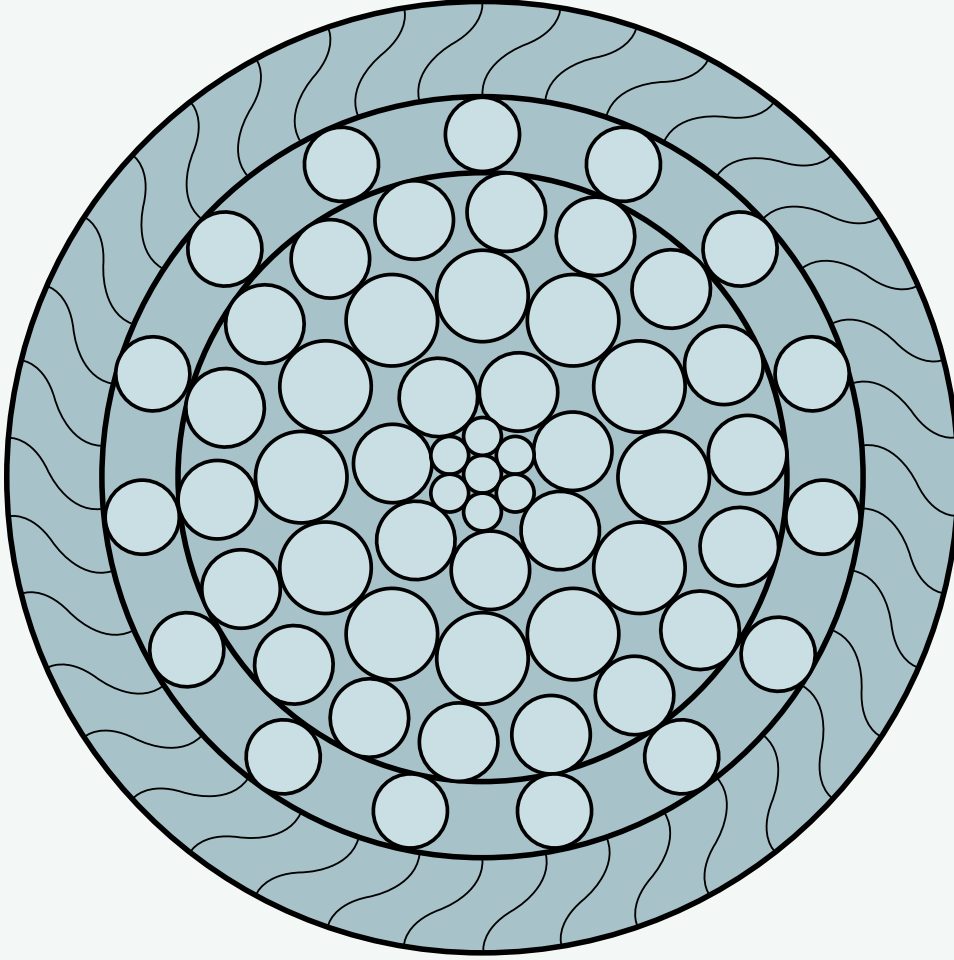


» İndirme/Batma İskele Sistemi
» Sinking Stage Winder

K-MAX LOCK

Full Locked Coil / Tam Kilitli Halat

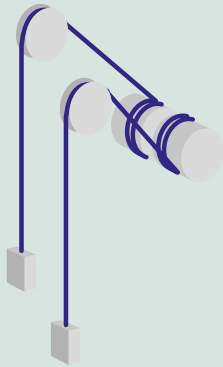
K-Max Lock Özellikleri
Benefits of K- Max Lock



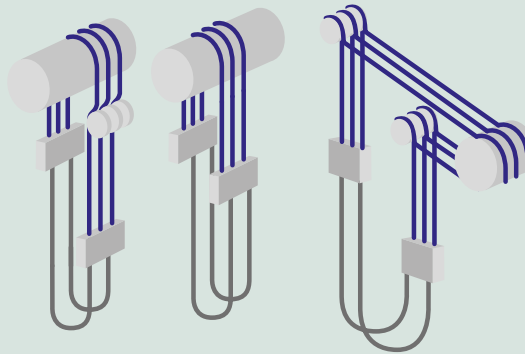
■ Teknik Bilgiler *Technical Data*

Sarıım Tipi / Lay Type		Sarıım Yönü / Lay Direction		Yüzey / Finish		Damar Tipi / Strand		Plastik Dolgulu Plastic Infilled
Çapraz Ordinary	Düz Langs	Sağ Right Hand	Sol Left Hand	Galvanizsiz Bright	Galvanizli Galvanized	Yuvarlak Round	Kompakt Compacted	
		•	•	•	•		•	

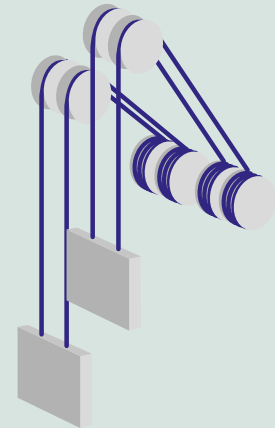
Halat Çapı Rope Nominal Diameter		Yaklaşık Ağırlık (Havada) Approx. Weight in Air		Yaklaşık Metalik Kesit Alanı Approx. Metallic Area	Minimum Kopma Kuvveti / Minimum Breaking Force			
					Grade 1770		Grade 1960	
mm	inches	kg/m	lb/ft	mm ²	kN	tonnes force	kN	tonnes force
20		2.24	1.50	259	343	35	366	37
22		2.71	1.81	313	414	42	443	45
24		3.22	2.16	373	493	50	527	54
25.4	1	3.61	2.42	418	552	56	590	60
26		3.78	2.53	438	579	59	618	63
28		4.38	2.94	507	671	68	717	73
30		5.03	3.37	583	771	79	823	84
31.8	1 1/4	5.65	3.79	655	866	88	925	94
32		5.72	3.83	663	877	89	937	95
34		6.46	4.33	748	990	101	1,057	108
36		7.24	4.85	839	1,110	113	1,185	121
38.1	1 1/2	8.11	5.44	940	1,243	127	1,328	135
40		8.94	5.99	1,036	1,370	140	1,463	149
42		9.86	6.61	1,142	1,511	154	1,613	165
44		10.82	7.25	1,253	1,658	169	1,771	181
44.5	1 3/4	11.07	7.42	1,282	1,696	173	1,811	185
46		11.83	7.92	1,370	1,812	185	1,935	197
48		12.88	8.63	1,491	1,973	201	2,107	215
50		13.97	9.36	1,618	2,141	218	2,286	233
50.8	2	14.42	9.66	1,670	2,210	225	2,360	241
52		15.11	10.13	1,750	2,315	236	2,473	252
54		16.30	10.92	1,887	2,497	255	2,667	272
56		17.53	11.74	2,030	2,685	274	2,868	292
57.2	2 1/4	18.29	12.25	2,118	2,802	286	2,992	305
58		18.80	12.60	2,177	2,881	294	3,077	314
60		20.12	13.48	2,330	3,083	314	3,292	336
62		21.48	14.39	2,488	3,292	336	3,516	358
63.5	2 1/2	22.54	15.10	2,610	3,453	352	3,688	376
64		22.89	15.34	2,651	3,507	358	3,746	382



» Tambur Sistemi
» Drum Winder



» Sürtünmeye Dayalı Sistem
» Friction Winder

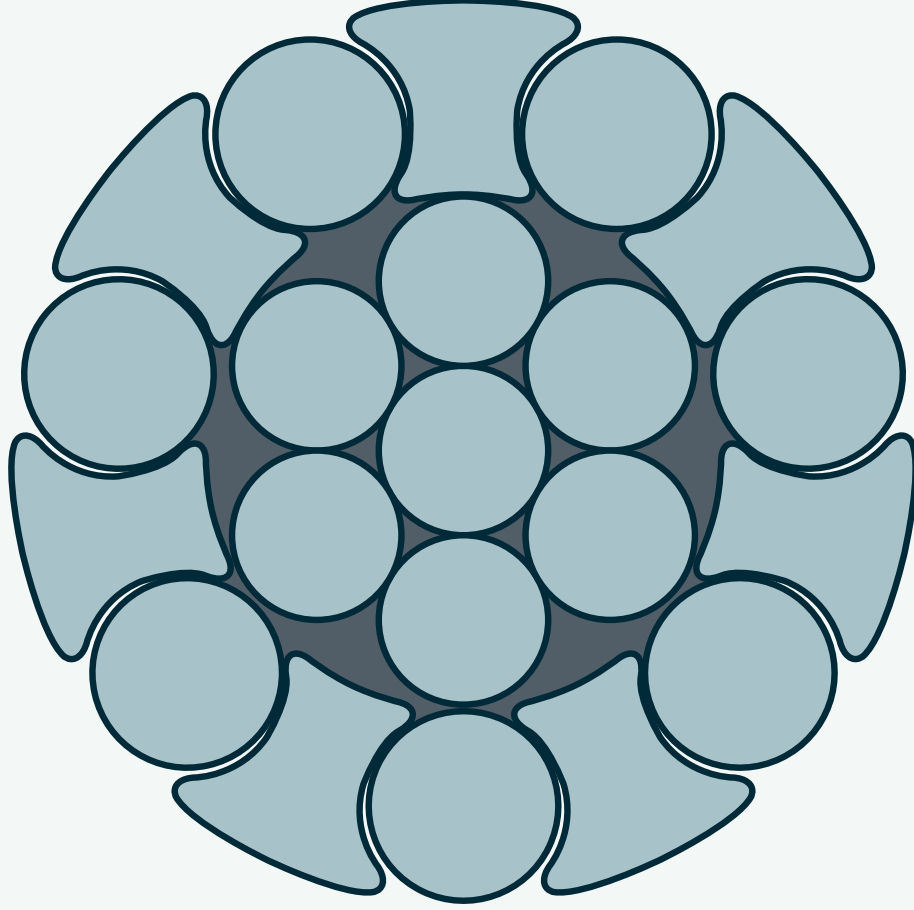


» Çoklu Halat Sistemi
» Blaire Multi Rope Winder

K-MAX HALF LOCK

K-Max Half Lock Özellikleri
Benefits of K-Max Half Lock

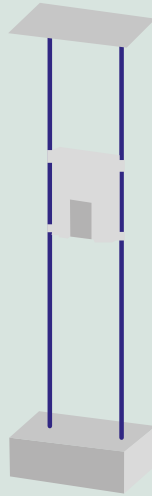
Half Locked Coil / Yarım Kilitli Halat



■ Teknik Bilgiler *Technical Data*

Sarıım Tipi / Lay Type		Sarıım Yönü / Lay Direction		Yüzey / Finish		Damar Tipi / Strand		Plastik Dolgulu Plastic Infilled
Çapraz Ordinary	Düz Langs	Sağ Right Hand	Sol Left Hand	Galvanizsiz Bright	Galvanizli Galvanized	Yuvarlak Round	Kompakt Compacted	
		•	•	•	•	•	•	

Halat Çapı Rope Nominal Diameter		Yaklaşık Ağırlık (Havada) Approx. Weight in Air		Yaklaşık Metalik Kesit Alanı Approx. Metallic Area	Minimum Kopma Kuvveti / Minimum Breaking Force	
mm	inches	kg/m	lb/ft	mm ²	kN	tonnes force
38.1	1 1/2	8.07	5.41	935	916	93
41.3	1 5/8	9.49	6.36	1,099	1,077	110
44.5	1 3/4	11.01	7.38	1,275	1,250	127
47.6	1 7/8	12.60	8.44	1,459	1,430	146
50.8	2	14.35	9.62	1,662	1,629	166



» Kılavuz Halat / Guide Rope

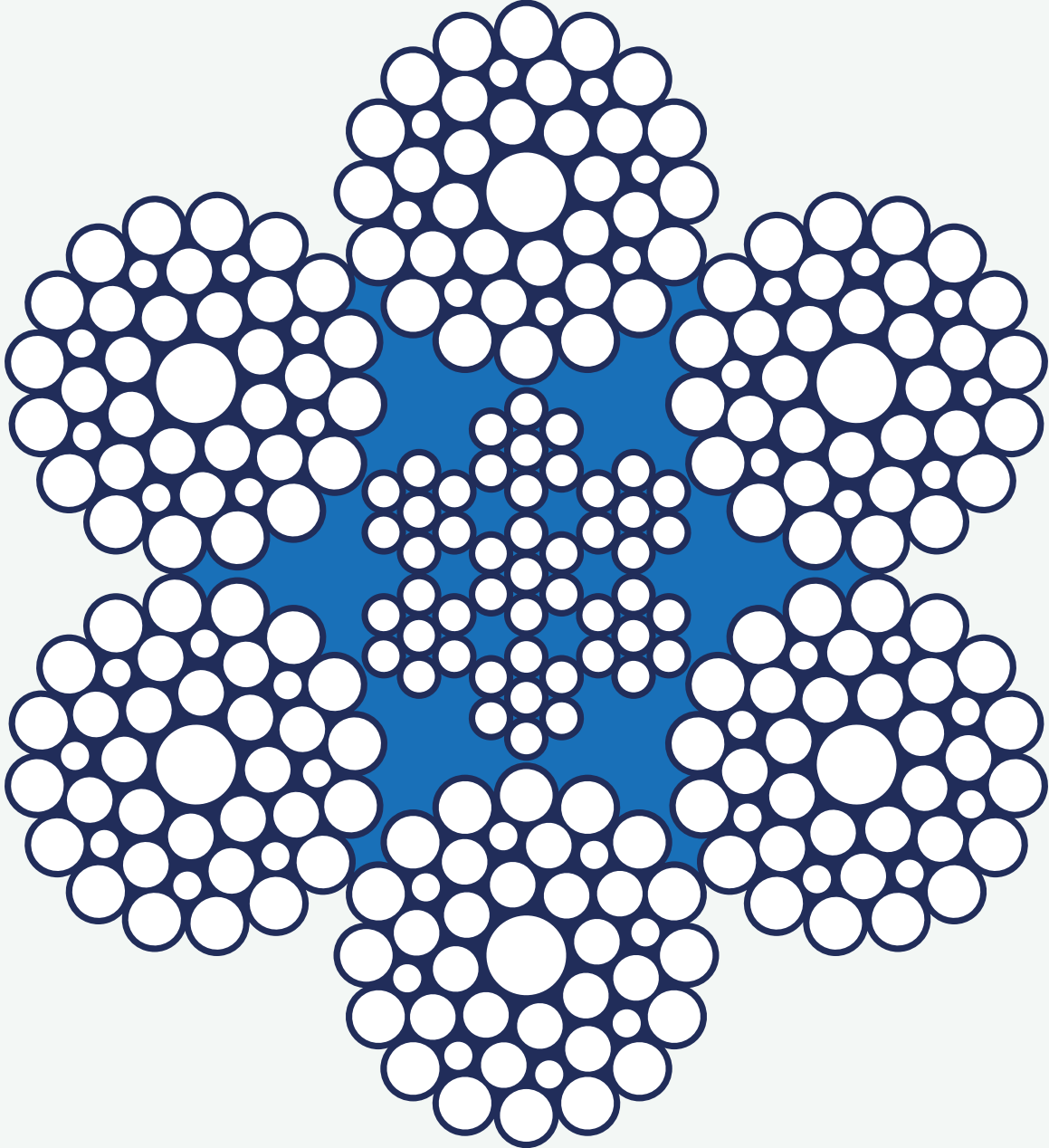
Neptune

Neptune 6 Strand Round Özellikleri

Benefits of Neptune 6 Strand Round

6 Strand Round Yuvarlak 6 Damarlı

- ◇ Tam yağlanmış
- ◇ Plastik dolgu seçeneği
- ◇ Yüksek kopma kuvveti
- ◇ Galvanizli / Alumar Kaplama / Siyah
- ◇ Fully lubricated
- ◇ Plastic infilled option
- ◇ High breaking force
- ◇ Zinc coated / Alumar coated / Bright



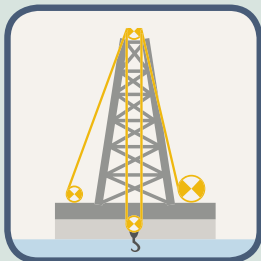
Halat Çapı Rope Nominal Diameter		Yaklaşık Ağırlık (Havada) Approx. Weight in Air		Minimum Kopma Kuvveti / Minimum Breaking Force												Referans Bilgisi (Yaklaşık Olarak) Reference information (Approximately)		
				EEIPS			ALPHA			DELTA			OMEGA			Eksenel Sertlik Axial Stiffness	Yükün %20 'sinde ortaya çıkan tork Torque generated at 20% of Nominal Load	Metallik Kesit Alanı Metallic Cross Sectional Area
mm	inches	kg/m	lb/ft	tonnes force	kN	short tons	tonnes force	kN	short tons	tonnes force	kN	short tons	tonnes force	kN	short tons	MN	N.m	mm ²
50.8	2	11.3	7.6	197	1,930	217	214	2,100	236	225	2,210	248	235	2,310	259	130	1,500	1,240
54.0	2 1/8	12.8	8.6	220	2,160	243	241	2,360	266	250	2,450	276	260	2,550	287	140	1,700	1,400
57.2	2 1/4	14.3	9.6	247	2,420	272	272	2,670	300	285	2,790	314	298	2,920	328	160	2,100	1,560
60.3	2 3/8	15.7	10.5	275	2,700	303	303	2,970	334	318	3,120	351	332	3,260	366	180	2,400	1,720
63.5	2 1/2	17.8	11.9	301	2,950	332	330	3,240	364	346	3,390	381	362	3,550	399	200	2,800	1,960
66.7	2 5/8	19.7	13.2	330	3,240	364	365	3,580	402	383	3,760	422	400	3,920	441	220	3,200	2,150
69.9	2 3/4	21.4	14.4	360	3,530	397	400	3,920	441	420	4,120	463	439	4,310	484	240	3,700	2,350
73.0	2 7/8	23.5	15.8	392	3,840	432	440	4,320	485	462	4,530	509	483	4,740	532	270	4,300	2,640
76.2	3	25.4	17.1	425	4,160	469	483	4,740	532	507	4,970	559	530	5,200	584	290	4,900	2,780
79.4	3 1/8	27.6	18.5	458	4,490	505	522	5,120	575	548	5,370	604	572	5,610	631	320	5,400	3,110
82.6	3 1/4	29.9	20.1	494	4,840	544	557	5,460	614	585	5,740	645	611	5,990	674	350	6,000	3,350
85.7	3 3/8	32.2	21.6	528	5,180	582	607	5,950	669	637	6,250	702	666	6,530	734	370	6,800	3,590
88.9	3 1/2	34.8	23.4	563	5,520	621	659	6,460	726	692	6,790	763	723	7,090	797	400	7,600	3,850
95.3	3 3/4	39.9	26.8	640	6,280	705	714	7,000	787	750	7,350	827	785	7,700	865	460	9,000	4,470
102.0	4	45.3	30.5	720	7,060	794	796	7,810	877	836	8,200	922	873	8,560	962	520	10,700	5,050
108.0	4 1/4	51.1	34.3	788	7,730	869	845	8,290	931	887	8,700	978	926	9,080	1,021	580	12,300	5,600
114.0	4 1/2	57.4	38.6	876	8,590	966	939	9,210	1,035	986	9,670	1,087	1,030	10,100	1,135	640	14,400	6,240
121.0	4 3/4	63.9	42.9	967	9,480	1,066	1,040	10,200	1,146	1,090	10,700	1,202	1,140	11,200	1,257	710	16,800	6,910
127.0	5	70.8	47.5	1,064	10,430	1,172	1,140	11,200	1,257	1,200	11,800	1,323	1,250	12,300	1,378	790	19,500	7,620

Daha yüksek kopma kuvvetli halatlar özel istek üzerine üretilmektedir.

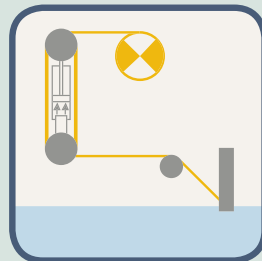
Deniz suyunda yaklaşık halat hacmi= 0.87x Havadaki halat hacmi.

Ropes with higher Mbf could be custom designed upon special request.

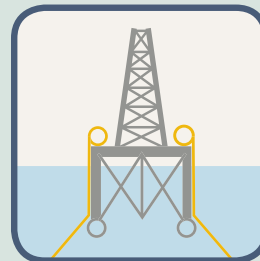
Estimated Rope Mass in Sea Water = 0.87 x Rope Mass in Air.



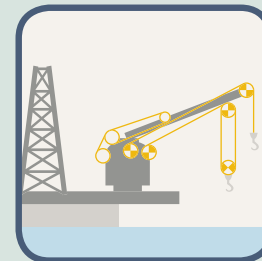
» Drilling Lines



» Riser Tensioner



» Anchor & Mooring



» Crane

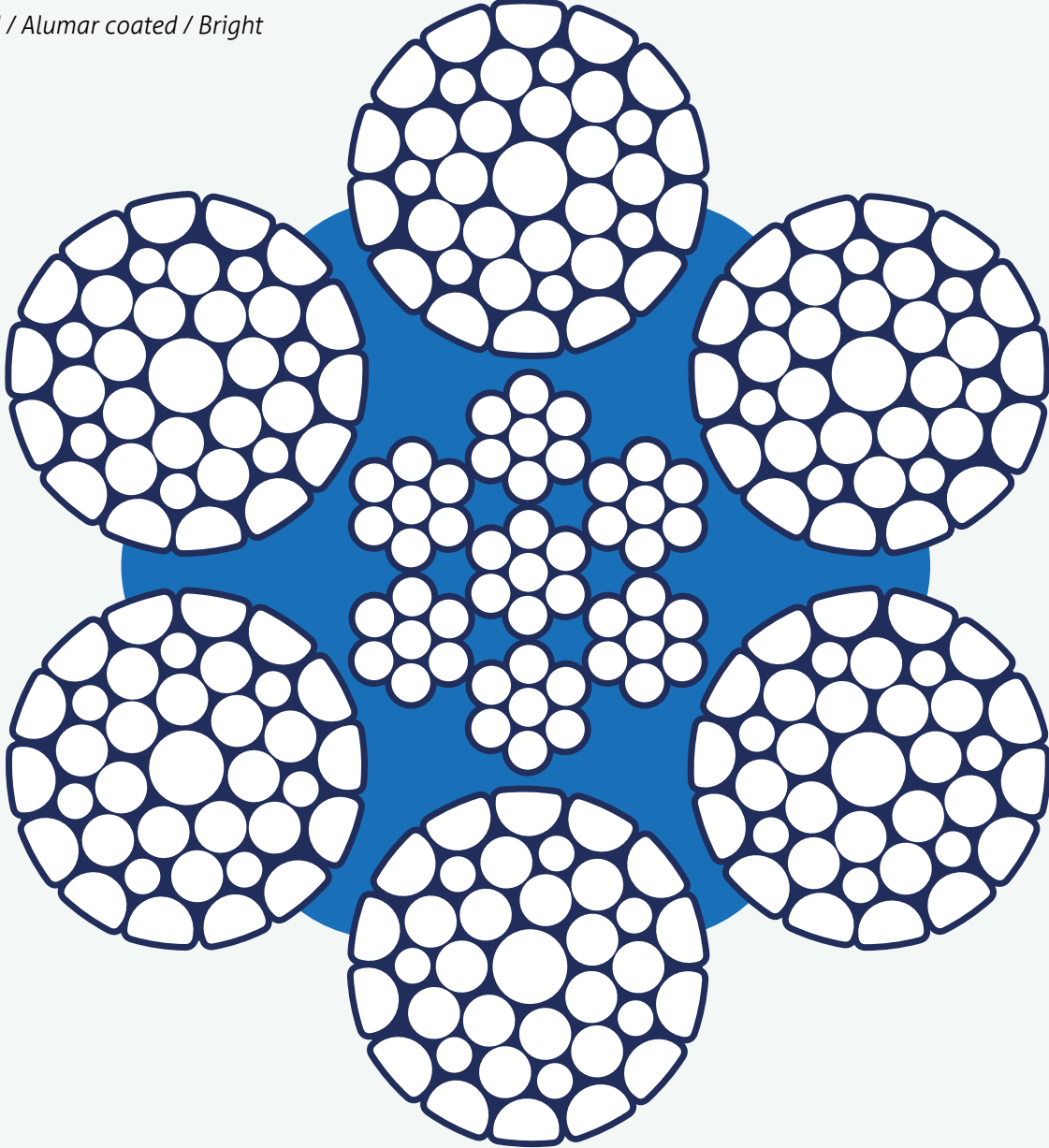
Neptune

Neptune 6 Strand Compacted Özellikleri

Benefits of Neptune 6 Strand Compacted

6 Strand Compacted *Kompakt 6 Damarlı*

- ◊ Tam yağlanmış
- ◊ Plastik dolgu seçeneği
- ◊ Yüksek kopma kuvveti
- ◊ Daha geniş temas yüzeyi
- ◊ Aşınmaya karşı daha yüksek dayanıklılık
- ◊ Galvanizli / Alumar Kaplama / Siyah
- ◊ *Fully lubricated*
- ◊ *Plastic infilled option*
- ◊ *High breaking force*
- ◊ *Greater contact area*
- ◊ *Higher resistance to abrasion*
- ◊ *Zinc coated / Alumar coated / Bright*



Halat Çapı Rope Nominal Diameter		Yaklaşık Ağırlık (Havada) Approx. Weight in Air		Minimum Kopma Kuvveti / Minimum Breaking Force												Referans Bilgisi (Yaklaşık Olarak) Reference information (Approximately)		
				EEIPS			ALPHA			DELTA			OMEGA			Eksenel Sertlik Axial Stiffness	Yükün %20 'sinde ortaya çıkan tork Torque generated at 20% of Nominal Load	Metallik Kesit Alanı Metallic Cross Sectional Area
mm	inches	kg/m	lb/ft	tonnes force	kN	short tons	tonnes force	kN	short tons	tonnes force	kN	short tons	tonnes force	kN	short tons	MN	N.m	mm ²
50.8	2	12.1	8.1	218	2,140	240	241	2,360	266	253	2,480	279	257	2,520	283	150	1,600	1,380
54.0	2 1/8	13.8	9.3	244	2,390	269	267	2,620	294	280	2,750	309	285	2,790	314	170	1,900	1,550
57.2	2 1/4	15.5	10.4	274	2,690	302	305	2,990	336	321	3,150	353	326	3,200	359	190	2,300	1,720
60.3	2 3/8	16.9	11.0	305	2,990	336	340	3,330	375	358	3,510	395	363	3,560	400	210	2,700	1,910
63.5	2 1/2	19.1	12.8	334	3,280	368	373	3,660	411	392	3,840	432	398	3,900	439	230	3,100	2,170
66.7	2 5/8	21.1	14.2	367	3,600	405	411	4,030	453	432	4,240	476	439	4,300	484	260	3,600	2,390
69.9	2 3/4	23.1	15.5	400	3,920	441	454	4,450	500	476	4,670	525	484	4,746	534	280	4,200	2,610
73.0	2 7/8	25.2	16.9	435	4,270	480	496	4,860	547	521	5,110	574	529	5,190	583	320	4,700	2,920
76.2	3	27.4	18.4	472	4,630	520	545	5,340	601	573	5,620	632	581	5,700	640	330	5,400	3,080
79.4	3 1/8	29.8	20.0	508	4,980	560	579	5,680	638	608	5,960	670	618	6,060	681	370	6,000	3,440
82.6	3 1/4	32.3	21.7	548	5,370	604	618	6,060	681	649	6,360	715	660	6,470	728	400	6,700	3,700
85.7	3 3/8	34.8	23.4	586	5,750	646	656	6,430	723	689	6,760	759	700	6,860	772	420	7,500	3,860
88.9	3 1/2	37.6	25.3	625	6,130	689	713	6,990	786	749	7,350	826	761	7,460	839	450	8,400	4,130
95.3	3 3/4	43.0	28.9	711	6,970	784	793	7,780	874	833	8,170	928	848	8,320	935	520	10,000	4,810
102.0	4	48.9	32.9	799	7,840	881	876	8,590	966	920	9,020	1,014	935	9,170	1,031	590	11,900	5,430
108.0	4 1/4	53.1	35.7	884	8,670	974	978	9,590	1,078	1,030	10,100	1,135	1,040	10,200	1,146	630	14,000	5,790
114.0	4 1/2	59.7	40.2	971	9,520	1,070	1,070	10,500	1,179	1,130	11,100	1,246	1,150	11,300	1,268	700	16,300	6,460
121.0	4 3/4	66.5	44.7	1,059	10,400	1,167	1,170	11,500	1,290	1,230	12,100	1,356	1,250	12,300	1,378	770	18,700	7,150

Daha yüksek kopma kuvvetli halatlar özel istek üzerine üretilmektedir.

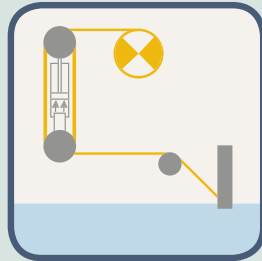
Deniz suyuunda yaklaşık halat hacmi= 0.87x Havadaki halat hacmi.

Ropes with higher Mbf could be custom designed upon special request.

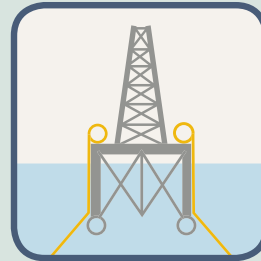
Estimated Rope Mass in Sea Water = 0.87 x Rope Mass in Air.



» Drilling Lines



» Riser Tensioner



» Anchor & Mooring



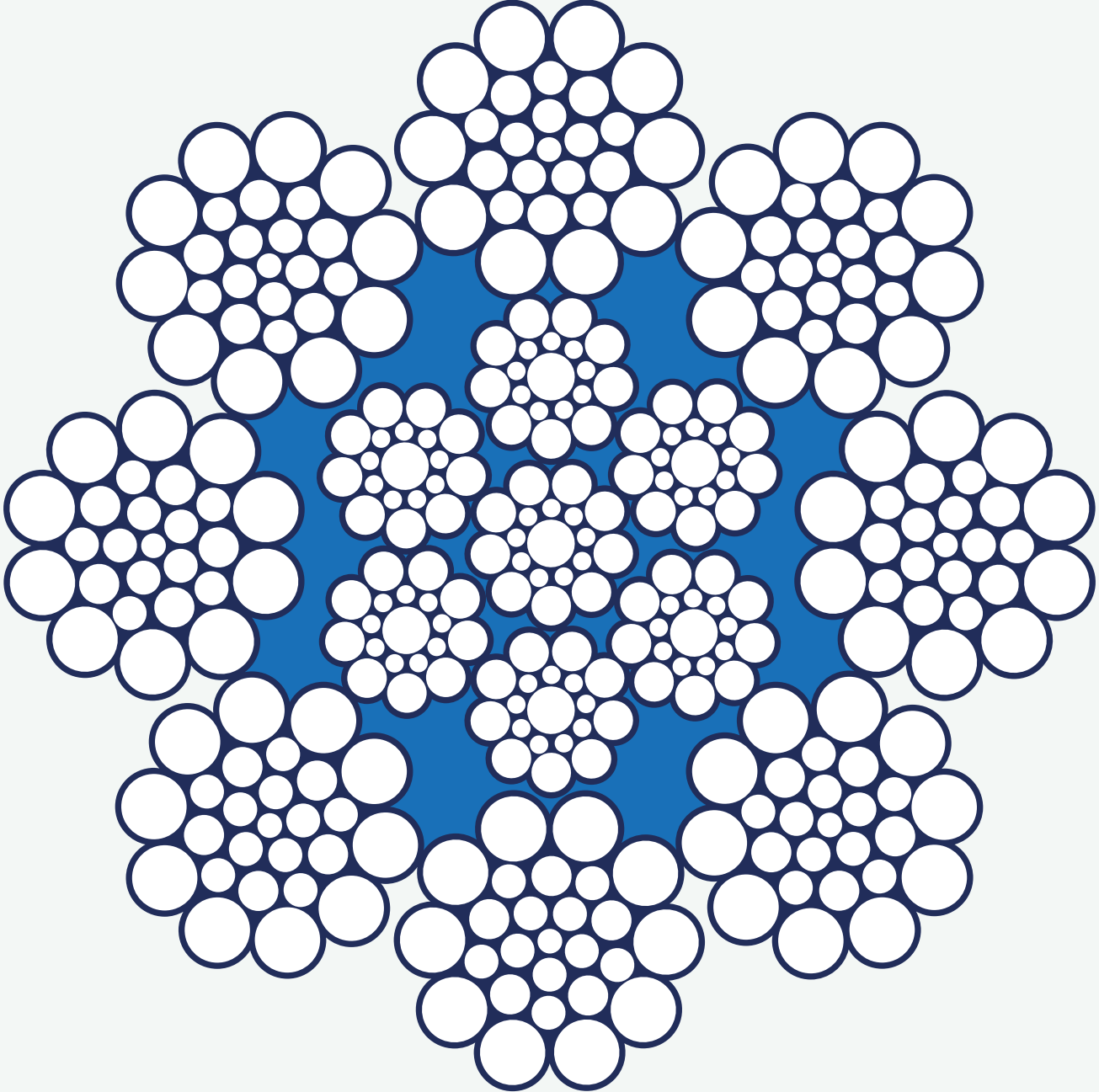
» Crane

Neptune

Neptune 8 Strand Round Özellikleri
Benefits of Neptune 8 Strand Round

8 Strand Round Yuvarlak 8 Damarlı

- ◇ Tam yağlanmış
- ◇ Plastik dolgu seçeneği
- ◇ Yüksek kopma kuvveti
- ◇ Galvanizli / Alumar Kaplama / Siyah
- ◇ Fully lubricated
- ◇ Plastic infilled option
- ◇ High breaking force
- ◇ Zinc coated / Alumar coated / Bright



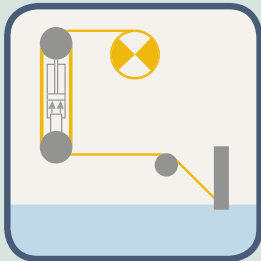
Halat Çapı Rope Nominal Diameter		Yaklaşık Ağırlık (Havada) Approx. Weight in Air		Minimum Kopma Kuvveti / Minimum Breaking Force												Referans Bilgisi (Yaklaşık Olarak) Reference information (Approximately)		
				EEIPS			ALPHA			DELTA			OMEGA			Eksenel Sertlik Axial Stiffness	Yükün %20 'sinde ortaya çıkan tork Torque generated at 20% of Nominal Load	Metalik Kesit Alanı Metallic Cross Sectional Area
mm	inches	kg/m	lb/ft	tonnes force	kN	short tons	tonnes force	kN	short tons	tonnes force	kN	short tons	tonnes force	kN	short tons	MN	N.m	mm ²
50.8	2	11.5	7.7	197	1,930	217	214	2,100	236	225	2,210	248	235	2,310	259	120	1,800	1,260
54.0	2 1/8	13.0	8.7	220	2,160	243	241	2,360	266	250	2,450	276	260	2,550	287	130	2,100	1,420
57.2	2 1/4	14.5	9.7	247	2,420	272	272	2,670	300	285	2,790	314	298	2,920	328	150	2,500	1,580
60.3	2 3/8	15.9	10.6	275	2,700	303	303	2,970	334	318	3,120	350	332	3,260	366	160	2,900	1,750
63.5	2 1/2	18.1	12.1	301	2,950	332	330	3,240	364	346	3,390	381	362	3,550	399	190	3,400	1,990
66.7	2 5/8	20.0	13.4	330	3,240	364	365	3,580	402	383	3,760	422	400	3,920	441	210	3,900	2,210
69.9	2 3/4	21.7	14.6	360	3,530	397	400	3,920	441	420	4,120	463	439	4,310	484	230	4,500	2,420
73.0	2 7/8	23.9	16.1	392	3,840	432	440	4,310	485	462	4,530	509	483	4,740	532	250	5,100	2,700
76.2	3	25.8	17.4	425	4,160	468	491	4,820	541	516	5,060	569	538	5,280	593	270	5,800	2,850
79.4	3 1/8	28.0	18.8	458	4,490	505	522	5,120	575	548	5,370	604	572	5,610	631	290	6,500	3,150
82.6	3 1/4	30.3	20.4	494	4,840	545	557	5,460	614	585	5,740	645	611	5,990	674	320	7,200	3,400
85.7	3 3/8	32.7	21.9	528	5,180	582	607	5,950	669	637	6,250	702	666	6,530	734	340	8,100	3,670
88.9	3 1/2	35.3	23.7	563	5,520	621	659	6,460	726	692	6,790	763	723	7,090	797	370	9,100	3,940
95.3	3 3/4	40.5	27.2	640	6,280	706	714	7,000	787	750	7,350	827	785	7,700	865	430	10,800	4,580
102.0	4	46.0	31.0	720	7,060	794	796	7,810	877	836	8,200	922	873	8,560	962	480	12,800	5,170
108.0	4 1/4	51.9	34.8	788	7,730	869	845	8,290	931	887	8,700	978	926	9,080	1,021	540	14,700	5,830
114.0	4 1/2	58.3	39.2	876	8,590	966	939	9,210	1,035	986	9,670	1,087	1,030	10,100	1,135	610	17,300	6,490
121.0	4 3/4	64.9	43.6	967	9,480	1,066	1,040	10,200	1,146	1,090	10,700	1,202	1,140	11,200	1,257	670	20,100	7,190
127.0	5	71.9	48.2	1,064	10,400	1,173	1,140	11,200	1,257	1,200	11,700	1,323	1,250	12,300	1,378	740	23,300	7,930
133.0	5 1/4	77.3	51.8	1,138	11,200	1,254	1,220	11,900	1,345	1,280	12,600	1,411	1,330	13,000	1,466	810	26,200	8,710
140.0	5 1/2	85.7	57.4	1,223	12,000	1,348	1,310	12,800	1,444	1,370	13,500	1,510	1,430	14,000	1,576	900	29,500	9,650
146.0	5 3/4	93.2	62.5	1,315	12,900	1,450	1,410	13,800	1,554	1,480	14,500	1,631	1,540	15,100	1,698	980	33,100	10,500
152.0	6	101.0	67.7	1,410	13,800	1,554	1,510	14,800	1,664	1,580	15,500	1,742	1,650	16,200	1,819	1,060	37,100	11,400
159.0	6 1/4	109.7	73.5	1,497	14,700	1,650	1,600	15,700	1,764	1,680	16,500	1,852	1,760	17,300	1,940	1,150	41,000	12,300
162.0	6 3/8	114.0	76.4	1,539	15,100	1,696	1,650	16,100	1,819	1,730	17,000	1,907	1,810	17,800	1,995	1,190	43,000	12,800

Daha yüksek kopma kuvvetli halatlar özel istek üzerine üretilmektedir.

Deniz suyunda yaklaşık halat hacmi= 0.87x Havadaki halat hacmi.

Ropes with higher Mbf could be custom designed upon special request.

Estimated Rope Mass in Sea Water = 0.87 x Rope Mass in Air.



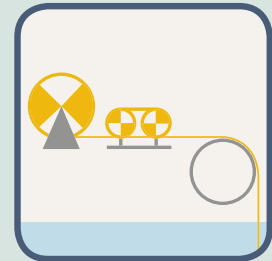
» Riser Tensioner



» Anchor & Mooring



» Crane



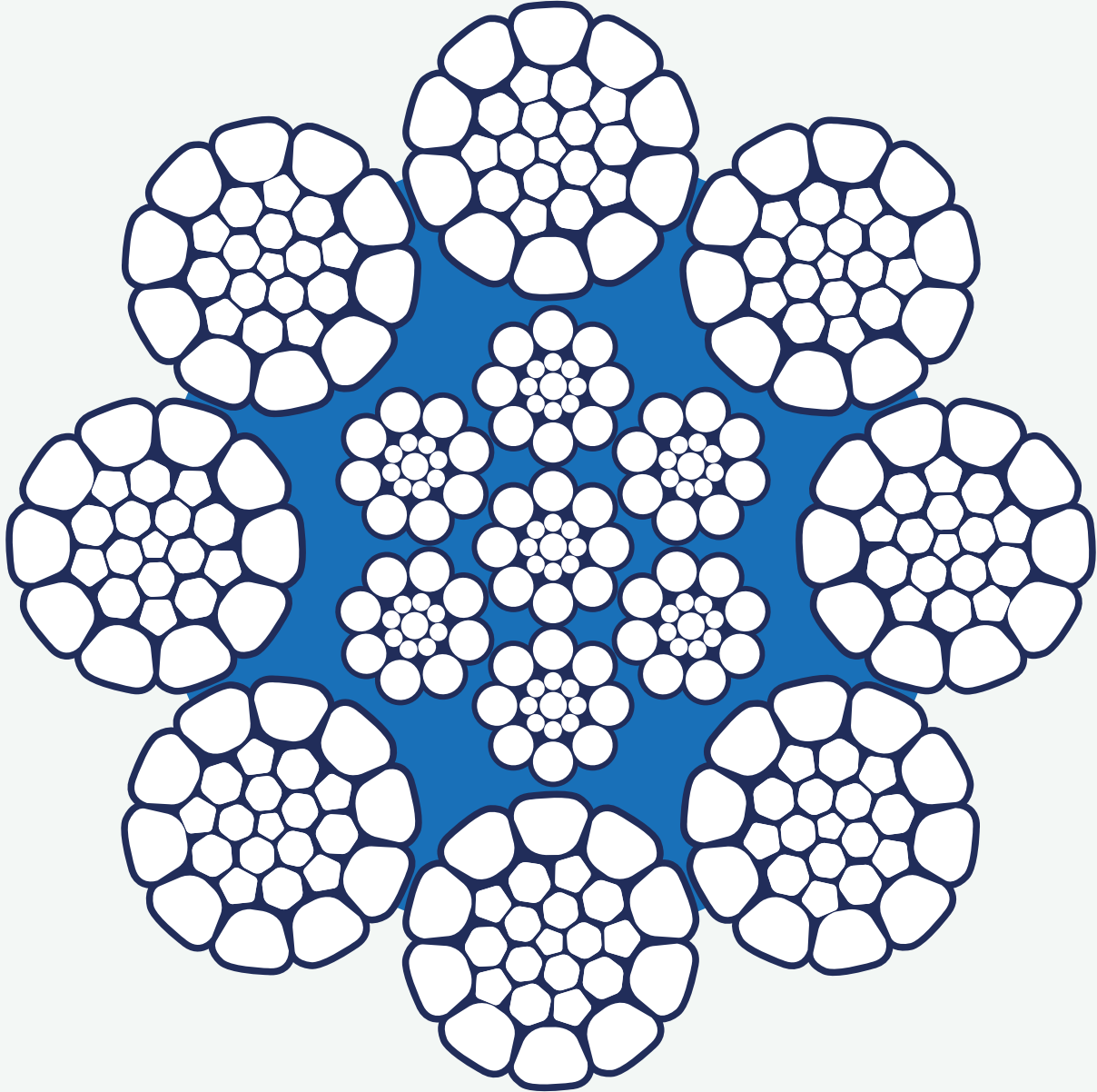
» A&R Winch

Neptune

Neptune 8 Strand Compacted Özellikleri
Benefits of Neptune 8 Strand Compacted

8 Strand Compacted *Kompakt 8 Damarlı*

- ◇ Tam yağlanmış
- ◇ Plastik dolgu seçeneği
- ◇ Yüksek kopma kuvveti
- ◇ Daha geniş temas yüzeyi
- ◇ Aşınmaya karşı daha yüksek dayanıklılık
- ◇ Galvanizli / Alumar Kaplama / Siyah
- ◇ *Fully Lubricated*
- ◇ *Plastic Infilled Option*
- ◇ *High Breaking Force*
- ◇ *Greater contact area*
- ◇ *Higher resistance to abrasion*
- ◇ *Zinc coated / Alumar coated / Bright*



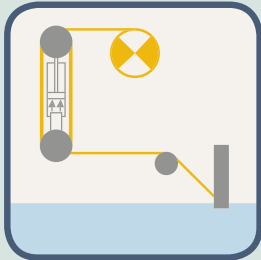
Halat Çapı Rope Nominal Diameter		Yaklaşık Ağırlık (Havada) Approx. Weight in Air		Minimum Kopma Kuvveti / Minimum Breaking Force												Referans Bilgisi (Yaklaşık Olarak) Reference information (Approximately)		
				EEIPS			ALPHA			DELTA			OMEGA			Eksenel Sertlik Axial Stiffness	Yükün %20 'sinde ortaya çıkan tork Torque generated at 20% of Nominal Load	Metalik Kesit Alanı Metallic Cross Sectional Area
mm	inches	kg/m	lb/ft	tonnes force	kN	short tons	tonnes force	kN	short tons	tonnes force	kN	short tons	tonnes force	kN	short tons	MN	N.m	mm ²
50.8	2	12.2	8.2	218	2,140	241	241	2,360	266	253	2,480	279	257	2,520	283	130	2,000	1,380
54.0	2 1/8	13.9	9.4	244	2,400	269	267	2,620	294	280	2,750	309	285	2,790	314	150	2,300	1,540
57.2	2 1/4	15.7	10.5	274	2,680	302	305	2,990	336	321	3,150	354	326	3,200	359	170	2,800	1,720
60.3	2 3/8	17.1	11.1	305	2,990	335	340	3,330	375	358	3,510	395	363	3,560	400	190	3,200	1,910
63.5	2 1/2	19.3	12.9	334	3,270	368	373	3,660	411	392	3,840	432	398	3,900	439	210	3,700	2,170
66.7	2 5/8	21.3	14.3	367	3,590	404	411	4,030	453	432	4,240	476	439	4,310	484	240	4,300	2,410
69.9	2 3/4	23.3	15.6	400	3,920	440	454	4,450	500	476	4,670	525	484	4,750	534	260	5,000	2,630
73.0	2 7/8	25.5	17.1	435	4,260	479	496	4,860	547	521	5,110	574	529	5,190	583	290	5,700	2,940
76.2	3	27.7	18.6	472	4,630	520	545	5,340	601	573	5,620	632	581	5,700	640	310	6,500	3,100
79.4	3 1/8	30.1	20.2	508	4,980	560	579	5,680	638	608	5,960	670	618	6,060	681	340	7,200	3,440
82.6	3 1/4	32.6	21.9	548	5,370	604	618	6,060	681	649	6,360	715	660	6,470	728	370	8,000	3,730
85.7	3 3/8	35.1	23.6	586	5,750	646	656	6,430	723	689	6,760	759	700	6,860	772	390	9,000	4,010
88.9	3 1/2	38.0	25.6	625	6,120	689	713	6,990	786	749	7,350	826	761	7,460	839	420	10,100	4,290
95.3	3 3/4	43.4	29.2	711	6,970	783	793	7,780	874	833	8,170	918	848	8,320	935	490	11,900	4,990
102.0	4	49.4	33.2	799	7,830	881	876	8,590	966	920	9,020	1,014	935	9,170	1,031	550	14,200	5,640
108.0	4 1/4	53.6	36.0	884	8,670	972	978	9,590	1,078	1,030	10,100	1,135	1,040	10,200	1,146	610	16,700	6,190
114.0	4 1/2	60.3	40.6	971	9,520	1,068	1,070	10,500	1,179	1,130	11,100	1,246	1,150	11,300	1,268	680	19,500	6,900
121.0	4 3/4	67.2	45.2	1,059	10,390	1,165	1,170	11,500	1,290	1,230	12,100	1,356	1,250	12,300	1,378	750	22,400	7,650
127.0	5	74.4	50.0	1,149	11,270	1,264	1,270	12,500	1,400	1,330	13,000	1,466	1,360	13,300	1,499	820	25,600	8,310
133.0	5 1/4	82.0	55.2	1,232	12,080	1,355	1,360	13,300	1,499	1,430	14,000	1,576	1,450	14,200	1,598	880	28,800	8,970
140.0	5 1/2	90.0	60.6	1,322	12,960	1,454	1,460	14,300	1,609	1,540	15,100	1,698	1,560	15,300	1,720	970	32,400	9,940
146.0	5 3/4	98.4	66.2	1,419	13,920	1,561	1,570	15,400	1,731	1,650	16,200	1,819	1,680	16,500	1,852	1,060	36,400	10,800

Daha yüksek kopma kuvvetli halatlar özel istek üzerine üretilmektedir.

Deniz suyunda yaklaşık halat hacmi= 0.87x Havadaki halat hacmi.

Ropes with higher Mbf could be custom designed upon special request.

Estimated Rope Mass in Sea Water = 0.87 x Rope Mass in Air.



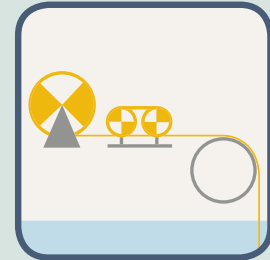
» Riser Tensioner



» Anchor & Mooring



» Crane



» A&R Winch

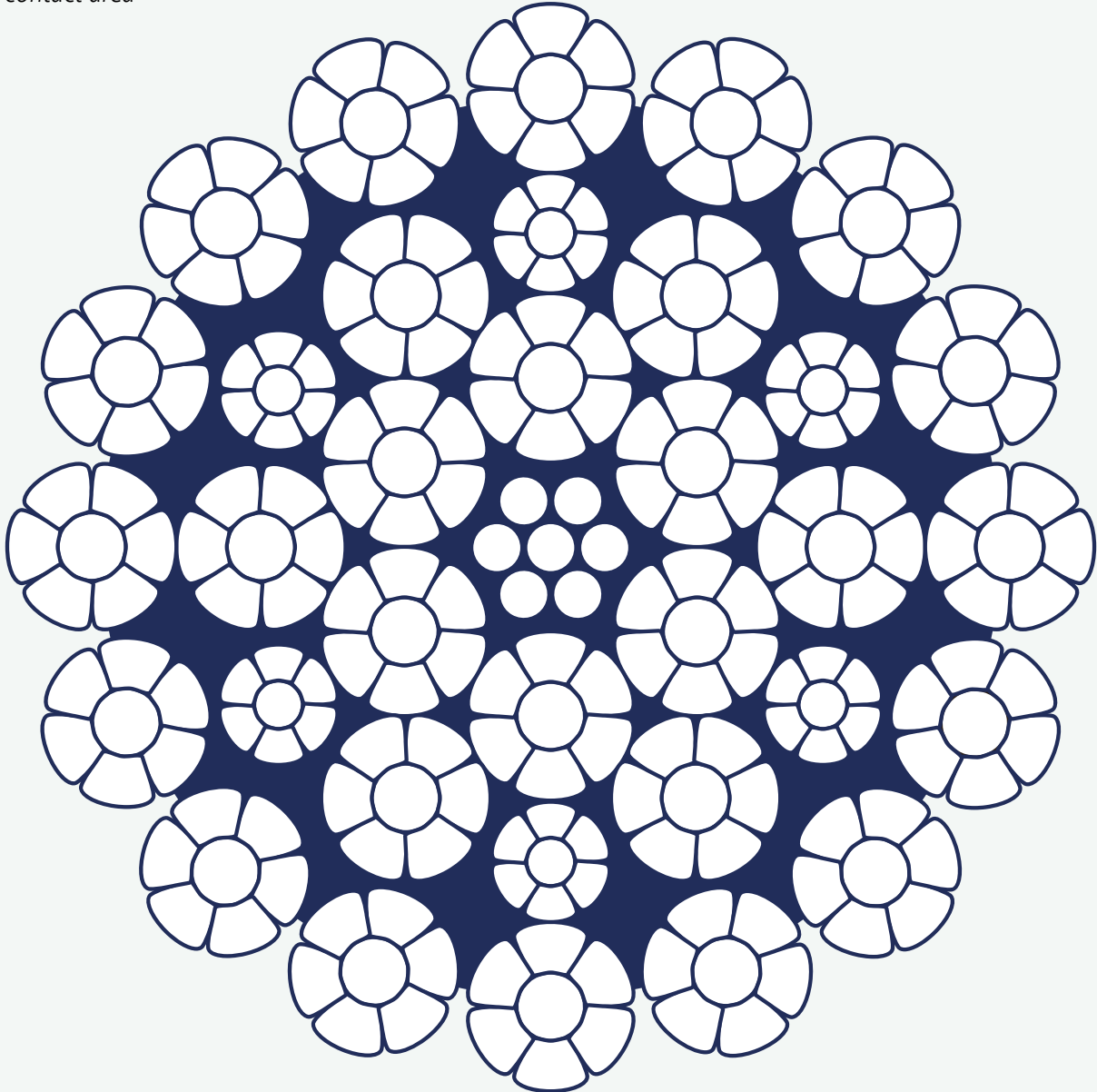
N2 Hyrope

N2 Hyrope 35xK7 Özellikleri
Benefits of N2 Hyrope 35xK7

35xK7 Rotation Resistant Rope *Dönme Karşı Dirençli Halat*

- ◇ Dönme dirençli
- ◇ Tam yağlanmış
- ◇ Plastik dolgu seçeneği
- ◇ Yüksek kopma kuvveti
- ◇ Kompakt
- ◇ Daha geniş temas yüzeyi

- ◇ *Rotation resistant*
- ◇ *Fully lubricated*
- ◇ *Plastic infilled option*
- ◇ *High breaking force*
- ◇ *Compacted*
- ◇ *Greater contact area*



Halat Çapı Rope Nominal Diameter		Yaklaşık Ağırlık (Havada) Approx. Weight in Air		Minimum Kopma Kuvveti / Minimum Breaking Force				Referans Bilgisi (Yaklaşık Olarak) Reference information (Approximately)			
				N grade		S grade		Maksimum Uzunluk Maximum Length	Eksenel Sertlik Axial Stiffness	Yükün %20'sinde ortaya çıkan tork Torque generated at 20% of Nominal Load	Metalik Kesit Alanı Metallic Cross Sectional Area
mm	inches	kg/m	lb/ft	tonnes force	kN	tonnes force	kN	meter	MN	N.m	mm ²
50.8	2	12.9	8.6	229	2,250	241	2,360	23,200	150	340	1,390
52.0		13.4	9.0	240	2,360	253	2,480	22,300	160	370	1,460
54.0	2 1/8	14.6	9.8	259	2,540	273	2,680	20,500	170	410	1,580
56.0		15.7	10.5	278	2,730	293	2,870	19,100	180	460	1,690
57.2	2 1/4	16.3	10.9	285	2,790	300	2,940	18,400	190	480	1,770
58.0		16.9	11.3	294	2,880	309	3,030	17,700	200	500	1,820
60.3	2 3/8	18.2	12.2	314	3,080	331	3,250	16,400	210	560	1,960
62.0		19.4	13.0	335	3,290	353	3,460	15,400	220	610	2,080
63.5	2 1/2	20.2	13.5	352	3,460	371	3,640	14,800	240	660	2,180
64.0		20.2	13.5	357	3,500	376	3,690	14,800	240	670	2,210
66.0		21.5	14.4	380	3,730	400	3,920	13,900	250	740	2,350
66.7	2 5/8	22.2	14.9	388	3,800	408	4,000	13,500	260	760	2,400
68.0		22.9	15.3	404	3,960	425	4,170	13,100	270	810	2,500
69.9	2 3/4	24.4	16.3	426	4,180	448	4,400	12,200	290	880	2,640
72.0		25.8	17.3	452	4,430	476	4,670	11,600	300	960	2,790
73.0	2 7/8	26.7	17.9	465	4,560	489	4,800	11,200	310	1,000	2,870
74.0		27.4	18.4	478	4,690	503	4,930	10,900	320	1,040	2,950
76.0		29.0	19.4	504	4,940	530	5,200	10,300	340	1,130	3,110
76.2	3	29.0	19.4	504	4,940	530	5,200	10,300	340	1,130	3,110
79.4	3 1/8	31.5	21.1	541	5,310	570	5,590	9,500	370	1,260	3,390
82.0		33.9	22.7	568	5,570	598	5,860	8,800	390	1,370	3,620
82.6	3 1/4	34.1	22.8	568	5,570	598	5,860	8,700	400	1,380	3,670
84.0		34.9	23.4	588	5,770	619	6,070	8,500	410	1,450	3,800
85.7	3 3/8	36.7	24.6	613	6,010	645	6,320	8,100	430	1,540	3,950
88.0		38.4	25.7	646	6,330	679	6,660	7,800	450	1,670	4,170
88.9	3 1/2	39.5	26.5	658	6,450	693	6,790	7,500	460	1,720	4,250
90.0		39.5	26.5	658	6,450	693	6,790	7,500	470	1,740	4,360
92.0		41.3	27.7	686	6,730	722	7,080	7,200	480	1,850	4,560
94.0		43.1	28.9	708	6,940	745	7,310	6,900	500	1,960	4,760
95.3	3 3/4	45.4	30.4	717	7,030	755	7,400	6,600	520	2,010	4,900
96.0		46.4	31.1	729	7,150	767	7,520	6,400	530	2,050	4,970

Daha yüksek kopma kuvvetli halatlar özel istek üzerine üretilmektedir.

Deniz suyunda yaklaşık halat hacmi= 0.87x Havadaki halat hacmi.

Ropes with higher Mbf could be custom designed upon special request.

Estimated Rope Mass in Sea Water = 0.87 x Rope Mass in Air.



» Anchor & Mooring



» Crane

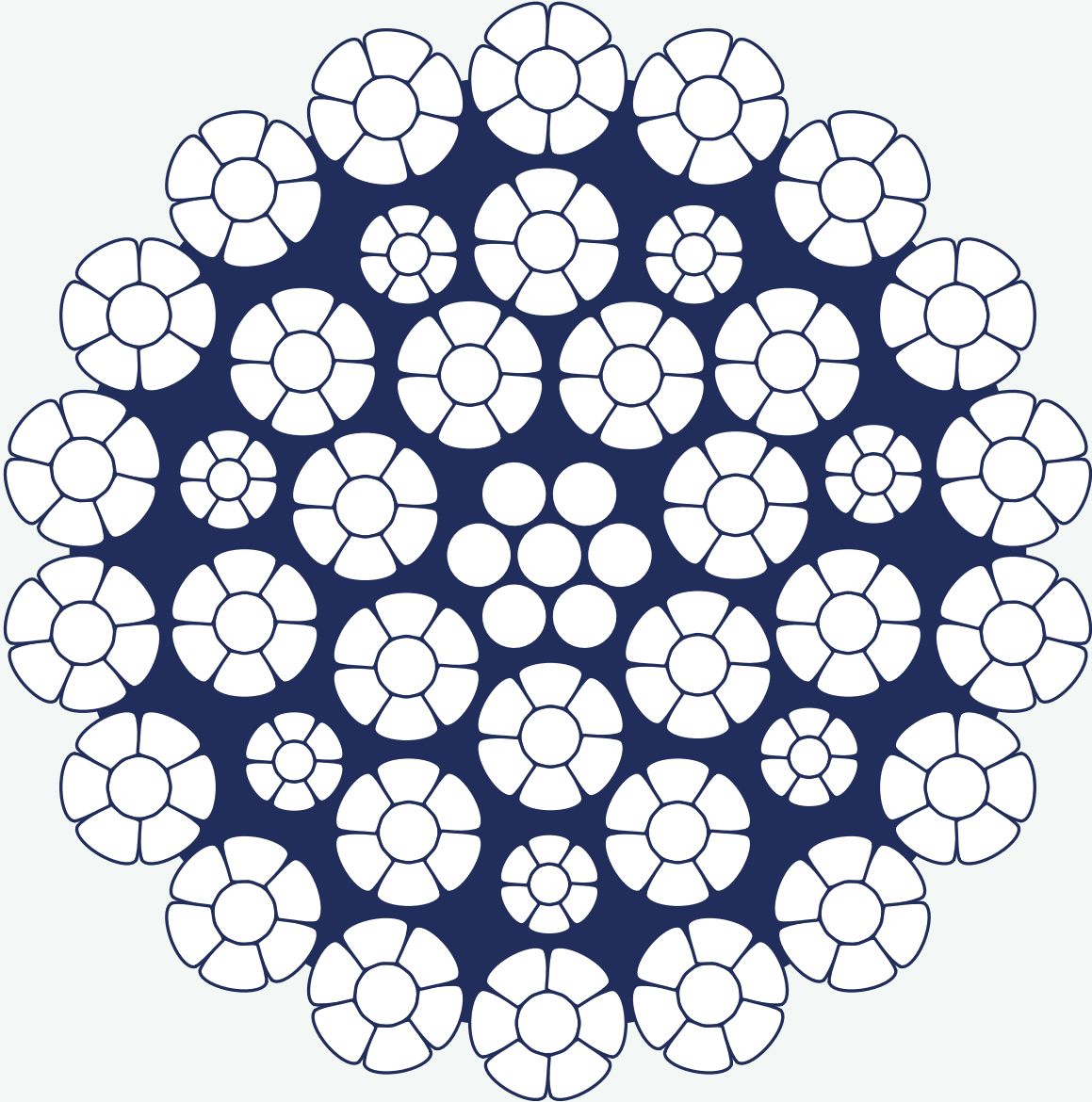
N2 Hyrope

N2 Hyrope 40xK7 Özellikleri

Benefits of N2 Hyrope 40xK7

40xK7 Rotation Resistant Rope *Dönmeye Karşı Dirençli Halat*

- ◇ Dönmeye dirençli
- ◇ Tam yağlanmış
- ◇ Plastik dolgu seçeneği
- ◇ Yüksek kopma kuvveti
- ◇ Kompakt
- ◇ Daha geniş temas yüzeyi
- ◇ *Rotation resistant*
- ◇ *Fully lubricated*
- ◇ *Plastic infilled option*
- ◇ *High breaking force*
- ◇ *Compacted*
- ◇ *Greater contact area*



Halat Çapı Rope Nominal Diameter		Yaklaşık Ağırlık (Havada) Approx. Weight in Air		Minimum Kopma Kuvveti / Minimum Breaking Force				Referans Bilgisi (Yaklaşık Olarak) Reference information (Approximately)			
				N grade		S grade		Maksimum Uzunluk Maximum Length	Eksenel Sertlik Axial Stiffness	Yükün %20'sinde ortaya çıkan tork Torque generated at 20% of Nominal Load	Metalik Kesit Alanı Metallic Cross Sectional Area
mm	inches	kg/m	lb/ft	tonnes force	kN	tonnes force	kN	meter	MN	N.m	mm ²
82.0		33.9	22.7	587	5,760	618	6,060	8,800	400	850	3,700
82.6	3 1/4	34.1	22.8	587	5,760	618	6,060	8,700	410	860	3,750
84.0		34.9	23.4	608	5,960	640	6,280	8,500	420	900	3,880
85.7	3 3/8	36.7	24.6	637	6,250	671	6,580	8,100	440	960	4,040
88.0		38.4	25.7	660	6,470	695	6,820	7,800	460	1,030	4,270
88.9	3 1/2	39.5	26.5	691	6,770	727	7,130	7,500	470	1,080	4,360
90.0		39.5	26.5	691	6,770	727	7,130	7,500	480	1,100	4,470
92.0		41.3	27.7	722	7,080	760	7,450	7,200	490	1,170	4,560
94.0		43.1	28.9	745	7,300	784	7,690	6,900	510	1,240	4,760
95.3	3 3/4	45.4	30.4	755	7,410	795	7,800	6,600	530	1,270	4,900
96.0		46.4	31.1	767	7,520	807	7,910	6,400	540	1,300	4,970
98.0		48.3	32.4	805	7,890	847	8,310	6,200	560	1,390	5,180
100		50.3	33.7	831	8,150	875	8,580	9,900	580	1,470	5,390
102	4	51.6	34.6	865	8,480	910	8,920	9,600	600	1,560	5,570
104		53.6	35.9	899	8,820	946	9,280	9,300	630	1,650	5,830
106		55.7	37.3	935	9,160	984	9,650	8,900	650	1,750	6,060
108	4 1/4	58.3	39.1	969	9,500	1,020	10,000	8,500	680	1,850	6,290
110		60.5	40.5	998	9,790	1,050	10,300	8,200	700	1,940	6,520
112		62.8	42.1	1,030	10,100	1,080	10,600	7,900	720	2,040	6,670
114	4 1/2	65.3	43.8	1,070	10,500	1,130	11,100	7,600	740	2,150	6,910
116		67.6	45.3	1,090	10,700	1,150	11,300	7,300	770	2,230	7,150
120		72.4	48.5	1,170	11,500	1,230	12,100	6,900	830	2,480	7,660

Daha yüksek kopma kuvvetli halatlar özel istek üzerine üretilmektedir.

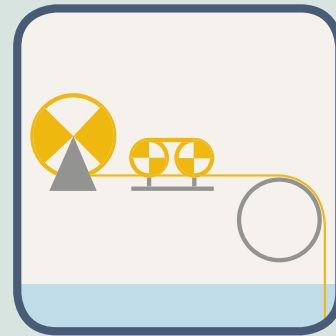
Deniz suyunda yaklaşık halat hacmi= 0.87x Havadaki halat hacmi.

Ropes with higher Mbf could be custom designed upon special request.

Estimated Rope Mass in Sea Water = 0.87 x Rope Mass in Air.



» Crane



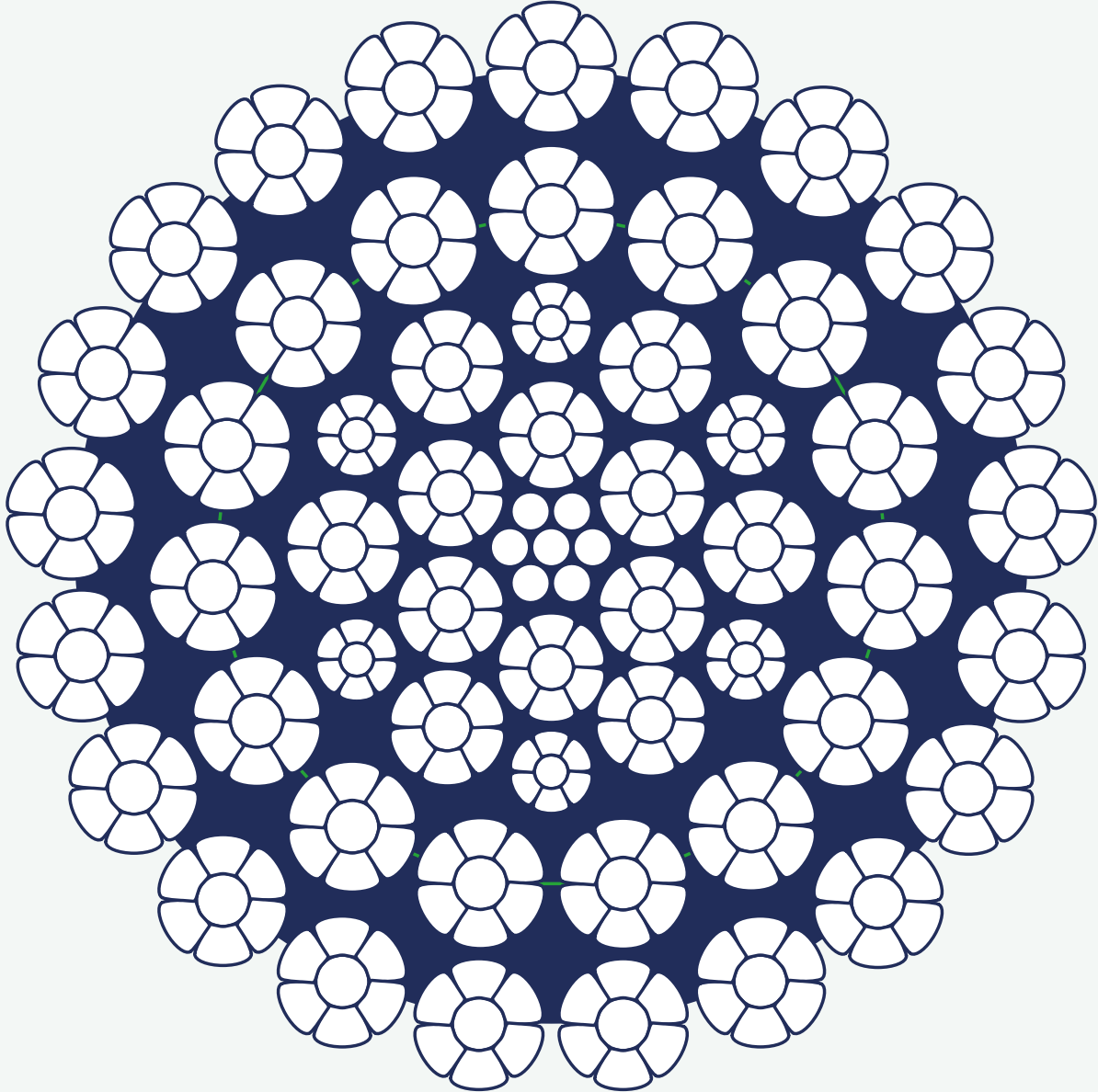
» A&R Winch

N2 Hyrope

N2 Hyrope 55xK7 Özellikleri
Benefits of N2 Hyrope 55xK7

55xK7 Rotation Resistant Rope *Dönme Karşı Dirençli Halat*

- ◇ Dönme dirençli
- ◇ Tam yağlanmış
- ◇ Plastik dolgu seçeneği
- ◇ Yüksek kopma kuvveti
- ◇ Kompakt
- ◇ Daha geniş temas yüzeyi
- ◇ *Rotation resistant*
- ◇ *Fully lubricated*
- ◇ *Plastic infilled option*
- ◇ *High breaking force*
- ◇ *Compacted*
- ◇ *Greater contact area*



Halat Çapı Rope Nominal Diameter		Yaklaşık Ağırlık (Havada) Approx. Weight in Air		Minimum Kopma Kuvveti / Minimum Breaking Force				Referans Bilgisi (Yaklaşık Olarak) Reference information (Approximately)			
				N grade		S grade		Maksimum Uzunluk Maximum Length	Eksenel Sertlik Axial Stiffness	Yükün %20'sinde ortaya çıkan tork Torque generated at 20% of Nominal Load	Metalik Kesit Alanı Metallic Cross Sectional Area
mm	inches	kg/m	lb/ft	tonnes force	kN	tonnes force	kN	meter	MN	N.m	mm ²
112		59.5	39.9	1,000	9,810	1,060	10,400	10,000	660	3,730	6,730
114	4 1/2	62.0	41.5	1,050	10,300	1,100	10,800	9,600	680	3,990	6,970
116		64.2	43.0	1,070	10,500	1,130	11,100	9,300	710	4,140	7,210
120		68.7	46.0	1,140	11,200	1,200	11,800	8,700	760	4,560	7,720
121	4 3/4	69.1	46.3	1,150	11,300	1,210	11,900	8,600	770	4,640	7,850
122		70.2	47.0	1,180	11,600	1,240	12,200	8,500	780	4,800	7,980
124		72.6	48.6	1,220	12,000	1,280	12,600	8,200	810	5,040	8,240
126		74.9	50.2	1,260	12,400	1,320	12,900	8,000	830	5,290	8,510
127	5	76.6	51.3	1,280	12,600	1,340	13,100	7,800	850	5,420	8,650
128		77.8	52.1	1,280	12,600	1,350	13,200	7,700	860	5,460	8,780
130		80.3	53.8	1,320	12,900	1,390	13,600	7,400	890	5,720	9,060
132		82.8	55.5	1,360	13,300	1,430	14,000	7,200	920	5,990	9,340
133	5 1/4	84.4	56.5	1,390	13,600	1,460	14,300	7,100	930	6,160	9,480
134		85.7	57.4	1,400	13,700	1,470	14,400	7,000	940	6,260	9,630
136		88.3	59.2	1,430	14,000	1,510	14,800	6,700	970	6,480	9,920
138		90.9	60.9	1,470	14,400	1,550	15,200	6,600	1,000	6,760	10,200
140	5 1/2	92.6	62.0	1,520	14,900	1,600	15,700	6,400	1,030	7,100	10,500
142		95.3	63.9	1,550	15,200	1,630	16,000	6,200	1,060	7,430	10,800
144		98.0	65.7	1,590	15,600	1,670	16,400	6,100	1,090	7,730	11,100
146	5 3/4	101.0	67.7	1,620	15,900	1,710	16,800	5,900	1,120	8,030	11,400
148		104.0	69.7	1,650	16,200	1,740	17,100	5,700	1,150	8,340	11,700
150		107.0	71.7	1,690	16,600	1,780	17,500	5,600	1,180	8,700	12,100
152	6	110.0	73.7	1,740	17,100	1,830	18,000	5,400	1,210	9,070	12,400
154		112.0	75.0	1,780	17,500	1,880	18,400	5,300	1,250	9,350	12,700
156		115.0	77.1	1,800	17,700	1,900	18,600	5,200	1,280	9,670	13,000
158		118.0	79.1	1,840	18,000	1,940	19,000	5,000	1,310	10,000	13,400
159	6 1/4	120.0	80.4	1,860	18,200	1,960	19,200	5,000	1,330	10,200	13,600
160		121.0	81.1	1,890	18,500	1,990	19,500	4,900	1,350	10,400	13,700
162	6 3/8	124.0	83.1	1,930	18,900	2,030	19,900	4,800	1,380	10,700	14,100
165	6 1/2	129.0	86.4	1,950	19,100	2,050	20,100	4,600	1,430	11,400	14,600
171	6 3/4	140.0	93.8	2,090	20,500	2,200	21,600	4,200	1,540	12,800	15,700

Daha yüksek kopma kuvvetli halatlar özel istek üzerine üretilmektedir.

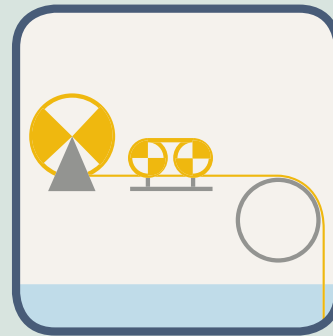
Deniz suyuunda yaklaşık halat hacmi= 0.87x Havadaki halat hacmi.

Ropes with higher Mbf could be custom designed upon special request.

Estimated Rope Mass in Sea Water = 0.87 x Rope Mass in Air.



» Crane



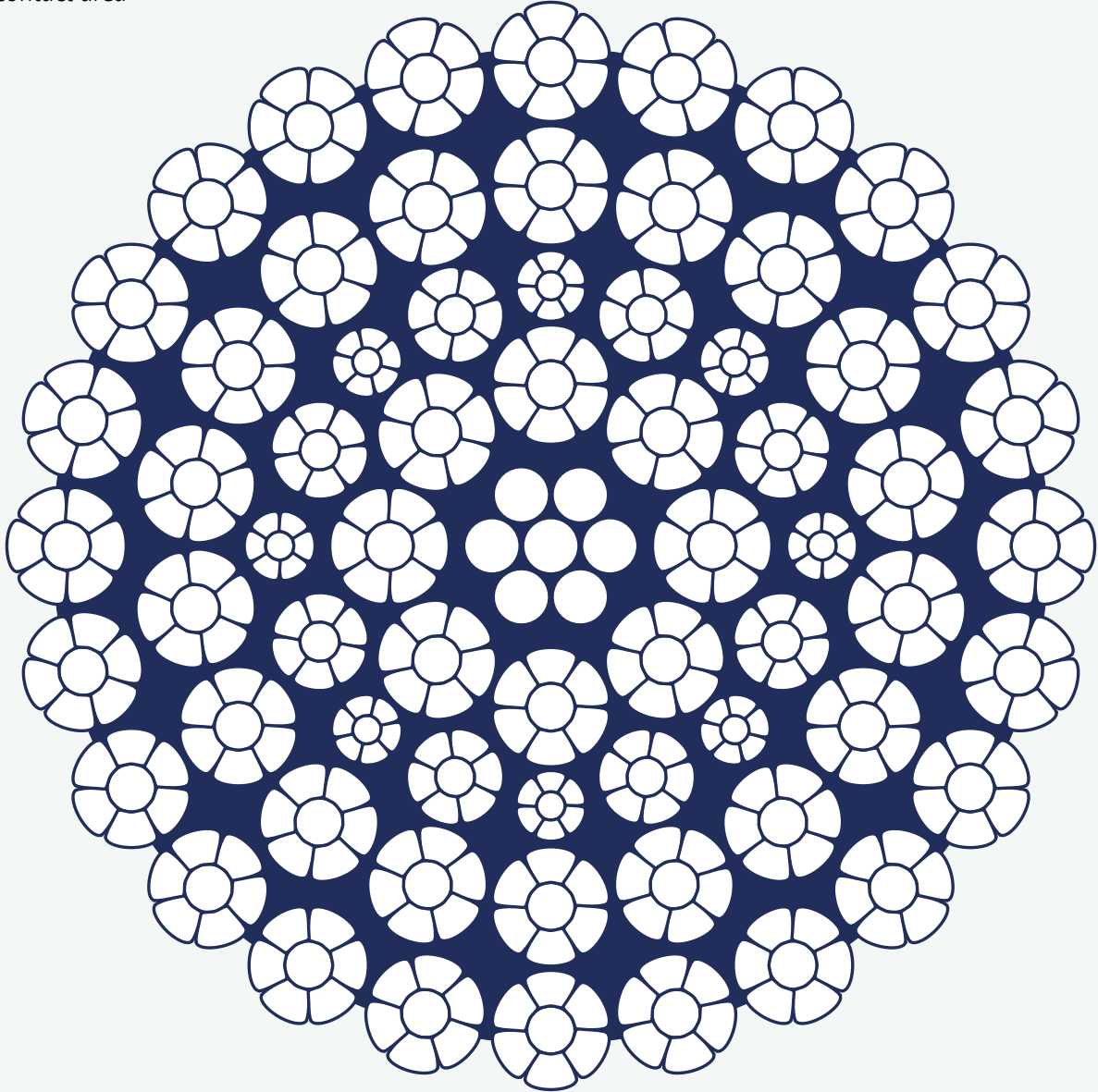
» A&R Winch

N2 Hyrope

N2 Hyrope 67xK7 Özellikleri
Benefits of N2 Hyrope 67 x K7

67xK7 Rotation Resistant Rope *Dönmeye Karşı Dirençli Halat*

- ◇ Dönmeye dirençli
- ◇ Tam yağlanmış
- ◇ Plastik dolgu seçeneği
- ◇ Yüksek kopma kuvveti
- ◇ Kompakt
- ◇ Daha geniş temas yüzeyi
- ◇ *Rotation resistant*
- ◇ *Fully lubricated*
- ◇ *Plastic infilled option*
- ◇ *High breaking force*
- ◇ *Compacted*
- ◇ *Greater contact area*



Halat Çapı Rope Nominal Diameter		Yaklaşık Ağırlık (Havada) Approx. Weight in Air		Minimum Kopma Kuvveti / Minimum Breaking Force				Referans Bilgisi (Yaklaşık Olarak) Reference information (Approximately)			
				N grade		S grade		Maksimum Uzunluk Maximum Length	Eksenel Sertlik Axial Stiffness	Yükün %20'sinde ortaya çıkan tork Torque generated at 20% of Nominal Load	Metalik Kesit Alanı Metallic Cross Sectional Area
mm	inches	kg/m	lb/ft	tonnes force	kN	tonnes force	kN	meter	MN	N.m	mm ²
112		59.5	39.9	1,000	9,810	1,060	10,400	10,000	660	3,730	6,730
114	4 1/2	62.0	41.5	1,050	10,300	1,100	10,800	9,600	680	3,990	6,970
116		64.2	43.0	1,070	10,500	1,130	11,100	9,300	710	4,140	7,210
120		68.7	46.0	1,140	11,200	1,200	11,800	8,700	760	4,560	7,720
121	4 3/4	69.1	46.3	1,150	11,300	1,210	11,900	8,600	770	4,640	7,850
122		70.2	47.0	1,180	11,600	1,240	12,200	8,500	780	4,800	7,980
124		72.6	48.6	1,220	12,000	1,280	12,600	8,200	810	5,040	8,240
126		74.9	50.2	1,260	12,400	1,320	12,900	8,000	830	5,290	8,510
127	5	76.6	51.3	1,280	12,600	1,340	13,100	7,800	850	5,420	8,650
128		77.8	52.1	1,280	12,600	1,350	13,200	7,700	860	5,460	8,780
130		80.3	53.8	1,320	12,900	1,390	13,600	7,400	890	5,720	9,060
132		82.8	55.5	1,360	13,300	1,430	14,000	7,200	920	5,990	9,340
133	5 1/4	84.4	56.5	1,390	13,600	1,460	14,300	7,100	930	6,160	9,480
134		85.7	57.4	1,400	13,700	1,470	14,400	7,000	940	6,260	9,630
136		88.3	59.2	1,430	14,000	1,510	14,800	6,700	970	6,480	9,920
138		90.9	60.9	1,470	14,400	1,550	15,200	6,600	1,000	6,760	10,200
140	5 1/2	92.6	62.0	1,520	14,900	1,600	15,700	6,400	1,030	7,100	10,500
142		95.3	63.9	1,570	15,400	1,650	16,200	6,200	1,060	7,430	10,800
144		98.0	65.7	1,610	15,800	1,690	16,600	6,100	1,090	7,730	11,100
146	5 3/4	101.0	67.7	1,650	16,200	1,740	17,100	5,900	1,120	8,030	11,400
148		104.0	69.7	1,690	16,600	1,780	17,500	5,700	1,150	8,340	11,700
150		107.0	71.7	1,740	17,100	1,830	17,900	5,600	1,180	8,700	12,100
152	6	110.0	73.7	1,790	17,600	1,880	18,400	5,400	1,210	9,070	12,400
154		112.0	75.0	1,820	17,800	1,920	18,800	5,300	1,250	9,350	12,700
156		115.0	77.1	1,860	18,200	1,960	19,200	5,200	1,280	9,670	13,000
158		118.0	79.1	1,900	18,600	2,000	19,600	5,000	1,310	10,000	13,400
159	6 1/4	120.0	80.4	1,920	18,800	2,020	19,800	5,000	1,330	10,200	13,600
160		121.0	81.1	1,950	19,100	2,050	20,100	4,900	1,350	10,400	13,700
162	6 3/8	124.0	83.1	1,990	19,500	2,100	20,600	4,800	1,380	10,700	14,100
165	6 1/2	129.0	86.4	2,070	20,300	2,180	21,400	4,600	1,430	11,400	14,600
171	6 3/4	140.0	93.8	2,240	22,000	2,350	23,000	4,200	1,540	12,800	15,700

Daha yüksek kopma kuvvetli halatlar özel istek üzerine üretilmektedir.

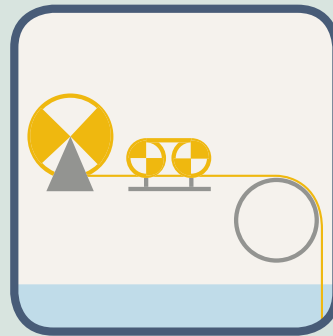
Deniz suyuunda yaklaşık halat hacmi= 0.87x Havadaki halat hacmi.

Ropes with higher Mbf could be custom designed upon special request.

Estimated Rope Mass in Sea Water = 0.87 x Rope Mass in Air.



» Crane



» A&R Winch

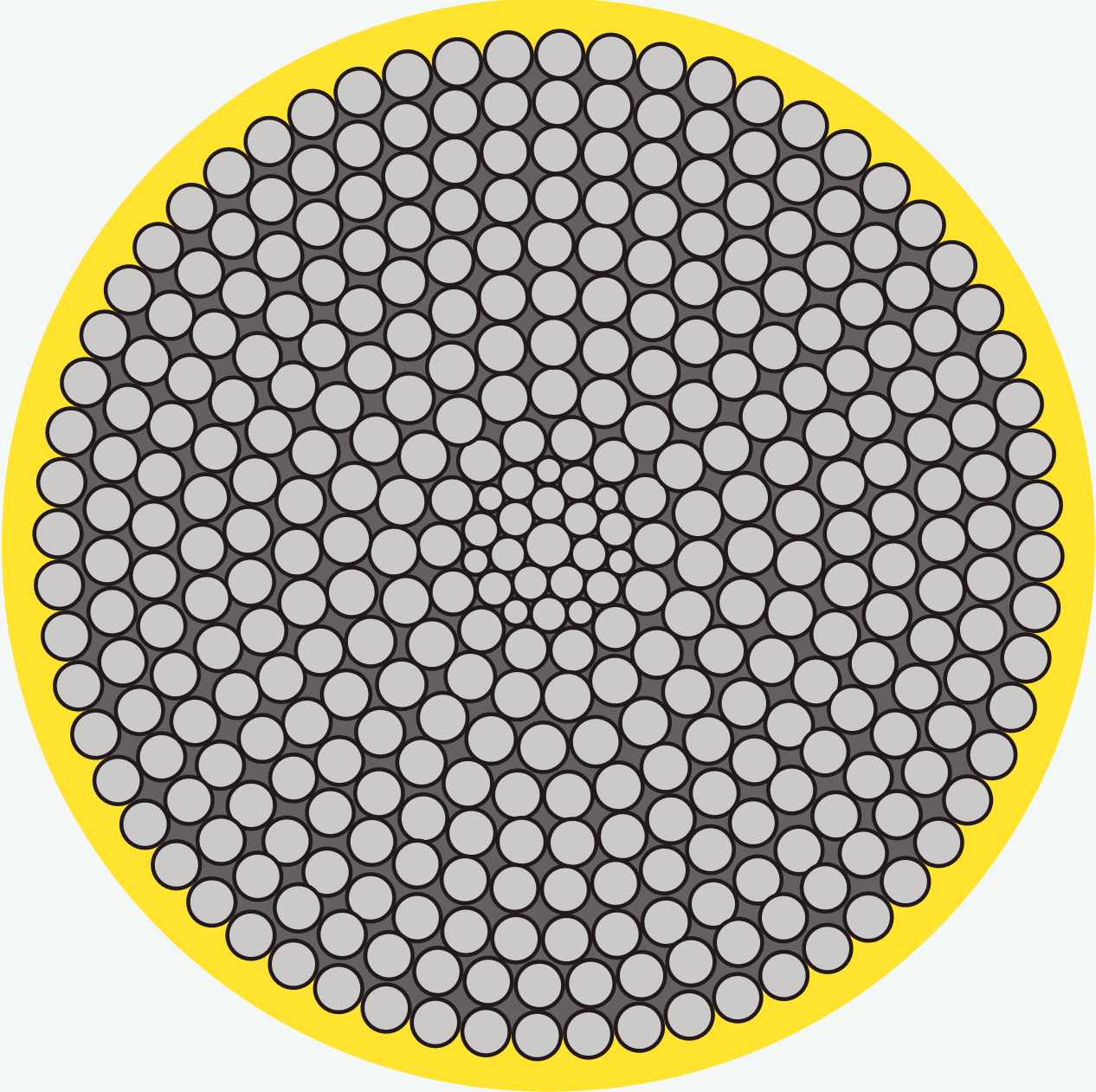
N2 Spiral

N2 Spiral Özellikleri Benefits of N2 Spiral

Permanent mooring for offshore industry

Offshore sektörü için kalıcı demirleme/bağlama

- ◇ Yüksek torsiyonel denge
- ◇ Korozyona karşı üstün koruma
- ◇ 20 yılı aşkın daha yüksek servis ömrü
- ◇ N2 Spiral'in öngörülen hizmet ömrü içerisinde en iyi dayanıklılık ve tork dengesi için germe yorulması ve aksenal yorulma üzerinde dinamik test ve bilgisayar destekli modelleme.
- ◇ N2 Spiral sonlandırmada modern gerekliliklere uygun tasarım ve üretim
- ◇ Koruyucu MDPE ya da HDPE kaplama
- ◇ *High torsional balance*
- ◇ *Superior corrosion protection*
- ◇ *Longer service life to over 20 years*
- ◇ *Computer Aided Rope Design Modeling and Dynamic Testing on tension-tension fatigue and axial fatigue for the best endurance, torque balance and for predicting the life span of N2 Spiral*
- ◇ *Design and manufacture of N2 Spiral terminations ensure compliance with contemporary requirements*
- ◇ *Sheathing in MDPE or HDPE*



Damar Çapı Strand Nominal Diameter		Ürün Çapı Products Dia	Kaplama Kalınlığı Sheathing Thickness	Yaklaşık Ağırlık Approx. weight		Minimum Kopma Kuvveti / Minimum Breaking Force				Yaklaşık Eksenel Sertlik Approx. Axial Stiffness	Metalik Kesit Alanı Metallic Cross Sectional Area
				In air		1770		1960			
mm	inches	mm	mm	kg/m	lb/ft	tonnes force	kN	tonnes force	kN	MN	mm ²
65	2 1/2	77.0	6	22.7	15.3	420	4,120	465	4,560	410	2,520
68	2 5/8	80.0	6	24.4	16.4	455	4,460	500	4,900	440	2,680
70	2 3/4	86.0	8	26.7	17.9	480	4,710	545	5,350	480	2,940
73	2 7/8	89.0	8	29.3	19.7	525	5,150	605	5,930	540	3,250
76	3	92.0	8	31.8	21.4	580	5,690	655	6,420	580	3,540
79	3 1/8	95.0	8	34.9	23.5	625	6,130	720	7,060	620	3,880
82	3 1/4	98.0	8	37.7	25.3	670	6,570	780	7,650	670	4,200
86	3 3/8	102.0	8	38.9	26.1	735	7,210	825	8,090	710	4,450
90	3 1/2	110.0	10	43.1	29.0	810	7,940	890	8,730	770	4,790
92.5	3 5/8	112.5	10	46.1	31.0	860	8,430	945	9,270	810	5,080
95.5	3 3/4	115.5	10	49.2	33.1	915	8,970	1,015	9,950	870	5,440
98	3 7/8	118.0	10	54.0	36.3	965	9,460	1,110	10,890	950	5,960
102	4	124.0	11	57.6	38.7	1,050	10,300	1,180	11,570	1,020	6,350
105.5	4 1/8	127.5	11	59.4	39.9	1,110	10,890	1,230	12,060	1,060	6,600
108	4 1/4	130.0	11	62.9	42.3	1,165	11,430	1,310	12,850	1,120	7,000
111.5	4 3/8	133.5	11	67.2	45.2	1,240	12,160	1,395	13,680	1,200	7,480
114	4 1/2	136.0	11	71.1	47.8	1,305	12,800	1,475	14,470	1,270	7,920
118	4 5/8	140.0	11	74.6	50.1	1,390	13,630	1,550	15,200	1,310	8,310
121.5	4 3/4	143.5	11	78.5	52.7	1,465	14,370	1,635	16,030	1,380	8,760
124	4 7/8	146.0	11	82.2	55.2	1,540	15,100	1,710	16,770	1,450	9,190
127	5	149.0	11	86.3	58.0	1,605	15,740	1,800	17,650	1,530	9,670
131	5 1/8	153.0	11	89.3	60.0	1,715	16,820	1,865	18,290	1,550	10,010
133	5 1/4	155.0	11	93.6	62.9	1,755	17,210	1,960	19,220	1,630	10,510
137.5	5 3/8	159.5	11	99.6	66.9	1,865	18,290	2,095	20,550	1,740	11,200
141	5 1/2	163.0	11	104.0	69.9	1,960	19,220	2,195	21,530	1,820	11,730
144	5 5/8	166.0	11	108.0	72.6	2,030	19,910	2,270	22,260	1,880	12,150
146.5	5 3/4	168.5	11	113.0	75.9	2,090	20,500	2,375	23,290	1,970	12,700
147.5	5 7/8	169.5	11	119.0	80.0	2,135	20,940	2,475	24,270	2,060	13,280
153	6	175.0	11	123.0	82.7	2,255	22,120	2,580	25,300	2,150	13,850

Daha yüksek kopma kuvvetli halatlar özel istek üzerine üretilmektedir.

Deniz suyuunda yaklaşık halat hacmi= 0.87x Havadaki halat hacmi.

Ropes with higher Mbf could be custom designed upon special request.

Estimated Rope Mass in Sea Water = 0.87 x Rope Mass in Air.



» Permanent Mooring

ÖRGÜ ve PRES BASKI



globalgroup
Management System Experts

TESCİL SERTİFİKASI

İşbu belge ile

ÇELSAN ÇELİK HALAT SANAYİ VE TİCARET A.Ş.
Demirciler Sitesi 10.Yol No:60 Zeytinburnu, İstanbul, TÜRKİYE

İŞ SAĞLIĞI VE GÜVENLİĞİ YÖNETİM SİSTEMİNİN

Çelik Halat, Zincir, Sapanlar ve Bağlantı Elemanları Satış
alanındaki uygulamasının

OHSAS 18001:2007

Hükümleri gereğince denetlendiği ve tescil edildiği onaylanır

Tescil Numarası: 98018505 Proje Numarası: 76-18505-1-0
Belgelendirme Tarihi: 10 Mayıs 2017 NACE Kodu: G 51.70
Bitiş Tarihi: 7 Mayıs 2018 Harici Hükümler: Yok
Belgelendirmeyi Onaylayan: Alan Cherry
Grup İcra Kurulu Başkanı

Bu sertifikaya 3 yıl için geçerlidir. Bu tescil işlemi, kuruluşun ilgili yönetim sistemini, yukarıda anılan standart uyarınca düzenli aralıklarla denetimlerine bağlar. Geçerliliği zamanla denetimleri gerçekleştirilmezse 4518602 işlemi akıya alır.
Bu belge, GlobalGROUP of Companies Limited, 21 Lansdowne Crescent, Edinburgh, Midlothian, EH2 2EN, Scotland, United Kingdom merkezlidir.

40001700

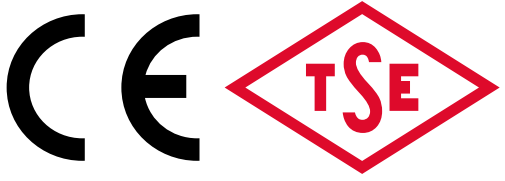
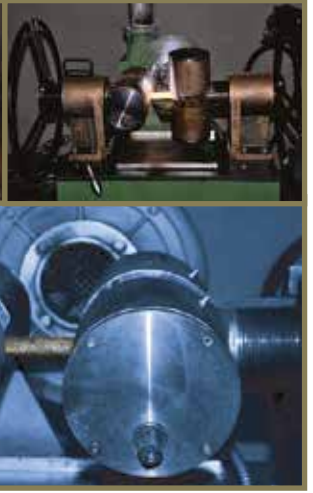
TÜRK STANDARLARI ENSTİTÜSÜ
TÜRK STANDARLARINA UYGUNLUK BELGESİ
TURKISH STANDARDS INSTITUTION
CERTIFICATE OF CONFORMITY TO TURKISH STANDARDS

Markanın Tanımı / Description of the Mark
TSE 18001:2007

BELGE NUMARASI REFERENCE NUMBER OF LICENSE	98004-18001-001
BELGENİN İLK VERİŞİLE TARIHI DATE OF FIRST ISSUE OF LICENSE	27.08.2015
BELGENİN SON GÜNCELLENME TARIHI LICENSE VALID UNTIL	27.08.2018
BELGE SAHİBİ KURULUŞUN ADI NAME OF THE LICENSE HOLDER	ÇELSAN ÇELİK HALAT SANAYİ VE TİC.A.Ş.
BELGE SAHİBİ KURULUŞUN ADRESİ ADDRESS OF THE LICENSE HOLDER	DEMİRCİLER SİTESİ 10.YOL NO:60 ZEYTİNBURNU İSTANBUL/TÜRKİYE
ÜRETİM YERİ ADI NAME OF THE MANUFACTURING PLANT	ÇELSAN ÇELİK HALAT SANAYİ VE TİCARET ANONİM ŞİRKETİ
ÜRETİM YERİ ADRESİ ADDRESS OF THE MANUFACTURING PLANT	EYÜP SULTAN MAH. İSMA SINA CAD. NO:284-B SARAYCIVA/BAĞCİKTEPE İSTANBUL / TÜRKİYE
İPTAL EDİLEN BELGE NUMARASI (YOKSA) INDICATION OF SUPERSEDED LICENSE (IF ANY)	14.0.2014.54.00TSE-8801
TESCİLİ TİCARİ MARKASI REGISTERED SERVICE MARK	BEKAL-HELEPOE
ULUSAL TÜRK STANDARDI NO:18001 TÜRKİYE STANDARDI	TS EN 13814-1:2012 / Çelik Halat İşaretleri - 22mm - 80mm - 80mm - 100mm - 125mm - 150mm - 175mm - 200mm - 225mm - 250mm - 275mm - 300mm - 325mm - 350mm - 375mm - 400mm - 425mm - 450mm - 475mm - 500mm - 525mm - 550mm - 575mm - 600mm - 625mm - 650mm - 675mm - 700mm - 725mm - 750mm - 775mm - 800mm - 825mm - 850mm - 875mm - 900mm - 925mm - 950mm - 975mm - 1000mm
BELGE KAPSAMI SCOPE OF LICENSE	ÇELİK İŞİ HALAT SAKLAMA 60-150 VE 175-175 VE ÇELİK ÖZLÜ İÇAÇTIRIM ARMA ÇAPRI 8 mm DİREKLERİN 30 mm DİREKLERE KADAR KALITE SİMPİ 1775 VE 1800 ÖLÇÜ- TSK KÖLÜLÜ SAKLAMA, HELEPOELİ YUMURSA ÖZLÜ HELEPOELİ YUMURSA ÖZLÜ HELEPOELİ YUMURSA ÖZLÜ

AHMET NURU KARTAL
TSE İSTANBUL BELGELENDİRME MÜDÜRÜ

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SAPANLAR

SAPANLAR

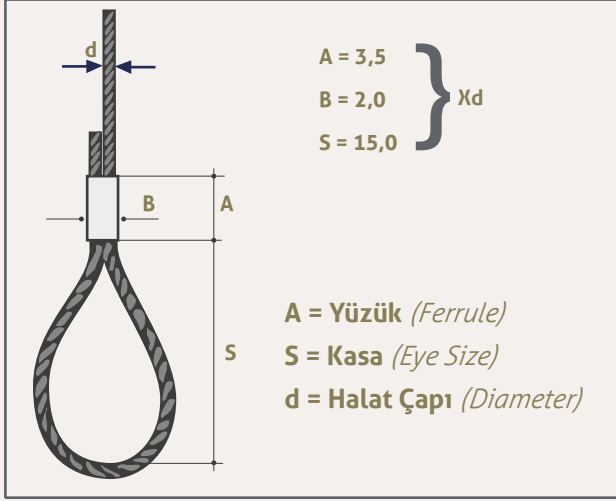
SLINGS



Çelik Halat Sapan

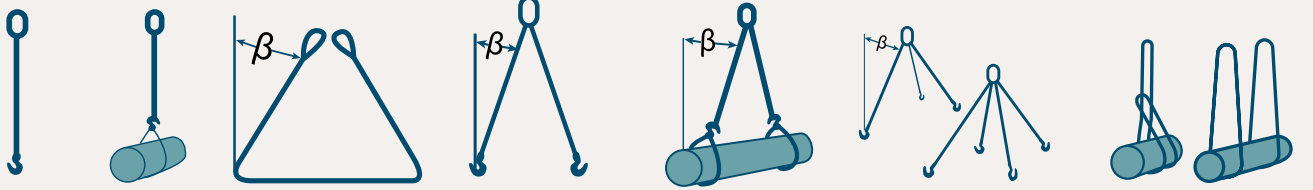
Wire Rope Sling

EN 13414-1



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

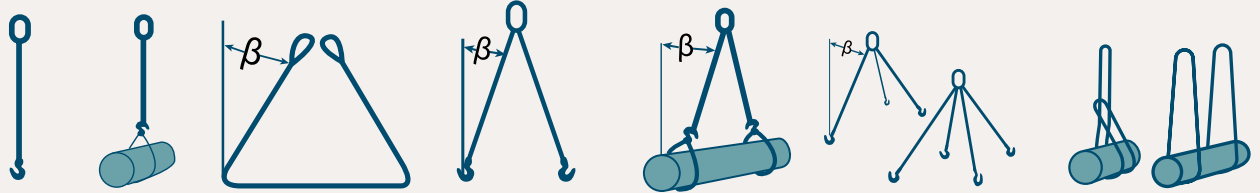


Halat Çapı Wire Rope Diameter	Tek Bacak Slings with 1 Leg	Boğdurma Choker Hitch	Sepet Sapan Basket Sling		2 Bacaklı Slings with 2 Legs		Boğdurma 2 Bacaklı Choker Hitch with 2 legs		3-4 Bacaklı Slings with 3-4 Legs		Sonsuz Sapan Endless Sling	
			0° - 45° 45° - 60°	1,0	1,4	1,0	1,4	1,0	1,2	0,8	2,1	1,5
Açı Angle												
Bacak Faktörü Leg Factor												
mm	kg											
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

EN 13414-1

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	
			0° - 45° 45° - 60°	1,0	1,4	1,0	1,4	1,0	1,2	0,8		
Açı Angle												
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	900	600	1550	1100	3000	1200
10	1150	920	1600	1150	1600	1150	1380	920	2400	1700	4600	1350
12	1700	1360	2300	1700	2300	1700	2040	1360	3550	2500	6800	2700
13	2000	1600	2800	2000	2800	2000	2400	1600	4150	3000	8000	3150
14	2250	1800	3150	2250	3150	2250	2700	1800	4800	3400	9000	3700
16	3000	2400	4200	3000	4200	3000	3600	2400	6300	4500	12000	4800
18	3700	2960	5200	3700	5200	3700	4440	2960	7800	5650	14800	6000
20	4600	3680	6500	4600	6500	4600	5520	3680	9800	6900	18400	7350
22	5650	4520	7800	5650	7800	5650	6780	4520	11800	8400	22600	9000
24	6700	5360	9400	6700	9400	6700	8000	5360	14000	10000	26800	10600
26	7800	6240	11000	7800	11000	7800	9360	6240	16400	11500	31200	12500
28	9000	7200	12600	9000	12600	9000	10800	7200	19000	13500	36000	14500
32	11800	9440	16500	11800	16500	11800	14160	9440	25000	17500	47200	19000
36	15000	12000	21000	15000	21000	15000	18000	12000	31500	22500	60000	23500
40	18500	14800	26000	18500	26000	18500	22200	14800	39000	28000	74000	30000
44	22500	18000	31500	22500	31500	22500	27000	18000	47000	33500	90000	36000
48	26000	20800	37000	26000	37000	26000	31200	20800	55000	40000	104000	42000
52	31500	25200	44000	31500	44000	31500	37800	25200	66000	47000	126000	50000
56	36000	28800	50000	36000	50000	36000	43200	28800	76000	54000	144000	58000
60	42000	33600	58000	42000	58000	42000	50400	33600	88000	63000	168000	67000

■ Tek Kollu Sapanlar *One Leg Slings*



Ç-1



Ç-2



Ç-3

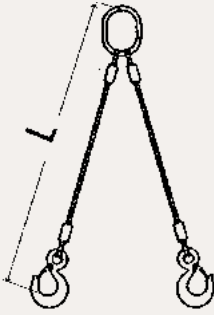


Ç-4

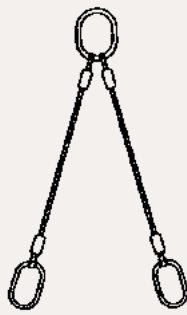


Ç-5

■ Çift Kollu Sapanlar *Two Legs Slings*



Ç-6



Ç-7

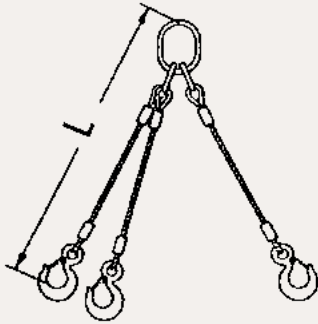


Ç-8

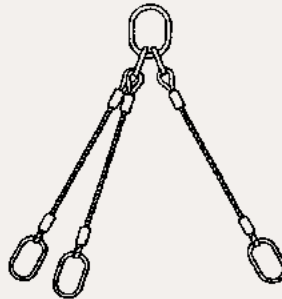


Ç-9

■ Üç Kollu Sapanlar *Three Legs Slings*



Ç-10



Ç-11

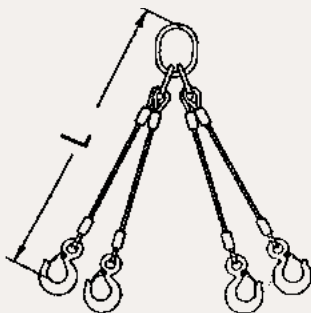


Ç-12

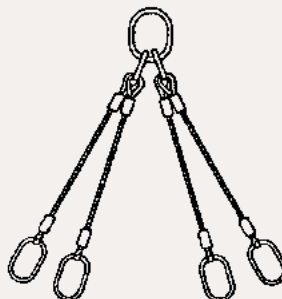


Ç-13

■ Dört Kollu Sapanlar *Four Legs Slings*



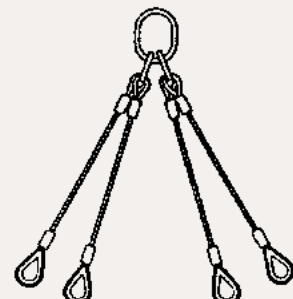
Ç-14



Ç-15



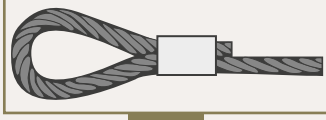
Ç-16



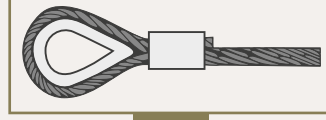
Ç-17

Halat Sonlandırma ve MBL Kayıplarına Genel Bakış

Overview of Rope Terminations and Loss of MBL caused by Rope Termination



%90 Yüzük Pres
%90 Crimped loop
>%90 EN 13414



%90 Radansalı pres baskı
%90 Pressed thimble
>%90 EN 13414



> %80 klemens ile sıkıştırılan.
Göz EN 13411-5
> 80% loop/thimble with rope clamps
according to EN 13411-5.
Çelik halat sapan için kullanmayınız!
Unsuitable to use for rope slings!



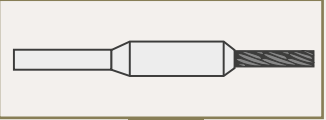
%80 Örgülü sapan dönmeye karşı
Korunmalıdır.
%80 Sliced loop. Loops must be
secured against twisting.
>%80 EN 13414



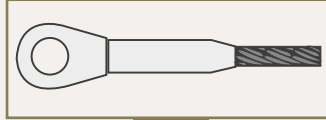
%80 Radansalı örgülü sapan,
dönmeye karşı korunmalıdır.
%80 Spliced thimble. Loops must be
Secured against twisting
>%80 EN 13414



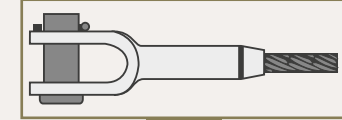
%90 dolu radansa pres baskılı.
90% pressed solid thimble.
>%90 EN 13414-3



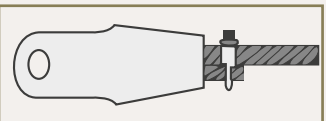
%90 Pres baskılı saplama.
90% clamp thread.



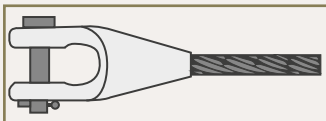
%90 kapalı baskı tip soket.
90% clamp head with eye.



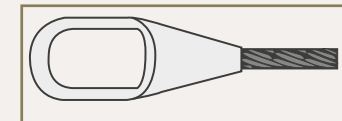
%90 açık baskı tip soket.
90% clamp head with clevis.



> %80 kamalı soket.
> %80 rope lock with wedge.
DIN 15315



%100 acık tip tutyalı
%100 cast head with clevis
EN 13411-4





%100 kapalı tip tutyalı soket.
100% cast head with eye.
EN 13411-4

Grommet Sapan

Grommet Sling

EN 13414-3



Grommet

Sonsuz Sapan		
Düşey ile açı	0°	0°
	Doğrudan	Boğma ilmekli
Sonsuz Sapan anma çapı		
mm	t	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
Sınıflama faktörü	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	Boğma ilmekli
Çalışma yükü sınırları (ÇYS)		
Sonsuz Sapan anma çapı		
mm	t	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
Sınıflama faktörü	1	0,8

Şema 2: Kalite sınıfı 6x36 olan çelik özlü tel halatlardan yapılmış sonsuz sapanlar için çalışma yük sınırları

Schema 2: Working load limits for grommet slings made by wire rope 6x36 with steel core.

Sonsuz Sapan		
Düşey ile açı	0°	0°
	Doğrudan	Boğma ilmekli
Çalışma yükü sınırları (ÇYS)		
Sonsuz Sapan anma çapı		
mm	t	t
24	8,25	6,50
27	10,5	8,50
30	11,5	9,00
33	14,0	11,0
36	16,5	13,0
39	19,5	15,5
42	22,5	18,0
48	30,0	23,5
54	37,5	30,0
60	46,0	37,0
Sınıflama faktörü	1	0,8

Şema 3: Kalite sınıfı 6x19 ve 6x36 olan kendir özlü tel halatlardan yapılmış sonsuz sapanlar için çalışma yük sınırları

Schema 3: Working load limits for grommet slings made by wire ropes 6x19 and 6x36 with fiber core.

Hukuki Esaslar

Judicial Principles

Gözlü ve daire sapanlar için, teknik talepler ve imalat bilgileri, bütün Avrupa için EN 1492-1 ve 1492-2 normları ile tespit edilmiştir. Tekstil sapan araçlarının Avrupa normlarına uygunluğu CE işareti ile belirtilir.

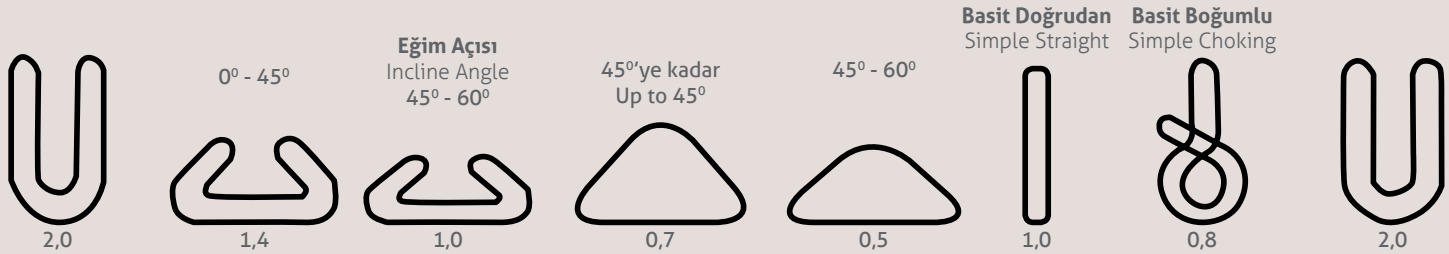
Manufacturing norms and technical claim for eyed and rounded slings are detected by EN 1492-1 and 1492-2 according to Europe norms. The compatibility of fabric slings for Europe standards is indicated by CE marks.

Taşıma Kapasitesi ve Taşıma Katsayı Faktörü

Loading Capacity and Loading Factor

Yükün ağırlığı ve bağlama şekli bağlama aracının taşıma kapasitesini belirler. Gözlü ve dairesel sapanlar için başlıca askı şekilleri aşağıdaki örneklerden alınabilir. Bir sapan aracının taşıma kapasitesi asılma şekline bağlı olarak değişiklik gösterir. Taşıma kapasitesinin değişimi yük sapan faktörü vasıtası ile belirlenir.

The weigh of the load and binding form determines the binding tool's capacity. Below is the main hanging forms for eye slings and round slings. Changes in load capacity is determined by means of sling factor.

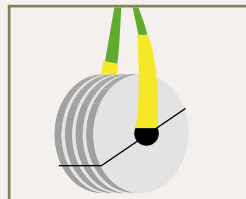
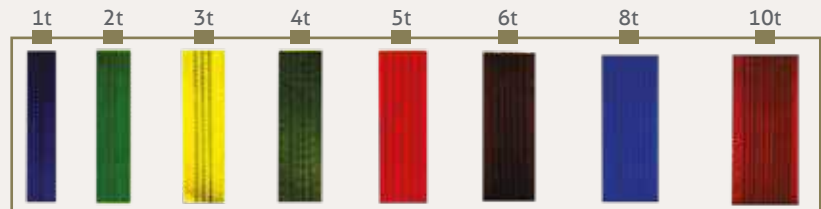


Önemli

Important

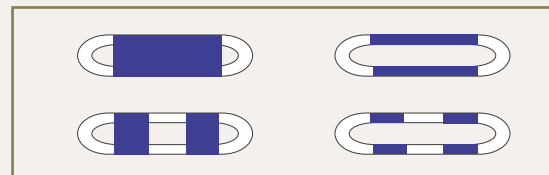
60° üzerindeki bir kol açısı ile sapan bağlantısına izin verilmemektedir. Bu değer üzerindeki bir kol açısında ortaya çıkan kuvvetlere hakim olunamamaktadır.

It should not be allowed to bind a sling with an arm angle above 60°. The forces emerging above 60° cannot be controlled.



Değişik Tiplerde Koruma Kılıfları

Different Type Protection Sleeves



Polyester Sapan

Polyester Sling

Sonsuz Polyester Sapan

Endless Polyester Sling

- ◇ %100 Polyester
 - ◇ Standart: EN 1492-2
 - ◇ Renk Kodlamalı
 - ◇ Her Çizgi Bir Tona Eşittir
 - ◇ Düşük Uzama Katsayılı
 - ◇ İçi Elyaf
-
- ◇ 100% Polyester
 - ◇ Standard: EN 1492-2
 - ◇ Color Coding
 - ◇ Each Line Equals a Tone
 - ◇ Low Elongation Factor
 - ◇ Fiber Inside



Güvenli Çalışma Yük Tablosu (kg) Safe Working Load Limits (kg)

Emniyet Katsayısı: 7 Safety Factor: 7

	%100	%80	%200	%140 0-45°	%100 45° - 60°
Sapan Renkleri Sling Colors					
Mor (Purple)	1000	800	2000	1400	1000
Yeşil (Green)	2000	1600	4000	2800	2000
Sarı (Yellow)	3000	2400	6000	4200	3000
Gri (Grey)	4000	3200	8000	5600	4000
Kırmızı (Red)	5000	4000	10000	7000	5000
Kahverengi (Brown)	6000	4800	12000	8400	6000
Mavi (Blue)	8000	6400	16000	11200	8000
Turuncu (Orange)	10000	8000	20000	14000	10000



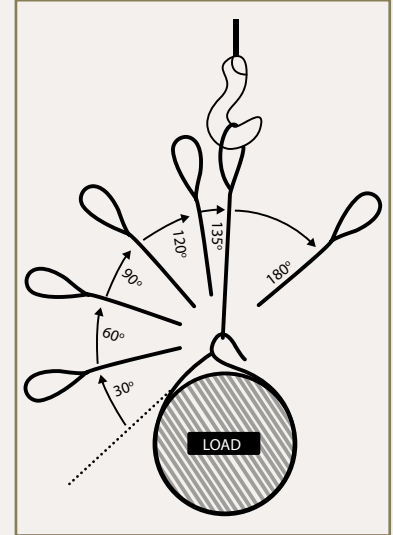
Gözlü Polyester Sapan

Polyester Webbing Sling with Eyes

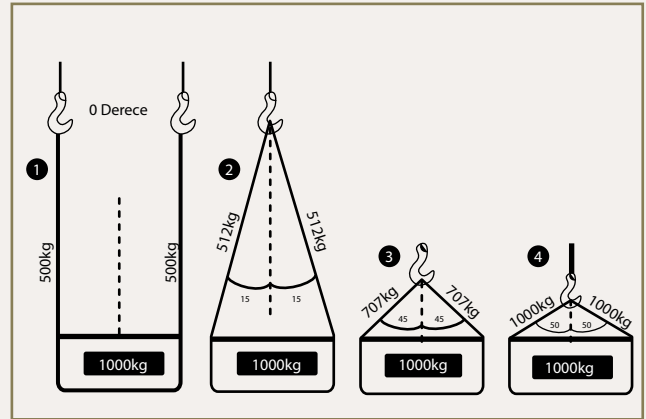
- ◇ %100 Polyester
- ◇ Standard: EN 1492-2
- ◇ Çift Katlı Polyesterden Dokuma
- ◇ Takviye Kaldırma Gözlü
- ◇ Renk Kodlamalı
- ◇ Düşük Uzama Katsayılı

- ◇ %100 Polyester
- ◇ Standard: EN 1492-2
- ◇ Double Ply Polyester Webbing
- ◇ Reinforced Eyes
- ◇ Color Coding
- ◇ Low Elongation Factor

Boğma Açılıarı Angle of Choke		Kapasite Kullanım Faktörü Rated Capacity Factor
120 - 180°	=	100%
90 - 119°	=	80%
60 - 89°	=	74%
30 - 59°	=	62%
0 - 29°	=	49%



Kol Açılıarı (Derece) Arm Angles (Degree)	Yük Çarpanı Load Factor
0	1,000
5	1,003
10	1,015
15	1,035
20	1,064
25	1,103
30	1,154
35	1,220
40	1,305
45	1,414
50	1,555
55	1,743
60	2,000



Güvenli Çalışma Yük Tablosu (kg) Safe Working Load Limits (kg)

Emniyet Katsayısı: 7 Safety Factor: 7

Sapan Renkleri Sling Colors	%100	%80	%200	%140 %0° - 45°	%100 %45° - 60°
Mor (Purple)	1000	800	2000	1400	1000
Yeşil (Green)	2000	1600	4000	2800	2000
Sarı (Yellow)	3000	2400	6000	4200	3000
Gri (Grey)	4000	3200	8000	5600	4000
Kırmızı (Red)	5000	4000	10000	7000	5000
Kahverengi (Brown)	6000	4800	12000	8400	6000
Mavi (Blue)	8000	6400	16000	11200	8000
Turuncu (Orange)	10000	8000	20000	14000	10000





BAĞLANTI ELEMENLARI HARDWARE

BAĞLANTI
ELEMENLARI



G-4161

Green Pin® Standart Kilit

Green Pin® Standard Shackles

Vidalı Omega Kilit / bow shackles with screw collar pin

Malzeme / Material

Grade 6 yüksek gerilimli ıslah çeliği gövde ve pim

bow and pin high tensile steel, Grade 6, quenched and tempered

Güvenlik Katsayısı / Safety Factor

MBL= 6XWLL

MBL equals 6 x WLL

Standart / Standard

EN 13889 normu ve US Federetaion Spec. RR-C-271 çeşit IVA sınıf 2, Grade A gereklilikleri ile uyumludur. 2 ton ve üzeri kilitler ASME B30.26 ile uyumludur.

EN 13889 and meets performance requirements of US Fed. Spec. RR-C-271 Type IVA Class 3, Grade A, ASME B30.26

Yüzey / Finish

Sıcak daldırma galvanizli

hot dipped galvanized

Sıcaklık Aralığı / Temperature Range

-40°C + 200°C'ye kadar

-40°C up to +200°C

Sertifika / Certification2.1 - 2.2 - 3.1 - MTC*
DNV 2.7-1^a * - DNV 2.7-1^b *
DNV 2.22 - CE**Not / Note**

Detaylı çap ve tolerans bilgisi için tablolardan yada firmamızdan destek alabilirsiniz.

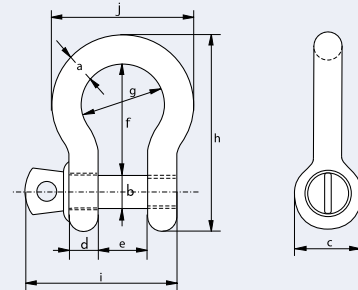
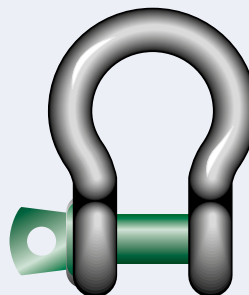
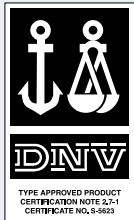
for details on dimensions and tolerances please consult our CAD drawings, these are available on request.

Çalışma Yük Sınırı working load limit	Gövde Çapı diameter bow	Vida Çapı diameter pin	Göz Çapı diameter eye	Göz Genişliği width eye	İç Genişliği width inside	İç Uzunluğu length inside	Gövde Genişliği width bow	Uzunluk length	Vida Uzunluğu length bolt	Genişlik width	Birim Ağırlık weight each
	a	b	c	d	e	f	g	h	i	j	
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
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

İNÇ In Inch

Çalışma Yük Sınırı working load limit	Gövde Çapı diameter bow	Vida Çapı diameter pin	Göz Çapı diameter eye	Göz Genişliği width eye	İç Genişliği width inside	İç Uzunluğu length inside	Gövde Genişliği width bow	Uzunluk length	Vida Uzunluğu length bolt	Genişlik width	Birim Ağırlık weight each
	a	b	c	d	e	f	g	h	i	j	
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
0.33	3/16	1/4	1/2	3/16	3/8	7/8	5/8	1 13/32	1 5/32	1 1/32	0.05
0.5	1/4	5/16	21/32	9/32	15/32	1 5/32	25/32	1 29/32	1 1/2	1 11/32	0.11
0.75	5/16	3/8	25/32	11/32	17/32	1 1/4	7/8	2 7/32	1 27/32	1 9/16	0.22
1	3/8	7/16	7/8	13/32	21/32	1 7/16	1 1/32	2 1/2	2 1/8	1 13/16	0.3
1.5	7/16	1/2	1 1/32	7/16	3/4	1 11/16	1 5/32	2 29/32	2 11/32	2	0.42
2	1/2	5/8	1 11/32	1/2	7/8	2	1 1/4	3 1/2	2 7/8	2 9/32	0.79
3.25	5/8	3/4	1 9/16	5/8	1 1/16	2 17/32	1 11/16	4 11/32	3 1/2	2 15/16	1.38
4.75	3/4	7/8	1 13/16	3/4	1 7/32	3	2	5 3/32	4 1/16	3 1/2	2.22
6.5	7/8	1	2 1/16	7/8	1 13/32	3 9/32	2 9/32	5 21/32	4 11/16	4 1/32	3.31
8.5	1	1 1/8	2 5/16	31/32	1 11/16	3 3/4	2 11/16	6 15/32	5 13/32	4 21/32	4.86
9.5	1 1/8	1 1/4	2 19/32	1 3/32	1 27/32	4 1/4	2 15/16	7 9/32	6 1/32	5 5/32	6.97
12	1 1/4	1 3/8	2 27/32	1 1/4	2	4 17/32	3 9/32	7 29/32	6 11/16	5 25/32	9.49
13.5	1 3/8	1 1/2	3 5/32	1 3/8	2 1/4	5 1/4	3 5/8	8 15/16	7 5/16	6 3/8	12.24
17	1 1/2	1 5/8	3 15/32	1 1/2	2 3/8	5 3/4	3 29/32	9 13/16	8	6 7/8	16.37
25	1 3/4	2	4 1/16	1 25/32	2 29/32	7	4 31/32	11 13/16	9 9/16	8 1/2	28.31
35	2	2 1/4	4 3/8	1 31/32	3 9/32	7 3/4	5 7/16	13 1/32	10 23/32	9 3/8	40.01
42.5	2 1/4	2 9/16	5 1/8	2 1/4	3 3/4	8 3/4	6 5/16	14 27/32	12 7/32	10 25/32	57.96
55	2 1/2	2 3/4	5 23/32	2 9/16	4 1/8	10 1/4	7 3/32	17 1/16	13 17/32	12 7/32	82.89

* 2 ton ve üzeri belirtilen kilitler içindir.



Green Pin® Standart Kilit

Green Pin® Standard Shackles

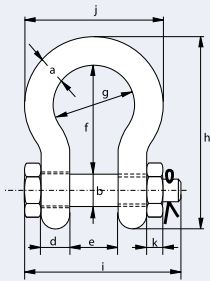
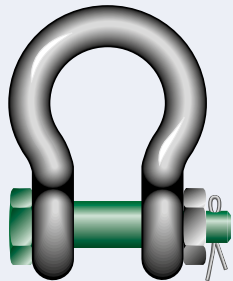
G-4163

Somunlu Omega Kilit / bow shackles with safety bolt

Çalışma Yük Sınırı working load limit	Gövde Çapı diameter bow	Vida Çapı diameter pin	Göz Çapı diameter eye	Göz Genişliği width eye	İç Genişliği width inside	İç Uzunluğu length inside	Gövde Genişliği width bow	Uzunluk length	Vida Uzunluğu length bolt	Genişlik width	Somun Kalınlığı thickness nut	Birim Ağırlık weight each
	a	b	c	d	e	f	g	h	i	j	k	
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
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	19.85
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

İNÇ In Inch

Çalışma Yük Sınırı working load limit	Gövde Çapı diameter bow	Vida Çapı diameter pin	Göz Çapı diameter eye	Göz Genişliği width eye	İç Genişliği width inside	İç Uzunluğu length inside	Gövde Genişliği width bow	Uzunluk length	Vida Uzunluğu length bolt	Genişlik width	Somun Kalınlığı thickness nut	Birim Ağırlık weight each
	a	b	c	d	e	f	g	h	i	j	k	
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
0.5	1/4	5/16	21/32	9/32	15/32	1 5/32	25/32	1 29/32	1 21/32	1 11/32	5/32	0.13
0.75	5/16	3/8	25/32	11/32	17/32	1 1/4	7/8	2 7/32	1 31/32	1 9/16	3/16	0.25
1	3/8	7/16	7/8	13/32	21/32	1 7/16	1 1/32	2 1/2	2 3/8	1 13/16	5/16	0.34
1.5	7/16	1/2	1 1/32	7/16	3/4	1 11/16	1 5/32	2 29/32	2 5/8	2	7/16	0.48
2	1/2	5/8	1 11/32	1/2	7/8	2	1 1/4	3 1/2	3 7/32	2 9/32	1/2	0.92
3.25	5/8	3/4	1 9/16	5/8	1 1/16	2 17/32	1 11/16	4 11/32	3 27/32	2 15/16	21/32	1.62
4.75	3/4	7/8	1 13/16	3/4	1 7/32	3	2	5 3/32	4 1/2	3 1/2	3/4	2.59
6.5	7/8	1	2 1/16	7/8	1 13/32	3 9/32	2 9/32	5 21/32	5 1/8	4 1/32	7/8	3.9
8.5	1	1 1/8	2 5/16	31/32	1 11/16	3 3/4	2 11/16	6 15/32	5 29/32	4 21/32	31/32	5.69
9.5	1 1/8	1 1/4	2 19/32	1 3/32	1 27/32	4 1/4	2 15/16	7 9/32	6 17/32	5 5/32	1 1/16	8.06
12	1 1/4	1 3/8	2 27/32	1 1/4	2	4 17/32	3 9/32	7 29/32	7	5 25/32	1 3/16	10.81
13.5	1 3/8	1 1/2	3 5/32	1 3/8	2 1/4	5 1/4	3 5/8	8 15/16	7 3/4	6 3/8	1 5/16	14.42
17	1 1/2	1 5/8	3 15/32	1 1/2	2 3/8	5 3/4	3 29/32	9 13/16	7 15/16	6 7/8	3/4	18.06
25	1 3/4	2	4 1/16	1 25/32	2 29/32	7	4 31/32	11 13/16	9 13/16	8 1/2	29/32	31.34
35	2	2 1/4	4 3/8	1 31/32	3 9/32	7 3/4	5 7/16	13 1/32	10 19/32	9 3/8	1 1/32	43.77
42.5	2 1/4	2 9/16	5 1/8	2 1/4	3 3/4	8 3/4	6 5/16	14 27/32	11 27/32	10 23/32	1 5/32	62.46
55	2 1/2	2 3/4	5 23/32	2 9/16	4 1/8	10 1/4	7 3/32	17 1/16	13	12 7/32	1 1/4	87.27
85	3	3 1/4	6 3/8	2 7/8	5	12 15/16	7 15/32	20 3/4	14 31/32	13 3/8	1 17/32	136.69



* 2 ton ve üzeri belirtilen kilitler içindir.

Malzeme / Material

Grade 6 yüksek gerilimli ıslah çeliği gövde ve pim

bow and pin high tensile steel, Grade 6, quenched and tempered

Güvenlik Katsayısı / Safety Factor

MBL= 6XWLL

MBL equals 6 x WLL

Standart / Standard

EN 13889 normu ve US Federataion Spec. RR-C-271 çeşit IVA sınıf 3 , Grade A, ASME B30.26 gereklilikleri ile uyumludur.

EN 13889 andmeets performance requirements of US Fed. Spec. RR-C-271 Type IVA Class 3, Grade A, ASME B30.26

Yüzey / Finish

Sıcak daldırma galvanizli

hot dipped galvanized

Sıcaklık Aralığı / Temperature Range

-40°C + 200°C'ye kadar

-40°C up to +200°C

Sertifika / Certification

2.1 - 2.2 - 3.1 - MTC^o
DNV 2.7-1^a * - DNV 2.7-1^b *
DNV 2.22 - CE

Not / Note

Detaylı çap ve tolerans bilgisi için tabloların yada firmamızdan destek alabilirsiniz.

for details on dimensions and tolerances please consult our CAD drawings, these are available on request.



G-4151

Green Pin® Standart Kilit Green Pin® Standard Shackles

Vidalı U Kilit / dee shackles with screw collar pin

Malzeme / Material

Grade 6 yüksek gerilimli ıslah çeliği gövde ve pim

bow and pin high tensile steel, Grade 6, quenched and tempered

Güvenlik Katsayısı / Safety Factor

MBL= 6XWLL

MBL equals 6 x WLL

Standart / Standard

EN 13889 normu ve US Federataion Spec. RR-C-271 çeşit IVB sınıf 3, Grade A, ASME B30.26 gereklilikleri ile uyumludur.

EN 13889 andmeets performance requirements of US Fed. Spec. RR-C-271 Type IVB Class 3, Grade A, ASME B30.26

Yüzey / Finish

Sıcak daldırma galvanizli

hot dipped galvanized

Sıcaklık Aralığı / Temperature Range

-40°C + 200°C'ye kadar

-40°C up to +200°C

Sertifika / Certification

2.1 - 2.2 - 3.1 - MTC[®]
DNV 2.7-1^a * - DNV 2.7-1^b **
DNV 2.22 - CE

Not / Note

Detaylı çap ve tolerans bilgisi için tablolardan yada firmamızdan destek alabilirsiniz.

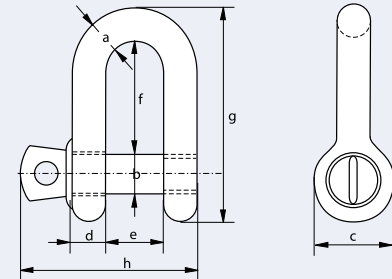
for details on dimensions and tolerances please consult our CAD drawings, these are available on request.

Çalışma Yük Sınırı working load limit	Gövde Çapı diameter bow	Vida Çapı diameter pin	Göz Çapı diameter eye	Göz Genişliği width eye	İç Genişliği width inside	İç Uzunluğu length inside	Uzunluk length	Vida Uzunluğu length bolt	Birim Ağırlık weight each
t	a	b	c	d	e	f	g	h	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

İNÇ In Inch

Çalışma Yük Sınırı working load limit	Gövde Çapı diameter bow	Vida Çapı diameter pin	Göz Çapı diameter eye	Göz Genişliği width eye	İç Genişliği width inside	İç Uzunluğu length inside	Uzunluk length	Vida Uzunluğu length bolt	Birim Ağırlık weight each
t	inch	inch	inch	inch	inch	inch	inch	inch	lbs
0.33	3/16	1/4	15/32	3/16	3/8	3/4	1 5/16	1 5/32	0.04
0.5	1/4	5/16	21/32	9/32	15/32	7/8	1 5/8	1 1/2	0.11
0.75	5/16	3/8	25/32	11/32	17/32	1 1/32	1 31/32	1 27/32	0.2
1	3/8	7/16	7/8	13/32	21/32	1 1/4	2 5/16	2 1/8	0.3
1.5	7/16	1/2	1 1/32	7/16	3/4	1 15/32	2 11/16	2 11/32	0.42
2	1/2	5/8	1 11/32	1/2	7/8	1 11/16	3 3/16	2 7/8	0.7
3.25	5/8	3/4	1 9/16	5/8	1 1/16	2	3 13/16	3 1/2	1.19
4.75	3/4	7/8	1 13/16	3/4	1 7/32	2 5/16	4 12/32	4 1/16	1.92
6.5	7/8	1	2 1/16	7/8	1 13/32	2 7/8	5 9/32	4 11/16	2.95
8.5	1	1 1/8	2 5/16	31/32	1 11/16	3 11/32	6 1/16	5 13/32	4.59
9.5	1 1/8	1 1/4	2 19/32	1 3/32	1 27/32	3 17/32	6 9/16	6 1/32	6.1
12	1 1/4	1 3/8	2 27/32	1 1/4	2	3 11/16	7 3/32	6 11/16	8.2
13.5	1 3/8	1 1/2	3 5/32	1 3/8	2 1/4	4 17/32	8 7/32	7 5/16	11.33
17	1 1/2	1 5/8	3 15/32	1 1/2	2 3/8	5	9 1/16	8	15.1
25	1 3/4	2	4 1/16	1 25/32	2 29/32	5 7/8	10 21/32	9 9/16	25.23
35	2	2 1/4	4 3/8	1 31/32	3 9/32	6 23/32	12	10 23/32	37.17
42.5	2 1/4	2 9/16	5 1/8	2 1/4	3 3/4	7 15/32	13 19/32	12 7/32	54.26
55	2 1/2	2 3/4	5 23/32	2 9/16	4 1/8	8	14 13/16	13 17/32	71.98

* 2 ton ve üzeri belirtilen kilitler içindir.



Çalışma Yük Sınırı working load limit	Gövde Çapı diameter bow	Vida Çapı diameter pin	Göz Çapı diameter eye	Göz Genişliği width eye	İç Genişliği width inside	İç Uzunluğu length inside	Uzunluk length	Vida Uzunluğu length bolt	Somun Kalınlığı thickness nut	Birim Ağırlık weight each
t	a	b	c	d	e	f	g	h	i	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

İNÇ In Inch

Çalışma Yük Sınırı working load limit	Gövde Çapı diameter bow	Vida Çapı diameter pin	Göz Çapı diameter eye	Göz Genişliği width eye	İç Genişliği width inside	İç Uzunluğu length inside	Uzunluk length	Vida Uzunluğu length bolt	Somun Kalınlığı thickness nut	Birim Ağırlık weight each
t	a	b	c	d	e	f	g	h	i	lbs
2	1/2	5/8	1 11/32	1/2	7/8	1 11/16	3 3/16	3 7/32	1/2	0.85
3.25	5/8	3/4	1 9/16	5/8	1 1/16	2	3 13/16	3 27/32	21/32	1.48
4.75	3/4	7/8	1 13/16	3/4	1 7/32	2 5/16	4 13/32	4 1/2	3/4	2.39
6.5	7/8	1	2 1/16	7/8	1 13/32	2 7/8	5 9/32	5 1/8	7/8	3.66
8.5	1	1 1/8	2 5/16	31/32	1 11/16	3 11/32	6 1/16	5 29/32	31/32	5.42
9.5	1 1/8	1 1/4	2 19/32	1 3/32	1 27/32	3 17/32	6 9/16	6 17/32	1 1/16	7.5
12	1 1/4	1 3/8	2 27/32	1 1/4	2	3 11/16	7 3/32	7	1 3/16	9.95
13.5	1 3/8	1 1/2	3 5/32	1 3/8	2 1/4	4 17/32	8 7/32	7 3/4	1 5/16	13.45
17	1 1/2	1 5/8	3 15/32	1 1/2	2 3/8	5	9 1/16	7 15/16	3/4	16.82
25	1 3/4	2	4 1/16	1 25/32	2 29/32	5 7/8	10 21/32	9 13/16	29/32	28.4
35	2	2 1/4	4 3/8	1 31/32	3 9/32	6 23/32	12	10 19/32	1 1/32	38.25
42.5	2 1/4	2 9/16	5 1/8	2 1/4	3 3/4	7 15/32	13 19/32	11 27/32	1 5/32	57.19
55	2 1/2	2 3/4	5 23/32	2 9/16	4 1/8	8	14 13/16	13	1 1/4	77.89
85	3	3 1/4	6 3/8	2 7/8	5	9 1/32	16 13/16	14 31/32	1 17/32	116.77

Malzeme / Material

Grade 6 yüksek gerilimli ıslah çeliği gövde ve pim

bow and pin high tensile steel, Grade 6, quenched and tempered

Güvenlik Katsayısı / Safety Factor

MBL= 6XWLL

MBL equals 6 x WLL

Standart / Standard

EN 13889 normu ve US Federetaion Spec. RR-C-271 çeşit IVB sınıf 3 , Grade A, ASME B30.26 gereklilikleri ile uyumludur.

EN 13889 andmeets performance requirements of US Fed. Spec. RR-C-271 Type IVB Class 3, Grade A, ASME B30.26

Yüzey / Finish

Sıcak daldırma galvanizli

hot dipped galvanized

Sıcaklık Aralığı / Temperature Range

-40°C + 200°C'ye kadar

-40°C up to +200°C

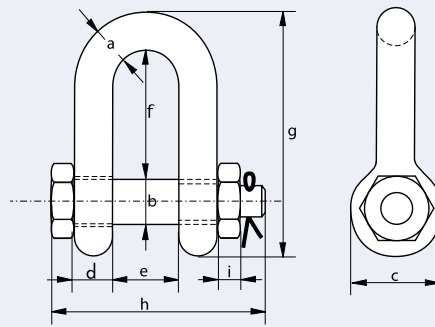
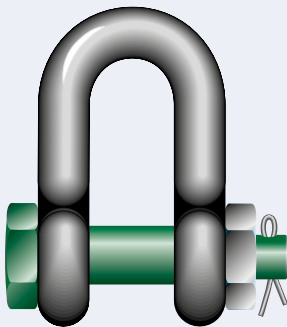
Sertifika / Certification

2.1 - 2.2 - 3.1 - MTC^a
DNV 2.7-1^a * - DNV 2.7-1^b **
DNV 2.22 - CE

Not / Note

Detaylı çap ve tolerans bilgisi için tablolardan yada firmamızdan destek alabilirsiniz.

for details on dimensions and tolerances please consult our CAD drawings, these are available on request.



* 2 ton ve üzeri belirtilen kilitler içindir.



P-6036

Green Pin® Ağır Yük Kilit
Green Pin® Heavy Duty Shackles

Somunlu Omega Kilit / bow shackles with safety bolt

Malzeme / Material

Grade 8 alaşımlı ıslah çeliği
gövde ve pin

bow and pin alloy steel, Grade 8
quenched and tempered

Güvenlik Katsayısı / Safety Factor

MBL= 5 X WLL

MBL equals 5 x WLL

Yüzey / Finish

Gövde gümüş, Pin yeşil boyalı (120 Tonluk kilit sıcak daldırma galvanizlidir.)

hackle bow painted silver, pin painted green (120 tons shackle is hot dipped galvanized)

Sertifika / Certification

2.1 - 2.2 - 3.1 - MTC^a - MTC^b*
LROS* - MPI^a - US^a - CE

Not / Note

Detaylı çap ve tolerans bilgisi için tablolardan yada firmamızdan destek alabilirsiniz.

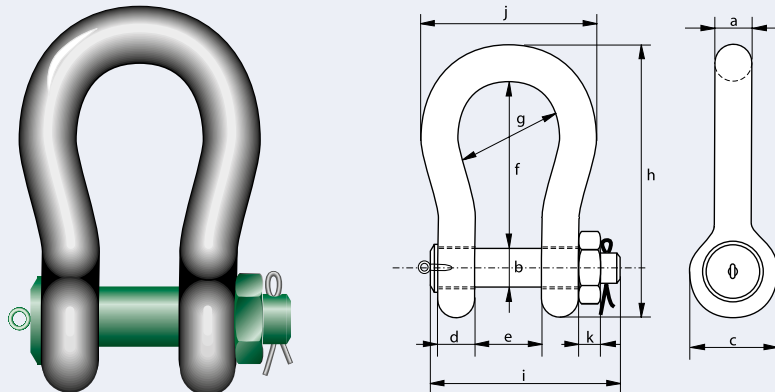
for details on dimensions and tolerances please consult our CAD drawings, these are available on request.

Çalışma Yük Sınırı working load limit	Gövde Çapı diameter bow	Vida Çapı diameter pin	Göz Çapı diameter eye	Göz Genişliği width eye	İç Genişliği width inside	İç Uzunluğu length inside	Gövde Genişliği width bow	Uzunluk length	Vida Uzunluğu length bolt	Genişlik width	Somun Kalınlığı thickness nut	Birim Ağırlık weight each
	a	b	c	d	e	f	g	h	i	j	k	kg
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
120	95	95	208	91	147	400	238	647	440	428	50	110
150	105	108	238	102	169	410	275	688	490	485	60	160
200	120	130	279	113	179	513	290	838	520	530	60	235
250	130	140	299	118	205	554	305	904	560	565	65	285
300	140	150	325	123	205	618	305	996	575	585	70	340
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

İNÇ In Inch

Çalışma Yük Sınırı working load limit	Gövde Çapı diameter bow	Vida Çapı diameter pin	Göz Çapı diameter eye	Göz Genişliği width eye	İç Genişliği width inside	İç Uzunluğu length inside	Gövde Genişliği width bow	Uzunluk length	Vida Uzunluğu length bolt	Genişlik width	Somun Kalınlığı thickness nut	Birim Ağırlık weight each
	a	b	c	d	e	f	g	h	i	j	k	lbs
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch
120	3 3/4	3 3/4	8 3/16	3 19/32	5 25/32	15 3/4	9 3/8	25 15/32	17 5/16	16 27/32	1 31/32	243
150	4 1/8	4 1/4	9 3/8	4 1/32	6 21/32	16 5/32	10 13/16	27 3/32	19 9/32	19 3/32	2 3/8	353
200	4 23/32	5 1/8	10 31/32	4 7/16	7 1/16	20 3/16	11 13/32	33	20 15/32	20 7/8	2 3/8	518
250	5 1/8	5 1/2	11 25/32	4 21/32	8 1/16	21 13/16	12	35 19/32	22 1/16	22 1/4	2 9/16	628
300	5 1/2	5 29/32	12 25/32	4 27/32	8 1/16	24 11/32	12	39 7/32	22 5/8	23 1/32	2 3/4	750
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 7/8	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	30 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

* 150 ton ve üzeri belirtilen kilitler içindir.



Çalışma Yük Sınırı working load limit	Et Kalınlığı diameter body	Vida Çapı diameter pin	Göz Çapı diameter eye	Göz Genişliği width eye	İç Genişliği width inside	İç Uzunluğu length inside	Gövde Genişliği width bow	Uzunluk length	Vida Uzunluğu length bolt	Genişlik width	Somun Kalınlığı thickness nut	Taşıma Yüzeyi bearing surface	Birim Ağırlık weight each
t	a	b	c	d	e	f	g	h	i	j	k	l	kg
7	22	22	46	19	32	96	64	153	115	110	19	41	2
12,5	28	28	61	25	44	121	82	197	151	146	24	54	4
18	35	35	69	30	54	148	102	239	175	180	29	64	7
30	40	42	90	35	69	165	126	279	211	200	34	79	13
40	55	51	109	45	84	199	140	331	252	235	38	97	21
55	60	57	115	55	90	240	160	389	299	270	45	100	30
75	68	70	125	54	110	290	185	473	327	317	54	120	48
125	85	80	154	85	137	366	220	583	426	390	64	150	92
150	94	95	179	89	147	391	253	645	435	434	50	170	140
200	110	105	199	100	158	481	280	759	470	482	50	205	205
250	126	120	227	110	179	542	300	859	519	530	60	240	264
300	135	134	245	122	195	601	350	947	575	620	70	265	360
400	160	160	293	145	231	576	370	985	675	690	80	320	580
500	170	180	328	160	263	681	450	1131	748	790	90	339	780
600	190	200	348	170	289	741	490	1234	809	865	100	370	980
700	200	215	392	190	315	751	540	1284	879	901	100	400	1360
800	218	230	420	200	342	851	554	1426	942	947	110	420	1430
900	242	255	466	220	368	851	580	1488	1023	1023	120	440	1650
1000	260	270	490	240	399	851	614	1532	1103	1107	120	460	2970
1250	285	300	510	260	452	931	650	1666	1227	1182	150	530	3700
1550	285	320	550	280	483	950	680	1710	1300	1253	150	560	4000

Malzeme / Material

Grade 8 alaşımlı ıslah çeliği
gövde ve pim

bow and pin alloy steel, Grade 8,
quenched and tempered

Güvenlik Katsayısı / Safety Factor

MBL = 5 X WLL

MBL equals 5 x WLL

Yüzey / Finish

Gövde gümüş, Pin yeşil boyalı
shackle bow painted silver, pin
painted green

Sıcaklık Aralığı / Temperature Range

-20°C + 200°C'ye

-20°C up to +200°C

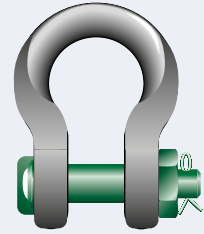
Sertifika / Certification

2.1 - 2.2 - 3.1 - MTC^b * - LROS^{*}
MPI^b * - US^b * - CE

Not / Note

Detaylı çap ve tolerans bilgisi için
tablolardan yada firmamızdan
destek alabilirsiniz.

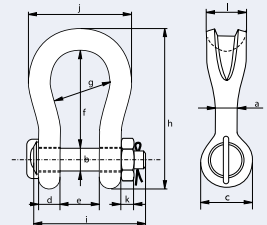
for details on dimensions and
tolerances please consult our CAD
drawings, these are available on
request.



İNÇ In Inch

Çalışma Yük Sınırı working load limit	Et Kalınlığı diameter body	Vida Çapı diameter pin	Göz Çapı diameter eye	Göz Genişliği width eye	İç Genişliği width inside	İç Uzunluğu length inside	Gövde Genişliği width bow	Uzunluk length	Vida Uzunluğu length bolt	Genişlik width	Somun Kalınlığı thickness nut	Taşıma Yüzeyi bearing surface	Birim Ağırlık weight each
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
7	7/16	7/8	1 13/16	3 1/16	3/4	1 9/22	3 25/32	2 17/32	6	4 17/32	2/4	1 5/16	4.41
12,5	1 7/16	1 1/8	2 3/8	1	1 3/4	4 3/4	3 1/4	7 3/4	5 15/16	5 3/4	15/16	2 1/8	8.88
18	1 3/8	1 3/8	2 23/32	1 3/16	2 1/8	5 13/16	4 1/32	9 13/32	6 7/8	7 3/32	1 5/32	2 17/32	18
30	1 9/16	1 21/32	3 17/32	1 3/8	2 23/32	6 1/2	4 31/32	10 31/32	8 5/16	7 7/8	1 11/32	3 1/8	29
40	2 5/32	2	4 9/32	1 25/32	3 5/16	7 27/32	5 1/2	13 1/32	9 29/32	9 1/4	1 1/2	3 13/16	46
55	2 3/8	2 1/4	4 17/32	2 5/32	3 17/32	9 7/16	6 5/16	15 5/16	11 25/32	10 5/8	1 25/32	3 15/16	66
75	2 11/16	2 3/4	4 29/32	2 1/8	4 11/32	11 13/32	7 9/32	18 5/8	12 7/8	12 15/32	2 1/8	4 23/32	106
125	3 11/32	3 5/32	6 1/16	3 11/32	5 13/32	14 13/32	8 21/32	22 15/16	16 25/32	15 11/32	2 17/32	5 29/32	203
150	3 11/16	3 3/4	7 1/16	3 1/2	5 25/32	15 13/32	9 31/32	25 13/32	17 1/8	17 3/32	1 31/32	6 11/16	309
200	4 11/32	4 1/8	7 27/32	3 15/16	6 7/32	18 15/16	11 1/32	29 7/8	18 1/2	18 31/32	1 31/32	8 1/16	452
250	4 31/32	4 23/32	8 15/16	4 11/32	7 1/16	21 11/32	11 13/16	33 13/16	20 7/16	20 7/8	2 3/8	9 7/16	582
300	5 5/16	5 9/32	9 21/32	4 13/16	7 11/16	23 21/32	13 25/32	37 9/32	22 5/8	24 13/32	2 3/4	10 7/16	794
400	6 5/16	6 5/16	11 17/32	5 23/32	9 3/32	22 11/16	14 9/16	38 25/32	26 9/16	27 5/32	3 5/32	12 19/32	1279
500	6 11/16	7 3/32	12 29/32	6 5/16	10 11/32	26 13/16	17 23/32	44 17/32	29 7/16	31 3/32	3 17/32	13 11/32	1720
600	7 15/32	7 7/8	13 11/16	6 11/16	11 3/8	29 3/16	19 9/32	48 19/32	31 27/32	34 1/16	3 15/16	14 9/16	2161
700	7 7/8	8 15/32	15 7/16	7 15/32	12 13/32	29 9/16	21 1/4	50 9/16	34 19/32	35 15/32	3 15/16	15 3/4	2998
800	8 19/32	9 1/16	16 17/32	7 7/8	13 15/32	33 1/2	21 13/16	56 5/32	37 3/32	37 9/32	4 11/32	16 17/32	3153
900	9 17/32	10 1/32	18 11/32	8 21/32	14 1/2	33 1/2	22 27/32	58 19/32	40 9/32	40 9/32	4 23/32	17 5/16	3638
1000	10 1/4	10 5/8	19 9/32	9 7/16	15 23/32	33 1/2	24 3/16	60 5/16	43 7/16	43 19/32	4 23/32	18 1/8	6548
1250	11 7/32	11 13/16	20 3/32	10 1/4	17 25/32	36 21/32	25 19/32	65 19/32	48 5/16	46 17/32	5 29/32	20 7/8	8157
1550	11 7/32	12 19/32	21 21/32	11 1/32	19 1/32	37 13/32	26 25/32	67 5/16	51 3/16	49 11/32	5 29/32	22 1/16	8818

* 75 ton ve üzeri belirtilen
kilitler içindir.



G-5263

Green Pin® Super Kilit
Green Pin® Super Shackles

Somunlu Omega Kilit / bow shackles with safety bolt

Malzeme / Material

Grade 8 alaşımlı ıslah çeliği
gövde ve pim

bow and pin alloy steel, Grade 8,
quenched and tempered

Güvenlik Katsayısı / Safety Factor

MBL = 5 X MBL

MBL equals 5 x WLL

Standart / Standard

US Federation Spec. RR-C-
271 Çeşit IVA Sınıf 3 grade B,
ASME B30.26 gereklilikleri ile
uyumludur.

EN 13889 and meets performance
requirements of US Fed. Spec. RR-
C-271 Type IVA Class 3, Grade B,
ASME B30.26

Yüzey / Finish

Sıcak daldırma galvanizli (175 Ton
kilit boyalıdır.)

hot dipped galvanized (175 ton
shackle is painted)

Sıcaklık Aralığı / Temperature Range

-20°C + 200°C'ye kadar.

-20°C up to +200°C

Sertifika / Certification

2.1 - 2.2 - 3.1 - MTC^a - CE

Not / Note

Detaylı çap ve tolerans bilgisi için
tablolardan yada firmamızdan
destek alabilirsiniz.

for details on dimensions and
tolerances please consult our CAD
drawings, these are available on
request.

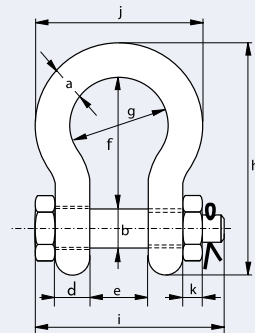
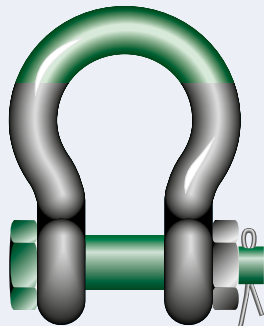
Çalışma Yük Sınırı working load limit	Gövde Çapı diameter bow	Vida Çapı diameter pin	Göz Çapı diameter eye	Göz Genişliği width eye	İç Genişliği width inside	İç Uzunluğu length inside	Gövde Genişliği width bow	Uzunluk length	Vida Uzunluğu length bolt	Genişlik width	Somun Kalınlığı thickness nut	Birim Ağırlık weight each
t	a	b	c	d	e	f	g	h	i	j	k	kg
3.3	13.5	16	34	13	22	51	32	89	82	58	13	0.44
5	16	19	40	16	27	64	43	110	98	75	17	0.79
7	19	22	46	19	31	76	51	129	114	89	19	1.26
9.5	22	25	52	22	36	83	58	144	130	102	22	1.88
12.5	25	28	59	25	43	95	68	164	150	118	25	2.78
15	28	32	66	28	47	108	75	185	166	131	27	3.87
18	32	35	72	32	51	115	83	201	178	147	30	5.26
21	35	38	80	35	57	133	92	227	197	162	33	6.94
30	38	42	88	38	60	146	99	249	217	175	19	8.79
40	45	50	103	45	74	178	126	300	260	216	23	15
55	57	57	117	57	83	197	138	341	303	252	26	22
85	70	70	143	70	105	260	180	437	363	320	32	42
120	83	83	162	83	127	329	190	535	425	356	40	70
150*	95	95	208	91	147	400	238	647	511	428	50	112
175*	105	108	238	102	169	410	275	688	561	485	60	160

* = Yuvarlak Başlı Vida /round headed bolt/

İNÇ In Inch

Çalışma Yük Sınırı working load limit	Gövde Çapı diameter bow	Vida Çapı diameter pin	Göz Çapı diameter eye	Göz Genişliği width eye	İç Genişliği width inside	İç Uzunluğu length inside	Gövde Genişliği width bow	Uzunluk length	Vida Uzunluğu length bolt	Genişlik width	Somun Kalınlığı thickness nut	Birim Ağırlık weight each
t	a	b	c	d	e	f	g	h	i	j	k	lbs
3.3	1/2	5/8	1 11/32	1/2	7/8	2	1 1/4	3 1/2	3 7/32	2 9/32	1/2	0.97
5	5/8	3/4	1 9/16	5/8	1 1/16	2 17/32	1 11/16	4 11/32	3 27/32	2 15/16	21/32	1.74
7	3/4	7/8	1 13/16	3/4	1 7/32	3	2	5 3/32	4 1/2	3 1/2	3/4	2.78
9.5	7/8	1	2 1/16	7/8	1 13/32	3 9/32	2 9/32	5 21/32	5 1/8	4 1/32	7/8	4.14
12.5	1	1 1/8	2 5/16	31/32	1 11/16	3 3/4	2 11/16	6 15/32	5 29/32	4 21/32	31/32	6.13
15	1 1/8	1 1/4	2 19/32	1 3/32	1 27/32	4 1/4	2 15/16	7 9/32	6 17/32	5 5/32	1 1/16	8.53
18	1 1/4	1 3/8	2 27/32	1 1/4	2	4 17/32	3 9/32	7 29/32	7	5 25/32	1 3/16	11.6
21	1 3/8	1 1/2	3 5/32	1 3/8	2 1/4	5 1/4	3 5/8	8 15/16	7 3/4	6 3/8	1 5/16	15.3
30	1 1/2	1 5/8	3 15/32	1 1/2	2 3/8	5 3/4	3 29/32	9 13/16	7 15/16	6 7/8	3/4	19.38
40	1 3/4	2	4 1/16	1 25/32	2 29/32	7	4 31/32	11 13/16	9 13/16	8 1/2	29/32	33.07
55	2	2 1/4	4 19/32	2 1/4	3 9/32	7 3/4	5 7/16	13 7/16	11 1/4	9 29/32	1 1/32	48.50
85	2 1/2	2 3/4	5 5/8	2 3/4	4 1/8	10 1/4	7 3/32	17 7/32	13 17/32	12 19/32	1 1/4	92.59
120	3	3 1/4	6 3/8	3 9/32	5	12 15/16	7 15/32	21 1/16	15 7/8	14 1/32	1 9/16	154.32
150*	3 3/4	3 3/4	8 3/16	3 19/32	5 25/32	15 3/4	9 3/8	25 15/32	20 1/8	16 27/32	1 31/32	246.92
175*	4	4 1/4	9 3/8	4 1/32	6 21/32	16 5/32	10 13/16	27 3/32	22 3/32	19 3/32	2 3/8	352.74

* = Yuvarlak Başlı Vida /round headed bolt/

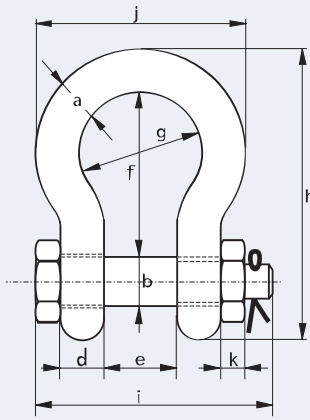
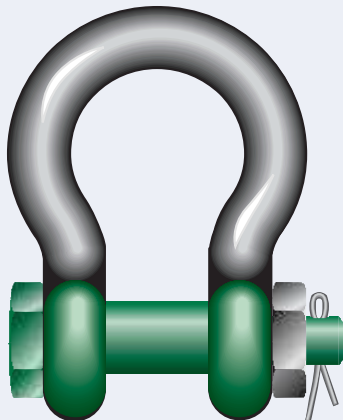


Aşırı İklimsel Koşullar İçin Somunlu Polar Kilit /
bow shackles with safety bolt, for use under extreme climatic conditions

Çalışma Yük Sınırı working load limit	Gövde Çapı diameter bow	Vida Çapı diameter pin	Göz Çapı diameter eye	Göz Genişliği width eye	İç Genişliği width inside	İç Uzunluğu length inside	Gövde Genişliği width bow	Uzunluk length	Vida Uzunluğu length bolt	Genişlik width	Somun Kalınlığı thickness nut	Birim Ağırlık weight each
	a	b	c	d	e	f	g	h	i	j	k	kg
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
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	116	50	83	197	138	334	269	238	26	19.85
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

İNÇ In Inch

Çalışma Yük Sınırı working load limit	Gövde Çapı diameter bow	Vida Çapı diameter pin	Göz Çapı diameter eye	Göz Genişliği width eye	İç Genişliği width inside	İç Uzunluğu length inside	Gövde Genişliği width bow	Uzunluk length	Vida Uzunluğu length bolt	Genişlik width	Somun Kalınlığı thickness nut	Birim Ağırlık weight each
	a	b	c	d	e	f	g	h	i	j	k	lbs
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
2	1/2	5/8	1 11/32	1/2	7/8	2	1 1/4	3 1/2	3 7/32	2 9/32	1/2	0.92
3.25	5/8	3/4	1 9/16	5/8	1 1/16	2 17/32	1 11/16	4 11/32	3 27/32	2 15/16	21/32	1.62
4.75	3/4	7/8	1 13/16	3/4	1 7/32	3	2	5 3/32	4 1/2	3 1/2	3/4	2.59
6.5	7/8	1	2 1/16	7/8	1 13/32	3 9/32	2 9/32	5 21/32	5 1/8	4 1/32	7/8	3.9
8.5	1	1 1/8	2 5/16	31/32	1 11/16	3 3/4	2 11/16	6 15/32	5 29/32	4 21/32	31/32	5.69
9.5	1 1/8	1 1/4	2 19/32	1 3/32	1 27/32	4 1/4	2 15/16	7 9/32	6 17/32	5 5/32	1 1/16	8.06
12	1 1/4	1 3/8	2 27/32	1 1/4	2	4 17/32	3 9/32	7 29/32	7	5 25/32	1 3/16	10.81
13.5	1 3/8	1 1/2	3 5/32	1 3/8	2 1/4	5 1/4	3 5/8	8 15/16	7 3/4	6 3/8	1 5/16	14.42
17	1 1/2	1 1/2	3 15/32	1 1/2	2 3/8	5 3/4	3 29/32	9 13/16	7 15/16	6 7/8	3/4	18.06
25	1 3/2	2	4 1/16	1 25/32	2 29/32	7	4 31/32	11 13/16	9 9/16	8 1/2	39/32	31.34
35	2	2 1/4	4 9/16	1 31/32	3 9/32	7 3/4	5 7/16	13 5/32	10 19/32	9 3/8	1 1/32	43.77
42.5	2 1/4	2 3/16	5 1/8	2 1/4	3 3/4	8 3/4	6 5/16	14 27/32	11 27/32	10 25/32	1 5/32	62.46
55	2 1/2	2 3/4	5 23/32	2 9/16	4 1/8	10 1/4	7 3/32	17 1/16	13	12 7/32	1 1/4	87.27
85	3	3 1/4	6 3/8	2 7/8	5	12 15/16	7 15/32	20 3/4	14 31/32	13 3/8	1 17/32	136.69



Malzeme / Material

Grade 8 alaşımlı ıslah çeliği
gövde ve pim.

bow and pin alloy steel, Grade 8,
quenched and tempred

Güvenlik Katsayısı / Safety Factor

MBL = 8 X WLL , 55 Ton ve 85 Ton
kilitler için MBL = 6 X WLL

MBL equals 8xWILL for shackles
with WILL 55 and 85 tons the MBL
equals 6xWILL

Standart / Standard

Sıcak daldırma galvanizli

EN 13889, ASME B30.26 and
meets performance requirements
of US Fed. Spec. RR-C-271 Type IVA
Class 3, Grade A

Yüzey / Finish

Sıcak daldırma galvanizli

hot dipped galvanized

Sıcaklık Aralığı / Temperature Range

-60°C + 200°C'ye

-60°C up to +200°C

Sertifika / Certification

2.1 - 2.2 - 3.1 - MTC[®] - DNV 2.7-1^a
DNV 2.7-1^b - DNV 2.22 - CE

Not / Note

Detaylı çap ve tolerans bilgisi için
tablolardan yada firmamızdan
destek alabilirsiniz.

for details on dimensions and
tolerances please consult our CAD
drawings, these are available on
request.



P-6031

Green Pin® Ağır Tonajlı Polar Kilit Green Pin® Heavy Duty Polar Shackles

Aşırı İklimsel Koşullar İçin Somunlu Polar Kilit /
bow shackles w,th safety bolt, for use under extreme climatic conditions

Malzeme / Material

Grade 8 alaşımlı ıslah çeliği
gövde ve pim

bow and pin alloy steel, Grade 8,
quenched and tempered

Güvenlik Katsayısı / Safety Factor

MBL = 5 X MBL

MBL equals 5 x WLL

Yüzey / Finish

Gövde gümüş ,pin yeşil boyalıdır.
(120 Ton kilit sıcak daldırma
galvanizlidir.)

Shackle bow painted silver, pin
painted green (120 tons shackle is
hot dipped galvanized)

Sıcaklık Aralığı / Temperature Range

-40°C + 200°C'ye kadar.

-40°C up to +200°C

Sertifika / Certification

2.1 - 2.2 - 3.1 - MTC^a - MTC^b *
LROS^a - MPI^a - US^a - CE

Not / Note

Detaylı çap ve tolerans bilgisi için
tablolardan yada firmamızdan
destek alabilirsiniz.

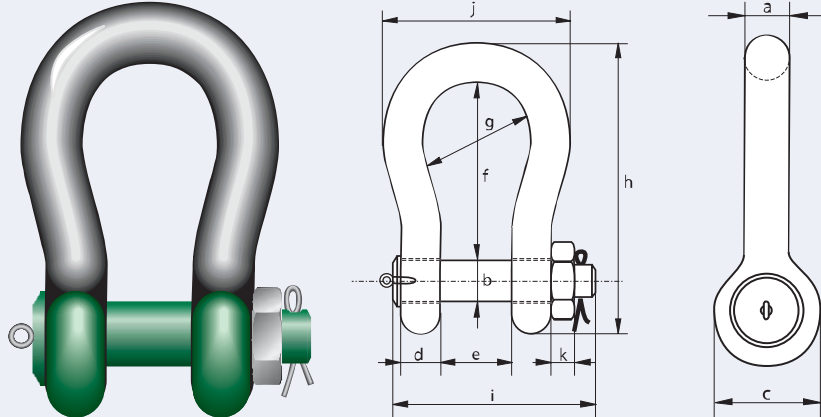
for details on dimensions and
tolerances please consult our CAD
drawings, these are available on
request.

Çalışma Yük Sınırı working load limit	Gövde Çapı diameter bow	Vida Çapı diameter pin	Göz Çapı diameter eye	Göz Genişliği width eye	İç Genişliği width inside	İç Uzunluğu length inside	Gövde Genişliği width bow	Uzunluk length	Vida Uzunluğu length bolt	Genişlik width	Somun Kalınlığı thickness nut	Birim Ağırlık weight each
	a	b	c	d	e	f	g	h	i	j	k	
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
120	95	95	208	91	147	400	238	647	440	428	50	110
150	105	108	238	102	169	410	275	688	490	485	60	160
200	120	130	279	113	179	513	290	838	520	530	60	235
250	130	140	299	118	205	554	305	904	560	565	65	285
300	140	150	325	123	205	618	305	996	575	585	70	340
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

İNÇ In Inch

Çalışma Yük Sınırı working load limit	Gövde Çapı diameter bow	Vida Çapı diameter pin	Göz Çapı diameter eye	Göz Genişliği width eye	İç Genişliği width inside	İç Uzunluğu length inside	Gövde Genişliği width bow	Uzunluk length	Vida Uzunluğu length bolt	Genişlik width	Somun Kalınlığı thickness nut	Birim Ağırlık weight each
	a	b	c	d	e	f	g	h	i	j	k	
t	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	lbs
120	3 3/4	3 3/4	8 3/16	3 19/32	5 25/32	15 3/4	9 3/8	25 15/32	17 5/16	16 27/32	1 31/32	243
150	4 1/8	4 1/4	9 3/8	4 1/32	6 21/32	16 5/32	10 13/16	27 3/32	19 9/32	19 3/32	2 3/8	353
200	4 23/32	5 1/8	10 31/32	4 7/16	7 1/16	20 3/16	11 13/32	33	20 15/32	20 7/8	2 3/8	518
250	5 1/8	5 1/2	11 25/32	4 21/32	8 1/16	21 13/16	12	35 19/32	22 1/16	22 1/4	2 9/16	628
300	5 1/2	5 29/32	12 25/32	4 27/32	8 1/16	24 11/32	12	39 7/32	22 5/8	23 1/32	2 3/4	750
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	7 15/32	7 7/16	11 3/32	28 9/32	14 3/4	48 15/16	31 7/8	30 1/2	2 3/4	1940
700	8 9/32	8 15/32	7 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	30 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

* 150 ton ve üzeri belirtilen kilitler içindir.



Green Pin® Geniş Ağızlı Kilit

Green Pin® Wide Mouth Shackles

G-4263

Somunlu Omega Kilit / bow shackles with safety bolt

Çalışma Yük Sınırı working load limit	Gövde Çapı diameter bow	Vida Çapı diameter pin	Göz Çapı diameter eye	Göz Genişliği width eye	İç Genişliği width inside	İç Uzunluğu length inside	Gövde Genişliği width bow	Uzunluk length	Vida Uzunluğu length bolt	Genişlik width	Somun Kalınlığı thickness nut	Birim Ağırlık weight each
t	a	b	c	d	e	f	g	h	i	j	k	kg
4.75	22	25	52	22	63	112	88	175	157	132	22	2.08
6.5	25	28	59	25	75	135	105	204	183	155	25	3.14
8.5	28	32	66	28	82	148	115	225	205	171	27	4.36
9.5	32	35	72	32	90	162	126	248	224	190	30	5.95
12	35	38	79	35	100	180	140	274	245	210	33	7.87
16	38	42	88	38	106	216	159	319	248	235	19	12.5
25	45	50	103	45	127	248	175	370	296	265	23	16.7
30	50	57	118	50	146	273	207	411	332	307	26	25
55	65	70	145	65	165	314	213	487	391	343	32	45
75	83	83	164	83	184	330	254	537	460	620	39	70

Malzeme / Material

Grade 8 alaşımlı ıslah çeliği
gövde ve pim.

bow and pin alloy steel, Grade 8,
quenched and tempred

Güvenlik Katsayısı / Safety Factor

MBL = 6 X WLL

MBL equals 6xWLL

Yüzey / Finish

Sıcak daldırma galvanizli

hot dipped galvanized

Sıcaklık Aralığı / Temperature Range

-20°C + 200°C'ye

-20°C up to +200°C

Sertifika / Certification

2.1 - 2.2 - 3.1 - MTC[®] - CE

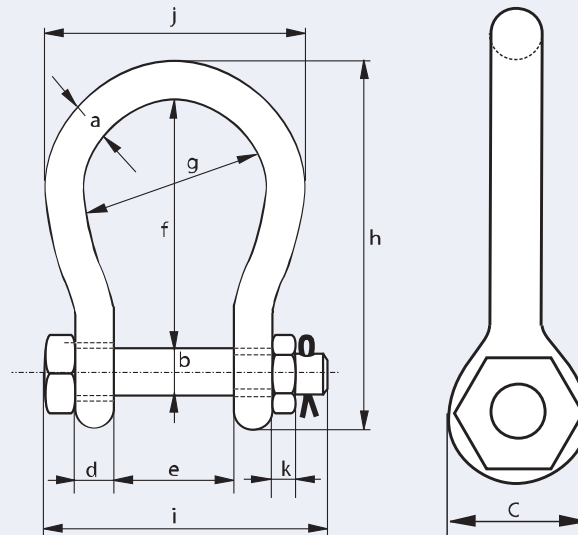
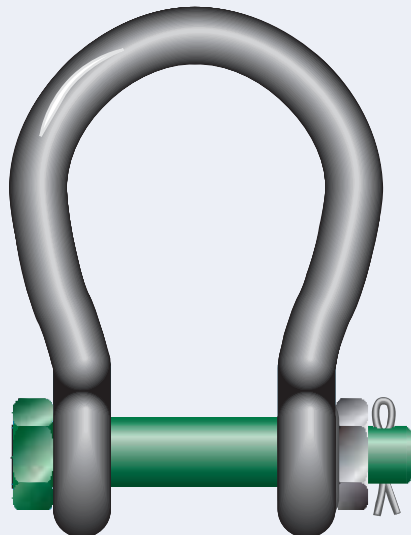
Not / Note

Detaylı çap ve tolerans bilgisi için
tablolardan yada firmamızdan
destek alabilirsiniz.

for details on dimensions and
tolerances please consult our CAD
drawings, these are available on
request.

İNÇ In Inch

Çalışma Yük Sınırı working load limit	Gövde Çapı diameter bow	Vida Çapı diameter pin	Göz Çapı diameter eye	Göz Genişliği width eye	İç Genişliği width inside	İç Uzunluğu length inside	Gövde Genişliği width bow	Uzunluk length	Vida Uzunluğu length bolt	Genişlik width	Somun Kalınlığı thickness nut	Birim Ağırlık weight each
t	a	b	c	d	e	f	g	h	i	j	k	lbs
4.75	7/8	1	2 1/16	7/8	2 15/32	4 13/32	3 15/32	6 13/16	6 3/16	5 3/16	7/8	4.59
6.5	1	1 1/8	2 5/16	31/32	2 15/16	5 5/16	4 1/8	8 1/32	7 7/32	6 3/32	31/32	6.92
8.5	1 1/8	1 1/4	2 19/32	1 3/32	3 7/32	5 13/16	4 17/32	8 27/32	8 1/16	6 23/32	1 1/16	9.61
9.5	1 1/4	1 3/8	2 27/32	1 1/4	3 17/32	6 3/8	4 31/32	9 3/4	8 13/16	7 15/32	1 3/16	13.12
12	1 3/8	1 1/2	3 1/8	1 3/8	3 15/16	7 3/32	5 1/2	10 25/32	9 21/32	8 9/32	1 5/16	17.35
16	1 1/2	1 5/8	3 15/32	1 1/2	4 3/16	8 1/2	6 1/4	12 9/16	9 3/4	9 1/4	3/4	27.56
25	1 3/4	2	4 1/16	1 25/32	5	9 3/4	6 7/8	14 9/16	11 21/32	10 7/16	29/32	36.82
30	2	2 1/4	4 21/32	1 31/32	5 3/4	10 3/4	8 5/32	16 3/16	13 1/16	12 3/32	1 1/32	55.12
55	2 1/2	2 3/4	5 23/32	9 2/16	6 1/2	12 3/8	8 3/8	19 3/16	15 13/32	13 1/2	1 1/4	105.82
75	3 1/4	3 1/4	6 15/32	3 9/32	7 1/4	13	10	21 5/32	18 1/8	16 17/32	1 17/32	154.32



G-3161 Yellow Pin Kilit

Yellow Pin Shackles

Vidalı Omega Kilit / bow shackles with screw collar pin

Malzeme / Material

Grade 6 yüksek gerilimli çelik gövde ve pim

bow and pin high tensile steel, Grade 6

Standart / Standard

generally to US Fed. Spec. RR-C-271

Yüzey / Finish

Sıcak daldırma galvanizli

hot dipped galvanized

Sertifika / Certification

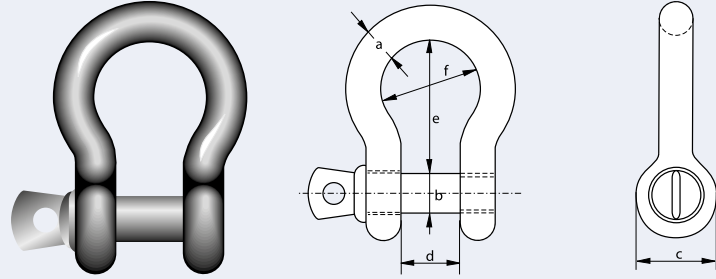
2.1 - 2.2 - CE

Not / Note

İthal kalite

import quality

Çalışma Yük Sınırı working load limit	Gövde Çapı diameter bow	Vida Çapı diameter pin	Göz Çapı diameter eye	İç Genişliği width inside	İç Uzunluğu length inside	Gövde Genişliği width bow	Birim Ağırlık weight each
	a	b	c	d	e	f	
t	mm	mm	mm	mm	mm	mm	kg
0.33	5	6	14	9.5	22	15	0.03
0.5	6	8	16	12	29	20	0.05
0.75	8	10	19	13.5	31	21	0.09
1	10	11	23	17	37	26	0.14
1.5	11	13	27	19	43	29	0.2
2	13	16	30	20	48	33	0.33
3.25	16	19	38	27	60	43	0.62
4.75	19	22	46	32	71	50	1.07
6.5	22	25	53	36	84	58	1.64
8.5	25	28	61	43	95	68	2.28
9.5	28	32	68	46	108	74	3.36
12	32	35	76	51	119	82	4.31
13.5	35	38	84	57	133	92	6.14
17	38	42	92	60	146	98	7.81
25	45	50	106	73	177	127	12.61



G-3163 Yellow Pin Kilit

Yellow Pin Shackles

Somunlu Omega Kilit / bow shackles with safety bolt

Malzeme / Material

Grade 6 yüksek gerilimli çelik gövde ve pim

bow and pin high tensile steel, Grade 6

Standart / Standard

generally to US Fed. Spec. RR-C-271

Yüzey / Finish

Sıcak daldırma galvanizli

hot dipped galvanized

Sertifika / Certification

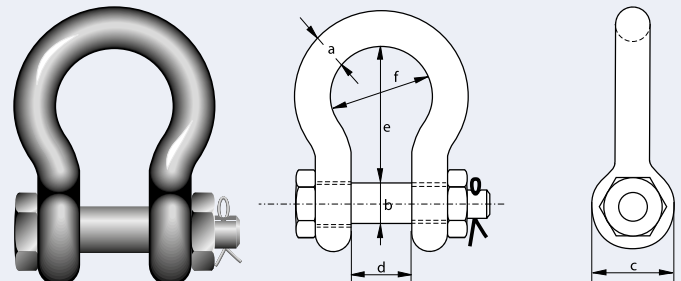
2.1 - 2.2 - CE

Not / Note

İthal kalite

import quality

Çalışma Yük Sınırı working load limit	Gövde Çapı diameter bow	Vida Çapı diameter pin	Göz Çapı diameter eye	İç Genişliği width inside	İç Uzunluğu length inside	Gövde Genişliği width bow	Birim Ağırlık weight each
	a	b	c	d	e	f	
t	mm	mm	mm	mm	mm	mm	kg
2	13	16	30	20	48	33	0.36
3.25	16	19	38	27	60	43	0.7
4.75	19	22	46	32	71	50	1.1
6.5	22	25	53	36	84	58	1.79
8.5	25	28	61	43	95	68	2.57
9.5	28	32	68	46	108	74	3.75
12	32	35	76	51	119	82	5.32
13.5	35	38	84	57	133	92	7.19
17	38	42	92	60	146	98	9.44
25	45	50	106	73	177	127	15.4

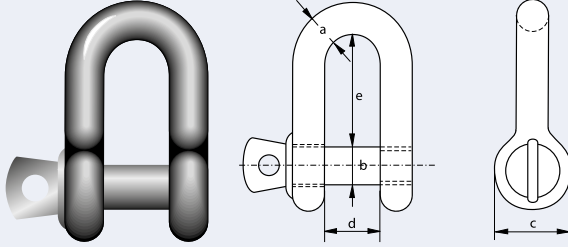


Yellow Pin Kilit Yellow Pin Shackles

G-3151

Vidalalı U Kilit / dee shackles with screw collar pin

Çalışma Yük Sınırı working load limit	Gövde Çapı diameter bow	Vida Çapı diameter pin	Göz Çapı diameter eye	İç Genişliği width inside	İç Uzunluğu length inside	Birim Ağırlık weight each
	a	b	c	d	e	
t	mm	mm	mm	mm	mm	kg
0.33	5	6	12	9.5	19	0.03
0.5	6	8	16	12	22	0.05
0.75	8	10	19	13.5	26	0.08
1	10	11	23	17	32	0.13
1.5	11	13	27	19	37	0.2
2	13	16	30	20	41	0.27
3.25	16	19	38	27	51	0.57
4.75	19	22	46	32	60	1.19
6.5	22	25	53	36	71	1.43
8.5	25	28	61	43	81	2.16
9.5	28	32	68	46	90	3.06
12	32	35	76	51	100	4.11
13.5	35	38	84	57	111	5.28
17	38	42	92	60	122	7.24
25	45	50	106	73	146	12.14



Malzeme / Material

Grade 6 yüksek gerilimli çelik gövde ve pim

bow and pin high tensile steel, Grade 6

Standart / Standard

generally to US Fed. Spec. RR-C-271

Yüzey / Finish

Sıcak daldırma galvanizli

hot dipped galvanized

Sertifika / Certification

2.1 - 2.2 - CE

Not / Note

İthal kalite

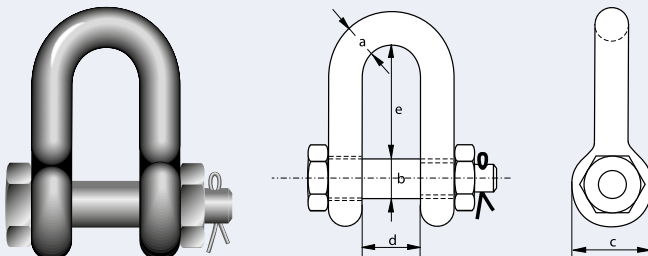
import quality

Yellow Pin Kilit Yellow Pin Shackles

G-3153

Somunlu U Kilit / dee shackles with safety bolt

Çalışma Yük Sınırı working load limit	Gövde Çapı diameter bow	Vida Çapı diameter pin	Göz Çapı diameter eye	İç Genişliği width inside	İç Uzunluğu length inside	Birim Ağırlık weight each
	a	b	c	d	e	
t	mm	mm	mm	mm	mm	kg
2	13	16	30	20	41	0.35
3.25	16	19	38	27	51	0.65
4.75	19	22	46	32	60	1.02
6.5	22	25	53	36	71	1.75
8.5	25	28	61	43	81	2.52
9.5	28	32	68	46	90	3.5
12	32	35	76	51	100	4.91
13.5	35	38	84	57	111	5.84
17	38	42	92	60	122	8.4
25	45	50	106	73	146	11.9



Malzeme / Material

Grade 6 yüksek gerilimli çelik gövde ve pim

bow and pin high tensile steel, Grade 6

Standart / Standard

generally to US Fed. Spec. RR-C-271

Yüzey / Finish

Sıcak daldırma galvanizli

hot dipped galvanized

Sertifika / Certification

2.1 - 2.2 - CE

Not / Note

İthal kalite

import quality

E/G-6131 Radansa

Thimbles

generally to DIN 6899 (B)

Malzeme / Material

Düşük karbonlu çelik

mild steel

Standart / Standard

generally to DIN 6899 (B)

Yüzey / Finish

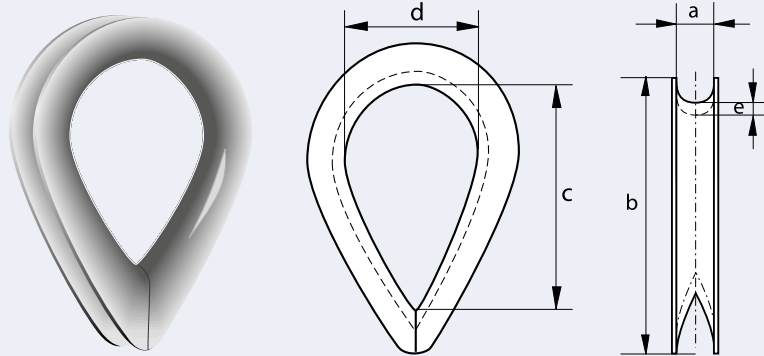
6mm ye kadar elektro galvanizli,
6 mm üstü sıcak daldırma
galvanizli.

*thimbles for rope diameters up to
and including 6 mm are electro-
galvanized, other diameters are
hot dipped galvanized*

Sertifika / Certification

2.1

Halat Çapı diameter rope	Yiv Genişliği width groove	Uzunluk length	İç Uzunluk length inside	İç Genişliği width inside	Sırt Kalınlığı thickness back	Ağırlık (100 adet) weight per 100 pcs
	a	b	c	d	e	
mm	mm	mm	mm	mm	mm	kg
2.5	3	22	19	12	1.6	0.6
3.5	4	26	21	13	1.6	0.7
4	5	32	23	14	1.9	0.9
5	6	38	25	16	2.4	1.8
6	7	44	28	18	2.4	1.9
7	8	51	32	20	2.8	2.7
9	10	57	38	24	3.1	4.1
11	12	64	45	28	3.3	6.9
13	13	70	48	30	3.3	7.6
13	14	76	51	32	3.7	9.2
15	16	83	58	36	3.8	16.4
16	17	89	61	38	4.7	19
17	18	95	64	40	4.7	20.3
18	20	102	72	45	5.7	27.3
20	22	114	80	50	5.7	28.6
22	24	127	90	56	6.5	44.8
24	26	140	99	62	6.8	57.7
26	28	152	112	70	8	72
28	30	165	120	75	8	104
30	32	178	128	80	8	115
32	34	203	152	95	8.5	153
34	36	216	160	100	8.5	176
36	38	229	176	110	8.5	195
38	40	241	184	115	10.5	292
40	42	254	192	120	10.5	320
42	45	305	240	150	10.5	364
47	50	360	265	160	12	535
57	60	380	275	170	12	790
63	65	420	300	180	13	830
72	75	460	350	200	15	1200
87	90	500	370	210	18	2600
97	100	550	380	220	20	3050



Halat Çapı diameter rope	Yiv Genişliği width groove	Et Kalınlığı width overall	Genişlik width	Uzunluk length	Çap diameter	Uzunluk length	Ağırlık (100 adet) weight per 100 pcs
	a	b	c	d	e	f	
mm	mm	mm	mm	mm	mm	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	104	72	6600
80	88	112	400	640	112	80	9000

Malzeme / Material

Dökme Yumuşak Çelik, (GTW 40)
cast mild steel, (GTW 40)

Standart / Standard

DIN 3091

according to DIN 3091

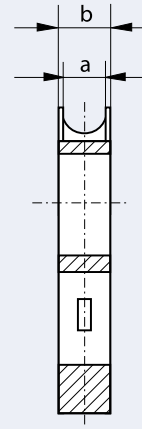
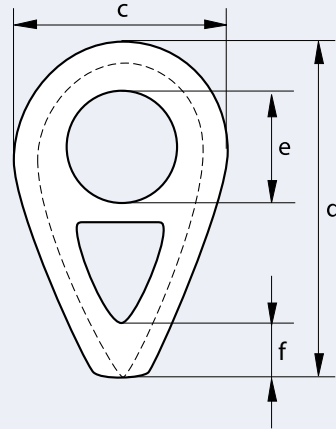
Yüzey / Finish

Kendi renginde

self coloured

Sertifika / Certification

2.1



E/G-6135 Radansa

Thimbles

generally to DIN 3090

Malzeme / Material

Düşük karbonlu çelik

mild steel

Standart / Standard

generally to DIN 3090

Yüzey / Finish

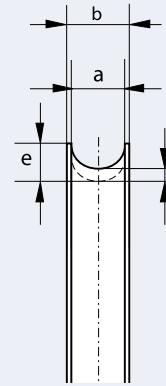
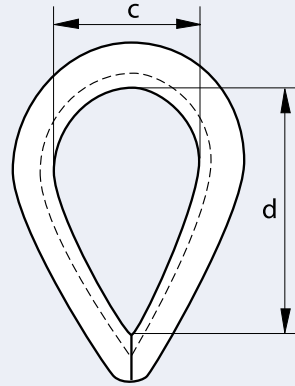
4mm ve 6mm elektro galvanizli,
daha yüksek çaplar sıcak
daldırma galvanizlidir.

for diameter 4 and 6 mm electro-
galvanized other diameters hot
dipped galvanized

Sertifika / Certification

2.1

Halat Çapı diameter wire rope	Yiv Genişliği width groove	Et Kalınlığı width overall	İç Genişliği width inside	İç Uzunluk length inside	Kalınlık thickness	Sırt Kalınlığı thickness back	Ağırlık (100 adet) weight per 100 pcs
mm	a	b	c	d	e	f	kg
4	5	9	10	20	5.1	2.1	1.4
6	7	12	15	30	7.1	2.6	3
8	9	13	20	40	11	4	7.1
10	11	16	25	50	14	5	17
12	13	19	30	60	16	6	24
14	16	22	35	70	17	7	36
16	18	25	40	80	19	8	50
18	20	27	45	90	21	9	62
20	22	32	50	100	23	10	90
22	24	33	55	110	24	10	100
24	26	37	60	120	27	11	130
26	29	46	65	130	30	12	220
28	31	50	70	140	33	12	240
32	35	55	80	160	38	14	270
36	40	60	90	180	42	16	430
40	44	65	100	200	46	18	570
44	48	70	110	220	53	20	850
48	53	75	120	240	58	22	1120
52	57	80	130	260	64	25	1530
56	62	85	140	280	67	25	2148
60	66	90	150	300	70	25	2300
64	70	95	160	320	78	30	3500
68	75	100	170	340	81	30	3700
72	79	105	180	360	84	30	4100
76	84	115	190	380	87	30	4600
80	88	120	200	400	90	30	5400



Halat Çapı diameter rope		Yiv Genişliği width groove	Uzunluk length	İç Uzunluk length inside	İç Genişliği width inside	Sırt Kalınlığı thickness back	Ağırlık (100 adet) weight per 100 pcs
inch	mm	a	b	c	d	e	kg
3/16	5	5.5	44	28	19	3	3.5
1/4	7	6	48	30	20	3.5	5.4
5/16	8	8	54	33	22	4	5.7
3/8	10	10	64	38	25	4.8	7.6
7/16	11	13	73	41	29	4.8	14.2
1/2	13	14	80	44	32	5.6	18
9/16	15	15	80	44	32	5.6	18.9
5/8	16	17	98	59	41	7.9	34
11/16	17	19	108	67	44	7.9	39.7
3/4	19	20	124	73	51	9.5	62.4
13/16	21	21	124	73	51	9.5	62.4
7/8	22	23	133	83	57	9.5	75.6
15/16	24	25	146	92	64	10.3	106
1	25	27	162	108	70	10.3	125
1 1/8	28	29	178	111	76	12.7	151
1 1/4	32	33	197	133	95	12.7	204
1 3/8	35	38	229	152	105	15.9	318
1 1/2	38	41	254	165	114	17.5	488
1 5/8	42	46	254	165	114	17.5	499
1 3/4	45	51	286	178	127	25.4	556
1 7/8	47	60	318	191	133	28.6	-
2	50	64	330	203	140	28.6	-
2 1/8	54	64	330	203	140	28.6	-
2 1/4	57	67	356	216	146	30.2	-
2 1/2	65	70	413	241	159	31.8	-
2 3/4	70	86	502	273	203	41.3	-

Malzeme / Material

Düşük karbon çelik
mild steel

Standart / Standard

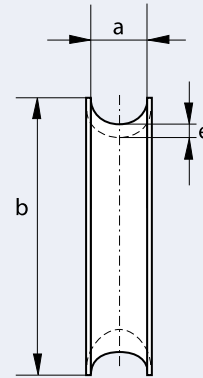
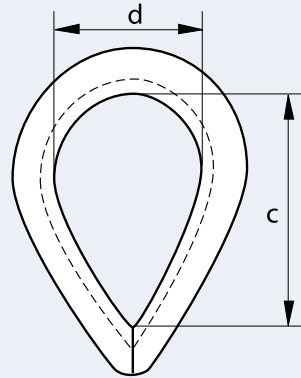
generally to EN13411-1 formerly
BS 464

Yüzey / Finish / Finish

Sıcak daldırma galvaniz
hot dipped galvanized

Sertifika / Certification

2.1



E-6260 Klemens

Wire rope clips

generally to EN 13411-5 Type A

Malzeme / Material

Köprü, dövme çelik
U-BOLT: Düşük karbonlu çelik
Bridge: malleable steel
U-bolt: mild steel

Standart / Standard

EN 13411-5 TİP A (Eski adı DIN 1142)

EN 13411-5 Type A Formerly DIN 1142

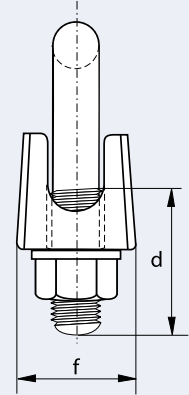
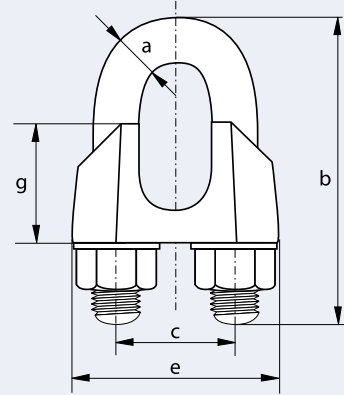
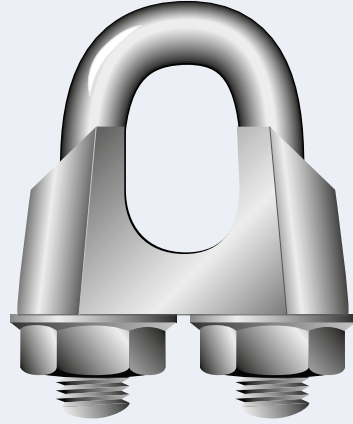
Yüzey / Finish

Elektro galvanizli
electro-galvanized

Sertifika / Certification

2.1

Halat Çapı diameter wire rope	Çap diameter	Gövde Genişliği length bow	İç Genişliği width inside	Diş Uzunluk length thread	Taban Uzunluğu length base	Taban Kalınlığı thickness base	Taban Yüksekliği height base	Ağırlık (100 adet) weight per 100 pcs
mm	mm	mm	mm	mm	mm	mm	mm	kg
5	5	25	12	14	25	13	13	2
6.5	6	32	14	17	30	16	14	4
8	8	41	18	20	39	20	18	8.2
10	8	46	20	24	40	20	21	9.2
12	10	56	24	28	50	25	24	21.5
13	12	64	29	29	55	28	29	27.5
14	12	66	28	31	59	30	28	39.5
16	14	76	34	35	64	32	35	43
19	14	83	37	36	68	33	40	49
22	16	96	41	40	74	34	44	68
26	20	111	46	50	84	38	51	117
30	20	127	54	55	95	41	59	140
34	22	141	60	60	105	45	67	213
40	24	159	68	65	117	49	77	268



Halat Çapı diameter wire rope	Çap diameter	Gövde Genişliği length bow	İç Genişliği width inside	Diş Uzunluk length thread	Taban Uzunluğu length base	Taban Kalınlığı thickness base	Taban Yüksekliği height base	Ağırlık (100 adet) weight per 100 pcs
mm	a	b	c	d	e	f	g	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	2.1
8	6	34	16	19	30	14	15	4.1
10	8	42	19	22	34	18	17	6.8
11	8	44	20	22	36	19	18	7.2
13	10	55	24	30	42	23	21	13
14	10	57	25	30	44	23	22	13.5
16	12	63	29	33	50	26	26	21
19	12	75	32	38	54	29	30	28
22	14	85	37	44	61	33	34	40
26	14	95	41	45	65	35	37	44
30	16	110	48	50	74	37	43	66
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

Malzeme / Material

Köprü, Döküm
U-BOLT: Düşük Karbonlu Çelik

Bridge: casted
U-bolt: mild steel

Standart / Standard

DIN 741

formerly DIN 741

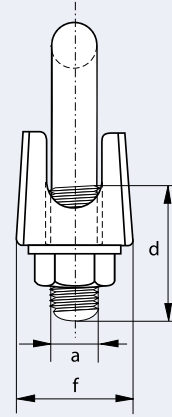
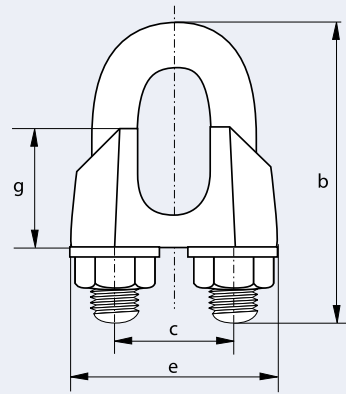
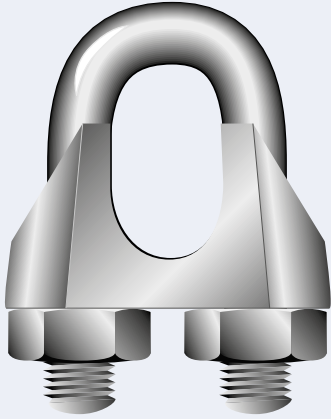
Yüzey / Finish / Finish

Elektro Galvanizli

electro-galvanized

Sertifika / Certification

2.1



G-6411 Green Pin® Soket

Green Pin® sockets

Kapalı Tip Soket / closed spelter socket

Malzeme / MaterialYüksek gerilimli çelik
high tensile steel**Yüzey / Finish**Sıcak Daldırma Galvanizli
hot dipped galvanized**Sıcaklık Aralığı / Temperature Range**

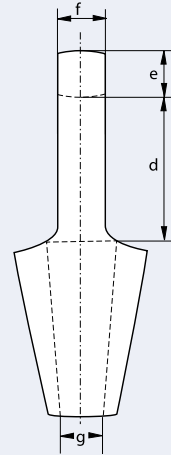
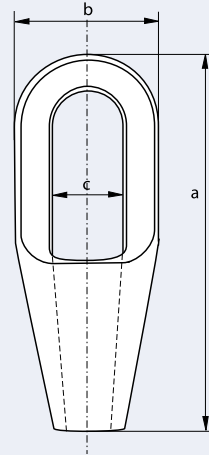
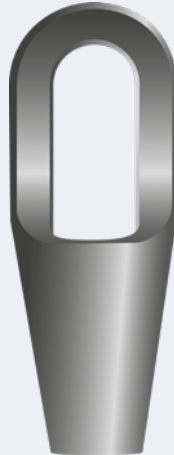
-20°C +200°C'ye kadar

-20°C up to +200°C

Sertifika / Certification

2.1 - 2.2 - 3.1

Numara number	MBL minimum breaking load	Halat Çapı diameter wire rope	Uzunluk length	Genişlik width	Gövde İç Genişliği width inside bow	Gövde İç Uzunluğu length inside bow	Et Kalınlığı thickness bow	Et Kalınlığı thickness bow	Ağız Genişliği opening	Birim Ağırlık weight each
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	0.7
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	2.1
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



Numara number	MBL minimum breaking load	Halat Çapı diameter wire rope	Uzunluk	Genişlik	İç Genişliği	Pin Çapı	İç Uzunluk	Ağız Genişliği	Birim Ağırlık weight each
			a	b	c	d	e	f	
	t	mm	mm	mm	mm	mm	mm	mm	kg
196	8	6 - 7	109	51	19	16	33	9	0.4
197	12	8 - 10	124	62	21	21	34	12	0.8
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	63	95	38	16
118	150	37 - 39	394	178	76	70	127	41	23
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	58
130	360	55 - 60	598	270	113	108	196	63	85
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	173
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	370
146	1200	108 - 115	1160	489	206	193	369	125	525
150	1300	120 - 130	1310	603	225	250	390	143	735

Malzeme / Material

Yüksek gerilimli çelik
high tensile steel

Yüzey / Finish

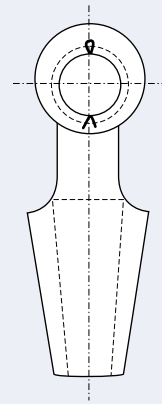
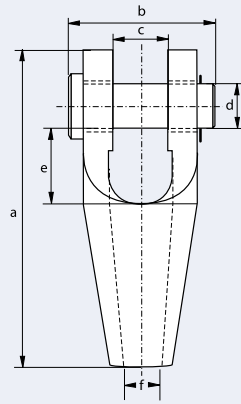
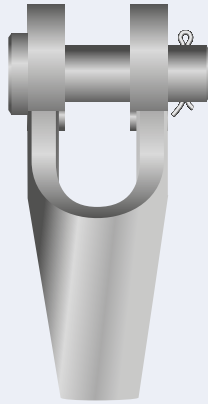
Sıcak Daldırma Galvanizli
hot dipped galvanized

Sıcaklık Aralığı / Temperature Range

-20°C +200°C'ye kadar
-20°C up to +200°C

Sertifika / Certification

2.1 - 2.2 - 3.1



G-6422 Green Pin® Soket

Green Pin® sockets

Açık Tip Somunlu Soket / open spelter socket with safety bolt

Malzeme / Material

Yüksek gerilimli çelik

high tensile steel

Yüzey / Finish

Sıcak Daldırma Galvanizli

hot dipped galvanized

Sıcaklık Aralığı / Temperature Range

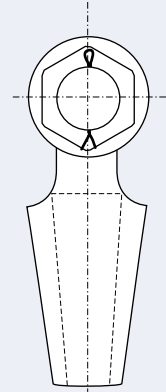
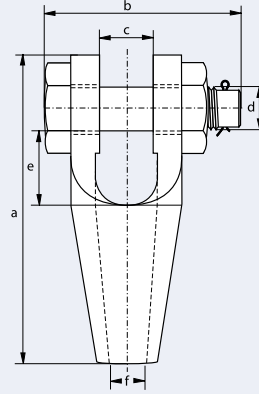
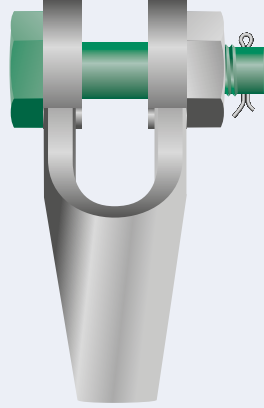
-20°C +200°C'ye kadar

-20°C up to +200°C

Sertifika / Certification

2.1 - 2.2 - 3.1

Numara number	MBL minimum breaking load t	Halat Çapı diameter wire rope mm	Uzunluk length	Genişlik width	İç Genişliği width inside	Pin Çapı diameter pin	İç Uzunluk length inside	Ağız Genişliği opening	Birim Ağırlık weight each
			a	b	c	d	e	f	kg
196	8	6 - 7	109	69	19	16	33	8.5	0.4
197	12	8 - 10	124	83	20	20	35	12	0.8
198	20	11 - 13	143	101	26	25	37	15	1
199	25	14 - 16	172	124	33	30	49	18	1.8
100	40	18 - 19	205	138	38	35	58	21	3
104	55	20 - 22	235	148	44	41	68	24	4.6
108	75	23 - 26	275	176	51	50	76	28	8
111	90	27 - 30	306	193	57	57	85	32	11
115	125	31 - 36	338	210	63	63	96	38	16
118	150	37 - 39	394	230	76	70	127	41	23
120	170	40 - 42	418	244	76	77	126	44	27



Green Pin® Soket G-6413

Green Pin® sockets

Açık Tip Kamalı Soket / open wedge socket

Numara number	MBL minimum breaking load	Halat Çapı diameter wire rope	Uzunluk length	Pın Merkezine Uzunluk length to center pin	Genişlik width	İç Genişliği width inside	Pin Çapı diameter pin	Et Kalınlıkları thick-ness side plates	Göz Çapı diameter eye	Birim Ağırlık weight each
			a	b	c	d	e	f	g	
0.25	8	7 - 8	128	110	51	18	16	9	36	0.8
0.5	12	9 - 10	165	142	62	20,5	21	11	46	1.5
1	20	11 - 13	175	146	66	25	25	12	57	2.4
2	25	14 - 16	211	176	82	31	30	15	70	4
3	40	18 - 19	252	212	95	38	35	16	80	7
4	55	20 - 22	288	240	110	44	41	19	95	11
5	75	24 - 26	329	274	130	51	51	22	110	16
6	90	27 - 29	375	310	144	57	57	25	130	21
7	110	30 - 32	423	350	155	63	64	28	146	30
8	125	34 - 36	474	400	163	69	64	28	148	37
9	150	37 - 39	527	450	178	76	70	30	153	51
10	170	40 - 42	580	500	187	76	76	33	160	64
11	225	43 - 48	650	550	226	89	89	39	186	96
12	280	49 - 52	745	640	257	101	95	46	194	130
13	360	54 - 58	785	660	275	114	108	54	230	180
14	425	60 - 68	970	835	300	127	121	60	250	275
15	460	72 - 76	1150	1000	355	146	133	76	270	440
16	625	81 - 86	1252	1100	375	159	140	79	300	510

Malzeme / Material

Yüksek gerilimli çelik
high tensile steel

Standart / Standard

generally to EN 13411-6

Yüzey / Finish

Sıcak Daldırma Galvanizli
hot dipped galvanized

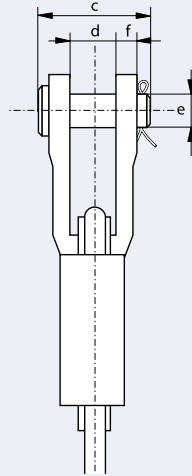
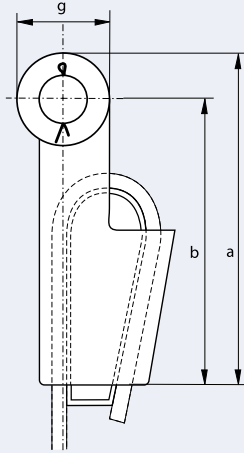
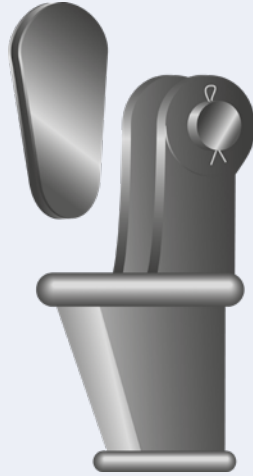
Sıcaklık Aralığı / Temperature Range

-20°C +200°C'ye kadar

-20°C up to +200°C

Sertifika / Certification

2.1 - 2.2 - 3.1



G-6423 Green Pin® Soket

Green Pin® sockets

Açık Tip Kamalı Somunlu Soket / open wedge socket with safety bolt

Malzeme / Material

Yüksek gerilimli çelik
high tensile steel

Standart / Standard

generally to EN 13411-6

Yüzey / Finish

Sıcak Daldırma Galvanizli
hot dipped galvanized

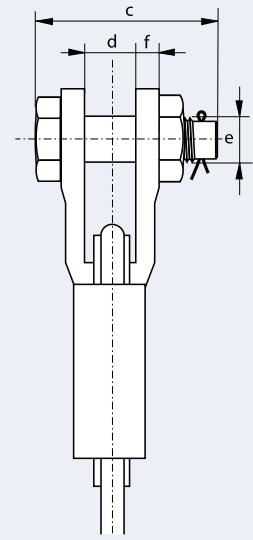
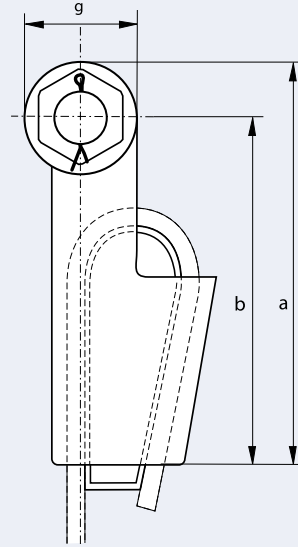
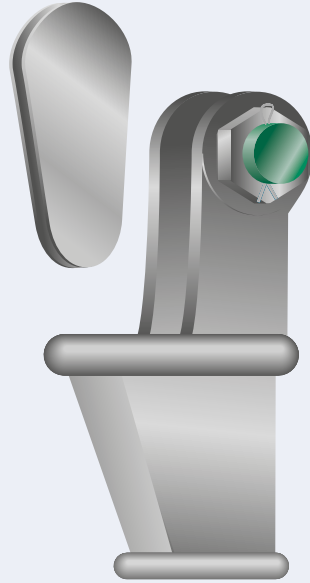
Sıcaklık Aralığı / Temperature Range

-20°C +200°C'ye kadar
-20°C up to +200°C

Sertifika / Certification

2.1 - 2.2 - 3.1

Numara number	MBL minimum breaking load	Halat Çapı diameter wire rope	Uzunluk	Pın Merkezine	Genişlik	İç Genişliği	Pın Çapı	Et Kalınlıkları	Göz Çapı	Birim Ağırlık
			length	Uzunluk						
	t	mm	mm	b	c	d	e	f	g	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
3	40	18 - 19	252	212	138	38	35	16	80	7
4	55	20 - 22	288	240	148	44	41	19	95	11
5	75	24 - 26	329	274	176	51	50	22	110	16
6	90	27 - 29	375	310	193	57	57	25	130	21
7	110	30 - 32	423	350	210	63	63	28	146	30
8	125	34 - 36	474	400	216	69	65	28	148	37
9	150	37 - 39	527	450	230	76	70	30	153	51
10	170	40 - 42	580	500	244	76	77	33	160	64



Çalışma Yük Sınırı working load limit	Diş Çapı diameter thread	Take Up take up	Kapalı	Açık	Kapalı	Çatal Ağız Uzunluğu opening jaw	İç Uzunluk length inside	Pin Çapı diameter pin	Çatal Et Kalınlığı thickness jaw eye	Çatal Göz Çapı diameter jaw eye	Birim Ağırlık weight each
			Pozisyondaki Uzunluk length closed position	Pozisyondaki Uzunluk length open position	Pozisyondaki Uzunluk length closed position						
t	a	inch	b	c	d	e	f	g	h	i	kg
2.36	3/4	6	369	487	439	24	38	16	16	41	2.59
2.36	3/4	9	444	640	514	24	38	16	16	41	3.13
2.36	3/4	12	520	792	590	24	38	16	16	41	3.42
2.36	3/4	18	670	1096	740	24	38	16	16	41	4.51
3.27	7/8	12	561	826	638	27	42	19	19	48	4.93
3.27	7/8	18	713	1132	790	27	42	19	19	48	6.41
4.54	1	6	447	555	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 1/4	12	641	914	748	44	71	29	26	68	11.2
6.9	1 1/4	18	803	1228	910	44	71	29	26	68	13.6
6.9	1 1/4	24	962	1539	1069	44	71	29	26	68	15
9.71	1 1/2	12	675	942	806	52	71	35	28	80	17
9.71	1 1/2	18	825	1244	956	52	71	35	28	80	19.3
9.71	1 1/2	24	980	1551	1111	52	71	35	28	80	20.7
12.7	1 3/4	18	938	1316	1092	60	86	41	33	90	25
12.7	1 3/4	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 1/2	24	1255	1831	1480	75	114	57	41	143	88
34	2 3/4	24	1348	1882	1604	90	110	70	41	158	98

Malzeme / Material

Sıcak dövme yüksek gerilimli çelik SAE 1035 yada 1045

drop forged high tensile steel SAE 1035 or 1045

Güvenlik Katsayısı / Safety Factor

MBL = 5 X WLL

MBL equals 5 x WLL

Standart / Standard

generally to ASTM F1145-92 formerly U.S. Federal Specification FF-T-791b

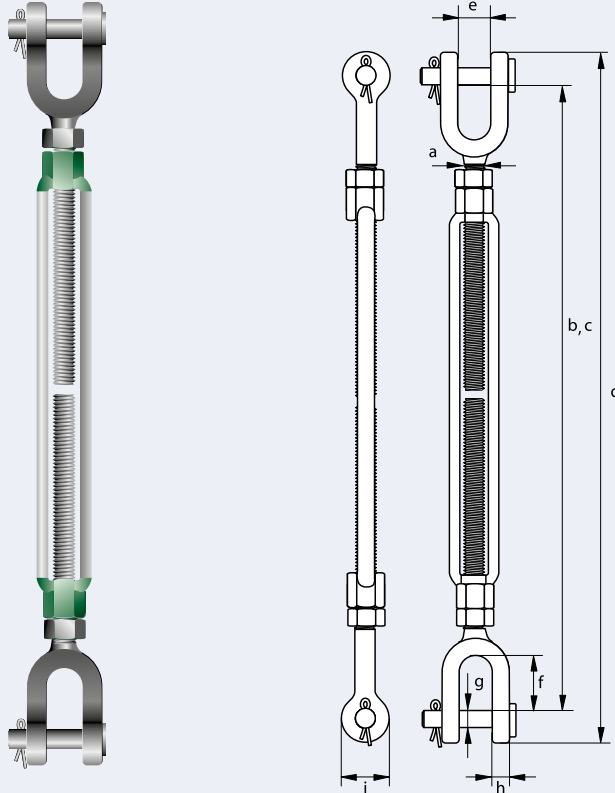
Yüze / Finish

Sıcak daldırma galvanizli

hot dipped galvanized

Sertifika / Certification

2.1 - 2.2 - 3.1



G-6323 Green Pin® Çatallı Gerdirme

Green Pin® turnbuckles Jaw - Jaw with cotter pin

generally to ASTM F1145-92

Malzeme / Material

Sıcak dövme yüksek gerilimli çelik SAE 1035 yada 1045

drop forged high tensile steel SAE 1035 or 1045

Güvenlik Katsayısı / Safety Factor

MBL = 5 X WLL

MBL equals 5 x WLL

Standart / Standard

generally to ASTM F1145-92 formerly U.S. Federal Specification FF-T-791b

Yüzey / Finish

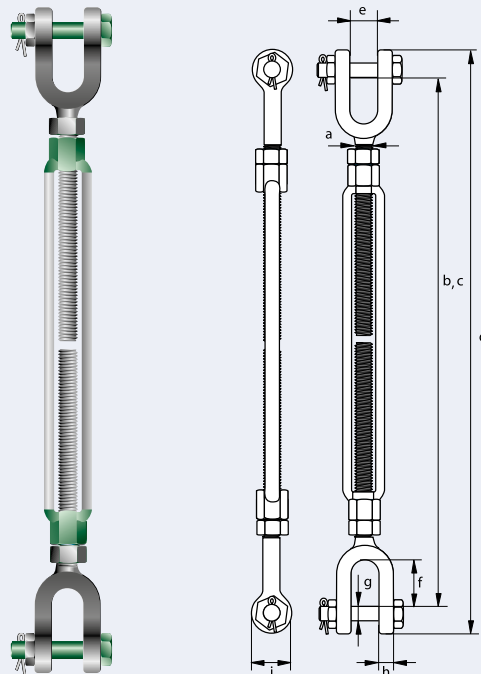
Sıcak daldırma galvanizli

hot dipped galvanized

Sertifika / Certification

2.1 - 2.2 - 3.1

Çalışma Yük Sınırı working load limit	Diş Çapı diameter thread	Take Up take up	Kapalı Pozisyondaki Uzunluk length closed position	Açık Pozisyondaki Uzunluk length open position	Kapalı pozisyondaki Uzunluk length closed position	Çatal Ağzı Uzunluğu opening jaw	İç Uzunluk length inside	Pın Çapı diameter pin	Çatal Et Kalınlığı thickness jaw eye	Çatal Göz Çapı diameter jaw eye	Birim Ağırlık weight each
t	a		b	c	d	e	f	g	h	i	kg
	inch	inch	mm	mm	mm	mm	mm	mm	mm	mm	
0.54	$\frac{3}{8}$	6	273	409	304	12	21	7	9	21	0.55
1	$\frac{1}{2}$	6	304	435	343	16	26	10	11	25	0.96
1	$\frac{1}{2}$	9	379	588	418	16	26	10	11	25	1.18
1	$\frac{1}{2}$	12	455	740	494	16	26	10	11	25	1.50
1.59	$\frac{5}{8}$	6	346	469	406	18	32	13	14	33	1.75
1.59	$\frac{5}{8}$	9	421	622	480	18	32	13	14	33	2.14
1.59	$\frac{5}{8}$	12	498	774	557	18	32	13	14	33	2.43
2.36	$\frac{3}{4}$	6	369	487	439	24	38	16	16	41	2.7
2.36	$\frac{3}{4}$	9	444	640	514	24	38	16	16	41	3.23
2.36	$\frac{3}{4}$	12	520	792	590	24	38	16	16	41	3.57
2.36	$\frac{3}{4}$	18	670	1096	740	24	38	16	16	41	4.55
3.27	$\frac{7}{8}$	12	561	826	638	27	42	19	19	48	5.22
3.27	$\frac{7}{8}$	18	713	1132	790	27	42	19	19	48	6.56
4.54	1	6	447	554	532	31	50	22	20	54	5.54
4.54	1	12	598	859	683	31	50	22	20	54	6.96
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	$1\frac{1}{4}$	12	643	916	748	44	71	28	26	68	11.9
6.9	$1\frac{1}{4}$	18	805	1230	910	44	71	28	26	68	13.6
6.9	$1\frac{1}{4}$	24	964	1541	1069	44	71	28	26	68	14.2
9.71	$1\frac{1}{2}$	12	675	942	806	52	71	35	28	80	18.5
9.71	$1\frac{1}{2}$	18	825	1244	956	52	71	35	28	80	19.3
9.71	$1\frac{1}{2}$	24	980	1551	1111	52	71	35	28	80	22
12.7	$1\frac{3}{4}$	18	938	1316	1092	60	86	41	33	90	30
12.7	$1\frac{3}{4}$	24	1089	1621	1243	60	86	41	33	90	33
16.8	2	24	1153	1673	1338	63	93	50	40	107	50
27.2	$2\frac{1}{2}$	24	1255	1831	1480	75	114	57	41	143	92
34	$2\frac{3}{4}$	24	1348	1882	1604	90	110	70	41	158	109



Çalışma Yük Sınırı working load limit	Diş Çapı diameter thread	Take Up take up	Kapalı	Açık	Uzunluk length	Çap diameter	İç Genişlik width inside	İç Uzunluk length inside	Kapalı	Birim Ağırlık weight each
			Pozisyonundaki Uzunluk length closed position	Pozisyonundaki Uzunluk length open position					Pozisyonundaki Uzunluk length closed position	
t	a		b	c	d	e	f	g	h	kg
0.54	3/8	6	292	428	183	10	13	29	49	0.47
1	1/2	6	325	455	193	12	18	36	58	0.84
1	1/2	9	400	608	270	12	18	36	57	1.05
1	1/2	12	476	760	346	12	18	36	57	1.26
1.59	5/8	6	380	503	203	14	21	45	79	1.35
1.59	5/8	9	455	656	280	14	21	45	78	1.60
1.59	5/8	12	531	808	356	14	21	45	89	1.92
2.36	3/4	6	413	532	214	17	26	54	89	2.03
2.36	3/4	9	490	685	291	17	26	54	89	2.47
2.36	3/4	12	564	837	367	17	26	54	88	2.9
2.36	3/4	18	718	1143	519	17	26	54	89	3.94
3.27	7/8	12	604	870	377	20	32	61	101	4.31
3.27	7/8	18	756	1174	529	20	32	61	101	5.51
4.54	1	6	498	604	234	24	37	76	118	4.35
4.54	1	12	649	909	387	24	37	76	117	5.75
4.54	1	18	801	1215	539	24	37	76	117	7.27
4.5	1	24	952	1518	692	24	37	76	116	7.52
6.9	1 1/4	12	712	985	385	29	47	91	145	9.28
6.9	1 1/4	18	862	1287	537	29	47	91	144	11.1
6.9	1 1/4	24	1015	1592	690	29	47	91	144	12.1
9.71	1 1/2	12	756	1023	401	32	55	106	156	14.2
9.71	1 1/2	18	916	1335	553	32	55	106	160	15.8
9.71	1 1/2	24	1065	1636	706	32	55	106	158	17.1
12.7	1 3/4	18	1020	1396	577	38	61	120	197	23.1
12.7	1 3/4	24	1171	1703	730	38	61	120	196	26.3
16.8	2	24	1264	1784	748	46	69	147	230	40.7
27.2	2 1/2	24	1430	1934	802	51	80	165	274	64
34	2 3/4	24	1450	1988	802	57	84	178	284	88

Malzeme / Material

Sıcak dövme yüksek gerilimli
çelik SAE 1035 yada 1045

drop forged high tensile steel SAE
1035 or 1045

Güvenlik Katsayısı / Safety Factor

MBL = 5 X WLL

MBL equals 5 x WLL

Standart / Standard

ASTM F 1145-92 (eski adı U.S
Federal Specification FF-T -791b)

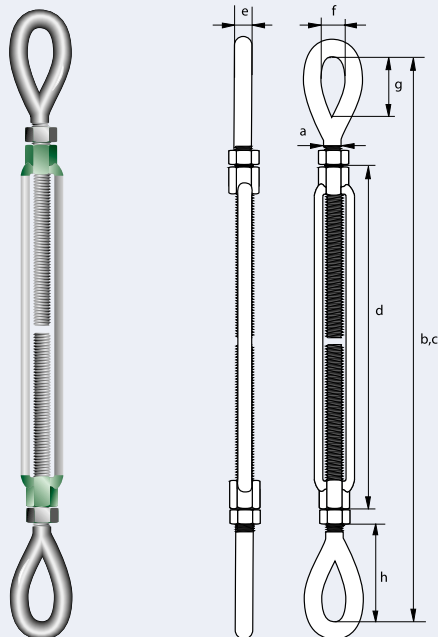
Yüzey / Finish

Sıcak daldırma galvanizli

hot dipped galvanized

Sertifika / Certification

2.1 - 2.2 - 3.1



E-6351 Gözlü Gerdirme

Rigging screws Eye - Eye

DIN 1480 / according to DIN 1480

Malzeme / Material

Sıcak dövme düşük karbon çelik
drop forged mild steel

Standart / Standard

DIN 1480

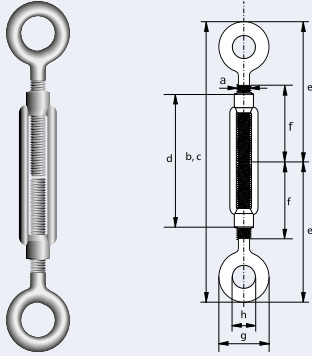
DIN 1480

Yüzey / Finish

Elektro Galvanizli
electro-galvanized

Sertifika / Certification

2.1



Diş Çapı diameter thread	Kapalı Pozisyondaki Uzunluk length closed position	Açık Pozisyondaki Uzunluk length open position	Gövde Uzunluğu length body	Sonlandırma Uzunluğu length end fitting	Diş Uzunluğu length thread	Göz Diş Çapı diameter eye outside	Göz İç Çapı diameter eye inside	Birim Ağırlık weight each
a	b	c	d	e	f	g	h	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

E-6352 Kancalı Gerdirme

Rigging screws Hook - Hook

DIN 1480 / according to DIN 1480

Malzeme / Material

Sıcak dövme düşük karbon çelik
drop forged mild steel

Standart / Standard

DIN 1480

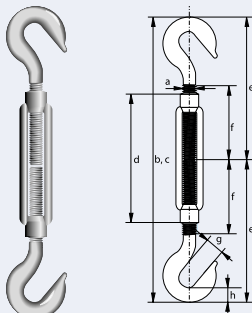
DIN 1480

Yüzey / Finish

Elektro galvanizli
electro-galvanized

Sertifika / Certification

2.1



Diş Çapı diameter thread	Kapalı Pozisyondaki Uzunluk length closed position	Açık Pozisyondaki Uzunluk length open position	Gövde Uzunluğu length body	Sonlandırma Uzunluğu length end fitting	Diş Uzunluğu length thread	Kanca Ağız Genişliği opening hook	Kanca Ağız Genişliği thickness hook	Birim Ağırlık weight each
a	b	c	d	e	f	g	h	kg
6	184	270	110	92	55	8	15	0.11
8	200	280	110	100	57	10.5	15	0.2
10	234	323	125	117	68	13	11	0.28
12	260	343	125	130	70	16	13	0.43
14	278	368	140	139	75	18	15	0.61
16	322	438	170	161	88	20	17	1
20	382	514	200	191	105	21	21	1.6
22	456	601	220	228	118	24	28	2.2
24	496	673	255	248	135	26	33	2.8
30	550	715	255	275	135	34	35	4.1
33	600	799	295	300	148	38	40	6
36	640	825	295	320	158	46	45	8.3

Göz – Kanca Gerdirme

Rigging screws Eye - Hook

E-6354

DIN 1480 / according to DIN 1480

Diş Çapı diameter thread	Kapalı Pozisyondaki Uzunluk length closed position	Açık Pozisyondaki Uzunluk length open position	Gövde Uzunluğu length body	Sonlandırma Uzunluğu length end fitting	Sonlandırma Uzunluğu length end fitting	Diş Uzunluğu length thread	Kanca Ağızı opening hook	Kanca Kalınlığı thickness hook	Göz Dış Çapı diameter eye outside	Göz İç Çapı diameter eye inside	Birim Ağırlık weight each
a	b	c	d	e	f	g	h	i	j	k	kg
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	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

Malzeme / Material

Sıcak Dövme düşük karbon çelik
drop forged mild steel

Standart / Standard

DIN 1480

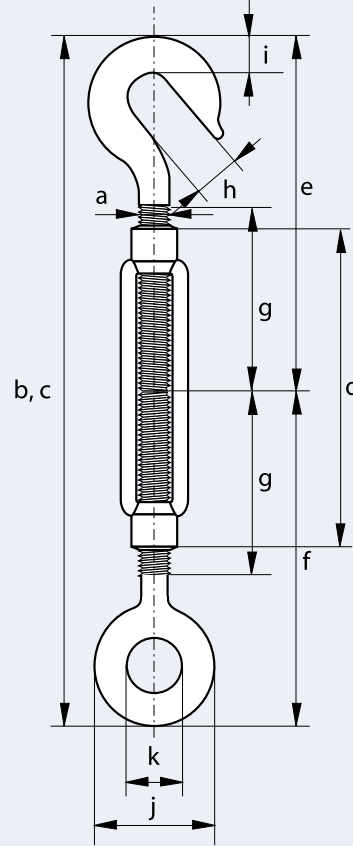
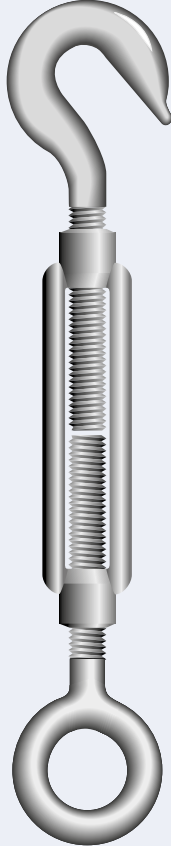
DIN 1480

Yüzey / Finish

Elektro galvanizli
electro-galvanized

Sertifika / Certification

2.1



G-6343 Kapalı Tip Çatallı Gerdirme

Closed body rigging screws

Jaw - Jaw

Malzeme / Material

Düşük karbon çelik
mild steel

Güvenlik Katsayısı / Safety Factor

MBL = 5 X WLL

MBL equals 5 x WLL

Yüzey / Finish

Sıcak daldırma galvaniz
hot dipped galvanized

Sertifika / Certification

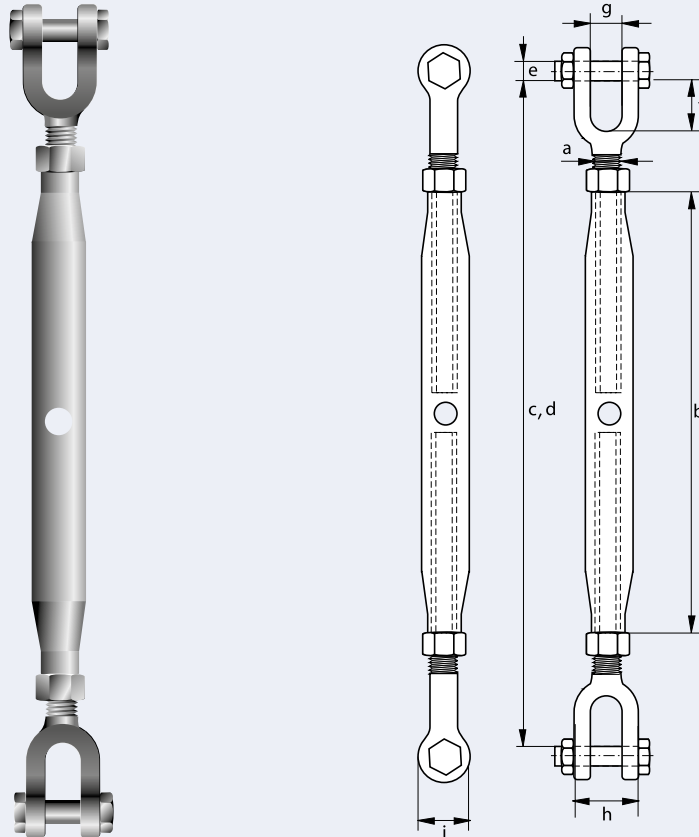
2.1 - 2.2

Not / Note

6 ve 8 mm gerdirmelerin yüzeyi elektro galvanizlidir.

end fittings of 6 and 8 mm rigging screws are electro-galvanized

Çalışma Yük Limiti working load limit	Dış Çapı diameter thread	Gövde Uzunluğu length body	Kapalı Pozisyondaki Uzunluğu length closed position	Açık Pozisyondaki Uzunluğu length open position	Pın Çapı diameter pin	İç Uzunluk length inside	Çatal Ağızı opening jaw	Çatal Genişliği width jaw	Çatal Gözü Çapı diameter jaw eye	Delik Çapı Diameter hole	Birim Ağırlık weight each
	a	b	c	d	e	f	g	h	i	j	
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
0.2	6	100	170	250	5	16	7	20	13	6	0.16
0.32	8	108	199	279	6	22	9	24	14	8	0.27
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	1.57
1.5	20	270	449	654	16	38	20	51	33	12	2.67
2.2	22	295	490	715	20	45	25	55	38	12	3.68
3.2	24	325	538	793	22	52	30	70	46	12	5.3
4.8	33	370	680	965	30	70	38	82	60	14	12
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



Çalışma Yük Sınırı working load limit	Çap diameter	Dış Uzunluğu length outside	Dış Genişliği width outside	İç Uzunluğu length inside	İç Genişliği width inside	İç Uzunluğu length inside	Uzunluk length	Birim Ağırlık weight each
	a	b	c	d	e	f	g	
t	mm	mm	mm	mm	mm	mm	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	0.32
1.6	13	164	64	33	38	51	138	0.6
2.4	16	199	76	40	44	60	167	1.13
3.3	19	221	89	44	51	67	183	1.82
4.5	22	257	102	52	57	78	213	2.83
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

Malzeme / Material

Yüksek gerilimli ıslah çeliği

high tensile steel, quenched and tempered

Güvenlik Katsayısı / Safety Factor

MBL= 5 X WLL

MBL equals 5 x WLL

Standart / Standard

US Federal Spec. RR-C-271, Tip 7, Sınıf 2

US Federal Spec. RR-C-271, Type VII, Class 2

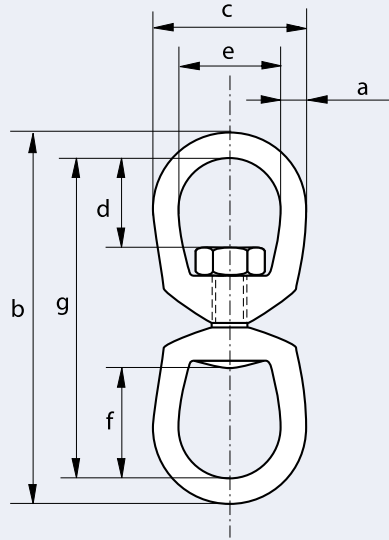
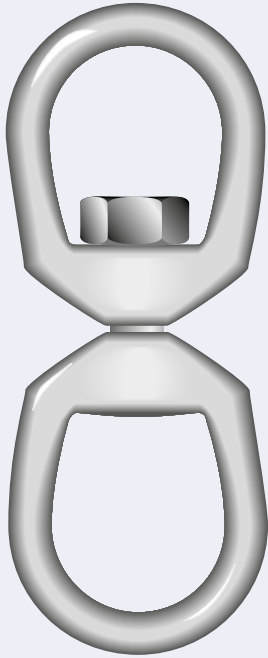
Yüzey / Finish

Sıcak daldırma galvanizli

hot dipped galvanized

Sertifika / Certification

2.1 - 2.2



G-7723 Green Pin® Fırdöndü

Green Pin® swivels

Çatal-Göz / Jaw - Eye

Malzeme / Material

Yüksek gerilimli ıslah çeliği

high tensile steel, quenched and tempered

Güvenlik Katsayısı / Safety Factor

MBL = 5X WLL

MBL equals 5 x WLL

Standart / Standard

US Federal Spec. RR-C-271, Tip 7, Sınıf 3

US Federal Spec. RR-C-271, Type VII, Class 3

Yüzey / Finish

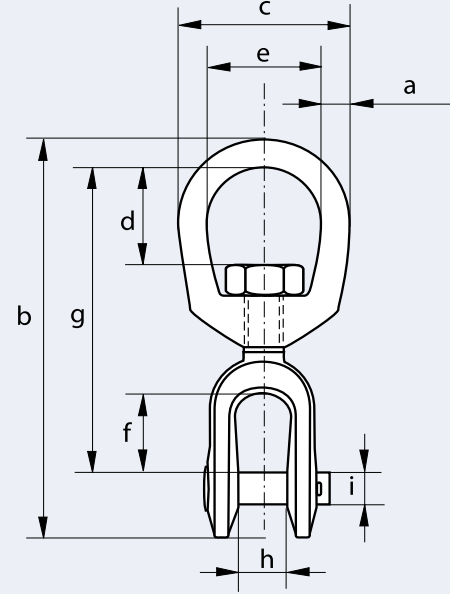
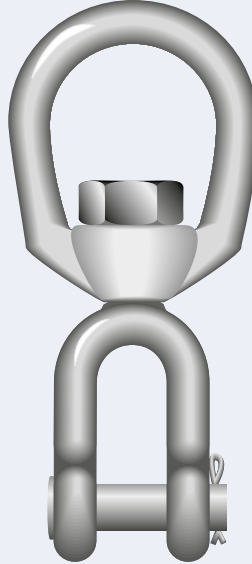
Sıcak daldırma galvanizli

hot dipped galvanized

Sertifika / Certification

2.1 - 2.2

Çalışma Yük Sınırı working load limit	Çap diameter	Uzunluk length	Dış Genişliği width outside	İç Uzunluğu length inside	İç Genişliği width inside	İç Uzunluğu length inside	Uzunluk length	İç Genişliği width inside	Pin Çapı diameter pin	Birim Ağırlık weight each
	a	b	c	d	e	f	g	h	i	
t	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
0.39	6	84	32	18	19	22	67	12	6	0.11
0.57	8	98	41	21	25	22	75	13	8	0.17
1.02	10	121	51	24	32	27	92	16	10	0.32
1.6	13	154	64	33	38	33	114	19	13	0.65
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	4.46
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



Green Pin® Top Fırdöndü
Green Pin® Thrust bearing swivels

G-7740

Göz-Göz / Eye - Eye

Çalışma Yük Sınırı working load limit	Uzunluk length		Kalınlık thickness	Çap diameter	Delik Geniřliđi diameter hole	Birim Ađırlık weight each
	a	b				
t	mm	mm	mm	mm	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	-

Malzeme / Material

Karbon Çelik
carbon steel

Güvenlik Katsayısı / Safety Factor

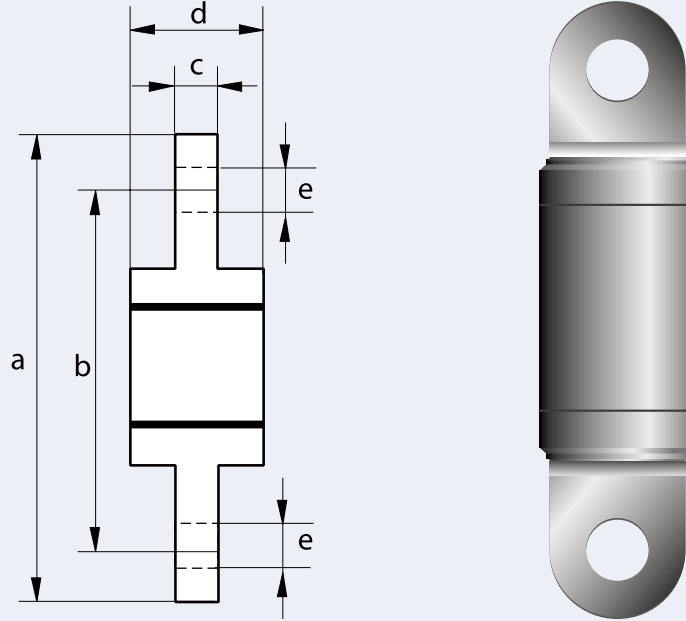
MBL = 5 X WLL
MBL equals 5 x WLL

Yüzey / Finish

Siyah Boyalı
painted black

Sertifika / Certification

2.1 , 2.2 , MTC



E-8140 Erkek Aybolt

Eye bolts

generally to DIN 580

Malzeme / Material

Karbon çelik , C15

carbon steel, C15

Güvenlik Katsayısı / Safety Factor

MBL = 6 X WLL

MBL equals 6 x WLL

Standart / Standard

generally to DIN 580

Yüzey / Finish

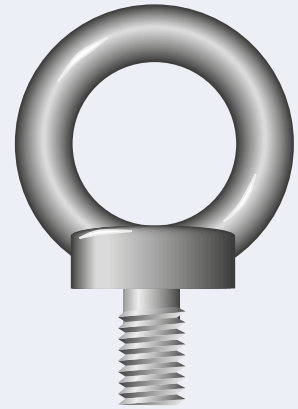
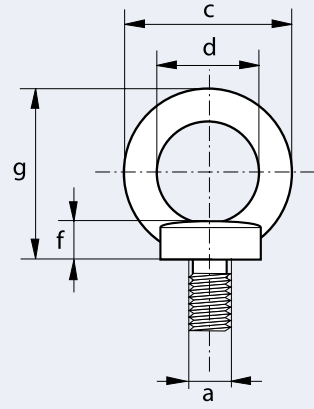
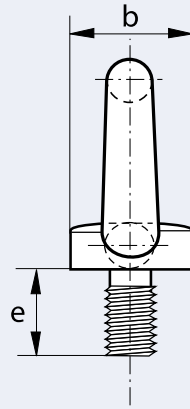
Kendinden renkli ,Elektro galvanizli

self coloured electro-galvanized

Sertifika / Certification

2.1 , 2.2 , CE

Çalışma Yük Sınırı working load limit	Diş Çapı diameter thread	Alt Gövde Çapı diameter base	Göz Dış Çapı diameter eye outside	Göz İç Çapı diameter eye inside	Uzunluk length	Alt Taban Et Kalınlığı thickness base	Yükseklik height	Ağırlık (100 Adet) weight per 100 pcs
	a	b	c	d	e	f	g	kg
t	mm	mm	mm	mm	mm	mm	mm	kg
0.07	M 6 x 1.00	20	36	20	13	6	36	3
0.14	M 8 x 1.25	20	36	20	13	6	36	6
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	17.7
0.49	M 14 x 2.00	35	63	35	27	12	60	27.7
0.7	M 16 x 2.00	35	63	35	27	12	62	28
0.9	M 18 x 2.50	40	72	40	30	14	71	40.5
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	35	14	80	67.3
1.8	M 24 x 3.00	50	90	50	36	18	90	83.4
2.5	M 27 x 3.00	50	90	50	36	18	90	122
3.2	M 30 x 3.50	65	108	60	45	22	109	166
4.3	M 33 x 3.50	65	108	60	45	22	110	216
4.6	M 36 x 4.00	75	126	70	54	26	128	265
6.1	M 39 x 4.00	75	126	70	54	26	130	334
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	880
16	M 64 x 6.00	120	206	110	90	42	208	1240
21	M 72 x 6.00	150	260	140	100	50	260	2330
28	M 80 x 6.00	170	296	160	112	55	298	3420
40	M 100 x 6.00	190	330	180	130	60	330	4910



Çalıřma Y¼k Sınırı working load limit	Diři Çapı diameter thread	Alt Gövde Çapı diameter base	Göz Diři Çapı diameter eye outside	Göz İç Çapı diameter eye inside	Alt Taban Et Kalınlığı thickness base	Y¼kseklik height	Ağırlık (100 Adet) weight per 100 pcs
	a	b	c	d	e	f	
t	mm	mm	mm	mm	mm	mm	kg
0.07	M 6 x 1.00	20	36	20	8.5	36	4.2
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	22
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	58.6
1.8	M 24 x 3.00	50	90	50	20	90	70.6
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	132
4.3	M 33 x 3.50	65	108	60	25	110	170
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	260
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

Malzeme / Material

Karbon çelik , C15
carbon steel, C15

G¼venlik Katsayısı / Safety Factor

MBL = 6 X WLL

MBL equals 6 x WLL

Standart / Standard

generally to DIN 582

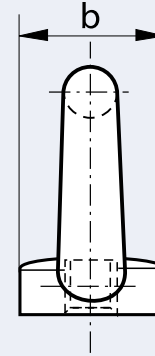
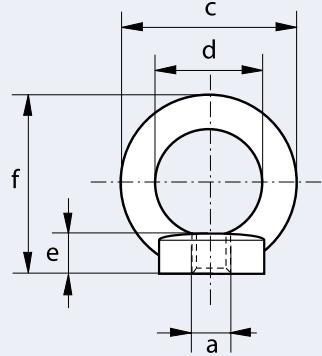
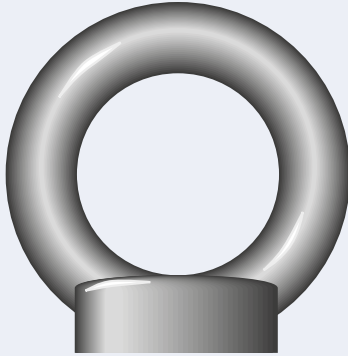
Y¼zey / Finish

Kendinden renkli ,Elektro
galvanizli

self coloured electro-galvanized

Sertifika / Certification

2.1 , 2.2 , CE



E-7200 Karabina Kanca

Carabine hooks

Standart Tip / standard type

Malzeme / Material

Düşük Karbon Çelik

Mild steel

Yüzey / Finish

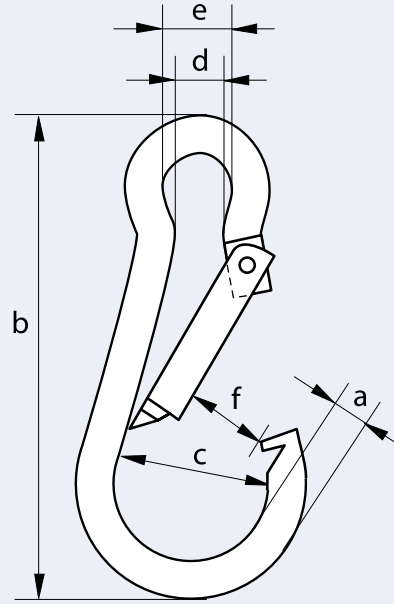
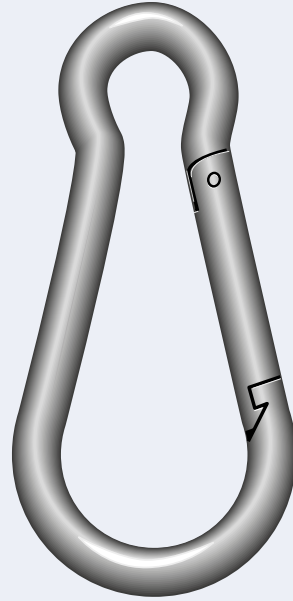
Elektro Galvanizli

electro-galvanized

Sertifika / Certification

2.1

Çap diameter	Uzunluk length	Genişlik width	İç Genişliği width inside	İç Genişliği width inside	Ağız Genişliği width opening	MBL minimum breaking load	Ağırlık (100 Adet) weight per 100 pcs
a	b	c	d	e	f	kg	kg
mm	mm	mm	mm	mm	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	1.6
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	9.3
11	120	36	14	18	15	600	12.5
12	140	40	16	20	19	680	19.5
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



Çap diameter	Uzunluk length	İç Genişliği width inside	İç Genişliği width inside	MBL minimum breaking load	Ağırlık (100 Adet) weight per 100 pcs
a	b	c	d		
mm	mm	mm	mm	kg	kg
4	40	4	7	-	1.7
5	50	5	7	100	1.9
6	60	6	8	120	2.9
7	70	7	10	180	4.6
8	80	10	12	300	6.9
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

Malzeme / Material

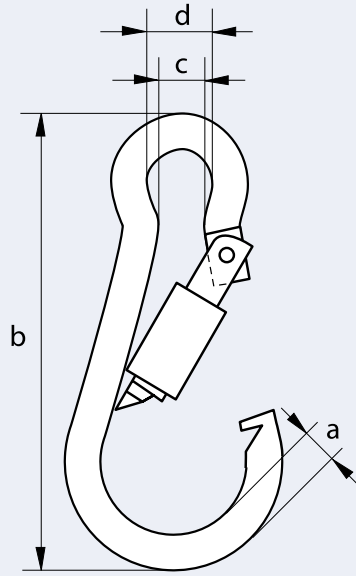
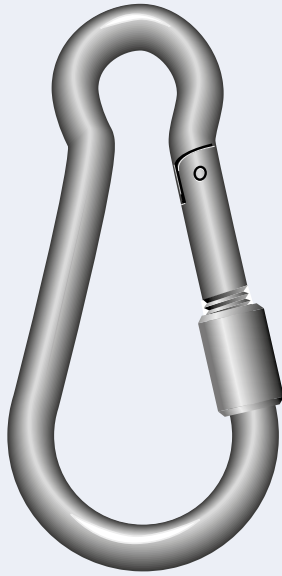
Düşük Karbon Çelik
Mild steel

Yüzey / Finish

Elektro galvanizli
electro-galvanized

Sertifika / Certification

2.1



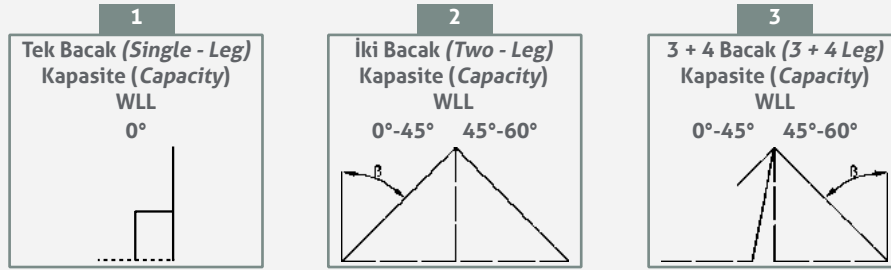


ZİNCİR VE ZİNCİR EKİPMANLARI

CHAIN AND CHAIN EQUIPMENTS

Güvenli Çalışma Tablosu ve Katsayısı EN 818-4

Factors and Working Load Limits EN 818-4



Nominal Ölçü Nominal Size	t	t	t	t	t
mm					
6 x 18	1,12	1,6	1,12	2,36	1,7
7 x 21	1,5	2,12	1,5	3,15	2,24
8 x 24	2	2,8	2	4,25	3
10 x 30	3,15	4,25	3,15	6,7	4,75
13 x 39	5,3	7,5	5,3	11,2	8
16 x 48	8	11,2	8	17	11,8
18 x 54	10	14	10	21,2	15
20 x 60	12,5	17	12,5	26,5	19
22 x 66	15	21,2	15	31,5	22,4
26 x 78	21,2	30	21,2	45	31,5
28 x 84	25	33,5	25	50	37,5
32 x 96	31,5	45	31,5	67	47,5
36 x 108	40	56	40	85	60
40 x 120	50	71	50	106	75
45 x 135	63	90	63	132	95
Faktor/Factor		1,4	1	2,1	1,5

* Asimetrik yüklemelerde yük kapasiteleri %50'ye kadar azalmaktadır.

*In case of asymmetric loads, load capacities are to be reduced by 50 %.

Sonsuz Zincir Sapan
(Endless Chain Sling)

Nominal Ölçü Nominal Size	t	t	t	t	t
mm					
6 x 18	1,8	1,25	0,9	1,9	1,32
7 x 21	2,5	1,7	1,25	2,65	1,8
8 x 24	3,15	2,24	1,6	3,35	2,36
10 x 30	5	3,35	2,5	5,3	3,75
13 x 39	8,5	5,83	4,25	9	6,3
16 x 48	12,5	9	6,3	13,2	9,5
18 x 54	16	11,2	8	17	11,8
20 x 60	20	14	10	21,2	15
22 x 66	23,6	17	11,8	25	18
26 x 78	33,5	23,6	17	35,5	25
28 x 84	40	26,5	20	42,5	30
32 x 96	50	35,5	25	53	37,5
36 x 108	63	45	31,5	67	47,5
40 x 120	80	56	40	85	60
45 x 135	100	71	50	106	75
Faktor/Factor	1,6	1,1 (1,4)*	0,8 (1)*	1,7 (2,1)*	1,2 (1,5)*

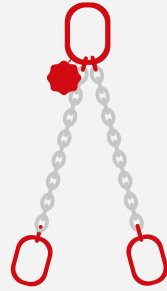
* Zincir Sapanın keskin kenarlar vb. haricindeki uygun kullanım koşulları ile kullanılması durumunda geçerli olan emniyetli çalışma yükleri yanda belirtilmektedir.

*In case of appropriate usage - not with choke hitch, no sharpe edges etc. - see WLL table above chain sling.

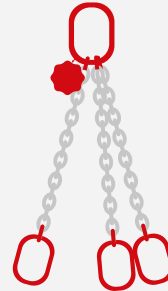
Zincir Sapanlar (Chain Sling with Terminal Link)



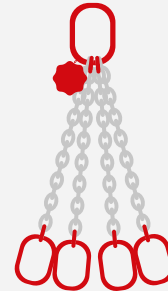
R-1



R-2



R-3

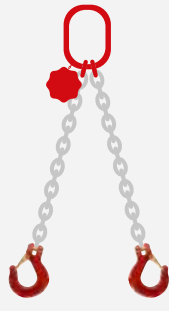


R-4

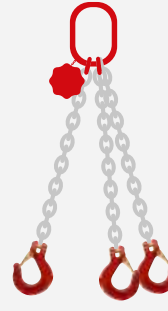
Kancalı Zincir Sapanlar (Chain Sling with Hook)



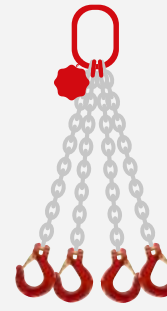
H-1



H-2



H-3

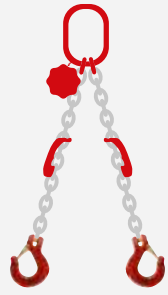


H-4

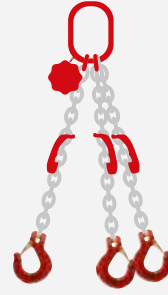
Kısaltmalı ve Kancalı Zincir Sapanlar (Chain Sling with Terminal Link)



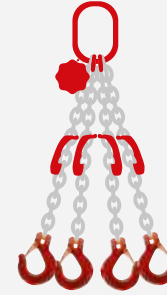
HV 1



HV 2

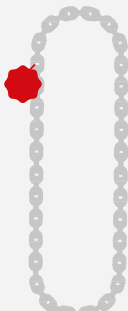


HV 3

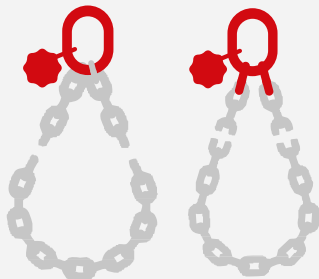


HV 4

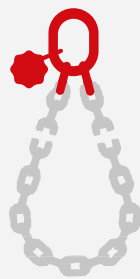
Sonsuz Sapan (Endless Chain Sling)



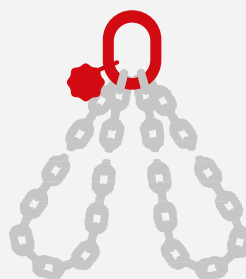
K 11



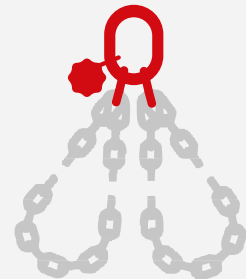
K 12



K 13



K 22



K 23

Zincir Sapanlar İçin Orta Dayanımlı Zincirler EN 818-2

Medium Tolerance Chain for Chain Slings EN 818-2

Nominal Ölçü Nominal Size	Adım Aralığı Pitch †	İç Genişlik W1 min. Inside Width	Dış Genişlik W2 max. Outside Width	Çalışma Yüğü Working Load Limit	Test Yüğü Manufac. P roof Force	Kopma Yüğü Breaking Proof Force	Br. Ağırlık Weight
mm	mm	mm	mm	kN	kN	kN	kg/m
TK 6	18	7,8	22,2	1,12	28,3	45,2	0,83
TK 7	21	9,1	25,9	1,5	38,5	61,6	1,11
TK 8	24	10,4	29,6	2	50,3	80,4	1,39
TK 10	30	13	37	3,15	78,5	126	2,34
TK 13	39	16,9	48,1	5,3	133	212	3,95
TK 16	48	20,8	59,2	8	201	322	6,02
TK 18	54	23,4	66,6	10	254	407	7,50
TK 20	60	26	74	12,5	314	503	9,10
TK 22	66	28,6	81,4	15	380	608	10,93
TK 26	78	33,8	96,2	21,2	531	849	15,10
TK 28	84	36,4	104	25	616	985	18,24
TK 32	96	41,6	118	31,5	804	1290	22,00
TK 36	108	46,8	133	40	1020	1630	28,10
TK 40	120	52	148	50	1260	2010	36,00
TK 45	135	58,5	167	63	1590	2540	45,50
TK 50	150	67,5	180	80	1960	3140	56,00



Kırılma noktası gerilimi, doğal siyah= **Min. 25%**
Elongation at fracture, natural black

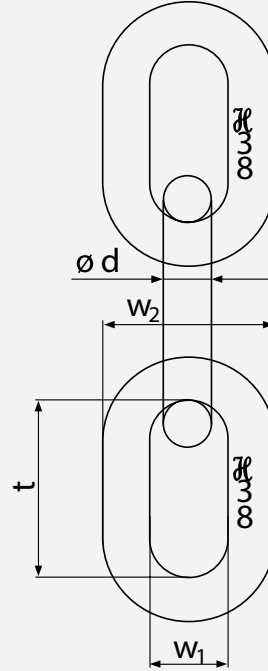
Kırılma noktası gerilimi, değişken yüzey
Elongation at fracture, variant surface= **Min. 20%**

WLL ilişkisi : MPF : BF = 1 : 2,5 : 4
Relation of WLL : MPF : BF = 1 : 2,5 : 4

Bükülme= **Min. 0,8 x d**
Deflection

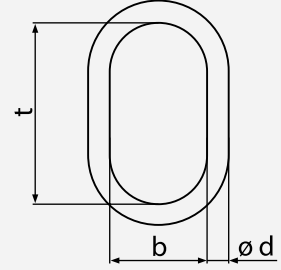
- Değişik zincir ısılarına göre izin verilen yük limitleri (EN 818-6 standartlarına göre):
- Allowed working loads (EN 818-6) for different chain temperature:

- 40° C bis + 200° C = 100%
200° C bis + 300° C = 90%
300° C bis + 400° C = 75%



Oval Halka (Master Links)

Kod Code	Çalışma Yüğü WLL		ø d (mm)	t (mm)	b (mm)	Br. Ağırlık Weight kg/ad
	t					
A 13	1,6		13	110	60	0,35
A 16	2,36		16	110	60	0,6
A 18	3,35		18	135	75	0,9
A 22	5,3		22	160	90	1,5
A 26	8		26	180	100	2,35
A 32	12,5		32	200	110	3,85
A 36	17		36	260	140	6,2
A 40	20		40	300	160	8,65
A 45	25		45	340	180	13
A 50	33,5		50	350	190	17,35
A 56	45		56	400	200	23,54
A 63	56		63	430	220	29,95
A 71	71		71	460	250	46,3
A 80	90		80	500	270	62
A 90	112		90	560	300	87,1
A 100	140		100	610	330	117,8

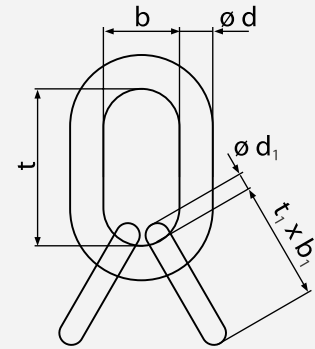


• EN 818-4, EN 13414'e göre 1 veya 2 bacaklı çelik halat ve zincir sapanları için geniş halka.

• Master links for 1 - or 2 - chain slings and wire ropes EN 818-4, EN 13414.

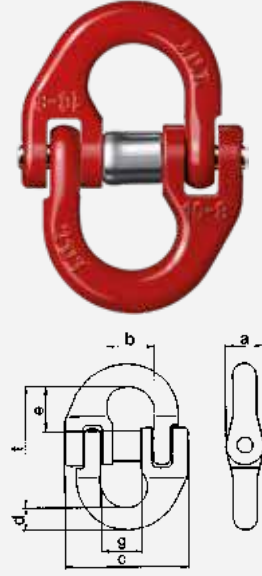
Küpelü Halka (Üç veya Dört Kollu Sapanlar için EN 818-4) (Master Links for Three - or Four - Leg Chain Slings EN 818-4)

Kod Code	Çalışma Yüğü WLL		ø d / ø d1t (mm)	t / t1 (mm)	b / b1 (mm)	Br. Ağırlık Weight kg/ad
	0° - 45° (t)	45° - 60° (t)				
TA 3/4 6	2,36	1,7	18 / 13	135 / 54	75 / 25	1,34
TA 3/4 8	4,25	3	22 / 16	160 / 70	90 / 34	2,37
TA 3/4 10	6,7	4,75	26 / 18	180 / 85	100 / 40	3,64
TA 3/4 13	11,2	8	32 / 22	200 / 115	110 / 50	6,24
TA 3/4 16	17	11,8	36 / 26	260 / 140	140 / 65	10
TA 3/4 18	21,2	15	45 / 32	340 / 150	180 / 70	18,95
TA 3/4 20	26,5	19	50 / 32	350 / 150	190 / 70	23,4
TA 3/4 22	31,5	22,4	50 / 36	350 / 170	190 / 75	25,9
TA 3/4 26	45	31,5	56 / 40	400 / 170	200 / 80	34,25
TA 3/4 28	50	37,5	63 / 45	430 / 180	220 / 90	45,45
TA 3/4 32	67	47,5	71 / 50	460 / 200	250 / 100	68
TA 3/4 36	85	60	80 / 63	500 / 250	270 / 125	99
TA 3/4 40	106	75	90 / 63	560 / 250	300 / 125	126,3
TA 3/4 45	132	95	100 / 70	610 / 280	330 / 140	173,2
Faktör/Factor	2,1	1,5				



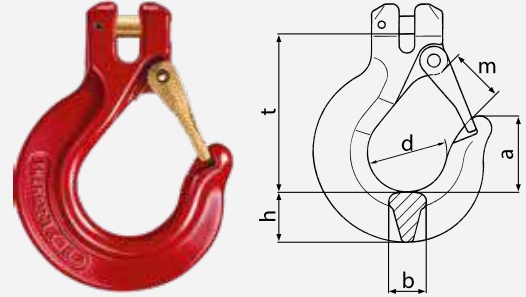
Bağlantı Ek Kilidi EN 1677-1 *Coupling EN 1677-1*

Kod Code	WLL	a	b	c	d	e	g	t	Yük Weight
	t	mm	mm	mm	mm	mm	mm	mm	kg
TBS 6	1,12	11	19	40	8	19	17	45	0,08
TBS 8	2	14	22	53	11	25	21	59	0,17
TBS 10	3,15	18	29	68	12	29	28	70	0,3
TBS 13	5,3	23	33	77	16	35	30	87	0,6
TBS 16	8	31	44	108	22	42	40	108	1,18
TBS 18	10	37	51	120	23	48	46	125	1,58
TBS 20	12,5	37	56	112	24	47	43	125	2
TBS 22	15	40	59	134	28	52	56	137	2,64
TBS 26	21,2	50	70	161	30	65	61	168	4,18
TBS 32	31,5	55	79	186	34	73	71	190	6,84
TBS 36	40	70	97	227	46	84	85	235	15,6
TBS 40	50	70	97	227	46	84	85	235	15,6



Pimli Sapan Kancası EN 1677-2 *Clevis Sling Hook EN 1677-2*

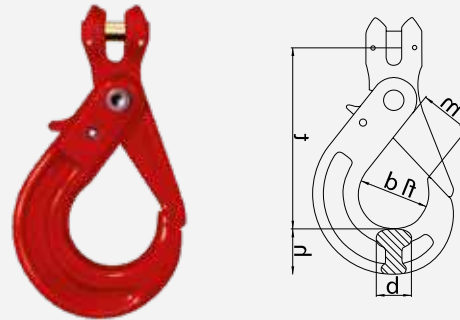
Kod Code	WLL	a	b	d	h	m	t	Yük Weight
	t	mm	mm	mm	mm	mm	mm	kg
GH 6	1,12	32	16	34	21	22	67	0,34
GH 7	1,5	44	20	48	26	30	95	0,7
GH 8	2	44	20	48	26	30	93	0,73
GH 10	3,15	52	26	54	35	37	112	1,44
GH 13	5,3	66	32	70	46	47	140	2,9
GH 16	8	62	37	74	49	51	152	4,7
GH 18	10	70	43	72	57	54	172	6,7
GH 22	15	95	48	92	69	68	210	10,9



- Güçlü emniyet mandallı pimli kaldırma kancası.
- *Lifting hook with strong safety latch.*

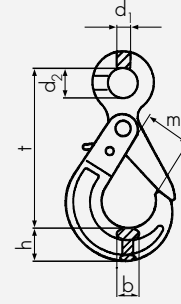
Pimli Kendinden Emniyetli Kanca EN 1677-3 *Self Locking Clevis Hooks EN 1677-3*

Kod Code	WLL	b	d	m	h	t	Yük Weight
	t	mm	mm	mm	mm	mm	kg
AHG 7/8	2	20,5	43	33	25	122	0,87
AHG 10	3,15	29	56	46	35	151	1,73
AHG 13	5,3	32	70	55	41	187	3,25
AHG 16	8	39	82	69	53	215	6,16
TCLC 18/20	12,5	42	102	90	55	240	8,6
TCLC 22	15	54	114	97	64	283	12,34



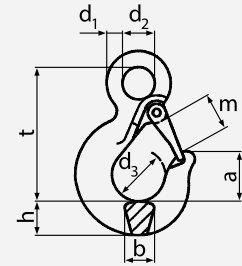
Gözlü Kendinden Emniyetli Kanca *Automatic-Hook*

Kod Code	WLL	b	d1	d2	h	m	t	Yük Weight
	t	mm	mm	mm	mm	mm	mm	kg
AHÖ 7/8	2	20	12	24	25	37	132	0,48
AHÖ 10	3,15	27	14	32	35	50	169	1,62
AHÖ 13	5,3	32	16	40	41	55	209	3,11
AHÖ 16	8	39	23	50	52	72	254	5,98
TCL 18/20	12,5	45	20	64	56	89	272	8,7
TCL 22	15	53	26	72	65	100	315	12,96



Kuş Gözü Kanca *Eye Sling Hooks EN 1677-2*

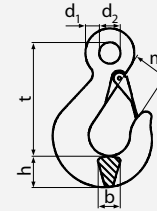
Kod Code	WLL	a	b	d1	d2	d3	h	m	t	Yük Weight
	t	mm	mm	mm	mm	mm	mm	mm	mm	kg
TOE 6	1,12	32	16	12	27	34	21	22	91	0,37
TOE 8	2	44	20	13	29	47	27	31	112	0,67
TOE 10	3,15	53	26	17	34	54	36	36	138	1,36
TOE 13	5,3	66	32	20	40	70	47	47	170	2,81
TOE 16	8	61	37	26	54	70	49	51	192	3,95



- Güçlü emniyet mandallı gözlü kaldırma kancası.
- Hook with strong safety latch.

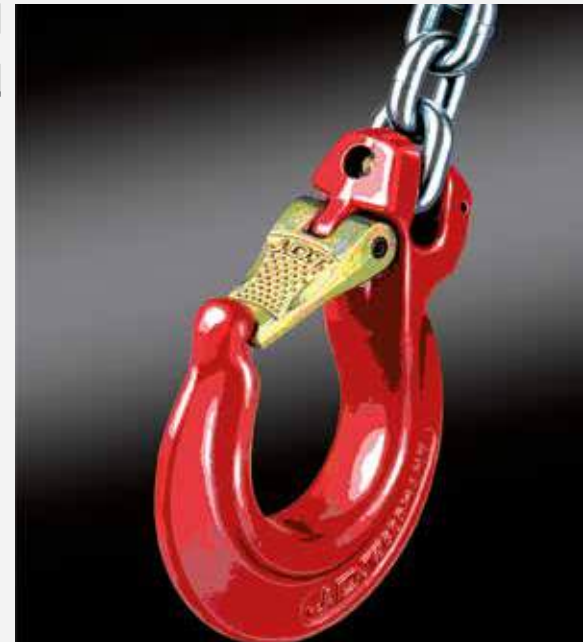
Kuş Gözü Kanca Tip 2 *Standard Hook*

Kod Code	WLL	b	d1	d2	h	m	t	Yük Weight
	t	mm	mm	mm	mm	mm	mm	kg
TSiH 18/20	12,5	44	27	40	58	56	219	5,7
TSiH 22	15	46	30	46	65	63	224	7,82
TSiH 26	21,2	56	33	48	74	77	270	11,6
TSiH 28	25	63	36	60	83	88	313	17,22
TSiH 32	31,5	70	40	66	92	98	349	22
TSiH 36	40	78	45	72	103	109	388	32
TSiH 40	50	89	51	84	116	124	442	46
TSiH 45	63	99	56	90	130	138	494	63



Kanca Emniyet Mandalı *Spare Parts*

Kod Code	Yük Weight
	kg
FFSG 6	0,02
FFSG 8	0,04
FFSG 10	0,09
FFSG 13	0,17
FFSG 16	0,29
FFSG 18	0,45
FFSG 22	0,64



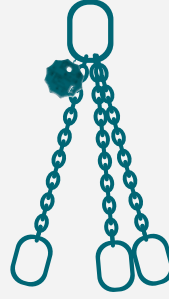
Zincir Sapanlar *Chain Sling with Terminal Link*



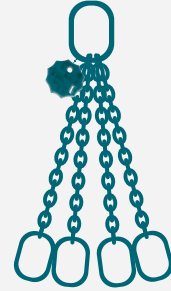
R-1



R-2



R-3



R-4

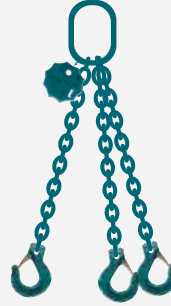
Kancalı Zincir Sapanlar *Chain Sling with Hook*



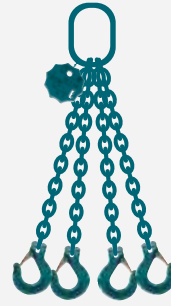
H-1



H-2



H-3



H-4

Kancalı ve Kısaltmalı Sapanlar *Chain Sling with Hook and Shortening Clutch*



HV 1



HV 2

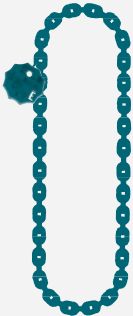


HV 3



HV 4

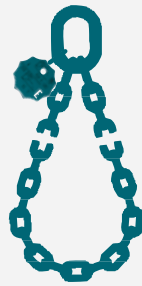
Sonsuz Sapan *Endless Chain Sling*



K 11



K 12



K 13



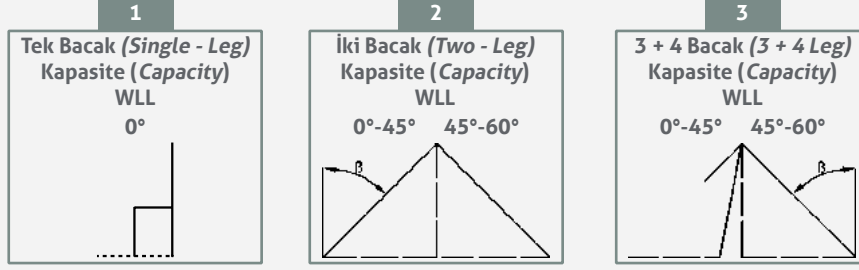
K 22



K 23

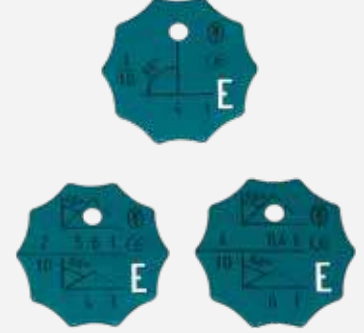
Genel Bilgilendirme

General Technical Informations



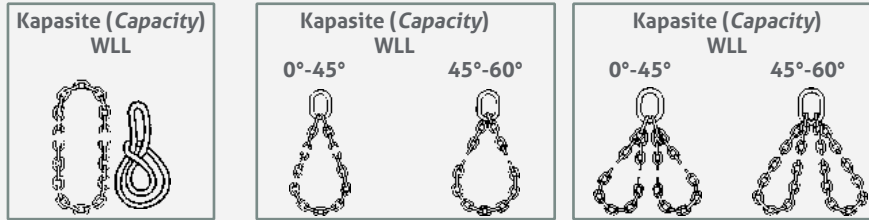
Nominal Ölçü Nominal Size	t		t		t	
mm						
6 x 18	1,4	2	1,4	3	2,1	
8 x 24	2,5	3,6	2,5	5,3	3,8	
10 x 30	4	5,6	4	8,4	6	
13 x 39	6,7	9,5	6,7	14	10	
16 x 48	10	14	10	21,2	15	
18 x 54	12,5	18	12,5	26,5	19	
22 x 66	19	26,5	19	40	28	
26 x 78	26,5	37	26,5	56	40	
Faktor/Factor	1	1,4	1	2,1	1,5	

* Asimetrik yüklemelerde yük kapasiteleri %50'ye kadar azalmaktadır.
* In case of asymmetric loads, load capacities are to be reduced by 50 %.



Sonsuz Zincir Sapan

Endless Chain Sling



Nominal Ölçü Nominal Size	t		t		t	
mm						
6 x 18	2,2	1,6	1,1	2,3	1,7	
8 x 24	4	2,8	2	4,2	3	
10 x 30	6,3	4,3	3,2	6,7	4,8	
13 x 39	10,6	7,5	5,3	11,2	8	
16 x 48	16	11,2	8	17	11,8	
18 x 54	20	14	10	21,2	15	
22 x 66	30	21,2	15	31,5	22,4	
26 x 78	42,4	29	21,2	45	32	
Faktor/Factor	1,6	1,1 (1,4)*	0,8 (1)*	1,7 (2,1)*	1,2 (1,5)*	

* Zincir Sapanın keskin kenarlar vb. haricindeki uygun kullanım koşulları ile kullanılması durumunda geçerli olan emniyetli çalışma yükleri yukarıda belirtilmektedir.

* In case of appropriate usage - not with choke hitch, no sharpe edges etc. - see WLL table above chain sling.



Enorm Grade 10 Kaldırma Amaçlı Kısa Bakla Zincir

Short Link Chains for Lifting Purposes

Kod Code	Nominal Ölçü Nominal Size	Çalışma Yüğü WLL	Test Yüğü Manufac. Proof Force	Kopma Yüğü Breaking Proof Force	Yük Weight
	mm	t	kN	kN	kg/m
Enorm 10 K	6 x 18	1,4	35,3	56,5	0,8
Enorm 10 K	8 x 24	2,5	62,8	101	1,5
Enorm 10 K	10 x 30	4	98,1	157	2,3
Enorm 10 K	13 x 39	6,7	166	265	3,9
Enorm 10 K	16 x 48	10	251	402	5,8
Enorm 10 K	18 x 54	12,5	318	509	7,4
Enorm 10 K	22 x 66	19	475	760	11
Enorm 10 K	26 x 78	26,5	664	1060	15,9



- Değişik zincir sıcaklığına göre izin verilen yük limitleri (EN 818-6 standartlarına göre):
- Allowed working loads (EN 818-6) for different chain temperature.

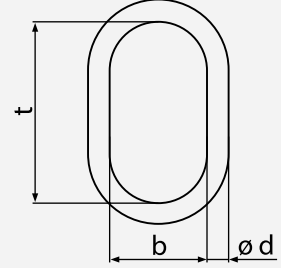
- 40 °C ile + 200 °C arasında = %100
 + 200 °C ile + 300 °C arasında = %90
 + 300 °C ile + 400 °C arasında = %75 yük limitleri ile çalıştırılmalıdır.

Enorm Zincir oda sıcaklığına kadar soğutulduğunda, tekrar %100 kullanım için hazır hale gelmektedir.

Once the Enorm 10 - chain has cooled down to room temperature it can be again used to 100%.

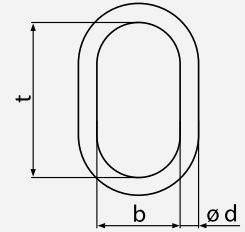
Oval Halka Master Link

Kod Code	Çalışma Yüğü WLL	ød	b	t	Birim Ağırlık Weight
	t	mm	mm	mm	kg/ad
Enorm 10 AE 1 - 6	1,4	13	60	110	0,35
Enorm 10 AE 1 - 8	2,5	16	60	110	0,6
Enorm 10 AE 1 - 10	4	18	75	135	0,9
Enorm 10 AE 1 - 13	6,7	22	90	160	1,5
Enorm 10 AE 1 - 16	10	26	100	180	2,35
Enorm 10 AE 1 - 18	12,5	32	110	200	3,85
Enorm 10 AE 1 - 22	19	36	140	260	6,2
Enorm 10 AE 1 - 26	26,5	45	180	340	13,0



- Tek bacaklı sapanlar içindir.
- For single-leg chain slings.

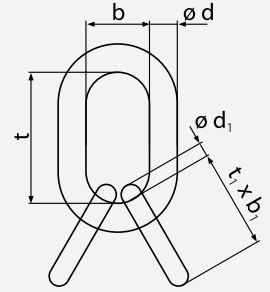
Kod Code	Çalışma Yüğü WLL		ød	b	t	Birim Ağırlık Weight
	0°-45° (t)	45°-60° (t)				
Enorm 10 AE 2 - 6	2	1,4	13	60	110	0,35
Enorm 10 AE 2 - 8	3,55	2,5	18	75	135	0,9
Enorm 10 AE 2 - 10	5,6	4	22	90	160	1,5
Enorm 10 AE 2 - 13	9,5	6,7	26	100	180	2,35
Enorm 10 AE 2 - 16	14	10	32	110	200	3,85
Enorm 10 AE 2 - 18	18	12,5	36	140	260	6,2
Enorm 10 AE 2 - 22	26,5	19	45	180	340	13,0
Enorm 10 AE 2 - 26	37	26,5	56	200	400	23,54



- İki bacaklı zincir sapanlar içindir.
- For two-leg chain slings.

Küpelü Halka *Master Links for Coupling Assembly System*

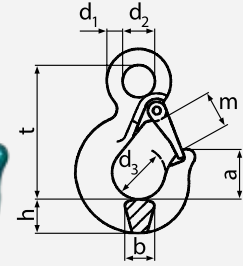
Kod Code	Çalışma Yüğü WLL		ød/ød1	b/b1	t/t1	Birim Ağırlık Weight
	0°-45° (t)	45°-60° (t)				
Enorm 10 AE 4 - 6	3	2,12	18/13	75/25	135/54	1,35
Enorm 10 AE 4 - 8	5,3	3,75	22/16	90/34	160/70	2,40
Enorm 10 AE 4 - 10	8,4	6	26/18	100/40	180/85	3,65
Enorm 10 AE 4 - 13	14	10	32/22	110/50	200/115	6,25
Enorm 10 AE 4 - 16	21,2	15	36/26	140/65	260/140	10,00
Enorm 10 AE 4 - 18	26,5	19	45/32	180/70	340/150	18,95
Enorm 10 AE 4 - 22	40	28	50/36	190/75	350/170	23,40
Enorm 10 AE 4 - 26	56	40	63/45	220/90	430/180	47,00



- Üç ya da dört bacaklı zincir sapanlar içindir.
- For three or four-leg chain slings.

Kuş Gözü Kanca *Eye Sling Hooks*

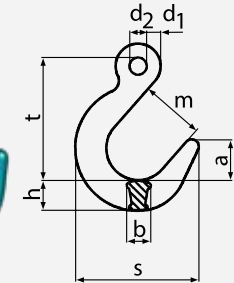
Kod Code	WLL	a	b	d1	d2	d3	h	m	t	Yük Weight
	t	mm	mm	mm	mm	mm	mm	mm	mm	kg
TOE 6	1,4	32	16	12	27	34	21	22	91	0,45
TOE 8	2,5	44	21	13	29	48	27	31	112	0,7
TOE 10	4	52	26	17	35	54	36	37	138	1,46
TOE 13	6,7	67	33	20	41	70	47	47	170	2,6
TOE 16	10	61	37	26	54	70	49	51	192	3,9
TOE 18	12,5	71	43	30	45	72	57	54	200	5,9
TOE 22	19	94	48	32	50	92	68	68	250	9,5
TOE 26	26,5	90	58	36	60	95	80	69	265	11,4



- Kuş Göz Kanca EN 1677-2.
- Eye sling hooks EN 1677-2.

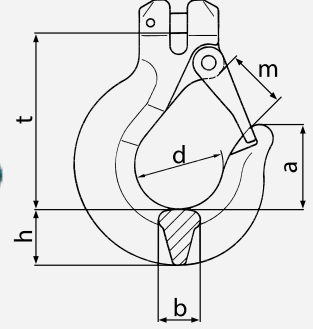
Gözlü Mandalsız Dökümcü Kancası *Foundry Hooks*

Kod Code	Çalışma Yüğü WLL	a	b	d1	d2	h	m	s	t	Birim Ağırlık Weight
	t	mm	mm	mm	mm	mm	mm	mm	mm	kg
TGH 6	1,4	30	20	10	13	26	50	97	95	0,52
TGH 8	2,5	40	25	12	18	32	63	120	121	1,0
TGH 10	4	49	32	16	20	38	75	147	145	1,92
TGH 13	6,7	58	39	20	25	43	87	170	175	3,0
TGH 16	10	68	45	24	35	54	98	202	204	5,24
TGH 18-22	19	83	56	32	46	65	118	254	250	10,1



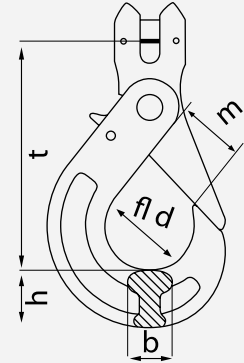
Pimli Sapan Kancası *Clevis Sling Hook - Compact*

Kod Code	Çalışma Yüğü WLL	a	b	d3	h	m	t	Birim Ağırlık Weight
	t	mm	mm	mm	mm	mm	mm	
Enorm 10 GH 6	1,4	32	16	34	21	22	67	0,3
Enorm 10 GH 8	2,5	44	20	48	26	30	93	0,7
Enorm 10 GH 10	4	52	26	54	35	37	112	1,4
Enorm 10 GH 13	6,7	66	32	70	46	47	140	2,9
Enorm 10 GH 16	10	62	37	74	49	51	152	4,4
Enorm 10 GH 18	12,5	70	43	72	56	54	172	6,8
Enorm 10 GH 22	19	95	48	92	69	68	210	11,0



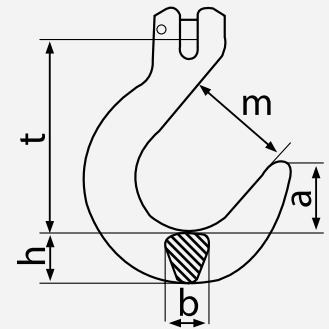
Pimli Kendinden Emniyetli Kanca *Self Locking Hook*

Kod Code	Çalışma Yüğü WLL	b	d	h	m	t	Birim Ağırlık Weight
	t	mm	mm	mm	mm	mm	
Enorm 10 EAHG 8	2,5	20	45	38	28	111	0,75
Enorm 10 EAHG 10	4	28	55	46	34	142	1,5
Enorm 10 EAHG 13	6,7	36	68	56	45	175	3,3



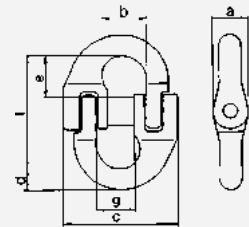
Pimli Mandalsız Dökümcü Kancası *Foundry Hooks*

Kod Code	Çalışma Yüğü WLL	a	b	h	m	t	Yük Weight
	t	mm	mm	mm	mm	mm	
WHG 18	12,5	77	53	54	114	218	7,8
WHG 22	19	90	64	65	124	237	11,9



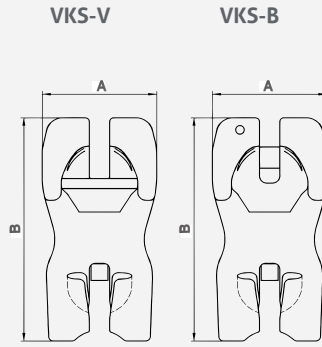
Bağlantı Ek Kilidi *Coupling*

Kod Code	Çalışma Yüğü WLL	a	b	c	d	e	g	t	Yük Weight
	t	mm	mm	mm	mm	mm	mm	mm	
Enorm 10 TBSE 6	1,4	11	19	40	8	19	17	45	0,07
Enorm 10 TBSE 8	2,5	14	22	53	11	25	21	59	0,18
Enorm 10 TBSE 10	4,0	18	29	68	12	29	28	70	0,34
Enorm 10 TBSE 13	6,7	25	33	79	16	31	29	86	0,66
Enorm 10 TBSE 16	10	31	44	108	22	42	40	108	1,3
Enorm 10 TBSE 18	12,5	37	51	120	23	48	46	125	1,8
Enorm 10 TBSE 22	19	40	59	134	28	52	56	137	3,0
Enorm 10 TBSE 26	26,5	50	70	161	30	65	61	168	5,1



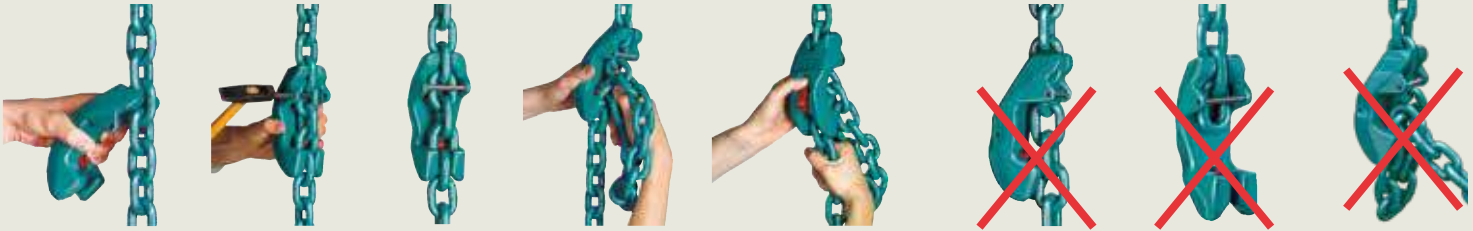
Kısaltma Kancası *Shortening Clutches*

Kod Code	WLL	A	B	Yük Weight
	t	mm		
Enorm 10 VKS-V 6 Enorm 10 VKS-B 6	1,4	46	121	0,7
Enorm 10 VKS-V 8 Enorm 10 VKS-B 8	2,5	58	153	1,1
Enorm 10 VKS-V 10 Enorm 10 VKS-B 10	4	66	139	1,6
Enorm 10 VKS-V 13 Enorm 10 VKS-B 13	6,7	82	182	2,9
Enorm 10 VKS-V 16 Enorm 10 VKS-B 16	10	103	220	5,1



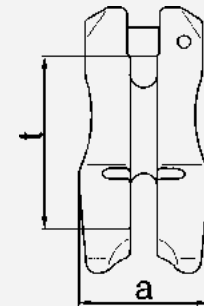
Uygulama Talimatları Instruction for Installation

Uygun Değildir Forbidden



Kısaltma Kancası Tip-2 *Clevis Shortening Clutches Type -2*

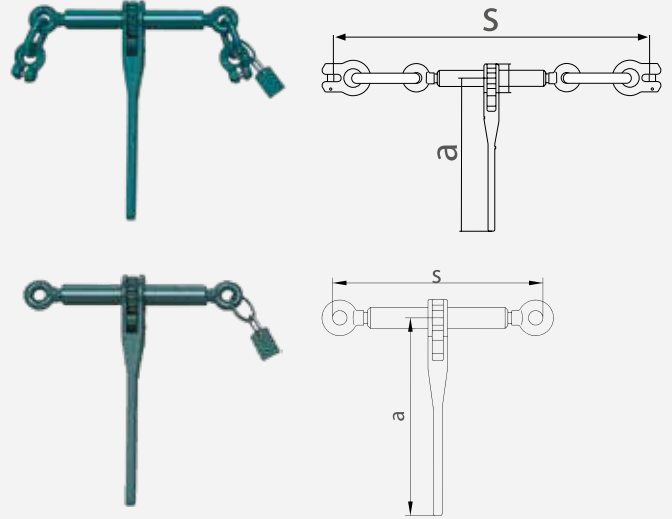
Kod Code	WLL	a	t	Yük Weight
	t	mm		
Enorm 10 VKE-S 18	12,5	101	134	4
Enorm 10 VKE-S 22	19	126	160	7,4



Zincir Çektirme Ratchet Type Load Binders

Kod Code	LC		STF	s	a	Yük Weight
	kN	daN				
ERSP 8	50	5000	1575	582 - 732	220	4,7
ERSP 10	80	8000	3000	691 - 861	387	5,8
ERSP 13	134	13400	3000	775 - 935	387	7,9

Kod Code	LC		STF	s	a	Yük Weight
	kN	daN				
ERSPO 8	50	5000	1575	360 - 510	220	3,45
ERSPO 10	80	8000	3000	419 - 579	387	3,95
ERSPO 13	134	13400	3000	419 - 579	387	4,50



Zincir Çektirme Uygulamaları Assembled Lashing Chain

- İstenilen boyda üretilebilir.
- Further lengths available.



Kod Code	LC		STF	Yük Weight
	kN	daN		
EZK 8	50	5000	1575	11,3
EZK 10	80	8000	3000	16,8
EZK 13	134	13400	3000	31,5

- İstenilen boyda üretilebilir.
- Further lengths available.



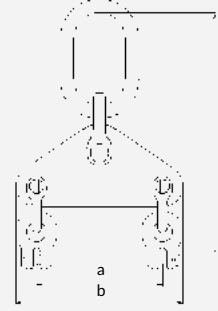
Kod Code	LC		STF	Yük Weight
	kN	daN		
EZKÖ 8	50	5000	1575	10,34
EZKÖ 10	80	8000	3000	15,24
EZKÖ 13	134	13400	3000	24,56



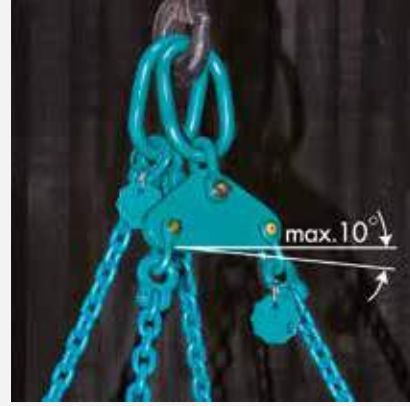
Uygun Değildir (Forbidden)
Zincir daima alt zincir baklasında sabitlenmelidir.
The chain has always be fixed in the lower chain pocket.

Oval Halkalı Yayıcı Plaka *Spreader Plate*

Kod Code	WLL			a	b	t	Master Link Master Link	Yük Weight
	0°-45° (t)	45°-60° (t)	4 str. = 2x2 0°-45°** (t)					
EAWI 1 10	5,6	4	11,2	185	255	399	22 x 160 x 90	7,7
EAWI 1 13	9,5	6,7	19	245	325	470	26 x 180 x 100	13,9
EAWI 1 16	14	10	28	300	390	556	32 x 200 x 110	24,2
EAWI 1 18	18	12,5	36	320	420	661	38 x 260 x 140	35,8



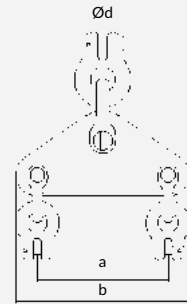
H 4 10 mm 0°-45° WLL 8 t



2 malzeme H 2 10 mm 0°-45° WLL 11,2 t

Oval Halkalı Yayıcı Plaka *Spreader Plate*

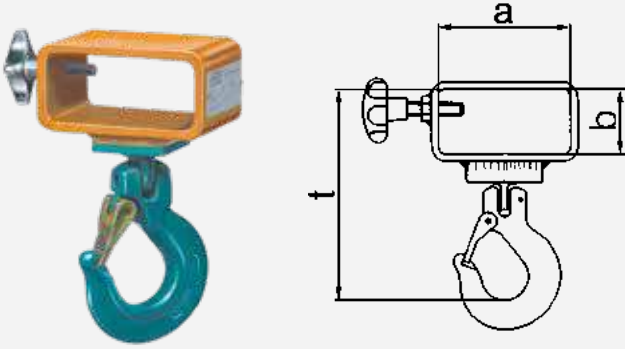
Kod Code	Nominal Ölçü Nominal Size	WLL			a	b	t	Yük Weight
	Ød (mm)	0°-45° (t)	45°-60° (t)	4 str. = 2x2 0°-45°** (t)				
EAWI 2 10	16 x 48	5,6	4	11,2	185	255	326	8,5
EAWI 2 13	18 x 54	9,5	6,7	19	245	325	393	15
EAWI 2 16	22 x 66	14	10	28	300	390	630	28,2



* Yukarıda verilen yük limitleri yalnızca 2 kollu zincir sapanları kullanım durumunda geçerlidir. 2 kollu zincir sapanların kullanıldığı durumlarda kollardan biri yayıcı levha vinç kancası ile birleşen iki zincir sapan ile birleşmelidir. Bu durum ayrıca 4 kollu zincir sapanlar içinde geçerli olmaktadır. Yukarıda belirtilen çalışma yük limitleri yalnızca yük dağılımının simetrik olduğu durumlarda geçerli olmaktadır. Ayrıca yayıcı levha (EAWI 1), DIN 15401'e göre 8'den 40'a kadar vinç kancaları için olan özel bağlantılar ile uygundur.

* The mentioned working load limits are valid only in case of using two of 2-leg chain slings. In this case one of the 2-leg chain slings must be assembled with a spreader plate and both chain slings have to be assembled to the crane hook. This is valid also in case of a 4-leg chain sling. Where as 2 legs have to be assembled with a spreader plate. The above mentioned working load limits are valid only in case of a symmetric distribution of load. The spreader plate EAWI 1 is also available with special links for crane hooks no. 8 up to 40 acc. DIN 15401.

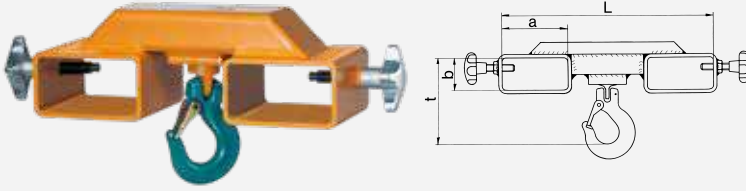
Forkliftler için Fırdöndülü Kanca *Swivel Hook For Forklift*



Kod Code	WLL	a	b	t	Yük Weight
	t	mm			kg
Enorm 10 GS 8	2,5	126	64	180	5
Enorm 10 GS 10	4	143	66	230	7,5
Enorm 10 GS 13	6,7	160	80	280	10,5

Forkliftler için Fırdöndülü Kanca *Swivel Hook for Forklift - Double*

- Forklift için döner kanca-ikili.
- *Swivel-hook for forklift-double.*

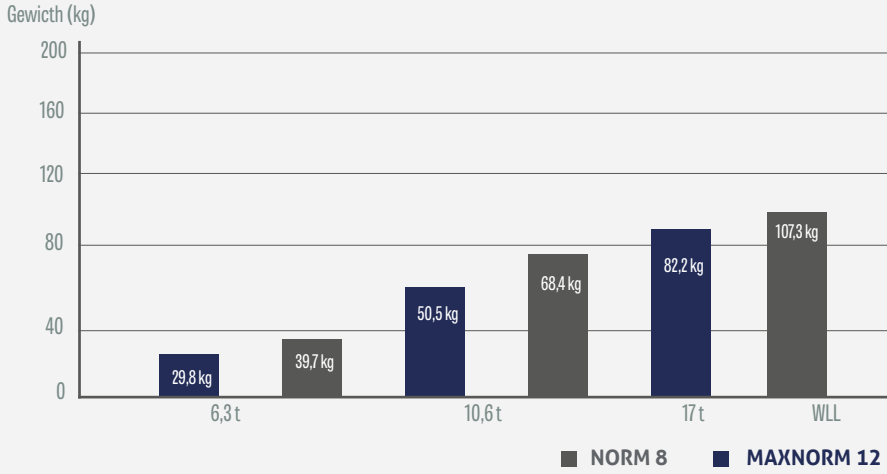


Kod Code	WLL	a	b	L	t	Yük Weight
	t	mm		mm	mm	kg
Enorm 10 GSD 8	2,5	126	64	365	125	11,40
Enorm 10 GSD 10	4	143	66	400	145	17,40
Enorm 10 GSD 13	6,7	160	80	400	200	20,10



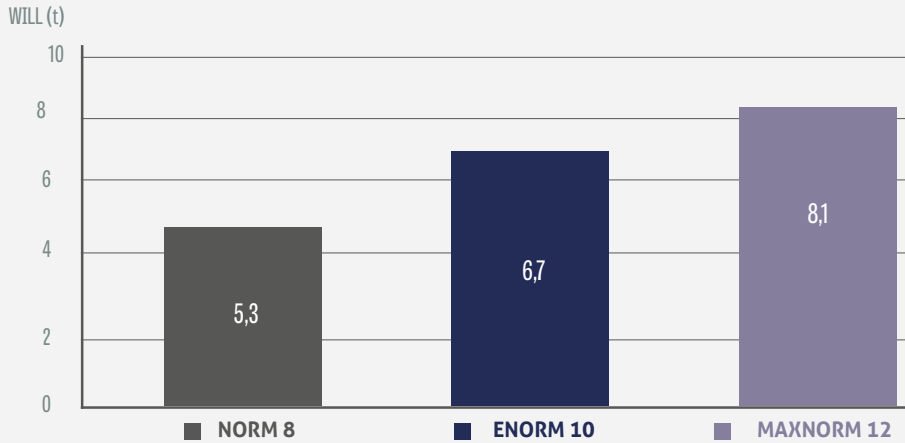
Genel Bilgilendirme

General Technical Informations



Bir üretici olarak JDT, tamamıyla Alman yapımı olan Grade 12 ürün serisi MAXNORM 12'yi piyasaya sunmaktadır. Bu seri PAS 1061'in teknik gerekliliklerini yerine getirmekle kalmayıp aynı zamanda belirtilen teknik gerekliliklerin üzerine çıkmaktadır (Örn: -60 oC'ye kadar dayanıklılık).

As the manufacturer, JDT offers a grade 12 product series that is fully émade in germany": the MAXNORM 12. This series does not only fulfill all of the technical requirements based on PAS 1061, in part it also exceeds them (e.g. low temperature durability up to -60 oC).



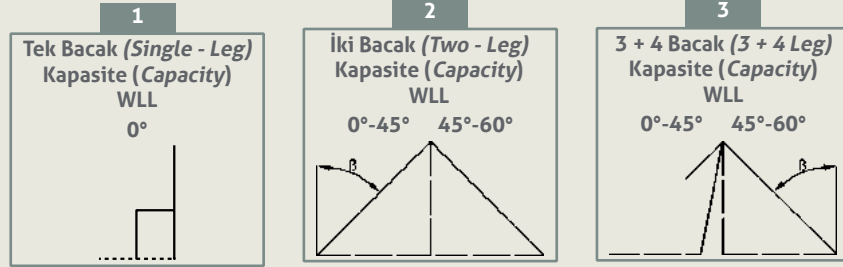
D3 (Kaza Sigortası ve Kazaları Engelleme Birliđi'nin Test Etme ve Sertifika Merkezi'nin üretici damgası) ile JDT çok dayanıklı ve güvenli bu elemanları 2014 yılında pazara tanıtmıştır.

With D3 (the manufacturer's stamp of the Accident Insurance and Prevention Association's testing and certification centre), JDT will introduce these extremely robust and safe products onto the international market in 2014.

Zincir Sapan

Chain Sling

Çalışma Yük Limitleri 12 / Working Load Limits Grade 12



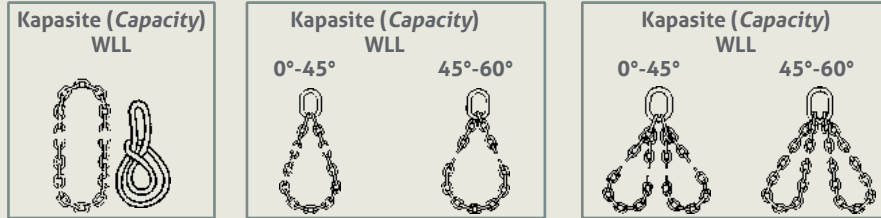
Nominal Ölçü Nominal Size	t		t		t	
mm						
8 x 24	3,0	4,25	3,0	6,3	4,5	
10 x 30	5,0	7,1	5,0	10,6	7,5	
13 x 39	8,1	11,3	8,1	17,0	12,0	
Faktor/Factor	1,0	1,4	1,0	2,1	1,5	

*Asimetrik yüklemelerde yük kapasitesi %50'ye kadar azalmaktadır.
*In the case of asymmetric loads, load capacities are to be reduced by 50%.

Sonsuz Zincir Sapan

Endless Chain Sling

Çalışma Yük Limitleri 12 / Working Load Limits Grade 12



Nominal Ölçü Nominal Size	t		t		t	
mm						
8 x 24	4,8	3,3	2,4	5,1	3,6	
10 x 30	8,0	5,5	4,0	8,5	6,0	
13 x 39	13,0	8,9	6,5	13,8	9,7	
Faktor/Factor	1,6	1,1 (1,4)*	0,8 (1)*	1,7 (2,1)*	1,2 (1,5)*	

*Zincir sapanın keskin kenarlar vb. kullanım durumları haricindeki uygun kullanım koşulları ile kullanılması durumlarında geçerli olan emniyetli çalışma yükleri yukarıda belirtilmektedir.

*In the event of appropriate usage - not with choke hitch, no sharp edges etc. - see WILL table above chain sling.

Bağlantı Uçlu Zincir Sapanlar *Chain Sling with Terminal Link*



R-1



R-2



R-3



R-4

Kancalı Zincir Sapanlar *Chain Sling with Hook*



H-1



H-2



H-3



H-4

Kancalı ve Kısaltmalı Sapanlar *Chain Sling with Hook and Shortening Clutch*



HV 1



HV 2



HV 3



HV 4

Sonsuz Zincir Sapan *Endless Chain Sling*



K 11



K 12



K 13



K 22



K 23

MAXNORM 12'nin Avantajları

Product advantages MAXNORM 12

Kod Code	Nominal Ölçü Nominal Size	Çalışma Yüğü WLL	Test Yüğü Manufac. Proof Force	Kopma Yüğü Breaking Proof Force	Yük Weight
	mm	t	kN	kN	kg/m
MAXNORM K8	8 x 24	3,0	73,5	118	1,6
MAXNORM K10	10 x 30	5,0	123,0	196	2,6
MAXNORM K13	13 x 39	8,1	199,0	318	4,1

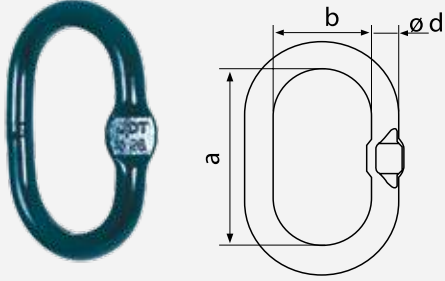


- ◇ 100% Alman yapımı.
- ◇ MAXNORM 12'nin kopma kuvveti grade 10'a göre %25, Grade 8'e göre %60'a kadar daha yüksektir.
- ◇ Düşük sıcaklığa dayanıklılığı -60 °C kadar ulaşmaktadır.
- ◇ Grade 12'ler, sınıfında dünyanın en hafif zinciridir.
- ◇ Bütün ürünlerin yüzeyleri gölge altında toz boya ile kaplanmıştır (Okyanus Mavisi).
- ◇ Kullanım kolaylığı ve optimize edilmiş servis ömrü.

- ◇ 100% Made in Germany.
- ◇ The breaking strenght of MAXNORM 12 is 25% higher than that of Grade 10 and even up 60% higher than that of Grade 8.
- ◇ Low temperature durability up to -60 °C.
- ◇ The world's lightest chain in Grade 12.
- ◇ The surface of all products is powder coated in the shade "Ocean Blue".
- ◇ Easy to use and optimised service life.

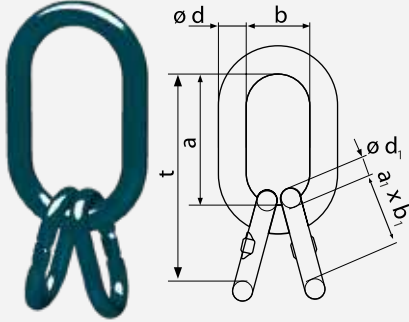
Oval Halka *Master Link*

- Tek kollu Zincir Sapanlar için.
- *For single-leg Chain Slings.*



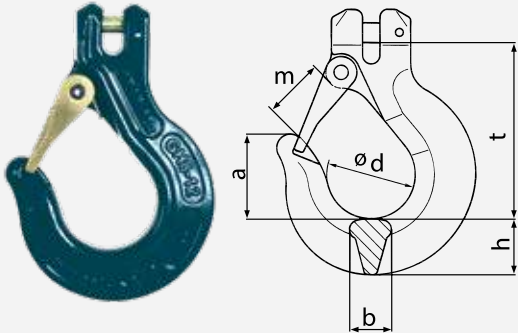
Kod Code	Çalışma Yüğü WLL		ød	a	b	Birim Ağırlık Weight
	t	mm				
MA 1 - 8	3,1	18	135	75	0,9	
MA 1 - 10	5,0	22	160	90	1,5	
MA 1 - 13	8,1	26	180	100	2,4	

- 3 ya da 4 kollü Zincir Sapanlar için.
- *For 3 or 4-leg Chain Slings.*



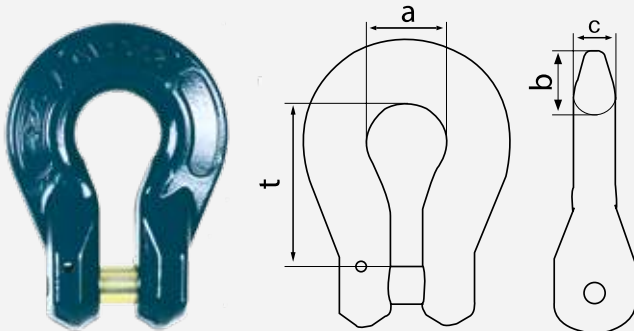
Kod Code	Çalışma Yüğü WLL		d	a	b	d ₁	a ₁	b ₁	t	Yük Weight
	0°-45° (t)	0°-45° (t)								
MA 4 - 8	6.3	4.5	26	180	100	18	85	40	265	3,6
MA 4 - 10	10.6	7.5	32	200	110	22	115	50	315	6.1
MA 4 - 13	17.0	12.0	36	260	140	26	140	65	400	10.0

- Pimli Sapan Kancaları-Kompakt .
- *Clevis Sling Hook-Compact.*



Kod Code	Çalışma Yüğü WLL		a	b	d	h	m	t	Yük Weight
	t	mm							
MGH - 8	3.0	52	27	54	32	38	123	1.5	
MGH - 10	5.0	67	32	70	36	47	146	2.5	
MGH - 13	8.1	62	37	74	47	51	158	4.0	

- Bağlantı Kilidi.
- *Eye-Connector.*



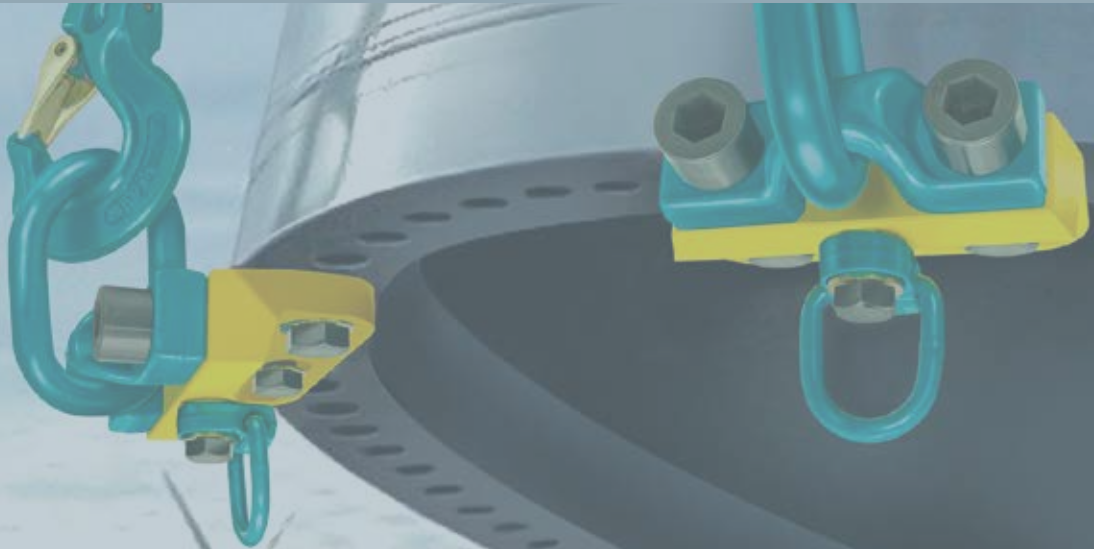
Kod Code	Çalışma Yüğü WLL		a	b	c	t	Yük Weight
	t	mm					
MGV - 8	3.0	25	22	13	50	0.36	
MGV - 10	5.0	31	25	16	63	0.60	
MGV - 13	8.1	38	31	20	78	1.3	





KALDIRMA ATAÇMANLARI

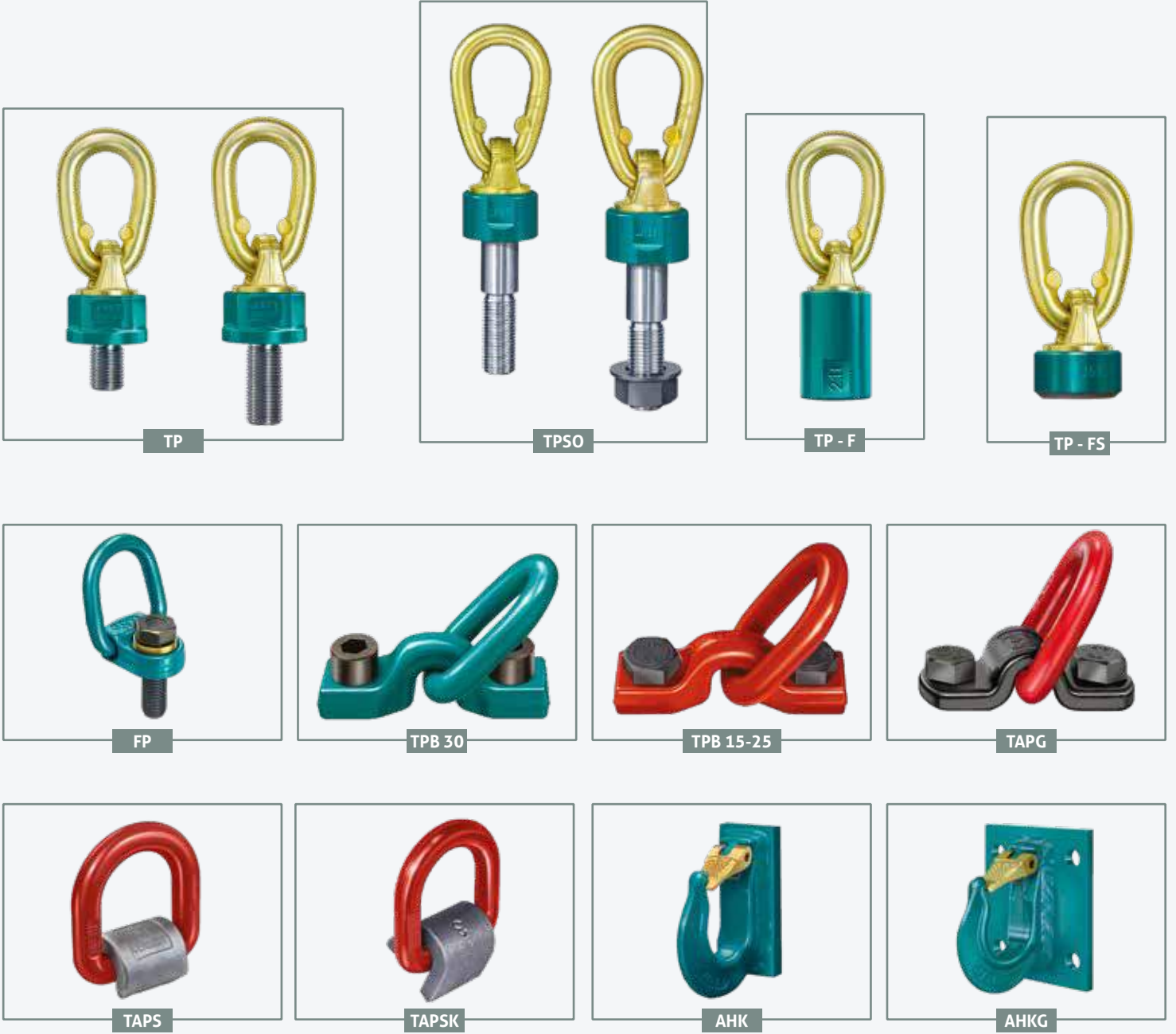
LIFTING ATTACHMENTS



Kaldırma Ataçmanları Çeşitleri

The range of Lifting Points

Her uygulama için doğru ataçmanı sunuyoruz.
We offer the right lifting point for every application.



THEIPA Point

THEIPA Point

ENORM Grade 10 materyaller TAWGK ile karşılaştırdığımızda Fırdöndünün ölçüsünü arttırmadan WLL'nin %25'i kadar bir artış sağlar.

Avantajları:

- ◇ Fırdöndünün dövme altıgen yapılı gövdesinden dolayı takmak - çıkarmak kolaydır.
- ◇ Halka üzerindeki çıkıntılı bölümler, halkayı bükülmekten korur.
- ◇ Güçlü Galvaniz kaplama sayesinde iç ve dış yüzeyler paslanmaya karşı korunmuştur.
- ◇ 180° Sallama 360° Dönme.
- ◇ Tüm yük yönlerinde kırılmaya karşı 4 kat emniyetlidir.
- ◇ Yük altında dönebilir.
- ◇ Güvenli çalışma yükü fırdöndü üzerinde yazılıdır.

Grade 10 ENORM material allows an increase in working load limit of %25 without increasing swivel size compared to TAWGK.

The advantages:

- ◇ Easy to attach or dismantle due to the forged hexagon shaped body of the swivel.
- ◇ Additional ball bearing system allows for smooth swiveling under load.
- ◇ Crimpfeature on the link prevents the link from kinking.
- ◇ Both internal and external surfaces are protected against corrosion by a tough galvanized coating.
- ◇ Swings 180° Rotates 360°.
- ◇ Secured four times against breakage in all load directions.
- ◇ Rotatable under load.
- ◇ Mark with the wll.

- ◇ Fırdöndü üzerindeki işaretler eğim açılarını açıkça gösterir.
- ◇ Ayrıca rulman sistemi yük altında düzgün bir dönüşe izin verir.
- ◇ Yeni WLL tablosu ile iskartaya alınma durumunu ölçebilirsiniz.
- ◇ Geliştirilmiş fırdöndü, özel işleme ile yüzey teması sağlar.
- ◇ Bütün dış versiyonları talep üzerine mevcuttur.

- ◇ Marks on the swivel give a clear indication of inclination angles.
- ◇ Additional ball bearing system allows for smooth swiveling under load.
- ◇ With the new WLL tables you can measure disposal stage.
- ◇ Improved swivel to surface contact due to special machining.
- ◇ All thread versions are available on request.

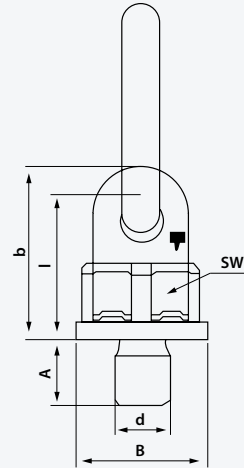
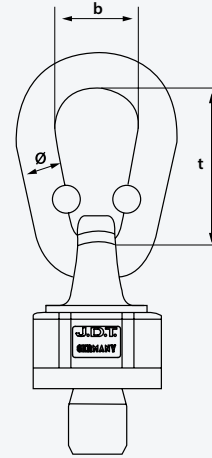


Yeni Nesil Fırdöndülü Ataçmanlar

The New Generation of Attachment Swivels

THEIPA Point THEIPA Point

Kod Code	Dış Türü Thread version dxA	Sıkma Torku Tightening Torque	Adım Pitch DIN 13	øB	g	SW	l	Halka Link ø x t x b	Yük Weight
	mm	Nm			mm			mm	kg
TP 0,7	M 10 x 18	10 - 40	1,5	36,5	48	34	41	13 x 55 x 32	0,42
	M 12 x 18	15 - 40	1,75	36,5	48	34	41	13 x 55 x 32	0,43
	M 12 x 25	15 - 40	1,75	36,5	48	34	41	13 x 55 x 32	0,43
	M 14 x 20	30 - 40	2	36,5	48	34	41	13 x 55 x 32	0,43
TP 1,4	M 16 x 20	45 - 130	2	36,5	48	34	41	13 x 55 x 32	0,43
	M 16 x 30	45 - 130	2	36,5	48	34	41	13 x 55 x 32	0,44
	M 20 x 30	75 - 130	2,5	36,5	48	34	41	13 x 55 x 32	0,46
	M 24 x 30	90 - 130	3	36,5	48	34	41	13 x 55 x 32	0,49
TP 2,5	M 20 x 30	100 - 170	2,5	52	68	46	57	16 x 70 x 34	0,95
	M 20 x 40	100 - 170	2,5	52	68	46	57	16 x 70 x 34	0,97
	M 20 x 50	100 - 170	2,5	52	68	46	57	16 x 70 x 34	1,04
	M 20 x 70	100 - 170	2,5	52	68	46	57	16 x 70 x 34	1,07
TP 4	M 24 x 30	190 - 280	3	57	75	50	63	18 x 85 x 45	1,43
	M 24 x 45	190 - 280	3	57	75	50	63	18 x 85 x 45	1,48
	M 24 x 50	190 - 280	3	57	75	50	63	18 x 85 x 45	1,5
	M 30 x 35	190 - 280	3,5	57	75	50	63	18 x 85 x 45	1,5
TP 6,7	M 30 x 35	230 - 400	3,5	70	95	65	78	20 x 85 x 45	2,33
	M 30 x 45	230 - 400	3,5	70	95	65	78	20 x 85 x 45	2,37
	M 30 x 50	230 - 400	3,5	70	95	65	78	20 x 85 x 45	2,44
	M 30 x 60	230 - 400	3,5	70	95	65	78	20 x 85 x 45	2,45
TP 8	M 30 x 35	270 - 600	3,5	81	106	75	86	23 x 115 x 60	3,59
	M 30 x 45	270 - 600	3,5	81	106	75	86	23 x 115 x 60	3,64
TP 10	M 36 x 50	270 - 600	4	81	106	75	86	23 x 115 x 60	3,72
	M 36 x 54	270 - 600	4	81	106	75	86	23 x 115 x 60	3,82
TP 12,5	M 42 x 50	270 - 700	4,5	81	106	75	86	23 x 115 x 60	3,82
	M 42 x 60	270 - 700	4,5	81	106	75	86	23 x 115 x 60	3,91
	M 42 x 63	270 - 700	4,5	81	106	75	86	23 x 115 x 60	3,94
	M 45 x 60	270 - 700	4,5	81	106	75	86	23 x 115 x 60	4,03
TP 17	M 48 x 72	270 - 700	5	81	106	75	86	23 x 115 x 60	4,33
	M 42 x 60	350 - 800	4,5	104	127	95	106	30 x 140 x 70	7,34
	M 45 x 60	350 - 800	4,5	104	127	95	106	30 x 140 x 70	7,50
	M 48 x 60	350 - 800	5	104	127	95	106	30 x 140 x 70	7,57
TP 20	M 56 x 78	350 - 900	5,5	104	127	95	106	30 x 140 x 70	8,00
	M 64 x 96	350 - 900	6	104	127	95	106	30 x 140 x 70	8,85
TP 28	M 64 x 110	350 - 900	6	104	127	95	106	30 x 140 x 70	9,20
	M 64 x 96	500 - 1000	6	129	174	115	135	35 x 170 x 80	16,3
TP 35	M 72 x 120	500 - 1200	6	129	174	115	135	35 x 170 x 80	17,6
	M 80 x 150	500 - 1200	6	129	174	115	135	35 x 170 x 80	19,5
	M 80 x 120	500 - 1400	6	148	187	135	146	43 x 220 x 100	25,1
TP 40	M 90 x 150	500 - 1500	6	148	187	135	146	43 x 220 x 100	27,6
	M 80 x 120	500 - 1500	6	170	233	150	182	46 x 240 x 110	35,5
	M 90 x 115	500 - 1500	6	170	233	150	182	46 x 240 x 110	36,5
	M 90 x 150	500 - 1500	6	170	233	150	182	46 x 240 x 110	38
	M 100 x 150	500 - 1700	6	170	233	150	182	46 x 240 x 110	39,8



İnçli sistemlerden, metrik sistemlere kadar bütün normal vida dişleri mevcuttur. Diğer dişleri de tedarik edilir. (TPSO)

Sıkma Torkları: DIN895 yada 894'e uygun açık uçlu somun anahtarı ile yapılır.

All normal threads available from inch system to round thread. Other threads can be supplied. (TPSO)

Tightening torques: with open-ended spanner according to DIN 895 or 894 without the aid of an extension.

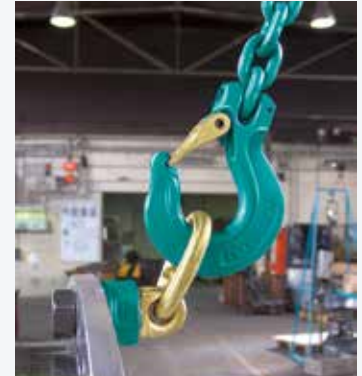




Bağlantı Şekilleri Kind of Attachment									
Parça Sayısı Number of Pieces		1	1	2	2	2	2	3 o. 4	
Eğim Açısı Inclination Angle		0°	90°	0°	90°	0-45°	45°-60°	0-45°	45°-60°
		WLL		WLL		WLL		WLL	
Kod Code		t	t	t	t	t	t	t	t
TP 0,7	M 10	1	0,5	2	1	0,7	0,5	1	0,75
	M 12	1,4	0,7	2,8	1,4	1	0,7	1,4	1
	M 14	2	1	4,0	2	1,4	1	2,12	1,5
TP 1,4	M 16	2,8	1,4	5,6	2,8	2	1,4	3	2,12
	M 20	3,4	1,7	6,8	3,4	2,4	1,7	3,55	2,5
	M 24	3,4	1,7	6,8	3,4	2,4	1,7	3,55	2,5
TP 2,5	M 20	5	2,5	10,0	5	3,55	2,5	5,3	3,75
	TP 4	M 24	8	4	16	8	5,6	4	8,5
TP 6,7	M 30	8	4	16	8	5,6	4	8,5	6
	M 30	12	6,7	24	13,4	9,5	6,7	14	10
TP 8	M 30	12	8	24	16	11,2	8	16	12
TP 10	M 36	15	10	30	20	14	10	21,2	15
TP 12,5	M 42	15	12,5	30	25	17	12,5	25	18
	M 45	15	12,5	30	25	17	12,5	25	18
	M 48	15	12,5	30	25	17	12,5	25	18
TP 17	M 42	20	13	40	26	18	13	27	19
	M 45	25	17	50	34	23,5	17	35	25
	M 48	25	17	50	34	23,5	17	35	25
	M 56	25	18	50	36	25	18	37,5	26,5
TP 20	M 64	25	20	50	40	28	20	42,5	30
TP 28	M 64	32,5	28	65	56	39	28	58	42
	M 72	32,5	28	65	56	39	28	58	42
	M 80	32,5	28	65	56	39	28	58	42
TP 35	M 80	40	35	80	70	49	35	74	52,5
	M 90	40	35	80	70	49	35	74	52,5
TP 40	M 80	50	40	100	80	56	40	84	60
	M 90	50	40	100	80	56	40	84	60
	M 100	50	40	100	80	56	40	84	60

Simetrik olmayan bir yük dağılımı durumunda 2 ve 3-4 bacaklı sapanlarda kaldırma kapasitesi tek bacaklı sapanlardaki gibi 90° uygulanır.

In the case of an unsymmetrical load distribution, the lifting capacities applicable to the 2 and 3-4-leg slings are the same as for 1-leg types at 90°.



THEIPA F Point (THEIPA F Point)

THEIPA Point-F iç diş ile portföye yeni eklenen bir ürün.

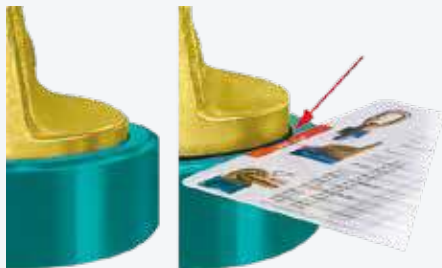
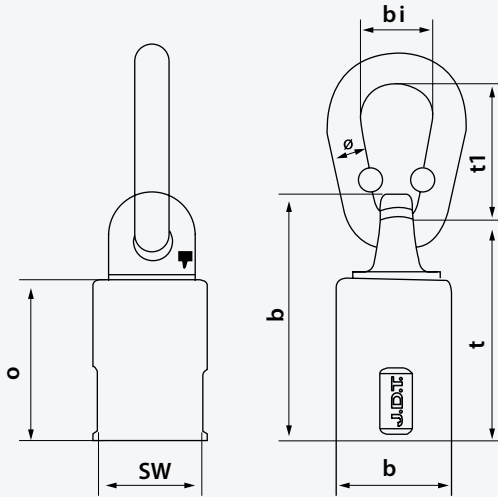
- ◇ Bütün THEIPA Point avantajları yine bu ürün içinde geçerlidir.
- ◇ Dişlerin derinliği kural olarak kendi çapının 1,25 katıdır.
- ◇ Damgalı WLL 90° ataçman türü için geçerlidir.
- ◇ Bağlantı elemanı olarak çatlak testli kalite sınıfı 10,9 olan civatalar uygundur.
- ◇ Farklı diş versiyonları ve uzunluklar istek üzerine tedarik edilir.

The THEIPA Point - F with an internal thread has been newly included in the range.

- ◇ All of the THEIPA Point's advantages have also been considered in this case.
- ◇ The thread's depth is 1.25 times its diameter as a rule.
- ◇ The stamped WLL applies to the kind of attachment by 90°.
- ◇ Bolts of the quality class 10.9 crack-tested are permitted as connecting elements.
- ◇ Different threaded versions and lengths can be supplied on request.



Kod Code	Diş Türü Thread version dxe	Sıkma Torqu Tightening Torque	Adım Pitch DIN 13	a	ø b	g	SW	t	Halka Link ø x t 1x bi	Yük Weight
	mm	Nm	mm	mm	mm	mm	mm	mm	mm	kg
TP-F 0,5	M 12 x 15	15 - 40	1,75	45	36,5	73	34	66	13 x 55 x 32	0,61
TP-F 1	M 16 x 20	45 - 130	2	52	36,5	80	34	73	13 x 55 x 32	0,65
TP-F 1,7	M 20 x 25	100 - 170	2,5	66	52	106	46	95	16 x 70 x 34	1,5
TP-F 2,1	M 24 x 30	190 - 280	3	80	57	120	50	108	18 x 85 x 45	2,12
TP-F 3,2	M 30 x 40	230 - 400	3,5	94	70	148	65	131	20 x 85 x 45	3,7
TP-F 5	M 36 x 45	270 - 600	4	107	80	164	75	145	23 x 115 x 60	5,75





Bağlantı Şekilleri Kind of Attachment								
Parça Sayısı Number of Pieces	1	1	2	2	2	2	3 o. 4	
Eğim Açısı Inclination Angle	0°	90°	0°	90°	0-45°	45°-60°	0-45°	45°-60°
	WLL		WLL		WLL		WLL	
Kod Code	t	t	t	t	t	t	t	t
TP-F 0,5 M 12 x 15	1,4	0,5	2,8	1	0,7	0,5	1	0,75
TP-F 1 M 16 x 20	2,8	1	5,6	2	1,4	1	2,12	1,5
TP-F 1,7 M 20 x 25	5	1,7	10	3,4	2,4	1,7	3,55	2,5
TP-F 2,1 M 24 x 30	8	2,1	16	4	2,8	2,1	4,25	3,15
TP-F 3,2 M 30 x 40	12	3,2	24	6,4	4,25	3,15	6,7	4,75
TP-F 5 M 36 x 45	15	5	30	10	6,7	5	10	7,5

Simetrik olmayan yük dağılımı durumunda 2 ve 3-4 bacaklı sapanlarda kaldırma kapasitesi tek bacaklı sapanlardaki gibi 90° uygulanır.

In case of an unsymmetrical load distribution, the lifting capacities applicable to the 2 and 3/4-leg slings are the same as for 1-leg types at 90°.



THEIPA Point - S THEIPA Point - S

ENORM Grade 10 materyaller TWSK ile karşılaştırdığımızda firdöndünün ölçüsünü arttırmadan WLL'nin %25'i kadar bir artış sağlar.

Avantajları:

- ◇ Firdöndü üzerindeki işaretler eğim açılarının açık bir göstergesidir.
- ◇ İlaveten rulman sistemi yük altında düzgün bir dönüğe izin verir.
- ◇ Halka üzerindeki çıkıntı bölümler halkayı bükülmekten korur.
- ◇ Güçlü Galv. kaplama sayesinde iç ve dış yüzeyler paslanmaya karşı korunmuştur.
- ◇ Özel mekanik işleme ile firdöndünün yüzey teması geliştirilmiştir.
- ◇ Rulmanın aşınması, aşınmış halkadaki boşluğa bakarak herhangi bir ölçüm yapmaya gerek kalmaksızın gözle tespit edilebilir.
- ◇ Tüm yük yönlerinde kırılmaya karşı 4 kat emniyetlidir.

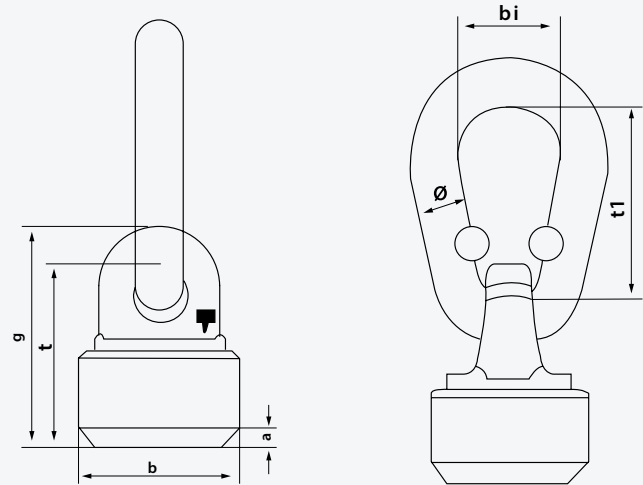
Grade 10 ENORM material allows for an increase in working load limit of 25% without increasing swivel size compared to TAWSK.

The advantages:

- ◇ Marks on the swivel give a clear indication of inclination angels.
- ◇ Additional ball bearing system allows for smooth swiveling under load.
- ◇ Crimpfeature on the link prevents the link from kinking.
- ◇ Both internal and external surfaces are protected against corrosion by a tough galvanized coating.
- ◇ Improved swivel to surface contact is due to special machining.
- ◇ Ball bearing wear can be visually recognized by the gap on the wear ring without measuring instruments.
- ◇ Secured four times against breakage in all load directions.



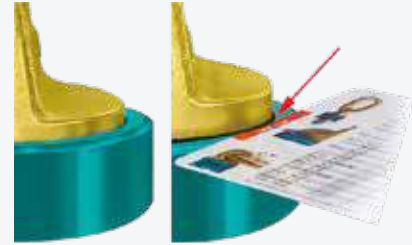
Kod Code	a	b	g	t	Halka Link ø x t l x bi	Yük Weight
	mm	mm	mm	mm	mm	kg
TP-S 2,5	5,5 x 45°	52	68	57	16 x 70 x 34	0,95
TP-S 4	7,0 x 45°	57	74	62	18 x 85 x 45	1,30
TP-S 6,7	8,5 x 45°	70	95	78	20 x 85 x 45	2,20
TP-S 10	10 x 45°	80	102	83	23 x 115 x 60	3,80
TP-S 17	12 x 45°	100	129	106	30 x 140 x 70	6,66



Bağlantı Şekilleri Kind of Attachment									
Parça Sayısı Number of Pieces	1	1	2	2	2	2	3 o. 4		
Eğim Açısı Inclination Angle	0°	90°	0°	90°	0-45°	45°-60°	0-45°	45°-60°	
WLL		WLL		WLL		WLL			
Kod Code	t	t	t	t	t	t	t	t	t
TP-S 2,5	5	2,5	10	5	3,55	2,5	5,3	3,75	
TP-S 4	8	4	16	8	5,6	4	8,5	6	
TP-S 6,7	12	6,7	24	13,4	9,5	6,7	14	10	
TP-S 10	15	10	30	20	14	10	21,2	15	
TP-S 17	25	17	50	34	23,5	17	35	25	

Simetrik olmayan bir yük dağılımı durumunda 2 ve 3-4 bacaklı sapanlarda kaldırma kapasitesi tek bacaklı sapanlardaki gibi 90° uygulanır.

In case of an unsymmetrical load distribution, the lifting capacities applicable to the 2 and 3/4-leg slings are the same as for 1-leg types at 90°.



WLL Tablosu ile ıskartaya alma durumunu ölçebilirsiniz.

With the new WLL tables you can measure disposal stage.

Fırdöndü üzerindeki işaretler eğim açılarının açık bir göstergesidir. İlaveten rulman sistemi, yük altında düzgün bir dönüşe izin verir.



Marks on the swivel give a clear indication of inclination angles. Additional ball bearing system allows for smooth swiveling under load.

Flat Point - Son Derece Yassı *Flat Point - Enormously Flat and Good*

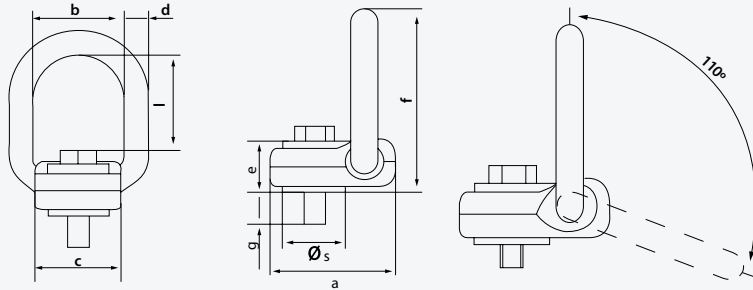
110° çalışma aralığı
110° working range



Flat Point'in Çalışma Limitleri 0,5-15t.

Avantajları:

- ◇ Tüm yük yönlerinde kırılmaya karşı dört kat emniyetlidir.
- ◇ Son derece yassı.
- ◇ 360° dönme.
- ◇ Kaldırma halkasıyla 110°'ye kadar çalışma aralığı.
- ◇ Otomatik kilitlenen halka.



Flat Point in working load limits of 0,5-15t.

The Advantages:

- ◇ Secured four times against breakage in all load directions.
- ◇ Enormously flat.
- ◇ Rotate 360°.
- ◇ Admissible working range of take-up link 110°.
- ◇ Automatically locking link.

Kod Code	JDT Vida JDT Screw	Tork Torque	a	b	c	d	e	f	g	l	s	Yük Weight
	mm	Nm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
FP 0,5	M 10 x 40	40	69	50	48	13	28	100	12	52	34	0,71
FP 0,8	M 12 x 45	65	69	50	48	13	28	100	17	51	34	0,73
FP 1,5	M 16 x 55	160	69	50	48	13	28	100	27	49	34	0,77
FP 2,5	M 20 x 70	250	69	50	48	13	28	100	42	46	34	0,86
FP 4-S	M 24 x 80	300	69	50	48	13	30	100	50	42	34	0,98
FP 4	M 24 x 80	300	104	76	72	18	39	147	41	74	58	2,5
FP 5	M 27 x 90	400	104	76	72	18	39	147	51	72	58	2,63
FP 6	M 30 x 90	500	104	76	72	18	39	147	51	70	58	2,74
FP 8	M 36 x 100	600	104	76	72	18	43	147	57	62	58	3,15
FP 10	M 42 x 100	1000	160	107	99	34,5	65,5	236	44,5	110	90	10,4
FP 15	M 48 x 120	2000	160	107	99	34,5	65,5	236	54,5	106	90	11,0

JDT vidaları DIN EN ISO 4014 (DIN931) - Mukavemet sınıfı 10.9, çatlak testine tabi tutulmuştur.

JDT screws according to DIN EN ISO 4014 (DIN 931) - strength class 10.9, crack-tested.

Bağlantı Şekilleri Kind of Attachment	1		2		2		3 o. 4	
	0°	90°	0°	90°	0-45°	45°-60°	0-45°	45°-60°
Parça Sayısı Number of Pieces	1		2		2		3 o. 4	
Eğim Açısı Inclination Angle	0°		90°		0-45°		45°-60°	
WLL		WLL		WLL		WLL		
Kod Code	t	t	t	t	t	t	t	t
FP 0,5 M 10	0,5	0,7	1	1,4	0,7	0,5	1	0,7
FP 0,8 M 12	0,8	1,25	1,6	2,5	1,12	0,8	1,6	1,12
FP 1,5 M 16	1,5	2,12	3	4	2	1,5	3,15	2,24
FP 2,5 M 20	2,5	3,55	5	7,1	3,35	2,5	5	3,75
FP 4-S M 24	4	4	8	8	5,6	4	8	6
FP 4 M 24	4	5,6	8	11,2	5,6	4	8	6
FP 5 M 27	5,3	7,1	10,6	14	7,1	5,3	11,2	8
FP 6 M 30	6	8	12	16	8	6	12,5	9
FP 8 M 36	8	8	16	16	11,2	8	16,8	12
FP 10 M 42	10,0	15,0	20,0	30,0	14	10,0	21,2	15,0
FP 15 M 48	15,0	20,0	30,0	40,0	21,2	15,0	31,5	22,4

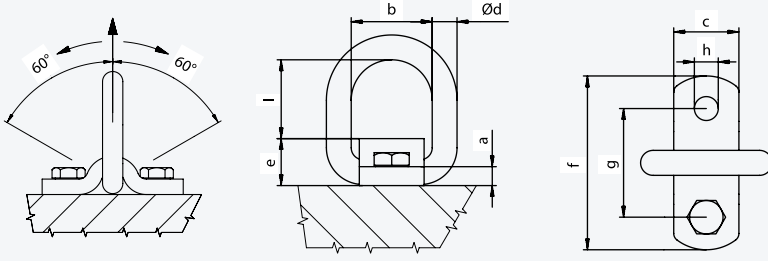
Simetrik olmayan bir yük dağılımı durumunda 2 ve 3-4 bacaklı sapanlarda kaldırma kapasitesi tek bacaklı sapanlardaki gibi 900 uygulanır.

In case of an unsymmetrical load distribution, the lifting capacities applicable to the 2 and 3/4-leg slings are the same as for 1-leg types at 90°.



TAPG-S

Çalışma Aralığı 120°
swings 120°



Vidalanabilir Mapa 3 – 8 ton çalışma yükü

Avantajları:

- ◇ Kompakt dizayn
- ◇ Kırılmaya karşı 4 kat güvenli
- ◇ 120° Çalışma açısı
- ◇ Vida ile bağlantılı olan plakanın üzerinde tonaj bilgisi mevcuttur.
- ◇ Vidalar dahil %100 catlağa karşı test edilmiş

Attachment-point, bolt-on-type, in working load limits of 3 – 8t.

The Advantages:

- ◇ Compact design
- ◇ Secured four times against breakage
- ◇ Working range 120°
- ◇ Bolt on plate also serves as marking stencil
- ◇ including bolts, 100 % crack-tested

Kilit üzerindeki halka rahat olarak hareket etmesi gerekmektedir.

The D-link must be able to move freely. The load take-up may not be supported on edges or on the sling point.

TAPG-S 3 – 8


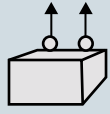
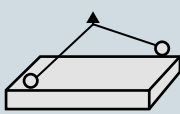
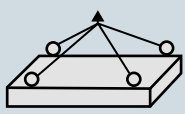
Kod Code	Vida Screw	Tork Torque	a	b	c	Ød	e	f	g	h	l	Ağırlık Weight	Ürün No Ident. no.
	mm	Nm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg	
TAPG-S 3	M 20 × 45	210	12	56	50	18	34	130	90	21	51	1,43	0380503300
TAPG-S 5	M 24 × 55	290	15	67	60	22	42	160	110	25	63	2,58	0380505300
TAPG-S 8	M 27 × 65	550	20	80	70	26	55	190	130	28	67	4,38	0380508300

Vidalar ISO 4017 (DIN 933/10.9) normuna göredir. %100 Catlak testine tabi tutulmuştur.

Bolts according to ISO 4017 (DIN 933 / 10.9), 100 % crack-tested.

TAPG 3 – 8

Kod Code	Tork Torque	a	b	c	Ød	e	f	g	h	l	Ağırlık Weight	Ürün No Ident. no.
	Nm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg	
TAPG 3	210	12	56	50	18	34	130	90	21	51	1,08	0380503200
TAPG 5	290	15	67	60	22	42	160	110	25	63	2,04	0380505200
TAPG 8	550	20	80	70	26	55	190	130	28	67	3,58	0380508200

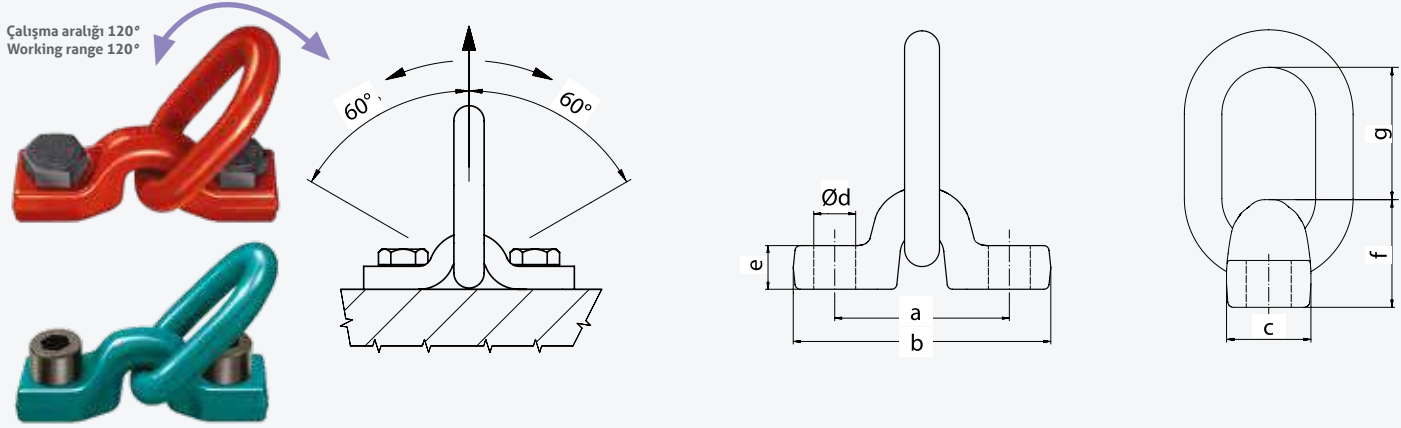
Bağlantı Şekilleri Kind of Attachment							
Parça Sayısı Number of Pieces	1	2	2	3 o. 4			
Eğim Açısı Inclination Angle	0°	0°	0-45° 45°-60°	0-45° 45°-60°			
	WLL		WLL				
Kod Code	t	t	t	t	t	t	t
TAPG-S / TAPG 3	3,15	4,75	9,5	4,25	3,15	6,3	4,75
TAPG-S / TAPG 5	5,3	8,0	16,0	7,1	5,3	11,2	8,0
TAPG-S / TAPG 8	8,0	12,0	24,0	11,2	8,0	16,0	12,0

Asimetrik olmayan yük dağılımı durumunda , 2,3 ve 4 bacaklı sapanlar için uygulanabilir kapasite minimum WLL ile aynıdır.

In the case of an unsymmetrical load distribution , the lifring capacities applicable to the 2 and 3-/4 leg slings are the same as min WLL.



TPB-S



Vidalanabilir Mapa 15-30 ton çalışma yükü

Avantajları:

- ◇ Kompakt dizayn
- ◇ Kırılmaya karşı 4 kat güvenli
- ◇ 120° Çalışma açısı
- ◇ Vida ile bağlantılı olan plakanın üzerinde tonaj bilgisi mevcuttur.
- ◇ Vidalar dahil %100 catlağa karşı test edilmiş Kilit üzerindeki halka rahat olarak hareket etmesi gerekmektedir.

The link must be able to move freely. The load take-up may not be supported on edges or on the sling point.

Attachment-point, bolt-on-type, in working load limits of 15 – 30 t.

The Advantages:

- ◇ Compact design
- ◇ Secured four times against breakage
- ◇ Link swings 120°
- ◇ Bolt on plate also serves as marking stencil
- ◇ including bolts, 100 % crack-tested

TPB- S 15 - 30

Kod Code	Vida Screw	Tork Torque	a	b	c	Ød	e	f	g	Halka link	Ağırlık Weight	Ürün No Ident no.
	mm	Nm	mm	mm	mm	mm	mm	mm	mm	mm	kg	
TPB-S 15	M 36 × 100	675	175	255	72	39	40	90	110	32 × 150 × 75	9,52	0380515200
TPB-S 20	M 42 × 120	1000	200	295	90	45	50	116	140	40 × 190 × 100	18,47	0380520200
TPB-S 25	M 45 × 120	1400	200	295	90	48	50	116	140	40 × 190 × 100	19,09	0380525200
TPB-S 30	M 48 × 130	1900	200	295	90	50	50	116	140	40 × 190 × 100	20,76	0381330100

TPB-S 15-25 *Vidalar ISO 4017 (DIN 933/10.9) normuna göre. %100 Catlak testine tabi tutulmuştur.

TPB-S 30 * Altıgen soket vida ISO 4762 , %100 Catlak testine tabi tutulmuştur.

TPB-S 15 – 25 Bolt according ISO 4017 (DIN 933 / 10.9), 100 % crack-tested

TPB-S 30 hexagon socket screw ISO 4762 / 10.9, 100 % crack-tested

TPB 15-30

Kod Code	Tork Torque	a	b	c	Ød	e	f	g	Halka link	Ağırlık Weight	Ürün No Ident no.
	Nm	mm	mm	mm	mm	mm	mm	mm	mm	kg	
TPB 15	675	175	255	72	39	40	90	110	32 × 150 × 75	7,40	0380515100
TPB 20	1000	200	295	90	45	50	116	140	40 × 190 × 100	15,10	0380520100
TPB 25	1400	200	295	90	48	50	116	140	40 × 190 × 100	15,10	0380525100
TPB 30	1900	200	295	90	50	50	116	140	40 × 190 × 100	15,00	0381230000

Bağlantı Şekilleri Kind of Attachment								
Parça Sayısı Number of Pieces	1	1	2	2	2	2	3 o. 4	
Eğim Açısı Inclination Angle	0°	90°	0°	90°	0-45°	45°-60°	0-45° 45°-60°	
WLL								
Kod Code	t	t	t	t	t	t	t	t
TPB-S / TPB 15	15,0	15,0	30,0	30,0	21,0	15,0	31,5	22,5
TPB-S / TPB 20	20,0	20,0	40,0	40,0	28,0	20,0	42,0	30,0
TPB-S / TPB 25	25,0	25,0	50,0	50,0	35,0	25,0	52,5	37,5
TPB-S / TPB 30	30,0	30,0	60,0	60,0	42,0	30,0	63,0	45,0

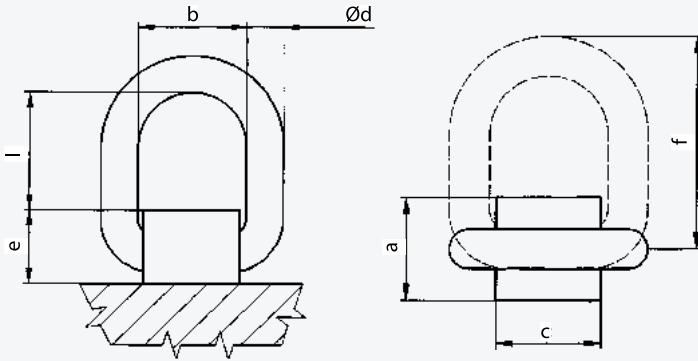
Asimetrik olmayan yük dağılımı durumunda ,2,3 ve 4 bacaklı sapanlar için uygulanabilir kapasite tek bacaklı sapan ile aynıdır.

In the case of an unsymmetrical load distribution , the lifting capacities applicabile to the 2 and 3-/4 leg slings are the same as for 1 leg.



TAPS

Çalışma aralığı 180°
swings 180°



Kaynaklanabilir Mapa 1-63 ton çalışma yükü

Avantajları:

- ◇ Kompakt dizayn
- ◇ Kırılmaya karşı 4 kat güvenli
- ◇ 180° Çalışma açısı
- ◇ EN 10025 e göre S355JR malzemeden üretilen kaynaklanabilir mapa.
- ◇ 25 CrMo4 , malzeme no 1 den üretilen TAPS 20 ve üzeri mapa.

Weld-on sling point in working load limits 1 – 63 t.

The Advantages:

- ◇ Compact design
- ◇ Secured four times against breakage
- ◇ D-link swings 180°
- ◇ Weld-on shackle made of material S355JR according to EN 10025
- ◇ Weld-on shackle \geq TAPS 20 made of material 25 CrMo4, Material no. 1.7218

TAPS 1 – 63

Kod Code	a	b	c	Ød	e	f	l	Ağırlık Weight	Ürün No Ident no.
	mm	mm	mm	mm	mm	mm	mm	kg	
TAPS 1	32	38	32	13	25	70	42	0,32	0381701000
TAPS 2	34	40	34	14	26	72	42	0,33	0381702000
TAPS 3	47	56	50	18	36	92	54	0,84	0381703000
TAPS 5	55	67	60	22	46	111	63	1,56	0381705000
TAPS 8	68	80	68	26	54	127	68	2,62	0381708000
TAPS 15	82	125	100	30	60	190	120	5,4	0380415000
TAPS 20	125	150	125	46	90	254	155	16,0	0380420000
TAPS 25	135	170	140	52	100	288	175	22,8	0380425000
TAPS 30	155	200	170	56	110	334	210	32,3	0380430000
TAPS 35	170	200	170	56	120	346	210	34,7	0380435000
TAPS 40	180	210	185	62	130	363	220	45,2	0380440000
TAPS 50	190	230	195	73	135	395	235	60,3	0380450000
TAPS 63	190	230	195	73	135	395	235	60,3	0380463000

Bağlantı Şekilleri Kind of Attachment								
Parça Sayısı Number of Pieces	1	1	2	2	2		3 o. 4	
Eğim Açısı Inclination Angle	0°	90°	0°	90°	0-45°	45°-60°	0-45°	45°-60°
WLL								
Kod Code	t	t	t	t	t	t	t	t
TAPS 1	1,6	1,12	3,2	2,24	1,5	1,12	2,36	1,6
TAPS 2	3,0	2,0	6,0	4,0	2,8	2,0	4,0	3,0
TAPS 3	4,75	3,15	9,5	6,3	4,25	3,15	6,3	4,75
TAPS 5	8,0	5,3	16,0	10,6	7,1	5,3	11,2	8,0
TAPS 8	12,0	8,0	24,0	16,0	11,2	8,0	16,0	12,0
TAPS 15	22,4	15,0	45,0	30,0	21,2	15,0	31,5	22,4
TAPS 20	30,0	20,0	60,0	40,0	30,0	20,0	40,0	30,0
TAPS 25	37,5	25,0	75,0	50,0	33,5	25,0	50,0	37,5
TAPS 30	45,0	30,0	90,0	60,0	45,0	30,0	63,0	45,0
TAPS 35	50,0	35,0	100,0	70,0	47,5	35,0	70,0	50,0
TAPS 40	60,0	40,0	120,0	80,0	56,0	40,0	80,0	60,0
TAPS 50	71,0	50,0	142,0	100,0	70,0	50,0	100,0	71,0
TAPS 63	75,0	63,0	150,0	126,0	90,0	63,0	132,0	95,0

Asimetrik olmayan yük dağılımı durumunda ,2,3 ve 4 bacaklı sapanlar için uygulanabilir kapasite 90° tek bacaklı sapan ile aynıdır.

In the case of an unsymmetrical load distribution , the lifting capacities applicabile to the 2 and 3-/4 leg slings are the same as for 1 leg types at 90°



TAPSK

Çalışma aralığı 270°
swings 270°



Kaynaklanabilir mapa (köşeler için)

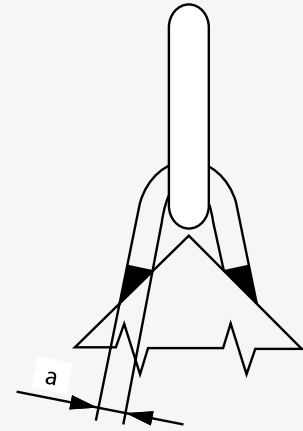
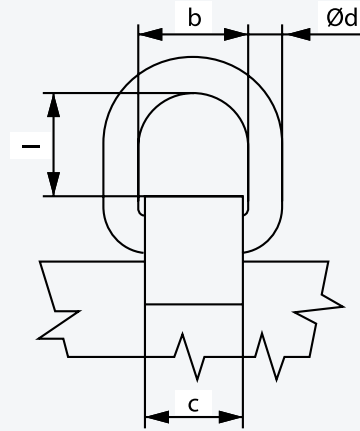
Avantajları:

- ◇ Kompakt dizayn
- ◇ Kırılmaya karşı 4 kat güvenli
- ◇ 270° çalışma açısı
- ◇ EN 10025 e göre S355JR malzemeden üretilen kaynaklanabilir mapa.

Weld-on sling point, edge fastening, in working load limits of 3 – 8t.

The Advantages:

- ◇ Compact design
- ◇ Secured four times against breakage
- ◇ D-link swings 270°
- ◇ Weld-on shackle made of material S355JR according to EN 10025



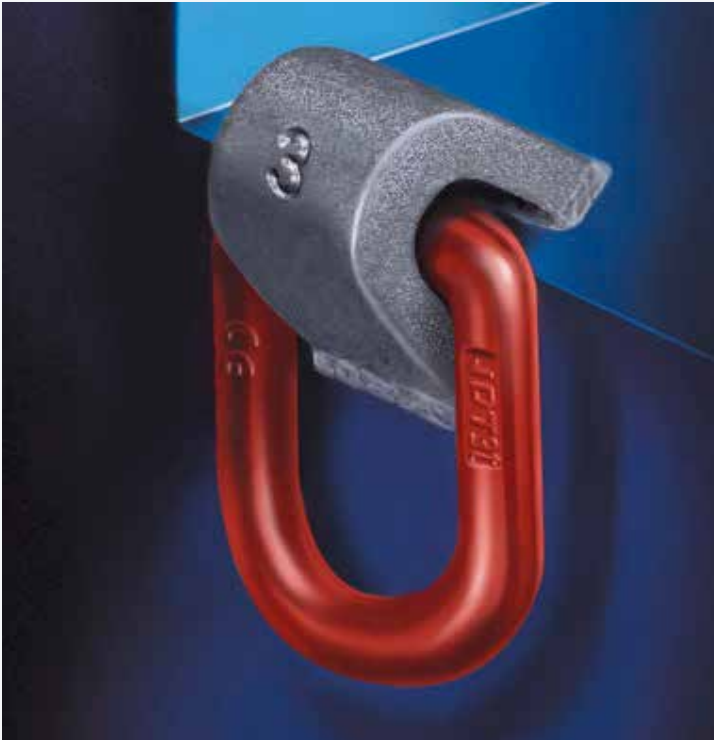
TAPSK 3 – 8

Kod Code	a	b	c	Ød	l	Ağırlık Weight	Ürün No Ident no.
	mm	mm	mm	mm	mm	kg	
TAPSK 3	12	56	50	18	53	1,01	0380703100
TAPSK 5	15	67	60	22	63	1,84	0380705100
TAPSK 8	20	80	70	26	68	3,14	0380708100

Bağlantı Şekilleri Kind of Attachment							
Parça Sayısı Number of Pieces	1	2	2	3 o. 4			
Eğim Açısı Inclination Angle	0°	0°	0-45° 45°-60°	0-45° 45°-60°			
WLL							
Kod Code	t	t	t	t	t	t	t
TAPSK 3	3,15	3,15	6,3	4,25	3,15	6,3	4,75
TAPSK 5	5,3	5,3	10,6	7,1	5,3	11,2	8,0
TAPSK 8	8,0	8,0	16,0	11,2	8,0	16,0	12,0

Asimetrik olmayan yük dağılımı durumunda , 2,3 ve 4 bacaklı sapanlar için uygulanabilir kapasite minimum WLL ile aynıdır.

In the case of an unsymmetrical load distribution , the lifting capacities applicable to the 2 and 3-/4 leg slings are the same as min. WLL .

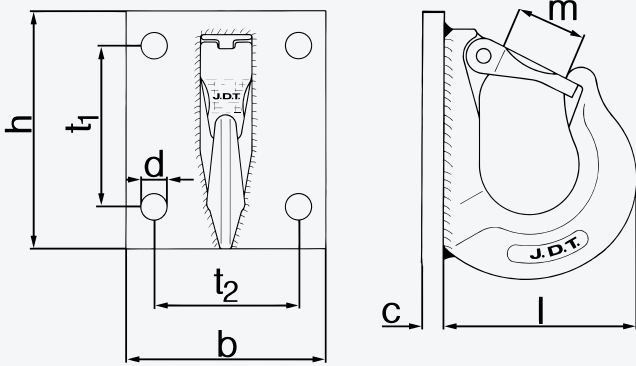


Vidalanır Tip Mandallı Kanca *Hook - Bolt on Type*

Kod Code	a*	Çalışma Yüğü WLL	b	c	d	h	l	m	t1	t2	Yük Weight
	t										
Enorm 10 AHKG 6	M12	1,4	100	10	13	100	68	22	60	70	1,1
Enorm 10 AHKG 8	M12	2,5	110	10	13	135	85	30	75	80	1,76
Enorm 10 AHKG 10	M16	4	130	12	17	155	110	37	100	95	3,2
Enorm 10 AHKG 13	M20	6,7	160	15	22	185	135	47	120	110	5,8
Enorm 10 AHKG 16	M24	10	180	15	26	220	140	51	150	120	8

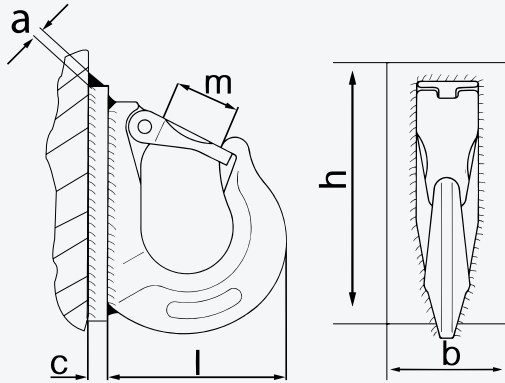
* Vidalar en az grade 80 kalitesinde ve çatlak testine tabi tutulmuş olmalıdır.

* The screws shall comply at least with the quality grade 8.8 and be crack-tested.



Kaynaklı Tip Mandallı Kanca *Hook Weld on Type*

Kod Code	Çalışma Yüğü WLL	a	b	c	h	l	m	Yük Weight
		t	mm	mm	mm	mm	mm	
Enorm 10 AHK 6	1,4	5	40	10	90	68	22	0,61
Enorm 10 AHK 8	2,5	5	50	10	115	85	30	1,2
Enorm 10 AHK 10	4	8	60	15	140	110	37	2,3
Enorm 10 AHK 13	6,7	8	70	15	175	135	47	3,9
Enorm 10 AHK 16	10	8	80	15	210	140	51	5,65



Uygulama Şekli : Yandan çekmede şekildeki gibi 15° de ve 45° izin verilen yük.
Range of application: 45° and permitted load 15° in sidewise pulling direction.



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