



[®]
Cotrac



LIFTING AND ANCHORING DEVICES MADE OF WIRE ROPES, SLINGS AND BELTS

- ✓ Steel wire ropes, bright or galvanized for diverse industrial use, with diameters from 1mm to 80 mm;
- ✓ Galvanized steel wire ropes with standard or spiral construction (strands), flexible or semi flexible, with diameters starting from 1mm, delivered in coils of specific length or on wooden reels;
- ✓ Wire rope slings for traction or lifting, matissed or with sleeves at ends, simple or with high resistance accessories (hooks, shackles etc.) with 1, 2, 3 or 4 legs, wire rope diameters starting from 6m (300 kg lift) to 80mm (over 75000 kg lift);
- ✓ Grade 3 resistance chains according to DIN 766 (short link);
- ✓ High resistance chains, grade 8 according to EN 818, in specific lengths, or delivered as lifting or anchoring devices; mining chains according to DIN 22252;
- ✓ Chain lifting devices with 1, 2, 3, 4 or more legs, with or without tightener;
- ✓ Commercial galvanized chains, chains for animals;
- ✓ Chain anchoring devices for transport platforms;
- ✓ Lifting webbing slings, endless or flat, made of polyester, with a lift capacity starting from 1 ton; anchoring belts for goods during transport, with lengths of 5, 6, 8, 10 or 12m;
- ✓ Rutile or base welding electrodes, diameters 2.50, 3.25, 4.00 or 5.00mm; SG2 welding wire;
- ✓ 'Martin Miller' saw blades;
- ✓ Accessories for chains and wire ropes, for commercial and industrial use (clips, thimbles, hooks, shackles, snap hooks etc.);
- ✓ (*) Assembly pieces, bright or galvanized, or stainless steel, for different industrial use; shaft and bore rings, clamps;
- ✓ (*) Profiles, plates, pipes and other metallurgical products;
- ✓ (*) Coke, carbide, PP and PES cords.

Our clients recommend us

SATISFIED CLIENTS	FIELD OF ACTIVITY	DELIVERED PRODUCTS
FORAJ SONDE SA • DAFORA FORAJ SA	Gas and petrol drilling	Pipes, wire ropes, lifting and anchoring devices
ROMGAZ SA • TRANSGAZ SA • E.ON GAZ DISTRIBUȚIE SA	Natural gas	Coke, pipes, welding electrodes
DAMEN SHIPYARDS • ȘANTIERUL NAVAL CONSTANȚA • AKER SA	Shipyards and docks	High resistance chains, wire ropes for ships and anchoring
SCCF - COLAS SA • ACSA SA • 2 INVEST SA	Construction of bridges and rafts	High resistance wire ropes, assembly pieces
HIDROCONSTRUCȚIA SA • CONSTRUCȚII HIDROTEHNICE SA	Hydro technical constructions	Wire ropes, pipes, welding electrodes
BUILD CORP SRL • ROMBET SA • VICTOR CONSTRUCT • CONTRANSCOM BENȚA SA	Civil and industrial constructions	Materials for fixing, anchoring, traction and welding
COMPANIA NAȚIONALĂ A HUILEI • SOCIETATEA NAȚIONALĂ A LIGNITULUI OLTENIA	Mining	High resistance chains, carbide, wire ropes
COMPANIA NAȚIONALĂ A URANIULUI • SOCIETATEA NAȚIONALĂ A SĂRII	Extraction industry	Big wire ropes for draglines, excavators
COMPLEXUL ENERGETIC ROVINARI • COMPLEXUL ENERGETIC TURCENI SA	Energy complexes	Steel wire ropes, high resistance chains
MECANICA MARSA • MECANICA CEAHLĂU	Car manufacturing industry	Wire ropes for traction, electrodes and welding wire
HOLCIM SA • LAFARGE SA • CARPATCEMENT	Concrete industry	Special construction wire ropes, electrodes and welding wire
RNP ROMSILVA SA • HLV • FORESTAR	Forestry	Chains, wire ropes, drive belts, assembly pieces
ROMANEL SA • KRONOSPAN • MOBEXPERT	Timber industry	Saw blades, drive belts, welding electrodes, assembly pieces

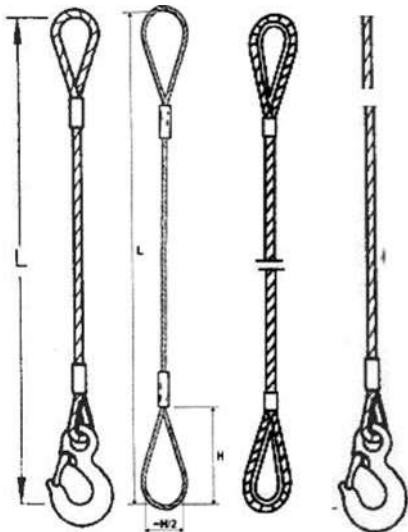
SLINGS AND LIFTING DEVICES MADE OF STEEL WIRE ROPES



The Wire rope lifting slings are manufactured according to the EN 13414-1 standard or if specified, according to STAS 8057 / DIN 3088 standards. They are made of 6x19, 6x37 or 6x36 WS wire ropes with vegetal or metallic core, by forming eyes at the ends. The eyes can be made by pressing a duraluminium sleeve (muff), or by braiding (splicing).

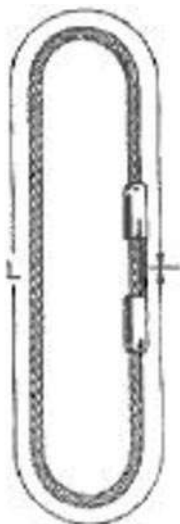
Next, the characteristics of the slings and devices made of vegetal core steel wire ropes, by muffing are presented.

Wire rope slings, with one leg, provided with eyes or various accessories at the ends



Lift [kgf]	H	Wire rope diameter [mm]
EN 13414	mm	
380	150	6
700	150	8
1050	150	10
1550	200	12
2120	250	14
2700	250	16
3400	300	18
4350	300	20
5200	350	22
6300	400	24
7200	400	26
8400	450	28
11000	500	32
14000	550	36
17000	600	40

Endless wire rope slings



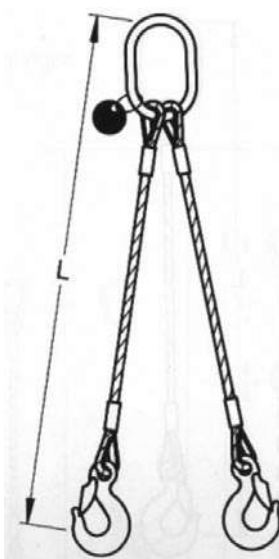
Lift [kgf](*)	Wire rope diameter [mm]
EN 13414	
1100	8
1700	10
2500	12
3300	14
4350	16
5650	18
6900	20
8400	22
10000	25 (24)
11800	26
13500	28
18000	32
22500	36
28000	40

* the lift is calculated for ring shaped lifting



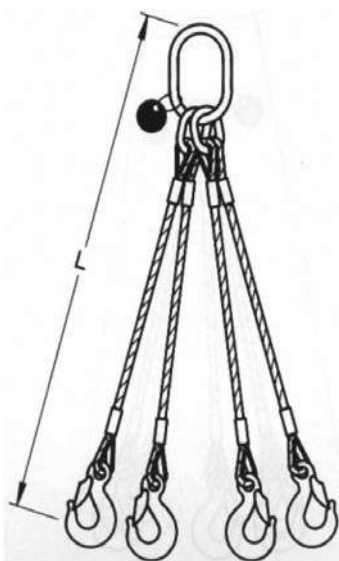
SLINGS AND LIFTING DEVICES MADE OF STEEL WIRE ROPES

2-leg wire rope suspensions, provided with hooks



Lift [kg]		Wire rope diameter [mm]
EN 13414		
0° - 45°	45° - 60°	
950	700	8
1500	1050	10
2120	1550	12
3000	2120	14
3850	2700	16
4800	3400	18
6000	4350	20
7200	5200	22
8800	6300	24
10000	7200	26
11800	8400	28
15000	11000	32
19000	14000	36
23500	17000	40

4-leg wire rope suspensions, provided with hooks



Lift [kg]		Wire rope diameter [mm]
EN 13414		
0° - 45°	45° - 60°	
1500	1050	8
2250	1600	10
3300	2300	12
4350	3150	14
5650	4200	16
7200	5200	18
9000	6500	20
11000	7800	22
13500	9400	24
15000	11000	26
18000	12500	28
23500	16500	32
29000	21000	36
36000	26000	40

Recommended field of use:

- With simple eyes, without thimble: lifting various materials, with well-defined shape and contour.
- With thimbles and hooks for tower cranes, slide bridges, for lifting panels and parts provided with eye fastenings.

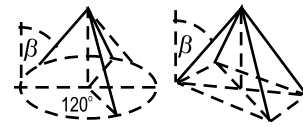
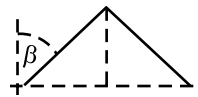
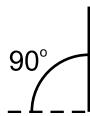
In case if the slings or the lifting devices are used for lifting machines provided with oversized hooks, an eye-hook device may as well be used (shortening device) with a length of 700mm, with one leg, to allow the use of standard devices; here we mention that the standard devices are manufactured with grade 8 and 10 high resistance pieces.

LIFTING SLINGS WITH CHAINS



Made of grade 8 high resistance chains according to DIN EN 818-2.
 The advantage of these slings compared to the ones made with steel wire ropes: resistance to temperatures, do not present elongation when applied to high weight lifting.
 The chain lifting slings can be manufactured with a chain shorter, to adjust the length of the leg, or without shorter.

Characteristics



Diameter mm	Lift [tons] 1 arm	Lift [tons] 2 arms		Lift [tons] 4 arms	
		0-45°	45-60°	0-45°	45-60°
6	1,12 t	1,60 t	1,12 t	2,36 t	1,70 t
8	2,00 t	2,80 t	2,00 t	4,25 t	3,00 t
10	3,15 t	4,25 t	3,15 t	6,70 t	4,75 t
13	5,30 t	7,50 t	5,30 t	11,20 t	8,00 t
16	8,00 t	11,20 t	8,00 t	17,00 t	11,80 t

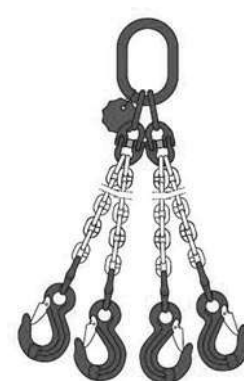
1-leg chain slings



2-leg chain slings



4-leg chain slings



The chain shorter devices are composed of one linking element fixed to the master ring, 4 to 5 chain links and an element named chain shorter which is used to adjust the length of the lifting sling.



FLAT AND ENDLESS WEBBING SLINGS; CARGO LASHING STRAPS

The polyester webbing slings that our company sells are manufactured according to the EN 1492-1 and EN 1492-2 standards, with a safety coefficient of 1:7.

The polyester fibers that are used have a small weight, high resistance to UV radiation and correspond to environmental regulations. These characteristics ensure our slings a long service life.

The color and linear marking define exactly their workloads and help choosing them according to the weight that has to be lifted.

Endless slings			Flat slings				
EN 1492-2:2000			EN 1492-1:2000				
Safety coefficient 7:1							
Round slings	Endless and flat slings	Lifting method:	vertical	knotted	in U	in angle 0-45°	in angle 45° -
		Lifting factor:	x 1	x 0.8	x 2	x 1.4	x 1
Medium diameter (mm)	width [mm]	color	tons	tons	tons	tons	tons
18	30	PURPLE	1.0	800 kg.	2.0	1.4	1.0
20	60	GREEN	2.0	1.6	4.0	2.8	2.0
22	90	YELLOW	3.0	2.4	6.0	4.2	3.0
25	120	GREY	4.0	3.2	8.0	5.6	4.0
27	150	RED	5.0	4.0	10.0	7.0	5.0
32	180	BROWN	6.0	4.8	12.0	8.4	6.0
38	240	BLUE	8.0	6.4	16.0	11.2	8.0
46	300	ORANGE	10.0	8.0	20.0	14.0	10.0
58	350	ORANGE	12.0	9.6	24.0	16.8	12.0



Cargo lashing straps

Dimension	Width	Length	Lift
	[mm]	[m]	[t]
0.25t x 5"	25	5	0,2
0.25t x 5**	25	5	1
2t x 6	30	0.5 + 5.5	2
4t x 8	50	0.5 + 7.5	4
4t x 10	50	0.5 + 9.5	4
4t x 12	50	0.5 + 11.5	4

Construction

(**) With hooks at both ends and ratchet

Composed of a short section (0.5m, with ratchet at one end and hook at the other) and a long section (3 – 12 m with hook at one end).

(*) Without hooks the webbing sling with ratchet at one end (length 3-12m). The fastening system can be with ratchet or tensioner buckle; the tensioner buckle is generally used to anchor smaller weight goods.



The version with hooks is used to anchor the load by mooring or pressing, and the other version is used to tie the bulk made goods.

CHAIN ANCHORING DEVICES



The components of a chain anchoring device:

1. Main element: tightening ratchet tensioner, available in two versions:

With hooks attached to both ends (chain shorters)



Chain size	code	Tensile load [kg]	Clamping length [mm]	Total length		Coupling length [mm]	Chain size	Lift [kg]
				minimum	maximum			
6	a-RLSP6-CC	4000	355	362	565	203	6	2000
8	a-RLSP8-CC	8500	355	362	565	203	8	4000
10	a-RLSP10-CC	14700	355	362	565	203	10	6400
13	a-RLSP13-CC	20500	355	362	565	203	13	10000

Without hooks attached to the ends



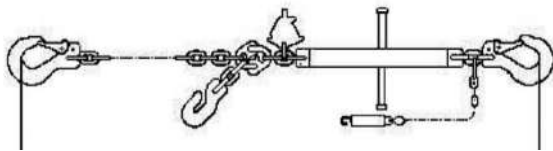
Chain size	code	Tensile load [kg]	Clamping length [mm]	Total length		Coupling length [mm]	Chain size	Lift [kg]
				minimum	maximum			
6	a-RLSP6-00	4000	355	362	565	203	6	2000
8	a-RLSP8-00	8500	355	362	565	203	8	4000
10	a-RLSP10-00	14700	355	362	565	203	10	6400
13	a-RLSP13-00	20500	355	362	565	203	13	10000

2. High resistance chain according to EN 818 (see chains catalogue)
3. Link and fixing elements – Clevis hook, chain shorter, connecting links (see high resistance accessories catalogue).

Anchoring devices – complete system: construction characteristics

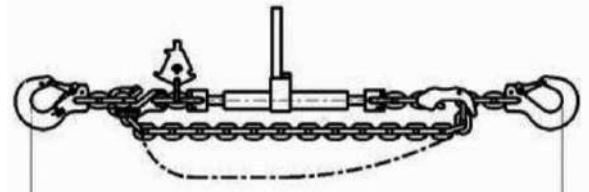
Version with turnbuckle without shorters attached to ends:

The complete system contains: 1 turnbuckle without hooks at ends, connecting link, high resistance chain, 2 pcs Clevis hooks, 1 shorter.



Version with turnbuckle with shorters attached to ends:

The complete system contains: 1 turnbuckle with hooks attached to ends, high resistance chain, 2 pcs Clevis hooks (without connecting links and shorters).



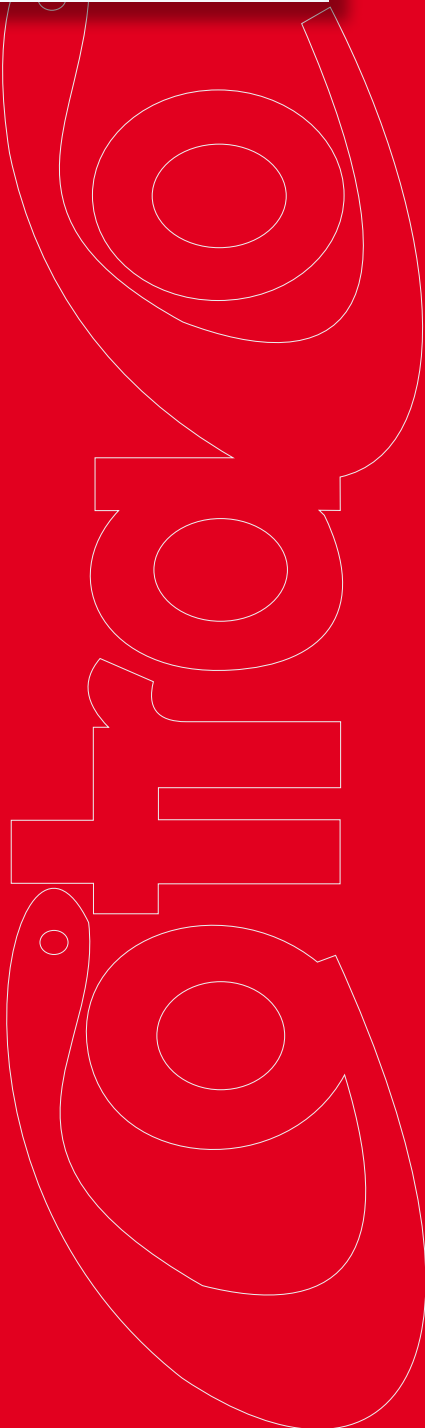
Fields of use:

Railway and road transport of overall goods, anchoring equipments.

Advantages of chain anchoring devices:

The characteristics are not influenced by temperature variations, they are resistant to elongation and shear, they have high stability.

The chain anchoring devices can be delivered in complete system version, with chain lengths depending of customer order, the usual length of work is of 3.5 meters.



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