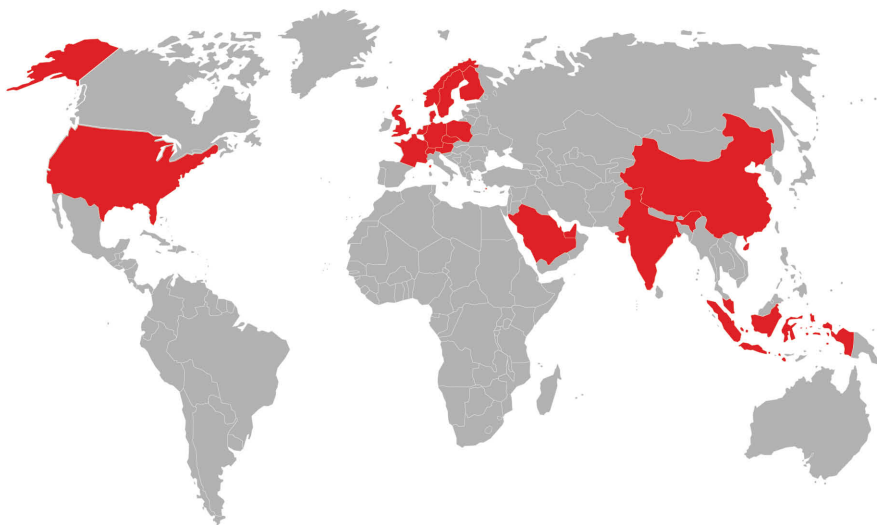




## GENERAL CATALOGUE LIFTING EQUIPMENT

## > Welcome to Carl Stahl

### International Offices



#### Dear Customers and Friends of Carl Stahl,

We are proud to present to you the latest edition of our Carl Stahl Catalogue. Some of the products have been adapted from the original German version to better serve our customers across this growing region.

Our goal is to make our products and services more accessible to everyone seeking safe and reliable solutions in all aspects of lifting, lashing, handling, and personal safety.

We have worked to make this catalogue as clear and comprehensive as possible, without omitting any information that may be important to you.

Continuous improvement of our products and services is not just a promise — it is a core principle of the entire Carl Stahl Group.

With more than 1,900 employees in 82 locations worldwide, we are there, where you need us.

Benefit from our international expertise and experience. We take the time to provide you with professional technical advice.

Beyond delivering high-quality products, we place equal importance on their safe and efficient use — an aspect increasingly valued by our customers.

To support this, we offer specialized training through Carl Stahl Safety & Security Consultancy in the UAE, at the Carl Stahl Academy in Süßen (Germany), and internationally through Carl Stahl Evita.

Please take advantage of our wide range of products and services. Our goal is to build long-term, trustworthy partnerships with our customers — providing tailored solutions for your specific needs and ensuring ongoing after-sales support.

We hope you will find this catalogue a valuable tool for both purchasing and reference. Our team is always ready to assist you with your questions and looks forward to welcoming you as a valued customer.

Put us to the test — you will not be disappointed.  
Carl Stahl Middle East Team





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## > Impressum

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We are there, where you need us...

## > Introduction

The specialist company from Germany, founded in 1880, continues to open new horizons with well-designed applications and first-class quality.

Carl Stahl provides a complete range of material-handling products.

By contacting Carl Stahl Middle East, you can receive up-to-date prices and availability on all of the below-mentioned products and services.

### OUR PRODUCTS:

- Steel Wire Rope Slings & Grommets
- Polyester Webbing Slings and Ratchet Lashing Assemblies
- Grade 80, 100 & 120 Chain Slings (available in single-leg and multi-leg formats)
- Polypropylene, Nylon & Manila Rope Slings
- Chain Blocks, Lever Hoists, Pulling Machines, Shackles, Hooks, Pallet Trucks, Beam Trolleys, Turnbuckles etc.
- WireCo WorldGroup wire ropes (CASAR, OLIVEIRA, DRUMET, UNION etc.)
- RUD – Manufacturer of Grade 120 chain systems and components, and a global specialist in lifting and lashing points
- GUNNEBO – Premium lifting and rigging products for heavy-duty industrial applications
- CROSBY – Industry-leading range of lifting and rigging products engineered to meet the toughest demands
- Aluminium Mobile Gantry Cranes – Lightweight modular gantries suitable for multiple applications
- STRAIGHTPOINT UK – Load cells from 100 kg to 2000 t offering advanced load monitoring and force-measurement solutions

### OUR SERVICES *(For more details, please refer to page no. 119):*

#### 1. Inspection, Testing and Certification Services for the following:

- Lifting Equipment (all types of onshore and offshore cranes and customized lifting equipment)
- Lifting Accessories & Appliances (wire-rope, chain, webbing slings, shackles, links, hoists etc.)
- Light Crane Systems (slewing jib cranes, monorails, A-frames, powered hoists/winches etc.)
- Handling Equipment (forklifts, telehandlers, reach trucks, pallet stackers etc.)
- Personnel Carrying Units (elevators, passenger lifts, escalators, MEWPs, travellers, suspended access platforms, construction hoists, BMUs, man baskets, spider baskets and mobile scaffolding)
- Cargo Carrying Units (offshore containers, material baskets, skids, racks etc.)
- Earth-Moving Equipment (backhoe loaders, skid loaders, excavators, dozers, shovels etc.)
- Pressure Equipment (pressure vessels, air receivers, boilers, underground and above-ground tanks etc.)
- Non-Destructive Testing (MPI, PT, UTG, ET and VT) and Destructive Testing (Break Test)
- Various aviation tools and equipment

#### 2. Training and Personnel Competency Certification in the Lifting Safety Field:

- Lifting Equipment Operators (all types of crane and forklift operators)
- Rigger Level 1 and Level 2
- Signaller and Banksman
- Various other equipment operators

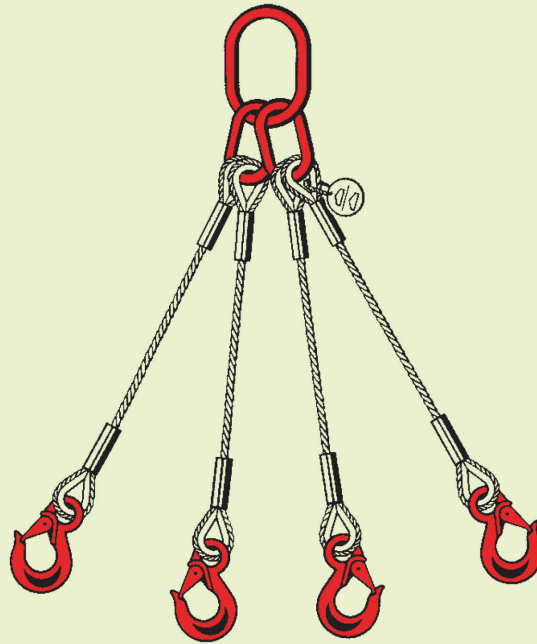
#### 3. Calibration Services:

All types of calibration services covering pressure, mass/balance, electrical, temperature, force/torque, dimensional, volume, flow and other miscellaneous equipment.

### APPROVALS:

- Quality, Health, Safety & Environmental Management Systems certified to ISO 9001:2015, ISO 45001:2018 and ISO 14001:2015 (by DNV)
- Emirates International Accreditation Centre (EIAC) Accredited Inspection Body – ISO/IEC 17020:2012 (IB-017 & IB-161)
- EIAC Accredited Certification Body for Persons – ISO/IEC 17024:2012 (CB-PRS-004)
- EIAC Accredited Calibration Lab – ISO/IEC 17025:2017 (LB-CAL-069)
- Emirates National Accreditation System (ENAS) Accredited Inspection Body – ISO/IEC 17020:2012 (NAI-086)
- ENAS Accredited Calibration Lab – ISO/IEC 17025:2017 (NAL-231)
- Approved by Abu Dhabi Municipality as a third-party inspection body for lifting equipment and gears
- ADNOC pre-qualified Manufacturer (Supplier ID: 10006901)
- ARAMCO approved vendor (Vendor Code No. 10113783)
- TRAKHEES – JAFZA approved third-party inspection body
- Approved by Dubai Civil Defense for hazardous storage tank inspection
- DNV Type Approval for the Manufacture of Offshore Wire Rope Sling Sets (Cert. no. TAS00003YT)
- RAKEZ – Govt. of Ras Al Khaimah approved third-party inspection body
- Full Member of Lifting Equipment Engineers Association (LEEAA, UK)





## Wire Rope Slings & Accessories

## > User Information

### 1.) Improper use



The improper use of wire rope slings poses a risk to people and property. People in close proximity to or beneath the load are at particular risk. Beware of suspended loads.

### 2.) Before every use:

- a. Conduct a careful visual inspection of the wire rope slings to check for damage and a safe usage condition.
- b. Read the user information and comply with this during use.

### 3.) The product must not be used in the event of:



- a. Broken strands
- b. Wire breaks involving more than 6 wires over a length of 6xD
- c. Wire breaks involving more than 14 wires over a length of 30xD
- d. Expansion of the hook by more than 10%.
- e. Kinks, bends, birdcages, protrusion of the rope core or other damage that causes the deformation of the wire rope construction.
- f. Loosening of the outer layer in the free length.
- g. Crushing in the free length.
- h. Crushing in the support area with wire breaks in stranded ropes
- i. Signs of corrosion
- j. Damage or severe wear to the rope and/or the terminals.
- k. Rope wear of 10% of the nominal diameter.
- l. Wear, deformation, tears and similar damage to press fittings.
- m. Protruding rope ends when using grommets (in the impact area – red marking).
- n. Heat-induced damage visible due to the discolouration of the strands and/or pitting on the strands due to electric arcs.
- o. Pitting corrosion on strands or a reduction in the flexibility of the rope due to severe internal corrosion.
- p. Faulty hook locking mechanism. (Not applicable to foundry hooks)

**Grounds: Foundry hooks are only used for special purposes.**

**Their connection to anchors or similar is therefore not permitted!**

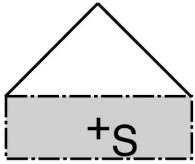
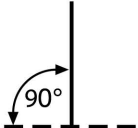
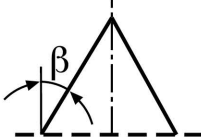
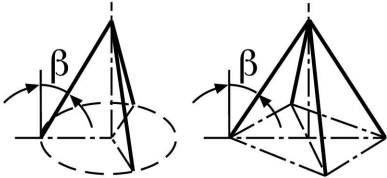
## > User Information

### 4.) Determine the load weight and centre of gravity:

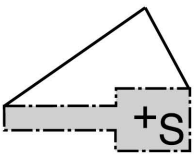
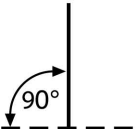
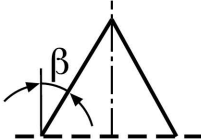
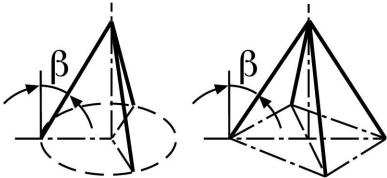
- The wire rope sling's working load limit (WLL) must not be exceeded (**Table P. 6**).
- Rope nominal diameter: **minimum 6 mm**
- The angle of inclination of each leg must not exceed  $60^\circ$  (**Fig. 1**).
- Note the reduced working load limit of the legs used!

Fig. 1

#### Symmetrical load

|                                                                                   | 1 leg                                                                             | 2 legs                                                                            | 3 and 4 legs                                                                       |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |  |  |
| Angle of inclination $\beta$                                                      | $0^\circ$                                                                         | $0^\circ-45^\circ$ $45^\circ-60^\circ$                                            | $0^\circ-45^\circ$ $45^\circ-60^\circ$                                             |
| Load factor                                                                       | 1                                                                                 | 1.4   1.0                                                                         | 2.1   1.5                                                                          |

#### Non-symmetrical load

|                                                                                     | 1 leg                                                                               | 2 legs                                                                              | 3 and 4 legs                                                                         |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|  |  |  |  |
| Angle of inclination $\beta$                                                        | $0^\circ$                                                                           | $0^\circ-45^\circ$ $45^\circ-60^\circ$                                              | $0^\circ-45^\circ$ $45^\circ-60^\circ$                                               |
| Load factor                                                                         | 1                                                                                   | 1   1                                                                               | 1.5   1                                                                              |

- 5.) **Anchorage points:** only use suitable anchorage points of a sufficient size.



## > User Information

### 6.) Basket hitch slinging:



**The use of basket hitch slinging is prohibited!**

This rule excludes:

- Large loads if the sling legs will not slide together and the load cannot shift (**Fig. 2a**).
- Long, bar-shaped loads may only be lifted using basket hitch slinging if the load is prevented from skewing, the sling legs are prevented from sliding and the load or parts thereof are prevented from shooting out (**Fig. 2b**).



Fig. 2a



Fig. 2b

### 7.) Identification tags:

Wire rope slings with no or illegible test data tags and load indicators must not be used.

### 8.) Safety instructions:



- Do not subject ferrules to bending stresses.
- Do not knot wires or move them over sharp edges (**Fig. 3**) (edge radius smaller than nominal rope diameter). Protect the wire using an edge guard or buffers (**Fig. 4**).
- Attached loads must not be welded **without** an isolating connection!
- Loops, master links and thimbles must be freely movable on the crane hook (**Fig. 5**).
- Strain must not be placed on the narrow ends of hooks.
- The load must only be hoisted from the base of the hook and in the direction of the load.
- Maximum sewn termination opening angle is  $20^\circ$ .
- Do not grasp under the strapping.

Fig. 3

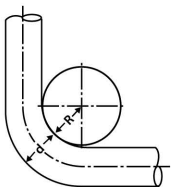
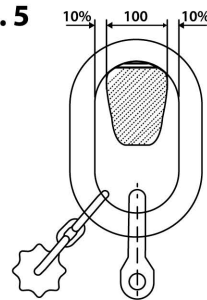


Fig. 4



Fig. 5



## > User Information

### 9.) Deviations from normal operating conditions

These require reductions to the working load limit, for example, in the case of:

- Non-symmetrical (uneven) loads (reduced load lifting factors).
- Using a choker hitch (20% reduction in the working load limit)

#### Reduction in the working load limit of slings at different angles of inclination (Fig. 6)

##### Reduction in the working load limit with:

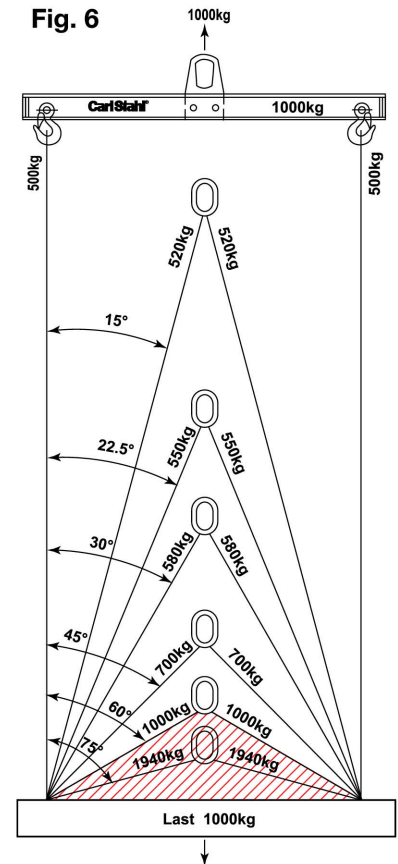
- Choker hitch: Loss = 20%
- Angle of inclination:
 

|           |            |
|-----------|------------|
| 0° - 45°  | Loss = 30% |
| 45° - 60° | Loss = 50% |

**Angles of inclination over 60° are prohibited!**

- Use outside the temperature range -40° to +100°C.

**Fig. 6**



### 10.) Ban on the use of wire slings:



In acids and lyes (corrosive) due to the invisible corrosion pits between the strands and wires.

### 11.) Fittings and accessories for wire rope slings:



The product must not be used in the event of:

- Mechanical damage due to crushing, indentations or crack formation.
- Deformation caused by bending, twisting, or impressions.
- Damage to securing devices and cross-section reductions of 5% or more in the case of eyelets, bolts and brackets on shackles and hooks.
- Damage to the terminals: wear, deformation or cracks on ferrules or extended splices.

### 12.) Wire rope sling inspections and repair:

- Only to be conducted by qualified persons.
- After at least six months.
- Fittings must be inspected at least every 6 months to ensure they are free from cracks.
- Implementation at or by Carl Stahl.

**In the case of the continual use of wire rope slings, the inspection intervals must be shortened in accordance with the Local regulations.**

## > User Information

### HOW TO ORDER

All slings are fabricated to customer specifications. Therefore, your purchase order should contain the following specific details.

- Sling model number
- Sling length as indicated on schematics alongside tables
- Component rope diameter
- Eye terminations
- Any special fittings, such as sliding choker hooks
- Any other special requirements.

Bridles will be fabricated with oblong alloy steel links unless otherwise specified.

To minimize the chance for error in transmitting orders, use the model numbers given for each sling type, followed by the letter codes in the illustrations for indicating eye or end treatments.

Standard sling eye designs are as indicated on the drawings at left for both mechanically and hand spliced slings. Other combinations or other types of hooks or fittings can be specified.

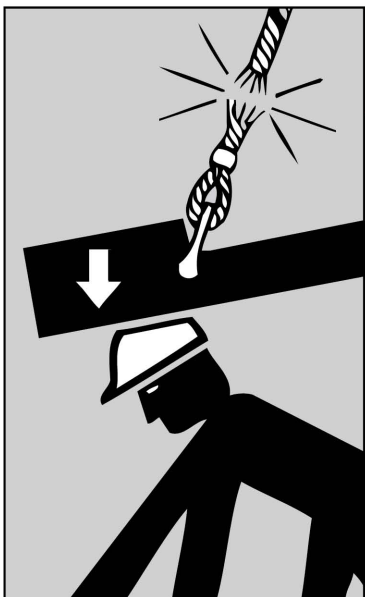
The sling body length is the length of wire rope between splices sleeves, or fittings.

The standard minimum body length for multi-part slings between splices is equal to forty times the component rope diameter.

Metal tags are available upon request.

### PROTECT YOURSELF

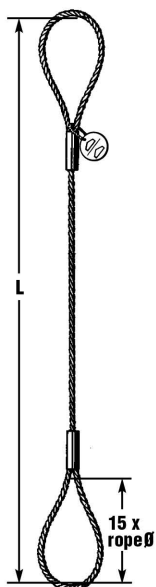
Safety first: take special precautions. Before installing wire rope, wire rope slings or assemblies in your applications, always read and follow the warning label attached to each product.

|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <div style="background-color: orange; color: black; padding: 5px; text-align: center;">  <b style="font-size: 2em;">WARNING</b> </div> <p>Wire rope <b>WILL FAIL</b> if worn out, overloaded, misused, damaged, improperly maintained or abused. Wire rope failure may cause serious injury or death!</p> <p>Protect yourself and others:</p> <ul style="list-style-type: none"> <li>• ALWAYS INSPECT wire rope for WEAR, DAMAGE or ABUSE BEFORE USE.</li> <li>• NEVER USE wire rope that is WORN-OUT, DAMAGED or ABUSED.</li> <li>• NEVER OVERLOAD a wire rope.</li> <li>• INFORM YOURSELF: Read and understand manufacturer's literature or "wire rope and wire rope sling safety bulletin"</li> <li>• REFER TO APPLICABLE CODES, STANDARDS and REGULATIONS for INSPECTION REQUIREMENTS and REMOVAL CRITERIA. *</li> </ul> |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## > SLINGS: Wire Rope Slings

**Standard : BS EN 13414 - 1 , ASME B30.9**

1102.  
Wire rope sling  
with pressed loops



1105.  
Wire rope sling with  
pressed thimble



1106.  
Wire rope sling with  
pressed loop and  
shackle



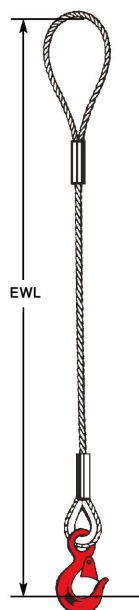
| Rope ø<br>in mm | WLL single<br>direct in kg | Item no.   | Item no.   | Item no.   |
|-----------------|----------------------------|------------|------------|------------|
| 6               | 0.47                       | 1102.01.06 | 1105.01.06 | 1106.01.06 |
| 8               | 0.83                       | 1102.01.08 | 1105.01.08 | 1106.01.08 |
| 9               | 1.0                        | 1102.01.09 | 1105.01.09 | 1106.01.09 |
| 10              | 1.30                       | 1102.01.10 | 1105.01.10 | 1106.01.10 |
| 11              | 1.50                       | 1102.01.11 | 1105.01.11 | 1106.01.11 |
| 12              | 1.80                       | 1102.01.12 | 1105.01.12 | 1106.01.12 |
| 13              | 2.17                       | 1102.01.13 | 1105.01.13 | 1106.01.13 |
| 14              | 2.52                       | 1102.01.14 | 1105.01.14 | 1106.01.14 |
| 16              | 3.29                       | 1102.01.16 | 1105.01.16 | 1106.01.16 |
| 18              | 4.15                       | 1102.01.18 | 1105.01.18 | 1106.01.18 |
| 19              | 4.63                       | 1102.01.19 | 1105.01.19 | 1106.01.19 |
| 20              | 5.12                       | 1102.01.20 | 1105.01.20 | 1106.01.20 |
| 22              | 6.21                       | 1102.01.22 | 1105.01.22 | 1106.01.22 |
| 24              | 7.38                       | 1102.01.24 | 1105.01.24 | 1106.01.24 |
| 26              | 8.67                       | 1102.01.26 | 1105.01.26 | 1106.01.26 |
| 28              | 10.05                      | 1102.01.28 | 1105.01.28 | 1106.01.28 |
| 30              | 11.53                      | 1102.01.30 | 1105.01.30 | 1106.01.30 |
| 32              | 13.13                      | 1102.01.32 | 1105.01.32 | 1106.01.32 |
| 34              | 14.82                      | 1102.01.34 | 1105.01.34 | 1106.01.34 |
| 36              | 16.60                      | 1102.01.36 | 1105.01.36 | 1106.01.36 |
| 38              | 18.55                      | 1102.01.38 | 1105.01.38 | 1106.01.38 |
| 40              | 20.57                      | 1102.01.40 | 1105.01.40 | 1106.01.40 |
| 42              | 22.59                      | 1102.01.42 | 1105.01.42 | 1106.01.42 |
| 44              | 24.80                      | 1102.01.44 | 1105.01.44 | 1106.01.44 |
| 48              | 31.41                      | 1102.01.48 | 1105.01.48 | 1106.01.48 |
| 52              | 35.45                      | 1102.01.52 | 1105.01.52 | 1106.01.52 |
| 56              | 42.89                      | 1102.01.56 | 1105.01.56 | 1106.01.56 |
| 60              | 46.10                      | 1102.01.60 | 1105.01.60 | 1106.01.60 |
| 64              | 54.18                      | 1102.01.64 | 1105.01.64 | 1106.01.64 |
| 71              | 64.87                      | 1102.01.71 | 1105.01.71 | 1106.01.71 |
| 77              | 76.59                      | 1102.01.77 | 1105.01.77 | 1106.01.77 |

Higher load capacities available on request. Please contact us.

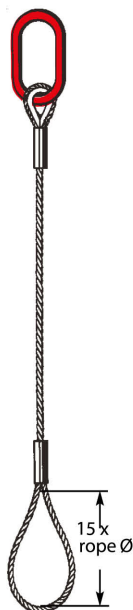


## > SLINGS: Wire Rope Slings

1112.  
Wire rope sling with  
pressed loop and safety  
eye hook.



1113.  
Wire rope slings with  
master link and pressed  
loop



1115.  
Wire rope sling with  
master link and shackle

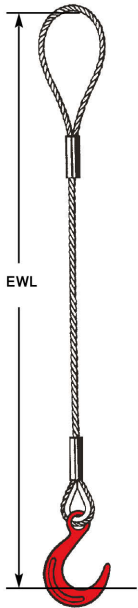


| Rope ø<br>in mm | WLL single<br>direct in kg | Item no.   | Item no.   | Item no.   |
|-----------------|----------------------------|------------|------------|------------|
| 6               | 0.47                       | 1112.01.06 | 1113.01.06 | 1115.01.06 |
| 8               | 0.83                       | 1112.01.08 | 1113.01.08 | 1115.01.08 |
| 9               | 1.0                        | 1112.01.09 | 1113.01.09 | 1115.01.09 |
| 10              | 1.30                       | 1112.01.10 | 1113.01.10 | 1115.01.10 |
| 11              | 1.50                       | 1112.01.11 | 1113.01.11 | 1115.01.11 |
| 12              | 1.80                       | 1112.01.12 | 1113.01.12 | 1115.01.12 |
| 13              | 2.17                       | 1112.01.13 | 1113.01.13 | 1115.01.13 |
| 14              | 2.52                       | 1112.01.14 | 1113.01.14 | 1115.01.14 |
| 16              | 3.29                       | 1112.01.16 | 1113.01.16 | 1115.01.16 |
| 18              | 4.15                       | 1112.01.18 | 1113.01.18 | 1115.01.18 |
| 19              | 4.63                       | 1112.01.19 | 1113.01.19 | 1115.01.19 |
| 20              | 5.12                       | 1112.01.20 | 1113.01.20 | 1115.01.20 |
| 22              | 6.21                       | 1112.01.22 | 1113.01.22 | 1115.01.22 |
| 24              | 7.38                       | 1112.01.24 | 1113.01.24 | 1115.01.24 |
| 26              | 8.67                       | 1112.01.26 | 1113.01.26 | 1115.01.26 |
| 28              | 10.05                      | 1112.01.28 | 1113.01.28 | 1115.01.28 |
| 30              | 11.53                      | 1112.01.30 | 1113.01.30 | 1115.01.30 |
| 32              | 13.13                      | 1112.01.32 | 1113.01.32 | 1115.01.32 |
| 34              | 14.82                      | 1112.01.34 | 1113.01.34 | 1115.01.34 |
| 36              | 16.60                      | 1112.01.36 | 1113.01.36 | 1115.01.36 |
| 38              | 18.55                      | 1112.01.38 | 1113.01.38 | 1115.01.38 |
| 40              | 20.57                      | 1112.01.40 | 1113.01.40 | 1115.01.40 |
| 42              | 22.59                      | 1112.01.42 | 1113.01.42 | 1115.01.42 |
| 44              | 24.80                      | 1112.01.44 | 1113.01.44 | 1115.01.44 |
| 48              | 31.41                      | 1112.01.48 | 1113.01.48 | 1115.01.48 |
| 52              | 35.45                      | 1112.01.52 | 1113.01.52 | 1115.01.52 |
| 56              | 42.89                      | 1112.01.56 | 1113.01.56 | 1115.01.56 |
| 60              | 46.10                      | 1112.01.60 | 1113.01.60 | 1115.01.60 |
| 64              | 54.18                      | 1112.01.64 | 1113.01.64 | 1115.01.64 |
| 71              | 64.87                      | 1112.01.71 | 1113.01.71 | 1115.01.71 |
| 77              | 76.59                      | 1112.01.77 | 1113.01.77 | 1115.01.77 |

Higher load capacities available on request. Please contact us.

## > SLINGS: Wire Rope Slings

1117.  
Wire rope sling with  
pressed loop and foundry  
hook



1118.  
Wire rope sling with  
master link and foundry  
hook



1121.  
Wire rope sling with  
pressed loop and safety  
hook



1122.  
Wire rope sling with  
master link and safety  
hook



| Rope ø<br>in mm | WLL single<br>direct in kg | Item no.   | Item no.   | Item no.   | Item no.   |
|-----------------|----------------------------|------------|------------|------------|------------|
| 6               | 0.47                       | 1117.01.06 | 1118.01.06 | 1121.01.06 | 1122.01.06 |
| 8               | 0.83                       | 1117.01.08 | 1118.01.08 | 1121.01.08 | 1122.01.08 |
| 9               | 1.0                        | 1117.01.09 | 1118.01.09 | 1121.01.09 | 1122.01.09 |
| 10              | 1.30                       | 1117.01.10 | 1118.01.10 | 1121.01.10 | 1122.01.10 |
| 11              | 1.50                       | 1117.01.11 | 1118.01.11 | 1121.01.11 | 1122.01.11 |
| 12              | 1.80                       | 1117.01.12 | 1118.01.12 | 1121.01.12 | 1122.01.12 |
| 13              | 2.17                       | 1117.01.13 | 1118.01.13 | 1121.01.13 | 1122.01.13 |
| 14              | 2.52                       | 1117.01.14 | 1118.01.14 | 1121.01.14 | 1122.01.14 |
| 16              | 3.29                       | 1117.01.16 | 1118.01.16 | 1121.01.16 | 1122.01.16 |
| 18              | 4.15                       | 1117.01.18 | 1118.01.18 | 1121.01.18 | 1122.01.18 |
| 19              | 4.63                       | 1117.01.19 | 1118.01.19 | 1121.01.19 | 1122.01.19 |
| 20              | 5.12                       | 1117.01.20 | 1118.01.20 | 1121.01.20 | 1122.01.20 |
| 22              | 6.21                       | 1117.01.22 | 1118.01.22 | 1121.01.22 | 1122.01.22 |
| 24              | 7.38                       | 1117.01.24 | 1118.01.24 | 1121.01.24 | 1122.01.24 |
| 26              | 8.67                       | 1117.01.26 | 1118.01.26 | 1121.01.26 | 1122.01.26 |
| 28              | 10.05                      | 1117.01.28 | 1118.01.28 | 1121.01.28 | 1122.01.28 |
| 30              | 11.53                      | 1117.01.30 | 1118.01.30 | 1121.01.30 | 1122.01.30 |
| 32              | 13.13                      | 1117.01.32 | 1118.01.32 | 1121.01.32 | 1122.01.32 |
| 34              | 14.82                      | 1117.01.34 | 1118.01.34 | 1121.01.34 | 1122.01.34 |
| 36              | 16.60                      | 1117.01.36 | 1118.01.36 | 1121.01.36 | 1122.01.36 |
| 38              | 18.55                      | 1117.01.38 | 1118.01.38 | 1121.01.38 | 1122.01.38 |
| 40              | 20.57                      | 1117.01.40 | 1118.01.40 | 1121.01.40 | 1122.01.40 |
| 42              | 22.59                      | 1117.01.42 | 1118.01.42 | 1121.01.42 | 1122.01.42 |
| 44              | 24.80                      | 1117.01.44 | 1118.01.44 | 1121.01.44 | 1122.01.44 |
| 48              | 31.41                      | 1117.01.48 | 1118.01.48 | 1121.01.48 | 1122.01.48 |
| 52              | 35.45                      | 1117.01.52 | 1118.01.52 | 1121.01.52 | 1122.01.52 |
| 56              | 42.89                      | 1117.01.56 | 1118.01.56 | 1121.01.56 | 1122.01.56 |
| 60              | 46.10                      | 1117.01.60 | 1118.01.60 | 1121.01.60 | 1122.01.60 |
| 64              | 54.18                      | 1117.01.64 | 1118.01.64 | 1121.01.64 | 1122.01.64 |
| 71              | 64.87                      | 1117.01.71 | 1118.01.71 | 1121.01.71 | 1122.01.71 |
| 77              | 76.59                      | 1117.01.77 | 1118.01.77 | 1121.01.77 | 1122.01.77 |

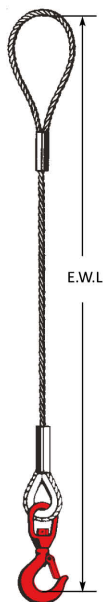
Higher load capacities available on request. Please contact us.

## > SLINGS: Wire Rope Slings

1133.  
Wire rope sling with  
pressed loop and  
swivel hook



1134.  
Wire rope sling with  
pressed loop and safety  
eye hook with swivel



1141.  
Wire rope sling master link  
and swivel hook



| Rope ø<br>in mm | WLL single<br>direct in kg | Item no.   | Item no.   | Item no.   |
|-----------------|----------------------------|------------|------------|------------|
| 6               | 0.47                       | 1133.01.06 | 1134.01.06 | 1141.01.06 |
| 8               | 0.83                       | 1133.01.08 | 1134.01.08 | 1141.01.08 |
| 9               | 1.0                        | 1133.01.09 | 1134.01.09 | 1141.01.09 |
| 10              | 1.30                       | 1133.01.10 | 1134.01.10 | 1141.01.10 |
| 11              | 1.50                       | 1133.01.11 | 1134.01.11 | 1141.01.11 |
| 12              | 1.80                       | 1133.01.12 | 1134.01.12 | 1141.01.12 |
| 13              | 2.17                       | 1133.01.13 | 1134.01.13 | 1141.01.13 |
| 14              | 2.52                       | 1133.01.14 | 1134.01.14 | 1141.01.14 |
| 16              | 3.29                       | 1133.01.16 | 1134.01.16 | 1141.01.16 |
| 18              | 4.15                       | 1133.01.18 | 1134.01.18 | 1141.01.18 |
| 19              | 4.63                       | 1133.01.19 | 1134.01.19 | 1141.01.19 |
| 20              | 5.12                       | 1133.01.20 | 1134.01.20 | 1141.01.20 |
| 22              | 6.21                       | 1133.01.22 | 1134.01.22 | 1141.01.22 |
| 24              | 7.38                       | 1133.01.24 | 1134.01.24 | 1141.01.24 |
| 26              | 8.67                       | 1133.01.26 | 1134.01.26 | 1141.01.26 |
| 28              | 10.05                      | 1133.01.28 | 1134.01.28 | 1141.01.28 |
| 30              | 11.53                      | 1133.01.30 | 1134.01.30 | 1141.01.30 |
| 32              | 13.13                      | 1133.01.32 | 1134.01.32 | 1141.01.32 |
| 34              | 14.82                      | 1133.01.34 | 1134.01.34 | 1141.01.34 |
| 36              | 16.60                      | 1133.01.36 | 1134.01.36 | 1141.01.36 |
| 38              | 18.55                      | 1133.01.38 | 1134.01.38 | 1141.01.38 |
| 40              | 20.57                      | 1133.01.40 | 1134.01.40 | 1141.01.40 |
| 42              | 22.59                      | 1133.01.42 | 1134.01.42 | 1141.01.42 |
| 44              | 24.80                      | 1133.01.44 | 1134.01.44 | 1141.01.44 |
| 48              | 31.41                      | 1133.01.48 | 1134.01.48 | 1141.01.48 |
| 52              | 35.45                      | 1133.01.52 | 1134.01.52 | 1141.01.52 |
| 56              | 42.89                      | 1133.01.56 | 1134.01.56 | 1141.01.56 |
| 60              | 46.10                      | 1133.01.60 | 1134.01.60 | 1141.01.60 |
| 64              | 54.18                      | 1133.01.64 | 1134.01.64 | 1141.01.64 |
| 71              | 64.87                      | 1133.01.71 | 1134.01.71 | 1141.01.71 |
| 77              | 76.59                      | 1133.01.77 | 1134.01.77 | 1141.01.77 |

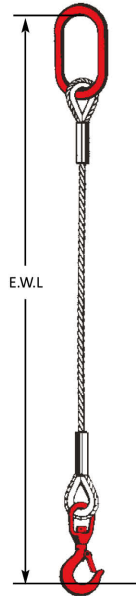
Higher load capacities available on request. Please contact us.

## > SLINGS: Wire Rope Slings

1142.  
Wire rope sling with  
master link and safety  
eye hook



1143.  
Wire rope sling with  
master link and safety  
eye hook with swivel



1144.  
Wire rope sling with  
master link, pressed  
thimble and choker hook



1146.  
Wire rope sling with  
pressed loop and self-  
locking eye hook



| Rope ø<br>in mm | WLL single<br>direct in kg | Item no.   | Item no.   | Item no.   | Item no.   |
|-----------------|----------------------------|------------|------------|------------|------------|
| 6               | 0.47                       | 1142.01.06 | 1143.01.06 | 1144.01.06 | 1146.01.06 |
| 8               | 0.83                       | 1142.01.08 | 1143.01.08 | 1144.01.08 | 1146.01.08 |
| 9               | 1.0                        | 1117.01.09 | 1143.01.09 | 1144.01.09 | 1146.01.09 |
| 10              | 1.30                       | 1142.01.10 | 1143.01.10 | 1144.01.10 | 1146.01.10 |
| 11              | 1.50                       | 1142.01.11 | 1143.01.11 | 1144.01.11 | 1146.01.11 |
| 12              | 1.80                       | 1142.01.12 | 1143.01.12 | 1144.01.12 | 1146.01.12 |
| 13              | 2.17                       | 1142.01.13 | 1143.01.13 | 1144.01.13 | 1146.01.13 |
| 14              | 2.52                       | 1142.01.14 | 1143.01.14 | 1144.01.14 | 1146.01.14 |
| 16              | 3.29                       | 1142.01.16 | 1143.01.16 | 1144.01.16 | 1146.01.16 |
| 18              | 4.15                       | 1142.01.18 | 1143.01.18 | 1144.01.18 | 1146.01.18 |
| 19              | 4.63                       | 1142.01.19 | 1143.01.19 | 1144.01.19 | 1146.01.19 |
| 20              | 5.12                       | 1142.01.20 | 1143.01.20 | 1144.01.20 | 1146.01.20 |
| 22              | 6.21                       | 1142.01.22 | 1143.01.22 | 1144.01.22 | 1146.01.22 |
| 24              | 7.38                       | 1142.01.24 | 1143.01.24 | 1144.01.24 | 1146.01.24 |
| 26              | 8.67                       | 1142.01.26 | 1143.01.26 | 1144.01.26 | 1146.01.26 |
| 28              | 10.05                      | 1142.01.28 | 1143.01.28 | 1144.01.28 | 1146.01.28 |
| 30              | 11.53                      | 1142.01.30 | 1143.01.30 | 1144.01.30 | 1146.01.30 |
| 32              | 13.13                      | 1142.01.32 | 1143.01.32 | 1144.01.32 | 1146.01.32 |
| 34              | 14.82                      | 1142.01.34 | 1143.01.34 | 1144.01.34 | 1146.01.34 |
| 36              | 16.60                      | 1142.01.36 | 1143.01.36 | 1144.01.36 | 1146.01.36 |
| 38              | 18.55                      | 1142.01.38 | 1143.01.38 | 1144.01.38 | 1146.01.38 |
| 40              | 20.57                      | 1142.01.40 | 1143.01.40 | 1144.01.40 | 1146.01.40 |
| 42              | 22.59                      | 1142.01.42 | 1143.01.42 | 1144.01.42 | 1146.01.42 |
| 44              | 24.80                      | 1142.01.44 | 1143.01.44 | 1144.01.44 | 1146.01.44 |
| 48              | 31.41                      | 1142.01.48 | 1143.01.48 | 1144.01.48 | 1146.01.48 |
| 52              | 35.45                      | 1142.01.52 | 1143.01.52 | 1144.01.52 | 1146.01.52 |
| 56              | 42.89                      | 1142.01.56 | 1143.01.56 | 1144.01.56 | 1146.01.56 |
| 60              | 46.10                      | 1142.01.60 | 1143.01.60 | 1144.01.60 | 1146.01.60 |
| 64              | 54.18                      | 1142.01.64 | 1143.01.64 | 1144.01.64 | 1146.01.64 |
| 71              | 64.87                      | 1142.01.71 | 1143.01.71 | 1144.01.71 | 1146.01.71 |
| 77              | 76.59                      | 1142.01.77 | 1143.01.77 | 1144.01.77 | 1146.01.77 |

Higher load capacities available on request. Please contact us.



## > SLINGS: Wire Rope Slings

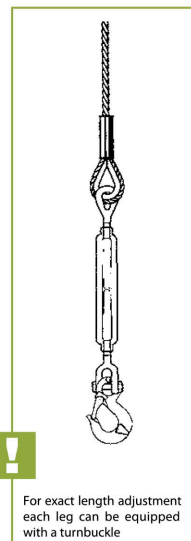
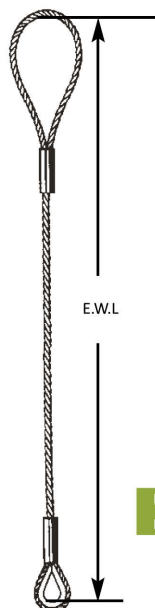
1148.  
Wire rope sling with  
master link and pressed  
thimble



1149.  
Wire rope sling with  
master link both ends



1170.  
Wire rope sling with  
pressed loop and pressed  
thimble

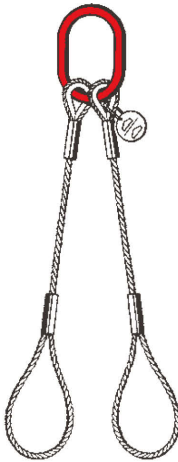


| Rope ø<br>in mm | WLL single<br>direct in kg | Item no.   | Item no.   | Item no.   |
|-----------------|----------------------------|------------|------------|------------|
| 6               | 0.47                       | 1148.01.06 | 1149.01.06 | 1170.01.06 |
| 8               | 0.83                       | 1148.01.08 | 1149.01.08 | 1170.01.08 |
| 9               | 1.0                        | 1148.01.09 | 1149.01.09 | 1170.01.09 |
| 10              | 1.30                       | 1148.01.10 | 1149.01.10 | 1170.01.10 |
| 11              | 1.50                       | 1148.01.11 | 1149.01.11 | 1170.01.11 |
| 12              | 1.80                       | 1148.01.12 | 1149.01.12 | 1170.01.12 |
| 13              | 2.17                       | 1148.01.13 | 1149.01.13 | 1170.01.13 |
| 14              | 2.52                       | 1148.01.14 | 1149.01.14 | 1170.01.14 |
| 16              | 3.29                       | 1148.01.16 | 1149.01.16 | 1170.01.16 |
| 18              | 4.15                       | 1148.01.18 | 1149.01.18 | 1170.01.18 |
| 19              | 4.63                       | 1148.01.19 | 1149.01.19 | 1170.01.19 |
| 20              | 5.12                       | 1148.01.20 | 1149.01.20 | 1170.01.20 |
| 22              | 6.21                       | 1148.01.22 | 1149.01.22 | 1170.01.22 |
| 24              | 7.38                       | 1148.01.24 | 1149.01.24 | 1170.01.24 |
| 26              | 8.67                       | 1148.01.26 | 1149.01.26 | 1170.01.26 |
| 28              | 10.05                      | 1148.01.28 | 1149.01.28 | 1170.01.28 |
| 30              | 11.53                      | 1148.01.30 | 1149.01.30 | 1170.01.30 |
| 32              | 13.13                      | 1148.01.32 | 1149.01.32 | 1170.01.32 |
| 34              | 14.82                      | 1148.01.34 | 1149.01.34 | 1170.01.34 |
| 36              | 16.60                      | 1148.01.36 | 1149.01.36 | 1170.01.36 |
| 38              | 18.55                      | 1148.01.38 | 1149.01.38 | 1170.01.38 |
| 40              | 20.57                      | 1148.01.40 | 1149.01.40 | 1170.01.40 |
| 42              | 22.59                      | 1148.01.42 | 1149.01.42 | 1170.01.42 |
| 44              | 24.80                      | 1148.01.44 | 1149.01.44 | 1170.01.44 |
| 48              | 31.41                      | 1148.01.48 | 1149.01.48 | 1170.01.48 |
| 52              | 35.45                      | 1148.01.52 | 1149.01.52 | 1170.01.52 |
| 56              | 42.89                      | 1148.01.56 | 1149.01.56 | 1170.01.56 |
| 60              | 46.10                      | 1148.01.60 | 1149.01.60 | 1170.01.60 |
| 64              | 54.18                      | 1148.01.64 | 1149.01.64 | 1170.01.64 |
| 71              | 64.87                      | 1148.01.71 | 1149.01.71 | 1170.01.71 |
| 77              | 76.59                      | 1148.01.77 | 1149.01.77 | 1170.01.77 |

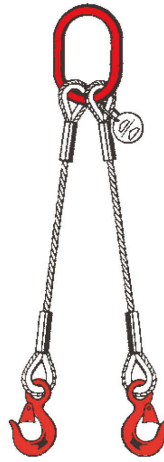
Higher load capacities available on request. Please contact us.

## > SLINGS: 2-Leg Wire Rope Slings

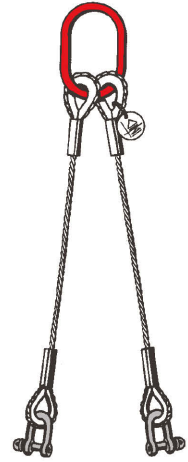
1214.  
2-leg wire rope sling  
with loops



1215.  
2-leg wire rope sling  
with safety eye hook



1216.  
2-leg wire rope sling  
with shackle



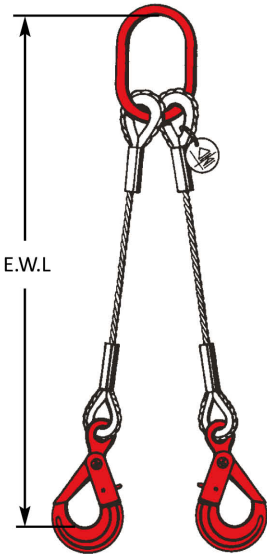
Wire rope slings according to DIN EN 13414-1 are manufactured and tested in accordance with the current requirements. Fittings and rope match exactly to guarantee the indicated load capacity. Strict quality control and clear marking ensure highest possible safety. Different configurations and lengths are available according to your individual requirements

| Rope ø<br>in mm | Load capacity 2 leg in kg<br>at angle<br>0-45° | Item no.   | Item no.   | Item no.   |
|-----------------|------------------------------------------------|------------|------------|------------|
| 6               | 0.66                                           | 1214.01.06 | 1215.01.06 | 1216.01.06 |
| 8               | 1.18                                           | 1214.01.08 | 1215.01.08 | 1216.01.08 |
| 9               | 1.4                                            | 1214.01.09 | 1215.01.09 | 1216.01.09 |
| 10              | 1.84                                           | 1214.01.10 | 1215.01.10 | 1216.01.10 |
| 11              | 2.10                                           | 1214.01.11 | 1215.01.11 | 1216.01.11 |
| 12              | 2.52                                           | 1214.01.12 | 1215.01.12 | 1216.01.12 |
| 13              | 3.07                                           | 1214.01.13 | 1215.01.13 | 1216.01.13 |
| 14              | 3.56                                           | 1214.01.14 | 1215.01.14 | 1216.01.14 |
| 16              | 4.65                                           | 1214.01.16 | 1215.01.16 | 1216.01.16 |
| 18              | 5.87                                           | 1214.01.18 | 1215.01.18 | 1216.01.18 |
| 19              | 6.55                                           | 1214.01.19 | 1215.01.19 | 1216.01.19 |
| 20              | 7.25                                           | 1214.01.20 | 1215.01.20 | 1216.01.20 |
| 22              | 8.78                                           | 1214.01.22 | 1215.01.22 | 1216.01.22 |
| 24              | 10.44                                          | 1214.01.24 | 1215.01.24 | 1216.01.24 |
| 26              | 12.26                                          | 1214.01.26 | 1215.01.26 | 1216.01.26 |
| 28              | 14.21                                          | 1214.01.28 | 1215.01.28 | 1216.01.28 |
| 30              | 16.31                                          | 1214.01.30 | 1215.01.30 | 1216.01.30 |
| 32              | 18.57                                          | 1214.01.32 | 1215.01.32 | 1216.01.32 |
| 34              | 20.96                                          | 1214.01.34 | 1215.01.34 | 1216.01.34 |
| 36              | 23.48                                          | 1214.01.36 | 1215.01.36 | 1216.01.36 |
| 38              | 26.24                                          | 1214.01.38 | 1215.01.38 | 1216.01.38 |
| 40              | 29.09                                          | 1214.01.40 | 1215.01.40 | 1216.01.40 |
| 42              | 31.95                                          | 1214.01.42 | 1215.01.42 | 1216.01.42 |
| 44              | 35.07                                          | 1214.01.44 | 1215.01.44 | 1216.01.44 |
| 48              | 44.42                                          | 1214.01.48 | 1215.01.48 | 1216.01.48 |
| 52              | 50.13                                          | 1214.01.52 | 1215.01.52 | 1216.01.52 |
| 56              | 60.65                                          | 1214.01.56 | 1215.01.56 | 1216.01.56 |
| 60              | 65.20                                          | 1214.01.60 | 1215.01.60 | 1216.01.60 |
| 64              | 76.63                                          | 1214.01.64 | 1215.01.64 | 1216.01.64 |
| 71              | 91.74                                          | 1214.01.71 | 1215.01.71 | 1216.01.71 |
| 77              | 108.32                                         | 1214.01.77 | 1215.01.77 | 1216.01.77 |

Higher load capacities available on request. Please contact us.

> SLINGS: 2-Leg Wire Rope Slings

1217.  
2-leg wire rope sling  
with self-locking  
eye hook



1218.  
2-leg wire rope sling  
with master links



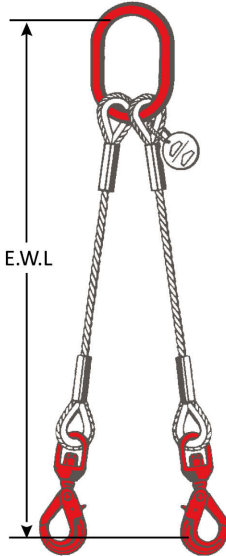
1219.  
2-leg wire rope sling  
with safety hook



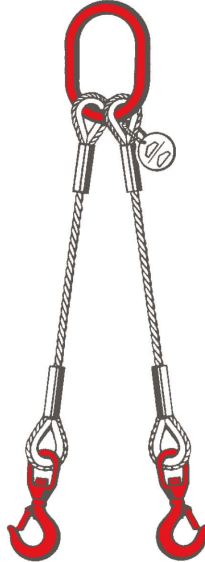
| Rope ø<br>in mm | Load capacity 2 leg in kg<br>at angle<br>0-45° | Item no.   | Item no.   | Item no.   |
|-----------------|------------------------------------------------|------------|------------|------------|
| 6               | 0.66                                           | 1217.01.06 | 1218.01.06 | 1219.01.06 |
| 8               | 1.18                                           | 1217.01.08 | 1218.01.08 | 1219.01.08 |
| 9               | 1.4                                            | 1217.01.09 | 1218.01.09 | 1219.01.09 |
| 10              | 1.84                                           | 1217.01.10 | 1218.01.10 | 1219.01.10 |
| 11              | 2.10                                           | 1217.01.11 | 1218.01.11 | 1219.01.11 |
| 12              | 2.52                                           | 1217.01.12 | 1218.01.12 | 1219.01.12 |
| 13              | 3.07                                           | 1217.01.13 | 1218.01.13 | 1219.01.13 |
| 14              | 3.56                                           | 1217.01.14 | 1218.01.14 | 1219.01.14 |
| 16              | 4.65                                           | 1217.01.16 | 1218.01.16 | 1219.01.16 |
| 18              | 5.87                                           | 1217.01.18 | 1218.01.18 | 1219.01.18 |
| 19              | 6.55                                           | 1217.01.19 | 1218.01.19 | 1219.01.19 |
| 20              | 7.25                                           | 1217.01.20 | 1218.01.20 | 1219.01.20 |
| 22              | 8.78                                           | 1217.01.22 | 1218.01.22 | 1219.01.22 |
| 24              | 10.44                                          | 1217.01.24 | 1218.01.24 | 1219.01.24 |
| 26              | 12.26                                          | 1217.01.26 | 1218.01.26 | 1219.01.26 |
| 28              | 14.21                                          | 1217.01.28 | 1218.01.28 | 1219.01.28 |
| 30              | 16.31                                          | 1217.01.30 | 1218.01.30 | 1219.01.30 |
| 32              | 18.57                                          | 1217.01.32 | 1218.01.32 | 1219.01.32 |
| 34              | 20.96                                          | 1217.01.34 | 1218.01.34 | 1219.01.34 |
| 36              | 23.48                                          | 1217.01.36 | 1218.01.36 | 1219.01.36 |
| 38              | 26.24                                          | 1217.01.38 | 1218.01.38 | 1219.01.38 |
| 40              | 29.09                                          | 1217.01.40 | 1218.01.40 | 1219.01.40 |
| 42              | 31.95                                          | 1217.01.42 | 1218.01.42 | 1219.01.42 |
| 44              | 35.07                                          | 1217.01.44 | 1218.01.44 | 1219.01.44 |
| 48              | 44.42                                          | 1217.01.48 | 1218.01.48 | 1219.01.48 |
| 52              | 50.13                                          | 1217.01.52 | 1218.01.52 | 1219.01.52 |
| 56              | 60.65                                          | 1217.01.56 | 1218.01.56 | 1219.01.56 |
| 60              | 65.20                                          | 1217.01.60 | 1218.01.60 | 1219.01.60 |
| 64              | 76.63                                          | 1217.01.64 | 1218.01.64 | 1219.01.64 |
| 71              | 91.74                                          | 1217.01.71 | 1218.01.71 | 1219.01.71 |
| 77              | 108.32                                         | 1217.01.77 | 1218.01.77 | 1219.01.77 |

## > SLINGS: 2-Leg Wire Rope Slings

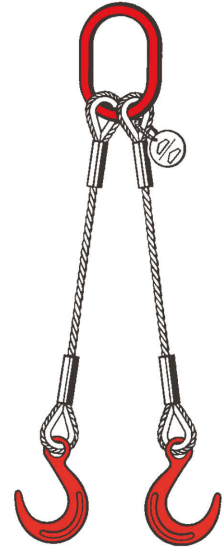
1224.  
2-leg wire rope sling  
with swivel hook



1225.  
2-leg wire rope sling  
with safety eye hook  
with swivel



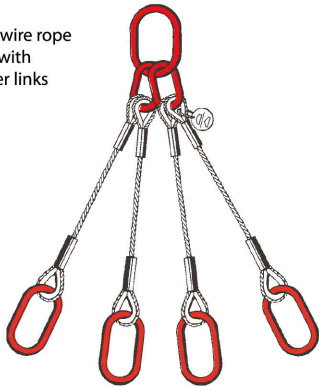
1226.  
2-leg wire rope sling  
with foundry hook



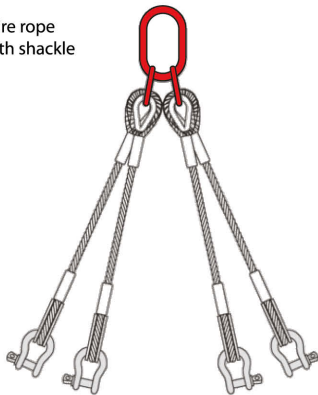
| Rope ø<br>in mm | Load capacity 2 leg in kg<br>at angle<br>0-45° | Item no.   | Item no.   | Item no.   |
|-----------------|------------------------------------------------|------------|------------|------------|
| 6               | 0.66                                           | 1224.01.06 | 1225.01.06 | 1226.01.06 |
| 8               | 1.18                                           | 1224.01.08 | 1225.01.08 | 1226.01.08 |
| 9               | 1.4                                            | 1224.01.09 | 1225.01.09 | 1226.01.09 |
| 10              | 1.84                                           | 1224.01.10 | 1225.01.10 | 1226.01.10 |
| 11              | 2.10                                           | 1224.01.11 | 1225.01.11 | 1226.01.11 |
| 12              | 2.52                                           | 1224.01.12 | 1225.01.12 | 1226.01.12 |
| 13              | 3.07                                           | 1224.01.13 | 1225.01.13 | 1226.01.13 |
| 14              | 3.56                                           | 1224.01.14 | 1225.01.14 | 1226.01.14 |
| 16              | 4.65                                           | 1224.01.16 | 1225.01.16 | 1226.01.16 |
| 18              | 5.87                                           | 1224.01.18 | 1225.01.18 | 1226.01.18 |
| 19              | 6.55                                           | 1224.01.19 | 1225.01.19 | 1226.01.19 |
| 20              | 7.25                                           | 1224.01.20 | 1225.01.20 | 1226.01.20 |
| 22              | 8.78                                           | 1224.01.22 | 1225.01.22 | 1226.01.22 |
| 24              | 10.44                                          | 1224.01.24 | 1225.01.24 | 1226.01.24 |
| 26              | 12.26                                          | 1224.01.26 | 1225.01.26 | 1226.01.26 |
| 28              | 14.21                                          | 1224.01.28 | 1225.01.28 | 1226.01.28 |
| 30              | 16.31                                          | 1224.01.30 | 1225.01.30 | 1219.01.30 |
| 32              | 18.57                                          | 1224.01.32 | 1225.01.32 | 1226.01.32 |
| 34              | 20.96                                          | 1224.01.34 | 1225.01.34 | 1226.01.34 |
| 36              | 23.48                                          | 1224.01.36 | 1225.01.36 | 1226.01.36 |
| 38              | 26.24                                          | 1224.01.38 | 1225.01.38 | 1226.01.38 |
| 40              | 29.09                                          | 1224.01.40 | 1225.01.40 | 1226.01.40 |
| 42              | 31.95                                          | 1224.01.42 | 1225.01.42 | 1226.01.42 |
| 44              | 35.07                                          | 1224.01.44 | 1225.01.44 | 1226.01.44 |
| 48              | 44.42                                          | 1224.01.48 | 1225.01.48 | 1226.01.48 |
| 52              | 50.13                                          | 1224.01.52 | 1225.01.52 | 1226.01.52 |
| 56              | 60.65                                          | 1224.01.56 | 1225.01.56 | 1226.01.56 |
| 60              | 65.20                                          | 1224.01.60 | 1225.01.60 | 1226.01.60 |
| 64              | 76.63                                          | 1224.01.64 | 1225.01.64 | 1226.01.64 |
| 71              | 91.74                                          | 1224.01.71 | 1225.01.71 | 1226.01.71 |
| 77              | 108.32                                         | 1224.01.77 | 1225.01.77 | 1226.01.77 |

> SLINGS: 4-Leg Wire Rope Slings

1426.  
4-leg wire rope  
sling with  
master links



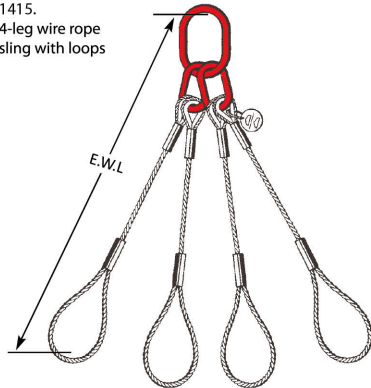
1416.  
4-leg wire rope  
sling with shackle



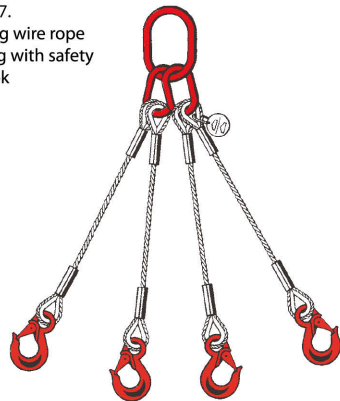
Options are available with Nut & Bolt shackles  
Screw pin Bow shackle | screw pin Dee shackles



1415.  
4-leg wire rope  
sling with loops



1417.  
4-leg wire rope  
sling with safety  
hook



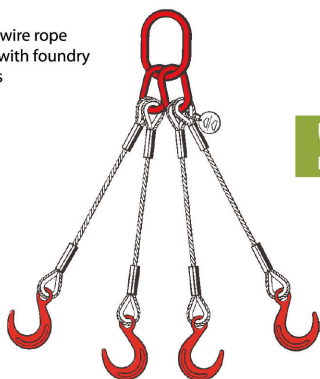
| Rope ø<br>in mm | Load capacity 4 leg<br>in kg at angle<br>0-45° | Item no.   | Item no.   |
|-----------------|------------------------------------------------|------------|------------|
| 6               | 0.98                                           | 1426.01.06 | 1416.01.06 |
| 8               | 1.75                                           | 1426.01.08 | 1416.01.08 |
| 9               | 2.18                                           | 1426.01.09 | 1416.01.09 |
| 10              | 2.74                                           | 1426.01.10 | 1416.01.10 |
| 11              | 3.15                                           | 1426.01.11 | 1416.01.11 |
| 12              | 3.78                                           | 1426.01.12 | 1416.01.12 |
| 13              | 4.55                                           | 1426.01.13 | 1416.01.13 |
| 14              | 5.28                                           | 1426.01.14 | 1416.01.14 |
| 16              | 6.90                                           | 1426.01.16 | 1416.01.16 |
| 18              | 8.72                                           | 1426.01.18 | 1416.01.18 |
| 19              | 9.72                                           | 1426.01.19 | 1416.01.19 |
| 20              | 10.76                                          | 1426.01.20 | 1416.01.20 |
| 22              | 13.04                                          | 1426.01.22 | 1416.01.22 |
| 24              | 15.51                                          | 1426.01.24 | 1416.01.24 |
| 26              | 18.21                                          | 1426.01.26 | 1416.01.26 |
| 28              | 21.10                                          | 1426.01.28 | 1416.01.28 |
| 30              | 24.22                                          | 1426.01.30 | 1416.01.30 |
| 32              | 27.58                                          | 1426.01.32 | 1416.01.32 |
| 34              | 31.13                                          | 1426.01.34 | 1416.01.34 |
| 36              | 34.87                                          | 1426.01.36 | 1416.01.36 |
| 38              | 38.96                                          | 1426.01.38 | 1416.01.38 |
| 40              | 43.20                                          | 1426.01.40 | 1416.01.40 |
| 42              | 47.44                                          | 1426.01.42 | 1416.01.42 |
| 44              | 52.07                                          | 1426.01.44 | 1416.01.44 |
| 48              | 65.96                                          | 1426.01.48 | 1416.01.48 |
| 52              | 74.44                                          | 1426.01.52 | 1416.01.52 |
| 56              | 90.06                                          | 1426.01.56 | 1416.01.56 |
| 60              | 96.81                                          | 1426.01.60 | 1416.01.60 |
| 64              | 113.79                                         | 1426.01.64 | 1416.01.64 |
| 71              | 136.23                                         | 1426.01.71 | 1416.01.71 |
| 77              | 160.84                                         | 1426.01.77 | 1416.01.77 |

| Rope ø<br>in mm | Load capacity 4 leg<br>in kg at angle<br>0-45° | Item no.   | Item no.   |
|-----------------|------------------------------------------------|------------|------------|
| 6               | 0.98                                           | 1415.01.06 | 1417.01.06 |
| 8               | 1.75                                           | 1415.01.08 | 1417.01.08 |
| 9               | 2.18                                           | 1415.01.09 | 1417.01.09 |
| 10              | 2.74                                           | 1415.01.10 | 1417.01.10 |
| 11              | 3.15                                           | 1415.01.11 | 1417.01.11 |
| 12              | 3.78                                           | 1415.01.12 | 1417.01.12 |
| 13              | 4.55                                           | 1415.01.13 | 1417.01.13 |
| 14              | 5.28                                           | 1415.01.14 | 1417.01.14 |
| 16              | 6.90                                           | 1415.01.16 | 1417.01.16 |
| 18              | 8.72                                           | 1415.01.18 | 1417.01.18 |
| 19              | 9.72                                           | 1415.01.19 | 1417.01.19 |
| 20              | 10.76                                          | 1415.01.20 | 1417.01.20 |
| 22              | 13.04                                          | 1415.01.22 | 1417.01.22 |
| 24              | 15.51                                          | 1415.01.24 | 1417.01.24 |
| 26              | 18.21                                          | 1415.01.26 | 1417.01.26 |
| 28              | 21.10                                          | 1415.01.28 | 1417.01.28 |
| 30              | 24.22                                          | 1415.01.30 | 1417.01.30 |
| 32              | 27.58                                          | 1415.01.32 | 1417.01.32 |
| 34              | 31.13                                          | 1415.01.34 | 1417.01.34 |
| 36              | 34.87                                          | 1415.01.36 | 1417.01.36 |
| 38              | 38.96                                          | 1415.01.38 | 1417.01.38 |
| 40              | 43.20                                          | 1415.01.40 | 1417.01.40 |
| 42              | 47.44                                          | 1415.01.42 | 1417.01.42 |
| 44              | 52.07                                          | 1415.01.44 | 1417.01.44 |
| 48              | 65.96                                          | 1415.01.48 | 1417.01.48 |
| 52              | 74.44                                          | 1415.01.52 | 1417.01.52 |
| 56              | 90.06                                          | 1415.01.56 | 1417.01.56 |
| 60              | 96.81                                          | 1415.01.60 | 1417.01.60 |
| 64              | 113.79                                         | 1415.01.64 | 1417.01.64 |
| 71              | 136.23                                         | 1415.01.71 | 1417.01.71 |
| 77              | 160.84                                         | 1415.01.77 | 1417.01.77 |

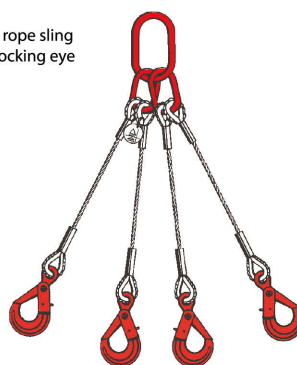


## ➤ SLINGS: 4-Leg Wire Rope Slings

1418.  
4-leg wire rope  
sling with foundry  
hooks

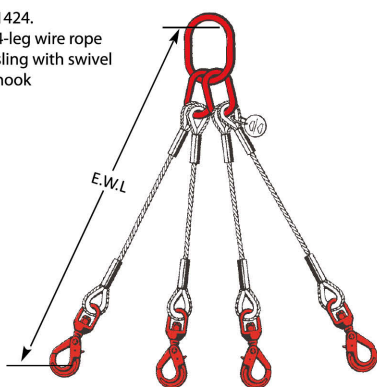


1419.  
4-leg wire rope sling  
with self-locking eye  
hook

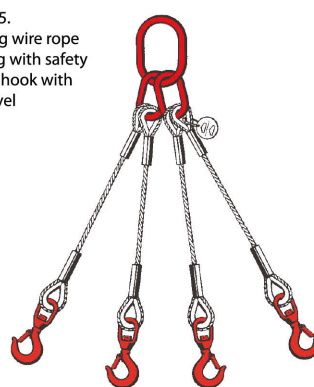


For your individual application we will also manufacture 3-leg wire rope slings.

1424.  
4-leg wire rope  
sling with swivel  
hook



1425.  
4-leg wire rope  
sling with safety  
eye hook with swivel



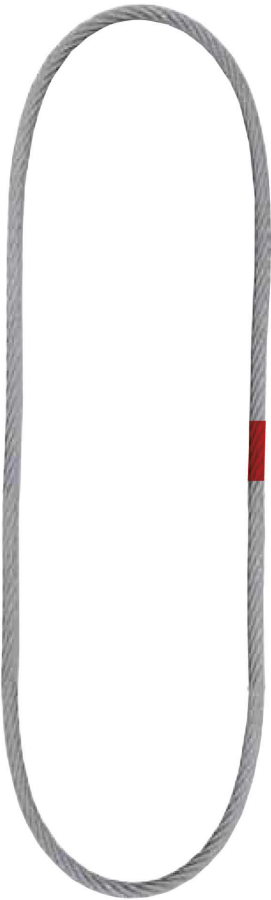
| Rope ø<br>in mm | Load capacity 4 leg<br>in kg at angle<br>0-45° | Item no.   | Item no.   |
|-----------------|------------------------------------------------|------------|------------|
| 6               | 0.98                                           | 1418.01.06 | 1424.01.06 |
| 8               | 1.75                                           | 1418.01.08 | 1424.01.08 |
| 9               | 2.18                                           | 1418.01.09 | 1424.01.09 |
| 10              | 2.74                                           | 1418.01.10 | 1424.01.10 |
| 11              | 3.15                                           | 1418.01.11 | 1424.01.11 |
| 12              | 3.78                                           | 1418.01.12 | 1424.01.12 |
| 13              | 4.55                                           | 1418.01.13 | 1424.01.13 |
| 14              | 5.28                                           | 1418.01.14 | 1424.01.14 |
| 16              | 6.90                                           | 1418.01.16 | 1424.01.16 |
| 18              | 8.72                                           | 1418.01.18 | 1424.01.18 |
| 19              | 9.72                                           | 1418.01.19 | 1424.01.19 |
| 20              | 10.76                                          | 1418.01.20 | 1424.01.20 |
| 22              | 13.04                                          | 1418.01.22 | 1424.01.22 |
| 24              | 15.51                                          | 1418.01.24 | 1424.01.24 |
| 26              | 18.21                                          | 1418.01.26 | 1424.01.26 |
| 28              | 21.10                                          | 1418.01.28 | 1424.01.28 |
| 30              | 24.22                                          | 1418.01.30 | 1424.01.30 |
| 32              | 27.58                                          | 1418.01.32 | 1424.01.32 |
| 34              | 31.13                                          | 1418.01.34 | 1424.01.34 |
| 36              | 34.87                                          | 1418.01.36 | 1424.01.36 |
| 38              | 38.96                                          | 1418.01.38 | 1424.01.38 |
| 40              | 43.20                                          | 1418.01.40 | 1424.01.40 |
| 42              | 47.44                                          | 1418.01.42 | 1424.01.42 |
| 44              | 52.07                                          | 1418.01.44 | 1424.01.44 |
| 48              | 65.96                                          | 1418.01.48 | 1424.01.48 |
| 52              | 74.44                                          | 1418.01.52 | 1424.01.52 |
| 56              | 90.06                                          | 1418.01.56 | 1424.01.56 |
| 60              | 96.81                                          | 1418.01.60 | 1424.01.60 |
| 64              | 113.79                                         | 1418.01.64 | 1424.01.64 |
| 71              | 136.23                                         | 1418.01.71 | 1424.01.71 |
| 77              | 160.84                                         | 1418.01.77 | 1424.01.77 |

| Rope ø<br>in mm | Load capacity 4 leg<br>in kg at angle<br>0-45° | Item no.   | Item no.   |
|-----------------|------------------------------------------------|------------|------------|
| 6               | 0.98                                           | 1419.01.06 | 1425.01.06 |
| 8               | 1.75                                           | 1419.01.08 | 1425.01.08 |
| 9               | 2.18                                           | 1419.01.09 | 1425.01.09 |
| 10              | 2.74                                           | 1419.01.10 | 1425.01.10 |
| 11              | 3.15                                           | 1419.01.11 | 1425.01.11 |
| 12              | 3.78                                           | 1419.01.12 | 1425.01.12 |
| 13              | 4.55                                           | 1419.01.13 | 1425.01.13 |
| 14              | 5.28                                           | 1419.01.14 | 1425.01.14 |
| 16              | 6.90                                           | 1419.01.16 | 1425.01.16 |
| 18              | 8.72                                           | 1419.01.18 | 1425.01.18 |
| 19              | 9.72                                           | 1419.01.19 | 1425.01.19 |
| 20              | 10.76                                          | 1419.01.20 | 1425.01.20 |
| 22              | 13.04                                          | 1419.01.22 | 1425.01.22 |
| 24              | 15.51                                          | 1419.01.24 | 1425.01.24 |
| 26              | 18.21                                          | 1419.01.26 | 1425.01.26 |
| 28              | 21.10                                          | 1419.01.28 | 1425.01.28 |
| 30              | 24.22                                          | 1419.01.30 | 1425.01.30 |
| 32              | 27.58                                          | 1419.01.32 | 1425.01.32 |
| 34              | 31.13                                          | 1419.01.34 | 1425.01.34 |
| 36              | 34.87                                          | 1419.01.36 | 1425.01.36 |
| 38              | 38.96                                          | 1419.01.38 | 1425.01.38 |
| 40              | 43.20                                          | 1419.01.40 | 1425.01.40 |
| 42              | 47.44                                          | 1419.01.42 | 1425.01.42 |
| 44              | 52.07                                          | 1419.01.44 | 1425.01.44 |
| 48              | 65.96                                          | 1419.01.48 | 1425.01.48 |
| 52              | 74.44                                          | 1419.01.52 | 1425.01.52 |
| 56              | 90.06                                          | 1419.01.56 | 1425.01.56 |
| 60              | 96.81                                          | 1419.01.60 | 1425.01.60 |
| 64              | 113.79                                         | 1419.01.64 | 1425.01.64 |
| 71              | 136.23                                         | 1419.01.71 | 1425.01.71 |
| 77              | 160.84                                         | 1419.01.77 | 1425.01.77 |

> SLINGS: Cable Laid Slings

1197.  
Highly flexible cable laid wire rope sling as endless grommet according to BS EN 13414-3  
Wire rope construction with steel core, tensile strength 1960 N/mm², minimum bending radius: 2 x Ø

Table G.1 — Working load limits for cable-laid endless slings (grommets) made of wire ropes with steel core of classes 6x19 and 6x36



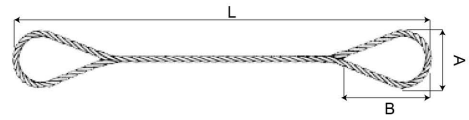
|                       | Endless sling (Grommet)                                                           |                                                                                     |
|-----------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Angle to vertical     | 0°                                                                                | 0°                                                                                  |
|                       | direct                                                                            | choke hitch                                                                         |
| Nominal rope diameter |  |  |
|                       |                                                                                   |                                                                                     |
| 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                                                                              | 19,0                                                                                |
| 42                    | 27,0                                                                              | 21,5                                                                                |
| 48                    | 35,5                                                                              | 28,5                                                                                |
| 54                    | 45,0                                                                              | 36,0                                                                                |
| 60                    | 55,5                                                                              | 44,5                                                                                |
| 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                                                                                 |
| calculation factors   | 2                                                                                 | 1,6                                                                                 |

Rope ø 24-60 mm: Safety factor 5  
Rope ø 66-132 mm: Safety factor 4,9-3  
  
Rope ø up to 470 mm available on request. Please contact us.

## > SLINGS: Hand-Spliced Wire Rope Slings

Hand-Spliced Wire Rope Slings:-  
BS EN 13414-1 standards.

(Single-Part, 3-Part, 6-Part, and 9-Part)



Hand-spliced wire rope slings are lifting slings manufactured by manually forming an eye at the end of a rope and securely tucking the strands back into the rope body. Depending on the application, slings can be made using a single rope or multiple parallel-laid rope sections- (3-part, 6-part, or 9-part) to achieve higher strength and load capacity.

These slings are designed in accordance with wire rope slings.



Single Part

- Available in single-part, 3-part, 6-part, and 9-part (Gator-Laid) configurations
- Hand-tucked splices ensure a smooth, snag-free finish
- Custom-made to required lengths and capacities
- Higher part slings (3, 6, 9) offer greater flexibility and load capacity
- Ideal for general lifting, construction, offshore, and heavy-duty applications
- Manufactured using high-quality wire ropes to meet safety and performance standards

Warning:

Not recommended for applications involving sling rotation



3-part slings

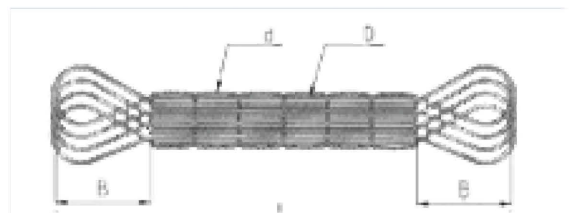


9-part slings

Hand Spliced Multi Part (Flat body type) Wire rope sling  
(Available in 3-Part 6-Part, -Part, and -Part Configurations)



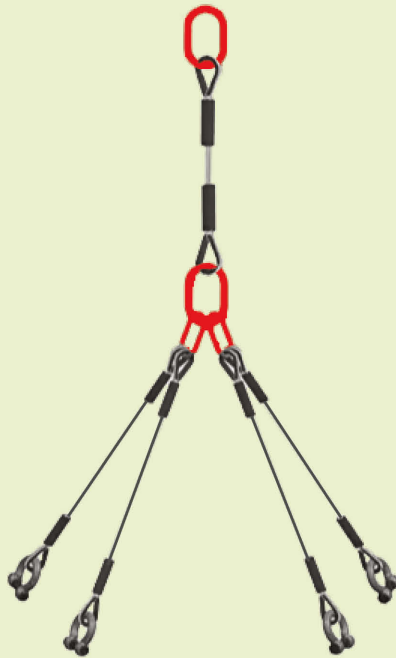
6-part slings



Available in 3-part, 6-part, and custom constructions for increased strength.

Hand spliced eyes ensure smooth and minimal snagging during use. High flexibility allows for easier handling and improved load distribution. Custom-made to suit specific lifting requirements and configurations. Suitable for vertical, basket, and choker applications.





## **DNV Type-Approved Lifting Set**

DNV Type-Approved Wire Rope Sling Manufacturer (**Approval No.: TAS00003YT**)

**DNV** Certified Quality Assured Lifting Solutions

## > DNV Type-Approved Lifting Set

### **The Features of Offshore Container Lifting Series:**

---

These lifting series are manufactured to meet the requirements of DNV 2.7-1 for offshore container lifting, fulfilling the need for the critical requirements of **Charpy impact, strength, and ductility**. The slings also comply with the relevant standards, including **ISO 10855-2, BS EN 13414-1, and BS EN 13411-3**.

---

#### **Low-Temperature Performance:**

The lifting components are designed to withstand impacts in extreme environments, performing safely at temperatures as low as **-40°C**.

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#### **Higher Safety Factors:**

The **DNV Type-Approved shackles** are designed with a safety factor of **6 for Grade 6, 8 for Grade 8, and 5 for master links & assemblies**, ensuring reliable operation even in the harshest offshore conditions.

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#### **DNV 2.7-1 and DNV 2.7-3 Test Certificates:**

Each lifting set is supplied with a **test certificate** covering materials and manufacturing processes as per DNV 2.7-1 and DNV 2.7-3 requirements, ensuring **full traceability**.

---

To guarantee optimal performance under the toughest weather and sea conditions, these lifting sets are **specially designed, manufactured, and tested** for offshore container handling operations.



> DNV Type-Approval Certificate



TYPE APPROVAL CERTIFICATE

Certificate no.:  
**TAS00003YT**  
Revision No:  
**3**

This is to certify:  
that the lifting set for offshore containers and portable offshore units

with type designation(s)  
wire rope lifting sets

issued to  
**Carl Stahl Lifting Equipment Trading L.L.C.**  
**Abu Dhabi, United Arab Emirates**

is found to comply with  
DNV standard DNV-ST-E271 – 2.7-1 Offshore containers, March 2023 (Amended December 2024)  
DNV standard DNV-ST-E273 – 2.7-3 Portable offshore units, April 2016 (Amended May 2022)  
ISO 10855-2:2024 Offshore containers and associated lifting sets – Part 2: Design, manufacture and marking of lifting sets  
IMO/MSC Circular 860  
EN 13414-1 Wire rope slings

Application:  
1, 2, 3, and 4 leg lifting sets, with forerunner where fitted, for lifting of:  
- offshore containers, with maximum gross mass 0 to 25000 kg,  
- portable offshore units

Issued at **Aberdeen** on **2025-10-03**

This Certificate is valid until **2028-08-14**.  
DNV local unit: **Abu Dhabi**

Approval Engineer: **Elisabeth Legg**

for DNV  
Digitally signed by Ward,  
Brendan  
Location: DNV Aberdeen, UK  
Contact Info: DNV UK Limited  
Date: 2025.10.03  
13:42:30+01'00'



This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.  
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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## > DNV Type-Approved Lifting Set

### Determination of Working Load Limit



| Table 8-1 Determination of Working Load Limit |                    |                                                |
|-----------------------------------------------|--------------------|------------------------------------------------|
| Rating(kg)                                    | Enhancement factor | Minimum required Working Load Limit(WLLmin)(t) |
| 500                                           | -                  | 7.00                                           |
| 1000                                          | -                  | 7.00                                           |
| 1500                                          | -                  | 7.00                                           |
| 2000                                          | 3.500              | 7.00                                           |
| 2500                                          | 2.880              | 7.20                                           |
| 3000                                          | 2.600              | 7.80                                           |
| 3500                                          | 2.403              | 8.41                                           |
| 4000                                          | 2.207              | 8.83                                           |
| 4500                                          | 2.067              | 9.30                                           |
| 5000                                          | 1.960              | 9.80                                           |
| 5500                                          | 1.873              | 10.30                                          |
| 6000                                          | 1.766              | 10.60                                          |
| 6500                                          | 1.733              | 11.26                                          |
| 7000                                          | 1.700              | 11.90                                          |
| 7500                                          | 1.666              | 12.50                                          |
| 8000                                          | 1.633              | 13.07                                          |
| 8500                                          | 1.600              | 13.60                                          |
| 9000                                          | 1.567              | 14.10                                          |
| 9500                                          | 1.543              | 14.57                                          |
| 10000                                         | 1.501              | 15.01                                          |
| 10500                                         | 1.479              | 15.53                                          |
| 11000                                         | 1.457              | 16.02                                          |
| 11500                                         | 1.435              | 16.50                                          |
| 12000                                         | 1.413              | 16.95                                          |
| 12500                                         | 1.391              | 17.38                                          |
| 13000                                         | 1.368              | 17.79                                          |
| 13500                                         | 1.346              | 18.18                                          |
| 14000                                         | 1.324              | 18.54                                          |
| 14500                                         | 1.302              | 18.88                                          |
| 15000                                         | 1.280              | 19.20                                          |
| 15500                                         | 1.267              | 19.64                                          |
| 16000                                         | 1.254              | 20.06                                          |
| 16500                                         | 1.240              | 20.47                                          |
| 17000                                         | 1.227              | 20.86                                          |
| 17500                                         | 1.214              | 21.24                                          |
| 18000                                         | 1.201              | 21.61                                          |
| 18500                                         | 1.188              | 21.97                                          |
| 19000                                         | 1.174              | 22.31                                          |
| 19500                                         | 1.161              | 22.64                                          |
| 20000                                         | 1.148              | 22.96                                          |
| 20500                                         | 1.143              | 23.44                                          |
| 21000                                         | 1.139              | 23.92                                          |
| 21500                                         | 1.135              | 24.39                                          |
| 22000                                         | 1.130              | 24.86                                          |
| 22500                                         | 1.126              | 25.33                                          |
| 23000                                         | 1.121              | 25.79                                          |
| 23500                                         | 1.117              | 26.25                                          |
| 24000                                         | 1.112              | 26.70                                          |
| 24500                                         | 1.108              | 27.15                                          |
| 25000                                         | 1.104              | 27.59                                          |



## **Chain Slings & Accessories**

Grade 8,10 & 12

## > User Information

### 1.) **Improper use**

of chain slings poses a risk to people and property. People in close proximity to the load are at particular risk. Beware of suspended loads.



**Only use different chain grades and chains from different manufacturers following consultation with the respective manufacturer.**

**Assembly must only be conducted by only suitably qualified persons!**

Chains, chain components and lanyards **must** have manufacturer markings.

### 2.) **Before every use:**

- a.) Conduct a careful visual inspection of the chain slings to check for damage and a safe usage condition.
- b.) Read the user information and comply with this during use.

### 3.) **The product must not be used in the event of:**



- a.) Mechanical damage due to crushing, indentations, crack formation or breakage.
- b.) Deformation caused by bending, twisting, or impressions.
- c.) Extension of the entire chain or a chain link interior by 5% or more.
- d.) Reduction of the nominal thickness at any point by more than 10%.
- e.) Damage to securing devices and cross-section reductions of 5% or more in the case of eyelets, bolts and brackets on shackles and hooks.
- f.) Bluish discolouration of the grade 8 chain due to heat (welding).
- g.) Expansion of the hook by more than 10%.
- h.) Faulty hook locking mechanism.

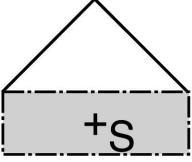
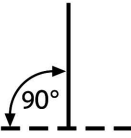
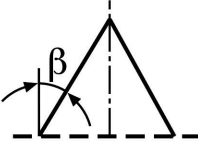
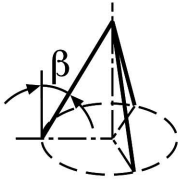
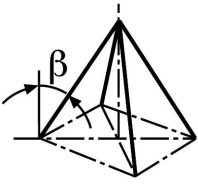
### 4.) **Determine the load weight and centre of gravity:**

- a.) The working load limit (WLL) of the chain sling must not be exceeded
- b.) The angle of inclination of each leg must not exceed 60° (**Fig. 1**).
- c.) Hang unused chain legs in the suspension head.

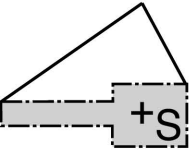
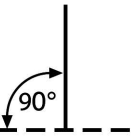
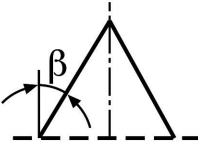
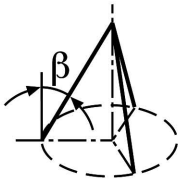
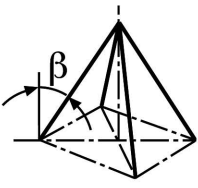
## > User Information

**Fig. 1**

### Symmetrical load

|                                                                                   | 1 leg                                                                             | 2 legs                                                                            | 3 and 4 legs                                                                      |                                                                                    |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |  |  |  |
| Angle of inclin. $\beta$                                                          | 0°                                                                                | 0°-45°    45°-60°                                                                 | 0°-45°                                                                            | 45°-60°                                                                            |
| Load factor                                                                       | 1                                                                                 | 1.4    1.0                                                                        | 2.1                                                                               | 1.5                                                                                |

### Non-symmetrical load

|                                                                                    | 1 leg                                                                              | 2 leg                                                                              | 3 and 4 legs                                                                       |                                                                                     |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |  |  |
| Angle of inclin. $\beta$                                                           | 0°                                                                                 | 0°-45°    45°-60°                                                                  | 0°-45°                                                                             | 45°-60°                                                                             |
| Load factor                                                                        | 1                                                                                  | 1    1                                                                             | 1.5                                                                                | 1                                                                                   |

**5.) Anchorage points:** only use suitable anchorage points of a sufficient size.

**6.) Shortening:** shortening is only permitted using shortening hooks or claws. **Comply with BS EN 1677 - 1** When using shortening hooks or claws, always ensure there is a consistent line of force.  
Improper use can lead to falling loads.

**7.) Identification tags:** chain slings without identification tags or with illegible identification tags must not be used.

## > User Information

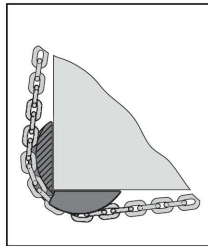
### 8.) Safety instructions:

- a.) Untwist twisted chains before lifting.
- b.) Do not knot chains or move them over sharp edges (**Fig. 2**).  
(Chain radius less than the chain's nominal thickness). Protect the chain using an edge guard or buffers (**Fig. 3**).
- c.) Attached loads must not be welded **without** an isolating connection!
- d.) Suspension rings must be freely movable on the crane hook (**Fig. 4**).
- e.) Strain must not be placed on the narrow ends of hooks.
- f.) The load must only be hoisted from the base of the hook and in the direction of the load.
- g.) Three adjacent wire breaks on the outer wires of a strand or wire break nests.
- h.) Chain components must not be subjected to bending stresses.
- i.) Basket hitch slinging is only permitted if the chains are unable to slip (**Fig. 5**).
- j.) Do not grasp under the strapping.

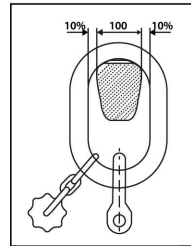
**Fig. 2**



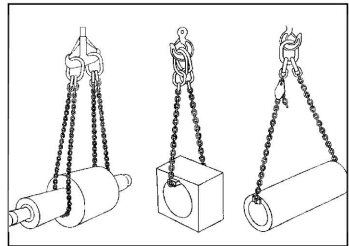
**Fig. 3**



**Fig. 4**



**Fig. 5**



### 9.) Deviations from normal operating conditions

require reductions to the working load limit, for example, in the case of

- a.) Non-symmetrical (uneven) loads (reduced load lifting factors).
- b.) Using a choker hitch (20% reduction in the working load limit), **Fig. 6**.
- c.) Use as a collar chain (**Fig. 7**).

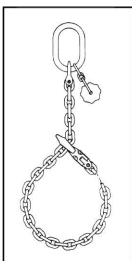
(Extract from BS EN 818-6)

As a general rule, the chain radius should be  $>2x$  the chain diameter.

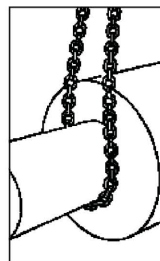
When hoisting a load with a chain directly on the support arms, the use of a support arm diameter of  $>3x$  the chain pitch is recommended.

If using a support arm diameter that is smaller than that recommended above, the working load limit must be reduced by 50%.

**Fig. 6** Lifting factor = 0.8



**Fig. 7**





## > User Information

d.) Use outside the following temperatures:

| WLL          | 100%            | 90%                 | 60%                 |
|--------------|-----------------|---------------------|---------------------|
| Grade 8      | -40°C to +200°C | Over 200°C to 300°C | Over 300°C to 400°C |
| WLL          | 100%            | 90%                 | 60%                 |
| Grade 10     | -40°C to +200°C | Over 200°C to 300°C | Over 300°C to 380°C |
| Grade 12 ICE | -60°C to +200°C | Over 200°C to 250°C | Over 250°C to 300°C |

- e.) On usage with more than 20,000 load changes and high dynamic stresses, increase by at least one chain nominal thickness (consultation with Carl Stahl).  
 f.) If chain slings are used for lifting magnets (battery or electrical magnets), one nominal size larger must be used for safety reasons.

**See the user information on lifting magnets.**

### 10.) Ban on the use of chain slings

The use of chain slings with grades 8, 10 and 12 is prohibited in acids, lyes, pickling plants, galvanising plants and other similar (corrosive) plants due to non-visible pitting corrosion in the joints as well as embrittlement or the formation of cracks (hydrogen embrittlement).

**For uses in such areas, use grade 6 chain slings made from stainless steel.**

Please note the lower nominal working load limits for grade 6 chain slings. These can also be used in explosion-proof environments.

### 11.) Chain record card (supplied with the delivery)

The chain record card shows the product specific information of the chain sling. The information includes the initial registration, inspection dates and repair and maintenance activities. In the case of repairs, the reason for the measure must be specified. The entries in the chain record card provide information about the user's ongoing monitoring measures during the use of the chain slings.

This is much needed by the user as evidence for the industrial inspectorate/employers' insurance association to demonstrate compliance with occupational health and safety/accident prevention measures (EU Machinery Directive).

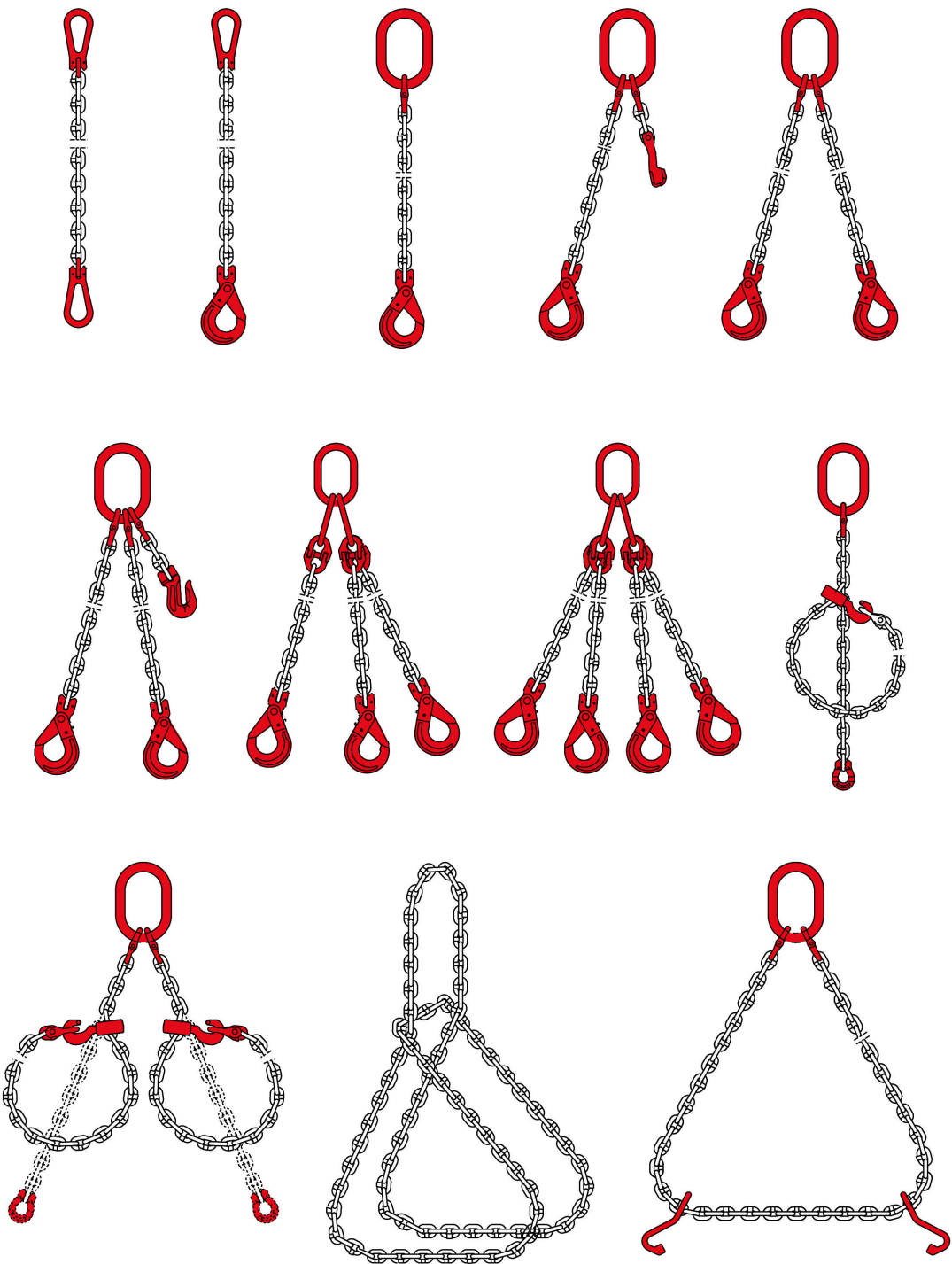
### 12.) Chain sling inspections and repair

- Only to be conducted by qualified persons
- After at least six months.
- Chains must be inspected at least every 6 months to ensure they are free from cracks
- Implementation at or by Carl Stahl

**In the case of the continual use of chain slings, the inspection intervals must be shortened in accordance with the workplace safety ordinance!**

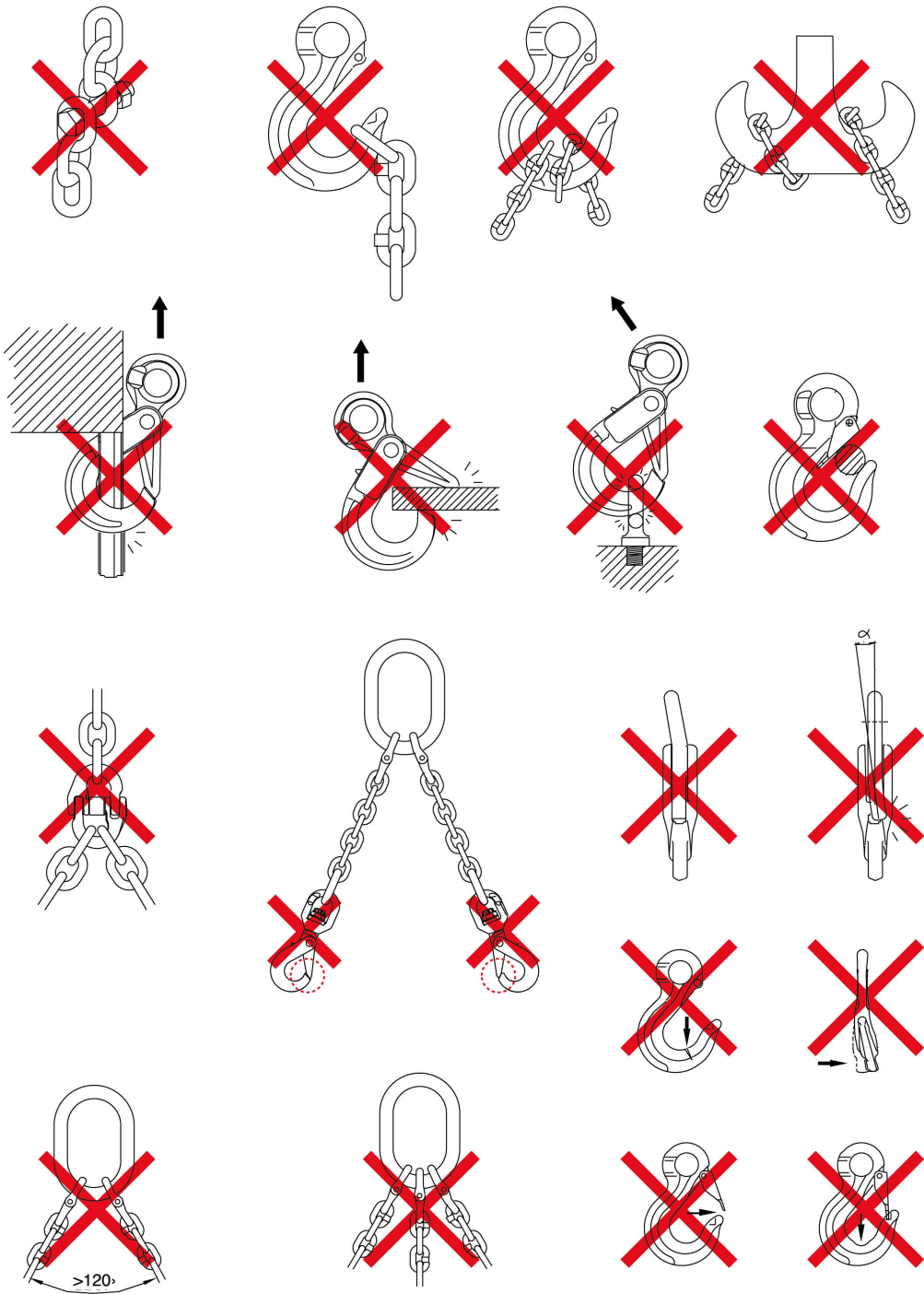
> Chain Sling Designs

Examples Of Chain Slings



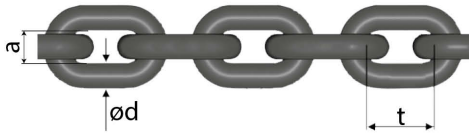
> Chain Forbidden Use

Incorrect Use



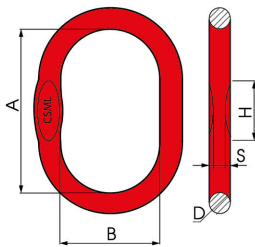
## > Accessories: Chain, Master Links & Assemblies - Grade 80

### 6000. Sling chain BS EN 818-2



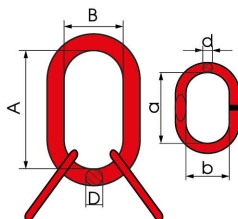
| Size | Dimensions        |                  | WLL<br>kg | Weight<br>kg/m | Item No.   |
|------|-------------------|------------------|-----------|----------------|------------|
|      | inner length<br>t | inner width<br>a |           |                |            |
| 7    | 21                | 9.1              | 1500      | 0.9            | 6002.00.07 |
| 8    | 24                | 10.4             | 2000      | 1.4            | 6002.00.08 |
| 10   | 30                | 13               | 3150      | 2.2            | 6002.00.10 |
| 13   | 39                | 16.9             | 5300      | 3.7            | 6002.00.13 |
| 16   | 48                | 20.8             | 8000      | 5.7            | 6002.00.16 |
| 20   | 60                | 26               | 12500     | 8.75           | 6002.00.20 |
| 22   | 66                | 28.6             | 15000     | 10.9           | 6002.00.22 |
| 26   | 78                | 33.8             | 21200     | 15.10          | 6002.00.26 |
| 32   | 96                | 44               | 31500     | 22.85          | 6002.00.32 |

### 6020. Master Links BS EN 1677 - 2



| Code    | Weight<br>(Kg) | WLL<br>(t) | A   | B   | D    | S  | H  | Item No.   |
|---------|----------------|------------|-----|-----|------|----|----|------------|
| CS16ML  | 0.6            | 4.1        | 120 | 70  | 16   | 9  | 70 | 6020.00.16 |
| CS20ML  | 1.1            | 6.7        | 150 | 80  | 20   | 11 | 50 | 6020.00.20 |
| CS20MLL | 1.25           | 6.5        | 170 | 90  | 20   | 11 | 70 | 6020.10.20 |
| CS22ML  | 1.53           | 8.2        | 170 | 90  | 22   | 11 | 70 | 6020.00.22 |
| CS22MLL | 1.83           | 5.8        | 270 | 140 | 22   | 12 | 70 | 6020.10.22 |
| CS25ML  | 2.21           | 10.7       | 190 | 100 | 25   | 12 | 80 | 6020.00.25 |
| CS28ML  | 3.06           | 12.9       | 210 | 110 | 28   | 13 | 80 | 6020.00.28 |
| CS28MLL | 3.81           | 11.8       | 270 | 140 | 28   | 15 | 70 | 6020.10.28 |
| CS32ML  | 5.05           | 17.1       | 270 | 140 | 32   | 15 | 70 | 6020.00.32 |
| CS38ML  | 7.3            | 28.1       | 270 | 140 | 38   | 17 | 55 | 6020.00.38 |
| CS38MLL | 10.78          | 19.1       | 420 | 220 | 38   | 20 | 55 | 6020.10.38 |
| CS45ML  | 12.2           | 38.3       | 320 | 170 | 45   | 20 | 60 | 6020.00.45 |
| CS45MLL | 18             | 27.6       | 470 | 250 | 45   | 25 | 60 | 6020.10.45 |
| CS50ML  | 17.65          | 45.0       | 380 | 200 | 50   | 24 | -  | 6020.00.50 |
| CS60ML  | 28.85          | 65.3       | 430 | 220 | 60   | -  | -  | 6020.00.60 |
| CS64ML  | 30.7           | 72.6       | 406 | 203 | 63.5 | -  | -  | 6020.00.64 |
| CS76ML  | 52             | 103        | 457 | 228 | 76.2 | -  | -  | 6020.00.76 |

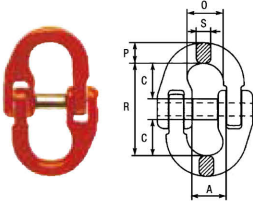
### 6030. Master Links Assembly



| Code    | Weight<br>(Kg) | WLL<br>(t) | A   | B   | D  | a   | b   | d  | Item No.   |
|---------|----------------|------------|-----|-----|----|-----|-----|----|------------|
| CS20QA  | 2.41           | 6.5        | 170 | 90  | 20 | 120 | 70  | 16 | 6030.00.20 |
| CS22QA  | 3.77           | 8.2        | 170 | 90  | 22 | 150 | 80  | 20 | 6030.00.22 |
| CS22QAL | 3.3            | 5.8        | 270 | 140 | 22 | 150 | 75  | 16 | 6030.10.22 |
| CS25QA  | 4.45           | 10.7       | 190 | 100 | 25 | 150 | 80  | 20 | 6030.00.25 |
| CS28QA  | 6.12           | 12.9       | 210 | 110 | 28 | 170 | 90  | 22 | 6030.00.28 |
| CS28QAL | 7.2            | 11.8       | 270 | 140 | 28 | 150 | 70  | 20 | 6030.10.28 |
| CS32QA  | 9.47           | 17.1       | 270 | 140 | 32 | 190 | 100 | 25 | 6030.00.32 |
| CS38QA  | 17.4           | 28.1       | 270 | 140 | 38 | 270 | 140 | 32 | 6030.00.38 |
| CS38QAL | 15             | 17.0       | 420 | 220 | 38 | 180 | 100 | 25 | 6030.10.38 |
| CS45QA  | 26.76          | 38.3       | 320 | 170 | 45 | 270 | 140 | 38 | 6030.00.45 |
| CS50QA  | 33.2           | 45.0       | 380 | 200 | 50 | 270 | 140 | 38 | 6030.00.50 |
| CS60QA  | 65.2           | 65.3       | 430 | 220 | 50 | 380 | 200 | 50 | 6030.00.60 |

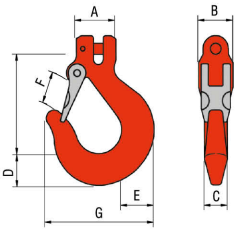
## > Accessories: Grade 80

### 6556. Chain connector



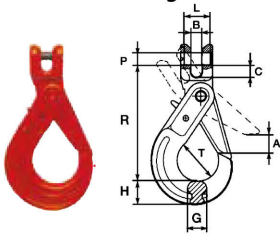
| Nominal chain size in mm | Load capacity in kg | Dimensions in mm |      |      |      |      |      | Weight in kg/pce | Item no.   |
|--------------------------|---------------------|------------------|------|------|------|------|------|------------------|------------|
|                          |                     | A                | C    | O    | R    | P    | S    |                  |            |
| 7                        | 1500                | 17.8             | 20   | 20.5 | 50.5 | 10.2 | 9    | 0.10             | 6556.00.15 |
| 8                        | 2000                | 19               | 25.5 | 23.5 | 62   | 11.5 | 10   | 0.25             | 6556.00.20 |
| 10                       | 3150                | 23.8             | 30   | 27.5 | 72   | 12.6 | 12.6 | 0.35             | 6556.00.32 |
| 13                       | 5300                | 28               | 36   | 33.3 | 87.3 | 19   | 16.7 | 0.68             | 6556.00.50 |
| 16                       | 8000                | 34.3             | 40.5 | 39.5 | 103  | 20.6 | 20.6 | 1.10             | 6556.00.80 |
| 20                       | 12500               | 44               | 48   | 47   | 116  | 23   | 23   | 1.70             | 6556.01.25 |
| 22                       | 15500               | 49               | 51   | 55   | 133  | 26.5 | 26.5 | 2.20             | 6556.01.50 |
| 26                       | 21500               | 60               | 60   | 66   | 148  | 31.5 | 31.5 | 4.20             | 6556.02.00 |
| 32                       | 31500               | 80               | 77   | 86   | 190  | 40   | 32   | 7.19             | 6556.03.20 |

### 6550. Clevis hook with latch



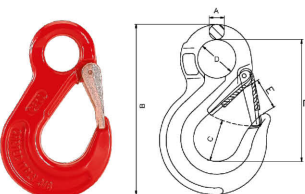
| Load capacity WLL in kg | Nominal chain size in mm | Dimensions in mm |    |    |    |    |    |     |     | Weight in kg/pce | Item no.   |
|-------------------------|--------------------------|------------------|----|----|----|----|----|-----|-----|------------------|------------|
|                         |                          | A                | B  | C  | D  | E  | F  | G   | T   |                  |            |
| 2000                    | 8                        | 38               | 28 | 20 | 28 | 31 | 30 | 98  | 97  | 0.76             | 6550.00.08 |
| 3150                    | 10                       | 46               | 36 | 26 | 35 | 38 | 35 | 122 | 108 | 1.39             | 6550.00.10 |
| 5300                    | 13                       | 58               | 46 | 30 | 37 | 48 | 40 | 139 | 126 | 2.38             | 6550.00.13 |
| 8000                    | 16                       | 67               | 56 | 36 | 49 | 58 | 48 | 164 | 155 | 4.05             | 6550.00.16 |
| 12500                   | 20                       | 78               | 49 | 36 | 77 | 48 | 71 | 47  | 190 | 8.00             | 6550.00.20 |
| 15500                   | 22                       | 91               | 48 | 50 | 68 | 75 | 70 | 230 | 210 | 10.02            | 6550.00.22 |
| 21500                   | 26                       | 116              | 67 | 59 | 73 | 83 | 99 | 260 | 260 | 13.00            | 6550.00.26 |

### 6554. Self-locking hook



| Load capacity WLL in kg | Nominal chain size in mm | Dimensions in mm |    |    |    |    |     |     |         | Weight in kg/pce | Item no.   |
|-------------------------|--------------------------|------------------|----|----|----|----|-----|-----|---------|------------------|------------|
|                         |                          | A                | B  | C  | G  | H  | R   | T   | PxL     |                  |            |
| 2000                    | 7-8                      | 34               | 9  | 10 | 20 | 26 | 123 | 43  | 9x22.5  | 0.934            | 6554.01.08 |
| 3150                    | 10                       | 45               | 12 | 14 | 25 | 30 | 143 | 56  | 13x31.5 | 1.580            | 6554.01.10 |
| 5300                    | 13                       | 51               | 15 | 17 | 35 | 40 | 180 | 69  | 16x42   | 3.200            | 6554.01.13 |
| 8000                    | 16                       | 60               | 19 | 19 | 36 | 50 | 215 | 80  | 21x51.5 | 5.950            | 6554.01.16 |
| 12500                   | 20                       | 70               | 23 | 26 | 60 | 67 | 253 | 90  | 24x73   | 9.800            | 6554.01.20 |
| 15500                   | 22                       | 80               | 26 | 32 | 62 | 70 | 287 | 100 | 26x72   | 14.400           | 6554.01.22 |

### 5160. Eye sling hook with latch

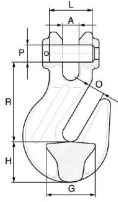


| WLL/T | Size in mm | A  | E  | C  | D  | L     | B   | WEIGHT/KG | ITEM NO.      |
|-------|------------|----|----|----|----|-------|-----|-----------|---------------|
| 2.0   | 7-8        | 11 | 30 | 26 | 28 | 98.5  | 133 | 0.4       | 5160CSESH7-8  |
| 3.15  | 10         | 15 | 34 | 39 | 38 | 120   | 167 | 0.9       | 5160CSESH10-8 |
| 5.3   | 13         | 19 | 39 | 54 | 43 | 152   | 213 | 1.83      | 5160CSESH13-8 |
| 8     | 16         | 23 | 46 | 64 | 50 | 183.5 | 255 | 3.2       | 5160CSESH16-8 |
| 12.5  | 20         | 24 | 48 | 80 | 62 | 219   | 305 | 5.8       | 5160CSESH20-8 |
| 15    | 22         | 32 | 71 | 80 | 62 | 241   | 348 | 9.2       | 5160CSESH22-8 |
| 21.2  | 26         | 35 | 81 | 82 | 64 | 279   | 394 | 13        | 5160CSESH26-8 |



## Accessories: Grade 80

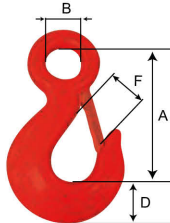
### 5140. Shortening Grab Hook



| Chain Dia<br>mm | A<br>mm | G<br>mm | H<br>mm | O<br>mm | R<br>mm | P x L<br>mm |
|-----------------|---------|---------|---------|---------|---------|-------------|
| 7/8             | 9       | 30      | 24      | 10      | 50      | 9 x 23      |
| 10              | 13      | 44      | 31      | 13      | 72      | 13 x 31.5   |
| 13              | 17      | 53      | 38      | 17      | 88      | 16 x 42     |
| 16              | 21      | 64      | 44      | 20      | 102     | 21 x 51.5   |
| 20              | 24      | 85      | 53      | 24      | 117     | 24 x 61.5   |
| 22              | 26      | 97      | 62      | 27      | 139     | 26 x 72     |

### 5160. Safety Eye Hook

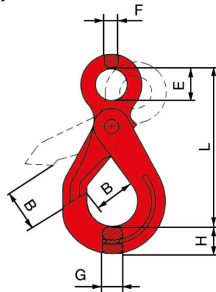
- Grade 8, DIN EN 1677-2
- Safety latch galvanised
- Finish: painted red



| Load capacity<br>WLL<br>in kg | Nominal chain<br>size in mm | Dimensions<br>in mm |    |    |    | Weight<br>in kg/pce | Item no.    |
|-------------------------------|-----------------------------|---------------------|----|----|----|---------------------|-------------|
|                               |                             | A                   | B  | D  | F  |                     |             |
| 1000                          | 6                           | 80                  | 19 | 21 | 25 | 0.25                | 5180.00.10  |
| 1500                          | 7                           | 93                  | 23 | 22 | 27 | 0.4                 | 5180.00.15  |
| 2000                          | 8                           | 103                 | 28 | 28 | 26 | 0.65                | 5180.00.20  |
| 3000                          | 10                          | 118                 | 31 | 30 | 31 | 0.8                 | 5180.00.30  |
| 5000                          | 13                          | 146                 | 39 | 41 | 34 | 1.65                | 5180.00.50  |
| 7000                          | 16                          | 188                 | 50 | 49 | 49 | 3.4                 | 5180.00.70  |
| 11000                         | 20                          | 226                 | 62 | 64 | 60 | 5.35                | 5180.00.110 |
| 15000                         | 22                          | 256                 | 72 | 70 | 68 | 6.7                 | 5180.00.150 |

### 5150. Self-locking Eye Hook CRO

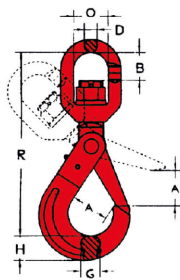
- Locks automatically under load
- Finish: painted red



| Load capacity<br>WLL<br>in kg | Nominal chain<br>size | Dimensions in mm |    |    |    |    |    | Weight<br>in kg/pce | Item no.   |
|-------------------------------|-----------------------|------------------|----|----|----|----|----|---------------------|------------|
|                               |                       | L                | B  | E  | F  | G  | H  |                     |            |
| 1120                          | 6                     | 109              | 28 | 21 | 11 | 16 | 21 | 0.5                 | 5150.00.10 |
| 2000                          | 7/8                   | 135              | 34 | 25 | 12 | 20 | 26 | 0.9                 | 5150.00.20 |
| 3150                          | 10                    | 168              | 45 | 33 | 16 | 25 | 30 | 1.6                 | 5150.00.32 |
| 5300                          | 13                    | 205              | 51 | 40 | 20 | 35 | 40 | 3.25                | 5150.00.50 |
| 8000                          | 16                    | 251              | 60 | 50 | 27 | 36 | 50 | 6.0                 | 5150.00.80 |
| 12500                         | 18                    | 290              | 70 | 60 | 30 | 60 | 67 | 9.8                 | 5150.01.20 |
| 15500                         | 22                    | 322              | 80 | 70 | 32 | 62 | 70 | 14.4                | 5150.01.50 |

### 5190. Self-locking Swivel Hook CRG

- Locks automatically under load
- Finish: painted red



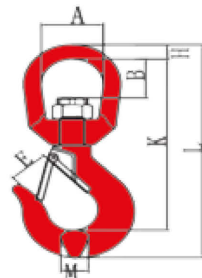
| Load capacity<br>WLL<br>in kg | Nominal chain<br>size | Dimensions in mm |    |    |    |    |    |    | Weight<br>in kg/pce | Item no.   |
|-------------------------------|-----------------------|------------------|----|----|----|----|----|----|---------------------|------------|
|                               |                       | R                | A  | B  | O  | D  | G  | H  |                     |            |
| 1120                          | 6                     | 149              | 28 | 23 | 33 | 11 | 15 | 21 | 0.6                 | 5190.00.10 |
| 2000                          | 7/8                   | 183              | 37 | 27 | 36 | 12 | 17 | 23 | 1.1                 | 5190.00.20 |
| 3150                          | 10                    | 218              | 44 | 36 | 42 | 15 | 21 | 30 | 2.0                 | 5190.00.32 |
| 5300                          | 13                    | 280              | 54 | 47 | 48 | 19 | 30 | 39 | 3.8                 | 5190.00.50 |
| 8000                          | 16                    | 343              | 62 | 67 | 61 | 22 | 37 | 49 | 7.1                 | 5190.00.80 |



Not suitable for rotation under load

### 5170. Safety Swivel Hook with latch

- Material: SAE 8620
- Forged load capacity details and manufacturer
- With deformation indicators
- Finish: painted gold



| Size (mm) | WILL (t) | BL(t) | Dimensions (mm) |      |    |      |       |       |      | Approx N.W. (kg/pc) |
|-----------|----------|-------|-----------------|------|----|------|-------|-------|------|---------------------|
|           |          |       | A               | E    | B  | H    | K     | L     | M    |                     |
| 7/8 - 8   | 2        | 8     | 42              | 21.5 | 35 | 15.8 | 150   | 192   | 21   | 1.02                |
| 13 - 8    | 5.3      | 21.2  | 48              | 32.5 | 39 | 18   | 191   | 246   | 31   | 3.6                 |
| 16 - 8    | 8        | 32    | 62              | 43   | 51 | 25   | 243.5 | 313   | 34   | 4.66                |
| 20 - 8    | 12.5     | 50    | 68              | 49.5 | 53 | 28.5 | 276.5 | 363.5 | 41.5 | 7.4                 |



Not suitable for rotation under load

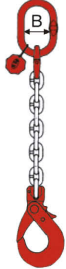


## > SLINGS: Chain Slings Grade 80

Standard : BS EN 818 - 4 , ASME B30.9

6108.

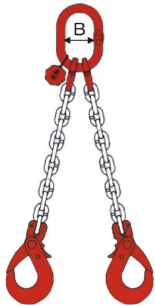
Chain sling, 1-leg, with clevis self locking hook



| Chain size<br>in mm | Load capacity 1-leg<br>single direct in t | Item no.   | Grade 100<br>load capacity | Grade 100<br>Item No. | Grade 120<br>Load Capacity | Grade 120<br>Item No. |
|---------------------|-------------------------------------------|------------|----------------------------|-----------------------|----------------------------|-----------------------|
| 7                   | 1.5                                       | 6108.00.07 | -                          | -                     | -                          | -                     |
| 8                   | 2                                         | 6108.00.08 | 2.5                        | 6108.00.08.100        | 3                          | 6108.00.08.120        |
| 10                  | 3.15                                      | 6108.00.10 | 4                          | 6108.00.10.100        | 5                          | 6108.00.10.120        |
| 13                  | 5.3                                       | 6108.00.13 | 6.7                        | 6108.00.13.100        | 8                          | 6108.00.13.120        |
| 16                  | 8                                         | 6108.00.16 | 10                         | 6108.00.16.100        | 12.5                       | 6108.00.16.120        |
| 20                  | 12.5                                      | 6108.00.20 | 16                         | 6108.00.20.100        | -                          | -                     |
| 22                  | 15                                        | 6108.00.22 | 20                         | 6108.00.22.100        | -                          | -                     |
| 26                  | 21.5                                      | 6108.00.26 | -                          | -                     | -                          | -                     |

6208.

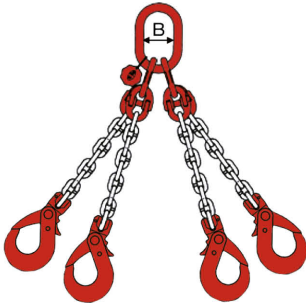
Chain sling, 2-leg, with clevis self locking hook



| Chain size<br>in mm | Load capacity 2-leg<br>single direct in t<br>0-90° | Item no.   | Grade 100<br>load capacity | Grade 100<br>Item No. | Grade 120<br>Load Capacity | Grade 120<br>Item No. |
|---------------------|----------------------------------------------------|------------|----------------------------|-----------------------|----------------------------|-----------------------|
| 7                   | 2.1                                                | 6208.00.07 | -                          | -                     | -                          | -                     |
| 8                   | 2.8                                                | 6208.00.08 | 3.5                        | 6208.00.08.100        | 4.2                        | 6208.00.08.120        |
| 10                  | 4.4                                                | 6208.00.10 | 5.6                        | 6208.00.10.100        | 7                          | 6208.00.10.120        |
| 13                  | 7.42                                               | 6208.00.13 | 9.38                       | 6208.00.13.100        | 11.2                       | 6208.00.13.120        |
| 16                  | 11.2                                               | 6208.00.16 | 14                         | 6208.00.16.100        | 17.5                       | 6208.00.16.120        |
| 20                  | 17.5                                               | 6208.00.20 | 22.4                       | 6208.00.20.100        | -                          | -                     |
| 22                  | 21.0                                               | 6208.00.22 | 28                         | 6208.00.22.100        | -                          | -                     |
| 26                  | 30                                                 | 6208.00.26 | -                          | -                     | -                          | -                     |

6408.

Chain sling, 4-leg with clevis self lo hook



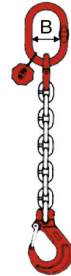
| Chain size<br>in mm | Load capacity 4-leg<br>single direct in t<br>0-90° | Item no.   | Grade 100<br>load capacity | Grade 100<br>Item No. | Grade 120<br>Load Capacity | Grade 120<br>Item No. |
|---------------------|----------------------------------------------------|------------|----------------------------|-----------------------|----------------------------|-----------------------|
| 7                   | 3.1                                                | 6408.00.07 | -                          | -                     | -                          | -                     |
| 8                   | 4.20                                               | 6408.00.08 | 5.25                       | 6408.00.08.100        | 6.3                        | 6408.00.08.120        |
| 10                  | 6.61                                               | 6408.00.10 | 8.4                        | 6408.00.10.100        | 10.5                       | 6408.00.10.120        |
| 13                  | 11.3                                               | 6408.00.13 | 14                         | 6408.00.13.100        | 16.8                       | 6408.00.13.120        |
| 16                  | 16.8                                               | 6408.00.16 | 21                         | 6408.00.16.100        | 26.25                      | 6408.00.16.120        |
| 20                  | 26.25                                              | 6408.00.20 | 33.6                       | 6408.00.20.100        | -                          | -                     |
| 22                  | 31.5                                               | 6408.00.22 | 42                         | 6408.00.22.100        | -                          | -                     |
| 26                  | 45                                                 | 6408.00.26 | -                          | -                     | -                          | -                     |

## > SLINGS: Chain Slings Grade 80

6101.

Chain sling, 1-leg, with safety hook with latch

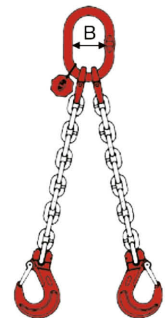
| Chain size<br>in mm | Load capacity 1-leg<br>single direct in t | Item no.   | Grade 100<br>load capacity | Grade 100<br>Item No. | Grade 120<br>Load Capacity | Grade 120<br>Item No. |
|---------------------|-------------------------------------------|------------|----------------------------|-----------------------|----------------------------|-----------------------|
| 7                   | 1.5                                       | 6101.00.07 | -                          | -                     | -                          | -                     |
| 8                   | 2                                         | 6101.00.08 | 2.5                        | 6101.00.08.100        | 3                          | 6101.00.08.120        |
| 10                  | 3.15                                      | 6101.00.10 | 4                          | 6101.00.10.100        | 5                          | 6101.00.10.120        |
| 13                  | 5.3                                       | 6101.00.13 | 6.7                        | 6101.00.13.100        | 8                          | 6101.00.13.120        |
| 16                  | 8                                         | 6101.00.16 | 10                         | 6101.00.16.100        | 12.5                       | 6101.00.16.120        |
| 20                  | 12.5                                      | 6101.00.20 | 16                         | 6101.00.20.100        | -                          | -                     |
| 22                  | 15                                        | 6101.00.22 | 20                         | 6101.00.22.100        | -                          | -                     |
| 26                  | 21.5                                      | 6101.00.26 | -                          | -                     | -                          | -                     |



6201.

Chain sling, 2-leg, with safety hook with latch

| Chain size<br>in mm | Load capacity 2-leg<br>single direct in t<br>0-90° | Item no.   | Grade 100<br>load capacity | Grade 100<br>Item No. | Grade 120<br>Load Capacity | Grade 120<br>Item No. |
|---------------------|----------------------------------------------------|------------|----------------------------|-----------------------|----------------------------|-----------------------|
| 7                   | 2.1                                                | 6201.00.07 | -                          | -                     | -                          | -                     |
| 8                   | 2.8                                                | 6201.00.08 | 3.5                        | 6201.00.08.100        | 4.2                        | 6201.00.08.120        |
| 10                  | 4.4                                                | 6201.00.10 | 5.6                        | 6201.00.10.100        | 7                          | 6201.00.10.120        |
| 13                  | 7.42                                               | 6201.00.13 | 9.38                       | 6201.00.13.100        | 11.2                       | 6201.00.13.120        |
| 16                  | 11.2                                               | 6201.00.16 | 14                         | 6201.00.16.100        | 17.5                       | 6201.00.16.120        |
| 20                  | 17.5                                               | 6201.00.20 | 22.4                       | 6201.00.20.100        | -                          | -                     |
| 22                  | 21.0                                               | 6201.00.22 | 28                         | 6201.00.22.100        | -                          | -                     |
| 26                  | 30                                                 | 6201.00.26 | -                          | -                     | -                          | -                     |



6401.

Chain sling, 4-leg, with safety hook with latch

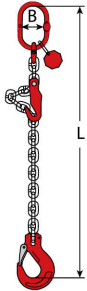
| Chain size<br>in mm | Load capacity 4-leg<br>single direct in t<br>0-90° | Item no.   | Grade 100<br>load capacity | Grade 100<br>Item No. | Grade 120<br>Load Capacity | Grade 120<br>Item No. |
|---------------------|----------------------------------------------------|------------|----------------------------|-----------------------|----------------------------|-----------------------|
| 7                   | 3.1                                                | 6401.00.07 | -                          | -                     | -                          | -                     |
| 8                   | 4.20                                               | 6401.00.08 | 5.25                       | 6401.00.08.100        | 6.3                        | 6401.00.08.120        |
| 10                  | 6.61                                               | 6401.00.10 | 8.4                        | 6401.00.10.100        | 10.5                       | 6401.00.10.120        |
| 13                  | 11.3                                               | 6401.00.13 | 14                         | 6401.00.13.100        | 16.8                       | 6401.00.13.120        |
| 16                  | 16.8                                               | 6401.00.16 | 21                         | 6401.00.16.100        | 26.25                      | 6401.00.16.120        |
| 20                  | 26.25                                              | 6401.00.20 | 33.6                       | 6401.00.20.100        | -                          | -                     |
| 22                  | 31.5                                               | 6401.00.22 | 42                         | 6401.00.22.100        | -                          | -                     |
| 26                  | 45                                                 | 6401.00.26 | -                          | -                     | -                          | -                     |



## > SLINGS: Chain Slings Grade 80

### 6101.01.

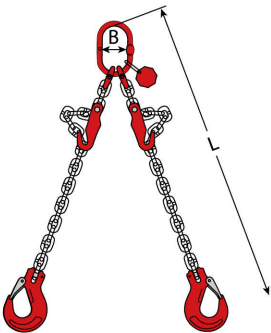
Chain sling, 1-leg, with shortening claw and safety hook with latch



| Chain size<br>in mm | Load capacity 1-leg<br>single direct in t | Item no.   | Grade 100<br>load capacity | Grade 100<br>Item No. | Grade 120<br>Load Capacity | Grade 120<br>Item No. |
|---------------------|-------------------------------------------|------------|----------------------------|-----------------------|----------------------------|-----------------------|
| 7                   | 1.5                                       | 6101.01.07 | -                          | -                     | -                          | -                     |
| 8                   | 2                                         | 6101.01.08 | 2.5                        | 6101.01.08.100        | 3                          | 6101.01.08.120        |
| 10                  | 3.15                                      | 6101.01.10 | 4                          | 6101.01.10.100        | 5                          | 6101.01.10.120        |
| 13                  | 5.3                                       | 6101.01.13 | 6.7                        | 6101.01.13.100        | 8                          | 6101.01.13.120        |
| 16                  | 8                                         | 6101.01.16 | 10                         | 6101.01.16.100        | 12.5                       | 6101.01.16.120        |
| 20                  | 12.5                                      | 6101.01.20 | 16                         | 6101.01.20.100        | -                          | -                     |
| 22                  | 15                                        | 6101.01.22 | 20                         | 6101.01.22.100        | -                          | -                     |
| 26                  | 21.5                                      | 6101.01.26 | -                          | -                     | -                          | -                     |

### 6201.02.

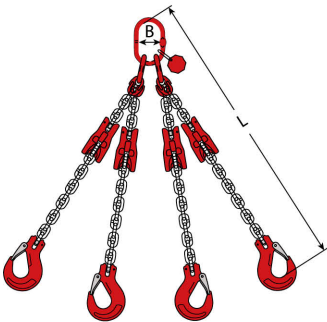
Chain sling, 2-leg, with shortening claw and safety hook with latch



| Chain size<br>in mm | Load capacity 2-leg<br>single direct in t<br>0-90° | Item no.   | Grade 100<br>load capacity | Grade 100<br>Item No. | Grade 120<br>Load Capacity | Grade 120<br>Item No. |
|---------------------|----------------------------------------------------|------------|----------------------------|-----------------------|----------------------------|-----------------------|
| 7                   | 2.1                                                | 6201.02.07 | -                          | -                     | -                          | -                     |
| 8                   | 2.8                                                | 6201.02.08 | 3.5                        | 6201.02.08.100        | 4.2                        | 6201.02.08.120        |
| 10                  | 4.4                                                | 6201.02.10 | 5.6                        | 6201.02.10.100        | 7                          | 6201.02.10.120        |
| 13                  | 7.42                                               | 6201.02.13 | 9.38                       | 6201.02.13.100        | 11.2                       | 6201.02.13.120        |
| 16                  | 11.2                                               | 6201.02.16 | 14                         | 6201.02.16.100        | 17.5                       | 6201.02.16.120        |
| 20                  | 17.5                                               | 6201.02.20 | 22.4                       | 6201.02.20.100        | -                          | -                     |
| 22                  | 21.0                                               | 6201.02.22 | 28                         | 6201.02.22.100        | -                          | -                     |
| 26                  | 30                                                 | 6201.02.26 | -                          | -                     | -                          | -                     |

### 6401.04.

Chain sling, 4-leg, with shortening claw and safety hook with latch



| Chain size<br>in mm | Load capacity 4-leg<br>single direct in t<br>0-90° | Item no.   | Grade 100<br>load capacity | Grade 100<br>Item No. | Grade 120<br>Load Capacity | Grade 120<br>Item No. |
|---------------------|----------------------------------------------------|------------|----------------------------|-----------------------|----------------------------|-----------------------|
| 7                   | 3.1                                                | 6401.04.07 | -                          | -                     | -                          | -                     |
| 8                   | 4.20                                               | 6401.04.08 | 5.25                       | 6401.04.08.100        | 6.3                        | 6401.04.08.120        |
| 10                  | 6.61                                               | 6401.04.10 | 8.4                        | 6401.04.10.100        | 10.5                       | 6401.04.10.120        |
| 13                  | 11.3                                               | 6401.04.13 | 14                         | 6401.04.13.100        | 16.8                       | 6401.04.13.120        |
| 16                  | 16.8                                               | 6401.04.16 | 21                         | 6401.04.16.100        | 26.25                      | 6401.04.16.120        |
| 20                  | 26.25                                              | 6401.04.20 | 33.6                       | 6401.04.20.100        | -                          | -                     |
| 22                  | 31.5                                               | 6401.04.22 | 42                         | 6401.04.22.100        | -                          | -                     |
| 26                  | 45                                                 | 6401.04.26 | -                          | -                     | -                          | -                     |

## > SLINGS: Chain Slings Grade 80

### 6108.01.

Chain sling, 1-leg, with shortening claw and clevis self locking hook

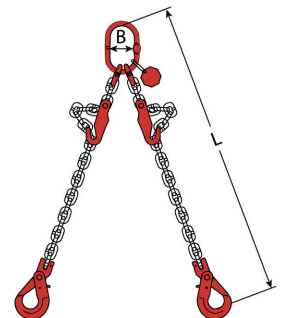
| Chain size<br>in mm | Load capacity 1-leg<br>single direct in t | Item no.   | Grade 100<br>load capacity | Grade 100<br>Item No. | Grade 120<br>Load Capacity | Grade 120<br>Item No. |
|---------------------|-------------------------------------------|------------|----------------------------|-----------------------|----------------------------|-----------------------|
| 7                   | 1.5                                       | 6108.01.07 | -                          | -                     | -                          | -                     |
| 8                   | 2                                         | 6108.01.08 | 2.5                        | 6108.01.08.100        | 3                          | 6108.01.08.120        |
| 10                  | 3.15                                      | 6108.01.10 | 4                          | 6108.01.10.100        | 5                          | 6108.01.10.120        |
| 13                  | 5.3                                       | 6108.01.13 | 6.7                        | 6108.01.13.100        | 8                          | 6108.01.13.120        |
| 16                  | 8                                         | 6108.01.16 | 10                         | 6108.01.16.100        | 12.5                       | 6108.01.16.120        |
| 20                  | 12.5                                      | 6108.01.20 | 16                         | 6108.01.20.100        | -                          | -                     |
| 22                  | 15                                        | 6108.01.22 | 20                         | 6108.01.22.100        | -                          | -                     |
| 26                  | 21.5                                      | 6108.01.26 | -                          | -                     | -                          | -                     |



### 6208.02.

Chain sling, 2-leg, with shortening claw and clevis self locking hook

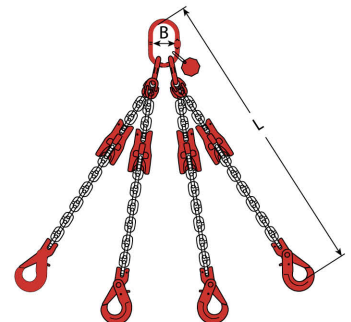
| Chain size<br>in mm | Load capacity 2-leg<br>single direct in t<br>0-90° | Item no.   | Grade 100<br>load capacity | Grade 100<br>Item No. | Grade 120<br>Load Capacity | Grade 120<br>Item No. |
|---------------------|----------------------------------------------------|------------|----------------------------|-----------------------|----------------------------|-----------------------|
| 7                   | 2.1                                                | 6208.02.07 | -                          | -                     | -                          | -                     |
| 8                   | 2.8                                                | 6208.02.08 | 3.5                        | 6208.02.08.100        | 4.2                        | 6208.02.08.120        |
| 10                  | 4.4                                                | 6208.02.10 | 5.6                        | 6208.02.10.100        | 7                          | 6208.02.10.120        |
| 13                  | 7.42                                               | 6208.02.13 | 9.38                       | 6208.02.13.100        | 11.2                       | 6208.02.13.120        |
| 16                  | 11.2                                               | 6208.02.16 | 14                         | 6208.02.16.100        | 17.5                       | 6208.02.16.120        |
| 20                  | 17.5                                               | 6208.02.20 | 22.4                       | 6208.02.20.100        | -                          | -                     |
| 22                  | 21.0                                               | 6208.02.22 | 28                         | 6208.02.22.100        | -                          | -                     |
| 26                  | 30                                                 | 6208.02.26 | -                          | -                     | -                          | -                     |



### 6408.04.

Chain sling, 4-leg, with shortening claw and clevis self locking hook

| Chain size<br>in mm | Load capacity 4-leg<br>single direct in t<br>0-90° | Item no.   | Grade 100<br>load capacity | Grade 100<br>Item No. | Grade 120<br>Load Capacity | Grade 120<br>Item No. |
|---------------------|----------------------------------------------------|------------|----------------------------|-----------------------|----------------------------|-----------------------|
| 7                   | 3.1                                                | 6408.04.07 | -                          | -                     | -                          | -                     |
| 8                   | 4.20                                               | 6408.04.08 | 5.25                       | 6408.04.08.100        | 6.3                        | 6408.04.08.120        |
| 10                  | 6.61                                               | 6408.04.10 | 8.4                        | 6408.04.10.100        | 10.5                       | 6408.04.10.120        |
| 13                  | 11.3                                               | 6408.04.13 | 14                         | 6408.04.13.100        | 16.8                       | 6408.04.13.120        |
| 16                  | 16.8                                               | 6408.04.16 | 21                         | 6408.04.16.100        | 26.25                      | 6408.04.16.120        |
| 20                  | 26.25                                              | 6408.04.20 | 33.6                       | 6408.04.20.100        | -                          | -                     |
| 22                  | 31.5                                               | 6408.04.22 | 42                         | 6408.04.22.100        | -                          | -                     |
| 26                  | 45                                                 | 6408.04.26 | -                          | -                     | -                          | -                     |

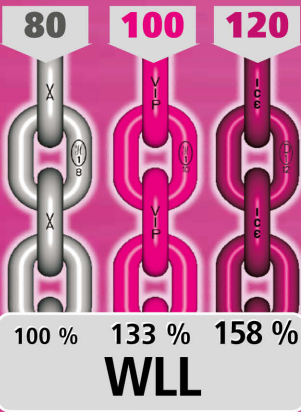


SLINGS: RUD Chain Slings

RUD-Quality in PINK!

Grade 80, Grade 100 (VIP) and WLL »in metric tons« of sling According to inclination angle at

RUD quality grades



| Methods of sling           |               | 1-leg                                                                   | 2-leg |          | 3-4 leg |                    |
|----------------------------|---------------|-------------------------------------------------------------------------|-------|----------|---------|--------------------|
|                            |               |                                                                         |       |          |         |                    |
| inclination angle: $\beta$ |               | 0                                                                       | 0-45° | > 45-60° | 0-45°   | > 45-60°           |
| load factor                |               | 1.0                                                                     | 1.4   | 1.0      | 2.1     | 1.5                |
| Diam. of chains            | Quality grade |                                                                         |       |          |         |                    |
| Ø 4                        | VIP           | 0.63                                                                    | 0.88  | 0.63     | 1.32    | 0.95               |
| Ø 6                        | Gk 8          | 1.12                                                                    | 1.6   | 1.12     | 2.36    | 1.7                |
|                            | VIP           | 1.5                                                                     | 2.1   | 1.5      | 3.15    | 2.25               |
|                            | ICE           | 1.8                                                                     | 2.5   | 1.8      | 3.75    | 2.7                |
| Ø 8                        | Gk 8          | 2.0                                                                     | 2.8   | 2.0      | 4.25    | 3.0                |
|                            | VIP           | 2.5                                                                     | 3.5   | 2.5      | 5.25    | 3.75               |
|                            | ICE           | 3.0                                                                     | 4.2   | 3.0      | 6.3     | 4.5                |
| Ø 10                       | Gk 8          | 3.15                                                                    | 4.25  | 3.15     | 6.7     | 4.75               |
|                            | VIP           | 4.0                                                                     | 5.6   | 4.0      | 8.4     | 6.0                |
|                            | ICE           | 5.0                                                                     | 7.0   | 5.0      | 10.5    | 7.5                |
| Ø 13                       | Gk 8          | 5.3                                                                     | 7.5   | 5.3      | 11.2    | 8.0                |
|                            | VIP           | 6.7                                                                     | 9.5   | 6.7      | 14.0    | 10.0               |
|                            | ICE           | 8.0                                                                     | 11.2  | 8.0      | 16.8    | 12.0               |
| Ø 16                       | Gk 8          | 8.0                                                                     | 11.2  | 8.0      | 17.0    | 11.8               |
|                            | VIP           | 10.0                                                                    | 14.0  | 10.0     | 21.0    | 15.0               |
|                            | ICE           | 12.5                                                                    | 17.0  | 12.5     | 26.5    | 19.0               |
| Ø 18                       | Gk 8          | 10.0                                                                    | 14.0  | 10.0     | 21.0    | 15.0               |
| Ø 20                       | Gk 8          | 12.5                                                                    | 17.0  | 12.5     | 26.5    | 19.0               |
|                            | VIP           | 16.0                                                                    | 22.4  | 16.0     | 33.6    | 24.0               |
| Ø 22                       | Gk 8          | 15.0                                                                    | 21.2  | 15.0     | 31.5    | 22.4               |
|                            | VIP           | 20.0                                                                    | 28.0  | 20.0     | 42.0    | 30.0               |
| Ø 26                       | Gk 8          | 21.2                                                                    | 30.0  | 21.2     | 45.0    | 31.5               |
| Ø 28                       | VIP           | 31.5                                                                    | 45.0  | 31.5     | 67.0*   | 47.5*              |
| Ø 32                       | Gk 8          | 31.5                                                                    | 45.0  | 31.5     | 67.0    | 47.5               |
|                            |               | Attention:<br>WLL has to be reduced by 50 % when load is unsymmetrical! |       |          |         | <br>Temperature °C |

Subject to technical modifications. \*Only 2 x 2-leg type available.



## SLINGS: RUD Chain Slings



# Grade 120 (ICE) chains symmetric loading

„Made in Germany“

| endless*<br>Basket sling chain<br>with choke hitch | Basket sling chain*                                                                                                        |                                                          |                                                          |                                                                                 | Choke hitch** |        |          |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|---------------------------------------------------------------------------------|---------------|--------|----------|
|                                                    | single                                                                                                                     |                                                          | double                                                   |                                                                                 | single        | double |          |
|                                                    | 0-45°                                                                                                                      | > 45-60°                                                 | 0-45°                                                    | > 45-60°                                                                        | 0°            | 0-45°  | > 45-60° |
| 1.6                                                | 1.1                                                                                                                        | 0.8                                                      | 1.7                                                      | 1.2                                                                             | 0.8           | 1.1    | 0.8      |
| 1.0                                                | 0.69                                                                                                                       | 0.5                                                      | 1.1                                                      | 0.75                                                                            | 0.5           | 0.69   | 0.5      |
| 1.8                                                | 1.2                                                                                                                        | 0.9                                                      | 1.9                                                      | 1.3                                                                             | 0.9           | 1.2    | 0.9      |
| 2.4                                                | 1.65                                                                                                                       | 1.2                                                      | 2.55                                                     | 1.8                                                                             | 1.2           | 1.65   | 1.2      |
| 2.88                                               | 2.0                                                                                                                        | 1.44                                                     | 3.1                                                      | 2.1                                                                             | 1.44          | 2.0    | 1.44     |
| 3.2                                                | 2.2                                                                                                                        | 1.6                                                      | 3.4                                                      | 2.4                                                                             | 1.6           | 2.2    | 1.6      |
| 4.0                                                | 2.75                                                                                                                       | 2.0                                                      | 4.25                                                     | 3.0                                                                             | 2.0           | 2.75   | 2.0      |
| 4.8                                                | 3.3                                                                                                                        | 2.4                                                      | 5.1                                                      | 3.6                                                                             | 2.4           | 3.3    | 2.4      |
| 5.0                                                | 3.5                                                                                                                        | 2.5                                                      | 5.3                                                      | 3.8                                                                             | 2.5           | 3.5    | 2.5      |
| 6.4                                                | 4.4                                                                                                                        | 3.2                                                      | 6.8                                                      | 4.8                                                                             | 3.2           | 4.4    | 3.2      |
| 8.0                                                | 5.5                                                                                                                        | 4.0                                                      | 8.5                                                      | 6.0                                                                             | 4.0           | 5.5    | 4.0      |
| 8.5                                                | 5.8                                                                                                                        | 4.0                                                      | 9.0                                                      | 6.0                                                                             | 4.0           | 5.8    | 4.0      |
| 10.6                                               | 7.5                                                                                                                        | 5.3                                                      | 11.2                                                     | 8.0                                                                             | 5.3           | 7.5    | 5.3      |
| 12.8                                               | 8.8                                                                                                                        | 6.4                                                      | 13.6                                                     | 9.6                                                                             | 6.4           | 8.8    | 6.4      |
| 12.5                                               | 8.8                                                                                                                        | 6.4                                                      | 13.6                                                     | 9.6                                                                             | 6.4           | 8.8    | 6.4      |
| 16.0                                               | 11.0                                                                                                                       | 8.0                                                      | 17.0                                                     | 12.0                                                                            | 8.0           | 11.0   | 8.0      |
| 20.0                                               | 14.0                                                                                                                       | 10.0                                                     | 21.2                                                     | 15.0                                                                            | 10.0          | 14.0   | 10.0     |
| 16.0                                               | 11.0                                                                                                                       | 8.0                                                      | 17.0                                                     | 12.0                                                                            | 8.0           | 11.0   | 8.0      |
| 20.0                                               | 14.0                                                                                                                       | 10.0                                                     | 21.2                                                     | 15.0                                                                            | 10.0          | 14.0   | 10.0     |
| 25.6                                               | 17.6                                                                                                                       | 12.8                                                     | 27.2                                                     | 19.2                                                                            | 12.8          | 17.6   | 12.8     |
| 23.6                                               | 16.5                                                                                                                       | 12.0                                                     | 25.5                                                     | 18.0                                                                            | 12.0          | 16.5   | 12.0     |
| 32.0                                               | 22.0                                                                                                                       | 16.0                                                     | 34.0                                                     | 24.0                                                                            | 16.0          | 22.0   | 16.0     |
| 33.5                                               | 23.3                                                                                                                       | 17.0                                                     | 36.0                                                     | 25.4                                                                            | 17.0          | 23.0   | 17.0     |
| 50.0                                               | 35.5                                                                                                                       | 25.0                                                     | 53.0*                                                    | 37.5*                                                                           | 25.0          | 35.5   | 25.0     |
| 50.0                                               | 35.5                                                                                                                       | 25.0                                                     | 53.0                                                     | 37.5                                                                            | 25.0          | 35.5   | 25.0     |
| Grade 80<br>+ VIP 100                              | When sling chains are used in temperature higher 200°C (392°F) the WLL has to be reduced. WLL in % at chain temperature of |                                                          |                                                          |                                                                                 |               |        |          |
|                                                    | -40° up to +200° C<br>(-40° F up to +392° F)                                                                               | higher 200° up to 300° C<br>(higher 392° F up to 572° F) | higher 300° up to 400° C<br>(higher 572° F up to 752° F) | **20 % reduction<br>for basket chains,<br>due to sharp edges,<br>is considered. |               |        |          |
|                                                    | 100 %                                                                                                                      | 90 %                                                     | 75 %                                                     |                                                                                 |               |        |          |
|                                                    | -60° up to +200° C<br>(-76° F up to +392° F)                                                                               | higher 200° up to 250° C<br>(higher 392° F up to 482° F) | higher 250° up to 300° C<br>(higher 482° F up to 572° F) |                                                                                 |               |        |          |
| ICE 120                                            | 100 %                                                                                                                      | 90 %                                                     | 60 %                                                     |                                                                                 |               |        |          |



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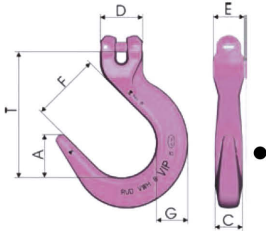
## > Accessories: Grade 100

### VIP Accessories Grade 100



#### 6559.V0 VIP Foundry Hook VWH

Also called container hook. With considerably larger opening, but without safety latch. Only to be used where unintentional unhooking is impossible. Special care and increased safety is necessary when using this hook. A risk analysis must be performed before use.



| Nominal chain size in mm | Load capacity in t | Designation | Dimensions in mm |    |    |     |    |     |    |     | Weight in kg/pce | Item no.   |
|--------------------------|--------------------|-------------|------------------|----|----|-----|----|-----|----|-----|------------------|------------|
|                          |                    |             | A                | B  | C  | D   | E  | F   | G  | T   |                  |            |
| 6                        | 1,5                | VWH 6       | 30               | 22 | 18 | 30  | 22 | 50  | 22 | 87  | 0,5              | 6559.V0.06 |
| 8                        | 2,5                | VWH 8       | 40               | 29 | 26 | 40  | 29 | 64  | 30 | 115 | 0,9              | 6559.V0.08 |
| 10                       | 4,0                | VWH 10      | 46               | 37 | 30 | 50  | 36 | 76  | 37 | 130 | 1,7              | 6559.V0.10 |
| 13                       | 6,7                | VWH 13      | 51               | 45 | 37 | 64  | 46 | 90  | 51 | 168 | 3                | 6559.V0.13 |
| 16                       | 10                 | VWH 16      | 64               | 56 | 40 | 75  | 56 | 100 | 58 | 190 | 5,7              | 6559.V0.16 |
| 20*                      | 16                 | VWH 20      | 96               | 80 | 73 | 102 | 80 | 136 | 80 | 277 | 15,1             | 6559.V0.20 |
| 22*                      | 20                 | VWH 22      | 96               | 80 | 73 | 102 | 80 | 136 | 80 | 277 | 15,1             | 6559.V0.22 |

\* in Sceletto design with patented wear marks in the hook bottom

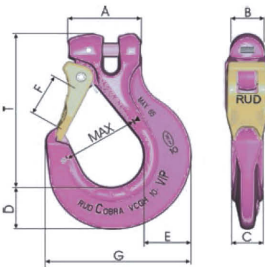


**Not allowed for lifting over persons!**

#### 6550.V0 VIP Cobra Clevis Hook with Safety Latch VCGH

- Extremely rugged and further improved version.
- No protruding hook tip.
- Broad hook tip to prevent misuse.
- Forged and tempered safety latch that locks on the hook tip to avoid lateral bending.

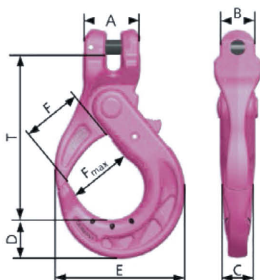
- 3-times wound stainless steel double leg spring.
- Both sides with wear marks.
- Wear marks for checking the mouth opening!
- $F_{max}$  = Distance of the marker points.



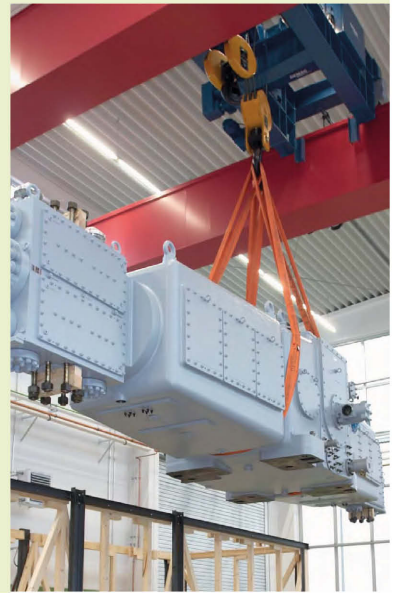
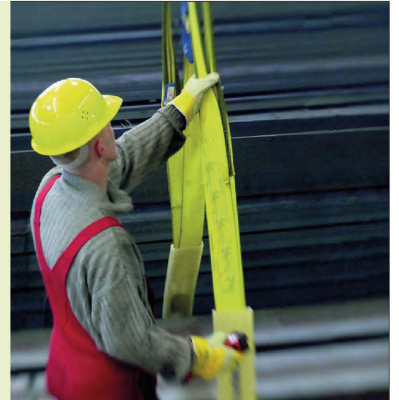
| Nominal chain size in mm | Load capacity in t | Designation | Dimensions in mm |     |    |    |     |    |                  |     |     |      | Weight in kg/pce | Item no. |
|--------------------------|--------------------|-------------|------------------|-----|----|----|-----|----|------------------|-----|-----|------|------------------|----------|
|                          |                    |             | A                | B   | C  | D  | E   | F  | F <sub>max</sub> | G   | T   |      |                  |          |
| 6                        | 1,5                | VCGH 6      | 38               | 22  | 16 | 20 | 24  | 25 | 44,5             | 71  | 76  | 0,4  | 6550.V0.06       |          |
| 8                        | 2,5                | VCGH 8      | 50               | 28  | 20 | 28 | 32  | 30 | 52               | 94  | 97  | 0,9  | 6550.V0.08       |          |
| 10                       | 4,0                | VCGH 10     | 60               | 36  | 26 | 36 | 39  | 35 | 64,5             | 117 | 108 | 1,5  | 6550.V0.10       |          |
| 13                       | 6,7                | VCGH 13     | 76               | 46  | 30 | 37 | 48  | 40 | 72,5             | 133 | 126 | 2,7  | 6550.V0.13       |          |
| 16                       | 10                 | VCGH 16     | 83               | 56  | 36 | 49 | 58  | 48 | 87               | 157 | 152 | 4,3  | 6550.V0.16       |          |
| 20                       | 16                 | VCGH 20     | 112              | 68  | 50 | 69 | 78  | 63 | 114              | 218 | 195 | 10   | 6550.V0.20       |          |
| 22                       | 20                 | VCGH 22     | 117              | 74  | 50 | 74 | 83  | 63 | 114              | 222 | 198 | 11,5 | 6550.V0.22       |          |
| 28                       | 31,5               | VCGH 28     | 150              | 101 | 69 | 88 | 109 | 90 | 155              | 295 | 275 | 26,4 | 6550.V0.28       |          |

#### 6554. VIP self-locking hook VAGH (Sceletto)

- Extremely rugged and proven design.
- Hook closes automatically when load is lifted.
- Unlocks only by pressing the protected unlocking lever on the back of the hook.
- No protruding hook tip.
- Big mouth width dimension F.
- Wear marks > dimension B < protect the connected chain link.
- Complete with preassembled connecting bolt and securing sleeve.
- Spare part set available on request.
- Patented wear marks that indicate discard criteria without measuring.
- Broad hook tip - prevents unallowed loading of the hook tip.
- Ergonomic and robust locking lever.



| Nominal chain size in mm | Load capacity in t | Designation | Dimensions in mm |    |    |    |     |    |           |     | Weight in kg/pce | Item no.   |
|--------------------------|--------------------|-------------|------------------|----|----|----|-----|----|-----------|-----|------------------|------------|
|                          |                    |             | A                | B  | C  | D  | E   | F  | $F_{max}$ | T   |                  |            |
| 8                        | 2,5                | VAGH (S)-8  | 40               | 30 | 27 | 28 | 97  | 44 | 60        | 121 | 1,0              | 6554.V0.08 |
| 10                       | 4,0                | VAGH (S)-10 | 49               | 37 | 30 | 31 | 107 | 48 | 66        | 135 | 1,5              | 6554.V0.10 |
| 13                       | 6,7                | VAGH (S)-13 | 61               | 48 | 36 | 40 | 137 | 61 | 81        | 169 | 2,9              | 6554.V0.13 |



## Synthetic Slings & Accessories

> SLINGS: Synthetic

4503. Tubular Round Slings

Standard : BS EN 1492 - 2 , ASME B30.9



Specify length "L" when requesting prices!



| SWL<br>in kg                           | COLOUR<br>Code | PART<br>No. |
|----------------------------------------|----------------|-------------|
| 1000                                   | Violet         | 4503.00.25  |
| 2000                                   | Green          | 4503.00.50  |
| 3000                                   | Yellow         | 4503.00.75  |
| 4000                                   | Grey           | 4503.01.00  |
| 5000                                   | Red            | 4503.01.25  |
| 6000                                   | Brown          | 4503.01.50  |
| 8000                                   | Blue           | 4503.02.00  |
| 10000                                  | Orange         | 4503.02.50  |
| 12000                                  | Orange         | 4503.03.00  |
| Higher Capacities Available on Request |                |             |

4436. Flat webbing sling with loop both end

Standard : BS EN 1492 - 1 , ASME B30.9



| Colour<br>Code                               | Single<br>Ply | Part<br>No. | Double<br>Ply | Part<br>No. | 4<br>Ply | Part<br>No. |
|----------------------------------------------|---------------|-------------|---------------|-------------|----------|-------------|
| Violet                                       | 500 kg        | 4436.10.25  | 1000 kg       | 4436.20.25  | 2000kg   | 4436.40.25  |
| Green                                        | 1000 kg       | 4436.10.50  | 2000 kg       | 4436.20.50  | 4000 kg  | 4436.40.50  |
| Yellow                                       | 1500 kg       | 4436.10.75  | 3000 kg       | 4436.20.75  | 6000 kg  | 4436.40.75  |
| Grey                                         | 2000 kg       | 4436.11.00  | 4000 kg       | 4436.21.00  | 8000 kg  | 4436.41.00  |
| Red                                          | 2500 kg       | 4436.11.25  | 5000 kg       | 4436.21.25  | 10000 kg | 4436.41.25  |
| Brown                                        | 3000 kg       | 4436.11.50  | 6000 kg       | 4436.21.50  | 12000 kg | 4436.41.50  |
| Blue                                         | 4000 kg       | 4436.12.00  | 8000 kg       | 4436.22.00  | 16000 kg | 4436.42.00  |
| Orange                                       | 5000 kg       | 4436.12.50  | 10000 kg      | 4436.22.50  | 20000 kg | 4436.42.50  |
| Orange                                       | 6000 kg       | 4436.13.00  | 12000 kg      | 4436.23.00  | 24000 kg | 4436.43.00  |
| Manufactured to EN1492-1 Safety Factor 7 : 1 |               |             |               |             |          |             |

Carl Stahl-Roundsling  
multi-leg system  
with safety hook

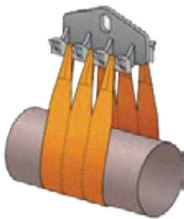
4551.  
E-1-Single  
leg



4554.  
E-4 leg



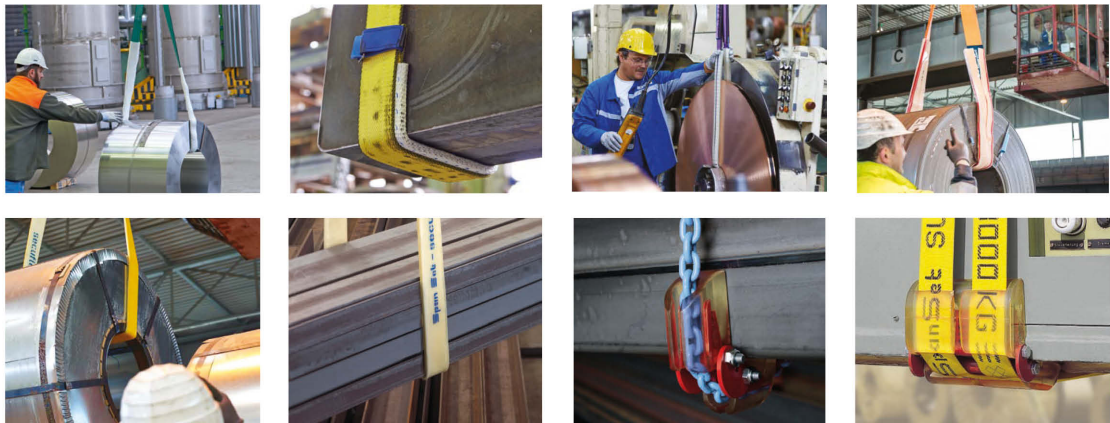
Pipe laying  
slings



Other hook types  
available on request!



> **Protective Sleeves**

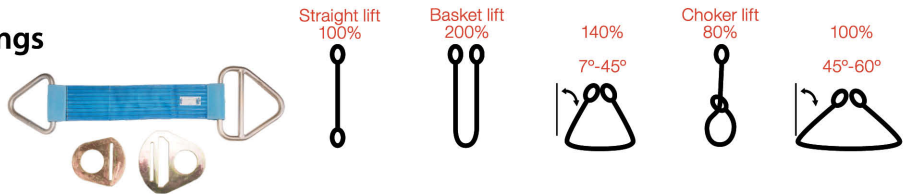


## > SLINGS: Webbing Slings

### Webbing Slings with Metal Fittings

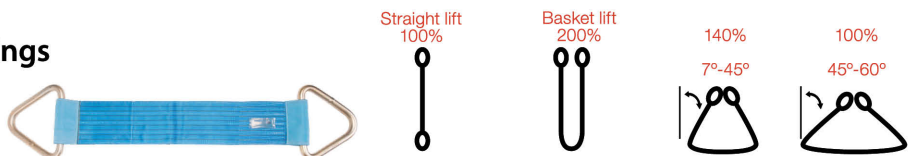
Slings with metal fittings are provided for more safety and durability

#### Male / Female Fittings REEVING



| REF   | COLOUR | SWL/WLL | SWL / WLL IN KG AT DIFFERENT MODES |       |       |      |       |
|-------|--------|---------|------------------------------------|-------|-------|------|-------|
| 1TMF  | VIOLET | 1T      | 1000                               | 2000  | 1400  | 800  | 1000  |
| 2TMF  | GREEN  | 2T      | 2000                               | 4000  | 2800  | 1600 | 2000  |
| 3TMF  | YELLOW | 3T      | 3000                               | 6000  | 4200  | 2400 | 3000  |
| 4TMF  | GREY   | 4T      | 4000                               | 8000  | 5600  | 3200 | 4000  |
| 5TMF  | RED    | 5T      | 5000                               | 10000 | 7000  | 4000 | 5000  |
| 6TMF  | BROWN  | 6T      | 8000                               | 12000 | 8400  | 4800 | 6000  |
| 8TMF  | BLUE   | 8T      | 7000                               | 16000 | 11200 | 6400 | 8000  |
| 10TMF | ORANGE | 10T     | 10000                              | 20000 | 14000 | 8000 | 10000 |

#### Male / Female Fittings NON-REEVING



| REF   | COLOUR | SWL/WLL | SWL / WLL IN KG AT DIFFERENT MODES |       |       |       |
|-------|--------|---------|------------------------------------|-------|-------|-------|
| 1TMM  | VIOLET | 1T      | 1000                               | 2000  | 1400  | 1000  |
| 2TMM  | GREEN  | 2T      | 2000                               | 4000  | 2800  | 2000  |
| 3TMM  | YELLOW | 3T      | 3000                               | 6000  | 4200  | 3000  |
| 4TMM  | GREY   | 4T      | 4000                               | 8000  | 5600  | 4000  |
| 5TMM  | RED    | 5T      | 5000                               | 10000 | 7000  | 5000  |
| 6TMM  | BROWN  | 6T      | 6000                               | 12000 | 8400  | 6000  |
| 8TMM  | BLUE   | 8T      | 8000                               | 16000 | 11200 | 8000  |
| 10TMM | ORANGE | 10T     | 10000                              | 20000 | 14000 | 10000 |



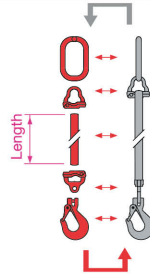
## SLINGS: Textile Bridle Slings

### Textile Bridle Slings

Have your load  
under control!

If your load has fixed attachment points, it is easy to choose the right sling: Without big effort, a textile bridle sling can be adapted to all situations. Be on the safe side when it comes to expensive machinery, custom-made parts or investment goods. That's why SpanSet textile bridle slings combine reliable textile slings with high-quality forged parts.

- Acc. to DIN EN 1492-2
- A perfect combination with attachment points
- High-strength hardware according to DIN 1677
- Modular design - all components can be exchanged



#### 4551./4511. RSG 1-leg Sling



| Item no.<br>1-leg<br>sling | Load capacity 1-leg<br>single direct<br>in kg | Type           |
|----------------------------|-----------------------------------------------|----------------|
| 4551.00.10                 | 1000                                          | RSG-1-1000-LS  |
| 4551.00.20                 | 2000                                          | RSG-1-2000-LS  |
| 4551.00.30                 | 3000                                          | RSG-1-3000-LS  |
| 4551.00.40                 | 4000                                          | RSG-1-4000-LS  |
| 4551.00.50                 | 5000                                          | RSG-1-5000-LS  |
| 4551.00.60                 | 6000                                          | RSG-1-6000-LS  |
| 4551.00.80                 | 8000                                          | RSG-1-8000-LS  |
| 4511.01.00                 | 10000                                         | RSG-1-10000-LS |
| 4511.01.50                 | 15000                                         | RSG-1-15000-LS |
| 4511.02.00                 | 20000                                         | RSG-1-20000-LS |
| 4511.02.50                 | 25000                                         | RSG-1-25000-LS |
| 4511.03.00                 | 30000                                         | RSG-1-30000-LS |

Min. length 2.5 m without fittings from type RSG-1-10000-LS and bigger

#### 4552./4512. RSG 2-leg Sling



| Item no.<br>2-leg<br>sling | Load capacity 2-leg<br>at angle |        | Type           |
|----------------------------|---------------------------------|--------|----------------|
|                            | 0-45°                           | 45-60° |                |
| 4552.00.10                 | 1400                            | 1000   | RSG-2- 1400-LS |
| 4552.00.20                 | 2800                            | 2000   | RSG-2- 2800-LS |
| 4552.00.30                 | 4200                            | 3000   | RSG-2- 4200-LS |
| 4552.00.40                 | 5600                            | 4000   | RSG-2- 5600-LS |
| 4552.00.50                 | 7000                            | 5000   | RSG-2- 7000-LS |
| 4552.00.60                 | 8400                            | 6000   | RSG-2- 8400-LS |
| 4552.00.80                 | 11200                           | 8000   | RSG-2-11200-LS |
| 4512.01.40                 | 14000                           | 10000  | RSG-2-14000-LS |
| 4512.02.10                 | 21000                           | 15000  | RSG-2-21000-LS |
| 4512.02.80                 | 28000                           | 20000  | RSG-2-28000-LS |
| 4512.03.50                 | 35000                           | 25000  | RSG-2-35000-LS |
| 4512.04.20                 | 42000                           | 30000  | RSG-2-42000-LS |

Min. length 2.5 m without fittings from type RSG-2-14000-LS and bigger

#### 4554./4514. RSG 4-leg Sling



| Item no.<br>4-leg<br>sling | Load capacity 4-leg<br>at angle |        | Type           |
|----------------------------|---------------------------------|--------|----------------|
|                            | 0-45°                           | 45-60° |                |
| 4554.00.10                 | 2100                            | 1500   | RSG-4- 2100-LS |
| 4554.00.20                 | 4200                            | 3000   | RSG-4- 4200-LS |
| 4554.00.30                 | 6300                            | 4500   | RSG-4- 6300-LS |
| 4554.00.40                 | 8400                            | 6000   | RSG-4- 8400-LS |
| 4554.00.50                 | 10500                           | 7500   | RSG-4-10500-LS |
| 4554.00.60                 | 12600                           | 9000   | RSG-4-12600-LS |
| 4554.00.80                 | 16800                           | 12000  | RSG-4-16800-LS |
| 4514.02.10                 | 21000                           | 15000  | RSG-4-21000-LS |
| 4514.03.15                 | 31500                           | 22500  | RSG-4-31500-LS |
| 4514.04.20                 | 42000                           | 30000  | RSG-4-42000-LS |
| 4514.05.20                 | 52500                           | 37500  | RSG-4-52500-LS |
| 4514.06.30                 | 63000                           | 45000  | RSG-4-63000-LS |

Min. length 2.5 m without fittings from type RSG-4-21000-LS and bigger

## > Lashing Straps

4ZG. Cargo lashing belt with ratchet assembly. Standard length 10mtr.



Width 1", 25 mm  
Breaking strength 1000kg  
Lashing capacity 360 kg

Width 1-1/2", 35mm  
Breaking strength 3000Kg  
Lashing Capacity 1100kg

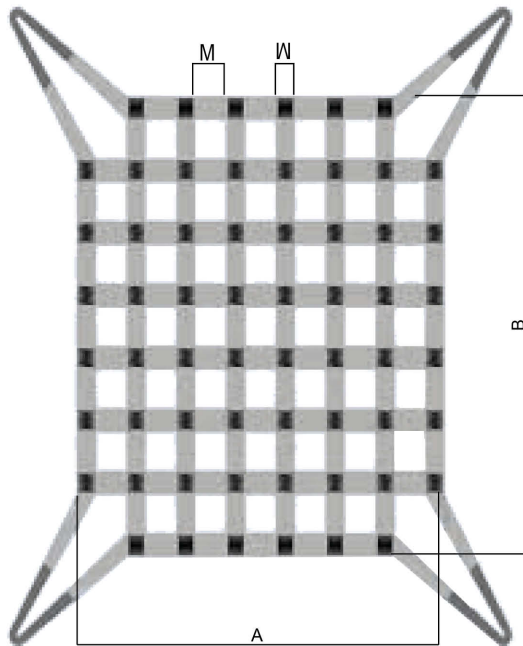
Width 2", 50 mm  
Breaking strength 5000kg  
Lashing capacity 2000kg

Width 3", 75 mm  
Breaking strength 10000kg  
Lashing capacity 4500kg

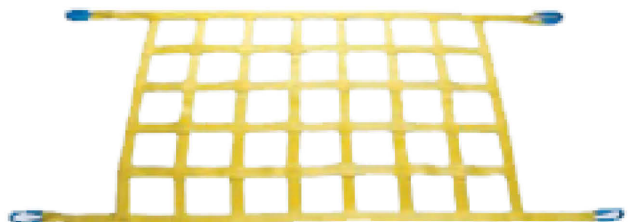
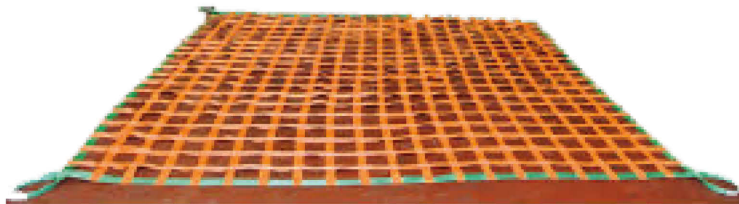
Width 4", 100 mm  
Breaking strength 12000kg  
Lashing capacity 5000kg



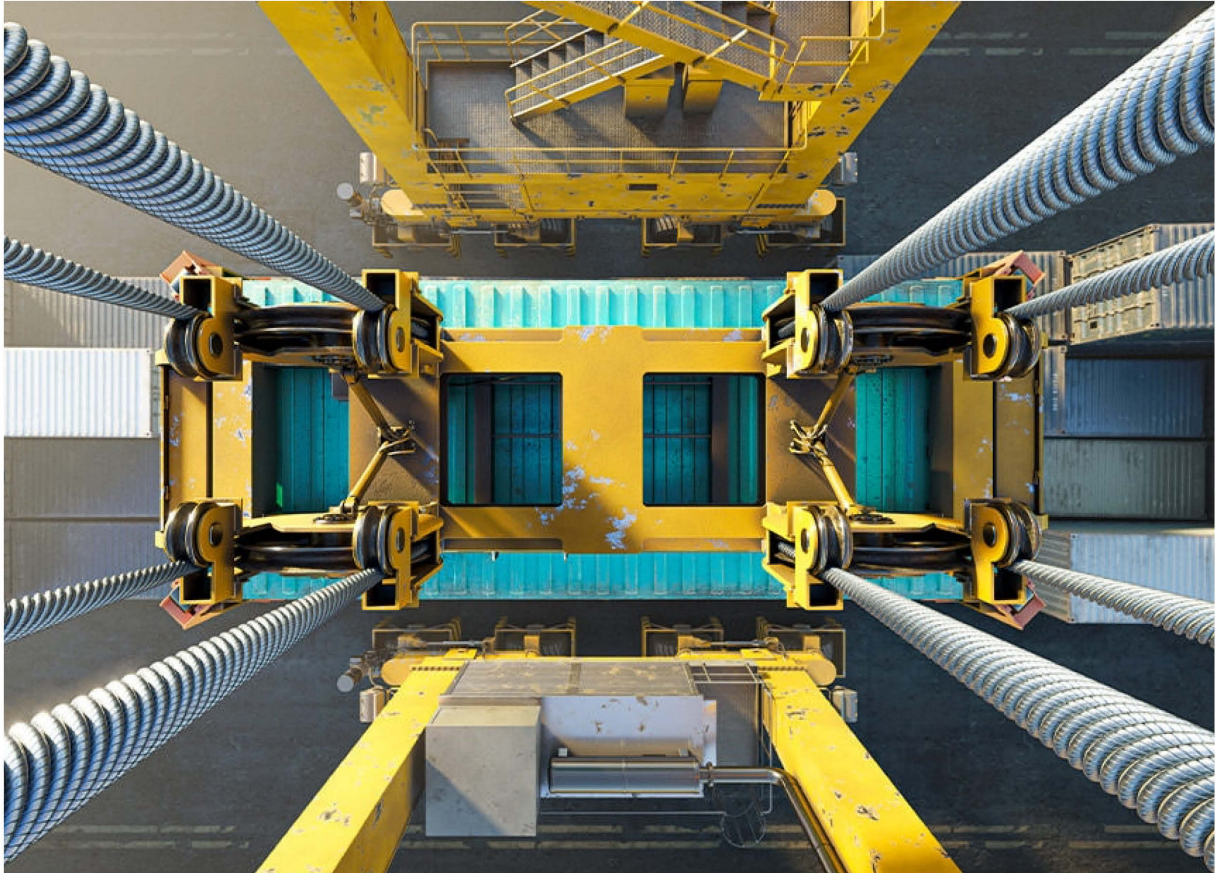
## > Lashing Straps



Cargo net systems are custom made of polyester, web cargo nets are considerably more flexible, lightweight and compact than ...nets,  
All are designed and fabricated to meet specific application requirements.







## Wire Ropes & Accessories

## > Steel Wire Rope

### Important technical terms

#### Abbreviations for core-types of parallel laid ropes and rotation-resistant ropes

| Term                                                              | Abbrev.         |
|-------------------------------------------------------------------|-----------------|
| <b>Single layer ropes:</b>                                        |                 |
| <b>Fibre core</b>                                                 | <b>FC</b>       |
| - Natural fibre core                                              | <b>NFC</b>      |
| - Synthetic fibre core                                            | <b>SFC</b>      |
| - Massive polymer core                                            | <b>SPC</b>      |
| <b>Steel core</b>                                                 | <b>WC</b>       |
| - Wire strand core                                                | <b>WSC</b>      |
| - Independent wire rope core                                      | <b>IWRC</b>     |
| - Independent wire rope core, compacted, separately stranded      | <b>IWRC (K)</b> |
| - Independent wire rope core, polymer-coated, separately stranded | <b>EPIWRC</b>   |
| <b>Parallel laid ropes:</b>                                       |                 |
| Wire rope core in parallel lay                                    | <b>PWRC</b>     |
| Wire rope core in parallel lay, compacted                         | <b>PWRC (K)</b> |
| <b>Rotation-resistant ropes:</b>                                  |                 |
| <b>Core element</b>                                               |                 |
| - Fibre core                                                      | <b>FC</b>       |
| - Wire strand core                                                | <b>WSC</b>      |

#### Lay and lay direction

|           |   |                          |
|-----------|---|--------------------------|
| <b>z</b>  | = | right hand lay           |
| <b>s</b>  | = | left hand lay            |
| <b>sZ</b> | = | right hand ordinary lay  |
| <b>zS</b> | = | left hand ordinary lay   |
| <b>zZ</b> | = | right hand lang's lay    |
| <b>sS</b> | = | left hand lang's lay     |
| <b>aZ</b> | = | right hand alternate lay |
| <b>aS</b> | = | left hand alternate lay  |

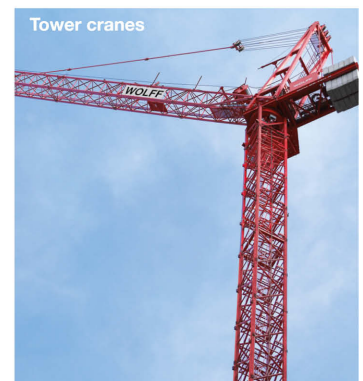
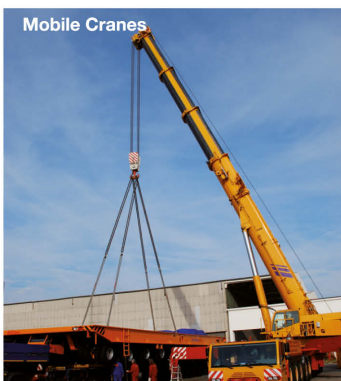
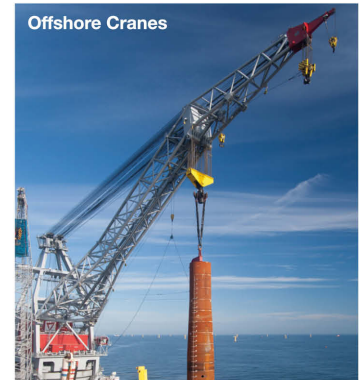
#### Compacting

|          |   |                                                                              |
|----------|---|------------------------------------------------------------------------------|
| <b>K</b> | = | in front of rope or strand construction indicates a compacted strand or rope |
|----------|---|------------------------------------------------------------------------------|

#### Strand types

|           |   |                  |
|-----------|---|------------------|
| <b>S</b>  | = | Seale            |
| <b>W</b>  | = | Warrington       |
| <b>F</b>  | = | Filler           |
| <b>WS</b> | = | Warrington Seale |
| <b>M</b>  | = | Cross lay        |
| <b>N</b>  | = | Compound lay     |

### Special Wire Ropes for below:





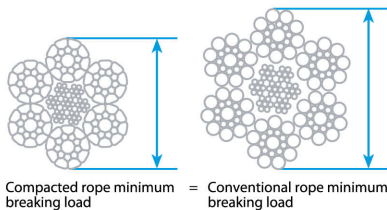
## > Steel Wire Rope: Guidelines

### Strength

Wire rope strength is normally referred to as minimum breaking force or minimum breaking load. The minimum breaking load of any given rope diameter can be increased in two basic ways;

- An increase in the tensile strength of the wire used to manufacture the rope will increase the minimum breaking load of the final rope. Typical tensile grades of wire used for crane rope manufacture are 1770 N/mm<sup>2</sup> 1960 N/mm<sup>2</sup> and 2160 N/mm<sup>2</sup>
- Additionally it is possible to increase the steel fill factor of the wire rope. Fill factor means the ratio between the sum of the nominal cross sectional areas of all the wires in the rope and the circumscribed area of the rope based on its nominal diameter. More simply it measures the metallic cross sectional area of the rope.

It is possible to marginally increase the fill factor by varying the construction i.e. adding smaller filler wires. More effectively the individual strands of the rope can be compacted.



The resultant rope has a very high steel fill factor and consequently a relatively high minimum breaking load for any given diameter when compared with a conventional rope.

The high breaking load to diameter relationship offered by compacted ropes can allow crane manufacturers to optimise the design of crane components such as winding drums and sheaves whilst still complying with international crane design standards.

Lower stress levels which occur when crane operators replace a conventional rope with an identical diameter of high strength compacted rope can lead to more 'comfortable' operation and longer rope life.

### Diameter

Correct and consistent wire rope diameter is critical to performance on a modern crane, and a rope which is too large or too small, for the drum and sheaves in which it is operating can cause premature rope failure.

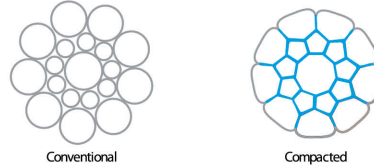
It is not only important to select a rope which has the correct nominal diameter according to the original equipment operating manual, but it is also important that the diameter of the rope is consistent throughout its entire length. Inconsistency in diameter, particularly short lengths where the rope is oversize, can cause premature localised wire breaks and short rope life.

### Bend Fatigue Resistance

Bend fatigue resistance is the ability of the wire rope to withstand repeated bending under constant or fluctuating loads. As the load increases in any reeving system so the rate of fatigue will increase. As bending radii decrease in a reeving system so the rate of fatigue will increase.

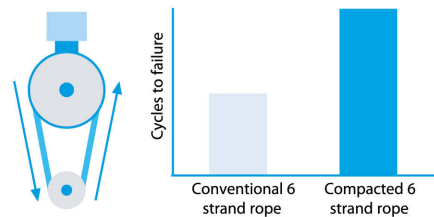
A wire rope which has an increased number of wires such as 6x36 construction will have greater resistance to fatigue than a 6x19 construction.

Extra fatigue life can be achieved by moving to compacted rope.

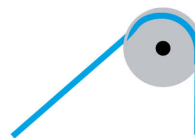


The compacted strand has very favourable internal and external contact conditions when compared with the point contact of round wires within a conventional strand.

The smooth surface of compacted rope offers a wider bearing surface to the sheave or drum groove. Increased fill factor, lowering internal stress levels, combined with improved internal and external contact conditions lead to longer rope life.



Laboratory fatigue testing indicates that it is possible to achieve up to two times normal rope life when comparing compacted rope with a conventional rope of equivalent construction.

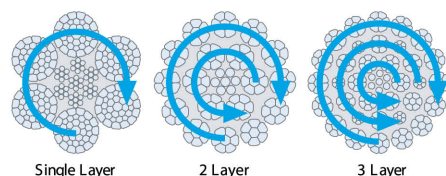


The smooth external surface of compacted rope can also lead to less wear on the sheave and winding drum.

### Rotation Resistance

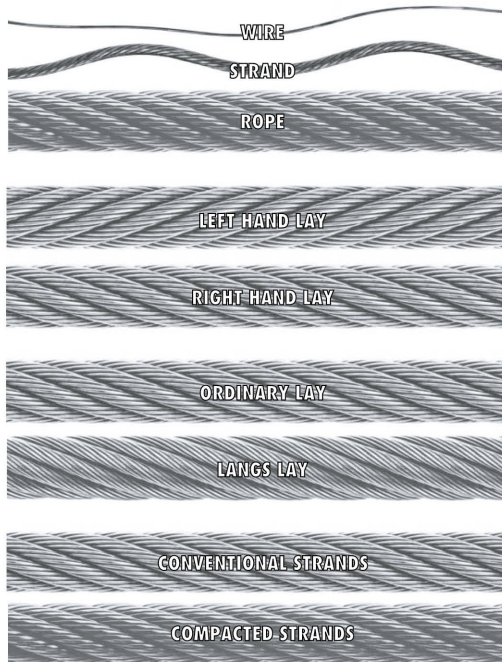
Each wire rope construction will have an inherent torque characteristic where both ends of the rope are secured and an applied force will generate torque at the fixing points. Each wire rope construction will have an inherent turn characteristic where one end of the rope is free to rotate and an applied force will cause the free end of the rope to turn.

The torque or turn generated will depend upon the magnitude of the force applied and also upon the construction of the wire rope selected. In terms of resistance to rotation wire ropes can be divided into three basic categories.



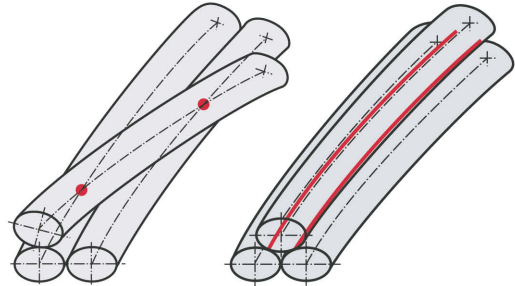
## > Steel Wire Rope: Guidelines

### WHAT IS ...?



### WHAT IS A PARALLEL LAY ROPE?

In a cross (non-parallel) lay strand **all wires have different lay lengths**, and in a cross (non-parallel) lay rope **all strands have different lay lengths**. The high **stress concentration** at the crossover points leads to an early internal failure.



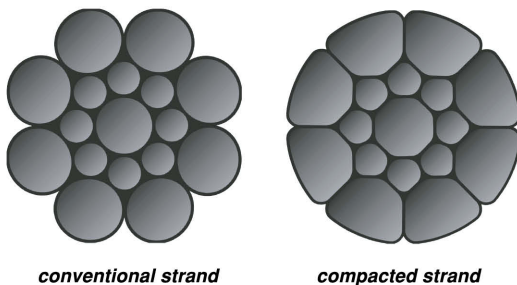
cross (non-parallel) lay  
stress concentration

parallel lay  
stress distribution

In a parallel lay strand **all wires have the same lay length**, and in a parallel lay rope **all strands have the same lay length**. The linear contact leads to an optimal **stress distribution**.

### WHAT IS A COMPACTED STRAND?

*Some of the Casar Special Wire Ropes are made out of conventional strands, some are made out of compacted strands.*



In order to produce a compacted strand, a conventional strand made out of round wires is drawn through a compacting tool. During this procedure, the wires are plastically deformed, the strand diameter is reduced and the surface is made smooth. The contact conditions between the individual wires and the strand-to-strand contacts improve.

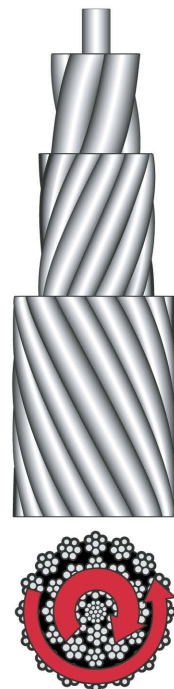
Ropes made out of compacted strands have a higher breaking load, a greater flexibility and better rope-to-sheave contact conditions than comparable ropes made out of conventional strands. Because of the larger outer wires and the smaller exposed area they are more resistant to abrasion and corrosion.

### WHAT IS A ROTATION-RESISTANT ROPE?

In a conventional rope, an external load creates a moment which tries to untwist the rope and to rotate the load.

A rotation-resistant Special Wire Rope has a steel core which is an independent rope, closed in the opposite direction to the outer strands. Under load, the core tries to twist the rope in the one direction, the outer strands try to twist it in the opposite direction.

The geometrical design of a rotation-resistant Special Wire Rope is such that the moments in the core and the outer strands compensate each other over a wide load-spectrum, so that even with great lifting heights no rope twist occurs.



## ➤ Steel Wire Rope: Guidelines

Single layer ropes have a much greater tendency to rotate under load than the two or three layer ropes which are often referred to as rotation resistant. Similarly the three layer rope will have less tendency to rotate when compared with the two layer rope.

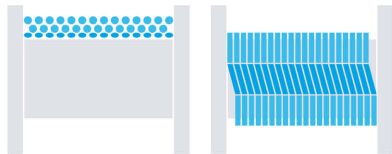
Both the two layer and three layer ropes depend on torsional balance between the outer and inner layers to create rotational stability. With correct rope selection rotation should not cause a problem in service provided that the rope has been correctly balanced in design and manufacture.

Before selecting a rotation resistant rope, consideration should be given to a single layer construction. If the application/duty in question does not require the rope to resist rotation then it is possible that a single layer rope can represent a more robust and more effective solution.

**Safety note -** Single layer Langs lay ropes (where the direction of strand lay is the same as the direction of rope lay) have exceptionally bad rotational characteristics and must only be used in applications where both ends of the rope are securely fixed.

### Crush Resistance

Selection of a rope with an independent wire rope core or wire strand core as opposed to a fibre rope core can improve resistance to crushing.

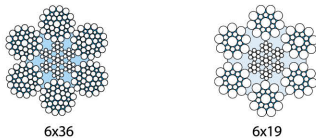


In multi-layer coiling situations where crushing of lower layers particularly at crossover point is unavoidable. Carl Stahl UK would recommend the use of compacted rope. The high steel fill factor, which is a feature of the compaction process, will offer greater resistance to crushing than an equivalent conventional rope.

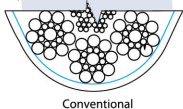
### Sheaves

Sheaves are used to change the direction of a steel wire rope. When entering a sheave, a steel wire rope will be bent and subjected to half a bending cycle. When leaving the sheave on the other side, the rope section will be straightened and thereby be subjected to another half a bending cycle. The diameter of a sheave is often measured as a multiple of a rope diameter, the D/d ratio. Allow minimum rope D/d ratio of 18 and recommended D/d ratio to be higher than 20. The fatigue life of a steel wire rope will increase with increasing D/d ratio.

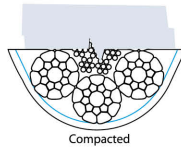
### Resistance to Wear and Abrasion



Larger external wires can provide greater resistance to wear and abrasion therefore a 6x19 construction might be selected in preference to a 6x36 construction in a situation in which wear and abrasion rather than bend fatigue are the principle cause of rope deterioration.



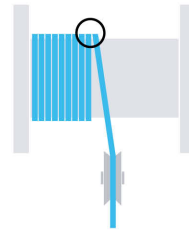
Conventional



Compacted

Maximum resistance to wear and abrasion can be achieved by selecting a compacted rope.

The smooth surface of the compacted rope offers a wider bearing surface to the sheave or drum groove resulting in improved resistance to wear and abrasion.



Abrasive wear can occur between the rope and any ancillary equipment such as sheaves and the surface of the winding drum but probably the most significant cause of abrasive wear on cranes takes place between adjacent laps of rope where the rope moves on and off the winding drum.

Selection of a compacted rope with its smooth external surface and very good contact condition will minimise abrasive wear between the rope and ancillary equipment and also between adjacent laps of rope.

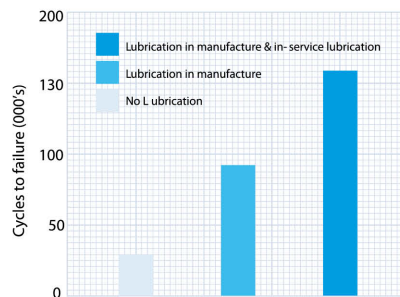
### Corrosion Resistance

It is normal to select a rope with galvanised finish if it is likely to be used in a corrosive environment.

### Lubrication

Effective lubrication with the correct rope lubricant can extend fatigue life, minimise abrasive wear and help to minimise corrosion.

Effect of manufacturing lubricant and in-service lubrication on bending fatigue resistance

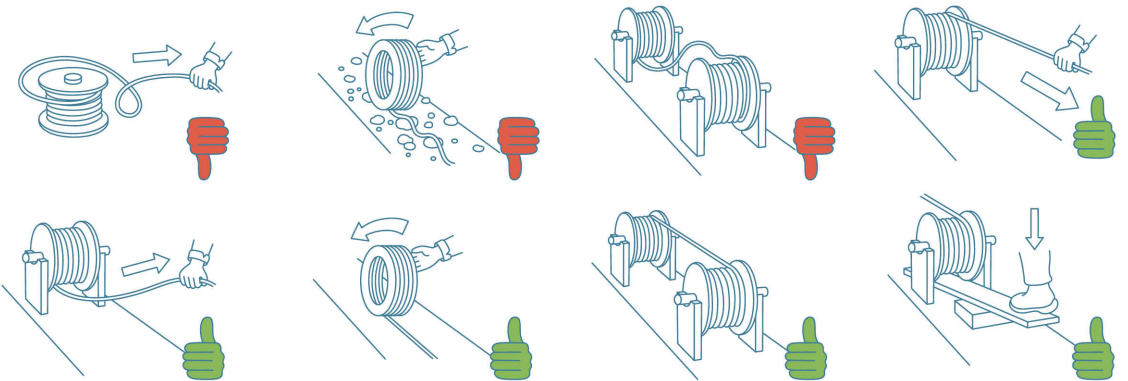
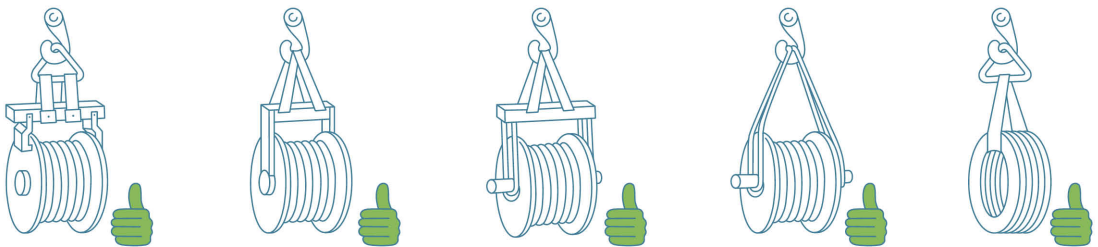
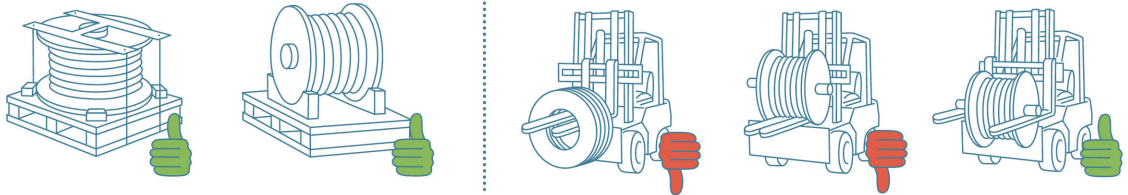


Laboratory bend fatigue tests show the significant effect which high performance manufacturing lubricant and in-service lubrication has on rope life. In-service lubrication with a suitable lubricant should be carried out wherever possible however the best opportunity to introduce lubricant into the rope is during manufacture.



## > Steel Wire Rope: Guidelines

### Instruction sheet



Please note



EN12385-3  
ISO 4309



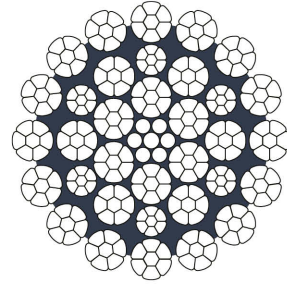
# WARNING



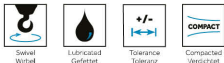
## Steel Wire Rope: CASAR Special Crane Rope

### CASAR STARLIFT PLUS M

- High performance mining rope
- Category 1 rotation resistant
- Fully lubricated
- Extremely high breaking force
- Good resistance to drum crushing
- Available in ordinary (regular) lay or longs lay



#### PROPERTIES



#### APPLICATIONS

High performance hoist rope for drum, koepe friction winder and particularly shaft sinking applications, where rotation-resistant ropes are required. Rope design and manufacturing parameters are adjusted according to the application, i.e. Starlift Plus MD and Starlift Plus MF. The Starlift Plus M with compacted strands offers a very high fatigue resistance as well as a good resistance to drum crushing. It is a very flexible rope with a specially designed core avoiding crossovers between the strands of core and preventing internal rope degradation.

| Nominal Diameter |       | metallic area   | Weight |       | Aggregate Breaking Force |         |                        |         | Minimum Breaking Force |         |                        |         |         |
|------------------|-------|-----------------|--------|-------|--------------------------|---------|------------------------|---------|------------------------|---------|------------------------|---------|---------|
|                  |       |                 |        |       | 1770 N/mm <sup>2</sup>   |         | 1960 N/mm <sup>2</sup> |         | 1770 N/mm <sup>2</sup> |         | 1960 N/mm <sup>2</sup> |         |         |
|                  |       |                 |        |       | kN                       | lbs     | kN                     | lbs     | kN                     | lbs     | kN                     | lbs     |         |
| mm               | inch  | mm <sup>2</sup> | Sqin   | kg/m  | lb/ft                    |         |                        |         |                        |         |                        |         |         |
| 20               |       | 225.6           | 0.3497 | 1.98  | 1.33                     | 399.3   | 89.769                 | 442.2   | 99.405                 | 332.0   | 74.637                 | 367.0   | 82.505  |
| 21               |       | 247.3           | 0.3833 | 2.17  | 1.46                     | 437.7   | 98.404                 | 484.7   | 108.967                | 364.0   | 81.830                 | 402.0   | 90.373  |
| 22               |       | 271.8           | 0.4213 | 2.39  | 1.61                     | 481.1   | 108.152                | 532.7   | 119.762                | 400.0   | 89.924                 | 442.0   | 99.366  |
|                  | 7/8   | 277.4           | 0.4300 | 2.44  | 1.64                     | 491.0   | 110.381                | 543.7   | 122.229                | 408.2   | 91.776                 | 451.1   | 101.413 |
| 23               |       | 296.9           | 0.4602 | 2.61  | 1.75                     | 525.5   | 118.140                | 581.9   | 130.822                | 437.0   | 98.241                 | 483.0   | 108.583 |
| 24               |       | 322.5           | 0.4999 | 2.83  | 1.90                     | 570.8   | 128.327                | 632.1   | 142.102                | 475.0   | 106.795                | 525.0   | 118.025 |
| 25               |       | 350.5           | 0.5433 | 3.08  | 2.07                     | 620.4   | 139.468                | 687.0   | 154.439                | 516.0   | 116.001                | 571.0   | 128.366 |
|                  | 1     | 361.8           | 0.5608 | 3.18  | 2.14                     | 640.4   | 143.964                | 709.1   | 159.418                | 532.6   | 119.741                | 589.4   | 132.504 |
| 26               |       | 377.7           | 0.5854 | 3.32  | 2.23                     | 668.5   | 150.291                | 740.3   | 166.424                | 556.0   | 124.994                | 615.0   | 138.257 |
| 27               |       | 410.9           | 0.6369 | 3.61  | 2.43                     | 727.3   | 163.502                | 805.4   | 181.053                | 605.0   | 136.009                | 669.0   | 150.397 |
| 28               |       | 441.4           | 0.6842 | 3.88  | 2.61                     | 781.3   | 175.638                | 865.1   | 194.492                | 650.0   | 146.126                | 719.0   | 161.638 |
|                  | 1 1/8 | 459.7           | 0.7125 | 4.04  | 2.71                     | 813.7   | 182.920                | 901.0   | 202.556                | 676.9   | 152.184                | 748.8   | 168.339 |
| 29               |       | 471.8           | 0.7313 | 4.15  | 2.79                     | 835.1   | 187.735                | 924.7   | 207.887                | 694.0   | 156.017                | 768.0   | 172.653 |
| 30               |       | 508.1           | 0.7876 | 4.47  | 3.00                     | 899.3   | 202.179                | 995.9   | 223.882                | 748.0   | 168.157                | 827.0   | 185.917 |
| 31               |       | 539.8           | 0.8367 | 4.75  | 3.19                     | 955.4   | 214.793                | 1,058.0 | 237.850                | 795.0   | 178.721                | 879.0   | 197.607 |
|                  | 1 1/4 | 566.2           | 0.8776 | 4.98  | 3.35                     | 1,002.2 | 225.298                | 1,109.8 | 249.482                | 833.9   | 187.462                | 922.0   | 207.271 |
| 32               |       | 573.4           | 0.8888 | 5.04  | 3.39                     | 1,014.9 | 228.163                | 1,123.9 | 252.655                | 844.0   | 189.739                | 934.0   | 209.972 |
| 33               |       | 616.1           | 0.9550 | 5.42  | 3.64                     | 1,090.5 | 245.153                | 1,207.6 | 271.469                | 907.0   | 203.902                | 1,003.0 | 225.483 |
| 34               |       | 647.1           | 1.0030 | 5.69  | 3.82                     | 1,145.4 | 257.489                | 1,268.3 | 285.129                | 953.0   | 214.243                | 1,054.0 | 236.949 |
|                  | 1 3/8 | 682.8           | 1.0583 | 6.00  | 4.03                     | 1,208.6 | 271.694                | 1,338.3 | 300.859                | 1,005.6 | 226.062                | 1,112.1 | 250.021 |
| 36               |       | 729.2           | 1.1303 | 6.54  | 4.39                     | 1,290.7 | 290.157                | 1,429.2 | 321.304                | 1,074.0 | 241.441                | 1,187.0 | 266.848 |
| 38               |       | 812.0           | 1.2586 | 7.31  | 4.91                     | 1,437.2 | 323.104                | 1,591.5 | 357.788                | 1,195.0 | 268.647                | 1,322.0 | 297.197 |
|                  | 1 1/2 | 816.3           | 1.2653 | 7.35  | 4.94                     | 1,444.9 | 324.815                | 1,599.9 | 359.683                | 1,201.3 | 270.669                | 1,329.0 | 298.771 |
| 40               |       | 900.8           | 1.3962 | 8.06  | 5.42                     | 1,594.4 | 358.439                | 1,765.6 | 396.915                | 1,326.0 | 298.097                | 1,467.0 | 329.795 |
|                  | 1 5/8 | 959.1           | 1.4866 | 8.58  | 5.77                     | 1,697.6 | 381.637                | 1,879.8 | 422.604                | 1,411.8 | 317.389                | 1,561.9 | 351.139 |
| 42               |       | 992.5           | 1.5384 | 8.87  | 5.96                     | 1,756.7 | 394.927                | 1,945.3 | 437.321                | 1,461.0 | 328.446                | 1,616.0 | 363.291 |
| 43               |       | 1,040.3         | 1.6125 | 9.29  | 6.24                     | 1,841.3 | 413.948                | 2,039.0 | 458.383                | 1,531.3 | 344.250                | 1,693.8 | 380.781 |
| 44               |       | 1,087.1         | 1.6850 | 9.77  | 6.57                     | 1,924.2 | 432.570                | 2,130.7 | 479.004                | 1,600.0 | 359.694                | 1,770.0 | 397.912 |
|                  | 1 3/4 | 1,109.4         | 1.7196 | 9.97  | 6.70                     | 1,963.6 | 441.443                | 2,174.4 | 488.830                | 1,632.8 | 367.073                | 1,806.3 | 406.074 |
| 46               |       | 1,188.0         | 1.8414 | 10.68 | 7.18                     | 2,102.8 | 472.719                | 2,328.5 | 523.463                | 1,749.0 | 393.191                | 1,935.0 | 435.005 |
| 47               |       | 1,240.3         | 1.9225 | 11.14 | 7.49                     | 2,195.3 | 493.530                | 2,431.0 | 546.508                | 1,756.3 | 394.824                | 1,944.8 | 437.206 |
|                  | 1 7/8 | 1,273.4         | 1.9738 | 11.45 | 7.69                     | 2,253.9 | 506.701                | 2,495.9 | 561.092                | 1,803.1 | 405.361                | 1,996.7 | 448.874 |
| 48               |       | 1,298.8         | 2.0131 | 11.58 | 7.78                     | 2,298.9 | 516.808                | 2,545.6 | 572.284                | 1,839.1 | 413.446                | 2,036.5 | 457.827 |
| 49               |       | 1,353.5         | 2.0979 | 12.06 | 8.10                     | 2,395.7 | 538.574                | 2,652.9 | 596.387                | 1,916.6 | 430.859                | 2,122.3 | 477.109 |
| 50               |       | 1,410.7         | 2.1866 | 12.61 | 8.47                     | 2,496.9 | 561.334                | 2,765.0 | 621.590                | 1,997.6 | 449.067                | 2,212.0 | 497.272 |
|                  | 2     | 1,456.2         | 2.2571 | 13.02 | 8.75                     | 2,577.5 | 579.439                | 2,854.2 | 641.639                | 2,062.0 | 463.551                | 2,283.3 | 513.311 |
| 51               |       | 1,467.6         | 2.2748 | 13.12 | 8.82                     | 2,597.7 | 583.975                | 2,876.5 | 646.662                | 2,078.1 | 467.180                | 2,301.2 | 517.330 |
| 52               |       | 1,526.3         | 2.3658 | 13.61 | 9.15                     | 2,701.6 | 607.333                | 2,991.5 | 672.527                | 2,161.2 | 485.866                | 2,393.2 | 538.021 |
| 53               |       | 1,585.5         | 2.4575 | 14.13 | 9.49                     | 2,806.3 | 630.889                | 3,107.6 | 698.612                | 2,245.1 | 504.711                | 2,486.1 | 558.889 |
| 54               | 2 1/8 | 1,654.6         | 2.5646 | 14.70 | 9.88                     | 2,928.6 | 658.385                | 3,243.0 | 729.059                | 2,342.9 | 526.708                | 2,594.4 | 583.247 |
| 55               |       | 1,718.1         | 2.6631 | 15.26 | 10.25                    | 3,041.0 | 683.652                | 3,367.5 | 757.039                | 2,432.8 | 546.922                | 2,694.0 | 605.631 |
| 56               |       | 1,767.8         | 2.7401 | 15.81 | 10.62                    | 3,129.0 | 703.428                | 3,464.9 | 778.938                | 2,503.2 | 562.743                | 2,771.9 | 623.150 |
| 57               | 2 1/4 | 1,831.5         | 2.8388 | 16.38 | 11.01                    | 3,241.8 | 728.775                | 3,589.7 | 807.005                | 2,593.4 | 583.020                | 2,871.8 | 645.604 |
| 58               |       | 1,896.3         | 2.9393 | 16.96 | 11.40                    | 3,356.5 | 754.571                | 3,716.8 | 835.570                | 2,685.2 | 603.656                | 2,973.4 | 668.456 |
| 59               |       | 1,962.3         | 3.0415 | 17.55 | 11.79                    | 3,473.2 | 780.814                | 3,846.1 | 864.631                | 2,778.6 | 624.652                | 3,076.9 | 691.705 |
| 60               |       | 2,029.4         | 3.1455 | 18.15 | 12.20                    | 3,592.0 | 807.507                | 3,977.6 | 894.189                | 2,873.6 | 646.006                | 3,182.0 | 715.351 |
|                  | 2 3/8 | 2,051.5         | 3.1798 | 18.35 | 12.33                    | 3,631.2 | 816.316                | 4,020.9 | 903.943                | 2,904.9 | 653.053                | 3,216.8 | 723.154 |
| 61               |       | 2,097.7         | 3.2514 | 18.76 | 12.61                    | 3,712.9 | 834.699                | 4,111.5 | 924.300                | 2,933.2 | 659.413                | 3,248.1 | 730.197 |
| 62               |       | 2,167.1         | 3.3590 | 19.38 | 13.02                    | 3,835.8 | 862.315                | 4,247.5 | 954.879                | 3,030.3 | 681.229                | 3,355.5 | 754.355 |
| 63               |       | 2,237.5         | 3.4681 | 20.01 | 13.45                    | 3,960.4 | 890.328                | 4,385.5 | 985.899                | 3,128.7 | 703.359                | 3,464.5 | 778.861 |
|                  | 2 1/2 | 2,273.2         | 3.5235 | 20.33 | 13.66                    | 4,023.6 | 904.533                | 4,455.5 | 1,001.630              | 3,178.6 | 714.581                | 3,519.8 | 791.288 |
| 64               |       | 2,309.1         | 3.5791 | 20.65 | 13.88                    | 4,087.1 | 918.818                | 4,525.8 | 1,017.448              | 3,228.8 | 725.866                | 3,575.4 | 803.784 |
| 65               |       | 2,381.8         | 3.6918 | 21.30 | 14.31                    | 4,215.8 | 947.746                | 4,668.3 | 1,049.482              | 3,330.5 | 748.720                | 3,688.0 | 829.091 |

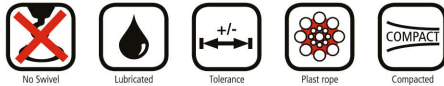
Product specifications are subject to change without notice or obligation. The shown drawings or cross sections are only for illustrative purposes; the images can vary depending on requested diameter and current status of technical development. This table is for reference only. Additional sizes available upon request.



## ➤ Steel Wire Rope: CASAR Special Crane Rope

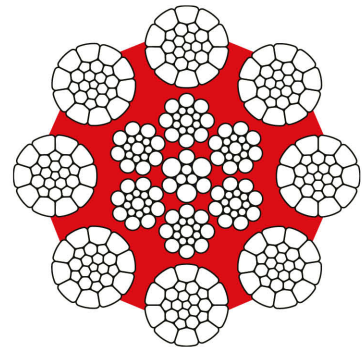
# CASAR TURBOPLAST

## PROPERTIES



## APPLICATIONS

High breaking load and good resistance against crushing. Hoisting rope in multiple part reeving for smaller lifting heights as well as for twin hoist systems with left and right hand lay ropes for greater lifting heights.

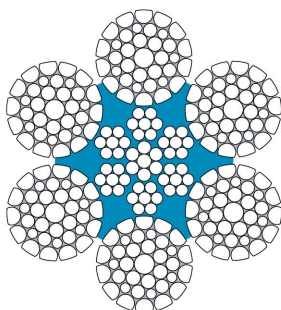


| nominal<br>diameter | metallic<br>area | weight | calculated aggregate breaking force |            |            |            |            |            | minimum breaking force |            |            |            |            |            |
|---------------------|------------------|--------|-------------------------------------|------------|------------|------------|------------|------------|------------------------|------------|------------|------------|------------|------------|
|                     |                  |        | 1770 N/mm²                          |            | 1960 N/mm² |            | 2160 N/mm² |            | 1770 N/mm²             |            | 1960 N/mm² |            | 2160 N/mm² |            |
| mm                  | mm²              | kg/m   | kN                                  | t [metric] | kN         | t [metric] | kN         | t [metric] | kN                     | t [metric] | kN         | t [metric] | kN         | t [metric] |
| 8                   | 33,4             | 0,30   | 59,1                                | 6,03       | 65,4       | 6,67       | 72,1       | 7,35       | 52,3                   | 5,33       | 58,0       | 5,91       | 63,5       | 6,48       |
| 9                   | 42,1             | 0,37   | 75,7                                | 7,72       | 83,9       | 8,56       | 92,4       | 9,42       | 67,6                   | 6,89       | 74,0       | 7,55       | 81,4       | 8,30       |
| 10                  | 53,0             | 0,47   | 93,7                                | 9,55       | 103        | 10,5       | 114        | 11,6       | 82,2                   | 8,38       | 90,0       | 9,18       | 101        | 10,2       |
| 11                  | 63,8             | 0,57   | 112                                 | 11,4       | 124        | 12,6       | 137        | 13,9       | 99,5                   | 10,1       | 109        | 11,1       | 121        | 12,3       |
| 12                  | 75,7             | 0,67   | 134                                 | 13,6       | 148        | 15,0       | 163        | 16,6       | 117                    | 11,9       | 130        | 13,2       | 144        | 14,6       |
| 13                  | 89,5             | 0,79   | 158                                 | 16,1       | 175        | 17,8       | 193        | 19,6       | 140                    | 14,2       | 153        | 15,6       | 170        | 17,3       |
| 14                  | 103,1            | 0,91   | 182                                 | 18,5       | 202        | 20,5       | 222        | 22,6       | 161                    | 16,4       | 177        | 18,0       | 196        | 19,9       |
| 15                  | 119,0            | 1,05   | 210                                 | 21,4       | 233        | 23,7       | 257        | 26,2       | 187                    | 19,0       | 205        | 20,9       | 226        | 23,0       |
| 16                  | 135,5            | 1,20   | 239                                 | 24,3       | 265        | 27,0       | 292        | 29,7       | 212                    | 21,6       | 232        | 23,6       | 252        | 25,6       |
| 17                  | 152,4            | 1,35   | 269                                 | 27,4       | 298        | 30,3       | 329        | 33,5       | 236                    | 24,0       | 259        | 26,4       | 283        | 28,8       |
| 18                  | 168,9            | 1,50   | 299                                 | 30,4       | 331        | 33,7       | 364        | 37,1       | 266                    | 27,1       | 292        | 29,7       | 314        | 32,0       |
| 19                  | 189,0            | 1,67   | 334                                 | 34,0       | 370        | 37,7       | 408        | 41,6       | 299                    | 30,4       | 327        | 33,3       | 351        | 35,7       |
| 20                  | 210,7            | 1,87   | 372                                 | 37,9       | 412        | 42,0       | 455        | 46,3       | 329                    | 33,5       | 361        | 36,8       | 391        | 39,8       |
| 21                  | 226,9            | 2,01   | 401                                 | 40,8       | 444        | 45,2       | 490        | 49,9       | 359                    | 36,6       | 394        | 40,1       | 421        | 42,9       |
| 22                  | 252,0            | 2,24   | 445                                 | 45,3       | 493        | 50,2       | 544        | 55,4       | 401                    | 40,8       | 439        | 44,7       | 468        | 47,7       |
| 23                  | 275,1            | 2,44   | 486                                 | 49,5       | 539        | 54,9       | 594        | 60,5       | 436                    | 44,4       | 478        | 48,7       | 511        | 52,1       |
| 24                  | 299,5            | 2,66   | 530                                 | 54,0       | 587        | 59,8       | 646        | 65,8       | 476                    | 48,5       | 521        | 53,1       | 556        | 56,6       |
| 25                  | 324,2            | 2,88   | 573                                 | 58,4       | 635        | 64,7       | 700        | 71,3       | 516                    | 52,6       | 566        | 57,7       | 602        | 61,3       |
| 26                  | 352,4            | 3,13   | 623                                 | 63,5       | 690        | 70,3       | 761        | 77,6       | 562                    | 57,3       | 616        | 62,8       | 655        | 66,7       |
| 27                  | 380,3            | 3,37   | 673                                 | 68,6       | 745        | 75,9       | 821        | 83,7       | 599                    | 61,0       | 657        | 66,9       | 702        | 71,5       |
| 28                  | 405,2            | 3,59   | 717                                 | 73,1       | 794        | 80,9       | 875        | 89,2       | 645                    | 65,7       | 707        | 72,0       | 748        | 76,2       |
| 29                  | 436,0            | 3,87   | 771                                 | 78,6       | 854        | 87,0       | 941        | 95,9       | 695                    | 70,8       | 760        | 77,4       | 807        | 82,3       |
| 30                  | 470,8            | 4,18   | 833                                 | 84,9       | 922        | 94,0       | 1016       | 103,6      | 745                    | 75,9       | 813        | 82,9       | 871        | 88,8       |
| 31                  | 502,3            | 4,46   | 889                                 | 90,6       | 984        | 100,3      | 1084       | 110,5      | 796                    | 81,1       | 869        | 88,6       | 930        | 94,8       |
| 32                  | 533,7            | 4,73   | 944                                 | 96,2       | 1046       | 106,6      | 1152       | 117,4      | 848                    | 86,4       | 938        | 95,6       | 988        | 100,7      |
| 33                  | 571,8            | 5,07   | 1012                                | 103,1      | 1120       | 114,2      | 1235       | 125,9      | 897                    | 91,4       | 979        | 99,8       | 1059       | 108,0      |
| 34                  | 601,4            | 5,33   | 1064                                | 108,4      | 1178       | 120,1      | 1299       | 132,4      | 959                    | 97,7       | 1055       | 107,5      | 1114       | 113,6      |
| 36                  | 670,5            | 5,95   | 1186                                | 120,9      | 1314       | 133,9      | 1448       | 147,6      | 1066                   | 108,7      | 1164       | 118,6      | 1242       | 126,6      |
| 38                  | 753,1            | 6,68   | 1333                                | 135,9      | 1476       | 150,5      | 1626       | 165,8      | 1192                   | 121,5      | 1301       | 132,6      | 1395       | 142,2      |
| 40                  | 837,9            | 7,43   | 1483                                | 151,2      | 1642       | 167,4      | 1809       | 184,4      | 1317                   | 134,2      | 1438       | 146,6      | 1552       | 158,2      |
| 42                  | 914,7            | 8,11   | 1619                                | 165,0      | 1792       | 182,7      | 1975       | 201,3      | 1457                   | 148,5      | 1591       | 162,2      | 1694       | 172,7      |
| 44                  | 1010,7           | 8,96   | 1788                                | 182,3      | 1980       | 201,9      | 2183       | 222,6      | 1593                   | 162,4      | 1739       | 177,3      | 1873       | 190,9      |
| 46                  | 1102,4           | 9,78   | 1951                                | 198,9      | 2160       | 220,2      | 2381       | 242,7      | 1755                   | 178,9      | 1916       | 195,3      | 2042       | 208,2      |
| 48                  | 1201,1           | 10,65  | 2125                                | 216,6      | 2354       | 240,0      | 2594       | 264,5      | 1905                   | 194,2      | 2079       | 212,0      | 2225       | 226,8      |
| 50                  | 1303,7           | 11,56  | 2307                                | 235,2      | 2555       | 260,5      | 2816       | 287,1      | 2036                   | 207,6      | 2265       | 230,9      | 2423       | 247,0      |
| 52                  | 1409,4           | 12,50  | 2494                                | 254,3      | 2762       | 281,6      | 3044       | 310,4      | 2201                   | 224,4      | 2448       | 249,6      | 2620       | 267,1      |
| 54                  | 1520,5           | 13,48  | 2690                                | 274,3      | 2979       | 303,7      | 3283       | 334,7      | 2375                   | 242,1      | 2641       | 269,3      | 2826       | 288,1      |
| 56                  | 1628,1           | 14,44  | 2881                                | 293,7      | 3191       | 325,3      | 3516       | 358,5      | 2543                   | 259,3      | 2828       | 288,3      | 3027       | 308,6      |
| 58                  | 1739,3           | 15,42  | 3078                                | 313,8      | 3408       | 347,5      | 3756       | 383,0      | 2716                   | 276,9      | 3022       | 308,1      | 3234       | 329,7      |
| 60                  | 1865,9           | 16,55  | 3302                                | 336,7      | 3657       | 372,9      | 4030       | 410,9      | 2914                   | 297,1      | 3242       | 330,5      | 3469       | 353,7      |
| 62                  | 1994,2           | 17,68  | 3529                                | 359,8      | 3908       | 398,5      | 4307       | 439,1      | 3113                   | 317,4      | 3364       | 343,0      | 3708       | 378,1      |
| 64                  | 2132,4           | 18,91  | 3774                                | 384,8      | 4179       | 426,1      | 4605       | 469,5      | 3329                   | 339,4      | 3597       | 366,7      | 3965       | 404,3      |
| 66                  | 2272,3           | 20,15  | 4021                                | 410,0      | 4453       | 454,0      | 4908       | 500,4      | 3547                   | 361,6      | 3833       | 390,8      | 4225       | 430,8      |
| 68                  | 2403,4           | 21,31  | 4254                                | 433,7      | 4710       | 480,2      | 5191       | 529,3      | 3752                   | 382,6      | 4055       | 413,4      | 4468       | 455,6      |
| 70                  | 2537,6           | 22,50  | 4491                                | 457,9      | 4973       | 507,1      | 5481       | 558,9      | 3962                   | 404,0      | 4281       | 436,5      | 4718       | 481,1      |
| 72                  | 2689,8           | 23,85  | 4761                                | 485,4      | 5272       | 537,5      | 5810       | 592,4      | 4200                   | 428,2      | 4538       | 462,7      | 5001       | 509,9      |

equal constructions and diameters available - please contact us directly.

## > Steel Wire Rope: CASAR Special Crane Rope

### CASAR HEXAPLAST

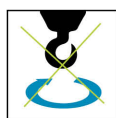


#### OVERVIEW

| RCN | Diameter range [mm] | Construction | Number of outer strands | Number of wires | Number of outer load bearing wires | Average fill factor | Average spin factor *N/mm² |
|-----|---------------------|--------------|-------------------------|-----------------|------------------------------------|---------------------|----------------------------|
| 02  | 10 – 13             | 6xK19        | 6                       | 163             | 114                                | 0,666               | 0,86 (1960*)               |
| 06  | 14 – 19             | 6xK26        | 6                       | 205             | 156                                | 0,663               |                            |
| 08  | 20 – 29             | 6xK31        | 6                       | 235             | 186                                | 0,675               | 0,84 (1960*)               |
| 09  | 30 – 60             | 6xK36        | 6                       | 265             | 216                                | 0,675               |                            |

- Temperature range of use: -50°C to +75°C
- Available in ordinary lay and Lang's lay
- Available in right hand and left hand
- With plastic covered core
- Tolerance range +1% to +4%

#### PROPERTIES



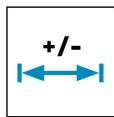
No Swivel



Compacted



Lubricated



Tolerance

#### APPLICATIONS

Can be used for all hoist and pulling applications when a higher MBL instead of 6 strands conventional ropes is required. The internal plastic layer provides additional performance benefits.

| nominal diameter |       | weight |       | minimum breaking force |            |         |             |
|------------------|-------|--------|-------|------------------------|------------|---------|-------------|
| mm               | inch  | kg/m   | lb/ft | 1960 N/mm²             |            |         |             |
|                  |       |        |       | kN                     | t [metric] | lbs     | t [2000lbs] |
| 12               |       | 0,64   | 0,43  | <b>125,8</b>           | 12,83      | 28.292  | 14,15       |
| 12,70            | 1/2   | 0,73   | 0,49  | <b>138,0</b>           | 14,07      | 31.024  | 15,51       |
| 13               |       | 0,77   | 0,52  | <b>150,1</b>           | 15,31      | 33.744  | 16,87       |
| 14               |       | 0,89   | 0,60  | <b>169,3</b>           | 17,26      | 38.052  | 19,03       |
| 15               |       | 1,00   | 0,67  | <b>190,9</b>           | 19,47      | 42.916  | 21,46       |
| 15,88            | 5/8   | 1,11   | 0,74  | <b>209,0</b>           | 21,31      | 46.985  | 23,49       |
| 16               |       | 1,15   | 0,77  | <b>218,8</b>           | 22,31      | 49.190  | 24,59       |
| 17               |       | 1,31   | 0,88  | <b>250,5</b>           | 25,54      | 56.315  | 28,16       |
| 18               |       | 1,45   | 0,97  | <b>276,7</b>           | 28,21      | 62.196  | 31,10       |
| 19               | 3/4   | 1,62   | 1,09  | <b>311,1</b>           | 31,72      | 69.940  | 34,97       |
| 20               |       | 1,78   | 1,20  | <b>344,8</b>           | 35,16      | 77.509  | 38,75       |
| 22               |       | 2,16   | 1,45  | <b>419,0</b>           | 42,73      | 94.195  | 47,10       |
| 22,23            | 7/8   | 2,24   | 1,50  | <b>420,0</b>           | 42,83      | 94.420  | 47,21       |
| 24               |       | 2,61   | 1,76  | <b>504,3</b>           | 51,42      | 113.371 | 56,69       |
| 25               |       | 2,80   | 1,88  | <b>542,5</b>           | 55,32      | 121.959 | 60,98       |
| 25,40            | 1     | 2,91   | 1,96  | <b>565,2</b>           | 57,63      | 127.062 | 63,53       |
| 26               |       | 3,09   | 2,07  | <b>598,2</b>           | 61,00      | 134.481 | 67,24       |
| 28               |       | 3,54   | 2,38  | <b>681,6</b>           | 69,50      | 153.228 | 76,61       |
| 28,58            | 1 1/8 | 3,65   | 2,45  | <b>687,0</b>           | 70,05      | 154.444 | 77,22       |
| 29               |       | 3,81   | 2,56  | <b>737,7</b>           | 75,22      | 165.842 | 82,92       |
| 30               |       | 4,11   | 2,76  | <b>786,6</b>           | 80,21      | 176.826 | 88,41       |
| 31,75            | 1 1/4 | 4,58   | 3,07  | <b>850,0</b>           | 86,68      | 191.088 | 95,54       |
| 32               |       | 4,61   | 3,09  | <b>890,9</b>           | 90,84      | 200.276 | 100,14      |
| 34               |       | 5,22   | 3,51  | <b>1.011</b>           | 103,09     | 227.282 | 113,64      |
| 34,93            | 1 3/8 | 5,56   | 3,74  | <b>1.030</b>           | 105,03     | 231.553 | 115,78      |
| 35               |       | 5,56   | 3,74  | <b>1.050</b>           | 107,07     | 236.049 | 118,02      |
| 36               |       | 5,85   | 3,93  | <b>1.131</b>           | 115,33     | 254.259 | 127,13      |
| 38               | 1 1/2 | 6,51   | 4,38  | <b>1.261</b>           | 128,59     | 283.484 | 141,74      |
| 40               |       | 7,23   | 4,86  | <b>1.401</b>           | 142,86     | 314.957 | 157,48      |
| 41,28            | 1 5/8 | 7,77   | 5,22  | <b>1.450</b>           | 147,86     | 325.973 | 162,99      |
| 42               |       | 7,91   | 5,32  | <b>1.530</b>           | 156,02     | 343.958 | 171,98      |
| 44               |       | 8,80   | 5,91  | <b>1.701</b>           | 173,45     | 382.400 | 191,20      |
| 44,45            | 1 3/4 | 8,96   | 6,02  | <b>1.710</b>           | 174,37     | 384.423 | 192,21      |
| 46               |       | 9,55   | 6,41  | <b>1.847</b>           | 188,34     | 415.222 | 207,61      |
| 47,63            | 1 7/8 | 10,34  | 6,95  | <b>1.940</b>           | 197,82     | 436.129 | 218,06      |

## > Steel Wire Rope: OLIVEIRA Special Crane Rope

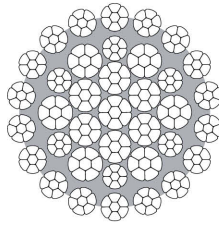
### // ROTATION-RESISTANT

#### Option PPI

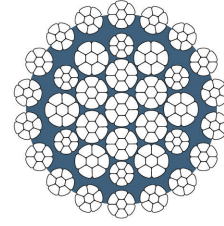
NR15 Maxilift (Option PPI)  
Towerlift 15 (Option PPI)  
LT 24 K (Option PPI)  
LT 24 C  
LT 18

### // NON-ROTATION-RESISTANT

### OPTION PPI



IMPROVED  
DESIGN



| Diameter range [mm] | Construction | Number of outer strands | Number of wires | Number of outer load bearing wires | Average fill factor | Average spin factor                                                    |
|---------------------|--------------|-------------------------|-----------------|------------------------------------|---------------------|------------------------------------------------------------------------|
| 13 – 54             | 37xK7        | 18                      | 259             | 126                                | 0,716               | 0,85<br>(1960 N/mm <sup>2</sup> )<br>0,81<br>(2160 N/mm <sup>2</sup> ) |

- Tolerance on diameter: (EN: +0%; +5%)
- Temperature range of use: -50°C to +100°C
- Temperature range of use for option PPI: -50°C to +80°C
- Option PPI – only available for diameter ≥ 13mm
- Available in ordinary lay and Lang's lay
- Available in right hand and left hand

| nominal diameter | metallic area   | weight | calculated aggregate breaking force |            |                        |            | minimum breaking force |            |                        |            |
|------------------|-----------------|--------|-------------------------------------|------------|------------------------|------------|------------------------|------------|------------------------|------------|
|                  |                 |        | 1960 N/mm <sup>2</sup>              |            | 2160 N/mm <sup>2</sup> |            | 1960 N/mm <sup>2</sup> |            | 2160 N/mm <sup>2</sup> |            |
| mm               | mm <sup>2</sup> | kg/m   | kN                                  | t [metric] | kN                     | t [metric] | kN                     | t [metric] | kN                     | t [metric] |
| 13               | 94,7            | 0,816  | 185,6                               | 18,9       | 204,6                  | 20,9       | 157,8                  | 16,1       | 165,7                  | 16,9       |
| 14               | 110,0           | 0,949  | 215,6                               | 22,0       | 237,6                  | 24,2       | 183,3                  | 18,7       | 192,5                  | 19,6       |
| 15               | 125,8           | 1,088  | 246,6                               | 25,1       | 271,7                  | 27,7       | 209,6                  | 21,4       | 220,6                  | 22,5       |
| 16               | 143,7           | 1,245  | 281,7                               | 28,7       | 310,4                  | 31,7       | 239,4                  | 24,4       | 251,4                  | 25,6       |
| 17               | 161,9           | 1,398  | 317,3                               | 32,4       | 349,7                  | 35,7       | 269,7                  | 27,5       | 283,4                  | 28,9       |
| 18               | 181,6           | 1,562  | 355,9                               | 36,3       | 392,3                  | 40,0       | 302,5                  | 30,9       | 317,7                  | 32,4       |
| 19               | 203,4           | 1,757  | 398,7                               | 40,7       | 439,3                  | 44,8       | 338,9                  | 34,6       | 355,9                  | 36,3       |
| 20               | 224,6           | 1,930  | 440,2                               | 44,9       | 485,1                  | 49,5       | 374,2                  | 38,2       | 393,0                  | 40,1       |
| 21               | 247,4           | 2,139  | 484,9                               | 49,4       | 534,4                  | 54,5       | 412,2                  | 42,0       | 432,9                  | 44,1       |
| 22               | 271,3           | 2,342  | 531,7                               | 54,2       | 586,0                  | 59,8       | 452,0                  | 46,1       | 474,7                  | 48,4       |
| 23               | 297,0           | 2,560  | 582,1                               | 59,4       | 641,5                  | 65,4       | 494,8                  | 50,5       | 519,6                  | 53,0       |
| 24               | 324,3           | 2,790  | 635,6                               | 64,8       | 700,5                  | 71,4       | 540,3                  | 55,1       | 567,4                  | 57,9       |
| 25               | 352,4           | 3,043  | 690,7                               | 70,4       | 761,2                  | 77,6       | 587,1                  | 59,9       | 616,6                  | 62,9       |
| 26               | 380,7           | 3,270  | 746,2                               | 76,1       | 822,3                  | 83,9       | 634,2                  | 64,7       | 666,1                  | 67,9       |
| 27               | 410,3           | 3,544  | 804,2                               | 82,0       | 886,2                  | 90,4       | 683,6                  | 69,7       | 717,9                  | 73,2       |
| 28               | 440,6           | 3,802  | 863,6                               | 88,1       | 951,7                  | 97,0       | 734,0                  | 74,9       | 770,9                  | 78,6       |
| 30               | 508,0           | 4,391  | 995,7                               | 101,5      | 1097,3                 | 111,9      | 846,3                  | 86,3       | 888,8                  | 90,6       |
| 32               | 576,0           | 4,977  | 1129,0                              | 115,1      | 1244,2                 | 126,9      | 959,6                  | 97,9       | 1007,8                 | 103        |
| 34               | 647,1           | 5,586  | 1268,3                              | 129,3      | 1397,7                 | 142,5      | 1079,3                 | 110        | 1133,0                 | 116        |
| 36               | 733,2           | 6,314  | 1437,1                              | 146,5      | 1583,7                 | 161,5      | 1221,5                 | 125        | 1282,8                 | 131        |
| 38               | 810,7           | 7,014  | 1589,0                              | 162,0      | 1751,1                 | 178,6      | 1352,4                 | 138        | 1418,4                 | 145        |
| 40               | 896,0           | 7,744  | 1756,2                              | 179,1      | 1935,4                 | 197,4      | 1495,0                 | 152        | 1569,0                 | 160        |
| 42               | 987,5           | 8,519  | 1935,5                              | 197,4      | 2133,0                 | 217,5      | 1645,2                 | 168        | 1730,0                 | 176        |
| 44               | 1091,6          | 9,400  | 2139,5                              | 218,2      | 2357,9                 | 240,4      | 1818,6                 | 185        | 1909,9                 | 195        |
| 46               | 1198            | 10,374 | 2347,9                              | 239,4      | 2587,5                 | 263,8      | 1995,7                 | 204        | 2095,8                 | 214        |
| 48               | 1311            | 11,320 | 2569,8                              | 262,0      | 2832,0                 | 288,8      | 2184,3                 | 223        | 2293,9                 | 234        |
| 50               | 1400            | 12,042 | 2743,2                              | 279,7      | 3023,1                 | 308,3      | 2331,7                 | 238        | 2451,2                 | 250        |
| 52               | 1529,7          | 13,226 | 2998,2                              | 305,7      | 3304,2                 | 336,9      | 2548,8                 | 260        | 2676,4                 | 273        |
| 54               | 1639,4          | 14,128 | 3213,2                              | 327,7      | 3541,1                 | 361,1      | 2731,2                 | 279        | 2868,3                 | 292        |

Special constructions and diameters available - please contact us directly.



# Steel Wire Rope: OLIVEIRA Special Crane Rope

## NAVIGATION

// ROTATION-RESISTANT

// SEMI-ROTATION-RESISTANT

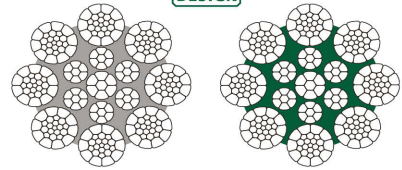
// NON-ROTATION-RESISTANT

HD 8 K (Option PPI)  
SC 6 K (Option PPI)  
SC 8 C (Option PPI)  
DP 8 K (Option PPI)  
DP 10 K  
LP 5

## OLIVEIRA HD 8 K

## OLIVEIRA HD 8 K PPI

IMPROVED  
DESIGN



## PROPERTIES



## APPLICATIONS

When rotation resistant ropes are not required (twin hoist systems with right and left ropes, small heights). Hoist for steel mill cranes, container cranes, floating cranes and boom hoist for deck cranes, luffing and mobile cranes, grab cranes

## OVERVIEW

| RCH | Diameter range (mm) | Construction | Number of outer strands | Number of wires | Number of outer load bearing wires | Average fill factor | Average spin factor |
|-----|---------------------|--------------|-------------------------|-----------------|------------------------------------|---------------------|---------------------|
| 03  | 8 – 11              | BxK12        | 8                       | 145             | 96                                 | 0,672               |                     |
| 03  | 12 – 14             | BxK17        | 8                       | 185             | 136                                | 0,675               |                     |
| 09  | 15 – 28,58          | BxK26        | 8                       | 257             | 208                                | 0,677               | 0,85 (1770°)        |
| 11  | 30 – 42             | BxK31        | 8                       | 297             | 248                                | 0,673               | 0,85 (1960°)        |
| 13  | 44 – 60             | BxK36        | 8                       | 407             | 288                                | 0,683               |                     |
| 13  | 62 – 64             | BxK36        | 8                       | 475             | 288                                | 0,671               | 0,84 (1770°)        |
| >13 | 66 – 72             | BxK41        | 8                       | 515             | 328                                | 0,666               | 0,83 (1960°)        |
|     |                     |              |                         |                 |                                    |                     | 0,81 (2160°)        |

## minimum breaking force

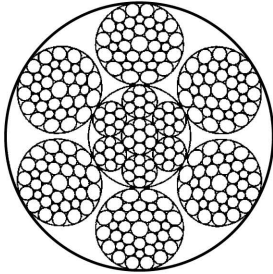
| nominal diameter |       | weight |       | 1770 N/mm <sup>2</sup> |                  | 1960 N/mm <sup>2</sup> |                  | 2160 N/mm <sup>2</sup> |                  |
|------------------|-------|--------|-------|------------------------|------------------|------------------------|------------------|------------------------|------------------|
| mm               | inch  | kg/m   | lb/ft | kN t [metric]          | lbs t [2000 lbs] | kN t [metric]          | lbs t [2000 lbs] | kN t [metric]          | lbs t [2000 lbs] |
| 8                | 5/16  | 0,30   | 0,20  | 50,4                   | 5,14             | 55,8                   | 5,69             | 57,7                   | 5,88             |
| 9                |       | 0,37   | 0,25  | 63,3                   | 6,46             | 70,1                   | 7,15             | 73,6                   | 7,50             |
| 9,53             | 3/8   | 0,39   | 0,26  | 66,8                   | 6,81             | 74,0                   | 7,54             | 79,6                   | 8,12             |
| 10               |       | 0,46   | 0,31  | 78,3                   | 7,98             | 86,7                   | 8,84             | 92,4                   | 9,42             |
| 11               | 7/16  | 0,57   | 0,38  | 96,7                   | 9,86             | 107,0                  | 10,92            | 112,0                  | 11,42            |
| 12               |       | 0,65   | 0,44  | 115,1                  | 11,74            | 126,4                  | 12,89            | 132,6                  | 13,52            |
| 12,70            | 1/2   | 0,71   | 0,48  | 124,4                  | 12,69            | 138,0                  | 14,07            | 144,7                  | 14,76            |
| 13               |       | 0,77   | 0,52  | 136,6                  | 13,93            | 149,0                  | 15,19            | 156,2                  | 15,93            |
| 14               |       | 0,90   | 0,61  | 157,9                  | 16,10            | 174,8                  | 17,82            | 187,0                  | 19,07            |
| 15               |       | 1,03   | 0,69  | 180,0                  | 18,35            | 202,7                  | 20,67            | 214,0                  | 21,82            |
| 15,88            | 5/8   | 1,15   | 0,77  | 200,0                  | 20,39            | 220,0                  | 22,43            | 235,0                  | 23,96            |
| 16               |       | 1,16   | 0,78  | 204,0                  | 20,80            | 229,4                  | 23,39            | 242,4                  | 24,72            |
| 18               |       | 1,49   | 1,00  | 260,2                  | 26,53            | 288,2                  | 29,39            | 307,0                  | 31,31            |
| 19               | 3/4   | 1,64   | 1,10  | 292,1                  | 29,79            | 323,5                  | 32,99            | 342,0                  | 34,87            |
| 20               |       | 1,84   | 1,23  | 321,0                  | 32,73            | 355,5                  | 36,25            | 379,0                  | 38,65            |
| 22               |       | 2,21   | 1,49  | 391,7                  | 39,94            | 433,7                  | 44,23            | 458,5                  | 46,75            |
| 22,23            | 7/8   | 2,26   | 1,52  | 394,9                  | 40,27            | 435,0                  | 44,36            | 462,0                  | 47,11            |
| 24               |       | 2,63   | 1,77  | 464,5                  | 47,37            | 514,3                  | 52,44            | 556,0                  | 56,70            |
| 25               |       | 2,86   | 1,92  | 504,2                  | 51,41            | 558,2                  | 56,92            | 602,0                  | 61,39            |
| 25,40            | 1     | 2,94   | 1,98  | 519,0                  | 52,92            | 572,0                  | 58,33            | 611,0                  | 62,30            |
| 26               |       | 3,11   | 2,09  | 548,9                  | 55,97            | 607,8                  | 61,98            | 655,0                  | 66,79            |
| 28               |       | 3,57   | 2,40  | 629,6                  | 64,20            | 697,3                  | 71,10            | 748,0                  | 76,27            |
| 28,58            | 1 1/8 | 3,62   | 2,46  | 638,0                  | 65,06            | 707,0                  | 72,09            | 751,0                  | 76,58            |
| 30               |       | 4,12   | 2,77  | 727,1                  | 74,14            | 803,0                  | 81,88            | 864,0                  | 88,10            |
| 31,75            | 1 1/4 | 4,59   | 3,09  | 812,0                  | 82,80            | 895,0                  | 91,26            | 951,0                  | 96,98            |
| 32               |       | 4,67   | 3,14  | 828,0                  | 84,43            | 911,0                  | 92,90            | 968,0                  | 98,71            |
| 34               |       | 5,29   | 3,56  | 936,4                  | 95,49            | 1.024,9                | 104,51           | 1.091,0                | 111,25           |
| 34,93            | 1 3/8 | 5,51   | 3,70  | 954,0                  | 97,28            | 1.057,0                | 107,78           | 1.109,0                | 113,09           |
| 36               |       | 5,84   | 3,93  | 1.040,1                | 106,06           | 1.150,0                | 117,27           | 1.217,0                | 124,10           |
| 38               | 1 1/2 | 6,58   | 4,42  | 1.159,3                | 118,22           | 1.270,6                | 129,56           | 1.332,5                | 135,88           |
| 40               |       | 7,30   | 4,90  | 1.285,5                | 131,08           | 1.409,8                | 143,76           | 1.478,6                | 150,77           |
| 41,28            | 1 5/8 | 7,47   | 5,02  | 1.305,0                | 133,07           | 1.464,3                | 149,32           | 1.535,6                | 156,59           |
| 42               |       | 7,98   | 5,36  | 1.403,6                | 143,13           | 1.538,4                | 156,87           | 1.613,3                | 164,51           |
| 44               |       | 9,00   | 6,05  | 1.554,3                | 158,49           | 1.735,6                | 176,98           | 1.820,2                | 185,61           |
| 44,45            | 1 3/4 | 9,06   | 6,09  | 1.572,2                | 160,32           | 1.743,4                | 177,78           | 1.828,4                | 186,44           |
| 46               |       | 9,78   | 6,57  | 1.713,0                | 174,68           | 1.883,2                | 192,03           | 1.975,0                | 201,39           |
| 47,63            | 1 7/8 | 10,40  | 6,99  | 1.774,0                | 180,90           | 1.964,0                | 200,27           | 2.112,0                | 215,36           |
| 48               |       | 10,61  | 7,13  | 1.858,8                | 189,54           | 2.055,3                | 209,58           | 2.155,5                | 219,80           |
| 50               |       | 11,62  | 7,81  | 1.986,0                | 202,52           | 2.252,9                | 229,73           | 2.362,7                | 240,93           |
| 50,80            | 2     | 11,87  | 7,98  | 2.044,7                | 208,50           | 2.283,4                | 232,84           | 2.394,7                | 244,19           |
| 52               |       | 12,51  | 8,41  | 2.147,0                | 218,93           | 2.426,9                | 247,48           | 2.545,2                | 259,54           |
| 54               | 2 1/8 | 13,49  | 9,07  | 2.316,2                | 236,19           | 2.607,0                | 265,84           | 2.734,0                | 278,79           |
| 56               |       | 14,59  | 9,80  | 2.480,1                | 252,90           | 2.805,0                | 286,03           | 2.941,7                | 299,97           |
| 57,15            | 2 1/4 | 14,92  | 10,03 | 2.572,9                | 262,36           | 2.849,1                | 290,53           | 3.027,7                | 308,74           |
| 58               |       | 15,69  | 10,55 | 2.649,5                | 270,17           | 3.020,9                | 308,04           | 3.168,1                | 323,06           |
| 60               |       | 16,71  | 11,23 | 2.842,4                | 289,84           | 3.224,0                | 328,75           | 3.381,1                | 344,77           |
| 60,33            | 2 3/8 | 16,71  | 11,23 | 2.844,0                | 290,01           | 3.225,0                | 328,86           | 3.383,0                | 344,97           |
| 62               |       | 17,45  | 11,73 | 2.969,0                | 302,75           | 3.280,0                | 334,47           | 3.528,0                | 359,76           |
| 63,50            | 2 1/2 | 18,17  | 12,21 | 3.092,0                | 315,30           | 3.485,0                | 355,37           | 3.682,0                | 375,46           |
| 64               |       | 18,66  | 12,54 | 3.200,0                | 326,31           | 3.589,0                | 365,98           | 3.764,0                | 383,82           |
| 66               |       | 19,67  | 13,22 | 3.389,0                | 345,58           | 3.708,0                | 378,11           | 3.988,0                | 406,66           |
| 66,68            | 2 5/8 | 19,94  | 13,40 | 3.440,0                | 350,78           | 3.760,0                | 383,41           | 4.050,0                | 412,99           |
| 68               |       | 20,81  | 13,98 | 3.585,0                | 365,57           | 3.924,0                | 400,14           | 4.220,0                | 430,32           |
| 70               | 2 3/4 | 21,69  | 14,57 | 3.778,0                | 385,24           | 4.133,7                | 421,52           | 4.445,7                | 453,34           |
| 72               |       | 23,26  | 15,63 | 4.012,7                | 409,18           | 4.390,6                | 447,71           | 4.722,0                | 481,51           |

Special constructions and diameters available - please contact us directly.



## > Steel Wire Rope: Stranded Ropes

### Rope Type: Stranded Rope acc. to BS EN 12385-4 Rope Construction: 6x36WS-IWRC



Rope class / Number of outer strands:

**6x36 / 6**

Surface available in:

**U (ungalvanised) / B (galvanised)**

Lay / Lay direction available in:

**sZ / zS**

Categories:

**not rotation-resistant**

Swivel:

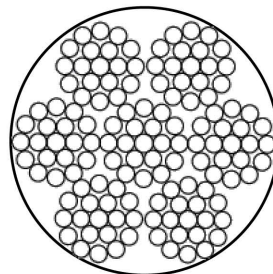
**not allowed**

Plastic inlay:

**no**

| NOM ROPE DIA | APPROX MASS.<br>KG./100M | MINIMUM BREAKING FORCE<br>1960 N/MM2 |
|--------------|--------------------------|--------------------------------------|
| MM           | STEEL CORE               | KN                                   |
| 8            | 26,8                     | 44,7                                 |
| 9            | 33,8                     | 56,5                                 |
| 10           | 41,8                     | 69,8                                 |
| 11           | 50,6                     | 84,4                                 |
| 12           | 60,2                     | 100                                  |
| 13           | 70,7                     | 118                                  |
| 14           | 82,0                     | 137                                  |
| 16           | 107,0                    | 179                                  |
| 18           | 135                      | 226                                  |
| 19           | 153                      | 252                                  |
| 20           | 167                      | 279                                  |
| 22           | 202                      | 338                                  |
| 24           | 241                      | 402                                  |
| 26           | 262                      | 472                                  |
| 28           | 328                      | 547                                  |
| 30           | 369                      | 628                                  |
| 32           | 428                      | 715                                  |
| 34           | 472                      | 807                                  |
| 36           | 542                      | 904                                  |
| 38           | 604                      | 1010                                 |
| 40           | 669                      | 1120                                 |
| 42           | 720                      | 1230                                 |
| 44           | 810                      | 1350                                 |
| 48           | 964                      | 1710                                 |
| 52           | 1.130                    | 1930                                 |
| 56           | 1.310                    | 2335                                 |
| 64           | 1.506                    | 2950                                 |

### 6x19 WSC Steel Wire Rope



Rope class / Number of outer strands:

**6x19 / 6**

Surface available in:

**U (ungalvanised) / B (galvanised)**

Lay / Lay direction available in:

**sZ / zS**

Categories:

**not rotation-resistant**

Swivel:

**not allowed**

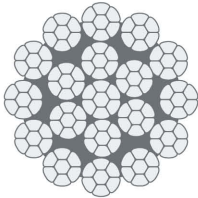
Plastic inlay:

**no**

| NOM ROPE DIA | APPROX MASS.<br>KG./100M | MINIMUM BREAKING FORCE<br>1960 N/MM2 |
|--------------|--------------------------|--------------------------------------|
| MM           | STEEL CORE               | KN                                   |
| 6            | 13,8                     | 25,5                                 |
| 8            | 24,3                     | 45,4                                 |
| 10           | 38,1                     | 71                                   |
| 11           | 49,6                     | 78,7                                 |
| 12           | 54,8                     | 102                                  |
| 13           | 69                       | 118                                  |
| 14           | 74,6                     | 137                                  |
| 16           | 97                       | 167                                  |
| 18           | 123                      | 226                                  |
| 19           | 137                      | 252                                  |
| 20           | 152                      | 79                                   |
| 22           | 184                      | 338                                  |

> Steel Wire Rope

19xK7



Semi-rotation resistant with **12 strands** in external layer, compacted strands

The very basic rotation resistant wire rope, extensively used the hoisting rope for various cranes (provision cranes, hose crane etc). Also used as life-boat falls. Less flexible compared to 35(W)x 7 but more abrasion resistant. Its construction is according to EN 12385 standard

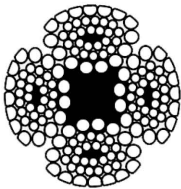
| NOM ROPE DIA<br>MM | MINIMUM BREAKING FORCE   |                  |
|--------------------|--------------------------|------------------|
|                    | APPROX MASS.<br>KG./100M | 1960 N/MM2<br>KN |
| 6                  | 14                       | 25               |
| 8                  | 26                       | 45               |
| 9                  | 33                       | 52,1             |
| 10                 | 40                       | 70               |
| 12                 | 58                       | 101              |
| 13                 | 68                       | 118              |
| 14                 | 79                       | 137              |
| 16                 | 103                      | 180              |
| 18                 | 130                      | 226              |
| 19                 | 144                      | 253              |
| 20                 | 160                      | 279              |
| 22                 | 198                      | 339              |

Explanation of products :

The rope is specially designed to be used where minimal rotation is a requirement. Comparing other multi-strand non-rotating constructions, this flattened 3 or 4 strands rope with fiber core construction enables this rope to have superior non-rotating characteristics and resistance to deformation. This rope is recommended for high altitude crane.

Properties

- Superior non-rotating characteristics
- Excellent deforming resistance
- Longer fatigue life
- High flexibility with fiber cores in each strand
- Strong against abrasion



- Rugged 4 strand steel wire rope
- Recommended for severe applications
- Fully lubricated in manufacturing



| NOM. ROPE DIA.<br>mm | NOM. ROPE DIA.<br>in | APPROX.*<br>MASS<br>kg/100m | MINIMUM BREAKING FORCE    |        |                        |        |
|----------------------|----------------------|-----------------------------|---------------------------|--------|------------------------|--------|
|                      |                      |                             | GALVANISED & UNGALVANISED |        |                        |        |
|                      |                      |                             | ROPE GRADE                |        |                        |        |
|                      |                      |                             | 1770 N/mm <sup>2</sup>    |        | 1960 N/mm <sup>2</sup> |        |
|                      |                      |                             | kN                        | tonnes | kN                     | tonnes |
| 10                   |                      | 44.8                        | 64.0                      | 6.5    | 69.4                   | 7.1    |
| 12                   |                      | 65.4                        | 92.3                      | 9.4    | 99.9                   | 10.2   |
| 14                   |                      | 88.8                        | 125.5                     | 12.8   | 136.5                  | 13.9   |
| 16                   | 5/8                  | 117.0                       | 164.5                     | 16.8   | 177.4                  | 18.1   |
| 18                   |                      | 149.0                       | 207.5                     | 21.2   | 224.5                  | 22.9   |
| 19                   | 3/4                  | 167.0                       | 231.5                     | 23.6   | 250.5                  | 25.5   |
| 20                   |                      | 183.0                       | 256.5                     | 26.2   | 277.5                  | 28.3   |
| 22                   |                      | 214.0                       | 310.0                     | 31.6   | 336.0                  | 34.3   |
|                      | 7/8                  | 218.0                       | 317.0                     | 32.3   | 343.0                  | 35.0   |
| 24                   |                      | 253.0                       | 369.0                     | 37.6   | 400.0                  | 40.8   |
| 25                   |                      | 275.0                       | 399.0                     | 40.7   | 432.0                  | 44.1   |
|                      | 1                    | 284.0                       | 413.0                     | 42.1   | 448.0                  | 45.7   |
| 26                   |                      | 298.0                       | 433.0                     | 44.2   | 469.0                  | 47.8   |
| 28                   |                      | 346.0                       | 502.0                     | 51.2   | 544.0                  | 55.5   |
| 30                   |                      | 398.0                       | 576.0                     | 58.7   | 624.0                  | 63.6   |
| 32                   | 1 1/4                | 456.0                       | 656.0                     | 66.9   | 689.0                  | 70.3   |
| 34                   |                      | 512.0                       | 740.0                     | 75.5   | 802.0                  | 81.8   |
| 36                   |                      | 574.0                       | 830.0                     | 84.6   | 898.0                  | 91.6   |
| 38                   | 1 1/2                | 640.0                       | 924.0                     | 94.2   | 1002.0                 | 102.0  |
| 40                   |                      | 709.0                       | 1002.0                    | 102.0  | 1082.0                 | 110.0  |
| 42                   |                      | 782.0                       | 1102.0                    | 112.0  | 1192.0                 | 122.0  |
| 44                   |                      | 859.0                       | 1212.0                    | 124.0  | 1312.0                 | 134.0  |
| 45                   |                      | 898.0                       | 1272.0                    | 130.0  | 1372.0                 | 140.0  |

Note: Rope Sizes and Breaking Force not shown in the standard table, may be available on request and prior confirmation.

Typical Applications

CONTAINER



TROLLEY

LATTICE BOOM



BOOM HOIST



DOCKSIDE



BOOM HOIST



TROLLEY

## > Accessories

### Wire rope terminations and fittings



Master Link



Master Link Assembly



Eye Self Locking Hook



Alloy Eye Hook



Swivel Hook



Foundry Hook



Chocker Hook



Sorting Hook



Wire Rope Clamp



Open Spelter Sockets



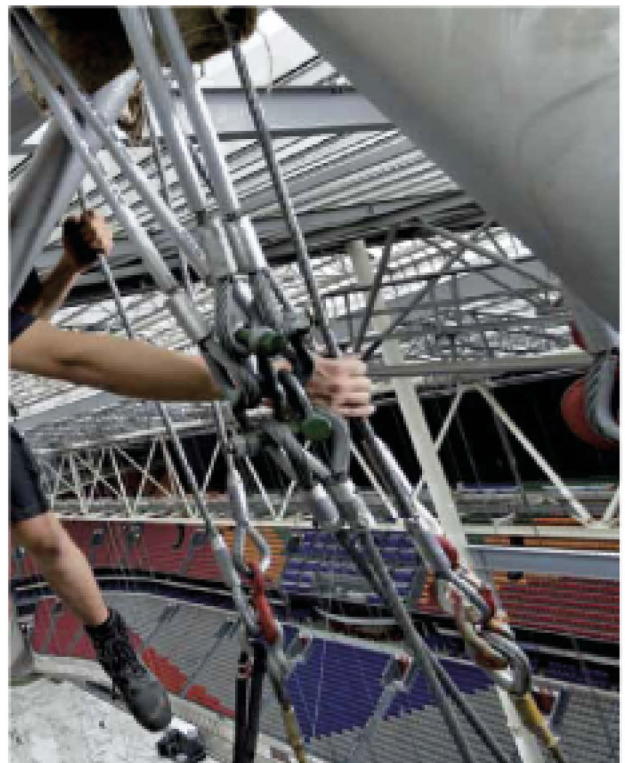
Closed Spelter Socket



Open Swage Socket



Wedge Sockets



Closed Swage Socket



Aluminium Ferrule



Steel Ferrule



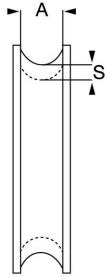
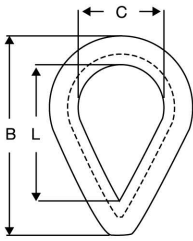
Solid Thimble



Aluminium Thimble

## > Accessories

### 5960. Thimble acc. to BS 464



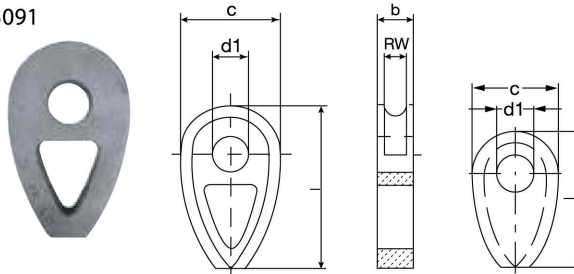
### Galvanised BS 464 Thimbles

| Rope Dia | A mm | B mm | L mm | C mm | S mm | Weight gs/10 | Part No.   |
|----------|------|------|------|------|------|--------------|------------|
| 1/4"     | 7    | 45   | 26   | 18   | 4    | 4.1          | 5960.00.06 |
| 5/16"    | 8    | 54   | 33   | 22   | 4    | 6.5          | 5960.00.08 |
| 3/8"     | 10   | 64   | 38   | 25   | 4.8  | 9.5          | 5960.00.10 |
| 1/2"     | 14   | 80   | 44   | 32   | 5.6  | 13           | 5960.00.13 |
| 5/8"     | 16   | 98   | 59   | 41   | 7.9  | 30           | 5960.00.16 |
| 3/4"     | 21   | 123  | 73   | 51   | 9.5  | 51.5         | 5960.00.19 |
| 7/8"     | 22   | 133  | 83   | 57   | 9.5  | 69.0         | 5960.00.22 |
| 1"       | 27   | 162  | 108  | 70   | 10.3 | 99.5         | 5960.00.26 |
| 1 1/8"   | 29   | 178  | 111  | 76   | 12.7 | 129          | 5960.00.28 |
| 1 1/4"   | 33   | 197  | 133  | 95   | 12.7 | 145          | 5960.00.32 |
| 1 3/8"   | 38   | 229  | 152  | 105  | 15.9 | 238          | 5960.00.36 |
| 1 1/2"   | 41   | 254  | 165  | 114  | 17.5 | 340          | 5960.00.38 |
| 1 5/8"   | 43   | 254  | 165  | 114  | 17.5 | 499          | 5960.00.42 |
| 1 3/4"   | 51   | 286  | 178  | 127  | 25.4 | 532          | 5960.00.44 |
| 2"       | 64   | 330  | 203  | 140  | 28.6 | 695          | 5960.00.52 |

The thimbles detailed above will meet the performance requirements of the new Standard BS-EN-13411

### 5980. Solid Thimble acc. to DIN 3091

With standard bore hole (d1)  
Surface: standard uncoated  
Version: galvanised or hot-dipped galvanised on request



### Solid Thimble acc. to DIN 3091

| Rope Dia | RW mm | b mm | d1 mm | c mm | l mm | Weight gs/10 | Part No.   |
|----------|-------|------|-------|------|------|--------------|------------|
| 8        | 9     | 15.0 | 14    | 40   | 66   | 0.181        | 5960.00.08 |
| 10       | 11    | 17.5 | 18    | 50   | 82   | 0.318        | 5960.00.10 |
| 12       | 13    | 20.0 | 21    | 60   | 98   | 0.515        | 5960.00.12 |
| 14       | 16    | 23.5 | 25    | 70   | 114  | 0.799        | 5960.00.14 |
| 16       | 18    | 26.0 | 28    | 80   | 130  | 0.895        | 5960.00.16 |
| 18       | 20    | 28.5 | 31    | 90   | 145  | 1,211        | 5960.00.18 |
| 20       | 22    | 31.0 | 35    | 100  | 161  | 1,610        | 5960.00.20 |
| 22       | 24    | 33.5 | 38    | 110  | 177  | 2,110        | 5960.00.22 |
| 24       | 26    | 36.0 | 41    | 120  | 193  | 2,710        | 5960.00.24 |
| 26       | 29    | 39.5 | 39.5  | 130  | 209  | 3,550        | 5960.00.26 |
| 28       | 32    | 42   | 42    | 138  | 223  |              | 5960.00.28 |
| 32       | 35    | 47   | 47    | 160  | 256  |              | 5960.00.32 |
| 36       | 42    | 54   | 54    | 172  | 290  |              | 5960.00.36 |

Available up to nominal size 80.  
Option: bore hole with tolerance zone acc. to DIN ISO 286

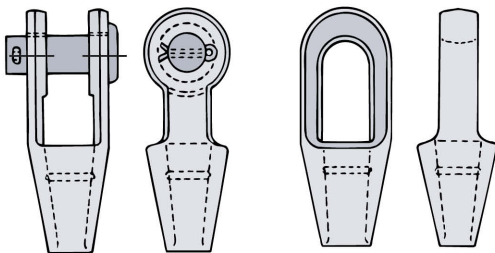
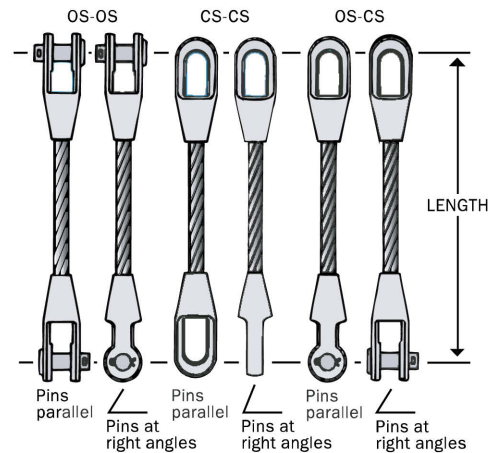


## > Sockets

### Wire Rope Assemblies. Swaged and Spelter Sockets

Boom pendants, guylines, raising lines, backstays, lifting bridles and more. Those are the uses of our wire rope assemblies, offered in both poured (spelter) sockets and mechanically swaged sockets. A Design Factor of five has been used to establish the rated capacities.

please indicate your choice of end fittings "OS" or "CS". "OS" indicates your preference for an open socket fitting, while "CS" designates a closed socket fitting.

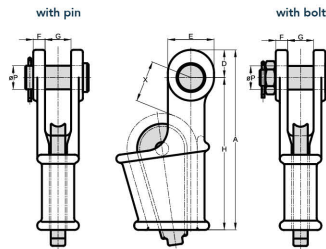


#### 5884. Wedge socket

wedge socket, galvanised  
for rope  $\varnothing$  from 7 to 76 mm

Available with:

- Bolt and pin
- Bolt, nut, and pin

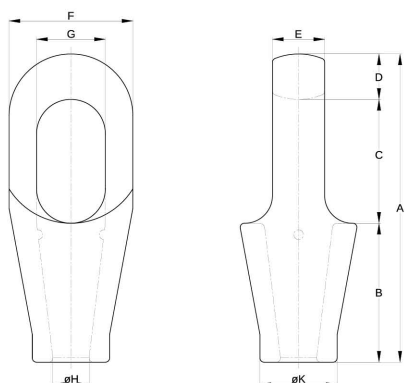


### OPEN WEDGE SOCKET

| Model<br>Number | MBL<br>(Mtons) | For Wire Rope<br>Ø mm | Dimensions (mm) |     |     |      |      |      |      |     | Weight<br>(kg) |
|-----------------|----------------|-----------------------|-----------------|-----|-----|------|------|------|------|-----|----------------|
|                 |                |                       | A               | D   | E   | F    | G    | H    | Ø P  | X   |                |
| OWS 0.15        | 5              | 5 - 6                 | 101             | 17  | 30  | 8    | 17   | 84   | 16   | 35  | 0.5            |
| OWS 0.25        | 8              | 7 - 8                 | 130             | 20  | 34  | 9    | 18   | 110  | 17.5 | 40  | 0.7            |
| OWS 0.5         | 12             | 9 - 10                | 150             | 23  | 40  | 11   | 20.5 | 125  | 20.6 | 45  | 1.2            |
| OWS 1           | 20             | 11 - 13               | 183             | 27  | 48  | 12.7 | 25.6 | 156  | 25.4 | 60  | 2.3            |
| OWS 2           | 25             | 14 - 16               | 224             | 32  | 56  | 14.5 | 32   | 192  | 30   | 65  | 3.6            |
| OWS 3           | 40             | 17 - 19               | 272             | 40  | 68  | 16.5 | 38   | 232  | 35   | 70  | 6.3            |
| OWS 4           | 55             | 20 - 22               | 312             | 48  | 80  | 20.5 | 45   | 264  | 41   | 80  | 10.3           |
| OWS 5           | 80             | 23 - 26               | 370             | 58  | 100 | 22.5 | 51   | 312  | 51   | 90  | 16             |
| OWS 6           | 100            | 27 - 29               | 413             | 65  | 110 | 25   | 57   | 348  | 57   | 100 | 21.5           |
| OWS 7           | 120            | 30 - 32               | 455             | 72  | 124 | 28   | 63   | 384  | 63   | 110 | 30             |
| OWS 8           | 130            | 34 - 36               | 508             | 76  | 132 | 28   | 70   | 432  | 63   | 125 | 36             |
| OWS 9           | 160            | 37 - 39               | 548             | 80  | 140 | 30   | 76   | 468  | 70   | 140 | 50             |
| OWS 10          | 200            | 40 - 42               | 589             | 85  | 150 | 33   | 76   | 504  | 76   | 155 | 60             |
| OWS 11          | 250            | 43 - 48               | 674             | 98  | 170 | 39   | 89   | 576  | 89   | 175 | 90             |
| OWS 12          | 300            | 49 - 52               | 733             | 108 | 186 | 46   | 101  | 625  | 95   | 195 | 125            |
| OWS 13          | 375            | 54 - 58               | 816             | 120 | 210 | 53   | 113  | 696  | 108  | 220 | 175            |
| OWS 14          | 450            | 60 - 68               | 950             | 133 | 230 | 60   | 127  | 817  | 121  | 250 | 250            |
| OWS 15          | 600            | 72 - 76               | 1057            | 145 | 250 | 76   | 146  | 912  | 133  | 280 | 400            |
| OWS 16          | 650            | 81 - 86               | 1160            | 160 | 275 | 79   | 159  | 1000 | 140  | 330 | 515            |

## Socket Assemblies

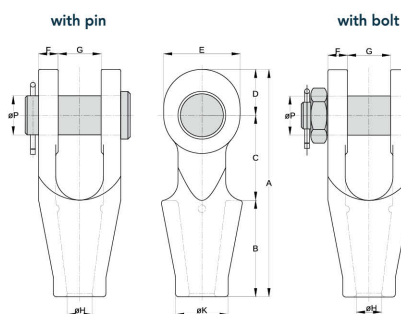
### Closed Spelter Sockets



CLOSED SPELTER SOCKET. MM DIMENSIONS

| Model Number | MBL (Mtons) | For Wire Rope Ø mm | Structural Strand Ø mm | Approx. Resin Volume (cc) | Dimensions (mm) |     |     |     |      |     |     |      |      | Weight (kg) |
|--------------|-------------|--------------------|------------------------|---------------------------|-----------------|-----|-----|-----|------|-----|-----|------|------|-------------|
|              |             |                    |                        |                           | A               | B   | C   | D   | E    | F   | G   | ØH   | ØK   |             |
| CSS 296      | 8           | 6 - 7              | -                      | 10                        | 102             | 46  | 45  | 11  | 14   | 38  | 22  | 10   | 20   | 0.3         |
| CSS 297      | 12          | 8 - 10             | -                      | 22                        | 120             | 54  | 52  | 14  | 17.5 | 44  | 24  | 13.5 | 26   | 0.4         |
| CSS 298      | 20          | 11 - 13            | -                      | 37                        | 140             | 64  | 59  | 17  | 23   | 53  | 30  | 15   | 30   | 0.65        |
| CSS 299      | 25          | 14 - 16            | 12 - 13                | 54                        | 162             | 76  | 65  | 21  | 26   | 67  | 36  | 18.5 | 38.5 | 1.25        |
| CSS 200      | 40          | 18 - 19            | 14 - 16                | 91                        | 194             | 89  | 78  | 27  | 32   | 77  | 42  | 22.5 | 46   | 1.9         |
| CSS 201      | 55          | 20 - 22            | 18 - 19                | 145                       | 224             | 101 | 90  | 33  | 38   | 92  | 50  | 26.8 | 55   | 3.4         |
| CSS 204      | 80          | 23 - 26            | 20 - 22                | 172                       | 253             | 114 | 103 | 36  | 45   | 101 | 57  | 29.5 | 62   | 4.7         |
| CSS 207      | 100         | 27 - 30            | 24 - 26                | 224                       | 282             | 127 | 116 | 39  | 51   | 114 | 65  | 34   | 70   | 6.5         |
| CSS 212      | 130         | 31 - 36            | 27 - 28                | 370                       | 312             | 139 | 130 | 43  | 57   | 127 | 71  | 40   | 83   | 9.5         |
| CSS 215      | 160         | 37 - 39            | 30 - 32                | 463                       | 358             | 152 | 155 | 51  | 63   | 140 | 80  | 44.5 | 90   | 13.5        |
| CSS 217      | 200         | 40 - 42            | 33 - 35                | 549                       | 390             | 165 | 171 | 54  | 70   | 148 | 84  | 48   | 97   | 17          |
| CSS 219      | 250         | 43 - 48            | 36 - 40                | 772                       | 443             | 190 | 198 | 55  | 76   | 171 | 95  | 53   | 112  | 25          |
| CSS 222      | 300         | 49 - 54            | 42 - 45                | 1364                      | 502             | 216 | 224 | 62  | 82   | 193 | 111 | 58.5 | 125  | 34          |
| CSS 224      | 375         | 55 - 60            | 46 - 48                | 1589                      | 550             | 229 | 248 | 73  | 92   | 219 | 125 | 68.5 | 135  | 47          |
| CSS 226      | 450         | 61 - 68            | 50 - 54                | 2040                      | 597             | 248 | 270 | 79  | 102  | 241 | 140 | 77.5 | 150  | 61          |
| CSS 227      | 500         | 69 - 75            | 56 - 62                | 2338                      | 644             | 279 | 286 | 79  | 124  | 273 | 159 | 83   | 160  | 82          |
| CSS 228      | 600         | 76 - 80            | 64 - 67                | 3428                      | 689             | 305 | 298 | 86  | 133  | 292 | 171 | 89   | 170  | 102         |
| CSS 229      | 650         | 81 - 86            | 70 - 73                | 4392                      | 736             | 330 | 311 | 95  | 146  | 311 | 184 | 95   | 180  | 120         |
| CSS 230      | 750         | 87 - 93            | 76 - 80                | 5586                      | 788             | 356 | 330 | 102 | 159  | 330 | 197 | 99   | 200  | 155         |
| CSS 231      | 900         | 94 - 102           | 83 - 92                | 8187                      | 845             | 381 | 356 | 108 | 178  | 362 | 216 | 110  | 215  | 195         |
| CSS 233      | 1200        | 108 - 115          | 96 - 108               | 10500                     | 965             | 440 | 400 | 125 | 190  | 405 | 235 | 128  | 250  | 315         |
| CSS 240      | 1400        | 120 - 128          | 112 - 121              | 14000                     | 1070            | 490 | 450 | 130 | 205  | 450 | 260 | 143  | 270  | 390         |

### Open Spelter Sockets



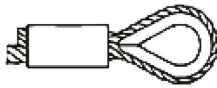
OPEN SPELTER SOCKET. MM DIMENSIONS

| Model Number | MBL (Mtons) | For Wire Rope Ø mm | Structural Strand Ø mm | Approx. Resin Volume (cc) | Dimensions (mm) |     |     |     |     |      |      |      |      |      | Weight (kg) |
|--------------|-------------|--------------------|------------------------|---------------------------|-----------------|-----|-----|-----|-----|------|------|------|------|------|-------------|
|              |             |                    |                        |                           | A               | B   | C   | D   | E   | F    | G    | ØH   | ØK   | ØP   |             |
| OSS 196      | 8           | 6 - 7              | -                      | 10                        | 105             | 46  | 40  | 19  | 34  | 9    | 18   | 10   | 20   | 17.5 | 0.4         |
| OSS 197      | 12          | 8 - 10             | -                      | 23                        | 122             | 54  | 45  | 23  | 40  | 11.2 | 20.6 | 13.5 | 26   | 20.6 | 0.75        |
| OSS 198      | 20          | 11 - 13            | -                      | 37                        | 142             | 64  | 51  | 27  | 48  | 12.7 | 25.6 | 15   | 30   | 25.4 | 1           |
| OSS 199      | 25          | 14 - 16            | 12 - 13                | 52                        | 171             | 76  | 63  | 32  | 56  | 14.5 | 32   | 18.5 | 38.5 | 30   | 1.75        |
| OSS 100      | 40          | 18 - 19            | 14 - 16                | 91                        | 205             | 89  | 76  | 40  | 68  | 16.5 | 38   | 22.5 | 46   | 35   | 3           |
| OSS 104      | 55          | 20 - 22            | 18 - 19                | 145                       | 238             | 101 | 89  | 48  | 80  | 20.5 | 45   | 26.8 | 55   | 41   | 5           |
| OSS 108      | 80          | 23 - 26            | 20 - 22                | 172                       | 273             | 114 | 101 | 58  | 98  | 22.5 | 51   | 29.5 | 62   | 51   | 8           |
| OSS 111      | 100         | 27 - 30            | 24 - 26                | 224                       | 306             | 127 | 114 | 65  | 110 | 25   | 57   | 34   | 70   | 57   | 10.5        |
| OSS 115      | 130         | 31 - 36            | 27 - 28                | 370                       | 338             | 139 | 127 | 72  | 124 | 28   | 63   | 40   | 83   | 63   | 15          |
| OSS 118      | 160         | 37 - 39            | 30 - 32                | 462                       | 394             | 152 | 162 | 80  | 140 | 30   | 76   | 44.5 | 90   | 70   | 21          |
| OSS 120      | 200         | 40 - 42            | 33 - 35                | 549                       | 415             | 165 | 165 | 85  | 148 | 33.5 | 76   | 48   | 97   | 76   | 27          |
| OSS 125      | 250         | 43 - 48            | 36 - 40                | 783                       | 467             | 191 | 178 | 98  | 170 | 39   | 89   | 53   | 112  | 89   | 40          |
| OSS 128      | 300         | 49 - 54            | 42 - 45                | 1364                      | 552             | 216 | 228 | 108 | 186 | 46   | 101  | 58.5 | 125  | 95   | 59          |
| OSS 130      | 375         | 55 - 60            | 46 - 48                | 1538                      | 603             | 229 | 254 | 120 | 210 | 53   | 113  | 68.5 | 135  | 108  | 79          |
| OSS 132      | 450         | 61 - 68            | 50 - 54                | 2040                      | 654             | 248 | 273 | 133 | 230 | 60   | 127  | 77.5 | 150  | 121  | 110         |
| OSS 135      | 500         | 69 - 75            | 56 - 62                | 2338                      | 696             | 279 | 279 | 138 | 240 | 73   | 133  | 83   | 160  | 127  | 135         |
| OSS 138      | 600         | 76 - 80            | 64 - 67                | 3428                      | 736             | 305 | 286 | 145 | 250 | 76   | 146  | 89   | 170  | 133  | 150         |
| OSS 140      | 650         | 81 - 86            | 70 - 73                | 4392                      | 790             | 330 | 300 | 160 | 275 | 79   | 159  | 95   | 180  | 140  | 195         |
| OSS 142      | 750         | 87 - 93            | 76 - 80                | 5554                      | 849             | 356 | 318 | 175 | 300 | 82   | 172  | 99   | 200  | 152  | 245         |
| OSS 144      | 900         | 94 - 102           | 88 - 96                | 8219                      | 922             | 381 | 343 | 198 | 336 | 89   | 191  | 110  | 215  | 178  | 335         |
| OSS 145      | 1000        | 103 - 108          | 98 - 102               | 9000                      | 995             | 406 | 381 | 208 | 356 | 95   | 203  | 118  | 240  | 185  | 435         |
| OSS 146      | 1200        | 108 - 115          | 104 - 111              | 10500                     | 1110            | 440 | 450 | 220 | 370 | 100  | 205  | 128  | 250  | 195  | 525         |
| OSS 150      | 1400        | 120 - 128          | 112 - 121              | 14000                     | 1185            | 490 | 440 | 255 | 430 | 113  | 225  | 143  | 270  | 220  | 680         |

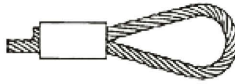
## > Rope Terminations and Cablegrips

Wire rope terminations:

Pressed thimble DIN 6899-



Pressed Loop



Cast socket (incl. synthetic resin casting material)



Pointed end



| Rope ø<br>in mm | Item no.<br>pressed thimble | Item no.<br>pressed loop | Item no.<br>cast socket | Item no.<br>pointed end |
|-----------------|-----------------------------|--------------------------|-------------------------|-------------------------|
| 5               | PKZ0.00.50                  | PSZ0.00.50               | -                       | 1130.00.50              |
| 6               | PKZ0.00.60                  | PSZ0.00.60               | -                       | 1130.00.60              |
| 7               | PKZ0.00.70                  | PSZ0.00.70               | -                       | 1130.00.70              |
| 8               | PKZ0.00.80                  | PSZ0.00.80               | -                       | 1130.00.80              |
| 9               | PKZ0.00.90                  | PSZ0.00.90               | -                       | 1130.00.90              |
| 10              | PKZ0.01.00                  | PSZ0.01.00               | VE00.01.00              | 1130.01.00              |
| 11              | PKZ0.01.10                  | PSZ0.01.10               | VE00.01.10              | 1130.01.10              |
| 12              | PKZ0.01.20                  | PSZ0.01.20               | VE00.01.20              | 1130.01.20              |
| 13              | PKZ0.01.30                  | PSZ0.01.30               | VE00.01.30              | 1130.01.30              |
| 14              | PKZ0.01.40                  | PSZ0.01.40               | VE00.01.40              | 1130.01.40              |
| 16              | PKZ0.01.60                  | PSZ0.01.60               | VE00.01.60              | 1130.01.60              |
| 18              | PKZ0.01.80                  | PSZ0.01.80               | VE00.01.80              | 1130.01.80              |
| 20              | PKZ0.02.00                  | PSZ0.02.00               | VE00.02.00              | 1130.02.00              |
| 22              | PKZ0.02.20                  | PSZ0.02.20               | VE00.02.20              | 1130.02.20              |
| 24              | PKZ0.02.40                  | PSZ0.02.40               | VE00.02.40              | 1130.02.40              |

Cablegrips – also called cable socks, cable pulling sleeves or “Chinese Fingers” – are used to pull and support electrical cables, pipes or hoisting ropes



### Cablegrip type K I

With single eye or pressed thimble



For quick and flexible fastening of cables, ropes or pipes free of damage to a traction or winch rope for towing in cable trenches, tubes etc. (Type K I-k ideal for use with swivel connectors)

### Cablegrip type K II

With double eyes or pressed thimbles



The type K II may not only be used for towing cables and pipes. It can also be moved alongside the cable due to its open front end for readjustment.

### Cablegrip type K N

With double eyes or pressed thimbles, open sided with lace-up strand



This open sided lace up type can be fitted anywhere along the cable, rope or pipe length. After the open side has been stitched together with the enclosed strand the cablegrip is ready for use.

### Cablegrip type K O

Open ended



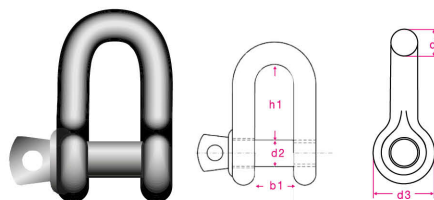
This type is used for joining 2 cables or ropes. It is indispensable when replacing hoisting or elevator ropes. Use only if there is not too much torsion on the rope.

## > ACCESSORIES: High Strength Shackles Grade 6

### Standard : BS EN 13889

#### 5630. High Strength Dee Shackle with Screw Pin

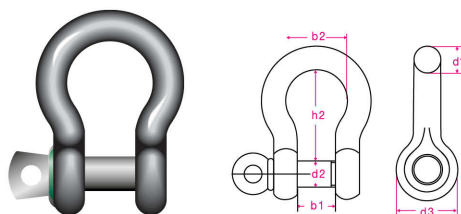
- Stamped with load capacity (WLL/kg), nominal size and manufacturer's mark
- Safety factor: minimum breaking load = 6 times WLL
- Material: forged high-tensile steel
- Finish: bow hot-dip galvanised, pin painted
- With forged usable load and nominal size



| WLL<br>in t | Nominal<br>size<br>in inches | d1<br>Bow | d2 | Dimensions in mm<br>d3<br>Ball | b1  | h1  | Weight<br>in kg/pce | Item no.   |
|-------------|------------------------------|-----------|----|--------------------------------|-----|-----|---------------------|------------|
| 0.5         | 1/4                          | 6         | 8  | 16                             | 12  | 19  | 0.05                | 5630.00.05 |
| 0.75        | 5/16                         | 8         | 10 | 19                             | 13  | 25  | 0.08                | 5630.00.07 |
| 1.0         | 3/8                          | 11        | 11 | 24                             | 18  | 31  | 0.13                | 5630.00.10 |
| 1.5         | 7/16                         | 11        | 14 | 27                             | 18  | 36  | 0.19                | 5630.00.15 |
| 2.0         | 1/2                          | 13        | 16 | 30                             | 21  | 41  | 0.31                | 5630.00.20 |
| 3.25        | 5/8                          | 17        | 19 | 38                             | 27  | 51  | 0.55                | 5630.00.32 |
| 4.75        | 3/4                          | 19        | 22 | 47                             | 32  | 60  | 0.96                | 5630.00.47 |
| 6.5         | 7/8                          | 22        | 25 | 54                             | 36  | 71  | 1.41                | 5630.00.65 |
| 8.5         | 1                            | 25        | 28 | 60                             | 43  | 81  | 2.03                | 5630.00.85 |
| 9.5         | 1 1/8                        | 29        | 33 | 66                             | 46  | 90  | 2.97                | 5630.00.95 |
| 12.0        | 1 1/4                        | 32        | 36 | 76                             | 52  | 100 | 4.01                | 5630.01.20 |
| 13.5        | 1 3/8                        | 35        | 39 | 84                             | 57  | 113 | 5.40                | 5630.01.35 |
| 17.0        | 1 1/2                        | 38        | 42 | 92                             | 60  | 124 | 7.29                | 5630.01.70 |
| 25.0        | 1 3/4                        | 44        | 52 | 109                            | 73  | 146 | 11.25               | 5630.02.50 |
| 35.0        | 2                            | 51        | 60 | 127                            | 83  | 171 | 16.20               | 5630.03.50 |
| 55.0        | 2 1/2                        | 63        | 72 | 150                            | 106 | 203 | 33.30               | 5630.05.50 |

#### 5650. High Strength Bow Shackle with Screw Pin

- Stamped with load capacity (WLL/kg), nominal size and manufacturer's mark
- Safety factor: minimum breaking load = 6 times WLL
- Material: forged high-tensile steel
- Finish: bow hot-dip galvanised, pin painted
- With forged usable load and nominal size



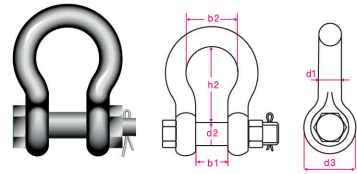
| WLL<br>in t | Nominal<br>size<br>in inches | d1<br>Bow | d2 | Dimensions in mm<br>d3<br>Ball | b1  | b2  | h2  | Weight<br>in kg/pce | Item no.   |
|-------------|------------------------------|-----------|----|--------------------------------|-----|-----|-----|---------------------|------------|
| 0.33        | 3/16                         | 6         | 6  | 14                             | 10  | 14  | 23  | 0.026               | 5650.00.03 |
| 0.5         | 1/4                          | 6         | 8  | 17                             | 12  | 17  | 28  | 0.05                | 5650.00.05 |
| 0.75        | 5/16                         | 8         | 10 | 21                             | 13  | 21  | 31  | 0.08                | 5650.00.07 |
| 1.0         | 3/8                          | 11        | 11 | 24                             | 18  | 25  | 35  | 0.14                | 5650.00.10 |
| 1.5         | 7/16                         | 11        | 14 | 28                             | 18  | 28  | 42  | 0.22                | 5650.00.15 |
| 2.0         | 1/2                          | 13        | 16 | 30                             | 21  | 30  | 48  | 0.33                | 5650.00.20 |
| 3.25        | 5/8                          | 17        | 19 | 38                             | 27  | 42  | 61  | 0.65                | 5650.00.32 |
| 4.75        | 3/4                          | 19        | 22 | 48                             | 32  | 48  | 71  | 0.97                | 5650.00.47 |
| 6.5         | 7/8                          | 22        | 25 | 57                             | 36  | 57  | 84  | 1.46                | 5650.00.65 |
| 8.5         | 1                            | 25        | 28 | 62                             | 43  | 62  | 95  | 2.39                | 5650.00.85 |
| 9.5         | 1 1/8                        | 29        | 33 | 69                             | 46  | 69  | 103 | 3.15                | 5650.00.95 |
| 12.0        | 1 1/4                        | 32        | 36 | 78                             | 52  | 78  | 119 | 4.32                | 5650.01.20 |
| 13.5        | 1 3/8                        | 35        | 39 | 86                             | 57  | 86  | 133 | 5.67                | 5650.01.35 |
| 17.0        | 1 1/2                        | 38        | 42 | 94                             | 60  | 94  | 146 | 7.79                | 5650.01.70 |
| 25.0        | 1 3/4                        | 44        | 52 | 112                            | 73  | 112 | 178 | 12.51               | 5650.02.50 |
| 35.0        | 2                            | 51        | 60 | 135                            | 83  | 135 | 197 | 18.50               | 5650.03.50 |
| 55.0        | 2 1/2                        | 63        | 72 | 158                            | 106 | 158 | 267 | 37.58               | 5650.05.50 |



## ACCESSORIES: High Strength Shackles Grade 6 & Rope Clip

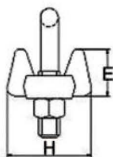
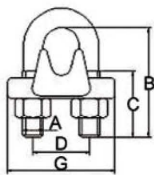
### 5660. High Strength Bow Shackle with Bolt, Nut and Cotter Pin

- With forged usable load and nominal size
- Stamped with load capacity (WLL/kg), nominal size and manufacturer's mark
- Safety factor: minimum breaking load = 6 times WLL
- Material: forged high-tensile steel
- Finish: bow hot-dip galvanised, pin painted



| WLL<br>in t | Nominal<br>size inches | Dimensions in mm |     |     |     |     |     | Weight<br>in kg/pce | Item no.   |
|-------------|------------------------|------------------|-----|-----|-----|-----|-----|---------------------|------------|
|             |                        | d1               | d2  | d3  | b1  | b2  | h2  |                     |            |
| 0.5         | 1/4                    | 6                | 8   | 17  | 12  | 19  | 28  | 0.07                | 5660.00.05 |
| 0.75        | 5/16                   | 8                | 10  | 21  | 13  | 21  | 31  | 0.10                | 5660.00.07 |
| 1.0         | 3/8                    | 11               | 11  | 24  | 18  | 25  | 35  | 0.18                | 5660.00.10 |
| 1.5         | 7/16                   | 11               | 14  | 28  | 18  | 29  | 42  | 0.25                | 5660.00.15 |
| 2.0         | 1/2                    | 13               | 16  | 30  | 21  | 33  | 48  | 0.37                | 5660.00.20 |
| 3.25        | 5/8                    | 17               | 19  | 38  | 27  | 42  | 61  | 0.71                | 5660.00.32 |
| 4.75        | 3/4                    | 19               | 22  | 48  | 32  | 51  | 71  | 1.27                | 5660.00.47 |
| 6.5         | 7/8                    | 22               | 25  | 57  | 36  | 58  | 84  | 1.78                | 5660.00.65 |
| 8.5         | 1                      | 25               | 28  | 62  | 43  | 68  | 95  | 2.52                | 5660.00.85 |
| 9.5         | 1 1/8                  | 29               | 33  | 69  | 46  | 74  | 109 | 3.53                | 5660.00.95 |
| 12.0        | 1 1/4                  | 32               | 36  | 78  | 52  | 82  | 119 | 5.04                | 5660.01.20 |
| 13.5        | 1 3/8                  | 35               | 39  | 86  | 57  | 92  | 133 | 6.84                | 5660.01.35 |
| 17.0        | 1 1/2                  | 38               | 42  | 94  | 60  | 98  | 146 | 8.78                | 5660.01.70 |
| 25.0        | 1 3/4                  | 44               | 52  | 112 | 73  | 127 | 178 | 14.09               | 5660.02.50 |
| 35.0        | 2                      | 51               | 55  | 127 | 83  | 146 | 197 | 20.90               | 5660.03.50 |
| 55.0        | 2 1/2                  | 64               | 70  | 152 | 105 | 184 | 267 | 39.90               | 5660.05.50 |
| 85.0        | 3                      | 76               | 80  | 200 | 127 | 200 | 330 | 62.00               | 5660.08.50 |
| 120.0       | 3 1/2                  | 92               | 95  | 203 | 133 | 232 | 374 | 109.00              | 5660.12.00 |
| 150.0       | 4                      | 100              | 107 | 228 | 140 | 250 | 372 | 130.00              | 5660.15.00 |

### 5830. Galvanised Drop Forged Wire Rope Grips



| Rope Size. |       | Dimensions |      |      |      |      |      |      | Part No.   |
|------------|-------|------------|------|------|------|------|------|------|------------|
| (in.)      | (mm)  | A          | B    | C    | D    | E    | F    | G    |            |
| 1/4        | 6-7   | 0.31       | 1.03 | 0.63 | 0.75 | 0.66 | 1.19 | 1.44 | 5830.00.06 |
| 5/16       | 8     | 0.38       | 1.23 | 0.75 | 0.88 | 0.72 | 1.31 | 1.69 | 5830.00.08 |
| 3/8        | 9-10  | 0.44       | 1.5  | 0.75 | 1    | 0.91 | 1.63 | 1.94 | 5830.00.10 |
| 1/2        | 12-13 | 0.5        | 1.88 | 1    | 1.19 | 1.13 | 1.91 | 2.28 | 5830.00.13 |
| 9/16       | 14-15 | 0.56       | 2.25 | 1.25 | 1.31 | 1.22 | 2.06 | 2.5  | 5830.00.14 |
| 5/8        | 16    | 0.56       | 2.38 | 1.25 | 1.31 | 1.34 | 2.06 | 2.5  | 5830.00.16 |
| 3/4        | 18-20 | 0.62       | 2.75 | 1.44 | 1.5  | 1.41 | 2.25 | 2.84 | 5830.00.19 |
| 7/8        | 22    | 0.75       | 3.12 | 1.62 | 1.75 | 1.49 | 2.44 | 3.16 | 5830.00.22 |
| 1          | 24-26 | 0.75       | 3.5  | 1.81 | 1.88 | 1.78 | 2.63 | 3.47 | 5830.00.26 |
| 1-1/8      | 28-30 | 0.75       | 3.88 | 2    | 2    | 1.91 | 2.81 | 3.59 | 5830.00.28 |
| 1-1/4      | 32-34 | 0.88       | 4.25 | 2.13 | 2.31 | 2.19 | 3.13 | 4.13 | 5830.00.32 |
| 1-3/8      | 36    | 0.88       | 4.53 | 2.31 | 2.38 | 2.31 | 3.13 | 4.19 | 5830.00.36 |
| 1-1/2      | 38    | 0.88       | 4.94 | 2.38 | 2.59 | 2.44 | 3.41 | 4.44 | 5830.00.38 |
| 1-3/4      | 44-46 | 1.13       | 5.75 | 2.75 | 3.06 | 2.94 | 3.81 | 5.28 | 5830.00.44 |
| 2          | 48-52 | 1.25       | 6.44 | 3    | 3.38 | 3.19 | 4.44 | 5.88 | 5830.00.52 |
| 2-1/4      | 56-58 | 1.25       | 7.13 | 3.19 | 3.88 | 3.23 | 4.5  | 6.38 | 5830.00.56 |
| 2-1/2      | 62-65 | 1.25       | 7.69 | 3.44 | 4.13 | 3.69 | 4.9  | 6.63 | 5830.00.64 |
| 2-3/4      | 68-72 | 1.25       | 8.31 | 3.56 | 4.38 | 4.88 | 5    | 6.88 | 5830.00.72 |
| 3          | 75-78 | 1.5        | 9.19 | 3.88 | 4.75 | 4.69 | 5.88 | 7.63 | 5830.00.75 |

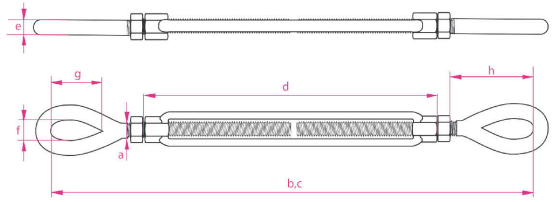
Above grips meets the performance requirements of US Federal Spec FF-C-450

## > ACCESSORIES: Turnbuckles

### 5732. Turnbuckles with extra long Adjustment Range, similar to ASTM F 1145-92, forged, Surface tempered, with 2 Eyes



Material: drop-forged, high-tensile steel SAE 1035 or 1045  
 Safety factor: Minimum breaking load = 5 times WLL  
 Standard: acc. to ASTM F1145-92  
 formerly U.S. Federal Specification FF-T791b  
 Surface: hot-dip galvanised  
 Certificates: on request



| WLL<br>in t | Thread size<br>a<br>in inches | Adjustment<br>range<br>in inches | Length<br>closed<br>b | Length<br>open<br>c | Length<br>d | Dimensions in mm |                            |                             |  | Length<br>closed<br>h | Weight<br>in kg/pce | Item no.   |
|-------------|-------------------------------|----------------------------------|-----------------------|---------------------|-------------|------------------|----------------------------|-----------------------------|--|-----------------------|---------------------|------------|
|             |                               |                                  |                       |                     |             | Diametre<br>e    | Inner width of<br>eye<br>f | Inner length<br>of eye<br>g |  |                       |                     |            |
| 0,54        | 3/8                           | 6                                | 302                   | 416                 | 180         | 9                | 13                         | 28                          |  | 65                    | 0,47                | 5732.38.06 |
| 1           | 1/2                           | 6                                | 338                   | 452                 | 190         | 12               | 18                         | 36                          |  | 80                    | 0,84                | 5732.12.06 |
| 1           | 1/2                           | 9                                | 414                   | 585                 | 270         | 12               | 18                         | 36                          |  | 80                    | 1,05                | 5732.12.09 |
| 1           | 1/2                           | 12                               | 490                   | 719                 | 345         | 12               | 18                         | 36                          |  | 80                    | 1,26                | 5732.12.12 |
| 1,59        | 5/8                           | 6                                | 394                   | 508                 | 205         | 14               | 21                         | 43                          |  | 98                    | 1,35                | 5732.58.06 |
| 1,59        | 5/8                           | 9                                | 470                   | 641                 | 280         | 14               | 21                         | 43                          |  | 98                    | 1,60                | 5732.58.09 |
| 1,59        | 5/8                           | 12                               | 546                   | 775                 | 355         | 14               | 21                         | 43                          |  | 98                    | 1,92                | 5732.58.12 |
| 2,36        | 3/4                           | 6                                | 432                   | 546                 | 210         | 17               | 25                         | 53                          |  | 113                   | 2,03                | 5732.34.06 |
| 2,36        | 3/4                           | 9                                | 508                   | 679                 | 285         | 17               | 25                         | 53                          |  | 113                   | 2,49                | 5732.34.09 |
| 2,36        | 3/4                           | 12                               | 584                   | 813                 | 365         | 17               | 25                         | 53                          |  | 113                   | 2,65                | 5732.34.12 |
| 2,36        | 3/4                           | 18                               | 737                   | 1080                | 520         | 17               | 25                         | 53                          |  | 113                   | 3,06                | 5732.34.18 |
| 3,27        | 7/8                           | 12                               | 625                   | 854                 | 375         | 20               | 31                         | 59                          |  | 118                   | 3,98                | 5732.78.12 |
| 3,27        | 7/8                           | 18                               | 778                   | 1121                | 530         | 20               | 31                         | 59                          |  | 118                   | 5,12                | 5732.78.18 |
| 4,54        | 1                             | 6                                | 524                   | 638                 | 230         | 22               | 36                         | 74                          |  | 155                   | 4,35                | 5732.10.06 |
| 4,54        | 1                             | 12                               | 676                   | 905                 | 385         | 22               | 36                         | 74                          |  | 155                   | 5,92                | 5732.10.12 |
| 4,54        | 1                             | 18                               | 829                   | 1172                | 540         | 22               | 36                         | 74                          |  | 155                   | 7,17                | 5732.10.18 |
| 4,54        | 1                             | 24                               | 980                   | 1437                | 690         | 22               | 36                         | 74                          |  | 155                   | 7,52                | 5732.10.24 |
| 6,91        | 1 1/4                         | 12                               | 760                   | 989                 | 390         | 29               | 45                         | 88                          |  | 197                   | 9,8                 | 5732.14.12 |
| 6,91        | 1 1/4                         | 18                               | 912                   | 1255                | 540         | 29               | 45                         | 88                          |  | 197                   | 11,31               | 5732.14.18 |
| 6,91        | 1 1/4                         | 24                               | 1064                  | 1521                | 690         | 29               | 45                         | 88                          |  | 197                   | 12,1                | 5732.11.24 |
| 9,71        | 1 1/2                         | 12                               | 823                   | 1052                | 400         | 32               | 54                         | 105                         |  | 215                   | 14,2                | 5732.11.12 |
| 9,71        | 1 1/2                         | 18                               | 975                   | 1318                | 560         | 32               | 54                         | 105                         |  | 215                   | 16,5                | 5732.11.18 |
| 9,71        | 1 1/2                         | 24                               | 1128                  | 1585                | 710         | 32               | 54                         | 105                         |  | 215                   | 17,1                | 5732.12.24 |
| 12,71       | 1 3/4                         | 18                               | 1060                  | 1403                | 575         | 38               | 60                         | 119                         |  | 254                   | 23,1                | 5732.13.18 |
| 12,71       | 1 3/4                         | 24                               | 1213                  | 1670                | 725         | 38               | 60                         | 119                         |  | 254                   | 26,3                | 5732.13.24 |
| 16,78       | 2                             | 24                               | 1315                  | 1772                | 750         | 45               | 69                         | 146                         |  | 308                   | 40,7                | 5732.20.24 |
| 27,22       | 2 1/2                         | 24                               | 1486                  | 1943                | 800         | 51               | 79                         | 165                         |  | 344                   | 64                  | 5732.21.24 |
| 34,02       | 2 3/4                         | 24                               | 1562                  | 2019                | 800         | 57               | 83                         | 178                         |  | 381                   | 88                  | 5732.23.24 |



EYE – HOOK TURN BUCKLE



HOOK – HOOK TURN BUCKLE



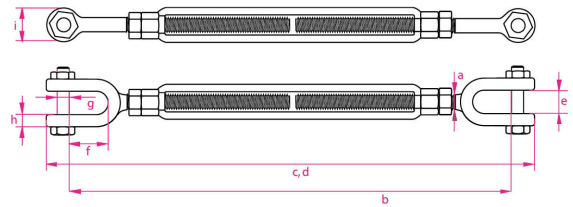
On request, some sizes are also available as item no. 5731. turnbuckle with extra long adjustment range, acc. to US Federal specification FF-T791b, forged, surface tempered, with hook and eye.

## ACCESSORIES: Turnbuckles

### 5734. Turnbuckles with extra long Adjustment Range, similar to ASTM F 1145-92, forged, Surface tempered, with 2 Forks



Material: drop-forged, high-tensile steel SAE 1035 or 1045  
 Safety factor: Minimum breaking load = 5 times WLL  
 Standard: acc. to ASTM F1145-92  
 formerly U.S. Federal Specification FF-T791b  
 Surface: hot-dip galvanised  
 Certificates: on request



| WLL<br>in t | Thread size<br>a<br>in inches | Adjustment<br>range<br>in inches | Length<br>closed<br>b | Length<br>closed<br>c | Length<br>open<br>d | Inner width<br>fork<br>e | Inner length<br>fork<br>f | Bolt<br>diametre<br>g | Material thick-<br>ness eye<br>h | Diametre eye<br>i | Weight<br>in kg/pce | Item no.   |
|-------------|-------------------------------|----------------------------------|-----------------------|-----------------------|---------------------|--------------------------|---------------------------|-----------------------|----------------------------------|-------------------|---------------------|------------|
| 0,54        | 3/8                           | 6                                | 274                   | 302                   | 416                 | 13                       | 22                        | 8                     | 8                                | 21                | 0,57                | 5734.38.06 |
| 1           | 1/2                           | 6                                | 306                   | 338                   | 452                 | 16                       | 26                        | 9,5                   | 10                               | 0,96              |                     | 5734.12.06 |
| 1           | 1/2                           | 9                                | 380                   | 414                   | 585                 | 16                       | 26                        | 9,5                   | 10                               | 1,18              |                     | 5734.12.09 |
| 1           | 1/2                           | 12                               | 456                   | 490                   | 719                 | 16                       | 26                        | 9,5                   | 10                               | 1,50              |                     | 5734.12.12 |
| 1,59        | 5/8                           | 6                                | 346                   | 394                   | 508                 | 18                       | 33                        | 13                    | 13                               | 1,84              |                     | 5734.58.06 |
| 1,59        | 5/8                           | 9                                | 421                   | 470                   | 641                 | 18                       | 33                        | 13                    | 13                               | 2,12              |                     | 5734.58.09 |
| 1,59        | 5/8                           | 12                               | 497                   | 546                   | 775                 | 18                       | 33                        | 13                    | 13                               | 2,56              |                     | 5734.58.12 |
| 2,36        | 3/4                           | 6                                | 369                   | 432                   | 546                 | 23                       | 38                        | 15,5                  | 16                               | 2,68              |                     | 5734.34.06 |
| 2,36        | 3/4                           | 9                                | 443                   | 508                   | 679                 | 23                       | 38                        | 15,5                  | 16                               | 3,03              |                     | 5734.34.09 |
| 2,36        | 3/4                           | 12                               | 519                   | 584                   | 813                 | 23                       | 38                        | 15,5                  | 16                               | 3,29              |                     | 5734.34.12 |
| 2,36        | 3/4                           | 18                               | 671                   | 737                   | 1080                | 23                       | 38                        | 15,5                  | 16                               | 3,65              |                     | 5734.34.18 |
| 3,27        | 7/8                           | 12                               | 551                   | 618                   | 854                 | 27                       | 44                        | 19                    | 18                               | 4,90              |                     | 5734.78.12 |
| 3,27        | 7/8                           | 18                               | 705                   | 772                   | 1121                | 27                       | 44                        | 19                    | 18                               | 5,95              |                     | 5734.78.18 |
| 4,54        | 1                             | 6                                | 448                   | 524                   | 638                 | 30                       | 52                        | 22                    | 20                               | 5,21              |                     | 5734.10.06 |
| 4,54        | 1                             | 12                               | 598                   | 676                   | 905                 | 30                       | 52                        | 22                    | 20                               | 6,96              |                     | 5734.10.12 |
| 4,54        | 1                             | 18                               | 751                   | 829                   | 1172                | 30                       | 52                        | 22                    | 20                               | 8,95              |                     | 5734.10.18 |
| 4,54        | 1                             | 24                               | 902                   | 980                   | 1437                | 30                       | 52                        | 22                    | 20                               | 7,85              |                     | 5734.10.24 |
| 6,91        | 1 1/4                         | 12                               | 657                   | 753                   | 989                 | 44                       | 73                        | 29                    | 25                               | 11,9              |                     | 5734.14.12 |
| 6,91        | 1 1/4                         | 18                               | 809                   | 905                   | 1255                | 44                       | 73                        | 29                    | 25                               | 14                |                     | 5734.14.18 |
| 6,91        | 1 1/4                         | 24                               | 962                   | 1058                  | 1521                | 44                       | 73                        | 29                    | 25                               | 13                |                     | 5734.11.24 |
| 9,71        | 1 1/2                         | 12                               | 689                   | 804                   | 1052                | 52                       | 70                        | 35                    | 27                               | 16,9              |                     | 5734.11.12 |
| 9,71        | 1 1/2                         | 18                               | 841                   | 956                   | 1318                | 52                       | 70                        | 35                    | 27                               | 18,7              |                     | 5734.11.18 |
| 9,71        | 1 1/2                         | 24                               | 994                   | 1109                  | 1585                | 52                       | 70                        | 35                    | 27                               | 18,4              |                     | 5734.12.24 |
| 12,71       | 1 3/4                         | 18                               | 918                   | 1049                  | 1403                | 59                       | 85                        | 41                    | 33                               | 25                |                     | 5734.13.18 |
| 12,71       | 1 3/4                         | 24                               | 1070                  | 1201                  | 1670                | 59                       | 85                        | 41                    | 33                               | 28,7              |                     | 5734.13.24 |
| 16,78       | 2                             | 24                               | 1136                  | 1295                  | 1772                | 64                       | 93                        | 51                    | 39                               | 45,4              |                     | 5734.20.24 |
| 27,22       | 2 1/2                         | 24                               | 1276                  | 1476                  | 1943                | 75                       | 114                       | 57                    | 38                               | 73                |                     | 5734.21.24 |
| 34,02       | 2 3/4                         | 24                               | 1334                  | 1560                  | 2019                | 89                       | 110                       | 70                    | 42                               | 98                |                     | 5734.23.24 |



On request, some sizes are also available as item no. 5731. turnbuckle with extra long adjustment range, acc. to US Federal specification FF-T791b, forged, surface tempered, with fork and eye.



## Chain Block & Lever Hoist



## > User Information

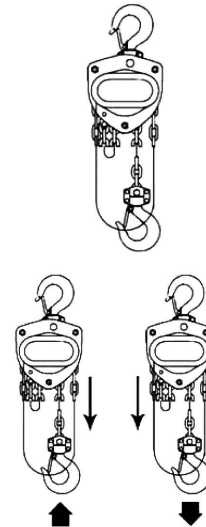
### OPERATION : CHAIN BLOCK & LEVER HOIST

Lifting devices and cranes must only be operated by who have been suitably trained. They must be instructed to operate the device by the contractor. The contractor must ensure that the operating manual is provided with the device and accessible to the operating personnel.

#### Structure : Chain Block

Spur wheel chain blocks are manual chain hoists with suspension hooks for stationary use. They can also be used with single-rail trolleys. They are operated manually using the hand chain. good condition.

Lifting and lowering by pulling the endless hand chain.  
Lift – pull the right leg – hand chain wheel turns clockwise.  
Lower – pull the left leg – hand chain wheel turns anti-clockwise



#### Structure : Lever Hoist

CARL STAHL lever hoists are compact devices with a suspension hook for stationary use.

Pull up the free-run wheel in the direction of the arrow ▲

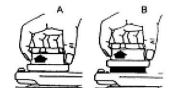


The chain can be pulled through

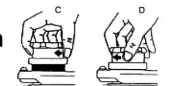
Use one hand to turn the free-run wheel in the direction of the arrow while simultaneously pulling on the load chain leg.

The free-run wheel jumps back to the OFF position. Chain free-run is switched off.

A) Free-run is OFF in both directions  
B) Switch ON free-run



C) Switch OFF free-run  
D) Free-run is OFF



### Safety inspection

The following must be checked before the initial use and prior to subsequent use:

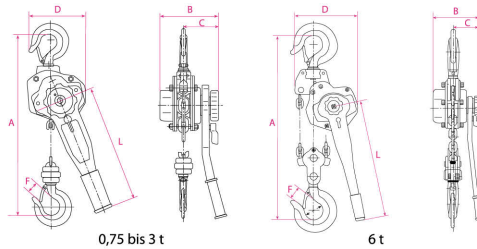
- Any mounting screws are tight and pins, Linchpins and safety fittings are present and secured.
- The chains are correctly positioned, oiled and in a good condition.

## > Manual Lifting Equipment: Lever / Chain Hoist

### Standard : BS EN 13157

#### 7311. Lever Hoist 1.5m standard lifting height Type RZ

- Excellent value for money
- Anti-corrosion treated chain
- Swivel hooks chain release
- Multi-purpose hoist, designed for work in any conditions

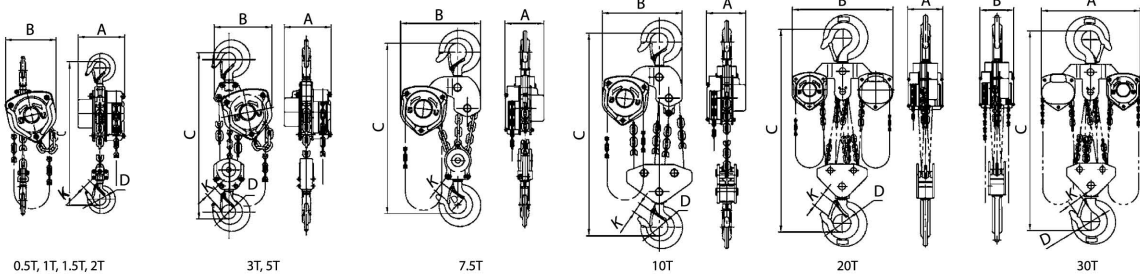


#### Lever hoist with 1.5m standard length of lift

| Load Capacity<br>kg | Model  | No of chains | Approx lever force N | Dimensions in mm |     |     |     |        |    |     |      | Weight at 1.5m lift kg | Item No. |
|---------------------|--------|--------------|----------------------|------------------|-----|-----|-----|--------|----|-----|------|------------------------|----------|
|                     |        |              |                      | A                | B   | C   | D   | H min. | F  | L   |      |                        |          |
| 750                 | RZ 75  | 1            | 210                  | 320              | 156 | 94  | 132 | 38     | 26 | 280 | 6.7  | 7311.50.07             |          |
| 1500                | RZ 150 | 1            | 240                  | 360              | 176 | 103 | 162 | 42     | 32 | 410 | 10.5 | 7311.50.15             |          |
| 2000                | RZ 200 | 1            | 300                  | 365              | 176 | 103 | 162 | 45     | 34 | 410 | 10.8 | 7311.50.20             |          |
| 3000                | RZ 300 | 1            | 320                  | 470              | 202 | 112 | 185 | 50     | 34 | 410 | 18.0 | 7311.50.30             |          |
| 6000                | RZ 600 | 2            | 340                  | 565              | 202 | 112 | 230 | 65     | 44 | 410 | 38.0 | 7311.50.60             |          |
| 9000                | RZ 900 | 3            | 360                  | 740              | 220 | 120 | 272 | 80     | 50 | 410 | 55.0 | 7311.50.90             |          |

#### 7311. Spur Wheel Chain Block Type FZ

With round steel chain. Standard height of lift 3m.



#### Spur Wheel Chain Block with 3m Standard Lifting Height

| Capacity | Model  | No of chain | Dimensions in mm |     |      |      |      | Unit weight | Item No.   |
|----------|--------|-------------|------------------|-----|------|------|------|-------------|------------|
| kg       |        | falls       | A                | B   | C    | D    | K    | kg          |            |
| 500      | FZ 05  | 1           | 137.5            | 137 | 270  | 35   | 28   | 8.4         | 7311.40.05 |
| 1000     | FZ 10  | 1           | 146.5            | 162 | 317  | 35.5 | 26   | 10.5        | 7311.40.10 |
| 1500     | FZ 15  | 1           | 170              | 183 | 399  | 45   | 32.5 | 15.5        | 7311.40.15 |
| 2000     | FZ 20  | 1           | 170              | 194 | 414  | 42.5 | 32   | 18.5        | 7311.40.20 |
| 3000     | FZ 30  | 2           | 170              | 220 | 465  | 50   | 37   | 21.2        | 7311.40.30 |
| 5000     | FZ 50  | 2           | 190.4            | 288 | 618  | 64   | 46   | 41.8        | 7311.40.50 |
| 7500     | FZ 75  | 3           | 190              | 377 | 768  | 64   | 46   | 61.6        | 7311.40.75 |
| 10000    | FZ 100 | 4           | 190              | 384 | 798  | 85   | 50   | 81.7        | 7311.41.00 |
| 20000    | FZ 200 | 8           | 209              | 625 | 890  | 110  | 81   | 173         | 7311.42.00 |
| 30000    | FZ 300 | 12          | 312              | 691 | 1380 | 110  | 81   | 238.5       | 7311.43.00 |

#### Chain Bag

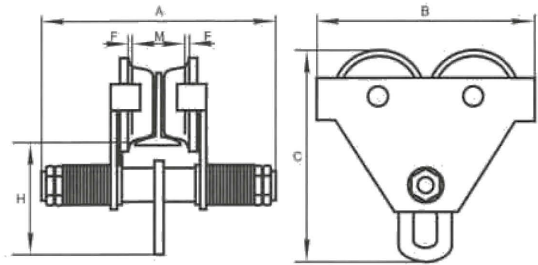


## Manual Lifting Equipment: Trolleys

### Standard : BS EN 13157

#### 7213. Push/pull beam trolley type HTP

Low height due to compact design and construction. Can be set for a wide range of beam styles including different profiles (INP, IPE and IPB). Central load suspension, no side movement. Rollers of cast iron. Smooth running due to ball race bearings, tilting protection is standard. Continuously adjustable.

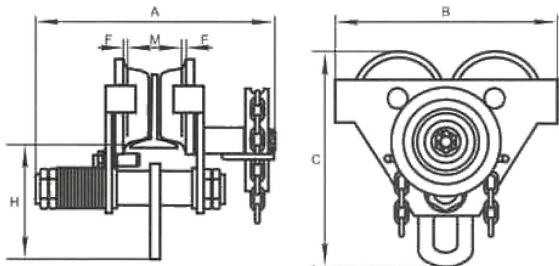
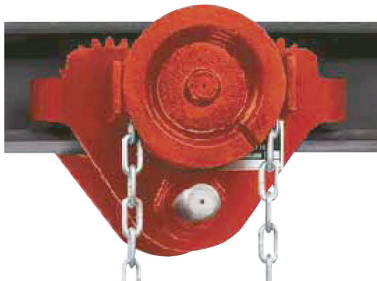


#### PLAIN TROLLEY SERIES SPECIFICATION

| CAPACITY | I- BEAM WIDTH | N.W/KGS | A mm | B mm | C mm  | H mm | F mm | M mm | ITEM NO. |
|----------|---------------|---------|------|------|-------|------|------|------|----------|
| 0.5t     | 50-220        | 7       | 230  | 212  | 198.5 | 113  | 75   | 44   | 7213.05  |
| 1t       | 58-220        | 12      | 254  | 255  | 231.5 | 128  | 85   | 56   | 7213.1   |
| 2t       | 74-220        | 22      | 294  | 302  | 278   | 152  | 90   | 69   | 7213.2   |
| 3t       | 90-220        | 30      | 344  | 344  | 338   | 186  | 132  | 74   | 7213.3   |
| 5t       | 125-220       | 55      | 360  | 378  | 393   | 219  | 120  | 88   | 7213.5   |

#### 7214. Geared beam trolley type HTG

Chain drive. Low height due to compact design and construction. Can be set for a wide range of beam sizes including different profiles (INP, IPE and IPB). Central load suspension, no side movement on the traverse. Rollers of cast iron. Smooth running due to ball bearings, tilting protection is standard. Smoothly adjustable chain traverse drive with chain for 3m track height.



#### GEARED TROLLEY SERIES SPECIFICATIONS

| CAPACITY | I- BEAM WIDTH | N.W/KGS | A mm  | B mm | C mm  | H mm  | F mm | M mm | ITEM NO. |
|----------|---------------|---------|-------|------|-------|-------|------|------|----------|
| 0.5t     | 50-220        | 14      | 308.5 | 212  | 198.5 | 113   | 98   | 44   | 7214.05  |
| 1t       | 58-220        | 19      | 328.5 | 255  | 231.5 | 128   | 115  | 58   | 7214.1   |
| 2t       | 60-220        | 29      | 361.5 | 302  | 278   | 152   | 120  | 54   | 7214.2   |
| 3t       | 74-220        | 40      | 428.5 | 344  | 338   | 186   | 132  | 74   | 7214.3   |
| 5t       | 90-220        | 65      | 434   | 378  | 393   | 219   | 153  | 86   | 7214.5   |
| 10t      | 125-220       | 103     | 487.5 | 455  | 490   | 275.5 | 220  | 132  | 7214.100 |
| 20t      | 125-305       | 245     | 547   | 642  | 622   | 315   | 196  | 124  | 7213.200 |
| 30t      | 125-305       | 265     | 517   | 642  | 557   | 320   | 212  | 156  | 7213.300 |

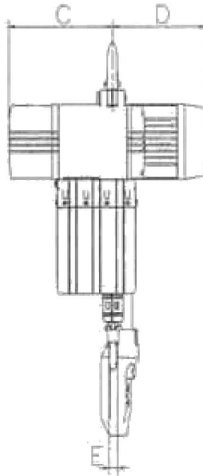
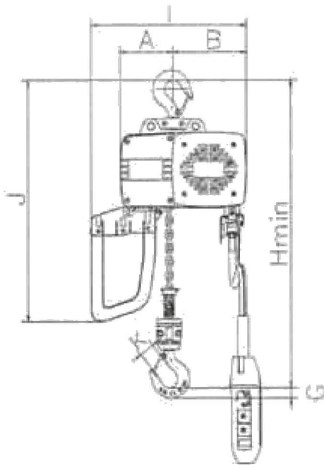
## > Electric Lifting Equipment : Chain Hoist

### CS Electric Chain Hoist (250kg to 5t)

The following options are also available:-

|                       |            |
|-----------------------|------------|
| Bracket Suspension    | CS-B Model |
| With Electric Trolley | CS-T Model |
| With Plain Trolley    | CS-P Model |

### Hook Suspension CS-H Model



#### ▼ Hook suspension

ISO9001:2015



ISO140001

| Model      | Rated load | Size | Classification | Lifting speed (m/min) | Hoist Motor (kW) | Chain Size | Chain Falls | Net Weight (kg) |
|------------|------------|------|----------------|-----------------------|------------------|------------|-------------|-----------------|
| CS-H03M5S1 | 250kg      | 1    | M5(2m)         | 8                     | 0.4              | Ø 4x12mm   | 1           | 21              |
| CS-H03M5P1 |            |      |                | 8/2                   | 0.4/0.1          |            |             | 22              |
| CS-H05M5S2 | 500kg      | 1    | M5(2m)         | 4                     | 0.4              | Ø 4x12mm   | 2           | 25              |
| CS-H05M5P2 |            |      |                | 4/1                   | 0.4/0.1          |            |             | 26              |
| CS-H05M5S1 | 500kg      | 2    | M5(2m)         | 8                     | 0.72             | Ø 5x15mm   | 1           | 32              |
| CS-H05M5P1 |            |      |                | 8/2                   | 0.72/0.18        |            |             | 33              |
| CS-H10M5S2 | 1t         | 2    | M5(2m)         | 4                     | 0.72             | Ø 5x15mm   | 2           | 35              |
| CS-H10M5P2 |            |      |                | 4/1                   | 0.72/0.18        |            |             | 36              |
| CS-H10M5S1 | 1t         | 3    | M5(2m)         | 8                     | 1.6              | Ø 7,1x21mm | 1           | 51              |
| CS-H10M5P1 |            |      |                | 8/2                   | 1.6/0.4          |            |             | 53              |
| CS-H20M5S2 | 2t         | 3    | M5(2m)         | 4                     | 1.6              | Ø 7,1x21mm | 2           | 56              |
| CS-H20M5P2 |            |      |                | 4/1                   | 1.6/0.4          |            |             | 58              |
| CS-H25M5P1 | 2.5t       | 4    | M5(2m)         | 6/1.5                 | 3.6/0.9          | Ø11.2x34mm | 1           | 100             |
| CS-H30M4P1 | 3t         | 4    | M4(1Am)        | 6/1.5                 | 3.6/0.9          |            | 1           | 100             |
| CS-H50M5P2 | 5t         | 4    | M5(2m)         | 3/0.75                | 3.6/0.9          |            | 2           | 121             |

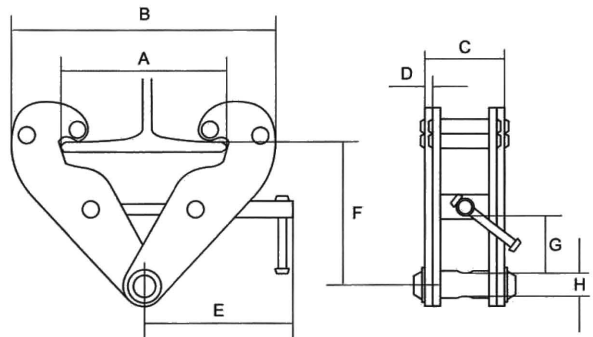
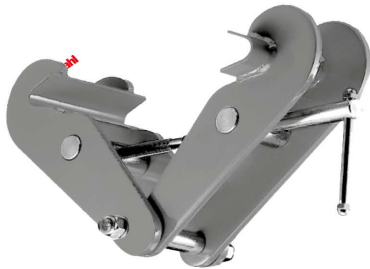
| Model      | Rated load (t) | Hmin | A   | B   | C   | D   | E  | G  | I   | J   | K  |
|------------|----------------|------|-----|-----|-----|-----|----|----|-----|-----|----|
| CS-H03M5S1 | 250kg          | 420  | 114 | 123 | 211 | 198 | 18 | 20 | 293 | 444 | 23 |
| CS-H03M5P1 | 250kg          | 420  | 114 | 123 | 211 | 228 | 18 | 20 | 293 | 444 | 23 |
| CS-H05M5S2 | 500kg          | 495  | 128 | 109 | 211 | 198 | 18 | 22 | 293 | 447 | 27 |
| CS-H05M5P2 | 500kg          | 495  | 128 | 109 | 211 | 228 | 18 | 22 | 293 | 447 | 27 |
| CS-H05M5S1 | 500kg          | 478  | 118 | 162 | 231 | 204 | 18 | 22 | 343 | 535 | 27 |
| CS-H05M5P1 | 500kg          | 478  | 118 | 162 | 231 | 204 | 18 | 22 | 343 | 535 | 27 |
| CS-H10M5S2 | 1t             | 584  | 134 | 146 | 231 | 204 | 20 | 25 | 343 | 552 | 31 |
| CS-H10M5P2 | 1t             | 584  | 134 | 146 | 231 | 204 | 20 | 25 | 343 | 552 | 31 |
| CS-H10M5S1 | 1t             | 586  | 128 | 187 | 264 | 230 | 20 | 25 | 405 | 583 | 31 |
| CS-H10M5P1 | 1t             | 586  | 128 | 187 | 264 | 245 | 20 | 25 | 405 | 583 | 31 |
| CS-H20M5S2 | 2t             | 681  | 150 | 165 | 264 | 230 | 27 | 43 | 405 | 606 | 38 |
| CS-H20M5P2 | 2t             | 681  | 150 | 165 | 264 | 245 | 27 | 43 | 405 | 606 | 38 |
| CS-H25M5P1 | 2.5t           | 703  | 183 | 207 | 300 | 322 | 27 | 43 | 508 | 830 | 38 |
| CS-H30M4P1 | 3t             | 703  | 183 | 207 | 300 | 322 | 27 | 43 | 508 | 830 | 38 |
| CS-H50M5P2 | 5t             | 894  | 198 | 192 | 300 | 322 | 35 | 51 | 508 | 870 | 52 |



## > Beam Clamp & Rope Pulling Machine

**Standard : BS EN 13157**

**7216. Beam Clamp (Heavy duty)**



| SAFE<br>WORKING<br>LOAD KG | ADJUSTABLE<br>BEAM WIDTH<br>MM | A MAX MM | B      |        | C MM | D MM | E MM | F      |        | G MM | H MM | ITEM CODE  |
|----------------------------|--------------------------------|----------|--------|--------|------|------|------|--------|--------|------|------|------------|
|                            |                                |          | MIN MM | MAX MM |      |      |      | MIN MM | MAX MM |      |      |            |
| 1000                       | 75-220                         | 260      | 180    | 360    | 64   | 5    | 215  | 102    | 155    | 25   | 22   | 7216CSBC1  |
| 2000                       | 75-220                         | 260      | 180    | 360    | 74   | 6    | 215  | 102    | 155    | 25   | 22   | 7216CSBC2  |
| 3000                       | 80-320                         | 354      | 235    | 490    | 103  | 8    | 260  | 140    | 225    | 45   | 24   | 7216CSBC3  |
| 5000                       | 80-320                         | 354      | 235    | 490    | 110  | 10   | 260  | 140    | 225    | 45   | 28   | 7216CSBC5  |
| 10000                      | 90-320                         | 365      | 320    | 505    | 120  | 12   | 280  | 170    | 235    | 50   | 40   | 7216CSBC10 |

### 7312. Rope pulling machine "Red Pull"

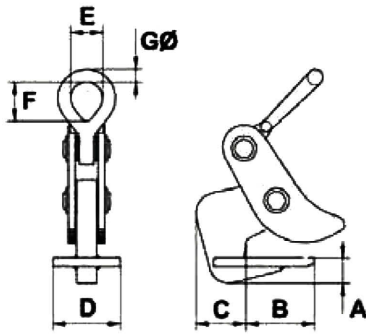
- Manual rope pulling machine with lever tupe
- Overload protection by shear pins
- Neutral gear position for pulling out the unloaded rope
- Impact resistant aluminium housing
- Complies with UVV BGV D8 (German Accident Prevention Regulations)
- Special wire rop with safety hook included
- Available immediately from stock



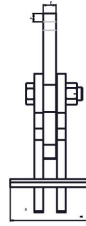
| Nominal capacity<br>in daN | Rope ø<br>in mm | Rope length<br>in m | Weight without rope<br>in kg | Item no.   |
|----------------------------|-----------------|---------------------|------------------------------|------------|
| 800                        | 8               | 20                  | 6                            | 7312.00.08 |
| 1600                       | 11,2            | 20                  | 11                           | 6312.00.16 |
| 3200                       | 16              | 20                  | 22                           | 7312.00.32 |
| 5400                       | 20              | 20                  | 26                           | 7312.00.54 |

## > Lifting Accessories: Horizontal & Vertical Plate Clamps

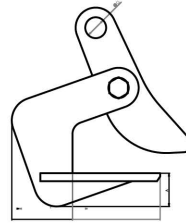
Standard : BS EN 13155



TCH. Horizontal clamp



TCH-A. Horizontal clamp

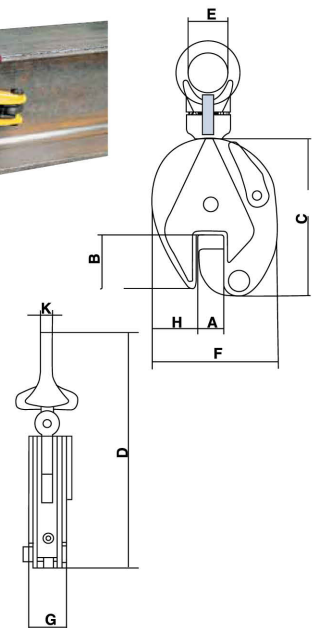


| Model  | Capacity' | Jaw capacity | A    | B    | C    | D    | E    | F    | G    | H    |
|--------|-----------|--------------|------|------|------|------|------|------|------|------|
|        | [kg]      | [mm]         | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [kg] |
| TCH1   | 1000      | 0 - 50       | 15   | 82   | 60   | 100  | 32   | 44   | 13   | 8    |
| TCH1 A | 1000      | 0 - 50       | 40   | 110  | 60   | 100  | 16   | 13   | 24   | 8    |
| TCH2   | 2000      | 5 - 32       | 30   | 82   | 60   | 100  | 50   | 73   | 18   | 11   |
| TCH2L  | 2000      | 20 - 50      | 30   | 82   | 60   | 100  | 50   | 73   | 18   | 12   |
| TCH3   | 3000      | 5 - 50       | 40   | 112  | 80   | 100  | 64   | 92   | 25   | 17   |
| TCH3L  | 3000      | 50 - 100     | 40   | 112  | 80   | 100  | 64   | 92   | 25   | 23   |
| TCH6   | 6000      | 5 - 75       | 55   | 172  | 100  | 130  | 90   | 130  | 35   | 46   |
| TCH6L  | 6000      | 50 - 125     | 55   | 172  | 100  | 130  | 90   | 130  | 35   | 56   |
| TCH8   | 8000      | 5 - 75       | 55   | 172  | 105  | 130  | 90   | 130  | 35   | 53   |
| TCH8L  | 8000      | 50 - 125     | 55   | 172  | 105  | 130  | 90   | 130  | 35   | 60   |
| TCH10  | 10000     | 5 - 100      | 65   | 215  | 120  | 150  | 114  | 114  | 35   | 95   |
| TCH10L | 10000     | 50 - 150     | 65   | 215  | 120  | 150  | 114  | 114  | 35   | 108  |
| TCH15  | 15000     | 5 - 100      | 71   | 230  | 120  | 150  | 114  | 114  | 35   | 110  |
| TCH15L | 15000     | 50 - 150     | 71   | 230  | 120  | 150  | 114  | 114  | 35   | 123  |
| TCH20  | 20000     | 5 - 100      | 70   | 220  | 118  | 220  | 80   | 80   | 38   | 165  |
| TCH20L | 20000     | 50 - 150     | 70   | 220  | 118  | 220  | 80   | 80   | 38   | 172  |

7125. Universal Clamp, Type SVC



| Model            |    | PCD05      | PCD10      | PCD20      | PCD30      | PCD50      | PCD100     |
|------------------|----|------------|------------|------------|------------|------------|------------|
| Rated capacity   | t  | 0.5        | 1.0        | 2.0        | 3.0        | 5.0        | 10         |
| Test load        | KN | 7.35       | 14.7       | 29.4       | 44.1       | 73.5       | 146.5      |
| Jaw Opening      | mm | 0-15       | 0-20       | 0-25       | 0-30       | 0-50       | 50-90      |
| Dimensions<br>mm | A  | 25         | 33         | 35         | 45         | 55         | 155        |
|                  | B  | 37         | 63         | 76         | 83         | 90         | 145        |
|                  | C  | 125        | 170        | 205        | 237        | 262        | 380        |
|                  | D  | 205        | 295        | 370        | 418        | 480        | 705        |
|                  | E  | 30         | 48         | 68         | 76         | 76         | 80         |
|                  | F  | 98         | 145        | 175        | 215        | 232        | 390        |
|                  | G  | 40         | 54         | 56         | 78         | 90         | 113        |
|                  | H  | 29         | 42         | 54         | 57         | 59         | 100        |
| Net weight       | kg | 1.9        | 4.5        | 7.5        | 14.8       | 23         | 50         |
| Item No.         |    | 7125.16.05 | 7125.19.10 | 7125.28.20 | 7125.32.30 | 7125.50.50 | 7125.90.10 |

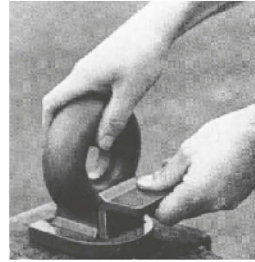


## Accessories: Lifting Lugs And Snatch Block

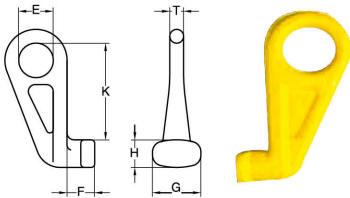
### Container Lifting Lugs (Sets of 4)

| WLL<br>TONNES<br>SET OF 4 | CHAIN<br>ANGLE | TYPE         | WEIGHT<br>kg |
|---------------------------|----------------|--------------|--------------|
| 56                        | VERTICAL       | TOP LIFTING  | 28           |
| 40                        | DEG 36         | SIDE LIFTING | 18           |
| 32                        | DEG 50         | SIDE LIFTING | 18           |

Top  
Lifting



### Eye Container Hook.



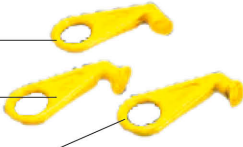
| Dsc.      | Working<br>Load Limit<br>tonnes* | Dimensions (mm) |    |    |    |     |    | N.W.<br>kg |
|-----------|----------------------------------|-----------------|----|----|----|-----|----|------------|
|           |                                  | E               | F  | G  | H  | K   | T  |            |
| Straight  | 12.5                             | 70              | 45 | 75 | 48 | 192 | 25 | 3.9        |
| Left 45°  | 12.5                             | 70              | 45 | 75 | 48 | 192 | 25 | 3.9        |
| Right 45° | 12.5                             | 70              | 45 | 75 | 48 | 192 | 25 | 3.9        |

★ Design factor 4:1 proof tested and certified.

For LT : Left

For RH: Right

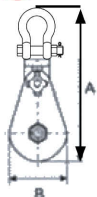
STR: Stright



Available as a set of 4 with a total WLL of 56 tonnes. Two types are available for either top lifting or bottom side lifting. Top lift - Self locking lugs for top lifting of containers. Suitable for splicing direct to 4 vertical slings. The lug engages in the top corner aperture and when rotated through 90° a lock ring drops and firmly secures the lug. These lugs are used for lifting with a spreader frame and do not project over the container. Side lifting - these lugs are designed to eliminate the dangerous use of standard hooks and are haned left and right. Maximum load is 40t at a sling angle of 36° or 32t at a sling angle of 50°. These lugs cannot drop out when the slings become slack as they are secured by a spring loaded pin.

### 754I. Snatch Block

- Forged swivel hook
- Foldable for easy insertion of the wire rope
- High load capacity at low dead weight
- Bronze bushing

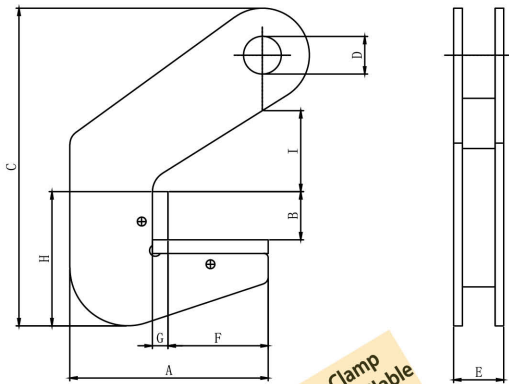


| LOAD<br>CAPACITY IN<br>TON | FOR WIRE ROPE IN<br>INCH | SHEAVE DIA<br>IN INCH | SHEAVE-(B) IN<br>MM | OVERALL<br>LEGTH (A) IN<br>MM | WEIGHT IN<br>KG | ITEM CODE      |
|----------------------------|--------------------------|-----------------------|---------------------|-------------------------------|-----------------|----------------|
| 2                          | 3/8                      | 3                     | 76                  | 242                           | 2               | 7541CSSBS3-2   |
| 4                          | 1/2                      | 4 1/2                 | 108                 | 356                           | 6               | 7541CSSBS4.5-4 |
| 8                          | 16-19 MM                 | 8                     | 203                 | 510                           | 16              | 7541CSSBS8-8   |
| 8                          | 3/4                      | 6                     | 151                 | 460                           | 13              | 7541CSSBS6-8   |
| 12                         | 7/8                      | 6                     | 156                 | 555                           | 21              | 7541CSSBS6-12  |
| 12                         | 7/8                      | 6                     | 156                 | 530                           | 18              | 7541CSSBS6-12  |
| 15                         | 7/8                      | 12                    | 313                 | 770                           | 44              | 7541CSSBS10-15 |
| 15                         | 7/8                      | 10                    | 260                 | 710                           | 36              | 7541CSSBS10-15 |
| 15                         | 19-22 MM                 | 8                     | 203                 | 635                           | 28              | 7541CSSBS8-15  |
| 20                         | 1 1/8                    | 10                    | 255                 | 785                           | 55              | 7541CSSBS10-20 |

Meet the requirement of ASME B30.26

> Accessories: Pipe Lifting Clamp

TECHNICAL INFORMATION



Pipe Lifting Clamp  
with Pads also available

60° - 90° CHAIN TOP ANGLE / 30° - 45° FROM VERTICAL

| Code  | Model   | Load Capacity<br>(per pair<br>kgs) | Dimensions |         |         |         |         |         |         |         |         | Weight<br>(per pair)<br>kgs |
|-------|---------|------------------------------------|------------|---------|---------|---------|---------|---------|---------|---------|---------|-----------------------------|
|       |         |                                    | A<br>mm    | B<br>mm | C<br>mm | D<br>mm | E<br>mm | F<br>mm | G<br>mm | H<br>mm | I<br>mm |                             |
| 61301 | TPHt.5T | 1500                               | 127        | 40      | 220     | 27      | 35      | 70      | 10      | 91      | 60      | 1.5                         |
| 61302 | TPH3T   | 3000                               | 142        | 40      | 228     | 27      | 35      | 70      | 10      | 93      | 58      | 2                           |
| 61303 | TPH4T   | 4000                               | 144        | 50      | 228     | 30      | 40      | 70      | 10      | 100     | 48      | 2.8                         |
| 61304 | TPH6T   | 6000                               | 152        | 50      | 232     | 30      | 40      | 70      | 10      | 98      | 48      | 3.2                         |
| 61305 | TPH8T   | 8000                               | 155        | 70      | 260     | 30      | 42      | 70      | 10      | 126     | 48      | 3.6                         |
| 61306 | TPH12T  | 12000                              | 175        | 70      | 322     | 33      | 46      | 70      | 10      | 155     | 55      | 9                           |
| 61307 | TPH16T  | 16000                              | 175        | 70      | 322     | 40      | 56      | 70      | 10      | 155     | 55      | 11                          |
| 61308 | TPH18T  | 18000                              | 145        | 70      | 300     | 52      | 68      | 70      | 10      | 155     | 55      | 13                          |

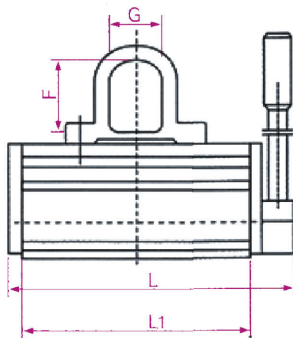
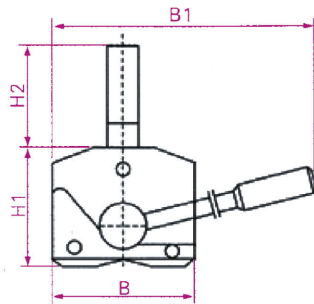
\*NB. Coated hooks have a 6mm reduction in wall thickness handling capacities



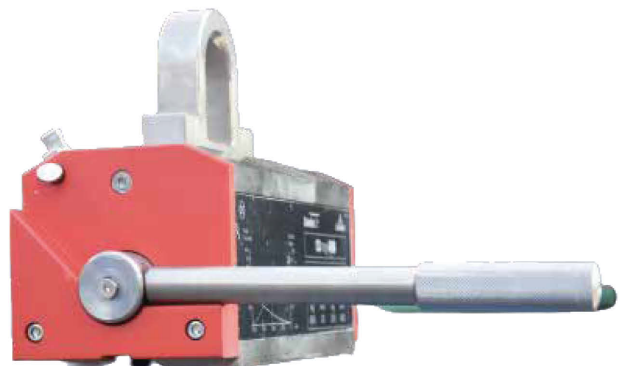
## > Load Suspension Equipment: Lifting Magnets

### 7631. Permanent Lifting Magnet Model CSmag

- Powerful permanent lifting magnet for maximum load capacity
- With its prismatic bottom it is suitable for flat and round material
- Break-away force is at least 3 times the rated capacity
- WLL for round material is at least 50% of WLL for flat material
- Easy-moving lever with safety lock
- Compact and sturdy design
- Big, bolted lifting eye suitable for load hooks according to the nominal load capacity.
- Each magnet comes with a test certificate and operating instructions



**Caution!**  
Ensure clean magnet and even work-piece surfaces!!!

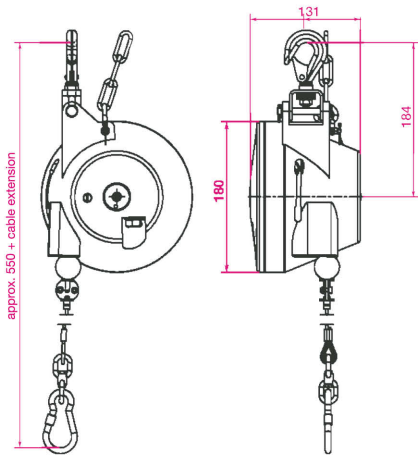


| Type       | Flat material                                      |                    | Round material                                  |                  | Dimensions in mm |     |     |     |     |     |    |    | Weight<br>in<br>kg/pce | Item no.   |
|------------|----------------------------------------------------|--------------------|-------------------------------------------------|------------------|------------------|-----|-----|-----|-----|-----|----|----|------------------------|------------|
|            | Load capacity in kg at<br>material thickness in mm |                    | Load capacity in kg at<br>material $\phi$ in mm |                  | L                | L1  | B   | H1  | H2  | B1  | F  | G  |                        |            |
|            | Load capacity                                      | Material thickness | Load capacity                                   | Material- $\phi$ |                  |     |     |     |     |     |    |    |                        |            |
| CSmag 100  | 100                                                | 20                 | 50                                              | 300              | 135              | 110 | 60  | 65  | 46  | 150 | 32 | 32 | 3,5                    | 7631.00.01 |
| CSmag 300  | 300                                                | 20                 | 150                                             | 300              | 203              | 165 | 87  | 89  | 68  | 223 | 45 | 38 | 10                     | 7631.00.03 |
| CSmag 600  | 600                                                | 30                 | 300                                             | 400              | 266              | 226 | 112 | 109 | 86  | 287 | 58 | 45 | 21                     | 7631.00.06 |
| CSmag 1000 | 1000                                               | 40                 | 500                                             | 450              | 330              | 290 | 148 | 125 | 95  | 364 | 60 | 52 | 40                     | 7631.00.10 |
| CSmag 1500 | 1500                                               | 45                 | 750                                             | 500              | 385              | 330 | 178 | 145 | 118 | 447 | 70 | 65 | 65                     | 7631.00.15 |
| CSmag 2000 | 2000                                               | 55                 | 1000                                            | 600              | 470              | 420 | 178 | 145 | 118 | 487 | 70 | 65 | 83                     | 7631.00.20 |

> Load Balancer & Lashing Chain System

Balancer

- Your advantages:**
- High-strength, highly abrasion resistant housing
  - Insulated suspension with swivelling and pivoting safety hook
  - Snap hook with screw lock for load suspension
  - Factory equipped with safety chain as fall protection device
  - All load capacities with spring fracture safeguard and integrated drum blocking device.
  - Load swivel integrated as standard



Load Binders

5R25.  
Ratchet Type Load  
Binders



5L25.  
Lever Type Load  
Binders



Technical Data 5R25

| Chain Dia<br>(mm) | Lashing Capacity<br>(kgs) | Minimum Breaking Load<br>(kgs) | Weight<br>(kgs) |
|-------------------|---------------------------|--------------------------------|-----------------|
| 5/16" - 3/8"      | 2450                      | 8575                           | 4.82            |
| 3/8" - 1/2"       | 4200                      | 14700                          | 5.92            |
| 1/2" - 5/8"       | 5900                      | 20650                          | 7.85            |

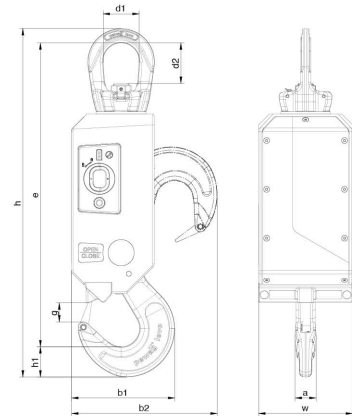
Technical Data 5L25

| Chain Dia<br>(inches) | W.L.L<br>(lbs) | Proof Load<br>(lbs) | M.B.S<br>(lbs) | Weight<br>(kgs) |
|-----------------------|----------------|---------------------|----------------|-----------------|
| 5/16" - 3/8"          | 5400           | 10800               | 19000          | 2.81            |
| 3/8" - 1/2"           | 9200           | 18400               | 33000          | 5.08            |

## > Automatic Hook

### Safe and automated handling of loads.

This lifting hook represents a new generation of automated lifting devices. Its advanced features enable automated attachment and release of loads, significantly supporting operators in challenging environments —such as working at height or in hazardous conditions. In professional settings, operator safety is always the highest priority. This radio-controlled, rotatable lifting hook ensures a secure grip and allows for hands-free load release, enhancing both safety and efficiency during lifting operations.



- provides support when working at height or in deep construction pits.
- withstands temperatures that put a strain on the user (-20 °C to +60 °C / -4 °F to +140 °F).
- is a safe partner when it comes to hazards that may be detected too late (e.g. odourless gases in cesspits).
- allows for the targeted use of human resources (crane operator is able to attach and release the load independently).

### Basis configuration.



**Practicable remote control**



**Charging station**



equipped with battery, temperature sensor and data logger, peTAG (for clear product identification) and operating manual

| Code | Working load limit [kg] | e [mm] | a [mm] | b1 [mm] | b2 [mm] | d1 [mm] | d2 [mm] | g [mm] | h [mm] | h1 [mm] | w [mm] | Weight [kg/pc.] |
|------|-------------------------|--------|--------|---------|---------|---------|---------|--------|--------|---------|--------|-----------------|
| LH 5 | 5,000                   | 460    | 32     | 156     | 220     | 54      | 61      | 29     | 528    | 46      | 142    | 20.00           |

| Code | Working load limit [lbs] | e [inch] | a [inch] | b1 [inch] | b2 [inch] | d1 [inch] | d2 [inch] | g [inch] | h [inch] | h1 [inch] | w [inch] | Weight [lbs/pc.] |
|------|--------------------------|----------|----------|-----------|-----------|-----------|-----------|----------|----------|-----------|----------|------------------|
| LH 5 | 11,023                   | 18.11    | 1.26     | 6.14      | 8.66      | 2.13      | 2.40      | 1.14     | 20.79    | 1.81      | 5.59     | 44.00            |

### Optional equipment.



**Magnetic module with sensor**  
for automatic load pickup



**Lighting module**  
fully illuminated working area



comprehensive software  
**Weighing module**



**Multiloading Adapter**  
to operate up to 10 charging stations in one line

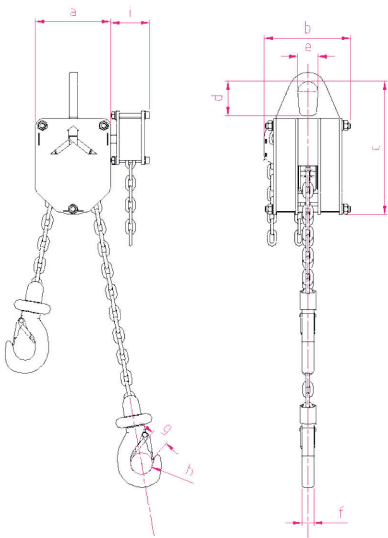
> Load Tilting Device & Industrial Truck

Load tilting device

NEW!

The load tilting device from the own brand series Con-dor with a load capacity of 500 kg for precisely tilting loads

Maximum permissible spread angle:  
up to 90°: 100% of the max. load capacity  
90°-120°: 70% of the max. load capacity

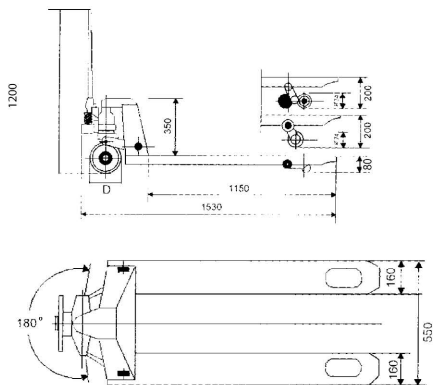


| Load capacity<br>in kg | Type  | Dimensions in mm |     |     |    |    |    |    |    |    | Weight<br>in kg/pce | Item no.   |
|------------------------|-------|------------------|-----|-----|----|----|----|----|----|----|---------------------|------------|
|                        |       | a                | b   | c   | d  | e  | f  | g  | h  | i  |                     |            |
| 500                    | LNG05 | 110              | 127 | 195 | 50 | 30 | 12 | 21 | 32 | 57 | 6                   | 7316.00.50 |



Note: 500 kg electric and 3,150 kg manual versions available

7785. Hand Pallet Trucks



| Load capacity<br>in kg | Fork width<br>in mm | Fork length<br>in mm | Lifting height<br>in mm | Steering wheels | Weight<br>in kg | Item no.    |
|------------------------|---------------------|----------------------|-------------------------|-----------------|-----------------|-------------|
| 3000                   | 550                 | 1150                 | 200                     | Polyurethane    | 65              | 7785.60.30T |
| 5000                   | 550                 | 1150                 | 200                     | Polyurethane    | 80              | 7785.60.50T |





## Load Monitoring System:

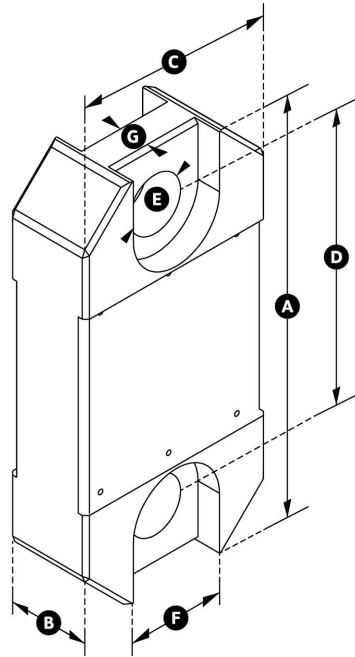
Supply, Repair and Calibration

## > Load Measuring Device: Load Cell

# Radiolink plus



Wall or Cab  
Mount Bracket  
available for handheld  
Part No.  
SU3282



## Features and benefits:

- Proprietary 2.4 GHz wireless
- Industry leading wireless range
- Error free data transmission
- Unrivalled resolution
- Environmentally sealed
- Audible overload alarm
- Unmatched battery life
- Internal antennae
- Compact size
- Remote on-off
- Lightweight
- Peak hold
- Advanced options available
- Tare
- Design validated by F.E.A.

Also available with  
hazardous area approval



**ATEX / IECEx**  
Ex ia II C T4 Ga

Certification numbers:

**RLP ATEX**

IECEx SIR 15.0071X / Sira 15ATEX2195X

**SW-HHP ATEX**

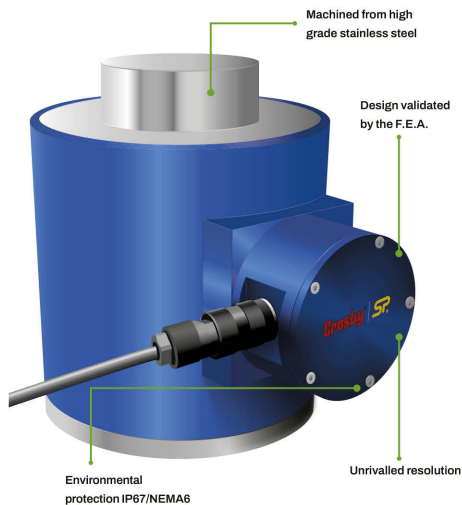
IECEx SIR 15.0072X / Sira 15ATEX2196X

Add 'ATEX' to the part number  
when ordering ATEX/IECEx products.  
For example: RLPST-ATEX

| Part Number    | RLP1T                                                                       | RLP2T5  | RLP5T   | RLP12T                         | RLP25T  | RLP35T  | RLP50T | RLP75T | RLP100T | RLP150T | RLP200T | RLP250T | RLP300T |
|----------------|-----------------------------------------------------------------------------|---------|---------|--------------------------------|---------|---------|--------|--------|---------|---------|---------|---------|---------|
| Capacity       | 1,000kg                                                                     | 2.5te   | 5te     | 12te                           | 25te    | 35te    | 50te   | 75te   | 100te   | 150te   | 200te   | 250te   | 300te   |
| Resolution     | 0.5kg                                                                       | 0.001te | 0.001te | 0.002te                        | 0.005te | 0.005te | 0.01te | 0.01te | 0.05te  | 0.05te  | 0.1te   | 0.1te   | 0.1te   |
| Units          | kg                                                                          | te      | te      | te                             | te      | te      | te     | te     | te      | te      | te      | te      | te      |
| Weight         | 1.4kg                                                                       | 1.4kg   | 2kg     | 3.2kg                          | 5kg     | 8.6kg   | 11.5kg | 16kg   | 34kg    | 46kg    | 72kg    | 72kg    | 118kg   |
| Safety Factor  | 12:1                                                                        | 5:1     | 5:1     | 5:1                            | 5:1     | 5:1     | 5:1    | 5:1    | 5:1     | 4:1     | 5:1     | 4:1     | 5:1     |
| Battery Type   | Handheld 2 x AA/Load cell 4 x AA                                            |         |         |                                |         |         |        |        |         |         |         |         |         |
| Battery Life   | Handheld 60 hours/Load cell 1200 hours continuous                           |         |         |                                |         |         |        |        |         |         |         |         |         |
| Display Type   | 6 digit 25mm LCD                                                            |         |         |                                |         |         |        |        |         |         |         |         |         |
| Operating Temp | -10°C to +50°C                                                              |         |         |                                |         |         |        |        |         |         |         |         |         |
| Accuracy       | ± 0.3 % of applied load                                                     |         |         |                                |         |         |        |        |         |         |         |         |         |
| Frequency      | 2.4 GHz                                                                     |         |         |                                |         |         |        |        |         |         |         |         |         |
| System Range   | 700 metres                                                                  |         |         |                                |         |         |        |        |         |         |         |         |         |
| Data Rate      | 3 Hz - up to 200 Hz can be ordered for dynamic load monitoring applications |         |         |                                |         |         |        |        |         |         |         |         |         |
| Protection     | IP67                                                                        |         |         |                                |         |         |        |        |         |         |         |         |         |
| Dimension A    | 204                                                                         | 204     | 249     | 305                            | 340     | 393     | 424    | 470    | 608     | 670     | 700     | 700     | 806     |
| Dimension B    | 43                                                                          | 43      | 43      | 47                             | 60      | 75      | 75     | 75     | 99      | 99      | 144     | 144     | 150     |
| Dimension C    | 101                                                                         | 101     | 101     | 101                            | 115     | 126     | 163    | 202    | 255     | 303     | 320     | 320     | 426     |
| Dimension D    | 146                                                                         | 146     | 165     | 193                            | 215     | 225     | 230    | 260    | 320     | 360     | 350     | 350     | 350     |
| Dimension E    | 24.5                                                                        | 24.5    | 38      | 47.5                           | 55      | 60      | 76     | 76     | 109     | 109     | 132     | 132     | 160     |
| Dimension F    | 48                                                                          | 48      | 66      | Not available on this capacity |         |         |        |        |         |         |         |         |         |
| Dimension G    | 19                                                                          | 19      | 32      |                                |         |         |        |        |         |         |         |         |         |
| Crosby Shackle | G2130                                                                       |         |         |                                |         |         | G2140  |        |         |         |         |         |         |
| Loading Pin Ø  | 19                                                                          | 19      | 25      | 35                             | 51      | 57      | 57     | 70     | 83      | 95      | 121     | 127     | 152     |

## > Load Measuring Device: Compression Load Cell

# Compression Loadcell



### FEATURES AND BENEFITS

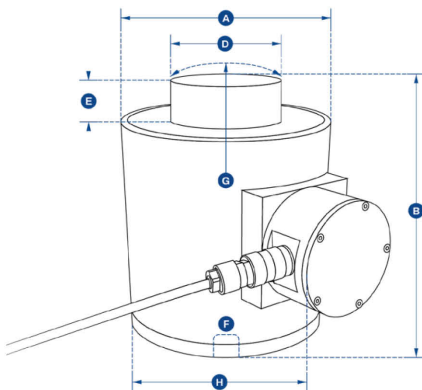
- Compact size
- Environmentally sealed to IP67 or NEMA6
- Optional analogue outputs
- Stainless steel element
- High accuracy
- Lightweight
- Unrivalled resolution
- 10m or 30ft cable supplied as standard (other lengths available)
- Custom versions available
- Design validated by F.E.A.

**Manufactured in ranges from 5te to 1000te - other capacities available on application.**

Crosby Straightpoint compression load cells are manufactured to the same stringent standards as all Straightpoint products.

The bodies are machined from high grade stainless steel, offering excellent strength and anti-corrosion properties. Compression load cells can be supplied with optional loadcaps to protect objects being tested.

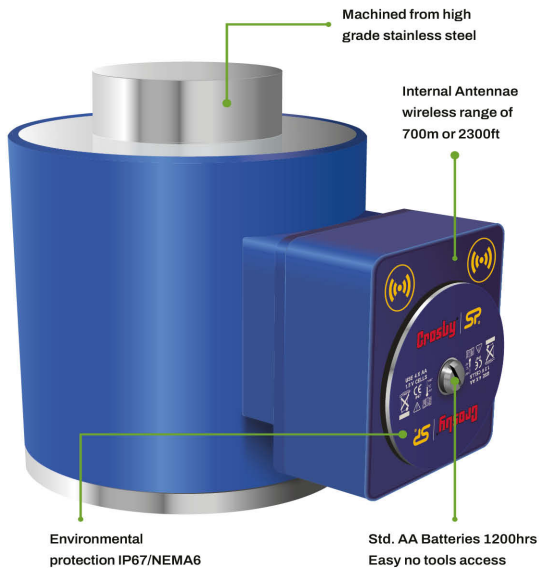
The compact lightweight design provides ease of use and superior portability, allowing Straightpoint compression load cells to be used in a broad range of industries including mining, energy, defence, heavy rigging, shipping and general transportation sectors.



| SP Model       | Ni5TC                       | Ni10TC             | Ni25TC             | Ni50TC              | Ni100TC              | Ni150TC              | Ni300TC              | Ni500TC                | Ni1000TC                 |
|----------------|-----------------------------|--------------------|--------------------|---------------------|----------------------|----------------------|----------------------|------------------------|--------------------------|
| Crosby Part    | 2789068                     | 2789062            | 2789065            | 2789067             | 2789061              | 2789063              | 2789064              | 2789066                | 2789275                  |
| Capacity       | 5 te<br>11,000 lb           | 10 te<br>22,000 lb | 25 te<br>55,000 lb | 50 te<br>110,000 lb | 100 te<br>220,000 lb | 150 te<br>330,000 lb | 300 te<br>660,000 lb | 500 te<br>1,100,000 lb | 1,000 te<br>2,200,000 lb |
| Resolution     | 0.001te<br>2 lb             | 0.002 te<br>5 lb   | 0.005 te<br>10 lb  | 0.01 te<br>20 lb    | 0.05 te<br>100 lb    | 0.05 te<br>100 lb    | 0.1 te<br>200 lb     | 0.2 te<br>500 lb       | 0.5 te<br>1,000 lb       |
| Weight         | 6.2 kg<br>13.64 lb          | 6.2 kg<br>13.64 lb | 6.2 kg<br>13.64 lb | 6.2 kg<br>13.64 lb  | 15.5 kg<br>34 lb     | 15.5 kg<br>34 lb     | 65 kg<br>143 lb      | 65 kg<br>143 lb        | 172 kg<br>379 lb         |
| Safety Factor  | 3:1                         |                    |                    |                     |                      |                      |                      |                        |                          |
| Protection     | IP67/NEMA6                  |                    |                    |                     |                      |                      |                      |                        |                          |
| Operating Temp | -10 to +50 °C / 14 to 122°F |                    |                    |                     |                      |                      |                      |                        |                          |
| Accuracy       | +/- 0.1% FS                 |                    |                    |                     |                      |                      |                      |                        |                          |
| Dimension ØA   | 100<br>3.94                 | 100<br>3.94        | 100<br>3.94        | 100<br>3.94         | 152<br>5.98          | 152<br>5.98          | 185<br>7.28          | 185<br>7.28            | 362<br>14.25             |
| Dimension B    | 127<br>5.00                 | 127<br>5.00        | 127<br>5.00        | 127<br>5.00         | 184<br>7.24          | 184<br>7.24          | 300<br>11.81         | 300<br>11.81           | 310<br>12.20             |
| Dimension ØD   | 59<br>2.32                  | 59<br>2.32         | 59<br>2.32         | 59<br>2.32          | 80<br>3.15           | 80<br>3.15           | 155<br>6.10          | 155<br>6.10            | 270<br>10.63             |
| Dimension E    | 16<br>0.63                  | 16<br>0.63         | 16<br>0.63         | 16<br>0.63          | 26<br>1.02           | 26<br>1.02           | 27.5<br>1.08         | 27.5<br>1.08           | 40<br>1.57               |
| Dimension F    | M18 x 2.5<br>152            | M18 x 2.5<br>152   | M18 x 2.5<br>152   | M20 x 2.5<br>152    | M20 x 2.5<br>432     | M20 x 2.5<br>432     | M20 x 2.5<br>432     | M20 x 2.5<br>432       | M30x3.5<br>950           |
| Dimension G    | 5.98                        | 5.98               | 5.98               | 5.98                | 17.01                | 17.01                | 17.01                | 17.01                  | 37.40                    |
| Dimension H    | 158<br>6.22                 | 158<br>6.22        | 158<br>6.22        | 158<br>6.22         | 204<br>8.03          | 204<br>8.03          | 237<br>9.33          | 237<br>9.33            | 416<br>16.38             |

## > Load Measuring Device: Compression Load Cell

# LoadSafe



### FEATURES AND BENEFITS

- Proprietary 2.4 GHz wireless
  - Accuracy of  $\pm 0.1\%$  FS
  - Environmentally sealed to IP67 or NEMA6
  - Stocked capacities up to 1000t
  - Industry leading wireless range up to 1000m or 3280ft
  - Internal antennae
  - ATEX & IECEx version for hazardous area zones 0, 1 & 2 available
  - Battery life of 1200hrs
  - Compact size
  - Remote On-Off from handheld display or software
  - Design validated by F.E.A.
- Bluetooth option is available and is supplied with a free HHP App for iOS and Android See page 27

**The Crosby Straightpoint LoadSafe Compression Load Cell. No longer hindered by troublesome and hard to maintain cables, large-scale projects can now be completed in a fraction of the time previously required.**

Multiple compression load cells can all connect wirelessly to INSIGHT via a USB dongle, their iOS or Android app (If Bluetooth), or their SW-HHP wireless handheld display.

Maintenance and repair costs are all but eliminated due to the absence of cables and connectors.

The flexibility of the product opens the door to a large number of applications in the heavy lift, energy, defence, rigging, shipping, and general transportation sectors.

Crosby Straightpoint's LoadSafe is machined from high grade 17-4PH stainless steel, providing excellent strength and corrosion resistance, which makes them suitable for the most arduous industrial conditions.

### Three versions of the WNI are available:

- Long range 2.4GHz version providing industry-leading wireless range of 1000m or 3280ft to SP's SW-HHP handheld or software options.

- Bluetooth output and can be connected to any smart phone running SP's free HHP app on iOS or Android, at ranges up to 100m or 328ft.

- ATEX/IECEx for hazardous areas, zones 0, 1 & 2. Providing a wireless range of up to 500m or 1640ft to SW-HHP-ATEX handheld.

Connected to Crosby Straightpoint's INSIGHT, the WNI load cell can be used to weigh and verify centre of gravity of large and heavy objects, which may not be evenly proportioned. The system will report weight on each individual load cell, total weight and C-of-G in an html report based on ISO19901.





## RUD Lifting & Lashing Point

> Lifting Points: Screw-On Lifting Points



Thread sizes

M 6-  
M 150

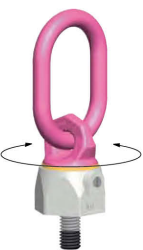
Imperial  
threads (UNC  
etc.) and spe-  
cial lengths  
on request.



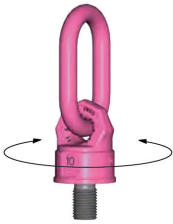
VLBG Lifting ring  
(Vario)



VWBG-V Lifting ring  
(Vario)



VWBG  
Lifting ring



Thread sizes

M 6-  
M 150

Imperial threads  
(UNC etc.) and  
special lengths  
on request.



PP-S (Vario)  
PowerPoint-Star



PP-VIP (Vario)  
PowerPoint-VIP



PP-B (Vario)  
PowerPoint-B



Starpoint VRS  
(Vario)  
Eye Bolt



Starpoint  
VRM  
Eye Nut



Weld-on Lifting Points



WPP-Series  
PowerPoint  
rotation



-40° C

WPPH-Series  
PowerPoint  
fixed



-40° C

VLBS  
Weld-on Lifting Ring



-20° C

VRBK  
Lifting ring for edges



ABA  
Lifting point loadable from  
all directions



-40° C

Note: Dimension & Capacity (WLL) details are available upon request

## > Lifting Points: Screw-On Lifting Points

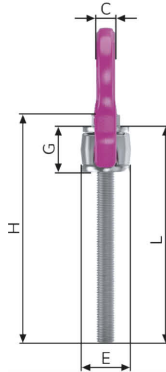
# ACP-TURNADO



Automatic-Center-Point.




ACP-Turnado - Vario Length



### PRODUCT FEATURES

- Large WLL range 1.35t-8-t.
- Higher WLL than comparable design sizes.
- Unique RUD spring mechanism.
- Stuck position of suspension ring avoided.
- No dangerous transverse loads.
- No Kinks.
- Includes RUD ICE- Bolt up to size M24.
- Pivots 180°.
- Swivels 360°.



### ACP-TURNADO - ICE - BOLT THREAD-METRIC.

| Type                  | WLL<br>[t] | Weight<br>[Kg/Unit] | T<br>[mm] | B<br>[mm] | C<br>[mm] | D<br>[mm] | E<br>[mm] | F<br>[mm] | G<br>[mm] | H<br>[mm] | I<br>[mm] | K<br>[mm] | L<br>[mm] | N   | N<br>[mm] | Tightening<br>torque [Nm] | Ref. No. |
|-----------------------|------------|---------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----|-----------|---------------------------|----------|
| ACP-TURNADO 1.35: M12 | 1.35       | 0.37                | 83        | 11        | 10.5      | 38        | 30        | 19        | 28        | 54.5      | 19        | 58        | 47        | M12 | 8         | 80                        | 7909314  |
| ACP-TURNADO 2.5 : M16 | 2.5        | 0.82                | 107       | 14        | 14        | 50        | 40        | 22        | 36        | 68        | 24        | 76        | 59        | M16 | 10        | 150                       | 7909316  |
| ACP-TURNADO 4: M20    | 4          | 1.34                | 118       | 17        | 17        | 50        | 50        | 20.5      | 43.5      | 82.5      | 30        | 89        | 70        | M20 | 12        | 300                       | 7909317  |
| ACP-TURNADO 6.3: M24  | 6.3        | 3.03                | 154       | 23        | 23        | 66        | 66        | 34        | 55        | 104       | 36        | 121       | 83        | M24 | 14        | 500                       | 7909318  |
| ACP-TURNADO 8: M30    | 8          | 5.66                | 183       | 29        | 27        | 75        | 75        | 41.5      | 68.5      | 123       | 46        | 148       | 110       | M30 | 17        | 800                       | 7909319  |

Subject to technical Changes!

### ACP-TURNADO - METRIC IN VARIABLE LENGTH INCL. SECURING NUT AND WASHER.

| Type                  | WLL<br>[t] | Weight<br>[Kg/Unit] | T<br>[mm] | B<br>[mm] | C<br>[mm] | D<br>[mm] | E<br>[mm] | F<br>[mm] | G<br>[mm] | H<br>[mm] | I<br>[mm] | K<br>[mm] | L<br>[mm] | M   | N<br>[mm] | Tightening<br>torque [Nm] | Ref. No. |
|-----------------------|------------|---------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----|-----------|---------------------------|----------|
| ACP-TURNADO 1.35: M12 | 1.35       | 0.37                | 83        | 11        | 10.5      | 38        | 38        | 12-117    | 28        | 55-153    | 19        | 58        | 40-145    | M12 | 8         | 80                        | 8600632  |
| ACP-TURNADO 2.5 : M16 | 2.5        | 0.82                | 107       | 14        | 14        | 50        | 50        | 16-149    | 36        | 68-195    | 24        | 76        | 52-185    | M16 | 10        | 150                       | 8600634  |
| ACP-TURNADO 4: M20    | 4          | 1.34                | 118       | 17        | 17        | 50        | 50        | 20-186    | 43.5      | 82-242    | 30        | 89        | 63-230    | M20 | 12        | 300                       | 8600636  |
| ACP-TURNADO 6.3: M24  | 6.3        | 3.03                | 154       | 23        | 23        | 66        | 66        | 24-210    | 55        | 104-280   | 36        | 121       | 79-265    | M24 | 14        | 500                       | 8600638  |
| ACP-TURNADO 8: M30    | 8          | 5.66                | 183       | 29        | 27        | 75        | 75        | 30-271    | 68.5      | 129-359   | 46        | 148       | 98-340    | M30 | 17        | 800                       | 8600640  |

Subject to technical Changes!



## General Lifting Points

## > Lifting Points



Lifting Point



Eye Point



S-279 / M279



Swivel Point



Anchor Point



Hoist Ring



Economic Point



Weld-on Point



Weld-on Ring



Weld-on Hook



Weld-On Pad Eyes – PELP



Weld-On Pad Eyes – DPLP



## ➤ Fall Protection Systems

# FALL PROTECTION SYSTEMS / PERSONAL PROTECTIVE EQUIPMENT FOR THE PREVENTION OF FALLS

**Carl Stahl – Your partner for fall protection systems and personal protective equipment for the prevention of falls.**

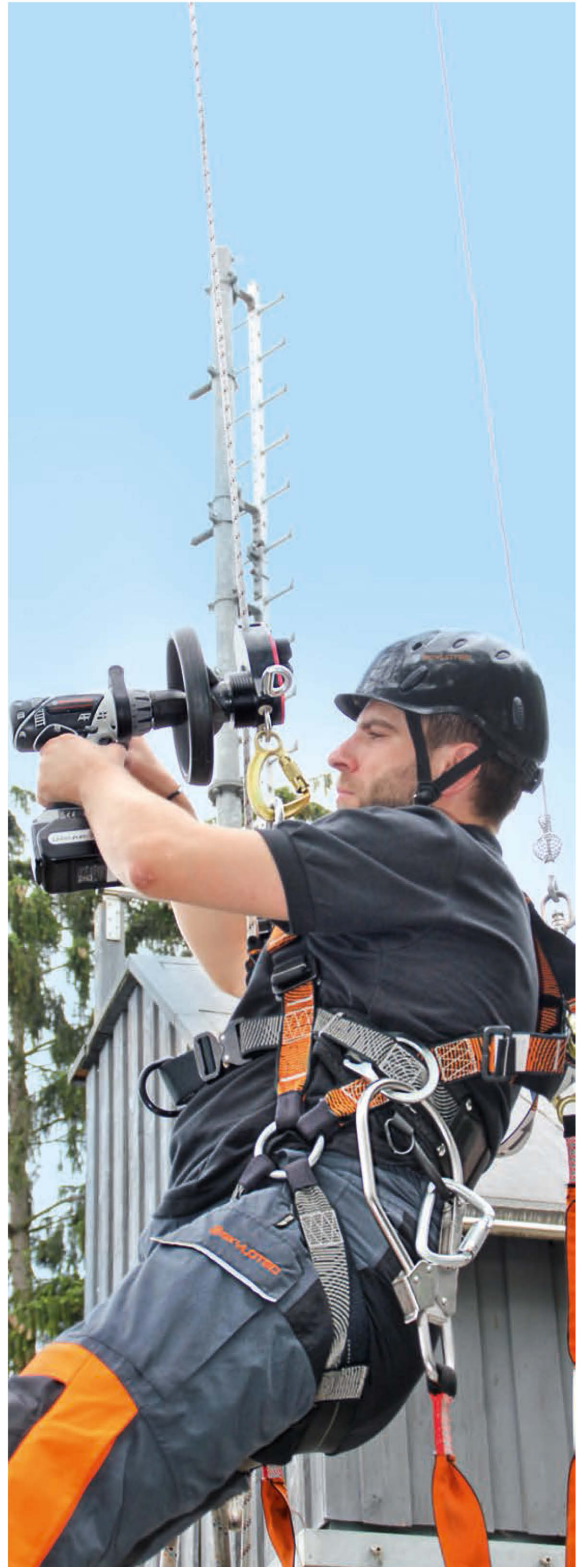
Choose from the most comprehensive range of systems and equipment as there are:

- ▶ Collective protection, aluminium safety railings
- ▶ Safety and side protection nets
- ▶ Full body harnesses, seat harnesses and work positioning belts
- ▶ Personal protective equipment sets
- ▶ Lanyards
- ▶ Anchorage points
- ▶ Fall arresters
- ▶ Horizontal and vertical lifeline systems
- ▶ Anchorage points for self-assembly
- ▶ Rescue kits



Please contact your closest Carl Stahl office for our special catalogue.

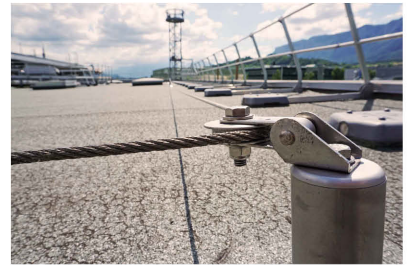
This catalogue is also available for download on our website  
[www.carlstahl-fallprotection.com](http://www.carlstahl-fallprotection.com)



## > Fall Protection Systems

### Horizontal life line system

High-performance stainless steel horizontal cable lifeline with automatic intermediate and angle brackets, ideal for floors, walls and overhead configurations



**HIGH ADAPTABILITY :**  
Free movement in all directions

**LONG-LASTING LIFESPAN :**  
Entirely made of stainless steel

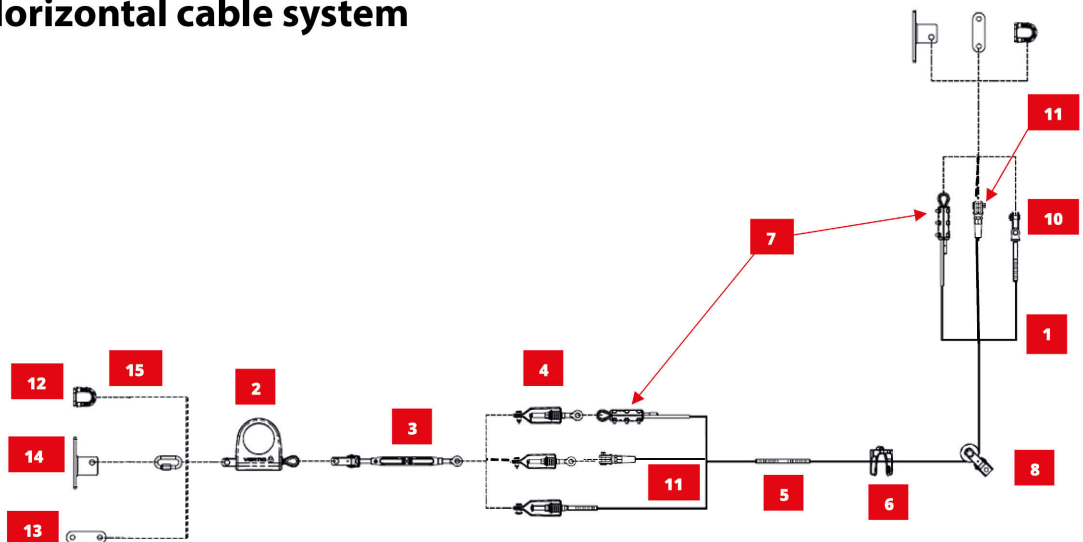
**USER PRODUCTIVITY :**  
Free movement all along the wire rope without unclipping

**USER-FRIENDLY :**  
Its engineered carriage can be connected anywhere all along the wire rope

**OPTIMUM SAFETY :**  
Equipped with tension control and fall indicators

**SUPERIOR DESIGN :**  
Superior design and finish allow a perfect integration whatever architectural constraints

### Horizontal cable system

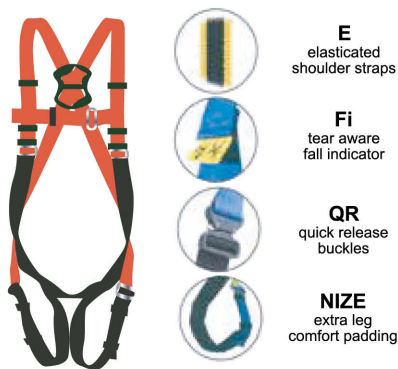


> Fall Protection Systems

PRO® 1-point fall arrest harness

Back D-ring, standard locks, better adjustment possibilities, fall indicator

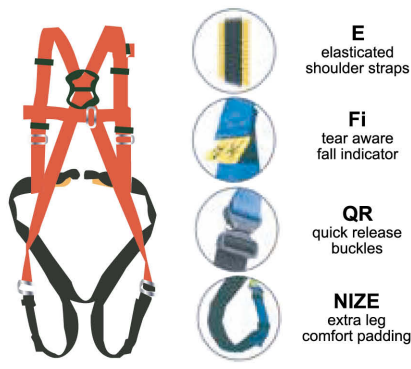
AB10112NG



PRO® 2-point fall arrest harness

Back and front D-ring, standard locks, better adjustment possibilities, fall indicator

AB11312NG



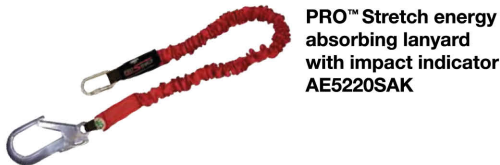
Shock absorber Lanyard



Energy absorbing lanyard  
AE5220WAE



Y-Energy absorbing lanyard  
AE5320WAF

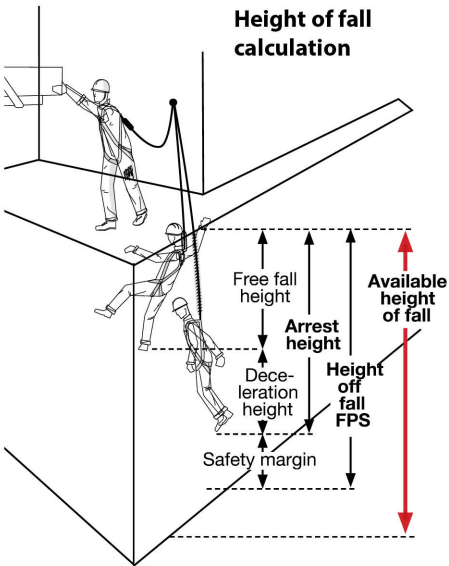
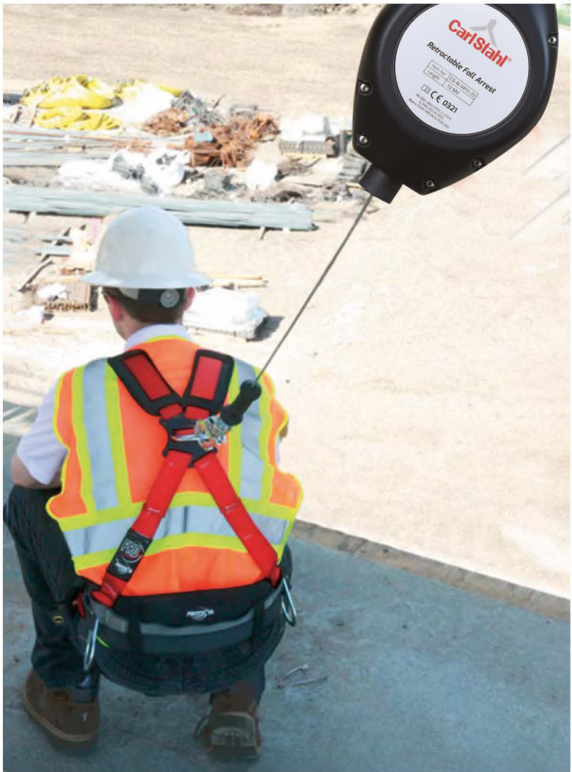


PRO™ Stretch energy absorbing lanyard with impact indicator  
AE5220SAK

| Type      | Material                | 1-<br>leg | 2-<br>leg | Length<br>in m | Weight<br>in kg | Connector                                                   | Item no.   |
|-----------|-------------------------|-----------|-----------|----------------|-----------------|-------------------------------------------------------------|------------|
| AE5220WAE | 25 mm polyester webbing | ✓         |           | 1.8            | 0.81            | 1 karabiner - 17 mm, 1 carabiner - 18 mm opening width      | 49VMGB01   |
| AE5320WAF | 25 mm polyester webbing |           | ✓         | 1.8            | 1.80            | 1 karabiner - 17 mm, 2 scaffold hooks - 60 mm opening width | 49VMY002   |
| AE5220SAK | 50 mm stretch material  | ✓         |           | 1.8            | 1.03            | Screw karabiner 17 mm, scaffold hook - 60 mm opening width  | 49VMST0SAK |

**> Fall Arrestor System**

**Fall arrestor system**



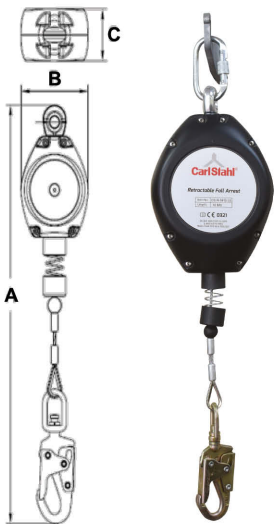
# Retractable Fall Arrest Block

**Retractable Lifeline - Wire Rope**

| Art. No.     | Length (Mtr) | Dimension (mm) |     |    | Class A or B | Weight (Kg) | Material  |
|--------------|--------------|----------------|-----|----|--------------|-------------|-----------|
|              |              | A              | B   | C  |              |             |           |
| N-9420-33    | 10           | 650            | 166 | 88 | Class B      | 4.0         | Plastic   |
| CS N-9410-33 | 10           | 650            | 166 | 88 | Class B      | 4.0         | Aluminium |
| N-9420-50    | 15           | 735            | 210 | 96 | Class B      | 6.5         | Plastic   |



EN 360







## Fibre Rope



> Fibre Rope



**8 STRAND NYLONE ROPE**



**8 STRAND POLYPROPYLENE ROPE**



**DOUBLE BRAIDED ROPE**



**JIUMAX SOFTSHACKLE**



**8 STANDS POLYESTER  
POLYPROPYLENE MIXED ROPE**



**UHMWPE (ULTRA HIGH MOLECULAR  
WEIGT POLYETHYLENE )**

**TYPE : SINGLE MOORING ASSEMBLY**



STEEL WIRE ROPE SLING

SINGLE MOORING TILE

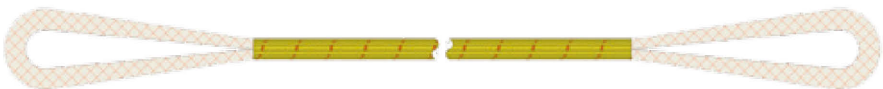
**TYPE : DOUBLE MOORING ASSEMBLY**



STEEL WIRE ROPE SLING

DOUBLE MOORING TILE

**MOORING TAILS**



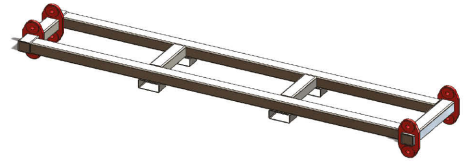


## Load Suspension Equipment & Lifting Attachment

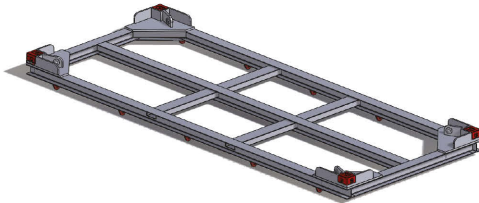
## > LOAD SUSPENSION EQUIPMENT

### Special lifting beams for all applications

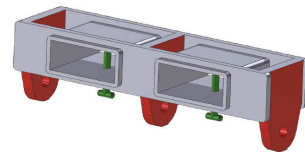
For lifting tasks beyond our standard product range, our engineering team provides customized design and manufacturing solution. Send us your enquiry with full specifications, and we will develop a tailor-made lifting beam suited to your exact application. All designs comply with international safety standards and Carl Stahl's quality requirements.



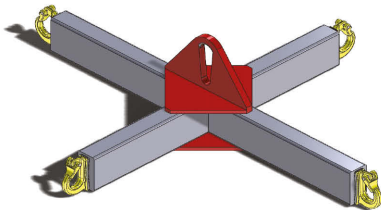
LIFTING ATTACHMENT: CSF 01



LIFTING FRAME: CSF 02



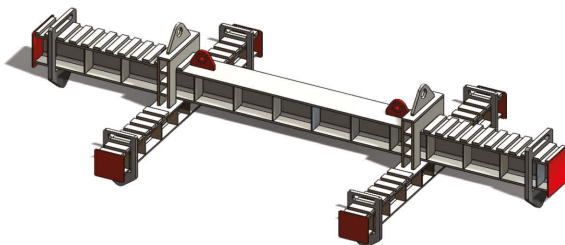
FORK LIFT ATTACHMENT: CSF 03



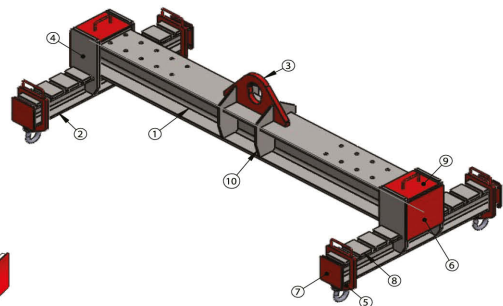
BULK BAG LIFTER: CSF 04



A FRAME: CSF 05

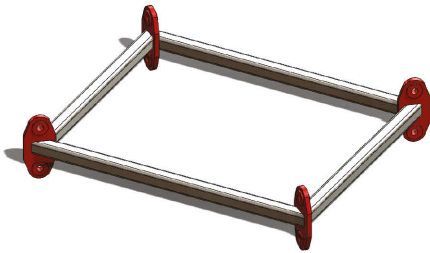


ADJUSTABLE LIFTING ATTACHMENT: CSF 06

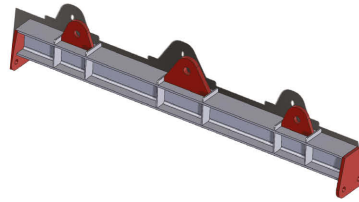


LIFTING ATTACHMENT : CSF 07

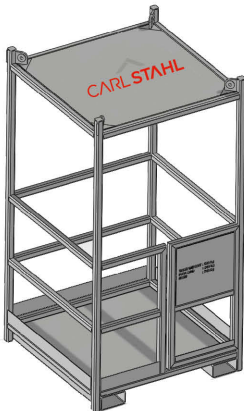
> **LOAD SUSPENSION EQUIPMENT**



LIFTING FRAME: CSF 08



SPREADER BEAM : CSF 09



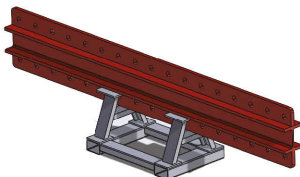
MAN LIFTING BASKET: MB 002



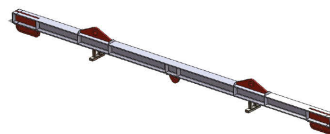
STACKABLE PALLET: CSF 010



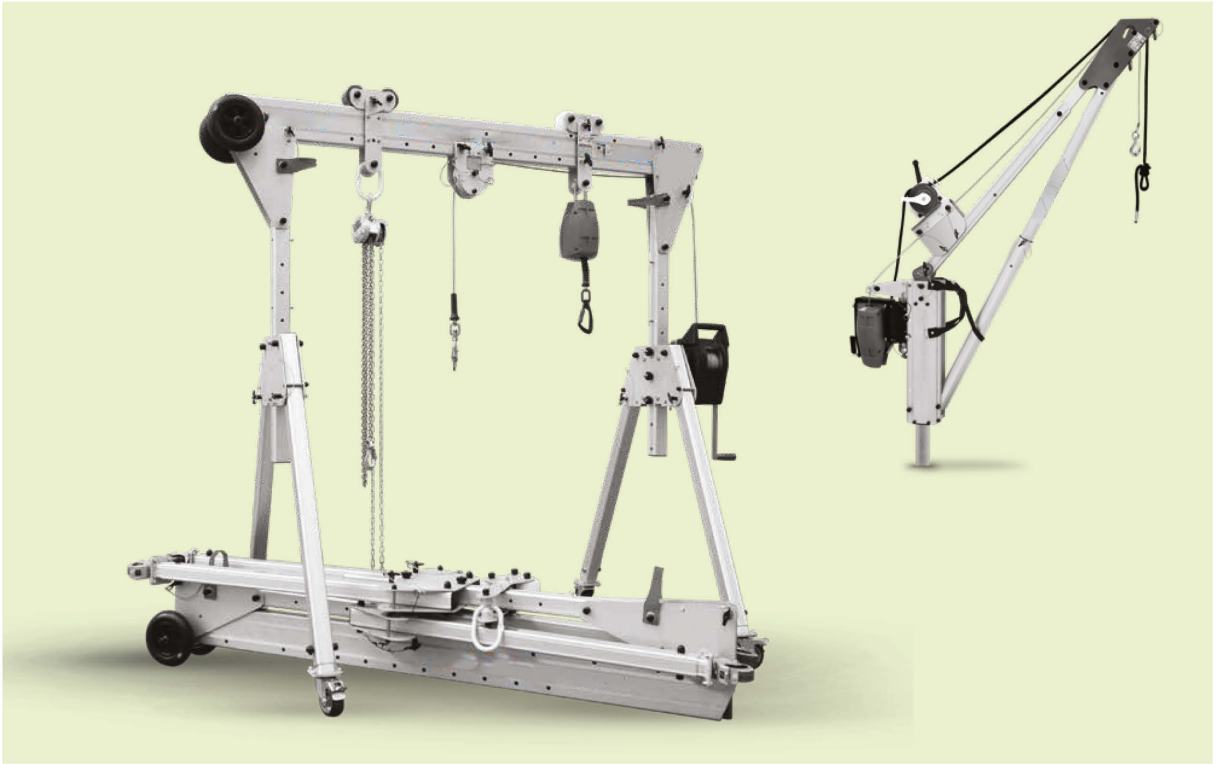
MATERIAL BASKET  
CSF 011



SPREADER BEAM WITH STAND : CSF 012



SPREADER BEAM WITH  
MULTIPLE LIFTING POINTS CSF: 013

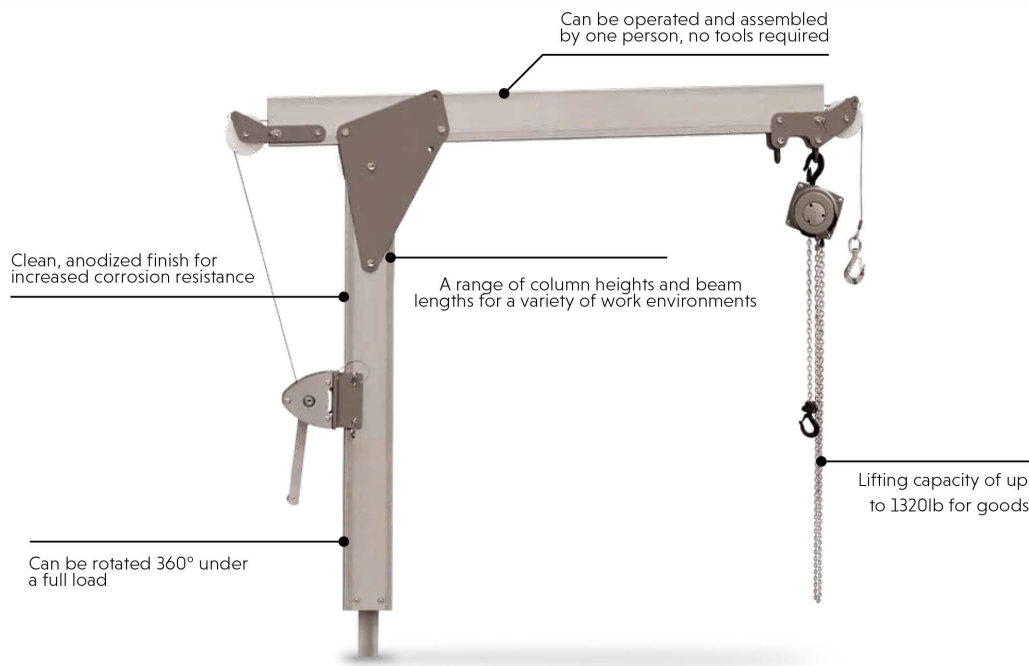


## Aluminum Crane Technology



> Aluminum Crane Technology

7170. Aluminium Portable DAVIT



| Beam Option | 0    | 1   | 2   | 3    |
|-------------|------|-----|-----|------|
| Beam Length | 46¾" | 57" | 65" | 80¾" |

| Dimension        | A    | B    | A    | B    | A    | B    | A   | B    |
|------------------|------|------|------|------|------|------|-----|------|
| Reach            | 31½" | 29¼" | 39¼" | 36½" | 47¼" | 43¾" | 63" | 58½" |
| Capacity [lb]    | 1320 |      | 1100 |      | 1100 |      | 820 |      |
| Beam Weight [lb] | 25   |      | 26   |      | 29   |      | 35  |      |

| Dimension      |   | C    | D    | C    | D    | C    | D    | C    | D    | Weight | Winch Positon |      | P1   | P2   |
|----------------|---|------|------|------|------|------|------|------|------|--------|---------------|------|------|------|
| Column Options | 3 | 50¾" | 60¾" | 51¼" | 63½" | 51½" | 66½" | 52¼" | 72¼" | 51     | W1            | 8¾"  | 58"  | 62"  |
|                |   |      |      |      |      |      |      |      |      |        | W2            | 12½" |      |      |
|                |   |      |      |      |      |      |      |      |      |        | W3            | 26½" |      |      |
|                |   |      |      |      |      |      |      |      |      |        | W4            | 30½" |      |      |
|                |   |      |      |      |      |      |      |      |      |        | W5            | 34½" |      |      |
|                | 4 | 63¼" | 73"  | 63½" | 76"  | 64"  | 79"  | 64¾" | 84¾" | 55     | W3            | 26½" | 70½" | 74½" |
|                |   |      |      |      |      |      |      |      |      |        | W4            | 30½" |      |      |
|                |   |      |      |      |      |      |      |      |      |        | W5            | 34½" |      |      |
|                | 5 | 75½" | 85¼" | 75¾" | 88¼" | 76¾" | 91¼" | 77"  | 96¾" | 62     | W5            | 34½" | 82¾" | 86½" |

Dimensions are to hook on Winched type.  
\*Radii achieved at 75% Capacity

## > Aluminum Crane Technology

# Portable Aluminium Gantry Cranes

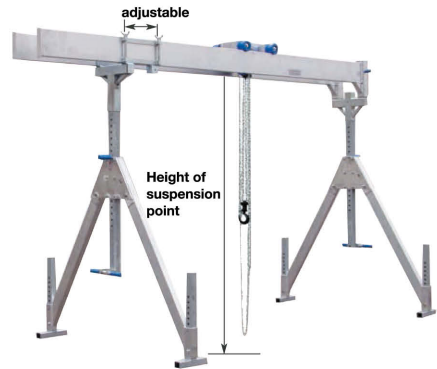
**8030. Stationary version  
with collapsible lateral stands, lockable  
trolley, and integrated horizontal adjuster**



Standard span (clearance width) 4 m

| Capacity<br>in kg | Height of suspension<br>point min./max. in mm | Lateral stand<br>span in mm | Weight<br>in kg | Item no.   |
|-------------------|-----------------------------------------------|-----------------------------|-----------------|------------|
| 1000              | 1260/2360                                     | 1300                        | 91              | 8030.4K.10 |
| 1000              | 1640/2990                                     | 1740                        | 97              | 8030.5K.10 |
| 1000              | 2320/4020                                     | 2240                        | 149             | 8030.6K.10 |
| 1500              | 1260/2360                                     | 1300                        | 99              | 8030.4K.15 |
| 1500              | 1640/2990                                     | 1740                        | 105             | 8030.5K.15 |
| 1500              | 2320/4020                                     | 2240                        | 157             | 8030.6K.15 |

**8030. Stationary version  
with collapsible lateral stands, double beam,  
lockable overhead trolley and integrated  
horizontal adjuster**



Standard span (clearance width) 4 m.  
Lockable overhead trolley provides maximised lifting height.

| Capacity<br>in kg | Height of suspension<br>point min./max. in mm | Lateral stand<br>span in mm | Weight<br>in kg | Item no.   |
|-------------------|-----------------------------------------------|-----------------------------|-----------------|------------|
| 1000              | 2150/3570                                     | 1740                        | 162             | 8030.5H.10 |
| 2000              | 2650/4350                                     | 2240                        | 208             | 8030.5H.20 |
| 3000              | 2640/3790                                     | 2230                        | 248             | 8030.5H.30 |

**!** Spans up to 8 m are available at short notice  
Special versions for many applications are  
available! Please contact us for details!

### Two-piece aluminium beam as option or for retrofitting

As we are already offering all our lateral stands for our aluminium gantry cranes in a collapsible version, now even the longest and most bulky component is available in a 2-piece version. The aluminium beam can either be used as a 4 m carrier beam or a 2 m-piece.



**Please contact  
us for details!**

The plug-on aluminium beam is available for single and double beam aluminium gantry cranes.

**NEW! Now for all  
aluminium gantry  
cranes!**



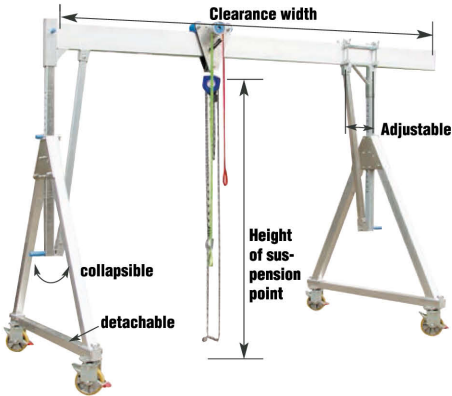
Lateral stand for  
stationary gantry crane

Lateral stands for version  
movable under load

➤ Aluminum Crane Technology

Portable Aluminium Gantry Cranes

**8030. Movable under load with collapsible lateral stands, lockable trolley, and integrated horizontal adjuster**



Standard span (clearance width) 4 m

| Capacity in kg | Height of suspension point min./max. in mm | Lateral stand span in mm | Weight in kg | Item no.     |
|----------------|--------------------------------------------|--------------------------|--------------|--------------|
| 1000           | 1730/2130                                  | 1490                     | 167          | 8030.7V.0110 |
| 1000           | 2170/3020                                  | 2000                     | 189          | 8030.7V.0210 |
| 1000           | 2500/3800                                  | 2320                     | 207          | 8030.7V.0310 |
| 1500           | 1730/2130                                  | 1490                     | 175          | 8030.7V.0115 |
| 1500           | 2170/3020                                  | 2000                     | 197          | 8030.7V.0215 |
| 1500           | 2500/3800                                  | 2320                     | 215          | 8030.7V.0315 |

**8030. Movable under load with collapsible lateral stands, double beam, lockable overhead trolley, and integrated horizontal adjuster**



Standard span (clearance width) 4 m  
Lockable overhead trolley provides maximised lifting height.

| Capacity in kg | Height of suspension point min./max. in mm | Lateral stand span in mm | Weight in kg | Item no.     |
|----------------|--------------------------------------------|--------------------------|--------------|--------------|
| 1000           | 2060/2460                                  | 1490                     | 234          | 8030.8V.0110 |
| 1000           | 2500/3350                                  | 2000                     | 260          | 8030.8V.0210 |
| 1000           | 2830/4130                                  | 2320                     | 278          | 8030.8V.0310 |
| 1500           | 2060/2460                                  | 1490                     | 234          | 8030.8V.0115 |
| 1500           | 2500/3350                                  | 2000                     | 260          | 8030.8V.0215 |
| 1500           | 2830/4130                                  | 2320                     | 278          | 8030.8V.0315 |
| 2000           | 2060/2460                                  | 1490                     | 234          | 8030.8V.0120 |
| 2000           | 2500/3350                                  | 2000                     | 260          | 8030.8V.0220 |
| 2000           | 2830/4130                                  | 2320                     | 278          | 8030.8V.0320 |
| 3000           | 2260/2610                                  | 1350                     | 358          | 8030.8V.0130 |
| 3000           | 2760/3510                                  | 1870                     | 390          | 8030.8V.0230 |
| 3000           | 3170/4320                                  | 2220                     | 420          | 8030.8V.0330 |

**Storage/Transport Box**

Material: Aluminium

- Rugged construction with hinged lid
- Plate for padlock
- Shell handles on the lid
- 6 wheels (including brake), so the box can be moved individually
- The base is reinforced so it can be transported with a pallet truck or a forklift (e.g. for loading on a vehicle).
- The single components of the aluminium gantry crane can be stored completely and in a space-saving way. Ideal for safe storage and transport.
- Mechanics at site always have a complete crane system at hand.

Dimensions: The box is adapted to the particular crane size.



Contents of box depicted =  
2-piece aluminium beam, foldable lateral stands and accessories

## ➤ Aluminum Crane Technology

# Portable Aluminium Gantry Cranes - Accessories

### 8030.ZA Hand Winch

- For height adjustment
- Not to be used under load
- The gantry crane can be assembled on a low level
- Afterwards it can be raised to the desired working height using the hand winches
- 1 set = 2 winches (1 per lateral stand)

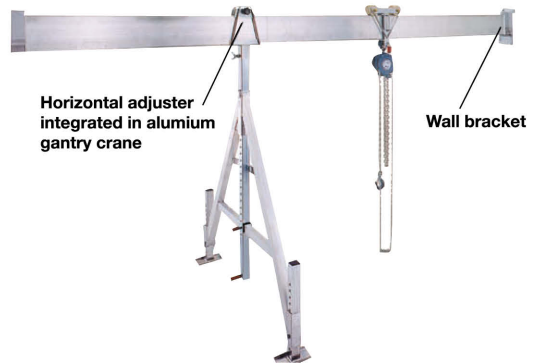


| For<br>gantry crane | Item no.   |
|---------------------|------------|
| all types           | 8030.ZA.01 |

### 8030.ZW Wall Bracket

- The wall bracket facilitates the attachment of the beam to a wall. This widens the field of possible applications especially when used through door or window openings.
- The beam can be slewed through 180° at the wall bracket (in unloaded condition)

| For<br>gantry crane | Item no.   |
|---------------------|------------|
| 8030.4K.xx          | 8030.ZW.01 |
| 8030.5K.xx          |            |
| 8030.6K.xx          | 8030.ZW.02 |
| 8030.7V.xxx         |            |
| 8030.5H.xx          | 8030.ZW.03 |
| 8030.8V.xxx         |            |



### Wheel Sets

- Facilitates moving of the assembled, unloaded gantry crane
- The spring-mounted wheels allow the lateral stands to rest directly on the supports when under load
- The integrated forks perwith the lateral stands to stay upright during assembly and disassembly of the crane
- The wheel sets are individually height-adjustable
- The crane can be moved easily to its next operating site
- No need for assembly or disassembly
- Scope of delivery: 4 pcs „forks“ = 1 wheel set

### 8030.ZV Wheel set with Vulkollan wheels

- For indoor use

| For<br>gantry crane | Item no.   |
|---------------------|------------|
| stationary version  | 8030.ZV.01 |

### 8030.ZL Wheel set with PU foam wheels

- For indoor and outdoor use

| For<br>gantry crane | Item no.   |
|---------------------|------------|
| stationary version  | 8030.ZL.01 |



Vulkollan  
tyres



Punctureproof  
PU foam tyres

### 8030.SZ Wiring/power supply for aluminium gantry cranes

- The portal crane is delivered ready to use
- Power supply 400 V/16A, 50 Hz, 5-pole with switch
- Phase changing 5-pole CEE plug
- Electrical connection of the hoist is effected by a 6-pole plug (protected IP66 DIN EN 60259)
- All electrical components are suitable for indoor and outdoor use under normal operating conditions



| For all gantry cranes                | Item no.    |
|--------------------------------------|-------------|
| with "single beam": PUR spiral cable | 8030.SZ.E04 |
| with "double beam": PUR spiral cable | 8030.SZ.D04 |



**NEW!** All our aluminium gantry cranes can now also be fitted with an electrically powered trolley. Additionally to powered lifting and lowering with an Electric Chain Hoist the load can now also be moved electrically along the beam. A radio remote control is available as an option. Please contact us for pricing.

**When ordering an accessory indicate item no. of your crane!**



## Hydraulic Lifting



## HYDRAULIC LIFTING

### The complete hydraulic range

Hydraulic products are designed and manufactured according to ISO 9001:2000 and comply with CE standards. All products are delivered with a test certificate according to national and international standards and bear an individual serial number.

### Single acting very low Height Pancake Cylinder Type HVL

- Working pressure up to 700 bar
- Capacities from 10 to 104 t
- Stroke length 6 mm
- No spring assisted return
- Surface treated piston rod
- Types HVL 10 to HVL 50 with adapter coupler



HVL100



| Type    | Capacity in t | Stroke in mm | Height in mm | Oil capacity in cm <sup>3</sup> | Cylinder Ø in mm | Weight in kg | Item no.  |
|---------|---------------|--------------|--------------|---------------------------------|------------------|--------------|-----------|
| HVL 10  | 10            | 6            | 28           | 9                               | 87               | 1.6          | 78HVL0.10 |
| HVL 20  | 20            | 6            | 32           | 17                              | 104              | 2.6          | 78HVL0.20 |
| HVL 30  | 32            | 6            | 34           | 27                              | 120              | 3.0          | 78HVL0.30 |
| HVL 50  | 50            | 6            | 45           | 43                              | 158              | 7.2          | 78HVL0.50 |
| HVL 100 | 104           | 6            | 65           | 88                              | 200              | 15.6         | 78HVL1.00 |

### Single acting low Height Pad Cylinder Type HPS

- Working pressure up to 700 bar
- Capacities from 4.5 to 147 t
- Stroke length 6 to 16 mm
- Spring assisted return
- Surface treated piston rod
- Collar threads withstand full load



HPS100



| Type     | Capacity in t | Stroke in mm | Height in mm | Oil capacity in cm <sup>3</sup> | Cylinder Ø in mm | Weight in kg | Item no.   |
|----------|---------------|--------------|--------------|---------------------------------|------------------|--------------|------------|
| HPS 50   | 4.5           | 6            | 32           | 4                               | 60               | 0.8          | 78HPS0.050 |
| HPS 51   | 4.5           | 16           | 42           | 10                              | 60               | 0.9          | 78HPS0.051 |
| HPS 100  | 10            | 10           | 46           | 14                              | 81               | 1.6          | 78HPS0.100 |
| HPS 200  | 20            | 11           | 52           | 31                              | 100              | 2.6          | 78HPS0.200 |
| HPS 300  | 32            | 12           | 59           | 55                              | 115              | 4.2          | 78HPS0.300 |
| HPS 500  | 50            | 15           | 67           | 107                             | 140              | 6.6          | 78HPS0.500 |
| HPS 750  | 73            | 16           | 81           | 164                             | 165              | 10.4         | 78HPS0.750 |
| HPS 1000 | 109           | 16           | 91           | 245                             | 215              | 23.2         | 78HPS1.000 |
| HPS 1500 | 147           | 16           | 100          | 330                             | 215              | 28.5         | 78HPS1.500 |

### Single acting low Height Cylinder Type HLS

- Working pressure up to 700 bar
- Capacities from 10 to 147 t
- Stroke length 25 to 60 mm
- Spring assisted return
- Surface treated piston rod
- Collar threads withstand full load



HLS301



| Type     | Capacity in t | Stroke in mm | Height in mm | Oil capacity in cm <sup>3</sup> | Cylinder Ø in mm | Weight in kg | Item no.   |
|----------|---------------|--------------|--------------|---------------------------------|------------------|--------------|------------|
| HLS 101  | 10            | 40           | 95           | 58                              | 70               | 2.4          | 78HLS0.101 |
| HLS 201  | 20            | 44           | 102          | 126                             | 90               | 4.8          | 78HLS0.201 |
| HLS 301  | 32            | 25           | 83           | 114                             | 102              | 5.0          | 78HLS0.301 |
| HLS 302  | 32            | 60           | 119          | 274                             | 102              | 7.0          | 78HLS0.302 |
| HLS 501  | 50            | 25           | 91           | 178                             | 127              | 8.4          | 78HLS0.501 |
| HLS 502  | 50            | 60           | 126          | 428                             | 127              | 10.4         | 78HLS0.502 |
| HLS 1001 | 109           | 25           | 108          | 384                             | 178              | 19.8         | 78HLS1.001 |
| HLS 1002 | 109           | 60           | 143          | 921                             | 178              | 24.0         | 78HLS1.002 |
| HLS 1501 | 147           | 25           | 130          | 516                             | 216              | 37.0         | 78HLS1.501 |
| HLS 1502 | 147           | 50           | 155          | 1031                            | 216              | 42.0         | 78HLS1.502 |

> Hydraulic Lifting

HP | MANUALLY OPERATED PUMPS - STEEL

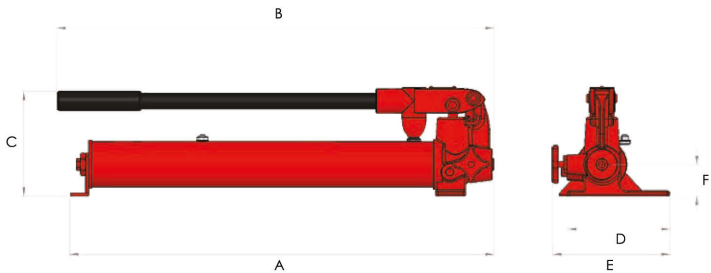


Single or two stage operation

Durable steel construction

Working pressure 700 bar

- ▶ Oil reservoir capacity up to 4.1 litres
- ▶ External pressure release valve and factory set safety relief valve
- ▶ Low handle effort and ergonomic grip for easy operation
- ▶ Changeover pressure for two stage models is 14 bar



| Model number                                                           | Valve type | Displacement per stroke (cm³) |                       | Usable oil capacity (litres) | Handle effort (kg) | Weight (kg) | Dimensions (mm) |     |     |     |     |    |
|------------------------------------------------------------------------|------------|-------------------------------|-----------------------|------------------------------|--------------------|-------------|-----------------|-----|-----|-----|-----|----|
|                                                                        |            | 1 <sup>st</sup> stage         | 2 <sup>nd</sup> stage |                              |                    |             | A               | B   | C   | D   | E   | F  |
| Single stage hand operated pumps for single acting cylinders and tools |            |                               |                       |                              |                    |             |                 |     |     |     |     |    |
| HP110                                                                  | 2-way      | 2.9                           | -                     | 1                            | 45                 | 5.6         | 558             | 566 | 128 | 134 | 145 | 40 |
| Two stage hand operated pumps for single acting cylinders and tools    |            |                               |                       |                              |                    |             |                 |     |     |     |     |    |
| HP227                                                                  | 2-way      | 12.9                          | 2.3                   | 2.3                          | 38                 | 10.5        | 544             | 597 | 168 | 135 | 145 | 53 |
| HP257                                                                  | 2-way      | 12.9                          | 2.3                   | 4.1                          | 38                 | 15.2        | 545             | 597 | 168 | 135 | 150 | 53 |

HIGH PRESSURE HYDRAULIC HOSES



Working pressure 700 bar

4:1 Factor of safety

Hand grip protective strain relievers



## **Stainless Steel Products**

## ➤ Stainless Steel Products: Corrosion Resistance

### Stainless steel slings and load suspension equipment for industrial use

- ▶ Chain Slings
- ▶ Wire Ropes and Accessories
- ▶ Safety Hooks
- ▶ Lifting Beams
- ▶ Pallet Trucks
- ▶ Superkraft Woven Wire Rope Slings

For use in the

- ▶ Food Industry
  - ▶ Chemical Industry
  - ▶ Dyeing Plants, Pickling Plants, Hardening Shops
  - ▶ Navigation
- and any place where corrosion is a problem!



#### Corrosion resistance of stainless steel materials

| Corrosive agent                                            | Concentration | Temperature | 1.4307  | 1.4401  | 1.4404  | 1.4462  |
|------------------------------------------------------------|---------------|-------------|---------|---------|---------|---------|
| Chloride                                                   | -             | -           | 1 L     | 1 L     | 1 L     | 1 L     |
| Acetic acid C <sub>2</sub> H <sub>4</sub> O <sub>2</sub>   | -             | -           | 1       | 0       | 0       | 0       |
| Fatty acid C <sub>18</sub> H <sub>34</sub> O <sub>2</sub>  | -             | 150 °C      | 1       | 0       | 0       | 0       |
| Fluorine                                                   | 40%           | -           | 1-2     | 1-2     | 1-2     | 1-2     |
| Gallic acid C <sub>6</sub> H <sub>2</sub> O <sub>2</sub> H | -             | -           | 0       | 0       | 0       | 0       |
| Hydroxide (alkaline)                                       | 20%           | -           | 0       | 0       | 0       | 0       |
|                                                            | 20%           | boiling     | 1       | 1       | 1       | 1       |
| Lactic acid                                                | 10%           | boiling     | 1       | 0       | 0       | 0       |
| Nitrosulphuric acids                                       | 1-2%          | boiling     | 2       | 0       | 0       | 0       |
| Phosphoric acid                                            | 60%           | boiling     | 2       | 1       | 1       | 1       |
| Nitric acid HNO <sub>3</sub>                               | 1-66%         | 20%         | 0       | 0       | 0       | 0       |
|                                                            | 1-40%         | boiling     | 0       | 0       | 0       | 0       |
|                                                            | 40-99%        | boiling     | 1-2     | 1-2     | 1-2     | 1-2     |
| Hydrochloric acid HCl                                      | 0-5%          | 20%         | 1 L     | 1 L     | 1 L     | 1 L     |
|                                                            | 1-2%          | -           | 2 - 3 L | 2 - 3 L | 2 - 3 L | 2 - 3 L |
|                                                            | 1-2%          | 50°C        | 2 - 3 L | 2 - 3 L | 2 - 3 L | 2 - 3 L |
| Sulphuric acid H <sub>2</sub> SO <sub>4</sub>              | 1-50%         | 20°C        | 1-2     | 1       | 1       | 1       |
|                                                            | 1-50%         | 70°C        | 1-2     | 0-2     | 0-2     | 0-2     |
|                                                            | 1-50%         | boiling     | 2-3     | 2-3     | 2-3     | 2-3     |
| Seawater*                                                  | -             | < 60°C      | 0 - 2 L | 0 - 1 L | 0 - 1 L | 0 L**   |
| Sulphate                                                   | -             | boiling     | 0-3     | 0-3     | 0-3     | 0-3     |
| Tartaric acid                                              | 50%           | boiling     | 2       | 1       | 1       | 1       |

0 = Resistant against erosive surface corrosion

1 = Slight attack by erosive surface corrosion

2 = Little resistance against erosive surface corrosion

3 = Not resistant against erosive surface corrosion

L = Pitting, crevice or stress corrosion might occur

#### Working load limit depending on the chain temperature

|        | -40°C bis +250°C | über 250°C bis 350°C* | über 350°C bis 450°C |
|--------|------------------|-----------------------|----------------------|
| W.L.L. | 100 %            | 75 %                  | 50 %                 |

\*1.4462 (AISI 318LN) max. 350°C allowed

\*No accumulation or concentration of chloride ions

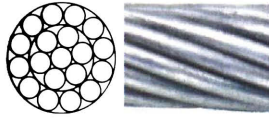
\*\*Generally highly resistant against seawater

Under unfavourable conditions corrosive attacks may occur in tight crevices.

The selection of the above-mentioned corrosive agents has been made according to their frequency of occurrence but may be extended in many areas. These indications result from laboratory tests of the material manufacturers and may only serve as a rough guide as practical application conditions cannot be compared with laboratory results.

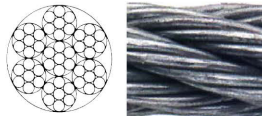
## > Stainless Steel Products: Wire Ropes

### 0153. Stainless Steel Strand, Material 1.4401, Constructions 1x19\*, 1 x 37\*\*, 1 x 61\*\*\*



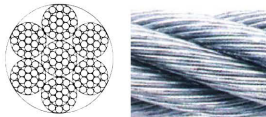
| Rope Ø<br>in mm | Minimum breaking load<br>(MBL) |       | Weight<br>in kg/m | Construc-<br>tion | Item no.   |
|-----------------|--------------------------------|-------|-------------------|-------------------|------------|
|                 | kN                             | kg    |                   |                   |            |
| 2,0             | 3,3                            | 337   | 0,020             | 1 x 19            | 0153.10.20 |
| 3,0             | 7,42                           | 757   | 0,045             | 1 x 19            | 0153.10.30 |
| 4,0             | 13,2                           | 1350  | 0,079             | 1 x 19            | 0153.10.40 |
| 5,0             | 20,6                           | 2100  | 0,124             | 1 x 19            | 0153.10.50 |
| 6,0             | 29,7                           | 3030  | 0,178             | 1 x 19            | 0153.10.60 |
| 8,0             | 49,4                           | 5040  | 0,317             | 1 x 19            | 0153.10.80 |
| 10,0            | 72,2                           | 7364  | 0,495             | 1 x 19            | 0153.11.00 |
| 12,0            | 104,0                          | 10608 | 0,713             | 1 x 19            | 0153.11.20 |
| 14,0            | 131,0                          | 13362 | 0,971             | 1 x 19            | 0153.11.40 |
| 16,0            | 176,0                          | 17952 | 1,100             | 1 x 19            | 0153.11.60 |

### 0155. Stainless Steel Wire Rope, Material 1.4401, Construction 6x7M-WSC



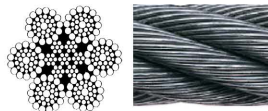
| Rope Ø<br>in mm | Minimum breaking load<br>(MBL) 1570 N/mm² |      | Weight<br>in kg/m | Item no.   |
|-----------------|-------------------------------------------|------|-------------------|------------|
|                 | kN                                        | kg   |                   |            |
| 2,0             | 2,24                                      | 228  | 0,015             | 0155.10.20 |
| 3,0             | 5,03                                      | 513  | 0,035             | 0155.10.30 |
| 4,0             | 8,94                                      | 912  | 0,061             | 0155.10.40 |
| 5,0             | 14,0                                      | 1430 | 0,096             | 0155.10.50 |
| 6,0             | 20,1                                      | 2050 | 0,138             | 0155.10.60 |
| 8,0             | 35,8                                      | 3650 | 0,246             | 0155.10.80 |

### 0160. Stainless Steel Wire Rope, Material 1.4401, Construction 6x19M-WSC



| Rope Ø<br>in mm | Minimum breaking load<br>(MBL) 1570 N/mm² |       | Weight<br>in kg/m | Item no.   |
|-----------------|-------------------------------------------|-------|-------------------|------------|
|                 | kN                                        | kg    |                   |            |
| 2,0             | 2,08                                      | 291   | 0,017             | CG71.92.00 |
| 3,0             | 4,69                                      | 478   | 0,034             | 0160.10.30 |
| 4,0             | 8,34                                      | 850   | 0,060             | 0160.10.40 |
| 5,0             | 13,0                                      | 1330  | 0,093             | 0160.10.50 |
| 6,0             | 18,8                                      | 1920  | 0,134             | 0160.10.60 |
| 8,0             | 33,4                                      | 3410  | 0,238             | 0160.10.80 |
| 10,0            | 52,1                                      | 5310  | 0,372             | 0160.11.00 |
| 12,0            | 75,1                                      | 7660  | 0,536             | 0160.11.20 |
| 16,0            | 133,0                                     | 13600 | 0,955             | 0160.11.60 |

### 0164. Stainless Steel Wire Rope, Material 1.4401, Construction 6x36WS-IWRC

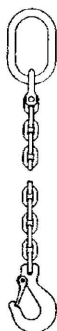


| Rope Ø<br>in mm | Minimum breaking load (MBL)<br>1570 N/mm² |       | Weight<br>in kg/m | Item no.   |
|-----------------|-------------------------------------------|-------|-------------------|------------|
|                 | kN                                        | kg    |                   |            |
| 6,0             | 20,1                                      | 2048  | 0,146             | 0164.10.60 |
| 8,0             | 35,7                                      | 3641  | 0,260             | 0164.10.80 |
| 10,0            | 55,9                                      | 5700  | 0,409             | 0164.11.00 |
| 12,0            | 80,5                                      | 8210  | 0,589             | 0164.11.20 |
| 14,0            | 110,0                                     | 11200 | 0,802             | 0164.11.40 |
| 16,0            | 143,0                                     | 14600 | 1,050             | 0164.11.60 |
| 18,0            | 181,0                                     | 18500 | 1,330             | 0164.11.80 |
| 20,0            | 224,0                                     | 22800 | 1,640             | 0164.12.00 |
| 22,0            | 271,0                                     | 27600 | 1,980             | 0164.12.20 |
| 24,0            | 322,0                                     | 32800 | 2,360             | 0164.12.40 |
| 26,0            | 354,0                                     | 36100 | 2,760             | 0164.12.60 |

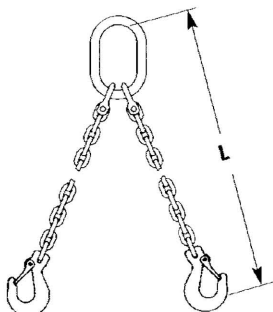


## > Stainless Steel Products: Chain Slings

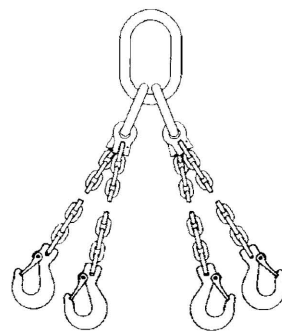
**6101.0E.**  
**1-leg Chain Sling**  
**with Safety Hook CML1**



**6201.0E.**  
**2-leg Chain Sling**  
**with Safety Hook CML2**



**6401.0E.**  
**4-leg Chain Sling**  
**with Safety Hook CML4**



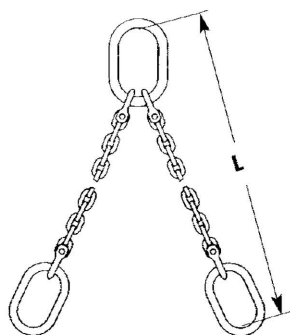
| Nominal<br>chain size<br>in mm | Load capacity<br>1-leg single<br>direct in kg | Item no.   | Load capacity 2-leg<br>in kg at angle |        | Item no.   | Load capacity 4-leg<br>in kg at angle |        | Item no.   |
|--------------------------------|-----------------------------------------------|------------|---------------------------------------|--------|------------|---------------------------------------|--------|------------|
|                                |                                               |            | 0-45°                                 | 45-60° |            | 0-45°                                 | 45-60° |            |
| 6                              | 900                                           | 6101.0E.06 | 1250                                  | 900    | 6201.0E.06 | 1900                                  | 1350   | 6401.0E.06 |
| 8                              | 1500                                          | 6101.0E.08 | 2100                                  | 1500   | 6201.0E.08 | 3150                                  | 2250   | 6401.0E.08 |
| 10                             | 2400                                          | 6101.0E.10 | 3350                                  | 2400   | 6201.0E.10 | 5000                                  | 3600   | 6401.0E.10 |

On request, nominal sizes 13 and 16 mm are also available with eye hook

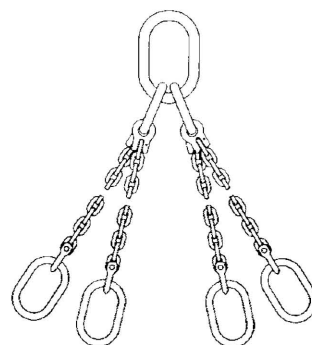
**6102.0E.**  
**1-leg Chain Sling**  
**with Master Link CME1**



**6202.0E.**  
**2-leg Chain Sling**  
**with Master Link CME2**



**6402.0E.**  
**4-leg Chain Sling**  
**with Master Link CME4**



| Nominal<br>chain size<br>in mm | Load capacity<br>1-leg single<br>direct in kg | Item no.   | Load capacity 2-leg<br>in kg at angle |          | Item no.   | Load capacity 4-leg<br>in kg at angle |          | Item no.   |
|--------------------------------|-----------------------------------------------|------------|---------------------------------------|----------|------------|---------------------------------------|----------|------------|
|                                |                                               |            | 0 - 45°                               | 45 - 60° |            | 0 - 45°                               | 45 - 60° |            |
| 6                              | 900                                           | 6102.0E.06 | 1250                                  | 900      | 6202.0E.06 | 1900                                  | 1350     | 6402.0E.06 |
| 8                              | 1500                                          | 6102.0E.08 | 2100                                  | 1500     | 6202.0E.08 | 3150                                  | 2250     | 6402.0E.08 |
| 10                             | 2400                                          | 6102.0E.10 | 3350                                  | 2400     | 6202.0E.10 | 5000                                  | 3600     | 6402.0E.10 |
| 13                             | 3850                                          | 6102.0E.13 | 5400                                  | 3850     | 6202.0E.13 | 8000                                  | 5700     | 6402.0E.13 |
| 16 (G5)                        | 5000                                          | 6102.0E.16 | 7000                                  | 5000     | 6202.0E.16 | 10000                                 | 7500     | 6402.0E.16 |



Other end fittings like  
shackles or eye hooks  
are available on request

## Stainless Steel Products : Eye Bolt, Lifting Ring

### 5555.E. Stainless Steel Eye Bolt Type INOX-STAR

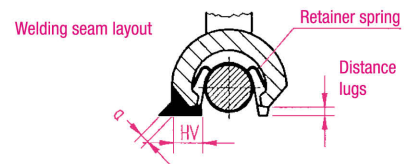
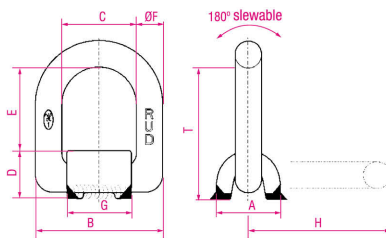
**Stainless steel**  
50% higher load capacity than DIN  
Can be loaded in all directions!



Also available as attachment point for fall protection systems.

| Type          | Nominal load capacity in t | Dimensions in mm |    |    |    |      |      |    |    |     |    | Weight in kg/pce | Item no.   |
|---------------|----------------------------|------------------|----|----|----|------|------|----|----|-----|----|------------------|------------|
|               |                            | A                | B  | C  | D  | E    | G    | K  | L  | M   | SW |                  |            |
| INOX-STAR M12 | 0,5                        | 43               | 14 | 10 | 30 | 30   | 32   | 56 | 18 | M12 | 8  | 0,2              | 5555.E0.12 |
| INOX-STAR M16 | 1,0                        | 50               | 16 | 14 | 35 | 35,5 | 38   | 65 | 24 | M16 | 10 | 0,3              | 5555.E0.16 |
| INOX-STAR M20 | 2,0                        | 57               | 19 | 16 | 40 | 41,5 | 46,5 | 74 | 30 | M20 | 12 | 0,6              | 5555.E0.20 |
| INOX-STAR M24 | 2,5                        | 70               | 24 | 19 | 48 | 50   | 56   | 92 | 36 | M24 | 14 | 1,0              | 5555.E0.24 |

### 5563. Weld-on Stainless Steel Lifting Ring LBS, Material 1.4571



| Load capacity<br>in t | Type            | Welding seam | Dimensions in mm |     |    |    |    |      |    |     |     | Weight<br>in kg/pce | Item no.<br>LBS stainless steel |
|-----------------------|-----------------|--------------|------------------|-----|----|----|----|------|----|-----|-----|---------------------|---------------------------------|
|                       |                 |              | A                | B   | C  | D  | E  | Ø F  | G  | H   | T   |                     |                                 |
| 0,5                   | LBS (1) RS 0,5t | HV 5+3       | 32               | 65  | 36 | 25 | 39 | 13,5 | 33 | 85  | 64  | 0,3                 | 5563.10.05                      |
| 1                     | LBS (3) RS 1t   | HV 8+3       | 42               | 85  | 50 | 31 | 50 | 16,5 | 46 | 108 | 81  | 0,6                 | 5563.10.10                      |
| 2                     | LBS (5) RS 2t   | HV 12+4      | 61               | 110 | 65 | 44 | 72 | 22,2 | 60 | 155 | 116 | 1,6                 | 5563.10.20                      |

### Maximum transport weight G in ton with different lifting methods

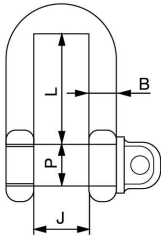
| Lifting method    |     |    |     |     |        |         |            |         |         |            |
|-------------------|-----|----|-----|-----|--------|---------|------------|---------|---------|------------|
|                   |     |    |     |     |        |         |            |         |         |            |
| Number of legs    | 1   | 2  | 1   | 2   | 2      | 2       | 2          | 3 and 4 | 3 and 4 | 3 and 4    |
| Inclination angle | 0°  | 0° | 90° | 90° | 0°-45° | 45°-60° | asymmetric | 0°-45°  | 45°-60° | asymmetric |
| LBS RS 0,5        | 0,5 | 1  | 0,5 | 1   | 0,7    | 0,5     | 0,5        | 1,05    | 0,75    | 0,5        |
| LBS RS 1          | 1   | 2  | 1   | 2   | 1,4    | 1       | 1          | 2,1     | 1,5     | 1          |
| LBS RS 2          | 2   | 4  | 2   | 4   | 2,8    | 2       | 2          | 4,2     | 3       | 2          |

> Stainless Steel Products Shackles

5672. High Strength Stainless Steel D-shackle, forged, stamped with Load Capacity

Stainless steel material,  
Safety factor 6:1  
Material: AISI 630

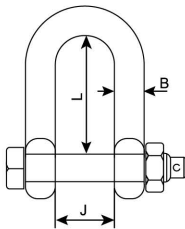
Higher load capacity  
due to special material



| Load capacity<br>in kg (WLL) | Nominal<br>size | Dimensions in mm |      |    |     | Weight<br>in kg | Item no.   |
|------------------------------|-----------------|------------------|------|----|-----|-----------------|------------|
|                              |                 | P                | B    | J  | L   |                 |            |
| 1000                         | 10              | 10,0             | 8,0  | 16 | 32  | 0,085           | 5672.00.10 |
| 2000                         | 12,7            | 12,7             | 10   | 20 | 40  | 0,150           | 5672.00.13 |
| 3000                         | 16              | 16               | 12,7 | 25 | 50  | 0,350           | 5672.00.16 |
| 5000                         | 19              | 19               | 16   | 32 | 64  | 0,550           | 5672.00.19 |
| 7000                         | 22,2            | 22,2             | 19   | 38 | 76  | 1,000           | 5672.00.22 |
| 9000                         | 25,4            | 25,4             | 22,2 | 44 | 88  | 1,900           | 5672.00.25 |
| 11000                        | 28,6            | 28,6             | 25,4 | 51 | 102 | 2,900           | 5672.00.29 |
| 13000                        | 31,8            | 31,8             | 28,6 | 57 | 114 | 3,100           | 5672.00.32 |
| 15000                        | 34,9            | 34,9             | 31,8 | 64 | 128 | 4,350           | 5672.00.35 |
| 18000                        | 38              | 38               | 34,9 | 70 | 140 | 5,300           | 5672.00.38 |

5673. Stainless Steel D-shackle with Nut and Pin, forged, stamped with Load Capacity

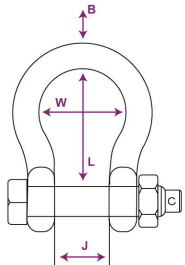
Stainless steel material,  
Safety factor 6:1  
Material: AISI 630



| Load capacity<br>in kg | Nominal<br>size | Dimensions in mm |    |     | Weight<br>in kg/pce | Item no.   |
|------------------------|-----------------|------------------|----|-----|---------------------|------------|
|                        |                 | B                | J  | L   |                     |            |
| 350                    | M6              | 6                | 13 | 25  | 0,048               | 5673.00.06 |
| 500                    | M8              | 8                | 16 | 32  | 0,075               | 5673.00.08 |
| 800                    | M10             | 9,5              | 19 | 38  | 0,136               | 5673.00.10 |
| 1000                   | M12             | 11               | 22 | 44  | 0,212               | 5673.00.12 |
| 1250                   | M12             | 12,7             | 26 | 52  | 0,331               | 5673.00.13 |
| 1800                   | M16             | 14,3             | 29 | 58  | 0,585               | 5673.00.16 |
| 2800                   | M20             | 16               | 32 | 64  | 0,760               | 5673.00.20 |
| 3300                   | M22             | 19               | 38 | 76  | 1,180               | 5673.00.22 |
| 4500                   | M24             | 22               | 44 | 88  | 1,750               | 5673.00.24 |
| 5000                   | M27             | 25,4             | 50 | 100 | 2,600               | 5673.00.27 |

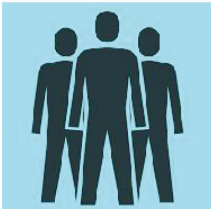
5674. Stainless Steel Bow Shackle with Nut and Pin, forged, stamped with Load Capacity

Stainless steel material,  
Safety factor 6:1  
Material: AISI 630



| Load capacity<br>in kg | Nominal<br>size | Dimensions in mm |    |    |     | Weight<br>in kg/pce | Item no.   |
|------------------------|-----------------|------------------|----|----|-----|---------------------|------------|
|                        |                 | B                | J  | W  | L   |                     |            |
| 280                    | M6              | 6                | 13 | 19 | 28  | 0,052               | 5674.00.06 |
| 400                    | M8              | 8                | 16 | 25 | 35  | 0,081               | 5674.00.08 |
| 600                    | M10             | 9,5              | 19 | 28 | 38  | 0,147               | 5674.00.10 |
| 800                    | M12             | 11               | 22 | 33 | 46  | 0,221               | 5674.00.12 |
| 1000                   | M12             | 12,7             | 26 | 38 | 52  | 0,354               | 5674.00.13 |
| 1500                   | M16             | 14,3             | 29 | 43 | 60  | 0,635               | 5674.00.16 |
| 2500                   | M20             | 16               | 32 | 50 | 68  | 0,805               | 5674.00.20 |
| 3000                   | M22             | 19               | 38 | 58 | 76  | 1,250               | 5674.00.22 |
| 4000                   | M24             | 22               | 44 | 66 | 88  | 1,820               | 5674.00.24 |
| 4500                   | M27             | 25,4             | 50 | 76 | 100 | 2,700               | 5674.00.27 |

# OUR SERVICES



## INTRODUCTION

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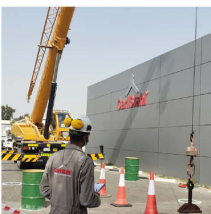
## THIRD PARTY INSPECTION AND TESTING

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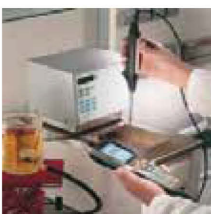
## TRAINING SERVICES

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## COMPETENCY ASSESSMENT FOR PERSONS

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## CALIBRATION SERVICES

PAGE | 128





## ➤ **CARL STAHL:** Global Expertise in Testing, Inspection, and Calibration

Since its founding in **1880 in Germany**, **Carl Stahl** has been a pioneer in state-of-the-art lifting technology and engineering excellence. Today we have grown into a global enterprise, serving clients across **five continents from over 70 locations**, built on a strong foundation of **customer satisfaction, safety, and precision engineering**. Our mission is to continuously develop advanced solutions that go beyond expectations.

In line with our dedication to providing the highest quality products and services, Carl Stahl has expanded into a multi-disciplinary organization offering a wide range of integrated facilities. This allows our valued clients to conveniently access diverse services under one trusted name — **Carl Stahl**

### **Our Services include:**

- **Test, Inspection & Certification:** Comprehensive services for all onshore and offshore lifting equipment, pressure equipment, PPE, anchor devices, lifting equipment carrying persons and associated machinery. We are experts in high-capacity crane load testing using water bags and test weights.
- **Aviation Tool & Instrument Inspection & Calibration:** Precision calibration and inspection of aviation maintenance tools in our state-of-the-art facility, utilizing custom-tailored fixtures and precision instruments.
- **Competency Assessment & Training:** Industry-specific training and assessment for personnel in the lifting and hoisting field.
- **Advanced Calibration Services:** A full-spectrum calibration laboratory capable of handling Mass/Balance, Weighing Bridges, Pressure, Temperature, Electrical, Dimensional, Force, Volume, Flow, and other specialized instruments.

Our technical team are among the most qualified and experienced in the field. Carl Stahl has developed an enviable reputation in all major industries and is well placed and heavily supported both nationally and internationally.



## ➤ REGULATORY COMPLIANCE

All our services are in accordance with the Federal Laws, local Regulation, International standards, Directives of code and practices as follows, but not limited to:

| LOCAL REGULATIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | INTERNATIONAL REGULATIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Emirates International Accreditation Center (EIAC)</li> <li>TRAKHEES – JAFZA &amp; MARINE</li> <li>Public Health and Safety Department (PHSD)</li> <li>Dubai &amp; Abu Dhabi Municipality</li> <li>Dubai Civil Defense</li> <li>Dubai South</li> <li>Ministry of Industry and Advanced Technology (MoIAT)</li> <li>Emirates National Accreditation System (ENAS)</li> <li>ADPHC – ADOSH SF</li> <li>Abu Dhabi Quality and Conformity Council (ADQCC)</li> <li>Abu Dhabi Center for Technical and Vocational Education and Training (ACTVET)</li> <li>Oil and Gas Field companies requirements</li> <li>Ras Al Khaimah Economic Zone (RAKEZ)</li> </ul> | <ul style="list-style-type: none"> <li>British Standards Institution (BSI)</li> <li>German Institutes for Standardization (DIN)</li> <li>American Welding Society (AWS)</li> <li>American Society for Testing and Materials (ASTM)</li> <li>American National Standards Institute (ANSI)</li> <li>American Society of Mechanical Engineers (ASME)</li> <li>American Petroleum Institute (API)</li> <li>Det Norske Veritas (DNV)</li> <li>American Bureau of Shipping (ABS)</li> <li>Lifting Operations and Lifting Equipment Regulations (LOLER)</li> <li>Provision and Use of Work Equipment Regulations (PUWER)</li> <li>Machinery Directive 42/2006/EC</li> <li>Lifting Equipment Engineers Association (LEEAA)</li> </ul> |

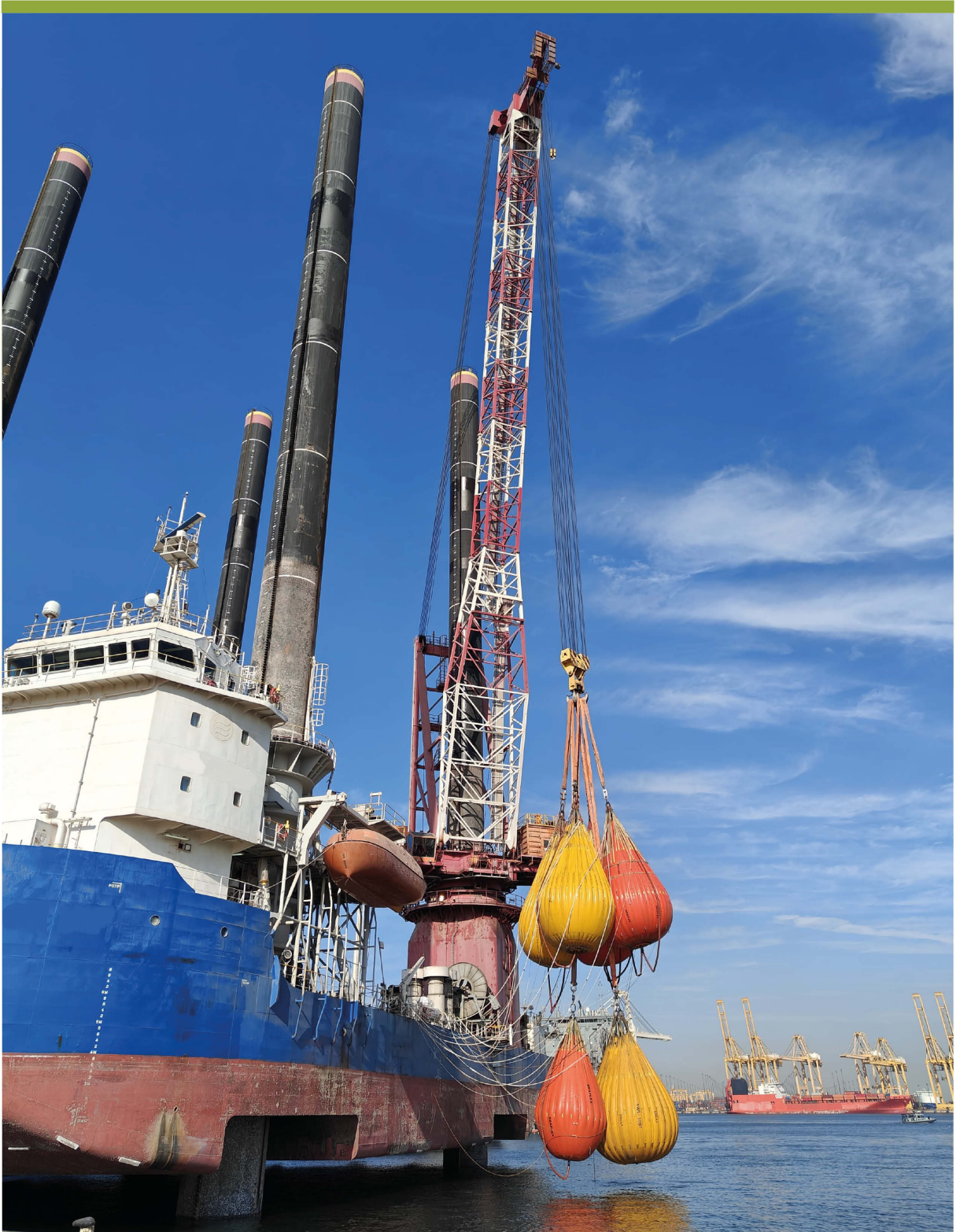
## ➤ SAFETY

Carl Stahl consistently strives to enhance safety. Well trained safe employees are our assets. We use and provide appropriate technology & solutions to make people and environment safe.

Our work places are equipped with most modern equipments and PPE to perform activities safety on site. Carl Stahl serves safety services and solutions to the client who cares their people & environment.

## ➤ COST BENEFIT

Our International acceptability and recognition would be the prime reason to choose Carl Stahl Services. We are offering unique value added services to our clients apart from statutory and regular requirements. Carl Stahl family is ready to serve as per the customer's convenience regardless of geographical limits and around the clock.



## LIFTING EQUIPMENT

Mobile Crane  
EOT Crane  
Tower Crane  
Portal Crane  
Deck Crane / Pedestal Crane  
Offshore Crane  
Harbor Crane  
Lorry Loader

## LIGHT CRANE SYSTEM

Slewing Jib Crane  
Monorail / Runway Beam  
A – Frame  
Electrical Chain Hoist  
Electric Wire Rope Winch  
Pneumatic Winch Hoist  
Davits

## PERSONAL CONVEYING UNITS

Elevator / Passenger Lifts  
Escalator  
MEWP (Mobile Elevating Work Platform)  
Suspended Access Platform  
Construction / Passenger Hoist  
Building Maintenance Unit (BMU)  
Man Basket

## AVIATION TOOLS

Various Lifting Slings  
Pedestals  
Supports  
Engine Stands  
Tripods  
Axel Jacks  
Fixtures  
Lifting Beams  
Boot Strap

## PERSONAL PROTECTIVE EQUIPMENT & ROPE ACCESS

Harness  
Lanyard  
Connector  
Energy Absorber  
Fall Arrestor  
Helmet  
Rope Adjustment Device  
Pulley  
Sling for mountaineering  
Kernmantle Ropes  
Ascender/ Descender

## CARGO CARRYING EQUIPMENT

Offshore Containers  
Material Baskets  
Skids  
Racks  
Garbage / Muck Skips  
Buckets and Tankers

## HANDLING EQUIPMENTS

Forklift Truck  
Telescopic Handler  
Pallet Stacker  
Container Handler  
Low Level Order Picker (LLOP)  
Fork Attachments

## NON-DESTRUCTIVE TESTING (NDT)

Magnetic Particle Examination technique  
Dye Penetrant Examination technique  
Eddy Current Examination technique  
Ultrasonic Thickness Gauging  
Visual Examination technique  
Ultrasonic Leak Detection Test

## LIFTING ACCESSORIES/GEARS

Steel Wire Rope Slings  
Endless Grommet Slings  
Chain Slings  
Webbing Slings  
Shackles  
Master links & Hooks  
Eye bolts  
Chain Blocks / Lever Hoists  
Spreader / Lifting Beams

## ANCHOR DEVICES

Vertical Life Line Anchor systems  
Horizontal Life Line Anchor systems  
Anchor Bolt  
Structural Anchors  
Eye Anchors  
Wire Anchor Sling  
Beam Slider  
Dead weight Anchor devices  
Rigid rail Anchor devices







## RIGGER LEVEL 1 (CSTC-001) – COURSE OUTLINE

- Introduction
- Site safety measures and PPE
- Centre of Gravity
- Lifting, Controlling
- Hazard identification & Prevention
- Slings Accessories
- Pre-use examination & safe use
- Weight Estimating
- Communication
- Choosing the right sling

## RIGGER LEVEL 2 (CSTC-002) – COURSE OUTLINE

- Introduction
- Site safety measures and PPE
- Types of slings & choices
- Forces on slings
- Centre of Gravity
- Lifting, Controlling
- Hazard identification & Prevention
- Slings Accessories
- Statutory Requirements
- Pre-use examination & safe use
- Planning the lift
- Weight Estimation
- Communication
- Choosing the right sling

## FORKLIFT OPERATOR (CSTC-003) – COURSE OUTLINE

- Introduction
- Personal Protective Equipment's
- What is a Forklift
- Types of Forklifts
- Major Parts
- Different Forklift Attachments
- Types Of Inspection
- Maintenance
- Stacking Materials
- Machine Stability & Safe Handling
- Offloading trucks
- Handling irregular Shapes
- Safety of site personnel
- General use for operation
- Safety Precautions
- Weight Estimation
- Summary

## EARTH MOVING EQUIPMENT (CSTC-004) – COURSE OUTLINE

- Introduction
- Training Objective
- Personal Protective Equipments
- What is an earth moving equipment
- Types of Earth moving equipments
- Pre Use inspection
- Common Hazards
- General rules of safety of moving plants
- Site traffic control
- Do's & don'ts
- Summary

## EOT CRANE OPERATOR (CSTC-005) – COURSE OUTLINE

- Introduction
- Personal Protective Equipment's
- Types of overhead/Gantry Cranes
- Crane parts & Terminology
- Hazard & Precautions
- Operating conditions
- Communication & Eligibility
- Pre Use inspection
- Slings & Lifting Practices
- Lifting Gears
- Weight Estimation
- Summary

## MOBILE ELEVATING WORK PLATFORM (MEWP) OPERATOR (CSTC-006) – COURSE OUTLINE

- Introduction
- Training Objective
- Personal Protective Equipment's
- Operator Qualification
- What is an Ariel Lift
- Types of MEWP
- Parts of MEWP
- Types Of Inspection
- Pre operational Inspection
- Operational Inspection
- Load Test
- Proof Load Test
- Machine Stability & Safe Handling
- Placards & Decals
- Functions & Symbols
- Safety rules
- Safety Precautions
- Grade & Side Slopes
- Summary



# TRAINING SERVICES



## MOBILE/CRAWLER/TOWER/PEDESTAL CRANE OPERATOR (CSTC-007) – COURSE OUTLINE

Introduction  
 Training Objective  
 Personal Protective Equipment's  
 Types of Mobile Cranes  
 Parts  
 Fly Jibs & fixed jibs  
 Crawler Cranes  
 Parts  
 Load Chart  
 Tower Cranes  
 Types of tower Crane  
 Parts  
 Utility  
 Advantages & disadvantages  
 Pedestal Cranes  
 Types of pedestal Cranes  
 Parts  
 Load Charts  
 Terminologies  
 Planning Before Set Up  
 Knowing the weight of load  
 Load Limiting factors  
 Communication & Eligibility  
 Pre Use inspection  
 Slings & Lifting Practices  
 Centre of gravity of load  
 Lifting Gears  
 Weight Estimation  
 Good lifting Practices  
 Major Causes of crane accidents  
 Crane Hazards  
 Summary

## WIRE ROPE EXAMINER (CSTC-014)

Introduction  
 Responsibilities & Primary functions  
 Standards & Publications  
 Wire rope manufacturing  
 Wire rope design & terminology  
 Strength versus flexibility  
 Wire rope deterioration  
 Wire rope retirement criteria  
 Wire rope inspection  
 Inspection of slings  
 Monitoring  
 Handling & Storage  
 Summary

## WORK AT HEIGHT (CSTC-009) – COURSE OUTLINE

Introduction  
 What is working at height  
 Hazards associated with working at Heights  
 Control of Hazards  
 Steps for safe working at Height  
 Safe working on ladders, scaffolds, work platforms and roofs  
 Fall Prevention  
 Techniques and equipment to be used  
 Permit to Work  
 Emergency Rescue Plan  
 Local Regulation  
 Summary

## LIFTING SUPERVISOR (CSTC-002A)

Introduction  
 Site safety measures and PPE  
 Types of slings & choices  
 Forces on slings  
 Centre of Gravity  
 Lifting, Controlling  
 Hazard identification & Prevention  
 Slings Accessories  
 Statutory Requirements  
 Pre-use examination & safe use  
 Planning the lift



## EIAC ACCREDITED COMPETENCY ASSESSMENTS

Mobile Crane Operator  
Tower Crane Operator  
Overhead Crane Operator  
Forklift Operator  
Rigger Level-1  
Rigger Level-2  
Singalman / Banksman

## NON-ACCREDITED COMPETENCY ASSESSMENTS

Various Power Tools Operator  
Piling Rig Operator  
Safe Welding Operator  
Earth Moving Equipment Operator  
MEWP Operator  
Basic Scaffolder  
Construction Hoist Operator  
Cradle Operator  
Lifting Supervisor  
Strand Jack Operator  
Self Propelled Modular Transporter (SMPT) Operator  
Blasting Machine Operator







## PRESSURE (COVERS -1 bar to 2800 bar)

Analogue or Bourdon Tube pressure/Vacuum Gauge  
 Digital Pressure/ Vacuum Gauge  
 Pressure/ Vacuum Switch  
 Pressure/ Vacuum Transmitter  
 Pressure Calibrator  
 Pressure Transducer  
 Manometer  
 Pressure Chart Recorder  
 Compound Gauge  
 Diff. Pressure Gauge  
 Diff Pressure Transmitter  
 Pressure Trimming  
 Diff Pressure Switch  
 Level Switch  
 Level Transmitter  
 Pirani Gauge  
 Tyre Gauge  
 All Types of Pneumatic and Hydraulic Pressure Instruments

## MASS/BALANCE (BALANCE UP TO 60 TON AND MASS UP TO 5 TON)

Digital Weighing Balance  
 Analogue Weighing Balance  
 Batch Weighing Scale  
 Hopper Weighing Scale  
 Weighing Bridge  
 F2 Class Weights  
 M1, M2, M3 Class Weights  
 Platform Scale  
 Weight Adjustment

## TEMPERATURE

Glass Thermometer (-20 to 200°C)  
 Digital Thermometer(-20 to 650°C)  
 Probe Thermometer(-20 to 650°C)  
 Temperature Transmitter/Switch  
 RTD Sensor(-20 to 650°C)  
 Thermocouple Sensor (-20 to 650°C)  
 IR Thermometer (-20 to 650°C)  
 Thermal Imager (-20 to 650°C)  
 Chiller / Freezer (-35 to 50°C)  
 Incubator (-35 to 50°C)  
 Vehicle Chiller(-35 to 50°C)  
 Refrigerator(-35 to 50°C)  
 Dry Block(-35 to 1200°C)  
 Liquid Bath(-35 to 200°C)  
 Autoclave(Amb. to 123°C)  
 Environment Chamber(-35 to 100°C)  
 Walk-in Chamber / Chiller / Freezer(-35 to 400°C)  
 Single / Multipoint Temp. / Humidity Room Mapping  
 Temperature Gauge (-20 to 650°C)  
 Temp. Chart Recorder (-20 to 650°C)  
 Temp Controller/ Indicator (RTD /Thermocouple)(-20 to 650°C)  
 Temp. / Humidity Data Logger (-20 to 650°C& 10% to 90 %RH)  
 Humidity Meter (10% to 90 %RH)  
 Thermo Hygrometer (-20 to 650°C& 10% to 90 %Rh)  
 Dew Point Meter(0 to 100°C)  
 Pyrometer (-20 to 650°C)  
 Dish Washer(Amb. to 90°C)  
 Ice Machine(Up to -35°C)  
 Oven / Furnace (Amb. to 1200°C)



## ELECTRICAL

Multi Meter  
Clamp Meter  
Volt Meter  
Ampere Meter  
Resistance Meter  
Capacitance Meter  
Power Measuring Instrument  
Energy Meters Single Phase or Three Phase  
Resistance Box  
Signal Generator  
Oscilloscope / Scope Meter  
Power Supply  
Megger  
Earth Resistance Meter  
Insulation Tester  
Battery Tester  
Welding Machine  
Multifunction Calibrators  
Temperature Simulation  
High Voltage Tester  
RCD Tester  
Loop Tester  
Timer / Stop Watch  
Tachometer

## FORCE AND TORQUE

Torque Wrench (Up to 2000 Nm)  
Torque Screw Driver (Up to 2000 Nm)  
Torque Multiplier (Up to 2000 Nm)  
Torque Transducer (Up to 2000 Nm)  
Load Cell (Up to 100 ton)  
Push / Pull Gauge (Up to 100 ton)  
Universal Testing Machine (Up to 100 ton)  
Compression Testing Machine (Up to 100 ton)  
Force Gauge (Up to 1000 KN)  
Rubber / Shore Hardness Tester

## FLOW

Air flow meter  
Gas Flow Meter  
Rota Meter  
Inclinometer  
Air Velocity  
Hepa Filters  
Water Flow Meter  
Ultrasonic Flow Meter

## VOLUME

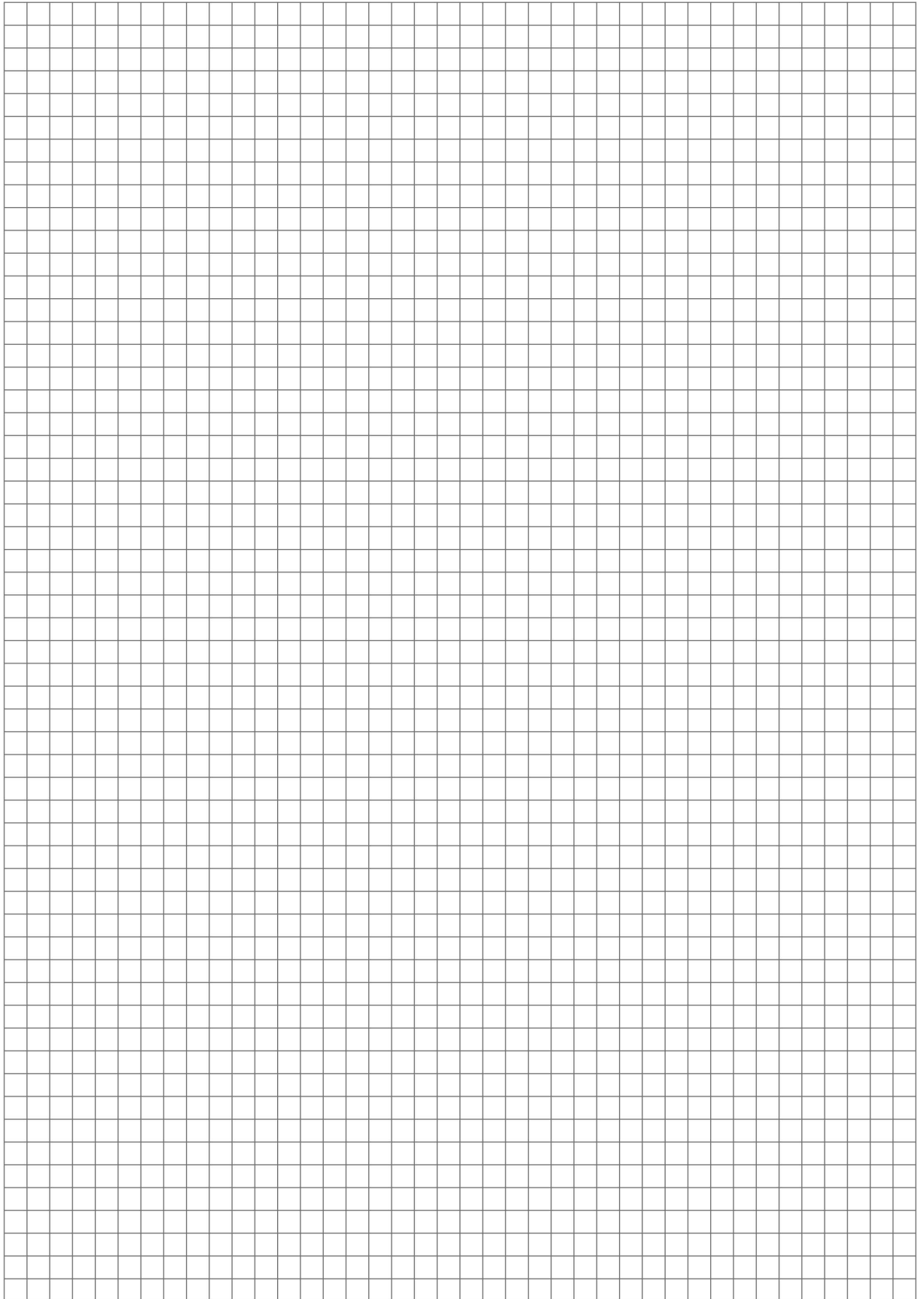
Pipette  
Burette  
Micropipette  
Glass Beaker  
Measuring Flask  
Visi Gauge

## DIMENSIONAL

Digital / Analogue / Dial Calipers (Up to 600 mm)  
Micrometer (Up to 100 mm)  
Dial Gauge (up to 25 mm)  
Lever Gauge (up to 25 mm)  
Dial Test Indicator (Up to 25)  
Height Gauge (up to 600 mm)  
Depth Gauge (up to 100 mm)  
Bore Gauge (up to 100 mm)  
Steel / Glass Scale (up to 600 mm)  
Measuring Tape (up to 100 Mtr)  
Laser Distance Meter  
Angle Gauge (0° to 180°)  
Feeler Gauge (up to 5 mm)  
Bevel Protector (0° to 180°)  
Thickness Gauge (up to 25 mm)  
Coating Thickness Gauge (up to 500 µm)  
Profile Projector



This image shows a full page of blank graph paper. The grid consists of small, equal-sized squares formed by thin, light gray lines. There are no margins, text, or other markings on the page.



# LOAD CHART

## Wire rope slings acc. to BS EN 13414-1

| Rope-Ø<br>mm | WLL in kg |        |              | Inclination angle β |           |
|--------------|-----------|--------|--------------|---------------------|-----------|
|              | 1-leg     | 2-leg  | 3- and 4-leg | 0° - 45°            | 45° - 60° |
| 6            | 0.47      | 0.96   | 0.87         | 0.98                | 0.70      |
| 8            | 1.16      | 2.33   | 2.16         | 2.33                | 1.75      |
| 10           | 1.84      | 3.68   | 3.24         | 3.68                | 2.72      |
| 11           | 1.90      | 3.80   | 3.36         | 3.80                | 2.85      |
| 12           | 2.10      | 4.20   | 3.78         | 4.20                | 3.15      |
| 13           | 2.17      | 4.35   | 3.96         | 4.35                | 3.27      |
| 14           | 2.52      | 5.04   | 4.52         | 5.04                | 3.77      |
| 16           | 3.29      | 6.58   | 5.92         | 6.58                | 4.93      |
| 18           | 4.15      | 8.30   | 7.47         | 8.30                | 6.22      |
| 19           | 4.63      | 9.26   | 8.33         | 9.26                | 6.94      |
| 20           | 5.12      | 10.24  | 9.22         | 10.24               | 7.68      |
| 22           | 6.21      | 12.42  | 11.16        | 12.42               | 9.31      |
| 24           | 7.38      | 14.76  | 13.51        | 14.76               | 11.07     |
| 26           | 8.67      | 17.34  | 15.81        | 17.34               | 13.00     |
| 28           | 10.05     | 20.10  | 18.21        | 20.10               | 15.07     |
| 30           | 11.53     | 23.06  | 20.82        | 23.06               | 17.30     |
| 32           | 13.13     | 26.26  | 23.68        | 26.26               | 19.69     |
| 34           | 14.82     | 29.64  | 26.80        | 29.64               | 22.33     |
| 36           | 16.62     | 33.24  | 29.96        | 33.24               | 25.22     |
| 38           | 18.55     | 37.10  | 33.36        | 37.10               | 28.36     |
| 40           | 20.57     | 41.14  | 36.62        | 41.14               | 30.85     |
| 42           | 22.59     | 45.38  | 40.04        | 45.38               | 33.88     |
| 44           | 24.80     | 49.82  | 43.62        | 49.82               | 37.19     |
| 48           | 31.41     | 62.82  | 55.96        | 62.82               | 47.11     |
| 52           | 35.45     | 70.90  | 63.44        | 70.90               | 53.17     |
| 56           | 42.89     | 85.78  | 77.44        | 85.78               | 64.33     |
| 60           | 46.10     | 92.20  | 83.81        | 92.20               | 69.15     |
| 64           | 54.18     | 108.36 | 97.31        | 108.36              | 81.27     |
| 71           | 64.87     | 129.74 | 116.23       | 129.74              | 97.31     |
| 77           | 76.59     | 153.18 | 136.84       | 153.18              | 114.88    |

Load capacity is reduced by 20% in case of choker hitch.

## Cable laid wire rope sling as endless grommet, acc. to BS EN 13414-3

| Nominal<br>rope diameter | 0°     |             | choke hitch |
|--------------------------|--------|-------------|-------------|
|                          | direct | choke hitch |             |
| 24                       | 9,00 t | 7,00 t      |             |
| 27                       | 11,5 t | 9,00 t      |             |
| 30                       | 14,0 t | 11,0 t      |             |
| 33                       | 17,0 t | 13,5 t      |             |
| 36                       | 20,0 t | 16,0 t      |             |
| 39                       | 23,5 t | 19,0 t      |             |
| 42                       | 27,0 t | 21,5 t      |             |
| 48                       | 36,5 t | 28,5 t      |             |
| 54                       | 45,0 t | 36,0 t      |             |
| 60                       | 55,5 t | 44,5 t      |             |
| 66                       | 69,0 t | 55,0 t      |             |
| 72                       | 84,0 t | 68,0 t      |             |
| 78                       | 102 t  | 81,0 t      |             |
| 84                       | 121 t  | 97,0 t      |             |
| 90                       | 144 t  | 115 t       |             |
| 96                       | 168 t  | 135 t       |             |
| 102                      | 196 t  | 157 t       |             |
| 108                      | 227 t  | 182 t       |             |
| 114                      | 262 t  | 210 t       |             |

Rope Ø 24-60 mm:  
Safety factor 5  
Rope Ø 66-132 mm:  
Safety factor 4,9-3  
Rope Ø up to 470 mm  
available on request.

## Polyester round slings acc. to BS EN 1492-2

| Load capacity<br>in kg | Single<br>direct | Choker<br>hitch | WLL in kg |        |        | Inclination angle β<br>over 75°<br>to 45°<br>to 60° |
|------------------------|------------------|-----------------|-----------|--------|--------|-----------------------------------------------------|
|                        |                  |                 | up to 75° | to 45° | to 60° |                                                     |
| 500                    | 500              | 400             | 1 000     | 700    | 500    |                                                     |
| 1000                   | 1 000            | 800             | 2 000     | 1 400  | 1 000  |                                                     |
| 2000                   | 2 000            | 1 600           | 4 000     | 2 800  | 2 000  |                                                     |
| 3000                   | 3 000            | 2 400           | 6 000     | 4 200  | 3 000  |                                                     |
| 4000                   | 4 000            | 3 200           | 8 000     | 5 600  | 4 000  |                                                     |
| 5000                   | 5 000            | 4 000           | 10 000    | 7 000  | 5 000  |                                                     |
| 6000                   | 6 000            | 4 800           | 12 000    | 8 400  | 6 000  |                                                     |
| 8000                   | 8 000            | 6 400           | 16 000    | 11 200 | 8 000  |                                                     |
| 10000                  | 10 000           | 8 000           | 20 000    | 14 000 | 10 000 |                                                     |
| 15000                  | 15 000           | 12 000          | 30 000    | 21 000 | 15 000 |                                                     |
| 20000                  | 20 000           | 16 000          | 40 000    | 28 000 | 20 000 |                                                     |
| 30000                  | 30 000           | 24 000          | 60 000    | 42 000 | 30 000 |                                                     |

Load capacities up to 100 ton are available.

## Polyester webbing slings acc. to BS EN 1492-1

| Load capacity<br>in kg | Single<br>direct | Choker<br>hitch | WLL in kg |        |        | Inclination angle β<br>direct up<br>to 45°<br>> 45°-60° |
|------------------------|------------------|-----------------|-----------|--------|--------|---------------------------------------------------------|
|                        |                  |                 | up to 75° | to 45° | to 60° |                                                         |
| 1 000                  | 1 000            | 800             | 2 000     | 1 400  | 1 000  |                                                         |
| 2 000                  | 2 000            | 1 600           | 4 000     | 2 800  | 2 000  |                                                         |
| 3 000                  | 3 000            | 2 400           | 6 000     | 4 200  | 3 000  |                                                         |
| 4 000                  | 4 000            | 3 200           | 8 000     | 5 600  | 4 000  |                                                         |
| 5 000                  | 5 000            | 4 000           | 10 000    | 7 000  | 5 000  |                                                         |
| 6 000                  | 6 000            | 4 800           | 12 000    | 8 400  | 6 000  |                                                         |
| 8 000                  | 8 000            | 6 400           | 16 000    | 11 200 | 8 000  |                                                         |
| 10 000                 | 10 000           | 8 000           | 20 000    | 14 000 | 10 000 |                                                         |

Attention!  
In case of asymmetric load the capacities for inclination angle  
45° to 60° apply.

## Chain slings acc. to BS EN 818. Grade 80

| Inclination angle β | Load factor | Chain ø   | Grade | WLL in kg |        |        | Inclination angle β |
|---------------------|-------------|-----------|-------|-----------|--------|--------|---------------------|
|                     |             |           |       | up to 75° | to 45° | to 60° |                     |
| 0                   | 1           | 1-Leg     | 1     | 1500      | 2100   | 1500   | 0-45°               |
| 1                   | 1,4         | 2-Leg     | 2     | 2100      | 2800   | 2100   | 45-60°              |
| 2,1                 | 1,5         | 3 & 4-Leg | 3     | 2800      | 3150   | 2800   | 0-45°               |
| 3 & 4-Leg           | 1,5         | 3 & 4-Leg | 4     | 3150      | 4200   | 3150   | 45-60°              |
| 7                   | 80          | 1500      | 2100  | 1500      | 3100   | 2250   |                     |
| 8                   | 80          | 2000      | 2800  | 2000      | 4200   | 3000   |                     |
| 10                  | 80          | 3150      | 4400  | 3150      | 6700   | 4725   |                     |
| 13                  | 80          | 5300      | 7420  | 5300      | 11200  | 7950   |                     |
| 16                  | 80          | 8000      | 11200 | 8000      | 16800  | 12000  |                     |
| 20                  | 80          | 12500     | 17500 | 12500     | 26250  | 18750  |                     |
| 22                  | 80          | 15000     | 21000 | 15000     | 31500  | 22500  |                     |
| 26                  | 80          | 21200     | 29880 | 21200     | 44520  | 31800  |                     |
| 32                  | 80          | 31500     | 44100 | 31500     | 66150  | 47250  |                     |

## Chain slings. Grade 100

| Inclination angle β | Load factor | Chain ø   | Grade | WLL in kg |        |        | Inclination angle β |
|---------------------|-------------|-----------|-------|-----------|--------|--------|---------------------|
|                     |             |           |       | up to 75° | to 45° | to 60° |                     |
| 0                   | 1           | 1-Leg     | 1     | 1500      | 2100   | 1500   | 0-45°               |
| 1                   | 1,4         | 2-Leg     | 2     | 2100      | 2800   | 2100   | 45-60°              |
| 2,1                 | 1,5         | 3 & 4-Leg | 3     | 2800      | 3150   | 2800   | 0-45°               |
| 3 & 4-Leg           | 1,5         | 3 & 4-Leg | 4     | 3150      | 4200   | 3150   | 45-60°              |
| 6                   | 100         | 1,5       | 2,1   | 1,5       | 3,15   | 2,25   |                     |
| 8                   | 100         | 2,5       | 3,5   | 2,5       | 5,25   | 3,75   |                     |
| 10                  | 100         | 4,0       | 5,6   | 4,0       | 8,4    | 6,0    |                     |
| 13                  | 100         | 6,7       | 9,38  | 6,7       | 14,0   | 10,0   |                     |
| 16                  | 100         | 10,0      | 14,0  | 10,0      | 21,0   | 15,0   |                     |
| 20                  | 100         | 16,0      | 22,4  | 16,0      | 33,6   | 24,0   |                     |
| 22                  | 100         | 20,0      | 28,0  | 20,0      | 42,0   | 30,0   |                     |
| 28                  | 100         | 31,5      | 45,0  | 31,5      | 67,0   | 47,25  |                     |

\* Only 2 set x 2 leg type available

## Chain slings. Grade 120

| Inclination angle β | Load factor | Chain ø   | Grade | WLL in kg |        |        | Inclination angle β |
|---------------------|-------------|-----------|-------|-----------|--------|--------|---------------------|
|                     |             |           |       | up to 75° | to 45° | to 60° |                     |
| 0                   | 1           | 1-Leg     | 1     | 1500      | 2100   | 1500   | 0-45°               |
| 1                   | 1,4         | 2-Leg     | 2     | 2100      | 2800   | 2100   | 45-60°              |
| 2,1                 | 1,5         | 3 & 4-Leg | 3     | 2800      | 3150   | 2800   | 0-45°               |
| 3 & 4-Leg           | 1,5         | 3 & 4-Leg | 4     | 3150      | 4200   | 3150   | 45-60°              |
| 6                   | 120         | 1,8       | 2,5   | 1,8       | 3,75   | 2,7    |                     |
| 8                   | 120         | 3,0       | 4,2   | 3,0       | 6,3    | 4,5    |                     |
| 10                  | 120         | 5,0       | 7,0   | 5,0       | 10,5   | 7,5    |                     |
| 13                  | 120         | 8,0       | 11,2  | 8,0       | 16,8   | 12,0   |                     |
| 16                  | 120         | 12,5      | 17,5  | 12,5      | 26,25  | 18,75  |                     |

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