

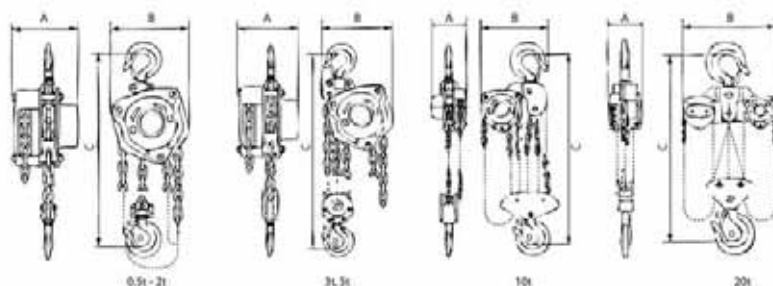
# MANUAL CHAIN HOIST



## KCB-1 TYPE

| Model                                |    | KCB005 | KCB010 | KCB015 | KCB020 | KCB030 | KCB050  | KCB100  | KCB200  |
|--------------------------------------|----|--------|--------|--------|--------|--------|---------|---------|---------|
| Capacity                             | t  | 0.5    | 1      | 1.5    | 2      | 3      | 5       | 10      | 20      |
| Standard Lift                        | m  | 2.5    | 2.5    | 2.5    | 3      | 3      | 3       | 3       | 3       |
| Proof Load                           | kN | 7.5    | 15     | 22.5   | 30     | 45     | 75      | 150     | 250     |
| Effort Required to Lift Rated Load   | N  | 231    | 309    | 320    | 360    | 340    | 414     | 414     | 414 x 2 |
| No. of Falls of Load Chain           |    | 1      | 1      | 1      | 1      | 2      | 2       | 4       | 8       |
| Load Chain                           | mm | 6 x 18 | 6 x 18 | 8 x 24 | 8 x 24 | 8 x 24 | 10 x 30 | 10 x 30 | 10 x 30 |
| Dimensions(mm)                       | A  | 131    | 140    | 161    | 161    | 161    | 186     | 207     | 215     |
|                                      | B  | 127    | 158    | 174    | 187    | 199    | 253     | 398     | 650     |
|                                      | C  | 270    | 317    | 399    | 414    | 465    | 636     | 798     | 890     |
|                                      | D  | 35     | 35.5   | 45     | 42.5   | 50     | 64      | 85      | 110     |
|                                      | K  | 30     | 28     | 36     | 33.5   | 40     | 50      | 64      | 85      |
| Net Weight                           | kg | 10     | 12     | 19     | 20     | 27     | 45.5    | 83      | 193     |
| Extra Weight per meter of Extra Lift | kg | 1.7    | 1.7    | 2.3    | 2.3    | 3.7    | 5.6     | 9.7     | 19.4    |

**Remark:** Capacities up to 50 ton are available.  
Hoists with the lift in other length are also available.



## Characteristics

- Capacity ranges from 0.5t to 20t.
- Automatic double pawl braking system.
- Double cover protection.
- Light weight robust construction.
- Low effort to lift maximum load.
- Extra thick asbestos free friction discs.
- Fully forged hooks are fitted with safety latches as standard.
- ISO high grade alloy load chain.
- Zinc plated hand chain as standard.
- Sealed bearing.
- Unique hand wheel cover for guiding hand chain at any angle.
- Each hoist is proof tested at 1.5 times of WLL up to 10t. 1.25 times of WLL 20t.
- Complies with EC Council Directive 98/37/EC Machinery. ASME B30, AS 1418.2.



## CAUTIONS

- Do not exceed Working Load Limit.
- Keep the load chain lubricated at all times.
- Before operating, inspect the load chain for damages.
- Before operating, inspect the top and bottom hooks for signs of deformations and check that the safety latches are attached.



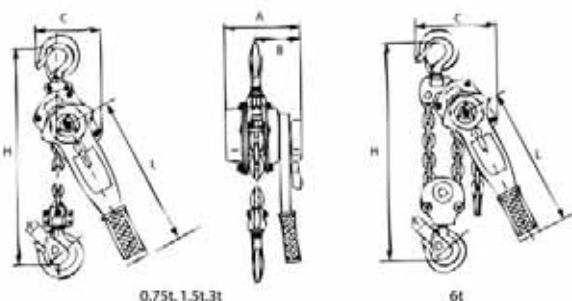
# MANUAL LEVER HOIST

## KLB-1 TYPE



| Model                                |    | KLB075 | KLB150 | KLB300  | KLB600  | KLB900  |
|--------------------------------------|----|--------|--------|---------|---------|---------|
| Capacity                             | t  | 0.75   | 1.5    | 3       | 6       | 9       |
| Standard Lift                        | m  | 1.5    | 1.5    | 1.5     | 1.5     | 1.5     |
| Proof Load                           | kN | 11     | 22.1   | 44.1    | 88.2    | 132.3   |
| Effort Required to Lift Rated Load   | N  | 140    | 220    | 320     | 340     | 360     |
| No. of Falls of Load Chain           |    | 1      | 1      | 1       | 2       | 3       |
| Load Chain                           | mm | 6 x 18 | 8 x 24 | 10 x 30 | 10 x 30 | 10 x 30 |
| Dimensions(mm)                       | A  | 145    | 175    | 203     | 203     | 203     |
|                                      | B  | 86     | 100    | 118     | 118     | 118     |
|                                      | C  | 122    | 130    | 150     | 205     | 316     |
|                                      | D  | 37     | 45     | 50      | 64      | 85      |
|                                      | H  | 320    | 380    | 480     | 620     | 700     |
|                                      | L  | 280    | 410    | 410     | 410     | 410     |
|                                      | K  | 30     | 36     | 40      | 50      | 64      |
| Net Weight                           | kg | 7.5    | 11.5   | 21      | 31.5    | 47      |
| Extra Weight per meter of Extra Lift | kg | 0.8    | 1.4    | 2.2     | 4.4     | 6.6     |

**Remark:** Hoists with the lift in other length are also available



## Characteristics

- KEN lever hoist is a universal, manual hoist for lifting, tensioning and lashing in any direction.
- The ratchet lever hoist features compact design and robust, deep drawn, stamped steel construction.
- High quality materials ensure light weight without infringing reliability.
- Low on weight, small mounting sizes and small lever force at full load.
- Asbestos free brake, holding load at any desired height.
- Top & Bottom hooks are fitted with safety latches as standard.
- The load chain can be pulled freely and easily through the hoist in both directions to attach the load or to tension the chain. For safety reason, free chains can not be done when the hoist is under load.
- Short hand lever with rubber grip.
- Hand lever operates with little effort due to optimal gear ratio.
- Drop forged steel suspension & load hooks are heat treated and fracture resistant. In case of dangerous overloading, the hook does not fracture but will slowly yield.
- The hoist is fitted with high grade alloy load chain.
- Complies with EC Council Directive 98/37/EC Machinery, ASME B30, AS1418.2.



## CAUTIONS

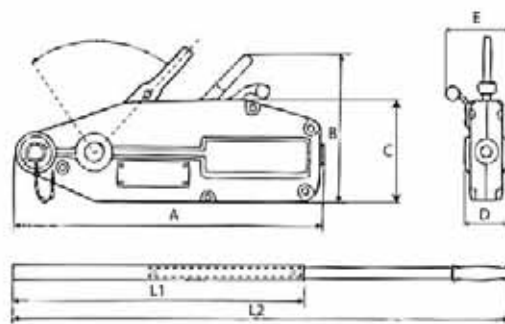
- Do not exceed Working Load Limit.
- Keep the load chain lubricated at all times.
- Before operating, inspect the load chain for damages.
- Before operating, inspect the top and bottom hooks for signs of deformations and check that the safety latches are attached.



# WIRE ROPE PULLING WINCH



| Model                        |    | K008 | K016 | K032 |
|------------------------------|----|------|------|------|
| Rated Lifting Capacity       | kg | 800  | 1600 | 3200 |
| Rated Pulling Capacity       | kg | 1250 | 2500 | 5000 |
| Rope Advance per Full Stroke | mm | 60   | 60   | 40   |
| Lever Pull At Win            | kg | 25   | 30   | 50   |
| Rope Diameter                | mm | 8.3  | 11   | 16   |
| Standard Length of Wire Rope | m  | 20   | 20   | 20   |
| Net Weight Without Cable     | kg | 7    | 14   | 23   |
| Max. Overall Size (mm)       | A  | 426  | 545  | 660  |
|                              | B  | 235  | 280  | 325  |
|                              | C  | 168  | 190  | 230  |
|                              | D  | 60   | 72   | 91   |
|                              | E  | 64   | 97   | 116  |
| L1                           |    | --   | 80   | 80   |
| L2                           |    | 80   | 120  | 120  |



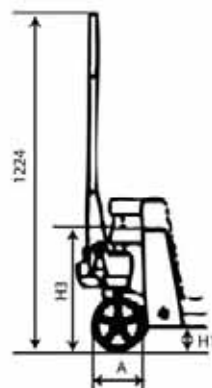
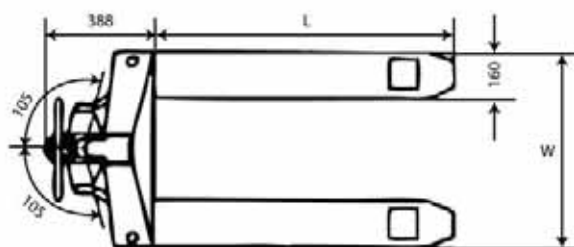
## Characteristics

- KEN wire rope pulling winch is an extremely versatile and portable unit for pulling, lifting, lowering and securing loads.
- Available in four sizes with capacities of 800kg, 1600kg, 3200kg and 5400kg.
- All hoists are supplied complete with 20 meter wire rope and an extendable operating lever.
- Wire rope is tapered on one end and fitted with a hook and safety catch at the other end.
- The hoist has low maintenance requirements and is easy to service.
- Overload protection ensures high personal safety when in operation.
- Specially built-in shear pins can be replaced without removing the load.

# HYDRAULIC PALLET TRUCK



| Capacity             | kg     | 2500  | 3500  |
|----------------------|--------|-------|-------|
| Lowered Forkheight   | H1(mm) | 75    | 75    |
| Total lift height    | H2(mm) | 190   | 190   |
| Height of Handle     | H3(mm) | 421.5 | 421.5 |
| Fork Length          | L(mm)  | 1100  | 1100  |
| Width over the forks | W(mm)  | 550   | 550   |
| Fork Wheel           | B(mm)  | 74    | 74    |
| Steering Wheel       | A(mm)  | 180   | 180   |
| Truck Weight         | kg     | 68    | 78    |



## Characteristics

- Fully hydraulic system. Bullet connection between steering shaft and pump piston. Convenient to replace the rear wheel
- Easy to manoeuvre with 210 degrees turning radius
- Grease fitting at all pivotal points to ensure trucks long life and easy control
- Special lowering valve to control the rate of descent and over load by-pass valve to make the trucks durable
- Number of pump strokes : 10 Lift height per stroke : 12mm
- Option : nylon wheel, polyurethane (PU) wheel, rubber wheel single fork roller or tandem roller



# LIFTING CLAMP



## VERTICAL LIFTING CLAMP

| Model            |    | LC010 | LC020 | LC030 | LC050 |
|------------------|----|-------|-------|-------|-------|
| Lifting Capacity | t  | 1     | 2     | 3     | 5     |
| Test Load        | kN | 19.6  | 39.2  | 58.8  | 98    |
| Jaw Opening      | mm | 0-22  | 0-30  | 0-35  | 0-50  |
| Dimensions(mm)   | A  | 220   | 250   | 296   | 350   |
|                  | B  | 52    | 60    | 68    | 78    |
|                  | C  | 155   | 155   | 176   | 218   |
|                  | D  | Φ50   | Φ60   | Φ60   | Φ65   |
|                  | H  | 0-24  | 0-35  | 0-40  | 0-50  |
| Net Weight       | kg | 3.6   | 6.0   | 9.2   | 16.5  |

B - width



## HORIZONTAL LIFTING CLAMP

| Model        |    | HLC075 | HLC150 | HLC020 |
|--------------|----|--------|--------|--------|
| Opening Size | mm | 0-25   | 0-30   | 0-45   |
| Capacity     | kg | 750    | 1500   | 2000   |
| Proof Load   | kg | 1500   | 3000   | 4000   |
| Net Weight   | kg | 3      | 4      | 6      |

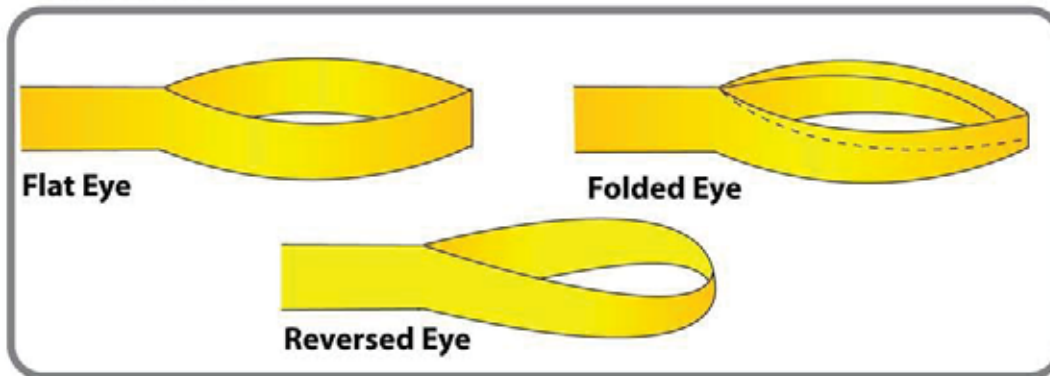
- For horizontal Lifting and transportation of steel
- The compact shape and relative light low own weight with a high lifting capacity
- The lifting clamps must always be used in pairs ( or multiples thereof)
- Lifting capacity and jaw opening are clearly engraved in the body

# WEBBING SLING

Polyester lifting slings are an excellent alternative to wire rope and chain slings. They do not damage or dent the load and can be used for lifting odd-shaped or fragile loads. Polyester webbing slings are highly resistant to acids (except concentrated sulphuric acid), and their elongation is only half as compared to nylon slings when under the same work load. Slings are manufactured either to EN 1492 -1:2000 with safety factor 7:1 or to BS 3481:PT2 - 1983 with safety factor of 6:1.



## TYPE OF EYES



| Colour code | Width in Inches | M=1  |       | M=0.8  |       | M=2  |       | M=1.4  |       | M=1  |       |
|-------------|-----------------|-----------------------------------------------------------------------------------------|-------|-------------------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------------|-------|--------------------------------------------------------------------------------------------|-------|-------------------------------------------------------------------------------------------|-------|
|             |                 | Straight Lift - 100%                                                                    |       | Choker Lift - 80%                                                                         |       | Basket/U-Lift - 200%                                                                    |       | At angle Beta - 140%                                                                       |       | At angle Beta - 100%                                                                      |       |
|             |                 | 1-PLY                                                                                   | 2-PLY | 1-PLY                                                                                     | 2-PLY | 1-PLY                                                                                   | 2-PLY | 1-PLY                                                                                      | 2-PLY | 1-PLY                                                                                     | 2-PLY |
| Violet      | 1               | 500                                                                                     | 1000  | 400                                                                                       | 800   | 1000                                                                                    | 2000  | 700                                                                                        | 1400  | 500                                                                                       | 1000  |
| Green       | 2               | 1000                                                                                    | 2000  | 800                                                                                       | 1600  | 2000                                                                                    | 4000  | 1400                                                                                       | 2800  | 1000                                                                                      | 2000  |
| Yellow      | 3               | 1500                                                                                    | 3000  | 1200                                                                                      | 2400  | 3000                                                                                    | 6000  | 2100                                                                                       | 4200  | 1500                                                                                      | 3000  |
| Grey        | 4               | 2000                                                                                    | 4000  | 1600                                                                                      | 3200  | 4000                                                                                    | 8000  | 2800                                                                                       | 5600  | 2000                                                                                      | 4000  |
| Red         | 5               | 2500                                                                                    | 5000  | 2000                                                                                      | 4000  | 5000                                                                                    | 10000 | 3500                                                                                       | 7000  | 2500                                                                                      | 5000  |
| Brown       | 6               | 3000                                                                                    | 6000  | 2400                                                                                      | 4800  | 6000                                                                                    | 12000 | 4200                                                                                       | 8400  | 3000                                                                                      | 6000  |
| Blue        | 8               | 4000                                                                                    | 8000  | 3200                                                                                      | 6400  | 8000                                                                                    | 16000 | 5600                                                                                       | 11200 | 4000                                                                                      | 8000  |
| Orange      | 10              | 5000                                                                                    | 10000 | 4000                                                                                      | 8000  | 10000                                                                                   | 20000 | 7000                                                                                       | 14000 | 5000                                                                                      | 10000 |
| Orange      | 12              | 6000                                                                                    | 12000 | 4800                                                                                      | 9600  | 12000                                                                                   | 24000 | 8400                                                                                       | 16800 | 6000                                                                                      | 12000 |

| Colour code | Width in Inches | M=1  |       | M=0.8  |       | M=2  |       | M=1.4  |       | M=1  |       |
|-------------|-----------------|-----------------------------------------------------------------------------------------|-------|-------------------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------------|-------|--------------------------------------------------------------------------------------------|-------|-------------------------------------------------------------------------------------------|-------|
|             |                 | Straight Lift - 100%                                                                    |       | Choker Lift - 80%                                                                         |       | Basket/U-Lift - 200%                                                                    |       | At angle Beta - 140%                                                                       |       | At angle Beta - 100%                                                                      |       |
|             |                 | 3-PLY                                                                                   | 4-PLY | 3-PLY                                                                                     | 4-PLY | 3-PLY                                                                                   | 4-PLY | 3-PLY                                                                                      | 4-PLY | 3-PLY                                                                                     | 4-PLY |
| Violet      | 1               | 1500                                                                                    | 2000  | 1200                                                                                      | 1600  | 3000                                                                                    | 4000  | 2100                                                                                       | 2800  | 1500                                                                                      | 2000  |
| Green       | 2               | 3000                                                                                    | 4000  | 2400                                                                                      | 3200  | 6000                                                                                    | 8000  | 4200                                                                                       | 5600  | 3000                                                                                      | 4000  |
| Yellow      | 3               | 4500                                                                                    | 6000  | 3600                                                                                      | 4800  | 9000                                                                                    | 12000 | 6300                                                                                       | 8400  | 4500                                                                                      | 6000  |
| Grey        | 4               | 6000                                                                                    | 8000  | 4800                                                                                      | 6400  | 12000                                                                                   | 16000 | 8400                                                                                       | 11200 | 6000                                                                                      | 8000  |
| Red         | 5               | 7500                                                                                    | 10000 | 6000                                                                                      | 8000  | 15000                                                                                   | 20000 | 10500                                                                                      | 14000 | 7500                                                                                      | 10000 |
| Brown       | 6               | 9000                                                                                    | 12000 | 7200                                                                                      | 9600  | 18000                                                                                   | 24000 | 12600                                                                                      | 16800 | 9000                                                                                      | 12000 |
| Blue        | 8               | 12000                                                                                   | 16000 | 9600                                                                                      | 12800 | 24000                                                                                   | 32000 | 16800                                                                                      | 22400 | 12000                                                                                     | 16000 |
| Orange      | 10              | 15000                                                                                   | 20000 | 12000                                                                                     | 16000 | 30000                                                                                   | 40000 | 21000                                                                                      | 28000 | 15000                                                                                     | 20000 |
| Orange      | 12              | 18000                                                                                   | 24000 | 14400                                                                                     | 19200 | 36000                                                                                   | 48000 | 25200                                                                                      | 33600 | 18000                                                                                     | 24000 |

## Safety Tips

- Use only certified / identified slings with visible Safe Working Load.
- Do not use damaged slings.
- Place slings on the load such that the load is uniform across their width.
- Can only be used for temperature range from -40°c to 100°c.
- Keep load stable. If the length of the load requires several slings, use a certified equipment to make the slings parallel and see that load is evenly distributed between the slings.
- Use only slipknot for choker lift.
- Avoid vibrations of shock loads.
- Do not forcibly pull out a sling, which is jammed under a load.
- Take into account the lifting angles.

# SLINGS

## ROUND SLING



Tubular Round Slings are manufactured on a Round Sling Machine. Slings made on this machine are more compact as the winding of the yarn is uniform and the tension on each yarn is constant.

Round Slings are manufactured to BS EN 1492-2:2000 with a safety factor 7:1 from 100% Polyester.

| Colour code | Colour coded according to 1492-1 |  |  |  |  |  |
|-------------|----------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Purple      | WLL 1T                           | 1000                                                                              | 800                                                                               | 2000                                                                                | 1400                                                                                | 1000                                                                                |
| Green       | WLL 2T                           | 2000                                                                              | 1600                                                                              | 4000                                                                                | 2800                                                                                | 2000                                                                                |
| Yellow      | WLL 3T                           | 3000                                                                              | 2400                                                                              | 6000                                                                                | 4200                                                                                | 3000                                                                                |
| Grey        | WLL 4T                           | 4000                                                                              | 3200                                                                              | 8000                                                                                | 5600                                                                                | 4000                                                                                |
| Red         | WLL 5T                           | 5000                                                                              | 4000                                                                              | 10000                                                                               | 7000                                                                                | 5000                                                                                |
| Brown       | WLL 6T                           | 6000                                                                              | 4800                                                                              | 12000                                                                               | 8400                                                                                | 6000                                                                                |
| Blue        | WLL 8T                           | 8000                                                                              | 6400                                                                              | 16000                                                                               | 11200                                                                               | 8000                                                                                |
| Orange      | WLL 10T                          | 10000                                                                             | 8000                                                                              | 20000                                                                               | 14000                                                                               | 10000                                                                               |
| Orange      | WLL 12T                          | 12000                                                                             | 9600                                                                              | 24000                                                                               | 16800                                                                               | 12000                                                                               |

## CARGO LASHING

Cargo lashing systems are available from 1" to 4" width and lashing capacities ranging from 400 kg to 5000 kg. A two part system consists of a short part and a long part with a tensioning device provided on the short part. Variety of hooks or end fittings as shown below can be provided.

| Webbing Width                                                                          | Minimum Breaking Strength | End-Fitting Type | Type    |
|----------------------------------------------------------------------------------------|---------------------------|------------------|---------|
|  1" | 1,000 Kgs                 | Double J Hook    | Ratchet |
|  2" | 5,000 Kgs                 | Double J Hook    | Ratchet |
|  3" | 10,000 Kgs                | Double J Hook    | Ratchet |
|  4" | 12,000 Kgs                | Flat Hook        | Ratchet |
|                                                                                        |                           |                  | Winch   |





## LOAD BINDER



### LEVER TYPE

|                       |      | 1/4-5/16 | 5/16-3/8 | 3/8-1/2 | 1/2-5/8 |
|-----------------------|------|----------|----------|---------|---------|
| Min.-Max. Chain Size  | inch | 1/4-5/16 | 5/16-3/8 | 3/8-1/2 | 1/2-5/8 |
| Working Load Limit    | lbs  | 2600     | 5400     | 9200    | 11000   |
| Proof Load            | lbs  | 5200     | 10800    | 18400   | 22000   |
| Minimum Ultimate Load | lbs  | 7800     | 19000    | 28000   | 33000   |
| Weight/Each           | lbs  | 3.52     | 8.37     | 12.11   | 12.20   |
| Handle Length         | inch | 11.42    | 15.43    | 17.24   | 17.24   |

- Safety, durability designed for all heavy duty transport use.
- Drop forged steel, high strength.
- Free 360 degree swivel hooks for easy handling.
- Heat-treated for extra strength.
- Each binder individually proof load tested.

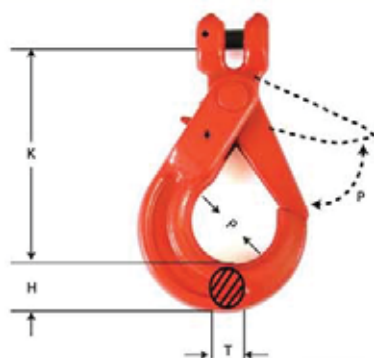
### RATCHET TYPE

|                       |      | 1/4-5/16 | 5/16-3/8 | 3/8-1/2 | 1/2-5/8 |
|-----------------------|------|----------|----------|---------|---------|
| Min.-Max. Chain Size  | inch | 1/4-5/16 | 5/16-3/8 | 3/8-1/2 | 1/2-5/8 |
| Working Load Limit    | lbs  | 2600     | 5400     | 9200    | 13000   |
| Proof Load            | lbs  | 5200     | 10800    | 18400   | 26000   |
| Minimum Ultimate Load | lbs  | 9200     | 19000    | 33000   | 46000   |
| Weight/Each           | lbs  | 3.52     | 10.50    | 12.90   | 14.38   |
| Handle Length         | inch | 7.16     | 13.42    | 13.92   | 13.92   |

- Safety, reliable design for easy operation.
- No requirement for locking of handle than lever type load binders.
- High quality drop forged construction.
- Heat treated for extra strength.
- Short reach hooks provide optimum take-up.
- Each binder individually proof load tested.

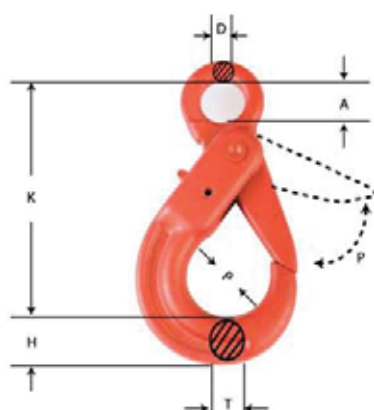


# HOOKS



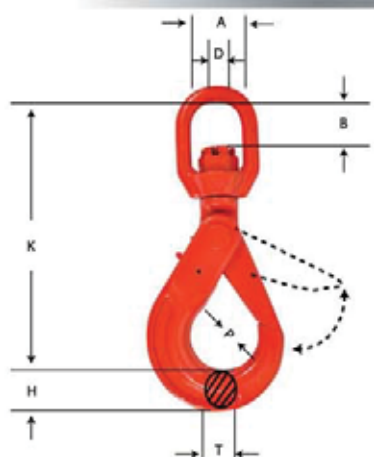
**Grade 80 Clevis Self Locking Safety Hook**

| size(mm) | K (mm) | P (mm) | T (mm) | H (mm) | WLL(Tons) | WT(kgs) |
|----------|--------|--------|--------|--------|-----------|---------|
| 6        | 100    | 28     | 14     | 19     | 1.1       | 0.50    |
| 7,8      | 119    | 34     | 19     | 24     | 2.0       | 0.80    |
| 10       | 143    | 45     | 24     | 31     | 3.2       | 1.50    |
| 13       | 179    | 54     | 27     | 40     | 5.4       | 2.80    |
| 16       | 212    | 63     | 36     | 53     | 8.0       | 5.60    |
| 18,20    | 319    | 80     | 49     | 71     | 12.5      | 7.50    |



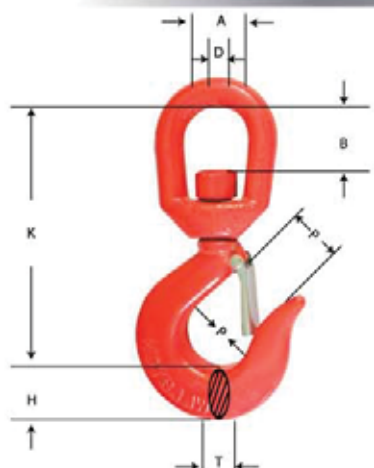
**Grade 80 Eye Self Locking Safety Hook**

| size(mm) | D (mm) | K (mm) | P (mm) | A (mm) | T (mm) | H (mm) | WLL(Tons) | WT(kgs) |
|----------|--------|--------|--------|--------|--------|--------|-----------|---------|
| 6        | 10     | 110    | 29     | 21     | 15     | 20     | 1.1       | 0.50    |
| 7,8      | 11     | 136    | 35     | 25     | 20     | 24     | 2.0       | 0.80    |
| 10       | 13     | 167    | 45     | 32     | 26     | 30     | 3.2       | 1.40    |
| 13       | 16     | 207    | 54     | 40     | 30     | 38     | 5.4       | 2.70    |
| 16       | 21     | 252    | 62     | 52     | 40     | 48     | 8.0       | 5.60    |
| 18,20    | 23     | 282    | 68     | 64     | 48     | 57     | 12.5      | 8.50    |
| 22       | 24     | 319    | 82     | 70     | 49     | 63     | 15.0      | 11.20   |
| 26       | 25     | 343    | 99     | 80     | 56     | 69     | 21.6      | 14.50   |



**Grade 80 Swivel Self Locking Safety Hook**

| size(mm) | D (mm) | K (mm) | P (mm) | A (mm) | B (mm) | T (mm) | H (mm) | WLL(Tons) | WT(kgs) |
|----------|--------|--------|--------|--------|--------|--------|--------|-----------|---------|
| 6        | 11     | 123    | 29     | 32     | 17     | 15     | 20     | 1.1       | 0.60    |
| 7,8      | 13     | 151    | 35     | 36     | 21     | 20     | 24     | 2.0       | 1.10    |
| 10       | 16     | 171    | 45     | 41     | 26     | 26     | 30     | 3.2       | 2.00    |
| 13       | 21     | 209    | 53     | 46     | 30     | 30     | 38     | 5.4       | 4.00    |
| 16       | 23     | 265    | 62     | 60     | 40     | 40     | 48     | 8.0       | 6.80    |
| 18,20    | 25     | 358    | 68     | 74     | 82     | 48     | 57     | 12.5      | 11.60   |
| 22       | 29     | 430    | 82     | 80     | 63     | 49     | 63     | 15.0      | 16.00   |
| 26       | 32     | 480    | 99     | 105    | 96     | 56     | 69     | 21.6      | 21.50   |

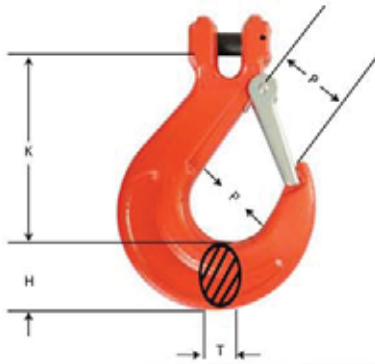


**Grade 80 Eye Swivel Hook with Safety Latch**

| size(mm) | D (mm) | K (mm) | P (mm) | A (mm) | B (mm) | T (mm) | H (mm) | WLL(Tons) | WT(kgs) |
|----------|--------|--------|--------|--------|--------|--------|--------|-----------|---------|
| 6        | 11     | 136    | 24     | 32     | 23     | 16     | 19     | 1.1       | 0.60    |
| 7,8      | 12     | 155    | 26     | 36     | 27     | 18     | 22     | 2.0       | 0.90    |
| 10       | 16     | 189    | 36     | 42     | 37     | 23     | 29     | 3.2       | 1.50    |
| 13       | 20     | 233    | 42     | 48     | 40     | 28     | 35     | 5.4       | 3.00    |
| 16       | 22     | 280    | 50     | 60     | 55     | 35     | 44     | 8.0       | 5.10    |
| 18,20    | 25     | 354    | 56     | 74     | 63     | 49     | 65     | 12.5      | 9.40    |
| 22       | 28     | 356    | 70     | 80     | 82     | 50     | 74     | 15.0      | 11.80   |
| 26       | 32     | 470    | 80     | 105    | 96     | 60     | 80     | 21.6      | 21.40   |
| 32       | 38     | 518    | 90     | 105    | 96     | 65     | 91     | 32.6      | 32.00   |

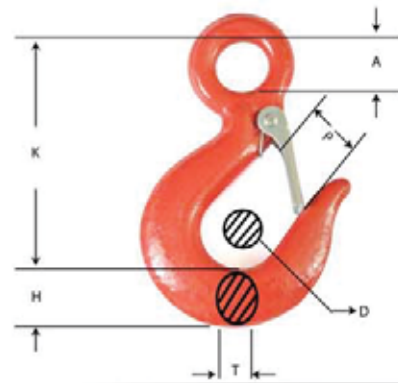
# HOOKS

CE



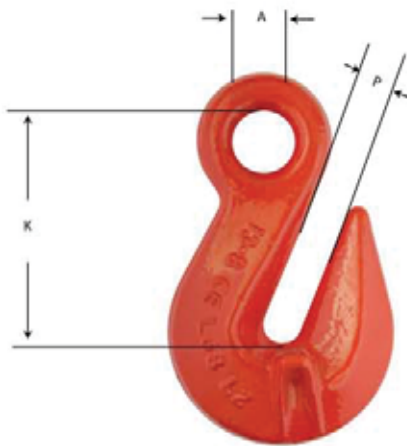
**Grade 80 Clevis Sling Hook with Latch**

| size(mm) | K (mm) | P (mm) | T (mm) | H (mm) | WLL(Tons) | WT(kgs) |
|----------|--------|--------|--------|--------|-----------|---------|
| 6        | 78     | 22     | 15     | 18     | 1.1       | 0.30    |
| 7,8      | 95     | 30     | 19     | 23     | 2.0       | 0.50    |
| 10       | 120    | 36     | 23     | 31     | 3.2       | 1.00    |
| 13       | 147    | 44     | 28     | 38     | 5.4       | 2.10    |
| 16       | 169    | 46     | 33     | 44     | 8.0       | 3.70    |
| 18,20    | 190    | 60     | 52     | 52     | 12.5      | 6.00    |



**Grade 80 Eye Hoist Hook with Latch**

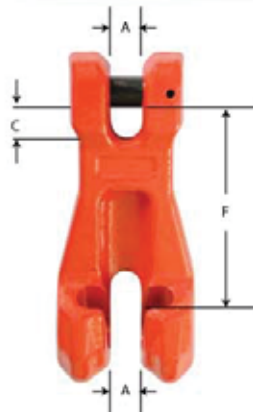
| size(mm) | D (mm) | K (mm) | P (mm) | A (mm) | T (mm) | H (mm) | WLL(Tons) | WT(kgs) |
|----------|--------|--------|--------|--------|--------|--------|-----------|---------|
| 6        | 22     | 85     | 22     | 19     | 14     | 19     | 1.1       | 0.28    |
| 7,8      | 26     | 107    | 25     | 29     | 20     | 26     | 2.0       | 1.67    |
| 10       | 29     | 122    | 29     | 32     | 22     | 29     | 3.2       | 0.87    |
| 13       | 38     | 150    | 38     | 40     | 30     | 37     | 5.4       | 1.92    |
| 16       | 49     | 191    | 44     | 51     | 36     | 47     | 8.0       | 3.77    |
| 18,20    | 62     | 233    | 60     | 62     | 41     | 57     | 12.5      | 6.81    |
| 22       | 66     | 260    | 67     | 72     | 49     | 66     | 15.0      | 9.81    |
| 26       | 72     | 326    | 86     | 89     | 60     | 76     | 21.6      | 17.93   |



**Grade 80 Eye Grab Hook with Wings**

| size(mm) | A (mm) | P (mm) | G (mm) | K (mm) | F (mm) | WLL(Tons) | WT(kgs) |
|----------|--------|--------|--------|--------|--------|-----------|---------|
| 6        | 13     | 8      | 8      | 51     | 30     | 1.1       | 0.20    |
| 7,8      | 10     | 10     | 9      | 60     | 30     | 2.0       | 0.20    |
| 10       | 20     | 13     | 13     | 84     | 41     | 3.2       | 0.60    |
| 13       | 25     | 16     | 15     | 102    | 52     | 5.4       | 1.20    |
| 16       | 30     | 20     | 20     | 114    | 57     | 8.0       | 2.30    |
| 18,20    | 36     | 23     | 23     | 132    | 98     | 12.5      | 4.60    |
| 22       | 38     | 26     | 26     | 157    | 110    | 15.0      | 8.20    |
| 26       | 41     | 32     | 32     | 187    | 100    | 21.6      | 9.80    |
| 32       | 57     | 40     | 40     | 230    | 90     | 32.0      | 19.40   |

F - Bottom width, G - Top width



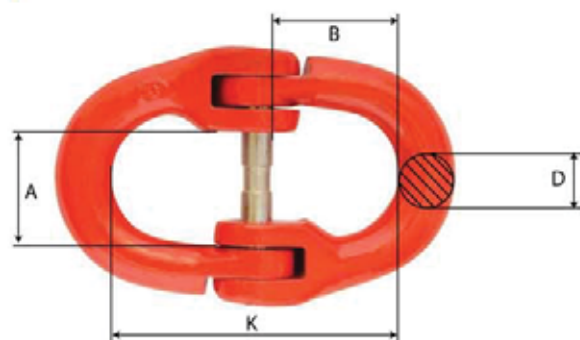
**Clevis Shortening Clutch**

| size(mm) | A (mm) | C (mm) | D (mm) | E (mm) | F (mm) | WLL(Tons) | WT(kgs) |
|----------|--------|--------|--------|--------|--------|-----------|---------|
| 6        | 6      | 8      | 7      | 11     | 45     | 1.1       | 0.20    |
| 7,8      | 8      | 10     | 9      | 16     | 62     | 2.0       | 0.40    |
| 10       | 12     | 14     | 12     | 25     | 87     | 3.2       | 0.90    |
| 13       | 16     | 17     | 15     | 32     | 115    | 5.4       | 1.90    |
| 16       | 20     | 19     | 19     | 39     | 143    | 8.0       | 3.20    |
| 18,20    | 21     | 23     | 22     | 46     | 152    | 12.5      | 6.20    |

## LINKS

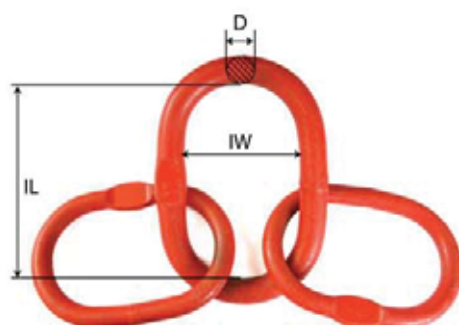


### Connecting Link, (Grade 80)



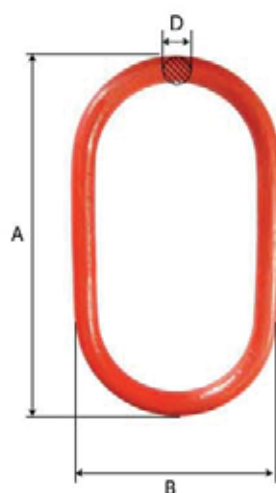
| size(mm) | D (mm) | K (mm) | A (mm) | B (mm) | WLL (ton) | WT(kgs) |
|----------|--------|--------|--------|--------|-----------|---------|
| 6        | 7      | 43     | 15     | 17     | 1.1       | 0.10    |
| 7,8      | 9      | 56     | 20     | 22     | 2.0       | 0.20    |
| 10       | 13     | 68     | 26     | 26     | 3.2       | 0.30    |
| 13       | 16     | 88     | 30     | 36     | 5.4       | 0.70    |
| 16       | 19     | 104    | 36     | 39     | 8.0       | 1.10    |
| 18,20    | 23     | 118    | 43     | 45     | 12.5      | 1.70    |
| 22       | 24     | 146    | 48     | 59     | 15.0      | 3.00    |
| 26       | 30     | 160    | 55     | 62     | 21.6      | 4.60    |
| 32       | 36     | 205    | 69     | 79     | 32.0      | 8.60    |

### Forged Oblong Master Link Assembly



| D (mm) | IW (mm) | IL (mm) | WLL (ton) | WT(kgs) |
|--------|---------|---------|-----------|---------|
| 18     | 75      | 135     | 2.4       | 1.2     |
| 22     | 90      | 160     | 4.3       | 2.2     |
| 26     | 100     | 180     | 6.7       | 3.4     |
| 32     | 100     | 200     | 11.2      | 6       |
| 36     | 140     | 260     | 17        | 10      |
| 51     | 190     | 350     | 26.5      | 23.3    |
| 51     | 190     | 350     | 32        | 25.9    |
| 57     | 200     | 400     | 40        | 35.2    |
| 72     | 250     | 460     | 63        | 67.6    |

### Grade 80 Master Link



| CODE | Length (A) mm | Width (B) mm | Dia (D) mm | WLL (ton) | Weight (kgs) |
|------|---------------|--------------|------------|-----------|--------------|
| 1184 | 83            | 40           | 11         | 2.1       | 0.2          |
| 1385 | 95            | 54           | 13         | 2.7       | 0.3          |
| 1386 | 115           | 60           | 13         | 2.7       | 0.4          |
| 1686 | 120           | 70           | 16         | 4.1       | 0.6          |
| 1687 | 130           | 100          | 16         | 3.2       | 0.9          |
| 2086 | 150           | 82           | 20         | 6.7       | 1.1          |
| 2087 | 170           | 90           | 20         | 6.5       | 1.3          |
| 2286 | 170           | 90           | 22         | 8.2       | 1.6          |
| 2287 | 210           | 110          | 22         | 7.2       | 1.9          |
| 2288 | 270           | 140          | 22         | 5.8       | 2.5          |
| 2586 | 190           | 103          | 25         | 10.7      | 2.3          |
| 2886 | 210           | 112.5        | 28         | 12.9      | 3.2          |
| 2887 | 270           | 140          | 28         | 11.8      | 4.0          |
| 3286 | 270           | 140          | 32         | 17.1      | 5.3          |
| 3886 | 270           | 140          | 38         | 28.1      | 7.5          |
| 3887 | 420           | 220          | 38         | 19.1      | 11.0         |
| 4586 | 320           | 170          | 45         | 36.3      | 12.5         |
| 4587 | 470           | 250          | 45         | 27.6      | 17.5         |
| 5086 | 380           | 200          | 60         | 45.0      | 18.0         |
| 6086 | 430           | 220          | 60         | 65.3      | 29.0         |
| 7086 | 500           | 250          | 70         | 84.4      | 43.2         |



# CHAIN SLINGS



## UNIFORM LOAD METHOD RATING FOR GRADE 80 ALLOY CHAIN SLINGS

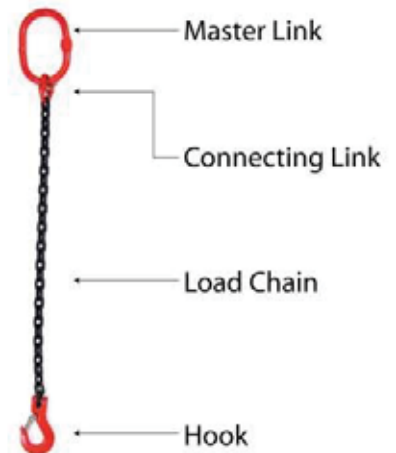
All general purpose slings should be rated by the uniform load method as shown in the table below

| Chain Size<br>mm | Single Leg | Two Leg     |              | Three & Four Leg |              |
|------------------|------------|-------------|--------------|------------------|--------------|
|                  |            | 0-45 degree | 45-60 degree | 0-45 degree      | 45-60 degree |
| 7                | 1.5        | 2.1         | 1.5          | 3.1              | 2.2          |
| 8                | 2.0        | 2.8         | 2.0          | 4.2              | 3.0          |
| 10               | 3.15       | 4.25        | 3.15         | 6.7              | 4.75         |
| 13               | 5.3        | 7.5         | 5.3          | 11.2             | 8.0          |
| 16               | 8.0        | 11.2        | 8.0          | 17.0             | 11.18        |
| 20               | 12.5       | 17.0        | 12.5         | 26.5             | 19.0         |
| 22               | 15.0       | 21.2        | 15.0         | 31.5             | 22.4         |
| 26               | 21.2       | 30.0        | 21.2         | 45.0             | 31.5         |
| 32               | 31.5       | 45.0        | 31.5         | 67.0             | 47.5         |

All loads shown in tonnes

Chain sling consists of Master Link or Master Link Assembly, Grade80 chain, Connecting Link and Hooks. There are different types of chain slings - Single Leg, Two Leg, Three Leg and Four Leg. It can be made in different lengths according to the application. WLL (Work load limit) depends on the size (in DIA) of the chain and the accessories used in its construction.

Grade 80 alloy chains are often selected when operating under high temperature or rugged conditions that would abrade or destroy other types of slings. They are flexible, durable, long lasting ductile and easy to inspect. The most advantageous feature of a chain sling is its ability to be repaired.



## CAUTIONS

- Do not exceed Working Load Limit.
- Before operating, inspect the chain for damages.
- Before operating, inspect the hooks for signs of deformations.

## WIRE ROPE SLINGS



Single Leg



Two Leg



Three Leg



Four Leg

| Normal Rope Dia(mm)   | One leg slings | Two leg slings |                 | Three and Four leg slings |                 | Endless sling |
|-----------------------|----------------|----------------|-----------------|---------------------------|-----------------|---------------|
| Angle to the Vertical | 0°             | 0° to 45°      | over 45° to 60° | 0° to 45°                 | over 45° to 60° | 0°            |
|                       | Direct         | Direct         | Direct          | Direct                    | Direct          | Choke hitch   |
| 8                     | 0.750          | 1.05           | 0.750           | 1.55                      | 1.10            | 1.20          |
| 9                     | 0.950          | 1.30           | 0.950           | 2.00                      | 1.40            | 1.50          |
| 10                    | 1.15           | 1.60           | 1.15            | 2.40                      | 1.70            | 1.85          |
| 11                    | 1.40           | 2.00           | 1.40            | 3.00                      | 2.12            | 2.25          |
| 12                    | 1.70           | 2.30           | 1.70            | 3.55                      | 2.50            | 2.70          |
| 13                    | 2.00           | 2.80           | 2.00            | 4.15                      | 3.00            | 3.15          |
| 14                    | 2.25           | 3.15           | 2.25            | 4.80                      | 3.40            | 3.70          |
| 16                    | 3.00           | 4.20           | 3.00            | 6.30                      | 4.50            | 4.80          |
| 18                    | 3.70           | 5.20           | 3.70            | 7.80                      | 5.65            | 6.00          |
| 20                    | 4.60           | 6.50           | 4.60            | 9.80                      | 6.90            | 7.35          |
| 22                    | 5.65           | 7.80           | 5.65            | 11.8                      | 8.40            | 9.00          |
| 24                    | 6.70           | 9.40           | 6.70            | 14.0                      | 10.0            | 10.6          |
| 26                    | 7.80           | 11.0           | 7.80            | 16.5                      | 11.5            | 12.5          |
| 28                    | 9.00           | 12.5           | 9.00            | 19.0                      | 13.5            | 14.5          |
| 32                    | 11.8           | 16.5           | 11.8            | 25.0                      | 17.5            | 19.0          |
| 36                    | 15.0           | 21.0           | 15.0            | 31.5                      | 22.5            | 23.5          |
| 40                    | 18.5           | 26.0           | 18.5            | 39.0                      | 28.0            | 30.0          |
| 44                    | 22.5           | 31.5           | 22.5            | 47.0                      | 33.5            | 36.0          |
| 48                    | 26.0           | 37.0           | 26.0            | 55.0                      | 40.0            | 42.0          |
| 52                    | 31.5           | 44.0           | 31.5            | 66.0                      | 47.0            | 50.0          |
| 56                    | 36.0           | 50.0           | 36.0            | 76.0                      | 54.0            | 50.0          |
| 60                    | 42.0           | 58.0           | 42.0            | 88.0                      | 63.0            | 67.0          |

All loads shown in tonnes.

Wire Ropes are of different types, Single Leg, Two Leg, Three Leg and Four Leg. Wire Rope Sling can be made with Soft Eyes on both ends and Hard Eyes on both ends or one end Soft Eye and Other end Hard Eye as shown in picture. WLL (Work load limit) depends on the size (in DIA) of the rope. Wire rope slings are available from 6 mm to 64mm in diameter.



SOFT EYE



THIMBLE EYE



MASTER LINK



MASTER LINK ASSEMBLY

## TURN BUCKLES



HOOK & EYE



HOOK & HOOK



EYE & EYE



JAW & JAW



JAW & EYE

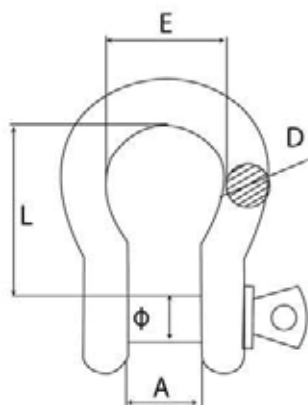
- Proof Load is 2 times of working load limit and minimum breaking load 5 times of working load limit.
- All turn buckles are drop forged, heat treated and hot dipped galvanised.
- Lock nuts are supplied as standard on both ends of terminal.
- Jaw terminals are supplied with bolt & nut with cotter pin.
- Turn buckles are recommended for straight or in-line pulls only.
- Drop Forged Turn Buckle conform to US Federal Spec. FF-T-791B

| SIZE<br>dia x take-up | WLL                    |                       |                           |      | Weight    |           |           |            |             |
|-----------------------|------------------------|-----------------------|---------------------------|------|-----------|-----------|-----------|------------|-------------|
|                       | jaw & jaw<br>jaw & eye | eye & eye<br>stub end | hook & hook<br>hook & eye |      | jaw & jaw | jaw & eye | eye & eye | hook & eye | hook & hook |
|                       | lbs                    | ton                   | lbs                       | ton  | kg        | kg        | kg        | kg         | kg          |
| 1/4X4                 | 500                    | 0.23                  | 400                       | 0.18 | 0.16      | 0.14      | 0.12      | 0.14       | 0.13        |
| 5/16X4 1/2            | 800                    | 0.36                  | 700                       | 0.32 | 0.24      | 0.23      | 0.2       | 0.21       | 0.21        |
| 3/8X6                 | 1200                   | 0.54                  | 1000                      | 0.45 | 0.37      | 0.36      | 0.34      | 0.35       | 0.35        |
| 1/2X6                 | 2200                   | 1                     | 1500                      | 0.68 | 0.71      | 0.68      | 0.7       | 0.73       | 0.73        |
| 1/2X9                 | 2200                   | 1                     | -                         | -    | 0.79      | 0.78      | -         | -          | -           |
| 1/2X12                | 2200                   | 1                     | 1500                      | 0.68 | 1.09      | 0.94      | 0.97      | 1.03       | 1.03        |
| 5/8X6                 | 3500                   | 1.59                  | 2250                      | 1.02 | 1.23      | 1.07      | 1.49      | 1.25       | 1.22        |
| 5/8X9                 | 3500                   | 1.59                  | -                         | -    | 1.56      | 1.44      | -         | -          | -           |
| 5/8X12                | 3500                   | 1.59                  | 2250                      | 1.02 | 1.77      | 1.64      | 1.55      | 1.59       | 1.57        |
| 3/4X6                 | 5200                   | 2.6                   | 3000                      | 1.36 | 1.86      | 1.81      | 1.72      | 1.75       | 1.74        |
| 3/4X9                 | 5200                   | 2.6                   | -                         | -    | 2.48      | 2.15      | -         | -          | -           |
| 3/4X12                | 5200                   | 2.6                   | 3000                      | 1.36 | 2.98      | 2.69      | 2.49      | 2.46       | 2.47        |
| 3/4X18                | 5200                   | 2.6                   | 3000                      | 1.36 | 3.64      | 3.18      | 3.26      | 3.68       | 3.47        |
| 7/8X12                | 7200                   | 3.27                  | 4000                      | 1.81 | 3.71      | 3.79      | 3.27      | 3.67       | 3.47        |
| 7/8X18                | 7200                   | 3.27                  | -                         | -    | 4.89      | 4.42      | 4.51      | -          | -           |
| 1X6                   | 10000                  | 4.54                  | -                         | -    | 4.62      | 4.05      | 4.1       | -          | -           |
| 1X12                  | 10000                  | 4.54                  | 5000                      | 2.27 | 5.53      | 5.08      | 5.22      | 5.41       | 5.31        |
| 1X18                  | 10000                  | 4.54                  | 5000                      | 2.27 | 6.87      | 6.03      | 6.35      | 6.35       | 6.35        |
| 1X24                  | 10000                  | 4.54                  | 5000                      | 2.27 | 8.2       | 7.71      | 7.82      | 7.82       | 7.82        |
| 1.1/4X12              | 15200                  | 6.89                  | 6500                      | 2.95 | 9.34      | 8.81      | 8.62      | 9.33       | 8.97        |
| 1.1/4X18              | 15200                  | 6.89                  | 6500                      | 2.95 | 11.2      | 11        | 10.4      | 10.4       | 10.4        |
| 1.1/4X24              | 15200                  | 6.89                  | 6500                      | 2.95 | 12.8      | 12.9      | 12.2      | 12.2       | 12.2        |
| 1.1/2X12              | 21400                  | 9.71                  | 7500                      | 3.4  | 13.9      | 13.1      | 12.5      | 12.5       | 12.5        |
| 1.1/2X18              | 21400                  | 9.71                  | 7500                      | 3.4  | 16.7      | 15.9      | 14.1      | 14.1       | 14.1        |
| 1.1/2X24              | 21400                  | 9.71                  | 7500                      | 3.4  | 18.9      | 17.8      | 17        | 17         | 17          |
| 1.3/4X18              | 28000                  | 12.7                  | -                         | -    | 24.5      | 24.4      | 23.8      | -          | -           |
| 1.3/4X24              | 28000                  | 12.7                  | -                         | -    | 28.7      | 27.5      | 26.3      | -          | -           |
| 2X24                  | 37000                  | 16.8                  | -                         | -    | 42.8      | 40.4      | 38.7      | -          | -           |
| 2.1/2X24              | 60000                  | 27.2                  | -                         | -    | 75        | 68        | 65        | -          | -           |
| 2.3/4X24              | 75000                  | 34                    | -                         | -    | 90        | 83        | 88        | -          | -           |

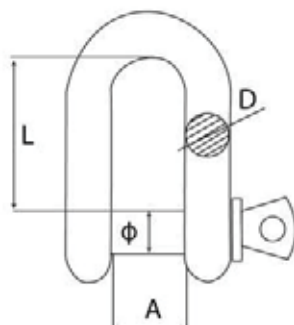


# SHACKLES

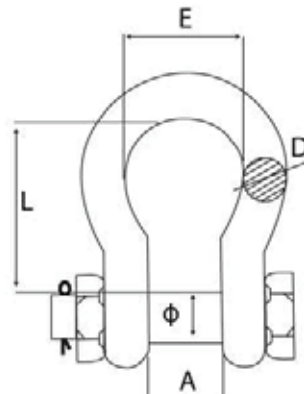
**Screw Pin  
Bow Shackle**  
G209



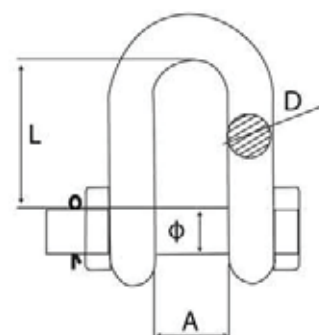
**Screw Pin  
Dee Shackle**  
G210



**Safety Pin  
Bow Shackle**  
G2130



**Safety Pin  
Dee Shackle**  
G2150

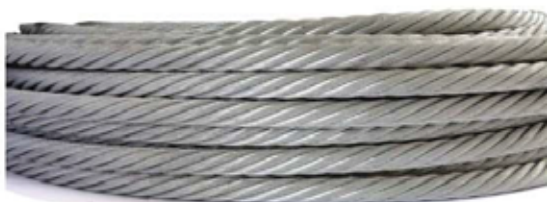


| SIZE  | PIN SIZE | Working Load Limit | A    | L           |             | Φ    | D    | E    | Weight |       |       |       |
|-------|----------|--------------------|------|-------------|-------------|------|------|------|--------|-------|-------|-------|
|       |          |                    |      | Bow shackle | Dee shackle |      |      |      | G209   | G2130 | G210  | G2150 |
| inch  | inch     | T                  | mm   | mm          | mm          | mm   | mm   | mm   | kg     | kg    | kg    | kg    |
| 3/16  | 1/4      | 1/3                | 9.66 | 22.4        | -           | 6.35 | 4.85 | 15.2 | 0.03   | 0.035 | -     | -     |
| 1/4   | 5/16     | 1/2                | 12   | 28.6        | 22          | 8    | 6.43 | 20   | 0.05   | 0.057 | 0.048 | 0.055 |
| 5/16  | 3/8      | 3/4                | 13   | 31          | 26          | 10   | 8    | 21   | 0.09   | 0.1   | 0.08  | 0.09  |
| 3/8   | 7/16     | 1                  | 17   | 36.5        | 32          | 11   | 9.5  | 26   | 0.14   | 0.15  | 0.13  | 0.14  |
| 7/16  | 1/2      | 1.1/2              | 18   | 42.5        | 36.5        | 12   | 11   | 29   | 0.17   | 0.22  | 0.2   | 0.21  |
| 1/2   | 5/8      | 2                  | 20.6 | 47.3        | 41.3        | 16   | 12.7 | 33   | 0.33   | 0.36  | 0.27  | 0.3   |
| 5/8   | 3/4      | 3.1/4              | 27   | 60.5        | 51          | 19   | 16   | 43   | 0.62   | 0.76  | 0.57  | 0.67  |
| 3/4   | 7/8      | 4.3/4              | 32   | 71.5        | 62          | 22   | 19   | 51   | 1.07   | 1.23  | 1.19  | 1.14  |
| 7/8   | 1        | 6.1/2              | 36.6 | 84          | 74.8        | 25.4 | 22   | 58   | 1.64   | 1.79  | 1.43  | 1.75  |
| 1     | 1.1/8    | 8.1/2              | 43   | 96          | 81.6        | 28.6 | 25   | 68   | 2.28   | 2.57  | 2.15  | 2.52  |
| 1.1/8 | 1.1/4    | 9.1/2              | 46   | 107.5       | 89.5        | 32   | 28.6 | 74   | 3.36   | 3.75  | 3.06  | 3.45  |
| 1.1/4 | 1.3/8    | 12                 | 51.6 | 119         | 100.8       | 35   | 32   | 82   | 4.11   | 5.31  | 4.11  | 4.95  |
| 1.3/8 | 1.1/2    | 13.1/2             | 57   | 133.5       | 112.5       | 38   | 35   | 92   | 6.14   | 7.18  | 5.28  | 6.24  |
| 1.1/2 | 1.5/8    | 17                 | 60   | 147         | 125         | 40   | 38   | 98   | 7.8    | 9.43  | 7.29  | 8.39  |
| 1.3/4 | 2        | 25                 | 73   | 177.5       | 146.5       | 50   | 44   | 127  | 12.6   | 15.4  | 12.13 | 14.23 |
| 2     | 2.1/4    | 35                 | 82   | 196.5       | 171.5       | 56   | 50   | 146  | 20.41  | 23.7  | 19.19 | 21.11 |
| 2.1/2 | 2.3/4    | 55                 | 105  | 267.5       | 202.5       | 68.5 | 63.5 | 184  | 38.9   | 44.6  | 32.55 | 28.9  |
| 3     | 3.1/4    | 85                 | 127  | 320         | 216         | 85   | 75   | 200  | -      | 70    | -     | 56.36 |
| 3.1/2 | 3.3/4    | 120                | 133  | 371.6       | -           | 95.5 | 92   | 229  | -      | 120   | -     | -     |
| 4     | 4.1/4    | 150                | 140  | 468         | -           | 108  | 104  | 254  | -      | 153   | -     | -     |

- Forged-Quenched and Tempered
- Surface : Hot Dip Galvanized body & Painted Pin
- Proof Load is 2 times of WLL, minimum breaking load is 6 times of WLL
- Marking : SIZE, WLL and other marking according to requirement
- Hot Dip Galvanized Drop Forged Shackle Conform to Federal Spec. RR-C-271D



## WIRE ROPES



### Information about our Wire Ropes

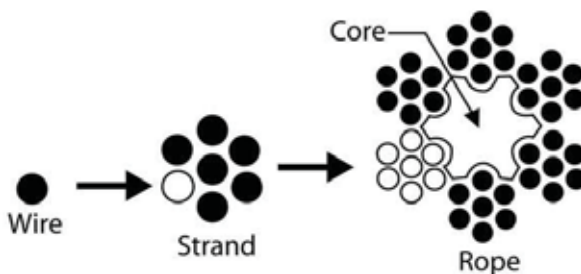
- Sizes : From 3mm to 64mm
- Surface Finish: Galvanised and Un-Galvanised
- Core: IWRC, FC and WSC
- Typical Wire Constructions: 6x37, 6x19, 18x7 and more
- Tensile Strengths: 1960 N/mm<sup>2</sup> (EIPS) and 2160 N/mm<sup>2</sup> (EEIPS)
- Customer Base: Crane companies, offshore rigs, Marine industry, Construction industry etc
- We also have stainless steel wire ropes

### General Information on Wire Ropes

Wire rope is made by plaiting strands of wire - normally medium carbon steel - into a thick cable. The strands are formed around a core. The strands in wire ropes are made of wire twisted together. Strands with smaller diameter wires are less abrasion resistant and more fatigue resistant. Strands made with thicker lengths of wire are more abrasion resistant and less fatigue resistant.

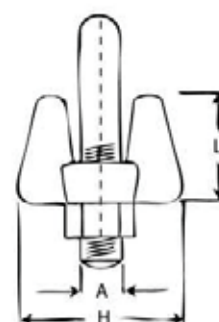
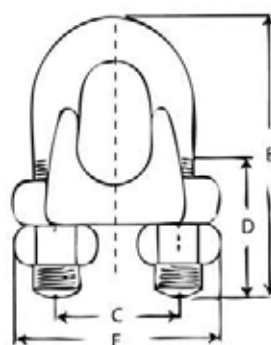
### Construction

The main components of a wire rope is shown below



In the above example, each individual wire is arranged around a central wire to form a 7-wire strand. Six of these strands are formed around a central core to make a wire rope. The rope is specified as 6x7 (6/1) - i.e. six strands each of seven wires.

## WIRE ROPE GRIPS



### H.D.Galvanized Drop Forged Clips

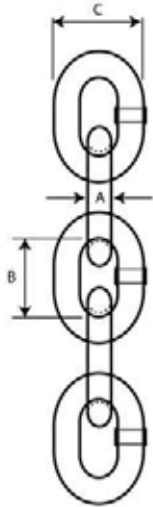
| RopeDIA(Inch) | A (mm) | B (mm) | C (mm) | D (mm) | F (mm) | H (mm) | L (mm) | Wt. Kgs/100 |
|---------------|--------|--------|--------|--------|--------|--------|--------|-------------|
| 1/4           | 8      | 34     | 19     | 13     | 37     | 30     | 17     | 8           |
| 5/16          | 10     | 45     | 22     | 19     | 43     | 33     | 18     | 14          |
| 3/8           | 11     | 49     | 26     | 19     | 49     | 42     | 26     | 19          |
| 1/2           | 13     | 61     | 30     | 26     | 58     | 48     | 27     | 34          |
| 5/8           | 16     | 74     | 33     | 32     | 64     | 52     | 33     | 45          |
| 3/4           | 14     | 86     | 38     | 37     | 72     | 57     | 37     | 68          |
| 7/8           | 19     | 98     | 45     | 40     | 80     | 62     | 40     | 108         |
| 1             | 19     | 108    | 48     | 46     | 88     | 67     | 44     | 113         |
| 1.1/8         | 19     | 117    | 51     | 51     | 91     | 72     | 48     | 140         |
| 1.1/4         | 22     | 130    | 59     | 54     | 105    | 79     | 56     | 207         |
| 1.3/8         | 22     | 140    | 60     | 59     | 108    | 79     | 58     | 234         |
| 1.1/2         | 22     | 147    | 66     | 60     | 112    | 86     | 64     | 266         |
| 1.3/4         | 29     | 175    | 78     | 74     | 134    | 97     | 78     | 441         |
| 2             | 32     | 195    | 86     | 78     | 152    | 113    | 87     | 603         |
| 2.1/4         | 32     | 208    | 98     | 81     | 162    | 116    | 100    | 707         |
| 2.1/2         | 32     | 227    | 105    | 87     | 168    | 119    | 113    | 806         |
| 2.3/4         | 32     | 243    | 112    | 91     | 174    | 127    | 124    | 1000        |
| 3             | 38     | 271    | 121    | 104    | 194    | 135    | 136    | 1440        |

Conform to US Federal Spec. FF-C-450 Type I Class I



# CHAIN

## GRADE 80 ALLOY STEEL LIFTING CHAIN



| Nominal size A (mm) | Inner length B (mm) | Outer width C (mm) | WLL (ton) | kgs /m |
|---------------------|---------------------|--------------------|-----------|--------|
| 7                   | 21                  | 25.9               | 1.5       | 1.1    |
| 8                   | 24                  | 29.6               | 2.0       | 1.5    |
| 10                  | 30                  | 37.0               | 3.15      | 2.2    |
| 13                  | 39                  | 48.1               | 5.3       | 3.8    |
| 16                  | 48                  | 59.2               | 8.0       | 5.8    |
| 20                  | 60                  | 74.0               | 12.5      | 9.1    |
| 22                  | 66                  | 81.4               | 15.0      | 11.0   |
| 26                  | 78                  | 96.2               | 21.2      | 15.3   |
| 32                  | 96                  | 118.0              | 31.5      | 23.2   |

### ALLOY STEEL LIFTING CHAIN

Heat treated for tensile strength, resistance to wear and shock absorbing capabilities.

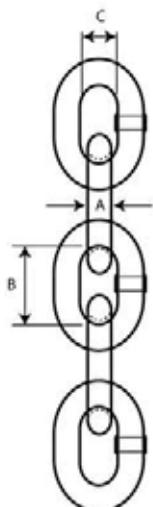
#### PROPERTIES

Working Load Limit (W.L.L) is the maximum load which chain or components are designed to sustain in lifting use. The mean stress at this load is 200n/mm<sup>2</sup> (M.P.A.) and is based on a factor of safety of 4:1.

Manufacturing Proof Force (M.P.F) is the force to which during manufacture chain or components are subjected. The mean stress at this load is 500n/mm<sup>2</sup> (MPA) which is 2.5 times the working load limit.

Minimum Breaking Load (M.B.L) is the minimum force which chain or components must withstand before failure. The mean stress at this load is 800n/mm<sup>2</sup> (MPA). The minimum elongation before failure is 20%.

## G I CHAIN



| Nominal Size (A) |     | Inside Length (B) |      | Inside Width (C) |      |
|------------------|-----|-------------------|------|------------------|------|
| inch             | mm  | inch              | mm   | inch             | mm   |
| 1/4              | 7   | 1.24              | 31.5 | 0.38             | 9.8  |
| 5/16             | 8.7 | 1.29              | 32.8 | 0.44             | 11.2 |
| 3/8              | 10  | 1.38              | 35   | 0.55             | 14   |
| 7/16             | 11  | 1.64              | 41.6 | 0.65             | 16.6 |
| 1/2              | 13  | 1.79              | 45.5 | 0.72             | 18.2 |
| 5/8              | 16  | 2.20              | 56   | 0.79             | 20   |

## RIGGING HARDWARE



Commercial  
GI D Shackle



Commercial  
GI Bow Shackle



GI Wire Rope Clip



Thimble



Hair Pin



Hair Pin with  
Eyelet



Carriage Bolt



Nut & Bolt



Eye Hook with Latch  
(Grade 70)



Clevis Grab Hook  
(Grade 70)



Eye Bolt



Eye Nut

## FALL PROTECTION

### CONNECTORS



Snap Hook



Snap hook  
with Eye



Carabiner  
Alloy Steel  
MBL : 22kN



Rebar Snap Hook  
Forged Steel  
MBL : 22kN

### LANYARDS



LY 01



LY 02



LY 03

### FULL BODY HARNESS



HS01/3C

Features:  
According to EN 361  
4 ways of Adjustments  
2 for the Shoulder  
2 for the Thighs  
3 D-Ring (1 Dorsal + 2 Frontal)  
Two colour Harness



HS02/1

Features:  
According to EN 361  
4 ways of Adjustments  
2 for the Shoulder  
2 for the Thighs  
2 D-Ring (1 Dorsal + 1 Frontal)  
Two colour Harness