

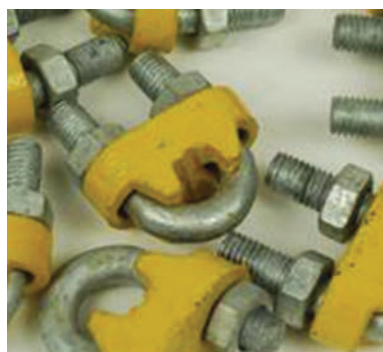


safety

FOR SAFE
WORKING LIVES

WIRE ROPE

2018 EDITION





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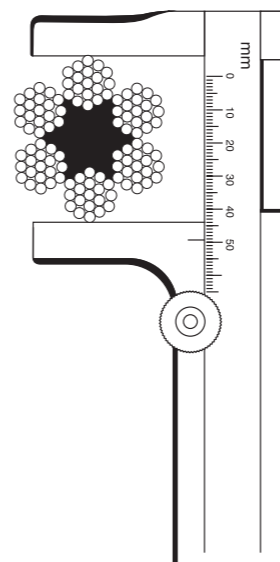
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WIRE ROPES OVERVIEW

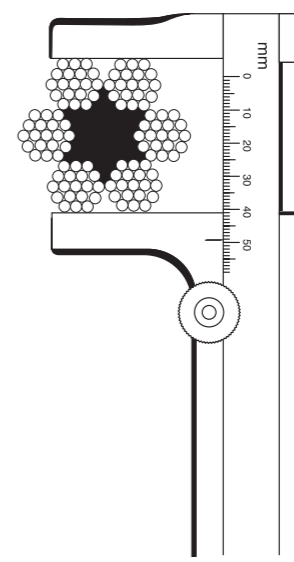
Wire Rope Size and Measurement

Wire ropes are described by their diameter, (mm), and are measured across the widest point, The Crown, as shown below.

Correct Way



Incorrect Way

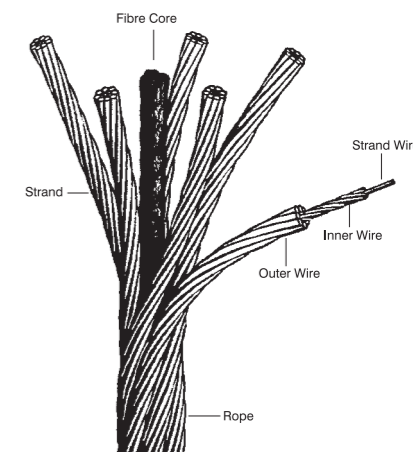


Construction

The size and number of wires in each strand, as well as the size and number of strands in the rope greatly affect the characteristics of the rope. In general, a large number of small-size wires and strands produce a flexible rope with good resistance to bending fatigue. The rope construction is also important for tensile load (static, live or shock) abrasive wear, crushing, corrosion and rotation.

The number of strands and wires will influence the flexibility, fatigue and wear resistance of any given wire rope. Rope selection is often a compromise. Generally the more load bearing wires in the rope the greater the flexibility, however the smaller the wires the less abrasion resistance. For example, the same nominal diameter 7 x 7 wire would be less flexible than a 7 x 19 wire, hence a large number of small size wire and strands produce a flexible rope with good resistance to bending fatigue wear. The construction of wire rope is defined by the number of outer strands (first number), and the number of wires within that strand (second number) and then by the arrangement of the wires in each strand (shown in brackets). The wires in each strand can be arranged in several ways, for example a 6 x 19 construction the 19 wires in each strand are laid 9 around 9 around 1 centre wire.

All wire rope is manufactured with three basic components: Wires, Strands and a Core.



WIRE ROPE

WIRE ROPE

Core

The core of a steel wire rope serves as a foundation for the strands, providing stability by keeping them in place throughout the life of the rope. Wire ropes can be supplied with either a fibre or wire core.

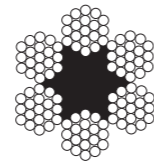
Grade

Wire rope can be manufactured in different steel grades, which directly affects the Minimum Breaking Force, (MBF). The higher the grade the higher the MBF. Common wire grades include: 1570, 1770, 1960 and 2070

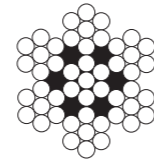
Finish

Wire Ropes can be supplied as Black (self-colour), Galvanised or Stainless Steel.

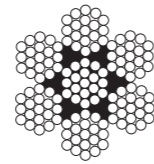
Wire rope is lubricated at the time of manufacture, to help reduce friction between wires and strands, and the friction between the rope and drum or sheave. In addition, the lubrication retards corrosion and inhibits possible rotting of the fibre core.



6 X 19 Fibre Core Wire



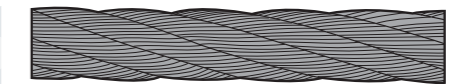
7 X 7 Wire Strand Core



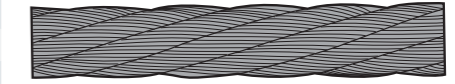
7 X 19 Wire Strand Core

Construction and Lays

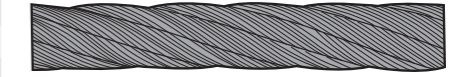
| | |
|--------|---------------------------------|
| RHOL | Right Hand Ordinary Lay |
| LHOL | Left Hand Ordinary Lay |
| RHLL | Right Hand Lang's Lay |
| LHLL | Left Hand Lang's Lay |
| Pref | Preformed |
| Post | Postformed |
| WRC | Wire Rope Core |
| WSC | Wire Strand Core |
| FC | Fibre Core |
| FW | Filler Wire Strand Construction |
| D or d | Diameter (in millimetres) |



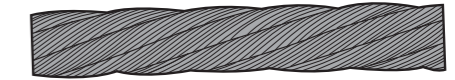
Right Hand Ordinary Lay



Left Hand Ordinary Lay



Right Hand Lang's Lay



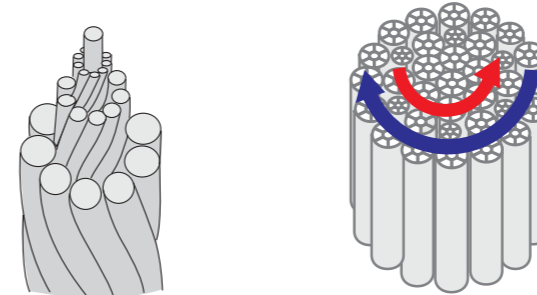
Left Hand Lang's Lay



Right Hand Alternate Lay

Rotating or Non-Rotating

Rotation resistant wire ropes are manufactured to resist rotation under load and are suitable for crane use and where long lengths are required.



Non-Rotating or Rotation Resistant Wire Rope – should be used when:

- Lifting an unguided load in single part
- Lifting an unguided load at great height with multi part reeving.

A regular rope (rotating) wire rope should be used when:

- Lifting a guided load on several falls at a small height (e.g. overhead crane)
- When lifting loads with right-hand and left-hand ropes in pairs.



Correct Spooling of Steel Wire Rope on Drum

It is imperative to correctly spool wire rope onto a drum. Improper spooling induces torque within the rope, which in turn reduces the life of the rope.

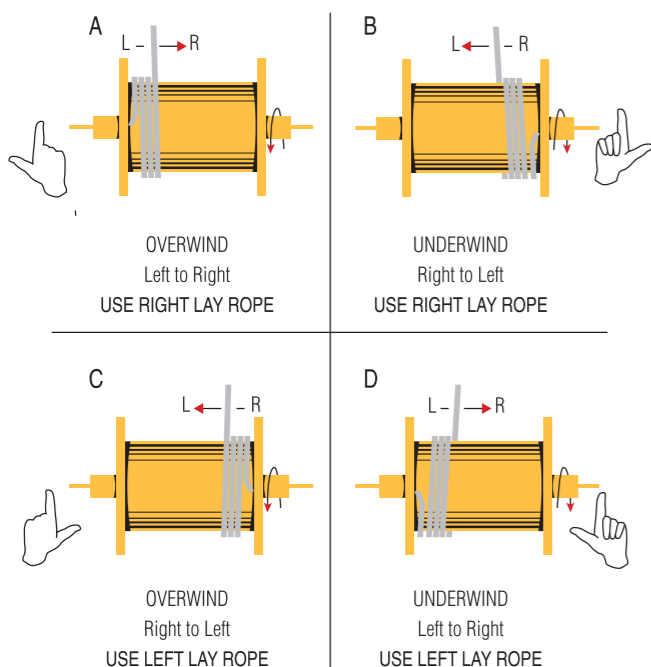
In any multi-layer spooling application it is important that when the rope is first installed on the drum, it is done so under

tension to avoid any slack on inner layers that can be crushed or nicked against the groove walls by outer layers.

In general, the tighter the line, the better the spooling, but the rope should be tensioned with at least 2% of the breaking load or 10% of the working load.

However, provision must also be made for the safety coefficient and the design of the cable. All subsequent spooling should also take place with the line under tension.

Please contact your local Robertsons' branch for further advice.

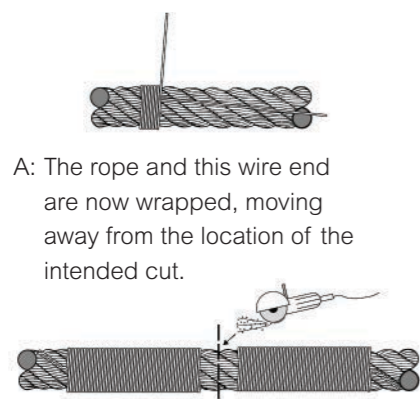


Steel Wire Rope Cutting Procedure

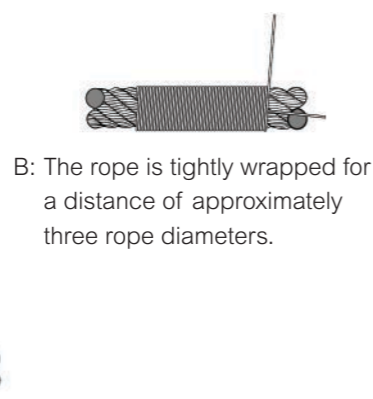
Hand cutters for cutting ropes up to 8mm in diameter are sufficient. Mechanical or hydraulic cutters will be required for wire ropes with larger diameters.

Careless cutting can result in the balance of tension in the rope being destroyed. In every case, each side of the cut must be correctly seized to prevent strand

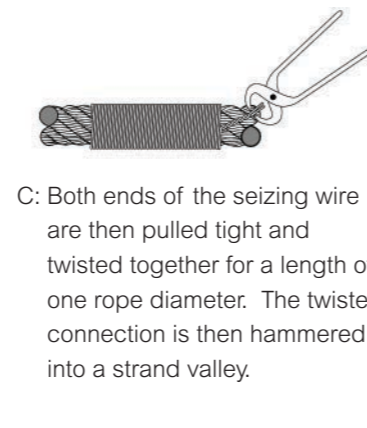
disturbance. Annealed wire must always be used for non-galvanised rope. For galvanised rope use soft, zinc coated wire.



A: The rope and this wire end are now wrapped, moving away from the location of the intended cut.



B: The rope is tightly wrapped for a distance of approximately three rope diameters.



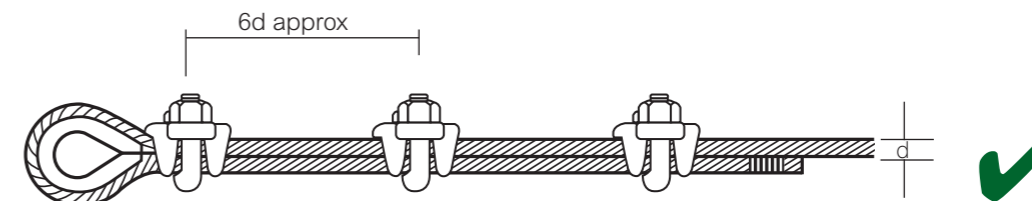
C: Both ends of the seizing wire are then pulled tight and twisted together for a length of one rope diameter. The twisted connection is then hammered into a strand valley.

D: After preparing the other side of the cut accordingly, the rope can now be cut.

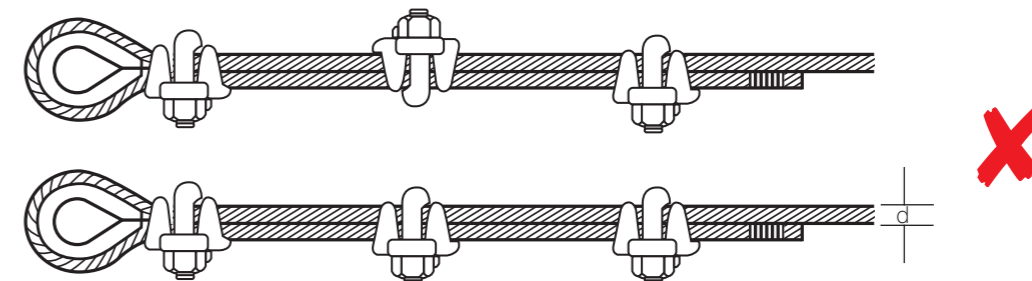
Clamping Wire Rope

To ensure complete safety, it is imperative that wire ropes are clamped correctly. The diagrams below are a guide only. Please refer to the relevant Australian Standards AS 2076 for further information.

The Right Way



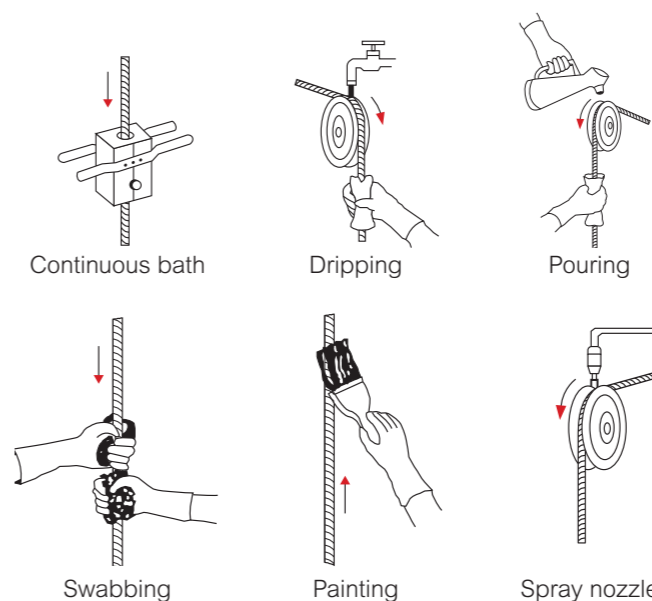
The Wrong Way



Note: d = diameter of rope

Lubricating Steel Wire Ropes

All steel wire ropes supplied by Robertsons are lubricated at the time of manufacture, however, periodic lubrication with good quality acid free and moisture free lubricant during use is required to ensure best performance. The following are accepted ways to lubricate wire ropes during use.



Storing Steel Wire Ropes

Ensure steel wire rope is stored in a weather-proof storage space. If wire rope is to be kept unused for a considerable amount of time, it must be protected from the elements. The ideal storage area is a dry, well-ventilated building or shed. Avoid closed, unheated, tightly sealed buildings or enclosures because condensation will form when warm, moist

outside (ambient) air envelopes the colder rope. Although wire rope is protected by a lubricant, this is not totally effective since condensation can still occur within the small sections between strands and wires, thereby causing corrosion problems. Ensure the reels are kept up off the ground, or are placed on a concrete floor.

Although the steel wire rope is lubricated at the time of manufacture, a suitable lubricant should be applied every three months. The reels containing the steel wire ropes should also be rotated 90 degrees every three months.

Correct Handling of Steel Wire Ropes

Incorrect handling of steel wire ropes can cause kinking or loops forming in the steel wire rope, causing permanent damage. Below is a summary of the correct way to handle steel wire rope:

- Reels should be mounted on jacks or placed on a swift (with a brake arrangement) and care taken to see that the reel rotates as the rope unwinds
- Ensure clearance for free rotation of the reel when the rope end is pulled and maintain continuous tension during haul off

- Over-winding should be avoided at all times to eliminate kinking
- Always prevent crossing the rope laps on the wheel.

Method of uncoiling small coil



Correct ✓



Incorrect ✗

Method of uncoiling large coils



Correct ✓



Incorrect ✗



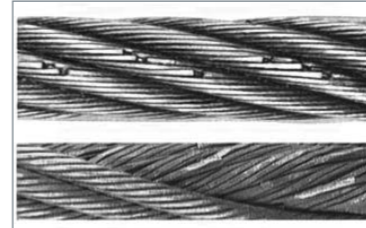
Correct ✓

Typical Steel Wire Rope Failures

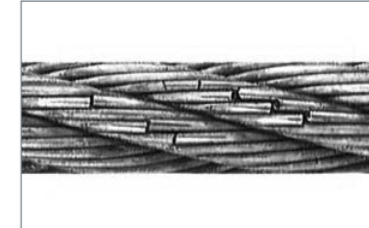
Steel wire rope is tough and durable, however eventually it will reach the end of its safe service life.

Below are some examples of typical damage and deterioration. Steel wire ropes should be inspected every 12 months.

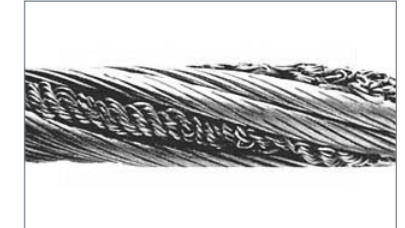
Fatigue Failure



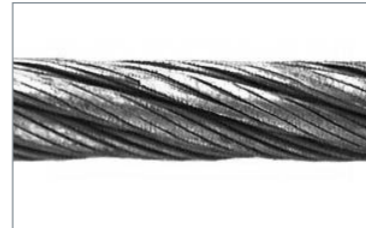
Thermal Damage



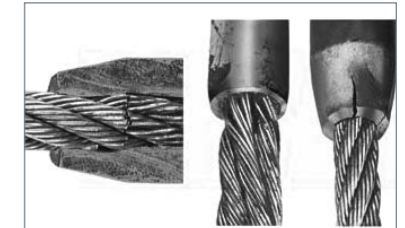
Shock Loading



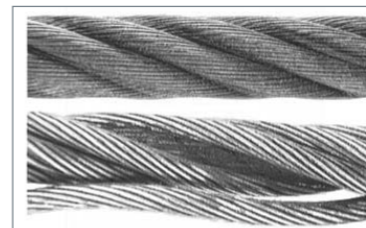
Abrasion



Birdcage (due to torsional unbalance) Termination Failure

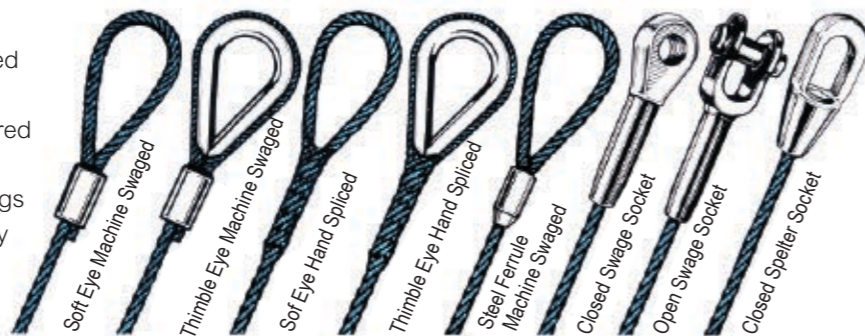


Corrosion (due to immersion in water)



Wire Rope Terminations

Hand spliced or machine swaged slings, with your choice of terminations, can be manufactured and tested (if required) on our premises at short notice. All slings and assemblies are permanently marked with safe working loads, based on a 5:1 factor of safety.



Machine Swaging

Aluminium Ferrules Sizes 2mm – 52mm.
 Copper Ferrules Sizes 2mm – 10mm
 Steel Ferrules Sizes 9mm – 75mm
 Swage Sockets Sizes 3mm – 52mm
 Hand Splicing from 2mm – 75mm dia

Typical Steel Wire Rope Description

13 mm 6/36 G1770 RHOL WRC PREF G2 - 200 mm soft eye each end
 - Machine spliced WLL 2.1 Tonne
 - 3.0 metres effective length

- | | |
|--------------------|---|
| (a) 13mm | Diameter, measured over crowns. |
| (b) 6/36 | Construction (six strands, each with thirty six wires). |
| (c) G1770 | G signifies "galvanised" wires. 1770 signifies tensile grade of wires (in Megapascals). |
| (d) RHOL | Right Hand Ordinary Lay (strands laid up to the RIGHT, wires in each strand to the LEFT). |
| (e) WRC | Wire Rope Core (approx 7.5% stronger and 11% heavier than FC). |
| (f) PREF | Strands shaped (helix formed) before laying up into a rope. |
| (g) G2 | Lubricant (Petroleum Jelly). |
| (h) 200mm | Eye size. |
| (i) Machine Splice | Steel, copper or aluminium alloy ferrule pressed around the looped end of wire rope. |
| (j) WLL | Maximum load that can be lifted on a particular service. |
| (k) Length | In metres, measured from bearing points of eyes. |



WIRE ROPE

6 x 24 Construction, commonly used for general purpose use

| Product Code | Dia (mm) | Construction | Grade | Finish | Core | Lay | MBF (kN) | Approx. Mass (kg/100m) | UOM | Metre Per Reel |
|--------------|----------|--------------|-------|------------|-------|------|----------|------------------------|-------|----------------|
| 711308 | 8 | 6x24 | 1570 | Galvanised | Fibre | RHOL | 28 | 20.4 | Metre | 1000 |
| 711309 | 9 | 6x24 | 1570 | Galvanised | Fibre | RHOL | 35.6 | 25.8 | Metre | 1000 |
| 711310 | 10 | 6x24 | 1570 | Galvanised | Fibre | RHOL | 44 | 31.8 | Metre | 1000 |
| 711311 | 11 | 6x24 | 1570 | Galvanised | Fibre | RHOL | 53 | 38.5 | Metre | 1000 |
| 711312 | 12 | 6x24 | 1570 | Galvanised | Fibre | RHOL | 63 | 45.8 | Metre | 1000 |
| 711313 | 13 | 6x24 | 1570 | Galvanised | Fibre | RHOL | 74 | 53.8 | Metre | 1000 |
| 711314-500 | 14 | 6x24 | 1570 | Galvanised | Fibre | RHOL | 86 | 62.4 | Metre | 500 |
| 711316 | 16 | 6x24 | 1570 | Galvanised | Fibre | RHOL | 113 | 81.5 | Metre | 1000 |
| 711318-500 | 18 | 6x24 | 1570 | Galvanised | Fibre | RHOL | 143 | 103 | Metre | 500 |
| 711320-500 | 20 | 6x24 | 1570 | Galvanised | Fibre | RHOL | 176 | 127 | Metre | 500 |
| 711322-500 | 22 | 6x24 | 1570 | Galvanised | Fibre | RHOL | 213 | 154 | Metre | 500 |
| 711324-500 | 24 | 6x24 | 1570 | Galvanised | Fibre | RHOL | 253 | 183 | Metre | 500 |
| 711332 | 32 | 6x24 | 1570 | Galvanised | Fibre | RHOL | 450 | 326 | Metre | 500 |

*Cut lengths available on request

6 x 36 Construction, commonly used for overhead and mobile crane hoist ropes

| Product Code | Dia (mm) | Construction | Grade | Finish | Core | Lay | MBF (kN) | Approx. Mass (kg/100m) | UOM | Metre Per Reel |
|--------------|----------|--------------|-------|------------|------|------|----------|------------------------|-------|----------------|
| 713410 | 10 | 6x36 | 1770 | Galvanised | Wire | RHOL | 63 | 41.8 | Metre | 1000 |
| 713412 | 12 | 6x36 | 1770 | Galvanised | Wire | RHOL | 90 | 60.2 | Metre | 1000 |
| 713413 | 13 | 6x36 | 1770 | Galvanised | Wire | RHOL | 107 | 70.7 | Metre | 1000 |
| 713414-500 | 14 | 6x36 | 1770 | Galvanised | Wire | RHOL | 124 | 82 | Metre | 500 |
| 713416 | 16 | 6x36 | 1770 | Galvanised | Wire | RHOL | 161 | 107 | Metre | 1000 |
| 713418 | 18 | 6x36 | 1770 | Galvanised | Wire | RHOL | 204 | 135 | Metre | 1000 |
| 713420-500 | 20 | 6x36 | 1770 | Galvanised | Wire | RHOL | 252 | 167 | Metre | 500 |
| 713422-500 | 22 | 6x36 | 1770 | Galvanised | Wire | RHOL | 304 | 202 | Metre | 500 |
| 713424-500 | 24 | 6x36 | 1770 | Galvanised | Wire | RHOL | 363 | 241 | Metre | 500 |
| 713426-500 | 26 | 6x36 | 1770 | Galvanised | Wire | RHOL | 426 | 283 | Metre | 500 |
| 713428-500 | 28 | 6x36 | 1770 | Galvanised | Wire | RHOL | 493 | 328 | Metre | 500 |
| 713432-500 | 32 | 6x36 | 1770 | Galvanised | Wire | RHOL | 644 | 428 | Metre | 500 |
| 713436-500 | 36 | 6x36 | 1770 | Galvanised | Wire | RHOL | 816 | 542 | Metre | 500 |
| 713438-250 | 38 | 6x36 | 1770 | Galvanised | Wire | RHOL | 911 | 604 | Metre | 250 |
| 713440-250 | 40 | 6x36 | 1770 | Galvanised | Wire | RHOL | 1009 | 669 | Metre | 250 |
| 713444-250 | 44 | 6x36 | 1770 | Galvanised | Wire | RHOL | 1220 | 810 | Metre | 250 |
| 713452 | 52 | 6x36 | 1770 | Galvanised | Wire | RHOL | 1700 | 1110 | Metre | 500 |

*Cut lengths available on request

6 x 7 Construction, commonly used for guying and catenary wires. Larger sizes are used as ferry, (punt), ropes

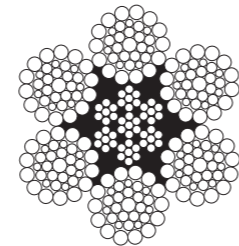
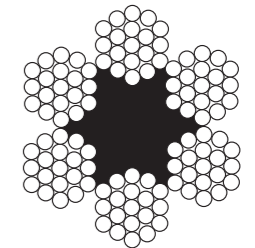
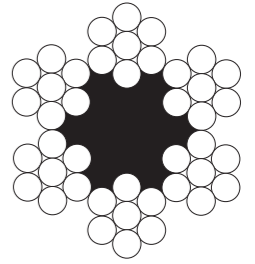
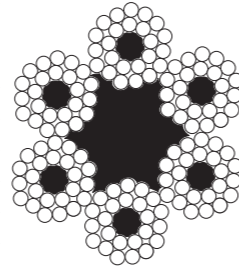
| Product Code | Dia (mm) | Construction | Grade | Finish | Core | Lay | MBF (kN) | Approx. Mass (kg/100m) | UOM | Metre Per Reel |
|--------------|----------|--------------|-------|------------|-------|------|----------|------------------------|-------|----------------|
| 707302 | 2 | 6x7 | 1570 | Galvanised | Fibre | RHOL | 2.1 | 1.4 | Metre | 1000 |
| 707302A | 2.5 | 6x7 | 1570 | Galvanised | Fibre | RHOL | 3.2 | 2.65 | Metre | 1000 |
| 707303 | 3 | 6x7 | 1570 | Galvanised | Fibre | RHOL | 4.7 | 3.22 | Metre | 1000 |
| 707304 | 4 | 6x7 | 1570 | Galvanised | Fibre | RHOL | 8.4 | 5.5 | Metre | 1000 |
| 707305 | 5 | 6x7 | 1570 | Galvanised | Fibre | RHOL | 13.1 | 8.6 | Metre | 1000 |
| 707306 | 6 | 6x7 | 1570 | Galvanised | Fibre | RHOL | 18.8 | 12.4 | Metre | 1000 |

*Cut lengths available on request

6 x 19 Construction, commonly used for general purpose winch and marine applications

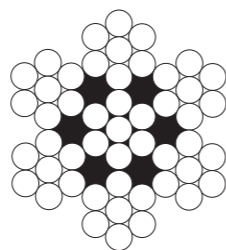
| Product Code | Dia (mm) | Construction | Grade | Finish | Core | Lay | MBF (kN) | Approx. Mass (kg/100m) | UOM | Metre Per Reel |
|--------------|----------|--------------|-------|------------|-------|------|----------|------------------------|-------|----------------|
| 709303 | 3 | 6x19 | 1570 | Galvanised | Fibre | RHOL | 4.3 | 3.2 | Metre | 1000 |
| 709303A | 3.5 | 6x19 | 1570 | Galvanised | Fibre | RHOL | 5.8 | 4.3 | Metre | 1000 |
| 709304 | 4 | 6x19 | 1570 | Galvanised | Fibre | RHOL | 7.7 | 5.8 | Metre | 1000 |
| 709305 | 5 | 6x19 | 1570 | Galvanised | Fibre | RHOL | 12 | 8.8 | Metre | 1000 |
| 709306 | 6 | 6x19 | 1570 | Galvanised | Fibre | RHOL | 17.6 | 12.4 | Metre | 1000 |
| 709308 | 8 | 6x19 | 1570 | Galvanised | Fibre | RHOL | 30.8 | 22.5 | Metre | 1000 |
| 709309 | 9 | 6x19 | 1570 | Galvanised | Fibre | RHOL | 39 | 28.4 | Metre | 1000 |
| 709310 | 10 | 6x19 | 1570 | Galvanised | Fibre | RHOL | 48.2 | 35.1 | Metre | 1000 |
| 709312 | 12 | 6x19 | 1570 | Galvanised | Fibre | RHOL | 69.4 | 50.5 | Metre | 1000 |

*Cut lengths available on request



7 x 7 Construction, commonly used for fixed guy ropes and catenary wires

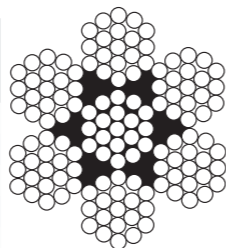
| Product Code | Dia (mm) | Construction | Grade | Finish | Core | Lay | MBF (kN) | Approx. Mass (kg/100m) | UOM | Metre Per Reel |
|--------------|----------|--------------|-------|------------|------|------|----------|------------------------|-------|----------------|
| 708305 | 5 | 7X7 | 2070 | Galvanised | Wire | RHOL | 18.9 | 10.4 | Metre | 1000 |
| 708306 | 6 | 7X7 | 2070 | Galvanised | Wire | RHOL | 27.2 | 14.3 | Metre | 1000 |
| 708307 | 7 | 7X7 | 2070 | Galvanised | Wire | RHOL | 37.2 | 20.2 | Metre | 1000 |
| 708308 | 8 | 7X7 | 2070 | Galvanised | Wire | RHOL | 47.5 | 25.66 | Metre | 1000 |
| 708309 | 9 | 7X7 | 2070 | Galvanised | Wire | RHOL | 59.3 | 32 | Metre | 1000 |
| 708310 | 10 | 7X7 | 2070 | Galvanised | Wire | RHOL | 73 | 39.4 | Metre | 1000 |



*Cut lengths available on request

7 x 19 Construction, commonly used for general purpose winch and marine applications

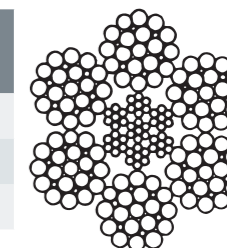
| Product Code | Dia (mm) | Construction | Grade | Finish | Core | Lay | MBF (kN) | Approx. Mass (kg/100m) | UOM | Metre Per Reel |
|--------------|----------|--------------|-------|------------|------|------|----------|------------------------|-------|----------------|
| 712403 | 3.2 | 7x19 | 2070 | Galvanised | Wire | RHOL | 7.1 | 4.4 | Metre | 1000 |
| 712404 | 4 | 7x19 | 2070 | Galvanised | Wire | RHOL | 11.2 | 6.22 | Metre | 1000 |
| 712405 | 5 | 7x19 | 2070 | Galvanised | Wire | RHOL | 17.2 | 8.6 | Metre | 1000 |
| 712406 | 6 | 7x19 | 2070 | Galvanised | Wire | RHOL | 25 | 12.4 | Metre | 1000 |
| 712408 | 8 | 7x19 | 2070 | Galvanised | Wire | RHOL | 43.5 | 24.4 | Metre | 1000 |
| 712410 | 10 | 7x19 | 2070 | Galvanised | Wire | RHOL | 64.4 | 46.1 | Metre | 1000 |



*Cut lengths available on request

TIRFOR Ropes, suitable for Tirfor and similar wire rope pullers also used on multi-layered winches

| Product Code | Dia (mm) | Construction | Grade | Finish | Core | Lay | MBF (kN) | Approx. Mass (kg/100m) | UOM | Metre Per Reel |
|--------------|----------|--------------|-------|------------|------|------|----------|------------------------|-------|----------------|
| 712408 | 8 | 6x19 | 2070 | Galvanised | Wire | ROHL | 47 | 25.5 | Metre | 1000 |
| 712411 | 11 | 6x25 | 2070 | Galvanised | Wire | RHOL | 89 | 50.9 | Metre | 1000 |
| 712416-500 | 16 | 6x25 | 2070 | Galvanised | Wire | RHOL | 188 | 106 | Metre | 500 |

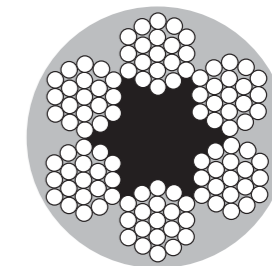


*Cut lengths available on request

6 x 19 Construction PVC Coated, commonly used for balustrade rails and marine rigging applications

| Product Code | Wire Dia (mm) | PVC/ Outside Dia (mm) | Construction | Grade | Wire Finish | PVC | Core | Lay | MBF (kN) | Approx. Mass (kg/100m) | UOM | Metre Per Reel |
|--------------|---------------|-----------------------|--------------|-------|-------------|------|-------|------|----------|------------------------|-------|----------------|
| 706030 | 3 | 5 | 6x19 | 1570 | Galvanised | Blue | Fibre | RHOL | 4.3 | 3.16 | Metre | 1000 |
| 706030A | 3.5 | 5.5 | 6x19 | 1570 | Galvanised | Blue | Fibre | RHOL | 5.8 | 4.2 | Metre | 1000 |
| 706040 | 4 | 6 | 6x19 | 1570 | Galvanised | Blue | Fibre | RHOL | 7.7 | 5.5 | Metre | 1000 |
| 706050 | 5 | 7 | 6x19 | 1570 | Galvanised | Blue | Fibre | RHOL | 12 | 8.6 | Metre | 1000 |
| 706060 | 6 | 8 | 6x19 | 1570 | Galvanised | Blue | Fibre | RHOL | 17.6 | 12.4 | Metre | 1000 |
| 706080 | 8 | 10 | 6x19 | 1570 | Galvanised | Blue | Fibre | RHOL | 30.8 | 22.1 | Metre | 1000 |
| 706100 | 10 | 12 | 6x19 | 1570 | Galvanised | Blue | Fibre | RHOL | 48.2 | 34.6 | Metre | 1000 |

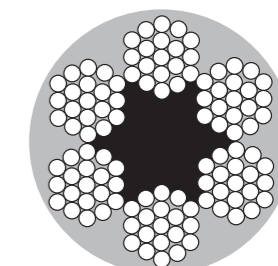
*Cut lengths available on request



6 x 19 Construction Red PVC Coated, commonly used for safety lines on conveyor systems

| Product Code | Wire Dia (mm) | PVC/ Outside Dia (mm) | Construction | Grade | Wire Finish | PVC | Core | Lay | MBF (kN) | Approx. Mass (kg/100m) | UOM | Metre Per Reel |
|--------------|---------------|-----------------------|--------------|-------|-------------|-----|-------|------|----------|------------------------|-------|----------------|
| 706030AR | 3.5 | 5.5 | 6x19 | 1570 | Galvanised | Red | Fibre | RHOL | 5.8 | 4.2 | Metre | 1000 |
| 706050R | 5 | 7 | 6x19 | 1570 | Galvanised | Red | Fibre | RHOL | 12 | 8.6 | Metre | 1000 |

*Cut lengths available on request



BRIDON CRANE WIRE ROPE

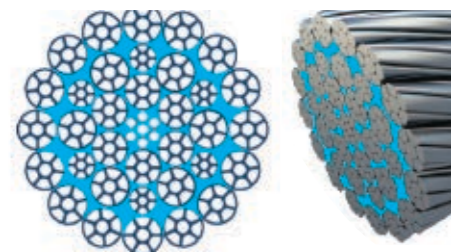
Endurance Dyform® 34LR

- Low rotation Dyform
- Recommended for high lifting operations
- Reduced rope sheave wear
- Accurate diameter, recommended for multi-layer coiling
- Long service life
- Crush resistant
- Reduced down time
- Suitable for single-part and multi-part reeving.



| Diameter (mm) | Approx. nominal length mass (kg/m) | Minimum breaking force (Fmin) EIPS/1960 grade | | Axial stiffness @20% load (MN) | Torque generated @20% load | | Metallic cross section (mm ²) |
|------------------|---------------------------------------|--|------|--------------------------------------|-------------------------------|----------------|--|
| | | (kN) | (t) | | Ordinary (Nm) | Lang's (Nm) | |
| Dyform 34x7 | | | | | | | |
| 10 | 0.50 | 92.1 | 9.39 | 5.8 | 1.5 | 3.3 | 58 |
| 11 | 0.61 | 111 | 11.4 | 7.0 | 2.0 | 4.4 | 70 |
| 12 | 0.72 | 133 | 13.5 | 8.3 | 2.5 | 5.7 | 84 |
| 13 | 0.85 | 156 | 15.9 | 9.7 | 3.2 | 7.3 | 98 |
| 14 | 0.98 | 181 | 18.4 | 11 | 4.0 | 9.1 | 114 |
| 15 | 1.13 | 207 | 21.1 | 13 | 5.0 | 11 | 131 |
| 16 | 1.28 | 236 | 24.0 | 15 | 6.0 | 14 | 149 |
| 17 | 1.45 | 266 | 27.1 | 17 | 7.2 | 16 | 168 |
| 18 | 1.62 | 298 | 30.4 | 19 | 8.6 | 19 | 188 |
| 19 | 1.81 | 333 | 33.9 | 21 | 10 | 23 | 210 |
| 20 | 2.00 | 368 | 37.6 | 23 | 12 | 27 | 232 |
| 21 | 2.21 | 406 | 41.4 | 25 | 14 | 31 | 256 |
| 22 | 2.42 | 446 | 45.4 | 28 | 16 | 35 | 281 |
| 23 | 2.65 | 487 | 49.7 | 30 | 18 | 40 | 307 |
| 24 | 2.88 | 531 | 54.1 | 33 | 20 | 46 | 335 |
| 25 | 3.13 | 576 | 58.7 | 36 | 23 | 52 | 363 |
| 26 | 3.38 | 623 | 63.5 | 39 | 26 | 58 | 393 |
| 27 | 3.65 | 672 | 68.5 | 42 | 29 | 65 | 424 |
| 28 | 3.92 | 722 | 73.6 | 45 | 32 | 73 | 456 |
| 29 | 4.21 | 775 | 79.0 | 48 | 36 | 81 | 489 |
| 30 | 4.50 | 829 | 84.5 | 52 | 40 | 90 | 523 |
| 32 | 5.12 | 939 | 95.7 | 59 | 48 | 108 | 595 |
| 34 | 5.78 | 1060 | 108 | 67 | 58 | 130 | 672 |
| 35 | 6.13 | 1124 | 115 | 70 | 63 | 142 | 712 |
| 36 | 6.48 | 1189 | 121 | 75 | 68 | 154 | 753 |
| 38 | 7.22 | 1325 | 135 | 83 | 81 | 181 | 839 |
| 40 | 8.00 | 1468 | 150 | 92 | 94 | 211 | 930 |

*Not all sizes kept in stock.

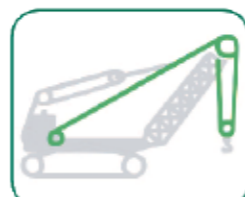


Note: Plastic impregnated (PI) options may be ordered (subject to availability).

Dockside Crane Ropes



Mobile Crane Ropes



Overhead Crane Ropes



Piling Crane Ropes



Tower Crane Ropes



The Endurance Dyform 34LR is used as the main hoist rope for these applications.

Endurance 50DB

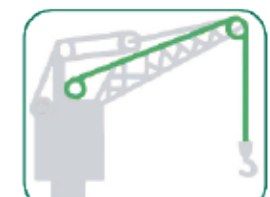
- Highest breaking force of all conventional low rotation and rotation resistant ropes
- Excellent resistance to rotation
- Unique strand and rope construction
- Lubricated during manufacture with an exclusive Bridon product
- Excellent wear characteristics
- Good flexibility
- Suitable for single-part and multi-part reeving.



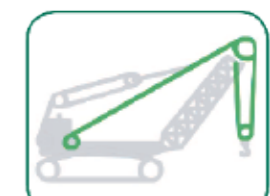
| Diameter (mm) | Approx. nominal length mass (kg/m) | Minimum breaking force (Fmin) EIPS/1960 grade | | Axial stiffness @20% load (MN) | Torque generated @20% load | | Metallic cross section (mm ²) |
|------------------|---------------------------------------|--|------|--------------------------------------|-------------------------------|----------------|--|
| | | (kN) | (t) | | Ordinary (Nm) | Lang's (Nm) | |
| 8 | 0.27 | 49.6 | 5.06 | 3.1 | n/a | 2.9 | 32 |
| 9 | 0.35 | 62.8 | 6.41 | 3.9 | n/a | 4.1 | 40 |
| 10 | 0.43 | 77.6 | 7.91 | 4.8 | n/a | 5.6 | 40 |
| 11 | 0.52 | 93.9 | 9.6 | 5.8 | n/a | 7.4 | 60 |
| 12 | 0.61 | 112 | 11.4 | 6.9 | n/a | 10 | 71 |
| 13 | 0.72 | 131 | 13.4 | 8.1 | n/a | 12 | 84 |
| 14 | 0.84 | 152 | 15.5 | 9.4 | n/a | 15 | 97 |
| 15 | 0.96 | 175 | 17.8 | 11 | n/a | 19 | 111 |
| 16 | 1.09 | 199 | 20.2 | 12 | n/a | 23 | 127 |
| 17 | 1.23 | 224 | 22.9 | 14 | n/a | 27 | 143 |
| 18 | 1.38 | 251 | 25.6 | 16 | n/a | 33 | 160 |
| 19 | 1.54 | 280 | 28.5 | 17 | n/a | 38 | 179 |
| 20 | 1.71 | 310 | 31.6 | 19 | n/a | 45 | 198 |
| 21 | 1.88 | 342 | 34.9 | 21 | n/a | 52 | 218 |
| 22 | 2.07 | 375 | 38.3 | 23 | n/a | 59 | 239 |

*Not all sizes kept in stock.

Dockside Crane Ropes



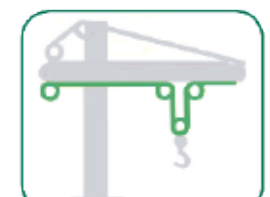
Mobile Crane Ropes



Overhead Crane Ropes



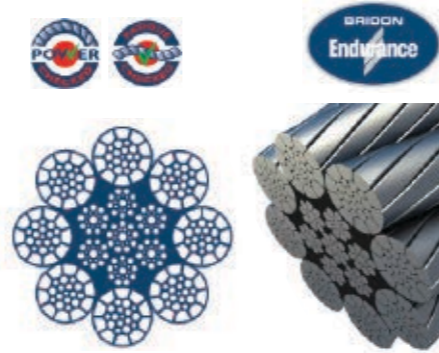
Tower Crane Ropes



The Endurance 50DB is used as the main hoist rope for these applications.

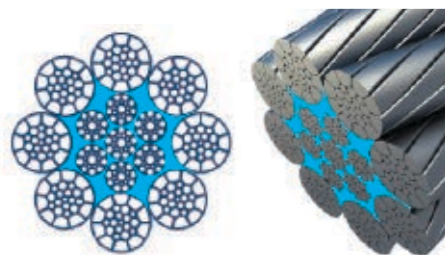
Endurance Dyform® 8

- Excellent service life
- High breaking force
- Lower downtime
- Cut resistant Dyform strands
- Flexible eight strand construction
- High temperature lubricant
- Reduced stretch
- Consistently high quality
- Reduced lifetime costs.



| Diameter (mm) | Approx. nominal length mass (kg/m) | Minimum breaking force (Fmin) EIPS/1960 grade | | Axial stiffness @20% load (MN) | Torque generated @20% load | | Metallic cross section (mm²) |
|----------------------|------------------------------------|---|-------|--------------------------------|----------------------------|-------------|------------------------------|
| | | (kN) | (t) | | Ordinary (Nm) | Lang's (Nm) | |
| Dyform 8x19S | | | | | | | |
| 10 | 0.47 | 88.2 | 8.99 | 5.3 | 12 | 16 | 53 |
| 11 | 0.57 | 107 | 10.9 | 6.5 | 16 | 21 | 65 |
| 12 | 0.68 | 127 | 12.9 | 7.7 | 21 | 27 | 77 |
| 13 | 0.80 | 149 | 15.2 | 9.0 | 27 | 35 | 90 |
| 14 | 0.92 | 173 | 17.6 | 10 | 34 | 44 | 105 |
| 15 | 1.06 | 198 | 20.2 | 12 | 42 | 54 | 120 |
| 16 | 1.20 | 226 | 23.0 | 14 | 51 | 65 | 137 |
| 17 | 1.36 | 255 | 26.0 | 15 | 61 | 78 | 154 |
| Dyform 8x26WS | | | | | | | |
| 18 | 1.52 | 286 | 29.1 | 17 | 72 | 93 | 173 |
| 19 | 1.70 | 318 | 32.5 | 19 | 85 | 109 | 193 |
| 20 | 1.88 | 353 | 36.0 | 21 | 99 | 127 | 214 |
| 22 | 2.28 | 427 | 43.5 | 26 | 131 | 169 | 258 |
| 24 | 2.71 | 508 | 51.8 | 31 | 171 | 219 | 308 |
| 26 | 3.18 | 596 | 60.8 | 36 | 217 | 279 | 361 |
| 28 | 3.69 | 691 | 70.5 | 42 | 271 | 349 | 419 |
| 30 | 4.23 | 794 | 80.9 | 48 | 333 | 429 | 481 |
| 32 | 4.82 | 903 | 92.1 | 55 | 405 | 520 | 547 |
| 34 | 5.44 | 1020 | 103.9 | 62 | 485 | 624 | 617 |
| Dyform 8x36WS | | | | | | | |
| 36 | 6.10 | 1143 | 116.5 | 69 | 576 | 741 | 692 |
| 38 | 6.79 | 1274 | 129.8 | 77 | 678 | 871 | 771 |
| 40 | 7.53 | 1411 | 143.9 | 85 | 790 | 1016 | 854 |
| 42 | 8.30 | 1556 | 158.6 | 94 | 915 | 1176 | 942 |
| 44 | 9.11 | 1708 | 174.1 | 103 | 1052 | 1352 | 1034 |
| 46 | 9.95 | 1866 | 190.2 | 113 | 1202 | 1545 | 1130 |
| 48 | 10.8 | 2032 | 207.1 | 123 | 1366 | 1756 | 1230 |
| 50 | 11.8 | 2205 | 224.8 | 134 | 1544 | 1985 | 1335 |

*Not all sizes kept in stock.



Note: Plastic impregnated (PI) options may be ordered (subject to availability).

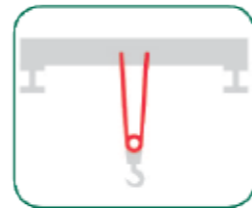
Dockside Crane Ropes



Mobile Crane Ropes



Overhead Crane Ropes



Container Crane Ropes



The Endurance Dyform 8 is used as the boom hoist rope for these applications.

Endurance Dyform® 6

- Exceptional service life
- Robust crush resistant Dyform construction
- Accurate diameter
- Long life, reduced lifetime costs
- Suitable for multi-layer spooling.



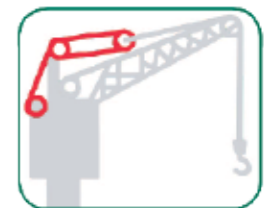
| Diameter (mm) | Approx. nominal length mass (kg/m) | Minimum breaking force (Fmin) EIPS/1960 grade | | Axial stiffness @20% load (MN) | Torque generated @20% load | | Metallic cross section (mm²) |
|----------------------|------------------------------------|---|------|--------------------------------|----------------------------|-------------|------------------------------|
| | | (kN) | (t) | | Ordinary (Nm) | Lang's (Nm) | |
| Dyform 6x26WS | | | | | | | |
| 8 | 0.29 | 53.0 | 5.40 | 3.5 | 5.8 | 9.2 | 34 |
| 9 | 0.37 | 67.0 | 6.83 | 4.4 | 8.3 | 13 | 43 |
| 10 | 0.46 | 82.8 | 8.44 | 5.4 | 11 | 18 | 53 |
| 11 | 0.56 | 100 | 10.2 | 6.6 | 15 | 24 | 64 |
| 12 | 0.66 | 119 | 12.1 | 7.8 | 20 | 31 | 76 |
| 13 | 0.78 | 140 | 14.3 | 9.2 | 25 | 40 | 89 |
| 14 | 0.90 | 162 | 16.5 | 11 | 31 | 50 | 103 |
| 15 | 1.03 | 186 | 19.0 | 12 | 39 | 61 | 118 |
| Dyform 6x36WS | | | | | | | |
| 16 | 1.17 | 212 | 21.6 | 14 | 47 | 74 | 135 |
| 17 | 1.33 | 239 | 24.4 | 16 | 56 | 89 | 152 |
| 18 | 1.49 | 268 | 27.3 | 18 | 67 | 105 | 170 |
| 19 | 1.66 | 299 | 30.5 | 20 | 78 | 124 | 190 |
| 20 | 1.84 | 331 | 33.7 | 22 | 91 | 144 | 210 |
| 22 | 2.22 | 401 | 40.8 | 26 | 122 | 192 | 255 |
| 24 | 2.64 | 477 | 48.6 | 31 | 158 | 249 | 303 |
| 26 | 3.10 | 559 | 57.0 | 37 | 201 | 317 | 356 |
| 28 | 3.60 | 649 | 66.1 | 42 | 251 | 396 | 413 |
| 30 | 4.13 | 745 | 75.9 | 49 | 308 | 487 | 474 |
| 32 | 4.70 | 847 | 86.4 | 56 | 374 | 591 | 539 |
| 34 | 5.30 | 957 | 97.5 | 63 | 449 | 709 | 608 |
| 36 | 5.95 | 1073 | 109 | 70 | 533 | 842 | 682 |
| 38 | 6.62 | 1195 | 122 | 78 | 627 | 990 | 760 |
| 40 | 7.34 | 1324 | 135 | 87 | 731 | 1155 | 842 |
| 42 | 8.09 | 1460 | 149 | 96 | 846 | 1337 | 928 |
| 44 | 8.88 | 1602 | 163 | 105 | 973 | 1537 | 1019 |
| 46 | 9.71 | 1751 | 179 | 115 | 1112 | 1756 | 1113 |
| 48 | 10.6 | 1907 | 194 | 125 | 1263 | 1995 | 1212 |
| 50 | 11.5 | 2069 | 211 | 136 | 1428 | 2255 | 1316 |

*Not all sizes kept in stock.



Note: Plastic impregnated (PI) options may be ordered (subject to availability).

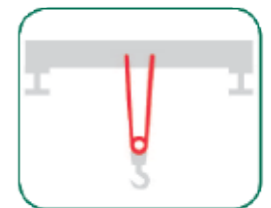
Dockside Crane Ropes



Mobile Crane Ropes



Overhead Crane Ropes



Tower Crane Ropes



Piling Crane Ropes

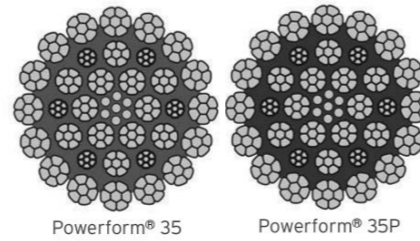


The Endurance Dyform 6 is used as the boom hoist rope for these applications.

USHA MARTIN CRANE WIRE ROPE

POWERFORM® 35/35P

- Superior strength and resistance to rotation
- Suitable for use on single part and multi-part hoist reeving systems
- High fatigue life due to unique compaction process
- A sample of rope from each production batch is tested to destruction
- Increased resistance to crushing. Recommended for multi-layer spooling operations
- Increased abrasion resistance
- Optional plastic impregnation. (P) signifies full plastic impregnation of the Steel Core
- Fully lubricated in manufacturing.



| Nom. Rope Dia. (mm) | Nom. Rope Dia. (in) | Approx. Mass (kg/100m) | Minimum Breaking Force Galvanised & Ungalvanised Rope Grade | | | |
|------------------------|------------------------|---------------------------|---|----------|------------------------|----------|
| | | | 1960 N/mm ² | | 2160 N/mm ² | |
| | | | (kN) | (tonnes) | (kN) | (tonnes) |
| 13 | ½ | 81.1 | 148.0 | 15.1 | 160.0 | 16.3 |
| 14 | | 85.0 | 155.0 | 15.8 | 167.0 | 17.0 |
| 16 | ⅝ | 98.6 | 180.0 | 18.3 | 192.0 | 19.6 |
| 18 | | 129.0 | 223.0 | 23.8 | 252.0 | 25.7 |
| 19 | ¾ | 163.0 | 300.0 | 30.6 | 321.0 | 32.7 |
| 20 | | 182.0 | 331.0 | 33.7 | 358.0 | 36.0 |
| 21 | | 201.0 | 372.0 | 37.9 | 399.0 | 40.7 |
| 22 | | 222.0 | 402.0 | 41.0 | 434.0 | 44.2 |
| 24 | ⅞ | 243.0 | 444.0 | 45.3 | 484.0 | 49.3 |
| 26 | | 249.0 | 453.0 | 46.2 | 490.0 | 49.9 |
| 28 | 1 | 290.0 | 531.0 | 54.1 | 572.0 | 58.3 |
| 30 | | 325.0 | 591.0 | 60.2 | 640.0 | 65.2 |
| 32 | 1-¼ | 340.0 | 621.0 | 63.3 | 661.0 | 67.4 |
| 35 | | 394.0 | 720.0 | 73.4 | 788.0 | 80.3 |
| 36 | 1-⅝ | 411.0 | 748.0 | 76.2 | 810.0 | 82.6 |
| 38 | | 453.0 | 827.0 | 84.3 | 904.0 | 92.2 |
| 40 | 1-¾ | 515.0 | 944.0 | 96.2 | 1035.0 | 106.0 |
| 42 | | 616.0 | 1125.0 | 115.0 | 1216.0 | 124.0 |
| 44 | 1-⅞ | 652.0 | 1185.0 | 121.0 | 1286.0 | 131.0 |
| 46 | | 726.0 | 1326.0 | 135.0 | 1437.0 | 146.0 |
| 48 | | 805.0 | 1477.0 | 151.0 | 1588.0 | 162.0 |
| 50 | 1-⅞ | 887.0 | 1485.0 | 151.0 | | |
| 52 | | 974.0 | 1618.0 | 165.0 | | |
| | | 994.0 | 1646.0 | 168.0 | | |
| | | 1064.0 | 1765.0 | 180.0 | | |
| | | 1159.0 | 1935.0 | 197.0 | | |
| | | 1258.0 | 2078.0 | 212.0 | | |
| | 2 | 1298.0 | 2150.0 | 219.0 | | |
| | | 1360.0 | 2256.0 | 230.0 | | |

*Mass per unit length of POWERFORM 35P increases by approx. 3%.

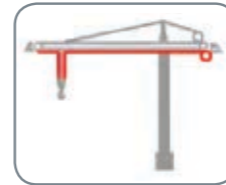
Note: • POWERFORM 35P is available on special request and prior confirmation.
• Rope sizes and Breaking Force not shown in the standard table, may be available on request and prior confirmation.



Mobile



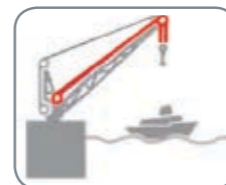
Tower



Lattice Boom



Dockside



Offshore Pedestal



Main Hoist

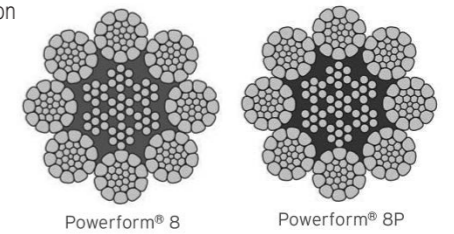


Whip Hoist

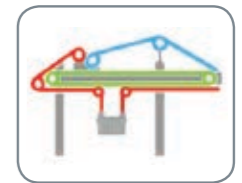


POWERFORM® 8/8P

- A high strength eight strand rope with plastic impregnated core ideal for situations where longer service life is required
- High fatigue life resulting from the unique compaction process
- Maximum resistance to crushing. Recommended for multi-layer spooling operations
- Increased abrasion resistance
- A sample of rope from each production batch is tested to destruction
- Greater surface contact area resulting from the eight strand construction and compacted finish give longer rope life and reduced sheave wear
- Optional plastic impregnation of the steel core. (P) signifies full plastic impregnation of the steel core.



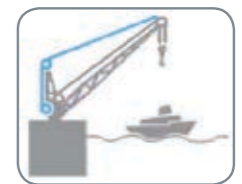
Container



Lattice Room



Dockside



Offshore Pedestal



Unloader



Swimgrab



Boom Hoist



Main Hoist



Racking/
Trolley



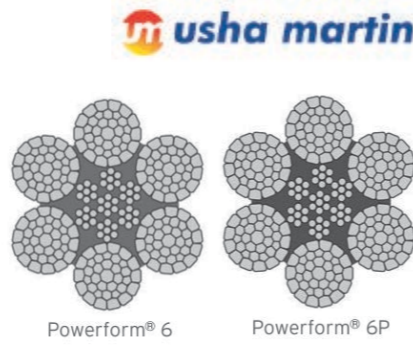
| Nom. Rope Dia. (mm) | Nom. Rope Dia. (in) | Approx. Mass (kg/100m) | Minimum Breaking Force Galvanised & Ungalvanised Rope Grade | | | |
|------------------------|------------------------|---------------------------|---|----------|------------------------|----------|
| | | | 1960 N/mm ² | | 2160 N/mm ² | |
| | | | (kN) | (tonnes) | (kN) | (tonnes) |
| 10 | | 46.0 | 87.8 | 9.0 | 94.0 | 9.6 |
| 11 | | 55.7 | 106.0 | 10.8 | 114.0 | 11.6 |
| 12 | | 66.2 | 126.0 | 12.8 | 135.0 | 13.8 |
| 13 | ½ | 74.2 | 142.0 | 14.5 | 152.0 | 15.5 |
| 14 | | 77.7 | 148.0 | 15.1 | 159.0 | 16.2 |
| 15 | | 90.2 | 172.0 | 17.5 | 184.0 | 18.8 |
| 16 | ⅝ | 104.0 | 198.0 | 20.2 | 211.0 | 21.5 |
| 17 | | 118.0 | 225.0 | 22.9 | 241.0 | 24.6 |
| 18 | | 133.0 | 254.0 | 25.9 | 272.0 | 27.7 |
| 19 | ¾ | 149.0 | 284.0 | 29.0 | 304.0 | 31.0 |
| 20 | | 166.0 | 317.0 | 32.2 | 339.0 | 34.6 |
| 22 | | 184.0 | 351.0 | 35.8 | 376.0 | 38.3 |
| 24 | ⅞ | 223.0 | 425.0 | 43.3 | 455.0 | 46.4 |
| 26 | | 227.0 | 434.0 | 44.2 | 464.0 | 47.3 |
| 28 | 1 | 265.0 | 506.0 | 51.6 | 541.0 | 55.1 |
| 30 | | 297.0 | 567.0 | 57.8 | 606.0 | 61.8 |
| 32 | 1-¼ | 318.0 | 594.0 | 60.6 | 635.0 | 64.7 |
| 35 | | 368.0 | 688.0 | 70.1 | 737.0 | 75.1 |
| 36 | 1-⅝ | 384.0 | 717.0 | 73.1 | 767.0 | 78.2 |
| 38 | | 423.0 | 790.0 | 80.5 | 846.0 | 86.2 |
| 40 | 1-¾ | 481.0 | 899.0 | 91.6 | 960.0 | 97.9 |
| 42 | | 543.0 | 1013.0 | 103.0 | 1083.0 | 110.0 |
| 44 | | 609.0 | 1138.0 | 116.0 | 1218.0 | 124.0 |
| 46 | 1-⅞ | 679.0 | 1268.0 | 129.0 | 1357.0 | 138.0 |
| 48 | | 752.0 | 1405.0 | 143.0 | 1503.0 | 153.0 |
| 50 | | 847.0 | 1535.0 | 156.0 | 1651.0 | 168.0 |
| 52 | 1-⅞ | 929.0 | 1700.0 | 173.0 | 1819.0 | 185.0 |
| | | 948.0 | 1735.0 | 177.0 | 1856.0 | 189.0 |
| | | 1016.0 | 1858.0 | 189.0 | 1985.0 | 202.0 |
| | | 1106.0 | 2023.0 | 206.0 | 2162.0 | 220.0 |
| | | 1200.0 | 2200.0 | 224.0 | 2349.0 | 239.0 |
| | 2 | 1239.0 | 2266.0 | 231.0 | 2425.0 | 247.0 |
| | | 1298.0 | 2374.0 | 242.0 | 2541.0 | 259.0 |

*Mass per unit length of POWERFORM 8P increases by approx. 3%.

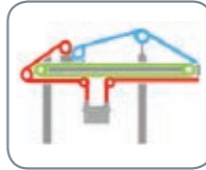
Note: • POWERFORM 8P is available for rope diameter 16mm and above on special request and prior confirmation.
• Rope sizes and Breaking Force not shown in the standard table, may be available on request and prior confirmation.

POWERFORM® 6/6P

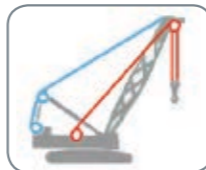
- A high strength rugged six strand rope ideal for situations where longer service life is required
- Can be substituted for any six strand construction to improve service life
- High fatigue life due to unique compaction process
- A sample of rope from each production batch is tested to destruction
- Maximum resistance to crushing. Recommended for multi-layer spooling operations
- Increased abrasion resistance
- Fully lubricated in manufacturing
- Optional plastic impregnation (P) signifies full plastic impregnation of the steel core.



Container



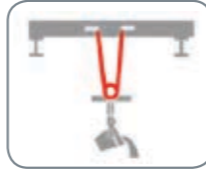
Lattice Room



Dockside



Steelworks Ladle



Offshore Pedestal



Unloader



Boom Hoist

Main Hoist

Racking/Trolley

| Nom. Rope Dia. | Nom. Rope Dia. | Approx. Mass | Minimum Breaking Force | | | |
|----------------|----------------|--------------|---------------------------|----------|------------------------|----------|
| | | | Galvanised & Ungalvanised | | | |
| | | | 1960 N/mm ² | | 2160 N/mm ² | |
| (mm) | (in) | (kg/100m) | (kN) | (tonnes) | (kN) | (tonnes) |
| 10 | | 46.4 | 69.5 | 7.1 | 85.7 | 8.7 |
| 11 | | 56.1 | 83.8 | 8.5 | 98.6 | 10.1 |
| 12 | | 66.8 | 100.0 | 10.2 | 114.0 | 11.6 |
| | ½ | 74.8 | 113.0 | 11.5 | 140.0 | 14.3 |
| 13 | | 78.4 | 118.0 | 12.0 | 147.0 | 15.0 |
| 14 | | 90.9 | 137.0 | 14.0 | 170.0 | 17.3 |
| 15 | | 104.0 | 157.0 | 16.0 | 195.0 | 19.9 |
| 16 | ⅝ | 119.0 | 178.0 | 18.1 | 218.0 | 22.2 |
| 17 | | 134.0 | 201.0 | 20.5 | 246.0 | 25.1 |
| 18 | | 150.0 | 225.0 | 22.9 | 276.0 | 28.1 |
| 19 | ¾ | 168.0 | 251.0 | 25.6 | 304.0 | 31.0 |
| 20 | | 186.0 | 278.0 | 28.3 | 335.0 | 34.1 |
| 22 | | 225.0 | 336.0 | 34.3 | 400.0 | 40.8 |
| | 7/8 | 229.0 | 343.0 | 35.0 | 408.0 | 41.6 |
| 24 | | 267.0 | 400.0 | 40.8 | 489.0 | 49.8 |
| | 1 | 299.0 | 449.0 | 45.8 | 552.0 | 56.3 |
| 26 | | 314.0 | 470.0 | 47.9 | 578.0 | 58.9 |
| 28 | | 364.0 | 545.0 | 55.6 | 657.0 | 67.0 |
| 30 | | 418.0 | 626.0 | 63.8 | 757.0 | 77.2 |
| 32 | 1-¼ | 475.0 | 712.0 | 72.6 | 846.0 | 86.2 |
| 34 | | 518.0 | 804.0 | 82.0 | 916.0 | 93.4 |
| 36 | | 581.0 | 901.0 | 91.8 | 1065.0 | 109.0 |
| 38 | 1-½ | 647.0 | 1004.0 | 102.0 | 1165.0 | 119.0 |
| 40 | | 717.0 | 1112.0 | 113.0 | 1295.0 | 132.0 |
| 42 | | 790.0 | 1226.0 | 125.0 | 1425.0 | 145.0 |
| 44 | | 867.0 | 1246.0 | 127.0 | 1505.0 | 153.0 |
| 46 | | 948.0 | 1362.0 | 139.0 | 1665.0 | 170.0 |
| 48 | | 1032.0 | 1483.0 | 151.0 | 1885.0 | 192.0 |
| 50 | | 1120.0 | 1609.0 | 164.0 | 1975.0 | 201.0 |
| 52 | | 1211.0 | 1741.0 | 177.0 | 2135.0 | 218.0 |
| 54 | | 1306.0 | 1877.0 | 191.0 | 2325.0 | 237.0 |
| 56 | | 1405.0 | 2019.0 | 206.0 | 2475.0 | 252.0 |
| 58 | | 1507.0 | 2166.0 | 221.0 | 2650.0 | 270.0 |
| 60 | | 1613.0 | 2317.0 | 236.0 | 2810.0 | 286.0 |

*Mass per unit length of POWERFORM 6P increases by approx. 3%.

Note: • POWERFORM 6P is available only for 16mm and above on special request and prior confirmation.
• Rope sizes and Breaking Force not shown in the standard table, may be available on request and prior confirmation.

* For higher lifting heights, a rotation resistant rope should be selected.

WIRE ROPE SLINGS

Typical Steel Wire Rope Sling Description

Hand spliced or machine swaged slings, with your choice of terminations, can be manufactured and tested (if required) on our premises at short notice. All slings and assemblies are permanently marked with safe working loads, based on a 5:1 factor of safety.

- 13 mm 6/36 G1770 RHOL WRC PREF G2 • 200 mm soft eye each end
- Machine spliced WLL 2.1 Tonne
- 3.0 metres effective length



- (a) SWR Steel Wire Rope.
- (b) FC Fibre Core.
- (c) 13mm Diameter (nominal) of SWR measured over "crowns".
- (d) 6/36 Construction (six strands, each with thirty six wires).
- (e) G1770 "G" signifies "galvanised" wires. 1770 signifies tensile grade of wires (in Megapascals).
- (f) RHOL Right Hand Ordinary Lay (strands laid up to the RIGHT, wires in each strand to the LEFT).
- (g) WRC Wire Rope Core (approx 7.5% stronger and 11% heavier than FC).
- (h) PREF Strands shaped (helix formed) before laying up into a rope.
- (i) G2 Lubricant (Petroleum Jelly).
- (j) 200mm Eye size.
- (k) Machine Splice Steel, copper or aluminium alloy ferrule pressed around the looped end of wire rope.
- (l) WLL Maximum load that can be lifted on a particular service.
- (m) Length For restrictions refer to AS 1666-1995.

Machine Swaging

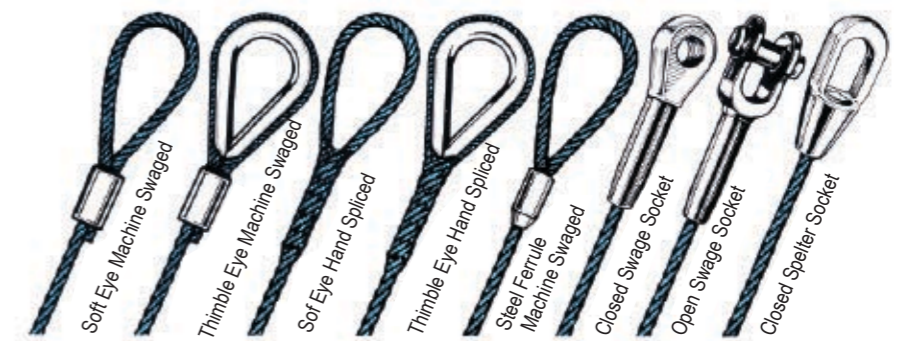
Aluminium Ferrules
Sizes 2mm – 52mm

Copper Ferrules
Sizes 2mm – 10mm

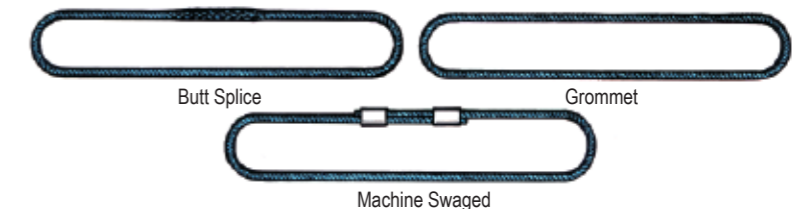
Steel Ferrules
Sizes 9mm – 75mm

Swage Sockets
Sizes 3mm – 52mm

Hand Splicing from
2mm – 75mm dia



Endless Slings



**Table of Working Load Limits for Standard Galvanised Slings
- Grade 1570, Fibre Core in accordance with AS1666.1**

| Wire Rope DIA. (mm) | MN Breaking Force (kN) | Direct Load | Choke Hitch | | Direct Load | | | Choke Hitch | | | | Basket Hitch | | | | | | | | | | | | | | | | | | | |
|---|------------------------|-------------|-------------|------------------|-------------|-------|------------|-------------|-------------|-----------------------|-------------|--------------|----------|------|-----------------------|------|-------------|-------|----------|-------|-------------|-------|-------------|-------|----------|-------|-------------|------|-------------|------|------------|
| | | | Round Load | Rectangular Load | 0°-60° | 90° | 120° | Round Load | | Other Than Round Load | | Round Load | | | Other Than Round Load | | | | | | | | | | | | | | | | |
| | | | | | | | | Single Wrap | Double Wrap | Single Wrap | Double Wrap | 0° | 60° | 90° | 120° | 0° | 60° | 90° | 120° | | | | | | | | | | | | |
| | | | 1 x 0.95 | | 0.75 x 0.95 | | 0.5 x 0.95 | | 1.73 x 0.95 | | 1.41 x 0.95 | | 1 x 0.95 | | 1.30 x 0.95 | | 0.87 x 0.95 | | 2 x 0.95 | | 1.73 x 0.95 | | 1.41 x 0.95 | | 1 x 0.95 | | 0.87 x 0.95 | | 0.71 x 0.95 | | 0.5 x 0.95 |
| WLL in Tonnes for 1570 Grade Fibre Core | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 28.7 | 0.55 | 0.41 | 0.27 | 0.96 | 0.78 | 0.55 | 0.72 | 0.48 | 1.11 | 0.96 | 0.78 | 0.55 | 0.55 | 0.48 | 0.39 | 0.27 | 1.21 | 0.99 | 0.70 | 0.91 | 0.61 | 1.40 | 1.21 | 0.99 | 0.70 | 0.70 | 0.61 | 0.50 | 0.35 | |
| 9 | 35.4 | 0.70 | 0.52 | 0.35 | 1.21 | 0.99 | 0.70 | 0.91 | 0.61 | 1.40 | 1.21 | 0.99 | 0.70 | 0.70 | 0.61 | 0.50 | 0.35 | 1.73 | 1.50 | 1.22 | 0.86 | 1.13 | 0.75 | 1.73 | 1.50 | 1.22 | 0.86 | 0.86 | 0.75 | 0.61 | 0.43 |
| 10 | 44.9 | 0.86 | 0.65 | 0.43 | 1.50 | 1.22 | 0.86 | 1.13 | 0.75 | 1.73 | 1.50 | 1.22 | 0.86 | 0.86 | 0.75 | 0.61 | 0.43 | 2.10 | 1.81 | 1.48 | 1.05 | 1.36 | 0.91 | 2.10 | 1.81 | 1.48 | 1.05 | 1.05 | 0.91 | 0.74 | 0.52 |
| 11 | 54.3 | 1.05 | 0.78 | 0.52 | 1.81 | 1.48 | 1.05 | 1.36 | 0.91 | 2.10 | 1.81 | 1.48 | 1.05 | 1.05 | 0.91 | 0.74 | 0.52 | 2.47 | 2.14 | 1.74 | 1.23 | 1.61 | 1.07 | 2.47 | 2.14 | 1.74 | 1.23 | 1.23 | 1.07 | 0.88 | 0.61 |
| 12 | 64.0 | 1.23 | 0.92 | 0.61 | 2.14 | 1.74 | 1.23 | 1.61 | 1.07 | 2.47 | 2.14 | 1.74 | 1.23 | 1.23 | 1.07 | 0.88 | 0.61 | 2.94 | 2.54 | 2.04 | 1.47 | 1.91 | 1.27 | 2.94 | 2.54 | 2.04 | 1.47 | 1.47 | 1.27 | 1.04 | 0.73 |
| 13 | 74.9 | 1.47 | 1.10 | 0.73 | 2.54 | 2.07 | 1.47 | 1.91 | 1.27 | 2.94 | 2.54 | 2.04 | 1.47 | 1.47 | 1.27 | 1.04 | 0.73 | 3.40 | 2.94 | 2.40 | 1.70 | 2.21 | 1.48 | 3.40 | 2.94 | 2.40 | 1.70 | 1.70 | 1.48 | 1.21 | 0.85 |
| 14 | 88.0 | 1.70 | 1.27 | 0.85 | 2.94 | 2.40 | 1.70 | 2.21 | 1.48 | 3.40 | 2.94 | 2.40 | 1.70 | 1.70 | 1.48 | 1.21 | 0.85 | 4.45 | 3.85 | 3.14 | 2.22 | 2.89 | 1.93 | 4.45 | 3.85 | 3.14 | 2.22 | 2.22 | 1.93 | 1.58 | 1.11 |
| 16 | 115 | 2.22 | 1.67 | 1.11 | 3.85 | 3.14 | 2.22 | 2.89 | 1.93 | 4.45 | 3.85 | 3.14 | 2.22 | 2.22 | 1.93 | 1.58 | 1.11 | 5.61 | 4.85 | 3.95 | 2.80 | 3.65 | 2.44 | 5.61 | 4.85 | 3.95 | 2.80 | 2.80 | 2.44 | 1.99 | 1.40 |
| 18 | 145 | 2.80 | 2.10 | 1.40 | 4.85 | 3.95 | 2.80 | 3.65 | 2.44 | 5.61 | 4.85 | 3.95 | 2.80 | 2.80 | 2.44 | 1.99 | 1.40 | 6.97 | 6.0 | 4.91 | 3.48 | 4.53 | 3.03 | 6.97 | 6.0 | 4.91 | 3.48 | 3.48 | 3.03 | 2.47 | 1.74 |
| 20 | 180 | 3.48 | 2.61 | 1.74 | 5.63 | 4.91 | 3.48 | 4.53 | 3.03 | 6.97 | 6.0 | 4.91 | 3.48 | 3.48 | 3.03 | 2.47 | 1.74 | 8.40 | 7.27 | 5.92 | 4.20 | 5.46 | 3.65 | 8.40 | 7.27 | 5.92 | 4.20 | 4.20 | 3.65 | 2.98 | 2.10 |
| 22 | 217 | 4.20 | 3.15 | 2.10 | 7.27 | 5.92 | 4.20 | 5.46 | 3.65 | 8.40 | 7.27 | 5.92 | 4.20 | 4.20 | 3.65 | 2.98 | 2.10 | 10.03 | 8.67 | 7.07 | 5.01 | 6.52 | 4.36 | 10.03 | 8.67 | 7.07 | 5.01 | 5.01 | 4.36 | 3.56 | 2.50 |
| 24 | 259 | 5.01 | 3.76 | 2.50 | 8.67 | 6.9 | 5.01 | 6.52 | 4.36 | 10.03 | 8.67 | 7.07 | 5.01 | 5.01 | 4.36 | 3.56 | 2.50 | 11.77 | 10.18 | 8.30 | 5.88 | 7.65 | 5.12 | 11.77 | 10.18 | 8.30 | 5.88 | 5.88 | 5.12 | 4.18 | 2.94 |
| 26 | 304 | 5.88 | 4.41 | 2.94 | 10.18 | 8.30 | 5.88 | 7.65 | 5.12 | 11.77 | 10.18 | 8.30 | 5.88 | 5.88 | 5.12 | 4.18 | 2.94 | 13.63 | 11.79 | 9.61 | 6.81 | 8.86 | 5.93 | 13.63 | 11.79 | 9.61 | 6.81 | 6.81 | 5.93 | 4.84 | 3.40 |
| 28 | 352 | 6.81 | 5.11 | 3.40 | 11.79 | 9.61 | 6.81 | 8.86 | 5.93 | 13.63 | 11.79 | 9.61 | 6.81 | 6.81 | 5.93 | 4.84 | 3.40 | 17.81 | 15.11 | 12.56 | 8.90 | 11.58 | 7.75 | 17.81 | 15.11 | 12.56 | 8.90 | 8.90 | 7.75 | 6.32 | 4.45 |
| 32 | 460 | 8.9 | 6.68 | 4.45 | 15.41 | 12.56 | 8.9 | 11.58 | 7.75 | 17.81 | 15.11 | 12.56 | 8.90 | 8.90 | 7.75 | 6.32 | 4.45 | | | | | | | | | | | | | | |

**Table of Working Load Limits for Standard Galvanised Slings
- Grade 1770, Steel Core in accordance with AS1666**

| | | GRADE 1770 STEEL CORE | | | GRADE 1960 STEEL CORE | | | | | | |
|-------------------|-------------|--|-------------|------------------|-------------------------|-------|-------|-------|-----------------------|-------|------|
| | | FERRULE-SECURED EYES - WORKING LOAD LIMIT (W.L.L.) IN TONNES | | | | | | | | | |
| Method of Loading | Rope Dia mm | Direct Loaded | Choke hitch | | Basket hitch Round Load | | | | 2-3 or 4 Leg Assembly | | |
| | | | Round Load | Rectangular Load | 0° | 60° | 90° | 120° | 0 to 60° | 90° | 120° |
| Included angle | | - | - | - | 0° | 60° | 90° | 120° | 0 to 60° | 90° | 120° |
| 8 | 0.78 | 0.58 | 0.39 | 1.56 | 1.35 | 1.10 | 0.78 | 1.35 | 1.10 | 0.78 | |
| 8 | 0.87 | 0.65 | 0.43 | 1.74 | 1.50 | 1.22 | 0.87 | 1.50 | 1.22 | 0.87 | |
| 9 | 0.99 | 0.74 | 0.49 | 1.98 | 1.71 | 1.40 | 0.99 | 1.71 | 1.40 | 0.99 | |
| 9 | 1.09 | 0.82 | 0.55 | 2.18 | 1.89 | 1.54 | 1.09 | 1.89 | 1.54 | 1.09 | |
| 10 | 1.22 | 0.92 | 0.61 | 2.40 | 2.10 | 1.72 | 1.22 | 2.10 | 1.72 | 1.22 | |
| 10 | 1.35 | 1.01 | 0.68 | 2.70 | 2.30 | 1.91 | 1.35 | 2.30 | 1.91 | 1.35 | |
| 11 | 1.48 | 1.11 | 0.74 | 3.00 | 2.60 | 2.10 | 1.48 | 2.60 | 2.10 | 1.48 | |
| 11 | 1.63 | 1.23 | 0.82 | 3.26 | 2.80 | 2.30 | 1.63 | 2.80 | 2.30 | 1.63 | |
| 12 | 1.76 | 1.32 | 0.88 | 3.50 | 3.00 | 2.50 | 1.76 | 3.00 | 2.50 | 1.76 | |
| 12 | 1.94 | 1.45 | 0.97 | 3.88 | 3.30 | 2.70 | 1.94 | 3.30 | 2.70 | 1.94 | |
| 13 | 2.10 | 1.55 | 1.04 | 4.10 | 3.60 | 2.90 | 2.10 | 3.60 | 2.90 | 2.10 | |
| 13 | 2.20 | 1.71 | 1.14 | 4.40 | 3.90 | 3.20 | 2.20 | 3.90 | 3.20 | 2.20 | |
| 14 | 2.40 | 1.80 | 1.20 | 4.80 | 4.20 | 3.40 | 2.40 | 4.20 | 3.40 | 2.40 | |
| 14 | 2.60 | 1.99 | 1.33 | 5.20 | 4.50 | 3.70 | 2.60 | 4.50 | 3.70 | 2.60 | |
| 16 | 3.10 | 2.30 | 1.56 | 6.20 | 5.40 | 4.40 | 3.10 | 5.40 | 4.40 | 3.10 | |
| 16 | 3.40 | 2.60 | 1.73 | 6.80 | 6.00 | 4.80 | 3.40 | 6.00 | 4.80 | 3.40 | |
| 18 | 4.00 | 3.00 | 1.98 | 7.90 | 6.80 | 5.60 | 4.00 | 6.80 | 5.60 | 4.00 | |
| 18 | 4.30 | 3.20 | 2.10 | 8.60 | 7.50 | 6.10 | 4.30 | 7.50 | 6.10 | 4.30 | |
| 20 | 4.90 | 3.70 | 2.40 | 9.80 | 8.40 | 6.90 | 4.90 | 8.40 | 6.90 | 4.90 | |
| 20 | 5.40 | 4.00 | 2.70 | 10.80 | 9.30 | 7.60 | 5.40 | 9.30 | 7.60 | 5.40 | |
| 22 | 5.90 | 4.40 | 3.00 | 11.80 | 10.20 | 8.30 | 5.90 | 10.20 | 8.30 | 5.90 | |
| 22 | 6.50 | 4.90 | 3.20 | 13.00 | 11.30 | 9.20 | 6.50 | 11.30 | 9.20 | 6.50 | |
| 24 | 7.00 | 5.30 | 3.50 | 14.10 | 12.20 | 9.90 | 7.00 | 12.20 | 9.90 | 7.00 | |
| 24 | 7.70 | 5.80 | 3.80 | 15.40 | 13.40 | 10.90 | 7.70 | 13.40 | 10.90 | 7.70 | |
| 26 | 8.30 | 6.20 | 4.10 | 16.50 | 14.30 | 11.60 | 8.30 | 14.30 | 11.60 | 8.30 | |
| 26 | 9.10 | 6.80 | 4.50 | 18.20 | 15.80 | 12.80 | 9.10 | 15.80 | 12.80 | 9.10 | |
| 28 | 9.60 | 7.20 | 4.80 | 19.10 | 16.60 | 13.50 | 9.60 | 16.60 | 13.50 | 9.60 | |
| 28 | 10.50 | 7.90 | 5.30 | 21.00 | 18.30 | 14.90 | 10.50 | 18.30 | 14.90 | 10.50 | |
| 32 | 12.50 | 9.40 | 6.30 | 25.00 | 22.00 | 17.60 | 12.50 | 22.00 | 17.60 | 12.50 | |
| 32 | 13.80 | 10.30 | 6.90 | 27.60 | 23.90 | 19.50 | 13.80 | 23.90 | 19.50 | 13.80 | |

Tri-Flex Wire Rope Slings

Tri-Flex slings provide strength and flexibility. Because of the patented TRI-FLEX SLING construction, there are substantial savings in material and machine costs in the larger sizes.

Pin size equals D/d of 1.5:1 in the eye.

Basket hitch equals D/D of 5:1 using finished diameter.



| Composed (Inches) | (mm) | Design Factor 5:1 Rated Loads | | | Finished Diameter |
|----------------------|------|-------------------------------|------------|---------------------|-------------------|
| | | Vertical (t) | Choker (t) | Vertical Basket (t) | |
| 1/4" | 6 | 1.5 | 1.1 | 3.1 | 12 |
| 5/16" | 8 | 2.3 | 1.7 | 4.7 | 16 |
| 3/8" | 10 | 3.2 | 2.4 | 6.5 | 19 |
| 7/16" | 11 | 4.4 | 3.3 | 8.8 | 22 |
| 1/2" | 12 | 5.8 | 4.3 | 11.6 | 25 |
| 9/16" | 14 | 7.2 | 5.4 | 14.5 | 28 |
| 5/8" | 16 | 8.9 | 6.7 | 17.9 | 32 |
| 3/4" | 19 | 12.7 | 9.5 | 23.5 | 38 |
| 7/8" | 22 | 17.2 | 12.9 | 34.4 | 44 |
| 1" | 25 | 22.4 | 16.8 | 44.9 | 51 |
| 1-1/8" | 28 | 28.3 | 21.2 | 56.6 | 57 |
| 1-1/4" | 32 | 34.8 | 26.1 | 69.6 | 63 |
| 1-3/8" | 35 | 41.7 | 31.2 | 74.3 | 70 |
| 1-1/2" | 38 | 49.8 | 37.3 | 99.7 | 76 |
| 1-3/4" | 44 | 66.2 | 49.7 | 132.4 | 89 |
| 2" | 51 | 86.1 | 64.5 | 172.3 | 102 |
| 2-1/4" | 57 | 107.4 | 80.2 | 214.9 | 114 |
| 2-1/2" | 63 | 131.5 | 98.8 | 263.8 | 127 |

Superflex Slings

Superflex slings are made of Superflex Cable, which is a plaited configuration, not laid or twisted like wire rope. The interplaiting of the sets of strands creates a tough set-resistant cable composed of many wires.

Features

- Very tough, durable yet flexible
- Easily handled, placed in position, cleaned and stored
- Will not spring back like wire rope
- Alloy ferrules chamfered at each end to EN13411.



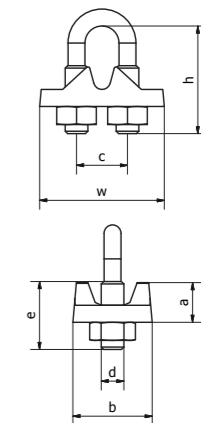
| Method of Loading | Direct Loaded | Choke Hitch | | Basket Hitch | Direct Loaded | Endless Strop | | |
|-------------------|-----------------|-------------|-------------|--------------|---------------|---------------|----------------------------|-----------------------------|
| | | Round Load | Square Load | | | Cradle Strop | Choked Strop on Round Load | Choked Strop on Square Load |
| Cable Size | | | | | | | | |
| | Loads in Tonnes | | | | | | | |
| Two-5 | 1.0 | 0.7 | 0.5 | 1.9 | 1.5 | 2.8 | 1.1 | 0.8 |
| Three-0 | 1.4 | 1.1 | 0.7 | 2.7 | 2.2 | 4.3 | 1.6 | 1.1 |
| Three-5 | 1.8 | 1.4 | 0.9 | 3.5 | 2.7 | 5.2 | 2.0 | 1.4 |
| Four -0 | 2.4 | 1.8 | 1.2 | 4.6 | 3.6 | 6.9 | 2.7 | 1.8 |
| Four -5 | 3.0 | 2.3 | 1.5 | 5.8 | 4.5 | 8.7 | 3.4 | 2.3 |
| Five-0 | 4.0 | 3.1 | 2.0 | 7.7 | 6.0 | 11.7 | 4.5 | 3.0 |
| Six-5 | 6.7 | 5.0 | 3.4 | 13.0 | 10.0 | 19.0 | 7.6 | 5.1 |
| Eight-0 | 10.3 | 7.8 | 5.2 | 20.0 | 15.6 | 29.6 | 11.8 | 7.8 |
| Ten-0 | 15.3 | 11.5 | 7.6 | 29.8 | 22.9 | 43.5 | 17.5 | 11.6 |

WIRE ROPE TERMINATIONS

Wire Rope Grips Galvanised AS2076

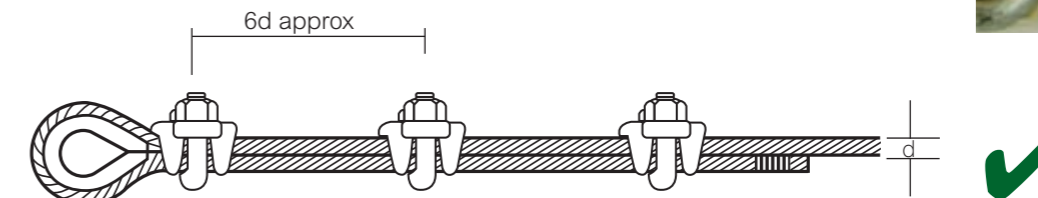
Wire Rope Grips Hot Dipped Galvanised AS2076

| Product Code | Size (mm) | c (mm) | h (mm) | w (mm) | e (mm) | d (mm) | b (mm) | a (mm) | Min number of Grips to form an eye | UOM | Pack Qty |
|--------------|-----------|--------|--------|--------|--------|--------|--------|--------|------------------------------------|------|----------|
| 303306 | 6 | 13 | 29 | 28 | 20 | 6 | 15 | 13 | 3 | Each | 400 |
| 303308 | 8 | 18 | 32 | 34 | 22 | 8 | 19 | 14.5 | 3 | Each | 300 |
| 303310 | 9-10 | 22 | 41 | 42 | 28 | 10 | 24 | 18 | 3 | Each | 200 |
| 303312 | 11-12 | 26 | 49 | 50 | 33 | 12 | 30 | 21 | 3 | Each | 100 |
| 303316 | 16 | 28 | 52 | 52 | 33 | 12 | 31 | 22 | 4 | Each | 75 |
| 303318 | 18 | 34 | 69 | 66 | 44 | 16 | 37 | 26 | 4 | Each | 60 |
| 303320 | 20 | 36 | 74 | 68 | 44 | 16 | 38 | 29 | 4 | Each | 50 |
| 303322 | 20 - 22 | 38 | 77 | 89 | 44 | 16 | 40z | 31 | 4 | Each | 50 |
| 303326 | 24 - 26 | 40 | 80 | 89 | 44 | 16 | 40 | 32.5 | 5 | Each | 20 |
| 303328 | 28 | 50 | 96 | 90 | 55 | 22 | 48 | 38 | 5 | Each | 20 |
| 303332 | 32 | 52 | 102 | 92 | 55 | 22 | 48 | 39 | 6 | Each | 20 |
| 303338 | 38 | 56 | 105 | 112 | 55 | 22 | 48 | 41.5 | 6 | Each | 10 |



Not Suitable for Lifting Purposes.

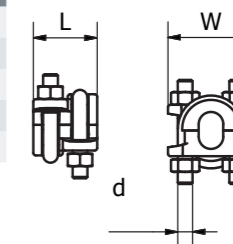
The Right Way



Note: d = diameter of rope

Double Throat Wire Rope Grips Hot Dipped Galvanised

| Product Code | Wire Dia (mm) | W (mm) | L (mm) | d (mm) | UOM | Pack Qty |
|--------------|---------------|--------|--------|--------|------|----------|
| 304308-9 | 8-9 | 46 | 40 | 8 | Each | 5 |
| 304310-12 | 10-12 | 52 | 40 | 10 | Each | 5 |
| 304316 | 16 | 58 | 46 | 10 | Each | 2 |
| 304320-22 | 20-22 | 76 | 56 | 12 | Each | 2 |
| 304326-28 | 26-28 | 78 | 61 | 12 | Each | 2 |



Not Suitable for Lifting Purposes.

Commercial Wire Rope Grips Electro Galvanised



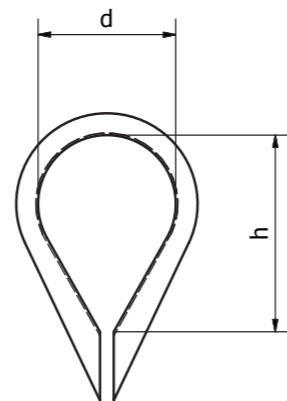
| Product Code | Size (mm) | UOM | Pack Qty |
|--------------|-----------|------|----------|
| 301203 | 3 | Each | 1200 |
| 301205 | 5 | Each | 600 |
| 301206 | 6 | Each | 400 |
| 301208 | 8 | Each | 300 |
| 301210 | 10 | Each | 200 |
| 301213 | 13 | Each | 100 |
| 301216 | 16 | Each | 75 |
| 301220 | 20 | Each | 60 |
| 301223 | 23 | Each | 20 |
| 301225 | 25 | Each | 20 |
| 301232 | 32 | Each | 20 |

Not Suitable for Lifting Purposes.

Wire Rope Thimbles AS1138

Wire Rope Thimbles Hot Dipped Galvanised AS1138

| Product Code | Size (mm) | a (mm) | d (mm) | h (mm) | UOM | Pack Qty |
|--------------|-----------|--------|--------|--------|------|----------|
| 312306 | 6 | 7 | 16 | 25 | Each | 400 |
| 312308 | 8 | 7.9 | 22 | 33 | Each | 400 |
| 312310 | 10 | 10.3 | 25 | 38 | Each | 400 |
| 312311 | 11 | 12.7 | 29 | 41 | Each | 200 |
| 312313 | 13 | 14.3 | 32 | 44 | Each | 100 |
| 312314 | 14 | 15 | 32 | 46 | Each | 100 |
| 312316 | 16 | 15.9 | 41 | 59 | Each | 75 |
| 312320 | 20 | 21.6 | 52 | 75 | Each | 30 |
| 312322 | 22 | 22.2 | 57 | 83 | Each | 25 |
| 312324 | 24 | 25.4 | 64 | 92 | Each | 20 |
| 312326 | 26 | 27 | 72 | 108 | Each | 15 |
| 312328 | 28 | 28.6 | 76 | 112 | Each | 15 |
| 312332 | 32 | 33.4 | 95 | 133 | Each | 10 |
| 312335 | 35 | 38 | 105 | 152 | Each | 7 |
| 312338 | 38 | 43 | 114 | 165 | Each | 5 |
| 312342 | 42 | 43 | 120 | 180 | Each | 5 |
| 312345 | 45 | 47 | 127 | 178 | Each | 2 |
| 312348 | 48 | 51 | 134 | 190 | Each | 2 |
| 312350 | 50 | 55 | 140 | 203 | Each | 2 |



Commercial Wire Rope Thimbles & Grips



Commercial Wire Rope Thimbles Galvanised

| Product Code | Size (mm) | UOM | Pack Qty |
|--------------|-----------|------|----------|
| 310304 | 4 | Each | 2000 |
| 310305 | 5 | Each | 2000 |
| 310306 | 6 | Each | 1000 |
| 310308 | 8 | Each | 400 |
| 310310 | 10 | Each | 400 |
| 310313 | 13 | Each | 100 |
| 310314 | 14 | Each | 100 |
| 310316 | 16 | Each | 75 |
| 310320 | 20 | Each | 30 |
| 310323 | 23 | Each | 25 |
| 310325 | 25 | Each | 20 |
| 310328 | 28 | Each | 15 |
| 310332 | 32 | Each | 10 |

Not Suitable for Lifting Purposes.



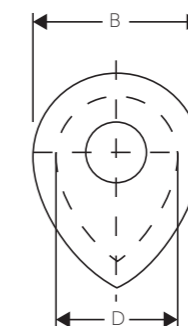
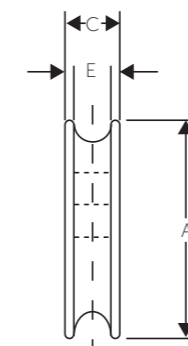
Solid Heart Thimbles



| Rope Dia (mm) | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) |
|---------------|--------|--------|--------|--------|--------|
| 8 | 48 | 36 | 13 | 27 | 8 |
| 10 | 58 | 45 | 16 | 33 | 10 |
| 11 | 71 | 52 | 20 | 39 | 11 |
| 12-14 | 84 | 60 | 23 | 47 | 14 |
| 16 | 96 | 71 | 27 | 52 | 17 |
| 18-20 | 117 | 84 | 29 | 63 | 22 |
| 22 | 130 | 95 | 34 | 69 | 24 |
| 24 | 140 | 105 | 36 | 76 | 26 |
| 26 | 155 | 115 | 40 | 82 | 27 |
| 28mm | 170 | 125 | 44 | 90 | 30 |

| Rope Dia (mm) | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) |
|---------------|--------|--------|--------|--------|--------|
| 32mm | 192 | 140 | 46 | 100 | 33 |
| 36mm | 205 | 150 | 50 | 110 | 37 |
| 38mm | 235 | 175 | 62 | 130 | 41 |
| 42mm | 235 | 170 | 56 | 125 | 44 |
| 44mm | 260 | 198 | 64 | 135 | 47 |
| 48mm | 275 | 200 | 66 | 148 | 51 |
| 52-54mm | 300 | 225 | 72 | 163 | 55 |
| 58mm | 330 | 245 | 82 | 174 | 61 |
| 64mm | 375 | 275 | 92 | 200 | 67 |
| 70-75mm | 405 | 310 | 105 | 223 | 77 |

Note: Please specify hole size required when placing an order.

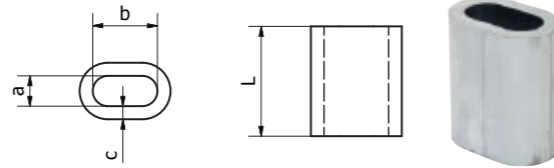


Wire Rope Ferrules



Aluminium Ferrules to EN13411

Standard ferrule for machine swaging eyes in galvanised or black wire rope.

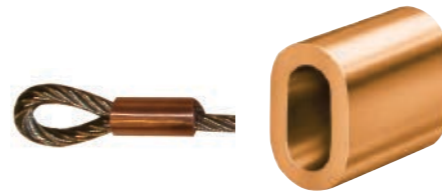


| Product Code | DIN Code | a (mm) | b (mm) | c (mm) | L (mm) | UOM | Pack Qty |
|--------------|----------|--------|--------|--------|--------|------|----------|
| 317101A | 1.5 | 1.8 | 3.6 | 1.05 | 6 | Each | 100 |
| 317102 | 2 | 2.2 | 4.4 | 0.90 | 7 | Each | 100 |
| 317102A | 2.5 | 2.7 | 5.4 | 1.05 | 9 | Each | 100 |
| 317103 | 3 | 3.3 | 6.6 | 1.25 | 11 | Each | 100 |
| 317103A | 3.5 | 3.8 | 7.6 | 1.5 | 13 | Each | 100 |
| 317104 | 4 | 4.4 | 8.8 | 1.7 | 14 | Each | 100 |
| 317105 | 5 | 5.5 | 11.0 | 2.1 | 18 | Each | 100 |
| 317106 | 6 | 6.6 | 13.2 | 2.5 | 21 | Each | 100 |
| 317106A | 6.5 | 7.2 | 14.4 | 2.7 | 23 | Each | 100 |
| 317107 | 7 | 7.8 | 15.6 | 2.9 | 25 | Each | 100 |
| 317108 | 8 | 8.8 | 17.6 | 3.3 | 28 | Each | 100 |
| 317109 | 9 | 9.9 | 19.8 | 3.7 | 32 | Each | 100 |
| 317110 | 10 | 10.9 | 21.8 | 4.1 | 35 | Each | 100 |
| 317111 | 11 | 12.1 | 24.2 | 4.5 | 39 | Each | 100 |
| 317112 | 12 | 13.2 | 26.4 | 4.9 | 42 | Each | 100 |
| 317113 | 13 | 14.2 | 28.4 | 5.4 | 46 | Each | 100 |
| 317114 | 14 | 15.3 | 30.6 | 5.8 | 49 | Each | 100 |
| 317116 | 16 | 17.5 | 35.0 | 6.7 | 56 | Each | 100 |

| Product Code | DIN Code | a (mm) | b (mm) | c (mm) | L (mm) | UOM | Pack Qty |
|--------------|----------|--------|--------|--------|--------|------|----------|
| 317118 | 18 | 19.6 | 39.2 | 7.6 | 63 | Each | 100 |
| 317120 | 20 | 21.7 | 43.4 | 8.4 | 70 | Each | 100 |
| 317122 | 22 | 24.3 | 48.6 | 9.2 | 77 | Each | 100 |
| 317124 | 24 | 26.4 | 52.8 | 10.0 | 84 | Each | 100 |
| 317126 | 26 | 28.5 | 57.0 | 10.9 | 91 | Each | 100 |
| 317128 | 28 | 31.0 | 62.0 | 11.7 | 98 | Each | 100 |
| 317130 | 30 | 33.1 | 66.2 | 12.5 | 105 | Each | 100 |
| 317132 | 32 | 35.2 | 70.4 | 13.4 | 112 | Each | 100 |
| 317134 | 34 | 37.8 | 75.6 | 14.2 | 119 | Each | 100 |
| 317136 | 36 | 39.8 | 79.6 | 15 | 126 | Each | 100 |
| 317138 | 38 | 41.9 | 83.8 | 15.8 | 133 | Each | 100 |
| 317140 | 40 | 44.0 | 88.0 | 16.6 | 140 | Each | 100 |
| 317142 | 42 | 45.0 | 90.0 | 17.4 | 147 | Each | 100 |
| 317144 | 44 | 48.4 | 96.8 | 18.3 | 154 | Each | 100 |
| 317146 | 46 | 49.0 | 98.0 | 19 | 161 | Each | 100 |
| 317152 | 52 | 57.2 | 114.4 | 21.6 | 182 | Each | 100 |
| 317156 | 56 | 61.6 | 123.2 | 23.3 | 196 | Each | 100 |

Copper Ferrules

Standard ferrule for machine swaging eyes in stainless steel wire rope.



| Product Code | Wire Size (mm) | Bore *1 | Length before swaging | Bites per sleeve (min)*2 |
|--------------|----------------|---------|-----------------------|--------------------------|
| CP-105 | 1.5 | 4.9 | 8 | 2 |
| CP-115NP | 1.6 | 4.9 | 8.8 | 2 |
| CP-115S | 1.5 | 4.9 | 8.8 | 2 |
| CP-120 | 2 | 4.9 | 9 | 2 |
| CP-120NP | 2 | 4.9 | 9 | 2 |
| CP-125 | 2.5 | 6 | 10 | 2 |
| CP-125NP | 2.5 | 6 | 10 | 2 |
| CP-130 | 3 | 7.3 | 13 | 2-3 |
| CP-130NP | 3 | 7.3 | 13 | 2-3 |
| CP-130S | 3 | 7.3 | 13 | 2-3 |
| CP-140 | 4 | 9.1 | 16 | 2-3 |

| Product Code | Wire Size (mm) | Bore *1 | Length before swaging | Bites per sleeve (min)*2 |
|--------------|----------------|---------|-----------------------|--------------------------|
| CP-140NP | 4 | 9.1 | 16 | 2-3 |
| CP-140S | 4 | 9.1 | 16 | 2-3 |
| CP-150 | 5 | 10.9 | 18 | 2-3 |
| CP-150NP | 5 | 10.9 | 18 | 2-3 |
| CP-150S | 5 | 10.9 | 18 | 2-3 |
| CP-160 | 6 | 12.7 | 20 | 3 |
| CP-164 | | 12.7 | 20 | 3 |
| CP-164NP | | 12.7 | 20 | 3 |
| CP-180 | 8 | 17 | 25 | 3 |
| CP-180NP | 8 | 17 | 25 | 3 |
| CP-199 | 10 | 19 | 27 | 3 |

*1 Bore = Dia of cavity in the pressing tool or die used for pressing.

*2 = When using CP Hand Tools.



Nickel Plated Copper Hand Swage Ferrules

Can be swaged in the field using a hand swage too.



| Product Code | Dies marked T | Diameter after pressing (mm) | | Required pressure approx. (kN) |
|--------------|---------------|------------------------------|------|--------------------------------|
| | | | Tol. | |
| GTC015 | 1,5 | 3,8 | 0 | 20 |
| GTC02 | 2 | 4 | +0,1 | 30 |
| GTC025 | 2,5 | 5 | 0 | 45 |
| GTC03 | 3 | 6 | | 60 |
| GTC035 | 3,5 | 7 | | 80 |
| GTC04 | 4 | 8 | | 100 |
| GTC045 | 4,5 | 9 | | 125 |
| GTC05 | 5 | 10 | | 180 |
| GTC06 | 6 | 12 | +0,3 | 210 |
| GTC065 | 6,5 | 13 | 0 | 250 |
| GTC07 | 7 | 14 | | 320 |
| GTC08 | 8 | 16 | | 410 |
| GTC09 | 9 | 18 | | 500 |

| Product Code | Dies marked INOX | Diameter after pressing (mm) | | Required pressure approx. (kN) |
|--------------|------------------|------------------------------|------|--------------------------------|
| | | | Tol. | |
| GTC10 | 10 | 20 | +0,4 | 600 |
| GTC11 | 11 | 22 | 0 | 720 |
| GTC12 | 12 | 24 | | 850 |
| GTC13 | 13 | 26 | | 1000 |
| GTC14 | 14 | 28 | +0,5 | 1300 |
| GTC16 | 16 | 32 | 0 | 1600 |
| GTC18 | 18 | 36 | +0,6 | 2000 |
| GTC20 | 20 | 40 | 0 | 2400 |
| GTC22 | 22 | 44 | | 2900 |
| GTC24 | 24 | 48 | +0,8 | 3400 |
| GTC26 | 26 | 52 | 0 | 3900 |
| GTC28 | 28 | 56 | | 4500 |
| GTC30 | 32 | 64 | 0 | 5800 |

Stainless Steel Ferrules

For stainless steel single layer wire ropes.



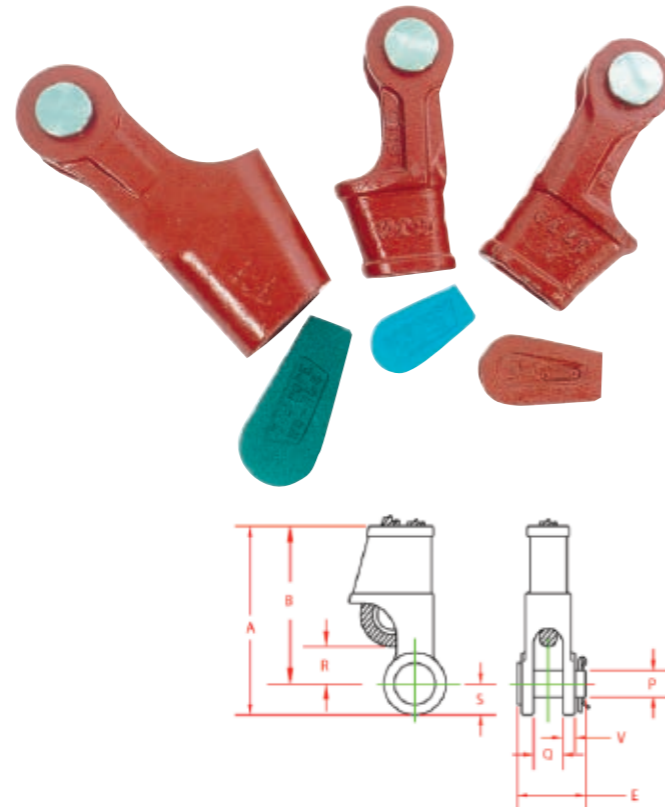
| Product Code | Dies marked INOX | Diameter after pressing (mm) | | Required pressure approx. (kN) |
|--------------|------------------|------------------------------|-------|--------------------------------|
| | | | Tol. | |
| GTS015 | 1,5 | 4,2 | +0,15 | 100 |
| GTS02 | 2 | 4,8 | 0 | 160 |
| GTS025 | 2,5 | 5 | | 200 |
| GTS03 | 3 | 6 | | 250 |
| GTS035 | 3,5 | 7,8 | | 300 |
| GTS04 | 4 | 8 | | 350 |
| GTS045 | 4,5 | 9,8 | | 400 |
| GTS05 | 5 | 10,8 | +0,3 | 500 |
| GTS06 | 6 | 12 | 0 | 600 |
| GTS07 | 7 | 14 | | 700 |
| GTS08 | 8 | 16 | | 850 |
| GTS09 | 9 | 18 | | 1000 |
| GTS10 | 10 | 20 | +0,4 | 1100 |

| Product Code | Dies marked INOX | Diameter after pressing (mm) | | Required pressure approx. (kN) |
|--------------|------------------|------------------------------|------|--------------------------------|
| | | | Tol. | |
| GTS11 | 11 | 21,3 | 0 | 1350 |
| GTS12 | 12 | 24 | | 1500 |
| GTS13 | 13 | 26 | | 1750 |
| GTS14 | 14 | 28 | +0,5 | 2000 |
| GTS16 | 16 | 32 | 0 | 2500 |
| GTS18 | 18 | 36 | -0,6 | 3100 |
| GTS20 | 20 | 40 | 0 | 3400 |
| GTS22 | 22 | 44 | | 3900 |
| GTS24 | 24 | 48 | +0,8 | 4500 |
| GTS26 | 26 | 52 | 0 | 5000 |
| GTS28 | 28 | 56 | | 5600 |
| GTS30 | 30 | 60 | | 6000 |

GUNNEBO Open Wedge Sockets



Open wedge sockets combine positive attachment with optimum versatility. Easy-to-change Gunnebo Johnson Wedge Sockets are a high strength cast alloy steel. Each socket accepts at least two different ductile iron wedges. This allows the socket to be used with more than one wire rope size. Together, wedge and body act as a vice which grips the wire rope and locks it into place. The headed attachment pin is standard.



| Product Code | Wire Rope Size (mm) | Wt. (kg) | A (mm) | B (mm) | E (mm) | P (mm) | Q (mm) | R (mm) | S (mm) | V (mm) |
|--------------|---------------------|----------|--------|--------|--------|--------|--------|--------|--------|--------|
| WS-4 | 10 | 1.4 | 165 | 137 | 67 | 25 | 25 | 44 | 29 | 10 |
| WS-4 | 13 | 1.4 | 165 | 137 | 67 | 25 | 25 | 49 | 29 | 10 |
| WS-5 | 13 | 3.9 | 222 | 184 | 89 | 32 | 35 | 62 | 38 | 16 |
| WS-5 | 14 | 3.9 | 222 | 184 | 89 | 32 | 35 | 71 | 38 | 16 |
| WS-5 | 16 | 3.9 | 222 | 184 | 89 | 32 | 35 | 70 | 38 | 16 |
| WS-6 | 16 | 4.1 | 224 | 186 | 89 | 32 | 38 | 64 | 38 | 14 |
| WS-8A | 16 | 7.7 | 286 | 232 | 105 | 41 | 44 | 81 | 54 | 25 |
| WS-8 | 19 | 4.1 | 224 | 186 | 89 | 32 | 38 | 45 | 38 | 14 |
| WS-8A | 19 | 7.7 | 286 | 232 | 105 | 41 | 44 | 72 | 54 | 25 |
| WS-7 | 22 | 6.8 | 279 | 241 | 89 | 32 | 33 | 75 | 38 | 16 |
| WS-8 | 22 | 7.3 | 289 | 241 | 105 | 41 | 44 | 73 | 48 | 19 |
| WS-7 | 24 | 6.6 | 279 | 241 | 89 | 32 | 33 | 73 | 38 | 16 |
| WS-8 | 24 | 7.3 | 289 | 241 | 105 | 41 | 44 | 64 | 48 | 19 |
| WS-10 | 28 | 20.5 | 392 | 337 | 105 | 41 | 44 | 78 | 56 | 19 |
| WS-11 | 28 | 25.0 | 406 | 343 | 140 | 64 | 64 | 114 | 64 | 21 |
| WS-10 | 32 | 20.5 | 392 | 337 | 105 | 41 | 44 | 79 | 56 | 19 |
| WS-11 | 32 | 25.0 | 406 | 343 | 140 | 64 | 64 | 108 | 64 | 21 |
| FS-26 | 36 | 45.0 | 467 | 381 | 175 | 76 | 67 | 106 | 86 | 32 |

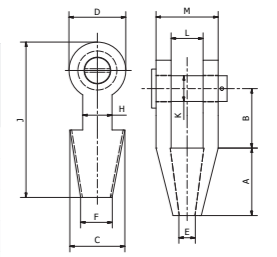
Note: When ordering, please specify model number and exact rope size.

Open Type Sockets



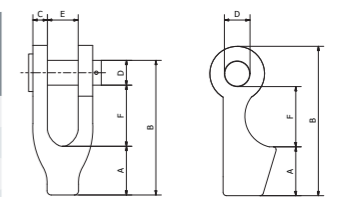
Open Type Metallising Sockets

| Product Code | Wire Dia. (mm) | D (mm) | J (mm) | H (mm) | P (mm) | S (mm) | M (mm) | R (mm) | B (mm) | A (mm) | C (mm) | WLL (t) | UOM | Pack Qty |
|--------------|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|------|----------|
| 309010 | 10 | 51 | 43 | 38 | 30 | 21 | 112 | 16 | 22 | 43 | 38 | 1.74 | Each | Each |
| 309013 | 13 | 60 | 52 | 44 | 24 | 22 | 135 | 21 | 29 | 48 | 44 | 2.60 | Each | Each |
| 309016 | 16 | 50 | 159 | 27 | 29 | 50 | 56 | 35 | 24 | 64 | 70 | 4.2 | Each | Each |
| 309020 | 20 | 64 | 175 | 33 | 33 | 62 | 70 | 38 | 29 | 67 | 76 | 7.5 | Each | Each |
| 309026 | 26 | 86 | 237 | 46 | 49 | 83 | 89 | 48 | 38 | 89 | 105 | 13.9 | Each | Each |
| 309028 | 28 | 92 | 262 | 50 | 57 | 92 | 94 | 50 | 41 | 102 | 114 | 14.8 | Each | Each |
| 309032 | 32 | 105 | 297 | 60 | 64 | 108 | 111 | 54 | 48 | 111 | 133 | 24.5 | Each | Each |
| 309036 | 36-42 | 127 | 330 | 67 | 70 | 127 | 135 | 65 | 57 | 114 | 152 | 33.8 | Each | Each |
| 309044 | 44-54 | 175 | 450 | 100 | 110 | 190 | 180 | 90 | 90 | 170 | 195 | 53.5 | Each | Each |



Open Type Wedge Sockets

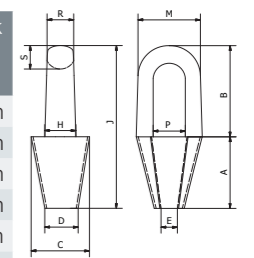
| Product Code | Wire Dia. (mm) | D (mm) | J (mm) | H (mm) | P (mm) | S (mm) | M (mm) | R (mm) | WLL (t) | UOM | Pack Qty |
|--------------|----------------|--------|--------|--------|--------|--------|--------|--------|---------|------|----------|
| 306010 | 10 | 16 | 22 | 52 | 8 | 135 | 60 | 22 | 2.6 | Each | Each |
| 306013 | 13 | 24 | 45 | 90 | 24 | 206 | 75 | 45 | 10.3 | Each | Each |
| 306016 | 16 | 33 | 54 | 85 | 30 | 235 | 85 | 54 | 13.4 | Each | Each |
| 306020 | 20 | 36 | 67 | 120 | 35 | 300 | 110 | 67 | 20 | Each | Each |
| 306022 | 22 | 36 | 67 | 142 | 35 | 340 | 140 | 67 | 21.3 | Each | Each |
| 306026 | 26-28 | 42 | 77 | 144 | 43 | 350 | 135 | 77 | 33.7 | Each | Each |
| 306032 | 32 | 56 | 70 | 200 | 45 | 445 | 200 | 70 | 39.6 | Each | Each |
| 306038 | 38 | 60 | 105 | 210 | 58 | 540 | 240 | 105 | 57.4 | Each | Each |



Closed Type Sockets

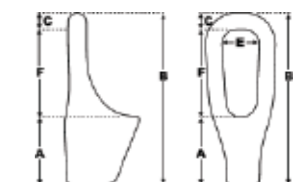
Closed Type Metallising Sockets

| Product Code | Wire Dia. (mm) | D (mm) | J (mm) | H (mm) | P (mm) | S (mm) | M (mm) | R (mm) | B (mm) | A (mm) | C (mm) | E (mm) | WLL (t) | UOM | Pack Qty |
|---------------|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|------|----------|
| 309120 | 20 | 33 | 178 | 33 | 38 | 24 | 75 | 25 | 102 | 76 | 62 | 21 | 5.66 | Each | Each |
| 309122 | 22 | 41 | 200 | 40 | 44 | 25 | 83 | 29 | 114 | 86 | 70 | 25 | 6.7 | Each | Each |
| 309126 | 26 | 49 | 235 | 46 | 50 | 29 | 100 | 35 | 130 | 105 | 83 | 29 | 8.63 | Each | Each |
| 309128 | 28 | 57 | 257 | 50 | 57 | 32 | 114 | 38 | 143 | 114 | 92 | 32 | 10 | Each | Each |
| 309132 | 32 | 64 | 286 | 60 | 64 | 38 | 124 | 41 | 152 | 133 | 108 | 35 | 14.1 | Each | Each |
| Special Order | 36-42 | 152 | 184 | 127 | 70 | 43 | 67 | 337 | 146 | 76 | 48 | 44 | 19.0 | Each | Each |
| Special Order | 44-54 | 170 | 220 | 180 | 100 | 54 | 89 | 390 | 180 | 90 | 63 | 51 | 30.4 | Each | Each |
| Special Order | 58-64 | 240 | 330 | 230 | 135 | 76 | 135 | 570 | 267 | 140 | 82 | 76 | 58.7 | Each | Each |



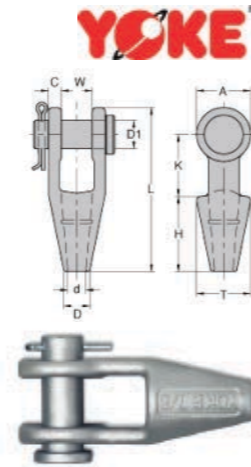
Closed Type Wedge Sockets

| Product Code | Rope Dia. (mm) | A (mm) | B (mm) | C (mm) | E (mm) | F (mm) | SWL (t) |
|--------------|----------------|--------|--------|--------|--------|--------|---------|
| 06320010 | 6 | 41 | 90 | 13 | 12 | 40 | 1.27 |
| 06320020 | 10 | 61 | 127 | 15 | 17 | 51 | 1.69 |
| 06320030 | 13 | 75 | 165 | 19 | 21 | 71 | 2.72 |
| 06320040 | 16 | 86 | 220 | 21 | 44 | 111 | 3.32 |
| 06320050 | 20 | 100 | 245 | 25 | 36 | 116 | 4.71 |



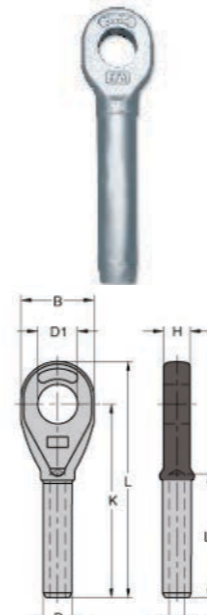
Forged Open Spelter Wire Rope Socket with round pin

| Product Code (galvanised) | Wire Dia. (mm) | Structural Strand Dia. (mm) | L (mm) | W (mm) | D1 (mm) | d (mm) | D (mm) | T (mm) | H (mm) | K (mm) | A (mm) | C (mm) | N.W. (kg) |
|---------------------------|----------------|-----------------------------|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|-----------|
| 46783 | 6-7 | - | 115 | 23 | 17 | 8 | 18 | 39 | 57 | 40 | 33 | 9 | 0.5 |
| 46785 | 8-20 | - | 123 | 21 | 20 | 13 | 21 | 44 | 57 | 45 | 38 | 11 | 0.6 |
| 46786 | 11-13 | - | 142 | 25 | 25 | 15 | 25 | 50 | 63 | 54 | 48 | 13 | 1.1 |
| 46797 | 14-16 | 13 | 172 | 32 | 30 | 18 | 29 | 57 | 76 | 64 | 58 | 14 | 1.7 |
| 46788 | 18-20 | 14-16 | 202 | 38 | 35 | 22 | 32 | 67 | 92 | 76 | 67 | 16 | 2.6 |
| 46789 | 22-23 | 18-20 | 235 | 45 | 41 | 24 | 38 | 85 | 102 | 89 | 80 | 20 | 4.7 |
| 46791 | 24-26 | 22-23 | 268 | 52 | 51 | 29 | 44 | 95 | 114 | 102 | 96 | 23 | 7.4 |
| 46793 | 28-30 | 24-25 | 300 | 57 | 56 | 32 | 51 | 105 | 127 | 117 | 105 | 25 | 10.0 |
| 46794 | 32-35 | 26-28 | 335 | 64 | 62 | 38 | 57 | 120 | 140 | 127 | 121 | 29 | 14.9 |
| 46795 | 36-39 | 30-32 | 384 | 76 | 70 | 41 | 70 | 133 | 152 | 152 | 137 | 30 | 20.8 |



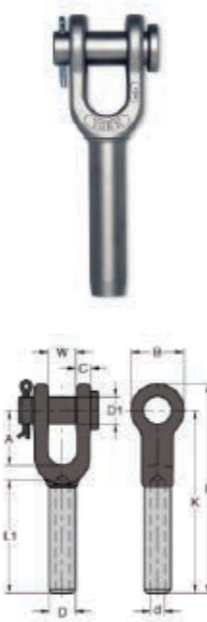
Forged Closed Swage Wire Rope Socket

| Product Code (self-colour) | Wire Dia. (mm) | L (mm) | D (mm) | B (mm) | D1 (mm) | d (mm) | L1 (mm) | H (mm) | K (mm) | Max after swage Dim. (mm) | N.W. (kg) |
|----------------------------|----------------|--------|--------|--------|---------|--------|---------|--------|--------|---------------------------|-----------|
| 46832 | 6-7 | 110 | 13 | 35 | 19 | 7.0 | 54 | 13 | 89 | 12 | 0.2 |
| 46833 | 8 | 140 | 20 | 41 | 22 | 9.0 | 80 | 17 | 114 | 18 | 0.3 |
| 46834 | 9-10 | 140 | 20 | 41 | 22 | 11.0 | 80 | 17 | 114 | 18 | 0.3 |
| 46835 | 11-12 | 176 | 25 | 51 | 27 | 12.0 | 108 | 22 | 146 | 23 | 0.7 |
| 46836 | 13 | 176 | 25 | 51 | 27 | 14.0 | 108 | 22 | 146 | 23 | 0.6 |
| 46837 | 14-15 | 221 | 32 | 61 | 32 | 16.0 | 135 | 29 | 185 | 30 | 1.4 |
| 46838 | 16 | 221 | 32 | 61 | 32 | 17.0 | 135 | 29 | 185 | 30 | 1.3 |
| 46839 | 18-20 | 259 | 39 | 73 | 36 | 21.0 | 162 | 33 | 217 | 36 | 2.2 |
| 46840 | 22-23 | 304 | 43 | 79 | 43 | 24.0 | 189 | 38 | 258 | 39 | 3.1 |
| 46841 | 24-25 | 342 | 50 | 92 | 52 | 27.0 | 216 | 45 | 293 | 46 | 4.8 |
| 46842 | 28 | 382 | 57 | 102 | 59 | 30.0 | 243 | 51 | 323 | 52 | 6.7 |
| 46843 | 32 | 431 | 64 | 114 | 65 | 34.0 | 270 | 57 | 364 | 58 | 10.1 |
| 46844 | 35-36 | 475 | 71 | 127 | 65 | 37.0 | 297 | 57 | 402 | 65 | 12.9 |
| 46845 | 38 | 511 | 78 | 140 | 71 | 41.0 | 323 | 64 | 432 | 71 | 16.9 |
| 46846 | 44-45 | 598 | 86 | 159 | 90 | 47.2 | 378 | 76 | 508 | 78 | 24.3 |
| 46847 | 48-51 | 702 | 100 | 184 | 97 | 54.1 | 432 | 83 | 584 | 90 | 40.5 |



Forged Open Swage Socket with round pin

| Product Code (self-colour) | Product Code (galvanised) | Wire Dia. (mm) | L (mm) | D (mm) | B (mm) | D1 (mm) | d (mm) | L1 (mm) | W (mm) | K (mm) | C (mm) | A (mm) | Max after swage Dim. (mm) | N.W. (kg) |
|----------------------------|---------------------------|----------------|--------|--------|--------|---------|--------|---------|--------|--------|--------|--------|---------------------------|-----------|
| 46812 | 46796 | 6-7 | 122 | 13 | 35 | 18 | 7 | 55 | 17 | 102 | 9 | 38 | 12 | 0.3 |
| 46813 | 46797 | 8 | 159 | 20 | 42 | 21 | 9 | 80 | 20 | 135 | 12 | 45 | 18 | 0.6 |
| 46814 | 46798 | 9-10 | 159 | 20 | 42 | 21 | 10 | 80 | 20 | 135 | 12 | 45 | 18 | 0.7 |
| 46818 | 46799 | 11-12 | 199 | 25 | 50 | 25 | 12 | 110 | 25 | 174 | 14 | 50 | 23 | 1.1 |
| 46819 | 46800 | 13 | 199 | 25 | 50 | 25 | 14 | 110 | 25 | 174 | 14 | 50 | 23 | 1.1 |
| 46820 | 46801 | 14-15 | 240 | 32 | 60 | 30 | 16 | 135 | 31 | 210 | 17 | 57 | 30 | 2.4 |
| 46821 | 46802 | 16 | 240 | 32 | 60 | 30 | 17 | 135 | 31 | 210 | 17 | 57 | 30 | 2.3 |
| 46822 | 46803 | 18-20 | 295 | 39 | 70 | 35 | 21 | 161 | 38 | 256 | 20 | 70 | 36 | 4.0 |
| 46823 | 46804 | 22-23 | 340 | 43 | 80 | 41 | 24 | 189 | 45 | 300 | 24 | 82 | 40 | 5.9 |
| 46824 | 46805 | 24-25 | 395 | 50 | 100 | 51 | 27 | 216 | 50 | 345 | 26 | 98 | 46 | 9.1 |
| 46826 | 46806 | 28 | 442 | 57 | 103 | 57 | 30 | 238 | 57 | 383 | 30 | 108 | 52 | 12.8 |
| 46827 | 46807 | 32 | 484 | 64 | 113 | 64 | 34 | 269 | 63 | 419 | 34 | 120 | 59 | 17.8 |
| 46828 | 46808 | 35-36 | 534 | 71 | 127 | 64 | 37 | 297 | 64 | 463 | 35 | 132 | 65 | 21.8 |
| 46829 | 46809 | 38 | 581 | 78 | 140 | 70 | 41 | 315 | 76 | 502 | 43 | 146 | 72 | 28.9 |
| 46830 | 46810 | 44-45 | 674 | 86 | 170 | 89 | 47 | 378 | 89 | 584 | 54 | 171 | 78 | 44.0 |
| 46831 | 46811 | 48-51 | 798 | 100 | 203 | 95 | 54 | 431 | 101 | 682 | 60 | 203 | 91 | 73.1 |



WIRE ROPE PRODUCTS

Brilube Lubricating Dressing

Ropes are like any other machine and to achieve maximum operating life in service lubrication must be applied. The type of service lubricant and frequency of application varies with the rope construction the operating conditions and its functional application.

Brilube is an advanced formulation with proven performance to help get the best from your wire rope.

Brilube 30, 40 and 50 can be applied by brush, drip feed or portable pressurised sprayer.

Brilube 60, 70 and 90 can be pressure applied using in-line application systems which are available to suit a wide range of rope sizes and constructions. These systems operate by forcing the lubricant into the rope under high pressure, whilst simultaneously cleaning the rope and removing the moisture, residual lubricant and contaminants.

Features

- Advanced corrosion protection
- High lubricity



- Reduced fling off.
- Enhanced rope life
- Effective penetration
- Easy application.

| Product | Applications | Description |
|------------|--|--|
| Brilube 30 | Tower Cranes Mobile Cranes Dockside Cranes Fishing Ropes | BRILUBE 30 - a semi-dry thin film lubricant with excellent penetration and corrosion resisting properties. Formulated for frequent use in harsh working conditions, whilst minimising lubricant build-up and abrasive particle contamination. Effective operating range -30°C to +60°C Minimum application temperature -5°C |
| Brilube 40 | Lifts & Elevators Friction Hoists | BRILUBE 40 - a synthetic lubricant which deposits a slip-resistant film on the wire surfaces. Formulated for use where frictional grip is vital, it provides internal lubrication whilst avoiding excessive build-up with repeated applications. BRILUBE 40 is recommended for use on lifts, elevators and similar friction driven rope installations. Effective operating range -80°C to +40°C Minimum application temperature -5°C |
| Brilube 50 | Indoor Cranes Piling Applications Small Excavators | BRILUBE 50 - an oil based lubricant with additives to increase adherence and enhance corrosion protection. It has excellent penetration and lubrication properties for working ropes in normal industrial environments. BRILUBE 50 is recommended for overhead cranes, hoist ropes and similar working ropes, where fatigue is the major factor in rope deterioration. Effective operating range -70°C to +30°C Minimum application temperature -25°C |
| Brilube 60 | Excavators Guy Ropes Winch Ropes | BRILUBE 60 - a medium thixotropic gel lubricant with excellent corrosion protection and stable properties over a wide temperature range. Formulated for long life on static or dynamic ropes. BRILUBE 60 is recommended for outdoor use providing effective lubrication and corrosion protection where only infrequent lubrication is possible. Effective operating range -55°C to +100°C Minimum application temperature -20°C |
| Brilube 70 | Off-shore Cranes Rigging Mooring & Towing Cables Fishing Ropes | BRILUBE 70 - a medium thixotropic gel lubricant with stable properties over a wide temperature range offering corrosion protection against marine working conditions. Formulated for long life on static or dynamic ropes in highly aggressive environments. BRILUBE 70 is recommended for use in off-shore and other hostile environments where effective lubrication and optimum corrosion protection are vital. Effective operating range -55°C to +100°C Minimum application temperature -20°C |
| Brilube 90 | Off-shore Installations Lake & River Ferries Dock Facilities Water Treatment Operations | BRILUBE 90 - a BIODEGRADABLE heavy duty, marine quality wire rope lubricant, developed by Bridon to meet the needs of wire ropes working in highly aggressive conditions and the demand for environmental acceptability. Formulated for heavy duty applications in environmentally sensitive locations. BRILUBE 90 is recommended for use wherever rope lubrication is a problem due to environmental concerns. Effective operating range -20°C to +120°C |

Note: Please contact your local Robertsons branch for full usage instructions and a product MSDS.

Wirelock

WIRELOCK® is a two pack socket capping compound that has the following advantages:

- No heat
- No acid
- No hazardous molten metal
- No long cooling/curing process
- No annealing of wires at socket neck
- No guessing of temperature
- No loss of lubricant at socket neck
- No special storage conditions
- No expensive equipment
- Provides 100% efficiency
- Improves fatigue life
- Is suitable for operation in extremes of temperature
- Is ideal for on site application
- Is approved by Lloyds Register of Shipping and Det Norske Veritas (D.N.V.).

Please contact your local Robertsons' branch for usage instructions and a product MSDS.

| Product Code | Pack Size (cc) |
|--------------|----------------|
| DWL0100 | 100 |
| DWL0250 | 250 |
| DWL0500 | 500 |
| DWL1000 | 1,000 |

Minimum amount of Wirelock required for a given size of wire rope socket

| Wire Rope Diameter (mm) | 14-16 | 18-20 | 22 | 24-26 | 28 | 32-36 | 38 | 40 | 44-48 | 52 | 56-60 | 64 | 70 | 76 | 83 | 89-92 | 96 | 100-104 |
|-------------------------|-------|-------|-----|-------|-----|-------|-----|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|
| Volume (cc) | 52 | 86 | 125 | 160 | 210 | 350 | 420 | 495 | 700 | 1,265 | 1,410 | 1,830 | 2,250 | 3,160 | 3,795 | 4,920 | 5,980 | 7,730 |

Felco Wire Rope Cutters

Swiss made, the Felco two-hand wire rope and cable cutters deliver a powerful, clean cut with enhanced user comfort and safety.

Features

- Strong, lightweight, aluminium handles and alloy steel blades ensure outstanding performance
- Handle shape optimises cutting capacity
- Durable and reliable.

| Product Code | Description | Capacity Wire Rope (mm) | UOM | Pack Qty |
|--------------|-------------|-------------------------|------|----------|
| 06350020 | Felco C9 | 9 | each | 1 |
| 06350030 | Felco C12 | 12 | each | 1 |
| 06350040 | Felco C16 | 16 | each | 1 |
| 06350060 | Felco C112 | 12.7 | each | 1 |



Wire Rope Lubricants

Heavy Duty Liquid Lanolin

A lubricant and corrosion inhibitor best suited to marine, heavy industrial and commercial applications.

Features

- Biodegradable. Non toxic, resists wash off
- Penetrates to the core of the rope, whilst also remaining on the outer strands

- Can be easily sprayed on wire rope; also popular for dipping baths, high speed and load bearing chains

- Perfect for wire rope slings and all industrial chains (forklift) - non fling & non webbing
- For long lasting lubrication of moving parts in a highly corrosive environment
- Lubricates & protects pulleys, blocks, swivels, cables & chains.

| Product Code | Description | Carton Qty |
|--------------|-------------------|------------|
| HD/PP-0400 | 400g Aerosol | 12 |
| HD/SP-0750 | 750ml Spray Pack | 12 |
| HD/0005 | 5 Litre Jerry Can | 4 |
| HD/0020 | 20 Litre Drum | each |



Wire Rope Lube

For wire ropes operating in corrosive environments or above 16mm.

Ideal for use around waterways and coastal environments.

Features

- Semi fluid grease
- Provides long lasting protection
- Formulated for marine cranes
- Acid & salt resistant
- Biodegradable.

| Product Code | Description | Carton Qty |
|--------------|---------------|------------|
| HW/RL20-Pail | 20 Litre Pail | each |



Type 'A' Grease

A corrosion and moisture proofing compound made from pure industrial grade lanolin.

Suitable for offshore & submerged wire ropes

Features

- Can be injected into wire rope with pressurised applicators including Masto & Viper
- Anti-seize for shackles, nuts & bolts
- Biodegradable.

| Product Code | Description | Carton Qty |
|--------------|--------------|------------|
| GS/0500 | 500ml Pail | 12 |
| GS/0001 | 1 litre Pail | each |
| GS/0004 | 4 litre Pail | each |
| GS/0020 | 20litre Pail | each |



Powa Wash

An industrial strength, all purpose cleaner.

Features

- Parts Washer
- Workshop Cleaner
- Quick Break Degreaser
- Non-flammable, non-toxic
- Biodegradable
- Water Soluble
- Dries quickly upon wash off.

| Product Code | Description | Carton Qty |
|--------------|-------------------|------------|
| PW/0005 | 5 litre Jerry Can | 4 |
| PW/0020 | 20 litre Cube | each |
| PW/0200 | 200 litre Drum | each |
| PW/1000 | 1000 litre IBC | each |



Fluid Wire Rope Grease

Features

- Rapidly penetrates wire ropes
- Provides excellent anti-wear properties and repels water
- Protects against corrosion
- Carries high loads
- NZFSA Approved C12 (All animal product except dairy)
- AgriQuality Approved.

| Product Code | Pack Size | UOM |
|--------------|-----------|------|
| RY453321 | 20 litre | Each |

Areas of Application:

- Wire ropes
- Dockyard cranes
- Mobile Cranes
- Chair lifts
- Flying foxes
- Slipways.



Wire Rope Grease

A semi-fluid grease with a combination of lubricating solids and molybdenum disulphide for lubrication and corrosion prevention of wire ropes.

Features

- Rapidly penetrates wire ropes
- Provides high load carrying capacity
- Repels water
- Excellent anti-wear properties
- Provides high corrosion protection
- NZFSA Approved C12 (All animal product except dairy)
- AgriQuality Approved.

| Product Code | Pack Size | UOM |
|--------------|-----------|------|
| RY453291 | 20kg | Each |

Areas of Application:

- Wire ropes
- Dockyard cranes
- Cranes
- Chair lifts
- Flying foxes
- Slipways.



Wire Rope Spray

A semi-fluid grease with a combination of lubricating solids and molybdenum disulphide for lubrication and corrosion prevention requirements of wire ropes.

Features

- Rapidly penetrates wire ropes and repels water
- Provides anti-wear properties
- Protects against corrosion
- NZFSA Approved C12 (All animal product except dairy)
- NZ AgriQuality Approved.

| Product Code | Pack Size | UOM |
|--------------|-----------|------|
| RY452412 | 300g | Each |

Areas of Application

- Wire ropes
- Dock yard cranes
- Mobile cranes
- Chain lifts
- Slipways
- Flying foxes.

