BUNZL

safety & lifting

FOR SAFE
WORKING LIVES

4 WIRE ROPE & FITTINGS

CATALOGUE **VOL2**

WIRE ROPE & FITTINGS

4

AT BUNZL SAFETY & LIFTING WE HAVE A WIDE RANGE OF WIRE ROPES TO SUIT VARIOUS APPLICATIONS.

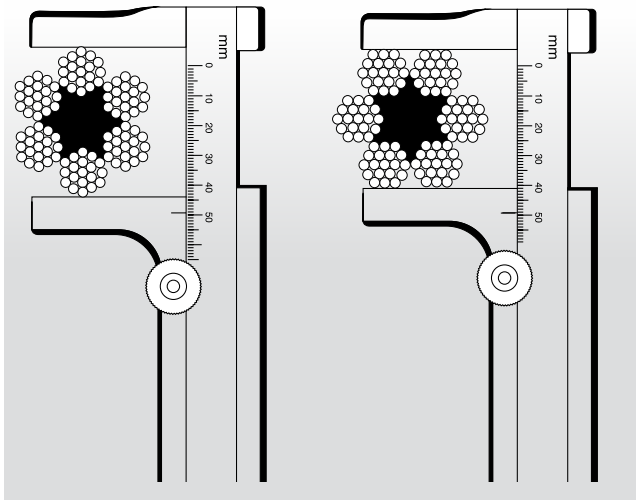
When choosing the correct wire rope for your application is most important, as you need to consider several factors to ensure optimal performance and safety, as well as extend the life of the rope.

WIRE ROPE 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

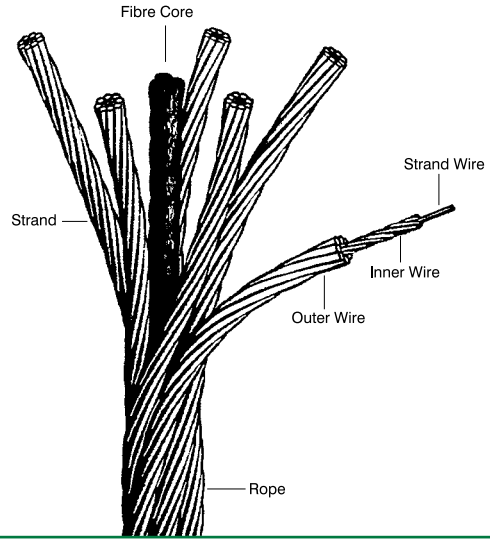


CONSTRUCTION

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.

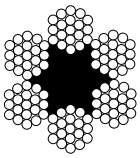
The number of strands and wires will influence the flexibility, fatigue and wear resistance of any given wire rope. Rope selection is often a compromise. Generally the more load bearing wires in the rope the greater the flexibility, however the smaller the wires the less abrasion resistance. For example, 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.



CORE

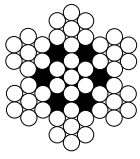
The core of a steel wire rope serves as a foundation for the strands, providing stability by keeping them in place throughout the life of the rope. Wire ropes can be supplied with either a fibre or wire core.



6 X 19
Fibre Core Wire

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.

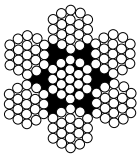


7 X 7
Wire Strand Core

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.



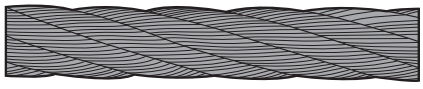
7 X 19
Wire Strand Core

CONSTRUCTION AND LAYS

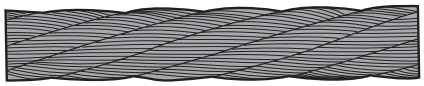
The size and number of wires in each strand, as well as the size and number of strands in the rope greatly affect the characteristics of the rope. In general, a large number of small-size wires and strands produce a flexible rope with good resistance to bending fatigue. The rope construction is also 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.

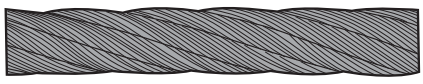
RHOL	Right Hand Ordinary Lay
LHOL	Left Hand Ordinary Lay
RHLL	Right Hand Lang's Lay
LHLL	Left Hand Lang's Lay
Pref	Preformed
Post	Postformed
WRC	Wire Rope Core
WSC	Wire Strand Core
FC	Fibre Core
FW	Filler Wire Strand Construction
D or d	Diameter (in millimetres)



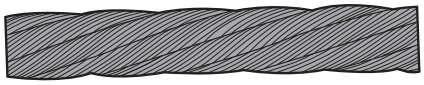
Right Hand Ordinary Lay



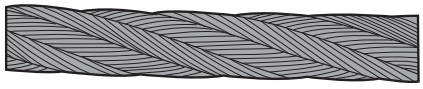
Left Hand Ordinary Lay



Right Hand Lang's Lay



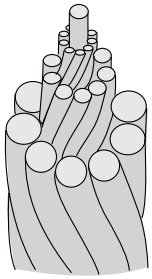
Left Hand Lang's Lay

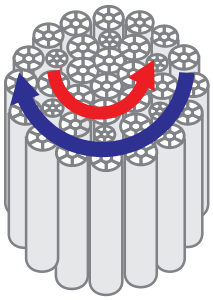


Right Hand Alternate Lay

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.

MANUFACTURED WIRE ROPE SLINGS

Bunzl Safety & Lifting can manufacture single, two, three, four and five leg wire rope slings and provide a wide range of end terminations. All assemblies are made to Australian Standard AS1666.

CORRECT SPOOLING OF STEEL WIRE ROPE ON DRUM

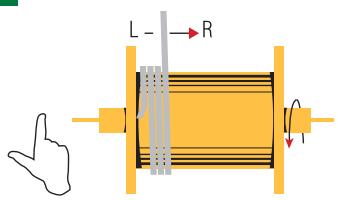
It is imperative to correctly spool wire rope onto a drum. Improper spooling induces torque within the rope, which in turn reduces the life of the rope.

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.

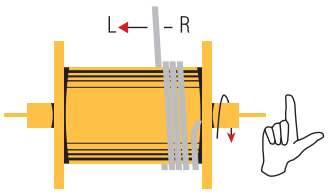
Please contact your local Bunzl Safety branch for further advice.

A



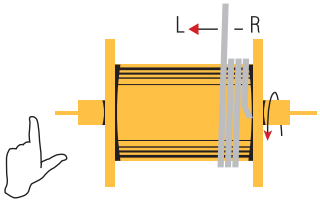
OVERWIND
Left to Right
USE RIGHT LAY ROPE

B



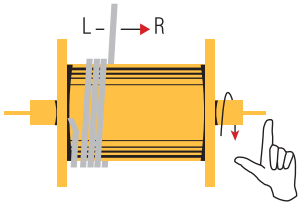
UNDERWIND
Right to Left
USE RIGHT LAY ROPE

C



OVERWIND
Right to Left
USE LEFT LAY ROPE

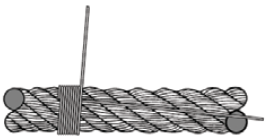
D



UNDERWIND
Left to Right
USE LEFT LAY ROPE

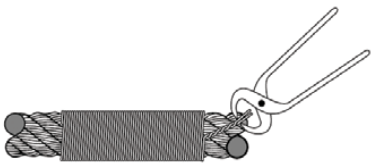
STEEL WIRE ROPE CUTTING PROCEDURE

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.

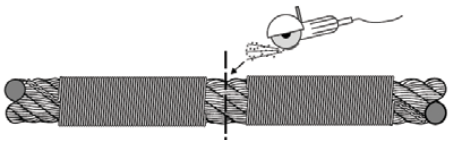


A The rope and this wire end are now wrapped, moving away from the location of the intended cut.

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.

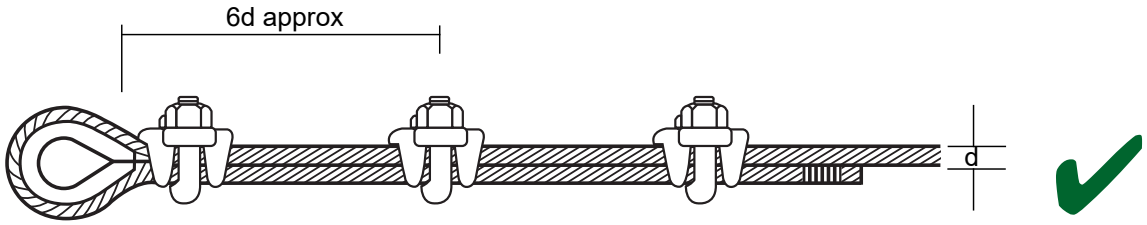


D After preparing the other side of the cut accordingly, the rope can now be cut

CLAMPING WIRE ROPE

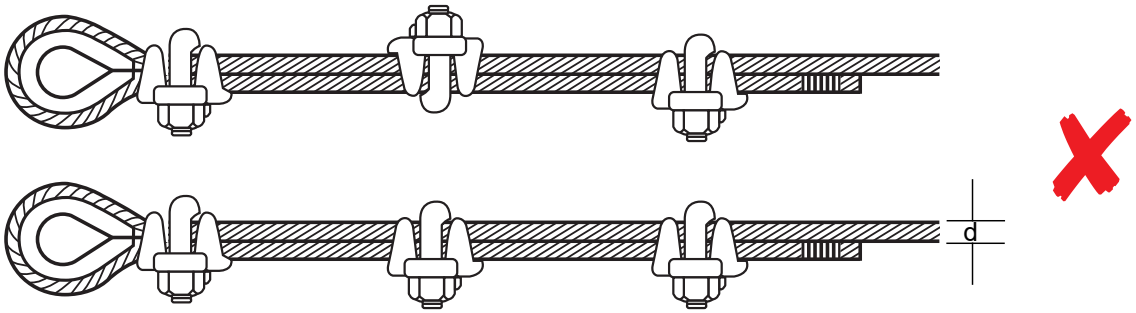
To ensure complete safety, it is imperative that wire ropes are clamped correctly. The diagrams below are a guide only. Please refer to the relevant Australian Standards AS 2076 for further information.

THE RIGHT WAY



THE WRONG WAY

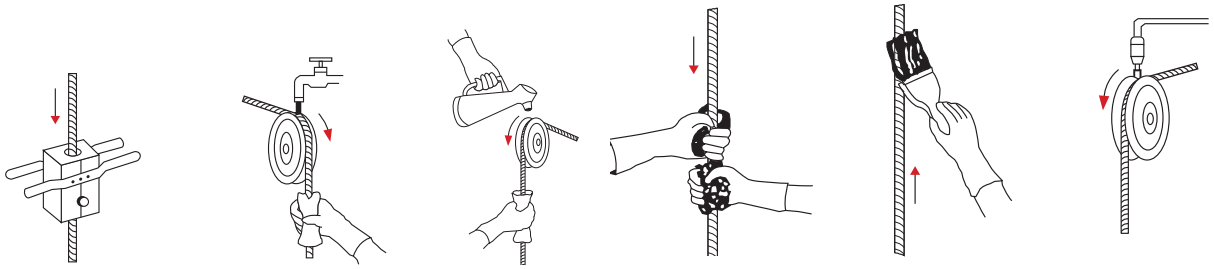
Note: d = diameter of rope



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.



Continuous bath | Dripping | Pouring | Swabbing | Painting | Spray nozzle

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.

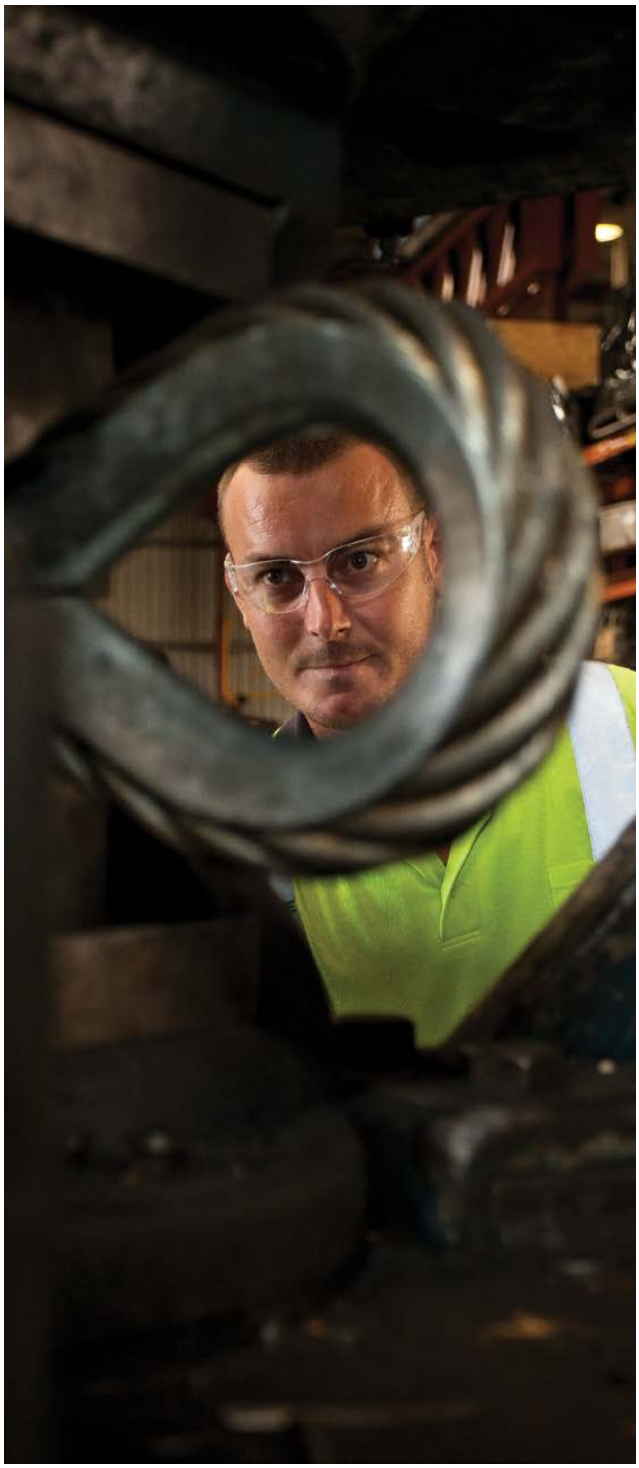
Although the steel wire rope is lubricated at the time of manufacture, a suitable lubricant should be applied every three months. The reels containing the steel wire ropes should also be rotated 90 degrees every three months.

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 ✘

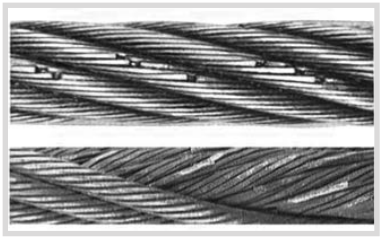
Correct ✔

TYPICAL STEEL WIRE ROPE FAILURES

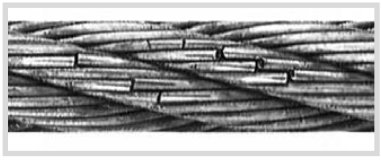
Steel wire rope is tough and durable, however eventually it will reach the end of its safe service life.

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

FATIGUE FAILURE



THERMAL DAMAGE



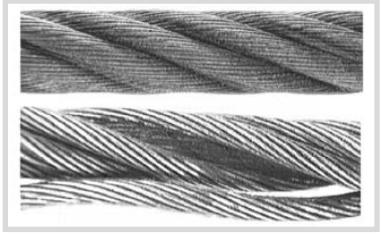
SHOCK LOADING

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.

Soft Eye Machine Swaged

Thimble Eye Machine Swaged

Sof Eye Hand Spliced

Thimble Eye Hand Spliced

Closed Spelter Socket

Machine Swaged

Closed Swage Socket

Open Swage Socket

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

(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.

GALVANISED WIRE ROPE

6X24 FIBRE CORE GRADE 1570 RHOL DRY LUB. A2 GALVANISED WIRE ROPE

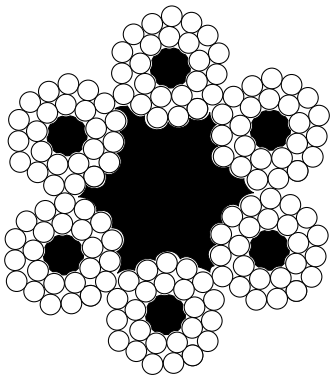
APPLICATIONS

Commonly used for general purpose use.

UOM: /METRE

CODE	DIA (mm)	CONSTRUCTION	GRADE	FINISH	CORE	LAY	MBF (kN)	APPROX. MASS	METRE PER REEL
711308	8	6x24	1570	Galvanised	Fibre	RHOL	28	20.4	1000
711310	10	6x24	1570	Galvanised	Fibre	RHOL	44	31.8	1000
711312	12	6x24	1570	Galvanised	Fibre	RHOL	63	45.8	1000
711313	13	6x24	1570	Galvanised	Fibre	RHOL	74	53.8	1000
711316	16	6x24	1570	Galvanised	Fibre	RHOL	113	81.5	1000

*Cut lengths available on request



6X36 G1770 IWRC GALVANISED WIRE ROPE

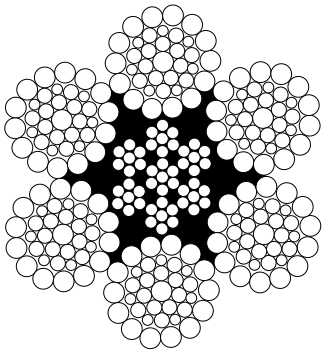
APPLICATIONS

Commonly used for general use and mobile cranes hoist ropes.

UOM: /METRE

CODE	DIA (mm)	CONSTRUCTION	GRADE	FINISH	CORE	LAY	MBF (kN)	APPROX. MASS	METRE PER REEL
713410	10	6x36	1770	Galvanised	Wire	RHOL	63	41.8	1000
713412	12	6x36	1770	Galvanised	Wire	RHOL	90	60.2	1000
713413	13	6x36	1770	Galvanised	Wire	RHOL	107	70.7	1000
713416	16	6x36	1770	Galvanised	Wire	RHOL	161	107	1000
713418	18	6x36	1770	Galvanised	Wire	RHOL	204	135	1000
713420-500	20	6x36	1770	Galvanised	Wire	RHOL	252	167	500
713422-500	22	6x36	1770	Galvanised	Wire	RHOL	304	202	500
713424-500	24	6x36	1770	Galvanised	Wire	RHOL	363	241	500
713426-500	26	6x36	1770	Galvanised	Wire	RHOL	426	283	500
713428-500	28	6x36	1770	Galvanised	Wire	RHOL	493	328	500

*Cut lengths available on request



6X7 FIBRE CORE G1570 RHOL DRY LUB. GALVANISED WIRE ROPE

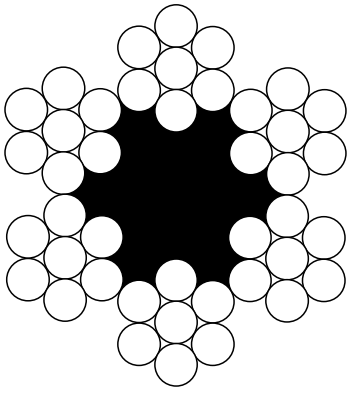
APPLICATIONS

Commonly used for guying and catenary wires.

UOM: /METRE

CODE	DIA (mm)	CONSTRUCTION	GRADE	FINISH	CORE	LAY	MBF (kN)	APPROX. MASS	METRE PER REEL
707302	2	6x7	1570	Galvanised	Fibre	RHOL	2.1	1.4	1000
707302A	2.5	6x7	1570	Galvanised	Fibre	RHOL	3.2	2.65	1000
707303	3	6x7	1570	Galvanised	Fibre	RHOL	4.7	3.22	1000
707304	4	6x7	1570	Galvanised	Fibre	RHOL	8.4	5.5	1000
707305	5	6x7	1570	Galvanised	Fibre	RHOL	13.1	8.6	1000
707306	6	6x7	1570	Galvanised	Fibre	RHOL	18.8	12.4	1000

*Cut lengths available on request



6X19 FIBRE CORE G1570 RHOL DRY LUB GALVANISED WIRE ROPE

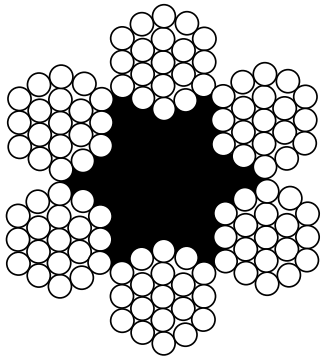
APPLICATIONS

Commonly used for general purpose winch and marine applications.

UOM: /METRE

CODE	DIA (mm)	CONSTRUCTION	GRADE	FINISH	CORE	LAY	MBF (kN)	APPROX. MASS	METRE PER REEL
709303	3	6x19	1570	Galvanised	Fibre	RHOL	4.3	3.2	1000
709303A	3.5	6x19	1570	Galvanised	Fibre	RHOL	5.8	4.3	1000
709304	4	6x19	1570	Galvanised	Fibre	RHOL	7.7	5.8	1000
709305	5	6x19	1570	Galvansed	Fibre	RHOL	12	8.8	1000
709306	6	6x19	1570	Galvanised	Fibre	RHOL	17.6	12.4	1000
709308	8	6x19	1570	Galvanised	Fibre	RHOL	30.8	22.5	1000
709310	10	6x19	1570	Galvanised	Fibre	RHOL	48.2	35.1	1000

*Cut lengths available on request



7X7 G2070 WRC RHOL DRY LUB GALVANISED WIRE ROPE

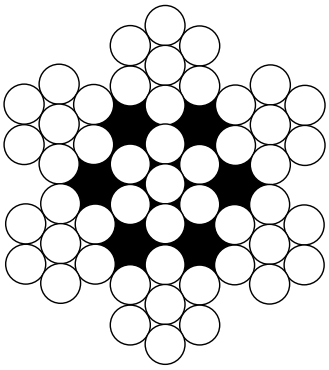
APPLICATIONS

Commonly used for guy ropes, catenary wires and Irrigation applications.

UOM: /METRE

CODE	DIA (mm)	CONSTRUCTION	GRADE	FINISH	CORE	LAY	MBF (kN)	APPROX. MASS	METRE PER REEL
708305	5	7X7	2070	Galvanised	Wire	RHOL	18.9	10.4	1000
708306	6	7X7	2070	Galvanised	Wire	RHOL	27.2	14.3	1000
708307	7	7X7	2070	Galvanised	Wire	RHOL	37.2	20.2	1000
708308	8	7X7	2070	Galvanised	Wire	RHOL	47.5	25.66	1000
708310	10	7X7	2070	Galvanised	Wire	RHOL	73	39.4	1000

*Cut lengths available on request



7X19 G2070 RHOL DRY LUB GALVANISED WIRE ROPE

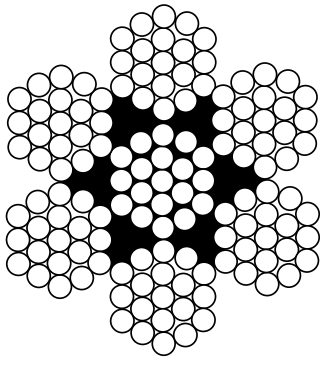
APPLICATIONS

Commonly used for general purpose winch and marine applications

UOM: /METRE

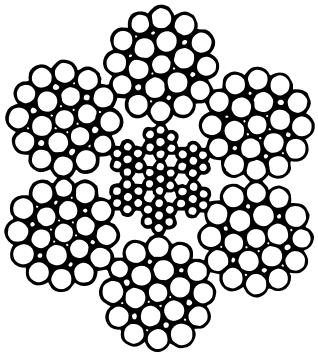
CODE	DIA (mm)	CONSTRUCTION	GRADE	FINISH	CORE	LAY	MBF (kN)	APPROX. MASS	METRE PER REEL
712403	3.2	7x19	2070	Galvanised	Wire	RHOL	7.1	4.4	1000
712404	4	7x19	2070	Galvanised	Wire	RHOL	11.2	6.22	1000
712405	5	7x19	2070	Galvanised	Wire	RHOL	17.2	8.6	1000
712406	6	7x19	2070	Galvanised	Wire	RHOL	25	12.4	1000
712408	8	7x19	2070	Galvanised	Wire	RHOL	43.5	24.4	1000
712410	10	7x19	2070	Galvanised	Wire	RHOL	64.4	46.1	1000

*Cut lengths available on request



GALVANISED WIRE ROPE

6X25 G2070 TIRFOR ROPE GALVANISED WIRE ROPE



APPLICATIONS

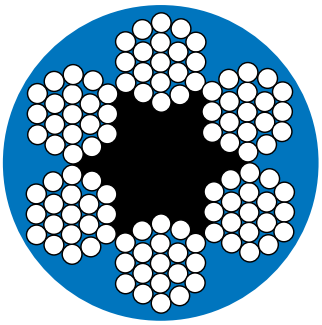
Suitable for winches and similar wire rope pullers also used on multi-layered winches.

UOM: /METRE

CODE	DIA (mm)	CONSTRUCTION	GRADE	FINISH	CORE	LAY	MBF (kN)	APPROX. MASS	METRE PER REEL
712411	11	6x25	2070	Galvanised	Wire	RHOL	89	50.9	1000
712416-500	16	6x25	2070	Galvanised	Wire	RHOL	188	106	500

*Cut lengths available on request

6X19 PVC FIBRE CORE G1570 RHOL PVC COATED GALVANISED WIRE ROPE BLUE COLOURED



APPLICATIONS

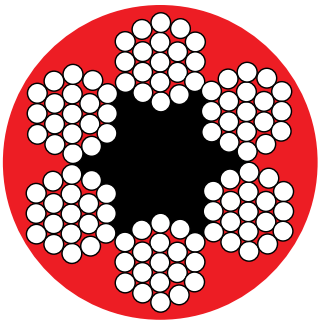
Commonly used for balustrade rails and marine rigging applications.

UOM: /METRE

CODE	WIRE DIA (mm)	PVC / OUTSIDE DIA (mm)	CONSTRUCTION	GRADE	WIRE FINISH	PVC	CORE	LAY	MBF (kN)	APPROX. MASS (kg/100m)	METRE PER REEL
706030	3	5	6x19	1570	PVC	Blue	Fibre	RHOL	4.3	3.16	1000
706030A	3.5	5.5	6x19	1570	PVC	Blue	Fibre	RHOL	5.8	4.2	1000
706040	4	6	6x19	1570	PVC	Blue	Fibre	RHOL	7.7	5.5	1000
706050	5	7	6x19	1570	PVC	Blue	Fibre	RHOL	12	8.6	1000
706060	6	8	6x19	1570	PVC	Blue	Fibre	RHOL	17.6	12.4	1000
706080	8	10	6x19	1570	PVC	Blue	Fibre	RHOL	30.8	22.1	1000
706100	10	12	6x19	1570	PVC	Blue	Fibre	RHOL	48.2	34.6	1000

*Cut lengths available on request

6X19 PVC FIBRE CORE G1570 RHOL PVC COATED GALVANISED WIRE ROPE RED COLOURED



APPLICATIONS

Commonly used for safety lines on conveyor systems.

UOM: /METRE

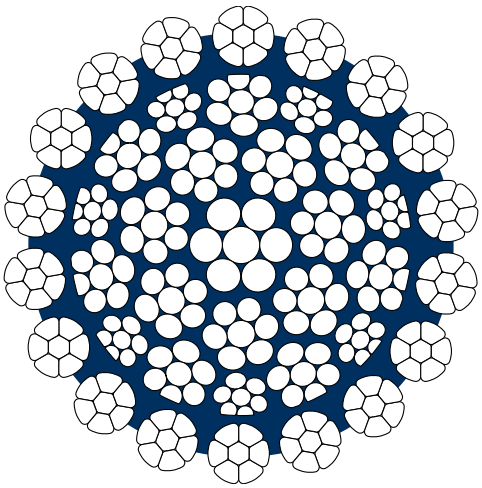
CODE	WIRE DIA (mm)	PVC / OUTSIDE DIA (mm)	CONSTRUCTION	GRADE	WIRE FINISH	PVC	CORE	LAY	MBF (kN)	APPROX. MASS (kg/100m)	METRE PER REEL
706030AR	3.5	5.5	6x19	1570	PVC	Red	Fibre	RHOL	5.8	4.2	1000
706050R	5	7	6x19	1570	PVC	Red	Fibre	RHOL	12	8.6	1000

*Cut lengths available on request

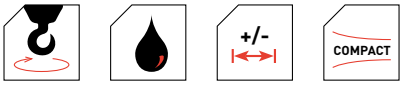
HIGH PERFORMANCE WIRE ROPE

CASAR

EUROLIFT



PROPERTIES



Swivel | Lubricated | Tolerance | Compacted

APPLICATIONS

Has a core in a special design avoiding crossover between the strands of core and preventing internal rope destruction. Hoist rope for mobile cranes, electrical hoists and other applications, where rotation-resistant ropes are required.

OVERVIEW

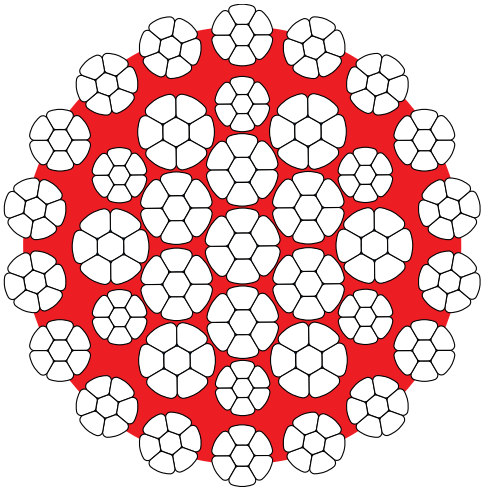
Diameter Range (mm)	10-34	34, 93-60
RCN	23-3	23-3
Number of Outer Strands	18	18
Number of Wires	280	292
Number of Outer Load Bearing Wires	126	126
Average Fill Factor	0.720	
Average Nominal Metallic Area Factor C	0.565	
Average Spin Factor *N/mm²	0.82 (1960)* / 0.80 (2160)*	

- Temperature range of use: -50°C to +75°C
- Suitable for multi-layer spooling in Lang's lay
- Available in ordinary lay and Lang's lay
- Available in right hand and left hand
- Available in galvanised and ungalvanised

NOMINAL DIAMETER (mm)	WEIGHT (kg/m)	MINIMUM BREAKING FORCE 1960 N/mm² (kN)	1960 N/mm² t (metric)	2160 N/mm² (kN)	2160 N/mm² t (metric)
10	0.50	89.6	9.14	97.4	9.93
11	0.61	108.8	11.09	118.4	12.07
12	0.73	130.8	13.34	139.9	14.27
13	0.84	152.7	15.57	165.4	16.87
14	0.97	179.1	18.26	190.9	19.47
15	1.12	204.0	20.80	219.5	22.38
16	1.28	230.6	23.51	249.1	25.40
17	1.43	257.9	26.30	280.6	28.61
18	1.61	293.9	29.97	317.5	32.38
19	1.79	329.0	33.55	352.8	35.98
20	2.01	362.2	36.93	391.7	39.94
21	2.19	396.1	40.39	430.9	43.94
22	2.42	441.4	45.01	472.0	48.13
23	2.64	471.8	48.11	513.2	52.33
24	2.89	524.3	53.46	564.1	57.52
25	3.07	567.9	57.91	609.4	62.14
26	3.35	614.9	62.70	657.4	67.04
27	3.64	654.2	66.71	711.7	72.57
28	3.91	712.9	72.70	765.6	78.07
29	4.19	754.6	76.95	821.0	83.72
30	4.48	817.6	83.35	877.9	89.52
31	4.83	869.7	88.69	958.4	97.73
32	5.12	930.0	94.83	1002.8	102.26
33	5.47	992.8	101.24	1094.1	111.57
34	5.76	1045.0	106.56	1130.9	115.32
36	6.51	1185.0	120.84	1262.3	128.72
38	7.21	1319.0	134.50	1412.2	144.01
40	8.04	1462.0	149.08	1560.4	49.12
42	8.85	1611.2	164.30	1667.4	170.03
44	9.71	1767.0	180.19	1823.0	185.90
46	10.68	1935.0	197.32	1989.7	202.90
48	11.58	2113.3	215.50	2187.0	223.01
50	12.50	2272.8	231.76	2504.7	255.41
52	14.18	2500.0	254.93	2750.0	280.42
54	14.69	2651.2	270.35	2921.7	297.93
56	15.75	2851.2	290.74	3142.2	320.42
58	16.83	3058.5	311.88	3370.6	343.71
60	18.01	3273.1	333.77	3607.1	367.83

CASAR

POWERPLAST



PROPERTIES

Swivel | Lubricated | Tolerance | Plast rope | Compacted

APPLICATIONS

Has a high breaking load and a good resistance against drum crushing. Hoist rope for deck cranes and offshore cranes, pull-inriser and other applications in the marine environment, where rotation resistant-ropes are required.

OVERVIEW

Diameter Range (mm)	12-56	57, 15-72
RCN	23-3	28
Number of Outer Strands	18	18
Number of Wires	259	593
Number of Outer Load Bearing Wires	126	270
Average Fill Factor	0.727	
Average Nominal Metallic Area Factor C	0.571	
Average Spin Factor *N/mm²	0.84 (1960)* / 0.81 (2160)*	

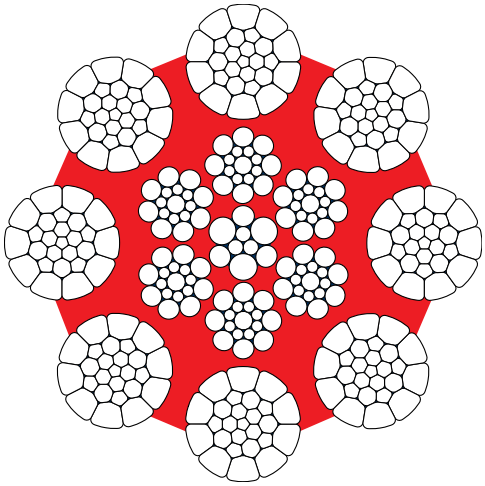
- Temperature range of use: -50°C to +115°C
- Suitable for multi-layer spooling in Lang's lay
- Available in ordinary lay and Lang's lay
- Available in right hand and left hand
- Available in galvanised execution

NOMINAL DIAMETER (mm)	WEIGHT (kg/m)	MINIMUM BREAKING FORCE			
		1960 N/mm²		2160 N/mm²	
		(kN)	t (metric)	(kN)	t (metric)
12	0.73	130.8	13.34	142.6	14.54
13	0.87	152.7	15.57	169.4	17.27
14	1.00	179.1	18.26	194.7	19.85
15	1.15	204.0	20.80	222.4	22.68
16	1.31	230.6	23.51	256.2	26.13
17	1.47	260.7	26.58	286.2	29.18
18	1.65	293.9	29.97	325.4	33.18
19	1.86	329.0	33.55	361.1	36.82
20	2.04	362.2	36.93	396.9	40.47
21	2.25	400.0	40.79	439.0	44.77
22	2.47	441.4	45.01	481.4	49.09
23	2.69	477.6	48.70	524.4	53.47
24	2.87	524.3	53.46	568.7	57.99
25	3.18	567.9	57.91	624.5	63.68
26	3.48	614.9	62.70	678.3	69.17
27	3.68	663.5	67.66	728.4	74.28
28	3.99	712.9	72.70	778.4	79.38
29	4.21	765.4	78.05	840.4	85.70
30	4.52	817.4	83.35	896.5	91.42
31	4.87	879.9	89.73	965.9	98.50
32	5.14	930.0	94.83	1019.4	103.95
33	5.46	991.2	101.08	1088.1	110.96
34	5.77	1045.0	106.56	1144.9	116.75
35	6.22	1102.6	112.44	1208.1	123.19
36	6.54	1185.5	120.89	1287.3	131.27
38	7.26	1319.0	134.50	1440.3	146.87
40	8.14	1462.0	149.08	1615.0	164.69
42	8.90	1611.2	164.30	1766.3	180.11
44	9.73	1767.0	180.19	1930.4	196.85
46	10.90	1935.0	197.32	2127.4	216.94
48	11.82	2113.0	215.47	2307.1	235.26
50	12.75	2292.0	233.72	2487.3	253.64
52	13.97	2436.0	248.41	2724.2	277.79
54	14.64	2632.0	268.39	2896.9	295.40
56	15.53	2854.3	291.06	3133.6	319.54
58	16.88	3077.9	313.86	3379.0	344.57
60	18.18	3292.8	335.78	3615.0	368.63
62	19.25	3546.3	361.63	3754.2	382.83
64	20.65	3803.1	387.81	4026.0	410.54
66	21.91	4036.5	411.61	4273.1	435.74
68	23.19	4271.9	435.62	4522.3	461.15
70	24.40	4495.5	458.42	4759.0	485.29
72	25.89	4780.4	487.47	5049.4	514.9

HIGH PERFORMANCE WIRE ROPE

CASAR

TURBOPLAST



PROPERTIES

No swivel | Lubricated | Tolerance | Plast rope | Compacted

APPLICATIONS

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

OVERVIEW

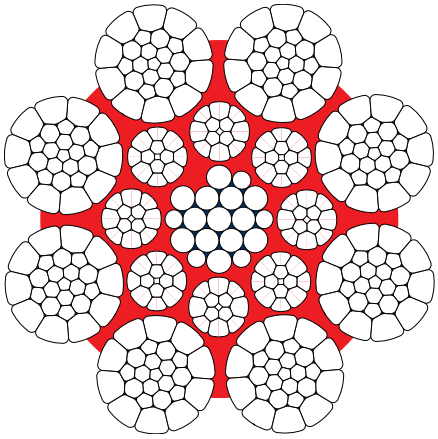
Diameter Range (mm)	8	9-24	25-48	50-72
RCN	09	09	09	11
Number of Outer Strands	8	8	8	8
Number of Wires	259	319	327	367
Number of Outer Load Bearing Wires	208	208	208	248
Average Fill Factor	0.664			
Average Nominal Metallic Area Factor C	0.522			
Average Spin Factor *N/mm²	0.89 (1770)* / 0.88 (1960)* / 0.86 (2160)*			

- Temperature range of use: -50°C to +115°C
- Suitable for multi-layer spooling in Lang's lay
- Available in ordinary lay and Lang's lay
- Available in right hand and left hand
- Available in galvanised and ungalvanised

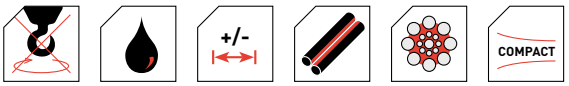
NOMINAL DIAMETER (mm)	WEIGHT (kg/m)	MINIMUM BREAKING FORCE 1960 N/mm² (kN)	1960 N/mm² t (metric)	2160 N/mm² (kN)	2160 N/mm² t (metric)
8	0.30	58.0	5.91	63.5	6.48
9	0.38	74.0	7.55	81.4	8.30
10	0.47	90.0	9.18	101.0	10.30
11	0.57	109.7	11.19	122.6	12.50
12	0.67	130.0	13.26	144.0	14.68
13	0.76	153.0	14.99	170.0	16.49
14	0.91	177.0	18.05	196.0	19.99
15	1.06	205.0	20.90	226.0	23.05
16	1.21	232.0	23.66	252.0	25.70
17	1.34	259.0	26.41	283.0	28.86
18	1.51	292.0	29.78	314.0	32.02
19	1.67	327.0	33.35	351.0	35.79
20	1.87	361.0	36.81	391.0	39.87
21	2.04	394.0	40.18	421.0	42.93
22	2.23	439.0	44.77	468.0	47.72
23	2.44	478.0	48.74	511.0	52.11
24	2.66	521.0	53.13	556.0	56.70
26	3.13	616.0	62.82	655.0	66.79
27	3.38	657.0	67.00	702.0	71.58
28	3.60	707.0	72.09	748.0	76.28
29	3.87	760.0	77.50	807.0	82.29
30	4.15	813.0	82.90	871.0	88.82
32	4.75	938.0	95.65	988.0	100.76
34	5.36	1055.0	107.58	1114.0	113.60
36	5.95	1164.0	118.70	1242.0	126.65
38	6.68	1301.0	132.67	1395.0	142.25
40	7.40	1438.0	146.64	1552.0	158.26
42	8.11	1591.0	162.24	1694.0	172.74
44	8.96	1739.0	177.33	1873.0	190.99
46	9.78	1916.0	195.38	2042.0	208.23
48	10.65	2079.0	212.00	2225.0	226.89
50	11.57	2265.0	230.97	2423.0	247.08
52	12.50	2448.0	249.63	2620.0	267.17
54	13.39	2641.0	269.31	2826.0	288.17
56	14.45	2828.0	288.38	3027.0	308.67
58	15.43	3022.0	308.16	3234.0	329.78
60	16.55	3242.0	330.60	3469.0	353.74
62	17.54	3364.0	343.04	3708.0	378.11
64	18.92	3597.0	366.80	3965.0	404.32
66	20.16	3833.0	390.86	4225.0	430.83
68	21.35	4055.0	413.50	-	-
70	22.51	4281.0	436.54	-	-
72	23.86	4538.0	462.75	-	-

CASAR

PARAPLAST



PROPERTIES



No swivel | Lubricated | Tolerance | Parallel Construction | Plast rope | Compacted

APPLICATIONS

Very fatigue resistant and very high minimum breaking load. Hoist rope for electrical hoists and lifting devices with multiple part reeving, whereas a rotation rope is not needed due to great lifting heights, low number of falls or guided loads.

OVERVIEW

Diameter Range (mm)	11-32	33-50
RCN	09	09
Number of Outer Strands	8	8
Number of Wires	323	363
Number of Outer Load Bearing Wires	208	208
Average Fill Factor	0.709	
Average Nominal Metallic Area Factor C	0.557	
Average Spin Factor *N/mm²	0.87 (1960)* / 0.86 (2160)*	

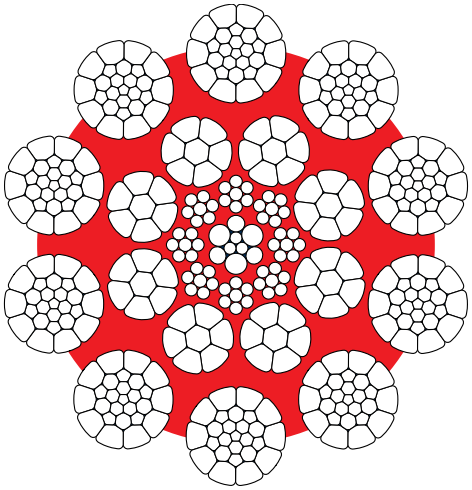
- Temperature range of use: -50°C to +115°C
- Suitable for multi-layer spooling
- Available in ordinary lay and Lang's lay
- Available in right hand and left hand
- Available in galvanised and ungalvanised

NOMINAL DIAMETER (mm)	WEIGHT (kg/m)	MINIMUM BREAKING FORCE			
		1960 N/mm²		2160 N/mm²	
		(kN)	t (metric)	(kN)	t (metric)
11	0.60	113.4	11.56	122.1	12.45
12	0.72	137.2	13.99	147.8	15.07
13	0.83	159.7	16.29	172.0	17.54
14	0.96	184.8	18.84	199.0	20.29
15	1.12	212.3	21.65	228.6	23.31
16	1.27	240.4	24.51	258.9	26.40
17	1.42	273.3	27.87	294.4	30.02
18	1.61	304.3	31.03	327.7	33.42
19	1.78	342.0	34.87	368.4	37.57
20	2.01	379.7	38.72	408.9	41.70
21	2.20	414.7	42.29	446.6	45.54
22	2.40	456.8	46.58	491.9	50.16
23	2.64	517.1	52.73	556.9	56.79
24	2.87	561.8	57.29	605.0	61.69
25	3.11	609.0	62.10	655.9	66.88
26	3.38	662.2	67.53	713.1	72.72
27	3.63	711.0	72.50	765.8	78.09
28	3.89	760.6	77.56	819.1	83.53
29	4.18	820.3	83.65	883.5	90.09
30	4.49	884.0	90.14	952.0	97.08
32	5.11	978.3	99.76	1065.6	108.66
34	5.75	1097.0	111.86	1194.9	121.85
36	6.42	1233.8	125.81	1343.9	137.04
38	7.20	1377.2	140.44	1500.1	152.97
40	7.98	1533.5	156.38	1670.3	170.32
42	8.78	1680.1	171.32	1830.1	186.62
44	9.64	1851.4	188.79	2016.6	205.64
46	10.54	2022.8	206.27	2203.3	224.68
48	11.46	2202.0	224.54	2398.5	244.58
50	12.52	2365.3	241.20	2576.4	262.72

HIGH PERFORMANCE WIRE ROPE

CASAR

SUPERPLAST 8



PROPERTIES

No swivel | Lubricated | Tolerance | Plast rope | Compacted

APPLICATIONS

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

OVERVIEW

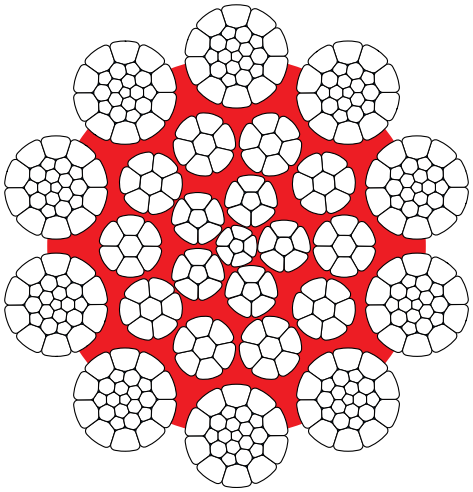
Diameter Range (mm)	10-66,68	68-76
RCN	11	→ 13
Number of Outer Strands	10	10
Number of Wires	381	519
Number of Outer Load Bearing Wires	260	310
Average Fill Factor	0.686	
Average Nominal Metallic Area Factor C	0.539	
Average Spin Factor *N/mm²	0.85 (1960)* / 0.84 (2160)*	

- Temperature range of use: -50°C to +115°C
- Suitable for multi-layer spooling
- Available in ordinary lay and Lang's lay
- Available in right hand and left hand
- Available in galvanised and ungalvanised

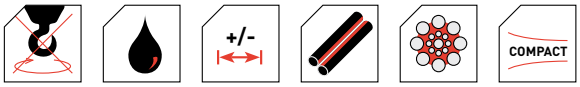
NOMINAL DIAMETER (mm)	WEIGHT (kg/m)	MINIMUM BREAKING FORCE			
		1960 N/mm²		2160 N/mm²	
		(kN)	t (metric)	(kN)	t (metric)
10	0.49	90.9	9.27	99.6	10.16
11	0.59	109.0	11.12	119.0	12.13
12	0.69	127.0	12.95	139.0	14.17
13	0.81	152.0	15.50	166.0	16.93
14	0.93	174.0	17.74	190.0	19.37
15	1.07	200.0	20.39	219.0	22.33
16	1.22	227.0	23.15	248.0	25.29
17	1.39	260.0	26.51	285.0	29.06
18	1.56	293.0	29.88	321.0	32.73
19	1.74	320.0	32.63	351.0	35.79
20	1.93	358.0	36.51	395.0	40.28
21	2.12	395.0	40.28	435.0	44.46
22	2.23	432.0	44.05	474.0	48.34
23	2.54	473.0	48.23	518.2	52.84
24	2.78	517.4	52.76	566.9	57.81
25	3.00	559.6	57.06	613.4	62.55
26	3.24	604.9	61.68	662.7	67.58
27	3.48	646.8	65.96	708.6	72.26
28	3.74	698.9	71.27	762.0	77.70
29	3.99	737.8	75.24	808.3	82.42
30	4.28	796.8	81.25	872.9	89.01
31	4.53	846.7	86.34	927.5	94.58
32	4.86	925.9	94.42	1014.3	103.43
33	5.19	968.4	98.75	1060.9	108.18
34	5.58	1046.0	106.66	1145.9	116.85
36	6.26	1172.5	119.56	1284.5	130.98
38	6.87	1282.5	130.78	1405.0	143.27
40	7.67	1429.3	145.75	1565.8	159.67
42	8.45	1581.5	161.27	1732.6	176.68
44	9.24	1725.8	175.98	1890.7	192.80
46	10.25	1899.3	193.68	2080.7	212.17
48	11.08	2068.9	210.97	2266.6	231.13
50	11.95	2232.3	227.63	2445.5	249.37
52	12.93	2421.3	246.91	2652.6	270.49
54	14.07	2626.5	267.83	2877.4	293.42
56	15.11	2853.4	290.97	3126.0	318.77
58	16.12	3004.3	306.36	3291.3	335.62
60	17.29	3245.0	330.90	3555.0	362.51
62	18.49	3432.1	349.98	3759.9	383.41
64	19.59	3646.8	371.87	3995.1	407.39
66	20.96	3876.8	395.33	5247.1	433.09
68	22.03	4132.9	421.44	4527.6	461.69
70	23.53	4370.1	445.63	4787.5	488.19
72	24.98	4544.9	463.46	4979.1	507.73

CASAR

SUPERPLAST 10 MIX



PROPERTIES



APPLICATIONS

Very high bending fatigue performance and high minimum breaking load. Mainly overhead and industrial cranes where rotation resistant ropes are not required.

OVERVIEW

Diameter Range (mm)	16-57, 15
RCN	11
Number of Outer Strands	10
Number of Wires	366
Number of Outer Load Bearing Wires	260
Average Fill Factor	0.700
Average Nominal Metallic Area Factor C	0.550
Average Spin Factor *N/mm²	0.87 (1960)* / 0.85 (2160)*

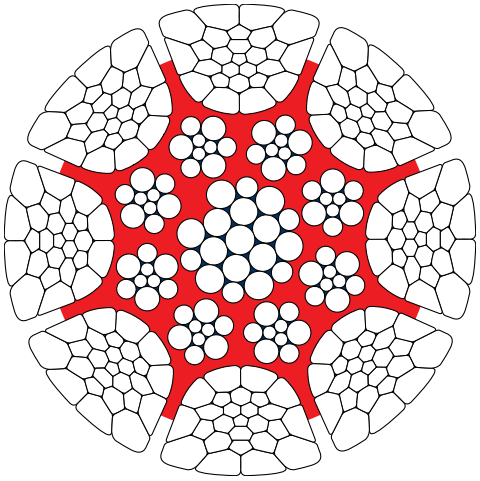
- Temperature range of use: -50°C to +115°C
- Suitable for multi-layer spooling in Lang's lay
- Available in ordinary lay and Lang's lay
- Available in right hand and left hand
- Available in galvanised and ungalvanised

NOMINAL DIAMETER (mm)	WEIGHT (kg/m)	MINIMUM BREAKING FORCE 1960 N/mm² (kN)	1960 N/mm² t (metric)	2160 N/mm² (kN)	2160 N/mm² t (metric)
16	1.24	237.0	24.17	259.0	26.41
17	1.42	270.0	27.53	291.0	29.67
18	1.53	301.0	30.69	328.0	33.45
19	1.87	344.0	35.08	375.0	38.24
20	2.03	377.0	38.44	406.0	41.40
21	2.16	412.0	42.01	449.0	45.79
22	2.43	465.0	47.42	507.0	51.70
23	2.65	507.0	51.70	546.0	55.68
24	2.89	553.0	56.39	602.0	61.39
25	3.11	594.0	60.57	647.0	65.98
26	3.37	645.0	65.77	695.0	70.87
27	3.63	692.0	70.57	754.0	76.89
28	3.96	757.0	77.19	825.0	84.13
29	4.23	808.0	82.39	871.0	88.82
30	4.44	847.0	86.37	923.0	94.12
31	4.77	913.0	93.10	994.0	101.36
32	5.13	982.0	100.14	1057.0	107.79
33	5.41	1036.0	105.64	1129.0	115.13
34	5.65	1106.0	112.78	1205.0	122.88
35	6.12	1167.0	119.0	1277.4	130.26
36	6.45	1235.0	125.94	1330.0	135.62
38	7.16	1369.0	139.0	1492.0	152.14
40	7.91	1496.0	152.55	1621.0	165.30
42	8.75	1654.0	168.66	1792.0	182.74
44	9.62	1820.0	185.59	1972.0	201.09
46	10.53	1985.0	202.42	2150.0	219.24
48	11.51	2176.0	221.89	2356.0	240.25
50	12.43	2350.0	239.64	2546.0	259.62
52	13.4	2508.0	255.75	2716.0	276.96
54	14.47	2793.0	284.81	2967.0	302.55
56	15.56	2931.0	298.88	3174.0	323.66

HIGH PERFORMANCE WIRE ROPE

CASAR

PARAFIT



PROPERTIES

No swivel | Lubricated | Tolerance | Parallel Construction | Plast rope | Compacted | Swaged

APPLICATIONS

Boom hoist rope for all kind of crawler cranes and mobile cranes especially suited for multi-layer spooling.

OVERVIEW

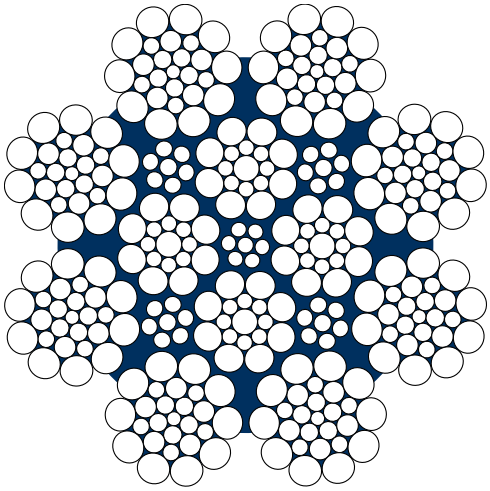
Diameter Range (mm)	14-50
RCN	09
Number of Outer Strands	8
Number of Wires	298
Number of Outer Load Bearing Wires	208
Average Fill Factor	0.744
Average Nominal Metallic Area Factor C	0.584
Average Spin Factor *N/mm²	0.87 (1960)* / 0.86 (2160)*

- Temperature range of use: -50°C to +115°C
- Suitable for multi-layer spooling
- Only available in ordinary lay
- Available in right hand and left hand
- Available in galvanised and ungalvanised

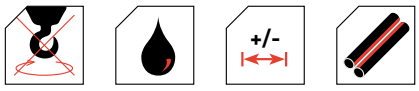
NOMINAL DIAMETER (mm)	WEIGHT (kg/m)	MINIMUM BREAKING FORCE 1960 N/mm² (kN)	1960 N/mm² t (metric)	2160 N/mm² (kN)	2160 N/mm² t (metric)
14	0.98	195.8	19.97	213.4	21.76
15	1.11	223.2	22.76	243.1	24.79
16	1.27	255.1	26.01	277.9	28.33
17	1.45	291.8	29.75	317.8	32.41
18	1.61	322.7	32.90	351.5	35.84
19	1.82	364.4	37.16	397.0	40.48
20	1.99	398.5	40.63	434.1	44.26
21	2.18	437.5	44.61	476.5	48.59
22	2.42	485.2	49.47	528.5	53.89
23	2.63	528.3	53.87	575.5	58.69
24	2.87	576.1	58.75	627.6	64.00
25	3.11	624.4	63.67	680.2	69.36
26	3.35	671.7	68.50	731.7	74.62
27	3.63	727.2	74.16	792.2	80.78
28	3.90	782.8	79.82	852.7	86.96
29	4.18	838.0	85.46	912.9	93.09
30	4.50	902.2	92.00	982.9	100.23
32	5.08	1018.9	103.90	1110.0	113.19
33	5.40	1083.6	110.50	1065.9	108.70
34	5.77	1157.3	118.01	1260.7	128.56
36	6.44	1291.6	131.71	1407.0	143.48
38	7.21	1446.4	147.49	1575.6	160.67
40	7.95	1593.8	162.53	1736.3	177.05
42	8.76	1757.2	179.19	1914.2	195.20
44	9.67	1939.8	197.81	2113.2	215.49
46	10.55	2115.8	215.75	2304.9	235.03
48	11.49	2304.2	234.96	2510.1	255.96
50	12.36	2480.3	252.92	2702.0	275.53

CASAR

ALPHALIFT



PROPERTIES



No swivel | Lubricated | Tolerance | Parallel Construction

APPLICATIONS

Very flexible construction with a high breaking load. Hoist rope for electrical hoist and other lifting devices, where rotation resistant ropes are not required.

OVERVIEW

Diameter Range (mm)	4-5	5.5-6.5	7-9.53	10-27
RCN	02	07	07	06
Number of Outer Strands	8	8	8	8
Number of Wires	99	211	271	255
Number of Outer Load Bearing Wires	56	168	168	152
Average Fill Factor	0.655			
Average Nominal Metallic Area Factor C	0.514			
Average Spin Factor	0.86			

- Temperature range of use: -50°C to +140°C
- Available in ordinary lay and Lang's lay
- Available in right hand and left hand
- Available in galvanised and ungalvanised

NOMINAL DIAMETER (mm)	WEIGHT (kg/m)	MINIMUM BREAKING FORCE 1960 N/mm² (kN)	1960 N/mm² (t metric)	2160 N/mm² (kN)	2160 N/mm² (t metric)
4	0.07	13.0	1.33	14.3	1.46
4.5	0.09	16.7	1.70	18.4	1.88
5	0.11	21.1	2.15	23.4	2.39
5.5	0.13	26.1	2.66	28.8	2.94
6	0.16	31.5	3.21	34.7	3.54
6.5	0.18	37.9	3.86	41.8	4.26
7	0.22	42.6	4.34	47.0	4.79
7.5	0.25	49.6	5.06	54.6	5.57
8	0.29	55.0	5.61	60.6	6.18
9	0.36	72.0	7.34	79.3	8.09
10	0.45	87.3	8.90	92.5	9.43
11	0.56	107.2	10.93	117.0	11.93
12	0.66	126.3	12.88	137.8	14.05
13	0.76	146.6	14.95	159.9	16.31
14	0.88	168.7	17.20	184.1	18.77
15	1.02	197.0	20.09	214.9	21.91
16	1.15	222.5	22.69	242.8	24.76
17	1.29	250.3	25.52	273.1	27.85
18	1.46	282.8	28.84	308.5	31.46
19	1.65	319.9	32.62	349.0	35.59
20	1.81	352.0	35.89	384.0	39.16
21	2.02	391.6	39.93	427.2	43.56
22	2.21	430.2	43.87	469.4	47.87
23	2.40	467.4	47.66	509.9	52.00
24	2.59	504.7	51.47	550.6	56.15
25	2.80	545.3	55.61	594.9	60.66
26	3.03	588.8	60.04	642.4	65.51
27	3.27	635.5	64.80	693.3	70.70

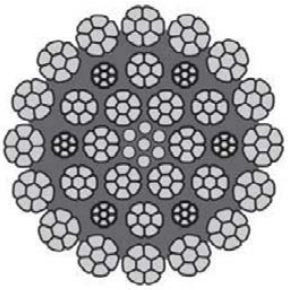
HIGH PERFORMANCE WIRE ROPE

USHA MARTIN

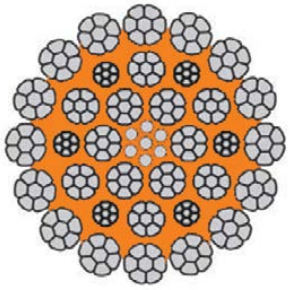
CRANE WIRE ROPE POWERFORM® 35/35P

FEATURES AND BENEFITS

- 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



Powerform® 35



Powerform® 35P

NOM. ROPE DIA.	NOM. ROPE DIA.	APPROX. MASS	MINIMUM BREAKING FORCE GALVANISED & UNGALVANISED ROPE GRADE			
			1960 N/mm²		2160 N/mm²	
(mm)	(in)	(kg/100m)	(kN)	(t)	(kN)	(t)
	1/2	81.1	148.0	15.1	160.0	16.3
13		85.0	155.0	15.8	167.0	17.0
14		98.6	180.0	18.3	192.0	19.6
16	5/8	129.0	223.0	23.8	252.0	25.7
18		163.0	300.0	30.6	321.0	32.7
19	3/4	182.0	331.0	33.7	358.0	36.0
20		201.0	372.0	37.9	399.0	40.7
21		222.0	402.0	41.0	434.0	44.2
22		243.0	444.0	45.3	484.0	49.3
	7/8	249.0	453.0	46.2	490.0	49.9
24		290.0	531.0	54.1	572.0	58.3
	1	325.0	591.0	60.2	640.0	65.2
26		340.0	621.0	63.3	661.0	67.4
28		394.0	720.0	73.4	788.0	80.3
	1 - 1/8	411.0	748.0	76.2	810.0	82.6
30		453.0	827.0	84.3	904.0	92.2
32	1 - 1/4	515.0	944.0	96.2	1035.0	106.0
35	1 - 3/8	616.0	1125.0	115.0	1216.0	124.0
36		652.0	1185.0	121.0	1286.0	131.0
38	1 - 1/2	726.0	1326.0	135.0	1437.0	146.0
40		805.0	1477.0	151.0	1588.0	162.0
42		887.0	1485.0	151.0		
44		974.0	1618.0	165.0		
	1 - 3/4	994.0	1646.0	168.0		
46		1064.0	1765.0	180.0		
48		1159.0	1935.0	197.0		
50		1258.0	2078.0	212.0		
	2	1298.0	2150.0	219.0		
52		1360.0	2256.0	230.0		

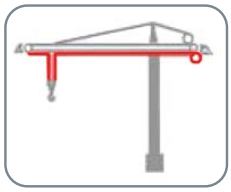
*Mass per unit length of POWERFORM 35P increases by approx. 3%.

Note:

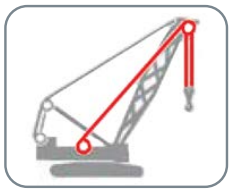
- POWERFORM 35P is available on special request and prior confirmation.
- Rope sizes and Breaking Force not shown in the standard table, may be available on request and prior confirmation.

Mobile

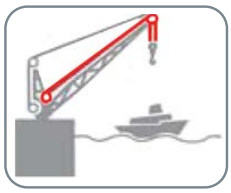
Tower



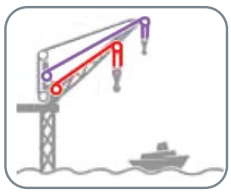
Lattice Boom



Dockside



Offshore Pedestal



Main Hoist

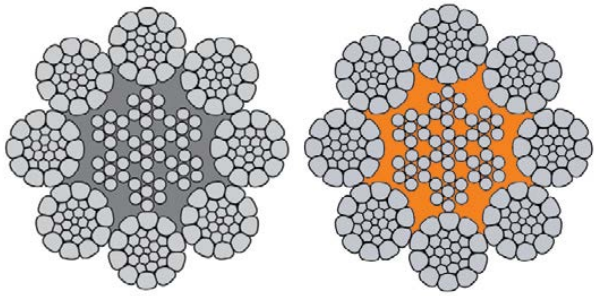
Whip Hoist

USHA MARTIN

CRANE WIRE ROPE POWERFORM® 8/8P

FEATURES AND BENEFITS

- 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



Powerform® 8 Powerform® 8P

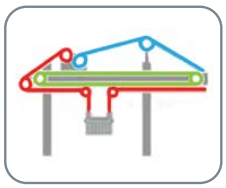
NOM. ROPE DIA.	NOM. ROPE DIA.	APPROX. MASS	MINIMUM BREAKING FORCE GALVANISED & UNGALVANISED ROPE GRADE			
			1960 N/mm²		2160 N/mm²	
(mm)	(in)	(kg/100m)	(kN)	(t)	(kN)	(t)
10		46.0	87.8	9.0	94.0	9.6
11		55.7	106.0	10.8	114.0	11.6
12		66.2	126.0	12.8	135.0	13.8
	1/2	74.2	142.0	14.5	152.0	15.5
13		77.7	148.0	15.1	159.0	16.2
14		90.2	172.0	17.5	184.0	18.8
15		104.0	198.0	20.2	211.0	21.5
16	5/8	118.0	225.0	22.9	241.0	24.6
17		133.0	254.0	25.9	272.0	27.7
18		149.0	284.0	29.0	304.0	31.0
19	3/4	166.0	317.0	32.2	339.0	34.6
20		184.0	351.0	35.8	376.0	38.3
22		223.0	425.0	43.3	455.0	46.4
	7/8	227.0	434.0	44.2	464.0	47.3
24		265.0	506.0	51.6	541.0	55.1
	1	297.0	567.0	57.8	606.0	61.8
26		318.0	594.0	60.6	635.0	64.7
28		368.0	688.0	70.1	737.0	75.1
	1 - 1/8	384.0	717.0	73.1	767.0	78.2
30		423.0	790.0	80.5	846.0	86.2
32	1 - 1/4	481.0	899.0	91.6	960.0	97.9
34		543.0	1013.0	103.0	1083.0	110.0
36		609.0	1138.0	116.0	1218.0	124.0
38	1 - 1/2	679.0	1268.0	129.0	1357.0	138.0
40		752.0	1405.0	143.0	1503.0	153.0
42		847.0	1535.0	156.0	1651.0	168.0
44		929.0	1700.0	173.0	1819.0	185.0
	1 - 3/4	948.0	1735.0	177.0	1856.0	189.0
46		1016.0	1858.0	189.0	1985.0	202.0
48		1106.0	2023.0	206.0	2162.0	220.0
50		1200.0	2200.0	224.0	2349.0	239.0
	2	1239.0	2266.0	231.0	2425.0	247.0
52		1298.0	2374.0	242.0	2541.0	259.0

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

Note:

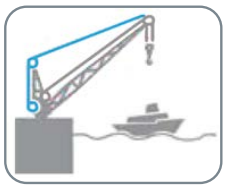
- POWERFORM 8P is available for rope diameter 16mm and above on special request and prior confirmation.
- Rope sizes and Breaking Force not shown in the standard table, may be available on request and prior confirmation.

Container

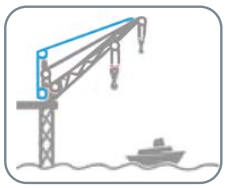


Lattice Room

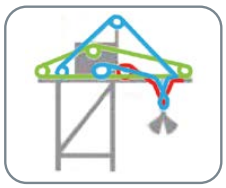
Dockside



Offshore Pedestal



Unloader



Swimgrab

Boom Hoist
Main Hoist
Racking / Trolley

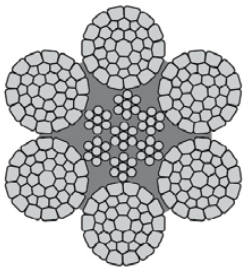
HIGH PERFORMANCE WIRE ROPE

USHA MARTIN

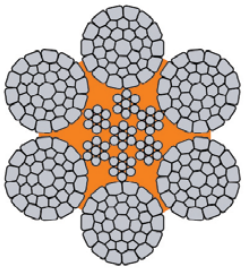
CRANE WIRE ROPE POWERFORM® 6/6P

FEATURES AND BENEFITS

- 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



Powerform® 6



Powerform® 6P

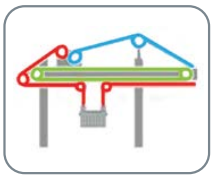
NOM. ROPE DIA.	NOM. ROPE DIA.	APPROX. MASS	MINIMUM BREAKING FORCE GALVANISED & UNGALVANISED ROPE GRADE			
			1960 N/mm²		2160 N/mm²	
(mm)	(in)	(kg/100m)	(kN)	(t)	(kN)	(t)
10		46.4	69.5	7.1	85.7	8.7
11		56.1	83.8	8.5	98.6	10.1
12		66.8	100.0	10.2	114.0	11.6
	1/2	74.8	113.0	11.5	140.0	14.3
13		78.4	118.0	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	5/8	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	3/4	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 - 1/4	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 - 1/2	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%.

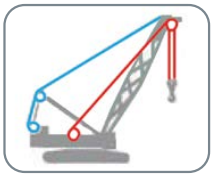
Note:

- 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.

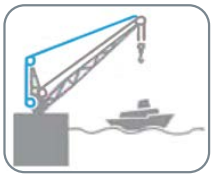
Container



Lattice Room

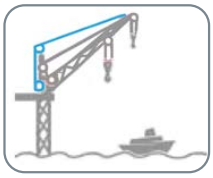


Dockside

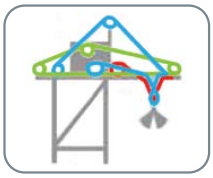


Steelworks Ladle

Offshore Pedestal



Unloader



Boom Hoist

Main Hoist

Racking / Trolley

*** 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.

13mm 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.

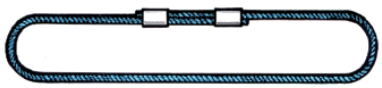
MACHINE SWAGING

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

Butt Splice

Grommet



Machine Swaged

Soft Eye Machine Swaged

Thimble Eye Machine Swaged

Sof Eye Hand Spliced

Thimble Eye Hand Spliced

Closed Spelter Socket

Machine Swaged

Closed Swage Socket

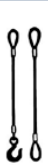
Open Swage Socket

SINGLE & MULTI-LEG WIRE ROPE SLINGS

FERRULE-SECURED EYES
- AS 1666 WORKING LOAD LIMIT (W.L.L.) IN TONNES

GRADE 1770 STEEL CORE

GRADE 1960 STEEL CORE

METHOD OF LOADING / ROPE DIA (mm)	DIRECT LOADED	CHOKE HITCH		BASKET HITCH ROUND LOAD				2-3 OR 4 LEG ASSEMBLY		
		ROUND LOAD	RECTANGULAR LOAD							
										
INCLUDED ANGLE	-	-	-	0°	60°	90°	120°	0° TO 60°	90°	120°
LOADING FACTOR	1 x 0.95	0.75 x 0.95	0.5 x 0.95	2 x 0.95	1.73 x 0.95	1.41 x 0.95	1 x 0.95	1.73 x 0.95	1.41 x 0.95	1 x 0.95
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	11.60	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

WIRE ROPE SLINGS

ANDROMEDA INDUSTRIES

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 AND BENEFITS

- Australian made cable and slings since 1972
- Highly flexible steel slings and strops comprising of 912 individual wires
- Extremely tough and set resistant cable to cover any lifting application
- Lifting capacity from 1.0t up to 168.0t

SINGLE SLINGS

BASIC CABLE DETAILS										
CABLE SIZE	MIN. BREAKING FORCE (MBF) kN	CABLE NOMINAL DIA. (D) mm	SINGLE FALL WLL	CRADLE LIFT ANGLE <30°	CHOKED ON ROUND LOAD	CHOKED ON RECTANGULAR LOAD WITH EDGE RADIUS > 1.0D	WLL for various included angles of two, three or four leg slings. <30°	60°	90°	120°
LOADS IN TONNES										
Two-5	50	10	1.0	2.0	0.7	0.5	2.0	1.7	1.4	1.0
Three-0	75	12	1.5	2.9	1.1	0.8	2.9	2.6	2.1	1.5
Three-5	95	14	1.8	3.5	1.4	0.9	3.5	3.1	2.5	1.8
Four-0	125	16	2.4	4.7	1.8	1.2	4.7	4.2	3.4	2.4
Four-5	157	18	3.0	5.9	2.3	1.5	5.9	5.2	4.2	3.0
Five-0	210	20	4.1	8.0	3.1	2.1	8.0	7.1	5.8	4.1
Five-5	270	22	5.2	10.2	3.9	2.6	10.2	9.0	7.3	5.2
Six-5	345	26	6.7	13.1	5.0	3.4	13.1	11.6	9.4	6.7
Eight-0	530	32	10.3	20.2	7.7	5.2	20.2	17.8	14.5	10.3
Ten-0	790	40	15.3	30.0	11.5	7.7	30.0	26.5	21.6	15.3
Twelve-0	1110	48	21.6	42.1	16.1	10.8	42.1	37.2	30.3	21.5
Fourteen-0	1460	56	28.3	55.5	21.2	14.2	55.5	49.0	39.9	28.3
Seventeen-0	2168	68	42.1	82.5	31.6	21.1	82.5	72.8	59.4	42.1
Twenty-0	3015	80	58.5	114.7	43.9	29.3	114.7	101.2	82.5	58.5
TwentyFour-0	4340	96	84.3	165.2	63.2	42.1	165.2	145.8	118.9	84.3
Loading factors for various configurations based on the single fall WLL			1.0	1.96	0.75	0.5	1.96	1.73	1.41	1.0

ANDROMEDA INDUSTRIES

FEATURES AND BENEFITS

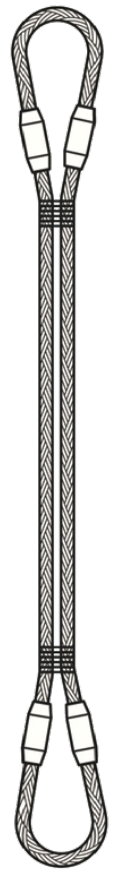
- Designed to choke onto and safely lift poles and piles, steel bars, drill rods and bundles of tube
- Very versatile slings with great gripping power
- Various versions are available

SINGLE ENDED STROPS

BASIC CABLE DETAILS			STROP TERMINATED ONE END ONLY (VERY SLIM ONE END, EASY FITTING IN TIGHT PLACES)						
CABLE SIZE	MIN. BREAKING FORCE (MBF) kN	CABLE NOMINAL DIA. (D) mm	SINGLE FALL WLL	<30°	60°	90°	120°	CHOKED ON ROUND LOAD	CHOKED ON SQUARE LOAD
			LOADS IN TONNES						
Two-5	50	10	1.5	2.9	2.6	2.1	1.5	1.1	0.8
Three-0	75	12	2.3	4.5	4.0	3.2	2.3	1.7	1.1
Three-5	95	14	2.7	5.3	4.7	3.8	2.7	2.0	1.4
Four-0	125	16	3.6	7.1	6.2	5.1	3.6	2.7	1.8
Four-5	157	18	4.5	8.8	7.8	6.3	4.5	3.4	2.3
Five-0	210	20	6.1	11.9	10.5	8.6	6.1	4.6	3.0
Five-5	270	22	7.8	15.3	13.5	11.0	7.8	5.9	3.9
Six-5	345	26	10.0	19.6	17.3	14.1	10.0	7.5	5.0
Eight-0	530	32	15.4	30.2	26.6	21.7	15.4	11.6	7.7
Ten-0	790	40	23.0	45.0	39.8	32.4	23.0	17.3	11.5
Twelve-0	1110	48	32.4	63.5	56.0	45.7	32.4	24.3	16.2
Fourteen-0	1460	56	42.5	83.3	73.5	59.9	42.5	31.9	21.3
Seventeen-0	2168	68	63.1	123.7	109.2	89.0	63.1	47.3	31.6
Twenty-0	3015	80	87.8	172.1	151.9	123.8	87.8	65.8	43.9
TwentyFour-0	4340	96	126.5	247.9	218.8	178.4	126.5	94.9	63.3
Loading factors for the various configurations based on the single fall WLL			1.0	1.96	1.73	1.41	1.0	0.75	0.50

DOUBLE ENDED STROPS

BASIC CABLE DETAILS			STROP TERMINATED BOTH ENDS						
CABLE SIZE	MIN. BREAKING FORCE (MBF) kN	CABLE NOMINAL DIA. (D) mm	SINGLE FALL WLL	<30°	60°	90°	120°	CHOKED ON ROUND LOAD	CHOKED ON SQUARE LOAD
			LOADS IN TONNES						
Two-5	50	10	2.0	3.9	3.5	2.8	2.0	1.5	1.0
Three-0	75	12	3.0	5.9	5.2	4.2	3.0	2.3	1.5
Three-5	95	14	3.6	7.1	6.2	5.1	3.6	2.7	1.8
Four-0	125	16	4.8	9.4	8.3	6.8	4.8	3.6	2.4
Four-5	157	18	6.0	11.8	10.4	8.5	6.0	4.5	3.0
Five-0	210	20	8.2	16.1	14.2	11.6	8.2	6.2	4.1
Five-5	270	22	10.4	20.4	18.0	14.7	10.4	7.8	5.2
Six-5	345	26	13.4	26.3	23.2	18.9	13.4	10.1	6.7
Eight-0	530	32	20.6	40.4	35.6	29.0	20.6	15.5	10.3
Ten-0	790	40	30.6	60.0	52.9	43.1	30.6	23.0	15.3
Twelve-0	1110	48	43.2	84.7	74.7	60.9	43.2	32.4	21.6
Fourteen-0	1460	56	56.6	110.9	97.9	79.8	56.6	42.5	28.3
Seventeen-0	2168	68	84.2	165.0	145.7	118.7	84.2	63.2	42.1
Twenty-0	3015	80	117.0	229.3	202.4	165.0	117.0	87.8	58.5
TwentyFour-0	4340	96	168.6	330.5	291.7	237.7	168.6	126.45	84.3
Loading factors for the various configurations based on the single fall WLL			1.0	1.96	1.73	1.41	1.0	0.75	0.50



WIRE ROPE SLINGS

ANDROMEDA INDUSTRIES

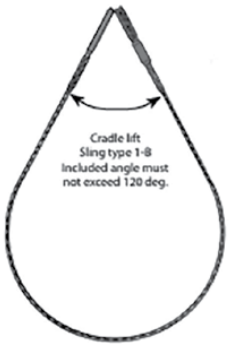
FLAT WOVEN SLINGS - CRADLE LIFT

FEATURES AND BENEFITS

- Heavy duty, specifically designed cradle lift sling
- Various end terminations to suit various applications
- Designed for general lifting purposes requiring reduced contact pressure
- Sizes available up to 250mm nominal width
- Protective covering available upon request

STANDARDS
AS1666.1

SIZE	WOVEN FLAT CABLE					SLING WLL IN TONNES			
NOMINAL SIZE OF SLING = WIDTH (mm)	24 PLY WARP, FINE CORDS, 2 PLY WEFT, FINE CORDS					CRADLE LIFT INCLUDED ANGLE AT THE HOOK			PROOF LOAD
	FLAT CABLE THICKNESS (mm)	GENERIC CORD SIZE (mm)	WEIGTH (kg/m)	WOVEN JACKET NOM. DIA	WLL IN SINGLE FALL (kN)	< 30 DEG	60 DEG	120 DEG	STRAIGHT PULL IN SINGLE FALL (kN)
50	5	2.0	0.4	32	10.2	1.9	1.7	1.0	20.4
64	7	2.5	0.6	38	16.0	3.0	2.7	1.6	32.0
76	8	3.0	1.0	52	23.8	4.5	4.0	2.3	47.6
88	10	3.5	1.3	62	31.6	6.0	5.3	3.1	63.2
100	11	4.0	1.6	70	42.5	8.1	7.1	4.1	85.0
112	12	4.5	2.1	76	53.4	10	9.0	5.2	107
125	14	5.0	2.7	102	71.4	13	12	7.0	143
160	17	6.5	4.3	120	114	21	19	11	228
200	20	8.0	6.9	150	170	32	28	17	340
250	25	10.0	10.3	170	255	48	43	25	510



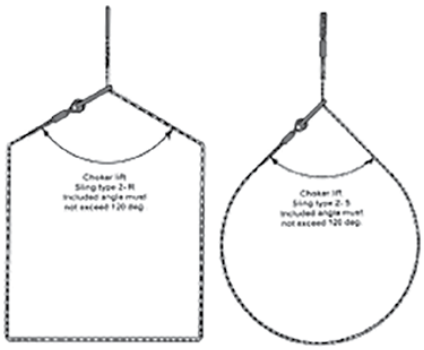
FLAT WOVEN SLINGS - CHOKER LIFT

FEATURES AND BENEFITS

- Specifically designed choker lift sling
- Provides a thin working end for sliding easily under loads
- Various handmade slings available upon request
- Other sizes available up to 250mm nominal width
- Protective covering available upon request

STANDARDS
AS1666.1

SIZE	WOVEN FLAT CABLE					SLINGS		
NOMINAL SIZE OF SLING = WIDTH (mm)	24 PLY WARP, FINE CORDS, 2 PLY WEFT, FINE CORDS					WLL IN TONNES	WLL	PROOF LOAD
	FLAT CABLE THICKNESS (mm)	GENERIC CORD SIZE (mm)	WEIGTH (kg/m)	WOVEN JACKET NOM. DIA	WLL IN SINGLE FALL (kN)	CHOKED ON ROUND LOAD	CHOKED ON SQUARE LOAD	STRAIGHT PULL IN SINGLE FALL (kN)
50	5	2.0	0.4	32	10.2	0.7	0.5	20.4
64	7	2.5	0.6	38	16.0	1.2	0.8	32.0
76	8	3.0	1.0	52	23.8	1.7	1.1	47.6
88	10	3.5	1.3	62	31.6	2.3	1.5	63.2
100	11	4.0	1.6	70	42.5	3.1	2.0	85.0
112	12	4.5	2.1	76	53.4	3.8	2.6	107
125	14	5.0	2.7	102	71.4	5.1	3.4	143
160	17	6.5	4.3	120	114	8.2	5.5	228
200	20	8.0	6.9	150	170	12	8.2	340
250	25	10.0	10.3	170	255	18	12	510

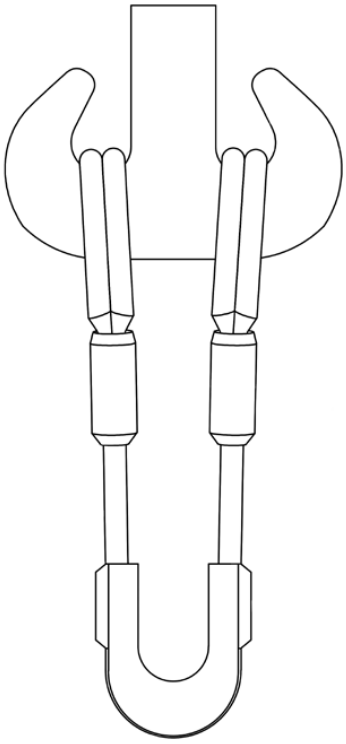


ANDROMEDA INDUSTRIES

DEAN-O SLING

FEATURES AND BENEFITS

- Purposely designed to provide a single lifting point under Ramshorn Hooks on large cranes
- Enables a single point load to be attached maintaining centreline loading
- Available in different capacities with a WLL of 11 tonne up to 165 tonne
- Suitable Master Links can be fitted into and removed as required



WIRE ROPE GRIPS

WIRE ROPE GRIPS HOT DIPPED GALVANISED AS2076

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.

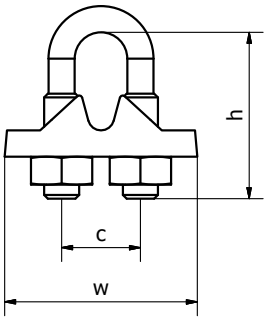
FEATURES

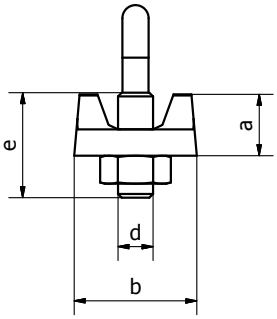
- Marked with AS and size under saddle
- Heavy duty cast steel saddle and hi tensile U-bolt comes with larger nut size for greater tightening force
- Hot dipped galvanized finish on both U-bolt and saddle
- Available to suit 6-38mm

UOM: /EACH

CODE	SIZE (mm)	c (mm)	h (mm)	w (mm)	e (mm)	d (mm)	b (mm)	a (mm)	QTY
303306	6	13	29	28	20	M6	15	13	800
303308	8	18	32	34	22	M8	19	14	400
303310	10	22	40	42	28	M10	23	17	200
303312	12	26	48	50	33	M12	30	30	120
303314	14	28	52	52	33	M12	30	21.5	100
303316	16	34	64	66	44	M16	38	26.5	50
303318	18	36	68	68	44	M16	38	27	50
303320	20	38	72	70	44	M16	38	30	50
303322	22	40	76	72	44	M16	38	31.5	40
303326	26	50	92	90	55	M20	48	37.5	20
303328	28	52	96	92	55	M20	48	39	20
303332	32	56	104	96	55	M20	48	41	20

Not Suitable for Lifting Purposes





COMMERCIAL WIRE ROPE GRIPS IN BUCKET SIZES 3mm - 25mm

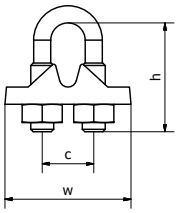
FEATURES

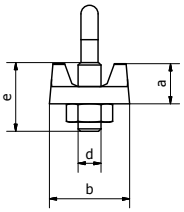
- Wire rope grips can be used to form an eye on the end of the rope
- Wire Rope grip bucket sizes 3mm to 25mm
- Electro Galvanised finish
- Commercial Grade

UOM: /EACH

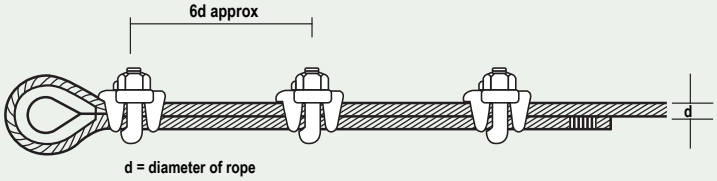
CODE	SIZE (mm)	w (mm)	c (mm)	h (mm)	a (mm)	d (mm)	b (mm)	ROUND BUCKET LITRE	QTY / BUCKET	BUCKET WEIGHT (kg)
301203P	3	19.5	9	17	9.5	4	10.5	0.75	100	0.8
301205P	5	22.5	11	19	10	5	11	0.75	100	1.3
301206P	6	24	13	23	10.5	5	12	0.75	50	0.8
301208P	8	28	15	28	14	6	14	0.75	80	1.4
301210P	10	33	18.5	34	16	8	18	0.75	50	2.7
301213P	13	41	23	45	21	10	22	0.75	20	3.3
301216P	16	49	29.5	52	25	12	25	1	15	2.7
301220P	20	52	32	62	30	12	28	1	10	2.35
301222P	22	61	37	68	34	14	33	1	5	1.4
301225P	25	70	41	78	39	14	34	1	5	1.97

Not Suitable for Lifting Purposes





THE RIGHT WAY



BEAVER®

WIRE ROPE THIMBLES HOT DIPPED GALVANISED AS1138

FEATURES

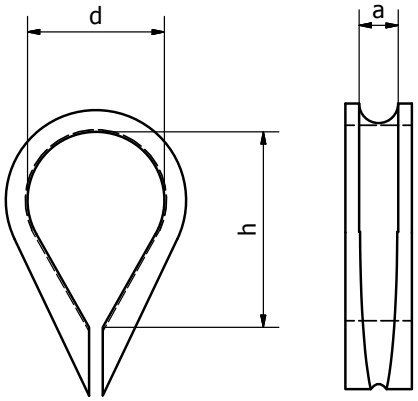
- Used to reinforce the rope eyes and protect the wire rope
- Helps reduce damage and wear to the rope from attachments
- Hot dip galvanised with yellow paint at the tips

STANDARDS
Complies to AS1138

UOM: /EACH

CODE	SIZE (mm)	A (mm)	D (mm)	H (mm)	PACK QTY
312306	6	7	16	25	750
312308	8	7.9	22	33	500
312310	10	10.3	25	38	300
312311	11	12.7	29	41	250
312313	13	14.3	32	44	200
312314	14	15	32	46	125
312316	16	15.9	41	59	100
312320	20	21.6	52	75	50
312322	22	22.2	57	83	40
312324	24	25.4	64	92	20
312326	26	27	72	108	25
312328	28	28.6	76	112	20
312332	32	33.4	95	133	12
312335	38	38	105	152	10
312345	45	47	127	178	6
312348	48	51	134	190	3

Not Suitable for Lifting Purposes



WIRE ROPE THIMBLES/FERRULES

COMMERCIAL WIRE ROPE THIMBLES

FEATURES

- Commercial Grade
- Galvanised

UOM: /EACH

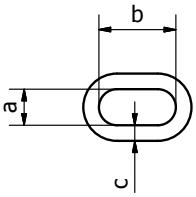
CODE	SIZE (mm)	PACK QTY
310305	5	1000
310306	6	1000
310308	8	750
310310	10	500
310313	13	300
310316	16	150
310320	20	100
310323	23	50
310325	25	36
310328	28	18
310332	32	16

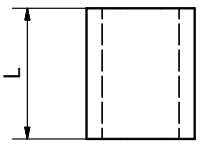
Not Suitable for Lifting Purposes

ALUMINIUM FERRULES TO EN13411

FEATURES

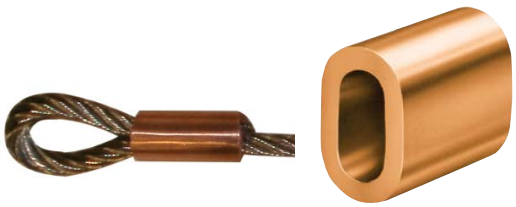
- Standard ferrule
- Suitable for machine swaging eyes in galvanised or black wire rope





CODE	DIN CODE	a (mm)	b (mm)	c (mm)	L (mm)	PACK QTY
317101A	1.5	1.8	3.6	1.05	6	5000
317102	2	2.2	4.4	0.90	7	5000
317102A	2.5	2.7	5.4	1.05	9	2500
317103	3	3.3	6.6	1.25	11	10000
317103A	3.5	3.8	7.6	1.5	13	5000
317104	4	4.4	8.8	1.7	14	5000
317105	5	5.5	11.0	2.1	18	4000
317106	6	6.6	13.2	2.5	21	2000
317106A	6.5	7.2	14.4	2.7	23	1000
317107	7	7.8	15.6	2.9	25	1000
317108	8	8.8	17.6	3.3	28	1000
317109	9	9.9	19.8	3.7	32	500
317110	10	10.9	21.8	4.1	35	500
317111	11	12.1	24.2	4.5	39	300
317112	12	13.2	26.4	4.9	42	300
317113	13	14.2	28.4	5.4	46	200
317114	14	15.3	30.6	5.8	49	200
317116	16	17.5	35.0	6.7	56	100

CODE	DIN CODE	a (mm)	b (mm)	c (mm)	L (mm)	PACK QTY
317118	18	19.6	39.2	7.6	63	50
317120	20	21.7	43.4	8.4	70	50
317122	22	24.3	48.6	9.2	77	50
317124	24	26.4	52.8	10.0	84	25
317126	26	28.5	57.0	10.9	91	25
317128	28	31.0	62.0	11.7	98	25
317130	30	33.1	66.2	12.5	105	25
317132	32	35.2	70.4	13.4	112	20
317134	34	37.8	75.6	14.2	119	10
317136	36	39.8	79.6	15	126	10
317138	38	41.9	83.8	15.8	133	10
317140	40	44.0	88.0	16.6	140	10
317142	42	45.0	90.0	17.4	147	10
317146	46	49.0	98.0	19	161	1
317152	52	57.2	114.4	21.6	182	1
317156	56	61.6	123.2	23.3	196	1



COPPER FERRULES

FEATURES

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

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

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

FEATURES

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

PRODUCT	DIES MARKED T	DIAMETER AFTER PRESSING		REQUIRED PRESSURE APPROX. (kN)
		(mm)	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

CODE	DIES MARKED INOX	DIAMETER AFTER PRESSING		REQUIRED PRESSURE APPROX. (kN)
		(mm)	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

WIRE ROPE THIMBLES/FERRULES

BEAVER®

STAINLESS STEEL FERRULES

FEATURES

- For stainless steel single layer wire ropes

CODE	DIES MARKED INOX	DIAMETER AFTER PRESSING		REQUIRED PRESSURE APPROX. (kN)
		(mm)	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

CODE	DIES MARKED INOX	DIAMETER AFTER PRESSING		REQUIRED PRESSURE APPROX. (kN)
		(mm)	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

TOWNLEY
FORGING AUSTRALIAN QUALITY

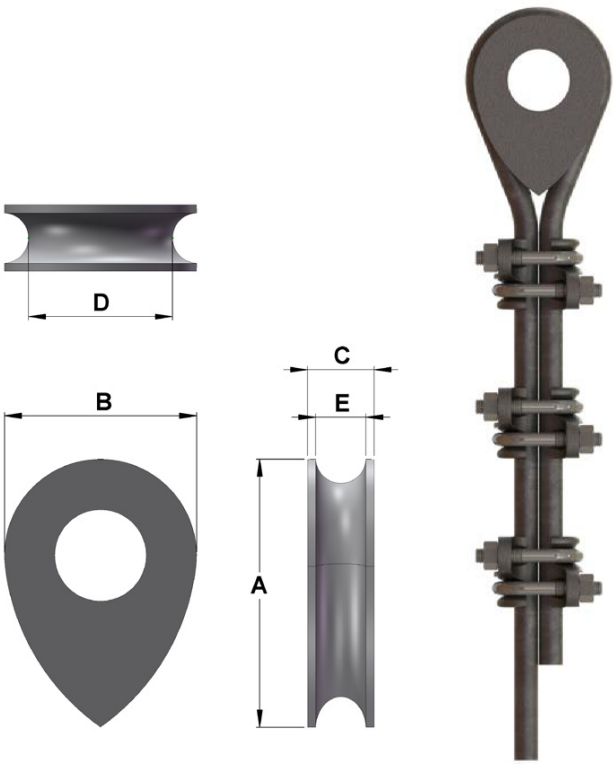
SOLID HEART THIMBLES

FEATURES

- Cast Steel finish
- Available for rope sizes 8mm to 75mm

STANDARDS
Complies to AS1138

CODE	ROPE DIA (mm)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	WEIGHT (kg)
FDT-SHT08	8	48	37	13	27	8	0.2
FDT-SHT10	10	57	46	15	34	10	0.4
FDT-SHT13	11 - 13	83	60	25	46	13	0.6
FDT-SHT16	14 - 16	94	70	28	52	18	0.7
FDT-SHT20	18 - 20	113	75	32	57	21	1.0
FDT-SHT22	22	127	95	33	68	24	1.5
FDT-SHT24	24	142	107	38	77	26	1.8
FDT-SHT26	26	156	117	41	82	28	2.5
FDT-SHT28	28	166	123	42	89	31	3.0
FDT-SHT36	32 - 36	204	151	53	114	39	6.7
FDT-SHT42	38 - 42	231	170	55	125	44	11.4
FDT-SHT44	44	252	186	64	136	47	11.4
FDT-SHT48	48	267	202	65	148	50	12
FDT-SHT54	52 - 54	293	222	73	162	54	20
FDT-SHT58	58	330	245	82	174	61	28
FDT-SHT64	64	374	274	90	198	65	44
FDT-SHT75	70 - 75	405	310	105	223	77	52



TOWNLEY
FORGING AUSTRALIAN QUALITY

OPEN TYPE METALLING SOCKETS

FEATURES

- Manufactured in Australia
- Cast Alloy Steel
- Available for rope sizes 10mm to 70mm
- 100% Magnetic particle inspected in accordance with AS1171
- Ultrasonically tested in accordance with AS2574
- Black self colour

STANDARDS
Manufactured in accordance with BS463 to meet the performance requirements of AS1666 Wire Rope Slings
Complies to AS1171 / AS2574

CODE	ROPE DIA (mm)	A (mm)	B (mm)	C (mm)	D (mm)	H (mm)	J (mm)	K (mm)	L (mm)	M (mm)	O (mm)	WEIGHT (kg)
FDT-OM10	10	51	43	38	30	21	112	16	22	43	38	0.5
FDT-OM13	13	60	52	44	24	22	135	21	29	48	44	0.8
FDT-OM16	16	70	64	50	29	27	159	24	35	56	50	1.1
FDT-OM20	20	76	67	62	33	33	175	29	38	70	64	2
FDT-OM22	22	86	76	70	41	40	197	32	43	78	70	2.5
FDT-OM26	26	105	89	83	49	46	237	38	48	89	86	5
FDT-OM28	28	114	102	92	57	50	262	41	50	94	92	6.5
FDT-OM32	32	133	111	108	64	60	297	48	54	111	105	10
FDT-OM38	36 - 42	152	114	127	70	67	330	57	65	135	127	14
FDT-OM52	44 - 54	195	170	190	100	100	450	90	90	180	175	45
FDT-OM64	58 - 64	240	270	225	120	115	620	105	130	240	230	85
FDT-OM70	70	250	295	230	130	125	670	120	145	260	255	110

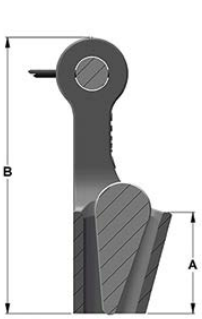
TOWNLEY
FORGING AUSTRALIAN QUALITY

OPEN TYPE WEDGE SOCKETS

FEATURES

- Manufactured in Australia
- Cast Alloy Steel
- Available for rope sizes 8mm – 38mm
- 100% Magnetic particle inspected in accordance with AS1171
- Ultrasonically tested in accordance with AS2574

STANDARDS
Manufactured in accordance with BS463 to meet the performance requirements of AS1666 Wire Rope Slings
Complies to AS1171 / AS2574



CODE	ROPE DIA (mm)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	WEIGHT (kg)
FDT-OW10	8 - 10	60	135	8	16	22	52	1
FDT-OW13	13	75	206	24	24	45	90	4
FDT-OW16	16	85	235	30	33	54	85	5.5
FDT-OW22	20 - 22	110	300	35	36	67	120	8.5
FDT-OW28	26 - 28	135	350	43	42	77	144	18
FDT-OW32	32	200	445	45	56	70	200	26

HEAVY DUTY SNATCH BLOCKS

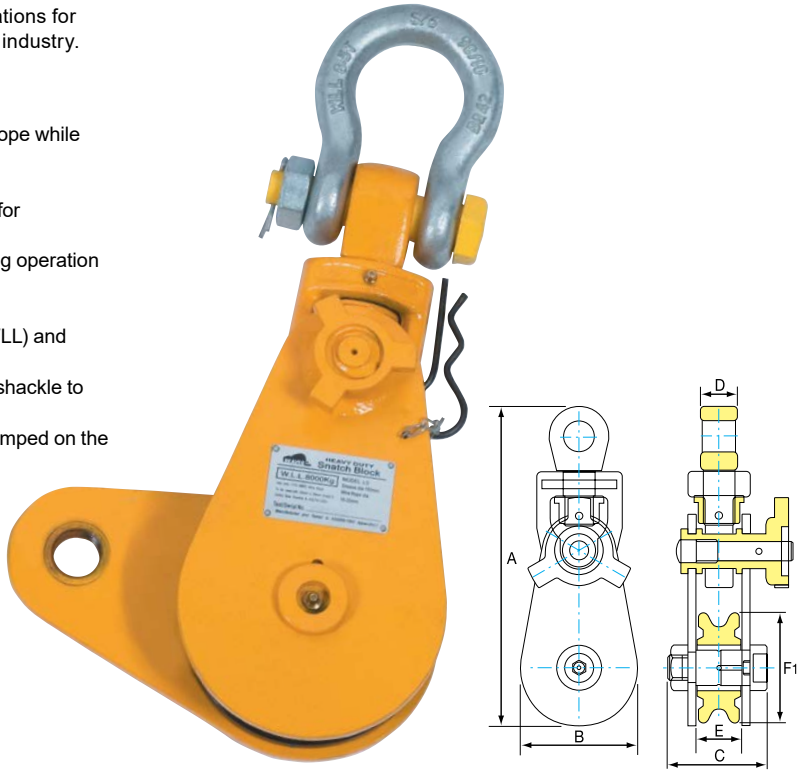
SUPER SNATCH BLOCKS

Beaver's range of Heavy Duty Snatch Blocks offer the best in innovation, safety, reliability and performance with applications for construction mining, offshore exploration and the building industry.

FEATURES AND BENEFITS

- Solid all-steel construction
- Easy opening mechanism ensures a fast change of wire rope while block is suspended
- Fully machined sheave
- Sheave has a sealed ball bearing system, fully lubricated for maintenance free operation
- Forged steel eye is designed to avoid twisting of unit during operation
- Fitted with grease nipples for ease of maintenance
- Special design of side plates restricts rope from jamming
- Operationally tested to 2 times the Working Load Limit (WLL) and come with an individual test certificate
- Each unit is supplied complete with Grade 'S' safety bow shackle to Australian Standard AS 2741
- All snatch blocks have an individual test serial number stamped on the identification plate

STANDARDS
Complies to AS2089



Heavy Duty Snatch Blocks Comply to AS 2089. Supplied with a Grade 'S' Safety Bow Shackle. Shackle Complies to AS 2741.

PRODUCT CODE	WLL (t)	WIRE ROPE DIA. (mm)	SHEAVE DIA. F1 (mm)	DIMENSIONS (mm)					GRADE 'S' SAFETY BOW SHACKLE TO AS 2741	WEIGHT (kg)
				A	B	C	D	E		
557210S	4000 3700	14 12	210	367	220	68	32	32	22 x 25mm	10.5
557275S	8000 6000	18 16	275	518	285	94	40	48	25 x 29mm	28.5
557395S	12000 12000	26 22	395	682	410	133.5	52	63.5	35 x 38mm	61
557420S	15000 15000	28 26	420	725	435	133.5	55	63.5	38 x 41mm	65
557480S	22000 20000	32 28	480	867	500	155	68	70	44 x 51mm	148
557675S	30000	44	675	1146	700	173.5	82	90	51 x 57mm	250

BIGHAUL™ WIRE ROPE HOISTS

A versatile portable and compact creeper winch for pulling, lifting, lowering, spanning, 4WD recovery and securing loads over large distances.

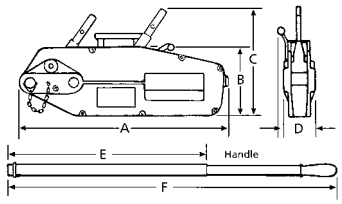
FEATURES AND BENEFITS

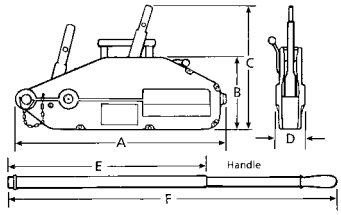
- Lightweight, safe and easy to operate
- Compact, high strength aluminium alloy housing with smooth contour design, a large flat base surface for increased stability in horizontal and vertical working positions
- An overload protection system is built-in with a shear pin in the forward lever which will shear when approximately 25% overloaded. The broken pins can be replaced without removing the load. Spare pins are located in the operating lever for RVBH08 and in the handle for RVBH16 and RVBH32
- Forward and reverse lever placed in tandem, providing a slim compact design for storage and ensuring maximum power transfer
- The rope clamp system is easily disengaged with a lever, allowing smooth installation of the wire rope
- The Big Haul Creeper Winch comes complete with operating lever and 20m of wire rope mounted on a reel for all models. The wire rope is fitted with a safety latch hook at one end and is tapered at the other end for easy insertion into the unit
- The Big Haul Creeper Winch has a parallel clamping system, which has a large surface contact area, providing an evenly distributed grip at a lower force that results in less rope wear. The system offers a longer rope advance and requires less handle pulling effort, thus increasing operator efficiency
- All models are equipped with an anchor bolt, that offers numerous connection possibilities with load hooks, wire rope and chain slings
- All Big Haul Creeper Winches are tested and have individual serial numbers for easy traceability to a test certificate
- Big Haul Creeper Winches are easy to maintain, service and repair

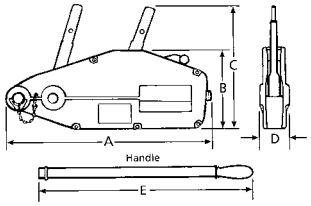
STANDARDS
Complies to AS1418.2

Model BigHaul - C/w 20m of Wire Rope. Compact High Strength Aluminium Alloy Housing

PRODUCT CODE	RATED CAPACITY PULLING (kg)	RATED CAPACITY LIFTING (kg)	WIRE ROPE DIA. (mm)	STD ROPE LENGTH (m)	ROPE ADVANCED PER FULL STROKE CYCLE (mm)	EFFORT ON HANDLE AT RATED LIFTING CAPACITY; FORWARD OPERATION (kN)	NETT WEIGHT WIRE ROPE AND REEL (kg)	NETT WEIGHT WITHOUT WIRE ROPE (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
518508	1250	800	8.3	20	60	284	7.5	7.5	430	165	230	60	800	N/A
518516	2500	1600	11	20	60	412	12	12	540	190	300	75	790	1200
518532	5000	3200	16	20	40	441	13	13	660	220	330	110	790	1200







WIRE ROPE PRODUCTS

GUNNEBO LIFTING

WIRELOCK

Wirelock® is a two pack socket capping compound.

FEATURES

- 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.).

CODE	PACK SIZE (cc)
DWL0100	100
DWL0250	250
DWL0500	500
DWL1000	1,000

Please contact your local Bunzl Safety & Lifting's branch for usage instructions and a product MSDS.

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

Lanotec™

WIRE ROPE LANOLIN 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.

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

Lanotec™

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

CODE	DESCRIPTION	CARTON QTY
HW/RL20-Pail	20 Litre Pail	each

Lanotec™

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.

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

FOR SAFE WORKING LIVES

BUNZL

safety & lifting

Bunzl Safety & Lifting
55 Sarah Andrews Close
Erskine Park NSW 2759
1800 967 573
bunzlsafety.com.au

804-072025