

# WIRE ROPE



## KONDOTEC INTERNATIONAL (THAILAND) CO., LTD (Founded 2012)

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[www.kondotec-inter.com](http://www.kondotec-inter.com)  
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## KONDOTEC INC - HEADQUARTERS (Founded 1947)

2-90 Sakaigawa 2-chome  
 Nishi-ku Osaka  
 550-0024 Japan  
 Tel: +81 6 6582 9672  
 Fax: +81 6 6582 9674



Capital (Head Quarter) : 2,666.5 million yen  
 ( Around 888 million THB)  
 Capital (Thailand) : 102 million yen  
 Japan Representative : Katsuhiko Kondo, President  
 Thailand Representative : Soichi Furuta, President  
 Employee : 691 (as of March 2014)  
 Suppliers : Ourself Factory and Around 5,000 companies both at home and abroad  
 Wire Rope Cooperate Factory (Original equipment manufacturer : OEM)  
 Customers : Dealers of Civil  
 Construction material  
 Do-it-yourself stores (DIY)  
 Fabricator



## PRODUCT

### Environmental / Green Belt / Industrial Waste Materials

- Oil Absorbent
- Container Bag, Jumbo Bag
- Grating

### Wire Rope / Lifting Equipments

- Wire Rope Clip
- Belt Sling

### Hook / Ring / Shackle / Swivel

#### Scaffolding Material

- Form Tie (Seperator)
- Scaffolding Chain
- Scaffolding Clamp
- Bonjoint

### Fabricate Material

#### Construction Material

### Turnbuckles / Bolt / Fastener

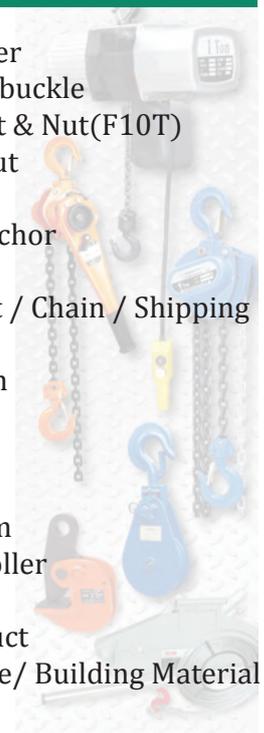
- Architecure Turnbuckle
- High Tension Bolt & Nut(F10T)
- Eye Bolt & Eye Nut
- Anchor Bolt
- Railway Hook Anchor

### Transport-Cargo Equipment / Chain / Shipping

- Lever Hoist
- Chain Sling, Chain
- Winch
- Power Lashing
- Load Binder
- Strecth Wrap Film
- Toe Lift Jack & Roller

### Tools / Stainless Steel Product

#### Hardware for Wooden House/ Building Material



# TECHNOLOGY, EQUIPMENT AND DEVELOPMENT POWER THAT KEEPS

## KYUSHU FACTORY



KYUSHU FACTORY 1

JIS AUTHORIZATION FACTORY  
ISO 9001 AUTHORIZATION FACTORY  
SCAFFOLDING AUTHORIZATION FACTORY



KYUSHU FACTORY 2 & 3

## SHIGA FACTORY



JIS AUTHORIZATION FACTORY  
ISO 9001 AUTHORIZATION FACTORY

## JIS AUTHORIZATION

### KYUSHU FACTORY



- ▶ JIS A 5540 TURNBUCKLE FOR CONSTRUCTION
- ▶ JIS A 5541 TURNBUCKLE BODY FOR CONSTRUCTION
- ▶ JIS A 5542 TURNBUCKLE BOLT FOR CONSTRUCTION

### SHIGA FACTORY



### KANTO FACTORY



- ▶ JIS A 5540 TURNBUCKLE FOR CONSTRUCTION
- ▶ JIS A 5542 TURNBUCKLE BOLT FOR CONSTRUCTION

### SAPPORO FACTORY



## KANTO FACTORY



JIS AUTHORIZATION FACTORY  
ISO 9001 AUTHORIZATION FACTORY

## SAPPORO FACTORY



JIS AUTHORIZATION FACTORY

## KANTO DISTRIBUTION CENTER



## ISO 9001 REGISTRATION CERTIFICATION

[REGISTRATION NO. JQA-QM4017]

### KYUSHU FACTORY



[REGISTRATION NO. JQA-13365]

### SHIGA FACOTRY



[REGISTRATION NO. JSQA 1230]

### KANTO FACTORY



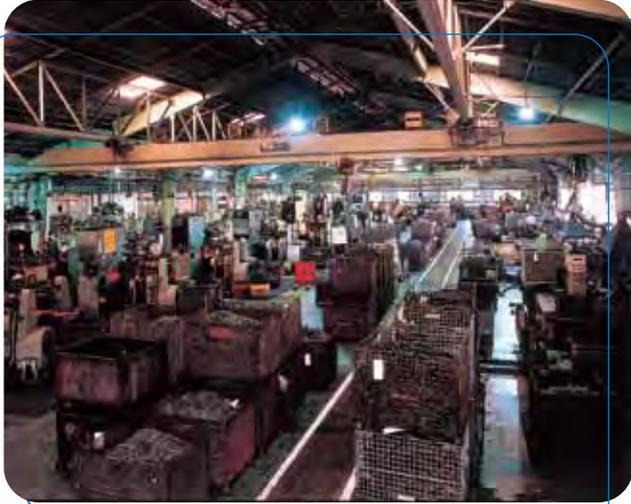
[REGISTRATION NO. RQ2117]

### SAPPORO FACTORY





PRODUCTION LINE FOR CHAIN



PRODUCTION LINE FOR TURNBUCKLE



PRODUCTION LINE FOR DROP FORGED



PRODUCTION LINE FOR SEPARATOR

# WE 'LL ANSWER CUSTOMER'S NEEDS BY HIGH QUALITY AND LOW COST

PRODUCTS, PRODUCTION LINE



PRODUCTION LINE FOR BRACE



STOCK YARD (FINAL PRODUCTS)



PRODUCTION LINE FOR STEEL PLATE OF CONSTRUCTION



STOCK YARD (MATERIAL)

HIGH QUALITY & LOW COST

# WIRE ROPES ROPE FITTINGS FIBER ROPES

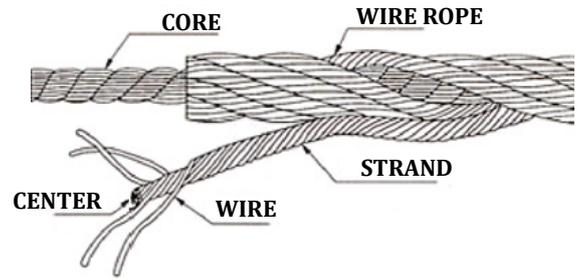


**WHAT IS WIRE ROPE**

The right picture illustrates the component of a wire rope. In general, a wire rope consists of a number of wire strands formed helically about a central axis.

The most popular ropes have 6 or 8 strands supported by an axial member known as the core.

There are other constructions, but they are less common. Each strand is composed of a number of individual wires which have been formed helically about an axial member called the center.



This center supporting member of the strand is generally once or more wires, however, it may be natural fibers (cotton, hemp, sisal, etc) or synthetic fibers (rayon, nylon, polypropylene).

**RAW MATERIALS**

- Ungalvanized (Bright) Steel Wire
- Drawn Galvanized Steel Wire
- Stainless Steel Wire

**TENSILE STRENGTHS OF STEEL WIRE**

Steel wire is made in various tensile strength to meet the different requirements of a particular job. For the production of our ropes, we use wire in the following tensile strength ranges:

1470 N/mm <sup>2</sup> (=150 kgf/ mm <sup>2</sup> )	JIS STANDARD	: E type (E種) 1320 N/mm <sup>2</sup>
1570 N/mm <sup>2</sup> (=160 kgf/ mm <sup>2</sup> )		: G type (G種) 1470 N/mm <sup>2</sup>
1770 N/mm <sup>2</sup> (=180 kgf/ mm <sup>2</sup> )		: A type (A種) 1620 N/mm <sup>2</sup>
1960 N/mm <sup>2</sup> (=200 kgf/ mm <sup>2</sup> )		: B type (B種) 1770 N/mm <sup>2</sup>
2160 N/mm <sup>2</sup> (=220 kgf/ mm <sup>2</sup> )		

In the U.S.A the various grades are designated as follows:

- Traction Steel**
- Mild Plow Steel (MPS)**
- Plow Steel (PS)**
- Improved Plow Steel (IPS)**
- Extra Improved Plow Steel (EIPS)**

The most common grades is “Improved Plow Steel” Which comes nearest to our 1770 N/mm<sup>2</sup> (=180 kgf/ mm<sup>2</sup>) tensile strength.

**TENSILE GRADES**

**MANUFACTURING STANDARDS**

ISO	METRIC	AMERICAN
1960 N/mm <sup>2</sup>	200 kgf/ mm <sup>2</sup>	Extra Improved Plow Steel (EIPS)
1770 N/mm <sup>2</sup>	180 kgf/ mm <sup>2</sup>	Improved Plow Steel (IPS)
1570 N/mm <sup>2</sup>	160 kgf/ mm <sup>2</sup>	Plow Steel (PS)
1420 N/mm <sup>2</sup>	145 kgf/ mm <sup>2</sup>	Traction Steel

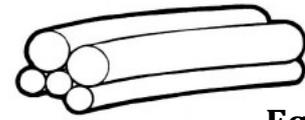


# GENERAL INFORMATION

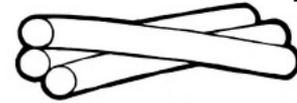
## STRAND

### Components of the strand

A strand consists of a strand core and a layer or a number of layers of round wires. The round wire are laid helically around the strand core. the stran core consists either of a wire (core wire) or a number of wires or even iber yarns.



Equal Lay



Cross Lay

### STRAND CONSTRUCTION

Two different types of laying the strand are Equal Lay and Cross Lay.

### Strands with Equal Lay Wires

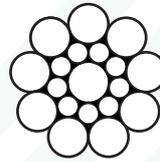
In these constructions, the pitches of various layers of wire are identical as stranding is carried out in a single operation, therefore, the contacts between wires are linear. Seale, Warrington and Filler strands belong to this construction. Wires of different diameters are required for these construction.

As For Example:

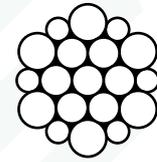
- Seale : 9+9+1
- Warrington : 6/6+6+1
- Filler : 12+6F+6+1



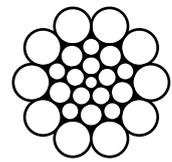
Filler



Seale



Warrington



Warrington-Seale

### Strands with Cross Lay Wires

All the wires in this type of strand are of equal diameter and for geometrical reasons the number of wires decreases in each layer, starting from the outermost one, according to an arithmetical progression based on number (e.g. 16+10+3 or 18+12+6+1 or 12+6). In cross lay constructions, each layer of wire is laid up a seperate operation with a different length of lay, the result being the crossing of the various layers of wires. Consequently strong pressure occurs between the wires which may break, especially with variable with variable loads.

## ROPE CORES

Ropes are supplied either with iber or steel core, the choice being largely dependent on the application.

### Fiber Core

Fiber cores are mainly made from polypropylene. This material has the advantage that it neither absorbs nor retains moisture, and thus it eliminates conditions creating internal corrosion.

Polypropylene core will have small variations in size and weight and are less susceptible to damage, especially under moist conditions.

### The following precautions must be taken during use:

- Do not use iber core ropes where these are exposed to high temperatures, i.e. above 90 degree, this will damage the iber core.
- The iber core ropes should not be used when multi-layer winding is required as the iber cores susceptible to crushing.

### Steel Core

The steel core is designated IWRC (Independent Wire Rope Core) and normal construction is 7 x 7. Steel core proves advantageous in severe working conditions involving a low factor of safety, small drums and sheaves, high operational speeds and wide leet angles. Steel core tends to preserve the circular cross-section of the rope when it is crushed by over - winding on drums. It also prevents the strands from bridging, (being forcibly against each other) which can result in fatigue failure of wires.

## WIRE ROPE LAY

The direction of lay or rotation of the strands is normally right hand. But some machinery needs left hand lay.

- R.H.O.L- Right Hand Ordinary Lay
- R.H.L.L- Right Hand Lang's Lay
- L.H.O.L - Left Hand Ordinary Lay
- L.H.L.L - Left Hand Lang's Lay



R.H.O.L.



L.H.O.L.



R.H.L.L.



L.H.L.L.



# GENERAL INFORMATION

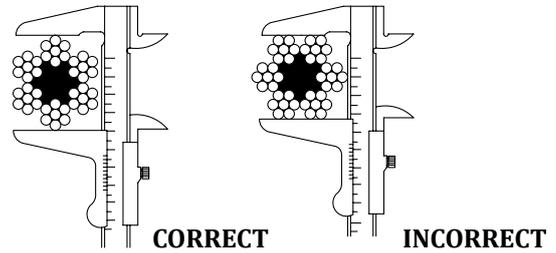
## Diameter of Wire Ropes

The diameter of a wire rope is the diameter of circle which encloses all of the wires.

When measuring wire rope, it is important to take the greatest distance of the outer limits of the Crowns' of 2 opposite strands. A measurement across the valleys will result in incorrect lower readings.

## Method of Measuring Diameter

Caliper, fitted with jaws broad enough to cover not less than two adjacent strands (see picture)



## Safety Factor of Wire Rope

It is difficult to fix the safety factor for each type of wire rope to be used for various equipments, as this factor depends not only on the load carried, but also on the speed of rope working, the kinds of fitting used for rope ends, the acceleration and deceleration, length of rope, the number, size and arrangements of sheave and drums etc.

The following safety factor are minimum requirements for safety and economy in the common installation.

## Ropes Characteristics

This chart is purely an attempt to illustrate the relative characteristics of different constructions of wire rope as indicated in the text.

No numerical scale is shown or intended.

PURPOSE	MINIMUM SAFETY FACTOR
ELEVATOR	10
CRANE, HOIST DERRICK, SLING	6
GUY OR STAY, HORIZONTAL PULL OR TRACTION	4
MAIN WIRE OF AERIAL ROPE WAY	3

## WIRE ROPE APPLICATIONS

The following list of suggested constructions of wire rope for various applications is of course not exhaustive and, may often be modified in the light of a particular machine manufacturer's advice or of local experience where unusual conditions may favor some variation from accepted practice elsewhere.

**These suggestions should therefore be taken as a guide where no other guidance exists, or as possible alternatives where one construction has been found unsatisfactory.**

		CONSTRUCTION		
		STRANDS	CORE	LAY
CRANES Incl. Clamshells	Derrick/Boom	6 x 19 Filler (6 x 25Fi)	IWRC	0 or L
		6 x 36	IWRC	0 or L
	Hoist (holding/closing)	6 x 19 Filler (6 x 25Fi)	IWRC	0
		6 x 36	IWRC	0
	Tag lines	18 x 7	FC or Strand	0 or L
Tower Cranes	Hoist	6 x 19	FC	0
Dredgers	Boom Hoist	6 x 19	FC or Strand	0 or L
	Swing	6 x 19 Filler (6 x 25Fi)	IWRC	0
	Ladder Hoist	6 x 19 Filler (6 x 25Fi)	IWRC	0
		6 x 36	IWRC	0 or L
	Spud	6 x 19 Filler (6 x 25Fi)	IWRC	0
Drilling Rigs (Rotary)	Drilling Lines	6 x 19 Seale	IWRC	0
	Sand Coring Swabbing	6 x 7 Galv.	Poly	0
	Casing	6 x 19 Filler (6 x 25Fi)	IWRC or FC	0
Drilling Rigs (Percussion)	Drilling Lines	6 x 21 Filler, Generally Left Hand	FC	0



### Handling and Installation

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#### MUST AVOID FOR LONGER LIFE OF ROPE

- Twist, loop or kink of wire rope.
- Moisture, dust and acid or sulphuric hume gas
- Overload
- Crushing or hammering
- Sever or reverse bending (S-Bending)
- Too small sheaves, drums and guide rollers.
- Hard rolling of sheaves and guide rollers.
- Worn groove, broken or soft sheaves and rollers.
- Poor or no lubrication.
- Heat in luence
- Wrong itting and spooling on the drum
- Excessive leet angle
- Vibration
- Obstacles, sand and grit on the surface of operation line
- Shock too fast or stop

### How to order

---

In ordering steel wire rope, you are requested to give us complete information as speci ed below :

1. Application : Working condition, type of reprocessing.
2. Size : Diameter of the rope in millimeters or inches.
3. Construction : Number of strands, number of wires per strand and type of strand construction.
4. Type of core : Fiber core (FC),  
Independent wire rope core (IWRC),  
or Independent wire strand core (IWSC)
5. Lay : Right regular lay, left regular lay, right lang lay, left lang lay.
6. Preforming : Preformed or not.
7. Material : Bright (ungalvanized), galvanized or stainless steel.
8. Wire Grade : Tensile strength of the wires
9. Breaking Load : Minimum or calculated breaking load in tones or pounds.
10. Lubrication : Whether lubrication is desired or not, and required lubricant.
11. Packing Length : Length of wire rope per package.
12. Packing : In coils wrapped with oil paper and hessian (or PP) cloth, or on wooden reels.
13. Quantity : By number of coils or reels, by length or weight.
14. Speci ication : Any recognized speci ication, if required.
15. Test Report : Any format or ISO/IEC 17025 accredited test report.
16. Remarks : Other requirements such as coating, swaging, armouring, shipping, etc.

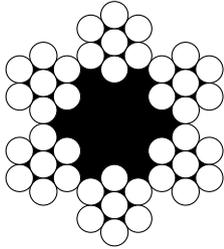


# Standard Steel Wire Rope

## Steel Wire Rope

6×7

6 x 7 + FC

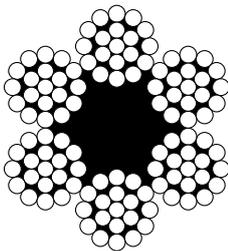


Usage:  
Mining, Stay,  
Logging, Tramway

Diameter mm	GB/T 8918			EN 12385-4		
	Min. Breaking Load (kN)		Approx. Weight (Kg/100m)	Min. Breaking Load (kN)		Approx. Weight (Kg/100m)
	1670N/mm <sup>2</sup>	1770N/mm <sup>2</sup>		1670N/mm <sup>2</sup>	1770N/mm <sup>2</sup>	
2	2.21	2.35	1.40	2.35	2.60	1.38
3	4.98	5.28	3.16	5.29	5.86	3.11
4	8.87	9.40	5.62	9.40	10.40	5.52
5	13.80	14.60	8.77	14.70	16.30	8.63
6	19.90	21.10	12.60	21.20	23.40	12.40
7	27.10	28.70	17.20	28.80	31.90	16.90
8	35.40	37.60	22.50	37.60	41.60	22.10
9	44.90	47.50	28.40	47.60	52.70	27.90
10	55.40	58.70	35.10	58.80	65.10	34.50
11	67.00	71.10	42.50	71.10	78.70	41.70
12	79.80	84.60	50.50	84.60	93.70	49.70
13	93.70	99.30	59.30	99.30	110.00	58.30
14	108.00	115.00	68.80	115.00	128.00	67.60
16	141.00	150.00	89.90	150.00	167.00	88.30
18	179.00	190.00	114.00	190.00	211.00	112.00
20	221.00	235.00	140.00	235.00	260.00	138.00
22	268.00	284.00	170.00	284.00	315.00	167.00
24	319.00	338.00	202.00	338.00	375.00	199.00
26	374.00	397.00	237.00	397.00	440.00	233.00
28	434.00	460.00	275.00	461.00	510.00	270.00
32	567.00	601.00	359.00	602.00	666.00	353.00

6×19

6 x 19 + FC



Usage:  
Mining, Stay,  
Logging, Tramway

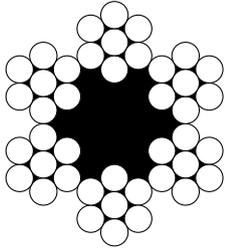
Diameter mm	GB/T 8918			EN 12385-4		
	Min. Breaking Load (kN)		Approx. Weight (Kg/100m)	Min. Breaking Load (kN)		Approx. Weight (Kg/100m)
	1670N/mm <sup>2</sup>	1770N/mm <sup>2</sup>		1670N/mm <sup>2</sup>	1770N/mm <sup>2</sup>	
3	4.61	4.89	3.11	4.89	5.42	3.11
4	8.20	8.69	5.54	8.69	9.63	5.54
5	12.80	13.50	8.65	13.60	15.00	8.65
6	18.40	19.50	12.50	19.60	21.70	12.50
7	25.10	26.60	17.00	26.60	29.50	17.00
8	32.80	34.70	22.10	34.70	38.50	22.14
9	41.50	44.00	28.00	44.00	48.70	28.03
10	51.20	54.30	34.60	54.30	60.20	34.60
11	62.00	65.70	41.90	65.70	72.80	41.87
12	73.80	78.20	49.80	78.20	86.70	49.82
13	86.60	91.80	58.50	91.70	102.00	58.47
14	100.00	106.00	67.80	106.00	118.00	67.82
16	131.00	139.00	88.60	139.00	154.00	88.58
18	166.00	176.00	112.00	176.00	195.00	112.00
20	205.00	217.00	138.00	217.00	241.00	138.00
22	248.00	263.00	167.00	263.00	291.00	167.00
24	295.00	312.00	199.00	312.00	347.00	199.00
26	346.00	367.00	234.00	367.00	407.00	234.00
28	401.00	426.00	271.00	426.00	472.00	271.00
32	524.00	556.00	354.00	556.00	616.00	354.00



# Standard Steel Wire Rope

## JIS Steel Wire Rope (JIS G3525-1998)

6 x 7 + FC

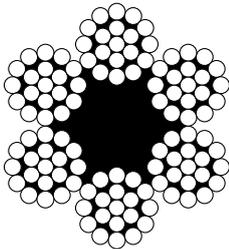


Usage:  
Mining, Stay,  
Logging, Tramway

6x7

Dia mm	Breaking Load		Approx Weight Kg/m
	GALV Grade G	UN-GALV Grade A	
	kN	kN	
6	19.0	21.4	0.134
8	33.8	38.1	0.237
9	42.8	48.2	0.300
10	52.8	59.5	0.371
12	76.0	85.6	0.534
14	103	117	0.727
16	135	152	0.950
18	171	193	1.20
20	211	238	1.48
22	256	288	1.80
24	304	343	2.14
26	357	402	2.51
28	414	466	2.91
30	475	535	3.34
32	541	609	3.80

6 x 19 + FC



Usage:  
Mining, Stay,  
Logging, Tramway

6x19

Dia mm	Breaking Load		Approx Weight Kg/m
	GALV Grade G	UN-GALV Grade A	
	kN	kN	
6	18.1	19.4	0.131
8	32.1	34.6	0.233
9	40.7	43.8	0.295
10	50.2	54.0	0.364
12	72.3	77.8	0.524
14	98.4	106	0.713
16	128	138	0.932
18	163	175	1.18
20	201	216	1.46
22	243	261	1.76
24	289	311	2.10
26	339	365	2.46
28	393	424	2.85

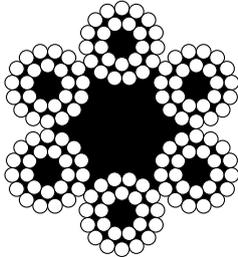


# Standard Steel Wire Rope

## Steel Wire Rope

6×24

6 x 24 + 7FC

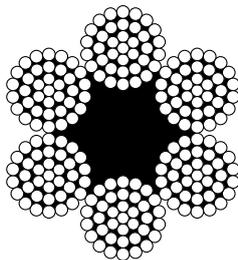


Usage:  
Hoist, Marine,  
General Engineering,  
Lashing

Diameter mm	GB/T8918		
	Min. Breaking Load (kN)		Approx. Weight (Kg/100m)
	1570 N/mm <sup>2</sup>	1670 N/mm <sup>2</sup>	
8	28.10	29.90	20.40
9	35.60	37.80	25.80
10	43.90	46.70	31.80
11	53.10	56.50	38.50
12	63.30	67.30	45.80
13	74.20	79.00	53.70
14	86.10	91.60	62.30
16	112.00	119.00	81.40
18	142.00	151.00	103.00
20	175.00	187.00	127.00
22	212.00	226.00	154.00
24	253.00	269.00	183.00
26	297.00	316.00	215.00
28	344.00	366.00	249.00
32	450.00	478.00	326.00

6×37

6 x 37 + FC



Usage:  
Mining, Stay,  
Logging, Tramway

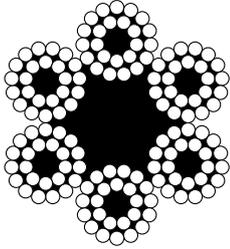
Diameter mm	GB/T8918			EN 12385-4		
	Min. Breaking Load (kN)		Approx. Weight (Kg/100m)	Min. Breaking Load (kN)		Approx. Weight (Kg/100m)
	1670 N/mm <sup>2</sup>	1770 N/mm <sup>2</sup>		1770 N/mm <sup>2</sup>	1960 N/mm <sup>2</sup>	
5	12.30	13.00	8.65	13.10	14.50	8.65
6	17.70	18.70	12.50	18.80	20.80	12.50
7	24.10	25.50	17.00	25.60	28.30	17.00
8	31.50	33.40	22.10	33.40	37.00	22.10
9	39.90	42.20	28.00	42.30	46.80	28.00
10	49.20	52.20	34.60	52.20	57.80	34.60
11	59.60	63.10	41.90	63.20	70.00	41.90
12	70.90	75.10	49.80	75.20	83.20	49.80
13	83.20	88.20	58.50	88.20	97.70	58.47
14	96.50	102.00	67.80	102.00	113.30	67.82
16	126.00	133.00	88.60	133.00	148.00	88.58
18	159.00	169.00	112.00	169.00	187.00	112.00
20	197.00	208.00	138.00	209.00	231.00	138.00
22	238.00	252.00	167.00	252.00	280.00	167.00
24	283.00	300.00	199.00	300.00	333.00	199.00
26	333.00	352.00	234.00	353.00	391.00	234.00
28	386.00	409.00	271.00	409.00	453.00	271.00
32	504.00	534.00	354.00	534.00	592.00	354.00



# Standard Steel Wire Rope

## JIS Steel Wire Rope (JIS G3525-1998)

6 x 24 + 7FC

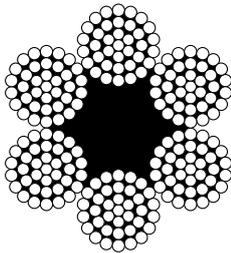


Usage:  
Hoist, Marine,  
General Engineering,  
Lashing

6x24

Dia mm	Breaking Load		Approx Weight Kg/m
	GALV	UN-GALV	
	Grade G	Grade A	
	kN	kN	
6	16.5	17.7	0.120
8	29.3	31.6	0.212
9	37.1	39.9	0.269
10	45.8	49.3	0.332
12	65.9	71.0	0.478
14	89.7	96.6	0.651
16	117	126	0.850
18	148	160	1.08
20	183	197	1.33
22	222	239	1.61
24	264	284	1.91
26	309	333	2.24
28	359	387	2.60
30	412	444	2.99
32	469	505	3.40
36	593	639	4.30
40	732	789	5.31

6 x 37 + FC



Usage:  
Mining, Stay,  
Logging, Tramway

6x37

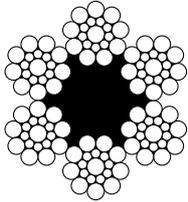
Dia mm	Breaking Load		Approx Weight Kg/m
	GALV	UN-GALV	
	Grade G	Grade A	
	kN	kN	
6	17.8	19.1	0.129
8	31.6	34.0	0.230
9	40.0	43.0	0.291
10	49.4	53.1	0.359
12	71.1	76.5	0.517
14	96.7	104	0.704
16	126	136	0.920
18	160	172	1.16
20	197	212	1.44
22	239	257	1.74
24	284	306	2.07
26	334	359	2.43
28	387	416	2.82
30	444	478	3.23
32	505	544	3.68
36	640	688	4.66
40	790	850	5.75
44	956	1030	6.96
48	1140	1220	8.28
52	1330	1440	9.72
56	1550	1670	11.3
60	1780	1910	12.9



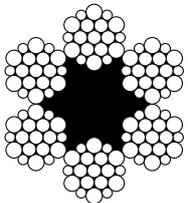
# Standard Steel Wire Rope

## Steel Wire Rope

6 x S(19) + FC



6 x W(19) + FC



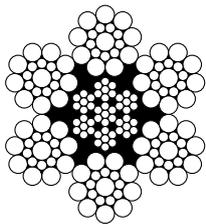
Usage:  
Hoist,  
General Engineering,  
Crane

6 x S(19) + FC

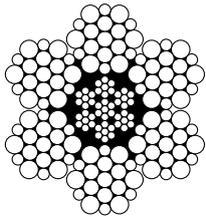
6 x W(19) + FC

Diameter mm	GB/T8918			EN 12385-4		
	Min. Breaking Load (kN)		Approx. Weight (Kg/100m)	Min. Breaking Load (kN)		Approx. Weight (Kg/100m)
	1670 N/mm <sup>2</sup>	1770 N/mm <sup>2</sup>		1770 N/mm <sup>2</sup>	1960 N/mm <sup>2</sup>	
6	19.80	21.00	13.30	21.00	23.30	12.90
7	27.00	28.60	18.10	28.60	31.70	17.60
8	35.20	37.30	23.60	37.40	41.40	23.00
9	44.60	47.30	29.90	47.30	52.40	29.10
10	55.10	58.40	36.90	58.40	64.70	35.90
11	66.60	70.60	44.60	70.70	78.30	43.30
12	79.30	84.10	53.10	84.10	93.10	51.70
13	93.10	98.70	62.30	98.70	109.00	60.70
14	108.00	114.00	72.20	114.00	127.00	70.40
16	141.00	149.00	94.40	150.00	166.00	91.90
18	178.00	189.00	119.00	189.00	210.00	116.00
20	220.00	233.00	147.00	234.00	259.00	144.00
22	266.00	282.00	178.00	283.00	313.00	174.00
24	317.00	336.00	212.00	336.00	373.00	207.00
26	372.00	394.00	249.00	395.00	437.00	243.00
28	432.00	457.00	289.00	458.00	507.00	281.00
32	564.00	598.00	377.00	598.00	662.00	368.00

6 x S(19) + IWRC



6 x W(19) + IWRC



Usage:  
Hoist,  
General Engineering,  
Crane

6 x S(19) + IWRC

6 x W(19) + IWRC

Diameter mm	GB/T8918			EN 12385-4		
	Min. Breaking Load (kN)		Approx. Weight (Kg/100m)	Min. Breaking Load (kN)		Approx. Weight (Kg/100m)
	1670 N/mm <sup>2</sup>	1770 N/mm <sup>2</sup>		1770 N/mm <sup>2</sup>	1960 N/mm <sup>2</sup>	
6	21.40	22.60	14.60	22.70	25.10	14.40
7	29.10	30.80	19.90	30.90	34.20	19.60
8	38.00	40.30	25.90	40.30	44.70	25.60
9	48.10	51.00	32.80	51.00	56.50	32.40
10	59.40	63.00	40.50	63.00	69.80	40.00
11	71.90	76.20	49.10	76.20	84.40	48.40
12	85.60	90.70	58.40	90.70	100.00	57.60
13	100.00	106.00	68.50	106.00	118.00	67.60
14	116.00	123.00	79.50	124.00	137.00	78.40
16	152.00	161.00	104.00	161.00	179.00	102.00
18	192.00	204.00	131.00	204.00	226.00	130.00
20	237.00	252.00	162.00	252.00	279.00	160.00
22	287.00	304.00	196.00	305.00	338.00	194.00
24	342.00	362.00	234.00	363.00	402.00	230.00
26	401.00	425.00	274.00	426.00	472.00	270.00
28	466.00	494.00	318.00	494.00	547.00	314.00
32	608.00	645.00	415.00	645.00	715.00	410.00



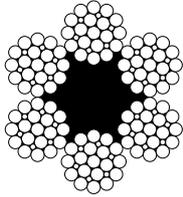
# Standard Steel Wire Rope

## Steel Wire Rope

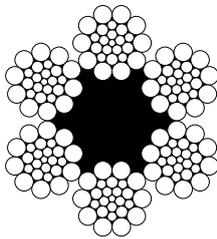
6 x Fi(25) + FC

6 x WS(26) + FC

6 x Fi(25) + FC



6 x WS(26) + FC



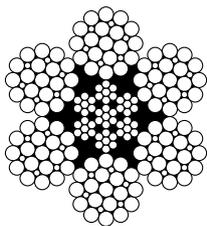
Usage:  
Hoist,  
General Engineering,  
Crane

Diameter mm	GB/T8918			EN 12385-4		
	Min. Breaking Load (kN)		Approx. Weight (Kg/100m)	Min. Breaking Load (kN)		Approx. Weight (Kg/100m)
	1670 N/mm <sup>2</sup>	1770 N/mm <sup>2</sup>		1770 N/mm <sup>2</sup>	1960 N/mm <sup>2</sup>	
6	----	----	----	21.00	23.30	12.90
7	----	----	----	28.60	31.70	17.60
8	----	----	----	37.40	41.40	23.00
9	----	----	----	47.30	52.40	29.10
10	----	----	----	58.40	64.70	35.90
11	----	----	----	70.70	78.30	43.30
12	79.30	84.10	54.70	84.10	93.10	51.70
13	93.10	98.70	64.20	98.70	109.00	60.70
14	108.00	114.00	74.50	114.00	127.00	70.40
16	141.00	149.00	97.30	150.00	166.00	91.90
18	178.00	189.00	123.00	189.00	210.00	116.00
20	220.00	233.00	152.00	234.00	259.00	144.00
22	266.00	282.00	184.00	283.00	313.00	174.00
24	317.00	336.00	219.00	336.00	373.00	207.00
26	372.00	394.00	257.00	395.00	437.00	243.00
28	432.00	457.00	298.00	458.00	507.00	281.00
32	564.00	598.00	389.00	598.00	662.00	368.00

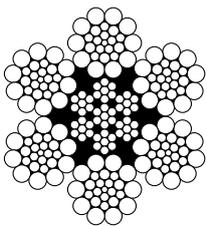
6 x Fi(25) + IWRC

6 x W(26) + IWRC

6 x Fi(25) + IWRC



6 x WS(26) + IWRC



Usage:  
Hoist,  
General Engineering,  
Crane

Diameter mm	GB/T8918			EN 12385-4		
	Min. Breaking Load (kN)		Approx. Weight (Kg/100m)	Min. Breaking Load (kN)		Approx. Weight (Kg/100m)
	1670 N/mm <sup>2</sup>	1770 N/mm <sup>2</sup>		1770 N/mm <sup>2</sup>	1960 N/mm <sup>2</sup>	
6	----	----	----	21.00	23.30	12.90
7	----	----	----	28.60	31.70	17.60
8	----	----	----	37.40	41.40	23.00
9	----	----	----	47.30	52.40	29.10
10	----	----	----	58.40	64.70	35.90
11	----	----	----	70.70	78.30	43.30
12	79.30	84.10	54.70	84.10	93.10	51.70
13	93.10	98.70	64.20	98.70	109.00	60.70
14	108.00	114.00	74.50	114.00	127.00	70.40
16	141.00	149.00	97.30	150.00	166.00	91.90
18	178.00	189.00	123.00	189.00	210.00	116.00
20	220.00	233.00	152.00	234.00	259.00	144.00
22	266.00	282.00	184.00	283.00	313.00	174.00
24	317.00	336.00	219.00	336.00	373.00	207.00
26	372.00	394.00	257.00	395.00	437.00	243.00
28	432.00	457.00	298.00	458.00	507.00	281.00
32	564.00	598.00	389.00	598.00	662.00	368.00



# Standard Steel Wire Rope

JIS Steel Wire Rope

(JIS G3525-1998)

Construction	6×S (19)	6×W (19)
Section		

Construction	6×Fi (25)	6×WS (26)
Section		

Dia mm	Breaking Load			Approx Weight Kg/m
	GALV / UN-GALV			
	Grade E kN	Grade A kN	Grade B kN	
4	—	—	9.29	0.062
5	—	—	14.5	0.096
6	16.1	19.6	20.9	0.139
6.3	17.7	21.6	23.0	0.153
8	28.6	34.9	37.2	0.247
9	36.2	44.1	47.0	0.312
10	44.7	54.5	58.1	0.386
11.2	56.1	68.3	72.8	0.484
12	64.4	78.5	83.7	0.556
12.5	69.9	85.1	90.7	0.603
14	87.7	107	114	0.756
16	115	139	149	0.988
18	145	176	188	1.25
20	179	218	232	1.54
22.4	224	273	291	1.94
25	280	340	363	2.41
28	—	—	455	3.02
30	—	—	523	3.47
31.5	—	—	576	3.83
33.5	—	—	652	4.33
35.5	—	—	732	4.86
37.5	—	—	816	5.43
40	—	—	929	6.17

Construction	IWRC 6×S (19)	IWRC 6×W (19)
Section		

Construction	IWRC 6×Fi (25)	IWRC 6×WS (26)
Section		

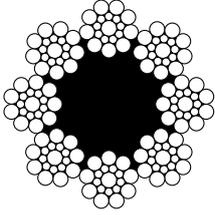
Dia mm	Breaking Load		Approx Weight Kg/m
	GALV / UN-GALV		
	Grade B kN		
10	66.2		0.430
11.2	83.0		0.539
12.5	103		0.672
14	130		0.843
16	169		1.10
18	214		1.39
20	265		1.72
22.4	332		2.16
25	414		2.69
28	519		3.37
30	596		3.87
31.5	657		4.27
33.5	743		4.83
35.5	834		5.42
37.5	931		6.05
40	1060		6.88



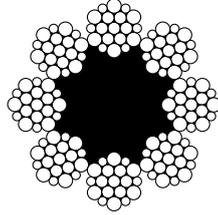
# Steel Wire Rope

8 x S(19) + FC

8 x W(19) + FC



8xS (19)



8xW (19)

Usage: Hoist, General Industry,  
Sink, Boat Dragging

Diameter mm	GB/T 20118-2006 / GB 8918-2006			EN 12385-4			JIS G 3525-2006				
	Min. Breaking Load (kN)		Approx. Weight (Kg/100m)	Min. Breaking Load (kN)		Approx. Weight (Kg/100m)	Diameter mm	Min. Breaking Load (kN)			Approx. Weight (Kg/m)
	1670N/mm <sup>2</sup>	1770N/mm <sup>2</sup>		1770N/mm <sup>2</sup>	1960N/mm <sup>2</sup>			Ungalv./Galv.			
								E Type	A Type	B Type	
8	31.30	33.20	22.10	33.20	36.80	21.80	8.0	26.0	30.8	32.8	0.220
9	39.60	42.00	28.00	42.00	46.50	27.50	10.0	40.6	48.1	51.3	0.343
10	48.90	51.90	34.60	51.90	57.40	34.00					
11	59.20	62.80	41.90	62.80	69.50	41.10	11.2	51.0	60.3	64.3	0.430
12	70.50	74.70	49.90	74.70	82.70	49.00	12.0	58.5	69.2	73.8	0.494
13	82.70	87.60	58.50	87.60	97.10	57.50	12.5	63.5	75.1	80.1	0.536
14	95.90	102.00	67.90	102.00	113.00	66.60	14.0	79.6	94.3	100.0	0.672
16	125.00	133.00	88.70	133.00	147.00	87.00	16.0	104.0	123.0	131.0	0.878
18	159.00	168.00	112.00	168.00	186.00	110.00	18.0	132.0	156.0	166.0	1.110
20	196.00	207.00	139.00	207.00	230.00	136.00	20.0	162.0	192.0	205.0	1.370
22	237.00	251.00	168.00	251.00	278.00	165.00	22.4	204.0	241.0	257.0	1.720
24	282.00	299.00	199.00	299.00	331.00	196.00	25.0	254.0	301.0	320.0	2.140
26	331.00	351.00	234.00	351.00	388.00	230.00					
28	384.00	407.00	271.00	407.00	450.00	267.00					
32	501.00	531.00	355.00	531.00	588.00	348.00					

## JIS WIRE ROPE

JIS G 3525-2006

6x24	6x37	6xFi (25)	6xFi (25) IWRC	6xFi (29) FC	6xFi (29) IWRC



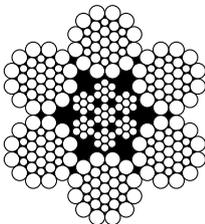
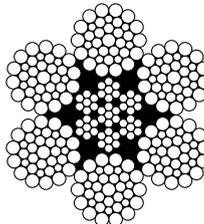
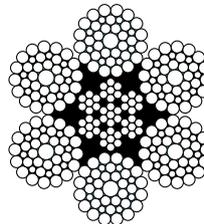
# Standard Steel Wire Rope

## WIRE ROPE

6 x WS(31) + IWRC

6 x WS(36) + IWRC

6 x WS(41) + IWRC

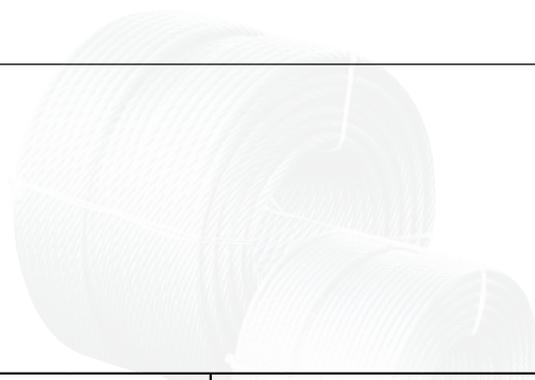
Diameter mm	GB / T 20118-2006 / GB 8918-2006			EN 12385-4			JIS G 3525-2006		
	Min. Breaking Load (kN)		Approx. Weight (Kg/100m)	Min. Breaking Load (kN)		Approx. Weight (Kg/100m)	mm	Breaking Load kN	kg/m
	1670 N/mm <sup>2</sup>	1770 N/mm <sup>2</sup>		1770 N/mm <sup>2</sup>	1960 N/mm <sup>2</sup>			Grade B	
8	38.00	40.30	26.80	40.30	44.70	26.20			
9	48.00	51.00	33.90	51.00	56.50	33.10	10.0	67.7	0.440
10	59.50	63.00	41.80	63.00	69.80	40.90	11.2	84.9	0.552
11	72.00	76.20	50.60	76.20	84.40	49.50	12.5	106.0	0.688
12	85.60	90.70	60.20	90.70	100.00	58.90	14.0	133.0	0.863
13	100.00	106.00	70.60	106.00	118.00	69.10	16.0	173.0	1.130
14	117.00	124.00	81.90	124.00	137.00	80.20	18.0	219.0	1.430
16	152.00	161.00	107.00	161.00	179.00	105.00	20.0	271.0	1.760
18	193.00	204.00	135.00	204.00	226.00	133.00	22.4	340.0	2.210
20	238.00	252.00	167.00	252.00	279.00	164.00	25.0	423.0	2.750
22	288.00	305.00	202.00	305.00	338.00	198.00	28.0	531.0	3.450
24	342.00	363.00	241.00	363.00	402.00	236.00	30.0	609.0	3.960
26	402.00	426.00	283.00	426.00	472.00	276.00	31.5	672.0	4.370
28	466.00	494.00	328.00	494.00	547.00	321.00	33.5	760.0	4.940
32	609.00	645.00	428.00	645.00	715.00	419.00	35.5	853.0	5.550
   <p>6 x WS(31) + IWRC      6 x WS(36) + IWRC      6 x WS(41) + IWRC</p>							37.5	952.0	6.190
							40.0	1080.0	7.040
							42.5	1220.0	7.950
							45.0	1370.0	8.910
							47.5	1530.0	9.930
							50.0	1690.0	11.000
							53.0	1900.0	12.400
							56.0	2120.0	13.800
							60.0	2440.0	15.800

Usage: Well Drilling, Hoist, General Industry,  
Crane, Construction Machine, Mine Lifting,  
High-furnace Hoisting, Cable Car, Excavator, Marine

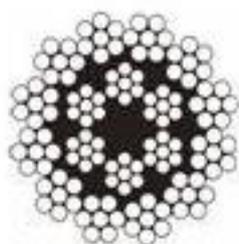
## WIRE ROPE

18 x 7 + IWS

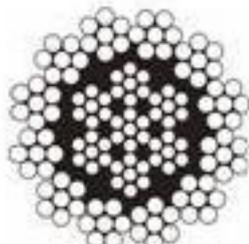
17 x 7 + IWS



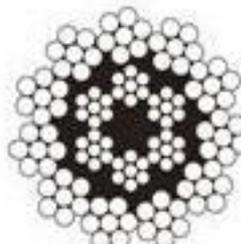
Diameter mm	GB/T 20118-2006 / GB 8918-2006			EN 12385-4				JIS G 3525-2006		
	Min. Breaking Load (kN)		Approx. Weight (Kg/100m)	Min. Breaking Load (kN)		Approx. Weight (Kg/100m)		Diameter mm	Min. Breaking Load (kN)	Approx. Weight (Kg/m)
	1670N/mm <sup>2</sup>	1770N/mm <sup>2</sup>		1770N/mm <sup>2</sup>	1960N/mm <sup>2</sup>	FC	IWS		Ungalv./Galv.	
	FC / IWS	FC / IWS	FC / IWS	FC / IWS	A Type					
6	19.70	20.90	15.50	20.90	23.10	13.80	14.40	12	84.70	0.612
7	26.80	28.40	21.10	28.40	31.50	18.70	19.60	14	115.00	0.833
8	35.10	37.20	27.50	37.20	41.10	24.40	25.70	16	151.00	1.090
9	44.40	47.00	34.80	47.00	52.10	30.90	32.50	18	191.00	1.380
10	54.80	58.10	43.00	58.10	64.30	38.20	40.10	20	235.00	1.700
11	66.30	70.20	52.00	70.20	77.80	46.20	48.50	22	285.00	2.060
12	78.90	83.60	61.90	83.60	92.60	55.00	57.70			
13	92.50	98.10	72.70	98.10	109.00	64.60	67.80			
14	107.00	114.00	84.30	114.00	126.00	74.90	78.60			
16	140.00	149.00	110.00	149.00	165.00	97.80	103.00			
18	177.00	188.00	139.00	188.00	208.00	124.00	130.00			
20	219.00	232.00	172.00	232.00	257.00	153.00	160.00			
22	265.00	281.00	208.00	281.00	311.00	185.00	194.00			
24	316.00	334.00	248.00	334.00	370.00	220.00	231.00			
26	370.00	392.00	291.00	392.00	435.00	258.00	271.00			
28	429.00	455.00	337.00	455.00	504.00	299.00	314.00			
32	561.00	594.00	440.00	-	-	-	-			



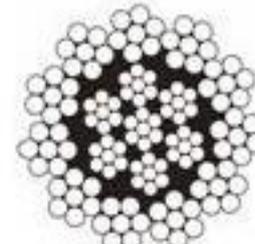
18x7+FC



18x7+IWS



17x7+FC



17x7+IWS

Usage: Vertical Well, Tramway Support, Crane

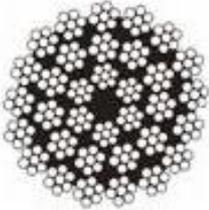


## WIRE ROPE

34 x 7 + FC

36 x 7 + FC

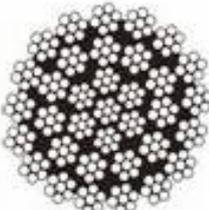
Usage: Crane, General Engineering

 <b>34x7+FC</b>	Diameter mm	GB/T 20118-2006 / GB 8918-2006			EN 12385-4			
		Min. Breaking Load (kN)		Approx. Weight (Kg/100m)	Min. Breaking Load (kN)		Approx. Weight (Kg/100m)	
		1670N/mm <sup>2</sup>	1770N/mm <sup>2</sup>		1770N/mm <sup>2</sup>	1960N/mm <sup>2</sup>		
		FC / IWS	FC / IWS	FC / IWS	FC / IWS	FC / IWS	FC	IWS
	10	51.60	54.70	39.00	56.30	62.30	39.00	40.10
	11	62.40	66.20	47.20	68.10	75.40	47.20	48.50
	12	74.30	78.80	56.20	81.10	89.80	56.20	57.70
	13	87.20	92.40	65.90	95.10	105.00	65.90	67.80
	14	101.00	107.00	76.40	110.00	122.00	76.40	78.60
	16	132.00	140.00	99.80	144.00	160.00	99.80	103.00
	18	167.00	177.00	126.00	182.00	202.00	126.00	130.00
	20	206.00	218.00	156.00	225.00	249.00	156.00	160.00
	22	249.00	264.00	189.00	272.00	302.00	189.00	194.00
	24	296.00	314.00	225.00	324.00	359.00	225.00	231.00
	26	348.00	369.00	264.00	380.00	421.00	264.00	271.00
	28	403.00	427.00	306.00	441.00	489.00	306.00	314.00
	32	527.00	558.00	399.00	576.00	638.00	399.00	411.00

34 x 7 + IWS

36 x 7 + IWS

Usage: Crane, General Engineering

 <b>34x7+IWS</b>	Diameter mm	GB/T 20118-2006 / GB 8918-2006			EN 12385-4			
		Min. Breaking Load (kN)		Approx. Weight (Kg/100m)	Min. Breaking Load (kN)		Approx. Weight (Kg/100m)	
		1670N/mm <sup>2</sup>	1770N/mm <sup>2</sup>		1770N/mm <sup>2</sup>	1960N/mm <sup>2</sup>		
		FC / IWS	FC / IWS	FC / IWS	FC / IWS	FC / IWS	FC	IWS
	10	53.10	56.30	43.00	56.30	62.30	39.00	40.10
	11	64.30	68.10	52.00	68.10	75.40	47.20	48.50
	12	76.50	81.10	61.90	81.10	89.80	56.20	57.70
	13	89.70	95.20	72.70	95.10	105.00	65.90	67.80
	14	104.00	110.00	84.30	110.00	120.00	76.40	78.60
	16	136.00	144.00	110.00	144.00	160.00	99.80	103.00
	18	172.00	182.00	139.00	182.00	202.00	126.00	130.00
	20	212.00	225.00	172.00	225.00	249.00	156.00	160.00
	22	257.00	272.00	208.00	272.00	302.00	189.00	194.00
	24	306.00	324.00	248.00	324.00	359.00	225.00	231.00
	26	359.00	380.00	291.00	380.00	421.00	264.00	271.00
	28	416.00	441.00	337.00	441.00	489.00	306.00	314.00
	32	544.00	576.00	440.00	576.00	638.00	399.00	411.00

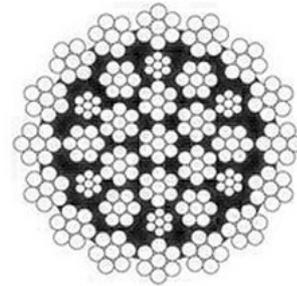


# Steel Wire Rope

## WIRE ROPE

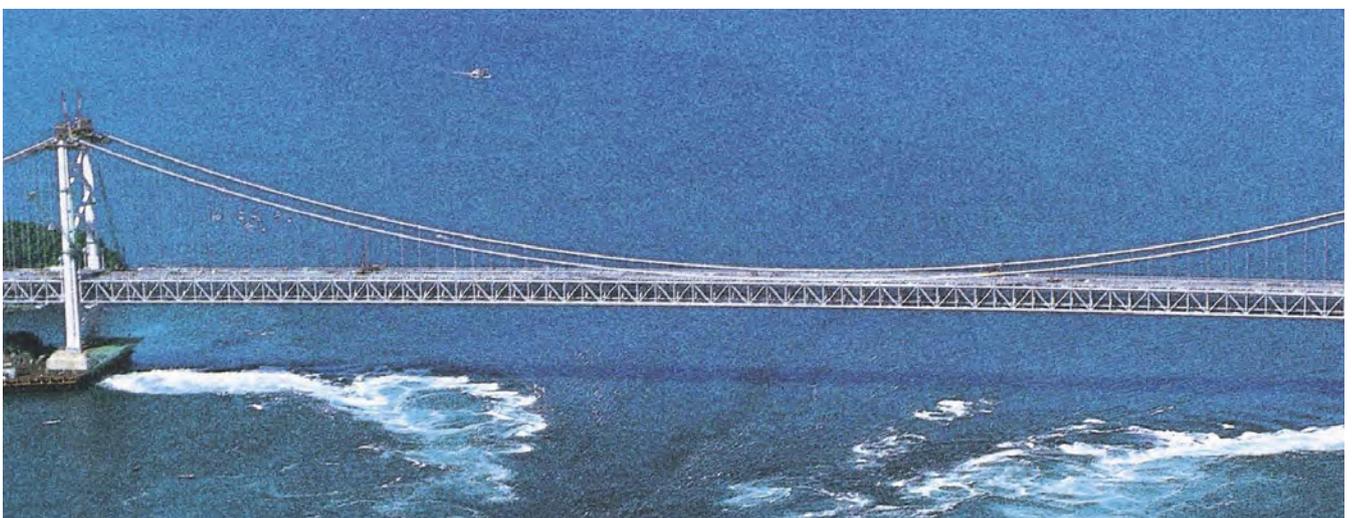
35 (W) X 7

Usage: Crane, General Engineering



35WX7

Diameter mm	GB/T 20118-2006 / GB 8918-2006						EN 12385-4			
	Min. Breaking Load (kN)						Approx. Weight (Kg/100m)	Min. Breaking Load (kN)		Approx. Weight (Kg/100m)
	1570N/mm <sup>2</sup>	1670N/mm <sup>2</sup>	1770N/mm <sup>2</sup>	1870N/mm <sup>2</sup>	1960N/mm <sup>2</sup>	2160N/mm <sup>2</sup>		1960N/mm <sup>2</sup>	2160N/mm <sup>2</sup>	
8	36.20	38.50	40.80	43.10	45.20	49.80	29.40	45.20	48.40	29.10
9	45.80	48.70	51.60	54.50	57.20	63.00	37.30	57.20	61.20	36.80
10	56.50	60.10	63.70	67.30	70.60	77.80	46.00	70.60	75.60	45.40
11	68.40	72.70	77.10	81.50	85.40	94.10	55.70	85.40	91.50	54.90
12	81.40	86.60	91.80	96.90	102.00	112.00	66.20	102.00	109.00	65.40
13	95.50	102.00	108.00	114.00	119.00	131.00	77.70	119.00	128.00	78.70
14	111.00	118.00	125.00	132.00	138.00	152.00	90.20	138.00	148.00	89.00
16	145.00	154.00	163.00	172.00	181.00	199.00	118.00	181.00	194.00	116.00
18	183.00	195.00	206.00	218.00	229.00	252.00	149.00	229.00	245.00	147.00
20	226.00	240.00	255.00	269.00	282.00	311.00	184.00	282.00	302.00	182.00
22	274.00	291.00	308.00	326.00	342.00	376.00	223.00	342.00	366.00	220.00
24	326.00	346.00	367.00	388.00	406.00	448.00	265.00	406.00	435.00	262.00
26	382.00	406.00	431.00	455.00	477.00	526.00	311.00	477.00	511.00	307.00
28	443.00	471.00	500.00	528.00	553.00	610.00	361.00	553.00	593.00	356.00
30	509.00	541.00	573.00	606.00	635.00	700.00	414.00	635.00	680.00	409.00
32	579.00	616.00	652.00	689.00	723.00	796.00	471.00	723.00	774.00	465.00
34	653.00	695.00	737.00	778.00	816.00	899.00	532.00	816.00	874.00	525.00
36	732.00	779.00	826.00	872.00	914.00	1010.00	596.00	914.00	980.00	588.00
38	816.00	868.00	920.00	972.00	1020.00	1120.00	664.00	1020.00	1090.00	656.00
40	904.00	962.00	1020.00	1080.00	1130.00	1240.00	736.00	1130.00	1210.00	726.00





# Wire Rope Sling

## Rope End Fitting

Processing	Efficiency	Method
Socket	100%	
Eye Plice	75~95%	
Rocked	95%	
Clips	about 80%	
Wedge	65~70%	
Splice With Rocked	95%	

## JIS Rocked Wire Rope



Dia	1m			2m			3m			4m		
	Product Code	Weight (kg)		Product Code	Weight (kg)		Product Code	Weight (kg)		Product Code	Weight (kg)	
6	061	0.21		062	0.33		063	0.45		064	0.57	
8	081	0.39		082	0.61		083	0.82		084	1.03	
9	091	0.50		092	0.77		093	1.04		094	1.31	
10	101	0.68		102	1.01		103	1.34		104	1.67	
12	121	1.01		122	1.48		123	1.96		124	2.44	
14	141	1.49		142	2.14		143	2.79		144	3.44	
16	161	1.97		162	2.82		163	3.67		164	4.52	
18	181	2.68		182	3.76		183	4.84		184	5.92	
20	201	3.33		202	4.66		203	5.99		204	7.32	
22	221	4.17		222	5.78		223	7.39		224	9.00	

Dia	5m			6m			8m			10m		
	Product Code	Weight (kg)		Product Code	Weight (kg)		Product Code	Weight (kg)		Product Code	Weight (kg)	
6	065	0.69		066	0.81		068	1.05		0610	1.29	
8	085	1.24		086	1.45		088	1.88		0810	2.30	
9	095	1.57		096	1.84		098	2.38		0910	2.92	
10	105	2.01		106	2.34		108	3.00		1010	3.67	
12	125	2.92		126	3.40		128	4.35		1210	5.31	
14	145	4.09		146	4.74		148	6.05		1410	7.35	
16	165	5.37		166	6.22		168	7.92		1610	9.62	
18	185	7.00		186	8.08		188	9.16		1810	11.32	
20	205	8.65		206	9.98		208	12.64		2010	15.30	
22	225	10.61		226	12.22		228	15.44		2210	18.66	



# Ferrule, Cutter

## Aluminium Ferrule (JIS/EN)



Mandrel  
Seamless Tube,  
Double Type

JIS H4080 (According to JIS B8817)

Size	Length (A )	Q'ty
6	24	600
8	31.5	500
9	36	400
10	40	250
12	48	200
14	56	140
16	64	100
18	72	70
20	80	50
22	88	40
24	96	30
26	104	28
28	112	21
30	120	17
32	128	13

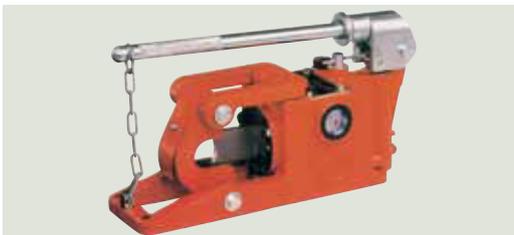


Mandrel  
Seamless Tube,  
Single Type

JIS H4080 (According to JIS B8817)

Size	Length (A )
6	29
8	39
9	44
10	48
12	58
14	68
16	77

## Hydraulic Wire Rope Cutter



No necessity of the auxiliary tool in work, and it will be possible to cut in a few seconds.

Grinding and substitution of the cutting blade can be easily done.

The oil leakage is prevented by adopting the new method for packing

The state of oil plances from the oil gauge on the tank side and understands.

The oil can be easily replenished

Type	Capacity (A )	Size (L)X(W)X(H)	Weight (O )
A	20	310 × 90 × 152	10
B	30	380 × 105 × 180	15
C	40	400 × 120 × 200	20
D	50	485 × 130 × 220	30
E	60	630 × 175 × 270	70
L	100	1000 × 600 × 360	200



# Wire Rope Clip

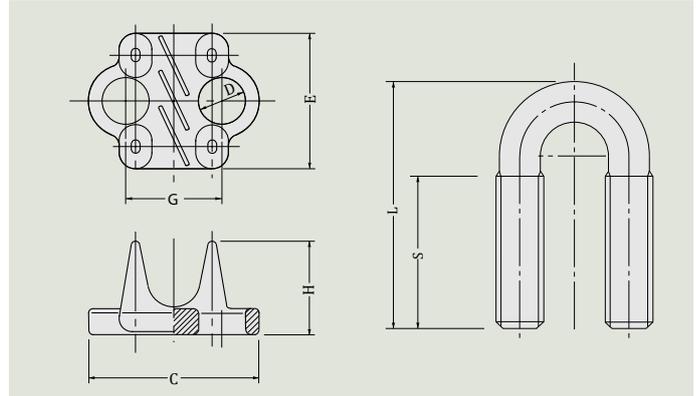
## Drop Forged Steel Wire Rope Clip (JIS/US)



Self Color



HOT DIPPED GALV.

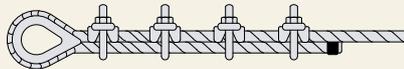


JIS B2809-1996 (JIS Standard F Type)

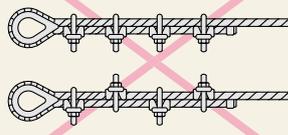
Size	BODY				U-BOLT/NUT			Weight (N)
	C	E	G	H	Thread	L	S	
6	30	24.5	14	16	M6	35	20	47
8	36	31	18	19	8	40	20	80
9	41	29	22	19	10	46	24	112
10	45	35	22	23	10	50	28	150
12	51	39	26	27	12	60	35	220
14	53	45	28	31	12	65	40	260
16	60	48	32	35	14	75	45	380
18	62	53	34	37	14	80	50	450
20-22	78	62	44	43	18	100	60	800
24-25	86	68	48	47	20	110	65	1100
26-28	94	75	54	53	22	120	70	1500
30-32	98	79	58	58	22	130	75	1600
33-38	120	93	70	65	27	150	85	2800
40-45	136	100	80	72	30	175	95	4400
47-50	150	115	89	81	33	195	100	6100
53-60	170	128	101	96	36	240	125	8900
63-70	191	142	116	105	39	270	130	10900
73-80	212	156	128	114	42	300	150	14600

### Method of installing wire rope clip

- Please install the wire rope clip correctly.
- It was tightened by correct torque then the retention of efficiency is 80%.



Correct



Wrong

The slipping is caused in the tightening parts if the wrong instruction or tightening torque is not proper and it causes an accident due to the decrease in retentivity.

### ⚠ Notes

- 1: Please use what suitable for JIS rope diameter (please do not use the rope of different kinds & diameter with the same wire rope clips)
- 2: Please remove if the sand on the clips and please do not use the rusted.
- 3: Please bring a wire rope clip that is the nearest the eye of the thimble close the thimble as much as possible.
- 4: Moreover, please give the length of the wire rope of the part of the terminal end of the wire rope clip as 6 times the diameter.  
Please tighten with the torque wrench by correct torque. Moreover, please tighten one by one dividing from the wire rope clip of the terminal into 3 times or more in the same order.
- 5: Please fasten in the diameter's become thin and slipperiness
- 6: Please mark with the paint or others, and sometimes confirm the presence of slipping after installation ends.
- 7: Please do not use the wire rope clip for the Vinyl core wire rope when the load.

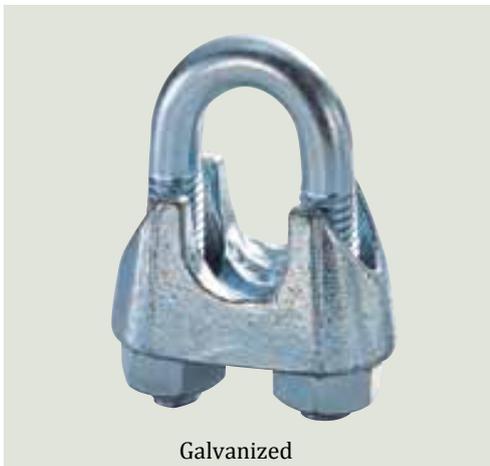
### Fitting Standard (FOR 6X24 / 6X37)

Rope Dia (A)	Fitting Q'ty	Space (A)	Torque (O f-B)
6	4	40	100
8	4	50	120
10	4	70	160
12	4	80	240
14	4	90	380
16	4	100	530
18	5	120	680
20	5	130	840
24	5	160	1210
26	5	170	1400
30	6	200	1900
36	7	230	2660
40	7	260	3050
48	8	310	4050

# Malleable Iron Cast Wire Rope Clip

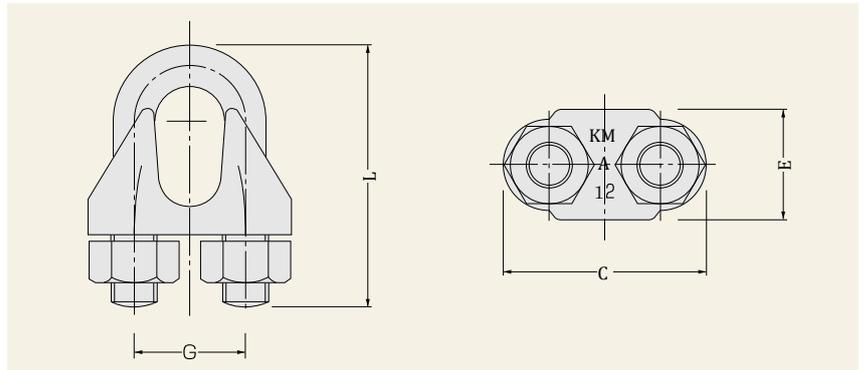


Self Color



Galvanized

Please use the drop forged wire rope clip (JIS type) when the heavy loading



Size (A)	U-BOLT/NUT (W)	Weight (N)
3	3/16	15
4.5	1/4	27
6	5/16	55
8	5/16	62
9	3/8	105
12	3/8	130
16	1/2	254
19	1/2	295
19KL	1/2	272
22	5/8	545
25	5/8	650

The KL clip is the small size and light for the lashing wire

	C	E	G	L
KM19	61	32	33	74
KL19	56	28	32	73

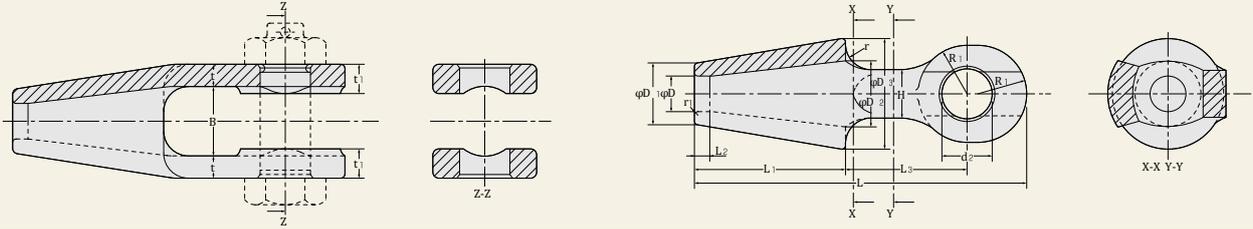


# Wire rope socket

## Wire rope socket

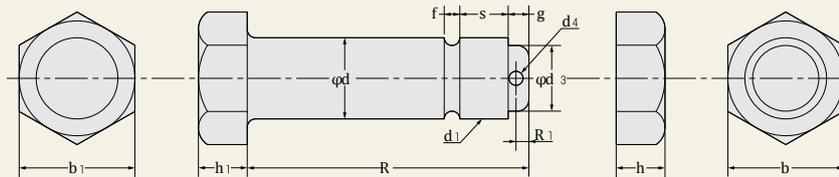
(Open type) JIS F 3432-1995

### Wire Rope Socket Open Type



Size	Rope Dia	D	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	B	L	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	H	t	t <sub>1</sub>	R <sub>1</sub>	r	r <sub>1</sub>	d <sub>2</sub>	WLL KN (tf)	Weight (O)
16	16	20	26	37	55	40	193	88	8	74	24	9	13	26	12	2	26	25.5 ( 2.6)	1.04
18	18	23	30	40	62	43	210	95	9	81	27	11	15	29	13	2	29	32.4 ( 3.3)	1.49
20	20	25	35	44	69	47	227	103	10	86	30	13	18	32	15	2	32	40.2 ( 4.1)	2.13
22	22.4	30	40	49	77	52	245	111	11	93	33	14	20	35	17	2	35	50.0 ( 5.1)	2.84
24	24	32	44	52	84	56	262	119	12	98	36	16	22	38	18	2	38	57.9 ( 5.9)	3.77
25	25	33	49	56	91	60	281	127	13	106	39	18	24	41	20	2	41	67.7 ( 6.9)	4.83
28	28	36	53	61	98	65	298	135	14	111	41	19	26	44	21	2	44	78.5 ( 8.0)	5.92
30	30	38	58	64	106	68	316	143	15	118	44	21	28	47	23	3	47	90.2 ( 9.2)	7.50
32	31.5	40	62	68	113	72	335	151	16	125	47	23	31	50	25	3	50	103.0 (10.5)	9.21
34	33.5	42	67	71	120	75	353	159	17	131	50	25	33	54	26	3	54	112.8 (11.5)	11.3
36	35.5	44	71	76	127	80	373	168	18	138	53	26	35	57	28	3	57	127.5 (13.0)	13.1
38	37.5	47	76	80	134	84	392	177	19	144	56	27	36	60	29	3	60	142.2 (14.5)	15.4
40	40	49	80	84	141	88	413	186	20	153	59	29	38	63	31	4	63	161.8 (16.5)	18.0
42	42.5	52	84	88	148	92	434	196	21	160	61	30	40	66	33	4	66	181.4 (18.5)	20.9
45	45	54	92	96	162	101	474	214	23	175	67	33	44	72	36	4	72	205.9 (21.0)	27.5
48	47.5	57	96	99	169	104	494	223	24	183	70	35	46	75	37	4	75	225.6 (23.0)	31.4
50	50	60	99	104	176	109	516	233	25	191	73	36	48	78	39	5	78	250.1 (25.5)	35.1
53	53	63	102	108	183	113	536	242	26	199	76	38	50	81	40	5	81	274.6 (28.0)	39.3
56	56	66	108	114	193	119	567	256	28	211	80	40	53	85	42	5	85	308.9 (31.5)	46.9
60	60	70	116	124	210	129	619	279	30	232	87	43	57	92	46	6	92	353.0 (36.0)	59.4
63	63	74	120	128	216	133	641	289	31	240	90	44	58	95	47	6	95	392.3 (40.0)	64.5

### Hexagonal Bolt And Nut For Wire Rope Socket Open Type

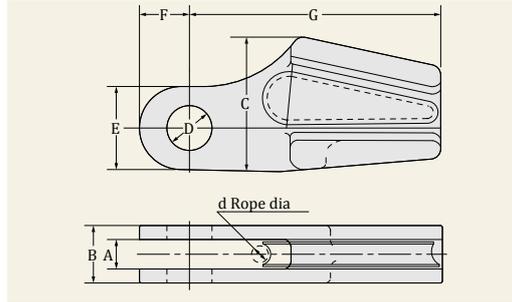


Size	Rope Dia	d	Thread d <sub>1</sub>	R	R <sub>1</sub>	S	g	h	b	d <sub>3</sub>	Dia of Cotter Pin d <sub>4</sub>	f	h <sub>1</sub>	Weight (O)
16	16	25	M22	81	6.5	13	10	13	32	17	5	4	14	0.50
18	18	28	M24	89	6.5	14	10	14	36	19	5	5	15	0.69
20	20	31	M27	101	8	16	12	16	41	22	5	5	17	0.80
22	22.4	34	M30	110	8	18	12	18	46	25	6	5	19	1.12
24	24	37	M33	120	8	20	12	20	50	27	6	6	21	1.44
25	25	40	M39	134	10	23	15	23	60	30	8	6	25	2.09
28	28	43	M42	143	10	25	15	25	63	32	8	7	26	2.49
30	30	46	M45	152	10	27	15	27	67	35	8	7	28	3.17
32	31.5	49	M48	162	10	29	15	29	71	35	8	8	30	3.73
34	33.5	52	M48	169	10	29	15	29	71	38	8	8	30	4.06
36	35.5	55	M52	178	10	31	15	31	77	40	8	8	32	4.83
38	37.5	58	M56	190	12	34	18	34	85	46	10	9	35	6.15
40	40	61	M56	198	12	34	18	34	85	46	10	9	35	6.63
42	42.5	64	M60	206	12	36	18	36	90	50	10	9	38	7.84
45	45	70	M68	225	12	40	18	40	100	58	10	10	42	10.5
48	47.5	73	M68	232	12	40	18	40	100	58	10	10	42	11.1
50	50	76	M72× 6	241	12	42	18	42	105	58	10	10	45	12.6
53	53	79	M76× 6	253	12	46	18	46	110	64	10	10	48	14.3
56	56	83	M80× 6	265	12	48	18	48	115	68	10	11	50	17.1
60	60	90	M85× 6	287	14	50	22	50	120	75	13	11	52	20.4
63	63	93	M85× 6	293	14	50	22	50	120	75	13	11	52	21.8



# Wire rope socket

## Wedging Socket



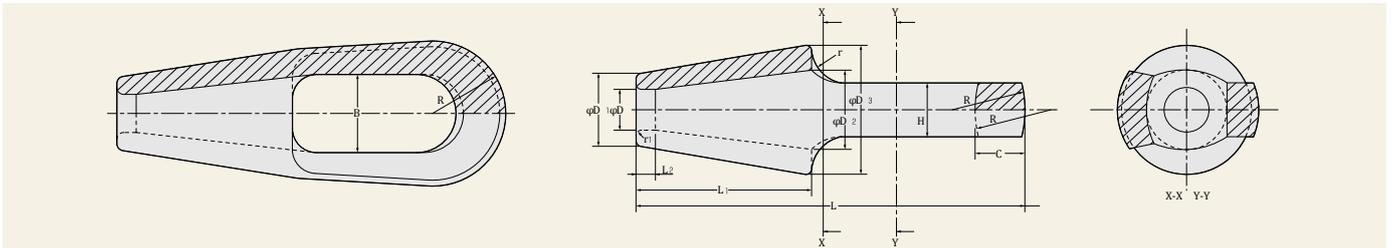
Size	Rope Dia d (m/m)	D	A	B	E	F	G	C	Weight (O)
10	10~12	25	19	37	50	30	150	84	3.1
14	14~16	29	24	50	58	35	195	106	5.0
18	18~20	32	28	64	64	40	235	128	8.7
22	22~24	40	34	78	80	48	280	154	16.2
26	26~28	45	38	90	90	55	330	178	23.8
30	30~32	50	42	104	100	60	380	203	38.2
34	34~36	60	48	118	120	75	420	233	53.8
38	38~40	65	52	128	130	80	450	260	
42	42~44	70	54	142	140	85	480	286	

## Wire rope socket

(Closed type)

JIS F 3432-1995

Wire rope socket Closed type



Size	Rope Dia	D	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	B	L	L <sub>1</sub>	L <sub>2</sub>	H	C	R	r	r <sub>1</sub>	WLL KN (tf)	Weight (O)
16	16	20	26	37	55	40	193	88	8	24	21	38	12	2	25.5 (2.6)	1.18
18	18	23	30	40	62	43	210	95	9	27	24	41	13	2	32.4 (3.3)	1.64
20	20	25	35	44	69	47	227	103	10	30	26	44	15	2	40.2 (4.1)	2.24
22	22.4	30	40	49	77	52	245	111	11	33	29	48	17	2	50.0 (5.1)	2.95
24	24	32	44	52	84	56	262	119	12	36	31	51	18	2	57.9 (5.9)	3.84
25	25	33	49	56	91	60	281	127	13	39	34	54	20	2	67.7 (6.9)	4.89
28	28	36	53	61	98	65	298	135	14	41	36	58	21	2	78.5 (8.0)	5.87
30	30	38	58	64	106	68	316	143	15	44	39	61	23	3	90.2 (9.2)	7.37
32	31.5	40	62	68	113	72	335	151	16	47	42	64	25	3	103.0 (10.5)	8.97
34	33.5	42	67	71	120	75	353	159	17	50	44	68	26	3	112.8 (11.5)	10.8
36	35.5	44	71	76	127	80	373	168	18	53	47	72	28	3	127.5 (13.0)	12.6
38	37.5	47	76	80	134	84	392	177	19	56	49	75	29	3	142.2 (14.5)	15.0
40	40	49	80	84	141	88	413	186	20	59	52	79	31	4	161.8 (16.5)	17.5
42	42.5	52	84	88	148	92	434	196	21	61	54	83	33	4	181.4 (18.5)	20.3
45	45	54	92	96	162	101	474	214	23	67	60	91	36	4	205.9 (21.0)	26.6
48	47.5	57	96	99	169	104	494	223	24	70	62	95	37	4	225.6 (23.0)	30.5
50	50	60	99	104	176	109	516	233	25	73	65	99	39	5	250.1 (25.5)	34.1
53	53	63	102	108	183	113	536	242	26	76	67	103	40	5	274.6 (28.0)	38.0
56	56	66	108	114	193	119	567	256	28	80	71	109	42	5	308.9 (31.5)	45.2
60	60	70	116	124	210	129	619	279	30	87	78	119	46	6	353.0 (36.0)	58.3
63	63	74	120	128	216	133	641	289	31	90	81	123	47	6	392.3 (40.0)	64.0



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