HIGH QUALITY PRODUCTS

WIRE ROPE

FINE CORD

STRAND

WIRE

www.ushasiam.com

usha siam

A group company of usha martin

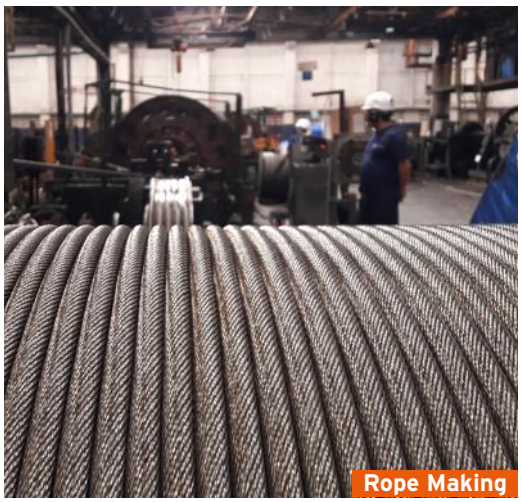
About us

Usha Siam is a leading wire rope manufacturer in Thailand producing Steel Wire Rope, Auto Cables, Fine Cord (Galvanized Aircraft Cable), Strands and Speciality Wires. The company has integrated manufacturing facilities including Hot Dip Galvanizing Lines, Wire Drawing Machines, Stranding and Rope Closing machines, along with wire rope design and testing facilities. The company also has a Joint Venture with TESAC (A Shinko wire group company) of Japan since 2012. As a part of Usha Martin group, the company has access to a worldwide distribution network.

Usha Siam is ISO-9001 accredited and is having approvals from Lloyds Register, Japanese Industrial Standards for JIS G 3525, American Petrolium Institute – API spec 9A licence, American Bureau of Shipping (ABS), Det Norske Veritas (DNV), TIS, ISO9001, SNI and SIRIM.

Usha Martin's global design centre in Italy develops wire ropes that exceed customer expectations and provides customers the benefits of technical developments in wire rope industry.

Company Snapshot


Rope Making


Wire Drawing


Furnace Line

Registered Office	101/46 Moo 20 Navanakorn Industrial Estate, Pathumthani, 12120 Thailand
Year of Establishment	1980
Number of Employees	Above 500
Main Products	Steel Wire Rope Auto Cable/Fine Cord Strand Speciality Wire
Production Capacity	36000 T per annum
Manufacturing Units	Factory 1 : Year 1980 Factory 2 : Year 2008 Tesac Usha Wireropes: 2012, (JV with Tesac -Shinko wire, of Japan)

WIRE ROPE

CRANE ROPES

OIL AND GAS ROPES

GENERAL ENGINEERING ROPES

ELEVATOR ROPES

SHIPPING ROPES

FISHING / COMBINATION ROPES

CONSTRUCTION INDUSTRY ROPES

FINE CORD

GONDOLA ROPE

AUTO CABLE

MARBLE CUTTING ROPE

GALVANIZED AIRCRAFT CABLE (GAC)

GENERAL APPLICATION

PVC COATED ROPES

STEEL WIRE STRAND

GALVANIZED / UNGALVANISED STRAND

STEEL WIRE

SPECIALITY STEEL WIRES

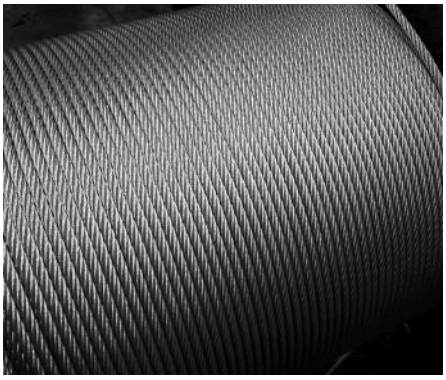
Products

WIRE ROPES AND FINE CORD

With a size range varying from 1.0 mm to 64 mm diameter, Usha Siam makes a wide range of wire ropes with common class of wirerope being 35x7, 19x7, 8x25,, 8x19, 6x36, 6x26, 6x24, 7x19, 6x19, 6x7, 7x7, 4x39, 4x19, 4x7 etc.

Usha Siam has expertise in making Compacted Ropes, Round wire strand Ropes, Rotation Resistant Ropes, PVC ropes, Galvanized Ropes, Ungalvanized Ropes and Combination Ropes.

- Crane Rope
- Elevator Rope
- Oil and Offshore Rope
- Anchor Mooring Rope
- Piling Rope
- Fishing Rope
- Drill line
- Sandline
- Gondola rope
- Automotive Control Cable
- Aircraft Cable
- Marble Cutting Rope
- Engineering, Slings and Lifting Application
- Construction Industry Ropes



COMBINATION ROPES

Combining the strengths of steel and synthetic fibers, Usha Siam makes combination ropes with different configurations.

These ropes are highly flexible and have long life with application in marine, fishing, playgrounds, agricultural sector etc.

GALVANIZED / UNGALVANIZED STRANDS

Size range: 4.0mm to 22mm dia.

(1x7, 1x19 Strands conforming to ASTM A 640, ASTM A475, ASTM A 363, ASTM B 500, TIS 404)

-Applications:

- Telephone messenger Strand
- Guy Strand
- Over head ground wire strand
- Roping Strand

SPECIALITY STEEL WIRES

Size Range: 0.30mm to 11.20mm, with wide ranging applications like:

- Outer Casing Wire for Automotive Control Cables
- Piano Wire, Spring Wire, Mattress Spring Wire
- Needle Wire
- Welding Wire (CO2)
- Paper Pin/ Paper Clip Wire
- Baling Wire
- Roping Wire

Certification:

The company has most of the required certifications as required in wire-rope industry, like

- API 9A – American Petroleum Institute
- JIS G 3525 – Japanese Industrial Standards
- Lloyd's Register – Approved Rope Manufacturer and CO2 Welding Wire
- DNV – Approved Rope Manufacturer
- ABS – Approved Rope Manufacturer
- TIS - Thai Industrial Standard
- ISO 9001 - Quality Management System
- SNI – Approved Rope Manufacturer
- SIRIM – Approved Rope Manufacturer

Global Design Center, Italy

Usha Martin's global design centre in Italy develops wire ropes that exceed customer expectations and provides customers the benefits of technical developments in wire rope industry. Besides rope design and testing, the centre is actively engaged in providing technical assistance in the form of evaluating customer concept design of new equipment, conducting training for customers about rope properties, and managing special tests required by customers.

The proprietary design software used by the centre enables us to provide products that are the best in class. The centre is the hub for integrating and distributing know-how in various facilities of the company so that customers always get a consistent quality of product and technical services from us.

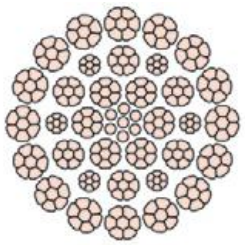
Global Distribution Network

As a part of the Usha Martin group, we have access to worldwide network of distribution centres. So you will find us close to you, whichever part of world your requirement is.

Powerform 35

(35xK7, 33xK7, 28xK7)

- Powerform 35 has the highest strength of all low rotation hoist ropes.
- Maximum resistance to rotation.
- Suitable for use on single part and multi-part hoist reeving systems.
- High fatigue life resulting from the unique compaction process.
- Increased resistance to crushing. Recommended for multi-layer spooling operations.
- Increased abrasion resistance resulting from the unique compaction process.
- Fully lubricated in manufacturing.



Powerform 35

Nominal Rope Diameter		Approx mass kg/100m	Minimum Breaking Force (kN)		
mm	inch		1770 N/mm²	1960 N/mm²	2160 N/mm²
13		81.3	123	144	155
14		94.3	142	180	192
16	5/8	123	186	233	252
18		156	235	300	321
19	3/4	174	262	331	358
20		192	290	372	399
22		233	351	444	484
	7/8	237	358	453	490
24		277	418	531	572
	1	310	468	591	640
26		325	490	621	661
28		377	569	720	788
	1-1/8	393	593	748	810
32	1-1/4	492	734	944	1035
35	1-3/8	589	884	1125	1216
38	1-1/2	694	1048	1326	1437
40		770	1161	1477	1588

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

Typical Applications

MOBILE
Main Hoist

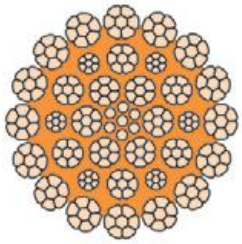
OFFSHORE PEDESTAL
Main Hoist, Whip Hoist

- Main Hoist
- Whip Hoist

Powerform 35P

(35xK7, 33xK7, 28xK7)

- Powerform 35P has the highest strength of all low rotation hoist ropes.
- Maximum resistance to rotation.
- Suitable for use on single part and multi-part hoist reeving systems.
- High fatigue life resulting from the unique compaction process.
- Increased resistance to crushing. Recommended for multi-layer spooling operations.
- Increased abrasion resistance resulting from the unique compaction process.
- Fully lubricated in manufacturing.



Powerform 35P

Nominal Rope Diameter		Approx mass kg/100m	Minimum Breaking Force (kN)		
mm	inch		1770 N/mm²	1960 N/mm²	2160 N/mm²
13		81.3	123	144	155
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Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

Typical Applications

MOBILE

- Main Hoist

OFFSHORE PEDESTAL

Main Hoist,Whip Hoist

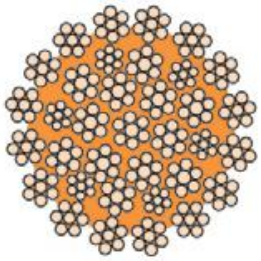
- Main Hoist
- Whip Hoist

Hyflex 35/35P

(35x7, 33x7, 28x7)

- Hyflex 35/35P is a high strength flexible hoist rope, with anti spin properties for higher lifts.
- Very high resistance to rotation in applications. Used for Taller Tower cranes.
- Suitable for use on single part and multi-part hoist receiving systems.
- Langs Lay construction offers maximum resistance to wear.
- A sample of rope for each production batch is tested in order to confirm compliance with specified breaking force values.

Hyflex 35



Hyflex 35P

Breaking Load Chart					
Nominal Rope Diameter		Approx. Mass. kg/100m	Minimum Breaking Force (kN)		
mm	inch		1770 N/mm²	1960 N/mm²	2160 N/mm²
13		72.5	108	119	128
14		84.1	125	148	168
16	5/8	110	163	194	221
18		139	206	229	245
19		155	230	255	273
19	3/4	156	232	277	312
20		172	255	301	337
22		208	308	370	412
	7/8	212	314	376	418
24		247	367	441	498
	1	277	411	491	546
26		290	431	517	581
28		336	500	599	681
	1-1/8	350	521	621	704
30		433	644	679	775
32	1-1/4	439	652	769	685
35	1-3/8	523	776	945	1044
36		556	826	983	1085
38	1-1/2	623	925	1078	1205
40		686	1020	1130	1335

The above figures are for Steel Core Ropes.

Apart from above 1770, 1960, 2160 N/mm² rope grade, the IPS, EIPS, EEIPS rope grade is also available.

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

Typical Applications

MOBILE

- Main Hoist

TOWER

- Main Hoist

OFFSHORE PEDESTAL

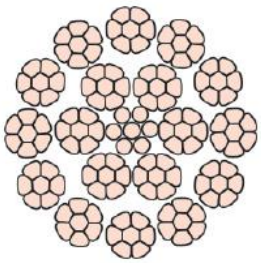
Main Hoist,Whip Hoist

- Main Hoist
- Whip Hoist

Powerform 18

(18xK7, 18xK19S, 18xK26WS, 19xK7)

- Powerform 18 is a high strength rotation resistant hoist rope.
- Suitable for use on single part and multi-part hoist reeving systems.
- High fatigue life resulting from the unique compaction process.
- Increased resistance to crushing. Recommended for multi-layer spooling operations.
- Increased abrasion resistance resulting from the unique compaction process.
- Fully lubricated in manufacturing.



Powerform 18

Nominal Rope Diameter		Approx Mass kg/100m	Minimum Breaking Force (kN)		
mm	inch		1770 N/mm²	1960 N/mm²	2160 N/mm²
10		46	72.6	80.8	70.8
11	7/16	55.7	87.8	101	111
12		66.2	104	116	127
	1/2	74.2	117	135	148
13		77.7	123	141	155
14		90.2	142	160	177
16	5/8	118	186	209	232
18		149	235	266	295
19	3/4	166	262	292	322
20		184	290	320	359
22		223	351	379	424
	7/8	227	358	387	433
24		265	418	462	523
	1	297	468	517	585
26		277	490	542	613
28		361	569	644	707
	1-1/8	376	593	672	710
32	1-1/4	471	743	820	920
35	1-3/8	560	884	1000	1052
35		564	889	1006	1058
36		596	940	1064	1120
38	1-1/2	664	1048	1186	1248
40		736	1161	1314	1382

Note: For higher lifting heights consideration should be given to using a Powerform-18 constructions with improved rotational characteristics.

The above figures are for Steel Core Ropes.

For Fiber Core Ropes, the breaking force can be provided on request.

Apart from above 1770, 1960, 2160 N/mm² rope grade, the IPS, EIPS, EEIPS rope grade is also available.

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

Typical Applications

MOBILE

- Main Hoist

OFFSHORE PEDESTAL

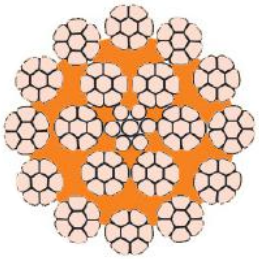
Main Hoist, Whip Hoist

- Main Hoist
- Whip Hoist

Powerform 18P

(18xK7, 18xK19S, 18xK26WS, 19xK7)

- Powerform 18P is a high strength rotation resistant hoist rope.
- Suitable for use on single part and multi-part hoist reeving systems.
- High fatigue life resulting from the unique compaction process.
- Increased resistance to crushing. Recommended for multi-layer spooling operations.
- Increased abrasion resistance resulting from the unique compaction process.
- Fully lubricated in manufacturing.



Powerform 18P

Nominal Rope Diameter		Approx Mass kg/100m	Minimum Breaking Force (kN)		
mm	inch		1770 N/mm²	1960 N/mm²	2160 N/mm²
10		46	72.6	80.8	70.8
11	7/16	55.7	87.8	101	111
12		66.2	104	116	127
	1/2	74.2	117	135	148
13		77.7	123	141	155
14		90.2	142	160	177
16	5/8	118	186	209	232
18		149	235	266	295
19	3/4	166	262	292	322
20		184	290	320	359
22		223	351	379	424
	7/8	227	358	387	433
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	1-1/8	376	593	672	710
32	1-1/4	471	743	820	920
35	1-3/8	560	884	1000	1052
35		564	889	1006	1058
36		596	940	1064	1120
38	1-1/2	664	1048	1186	1248
40		736	1161	1314	1382

Note: For higher lifting heights consideration should be given to using a Powerform-18P constructions with improved rotational characteristics.

The above figures are for Steel Core Ropes.

For Fiber Core Ropes, the breaking force can be provided on request.

Apart from above 1770, 1960, 2160 N/mm² rope grade, the IPS, EIPS, EEIPS rope grade is also available.

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

Typical Applications

MOBILE

- Main Hoist

OFFSHORE PEDESTAL

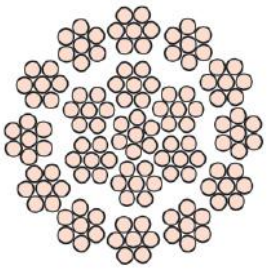
Main Hoist, Whip Hoist

- Main Hoist
- Whip Hoist

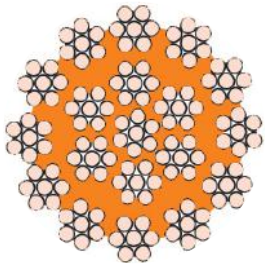
Hyflex 18/18P

(18x7, 18x19S, 18x26WS, 19x7)

- Hyflex Class 18/18P is a high strength flexible hoist rope, with anti spin properties.
- Good resistance to rotation, also known as Non Rotating ropes, used extensively for tall cranes and Tower crane duties.
- Consistent performance.
- Fully lubricated in manufacturing.
- Also available in fiber core construction.
- A sample of rope for each production batch is tested in order to confirm compliance with specified breaking force values.



Hyflex 18



Hyflex 18P

Nominal Rope Diameter		Approx Weight (kg/100 m)		Minimum Breaking Force (kN)		
mm	inch	FC	WSC	1770 N/mm²	1960 N/mm²	2160 N/mm²
5		9.6	10.2	14.5	16.1	17.7
6		13.8	14.6	20.9	25	27
7		18.8	19.9	28.4	34	36.7
8		24.5	26.0	37.2	45	48.6
9		31.0	33.0	47	56.5	61
	3/8	34.6	36.7	52.4	58	63.9
10		38.3	40.7	58.1	70	75.6
11		46.3	49.2	70.2	84	90.7
	7/16	47.2	50.1	71.5	79.2	87.3
12		55.1	58.6	83.6	101	109
	1/2	61.8	65.6	93.6	113	121
13		64.7	68.8	98.1	118	127
14		75.1	79.8	114	137	148
16	5/8	98.0	104.2	149	180	194
18		124	131.9	188	226	244
	3/4	140	148.5	212	253	273
20		153	162.8	232	279	301
22		185	197.0	282	339	366
	7/8	189	200.6	286	346	374
24		221	234.4	334	370	408
	1	247	262.6	375	415	457
26		259	275.1	392	435	479
28		300	319.1	455	504	555
	1-1/8	313	332.9	475	526	580
	1-1/4	387	411.6	587	650	716
32		392	416.8	594	658	725
	1-3/8	467	495.7	707	783	863
35		469	498.6	711	788	868
36		496	527.5	752	833	918
38		553	587.7	910	1010	1110
	1-1/2	556	590.8	843	933	1030
40		613	651.2	929	1030	1130

The above figures are for Steel Core Ropes.

For Fiber Core Ropes, the breaking force can be provided on request.

Apart from above 1770, 1960, 2160 N/mm² rope grade, the IPS, EIPS, EEIPS rope grade is also available.

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

Typical Applications

MOBILE

- Main Hoist

TOWER

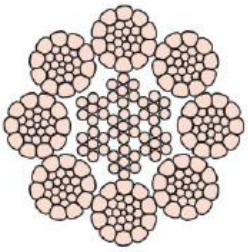
Main Hoist

- Main Hoist

Powerform 8

(8xK36WS, 8xK31WS, 8xK26WS, 8xK25F, 8xK19S)

- Powerform 8 is a flexible high strength eight strand rope with steel core.
- A sample of rope from each production batch is tested in order to confirm compliance with specified breaking force values.
- Greater surface contact area resulting from eight strand construction.
- Good bending fatigue life.
- Fully lubricated in manufacturing.



Powerform 8

Nominal Rope Diameter	Approx. Mass.	Minimum Breaking Force (kN)		
mm	kg/100m	1770 N/mm²	1960 N/mm²	2160 N/mm²
10	44.2	77.0	87.8	94
11	53.5	93.2	103	107
12	63.6	111	126	135
13	74.7	130	144	150
14	86.6	151	172	184
16	113	197	225	241
18	143	249	276	287
19	160	278	317	339
20	177	308	351	376
22	214	373	425	455
24	254	443	506	541
26	299	520	594	635
28	347	604	688	737
32	453	788	899	960

FC is available in all grades above.

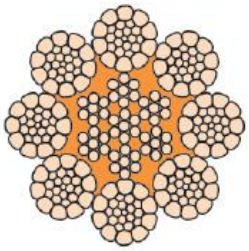
Plasticated steel core is also available.

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

Powerform 8P

(8xK36WS, 8xK31WS, 8xK26WS, 8xK25F, 8xK19S)

- Powerform 8P is a flexible high strength eight strand rope with steel core.
- A sample of rope from each production batch is tested in order to confirm compliance with specified breaking force values.
- Greater surface contact area resulting from eight strand construction.
- Good bending fatigue life.
- Fully lubricated in manufacturing.



Powerform 8P

Nominal Rope Diameter	Approx. Mass. kg/100m	Minimum Breaking Force (kN)		
mm		1770 N/mm²	1960 N/mm²	2160 N/mm²
10	44.2	77.0	87.8	94
11	53.5	93.2	103	107
12	63.6	111	126	135
13	74.7	130	144	150
14	86.6	151	172	184
16	113	197	225	241
18	143	249	276	287
19	160	278	317	339
20	177	308	351	376
22	214	373	425	455
24	254	443	506	541
26	299	520	594	635
28	347	604	688	737
32	453	788	899	960

FC is available in all grades above.

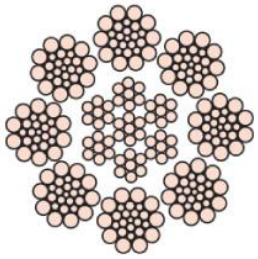
Plasticated steel core is also available.

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

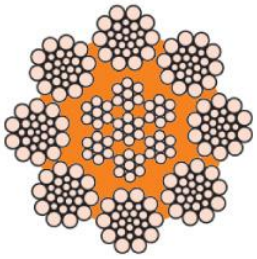
Hyflex 8/8P

(8x36WS, 8x31WS)

- Hyflex 8/8P is a flexible high strength eight strand rope with steel core.
- A sample of rope from each production batch is tested in order to confirm compliance with specified breaking force values.
- Greater surface contact area resulting from eight strand construction.
- Good bending fatigue life.
- Fully lubricated in manufacturing.



Hyflex 8



Hyflex 8P

Nominal Rope Diameter		Approx. Mass. kg/100m	Minimum Breaking Force (kN)		
mm	inch		1770 N/mm²	1960 N/mm²	2160 N/mm²
12		61.3	90.7	105	117
	1/2	68.7	102	123	131
13		72	106	118	130
14		83.5	124	143	160
16	5/8	109	161	187	208
18		138	204	239	267
19	3/4	154	227	269	300
20		170	252	279	308
22		206	305	356	400
	7/8	211	308	360	402
24		245	363	423	475
	1	275	399	470	525
26		288	426	500	562
28		334	494	572	642
	1-1/8	348	503	596	665
30		383	567	656	733
32	1-1/4	436	645	747	836
34		492	728	807	889

The above figures are for Steel Core Ropes.

For Fiber Core Ropes, the breaking force can be provided on request.

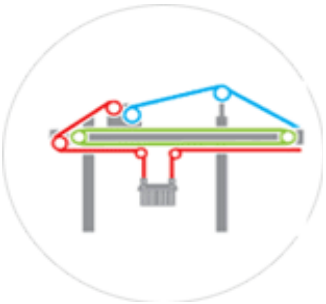
8 stranded ropes are also available as Hyflex 8x29F with Steel and Fiber Cores

Breaking load details can be provided on request.

Apart from above 1770, 1960, 2070 N/mm² rope grade, the IPS, EIPS, EEIPS rope grade is also available.

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

Typical Applications



CONTAINER

- Main Hoist
- Boom Hoist
- Trolley

SWIMGRAB

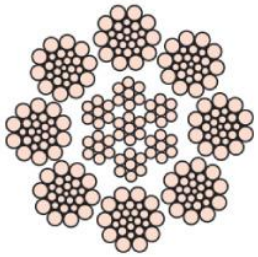
Main Hoist, Boom Hoist

- Main Hoist
- Boom Hoist
- Trolley

Hyflex 8x19

(8x26WS, 8x25F, 8x19S)

- Hyflex 8x19 is a flexible high strength eight strand rope with steel core.
- A sample of rope from each production batch is tested in order to confirm compliance with specified breaking force values.
- Greater surface contact area resulting from the eight strand construction.
- Good bending fatigue life.
- Fully lubricated in manufacturing.



Hyflex 8x19

Nominal Rope Diameter		Approx mass kg/100m	Minimum Breaking Force (kN)			
mm	Inch		1570 N/mm²	1770 N/mm²	1960 N/mm²	2160 N/mm²
	1/2	68.4	71	102	113	124
13		71.6	94.4	106	118	130
14		83.1	110	124	143	160
16	5/8	109	143	161	187	208
18		137	181	204	239	267
19	3/4	155	204	230	269	300
20		170	224	252	279	308
22		205	271	305	356	400
	7/8	210	276	311	360	402
24		244	322	363	423	475
	1	274	360	406	470	525
26		287	378	426	500	562
28		332	438	494	572	642
	1-1/8	354	457	515	596	665
32	1-1/4	428	565	637	747	836

FC is available in all grades above.

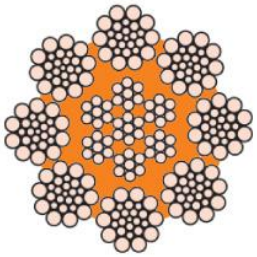
Plasticated steel core is also available.

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

Hyflex 8x19P

(8x26WS, 8x25F, 8x19S)

- Hyflex 8x19P is a flexible high strength eight strand rope with steel core.
- A sample of rope from each production batch is tested in order to confirm compliance with specified breaking force values.
- Greater surface contact area resulting from the eight strand construction.
- Good bending fatigue life.
- Fully lubricated in manufacturing.



Hyflex 8x19P

Nominal Rope Diameter		Approx mass kg/100m	Minimum Breaking Force (kN)			
mm	Inch		1570 N/mm²	1770 N/mm²	1960 N/mm²	2160 N/mm²
	1/2	68.4	71	102	113	124
13		71.6	94.4	106	118	130
14		83.1	110	124	143	160
16	5/8	109	143	161	187	208
18		137	181	204	239	267
19	3/4	155	204	230	269	300
20		170	224	252	279	308
22		205	271	305	356	400
	7/8	210	276	311	360	402
24		244	322	363	423	475
	1	274	360	406	470	525
26		287	378	426	500	562
28		332	438	494	572	642
	1-1/8	354	457	515	596	665
32	1-1/4	428	565	637	747	836

FC is available in all grades above.

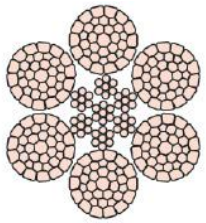
Plasticated steel core is also available.

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

Powerform 6

(6xK36WS, 6xK31WS, 6xK26WS, 6xK25F, 6xK19S)

- A sample of rope from each production batch is tested in order to confirm compliance with specified breaking force values.
- Consistent performance.
- Independent wire rope core.
- Fully lubricated in manufacturing.



Powerform 6

Nominal Rope Diameter	Approx. Mass.	Minimum Breaking Force (kN)	
mm	kg/100 m	1770 N/mm²	1960 N/mm²
8	29.1	46.4	51.4
10	45.4	69.5	85.7
11	54.9	83.8	98.6
12	65.4	104	116
13	76.7	118	147
14	89	137	170
16	116	178	218
18	147	225	276
19	164	251	304
20	182	278	335
22	220	336	400
24	262	400	489
26	307	491	543
28	356	545	657
32	465	712	846
35	556	889	984
36	588	901	1065
38	656	1004	1165
40	726	1112	1295
44	879	1405	1556

Above figures are for Steel Core Ropes.

For Fiber Core Ropes, the breaking force can be provided on request.

Apart from above 1770, 1910 N/mm² rope grade, the IPS, EIPS, EEIPS, 2070 N/mm² rope grade is also available.

FC is also available in all grades above.

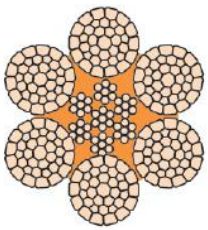
Plasticated steel core is also available.

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

Powerform 6P

(6xK36WS, 6xK31WS, 6xK26WS, 6xK25F, 6xK19S)

- A sample of rope from each production batch is tested in order to confirm compliance with specified breaking force values.
- Consistent performance.
- Independent wire rope core.
- Fully lubricated in manufacturing.



Powerform 6P

Nominal Rope Diameter	Approx. Mass.	Minimum Breaking Force (kN)	
mm	kg/100 m	1770 N/mm²	1960 N/mm²
8	29.1	46.4	51.4
10	45.4	69.5	85.7
11	54.9	83.8	98.6
12	65.4	104	116
13	76.7	118	147
14	89	137	170
16	116	178	218
18	147	225	276
19	164	251	304
20	182	278	335
22	220	336	400
24	262	400	489
26	307	491	543
28	356	545	657
32	465	712	846
35	556	889	984
36	588	901	1065
38	656	1004	1165
40	726	1112	1295
44	879	1405	1556

Above figures are for Steel Core Ropes.

For Fiber Core Ropes, the breaking force can be provided on request.

Apart from above 1770, 1910 N/mm² rope grade, the IPS, EIPS, EEIPS, 2070 N/mm² rope grade is also available.

FC is also available in all grades above.

Plasticated steel core is also available.

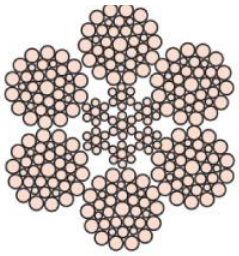
Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

Hyflex 6/6P

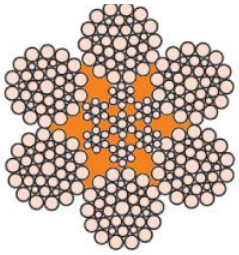
(6x36WS, 6x31WS)

- High quality flexible 6x36 class crane rope.
- A sample of rope from each production batch is tested in order to confirm compliance with specified breaking force values.
- Consistent performance.
- Independent wire rope core.
- Fully lubricated in manufacturing.

Nominal Rope Diameter		Approx Mass		Minimum Breaking Force (kN)						
mm	Inch	kg/ 100 m	(lb. ft)	1770 N/mm²	1960 N/mm²	2160 N/mm²	IPS	EIPS	EEIPS	Cus-tom
8		26.8		40.3	44.6	49.2				
9.5	3/8		0.25				58.4	67.2	73.8	
10		41.9		63.0	69.8	76.9				
11		50.6		76.2	84.4	93.0				
11.1	7/16		0.34				79.1	90.7	99.6	
12		60.3		90.7	100	111				
12.7	1/2		0.45				102	118	130	
13		70.8		106	118	130				
14		82.1		124	137	151				
14.3	9/16		0.57				129	149	165	
15.9	5/8		0.71				157	183	202	
16		107		161	179	197				
18		136		204	226	249				
19		151		227	252	278				
19.1	3/4		1.02				228	262	288	
20		168		252	279	308				
22		203		305	338	372				
22.2	7/8		1.38				308	354	390	
24		241		363	402	443				
25.4	1		1.81				399	460	506	
26		283		426	472	520				
28		329		494	547	603				
28.6	1-1/8		2.29				503	578	636	
31.8	1-1/4		2.83				617	711	782	
32		429		645	645					

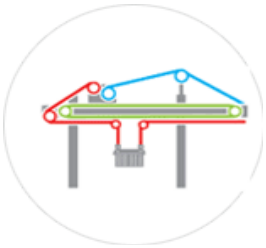


Hyflex 6



Hyflex 6P

Typical Applications



CONTAINER

- Main Hoist
- Boom Hoist
- Trolley

UNLOADER

- Main Hoist
- Boom Hoist
- Racking

Nominal Rope Diameter		Approx Mass		Minimum Breaking Force (kN)						
mm	Inch	kg/ 100 m	(lb. ft)	1770 N/mm²	1960 N/mm²	2160 N/mm²	IPS	EIPS	EEIPS	Cus-tom
34.9	1-3/8		3.41				743	854	943	
35		513		772	855	942				
36		543		817	904	997				
38		605		910	1010	1110				
38.1	1-1/2		4.06				880	1010	1110	
40		670		1010	1120	1230				
41.3	1-5/8		4.76				1020	1170	1300	
44		811		1220	1350	1490				
44.5	1-3/4		5.54				1180	1360	1500	
45		849		1280	1410	1560				
47.6	1-7/8		6.34				1350	1550	1710	
48		965		1450	1610	1770				
50.8	2		7.22				1530	1760	1930	
51		1090		1640	1810	2000				
52		1133		1700	1890	2080				
54	2-1/8		8.16				1710	1970	2160	
56		1314		1980	2190	2410				
57.2	2-1/4		9.16				1910	2200	2420	
60		1508		2270	2510	2770				
62		1611								2810
63.5		1690								2950
64		1716								3010

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

LATTICE BOOM

- Main Hoist

STEELWORK LADLE

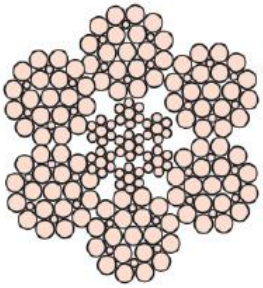
Main Hoist

- Main Hoist
- Boom Hoist
- Trolley

Hyflex 6x19

(6x26WS, 6x19W 6x25F, 6x21F, 6x19S)

- High quality flexible 6x19 class crane rope
- A sample of rope from each production batch is tested in order to confirm compliance with specified breaking force values.
- Consistent performance.
- Independent wire rope core.
- Good resistance to abrasion.
- Fully lubricated in manufacturing.



Hyflex 6x19

Nominal Rope Diameter		Approx. Mass. kg/100 m	Minimum Breaking Force (kN)		
mm	inch		1770 N/mm²	1960 N/mm²	2160 N/mm²
6		14.3	22.7	25.1	27.7
7		19.5	30.9	34.2	37.7
8	5/16	25.5	40.3	44.7	49.2
9		32.2	51	56.5	62.3
10		39.8	63	69.8	76.9
11	7/16	48.2	76.2	84.4	73
12		57.3	90.7	101	111
13		67.3	107	118	130
14		78	124	137	151
16	5/8	102	161	179	197
18		129	204	226	249
20		159	252	279	308
22	7/8	193	305	338	372
24	15/16	229	363	402	443
26	1	269	426	472	520
28		312	494	547	603
32	11/4	408	645	715	787
36		516	817	904	997
40		637	1010	1120	1230
44		771	1220	1350	1490
48	1 7/8	917	1450	1610	1770
52		1076	1700	1890	2003

For Other constructions of the 6x19 Class and Fiber Core Ropes, the breaking force details can be provided on request.

Apart from above 1770, 1960 N/mm² rope grade, the IPS, EIPS, EEIPS, 2070 N/mm² rope grade is also available.

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

Typical Applications

LATTICE BOOM

- Boom Hoist

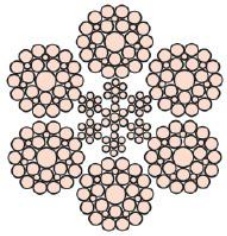
DOCKSIDE

Boom Hoist

- Boom Hoist

Hyflex 6x29F

- High quality flexible crane rope. (Grade B and Grade T according to JIS G 3525)
- A sample of rope from each production batch is tested in order to confirm compliance with specified force values.
- Consistent performance.
- Independent wire rope core.
- Fully lubricated in manufacturing.



Hyflex 6x29F

Nominal Rope Diameter	Approx. Mass. kg/100 m	Minimum Breaking Force (kN)	
mm		1770 N/mm²	1910 N/mm²
10	42.9	67.7	71.1
11.2	53.8	84.9	89.2
12.5	67.0	106	111
14	84.1	133	139
16	109.8	173	182
18	139.0	219	230
20	171.6	271	284
22.4	215.2	340	357
25	268.1	423	444
28	336.3	531	558
30	386.1	609	640
31.5	425.7	672	706
33.5	481.4	760	798
35.5	540.6	853	896
37.5	603.3	952	1000
40	686.4	1080	1140
42.5	774.9	1220	1280
45	868.3	1370	1440
47.5	967.9	1530	1600
50	1072.5	1690	1780
52	1160.0	1828	1925

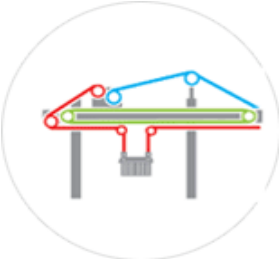
Above figures are for Steel Core Ropes.

For Fiber Core Ropes, the breaking force can be provided on request.

Apart from above 1770, 1910 N/mm² rope grade, the IPS, EIPS, EEIPS, 2070 N/mm² rope grade is also available.

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

Typical Applications



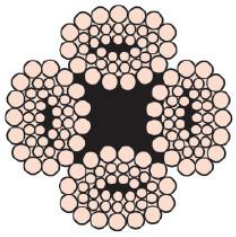
CONTAINER
Main Hoist, Boom Hoist, Trolley

- Main Hoist
- Boom Hoist
- Trolley

Hyflex 4

4x39[15-15/9-FC]

Nominal Rope Diameter	Approx weight kg/100 m	Minimum Breaking Force (kN)	
mm		1770 N/mm²	1960 N/mm²
22	209	310	336
22.4	216	321	348
24	248	369	400
25	269	399	432
26	291	433	469
28	338	502	544
30	388	576	624
31.5	428	713	772
32	441	656	689
33.5	484	718	779
34	498	740	802
35.5	543	807	873
36	559	830	898
37.5	606	900	976
38	622	924	1002
40	690	1002	1082
42.5	779	1131	1221



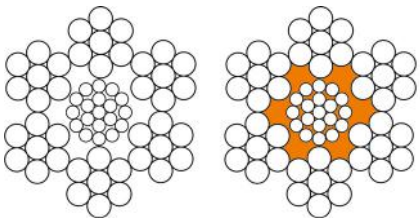
Hyflex 4

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

Marble Cutting Rope

6x7+WSC, Galvanized

Nominal Rope Diameter	Core	Approx weight kg/100 m	Diameter Tolerance	Minimum Breaking Force(kgf)
mm	Steel		%	1960 N/mm²
2.35	1x7	2.3	-0, +3	430
3.80	1x19	6.0	-0, +3	1100
4.80	1x19*	9.7	-0, +3	1760



Note : 1)Pre-formed, dry & clean
2)Plasticate core also available(*)

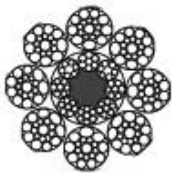
Powerform 6xK7+WSC, Galvanized

Nominal Rope Diameter	Core	Approx weight kg/100 m	Diameter Rolerance	Minimum Breaking Force(kgf)
mm	Steel		%	1960 N/mm²
4.85	1xK19	10.1	4.80-4.90	1815

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

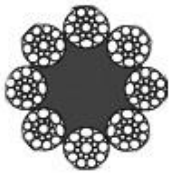
Elevator Ropes

HOIST and COMPENSATING ROPES



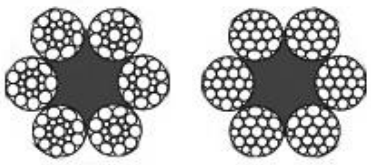
8 x 19S+ IWRC (8x7+CF)

HOIST and COMPENSATING ROPES



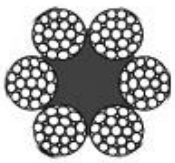
8 x 19S+ Fibre core (CFN)

HOIST and COMPENSATING ROPES



6 x 19 Classification + Fibre core (CFN)

GOVERNOR ROPES



6 x 25F

Breaking load of 8x19S, 8x19W, 8x25F as per JIS G 3525				
Nominal Rope Diameter	Approx Mass (Kg/100 m)	Minimum Breaking Force (kN)		
		Bright or plated		Bright
mm		Grade E (1320 N/mm²)	Grade A (1620 N/mm²)	Grade B (1770 N/mm²)
8	22	26	30.8	32.8
10	34.3	40.6	48.1	51.3
11.2	43	51	60.3	64.3
12	49.4	58.5	69.2	73.8
12.5	53.6	63.5	75.1	80.1
14	67.2	79.6	94.3	100
16	87.8	104	123	131
18	111	132	156	166
20	137	162	192	205
22.4	172	204	241	257
25	214	254	301	320

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

Hoist and Compensating Ropes 8X19 (8x19S, 8x19W, 8x25F) Steel Core					
Nominal Rope Diameter	Approx. Weight / mass	Minimum Breaking Force (kN)			
mm	kg/100m	1370/1770 N/mm²	1570/1770 N/mm²	1570 N/mm²	1770 N/mm²
8	26.0	35.8	38.0	35.8	40.3
9	33.0	45.3	48.2	45.3	51.0
10	40.7	55.9	59.5	55.9	63.0
11	49.2	67.7	71.9	67.7	76,2
12	58.6	80.5	85.6	80.5	90.7
13	68.7	94.5	100	94.5	106
16	104.0	143	152	143	161

Hoist and Compensating Rope 8x19 (8x19S, 8x19W, 8x25F) Fiber Core				
Nominal Rope Diameter	Approx Mass (Kg/100 m)	Minimum Breaking Force (kN)		
mm		1180/1770 N/mm²	1370/1770 N/mm²	1570 N/mm²
8	21.8	25.7	28.1	29.4
9	27.5	32.5	35.5	37.3
10	34.0	40.1	44.0	46.0
11	41.1	48.6	53.2	55.7
12	49.0	57.8	63.3	66.2
13	57.5	67.8	74.3	77.7
16	87.0	103	113	118

Hoist and Compensating Rope 6x19 (6x19S, 6x19W, 6x25F) Fiber Core					
Nominal Rope Diameter	Approx Mass (Kg/100 m)	Minimum Breaking Force (kN)			
mm		1180/1770 N/mm²	1370/1770 N/mm²	1570 N/mm²	1770 N/mm²
8	23.0	28.9	31.7	33.2	37.4
9	29.2	36.6	40.1	42	47.3
10	35.9	45.2	49.5	51.8	58.4
11	43.4	54.7	59.9	62.7	70.7
12	51.7	65.1	71.3	74.6	84.1
12.7	58.0	73.1	80.0	83.8	94.5
16	91.9	116	127	133	150

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

Elevator Ropes (...Continued)

Governor Rope 6x19, Rope Size 8-12 mm (6x19S, 6x19W, 6x25F) Fiber Core					
Nominal Rope Diameter	Approx Mass (Kg/100 m)	Minimum Breaking Force (kN)			
mm		1180/1770 N/mm²	1370/1770 N/mm²	1570 N/mm²	1770 N/mm²
8	23.0	28.9	31.7	33.2	37.4
10	35.9	45.2	49.5	51.8	58.4
12	51.7	65.1	71.3	74.6	84.1

Governor Rope 8x19, Rope Size 8-13 mm (8x19S, 8x19W, 8x25F) Fiber Core				
Nominal Rope Diameter	Approx Mass (Kg/100 m)	Minimum Breaking Force (kN)		
mm		1180/1770 N/mm²	1370/1770 N/mm²	1570 N/mm²
8.0	21.8	25.7	28.1	29.4
9.5	30.9	36.2	39.7	41.5
11	41.1	48.6	53.2	55.7
12.7	54.8	64.8	70.9	74.2

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

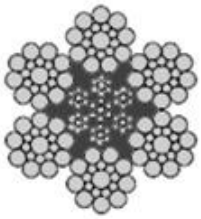
Drill Line / Sand Line

(6x26WS, 6xK26WS, 6x19S, 6xK19S) (6x7)

Drill Line

Deteriorating Forces

- Abrasion
- Drum/Sheaves wear fatigue
- Crushing forces from multi-layer winding on drum
- Shock load



Drill Line

Properties required

- Flexibility
- Abrasion resistance
- Stable construction to absorb crushing forces

Nominal Rope Diameter		Approx Mass	Minimum Breaking Force (kN)	
			6x26WS, 6x19S	
Inch.	mm	Kg./100 m	EIPS	EEIPS
3/4	19	155	262	288
7/8	22	211	354	389
1.0	26	275	460	506
1 - 1/8	29	348	568	636
1 - 1/4	32	430	711	782
1 - 3/8	35	521	854	943
1 - 1/2	38	619	1010	1112
1 - 5/8	42	726	1170	1300
1 - 3/4	45	844	1360	1500
1 - 7/8	48	967	1550	1710
2.0	52	1100	1760	1930

Nominal Rope Diameter		Approx Mass	Minimum Breaking Force (kN)
			6xK26WS, 6xK19S
			EIPS
Inch.	mm	Kg./100 m	kN
3/4	19	160	301
7/8	22	219	404
1.0	26	286	539
1-1/8	29	363	683
1-1/4	32	448	842
1-3/8	35	544	1023
1-1/2	38	645	1212
1-5/8	42	756	1422

Sand Line

- Large outer wires for resistance to wear.
- Exceptional spooling characteristics.
- Resistance to kinking.
- Easy to splice.

Sand Line

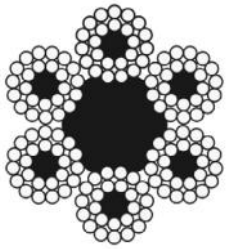
Nominal Rope Diameter	Approx mass kg/100 m	Minimum Breaking Force (kN)	
		IPS	EIPS
3/8	31.2	52.1	141
7/16	43	70.5	77.6
1/2	57	91.6	101
9/16	71	116	127
5/8	88	141	155

Reference standards : API 9A, ASTM A1023 (drawn-galvanized/ungalvanized)
Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

Sand Line

6x24

- High quality flexible 6x24 class shipping rope
- A sample of rope from each production batch is tested in order to confirm compliance with specified breaking force values.
- Consistent performance.
- Good resistance to abrasion.
- Fully lubricated in manufacturing.



6x24

Nominal Rope Diameter	Approx. Mass.	Minimum Breaking Force (kN)	
mm	kg/100 m	1570 N/mm²	1770 N/mm²
10	30.2	44.9	50.6
11	36.5	54.3	61.3
12	43.5	64.7	72.9
13	51.0	75.9	85.6
14	59.2	88.0	99.2
16	77.3	115	130
18	97.8	145	164
20	121	180	202
22	146	217	245
24	174	259	292
26	204	304	342
28	237	352	397
30	272	404	456
32	309	460	518
34	349	519	585

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

Anchor Mooring

Class 6x19 and 6x36 -Steel Core, RHOL
Ungalvanised or Drawn Galvanised

Nominal Rope Diameter	Approx Mass (Kg/100 m)	Minimum Breaking Force (kN)
mm		Titan/EEIPS
38	30.2	1112
42	36.6	1300
45	43.5	1500
48	59.2	1710
52	77.3	1930
54	97.8	2170
58	121	2420
60	146	2690
64	174	2940

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

Fishing Ropes

Powerform Fishing Ropes

(6xK26WS, 6xK19S, 6xK7)

Nominal Rope Diameter	Approx Mass kg/100 m		Minimum Breaking Force (kN) 6xK26WS, 6xK19S 1570 N/mm²	
mm	Fiber Core	Steel Core	Fiber Core	Steel Core
mm	Fiber core	Steel core	Fiber core	Steel core
12	54.3	61.6	84.3	92.7
13	63.7	72.3	99.0	109
14	73.9	83.9	115	126
15	84.8	96.3	132	145
16	96.5	110	168	187
18	122	139	212	237
20	151	171	262	292
22	182	207	317	353
24	217	247	377	420
26	255	289	443	493
28	296	336	514	572
30	339	385	590	657
32	386	438	671	748
34	436	495	757	844
36	489	555	849	946
38	544	618	946	1054
40	603	685	1048	1168
42	665	755	1155	1288
44	730	829	1268	1413

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

Nominal Rope Diameter	Approx Mass (Kg/100 m)		Minimum Breaking Force (kN) 6xK7 1470 N/mm	
mm	Fiber Core	Steel Core	Fiber Core	Steel Core
12	54.4	61.1	83.8	88.8
13	63.9	71.8	98.4	104
14	74.0	83.2	114	121
15	85.0	95.5	131	139
16	96.5	108	149	158
18	123	138	189	200
20	151	170	233	247
22	183	206	282	299
24	218	245	335	355
26	256	288	394	417
28	296	333	456	483
30	340	382	524	555
32	387	435	596	631

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

Conventional Fishing Ropes

(6x26WS, 6x19S, 6x12, 6x19M, 6x7)

Nominal Rope Diameter (mm)	Approx Mass Kg/100 m		Minimum Breaking Force (kN) 6x26WS, 6x19S 1570 N/mm²	
	Fibre Core	Steel Core	Fibre Core	Steel Core
10	36.0	41.0	56.2	60.8
11	43.6	50.0	68.0	73.5
12	51.8	59.0	76.6	87.5
13	60.8	69.3	94.0	103
14	70.6	80.4	106	119
15	81.0	92.2	124	137
16	92.2	105	145	156
17	104	118	159	176
18	117	133	182	197
19	130	148	192	210
20	144	164	224	244
22	174	198	261	282
24	207	236	310	338
26	243	277	388	422
28	282	321	447	482
30	324	369	512	561
32	369	420	579	638

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

6x7 (6/1) Construction "Sea Lion Brand"				
Nominal-Rope Diameter (mm)	Approx Mass Kg/100 M		Minimum Breaking Load At 1470 N//mm² (kN)	
	Fibre Core	Steel Core	Fibre Core	Steel Core
12	52	58	76	84
13	61	68	88	99
14	70.5	79	103	113
15	83	91	119	131
16	90.5	103	135	149
17	102	116	153	168
18	115	131	171	188
19	128	146	190	209
20	143	162	211	232
22	171	195	256	282
24	204	232	304	334

6x12 (9/3) Construction with Fibre Core 6x19 (12/6/1) Construction with Fibre Main Core		
Nominal Rope Diameter	Approx Mass Kg/100 m	Minimum Breaking Load
mm		At 1470 N/mm² (kN)
8	20.5	32.1
9	28	40.7
10	31.5	50.2
11	39.5	60.7
12	48.5	72.3
13	56	84.4
14	65	98.4
16	85	128.0
18	107.5	163.0
20	133	201.0

Galvanizing Class A, Class B and Zn-Al alloy coating is also available.

SEA LION

SUPERIOR QUALITY

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

Conventional Fishing Ropes (...Continued)

3 STRAND for trawler rope

(3x19S)

Nominal Rope Diameter	Approx Mass	Minimum Breaking Force (kN)
mm	kg/100 m	1570 N/mm^2
10	30.2	58.0
11	36.6	70.0
12	43.5	84.0
14	59.2	115.0
16	77.3	146.0
18	97.8	185.0
20	121	230.0
22	146	276.0
24	174	329.0
26	204	386.0
28	237	447.0
30	272	513.0
32	309	573.0

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

6 Strand Ropes with Fibre Core Galvanised

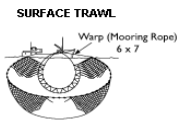
6x7

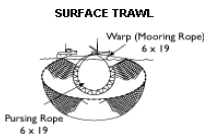
6x19 M

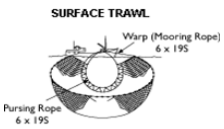
6x19S

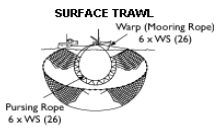
6x26WS

TYPICAL APPLICATIONS :









Combination Rope (c-MERMAID)

(FC/Steel/FC+IWRC)

Nominal Rope Diameter	Approx Mass	Minimum Breaking Force (kN)
mm	kg/100m	
14	30.0	46.7
16	39.2	65.1
18	49.6	79.4
20	61.2	93.8
22	74.1	126
24	88.1	146
26	103	183
28	120	206
30	138	239
32	157	277

Combination Rope color is available as per customer requirement.

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

Special Features

No Lubrication needed (means low operating cost)

High Resistance to corrosion

High Flexibility

Better Grip

Technical Specifications:

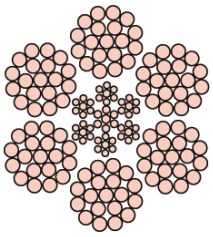
- Rope Class: Combination Rope
- Construction: 6x17S+Poly Yarn
- Multi polymer yarns on strands
- Coating: Galvanized
- Sizes: 14 mm to 32 mm.
- Core: IWRC
- Lubrication: Dry
- Tensile/Grade: 1570/1770 N/mm2
- Specifications: BS EN 12385/4/2002 in General
- Test Certificates provided with every lot

c-MERMAID

c-MERMAID is a specialized Fishing Rope made with multi poly yarns covering individual strands. This provides high protection against corrosion and high flexibility in handling. The high grade engineering polymer eliminates need for lubrication, resulting in **lower cost** of maintenance. Galvanized steel wires inside provide high protection against corrosion.

6x19M

- A sample of rope from each production batch is tested in order to confirm compliance with specified breaking force values.
- Consistent performance.
- Independent wire rope core.
- Fully lubricated in manufacturing.



6x19M

Nominal Rope Diameter	Approx Mass	Minimum Breaking Force (kN)			
mm	kg/100m	1570 N/mm²	1770 N/mm²	1960 N/mm²	2160 N/mm²
4	6.3	9.1	10.2	11.4	12.5
5	9.9	14.2	16.0	17.7	19.5
6	14.2	20.5	23.1	25.5	28.1
7	19.4	27.8	31.4	34.8	38.3
8	25.3	33.4	37.6	41.6	45.9
9	32.1	42.2	47.6	52.7	58.1
10	39.6	52.1	58.8	65.1	71.7
11	47.9	63.1	71.1	78.7	86.8
12	57.0	75.1	84.6	93.7	103
13	66.9	88.1	99.3	110	121
14	77.6	102	115	128	141
16	101	133	150	167	184
18	128	169	190	211	232
20	158	208	235	260	287
22	192	252	284	315	347
24	228	300	338	375	413
26	268	352	397	440	485
28	310	409	461	510	562
30	356	469	529	586	645
32	405	534	602	666	734
34	458	602	679	752	829
36	513	676	762	843	929
38	572	753	849	940	1036
40	634	834	940	1041	1147
42	699	919	1037	1148	1265
44	767	1009	1138	1260	1388
46	840	1103	1243	1377	1517
48	912	1201	1354	1499	1652

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

6x7 and 7x7

Nominal Rope Diameter	Approx Mass (Kg/100 m)		Minimum Breaking Force (kN)					
			1570 N/mm²		1770 N/mm²		1960 N/mm²	
mm	Fiber Core	Steel Core	Fiber Core	Steel Core	Fiber Core	Steel Core	Fiber Core	Steel Core
2	1.4	1.6	2.1	2.3	2.4	2.5	2.6	2.8
3	3.1	3.6	4.7	5.1	5.3	5.7	5.9	6.3
4	5.5	6.5	8.3	9.0	9.4	10.2	10.4	11.3
5	8.6	10.1	13.0	14.1	14.7	15.9	16.3	17.6
6	12.4	14.6	18.8	20.3	21.2	22.9	23.4	25.3
8	28.9	25.9	33.4	36.1	37.6	40.7	41.7	45.0
9	27.9	32.7	42.2	45.7	47.6	51.5	52.7	57.0
10	34.4	40.4	52.1	56.4	58.8	63.5	65.1	70.4
11	41.6	48.9	63.1	68.2	71.1	76.9	78.7	85.1
12	49.5	58.2	75.1	81.2	84.6	91.5	93.7	101.3
13	58.1	68.3	88.1	95.3	99.3	107	110	119
14	67.4	79.2	102	110	115	125	128	138
16	88.1	103.4	133	144	150	163	167	180
18	111.4	130.9	169	183	190	206	211	228
20	137.6	161.6	208	225	235	254	260	281
22	166.5	195.5	252	273	284	308	315	341
24	198.1	232.7	300	325	338	366	375	405
26	232.5	273.1	352	381	397	430	440	476
28	269.7	316.7	409	442	461	498	510	552
32	352.2	413.7	534	577	602	651	666	721
36	445.8	523.6	676	730	762	824	843	912
40	550.4	646.4	834	902	940	1020	1040	1130

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

Gondola Rope

The construction of high-rise building, Chimneys, Towers, Bridges and Industrial structures has created a demand for "UNLIMITED HEIGHT, MOBILE CONTINUOUS ACCESS PLATFORMS". These are required for construction and maintenance of building, cleaning, painting, repairs and glass facade maintenance. These mobile continuous access platforms are commonly known as GONDOLAS. These platforms are raised and lowered "using hoisting motors that run on steel wire ropes that pass through the hoisting mechanism using pressure pulleys. The steel wire ropes used in it are called GONDOLA ROPES.

These steel wire ropes are made using a special steel with tightly controlled specification having special zinc coating applied before wire drawing with improved adherence of coating, closer tolerances, improved fatigue property to provide longer rope life and consistent quality.

LUBRICANT

Unless otherwise specified, the Gondola ropes are dry with a view to avoid the adhesion of dust particles and slippage in rollers when in use in open-air atmosphere.

MAINTENANCE

Sheave and grooved rollers must be checked periodically for wear in the grooves, which may cause pinching, and abrasion of the rope. If the groove bears the imprint of the rope it should be machined clean or replaced with a sheave of harder material.

STORAGE

In order to avoid corrosion and damage, wire rope should be stored in a dry place, with adequate ventilation to avoid a build-up of moisture around rope. The stored rope must be covered with dust protecting covering. Avoid the rope contact with alkalis and acidic materials, otherwise the rope will get corroded at the point of contact.

RECOMMENDATION

Proper maintenance and care of rope ensures safety, longer life and lower costs, therefore:

- Never over load the wire rope.
- Never exceed the work load limit/safe working load.
- Use correct design factor for the application.
- Never use damaged, or corroded rope.
- Never use broken, corroded, grooved sheaves.
- Never fail in performing the periodical check for the maintenance of rope.
- Do not use twisted, looped or kinked wire rope.
- Avoid crushing or hammering, severe or reverse bending.
- Avoid shock-too fast start or stop, as this may lead to bird caging of the rope.

Powerform 6 Gondola Rope

[6x19S, 6x17S] - Steel Core

Dia-meter	Approx Mass	Minimum Breaking Force (kN)			
mm	kg/100 m	1770 N/mm²	1960 N/mm²	2160 N/mm²	2400 N/mm²
8.0	27.4	46.4	51.4	56.7	60.0
8.2	28.8	48.8	54.0	59.5	62.9
8.3	29.5	50.0	55.4	61.0	64.5
9.0	34.7	58.8	65.1	71.7	75.8
9.5	38.6	65.5	72.5	80.0	84.5
10.0	42.8	72.6	80.4	88.6	93.6

Conventional 6 Gondola Rope

[6x19S, 6x19M, 6x17S]-Steel Core

Dia-meter	Approx Mass	Minimum Breaking Force (kN)			
mm	kg/100 m	1770 N/mm²	1960 N/mm²	2160 N/mm²	2400 N/mm²
8.0	24.7	40.3	44.7	49.2	53
8.2	25.9	42.4	47.0	51.7	55.7
8.3	26.6	43.3	48.2	53.0	57.0
9.0	31.3	51.0	56.6	62.3	67.1
9.5	35.0	56.9	63.0	69.4	74.7
10.0	36.8	63.0	69.8	76.9	82.8

Powerform 5 Gondola Rope

[5x26WS, 5x19S]

Dia-meter	Approx Mass	Minimum Breaking Force (kN)			
mm	kg/100 m	1770 N/mm²	1960 N/mm²	2160 N/mm²	2400 N/mm²
8.0	24.6	45.3	50.2	55.3	58.4
8.2	25.8	47.6	52.7	58.1	61.3
8.3	26.4	48.8	54.0	59.5	62.8
9.0	31.1	57.3	63.5	70.0	73.9
9.5	34.6	63.9	70.8	78.0	82.3
10.0	38.4	70.8	78.4	85.4	91.2

Conventional 5 Gondola Rope

[5x26WS, 5x19S]

Dia-meter	Approx Mass	Minimum Breaking Force (kN)			
mm	kg/100 m	1770 N/mm²	1960 N/mm²	2160 N/mm²	2400 N/mm²
8.0	22.3	40.8	45.2	49.8	52.5
8.2	23.4	42.8	47.4	52.3	55.2
8.3	24.0	43.9	48.6	53.6	56.5
9.0	28.2	51.6	57.2	63.0	66.5
9.5	33.1	57.8	64.0	70.2	74.1
10.0	36.7	64.1	71.0	77.8	82.1

Powerform 4 Gondola Rope

[4x36WS, 4x26WS, 4x19S]

Dia-meter	Approx Mass	Minimum Breaking Force (kN)			
mm	kg/100 m	1770 N/mm²	1960 N/mm²	2160 N/mm²	2400 N/mm²
8.0	26.2	44.2	48.9	53.9	55.4
8.2	27.5	46.4	51.4	56.6	58.2
8.3	28.2	47.6	52.6	58.0	59.7
9.0	33.1	55.9	61.9	68.2	70.2
9.5	36.9	62.3	69.0	76.0	78.2
10.0	40.9	69.0	76.4	84.2	86.6

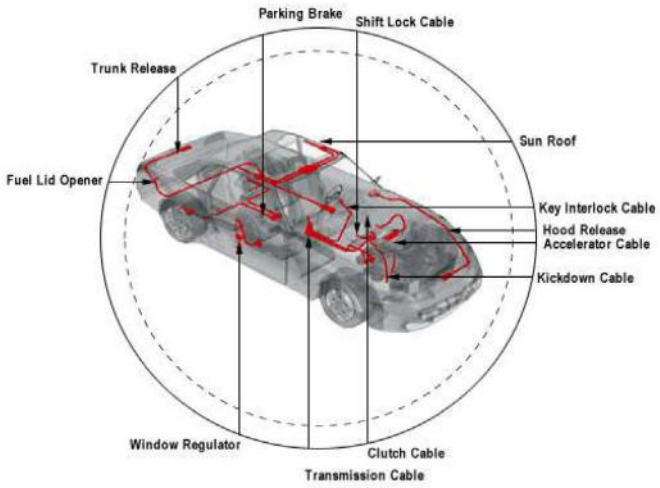
Conventional 4 Gondola Rope

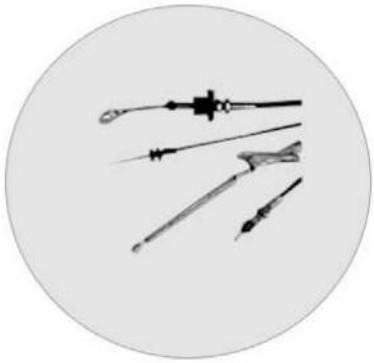
[4x36WS, 4x26WS, 4x19S]

Dia-meter	Approx Mass	Minimum Breaking Force (kN)			
mm	kg/100 m	1770 N/mm²	1960 N/mm²	2160 N/mm²	2400 N/mm²
8.0	22.9	42.0	46.6	51.1	52.5
8.2	24.1	44.1	49.0	53.7	55.2
8.3	24.7	45.2	50.1	55.1	56.5
9.0	29.0	53.2	58.9	64.7	66.5
9.5	32.5	59.2	65.7	72.1	74.1
10.0	36.0	65.5	72.5	80.0	82.1

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

GAC / Control Cables





GAC / Auto Control Cables.

Size Range		Construction	Core	Rope Grade (N/mm^2)	Coating
mm	inch				
1.0 - 4.2		1x7(6/1)	-	1770, 1960	Galvanized
1.2 - 4.0		1x12(9/3)	-		
2.0 - 4.0		1x15(14/1)	-		
1.2 - 4.0		1x19(12/6/1)	-		
3.0 - 4.0		1x37(18/12/6/1)	-		
1.5 - 10.0	1/16" - 3/8"	7x7(6/1)	WSC		
3.0 - 12.0	1/8" - 7/16"	7x19(12/6/1)			
2.0 - 7.0	5/64" - 9/32"	6x7(6/1)	FMC and WSC	1570, 1770, 1960, 2070, 2160	Galvanized
3.0 - 12.0	1/8" - 7/16"	6x19(12/6/1)			
4.0 - 5.0	5/32" - 3/16"	4x7(6/1)			
2		3x19(12/6/1)	FMC	2250	Galvanized
2.5 - 10.0		4x19(12/6/1)		2070, 2250	
6.0 - 10.0		6x19S(9/9/1)	FMC, WSC	1770, 1960, 2070, 2160	Galvanized

(BS EN 12385-4, JASO F 903, RR-W-410H, AS 3569 and Customer Specification)
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PVC Coated Ropes

Galvanized Steel Wire Ropes Coated with PVC, PP, PE in various colors

Size (mm)		Size (inch)		Construction		Rope grade (N/mm^2)	Colour of outer cover
Inner size	Outer size	Inner size	Outer size				
2	3,3.5,4,5	1/16"	3/32",1/8" and 3/16"	6x7, 7x7	-	1570, 1770, 1960	Various colours
2.5	3.5,4,5,5.5	3/32"	1/8",5/32" and 3/16"		-		
3	4,5,6	1/8"	3/16",7/32" and 1/4"		6x19, 7x19		
4	5,6,7	3/16"	1/4",5/16"				
5	6,7,8	1/8"	3/16",7/32" and 1/4"				
6	7,8,9	5/32"	7/32"				
7	8,9,10	3/16"	1/4",5/16"				
8	9,10,11	1/4"	5/16" and 3/8"				
9	10,11,12	5/16"	7/16"				
10	11,12	3/8"	7/16"				

Intermediate sizes are available as per Customer Requirement.

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Galvanized / Ungalvanized Strands

Galvanised Guy Strand	
Size & Construction	25 mm^2 (7/2.10 mm), 35 mm^2(7/2.50 mm), 50 mm^2(7/3.00 mm), 70 mm^2 (19/2.10 mm), 95 mm^2(19/2.50 mm), 120 mm^2 (19/2.80 mm)
Approx. Wt. (Kg/Km)	25 mm^2-192 kgs., 35 mm^2-272 kgs., 50 mm^2-392 kgs., 70 mm^2-522kgs.,95 mm^2-740 kgs.,120 mm^2 -933kgs.
Specification	TIS-404(Grade-I), as per customer
Application	For earthing and support of electric poles.

LT. Overhead Ground Wire Strand	
Size & Construction	1/4" (7/2.03mm.), 5/16" (7/2.64mm.), 3/8" (7/3.05mm.)
Approx. Wt. (Kg/Km)	1/4"-180 kgs., 5/16" -305 kgs., 3/8"-406 kgs.
Specification	Grade -EHS, HS, UTILITY : ASTM A 475 , CAN / CSA - G-12
Application	For supporting telecom and optical fibre cables poles and telecom towers.

HT. -Overhead Ground Wire Strand	
Size & Construction	5/16"(7/2.64 mm.), 3/8"(7/3.05 mm.), 7/16"(7/3.68 mm.)
Approx. (Wt. Kg/Km)	5/16"-305 kgs., 3/8"-406 kgs., 7/16"-595 kgs.
Specification	ASTM A363 (Grade-EHS, HS)
Application	For earthing in HT power lines.

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Galvanized Strand (Dry/Pre Lubricated)	
Size & Construction	1/4" (7/2.03mm.), 3/16" (7/1.57mm.), 7/1.80mm., 7/1.60mm., 7/1.32mm.
Approx. Wt. (Kg/Km)	7/2.03 mm.-180 kgs., 7/1.80 mm.-142 kgs., 7/1.60 mm.-112 kgs., 7/1.57mm-109 kgs., 7/1.32 mm.-76 kgs
Specification	ASTM A 640 / Customer's specification, ASTM A475, BS 183
Application	Telephone Messenger support strand for figure 8 telecom Aerial Cables/ Aerial Optic Fibre Cables

Roping Strand	
Size & Construction	1x7, 1x19M, 1xClass 19, 1xClass 36
Approx. Wt. (Kg/Km)	Ungalvanised or galvanised 1570, 1770, 1960, 2160 N/mm^2 Non lubricate or pre-lubricated As per customer requirement

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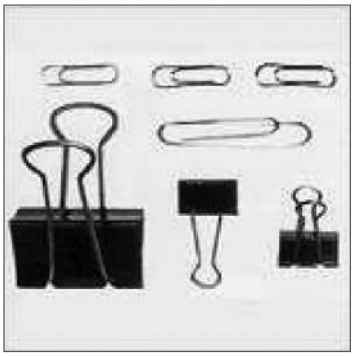
Speciality Steel Wires

Outer Casing Wire	
Specification	JIS G3521 and Customer's specification
Regular Size (mm)	1.10 - 3.20
Packing	50 Kgs./Ordinary coil 200-350 Kgs/Cheese Coil Z2 Type
Application	- Automotive control cable, - Control Cable

Spring Wire	
Specification	JIS G3521 SWA/B/C, Black/ Galvanized
Regular Size (mm)	0.71 - 11.20
Packing	Coil 15-500 Kgs/Coil Depending on size Former 1000 Kgs/Former for size 4.00mm and above
Application	- Mattress/ Bed, - Shock absorber, - Furniture, - Stationary, - Crimped mesh, - Roling shutters - Compression Spring, - Extension Spring

Spring Wire	
Specification	JIS G3521 SWA/B/C, Black/ Galvanised
Regular Size (mm)	0.30 - 0.70
Packing	Coils 10 - 15 Kgs/Ordinary Coil Depending on size
Application	- Toys, - Electronic (VCR,VTR) etc., - Gas lighter - Armouring, - Brush, - Compression Spring - Extension Spring

MIG-MAG Welding Wire (CO_2wire)	
Specification	ANSI/AWS A5.18ER70S-6, DIN8559 SG2, JIS Z 3312 YGW 12
Regular Size (mm)	0.80, 0.90, 1.00, 1.20, 1.60
Packing	15/20 Kg Spools
Application	- Automobile, - Pressure Vessel, - Construction and Engineering, - Containers, - Ship Building



Baling Wire and Unitising Wire	
Specification	Customer's specification
Regular Size (mm)	2.18, 2.25, 2.28, 2.30, 3.00, 3.04, 3.14
Packing	600-800 Kgs./Coil
Application	- Cloth baling - Paper/Pulp baling

Needle Wire	
Specification	JIS G 3521, CUSTOMER STANDARD, Black, Copper coated
Regular Size (mm)	0.53 - 1.10mm
Packing	250 Kgs/Reel
Application	-Pins wire, -Safety Pins, -Headed Pins, -Straight Pins, -T Pins

Piano Wire	
Specification	JIS G3522 SWP-A/B/V
Regular Size (mm)	0.60-8.00mm For SWP-A 0.60-7.00mm For SWP-B 1.00-6.00mm For SWP-V
Packing	-Coil 15-500 Kgs/Coil Depending on size -Former 1000 Kgs/Former for size 4.00mm and above
Application	-Automobile, -Compression Spring, -Extension Spring, -Torsion Spring, -General Spring

Paper Clip Wire Galvanised/Ungalvanised	
Specification	Customer's specification
Regular Size (Mm)	0.90, 0.98, 1.00, 1.20, 1.25
Packing	20-25 Kgs/Ordinary Coil
Application	For paper clip

Roping Wire	
Specification	Standard as per customer requirement, Galv, Un-galv
Regular Size (Mm)	0.30 - 4.00mm
Packing	-Ordinary Coil 200-350 Kgs/coil -Cheese Coil Z2 Type / Spools
Application	-General wire rope, -Elevator wire rope

Note - The above figures are for guidence only. No guarantee or warranty about its accuracy is expressed or implied. The cross section image too is for reference only.

HOW TO ORDER USHASIAM PRODUCTS

- Nominal Diameter and tolerance
- Construction / Class / Brand Name
- Finish (galvanised or ungalvanised)
- Tensile strength
- Minimum load breaking requirement
- Core - Fibre / WRC / WSC
- Lay - eg. Right hand regular lay
- lubrication
- Packing - wooden reel/ steel reel/ coils
- Particulars of fittings
- Preformed / Non- performed
- Exact length per reel / coil etc. (special length tolerance, if any)
- Delivery time
- Special Requirements
- Pre- stretching
- Packaging
- Identification
- Third party inspection

Note: It is always important to state application of the rope other than the above points to ensure correct rope for your purpose or find out more at www.ushasiam.com

HOW TO IDENTIFY USHASIAM ROPE

Every genuine Usha Siam Rope has this identification tape inside

METRIC - IMPERIAL DIAMETER CONVERSION					
in.	mm.	in.	mm.	in.	mm.
5/32	3.97	15/16	23.8	2 1/2	63.5
3/16	4.76	1	25.4	2 3/4	69.9
7/32	5.56	11/16	27.0	3	76.2
1/4	6.35	1 1/8	28.6	3 1/4	82.6
5/16	7.94	1 3/16	30.2	3 1/2	88.9
3/8	9.53	1 1/4	31.8	3 3/4	95.3
7/16	11.1	1 3/8	34.9	4	101.6
1/2	12.7	1 1/2	38.1	4 1/4	108.0
9/16	14.3	1 5/16	41.3	4 3/4	114.3
5/8	15.9	1 3/4	44.5	5	127.0
11/16	17.5	1 7/8	47.6		
3/4	19.0	2	50.8		
13/16	20.6	2 1/8	54.0		
7/8	22.2	2 1/4	57.2		

CONVERSION TABLE				
Length	1 m	= 1000 mm	=3.281 ft	=39.37 inch
Force	1 kN	=101.97 kp	=0.10197 t metric-f	=224 lbs-f
Tensile Strength	1 N/mm^2	=0.10197 kp/mm2	=145.04 p.s.i.	=10 bar
Cross Section	1 mm^2	= 0.00155 in^2		
Weight	1 metric t	=1000 kg =1.102 short t	=0.9842 long t	=2204.6 lbs
Weight per Length Unit	1 kg/m	= 0.672 lbs/ft		

usha siam

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October 2020

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SNI 0727 : 2008 LSPr-012-IDN

Certified as an approved Manufacturer of Steel Wire Ropes by Lloyd's Register Asia Certificate No. MD00/1602/0005/11

ABS TYPE APPROVED PRODUCT
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