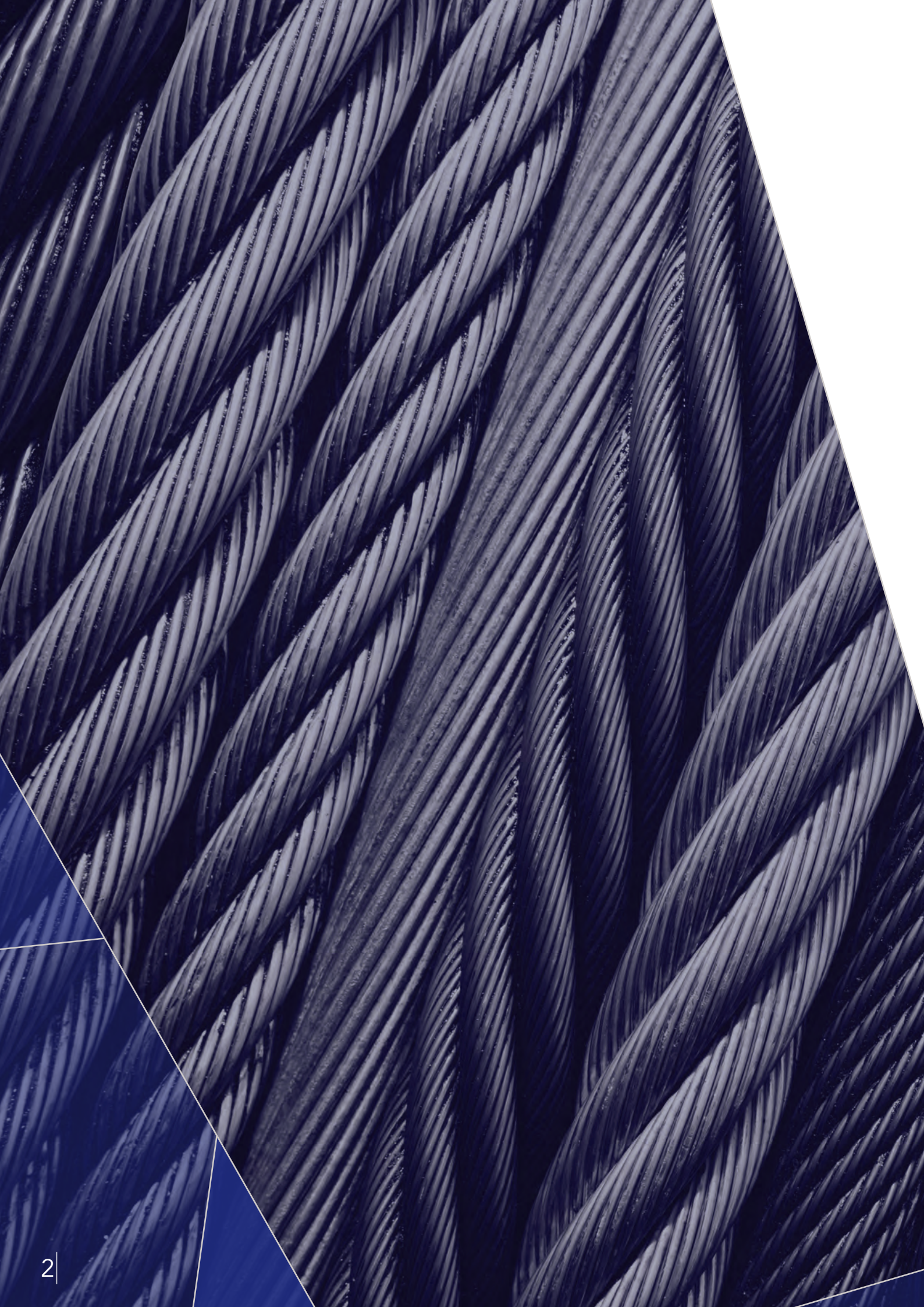


Steel Wire Ropes for GENERAL PURPOSE

Edition: February 2019







Steel Wire Ropes for GENERAL PURPOSE

Lifting operations are performed in different segments, such as construction, industry and load handling, among others. In these operations, safety is a critical factor, which requires reliable materials. Steel wire ropes are a key element, since everything depends on their performance.

IPH produces a wide range of standard wire ropes that covers a vast range of needs, specially in general lifting activities. Always with the highest level of quality and an after-sales service attentive to customer's requirements.

IPH products meet the highest international requirements, as the company manufactures and certifies according to ISO 2408, IRAM 547 and NBR ISO 2408, thus providing products according to each operation or market segment.

IPH QUALITY

The quality certificate issued by IPH guarantees the traceability and compliance with national and international standards, which can be applied to the controls carried out throughout the manufacturing process, from the wire production to the final product.

MANAGEMENT SYSTEM CERTIFICATIONS:

American Petroleum Institute, API Monogram Spec Q1, Spec 9A.
TÜV Rheinland, ISO 9001:2015.
Fundação Vanzolini NBR, ISO 9001:2015.

WIRE ROPES SPECIFIC CERTIFICATIONS:

Marine use

Lloyd's Register plant certification.

Elevators

IRAM-INTI and IRAM 840 product certification.

General purpose

ABNT NBR and ISO 2408 product certification.

Offshore containers lifting slings

DNV 2.7-1 product certification.

Wire rope slings

IRAM 5221 Flemish eye product certification.

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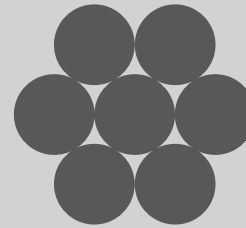
- 14 Latin America's most leading edge industrial logistics system

SINGLE STRAND WIRE ROPES

Structural and control cables

Galvanized spiral ropes for general structural applications are widely used as guys, messengers, span wires and all kind of static uses as an element to increase structural stiffness. Characteristics and measurements units on these ropes respond to standard IRAM 722, heavy galvanized.

These ropes can also be supplied under other international standards such as ASTM 475 or EN 12385 depending on the application, upon request.



IPH 17

Minimum breaking load

Diameter	Approx. Mass	Grade 120 daN/mm ²		Grade 140 daN/mm ²		Grade 1770 N/mm ²	
		[kN]	[t]	[kN]	[t]	[kN]	[t]
1,20	0,007	-	-	-	-	1,50	0,15
1,50	0,011	-	-	-	-	2,17	0,22
3,00	0,050	6,4	0,65	7,9	0,81	-	-
3,50	0,070	9,5	0,97	11,0	1,12	-	-
4,80	0,110	16,4	1,67	19,0	1,94	-	-
6,00	0,18	25,6	2,61	29,6	3,02	-	-
7,50	0,28	40,0	4,08	46,4	4,73	-	-
8,10	0,32	46,6	4,76	54,0	5,51	-	-
9,00	0,40	57,5	5,87	66,7	6,81	-	-
10,00	0,50	71,0	7,24	-	-	-	-
10,50	0,54	73,3	7,48	-	-	-	-
12,70	0,78	114	11,6	-	-	-	-

Construction: 1x7 strands Ø 1.20 - 1.50 mm, in grade 1770 N/mm².

Coating: galvanized.

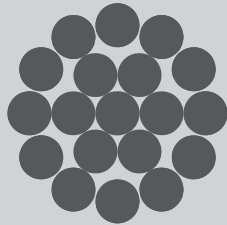
Spec ref.: ASTM 475 / EN 12385 for structural ropes.

For other diameters or grades not specified in this catalogue, please contact IPH.

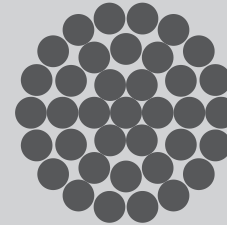


SINGLE STRAND WIRE ROPES

Structural



IPH 119R



IPH 137R

IPH 119R

Minimum breaking load

Diameter	Approx. Mass	Grade 120 daN/mm ²		Grade 140 daN/mm ²	
		[mm]	[Kg/m]	[kN]	[t]
6,30	0,19	26,3	2,68	30,5	3,11
7,50	0,27	37,8	3,86	43,8	4,47
9,00	0,39	54,3	5,54	63,0	6,43
10,50	0,53	74,0	7,55	85,8	8,76
12,50	0,75	105	10,7	122	12,4
14,00	0,94	132	13,5	153	15,6
16,00	1,23	172	17,6	199	20,3
19,00	1,79	243	24,8	281	28,7

Construction: 1x19.

Coating: galvanized.

For other diameters or grades not specified in this catalogue, please contact IPH.

IPH 137R

Minimum breaking load

Diameter	Approx. Mass	Grade 120 daN/mm ²		Grade 140 daN/mm ²	
		[mm]	[Kg/m]	[kN]	[t]
22,00	2,38	309	31,5	359	36,6
24,00	2,83	368	37,6	426	43,5
26,00	3,33	432	44,1	501	51,1
28,00	3,86	501	51,1	581	59,3

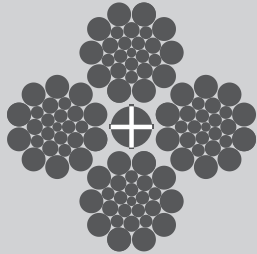
Construction: 1x37.

Coating: galvanized.

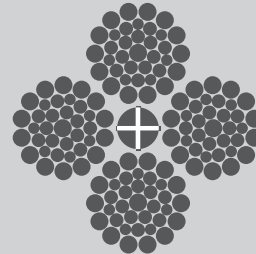
For other diameters or grades not specified in this catalogue, please contact IPH.

4-STRAND WIRE ROPES

Pulling hoist



IPH 426



IPH 436

Galvanized wire rope specially designed for pulling hoist. Its geometry is designed to fit these devices, avoiding kinks or twists that could cause failures in the internal mechanism.

Diameter	Approx. Mass	Minimum breaking load	
		Grade 1770 N/mm ²	
[mm]	[kg/m]	[kN]	[t]
8,30	0,26	45	4,59
11,50	0,51	90	9,18
16,30	1,02	170	17,3

Construction: 4x26 WS or 4x36 WS, depending on diameter.

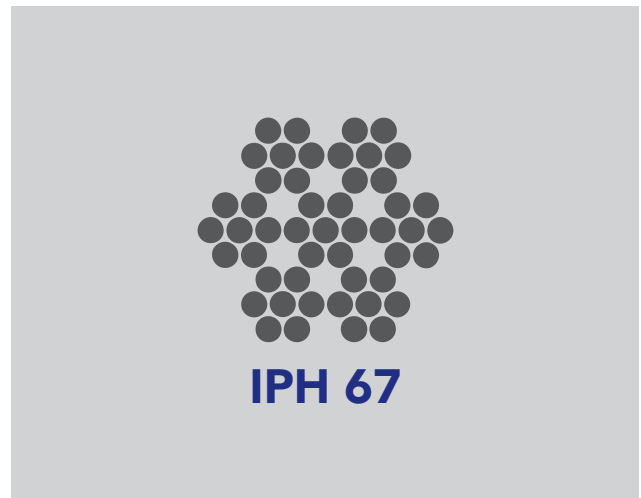
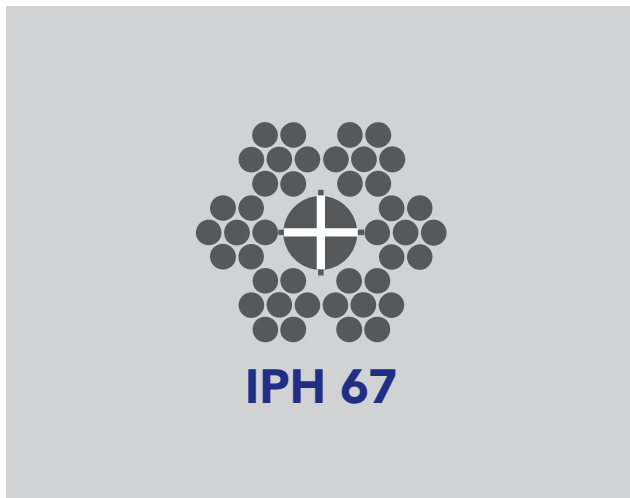
Coating: galvanized.

For other diameters or grades not specified in this catalogue, please contact IPH.



6-STRAND WIRE ROPES

General purpose



FIBER CORE – GALVANIZED

Minimum breaking load

Diameter	Approx. Mass	Grade 1770 N/mm ²	
		[kN]	[t]
[mm]	[kg/m]		
2,00	0,014	2,35	0,24
2,50	0,022	3,70	0,38
3,00	0,031	5,29	0,54
4,00	0,055	9,40	0,96
5,00	0,086	14,7	1,50
6,30	0,137	23,3	2,38

Construction: 5x7 or 6x7, depending on diameter range.

Coating: galvanized.

Spec ref.: ABNT / ISO 2408 – EN 12385.

For other diameters or grades not specified in this catalogue, please contact IPH.

STEEL CORE – GALVANIZED

Minimum breaking load

Diameter	Approx. Mass	Grade 1770 N/mm ²		Grade 2160 N/mm ²	
		[kN]	[t]	[kN]	[t]
[mm]	[kg/m]				
1,50	0,009	-	-	1,89	0,19
1,60	0,010	-	-	2,15	0,22
2,00	0,015	2,75	0,28	-	-
2,40	0,022	3,96	0,40	-	-
2,50	0,024	4,29	0,44	-	-
3,00	0,035	6,18	0,63	-	-
4,00	0,061	11,0	1,12	-	-
5,00	0,096	17,2	1,76	-	-

Construction: 7x7.

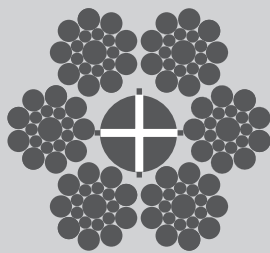
Coating: galvanized.

Spec ref.: ABNT / ISO 2408 - EN 12385.

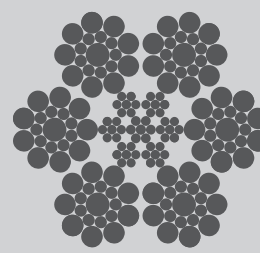
For other diameters or grades not specified in this catalogue, please contact IPH.

6-STRAND WIRE ROPES

General Purpose



IPH 619



IPH 619

Wire rope with excellent wearing resistance, provided by the largest section of the outer wires, superior to other constructions. This construction is a good selection when a combination of external abrasion and bending fatigue are present. It is fully lubricated during manufacturing to reduce friction wear.

Diameter	SFC	Minimum breaking load				IWRC	Minimum breaking load			
		Approx. Mass	Grade 1770 N/mm ²		Grade 1960 N/mm ²		Approx. Mass	Grade 1770 N/mm ²		Grade 1960 N/mm ²
[mm]	[kg/m]	[kN]	[t]	[kN]	[t]	[kg/m]	[kN]	[t]	[kN]	[t]
3,00	0,032	5,30	0,54	5,83	0,59	-	-	-	-	-
4,00	0,057	8,70	0,89	9,60	0,98	-	-	-	-	-
5,00	0,09	14,6	1,49	16,2	1,65	-	-	-	-	-
6,00	0,13	19,6	2,00	21,7	2,20	-	-	-	-	-
8,00	0,23	37,4	3,82	41,4	4,22	0,26	40,3	4,11	44,7	4,56
9,50	0,32	52,7	5,38	58,4	5,96	0,36	56,9	5,81	63,0	6,43
11,00	0,43	70,7	7,21	78,3	7,99	0,48	76,2	7,78	84,4	8,61
13,00	0,61	98,7	10,1	109	11,1	0,68	106	10,8	118	12,0
14,00	0,70	114	11,6	127	13,0	0,78	124	12,7	137	14,0
16,00	0,92	150	15,3	166	16,9	1,02	161	16,4	179	18,3
19,00	1,30	211	21,5	233	23,8	1,44	227	23,2	252	25,7
22,00	1,74	283	28,9	313	31,9	1,94	305	31,1	338	34,5
26,00	2,43	395	40,3	437	44,6	2,70	426	43,5	472	48,2
28,00	2,81	458	46,7	507	51,7	3,14	494	50,4	547	55,8
32,00	3,68	598	61,0	662	67,6	4,10	645	65,8	715	73,0
35,00	4,40	716	73,1	792	80,8	4,90	772	78,8	855	87,2
38,00	5,18	843	86,0	934	95,3	5,78	910	92,9	1010	103
44,00	6,95	1130	115	1250	128	7,74	1220	124	1350	138
51,00	9,34	1520	155	1680	171	10,4	1640	167	1810	185

Constructions: 6x19 S, 6x19 W, 6x25 F, 6x26 WS, according to grade and diameter.

Coating: bright or galvanized, according to diameter and construction.

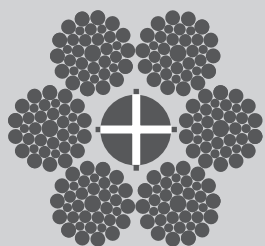
Spec ref.: ABNT / ISO 2408 / IRAM 547.

For other diameters or grades not specified in this catalogue, please contact IPH.

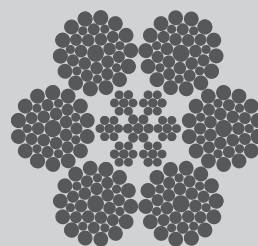


6-STRAND WIRE ROPES

General Purpose



IPH 636



IPH 636

Its greater flexibility compared with the type 6x19, gives it an increase of the lifetime in most applications when bending fatigue occurs. It is fully lubricated during manufacturing to reduce friction wearing.

Diameter	SFC		Minimum breaking load				IWRC		Minimum breaking load			
	Approx. Mass		Grade 1770 N/mm ²		Grade 1960 N/mm ²		Approx. Mass		Grade 1770 N/mm ²		Grade 1960 N/mm ²	
[mm]	[kg/m]		[kN]	[t]	[kN]	[t]	[kg/m]		[kN]	[t]	[kN]	[t]
6,30	0,14		20,7	2,11	-	-	-		-	-	-	-
8,00	0,22		33,4	3,41	-	-	-		-	-	-	-
9,00	0,30		47,3	4,83	52,4	5,35	0,33		51,0	5,20	56,5	5,77
9,50	0,33		52,7	5,38	58,4	5,96	0,37		56,8	5,80	63,0	6,43
11,00	0,44		70,7	7,21	78,3	7,99	0,50		76,2	7,78	84,4	8,61
13,00	0,62		98,7	10,1	109	11,1	0,69		106	10,8	118	12,0
14,00	0,72		114	11,6	127	13,0	0,80		124	12,7	137	14,0
16,00	0,94		150	15,3	166	16,9	1,05		161	16,4	179	18,3
19,00	1,32		211	21,5	233	23,8	1,48		227	23,2	252	25,7
22,00	1,78		283	28,9	313	31,9	1,98		305	31,1	338	34,5
26,00	2,48		395	40,3	437	44,6	2,76		426	43,5	472	48,2
28,00	2,88		458	46,7	507	51,7	3,21		494	50,4	547	55,8
32,00	3,76		598	61,0	662	67,6	4,19		645	65,8	715	73,0
35,00	4,50		716	73,1	792	80,8	5,01		772	78,8	855	87,2
38,00	5,30		843	86,0	934	95,3	5,91		910	92,9	1010	103
44,00	7,11		1130	115	1250	128	7,92		1220	124	1350	138
51,00	9,55		1520	155	1680	171	10,60		1640	167	1810	185

SFC Construction: diameters ≤ 8.00 mm: included 6x37 M. Diameters > 8.00 mm: 6x31, 6x36 and 6x41 WS, according to diameter and grade.

IWRC constructions: 6x31 WS, 6x36 WS, 6x41 WS according to diameter and grade.

Coating: bright or galvanized, according to diameter and construction.

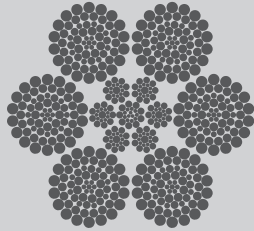
Spec ref.: ABNT/ ISO 2408/IRAM 547.

For other diameters or grades not specified in this catalogue, please contact IPH.



6-STRAND WIRE ROPES

Large diameters



Six-strand wire ropes developed for large size special applications.

Designed with specific construction to meet the requirements of each service.

They are fully lubricated during manufacturing to reduce friction wearing.

Diameter		Approx. Mass	Minimum breaking load	
[mm]	[inches]		[kN]	[tn]
50,80	2	11,00	1760	180
54,00	2 1/8	12,41	1970	201
57,15	2 1/4	13,91	2200	224
60,33	2 3/8	15,50	2440	249
63,50	2 1/2	17,30	2950	301
69,85	2 3/4	20,80	3530	360
76,20	3	24,70	4160	424
82,55	3 1/4	29,00	4830	493
85,73	3 3/8	31,30	5180	529
88,90	3 1/2	33,80	5520	563
101,60	4	44,00	6340	647

Construction: 6x36, 6x41, 6x61 or 6x69 WS, according to grade and diameter.

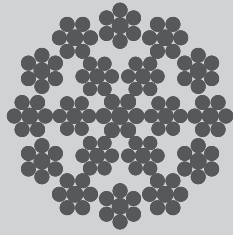
Coating: bright or galvanized (Class B).

Spec ref.: API 9A / ISO 10425.

For other diameters or grades not specified in this catalogue, please contact IPH.



ROTATION RESISTANT WIRE ROPES



IPH RR19

Traditional design of rotation resistant wire ropes, specially developed for non-guided load lifting.

This wire rope is featured by multiple layers of strands, used in cranes and small or medium height overhead cranes, where resistance to rotation is required.

Among other features it has an adequate lifetime balance to bending fatigue, corrosion and crushing resistance.



Minimum breaking load

Diameter	Approx. Mass	Grade 1960 N/mm ²	
		[kN]	[t]
[mm]	[kg/m]		
5,00	0,10	16,1	1,64
6,00	0,14	23,1	2,36
8,00	0,26	41,1	4,19
9,00	0,33	52,1	5,32
9,50	0,36	58,0	5,92
10,00	0,40	64,0	6,53
11,00	0,49	78,0	7,96
12,00	0,58	93,0	9,49
13,00	0,68	109	11,1
14,00	0,79	126	12,9
16,00	1,03	165	16,8
19,00	1,45	232	23,7
22,00	1,94	311	31,7
26,00	2,71	435	44,4
28,00	3,14	504	51,4
32,00	4,11	658	67,1

Construction: 18x7 steel core or 19x7.

Coating: Bright (galvanized on request).

Spec ref.: ABNT / ISO 2408 / IRAM 547.

For other diameters or grades not specified in this catalogue, please contact IPH.

IPH VALUE

RESEARCH AND DEVELOPMENT

- Design engineering know-how.
- Field engineering applied to each operation and improvement opportunities analysis, according to every customer needs.
- Modern testing laboratory equipped with state-of-the-art machinery that can simulate actual operation efforts and conditions, enabling us to validate and guarantee rope performance.



INTEGRATION

Integration is part of the company's DNA, starting with the steel wire rod.

- Wire production.
- Strand production.
- Steel, synthetic and natural fiber core production.
- Plastic extrusion process.
- Fitting installation as sockets, standard and custom-made swage end terminals.
- Conditioning and packaging development according to every need.
- Slings manufacture.
- Wooden and steel reels manufacture.



CUTTING EDGE TECHNOLOGY

- Cutting edge facilities and equipment.
- Tools and devices designed & developed for each product.
- Process automation and real time controls of key variables.



TRAINED PROFESSIONAL STAFF

- Highly trained engineers and technicians to evaluate, assess and advise the optimal solution for each application. Constant training for clients about good practices regarding the use and application of steel wire ropes, including installation, inspection and discard criteria.



SUPPORT & CERTIFICATION

- Full traceability of the product and its components up to their raw materials.
- Process and type certification.
- Third party tests and certifications.



LATIN AMERICA'S MOST LEADING EDGE INDUSTRIAL LOGISTICS SYSTEM

Founded in 1949 in Buenos Aires, Argentina, IPH has become one of the major players in the manufacturing of steel wire ropes in Latin America, placing itself into a position of leadership through the specialization in achieving solutions for the highest demands in the market.

Since its beginnings, IPH developed a business model based on innovation and high technology investment. Its high quality and customer service standards allow the company to be present among the most competitive markets in the five continents.

Located in Buenos Aires, Argentina, it's plant features 45,000 covered square meters and its production capacity reaches up to 1,500 tons per month. It combines cutting edge technology, highly skilled human resources and a quality management system complying with the leading international standards.

IPH's vertically integrated production process planning involves all steel wire rope's components, from its own manufacture of wires, fiber and steel cores for its ropes to wooden or steel reels and packaging according to customers specifications. This Integration Model is key to the design optimization, productive versatility and sustainability and quality assurance of finished products.

In its two modern Service Centers located in Buenos Aires - Argentina and São Paulo - Brazil, IPH keeps the widest stock of finished goods and facilities featuring state-of-the-art equipment and processes to provide with an excellent customer service and after sale support. IPH carries out multiple purpose steel wire ropes slings manufacturing, cut to length, polyester slings manufacturing, finished product conditioning, lab tests and certification, supplying the market with the most integral proposal on load lifting and handling solutions.

The factory, combined with the two sales and service centers, confers to IPH a highly efficient operation configuring the most modern industrial and logistic system in Latin America.



San Miguel Plant
Buenos Aires, Argentina.



Itapevi Service Center
São Paulo, Brazil.



Bella Vista Service Center
Buenos Aires, Argentina.





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IPH. EVOLUTION AS AN ATTITUDE

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