# HIGH PERFORMANCE STEEL WIRE ROPE

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### **TABLE OF CONTENTS**

### **6 STRAND WIRE ROPE**

- 4 IPH GPC
- 5 IPH GPCL

### **8 STRAND WIRE ROPE**

- 6 IPH GP8C
- 7 IPH GPT

### **8 STRAND WIRE ROPE (PARALLEL)**

9 IPH GP88C

### **NON-ROTATION WIRE ROPE**

- 10 IPH RR35C/RR35CL
- **12** IPH 157C
- 13 IPH VALUE
- **14 INSTITUTIONAL** IPH'S HISTORY







# **HIGH PERFORMANCE** Steel Wire Rope

GP Line – Advanced Steel Cable Solutions

The GP Line is a complete family of steel cables designed using the latest manufacturing technologies.

Its versatility and the ability to combine these technologies allow us to create customized cables tailored to each customer's specific needs, even for the most demanding applications. The primary goal of the GP Line is to meet the requirements of high-performance applications, where extending the service life of the steel cable under maximum safety conditions is a critical necessity.

The GP Line consists of three main categories:

- load distribution.

## **IPH QUALITY**

The quality certificate issued by IPH guarantees traceability and compliance with both national and international standards. These standards are applied at every stage of the manufacturing process, from raw material reception to the final product.

### MANAGEMENT SYSTEM CERTIFICATIONS:

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

WIRE ROPE 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.

Prod members of: Associated Wire Rope Fabricators

· Compacted strand cables – offering increased strength and durability.

· Plastic-infused cables – enhancing stability and resistance to internal wear. · Cables with eight or more outer strands – providing superior flexibility and

> **Offshore containers lifting slings** DNV 2.7-1 product certification.

Wire rope slings IRAM 5221 Flemish eye product certification.



# **6-STRAND WIRE ROPE**



### Advantages & Features

- High breaking strength ensures safer operation with higher safety factors.
- Compacted strands increase surface contact, extending the rope's lifespan and reducing sheave wear.
- Enhanced durability, offering greater resistance to abrasion and drum compression.
- \*Not compatible with swivels avoid using with rotating connectors.



The IPH GPC wire rope line features compacted strands, which enhance the rope's breaking strength and increase surface contact with sheaves. This design reduces wear on both the rope and sheaves while improving resistance to crushing. As a result, these ropes are ideal for intensive applications involving multilayer drums, such as oil drilling, clamshell cranes, and draglines.

### **Minimum Breaking Load**

Diameter	Weight	Grade 1960 N/mm²		Grade 210	60 N/mm²
[mm]	[lb/ft]	[kN]	[t]	[kN]	[t]
10.00	0.296	78.3	7.99	86.1	8.79
11.00	0.356	94.7	9.66	104	10.6
12.00	0.423	113	11.5	124	12.7
13.00	0.497	132	13.5	146	14.8
14.00	0.578	153	15.7	169	17.2
15.00	0.665	176	18.0	194	19.8
16.00	0.753	200	20.4	220	22.5
17.00	0.853	226	23.1	249	25.4
18.00	0.954	254	25.9	279	28.5
19.00	1.062	283	28.8	311	31.7
20.00	1.176	313	31.9	344	35.1
21.00	1.297	345	35.2	380	38.7
22.00	1.425	379	38.7	417	42.5
23.00	1.559	414	42.2	455	46.5
24.00	1.693	451	46.0	496	50.6
25.00	1.841	489	49.9	538	54.9
26.00	1.989	529	54.0	582	59.4
27.00	2.144	570	58.2	628	64.0
28.00	2.305	614	62.6	675	68.9
29.00	2.473	658	67.2	724	73.9
30.00	2.648	704	71.9	775	79.1

Diameter	Weight	Grade 1960 N/mm²		Grade 2160 N/mm²	
[mm]	[lb/ft]	[kN]	[t]	[kN]	[t]
31,00	2.829	752	76,7	827	84,4
32,00	3.010	801	81,8	882	90,0
33,00	3.205	852	87,0	938	95,7
34,00	3.400	905	92,3	995	102
35,00	3.602	959	97,8	1060	108
36,00	3.810	1010	103	1120	114
37,00	4.025	1070	109	1180	120
38,00	4.247	1130	115	1240	127
39,00	4.475	1190	121	1310	134
40,00	4.711	1250	128	1380	141
42,00	5.188	1380	141	1520	155
44,00	5.698	1520	155	1670	170
46,00	6.229	1660	169	1820	186
48,00	6.787	1800	184	1980	202
50,00	7.392	1960	200	2150	219

Construction: 6x26 WSCO or 6x36 WSCO, depending on diameter range. Coating: bright or galvanized, fully lubricated. For other rope diameters or grades not specified in this catalog, please contact IPH.



		Minimum Breaking Load				
Diameter	Weight	Grade 1960 N/mm²		Grade 21	60 N/mm²	
[mm]	[lb/ft]	[kN]	[t]	[kN]	[t]	
22.00	1.431	398	40.6	438	44.6	
26.00	2.002	555	56.6	611	62.3	
28.00	2.325	644	65.7	709	72.3	
32.00	3.031	841	85.8	926	94.5	

Construction: 6x36 WS, depending on diameter range. Coating: bright (galvanized on request).

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

### Minimum Breaking Load

### Advantages & Features

In addition to the features of the IPH GP line, the plastic-injected steel core provides:

- Greater structural stability, enhancing dynamic performance.
- Reduced internal friction, thanks to the protective plastic coating.
- Improved load distribution and increased resistance to bending fatigue.
- Not compatible with swivels avoid use with rotating connectors.

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# **8-STRAND WIRE ROPE**



### Advantages & Features

- Increased breaking strength due to compacted strands, which enhance the metallic cross-section.
- Greater wear resistance, reducing wear on both the wire rope and sheaves.
- Minimized diameter reduction under tension for improved stability.
- Better load distribution and enhanced resistance to bending fatigue.

\*Not compatible with swivels - avoid use with rotating connectors.

The GP8C Group features eight compacted strands, providing a larger contact surface and greater flexibility compared to six-strand wire ropes. These ropes are ideal for ladle cranes, container cranes, and other heavyduty machinery with single-layer drums.

		Minimum Breaking Load				
Diameter	Weight	Grade 1960 N/mm²		Grade 216	60 N/mm²	
[mm]	[lb/ft]	[kN]	[t]	[kN]	[t]	
10.00	0.302	78.0	7.96	86.0	8.78	
11.00	0.363	94.4	9.63	104	10.6	
12.00	0.430	113	11.5	124	12.7	
13.00	0.517	132	13.5	146	14.9	
14.00	0.585	153	15.6	169	17.2	
15.00	0.679	176	18.0	194	19.8	
16.00	0.766	200	20.4	220	22.4	
17.00	0.867	225	23.0	248	25.3	
18.00	0.974	254	25.9	279	28.5	
19.00	1.089	282	28.8	310	31.6	
20.00	1.210	313	31.9	344	35.1	
21.00	1.331	345	35.2	379	38.7	
22.00	1.451	379	38.7	416	42.4	
23.00	1.593	414	42.3	455	46.4	
24.00	1.734	451	46.0	495	50.5	
25.00	1.882	489	49.9	537	54.8	
26.00	2.029	529	54.0	582	59.4	
27.00	2.191	570	58.2	628	64.0	
28.00	2.352	614	62.7	675	68.9	
29.00	2.527	659	67.2	724	73.9	
30.00	2.701	704	71.8	775	79.1	
32.00	3.071	801	81.7	882	90.0	
34.00	3.461	905	92.3	995	102	
36.00	3.877	1020	104	1120	114	
38.00	4.321	1130	115	1240	127	
40.00	4.784	1250	128	1380	141	
42.00	5.275	1380	141	1520	155	
44.00	5.792	1520	155	1670	170	
46.00	6.330	1660	169	1820	186	
48.00	6.921	1800	184	1980	202	
50.00	7.459	1960	200	2150	219	

Construction: 8x26, 8x31 or 8x36 WSCO, depending on diameter range. Coating: bright or galvanized, fully lubricated.

NOTE: in steelmaking, the use of high temperature lubricant is recommended.

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

# **8-STRAND WIRE ROPE**



IPH GPT wire ropes deliver excellent performance, meeting the full range of operational demands. The eight compacted strands minimize wear on both sheaves and the wire rope, while the plastic-infused core enhances stability and increases breaking strength. These ropes are ideal for container cranes and other high-demand equipment. However, they are not recommended for continuous use in high-temperature environments.

Diameter	Weight	Grade 1960 N/mm²		Grade 2160 N/mm²	
[mm]	[lb/ft]	[kN]	[t]	[kN]	[t]
10.00	0.309	87.7	8.95	96.4	9.84
12.00	0.444	126	12.9	139	14.2
13.00	0.524	148	15.1	163	16.6
14.00	0.605	172	17.6	189	19.3
15.00	0.692	198	20.2	217	22.1
16.00	0.786	225	23.0	247	25.2
17.00	0.894	254	25.9	278	28.4
18.00	1.001	284	29.0	312	31.8
19.00	1.115	317	32.3	348	35.5
20.00	1.230	351	35.8	385	39.3
21.00	1.357	380	38.8	417	42.5
22.00	1.492	417	42.6	457	46.7
23.00	1.633	455	46.4	500	51.0
24.00	1.774	496	50.6	544	55.5
25.00	1.929	538	54.9	590	60.2
26.00	2.083	582	59.4	639	65.2
27.00	2.244	628	64.1	689	70.3
28.00	2.419	675	68.9	741	75.6
29.00	2.594	721	73.6	794	81.1
30.00	2.775	775	79.1	851	86.8
31.00	2.963	815	83.2	895	91.3
32.00	3.158	869	88.7	953	97.3
33.00	3.353	924	94.3	1010	103
34.00	3.561	981	100	1080	110
35.00	3.776	1040	106	1140	116

### Advantages & Features

- Increased breaking strength due to compacted strands, enhancing the metallic cross-section.
- Greater wear resistance, reducing wear on both sheaves and the wire rope.
- Minimized diameter reduction under tension for improved performance.
- Larger contact surface with sheaves, enhancing efficiency and longevity.
- Higher structural stability, improving dynamic performance.
- Reduced internal friction thanks to the protective plastic coating.
- Better load distribution and enhanced resistance to bending fatigue. \*Not compatible with swivels - avoid use with

rotating connectors.

### Minimum Breaking Load

CONTINUE

### Minimum Breaking Load

Diameter	Weight	Grade 1960 N/mm²		Grade 216	0 N/mm²
[mm]	[lb/ft]	[kN]	[t]	[kN]	[t]
36.00	3.992	1100	112	1210	123
37.00	4.220	1160	118	1280	131
38.00	4.448	1230	126	1340	137
39.00	4.690	1289	132	1420	145
40.00	4.932	1360	139	1490	152
42.00	5.436	1490	152	1640	167
44.00	5.967	1640	167	1810	185
46.00	6.384	1670	170	1850	189
48.00	6.720	1870	191	2060	210
50.00	7.728	2120	216	2320	237

Construction: 8x26, 8x31 or 8x36 WSCO, depending on diameter range. Coating: bright or galvanized, fully lubricated.

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



# **8-STRAND WIRE ROPE** (PARALLEL)



### Advantages & Features

- Enhanced resistance to bending fatigue, extending rope lifespan.
- Larger metallic cross-section for increased breaking strength.
- the wire rope and sheaves.
- Superior lateral stability, ensuring reliable performance under load.
- drum grooves. A narrow groove may cause deformation or waviness; the groove diameter should be 6% larger than the rope's nominal diameter. \*Not compatible with swivels – avoid use with rotating connectors.

The IPH GP88C line is designed for lifting equipment that requires flexible wire ropes with high breaking strength and excellent resistance to bending fatigue. These ropes are especially recommended for use in overhead cranes, electric hoists, and similar applications.

Diameter	Weight	Grade 2160 N/mm²			
[mm]	[lb/ft]	[kN]	[t]		
6.40	0.134	40.5	4.13		
7.00	0.161	48.8	4.98		
8.00	0.202	63.7	6.50		
9.00	0.262	80.6	8.22		
10.00	0.323	101	10.3		
11.00	0.390	123	12.6		
12.00	0.464	140	14.3		

Construction: 8x17 SCO or 8x19 SCO (parallel), depending on diameter range. Coating: galvanized (bright on request), fully lubricated. Lay: regular.

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



• Compacted 8-strand design improves surface contact and load distribution, reducing wear on both

• Proper groove dimensions required – 8-strand parallel wire ropes need correctly sized sheave and

### Minimum Breaking Load

# NON ROTATION WIRE ROPE



### Advantages & Features

- Outstanding resistance to rotation, ensuring stability during lifting operations.
- Compacted surface enhances abrasion resistance and reduces sheave wear.
- High breaking strength due to an increased metallic cross-section from the compacting process.
- Special design and Lang lay construction provide excellent resistance to bending fatigue.
- Superior compression load resistance for multilayer drum applications, especially RR35CL.
- Fully lubricated for enhanced protection against friction and corrosion, combined with a galvanized coating for increased durability.
- Compatible with swivels, allowing for rotational movement when necessary.



This represents a major advancement in non-rotation wire ropes, essential for tower cranes, mobile cranes, and high-rise overhead cranes. The compacted strands and parallel design provide a higher breaking load than conventional non-rotation ropes, while also offering greater flexibility and reduced wear on both sheaves and the rope itself.

The IPH RR35CL wire rope builds upon the features of RR35C, offering enhanced stability and improved resistance to bending fatigue due to its internal plastic infiltration. Both wire ropes are designed for the same applications. The impregnated core prevents lubrication loss, internal moisture buildup, and friction, significantly extending the rope's service life.

Diameter	Weight	Grade 1960 N/mm²		Grade 216	00 N/mm²
[mm]	[lb/ft]	[kN]	[t]	[kN]	[t]
10.00	0.296	87.9	9.00	94.0	9.59
11.00	0.356	106	10.8	113	11.6
12.00	0.423	125	12.8	134	13.7
13.00	0.497	148	15.1	158	16.1
14.00	0.652	182	18.6	195	19.9
15.00	0.746	209	21.3	224	22.9
16.00	0.847	238	24.3	255	26.0
17.00	0.961	268	27.3	287	29.3
18.00	1.075	302	30.8	323	33.0
19.00	1.196	338	34.5	362	36.9
20.00	1.331	373	38.1	399	40.7
21.00	1.465	409	41.7	438	44.7
22.00	1.606	451	46.0	482	49.2
23.00	1.754	493	50.3	527	53.8
24.00	1.915	536	54.7	573	58.5
25.00	2.076	581	59.3	622	63.5
26.00	2.244	629	64.2	673	68.7
28.00	2.601	730	74.5	781	79.7
30.00	2.990	836	85.3	895	91.3
32.00	3.400	944	96.3	1010	103
34.00	3.837	1080	110	1150	117
36.00	4.301	1200	122	1280	131
38.00	4.791	1340	137	1430	146
40.00	5.315	1480	151	1580	161
42.00	5.860	1640	167	1750	179
44.00	6.431	1790	183	1910	195
48.00	7.660	2130	217	2280	233
50.00	8.332	2310	236	2470	252

Construction: 27x7 CO or 35x7 CO, depending on diameter range. Coating: galvanized (bright on request), fully lubricated. Lay: Lang. For other rope diameters or grades not specified in this catalog, please contact IPH.



### Minimum Breaking Load

# NON ROTATION WIRE ROPE



### Advantages & Features

- Compacted surface enhances abrasion resistance and reduces sheave wear.
- High breaking strength due to an increased metallic cross-section from the compacting process.
- Superior flexibility ensures excellent spooling performance and smooth operation under both simple and reverse bending.
- Exceptional compression load resistance, making it ideal for multilayer drum applications.
- Compatible with swivels, allowing for rotational movement when needed

### Minimum Breaking Load Weight Grade 1960 N/mm<sup>2</sup> Diameter [mm] [lb/ft] [kN] [t] 180 18.4 0.611 14.00 15.00 0.706 207 21.1 236 16.00 0.800 24.1 17.00 0.900 267 27.2 18.00 1.015 299 30.5 19.00 1.129 332 33.9 20.00 1.243 368 37.6 405 21.00 1.378 41.3

Coating: bright, fully lubricated.

Lay: lang.

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



# **IPH VALUE**

### **RESEARCH & DEVELOPMENT**

- Expert design engineering to develop innovative and efficient wire rope solutions.
- Field engineering expertise, analyzing operations and identifying improvement opportunities tailored to each customer's needs.
- Advanced testing laboratory equipped with state-of-the-art machinery to simulate real-world operating conditions, ensuring validated and guaranteed rope performance.



### CUTTING-EDGE TECHNOLOGY

- State-of-the-art facilities and equipment, ensuring precision and efficiency.
- Custom-designed tools and devices, developed for each specific product.
- Advanced process automation, with real-time monitoring and control of key variables for optimal performance and consistency.



### SUPPORT & CERTIFICATION

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

### INTEGRATION

Integration is at the core of our operations, ensuring full control over every stage of production:

- Steel wire rod processing, forming the foundation of our high-quality ropes.
- Wire and strand production, ensuring consistency and durability.
  Core manufacturing, including steel, synthetic,
- Core manufacturing, including steel, synthetic, and natural fiber options.
- Plastic infiltration process, enhancing rope performance and longevity.
  Fitting installation, including sockets and custom
- Fitting installation, including sockets and custom swage end terminals.
- Customized packaging solutions, designed to meet specific customer needs.
- Slings manufacturing, tailored for various lifting applications.
- Wooden and steel reel production, ensuring proper storage and handling.



### TRAINED PROFESSIONAL STAFF

- Expert engineers and technicians provide evaluation, assessment, and guidance to ensure optimal high-performance solutions for every application.
- Ongoing client training on best practices for steel wire rope use, covering installation, inspection, and discard criteria to maximize safety and efficiency.





# **IPH'S HISTORY**

Founded in 1949 in Buenos Aires, Argentina, IPH has become a leading manufacturer of steel wire ropes in the Americas. Over the years, IPH has built a reputation for delivering solutions to meet the most demanding industry requirements, supported by continuous investment in infrastructure, technology, and research and development. IPH operates a state-of-the-art facility in Buenos Aires, featuring 484,000 square feet of production space and a monthly capacity of 1,600 tons. Combining cuttingedge technology, highly skilled personnel, and a robust quality management system that adheres to international standards, IPH delivers reliable and high-performance products tailored to the specific needs of various industries.

Our products are designed to excel in applications such as elevators, oil and gas, mining, fishing, energy transport, aerial tramways, port terminals, cranes, and large-scale hoisting.

At IPH, customer satisfaction is a priority. We provide personalized technical support, tailored training programs, and a focus on the efficient and safe operation of our products. These high standards have allowed IPH to distribute its products globally, reaching competitive markets across five continents.

For over 75 years, IPH has upheld a business philosophy rooted in quality and innovation, transforming the company into the global leader it is today.



# IPH. EVOLUTION AS AN ATTITUDE



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