CABLES FOR ROBOTICS & AUTOMATION

CABLES FOR GLOBAL PERFORMANCE

OMERIN USES ITS KNOW-HOW AND TECHNOLOGY TO DEVELOP INCREASINGLY HIGH-PERFORMANCE PRODUCTS

CABLES FOR GLOBAL PERFORMANCE

omerin

CGP SAS, CABLES FOR GLOBAL PERFORMANCE
A SUBSIDIARY OF THE OMERIN GROUP

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Technical expertise

Since 1947, CGP has been building up genuine expertise, to achieve total control of the manufacturing processes for special high-performance cables. Our design office is staffed by experienced engineers specialising in metallurgy, plastics, electromagnetic compatibility, micromechanics, data transmission, etc.
Our laboratory uses test equipment to validate the physical, chemical, mechanical, electrical, and fire-retardant behaviours of the cables we manufacture.

Our staff: eager to help you

The technical expertise of our teams is at your service, providing answers and solutions to all your requirements.
The Methods, Quality, and Research & Development departments work in constant collaboration. All our staff apply this approach, with their involvement and constant self-checking at all stages of production.

PRODUCTS

CABLE CARRIER CHAINS

Single-core power cables

Multi-core instrumentation & control cables

ALTERNATE BENDING

Multi-core instrumentation & control cables

BENDING & TORSION

Multi-core instrumentation & control cables

SPECIAL & CUSTOM

CABLES FOR GLOBAL PERFORMANCE

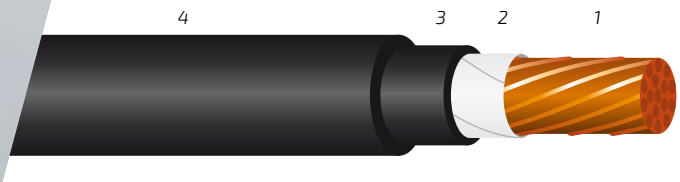
CABLE CARRIER CHAINS

Cables for Robotics & Automation

HIFLEX® CH

CABLE CARRIER CHAINS
SINGLE-CORE POWER CABLES

HIFLEX®
CH2 POWER



Number of cycles
2 million
in cable carrier chains

Bending radius
10 x ø

1 • Flexible bare copper core – Class 5
as per IEC 60228
2 • Snag-proof tape on core
3 • PVC insulation
4 • Extra-flexible PVC jacket

Applications
Extra-flexible electrical cable for electrical power supply and instrumentation & control of moving devices. Especially designed for use in cable carrier chains

Options
• Tin-plated copper core
• Other colours: contact us
• Other nominal cross-sections: contact us

General characteristics

Thermal
Continuous operating temperatures: -20°C to +90°C

Electrical
Operating voltage: 600 / 1000 V
Test voltage: 3000 V

Mechanical strength
as per test report CGP DEP2008001-CH2
Fatigue strength in cable carrier chains: 2 million cycles
Dynamic bending radius: 10 x ø
Good mechanical strength

Chemical
Good resistance to common chemical environments

Stranding* (mm²)	Nominal outside diameter (mm)	Approximate weight (kg/km)
1 x 6	7.4	103
1 x 10	8.9	157
1 x 16	10.3	226
1 x 25	11.8	321
1 x 35	13.2	432
1 x 50	15.5	616
1 x 70	18.1	830
1 x 95	20.2	1087

**for other stranding combinations, please contact us*

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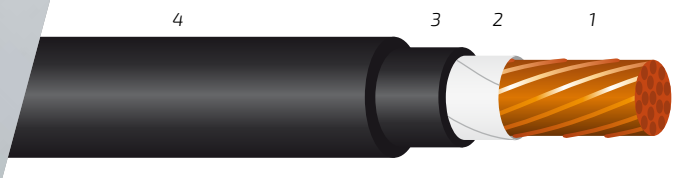
CABLE CARRIER CHAINS
SINGLE-CORE POWER CABLES

HIFLEX®
CH5 POWER

Number of cycles
5 million
in cable carrier chains

Bending radius
10 x ø

1 • Flexible bare copper core – Class 5
as per IEC 60228
2 • Snag-proof tape on core
3 • TPE insulation
4 • Polyurethane sheath



Applications
Extra-flexible electrical cable for electrical power supply and instrumentation & control of moving devices. Especially designed for use in cable carrier chains

Options
• Tin-plated copper core
• Other colours: contact us
• Other nominal cross-sections: contact us

General characteristics

Thermal
Continuous operating temperatures: -20°C to +90°C

Electrical
Operating voltage: 600 / 1000 V
Test voltage: 3000 V

Halogen free
as per IEC 60754-1

Mechanical strength
as per test report CGP DEP2008003-CH5
Fatigue strength in cable carrier chains: 5 million cycles
Dynamic bending radius: 10 x ø
Good mechanical strength

Chemical
Good resistance to common chemical environments

Stranding* (mm²)	Nominal outside diameter (mm)	Approximate weight (kg/km)
1 x 6	6.3	82
1 x 10	7.6	127
1 x 16	9.2	194
1 x 25	10.8	286
1 x 35	12.0	387
1 x 50	13.7	543
1 x 70	16.6	753
1 x 95	19.0	1010

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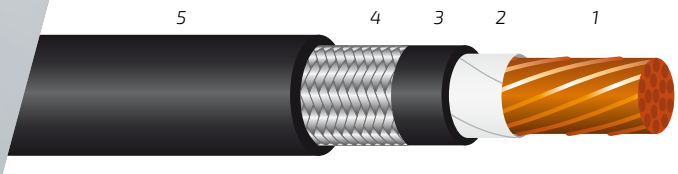
CABLE CARRIER CHAINS
SINGLE-CORE POWER CABLES

HIFLEX®
CH5 BE POWER



Number of cycles
5 million
in cable carrier chains

Bending radius
10 x ø

1 • Flexible bare copper core – Class 5 as per IEC 60228
2 • Snag-proof tape on core
3 • TPE insulation
4 • Tin-plated copper braid shield
5 • Polyurethane sheath

Applications
Extra-flexible electrical cable for electrical power supply and instrumentation & control of moving devices. Especially designed for use in cable carrier chains

Options
• Tin-plated copper core
• Other colours: contact us
• Other nominal cross-sections: contact us
• Wrap shielding

General characteristics

Thermal
Continuous operating temperatures: -20°C to +90°C

Electrical
Operating voltage: 600 / 1000 V
Test voltage: 3000 V

Halogen free
as per IEC 60754-1

Mechanical strength
as per test report CGP DEP2008004-CH5-BE
Fatigue strength in cable carrier chains: 5 million cycles
Dynamic bending radius: 10 x ø
Good mechanical strength

Chemical
Good resistance to common chemical environments

Stranding* (mm²)	Nominal outside diameter (mm)	Approximate weight (kg/km)
1 x 6	7.0	118
1 x 10	8.2	170
1 x 16	9.7	246
1 x 21	11.3	348
1 x 35	12.5	453
1 x 50	14.5	639
1 x 70	17.4	905
1 x 95	19.8	1184

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CABLE CARRIER CHAINS
MULTI-CORE INSTRUMENTATION & CONTROL CABLES

HIFLEX®
CH2 CONTROL

Number of cycles
2 million
in cable carrier chains

Bending radius
10 x ø

1 • Extra-flexible bare copper core - class 6 as per IEC 60228.
2 • PVC insulation
3 • Snag-proof tape
4 • Extra-flexible PVC jacket

General characteristics

Thermal
Continuous operating temperatures: -20°C to +90°C

Electrical
Operating voltage: 300 / 500 V
Test voltage: 2000 V

Mechanical strength
as per test report CGP DEP2008001-CH2
Fatigue strength in cable carrier chains: 2 million cycles
Dynamic bending radius: 10 x ø
Good mechanical strength

Chemical
Good resistance to common chemical environments

Applications
Extra-flexible electrical cable for electrical power supply and instrumentation & control of moving devices. Especially designed for use in cable carrier chains

Options
• Tin-plated copper core
• Other colours: contact us
• Other nominal cross-sections: contact us

Stranding* (mm²)	Nominal outside diameter (mm)	Approximate weight (kg/km)
2 x 0.75	5.7	47
3 x 0.75	6.0	57
5 x 0.75	7.1	85
7 x 0.75	8.4	119
12 x 0.75	10.1	182
14 x 0.75	10.6	205
18 x 0.75	11.8	258
25 x 0.75	14.2	368
2 x 1	6.2	58
3 x 1	6.5	70
4 x 1	7.1	86
5 x 1	7.7	104
7 x 1	9.1	145
12 x 1	11.0	226
18 x 1	12.9	323
20 x 1	13.6	358
25 x 1	15.5	458
40 x 1	18.8	699
3 x 1.5	7.6	98
4 x 1.5	8.4	124
5 x 1.5	9.2	151
7 x 1.5	10.8	209
12 x 1.5	13.2	331
18 x 1.5	15.6	476
20 x 1.5	16.4	527
25 x 1.5	18.8	678

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CABLE CARRIER CHAINS
MULTI-CORE INSTRUMENTATION & CONTROL CABLES

HIFLEX®
CH5 CONTROL

Number of cycles
5 million
in cable carrier chains

Bending radius
10 x ø

1 • Extra-flexible bare copper core - class 6 as per IEC 60228.
2 • TPE insulation
3 • Snag-proof tape
4 • Polyurethane sheath

General characteristics

Thermal
Continuous operating temperatures: -20°C to +90 °C

Electrical
Operating voltage: 300 / 500 V
Test voltage: 2000 V

Halogen free
as per IEC 60754-1

Mechanical strength
as per test report CGP DEP2008003-CH5
Fatigue strength in cable carrier chains: 5 million cycles
Dynamic bending radius: 10 x ø
Good mechanical strength

Chemical
Good resistance to common chemical environments

Applications
Extra-flexible electrical cable for electrical power supply and instrumentation & control of moving devices. Especially designed for use in cable carrier chains

Options
• Tin-plated copper core
• Other colours: contact us
• Other nominal cross-sections: contact us

Stranding* (mm²)	Nominal outside diameter (mm)	Approximate weight (kg/km)
2 x 0.75	5.0	34
3 x 0.75	5.3	43
5 x 0.75	6.3	66
7 x 0.75	7.2	89
12 x 0.75	8.5	137
14 x 0.75	8.9	156
18 x 0.75	9.9	197
25 x 0.75	11.7	274
2 x 1	5.4	42
3 x 1	5.7	53
4 x 1	6.3	67
5 x 1	6.8	81
7 x 1	7.9	111
12 x 1	9.5	177
18 x 1	10.9	251
20 x 1	11.5	279
25 x 1	13.1	354
40 x 1	15.8	544
3 x 1.5	6.5	73
4 x 1.5	7.1	93
5 x 1.5	7.6	111
7 x 1.5	8.8	153
12 x 1.5	10.7	246
18 x 1.5	12.6	359
20 x 1.5	13.2	396
25 x 1.5	14.9	499

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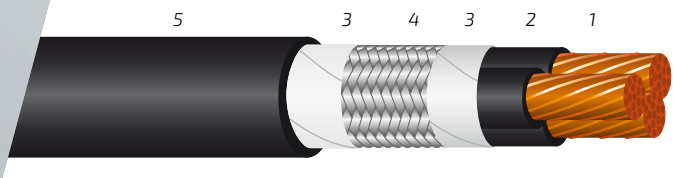
CABLE CARRIER CHAINS
MULTI-CORE INSTRUMENTATION & CONTROL CABLES

HIFLEX®
CH5 BE CONTROL



Number of cycles
5 million
in cable carrier chains

Bending radius
10 x ø

1 • Extra-flexible bare copper core - class 6 as per IEC 60228.
2 • TPE insulation
3 • Snag-proof tape
4 • Tin-plated copper braid shield
5 • Polyurethane sheath

Applications
Extra-flexible electrical cable for electrical power supply and instrumentation & control of moving devices. Especially designed for use in cable carrier chains

Options
• Tin-plated copper core
• Other colours: contact us
• Other nominal cross-sections: contact us
• Wrap shielding

General characteristics

Thermal
Continuous operating temperatures: -20°C to +90 °C

Electrical
Operating voltage: 300 / 500 V
Test voltage: 2000 V

Halogen free
as per IEC 60754-1

Mechanical strength
as per test report CGP DEP2008004-CH5-BE
Fatigue strength in cable carrier chains: 5 million cycles
Dynamic bending radius: 10 x ø
Good mechanical strength

Chemical
Good resistance to common chemical environments

Stranding* (mm²)	Nominal outside diameter (mm)	Approximate weight (kg/km)
2 x 0.5	5.3	34
3 x 0.5	5.5	39
4 x 0.5	5.9	50
7 x 0.5	7.3	77
12 x 0.5	8.4	113
18 x 0.5	9.7	158
25 x 0.5	11.3	214
2 x 0.75	5.7	39
3 x 0.75	6.0	52
4 x 0.75	6.6	66
7 x 0.75	7.9	99
12 x 0.75	9.4	153
25 x 0.75	12.6	285

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ALTERNATE BENDING

Cables for Robotics & Automation

HIFLEX® FX

ALTERNATE BENDING
MULTI-CORE INSTRUMENTATION & CONTROL CABLES

HIFLEX®
FX5 CONTROL

Number of cycles
5 million
in alternate bending

Bending radius
10 x ø

1 • Extra-flexible bare copper core - class 6 as per IEC 60228.
2 • TPE insulation
3 • Snag-proof tape
4 • Polyurethane sheath

Applications
Extra-flexible electrical cable for electrical power supply and instrumentation & control of moving devices.

Options
• Tin-plated copper core
• Other colours: contact us
• Other nominal cross-sections: contact us
• alternate bending

General characteristics

Thermal
Continuous operating temperatures: -20°C to +90 °C

Electrical
Operating voltage: 300 / 500 V
Test voltage: 2000 V

Halogen free
as per IEC 60754-1

Mechanical strength
as per test report CGP DEP2008003-FX5
Bending fatigue: 5 million cycles
Dynamic bending radius: 10 x ø
Good mechanical strength

Chemical
Good resistance to common chemical environments

Stranding* (mm²)	Nominal outside diameter (mm)	Approximate weight (kg/km)
2 x 0.75	5.0	34
3 x 0.75	5.3	43
5 x 0.75	6.3	66
7 x 0.75	7.2	89
12 x 0.75	8.5	137
14 x 0.75	8.9	156
18 x 0.75	9.9	197
25 x 0.75	11.7	274
2 x 1	5.4	42
3 x 1	5.7	53
4 x 1	6.3	67
5 x 1	6.8	81
7 x 1	7.9	111
12 x 1	9.5	177
18 x 1	10.9	251
20 x 1	11.5	279
25 x 1	13.1	354
40 x 1	15.8	544
3 x 1.5	6.5	73
4 x 1.5	7.1	93
5 x 1.5	7.6	111
7 x 1.5	8.8	153
12 x 1.5	10.7	246
18 x 1.5	12.6	359
20 x 1.5	13.2	396
25 x 1.5	14.9	499

*for other stranding combinations, please contact us

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BENDING & TORSION

Cables for Robotics & Automation

HIFLEX® TF

BENDING & TORSION
MULTI-CORE INSTRUMENTATION & CONTROL CABLES

HIFLEX®
TF5 CONTROL

Number of cycles
5 million
bending & torsion

Bending radius
10 x ø

1 • Extra-flexible bare copper core - class 6 as per IEC 60228.
2 • Special polymer insulation
3 • Snag-proof tape
4 • Polyurethane sheath

Applications
Extra-flexible electrical cable for electrical power supply and instrumentation & control of moving devices. Especially designed for use in bending and torsion

Options
• Tin-plated copper core
• Other colours: contact us
• Other nominal cross-sections: contact us

General characteristics

Thermal
Continuous operating temperatures: -20°C to +90 °C

Electrical
Operating voltage: 300 / 500 V
Test voltage: 2000 V

Mechanical strength
as per test report CGP DEP2008003-TF5
Bending fatigue: 5 million cycles
Dynamic bending radius: 10 x ø
Good mechanical strength

Chemical
Good resistance to common chemical environments

Stranding* (mm²)	Nominal outside diameter (mm)	Approximate weight (kg/km)
2 x 0.75	5.0	37
3 x 0.75	5.2	45
5 x 0.75	6.1	68
7 x 0.75	7.2	94
12 x 0.75	8.4	145
14 x 0.75	8.8	164
18 x 0.75	9.9	209
25 x 0.75	11.6	289
2 x 1	5.4	44
3 x 1	5.7	56
4 x 1	6.3	71
5 x 1	6.8	86
7 x 1	7.8	116
12 x 1	9.5	186
18 x 1	10.9	264
20 x 1	11.4	291
25 x 1	13.1	372
40 x 1	15.7	569
3 x 1.5	6.5	77
4 x 1.5	7.0	96
5 x 1.5	7.6	117
7 x 1.5	8.8	160
12 x 1.5	10.7	257
18 x 1.5	12.6	373
20 x 1.5	13.2	412
25 x 1.5	14.9	518

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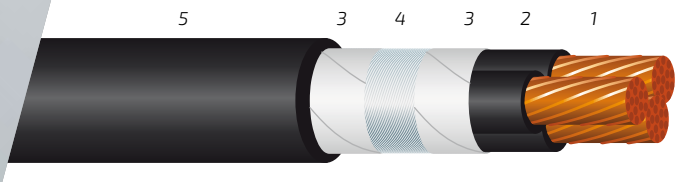
BENDING & TORSION
MULTI-CORE INSTRUMENTATION & CONTROL CABLES

HIFLEX®
TF5 BE CONTROL



Number of cycles
5 million
bending & torsion

Bending radius
10 x ø

1 • Extra-flexible bare copper core - class 6 as per IEC 60228.
2 • Special polymer insulation
3 • Snag-proof tape
4 • Shielding by covering in tin-plated copper
5 • Polyurethane sheath

Applications
Extra-flexible electrical cable for electrical power supply and instrumentation & control of moving devices. Especially designed for use in bending and torsion

Options
• Tin-plated copper core
• Other colours: contact us
• Other nominal cross-sections: contact us

General characteristics

Thermal
Continuous operating temperatures: -20°C to +90°C

Electrical
Operating voltage: 300 / 500 V
Test voltage: 2000 V

Mechanical strength
as per test report CGP DEP2010003-TF5-BE
Bending fatigue: 5 million cycles
Dynamic bending radius: 10 x ø
Good mechanical strength

Chemical
Good resistance to common chemical environments

Stranding* (mm²)	Nominal outside diameter (mm)	Approximate weight (kg/km)
2 x 0.5	5.1	36
3 x 0.5	5.2	42
4 x 0.5	5.6	51
7 x 0.5	6.9	78
12 x 0.5	8.0	116
18 x 0.5	9.4	168
25 x 0.5	10.9	222
2 x 0.75	5.5	43
3 x 0.75	5.7	53
4 x 0.75	6.1	65
7 x 0.75	7.6	102
12 x 0.75	8.9	156
25 x 0.75	12.4	309

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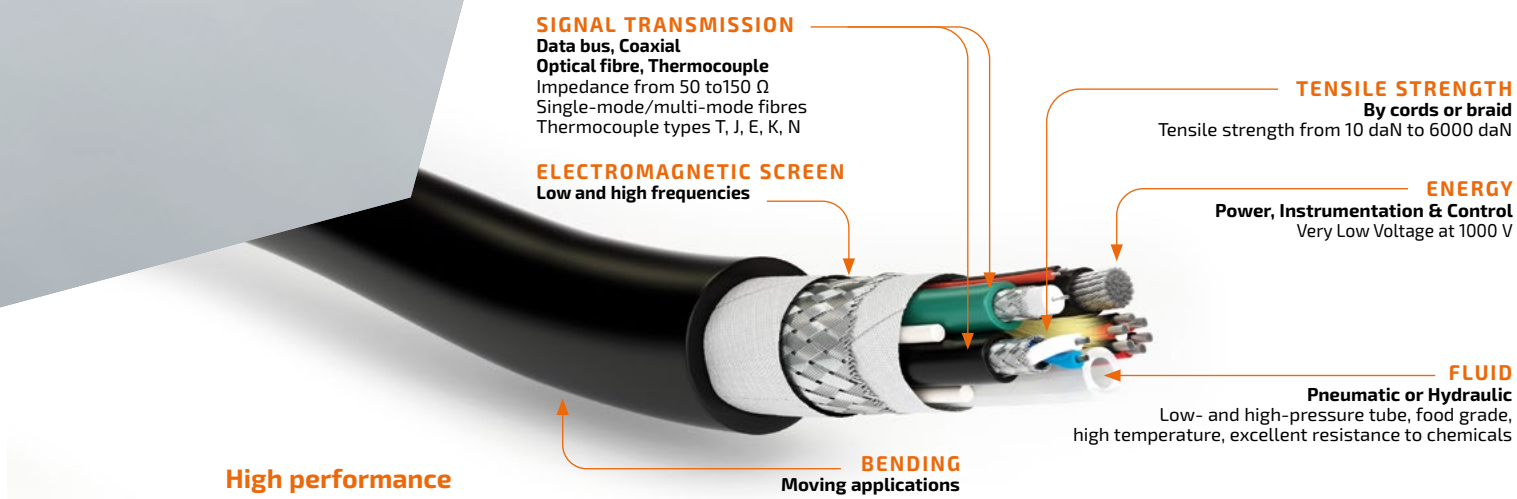
SPECIAL & CUSTOM

Cables for Robotics & Automation

OMBILIFLEX® CH / FX / TF

SPECIAL & CUSTOM

OMBILIFLEX®



High performance

OMBILIFLEX® cables are subject to a vast array of tests to guarantee a high level of quality and satisfy your requirements.

Our laboratory uses test equipment to validate the **physical, mechanical, chemical, electrical, and fire-retardant behaviours of** the cables we manufacture.

Applications

This range of multifunction, hybrid cables is intended for cutting-edge sectors like aerospace, military applications, robotics, medical applications, oil exploration, industry, etc.

OMBILIFLEX® CH = characterisation in **cable carrier chains**
OMBILIFLEX® FX = characterisation in **alternate bending**
OMBILIFLEX® TF = characterisation in **bending / torsion**

CUSTOM SOLUTION
CGP INNOVATION

Thanks to our expertise and total control of our electrical cable manufacturing processes, the engineers in our R&D department have developed the **OMBILIFLEX®** range. Umbilical cables can combine up to six different functions in a single product: **Energy, Signal, Fluid, Tensile strength, Electromagnetic screening, and Bending**.

Our design office is staffed by experienced engineers specialising in **metallurgy, plastics, electromagnetic compatibility, micromechanics, data transmission, etc.**. It will give you a fast and precise response by developing an **OMBILIFLEX®** consisting of power cables, twisted pairs, coaxial cables, tubes, optical fibres, shielding, tensile cords or brains... to suit the diverse and complex constraints of your applications.

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SPECIAL & CUSTOM

SPIRFLEX®

CGP INNOVATION
CUSTOM SOLUTION

The **SPIRFLEX®** range of high-performance spiral cables was created thanks to the know-how and technical expertise of our engineers. We design and manufacture **special cords that meet our customers' specifications, thus offering a totally made-to measure solution** (dimensions, length, connectors, etc.).

Our design office is staffed by experienced engineers specialising in metallurgy, plastics, electromagnetic compatibility, data transmission, etc. It will give you a fast and precise response by developing a **SPIRFLEX®** cable to suit the diverse and complex constraints of your applications.

High performance

Fire and fumes
Flame- and fire-retardant version

Mechanical strength
- Good flexibility
- Shape memory
- Major elongation
- High mechanical strength as per military standard SEFT 027

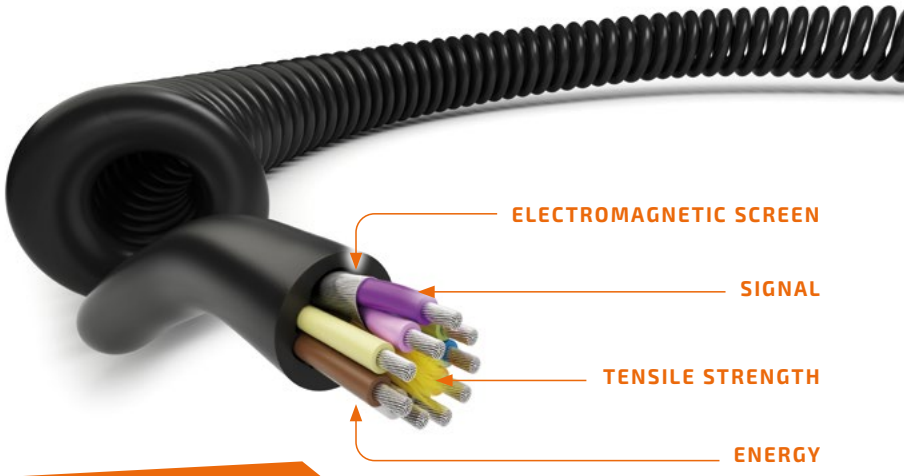
Physical
- Miniature model
- Hybrid functions: Signal / Tensile / Fluid
- Excellent electromagnetic protection
- Withstanding extreme conditions: high temperature, chemical attack

Applications

This range of high-performance spiral cables is intended for cutting-edge sectors like aerospace, military applications, robotics, medical applications, oil exploration, etc.

SPIRFLEX® HYBRID SOLUTION

CGP develops special, hybrid, and innovative solutions combined in a single **SPIRFLEX®** cable: Energy / Signal / Tensile strength / Fluid / Electromagnetic screening Hybrid **SPIRFLEX®** cables can therefore save considerable time and space during both installation and operation.



SPIRFLEX® CONNECTED SOLUTION

CGP designs solutions and cables **equipped with standard or special connectors** according to your needs and applications.
The connectors are fitted to the **SPIRFLEX®** spiral cables in our workshops, to guarantee top quality.

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