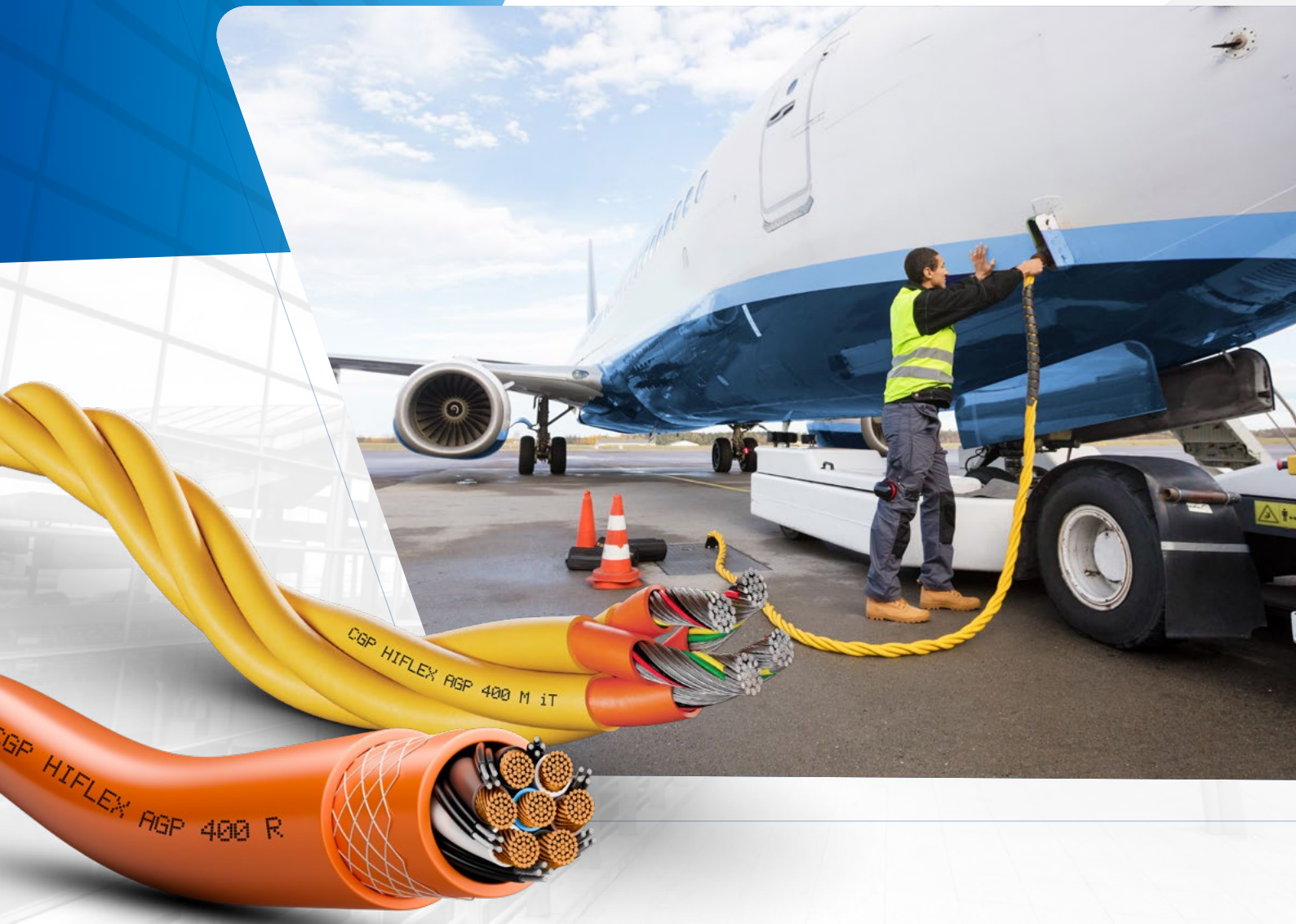


400 Hz
AIRCRAFT GROUND POWER CABLES

HIFLEX® AGP400



CABLES FOR GLOBAL PERFORMANCE

CGP WORKS IN CLOSE LIAISON WITH THE MAJOR OEM
OF AEROSPACE AND DEFENCE INDUSTRIES



omerin
LES CABLES DE L'EXTREME

CGP SAS, Cables for Global Performance belongs to the OMERIN group

AT CGP WE USE OUR KNOW-HOW AND TECHNOLOGY TO DEVELOP INCREASINGLY HIGH-PERFORMANCE PRODUCTS



Technical expertise

Since 1947, CGP has acquired a full control of electrical cable manufacturing processes.

Our Research & Development Department is made up of experienced engineers specialising in metallurgy, plastics, electromagnetic compatibility, micromechanics, data transmission, etc.

Our laboratory is equipped to test and validate the physical, mechanical, chemical and electrical behaviours and fire resistance of the cables we produce.



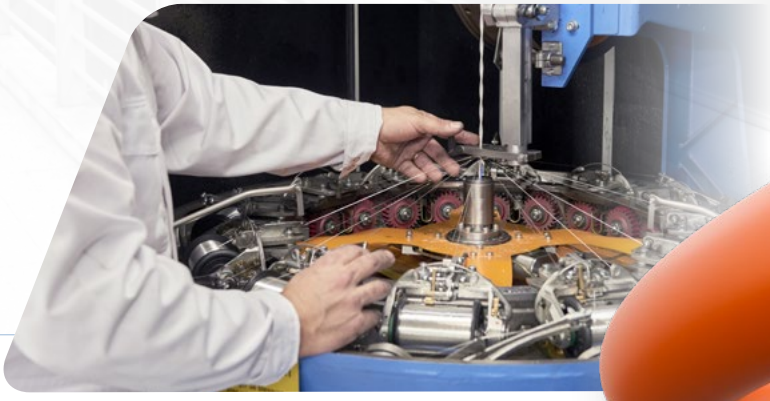


Men and Women at your service

The technical expertise of our teams is at your disposal, providing responses and solutions to all your requirements.

Our **Methods, Quality and R&D Departments work permanently** together with the aim of constantly improving our products and processes.

All our staff subscribe to this approach with their involvement and constant self-checking at all stages of production.





PRODUCT LIST

400 Hz AIRCRAFT GROUND POWER CABLES

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400 Hz AIRCRAFT GROUND POWER CABLES



REELING APPLICATIONS

REELING APPLICATIONS

HIFLEX® AGP 400 R

- **Conductor**

1. Class 6 red copper according to IEC 60228
2. Thermoplastic

- **Control core**

3. Class 6 tin plated copper according to IEC 60228
4. Thermoplastic
Helicoïdal stranding of 3 or 4 conductors

5. Abrasion resistant polyurethan
6. Anti twisting braid
7. Abrasion resistant polyurethan



Applications

400 Hz extra-flexible electrical cable for reeling applications : connection between the ground and the aircraft, allowing battery charging, pre-flight provisions, checks andmaintenance operations.

Marking

CGP HIFLEX AGP 400 R -
7x[cross-section]mm² + 6x[nb control core] x1 mm² - 0.6/1kV – [batch number]

Colour code

Phase Conductor:
Blue / White (x2) / Brown (x2) / Black (x2)
Control core: Black numbered
Internal Sheath: Orange
External Sheath: Orange
Other: please consult us.

General characteristics

- **Thermal**

Maximal use temperature in static use: **-40°C to +90°C**
Maximal use temperature in dynamic use: **-20°C to +90°C**

- **Electrical**

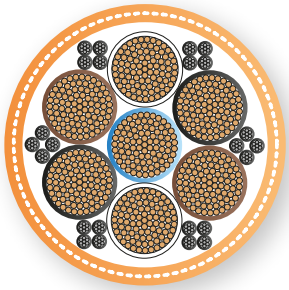
Operating voltage: 0.6 / 1 kV
Test voltage: 4000 V

- **Mechanical strength**

Minimal bending radius : 4 x Ø in static use
6 x Ø in dynamic use
Resistance to torsion and flexion: ★★★★☆
Resistance to abrasion and tear: ★★★★★

- **Chemical**

All materials comply with the RoHs and Reach european directives
Good resistance to ozone, water, UV radiations and mineral oils
Halogen free materials according to IEC 60754
No corrosive and low toxicity gases.



7x25 mm² + 6x4x1 mm²
7x35 mm² + 6x4x1 mm²

Also available in
7x25 mm² + 6x3x1 mm²
7x35 mm² + 6x3x1 mm²

General assembling: Helicoïdal stranding
Assembling protection by non woven polyester tape (covering: 25% min).

AGP 400 R

Nb cores x Cross section	Cable outer diameter (mm) Min	Cable outer diameter (mm) Max	Voltage drop (mV/Am)*	Maximum linear resistance at 20°C (Ω / km)	Maximal current rating per phase (A) *2	Approx. Cable weight (kg / m)
7x25 mm² + 6x3x1 mm²	37.5	40.5	50 mm²: 0.62	1 mm²: 20.5 25 mm²: 0.84	230	2.7
7x25 mm² + 6x4x1 mm²	37.5	40.5	50 mm²: 0.62	1 mm²: 20.5 25 mm²: 0.84	230	2.7
7x35 mm² + 6x3x1 mm²	39.5	42.5	70 mm²: 0.46	1 mm²: 20.5 35 mm²: 0.60	280	3.3
7x35mm² + 6x4x1mm²	39.5	42.5	70 mm²: 0.46	1 mm²: 20.5 35 mm²: 0.60	280	3.3

** Voltage drop between phase and neutral*
For cos Φ = 0.8
Temperature = 20 degrees Celsius

**2 : (Tambient: 30°C / Tconductor: 90°C)*

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Phone: **+33 (0)4 77 31 02 54**
www.cgp@omerin.com

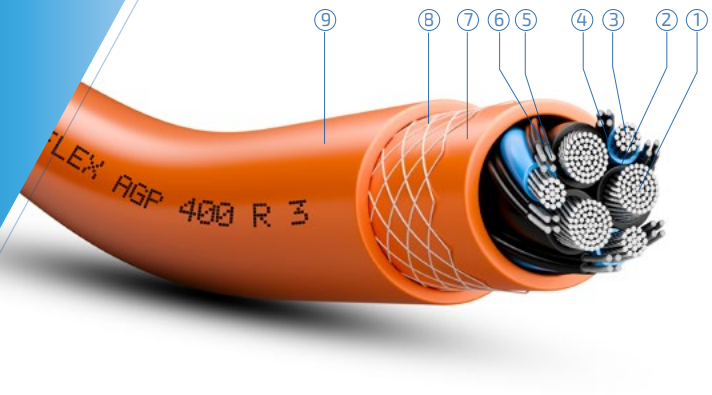
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REELING APPLICATIONS

HIFLEX® AGP 400 R 3

- **Phase conductor**
1. Class 6 tin plated copper according to IEC 60228
2. Thermoplastic
- **Neutral conductor**
3. Extra flexible tin plated copper
4. Thermoplastic
- **Control core**
5. Class 6 tin plated copper according to IEC 60228
6. Thermoplastic
Helicoïdal stranding of 4 conductors
7. Abrasion resistant polyurethan
8. Anti twisting braid
9. Abrasion resistant polyurethan



Applications
400 Hz extra-flexible electrical cable for reeling applications : connection between the ground and the aircraft, allowing battery charging, pre-flight provisions, checks andmaintenance operations.

Marking
CGP HIFLEX AGP 400 R 3 -
3x[cross-section]mm²
+ 3x[cross-section]mm²
+ 6X4X1 mm² - 0.6/1kV – [batch number]

Colour code
Phase Conductor: Black numbered
Neutral Conductor: Blue
Control core: Black numbered
Internal Sheath: Orange
External Sheath: Orange
Other: please consult us.

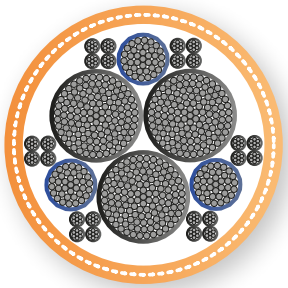
General characteristics

- **Thermal**
Maximal use temperature in static use: **-40°C to +90°C**
Maximal use temperature in dynamic use: **-20°C to +90°C**

- **Electrical**
Operating voltage: 0.6 / 1 kV
Test voltage: 4000 V

- **Mechanical strength**
Minimal bending radius: 4 x Ø in static use
6 x Ø in dynamic use
Resistance to torsion and flexion: ★★★★☆
Resistance to abrasion and tear: ★★★★★

- **Chemical**
All materials comply with the RoHs and Reach european directives
Good resistance to ozone, water, UV radiations and mineral oils
Halogen free materials according to IEC 60754
No corrosive and low toxicity gases.



3x50 mm² + 3x10 mm²+ 6x4x1 mm²
3x70 mm² + 3x12 mm² + 6x4x1 mm²

General assembling: Helicoïdal stranding
Assembling protection by non woven polyester tape (covering: 25% min).

AGP 400 R 3

Nb cores x Cross section	Cable outer diameter (mm) Min	Cable outer diameter (mm) Max	Voltage drop (mV/Am)*	Maximum linear resistance at 20°C (Ω / km)	Maximal current rating per phase (A) *2	Approx. Cable weight (kg / m)
3x50 mm² + 3x10 mm² + 6x4x1 mm²	34.5	37.5	50 mm²: 0.62	1 mm²: 20.5 10 mm²: 2.05 50 mm²: 0.41	230	2.8
3x70 mm² + 3x12 mm² + 6x4x1 mm²	39.5	42.5	70 mm²: 0.46	1 mm²: 20.5 12 mm²: 1.65 70 mm²: 0.277	280	3.4

** Voltage drop between phase and neutral*
For cos Φ = 0.8
Temperature = 20 degrees Celsius

**2 : (Tambient: 30°C / Tconductor: 90°C)*

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www.omerin.com

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REELING APPLICATIONS

HIFLEX® AGP 400 R 6

- **Phase conductor**

1. Class 6 red copper according to IEC 60228
2. Thermoplastic

- **Neutral split conductor**

3. Class 6 red copper according to IEC 60228
4. Thermoplastic

- **Control core**

5. Class 6 tin plated copper according to IEC 60228
6. Thermoplastic
Helicoïdal stranding of 4 conductors

7. Abrasion resistant polyurethan
8. Anti twisting braid
9. Abrasion resistant polyurethan



Applications

400 Hz extra-flexible electrical cable for reeling applications : connection between the ground and the aircraft, allowing battery charging, pre-flight provisions, checks andmaintenance operations.

Marking

CGP HIFLEX AGP 400 R 6 – 6x35 mm² + 6x6 mm² + 6X4X1 mm² - 0.6/1kV [batch number]

Colour code

Phase Conductor: White (x2) / Brown (x2) / Black (x2)
Neutral Conductor: Blue
Control core: Black numbered
Internal Sheath: Orange
External Sheath: Orange
Other: please consult us.

General characteristics

- **Thermal**

Maximal use temperature in static use: **-40°C to +90°C**
Maximal use temperature in dynamic use: **-20°C to +90°C**

- **Electrical**

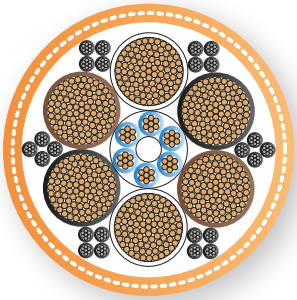
Operating voltage: 0.6 / 1 kV
Test voltage: 4000 V

- **Mechanical strength**

Minimal bending radius : 3 x Ø in static use
6 x Ø in dynamic use
Resistance to torsion and flexion: ★★★★★
Resistance to abrasion and tear: ★★★★★

- **Chemical**

All materials comply with the RoHs and Reach european directives
Good resistance to ozone, water, UV radiations and mineral oils
Halogen free materials according to IEC 60754
No corrosive and low toxicity gases.



6x35 mm² + 6x6 mm² + 6x4x1 mm²

General assembling: Helicoïdal stranding
Assembling protection by non woven polyester tape (covering: 25% min).

AGP 400 R 6

Nb cores x Cross section	Cable outer diameter (mm) Min	Cable outer diameter (mm) Max	Voltage drop (mV/Am)*	Maximum linear resistance at 20°C (Ω / km)	Maximal current rating per phase (A) *²	Approx. Cable weight (kg / m)
6x35 mm² + 6x6 mm² + 6x4x1 mm²	39.5	42.5	70 mm²: 0.46	1 mm²: 20.5 6 mm²: 3.6 35 mm²: 0.6	280	3.4

** Voltage drop between phase and neutral*
For cos Φ = 0.8
Temperature = 20 degrees Celsius

**² : (Tambient: 30°C / Tconductor: 90°C)*

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MOBILE APPLICATIONS

MOBILE APPLICATIONS

HIFLEX® AGP 400 M

Single core

- **Conductor**

1. Class 6 red copper according to IEC 60228

- **Control core**

2. Class 6 tin plated copper according to IEC 60228

3. Thermoplastic

4. Abrasion resistant polyurethan



Applications

400 Hz extra-flexible electrical cable for mobile applications : connection between the ground and the aircraft, allowing battery charging, pre-flight provisions, checks and maintenance operations.

Marking

CGP HIFLEX AGP 400 M - [cross-section]mm² - 0.6/1kV – [batch number]

Colour code

Conductor: Yellow, Green, Red, Black
Inner Sheath : Orange (abrasion indicator)
External Sheath : Black
Other: please consult us.

General characteristics

- **Thermal**

Maximal use temperature in static use: **-40°C to +90°C**
Maximal use temperature in dynamic use: **-20°C to +90°C**

- **Electrical**

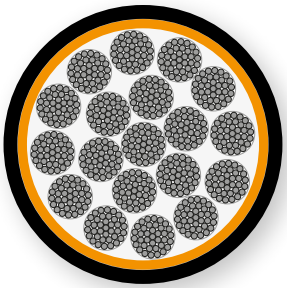
Operating voltage: 0.6 / 1 kV
Test voltage: 4000 V

- **Mechanical strength**

Minimal bending radius : 4 x Ø in static use
6 x Ø in dynamic use
Resistance to torsion and flexion: ★★★★☆
Resistance to abrasion and tear: ★★★★★

- **Chemical**

All materials comply with the RoHs and Reach european directives
Good resistance to ozone, water, UV radiations and mineral oils
Halogen free materials according to IEC 60754
No corrosive and low toxicity gases.



70 mm²

General assembling: Helicoïdal stranding
Assembling protection by non woven polyester tape (covering : 25% min).

AGP 400 M

Nb cores x Cross section	Cable outer diameter (mm) Min	Cable outer diameter (mm) Max	Voltage drop (mV/Am)*	Maximum linear resistance at 20°C (Ω / km)	Maximal current rating per phase (A) *2	Approx. Cable weight (kg / m)
70 mm²	15.6	17.2	70 mm²: 0.46	70 mm²: 0.277	280	0.8

** Voltage drop between phase and neutral*
For cos Φ = 0.8
Temperature = 20 degrees Celsius

**2 : (Tambient: 30°C / Tconductor: 90°C)*

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MOBILE APPLICATIONS

HIFLEX® AGP 400 M

Multicore

- **Conductor**

1. Class 6 red copper according to IEC 60228
2. Thermoplastic

- **Control core**

3. Class 6 tin plated copper according to IEC 60228
4. Thermoplastic
Helicoïdal stranding of 3 or 4 conductors

5. Abrasion resistant polyurethan



Applications

400 Hz extra-flexible electrical cable for mobile applications : connection between the ground and the aircraft, allowing battery charging, pre-flight provisions, checks and maintenance operations.

Marking

CGP HIFLEX AGP 400 M - 7x[cross-section]mm² + 6x[nb control core]x1 mm² - 0.6/1kV – [batch number]

Colour code

Conductor:
Blue / white (x2) / brown (x2) / black (x2)
Control core: Black numbered
External Sheath: Orange
Other: please consult us.

General characteristics

- **Thermal**

Maximal use temperature in static use: **-40°C to +90°C**
Maximal use temperature in dynamic use: **-20°C to +90°C**

- **Electrical**

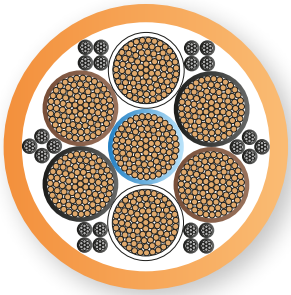
Operating voltage: 0.6 / 1 kV
Test voltage: 4000 V

- **Mechanical strength**

Minimal bending radius : 4 x Ø in static use
6 x Ø in dynamic use
Resistance to torsion and flexion: ★★★★☆
Resistance to abrasion and tear: ★★★★★

- **Chemical**

All materials comply with the RoHs and Reach european directives
Good resistance to ozone, water, UV radiations and mineral oils
Halogen free materials according to IEC 60754
No corrosive and low toxicity gases.



7x25 mm² + 6x4x1 mm²
7x35 mm² + 6x4x1 mm²

Also available in
7x25 mm² + 6x3x1 mm²
7x35 mm² + 6x3x1 mm²

General assembling: Helicoïdal stranding
Assembling protection by non woven polyester tape (covering : 25% min).

AGP 400 M

Nb cores x Cross section	Cable outer diameter (mm) Min	Cable outer diameter (mm) Max	Voltage drop (mV/Am)*	Maximum linear resistance at 20°C (Ω / km)	Maximal current rating per phase (A) *2	Approx. Cable weight (kg / m)
7x25 mm² + 6x3x1 mm²	35.5	38.5	50 mm²: 0.62	1 mm²: 20.5 25 mm²: 0.84	230	2.5
7x25 mm² + 6x4x1 mm²	35.5	38.5	50 mm²: 0.62	1 mm²: 20.5 25 mm²: 0.84	230	2.5
7x35 mm² + 6x3x1 mm²	37.5	40.5	70 mm²: 0.46	1 mm²: 20.5 35 mm²: 0.60	280	3.2
7x35 mm² + 6x4x1 mm²	37.5	40.5	70 mm²: 0.46	1 mm²: 20.5 35 mm²: 0.60	280	3.2

** Voltage drop between phase and neutral*
For cos Φ = 0.8
Temperature = 20 degrees Celsius

**2 : (Tambient: 30°C / Tconductor: 90°C)*

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HIFLEX® AGP 400 M i

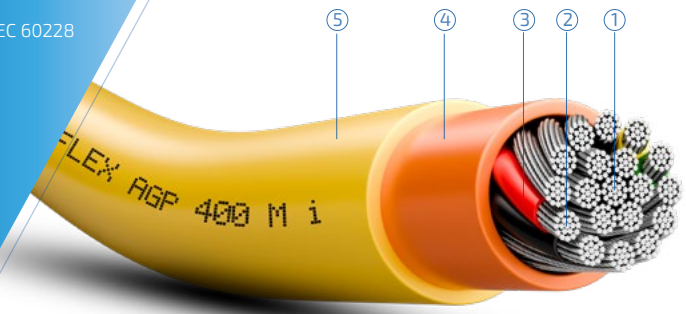
- **Conductor**

1. Class 6 tin plated copper according to IEC 60228

- **Control core**

2. Class 6 tin plated copper according to IEC 60228
3. Thermoplastic
Helicoïdal stranding of 2 conductors

4. Abrasion resistant polyurethan
(abrasion indicator)
5. Abrasion resistant polyurethan



Applications

400 Hz extra-flexible electrical cable for mobile applications : connection between the ground and the aircraft, allowing battery charging, pre-flight provisions, checks and maintenance operations.

Marking

CGP HIFLEX AGP 400 M i
1x[cross-section]mm² + 4x1mm² - 0.6/1kV – [batch number]

Colour code

Control core: Yellow, green, red, black
Internal Sheath: Orange (abrasion indicator)
External Sheath: Yellow
Other: please consult us.

General characteristics

- **Thermal**

Maximal use temperature in static use: **-40°C to +90°C**
Maximal use temperature in dynamic use: **-20°C to +90°C**

- **Electrical**

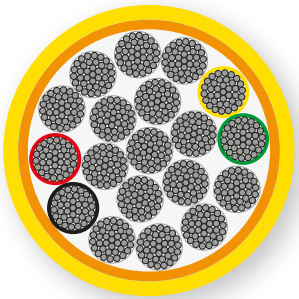
Operating voltage: 0.6 / 1 kV
Test voltage: 4000 V

- **Mechanical strength**

Minimal bending radius : 4 x Ø in static use
6 x Ø in dynamic use
Resistance to torsion and flexion: ★★★★☆
Resistance to abrasion and tear: ★★★★★

- **Chemical**

All materials comply with the RoHs and Reach european directives
Good resistance to ozone, water, UV radiations and mineral oils
Halogen free materials according to IEC 60754
No corrosive and low toxicity gases.



1x35 mm² + 4x1 mm²
1x50 mm² + 4x1mm²

Also available in
1x70 mm² + 4x1 mm²
1x95 mm² + 4x1 mm²
1x120 mm² + 4x1 mm²

General assembling: Helicoïdal stranding
Assembling protection by non woven polyester tape (covering : 25% min).

AGP 400 M i

Nb cores x Cross section	Cable outer diameter (mm) Min	Cable outer diameter (mm) Max	Voltage drop (mV/Am)*	Maximum linear resistance at 20°C (Ω / km)	Maximal current rating per phase (A) *2	Approx. Cable weight (kg / m)
1x35 mm² + 4x1 mm²	12	16	35 mm²: 0.85	1 mm²: 20.5 35 mm²: 0.554	180	0.5
1x50 mm² + 4x1 mm²	15	19	50 mm²: 0.62	1 mm²: 20.5 50 mm²: 0.393	230	0.7
1x70 mm² + 4x1 mm²	17.5	19.5	70 mm²: 0.46	1 mm²: 20.5 70 mm²: 0.277	280	0.9
1x95 mm² + 4x1 mm²	18	22	95 mm²: 0.37	1 mm²: 20.5 95 mm²: 0.210	330	1.1
1x120 mm² + 4x1 mm²	23	27	120 mm²: 0.31	1 mm²: 20.5 120 mm²: 0.164	380	1.5

** Voltage drop between phase and neutral*
For cos Φ = 0.8
Temperature = 20 degrees Celsius
**2 : (Tambient: 30°C / Tconductor: 90°C)*

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MOBILE APPLICATIONS

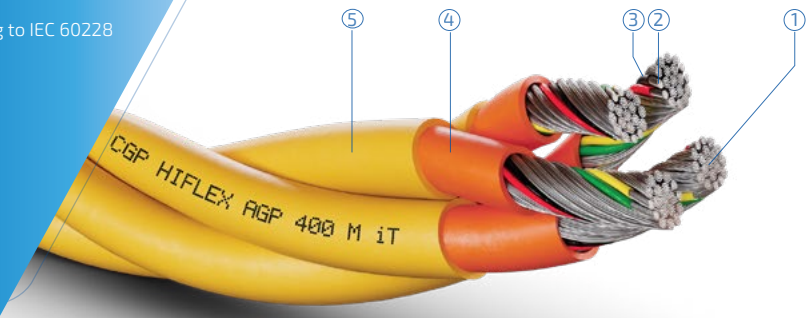
HIFLEX® AGP 400 M iT

- **Conductor**

1. Class 6 tin plated copper according to IEC 60228

- **Control core**

2. Class 6 tin plated copper according to IEC 60228
3. Thermoplastic
4. Abrasion resistant polyurethan (abrasion indicator)
5. Abrasion resistant polyurethan



Applications

400 Hz extra-flexible electrical cable for mobile applications : connection between the ground and the aircraft, allowing battery charging, pre-flight provisions, checks and maintenance operations.

Marking

CGP HIFLEX AGP 400 M iT - 1x[cross-section]mm² + 4x1mm² - 0.6/1kV – [batch number]

Colour code

Control core: Yellow, green, red, black
Internal Sheath: Orange (abrasion indicator)
External Sheath: Yellow
Other: please consult us.

General characteristics

- **Thermal**

Maximal use temperature in static use: **-40°C to +90°C**
Maximal use temperature in dynamic use: **-20°C to +90°C**

- **Electrical**

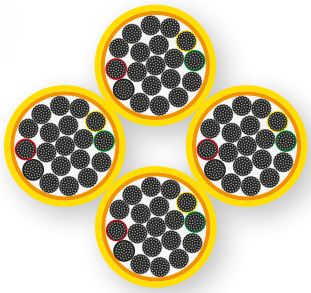
Operating voltage: 0.6 / 1 kV
Test voltage: 4000 V

- **Mechanical strength**

Minimal bending radius : 4 x Ø in static use
6 x Ø in dynamic use
Resistance to torsion and flexion: ★★★★☆
Resistance to abrasion and tear: ★★★★★

- **Chemical**

All materials comply with the RoHs and Reach european directives
Good resistance to ozone, water, UV radiations and mineral oils
Halogen free materials according to IEC 60754
No corrosive and low toxicity gases.



4x(1x35 mm² + 4x1 mm²)
4x(1x50 mm² + 4x1 mm²)
4x(1x70 mm² + 4x1 mm²)

General assembling: Helicoïdal stranding
Assembling protection by non woven polyester tape (covering : 25% min).

AGP 400 M iT

Nb cores x Cross section	Conductor diameter (mm) Min	Conductor diameter (mm) Max	Voltage drop (mV/Am)*	Maximum linear resistance at 20°C (Ω / km)	Maximal current rating per phase (A) *2	Approx. Cable weight (kg / m)
4x(1x35 mm² + 4x1 mm²)	32	36	35 mm²: 0.85	1 mm²: 20.5 35 mm²: 0.554	180	2.1
4x(1x50 mm² + 4x1 mm²)	39	43	50 mm²: 0.62	1 mm²: 20.5 50 mm²: 0.393	230	2.8
4x(1x70 mm² + 4x1 mm²)	43	47	70 mm²: 0.46	1 mm²: 20.5 70 mm²: 0.277	280	3.8

** Voltage drop between phase and neutral*
For cos Φ = 0.8
Temperature = 20 degrees Celsius

**2 : (Tambient: 30°C / Tconductor: 90°C)*

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MOBILE APPLICATIONS

HIFLEX® AGP 400 M iTN

- **Phase conductor**

1. Class 6 tin plated copper according to IEC 60228
2. Thermoplastic

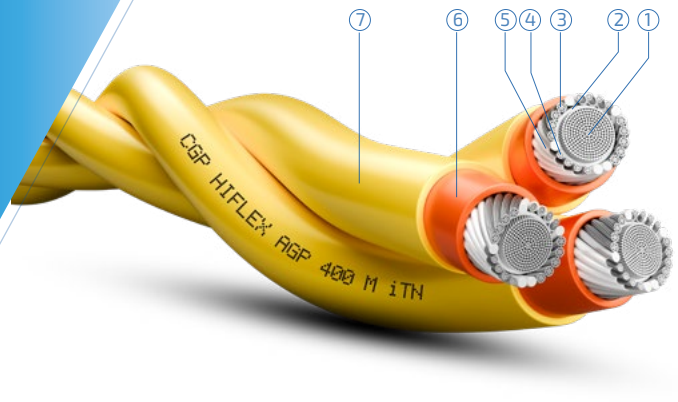
- **Neutral conductor**

3. Stranded tin plated copper

- **Control core**

4. Class 6 tin plated copper according to IEC 60228
5. Thermoplastic

6. Abrasion resistant polyurethan (abrasion indicator)
7. Abrasion resistant polyurethan



Applications

400 Hz extra-flexible electrical cable for mobile applications : connection between the ground and the aircraft, allowing battery charging, pre-flight provisions, checks and maintenance operations.

Marking

CGP HIFLEX AGP 400 M iTN
1x[cross-section]mm² + [nb neutral conductor]x[cross-section]mm²
+ 8x1mm² - 0.6/1kV – [batch number]

Colour code

Phase Conductor: White
Control core: White numbered
Internal Sheath: Orange (abrasion indicator)
External Sheath: Yellow
Other: please consult us.

General characteristics

- **Thermal**

Maximal use temperature in static use: **-40°C to +90°C**
Maximal use temperature in dynamic use: **-20°C to +90°C**

- **Electrical**

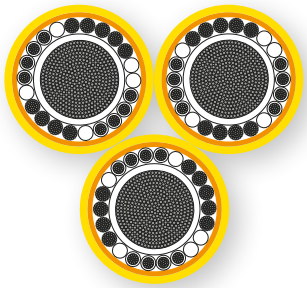
Operating voltage: 0.6 / 1 kV
Test voltage: 4000 V

- **Mechanical strength**

Minimal bending radius : 3 x Ø in static use
4 x Ø in dynamic use
Resistance to torsion and flexion: ★★★★★
Resistance to abrasion and tear: ★★★★★

- **Chemical**

All materials comply with the RoHs and Reach european directives
Good resistance to ozone, water, UV radiations and mineral oils
Halogen free materials according to IEC 60754
Flame retardant cable according to IEC60332-1
No corrosive and low toxicity gases.



3x(1x50 mm² / 20 + 8x1 mm²)
3x(1x70 mm² / 25 + 8x1 mm²)

Concentric stranding of 8 control conductors + neutral conductor + eventual fillers for cylindricity around the phase conductor.

Assembling protection by non woven polyester tape (covering : 25% mini).

AGP 400 M iTN

Nb cores x Cross section	Cable outer diameter (mm) Min	Cable outer diameter (mm) Max	Voltage drop (mV/Am)*	Maximum linear resistance at 20°C (Ω / km)	Maximal current rating per phase (A) *2	Approx. Cable weight (kg / m)
3x(1x50 mm²/ 20 + 8x1 mm²)	42.5	45.5	50 mm²: 0.62	1 mm²: 20.5 50 mm²: 0.393	230	3.1
3x(1x70 mm²/ 25 + 8x1 mm²)	47.5	50.5	70 mm²: 0.46	1 mm²: 20.5 70 mm²: 0.277	280	3.8

** Voltage drop between phase and neutral*
For cos Φ = 0.8
Temperature = 20 degrees Celsius

**2 : (Tambient: 30°C / Tconductor: 90°C)*

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FIXED APPLICATIONS

FIXED APPLICATIONS

HIFLEX® AGP 400 F

- **Conductor**

1. Class 5 red copper according to IEC 60228
2. Polyethylen

- **Control core**

3. Class 6 tin plated copper according to IEC 60228
4. Thermoplastic
Helicoïdal stranding of 4 conductors

5. Halogen free polyolefin



Applications

400 Hz electrical cable for fixed installation: underground connection between the power unit and the stationary unit, allowing battery charging, pre-flight provisions, checks and maintenance operations.

Marking

CGP HIFLEX AGP 400 F – 7x35mm²
+ 6x4x1 mm² - 0.6/1kV – [batch number]

Colour code

Conductor:
Blue / black numbered 1 to 3 (x2)
Control core: White numbered
External Sheath: Black
Other: please consult us.

General characteristics

- **Thermal**

Maximal use temperature in dynamic use: **-20°C to +90°C**

- **Electrical**

Operating voltage: 0.6 / 1 kV
Test voltage: Power cores: 4000 V
Control cores: 1500 V

- **Mechanical strength**

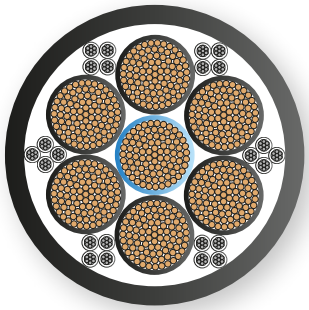
Minimal bending radius: 7 x Ø in static use

- **Chemical**

All materials comply with the RoHs and Reach european directives
Good resistance to chemical attack
Halogen free materials according to IEC 60754-1
Low corrosivity according to IEC 60754-2
Low emission of opaque smoke according to IEC61034-2
Water resistance: AD6.

- **Fire-performance**

Flame retardant according to IEC60332-1.



7x35 mm² + 6x4x1 mm²

General assembling: Helicoïdal stranding
Assembling protection by non woven polyester tape (covering : 25% min).

AGP 400 F

Nb cores x Cross section	Cable outer diameter (mm)		Voltage drop (mV/Am)*	Maximum linear resistance at 20°C (Ω / km)	Maximal current rating per phase (A) *2	Approx. Cable weight (kg / m)
	Min	Max				
7x35 mm² + 6x4x1 mm²	35.5	38.5	70 mm²: 0.46	1 mm²: 20.5 35 mm²: 0.60	280	2.8

** Voltage drop between phase and neutral*
For cos Φ = 0.8
Temperature = 20 degrees Celsius

**2 : (Tambient: 30°C / Tconductor: 90°C)*

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FIXED APPLICATIONS

HIFLEX® AGP 400 F LH

• **Conductor**
1. Class 5 red copper according to IEC 60228
2. Polyvinyle chloride

• **Control core**
3. Class 6 tin plated copper according to IEC 60228
4. Thermoplastic
Helicoïdal stranding of 3 or 4 conductors

5. Polyvinyle chloride



Applications
400 Hz electrical cable for fixed installation: underground connection between the power unit and the stationary unit, allowing battery charging, pre-flight provisions, checks and maintenance operations.

Marking
CGP HIFLEX AGP 400 F LH - 7x[cross-section]mm² + 6x[nb control core]x1mm² - 0.6/1kV – [batch number]

Colour code
Conductor:
Blue / white (x2) / brown (x2) / black (x2)
Control core: Black numbered
External Sheath: Orange
Other: please consult us.

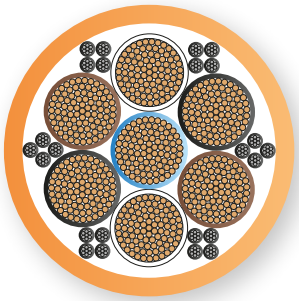
General characteristics

• **Thermal**
Maximal use temperature in static use: **-30°C to +80°C**

• **Electrical**
Operating voltage: 0.6 / 1 kV
Test voltage: 4000 V

• **Mechanical strength**
Minimal bending radius : 6 x Ø in static use

• **Chemical**
All materials comply with the RoHs and Reach european directives
Good resistance to ozone, water, UV radiations and mineral oils.



7x25 mm² + 6x4x1 mm²
7x35 mm² + 6x4x1 mm²

General assembling: Helicoïdal stranding
Assembling protection by non woven polyester tape (covering : 25% min).

AGP 400 F LH

Nb cores x Cross section	Cable outer diameter (mm) Min	Cable outer diameter (mm) Max	Voltage drop (mV/Am)*	Maximum linear resistance at 20°C (Ω / km)	Maximal current rating per phase (A) *2	Approx. Cable weight (kg / m)
7x25 mm² + 6x4x1 mm²	35.5	38.5	50 mm²: 0.62	1 mm²: 20.5 25 mm²: 0.84	205	2.5
7x35 mm² + 6x4x1 mm²	37.5	40.5	70 mm²: 0.46	1 mm²: 20.5 35 mm²: 0.60	260	3.2
7x50 mm² + 6x4x1 mm²	38.5	41.5	100 mm²: 0.35	1 mm²: 20.5 50 mm²: 0.39	310	4.1
7x70 mm²+ 6x4x1 mm²	47.5	50.5	140 mm²: 0.27	1 mm²: 20.5 70 mm²: 0.16	380	5.6

** Voltage drop between phase and neutral*
For cos Φ = 0.8
Temperature = 20 degrees Celsius

**2 : (Tambient: 30°C / Tconductor: 80°C)*

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FIXED APPLICATIONS

HIFLEX® AGP 400 F A

- **Conductor**

1. Class 5 red copper according to IEC 60228
2. Polyethylen

- **Control core**

3. Class 6 tin plated copper according to IEC 60228
4. Thermoplastic
Helicoïdal stranding of 4 conductors

5. Halogen free polyolefin
6. Double steel tape
7. Halogen free polyolefin



Applications

400 Hz electrical cable for fixed installation: underground connection between the power unit and the stationary unit, allowing battery charging, pre-flight provisions, checks and maintenance operations.

Marking

CGP HIFLEX AGP 400 F A -
7x35 mm² + 6x4x1 mm² - 0.6/1kV
[batch number]

Colour code

Conductor:
Blue / black numbered 1 to 3 (x2)
Control core: White numbered
External Sheath: Black
Other: please consult us.

General characteristics

- **Thermal**

Maximal use temperature in dynamic use: **-20°C to +90°C**

- **Electrical**

Operating voltage: 0.6 / 1 kV
Test voltage: Power cores: 4000 V
Control cores: 1500 V

- **Mechanical strength**

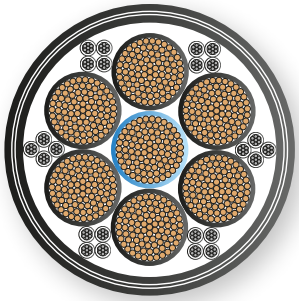
Minimal bending radius: 10 x Ø in static use
Impact resistance: AG4
Rodent resistant

- **Chemical**

All materials comply with the RoHs and Reach european directives
Good resistance to chemical attack
Halogen free materials according to IEC 60754-1
Low corrosivity according to IEC 60754-2
Low emission of opaque smoke according to IEC61034-2
Water resistance: AD6.

- **Fire-performance**

Flame retardant according to IEC60332-1.



7x35 mm² + 6x4x1 mm²

General assembling: Helicoïdal stranding
Assembling protection by non woven polyester tape (covering : 25% min).

AGP 400 F A

Nb cores x Cross section	Cable outer diameter (mm) Min	Cable outer diameter (mm) Max	Voltage drop (mV/Am)*	Maximum linear resistance at 20°C (Ω / km)	Maximal current rating per phase (A) *2	Approx. Cable weight (kg / m)
7x35 mm² + 6x4x1 mm²	38.5	41.5	70 mm²: 0.46	1 mm²: 20.5 35 mm²: 0.60	280	3.6

** Voltage drop between phase and neutral*
For cos Φ = 0.8
Temperature = 20 degrees Celsius

**2 : (Tambient: 30°C / Tconductor: 90°C)*

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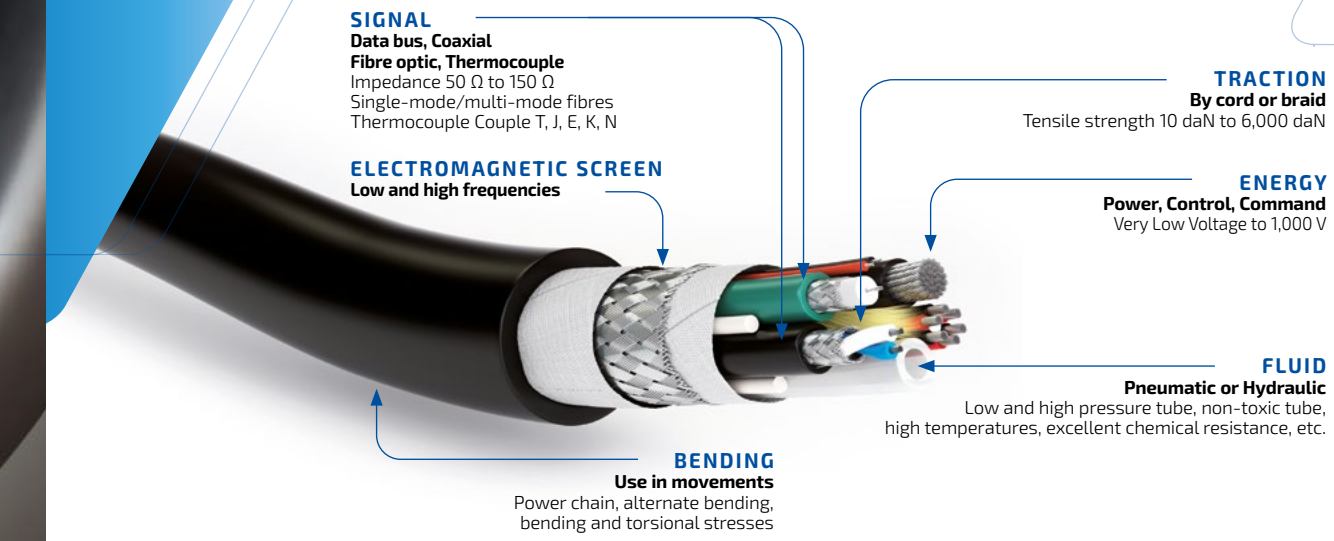
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HIGH PERFORMANCE SPECIAL MULTI-FUNCTION CABLES

OMBILIFLEX®



SIGNAL
Data bus, Coaxial
Fibre optic, Thermocouple
Impedance 50 Ω to 150 Ω
Single-mode/multi-mode fibres
Thermocouple Couple T, J, E, K, N

ELECTROMAGNETIC SCREEN
Low and high frequencies

TRACTION
By cord or braid
Tensile strength 10 daN to 6,000 daN

ENERGY
Power, Control, Command
Very Low Voltage to 1,000 V

FLUID
Pneumatic or Hydraulic
Low and high pressure tube, non-toxic tube, high temperatures, excellent chemical resistance, etc.

BENDING
Use in movements
Power chain, alternate bending, bending and torsional stresses

High performance characteristics

OMBILIFLEX® cables undergo numerous tests at every production stage to ensure a high level of quality and to meet your requirements

Our laboratory has the means to test and validate the **physical, mechanical, chemical, electrical and fire behaviours** of the cables we produce

Applications

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

Customized products
CGP INNOVATION

Thanks to our expertise and total mastery of our electrical cable manufacturing processes, the engineers of our R & D department have developed the **OMBILIFLEX®** range. Umbilical cables that can combine up to 6 different functions in one single product: **Energy, Signal, Fluid, Traction, Flexion and Electromagnetic protection.** This range of hybrid and multi-functional cables is designed for high-tech sectors such as aeronautics, military, robotics, medical, oil exploration, industry, etc.

Our Design Office is made up of experienced engineers who are specialists **in metallurgy, plastics manufacture, electromagnetic compatibility, micromechanics, data transmission, etc.** It will provide you with a fast, precise response by developing an **OMBILIFLEX®** formed of power cables, twisted pairs, coaxial cables, tubes, fibre optics, shielding, braid or traction cord, etc. in line with the miscellaneous and complex constraints of your applications.

SAMPLE PRODUCTION

OMBILIFLEX® U5-1000ITJD

Aerospace/Machine tools sector

Umbilical cable for industrial drill used to assemble the metal structure of on aircraft.
This **OMBILIFLEX®** cable transfers the fluid (pressurised oil), information (running the tooling) and power (supplying the tooling) and ensures good tensile strength and resistance to alternating movements.



OMBILIFLEX® U3-10000B

Defence/Military sector

Umbilical cable for airborne video surveillance systems.
This **OMBILIFLEX®** cable transfers power (camera supply) and information via fibre optics (high speed video/audio) and maintains very high tensile strength (> 4 000 daN).



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