



Incab
Europe

Fibre Optic Cables for the European Market

catalogue 2024

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History. Rebranding



1 Incab Europe was previously known as Emcab

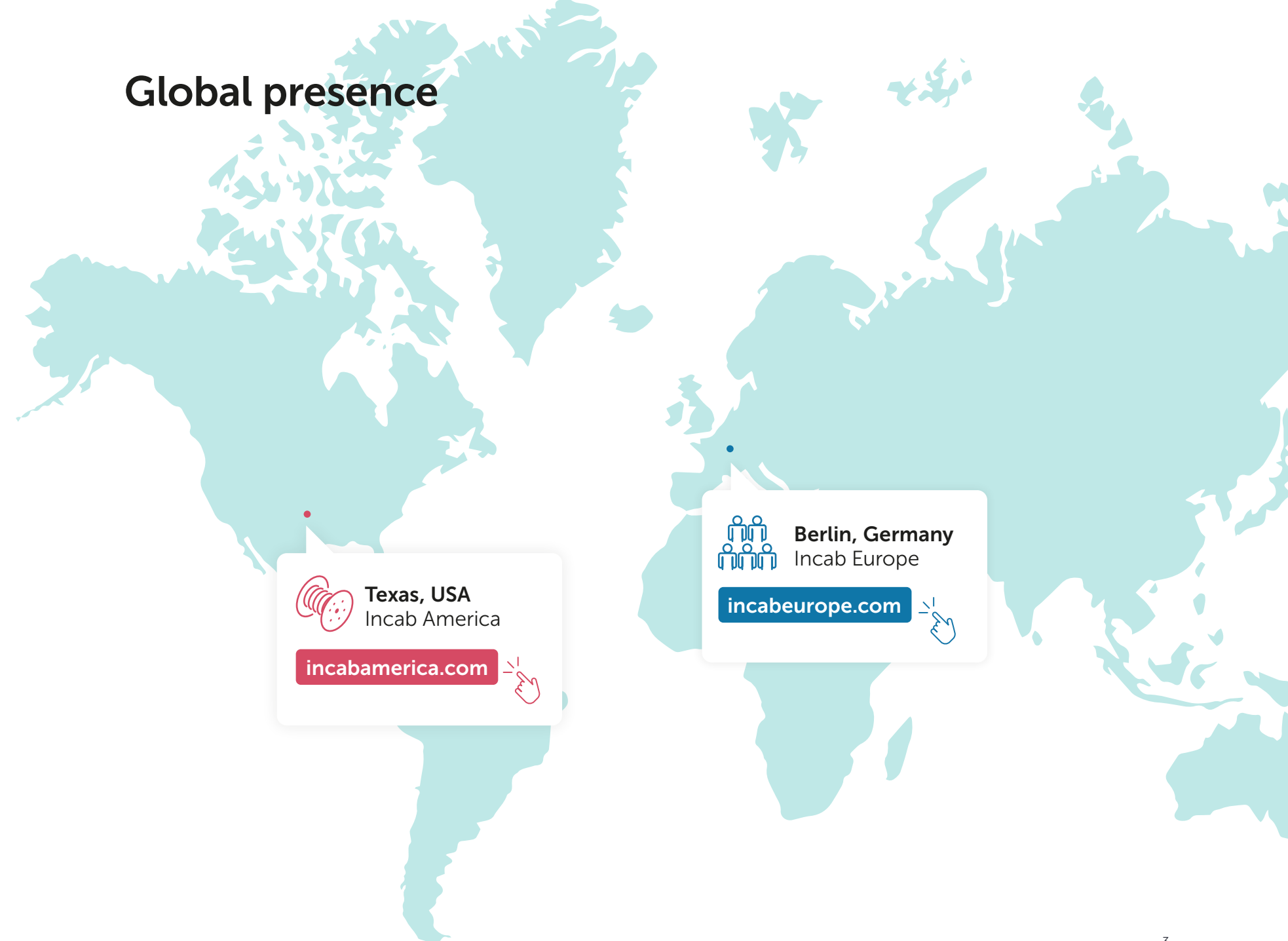
2 Since Spring 2022: change of ownership structure and renaming the company into Incab Europe

3 Incab Europe has become independent with Incab America as a reliable partner and the main production site

4 Each company is self-dependent and serves the clients in the respective market

Find out more: www.incabamerica.com

Global presence



Texas, USA
Incab America

incabamerica.com

Berlin, Germany
Incab Europe

incabeurope.com

Strategy



Incab Europe – an independent European enterprise



US manufacturing facility – the main production site



Building partnerships with European manufacturers



Developing own local production site

Secured partnership



Incab America is a relatively new player on the market, but we have managed to prove ourselves as a highly competitive manufacturer here, in the US. We've built our production site from scratch in Arlington, Texas, set the bar in the industry for long-term reliable performance and now we are rapidly developing. I strongly believe that Incab Europe is a great partner and resource when it comes to serving customers outside of the US and making Incab brand stronger. I'm sure that one day the word Incab will be the first word that comes to mind when people think of flawless fibre optic cables worldwide!

Mike Riddle, President of Incab America



Business cannot be taught but only be learned through experience. Incab Europe is not just another "kid on the block", it is the result of vast experience accumulated over many years of hard work of the entire team. When we say that we are a fibre optic cable producer with a guaranteed quality, we really mean it. And we deliver what we promise by all means!

Hans Götze, Managing Director of Incab Europe

Supply experience

As a legal successor of Emcab, Incab Europe takes on the supply experience and is committed to continue delivering high-quality cables to existing and new customers.



Flexibility

Incab Europe's formula is tried-and-true:

You get the product manufactured with an authentic understanding of quality: utilizing the best equipment and the ultimate technology.

We are flexible enough to react to our customers' needs in a timely manner. Our focus is 100% on development and production of fibre optic cables in Europe and US.

A passion for sustainability

It is our corporate responsibility to launch and maintain manufacturing processes with regard to the environment, our employees, and also our customers' own sustainability aspirations by offering them sustainable products. Developing the production site in Europe we are committed to reach our sustainable development

goals and operate in line with global environmental standards everywhere we do business. Simply put, care for the planet and for the employees wellbeing and safety is one of Incab Europe's core values.



Lean production



Continuous improvement of technologies and materials along the product life cycle



REACH and RoHS compliance of raw materials



Reusable packaging (wooden and steel reels)



Recyclable and reusable wastes



Product

- Micro cables for blowing allow reducing plastic production
- Underground installation of air-blown cables minimizes the visual pollution of human-made landscapes
- Cables do not emit toxic substances during their service life
- Long product life cycle (some designs up to 50 years)



Sustainable Development Goals

- ✓ Reduce production emissions
- ✓ Reduce wastes
- ✓ Reduce packaging (reel-less cable coils)
- ✓ Reduce carbon footprint (development of local production sites)



People, Culture, Organization

- Workwear rental service ensuring employees safety and wellbeing while reducing wastes
- Variety of personal protective equipment to choose: ease of use while maintaining safety
- Creating a balanced environment



Based on the best available technology, our target is to have the lowest possible environmental impact and minimize it each year.

Mission

Connecting the entire world via fibre optic cable
delivering first-class solutions



Production



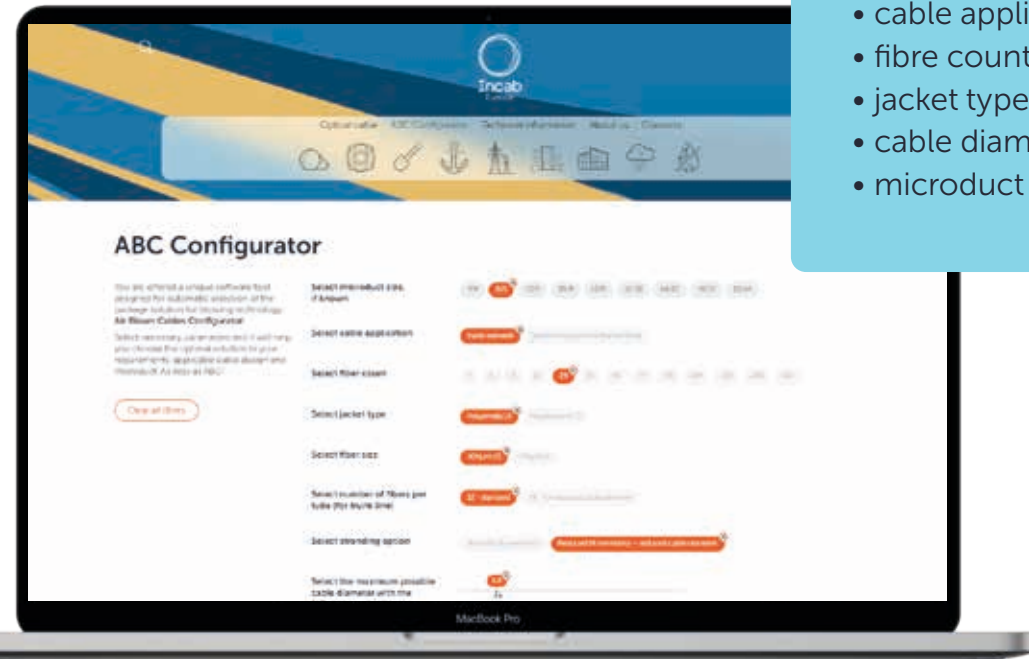
ABC Configurator

Air Blown Cables (ABC) Configurator is a unique software tool designed for automatic selection of the package solution for blowing technology. Select necessary parameters and it will help you choose the optimal solution to your requirements: applicable cable design and microduct size. **As easy as ABC!**

Use our free software to select the complete package for blowing technology

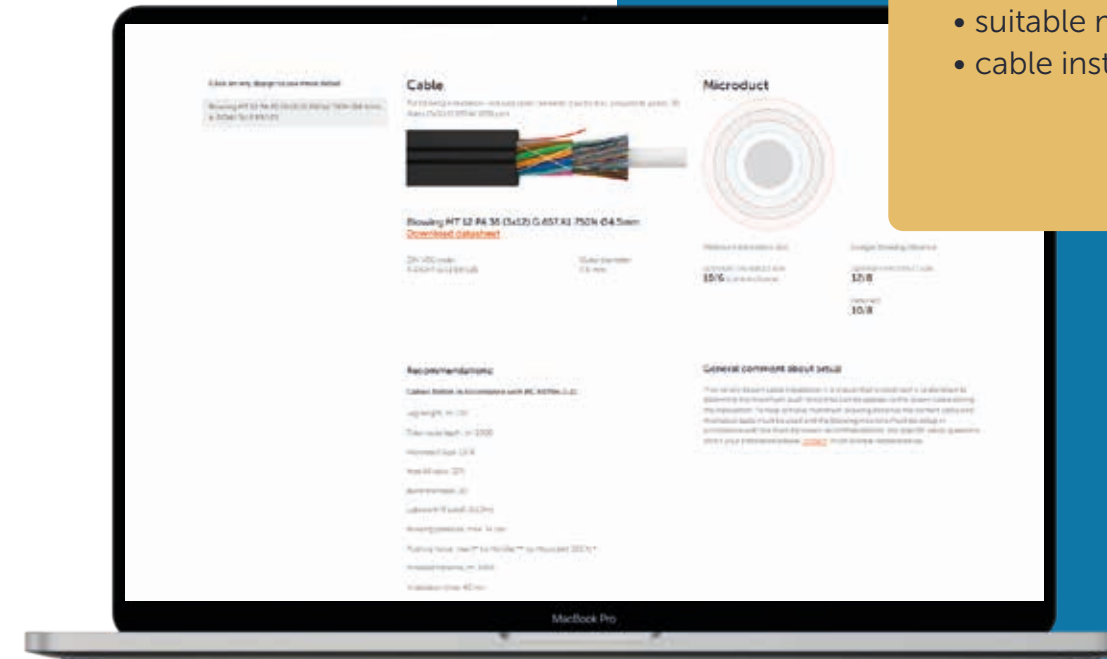
1. Select necessary characteristics:

- cable application
- fibre count and size
- jacket type
- cable diameter
- microduct size



2. Get:

- cable that meets your requirements and datasheet for it
- suitable microduct diameter
- cable installation tips



Incab Europe optical cables



Blowing



Ducting



Direct Buried



Submarine



Aerial



Indoor



Drop



OPGW/
Ground Wire



Fire Rated



Blowing



Blowing into microducts



Installation into indoor/outdoor cable conduits and trays

Operating parameters

Operating temperature	-40°C...+70°C
Installation temperature	-30°C...+50°C
Transportation and storage temperature	-50°C...+70°C
Minimum bending radius	15 x cable diameter
Design life	25 years

Options

Jacket — polyethylene or polyamide

Fibre — G.657.A1 (200 µm or 250 µm)



Each and all blowing cables are tested according to IEC 60794-1-21:2015 Standard



Blowing distance 2000m. Performance confirmed



Discover more

Discover detailed technical parameters for each design at incabeurope.com

Central tube (CT)

Blowing CT



Features



Cables are tested according to IEC 60794-1-21:2015



Reduced weight and size. Convenient for microducts



Blowing track: 2000 m. Performance confirmed



Detailed features of this design on the website

Cable design

1. Optical fibre
2. PBT loose tube
3. Aramid yarns
4. Jacket

Parameters

- Up to 24 fibres
- Cable diameter from 2.0 mm
- Operation tension up to 80 N
- Installation tension up to 150 N

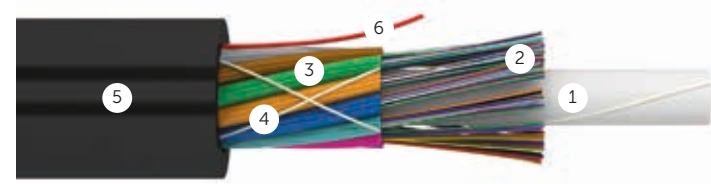


Blowing

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Multi-tube (MT) design with 12 fibres per tube

Blowing MT 12



 Detailed features of this design on the website

Cable design

1. Central strength member (FRP rod)
2. Optical fibre
3. Gel-filled loose tube
4. Water-swellable yarns
5. Jacket
6. Ripcord

Parameters

- Up to 432 fibres
- 12 fibres per tube
- Cable diameter from 3.6 mm
- Operation tension up to 1 kN
- Installation tension up to 3 kN

Features

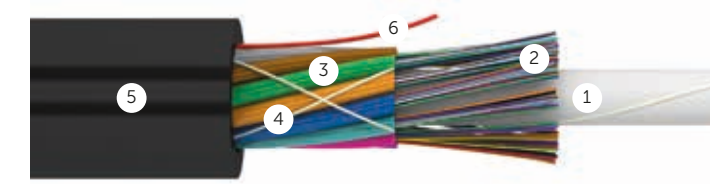
-  Cables are tested according to IEC 60794-1-21:2015
-  Blowing track: 2000 m. Performance confirmed
-  Jacket — polyethylene or polyamide
-  Fibre — G.657.A1 (200 µm or 250 µm)

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com



Multi-tube (MT) design with 24 fibres per tube


Blowing MT 24

 Detailed features of this design on the website



Features

-  Cables are tested according to IEC 60794-1-21:2015
-  Blowing track: 2000 m. Performance confirmed

 Easy to install

Cable design

1. Central strength member (FRP rod)
2. Optical fibre
3. Gel-filled loose tube
4. Water-swellable yarns
5. Jacket
6. Ripcord

Parameters

- Up to 288 fibres
- 24 fibres per tube
- Cable diameter from 5.3 mm
- Operation tension up to 1 kN
- Installation tension up to 3 kN

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Ducting



Pulling into underground ducts and sewer pipes. Installation into indoor/outdoor cable conduits and trays



Direct buried installation



Installation along bridges, tunnels and other structures

Operating parameters

Operating temperature	-40°C...+70°C
Installation temperature	-30°C...+70°C
Transportation and storage temperature	-40°C...+70°C
Minimum bending radius	from 15 × cable diameter
Design life	25 years

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specifications.



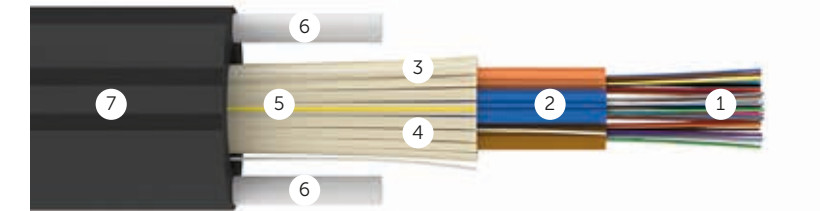
Discover more

Multi-tube (MT) fibreglass yarns soft tubes

Ducting MT FiberGlass Soft Tubes



Click here to see detailed features of this design



Cable design

1. Optical fibre
2. Gel-filled soft tube
3. Water-swellable yarns
4. Fibreglass yarns
5. Ripcord
6. FRP rod
7. Jacket

Features



All-dielectric design



Easy strippable micro tubes



Suitable for aerial application



The most popular design

Parameters

- Up to 432 fibres
- Maximum rated design tension up to 1.5 kN

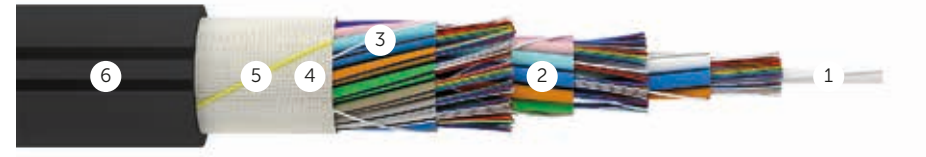


Ducting

Multi-tube (MT) high fibre count (HFC) design (12 fibres per tube)

Ducting MT 12 HFC

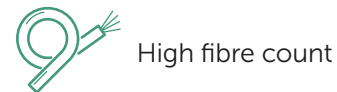
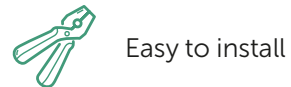
 [Click here to see detailed features of this design](#)



Cable design

1. Central strength member (FRP rod)
2. 3 layers of gel-filled loose tubes with optical fibres
3. Water-swellable yarns over each loose tubes layer
4. Water-swellable tape over stranded core
5. Ripcord
6. Jacket

Features




Parameters

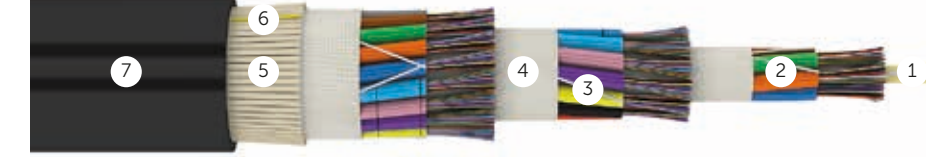
- Up to 432 fibres
- Maximum rated design tension up to 0.7 kN
- Crush — 0.1 kN /cm

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Multi-tube (MT) high fibre count (HFC) design (24 fibres per tube)

Ducting MT 24 HFC

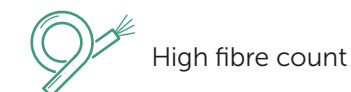
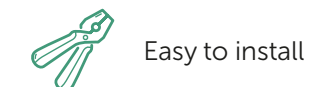
 [Click here to see detailed features of this design](#)



Cable design

1. Central strength member (FRP rod)
2. 3 layers of gel-filled loose tubes with optical fibres
3. Water-swellable yarns over each loose tubes layer
4. 3 layers of water-swellable tape over stranded core
5. Fibreglass yarns
6. Ripcord
7. Jacket

Features



Parameters

- Up to 864 fibres
- Maximum rated design tension up to 4 kN
- Crush — 0.3 kN /cm

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Multi-tube (MT) aramid yarns

Ducting MT Aramid

 [Click here to see detailed features of this design](#)



Cable design

1. Central strength member (FRP rod)
2. Optical fibre
3. Gel-filled loose tube
4. Water-swellaable yarns
5. Aramid yarns
6. Jacket
7. Ripcord

Features



All-dielectric design



Easy to install



Reduced weight and size


Parameters

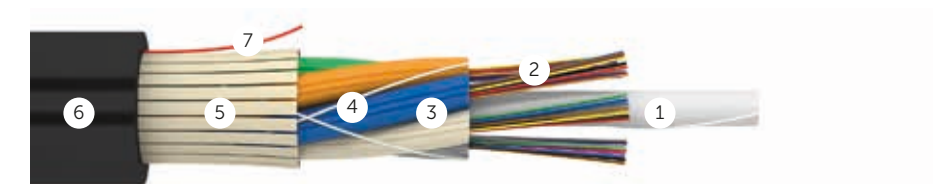
- Up to 432 fibres
- Maximum rated design tension up to 2.7 kN
- Crush – 0.22 kN /cm

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Multi-tube (MT) fibreglass yarns

Ducting MT FiberGlass

 [Click here to see detailed features of this design](#)



Cable design

1. Central strength member (FRP rod)
2. Optical fibre
3. Gel-filled loose tube
4. Water-swellaable yarns
5. Fibreglass yarns
6. Jacket
7. Ripcord

Features



All-dielectric design



Easy to install



Reduced weight and size

Parameters

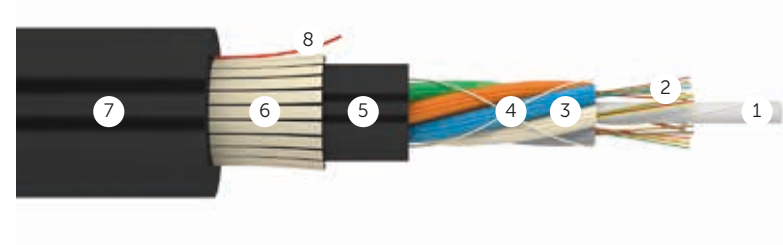
- Up to 432 fibres
- Maximum rated design tension up to 2.7 kN
- Crush – 0.22 kN /cm

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Multi-tube (MT) fibreglass yarns double jacket (DJ)

Ducting MT FiberGlass DJ

 [Click here to see detailed features of this design](#)



Cable design

1. Central strength member (FRP rod)
2. Optical fibre
3. Gel-filled loose tube
4. Water-swellable yarns
5. Inner jacket
6. Fibreglass yarns
7. Jacket
8. Ripcord

Features



All-dielectric design



Fibreglass yarns prevent damage by rodents



Improved reliability due to inner jacketing

Parameters

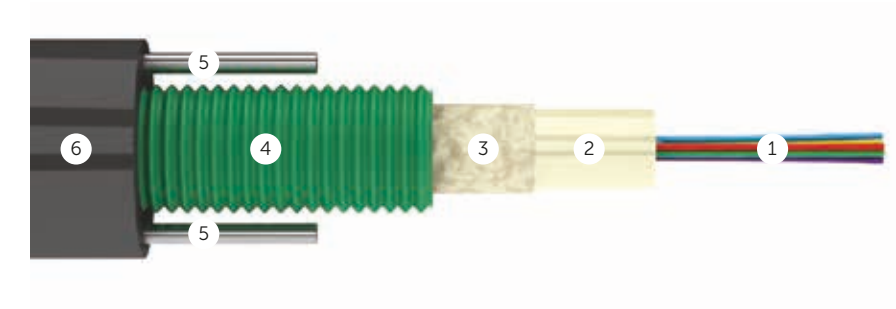
- Up to 432 fibres
- Maximum rated design tension to 2.7 kN
- Crush — 0.22 kN /cm

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Central tube (CT) corrugated steel tape (CST)

Ducting CT CST Light

 [Click here to see detailed features of this design](#)



Cable design

1. Optical fibre
2. Gel-filled loose tube
3. Water-blocking gel
4. Corrugated steel tape armor
5. Steel wires
6. Jacket

Features



Cost-effective design



Excellent rodent resistance



Reduced weight and size

Parameters

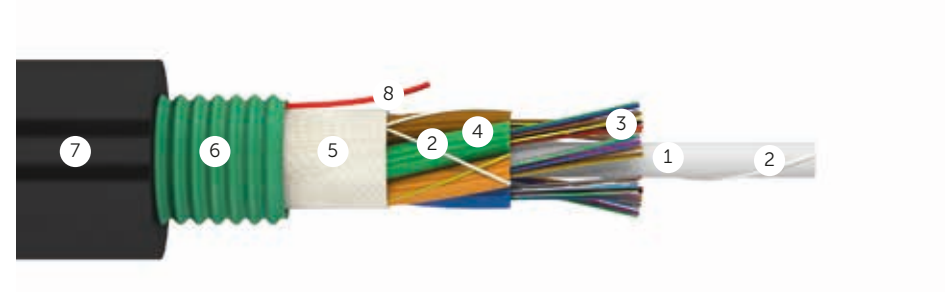
- Up to 24 fibres
- Maximum rated design tension up to 2.7 kN
- Crush — 0.5 kN /cm

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Multi-tube (MT) corrugated steel tape (CST)

Ducting MT CST

 [Click here to see detailed features of this design](#)



Cable design

1. Central strength member (FRP rod)
2. Water-swellable yarns
3. Optical fibre
4. Gel-filled loose tube
5. Water-swellable tape
6. Corrugated steel tape armor
7. Jacket
8. Ripcord

Features

-  Cost-effective design
-  Excellent rodent resistance
-  Reduced weight and size
-  Increased tightness due to application of water-swellable tape


Parameters

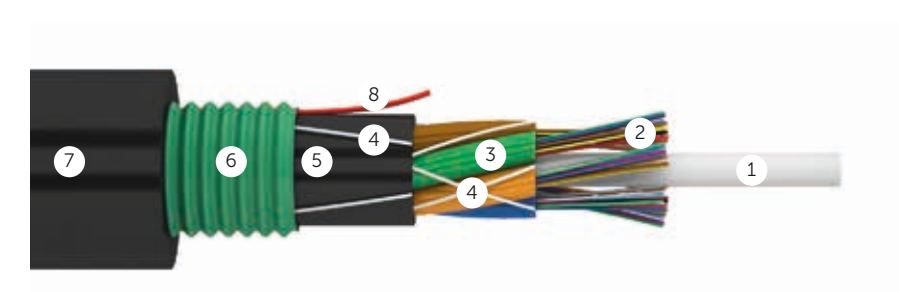
- Up to 432 fibres
- Maximum rated design tension up to 2.7 kN
- Crush — 0.22 kN /cm

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Multi-tube (MT) corrugated steel tape (CST) double jacket (DJ)

Ducting MT CST DJ




 [Click here to see detailed features of this design](#)



Cable design

1. Central strength member (FRP rod)
2. Optical fibre
3. Gel-filled loose tube
4. Water-swellable yarns
5. Inner jacket
6. Corrugated steel tape armor
7. Jacket
8. Ripcord

Features

-  Improved reliability due to inner jacketing
-  Excellent rodent resistance
-  Proven reliable design

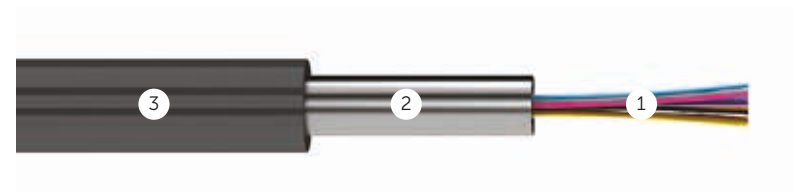
Parameters

- Up to 432 fibres
- Maximum rated design tension up to 2.7 kN
- Crush — 0.22 kN /cm

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Stainless steel tube (SST)

Ducting SST



Cable design

- 1. Optical fibre
- 2. Steel tube
- 3. Jacket

Click here to see detailed features of this design

Features

The smallest diameter

Excellent rodent resistance

100% waterproof

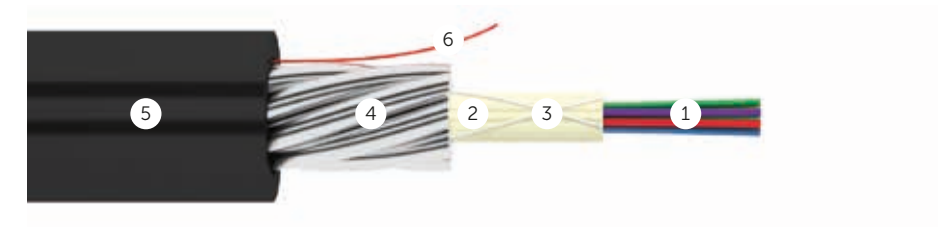
Parameters

- Up to 96 fibres
- Maximum rated design tension up to 1.5 kN
- Crush — 0.7 kN /cm

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Central tube (CT) galvanized steel wires (GSW)

Ducting CT GSW



Cable design

- 1. Optical fibre
- 2. Gel-filled loose tube
- 3. Water-swellable yarns
- 4. Armor of galvanized steel wires
- 5. Jacket
- 6. Ripcord

Click here to see detailed features of this design

Features

Cost-effective design

Excellent rodent resistance

Reduced weight and size

100% waterproof

Parameters

- Up to 24 fibres
- Maximum rated design tension up to 2.7 kN
- Crush — 0.7 kN /cm

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Direct Buried



Direct buried installation



Pulling into underground ducts and sewer pipes. Installation into indoor/outdoor cable conduits and trays



Installation along bridges, tunnels and other structures

Operating parameters

Operating temperature	-40°C...+70°C
Installation temperature	-10°C...+50°C
Transportation and storage temperature	-40°C...+70°C
Minimum bending radius	15 x cable diameter
Design life	25 years

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specifications.



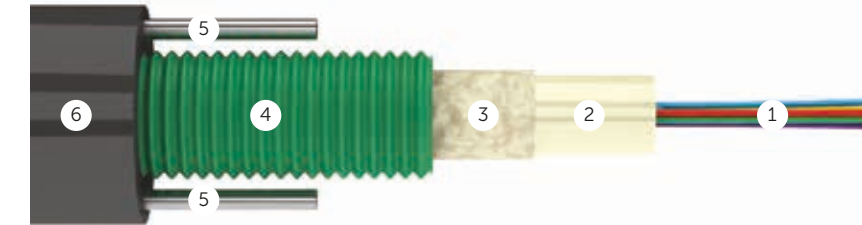
Discover more

Central tube (CT) corrugated steel tape (CST)

Direct Buried CT CST Light



Click here to see detailed features of this design



Cable design

1. Optical fibre
2. Gel-filled loose tube
3. Water-blocking gel
4. Corrugated steel tape armor
5. Steel wires
6. Jacket

Features



Cost-effective design



Excellent rodent resistance



Reduced weight and size

Parameters

- Up to 24 fibres
- Maximum rated design tension up to 2.7 kN
- Crush – 0.5 kN /cm

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification – info@emcab.co

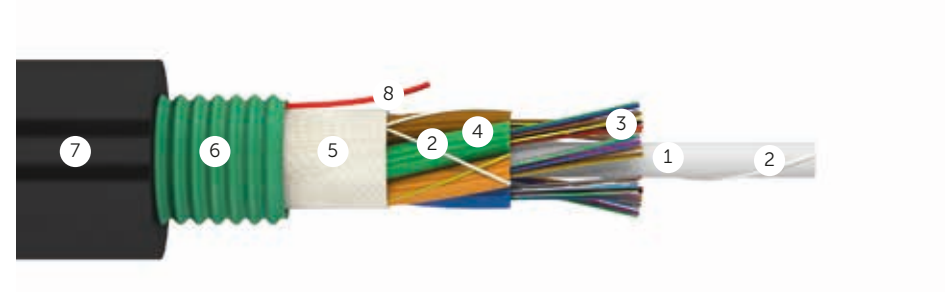


Direct Buried

Multi-tube (MT) corrugated steel tape (CST)

Direct Buried MT CST

 [Click here to see detailed features of this design](#)



Cable design

1. Central strength member (FRP rod)
2. Water-swellable yarns
3. Optical fibre
4. Gel-filled loose tube
5. Water-swellable tape
6. Corrugated steel tape armor
7. Jacket
8. Ripcord

Parameters

- Up to 432 fibres
- Maximum rated design tension up to 2.7 kN
- Crush – 0.22 kN /cm

Features

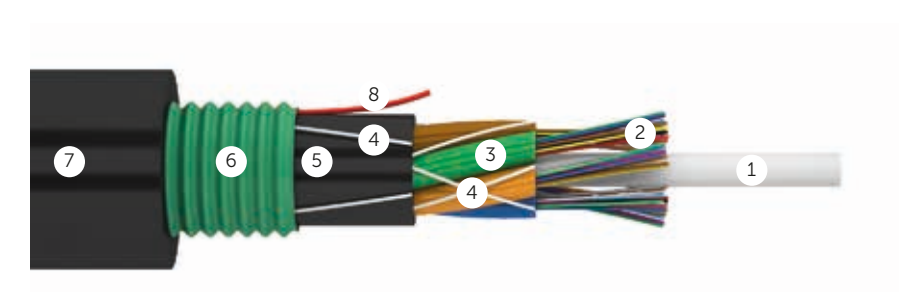
-  Cost-effective design
-  Excellent rodent resistance
-  Reduced weight and size
-  Increased tightness due to application of water-swellable tape

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Multi-tube (MT) corrugated steel tape (CST) double jacket (DJ)

Direct Buried MT CST DJ

 [Click here to see detailed features of this design](#)






Cable design

1. Central strength member (FRP rod)
2. Optical fibre
3. Gel-filled loose tube
4. Water-swellable yarns
5. Inner jacket
6. Corrugated steel tape armor
7. Jacket
8. Ripcord

Parameters

- Up to 432 fibres
- Maximum rated design tension up to 2.7 kN
- Crush – 0.22 kN /cm

Features

-  Improved reliability due to inner jacketing
-  Excellent rodent resistance
-  Proven reliable design

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

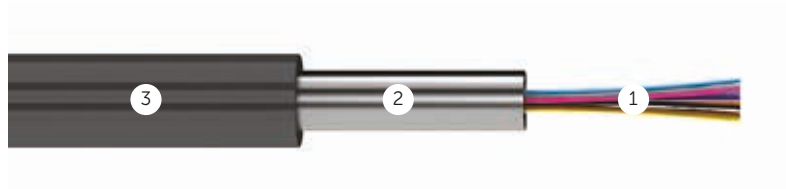
Direct Buried

Direct Buried

Stainless steel tube (SST)

Direct Buried SST

 Click here to see detailed features of this design



Cable design

1. Optical fibre
2. Steel tube
3. Jacket

Features



The smallest diameter



Excellent rodent resistance



100% waterproof

Parameters

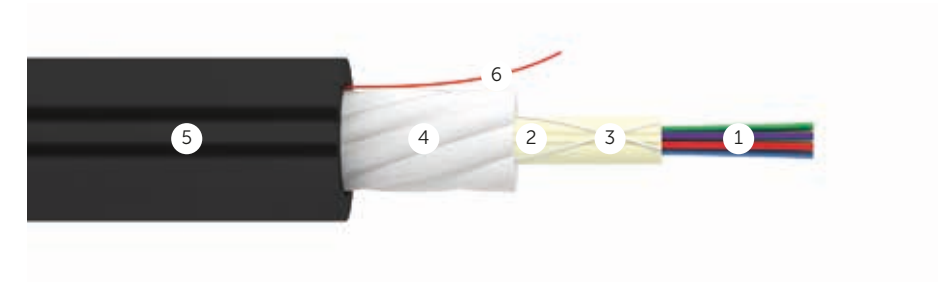
- Up to 96 fibres
- Maximum rated design tension up to 1.5 kN
- Crush — 0.7 kN /cm

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Central tube (CT) fibreglass rods (FRP)

Direct Buried CT FRP

 Click here to see detailed features of this design



Cable design

1. Optical fibre
2. Gel-filled loose tube
3. Water-swellable yarns
4. Fibreglass rods
5. Jacket
6. Ripcord

Features



Reliable protection from serious mechanical impact



Excellent rodent resistance



Reduced weight and size



All-dielectric design

Parameters

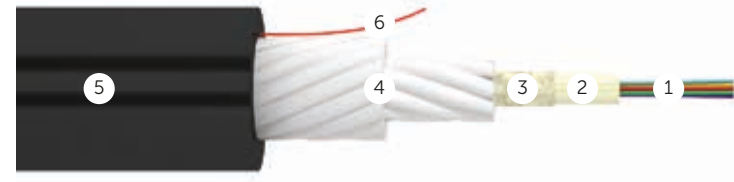
- Up to 24 fibres
- Maximum rated design tension up to 12 kN
- Crush — 0.7 kN /cm

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Central tube (CT) fibreglass rods (FRP) double armor

Direct Buried CT FRP2

 [Click here to see detailed features of this design](#)




Cable design

1. Optical fibre
2. Gel-filled loose tube
3. Water-blocking gel
4. Double armor of fibreglass rods
5. Jacket
6. Ripcord

Features

 Suitable for application in harsh environments

 All-dielectric design

 Reduced weight and size

Parameters

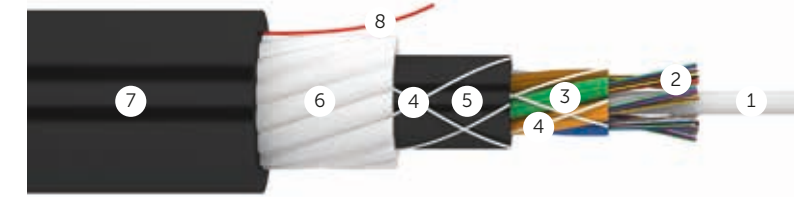
- Up to 24 fibres
- Maximum rated design tension up to 30 kN
- Crush up to 1 kN /cm

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Multi-tube (MT) fibreglass rods (FRP) double jacket

Direct Buried MT FRP


 [Click here to see detailed features of this design](#)




Cable design


1. Central strength member (FRP rod)
2. Optical fibre
3. Gel-filled loose tube
4. Water-swellable yarns
5. Inner jacket
6. Fibreglass rods
7. Jacket
8. Ripcord

Features

 Reliable protection from serious mechanical impact

 Excellent rodent resistance

 All-dielectric design

 Reduced weight, suitable for aerial installation

Parameters

- Up to 432 fibres
- Maximum rated design tension up to 20 kN
- Crush up to 1 kN /cm

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

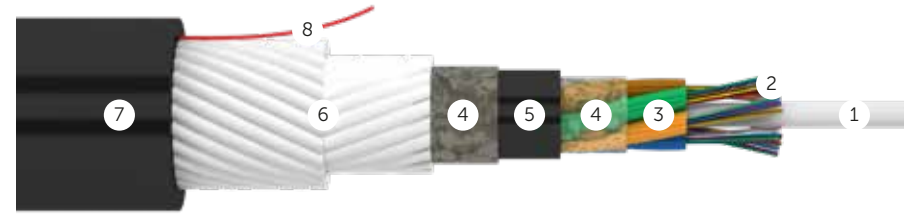
Direct Buried

Direct Buried

Multi-tube (MT) fibreglass rods (FRP) double armor double jacket

Direct Buried MT FRP2

 [Click here to see detailed features of this design](#)



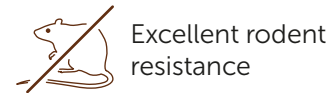
Cable design

1. Central strength member (FRP rod)
2. Optical fibre
3. Gel-filled loose tube
4. Water-blocking gel
5. Inner jacket
6. Double armor of fibreglass rods
7. Jacket
8. Ripcord

Parameters

- Up to 432 fibres
- Maximum rated design tension up to 40 kN
- Crush — 1 kN /cm

Features



Excellent rodent resistance



All-dielectric design



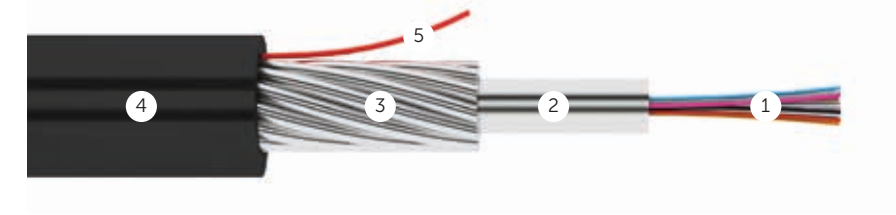
Applied in harsh environments with potential mechanical impact: in all ground types, swamps and harsh rivers

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Stainless steel tube (SST) galvanized steel wires (GSW)

Direct Buried SST GSW

 [Click here to see detailed features of this design](#)



Cable design

1. Optical fibre
2. Gel-filled stainless steel tube
3. Armor of galvanized steel wires
4. Jacket
5. Ripcord

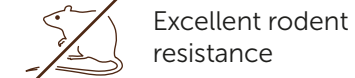
Parameters

- Up to 96 fibres
- Maximum rated design tension up to 40 kN
- Crush — 1 kN /cm

Features



100% waterproof



Excellent rodent resistance

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

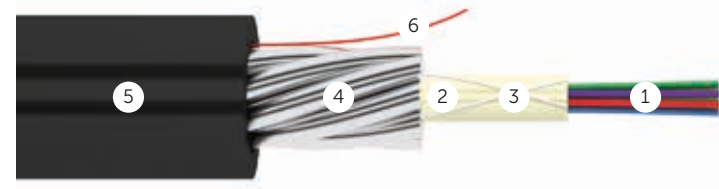
Direct Buried

Direct Buried

Central tube (CT) galvanized steel wires (GSW)

Direct Buried CT GSW

 [Click here to see detailed features of this design](#)







Cable design

1. Optical fibre
2. Gel-filled loose tube
3. Water-swellable yarns
4. Armor of galvanized steel wires
5. Jacket
6. Ripcord

Parameters

- Up to 24 fibres
- Maximum rated design tension up to 20 kN
- Crush — 0.7 kN /cm

Features

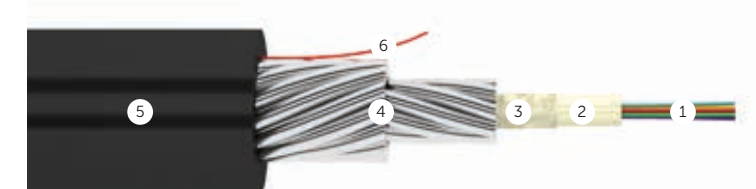
-  Cost-effective design
-  Excellent rodent resistance
-  Reduced weight and size
-  Reliable protection from serious mechanical impact

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Central tube (CT) galvanized steel wires (GSW) double armor

Direct Buried CT GSW2

 [Click here to see detailed features of this design](#)




Cable design

1. Optical fibre
2. Gel-filled loose tube
3. Water-blocking gel
4. Double armor of galvanized steel wires
5. Jacket
6. Ripcord

Parameters

- Up to 24 fibres
- Maximum rated design tension up to 80 kN
- Crush up to 1 kN /cm

Features

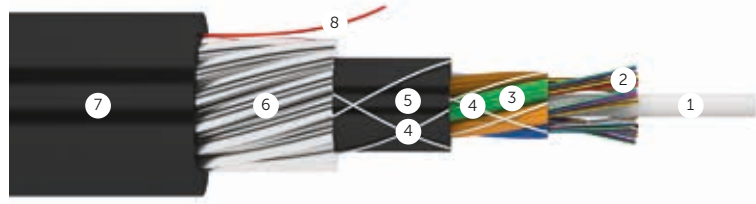
-  Excellent rodent resistance
-  Suitable for harsh environment applications

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Multi-tube (MT) galvanized steel wires (GSW) double jacket

Direct Buried MT GSW

 Click here to see detailed features of this design



Cable design

1. Central strength member (FRP rod)
2. Optical fibre
3. Gel-filled loose tube
4. Water-swellable yarns
5. Inner jacket
6. Armor of galvanized steel wires
7. Jacket
8. Ripcord

Features



Reliable protection from serious mechanical impact



Excellent rodent resistance

Parameters

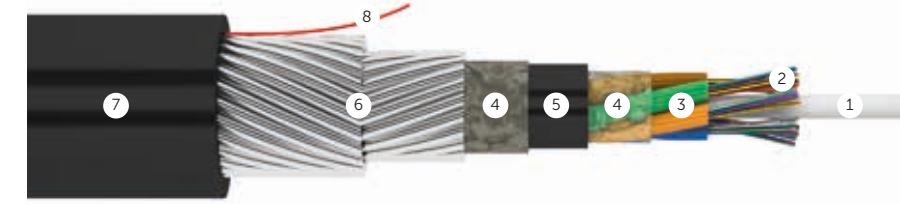
- Up to 432 fibres
- Maximum rated design tension up to 80 kN
- Crush up to 1 kN /cm

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Multi-tube (MT) galvanized steel wires (GSW) double armor double jacket

Direct Buried MT GSW2

 Click here to see detailed features of this design



Cable design

1. Central strength member (FRP rod)
2. Optical fibre
3. Gel-filled loose tube
4. Water-blocking gel
5. Inner jacket
6. Double armor of galvanized steel wires
7. Jacket
8. Ripcord

Features



Excellent rodent resistance



Applied in harsh environments with potential mechanical impact: in all ground types, swamps and harsh rivers

Parameters

- Up to 288 fibres
- Maximum rated design tension up to 80 kN
- Crush — 1 kN /cm

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

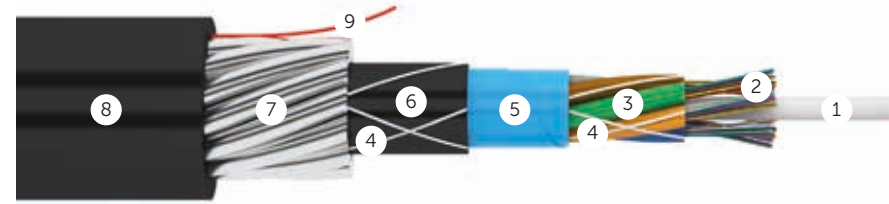
Direct Buried

Direct Buried

Multi-tube (MT) galvanized steel wires (GSW)

Direct Buried MT GSW Special

 Click here to see detailed features of this design




Cable design


1. Central strength member (FRP rod)
2. Optical fibre
3. Gel-filled loose tube
4. Water-swellable yarns
5. Aluminum and polymer tape
6. Inner jacket
7. Armor of galvanized steel wires
8. Jacket
9. Ripcord


Parameters

- Up to 432 fibres
- Maximum rated design tension up to 80 kN
- Crush up to 1 kN /cm

Features

 Aluminum and polymer tape protects the cable core from moisture

 Excellent solution for wetland and cross-river installation

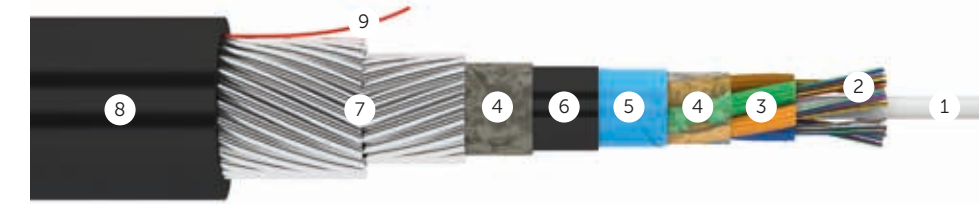
 Aluminum and polymer tape protects optical fibre from hydrogen penetration

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Multi-tube (MT) galvanized steel wires (GSW) double armor

Direct Buried MT GSW2 Special

 Click here to see detailed features of this design




Cable design


1. Central strength member (FRP rod)
2. Optical fibre
3. Gel-filled loose tube
4. Water-blocking gel
5. Aluminum and polymer tape
6. Inner jacket
7. Double armor of galvanized steel wires
8. Jacket
9. Ripcord


Parameters

- Up to 288 fibres
- Maximum rated design tension up to 80 kN
- Crush — 1 kN /cm

Features

 Aluminum and polymer tape protects the cable core from moisture

 Excellent solution for wetland and cross-river installation

 Suitable for application in harsh environments

 Aluminum and polymer tape protects optical fibre from hydrogen penetration

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Submarine



Underwater installation



Direct buried installation

Operating parameters

Operating temperature	-50°C...+70°C
Installation temperature	-30°C...+50°C
Transportation and storage temperature	-50°C...+70°C
Minimum bending radius	15 x cable diameter
Design life	25 years

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specifications.



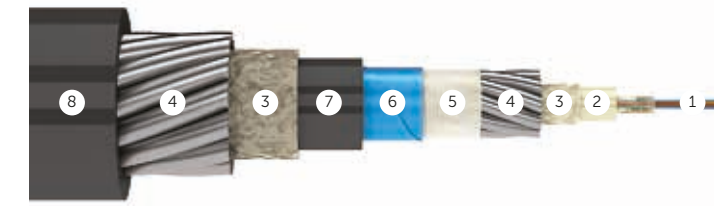
Discover more

Central tube (CT) galvanized steel wires (GSW) double armor

Submarine CT GSW2



Click here to see detailed features of this design



Cable design

1. Optical fibre
2. Gel-filled loose tube
3. Water-blocking gel
4. Armor of galvanized steel wires
5. Water-swellable tape
6. Aluminum and polymer tape
7. Inner jacket
8. Jacket

Features



Installation down to 2500 m



Suitable for application in harsh environments

Parameters

- Up to 24 fibres
- Maximum rated design tension up to 70 kN
- Crush – 1.5 kN /cm

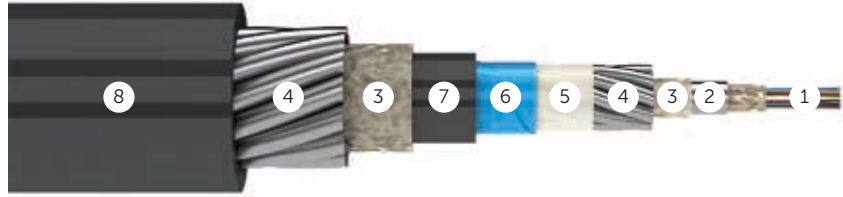
We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Stainless steel tube (SST) galvanized steel wires (GSW) double armor

Submarine SST GSW2



[Click here to see detailed features of this design](#)



Cable design

1. Optical fibre
2. Gel-filled steel tube
3. Water-blocking gel
4. Armor of galvanized steel wires
5. Water-swellable tape
6. Aluminum and polymer tape
7. Inner jacket
8. Jacket

Parameters

- Up to 96 fibres
- Maximum rated design tension up to 85 kN
- Crush — 1.5 kN /cm

Features



Installation down to 5000 m



Suitable for application in harsh environments

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com



Submarine

Aerial



Aerial installation between poles and buildings



Aerial installation on powerlines



Pulling into underground ducts and sewer pipes. Installation into indoor/outdoor cable conduits and trays



Installation along bridges, tunnels and other structures

Operating parameters

Operating temperature	-50°C...+70°C *-60°C ... +70°C
Installation temperature	-30°C...+70°C
Transportation and storage temperature	-50°C...+70°C
Minimum bending radius	from 10 x cable diameter
Design life	25 years

*Upon request

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specifications.



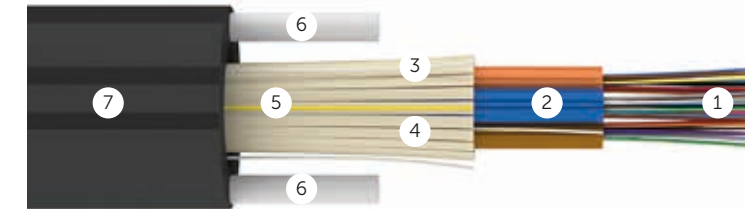
Discover more

Fibreglass yarns soft tubes

Aerial FiberGlass Soft Tubes



Click here to see detailed features of this design



Cable design

1. Optical fibre
2. Gel-filled soft tube
3. Water-swellaable yarns
4. Fibreglass yarns
5. Ripcord
6. FRP rod
7. Jacket

Features



All-dielectric design



Easy strippable micro tubes



Suitable for ducting application

Parameters

- Up to 432 fibres
- Maximum rated design tension up to 1.5 kN

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

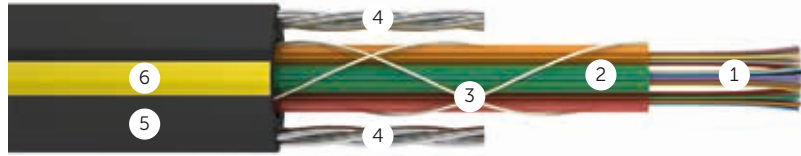


Aerial

Ultra-light weight (ULW) compact fibre unit (CFU)

Aerial ULW CFU

 [Click here to see detailed features of this design](#)



Cable design

1. Optical fibre
2. Compact fibre unit (CFU)
3. Water-swellable yarns
4. Strength member (brass coated steel wires)
5. Jacket
6. Extruded strip

Parameters

- Up to 96 fibres
- Maximum rated design tension up to 1.25 kN
- Crush — 2 kN/cm

Features



Aerial installation on distribution lines up to 11 kV



Easy strippable design




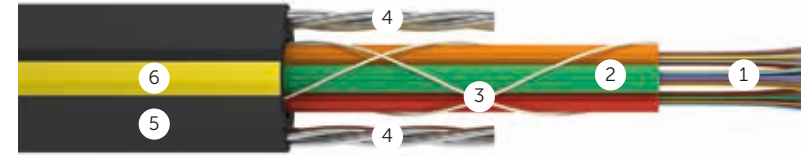
Ultra-light weight

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Ultra-light weight (ULW) soft tubes

Aerial ULW Soft Tubes

 [Click here to see detailed features of this design](#)



Cable design

1. Optical fibre
2. Gel-filled soft tubes
3. Water-swellable yarns
4. Strength member (brass coated steel wires)
5. Jacket
6. Extruded strip

Parameters

- Up to 96 fibres
- Maximum rated design tension up to 1.25 kN
- Crush — 2 kN/cm

Features



Aerial installation on distribution lines up to 11 kV




Easy strippable design

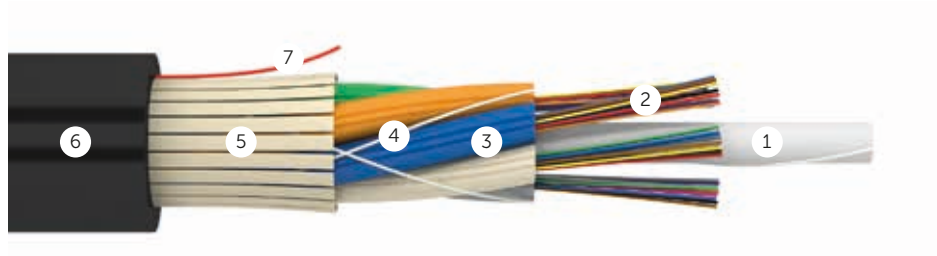


Ultra-light weight

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Aerial FiberGlass

 [Click here to see detailed features of this design](#)










Cable design

1. Central strength member (FRP rod)
2. Optical fibre
3. Gel-filled loose tube
4. Water-swellable yarns
5. Fibreglass yarns
6. Jacket
7. Ripcord

Parameters


- Up to 432 fibres
- Maximum rated design tension up to 10 kN
- Crush — 0.22 kN /cm

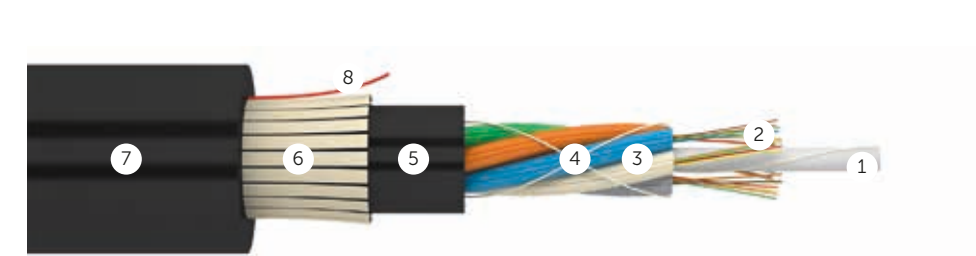
Features

 Aerial installation on distribution and transmission lines up to 35 kV	 Maximum rated design tension up to 10 kN with span lengths up to 200 meters
 Low susceptibility to ice and wind loads	 Reduced weight and size
 All-dielectric design	 Cost-effective design
 Wide range of operating temperatures. Installation temperature down to -30°C	

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Aerial FiberGlass DJ

 [Click here to see detailed features of this design](#)









Cable design

1. Central strength member (FRP rod)
2. Optical fibre
3. Gel-filled loose tube
4. Water-swellable yarns
5. Inner jacket
6. Fibreglass yarns
7. Jacket
8. Ripcord

Parameters


- Up to 432 fibres
- Maximum rated design tension up to 15 kN
- Crush — 0.22 kN /cm

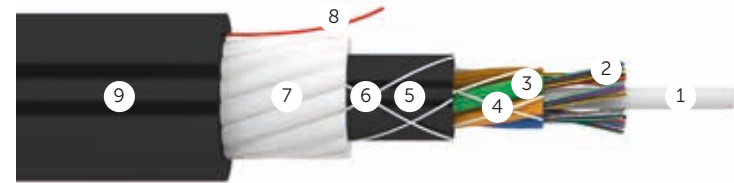
Features

 Aerial installation on distribution and transmission lines of 35 kV and above with tracking-resistant jacket	 Cost-effective solution for city trunk lines
 Maximum rated design tension up to 15 kN with span lengths up to 300 meters	 Wide range of operating temperatures. Installation temperature down to -30°C
 All-dielectric design	 Fibreglass yarns prevent damage by rodents

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Aerial Defender

 [Click here to see detailed features of this design](#)



Cable design

1. Central strength member (FRP rod)
2. Optical fibre
3. Gel-filled loose tube
4. Water-swellable yarns
5. Inner jacket
6. Water-swellable yarns
7. FRP rods
8. Ripcord
9. Jacket

Parameters


- Up to 432 fibres
- Maximum rated design tension up to 20 kN
- Crush up to 1 kN /cm

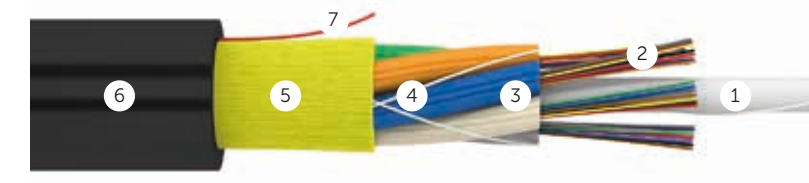
Features

-  Anti-rodent additive in the outer jacket for first-line protection
-  Superior protection from mechanical damage — FRP rods provide strength and second-line protection
-  Completely protected from water ingress
-  All-dielectric design

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Aerial Aramid

 [Click here to see detailed features of this design](#)









Cable design

1. Central strength member (FRP rod)
2. Optical fibre
3. Gel-filled loose tube
4. Water-swellable yarns
5. Aramid yarns
6. Jacket
7. Ripcord

Parameters


- Up to 432 fibres
- Maximum rated design tension up to 10 kN
- Crush — 0.22 kN /cm

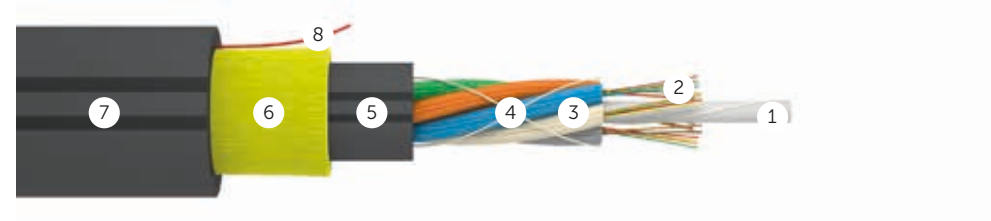
Features

-  Aerial installation on distribution and transmission lines up to 35 kV
-  Maximum rated design tension up to 10 kN with span lengths up to 200 meters
-  Low susceptibility to ice and wind loads
-  Reduced weight and size
-  Wide range of operating temperatures. Installation temperature down to -30°C
-  All-dielectric design

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Aerial Aramid DJ

 [Click here to see detailed features of this design](#)




Cable design


1. Central strength member (FRP rod)
2. Optical fibre
3. Gel-filled loose tube
4. Water-blocking gel
5. Inner jacket
6. Aramid yarns
7. Jacket
8. Ripcord

Parameters


- Up to 432 fibres
- Maximum rated design tension up to 100 kN
- Crush — 0.22 kN /cm


Features

 Aerial installation on distribution and transmission lines of 35 kV and above with tracking-resistant jacket

 The most reliable among Aerial cables. Double tensile strength

 All-dielectric design

 For construction of communication lines between towns and cities with distances between towers reaching 500 meters

 Wide range of operating temperatures. Installation temperature down to -30°C

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com



Indoor



Installation into indoor/outdoor cable conduits and trays



Pulling into underground ducts and sewer pipes



Installation along bridges, tunnels and other structures

Operating parameters

Operating temperature	-40°C...+60°C
Installation temperature	-10°C...+50°C
Transportation and storage temperature	-50°C...+50°C
Minimum bending radius	10 x cable diameter
Design life	25 years

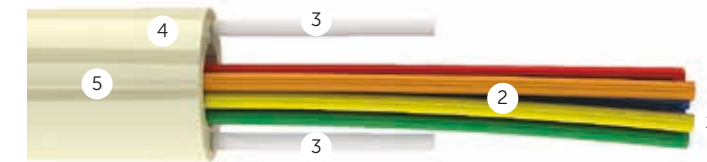
We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specifications.



Discover more

Riser tight-buffered (TB)

Riser TB



Click here to see detailed features of this design

Cable design

1. Optical fibre
2. Tight buffer
3. FRP rod
4. Halogen-free flame-retardant jacket
5. Match marks (jacket opening marking)

Features



Euroclass B2ca confirmed



Perfect solution for high buildings: the fibre is buffered up to floor box or up to the subscriber's flat



Flame-retardant



Easy access to the fibre at any place of the cable



All-dielectric design



UV-resistant



Operation temperature range down to -30°C

Parameters

- Up to 48 fibres
- Maximum rated design tension up to 400 N
- Crush — 80 N/cm

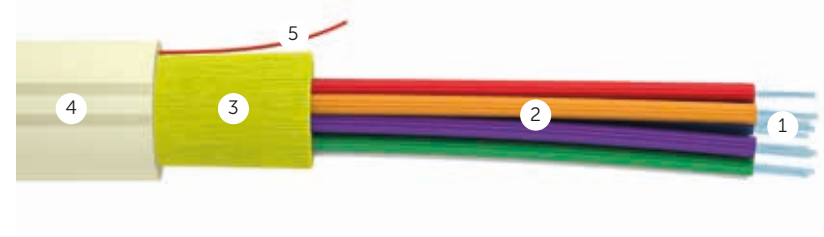
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Indoor

Distribution tight-buffered (TB)

Distribution TB










 [Click here to see detailed features of this design](#)

Cable design

1. Optical fibre
2. Tight buffer
3. Aramid yarns
4. Halogen-free flame-retardant jacket
5. Ripcord

Features

-  Euroclass B2ca confirmed
-  Easy termination
-  More flexible compared to Riser Cable
-  Flame-retardant
-  All-dielectric design
-  UV-resistant
-  Perfect solution for offices and data centers


Parameters

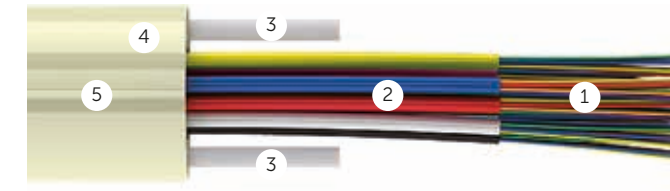
- Up to 48 fibres
- Maximum operation tension up to 800 N
- Maximum rated design tension up to 1600 N
- Crush — 100 N/cm

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Riser micro tube (MT)

Riser MT









 [Click here to see detailed features of this design](#)



Cable design

1. Optical fibre
2. Micro tubes
3. FRP rod
4. Halogen-free flame-retardant jacket
5. Match marks (jacket opening marking)

Features

-  Euroclass Eca confirmed
-  All-dielectric design
-  Operation temperature down to -30°C
-  Easy access to fibre at any place of the cable
-  Flame-retardant
-  UV-resistant
-  Perfect solution for multi-dwelling units
-  High density of fibres makes it possible to bundle up to 24 fibres into micro loose tubes and place up to 48 micro loose tubes in a cable

Parameters

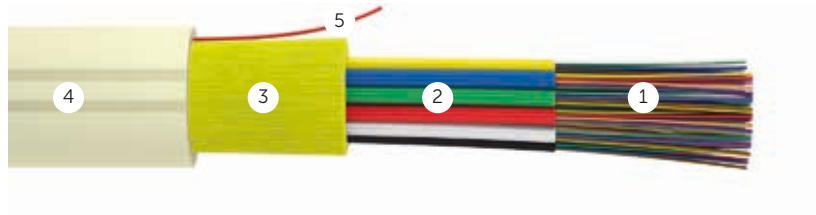
- Up to 1152 fibres
- Maximum rated design tension up to 400 N
- Crush — 80 N/cm

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Distribution micro tube (MT)

Distribution MT

 [Click here to see detailed features of this design](#)



Cable design

1. Optical fibre
2. Micro tubes
3. Aramid yarns
4. Halogen-free flame-retardant jacket
5. Ripcord

Features



All-dielectric design



Flame-retardant



High density of fibres makes it possible to bundle up to 24 fibres into micro loose tubes and place up to 48 micro loose tubes in a cable



UV-resistant


Parameters

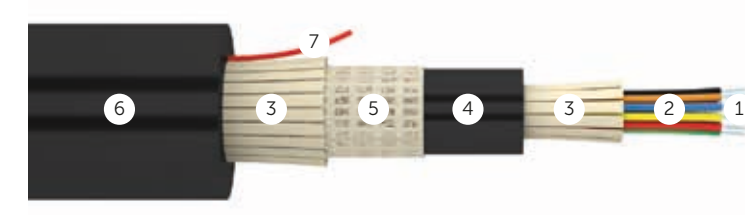
- Up to 288 fibres
- Maximum operation up to 800 N
- Maximum installation up to 1600 N
- Crush – 100 N/cm

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Tight-buffered double jacket

Distribution Fire Rated

 [Click here to see detailed features of this design](#)



Cable design

1. Optical fibre
2. Tight buffer
3. Fibreglass yarns
4. Inner jacket made of halogen-free flame-retardant polymer compound
5. Mica glass tape
6. Halogen-free jacket
7. Ripcord

Features



Remains functional under direct flame for at least 180 minutes



Easy to install



All-dielectric design



UV-resistant

Parameters

- Up to 24 fibres
- Maximum rated design tension up to 1100 N
- Crush – 200 N/cm

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com



Indoor

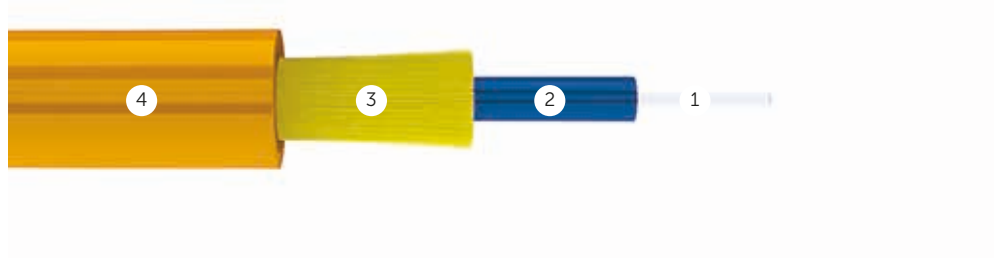


Indoor

Tight-buffered aramid yarns

Simplex

 [Click here to see detailed features of this design](#)



Cable design

1. Optical fibre
2. Tight buffer
3. Aramid yarns
4. Halogen-free flame-retardant jacket

Features



Euroclass B2ca confirmed



Flame-retardant



Cable can be terminated with a standard connector



UV-resistant



Compact and flexible



Perfect solution for patch cords manufacturing




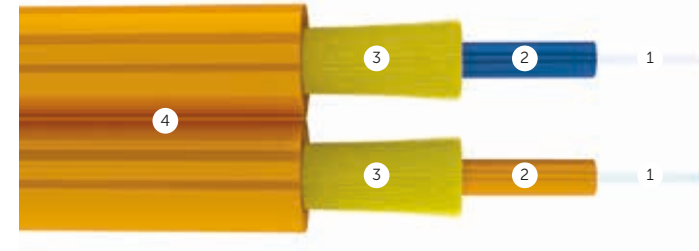
All-dielectric design

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Tight-buffered aramid yarns

Duplex

 [Click here to see detailed features of this design](#)



Cable design

1. Optical fibre
2. Tight buffer
3. Aramid yarns
4. Halogen-free flame-retardant jacket

Features



All-dielectric design



Flame-retardant



Cable can be terminated with a standard connector



UV-resistant



Compact and flexible



Perfect solution for patch cords manufacturing

Parameters

- Maximum rated design tension 180 N
- Crush — 50 N/cm

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Drop



Aerial installation between poles and buildings



Installation along bridges, tunnels and other structures



Pulling into underground ducts and sewer pipes. Installation into indoor/outdoor cable conduits and trays

Operating parameters

Operating temperature	-50°C...+70°C
Installation temperature	-10°C...+50°C
Transportation and storage temperature	-50°C...+70°C
Minimum bending radius	15 x cable diameter
Design life	25 years

We design cables based on our Customers' specific technical Requirements. Please, contact us for a cable designed to your exact specifications.

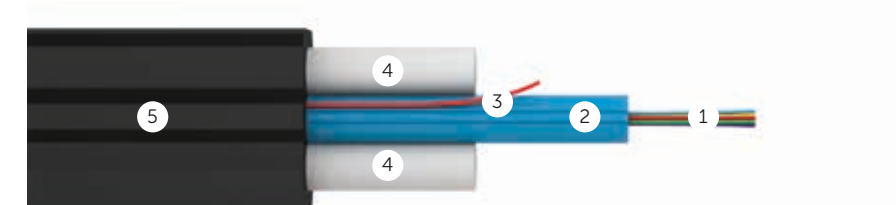


Discover more

Flat Type Drop



Click here to see detailed features of this design



Cable design

1. Optical fibre
2. Gel-filled loose tube
3. Ripcord
4. FRP rod
5. Jacket

Features



All-dielectric design



Reduced weight and size



Operating temperature range down to -40°C


Parameters

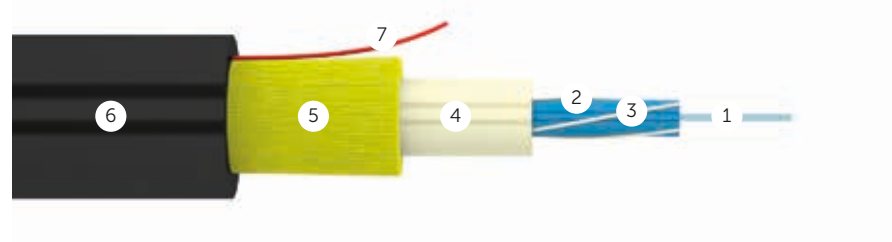
- Up to 24 fibres
- Maximum rated design tension up to 3 kN
- Crush – 1 kN/cm

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com



Round Type Drop TB

 [Click here to see detailed features of this design](#)



Cable design

1. Optical fibre
2. Tight buffer
3. Water-swellable yarns
4. PBT loose tube
5. Aramid yarns
6. Jacket
7. Ripcord

Features



All-dielectric design



Reduced weight and size



Cost-effective design

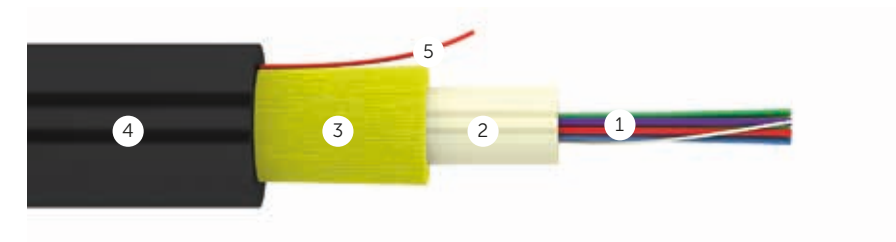
Parameters

- Maximum rated design tension 2 kN
- Crush — 0.3 kN/cm

We design cables based on our Customers' specific technical requirements.
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Round Type Drop

 [Click here to see detailed features of this design](#)



Cable design

1. Optical fibre
2. Gel-filled loose tube
3. Aramid yarns
4. Jacket
5. Ripcord

Features



All-dielectric design



Reduced weight and size



Cost-effective design

Parameters

- Up to 24 fibres
- Maximum rated design tension up to 2 kN
- Crush — 0.13 kN/cm

We design cables based on our Customers' specific technical requirements.
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OPGW / Ground Wire



Installation on medium and high-voltage power lines to protect phase conductors from direct lightning strikes



Used for distributed acoustic and temperature monitoring (DAS, DTS) to prevent third-party intervention, detect place of lightning strike and short circuit



Discover more

Operating parameters

Operating temperature	-50°C...+85°C *-60°C ... +85°C
Installation temperature	-30°C...+50°C
Transportation and storage temperature	-50°C...+85°C
Minimum bending radius	20 × cable diameter
Design life	50 years

* Upon request

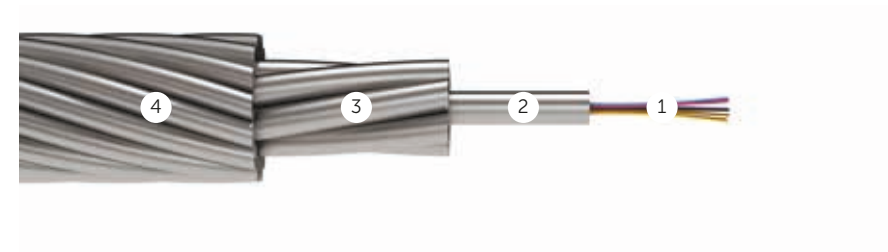
We design cables based on our Customers' specific technical Requirements. Please, contact us for a cable designed to your exact specifications.

Central tube (C)

OPGW C



Click here to see detailed features of this design



Cable design

1. Optical fibre
2. Gel-filled stainless steel tube
3. Stranded wires (aluminum-clad steel wires and/or aluminum alloy wires)
4. Stranded wires (aluminum-clad steel wires and/or aluminum alloy wires)

Features



Aluminum-clad steel wires are corrosion-resistant



Aluminum alloy wires shield the high-voltage conductors from lightning strikes

Parameters

- Up to 96 fibres
- Rated breaking strength up to 210 kN
- Maximum rated design tension up to 125 kN
- Crush — 1 kN/cm

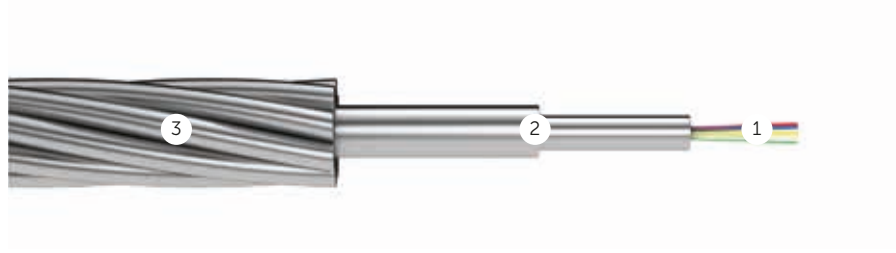
We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com



Aluminum-clad (CA) central tube

OPGW CA

 Click here to see detailed features of this design



Cable design

1. Optical fibre
2. Aluminum-clad stainless steel tube filled with water-blocking gel
3. Stranded wires (aluminum-clad steel wires and/or aluminum alloy wires)

Parameters

- Up to 96 fibres
- Rated breaking strength up to 210 kN
- Maximum rated design tension up to 125 kN
- Crush — 1.5 kN/cm

Features



Highly corrosion-resistant: ACS wires and aluminum-clad stainless steel tube



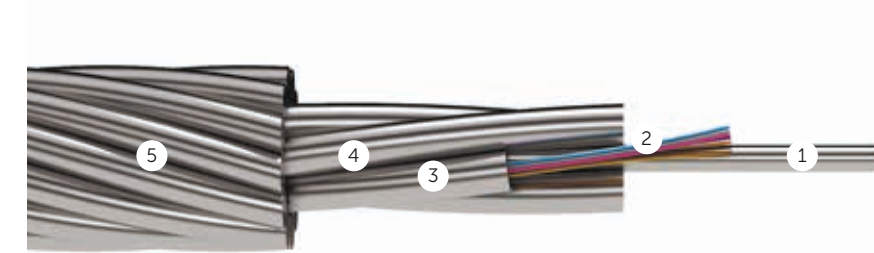
Aluminum alloy wires shield the high-voltage conductors from lightning strikes

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Stranded (S) steel tube

OPGW S

 Click here to see detailed features of this design



Cable design

1. Central strength member (aluminum-clad steel wires or aluminum alloy wires)
2. Optical fibre
3. Stainless steel tube filled with water-blocking gel
4. Stranded wires (aluminum-clad steel wires and/or aluminum alloy wires)
5. Stranded wires (aluminum-clad steel wires and/or aluminum alloy wires)

Parameters

- Up to 432 fibres
- Rated breaking strength up to 275 kN
- Maximum rated design tension up to 165 kN
- Crush — 1 kN/cm

Features



Aluminum-clad steel wires are corrosion-resistant



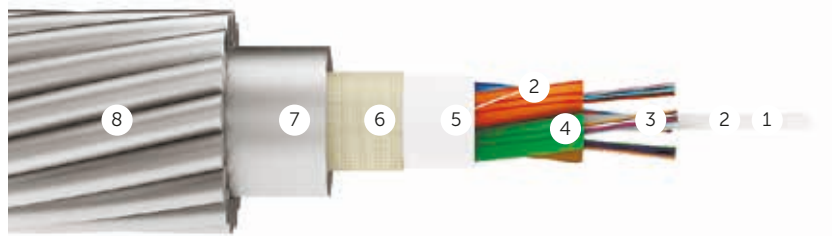
Aluminum alloy wires shield the high-voltage conductors from lightning strikes

We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

Aluminum pipe (AP)

OPGW AP

 [Click here to see detailed features of this design](#)





Cable design


1. Central strength member (FRP rod)
2. Water-swellable yarns
3. Optical fibre
4. Gel-filled loose tube
5. Water-swellable tape
6. Thermal barrier
7. Aluminum pipe
8. Aluminum-clad steel wires and/or aluminum alloy wires

Features

 Highly corrosion-resistant: ACS wires and aluminum pipe

 Aluminum alloy wires provide conductivity for fault current

 Convenient splice preparation

 Optical ground wire (OPGW) shields high-voltage conductors from lightning strikes


Parameters

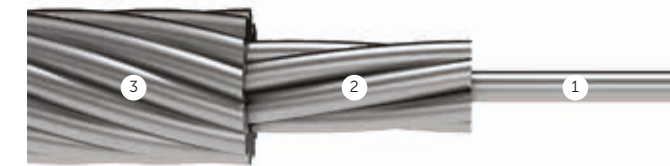
- Up to 144 fibres
- Rated breaking strength up to 210 kN
- Maximum rated design tension up to 125 kN
- Crush — 1 kN/cm

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Aluminum-clad steel wires

Ground Wire


 [Click here to see detailed features of this design](#)




Cable design

1. Central strength member (aluminum-clad steel wire)
2. Stranded wires (aluminum-clad steel wires and/or aluminum alloy wires)
3. Stranded wires (aluminum-clad steel wires and/or aluminum alloy wires)

Features

 Aluminum-clad steel wires are corrosion resistant

 Aluminum alloy wires shield the high-voltage conductors from lightning strikes


Parameters

- Rated breaking strength up to 700 kN

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Fire Rated

 Installation into indoor/outdoor cable conduits and trays

 Pulling into underground ducts and sewer pipes

 Installation along bridges, tunnels and other structures

 Direct buried installation

 Aerial installation between poles and buildings

 Aerial installation on powerlines

Operating parameters

Operating temperature	-50°C...+70°C
Installation temperature	-10°C...+50°C
Transportation and storage temperature	-50°C...+50°C
Minimum bending radius	from 10 x cable diameter
Design life	25 years

We design cables based on our Customers' specific technical Requirements. Please, contact us for a cable designed to your exact specifications.



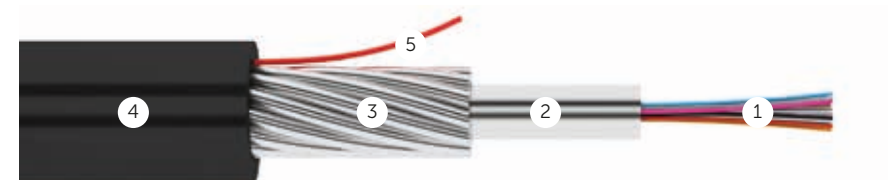
Discover more

Stainless steel tube halogen-free jacket design

Fire Rated Universal




Click here to see detailed features of this design





Cable design


1. Optical fibre
2. Stainless steel tube
3. Armor of steel wires
4. Halogen-free jacket
5. Ripcord


Features

 Remains functional under direct flame for at least 180 minutes

 Suitable for all applications

 Resistance to crushing load 1 kN/cm which is retained even after the fire

 Withstands the physical impact and water used during fire-fighting

 Small size – thin, light, economical

Parameters

- Up to 96 fibres
- Maximum rated design tension up to 7 kN
- Crush – 1 kN /cm

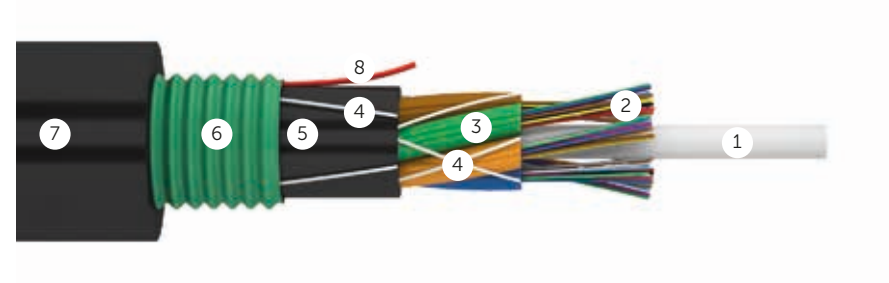
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Corrugated steel tape halogen-free jacket design

Fire Rated Outdoor


 [Click here to see detailed features of this design](#)





Cable design

1. Central strength member (FRP rod)
2. Optical fibre
3. Gel-filled loose tube
4. Water-swellable yarns
5. Inner jacket made of halogen-free flame-retardant polymer compound
6. Corrugated steel tape armor
7. Halogen-free jacket
8. Ripcord

Features

 Remains functional under direct flame for at least 180 minutes

 Easy to install

 Excellent rodent resistance

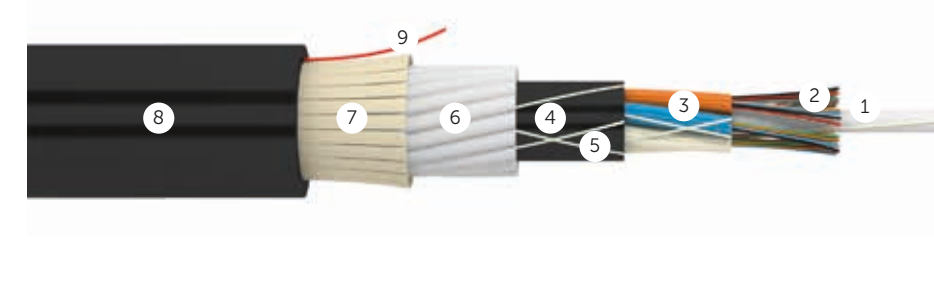
Parameters

- Up to 288 fibres
- Maximum rated design tension up to 2.7 kN
- Crush — 0.22 kN /cm

Fibreglass rods halogen-free jacket design

Fire Rated Universal Dielectric


 [Click here to see detailed features of this design](#)




Cable design

1. Central strength member (FRP rod)
2. Optical fibre
3. Gel-filled loose tube
4. Inner jacket made of halogen-free flame-retardant polymer compound
5. Water-swellable yarns
6. Fibreglass rods
7. Fibreglass yarns
8. Halogen-free jacket
9. Ripcord

Features

 Remains functional under direct flame for at least 180 minutes

 Suitable for all applications

 All-dielectric design

Parameters

- Up to 288 fibres
- Maximum rated design tension up to 7 kN
- Crush — 0.4 kN /cm

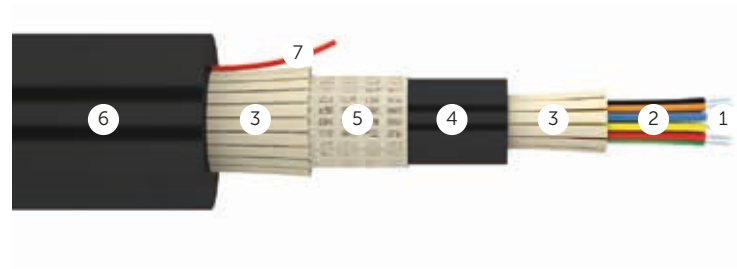
We design cables based on our Customers' specific technical requirements. Please, contact us for a cable designed to your exact specification — info@incabeurope.com

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Tight-buffered halogen-free jacket design

Fire Rated Dielectric

 [Click here to see detailed features of this design](#)



Cable design

1. Optical fibre
2. Tight buffer
3. Fibreglass yarns
4. Inner jacket made of halogen-free flame-retardant polymer compound
5. Mica glass tape
6. Halogen-free jacket
7. Ripcord

Features



Remains functional under direct flame for at least 180 minutes



Easy to install



All-dielectric design



UV resistance

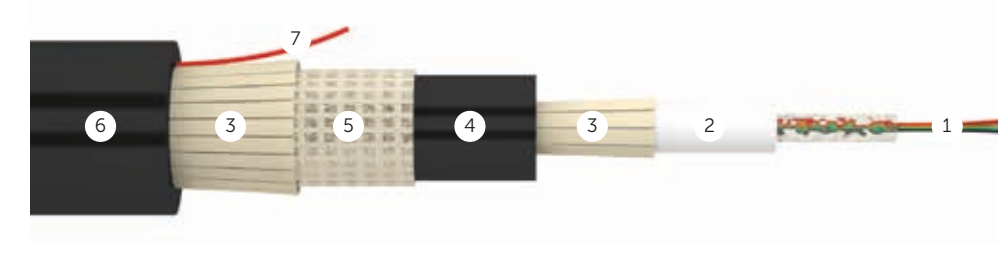
Parameters

- Up to 24 fibres
- Maximum rated design tension up to 1.1 kN
- Crush — 0.2 kN/cm

Central tube halogen-free jacket design

Fire Rated Dielectric Light

 [Click here to see detailed features of this design](#)



Cable design

1. Optical fibre
2. Gel-filled loose tube
3. Fibreglass yarns
4. Inner jacket made of halogen-free flame-retardant polymer compound
5. Mica glass tape
6. Halogen-free jacket
7. Ripcord

Features



Remains functional under direct flame for at least 180 minutes



All-dielectric design

Parameters


- Up to 24 fibres
- Maximum rated design tension up to 2 kN
- Crush — 0.2 kN /cm

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Technical Information

Here you can find useful links, unique free software, up-to-date parameters and color identification of optical fibres, guidelines for transportation, storage and maintenance of fibre optic cable, and other information designed to help you build a reliable optical communication system.

 Discover more
at incabeurope.com



Types and Parameters of Optical Fibre



Corning® fibre is used in all Incab Europe cables.
Its fibre attenuation is at least 10% lower than that of the other standard single-mode fibres.

It is 10-times more bend-resistant compared to other standard single-mode fibres,
and is 100%-compatible with other single-mode fibres.

We normally use Corning optical fibres in our cables, but we can also use fibres of other manufacturers on request.

Single-Mode Fibre

Fibre type	G.657.A1	G.657.A1	ULL	G.655.D	G.654.E	G.657.A2	G.657.B3
Product name	Corning® SMF-28® Ultra	Corning® SMF-28® Ultra 200	Corning® SMF-28® ULL	Corning® LEAF®	Corning® TXF®	Corning® ClearCurve® LBL	Corning® ClearCurve® ZBL
ITU-T recommendation	G.657.A1	G.657.A1	G.652.B / G.654.C	G.655.D	G.654.E	G.652.D / G.657.A2/B2	G.657.B3
Dimensional Specifications							
Core-Clad Concentricity	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5
Cladding Diameter	125.0 ± 0.7	125.0 ± 0.7	125.0 ± 0.7	125.0 ± 0.7	125.0 ± 0.7	125.0 ± 0.7	125.0 ± 0.7
Cladding Non-Circularity	≤ 0.7%	≤ 0.7%	≤ 0.7%	≤ 0.7%	≤ 0.7%	≤ 0.7%	≤ 0.7%
Coating Diameter	242 ± 5	242 ± 5	242 ± 5	242 ± 5	242 ± 5	242 ± 5	242 ± 5
Transmission Specifications							
Wavelength, nm	1310 - 1625	1310 - 1625	1310 - 1625	1550	1550 - 1625	1310 - 1625	1310 - 1625

Fibre type	G.657.A1	G.657.A1	ULL	G.655.D	G.654.E	G.657.A2	G.657.B3
Maximum Attenuation (dB/km):							
1310 nm wavelength	0.32	0.32	≤ 0.31	-	-	≤ 0.35	≤ 0.35
1383 nm wavelength	≤ 0.32	≤ 0.32	-	≤ 0.40	-	≤ 0.35	≤ 0.35
1490 nm wavelength	≤ 0.21	≤ 0.21	-	-	-	≤ 0.24	≤ 0.24
1550 nm wavelength	≤ 0.18	≤ 0.18	≤ 0.17	≤ 0.19	≤ 0.17	≤ 0.20	≤ 0.20
1625 nm wavelength	≤ 0.20	≤ 0.20	≤ 0.20	≤ 0.21	≤ 0.19	≤ 0.23	≤ 0.23
Dispersion ps/(nm*km)							
1550 nm wavelength	≤ 18	≤ 18	≤ 18	4	≤ 23	≤ 18	≤ 18
1625 nm wavelength	≤ 22	≤ 22	≤ 22	10	≤ 29	≤ 23	≤ 23
Polarization Mode Dispersion (PMD), ps/√km	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.2	≤ 0.2
Zero Dispersion	0.092	0.092	0.092	0.07	0.092	0.092	-
Zero Dispersion Wavelength, nm	1304 - 1324	1304 - 1324	1304 - 1324	-	1304 - 1324	1304 - 1324	-
Cable Cutoff Wavelength, nm	≤ 1260	≤ 1260	≤ 1260	≤ 1360	≤ 1520	≤ 1260	≤ 1260
Mode-Field Diameter (µm)							
1310 nm wavelength	9.2 ± 0.4	9.2 ± 0.4	9.2 ± 0.4	-	-	8.6 ± 0.4	8.6 ± 0.4
1550 nm wavelength	10.4 ± 0.5	10.4 ± 0.5	10.4 ± 0.5	9.6 ± 0.4	12.4 ± 0.5	9.6 ± 0.5	9.6 ± 0.5
Macrobend Loss, dB, λ=1550 nm/1625 nm							
(1 turn × R16 mm)	-	-	≤ 0.1 / -	≤ 0.50 / ≤ 0.50	-	-	-
(1 turn × R10 mm)	≤ 0.50 / ≤ 1.5	≤ 0.50 / ≤ 1.5	-	-	-	-	-
(1 turn × R7.5 mm)	-	-	-	-	-	≤ 0.4 / ≤ 0.8	-
(1 turn × R5 mm)	-	-	-	-	-	-	≤ 0.10 / ≤ 0.30
(100 turns × R25 mm)	-	-	-	-	≤ 0.1 / ≤ 0.1	-	-
(100 turns × R30 mm)	-	-	- / ≤ 0.05	≤ 0.05 / ≤ 0.05	-	-	-

Multimode Fibre

Fibre type	OM2	OM3	OM4	OM5	OM1
Product name	Corning® ClearCurve® OM2	Corning® ClearCurve® OM3	Corning® ClearCurve® OM4	Corning® ClearCurve® OM5	Corning® InfiniCor® 300
Standard	ITU-T G.651	ITU-T G.651	ITU-T G.651	ITU-T G.651	IEC 60793-2-10

Dimensional Specifications

Core Diameter	50.0 ± 2.5	50.0 ± 2.5	50.0 ± 2.5	50.0 ± 2.5	62.5 ± 2.5
Core-Clad Concentricity	≤ 1.5	≤ 1.5	≤ 1.5	≤ 1.5	≤ 1.5
Cladding Diameter	125.0 ± 1.0	125.0 ± 1.0	125.0 ± 1.0	125.0 ± 1.0	125.0 ± 2.0
Cladding Non-Circularity	≤ 1.0%	≤ 1.0%	≤ 1.0%	≤ 1.0%	≤ 1.0%
Coating Diameter	242 ± 5	242 ± 5	242 ± 5	242 ± 5	242 ± 5

Maximum Attenuation (dB/km)

850 nm wavelength	≤ 2.3	≤ 2.3	≤ 2.3	≤ 2.3	≤ 2.9
953 nm wavelength	-	-	-	≤ 1.7	-
1300 nm wavelength	≤ 0.6	≤ 0.6	≤ 0.6	≤ 0.6	≤ 0.6
Numerical Aperture	0.200 ± 0.015	0.200 ± 0.015	0.200 ± 0.015	0.200 ± 0.015	0.275 ± 0.015

Overfilled Bandwidth (MHz * km)

850 nm wavelength	700	1500	3500	3500	200
953 nm wavelength	-	-	-	1850	-
1300 nm wavelength	500	500	500	500	500

Effective Group Index of Retraction

850 nm wavelength	1.482	1.482	1.482	1.482	1.496
1300 nm wavelength	1.477	1.477	1.477	1.477	1.491

Fibre type	OM2	OM3	OM4	OM5	OM1
Fibre brand	Corning® ClearCurve® OM2	Corning® ClearCurve® OM3	Corning® ClearCurve® OM4	Corning® ClearCurve® OM5	Corning® InfiniCor® 300
Standard	ITU-T G.651	ITU-T G.651	ITU-T G.651	ITU-T G.651	IEC 60793-2-10

Attenuation to macrobending (2 turns on a bend former, radius of 15 mm), dB:

at a wavelength of 850 nm	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1	-
at a wavelength of 1300 nm	≤ 0.3	≤ 0.3	≤ 0.3	≤ 0.3	-

Attenuation to macrobending (2 turns on a bend former, radius of 7.5 mm), dB:

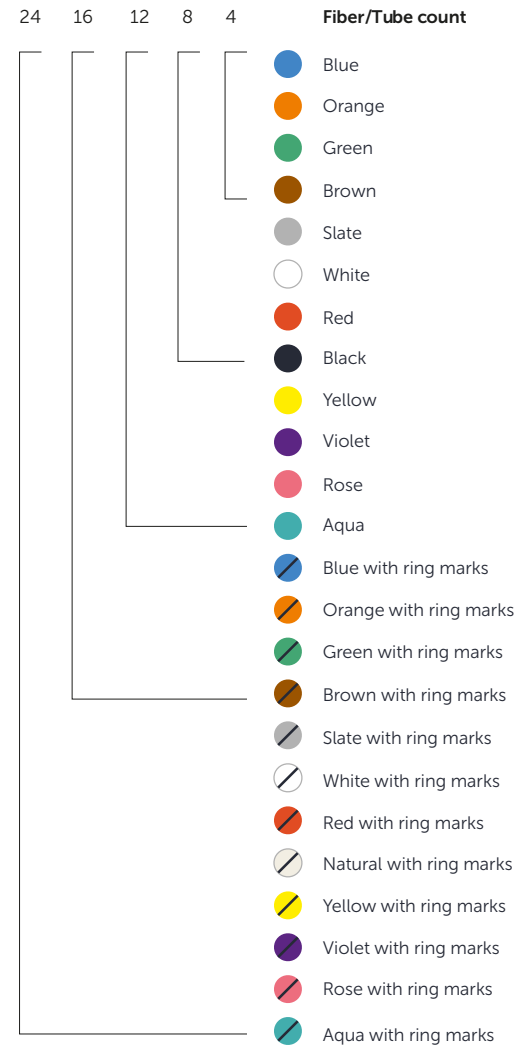
at a wavelength of 850 nm	≤ 0.2	≤ 0.2	≤ 0.2	≤ 0.2	-
at a wavelength of 1300 nm	≤ 0.5	≤ 0.5	≤ 0.5	≤ 0.5	-

Color Coding



We use all the main color coding systems.
Other color identifications are available on request.

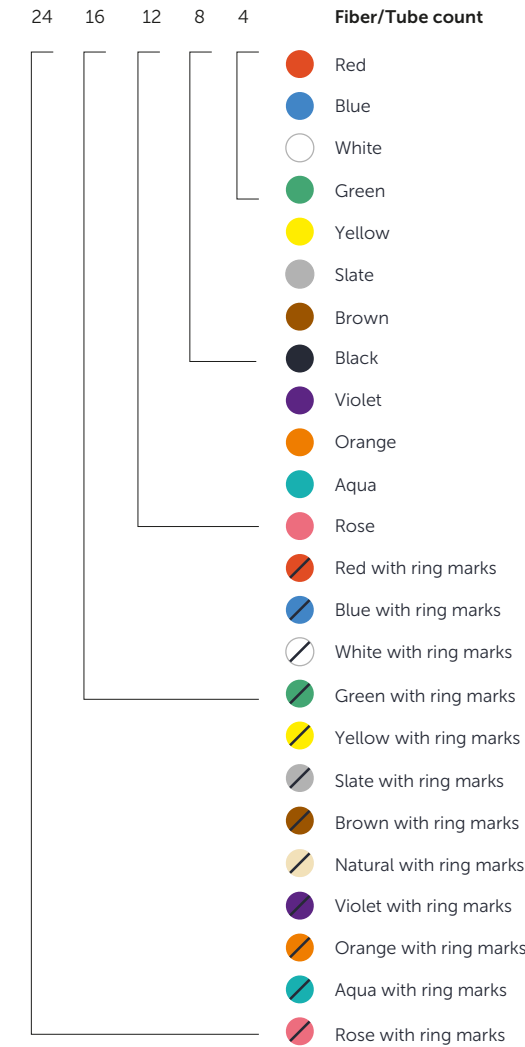
ANSI / TIA 598



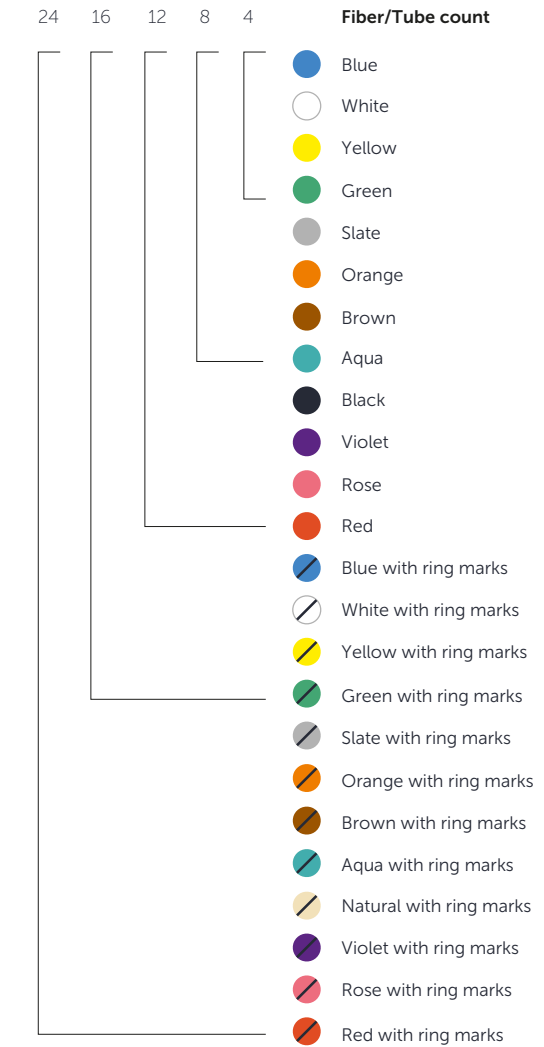
DIN VDE 0888



S12



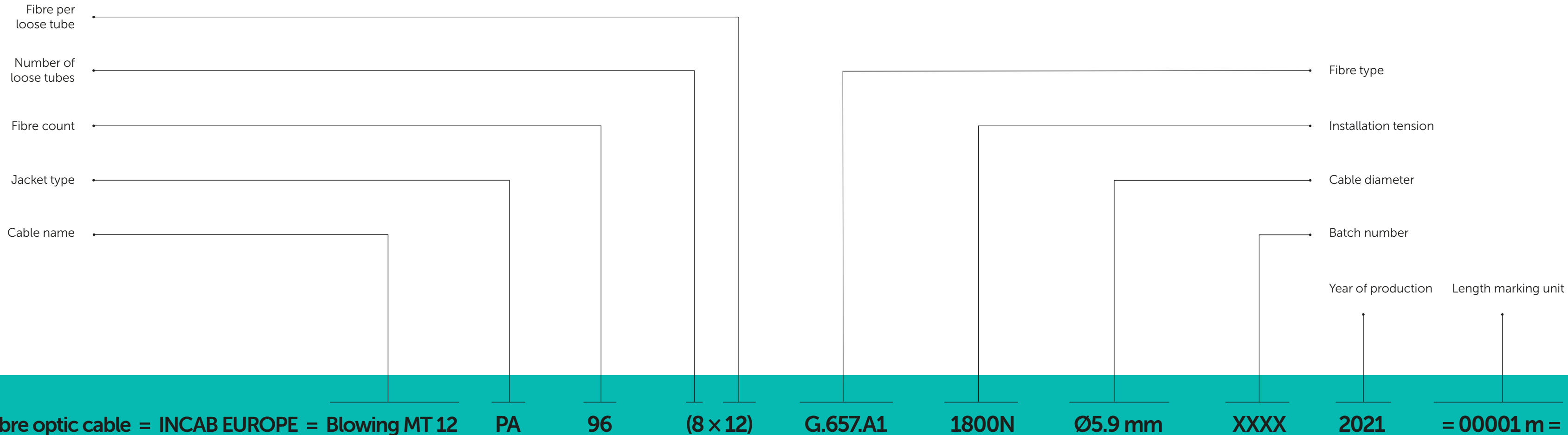
FIN2012



Marking System



Marking is printed through each meter according to INCAB EUROPE standard below or individual customer requirements.



Transportation. Storage. Installation



Transportation Guides:

- The reels should not be placed on their sides.
- The reels should be fixed. No nailing is allowed while fixing the reels.
- The truck should have a wooden floor.

Storage Guides:

- The reels should be protected from mechanical impact, as well as from sunlight, precipitation and dust.
- The reels should not be placed on their sides.
- The storage temperature range is from -50°C to +50°C.

Installation guideline overview. Ask INCAB EUROPE for the installation guidelines for the specific cable you are using:

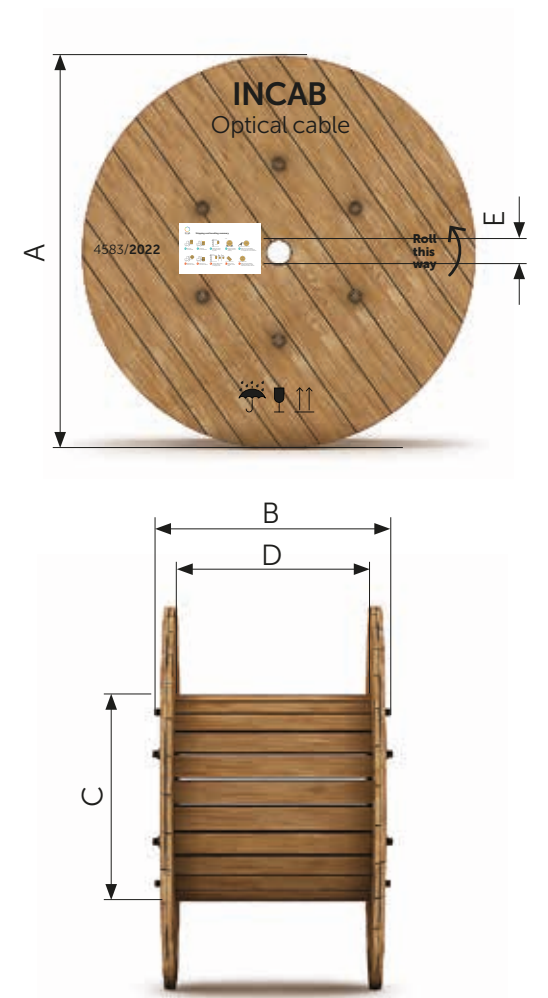
- Our cables are designed for installation by hand or standard installation equipment.
- Cable termination and installation should be done in ways and with instruments that eliminate the danger of cable damage.
- Basic requirements:
 - Length of cable axial torsion at an angle $\pm 360^\circ \geq 4$ m
 - Admissible static bending radius for duct cables ≥ 250 mm
 - Admissible static bending radius of loose tube $\geq 20 \times$ cable diameter

✓ from the side!
✓ Always lift from the bottom!
✓ Always use a steel bar when hoisting by crane!
✓ Always store reels upright and chock securely!
✓ Reels can only be rolled by hands on a smooth flat surface of a shopfloor for a short distance!

✗ Never lift from the front or back!
✗ Never lift from the hub or interior!
✗ Never lift directly with the rigging when hoisting by crane!
✗ Never store or put reels on their side!
✗ Reels cannot be rolled for transport purposes in open areas and on uneven surfaces!

Reel Dimensions

Reel Type	Dimensions, mm					Reel weight including lagging, kg
	A	B	C	D	E	
4	400	370	162	305	80	5
5	500	560	320	500	80	9
6	600	560	320	500	80	10
8b	800	646	450	500	80	50
10	1000	646	545	500	80	95
12	1220	650	650	500	80	125
12a	1220	864	650	710	80	145
14	1400	875	750	710	80	198
14g	1400	1065	750	900	80	206
16a	1600	970	800	800	80	273
17a	1700	1094	900	900	80	330
17mod	1700	1294	900	1100	80	440
18a	1800	1120	900	900	80	400
18mod	1800	1320	900	1100	80	500
18u	1800	1230	1000	1000	80	650



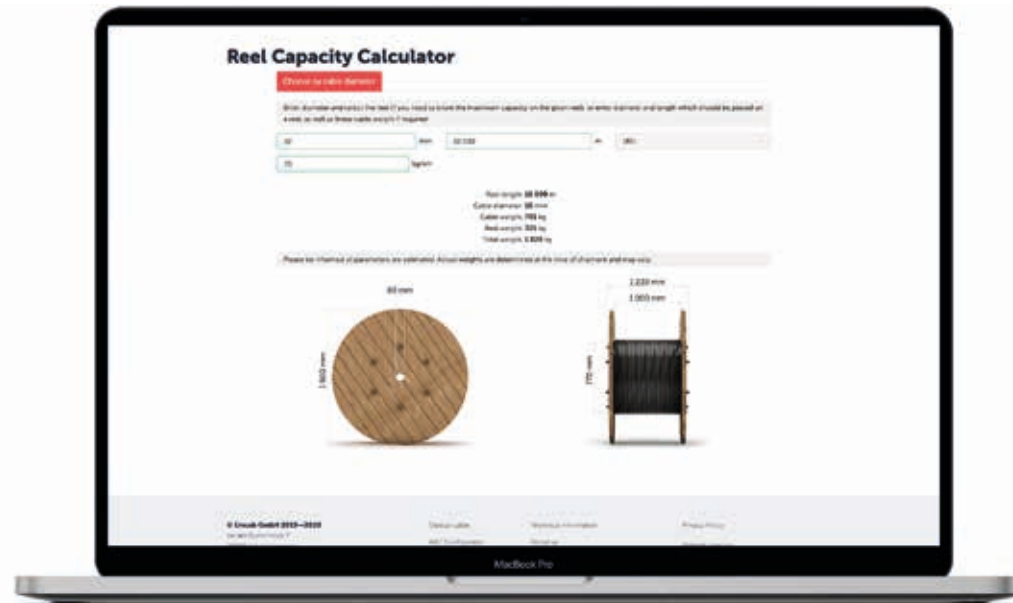
Digital Assistants

Try our free automated tools which help you choose suitable reel and simplify your ordering process.



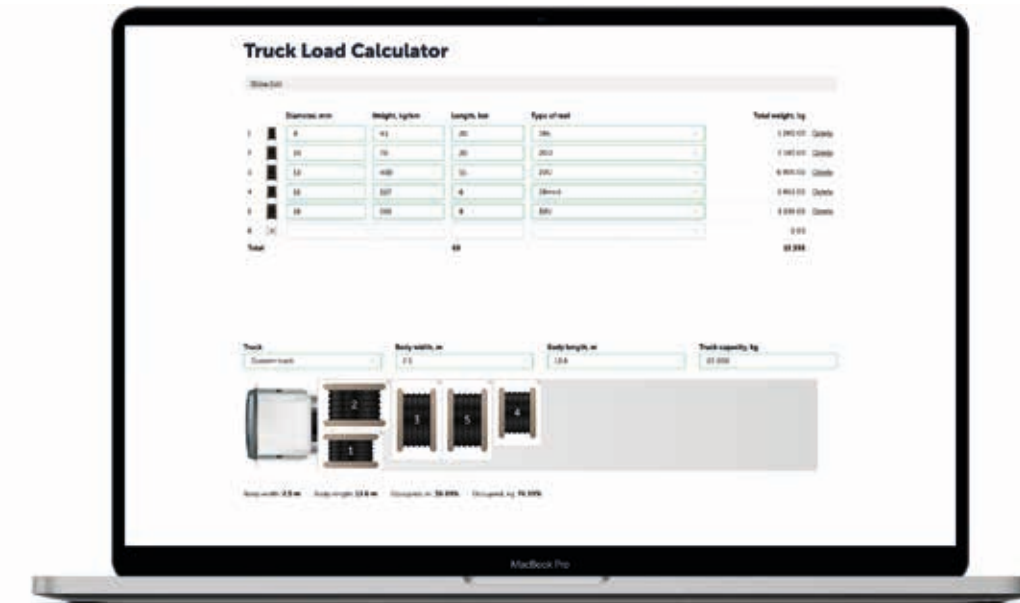
Reel Capacity Calculator

By entering cable diameter and weight (if needed) you will be offered the available reel options for the required cable length and total reel capacity. It will calculate the maximum reel length and total weight of reel with cable which is essential for your logistics purposes.



Truck Load Calculator

By entering the required cable diameter and weight you'll see how many reels can be placed on the truck and efficiently plan your logistics. The truck dimensions can be customised, too.



Certification

We care about producing and supplying the high-quality products that meet the best international standards.

The management systems used in production are recognized as ISO compliant.

All materials used in cables manufacturing are RoHS compliant and all manufacturing processes are REACH compliant.

 Certificate ISO 9001, ISO 14001, ISO 45001

  Conformity to RoHS and REACH



Contacts

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