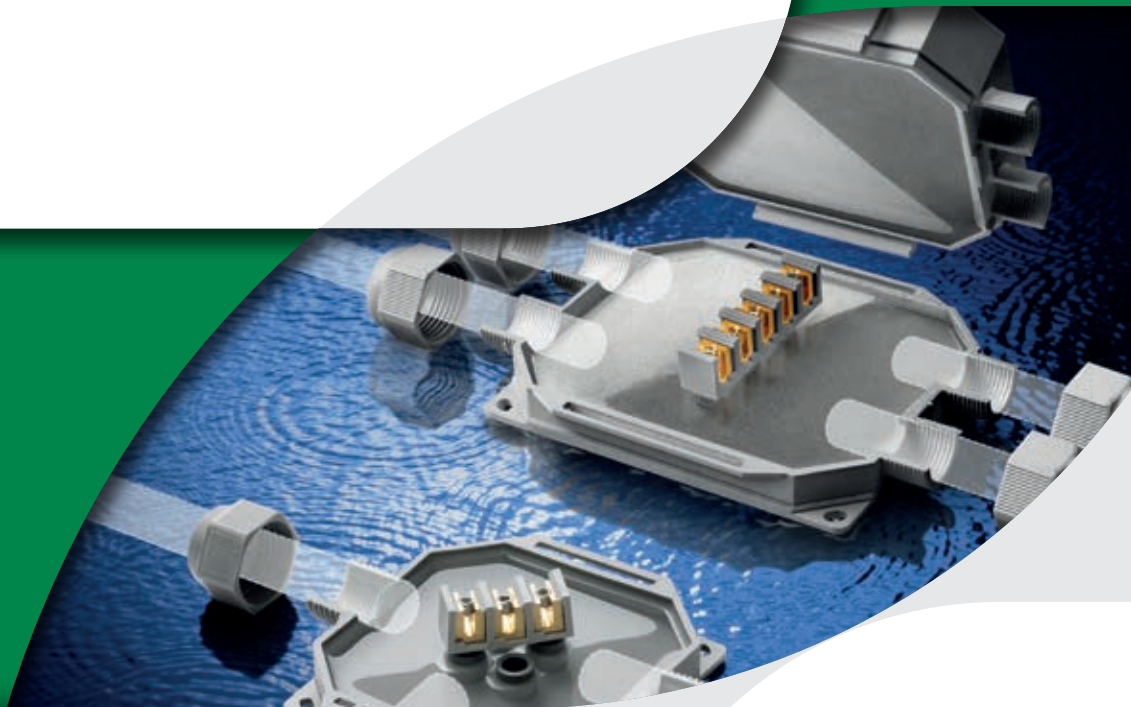


# LOW VOLTAGE

FILLERS - JOINTING BOXES  
CONNECTORS - TERMINAL BLOCKS  
GEL COVER - GEL BOX  
JOINTS - ACCESSORIES



## LOW VOLTAGE FILLERS

### GEL

- MAGIC GEL SPRINT
- MAGIC GEL
- MAGIC FLUID
- MAGIC POWER GEL
- RAY GEL
- WONDER GEL
- MONOGEL

### RUBBER

- GEL GUM
- SKY PLAST
- MAGIC RUBBER

### RESIN

- RAY RESIN





**ALL IN ONE**  
Ready in 1 Bottle!



Gel: UL 94-HB

**Dielectric strength:**

>20 kV/mm

**Cross linking time:**

fast (about 7 min. at 23°C)

**Volume resistivity:**

>2 . 10<sup>15</sup> Ω cm

**Working temperature:**

-60°C / +200°C

**Overload temperature**

for short periods:

up to 250°C

**Stabilised for:**

mould - UV

**Degree of protection:**

IP68 (in proper casings)

Magic Gel Sprint protects against dust and seals the connections from the effects of continuous immersion in water when it is poured into casings protected from the ingress of solid bodies, thus helping to create a **IP68** system.

**IP68**  
OFFICIALLY  
TESTED

**IMQ**



# MAGIC GEL SPRINT

Insulating and sealing gel with very high dielectric and thermal characteristics, ideal for POWER cables, TELECOM cables and ELECTRONICS CIRCUITS.

Magic Gel Sprint is formulated for an extra fast curing directly inside the bottle. Practical, performing, eco-sustainable, it is the ideal GEL for insulating and sealing boxes of the most commonly used dimensions.

### ADVANTAGES

- ▶ Non-toxic, safe and not classified as hazardous under CLP Directive.
- ▶ Suitable for installation in salt water (sea) and in chlorinated water (pools).
- ▶ For any type of indoor / outdoor and even submerged installation.
- ▶ For installations up to 1 kV.
- ▶ Suitable for high temperatures.
- ▶ Removable.
- ▶ No shelf life.



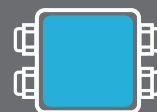
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**IP68**  
OFFICIALLY  
TESTED

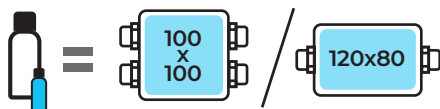
### HOW IS IP68 DEGREE OF PROTECTION OBTAINED?

The GEL protects against dusts and seals the connections from the effects of continuous immersion in water when it is poured into enclosures protected from the ingress of solid bodies, therefore contributing to create an IP68 system.

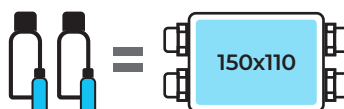




Magic Gel 450 Sprint



Magic Gel 900 Sprint



PRODUCT / Item	Colour	Package type	Total quantity
MAGIC GEL SPRINT 450 MAGICSPRINT450	●	1 bottle + 1 catalyst	450 ml
MAGIC GEL SPRINT 900 MAGICSPRINT900	●	2 bottles + 2 catalysts	900 ml



MAGIC GEL SPRINT is available in 2 version which are sustainable in terms of packaging and in terms of volume, as they are specifically designed for filling boxes in the most commonly used formats.





# MAGIC GEL MAGIC FLUID


Two-component gel with very high dielectric and thermal characteristics, ideal for connection systems (joint shells or enclosures) for power cables.

The insulating and sealing gel, when cast in suitable casings, ensures an IP68 degree of protection and it is able to replace all types of resins. This is a self-sealing insulation polymeric type in two practical bottles or in a single use bag, with cold cross linking. Once poured, the insulation, characterized by very low viscosity, surrounds and envelopes any type of material, cross linking in less than 10 minutes. Completely non-toxic, cross linking with a very low isothermal peak that does not thermally stress the materials it comes into contact with.

### ADVANTAGES

- ▶ For high temperature applications!
- ▶ The gel is not-classified as hazardous under the CLP Directive.
- ▶ Quick cross linking (only 10 minutes).
- ▶ Re-enterable also after long working periods.
- ▶ Low viscosity.
- ▶ No shelf life.



Gel: UL 94-HB 

**Dielectric strength:**

>20 kV/mm

**Cross linking time:**

fast (about 10 min. at 23°C)

**Volume resistivity**

>2 · 10<sup>15</sup> Ω cm

**Working temperature:**

-60°C / +200°C

**Overload temperature**

for short periods:

up to 250°C

**Stabilised for:**

mould - UV

**Degree of protection:**

IP68 (in proper casings)

*Magic Gel* protects against dust and seals the connections from the effects of continuous immersion in water when it is poured into casings protected from the ingress of solid bodies, thus helping to create a **IP68** system.

**IP68**  
OFFICIALLY  
TESTED | **IMQ**



FILLERS



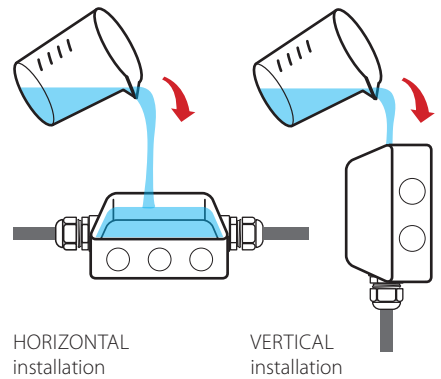
**Problem ENERGY**

What does a gel for this type of system have to give?

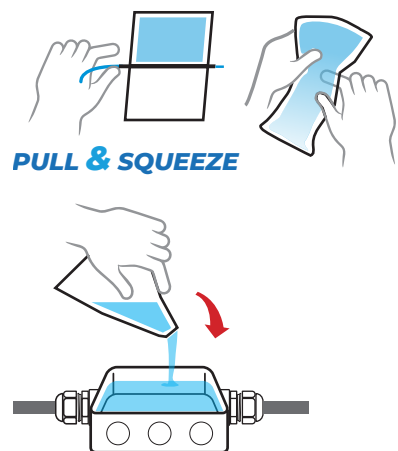
- ✓ **INSULATION:** Elevated voltages (1 kV operating, 4 kV testing)
- ✓ **THERMAL PERFORMANCE:** Operating temperature 90°C, overload temperature 130°C, short circuit temperature 250°C
- ✓ **SEALING:** Installations also possible in humid environments, flooded wells
- ✓ **DEGREE OF PROTECTION:** Must also work with water between the cores of the cable
- ✓ **CERTIFIED SYSTEMS:** The combination of insulation gel + casing must comply with current standards CEI 20-33 and EN 50393

**Solution:** *Magic Gel* meets all your Energy System requirements!

PRODUCT / Item	Colour	Package type	Total quantity
MAGIC GEL 300 MAGICGEL300	●	2 bottles	300 ml
MAGIC GEL 420 MAGICGEL-420	●	1 single, two-component bottle 1 jug - 1 spatula in wood	420 ml
MAGIC GEL 1000 MAGIC-GEL-1000	●	2 bottles - 1 jug 1 spatula in wood	1000 ml
MAGIC GEL 2000 MAGICGEL-2000	●	2 single, two-component bottles 1 jug - 1 spatula in wood	2 x 1000 ml
MAGIC GEL 10000 MAGICGEL10	●	2 tanks - 1 jug 1 spatula in wood	10 lt



PRODUCT / Item	Colour	Package type	Total quantity
MAGIC FLUID 90 100090-MAG	●	Two-component single dose bag	90 ml
MAGIC FLUID 110 100110-MAG	●	Two-component single dose bag	110 ml
MAGIC FLUID 170 100170-MAG	●	Two-component single dose bag	170 ml
MAGIC FLUID 210 100210-MAG	●	Two-component single dose bag	210 ml
MAGIC FLUID 420 100420-MAG	●	Two-component single dose bag	420 ml
MAGIC FLUID 550 100550-MAG	●	Two-component single dose bag	550 ml





Gel: UL 94-HB

**Dielectric strength:**

>20 kV/mm

**Cross linking time:**

fast (about 15 min. at 25°C)

**Volume resistivity:**

>2 · 10<sup>15</sup> Ω cm

**Operating temperature:**

-60°C / +200°C

**Overload temperature**

for short periods:

up to 250°C

**Stabilised for:**

mould - UV

**Degree of protection:**

IP68 (in proper casings)

*Magic Power Gel* protects against dust and seals the connections from the effects of continuous immersion in water when it is poured into casings protected from the ingress of solid bodies, thus helping to create a **IP68** system.

**IP68**  
OFFICIALLY  
TESTED | **IMQ**



# MAGIC POWER GEL

The unique two component gel in a single bottle, with superior dielectric, sealing and thermal characteristics, re-enterable and re-usable!

**ADVANTAGES**

- ▶ Very sticky.
- ▶ Strong self amalgamating characteristics.
- ▶ The gel is not-classified as hazardous under the CLP Directive.
- ▶ Single compact bottle; convenient twin compartment.
- ▶ Re-usable as well as re-enterable, even after long working periods.
- ▶ It doesn't give any waste.
- ▶ No shelf life.



For all types of connections, even in the toughest conditions, for power, telecom and signalling!



FILLERS



**STICKINESS**

- Exceptional sealing properties in any condition.
- Better resistance to pressure.
- Effective even in vertical or ceiling applications.

**SELF-AGGLOMERATING**

- Once cross linked it perfectly adheres on itself to get an homogeneous and compact mass.
- It can be therefore applied in multiple layers.

**ZERO WASTE**

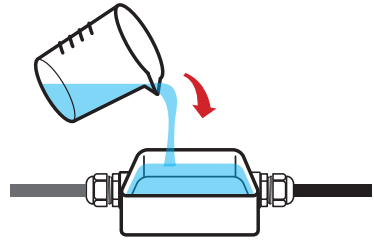
- Due to the nature of the product waste is eliminated; even residual product can be saved and used for the next application.
- Also any left over product maintains its high performance characteristics.

**SINGLE BOTTLE**

- Highly useful.
- The most compact packaging.
- Less space occupied in the toolbox.
- Both components in the same packaging.

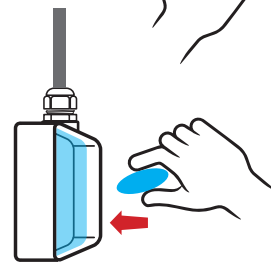
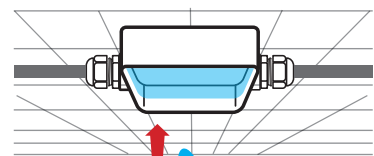
**CASTING APPLICATION**

HORIZONTAL installation



**AFTER CURING MANUAL APPLICATION**

CEILING or WALL application



PRODUCT / Item	Colour	Package type	Quantity
MAGIC POWER GEL 250 MAGICPOWER-250	●	1 single, two-component bottle	250 ml
MAGIC POWER GEL 500 MAGICPOWER-500	●	1 single, two-component bottle 1 jug - 1 spatula in wood	500 ml
MAGIC POWER GEL MAGICPOWER-GEL	●	1 single, two-component bottle 1 jug - 1 spatula in wood	1000 ml




PRODUCT / Item	Colour	Package type	Quantity
MAGIC POWER GEL BAG 150 MAGICPOWERBAG150	●	Two-component single dose bag	150 ml
MAGIC POWER GEL BAG 250 MAGICPOWERBAG250	●	Two-component single dose bag	250 ml





INTERCOMS  
LED DISPLAY



Gel: UL 94-HB 

**Dielectric strength:**

>20 kV/mm

**Cross linking time:**

about 15 min. at 23°C

**Volume resistivity:**

>1,5 x 10<sup>15</sup> Ω cm

**Operating temperature:**

-60°C / +180°C

**Thermal conductivity:**

< 0,2 W/m<sup>2</sup>K

**Dielectric constant:**

< 7

**Degree of protection:**

IP68 (in proper casings)

Ray Gel protects against dust and seals the connections from the effects of continuous immersion in water when it is poured into casings protected from the ingress of solid bodies, thus helping to create a IP68 system.

**IP68**  
OFFICIALLY  
TESTED | **IMQ**

# RAY GEL

Insulating, sealing, re-enterable fast cross linking two-component silicone gel for telephone and intercom systems and for LED and display protection.

## ADVANTAGES

- ▶ Quick cross linking.
- ▶ Antioxidant protection.
- ▶ Low temperature resistant.
- ▶ The gel is not-classified as hazardous under the CLP Directive.
- ▶ No shelf life.





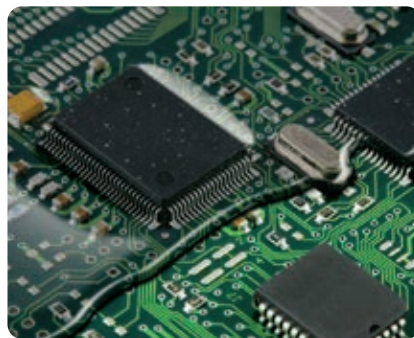
**RED**

- Specially formulated for UV resistance
- Suitable for "surface" installations
- Ideal for intercom systems



**TRANSPARENT**

- Excellent transparency
- Does not opacify
- Ideal for protecting printed circuit boards, for sealing displays, for insulating and sealing LEDs



**Problem TELECOM**

What does a gel for this type of system have to give?

- ✓ **SEALING:** Installations also possible in humid environments, flooded wells.
- ✓ **DEGREE OF PROTECTION:** IP68 in proper casing.
- ✓ **PREVENTION FROM OXIDATION:** Contacts in Telecom connections shouldn't give attenuations (low signal currents).
- ✓ **HIGH INSULATION FLUIDITY:** During casting, the the insulation has to fill all interstitial spaces between the cores of the cable.
- ✓ **ANTICRACKING:** Insulation in the permanently cold joint should not crack at low temperatures.
- ✓ **INSULATION:** The filler should be an insulating component.

**Solution:** Ray Gel meets all your Telecom system requirements.

PRODUCT / Item	Colour	Package type	Total quantity
BAG GEL 200-T BAGGEL200-T	○	Two-component single dose bags	200 ml
BAG GEL 400-T BAGGEL400-T	○		400 ml
BAG GEL 200-R BAGGEL200-R	●		200 ml
BAG GEL 400-R BAGGEL400-R	●		400 ml
RAY GEL 300-T RAYGEL300-T	○	2 bottles	300 ml
RAY GEL 1000-T RAYGEL1000-T	○		1000 ml
RAY GEL 300-R RAYGEL300-R	●		300 ml
RAY GEL 1000-R RAYGEL1000-R	●		1000 ml
RAY GEL 10K-T RAYGEL10K-T	○	2 tanks	10 lt
RAY GEL 20K-T RAYGEL20K-T	○		20 lt
RAY GEL 10K-R RAYGEL10K-R	●		10 lt
RAY GEL 20K-R RAYGEL20K-R	●		20 lt







# WONDER GEL

Single component insulating gels in cartridge to instantly protect new installations and oversee maintenance of all types of electrical connections.

**Installer's best friends.** Electrical connections, within empty enclosures, are exposed to the risk of short circuit, oxidation and corrosion, at times, resulting in irreparable damages. Without stress and no waiting around, **WonderGel** and **WonderGel Invisible** make your job easier, guaranteeing the protection and safety of systems in compliance to best practice rules to provide the highest quality solution, quick and perfect to get the satisfaction of both you and your clients.

## ADVANTAGES

- ▶ Ready to use! No mixing required! Already cross-linked! No need to wait!
- ▶ Resolve issues connected to incorrect insulation or sealing.
- ▶ Eliminate annoying out of service instances caused by moisture.
- ▶ Protect your systems from the penetration of insects.
- ▶ Protect your electrical connections from oxidation and corrosion.
- ▶ Applicable in all climatic conditions.
- ▶ The gel is not-classified as hazardous under the CLP Directive.



Gel: UL 94-HB

**Dielectric strength:**

>20 kV/mm

**Volume resistivity:**

>2 . 10<sup>15</sup> Ω cm

**Operating temperature:**

-60°C / +200°C

**Overload temperature for short periods:**

up to 250°C

**Stabilised for:**

mould - UV

**Degree of protection:**

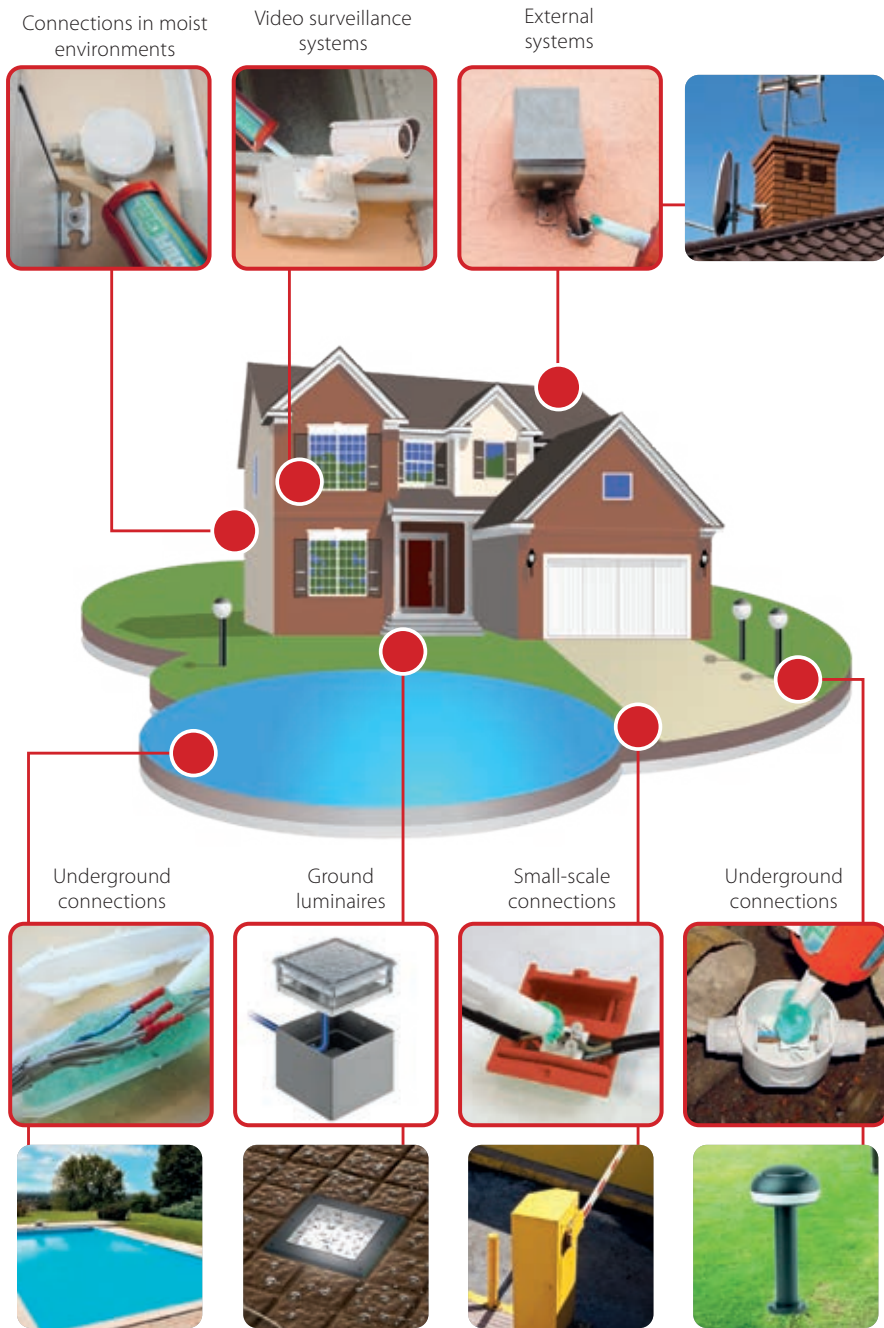
IP68 (in proper casings)

WonderGel protects against dust and seals the connections from the effects of continuous immersion in water when it is poured into casings protected from the ingress of solid bodies, thus helping to create a **IP68** system.

**IP68** | **IMQ**  
OFFICIALLY TESTED



Easy to apply even in areas which are difficult to access!



**WHAT IS GEL WONDER?**

- A single component gel
- Extremely sticky
- Stays soft with time
- Never dries
- Non-toxic and safe
- No shelf life



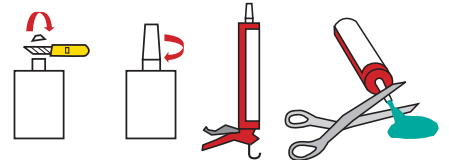
**WHAT DOES GUARANTEE?**

- Maximum insulation and sealing
- Effective and stable adhesion with the passing of time
- High resistance to water pressure
- Degree of protection IP68 when dispensed in suitable casings



**WHY IS IT IN A CARTRIDGE?**

- Always ready to use and at your fingertips
- Can be used with standard guns
- It is measurable
- No waste
- Complete with nozzle
- Extremely rapid to use even in difficult positions
- Compact



PRODUCT / Item	Colour	Package type	Total quantity
WONDER GEL WONDER	●	Cartridge with dosing nozzle	280 ml
WONDER GEL INVISIBLE WONDER-INV	○	Cartridge with dosing nozzle	280 ml



Gel: UL 94-HB

**Dielectric strength:**

>20 kV/mm

**Operating temperature:**

-60°C / +200°C

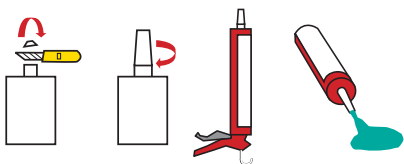
**Installation temperature:**

-40°C / +110°C

**Degree of protection:**

IP68 (in proper casings)

Wonder Gel Fluid protects against dust and seals the connections from the effects of continuous immersion in water when it is poured into casings protected from the ingress of solid bodies, thus helping to create a **IP68** system.



# WONDER FLUID

Single component insulation fluid gel cartridge.

**ADVANTAGES**

- ▶ The gel is not-classified as hazardous under the CLP Directive.
- ▶ Ready-to-use fluid gel.
- ▶ Suitable for box filling.
- ▶ Does not solidify when opened.
- ▶ No waste.
- ▶ No shelf life.



PRODUCT / Item	Colour	Package type	Total quantity
WONDER FLUID 280 WONDER-F280	●	Cartridge with dosing nozzle	280 ml

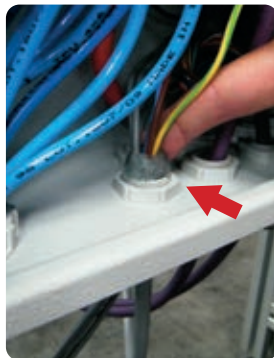


# MONOGEL

Single component transparent insulation gel for generic use.

## ADVANTAGES

- ▶ The gel is not-classified as hazardous under the CLP Directive.
- ▶ Ready to use.
- ▶ No shelf life.
- ▶ Inspectable.



Gel: UL 94-HB

**Dielectric strength:**

>20 kV/mm

**Operating temperature:**

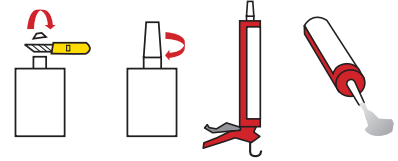
-60°C / +200°C

**Installation temperature:**

-40°C / +110°C

**Degree of protection:**

IP68 (in proper casings)



PRODUCT / Item	Colour	Package type	Total quantity
MONOGEL MONOGEL	○	Cartridge with dosing nozzle	300 ml



## TECHNO GEL GUM

Single bottle two-component insulation with very high dielectric, thermal and sealing characteristics. Waterproof and re-enterable!

TechnoGelGum is a strong hold flexible elastomer whose formula has been optimised for the protection of POWER CABLE, TELECOM CABLE and ELECTRONIC CIRCUIT connections. A new recipe that gives the product a surprising, original texture that combines the characteristics of GEL and RUBBER to emphasise its features. It's elastic and flexible like gel, but also tough and dry like rubber.

### ADVANTAGES

- ▶ For installations up to 1 kV, suitable for high temperatures.
- ▶ Suitable for installation in salt water (sea) and in chlorinated water (pools).
- ▶ For any type of indoor / outdoor and even submerged installation.
- ▶ Waterproof > 1 MPa.
- ▶ Vibration resistant can act as a damper.
- ▶ Removable.
- ▶ The gel is not-classified as hazardous under the CLP Directive.
- ▶ No shelf life.

#### Dielectric strength:

>20 kV/mm

#### Specific weight:

~ 1.05

#### Cross linking time:

fast (about 10 min. at 25°C)

#### Volume resistivity:

>2 . 10<sup>14</sup> Ω cm

#### Operating temperature:

-60°C / +200°C

#### Overload temperature

for short periods:

up to 250°C

#### Stabilised for:

mould - UV

#### Degree of protection:

IP68 (in proper casings)

*Techno Gel Gum* protects against dust and seals the connections from the effects of continuous immersion in water when it is poured into casings protected from the ingress of solid bodies, thus helping to create a **IP68** system.

**IP68**  
OFFICIALLY  
TESTED | **IMQ**



**STRONG CONSISTENCY**

**EXTREMELY FLEXIBLE  
AND WATER-REPELLENT**



FILLERS

FLEXIBLE like GEL

STRONG like RUBBER



SAFE



WATERPROOF



RE-ENTERABLE



Shake before using.



Pour TechnoGelGum into the provided jug in a 1:1 ratio.



Mix for 1 min. max.



Pour within 1 min. max.



In just 10 minutes the curing is completed.

PRODUCT / Item	Colour	Package type	Total quantity
TECHNO GEL GUM 500 TEGELGUM500	●	1 single, two-component bottle 1 jug - 1 spatula in wood	500 gr
TECHNO GEL GUM TEGELGUM	●	1 single, two-component bottle 1 jug - 1 spatula in wood	1 kg







**SKY PLAST  
BECOMES  
RUBBER  
IN 5 MINUTES**

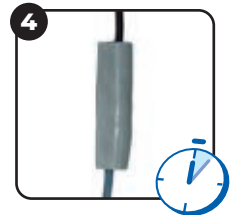
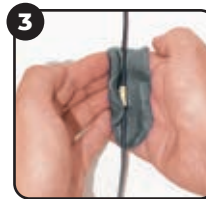
# SKY PLAST

Two-component insulating rubber, mouldable, self-extinguishing paste with high dielectric characteristics.

Sky Plast is ideal for covering, protecting, insulating, finishing and fireproofing any electrical and non-electrical component. Once the 2 components have been blended in a ratio of 1:1 (for max 2 min.) until uniform, it cross links quickly at room temperature in less than 5 minutes. After being wrapped around the component to be protected, Sky Plast quickly transforms into a layer of rubber with high dielectric and self-extinguishing characteristics.

### ADVANTAGES

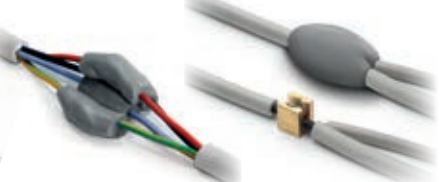
- ▶ Low smoke and toxic and corrosive gases emission.
- ▶ Able to replace taping, heat-shrinking, resin finishes.
- ▶ Flexible and elastic.
- ▶ Quickly ready for use.



Cable gland sealing



Creation of LV terminals



Insulation of multiple connections



Preparation on-site of expanders for inserts



Preparation of bars, washers, round wire insulators



Preparation on-site of seals



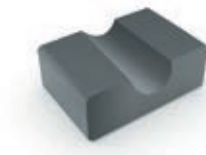
Conduit protection



Preparation on-site of small moulds for reliefs



Drop line, bar, transformer through insulation



On-site preparation of braces and supports



Preparation of deflectors, nozzles, flow deviators



PRODUCT / Item	Colour	Package type	Total quantity
SKY PLAST 250 SKYPLAST250	●	2 cans	250 gr
SKY PLAST SKYPLAST	●	2 cans	500 gr

# MAGIC RUBBER

Fast cross linking two-component rubber.

Two-component insulating liquid rubber, extremely conformable and fluid, flexible, elastic and re-enterable. In just a few minutes, transforms into a rubber with very high dielectric, thermal, mechanical and elastic characteristics.

## ADVANTAGES

- ▶ For installation up to 1kV.
- ▶ Low smoke, toxic and corrosive gas emissions.
- ▶ Ideal also for casts and moulds.
- ▶ No shelf life.



### Cross linking time:

15 minutes at 23°C

### Volume resistivity:

>2 10<sup>15</sup> Ω cm

### Dielectric strength:

> 20 kV/mm

### Specific weight:

1,22 approx

### Degree of protection:

IP68 (in proper casings)

*Magic Rubber* protects against dust and seals the connections from the effects of continuous immersion in water when it is poured into casings protected from the ingress of solid bodies, thus helping to create a **IP68** system.



1 Mix the 2 components in a ratio of 1:1.

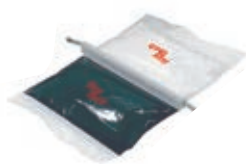
2 Mix for max 30".

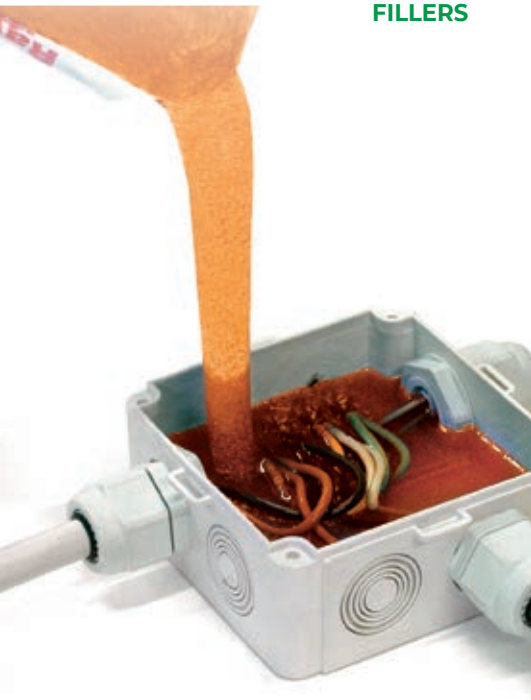
3 Pour the product into the casing to be filled.

4 In just a few minutes, the product transforms into rubber.

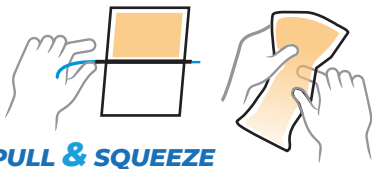
PRODUCT / Item	Colour	Package type	Total quantity
MAGIC RUBBER 500 MAGIC-RUBBER	●	1 single two-component bottle 1 jug - 1 spatula in wood	500 gr
MAGIC RUBBER 10 MAGICRUBBER-10	●	Two-component tanks 1 jug - 1 spatula in wood	10 kg

PRODUCT / Item	Colour	Package type	Total quantity
RUBBER FLUID 200 RUBBERFLUID-200	●	Two-component single dose bags	200 gr
RUBBER FLUID 350 RUBBERFLUID350	●	Two-component single dose bags	350 gr





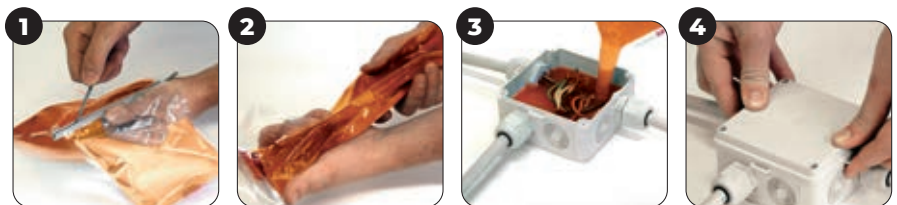
**Cross linking time:**  
20 minutes at 20°C  
**Hardness:**  
70 Shore D  
**Dielectric strength:**  
20 kV/mm  
**Specific weight:**  
1,07 kg/dm<sup>3</sup>  
1,7 kg/dm<sup>3</sup> per Rayresin Tan 3,8  
**Water absorption:**  
0,8% max



# RAY RESIN

Two-component epoxy resin for installations up to 1 kV.

Resin for electrical insulation and for the protection of thermosetting LV and MV accessories. The two components, the base resin and hardener, are mixed in close contact to trigger the cross linking reaction. Excellent bonding to metal, plastic and rubber components.



1 Remove the separator from the Rayresin bag.

2 Mix the 2 components.

3 Pour Rayresin in the tray (1' max).

4 Installation completed.

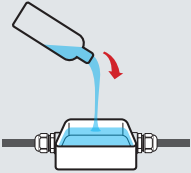
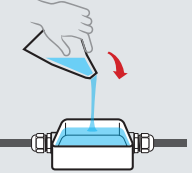

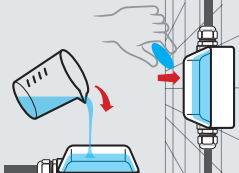



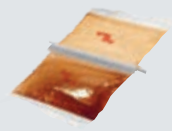
PRODUCT / Item	Colour	Package type	Total quantity
RAYRESIN 170 100170-000	●	Two-component single dose bags	170 gr
RAYRESIN 210 100210-000	●	Two-component single dose bags	210 gr
RAYRESIN 420 100420-000	●	Two-component single dose bags	420 gr

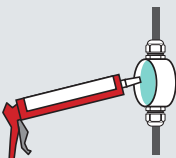
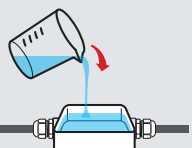
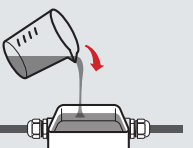
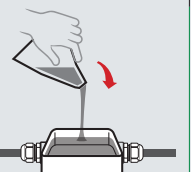
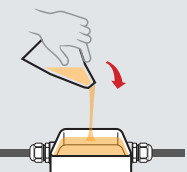


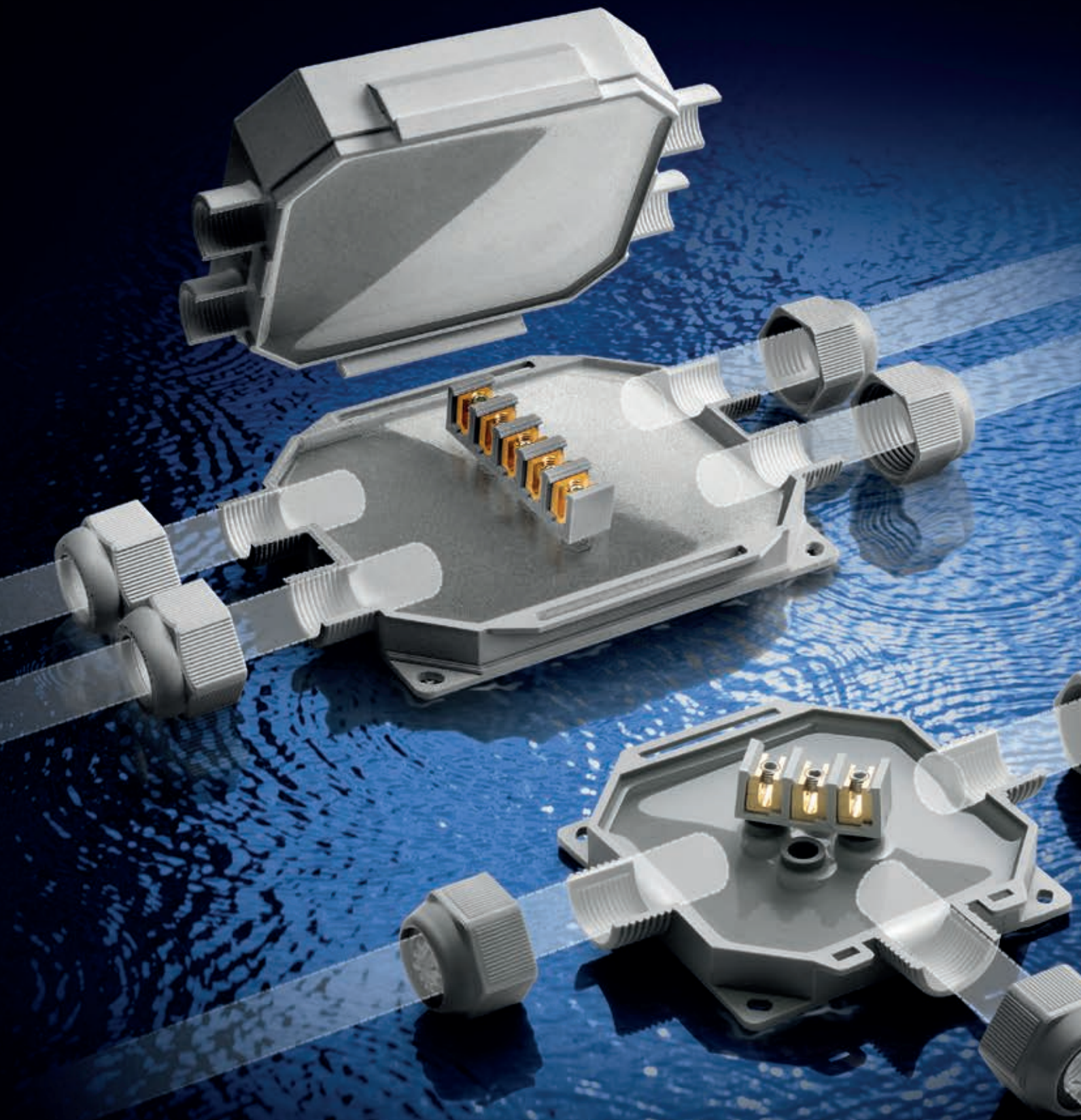
# FILLERS COMPARISON CHART



	MAGIC GEL SPRINT	MAGIC FLUID	MAGIC GEL	MAGIC POWER GEL	RAY GEL
<b>PACK CONTENTS</b>	1 bottle + 1 catalyst	1 sachet	2 bottles or one single 2 compartment bottle + jug + spatula	One single 2 compartment bottle + jug + spatula	2 bottles or sachet
<b>MIXING RATIO</b>	Predeterminate	Predeterminate	1:1 ratio with measuring Jug	1:1 ratio with measuring Jug	1:1 ratio
<b>MIXING TIME</b>	10 seconds	10 seconds	15 seconds	15 seconds	15 seconds
<b>CURING TIME (at 23° C)</b>	< 7 minutes	< 7 minutes	< 10 minutes	About 15 minutes	About 15 minutes
<b>INSTALLATION TEMPERATURE</b>	-15° / +55°C	-15° / +55°C	-15° / +55°C	-15° / +55°C -40° / +60° (cured)	-15° / +55°C
<b>USAGE</b>	By pouring  <b>ALL IN ONE</b> Ready in 1 bottle!	By pouring  <b>ALL IN ONE CLASSIC</b>	By pouring  <b>CLASSIC</b>	By pouring or "cure and stick"  <b>SELF AGGLOMERATING</b>	By pouring  <b>INTERCOMS</b> Led display



	WONDER GEL / FLUID	TECHNO GEL GUM	MAGIC RUBBER	RUBBER FLUID	RAY RESIN
<b>PACK CONTENTS</b>	1 cartridge	One single 2 compartment bottle + jug + spatula	One single 2 compartment bottle + jug + spatula	1 sachet	1 sachet
<b>MIXING RATIO</b>	None	1:1 ratio with measuring Jug	1:1 ratio with measuring Jug	Predeterminate	Predeterminate
<b>MIXING TIME</b>	-	15 seconds	15 seconds	15 seconds	30 seconds
<b>CURING TIME (at 23° C)</b>	Already cross-linked	About 15 minutes	About 15 minutes	About 15 minutes	About 25 minutes
<b>INSTALLATION TEMPERATURE</b>	-15° / +55°C	-15° / +55°C	-15° / +55°C	-15° / +55°C	+5° / +55°C
<b>USAGE</b>	Injection 	By pouring 	By pouring 	By pouring 	By pouring 





# LOW VOLTAGE JOINTING BOXES

## PRE-FILLED IP68

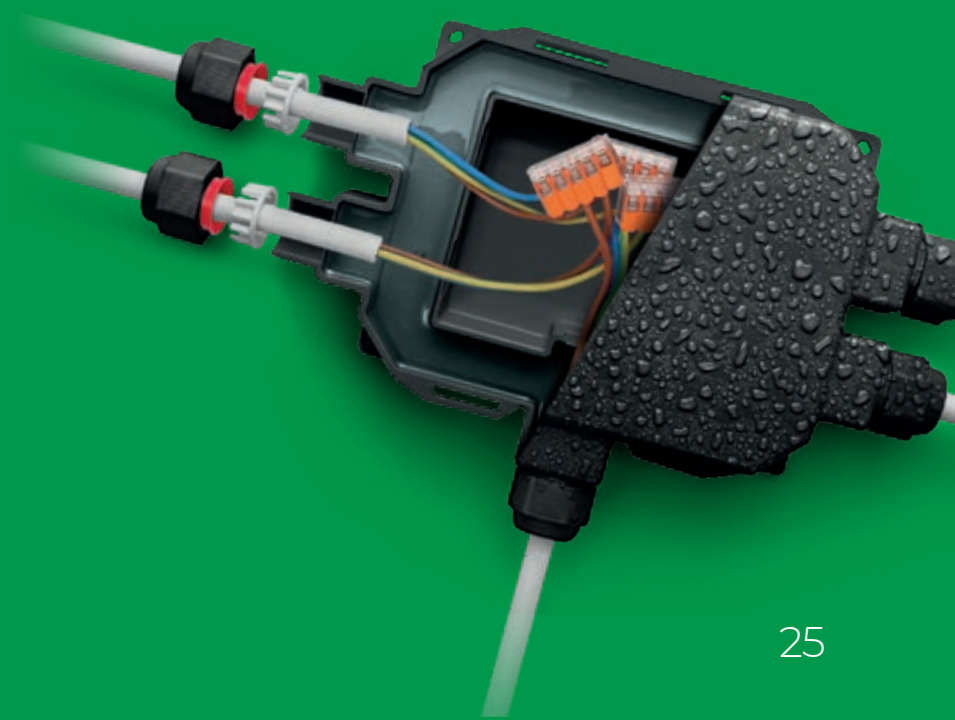
BOB  
BABY BOX  
READY BOX  
FOX BOX

## KIT IP68

MAGIC BOX  
POWER KIT  
MAGIC GEL SPRINT BOX 100

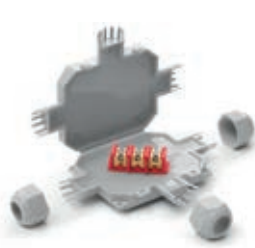

















## IP55

J-BOX





# RAYTECH PRE-FILLED BOXES

		<b>BOB 3</b>	<b>1</b> Entrance	<b>2</b> Outputs	 Connector <b>3x 4 mm<sup>2</sup></b> or free connections
		<b>BOB 4</b>	<b>1</b> Entrance	<b>3</b> Outputs	 Connector <b>3x 4 mm<sup>2</sup></b> or free connections
		<b>BABY BOX</b>	<b>1</b> Entrance	<b>2</b> Outputs	 Connector <b>3x 6 mm<sup>2</sup></b> or free connections
		<b>BABY BOX 3</b>	<b>1</b> Entrance	<b>3</b> Outputs	 Connector <b>5x 6 mm<sup>2</sup></b> or free connections
		<b>READY BOX 90</b>	<b>1</b> Entrance	<b>2</b> Outputs	 Connector <b>3x 6 mm<sup>2</sup></b> or free connections
		<b>READY BOX 120</b>	<b>1</b> Entrance	<b>3</b> Outputs	 Connector <b>5x 6 mm<sup>2</sup></b> or free connections
		<b>FOX BOX 3</b>	<b>1</b> Entrance	<b>2</b> Outputs	Free connections
		<b>FOX BOX</b>	<b>1</b> Entrance	<b>4</b> Outputs	Free connections



3 nuts

Cables Ø  
mm 8-13

Colours

mm  
105 x 80 x h 25



4 nuts

Cables Ø  
mm 8-13

Colours

mm  
105 x 65 x h 25



3 nuts  
+ adapters

Cables Ø  
mm 8-18  
Tubes Ø  
mm 16/20

Colours

mm  
95 x 80 x h 43



4 nuts  
+ adapters

Cables Ø  
mm 8-18  
Tubes Ø  
mm 16/20

Colours

mm  
95 x 110 x h 43



3 nuts  
+ adapters

Cables Ø  
mm 8-18  
Tubes Ø  
mm 16/20/32

Colours

mm  
90 x 90 x h 45



4 nuts  
+ adapters

Cables Ø  
mm 8-18  
Tubes Ø  
mm 16/20/32

Colours

mm  
120 x 100 x h 45



3 nuts  
+ adapters

Cables Ø  
mm 8-18  
Tubes Ø  
mm 16/20/32

Colours

mm  
180 x 135 x h 45



5 nuts  
+ adapters

Cables Ø  
mm 8-18  
Tubes Ø  
mm 16/20/32

Colours

mm  
210 x 155 x h 45

**Electrical performance:**

CEI EN 50393

as applicable

Class 2 in accordance with CEI 64-8.

Gel: UL 94-HB

Working temperature: 90°

Installation temperature: -40°C / +50°C

Fully submersible

Can be used underground

Halogen-free Gel

UV resistant

**IP68** | **IMQ**  
OFFICIALLY TESTED

**IP69K**  
OFFICIALLY TESTED

**IP68:**

(6) protected against dust and solid objects over 1 mm.

(8) Protected from permanent immersion in water.

**IP69K:**

(9K) protected against close-range high pressure, high temperature spray downs.





# BOB

The IP68 / IP69K micro-joints, gel pre-filled, complete with connector, suitable for any type of installation, even the most extreme.

Extremely compact and space-saving, pre-filled with soft, highly conformable gel. With minimal aesthetic impact and visually pleasing. Equipped with integrated cable glands for IP68 and IP69K degree of ingress protection and cable retention.


### ADVANTAGES

- ▶ Pre-filled with a gel that is not-classified as hazardous under the CLP Directive.
- ▶ Extremely compact and ready to install.
- ▶ Ideal for connections in lighting systems for gardens, steps and stairways, pedestrian crossings, etc.
- ▶ Pre-threaded entries for the positioning of the clamping nuts.
- ▶ No shelf life.
- ▶ Always re-enterable.



#### Electrical performance:

- CEI EN 50393 as applicable
- Class 2 in accordance with CEI 64-8.

🔧 Gel: UL 94-HB 

🌡️ Working temperature: 90°

🌡️ Installation temperature: -40°C / +50°C

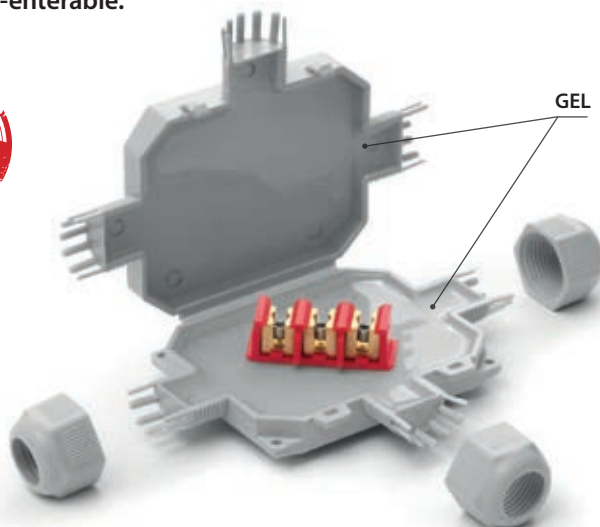
🌊 Fully submersible

🔧 Can be used underground

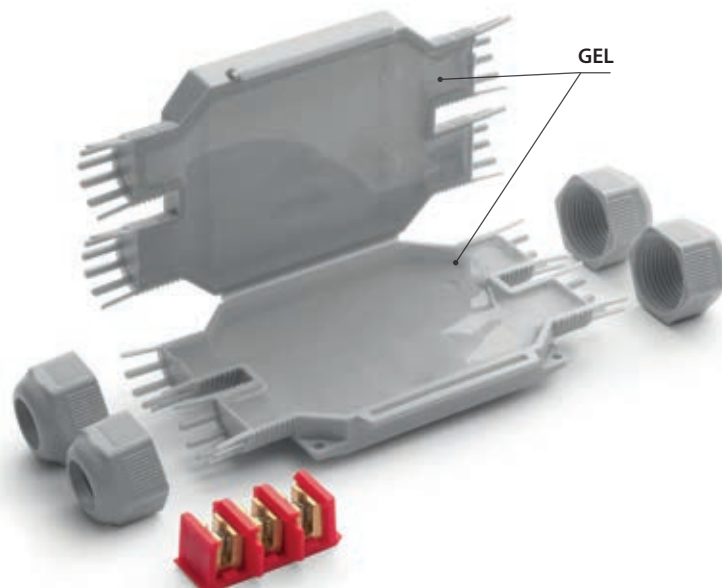
🌿 Halogen-free Gel

☀️ UV resistant

🔥 Self-extinguishing and resistant to abnormal heat and fire:  
Glow Wire Flammability Index at +960° C according to EN60695-2-12



BOB 3



BOB 4

IP68  
OFFICIALLY  
TESTED

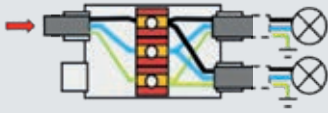
IMQ

IP69K  
OFFICIALLY  
TESTED

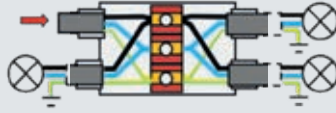


Some installation possibilities for BOB 4

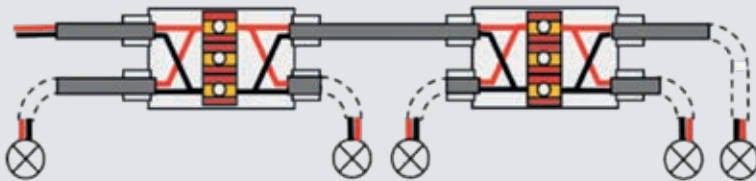
Parallel branch system with 3 three-core cables up to 3 x 4 mm<sup>2</sup>



Parallel branch system with 4 three-core cables up to 3 x 2.5 mm<sup>2</sup>

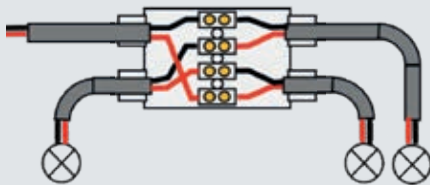


Parallel 5-lamp connection system

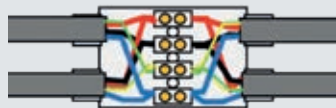


Can be installed with Mammut type connector (not included)

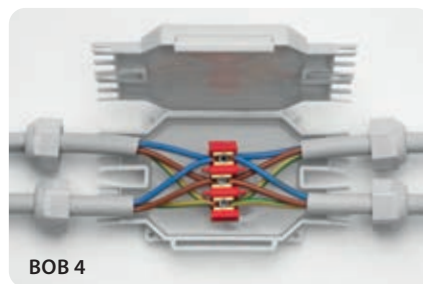
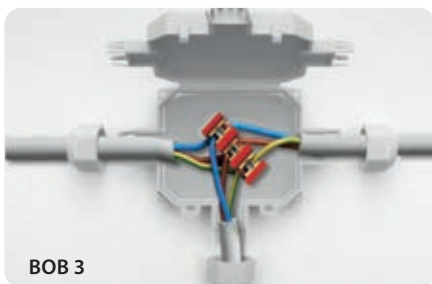
3-LED spotlight in-series system





3-LED RGB spotlight parallel system with four-core cables



For use in traps. The ideal accessory for branch connections from a through cable to light fittings and spotlights. Suitable in applications where there is presence of water and moisture.



PRODUCT / Item	Colour	Max cable formation (N° x mm <sup>2</sup> )		Cables Ø min - max (mm)	Pieces Pack	 (mm)
		Through	Branch			
BOB 3 BOB3	●	1 cable 3 x 4	2 cables 3 x 4	8 - 13	1 piece Blister	105 x 80 x 25
BOB 3 - N BOB3-N	●	3 x 2,5	2 cables 3 x 2,5		1 piece Blister	

PRODUCT / Item	Colour	Max cable formation (N° x mm <sup>2</sup> )		Cables Ø min - max (mm)	Pieces Pack	 (mm)
		Through	Branch			
BOB 4 BOB	●	1 cables 3 x 4	2 cables 3 x 4	8 - 13	1 piece Blister	105 x 65 x 25
BOB 4 - N BOB4-N	●	3 x 2,5	3 cables 3 x 2,5		1 piece Blister	





**JOINT OR BOX?  
CHOOSE BABY BOX!**




**Electrical performance:**  
• CEI EN 50393 as applicable  
• Class 2 in accordance with CEI 64-8.

 **Gel:** UL 94-HB 

 **Installation temperature:**  
-40°C / +50°C

 **Working temperature:** 90°


 **Gel operating temperature:**  
-60°C / +200°C

 **Fully submersible**

 **Can be used underground**

 **Halogen-free Gel**

 **UV resistant**

 **Self-extinguishing and resistant to abnormal heat and fire:**  
Glow Wire Flammability Index at +960° C according to EN60695-2-12

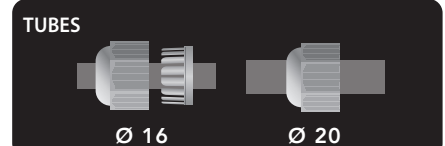
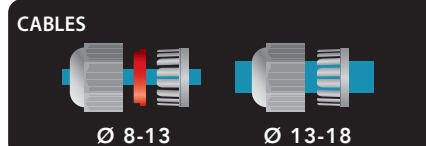
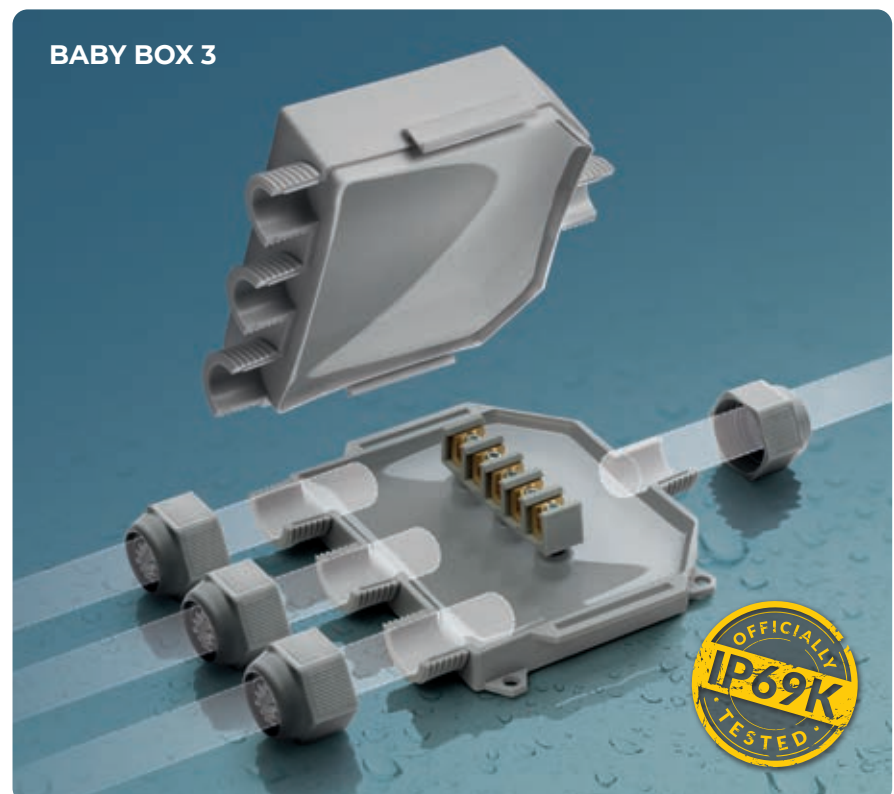
# BABY BOX

Pre-filled boxes (1 to 2) – (1 to 3) with integrated terminal block and clamping nuts.

BABY BOX is the range of ready to use boxes/junction boxes, complete with terminal block and a kit of components that allow its use with cables from 8 to 18 mm in diameter and ducts from 16 to 20 mm in diameter. Nothing to pour and no waiting times as it is already pre-filled with a non-toxic gel, not classified as dangerous and with no shelf life, which insulates and seals the connection thoroughly and gives to the range the maximum of reliability; the accessory is ideal for underground, submerged or aerial installations. BABY BOX, 3-entrances box with three-pole terminal block and BABY BOX 3, 4-entrances box with five-pole terminal block, are available in grey or black, they are very simple to install and equipped with external holes for wall fixing.

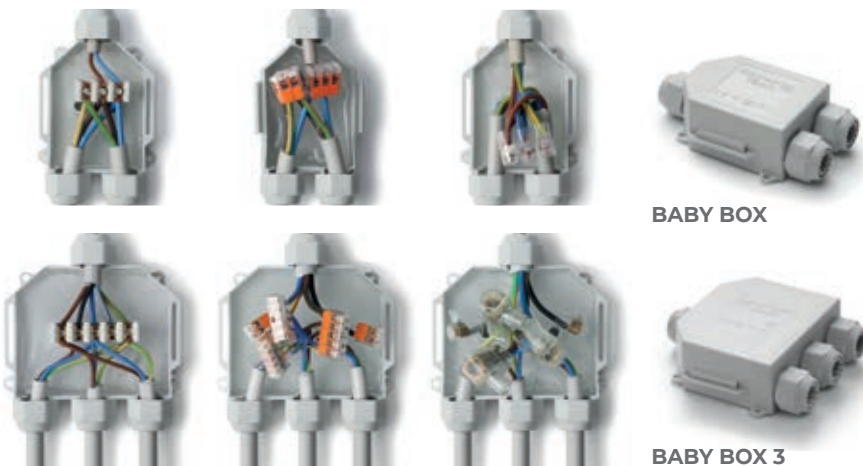
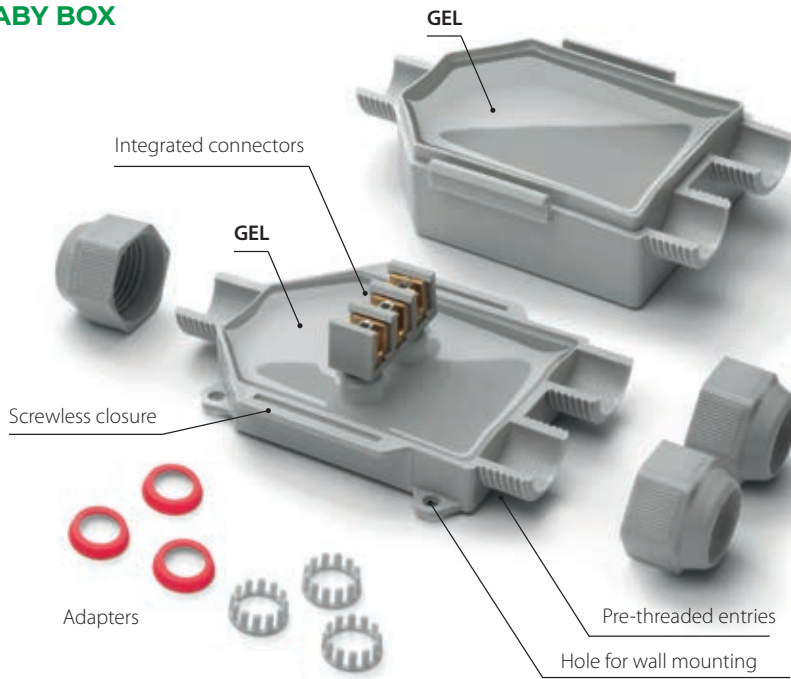
## ADVANTAGES

- ▶ Pre-filled with a gel that is not-classified as hazardous under the CLP Directive.
- ▶ Ready to use.
- ▶ Also suitable for wet or flooded environments.
- ▶ Always re-enterable.
- ▶ Wall or external ceiling fixing system.
- ▶ Click and hook closure, does not require screws.
- ▶ No shelf life.



**IP68** OFFICIALLY TESTED | **IMQ** | **IP69K** OFFICIALLY TESTED



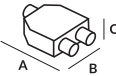

**BABY BOX**



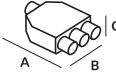



With integrated connectors.

Also suitable for extra-flat lever connectors.

Also suitable for screw terminals.

PRODUCT / Item	Colour		 Connectors	Cables Ø min - max (mm)	Tubes Ø (mm)	 (mm)
<b>BABY BOX</b> BABYBOX	●		 3x Max 12 mm <sup>2</sup>	8 - 18	16 / 20	90 x 80 x 47
<b>BABY BOX - N</b> BABYBOX-N	●					

PRODUCT / Item	Colour		 Connectors	Cables Ø min - max (mm)	Tubes Ø (mm)	 (mm)
<b>BABY BOX 3</b> BABYBOX3	●		 5x Max 12 mm <sup>2</sup>	8 - 18	16 / 20	95 x 110 x 43
<b>BABY BOX 3 - N</b> BABYBOX3-N	●					







## READY BOX

3 or 4 entrances junction boxes pre-filled with gel, complete with integrated terminal block and cable glands

Ready Boxes are pre-filled with gel and ready to use; complete with terminal blocks but can also be used with the most common connection systems. Supplied with nuts for the conformation with 3 or 4 outputs, they are suitable for a very wide range of cables or ducts diameters.

### ADVANTAGES

- ▶ Pre-filled with a gel that is not-classified as hazardous under the CLP Directive.
- ▶ Ready to use.
- ▶ Also suitable for wet or flooded environments.
- ▶ Always re-enterable.
- ▶ Wall or external ceiling fixing system.
- ▶ Click and hook closure, does not require screws.
- ▶ Pre-threaded entries for cable gland mounting.
- ▶ No shelf life.



#### Electrical performance:

- CEI EN 50393 as applicable
- Class 2 in accordance with CEI 64-8.

Gel: UL 94-HB

Working temperature: 90°

Gel operating temperature: -60°C / +200°C

Fully submersible

Can be used underground

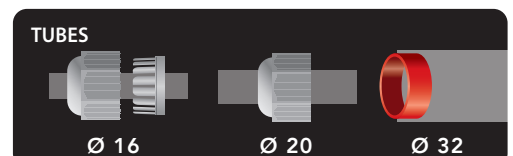
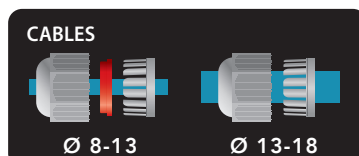
Halogen-free Gel

UV resistant

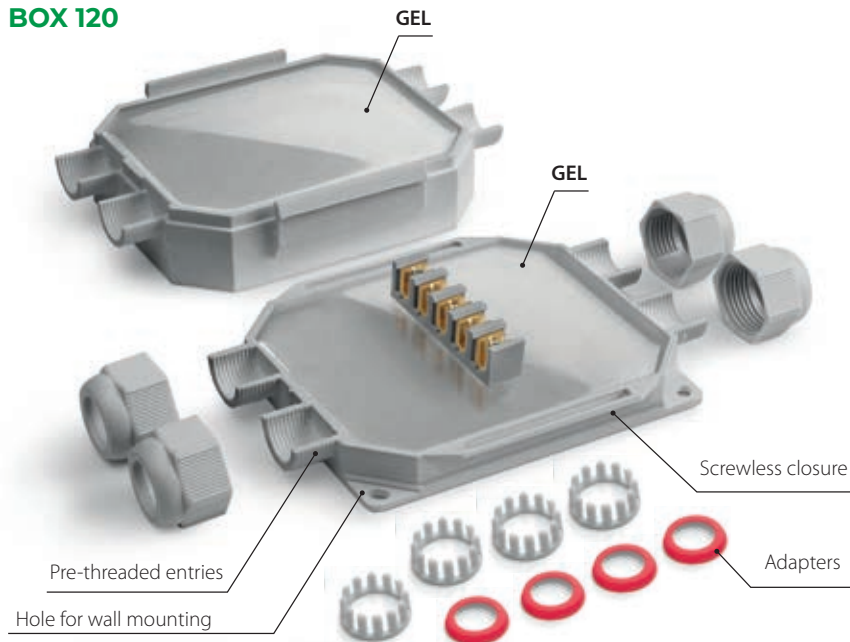
Self-extinguishing and resistant to abnormal heat and fire:  
Glow Wire Flammability Index at +960° C according to EN60695-2-12



**IP68**  
OFFICIALLY TESTED | **IMQ** | **IP69K**  
OFFICIALLY TESTED



**READY BOX 120**

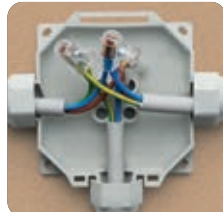
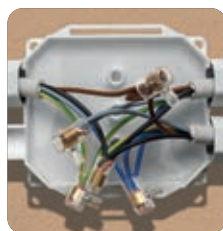
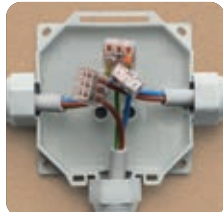
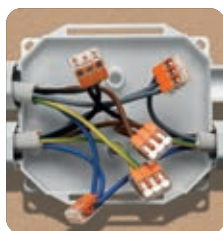
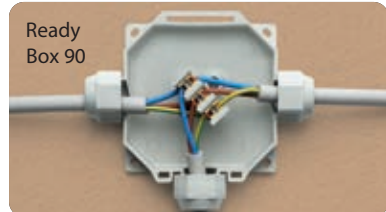
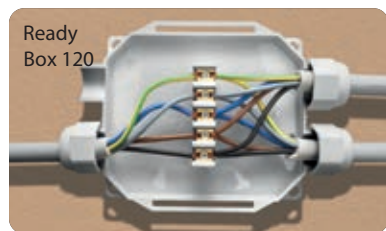


Installation with free cables.



Installation with cable gland duct.


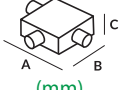
**READY BOX 90**


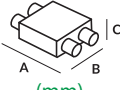


Thanks to its innovative design, unlike a standard box, there is no need to break through the walls of the box to insert the cable.

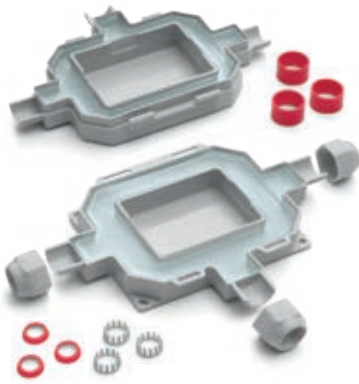
Also suitable for extra-flat lever connectors.

Also suitable for screw terminals.

PRODUCT / Item	Colour		Cables Ø min-max (mm)	Tubes Ø (mm)	 (mm)
Ready Box IP68 90 READYBOX90	●	3	8 - 18	16 / 20 / 32	90 x 90 x 45
Ready Box IP68 90/N READYBOX90-N	●				

PRODUCT / Item	Colour		Cables Ø min-max (mm)	Tubes Ø (mm)	 (mm)
Ready Box IP68 120 READYBOX120	●	4	8 - 18	16 / 20 / 32	120 x 100 x 45
Ready Box IP68 120/N READYBOX120-N	●				

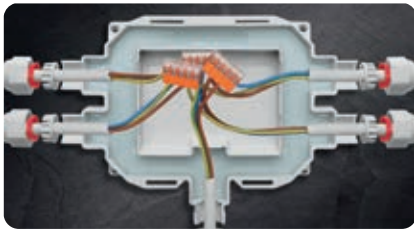




# FOX BOX

3 or 5 entrance jointing enclosure with gel filled perimeter chamber providing lighter weight with maximum capacity.

Kit includes accessories to maximise versatility allowing the use of cables from 8 to 18 mm in diameter or with 16, 20 and 32 mm diameter cable conduits. The internal, gel-free compartment allows for dry connections or any future alterations or disconnections. The gel, contained in the perimeter chamber also surrounds, insulates and seals any armour continuity connections or cable shields.



## ADVANTAGES

- ▶ Pre-filled with a gel that is not-classified as hazardous under the CLP Directive.
- ▶ Functional, elegant design.
- ▶ Ideal for exposed and safety systems and for video camera installation.
- ▶ Ready for use.
- ▶ Click and hook closure, does not require screws.
- ▶ Ready and installable in all environmental conditions.
- ▶ Also suitable for wet or flooded environments.
- ▶ Always re-enterable.
- ▶ Wall or external ceiling fixing system.
- ▶ No shelf life.

### Electrical performance:

- CEI EN 50393 as applicable
- Class 2 in accordance with CEI 64-8.

Gel: UL 94-HB

Working temperature: 90°

Gel operating temperature:  
-60°C / +200°C

Fully submersible

Can be used underground

Halogen-free Gel

UV resistant

Self-extinguishing and resistant to abnormal heat and fire:  
Glow Wire Flammability Index at +960° C according to EN60695-2-12



**IP68**  
OFFICIALLY  
TESTED

**IMQ**

**IP69K**  
OFFICIALLY  
TESTED

### CABLES



Ø 8-13

Ø 13-18

### TUBES



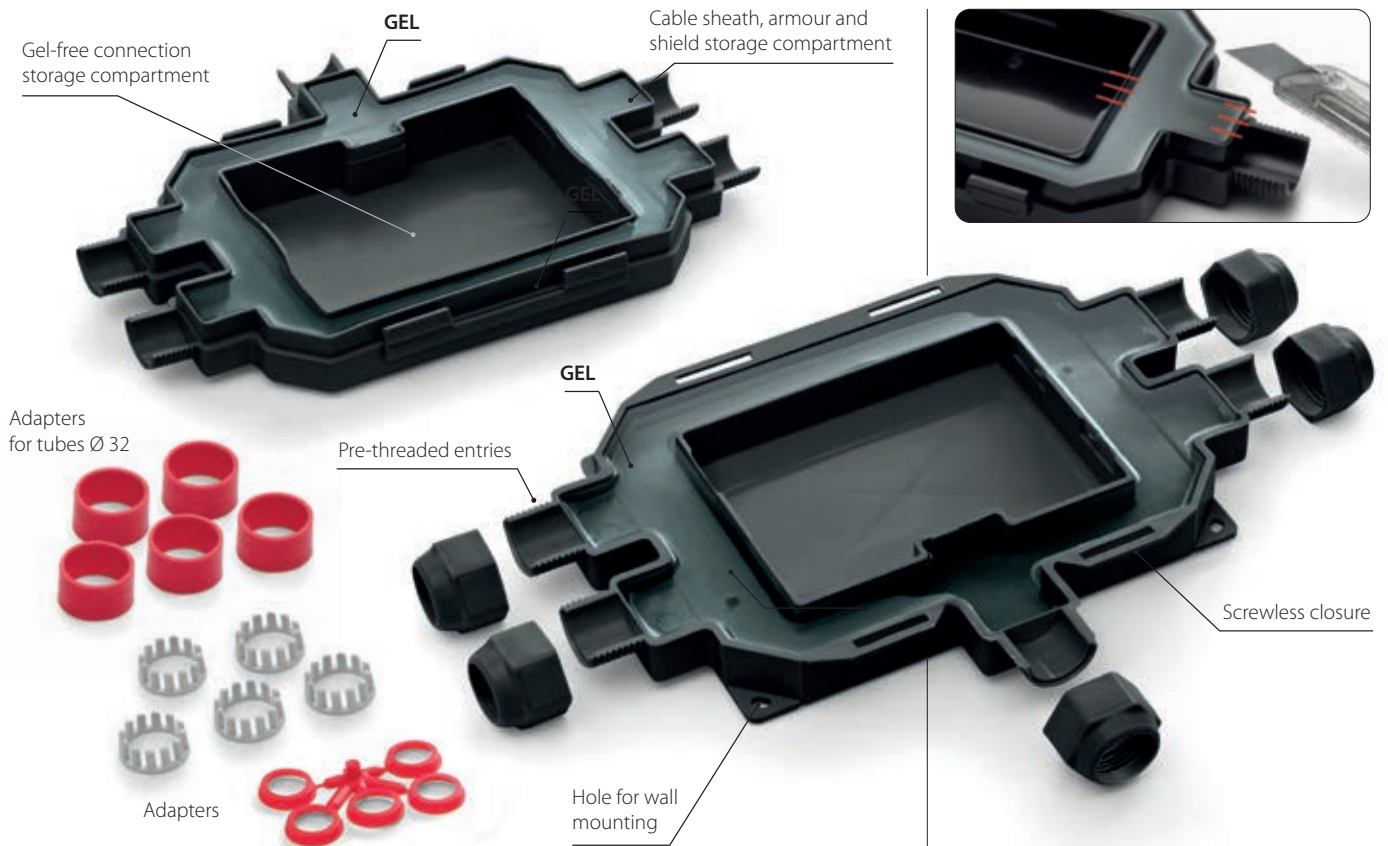
Ø 16

Ø 20

Ø 32



JOINTING BOXES



PRODUCT / Item	Colour	Cables Ø min-max (mm)	Tubes Ø (mm)	Inner capacity (mm)	Outer dimensions (mm)
FOX BOX 3 FOXBOX3	●				
FOX BOX 3 - N FOXBOX3-N	●	8 - 18	16 / 20 / 32	79 x 60 x 32	180 x 135 x 45
FOX BOX 3 - ARM FOXBOX3-ARM	●				

PRODUCT / Item	Colour	Cables Ø min-max (mm)	Tubes Ø (mm)	Inner capacity (mm)	Outer dimensions (mm)
FOX BOX FOXBOX	●				
FOX BOX - N FOXBOX-N	●	8 - 18	16 / 20 / 32	116 x 78 x 32	210 x 155 x 45
FOX BOX - ARM FOXBOX-ARM	●				

The Fox Box – Arm kit includes:

- The yellow/green insulated wires.
- The roll springs to carry out the continuity of the armouring.

Armourings and their continuity are housed in the chamber with the gel, ensuring perfect sealing.

# MAGIC BOX

IP68 Connection kit complete with Magic Fluid insulating gel.

Universal IP68 kit without shelf life, mechanically robust, non-toxic, suitable for installation even in the most extreme conditions, re-enterable, meeting all international standards. Protects from water, moisture, dust and accidental contact caused by small animals.

## ADVANTAGES

- ▶ With pre-drilled walls for a faster installation.
- ▶ Re-enterable even after long periods of operation.
- ▶ Able to absorb external shock without fracturing.
- ▶ For installations even at high depths.
- ▶ Also suitable for vertical filling.
- ▶ No shelf life.
- ▶ The gel is not-classified as hazardous under the CLP Directive.



### Electrical performance:

- CEI EN 50393 as applicable
- Class 2 in accordance with CEI 64-8.

🔧 Gel: UL 94-HB 

🌡️ Working temperature: 90°

🌡️ Gel operating temperature: -60°C / +200°C

🌊 Fully submersible

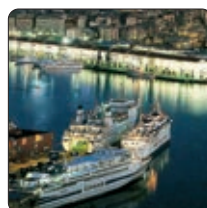
🔑 Can be used underground

🌿 Halogen-free Gel

🔥 Self-extinguishing and resistant to abnormal heat and fire:  
Glow Wire Flammability Index at +960° C according to EN60695-2-12



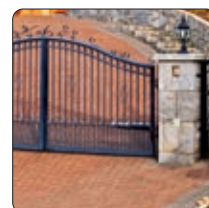
PUBLIC LIGHTING



NAVAL SECTOR



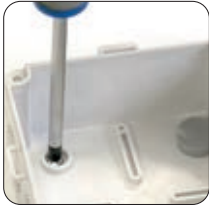
OUTDOOR - GARDENS



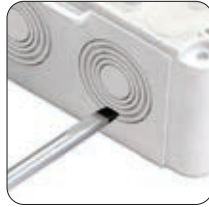
ELECTRIC GATES

IP68  
OFFICIALLY  
TESTED | IMQ

Kit box installation sequence



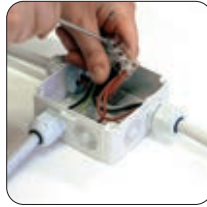
Fix the box and cover the screws with the caps.



Knock out the pre prepared holes.

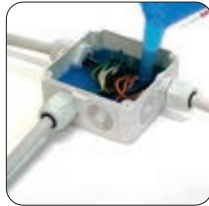


Install the cable glands.




Insert the cables and connect the wires.

Horizontal installation sequence



Vertical installation sequence



PRODUCT / Item	Input cables max. external Ø (mm)	 N° and type of cable glands	Box dimensions (mm)
<b>MAGIC BOX 65</b> MAGICBOX65	22	3 x PG16	Ø 65 x h 35
<b>MAGIC BOX 80</b> MAGICBOX80	22	3 x PG16	Ø 80 x h 40
<b>MAGIC BOX 100</b> MAGICBOX100	20	3 x M25 x 1.5	100 x 100 x h 50
<b>MAGIC BOX 120</b> MAGICBOX120	20	3 x M25 x 1.5	120 x 80 x h 50
<b>MAGIC BOX 150</b> MAGICBOX150	26	3 x M25 x 1.5	150 x 110 x h 70
<b>MAGIC BOX 190</b> MAGICBOX190	26	3 x M25 x 1.5	190 x 140 x h 70
<b>MAGIC BOX 240</b> MAGICBOX240	26	3 x M25 x 1.5	240 x 190 x h 90



Kit complete with cover  
3 cable glands  
Series of closing plugs  
Insulating gel for complete filling





# POWER KIT IP68

The only re-enterable and reusable IP68 kit. Can easily be used for ceiling mounted or recessed applications!

The most versatile, safe solution to fully protect connections in boxes with an IP68 degree of protection. Thanks to **Magic Power**, the newly developed, fast cross-linking, safe and reliable, extremely sticky self-agglomerating gel with very high dielectric, thermal and elastic characteristics, sealing is guaranteed in all type of installation, including submerged. The Power Kit IP68 solution is the only product of its kind! Not only because the insulation can be used in two different ways, both as a traditional "pour" in the box and as a "cross linked and sticky" product (cross linking first), but also because, thanks to its re-enterability and re-usability, it helps you save time and money!

## ADVANTAGES

- ▶ **Magic Power Gel is not-classified as hazardous under the CLP Directive.**
- ▶ **Complete Kit for a perfect connection IP68.**
- ▶ **Insulated with Magic Power Gel the innovative self-amalgamating gel.**
- ▶ **Can also be used in severe environmental conditions.**
- ▶ **Suitable for very high depths.**
- ▶ **No waste.**
- ▶ **No shelf life.**



### Electrical performance:

- CEI EN 50393 as applicable
- Class 2 in accordance with CEI 64-8.

💧 **Gel:** UL 94-HB **US**

🌡️ **Working temperature:** 90°

🌡️ **Gel operating temperature:**  
-60°C / +200°C

🌊 **Fully submersible**

🔑 **Can be used underground**

🌿 **Halogen-free Gel**

🔥 **Self-extinguishing and resistant to abnormal heat and fire:**  
Glow Wire Flammability Index at +960° C according to EN60695-2-12

**IP68** | **IMQ**  
OFFICIALLY TESTED

### WHERE CAN YOU USE THE POWER KIT?

In pools, tanks, submerged pumps, outdoor lighting systems, underground, port piers, marinas, sewer systems, and with temporary connections such as with lights, street vendors, etc.

### HOW DO YOU USE THE POWER KIT?

The insulation can be poured into the box (Pour!) or, for special applications, cross linked in the measuring jug and applied around the connection (Stick!). Mix the Magic Power gel in a 1:1 ratio in the supplied measuring jug. The gel will cross link in less than 15 minutes.

### NO WASTE

The cross linked gel which remains on the bottom after mixing can be easily removed from the jug and saved for later use.

Chose the **POUR** or **STICK** method most suited for your needs

**POUR**



You can use the Magic Power gel supplied in the two-component bottle in a 1:1 ratio by simply pouring it after mixing into the box supplied in the kit, to protect and seal internal connections. The gel cross links in just 15 minutes, but the box can be energised immediately.

**RE-ENTER AND RE-USE**



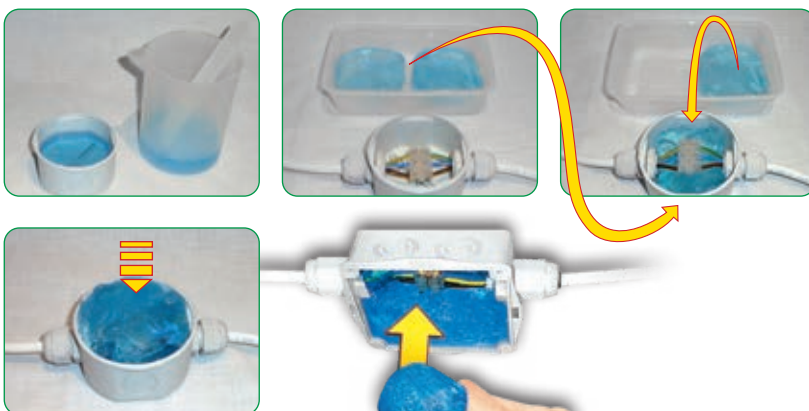
Thanks to Magic Power Gel, the box can be **re-opened, inspected** and **re-insulated** all using the original installed product.

**STICK**



Pour the components in the measuring jug, mix and leave to cross link (about 15 minutes). Remove the insulation and position it in small parts around the connection so that it is fully covered. Insulation saved from previous mixes can of course be utilised.

**IN A HURRY? ADVERSE WEATHER CONDITIONS? PREPARE YOUR INSULATION BEFORE INSTALLING IT!**





### WHAT ARE THE ADVANTAGES TO USING THE POWER KIT?

- The insulation is extremely sticky and self-amalgamating, with no shelf life, it is non-toxic and it adheres to everything while leaving your hands clean and dry.
- The kit does not cause waste: insulation left over in the measuring jug can be saved for later use.
- Re-enterable and reusable, saving time and money.
- The supplied box has pre-marked holes.
- Compatible with Magic Gel.
- A slight exothermic reaction (temperature increase of about 3°C) speeds up cross linking in cold weather conditions.
- Even protects boxes mounted on the ceiling to IP68 if using the "stick" method. Could also use left over product from previous installations.
- Insulation can be pre-prepared: at home, at work or in your car and then applying it once cross linked, saving time when you're in a hurry or in adverse weather conditions.

### SOME LEFT OVER? SAVE IT!



Left over gel that has already cross linked can be easily removed from the measuring jug and saved for later use.



PRODUCT / Item	Box	Insulating filler
<b>POWER KIT 65</b> POWER-65	Ø 65 x h 35 mm + 2 cable glands PG16 / caps	Single two-component bottle 1 small jug - 1 spatula in wood
<b>POWER KIT 80</b> POWER-80	Ø 80 x h 40 mm + 3 cable glands PG16 / caps	Single two-component bottle 1 small jug - 1 mixing spatula
<b>POWER KIT 100</b> POWER-100	100 x 100 x h 50 mm + 3 cable glands M25 x 1,5 / caps	Single two-component bottle 1 small jug - 1 mixing spatula
<b>POWER KIT 120</b> POWER-120	120 x 80 x h 50 mm + 3 cable glands M25 x 1,5 / caps	Single two-component bottle 1 small jug - 1 mixing spatula



# MAGIC GEL SPRINT BOX 100

Kit for IP68 connections with Magic Gel Sprint.

The kit includes a pack of Magic Gel Sprint 450, the gel formulated for an extra-rapid polymerization directly inside the bottle, and a 100 x 100 x h50 mm box: once connected the conductors in the box, the gel is prepared simply by pouring into the large bottle the content of the small one. Then shake and pour. Operation finished!

## ADVANTAGES

- ▶ For **POWER CABLES, TELECOM CABLES** and **ELECTRONIC CIRCUITS**.
- ▶ **Non-toxic, safe** and not classified as hazardous under CLP Directive.
- ▶ Suitable for installation in salt water (sea) and in chlorinated water (pools).
- ▶ Suitable for very high depths.
- ▶ For installations up to 1 kV.
- ▶ No shelf life.
- ▶ Re-enterable.
- ▶ Suitable for high temperatures.



Extra fast curing!



### Electrical performance:

- CEI EN 50393 as applicable
- Class 2 in accordance with CEI 64-8.

🔧 Gel: UL 94-HB

🌡 Working temperature: 90°

🌡 Gel operating temperature: -60°C / +200°C

🌊 Fully submersible

🔧 Can be used underground

🌿 Halogen-free Gel

🔥 Self-extinguishing and resistant to abnormal heat and fire: Glow Wire Flammability Index at +960° C according to EN60695-2-12

**IP68** OFFICIALLY TESTED | **IMQ**



### PRODUCT / Item

**MAGIC GEL SPRINT BOX 100**  
MAGICSPRINTBOX1

### Box

100 x 100 x h 50 mm  
+ 3 cable glands M25 x 1,5

### Insulating filler

Bottle + Catalyst



**Electrical Performance:**  
CEI 23-48, IEC 60670

**Degree of protection:**  
empty IP55  
filled with Gel Raytech IP68

**Self-extinguishing and resistant to abnormal heat and fire:**  
Glow Wire Flammability Index at +960° C according to EN60695-2-12

# J-BOX

Snap shut closing enclosures with perforated knockouts.

Enclosure with snap shut cover and perforated knockouts for faster mounting of cable glands. Very high mechanical and flame retardant properties. Re-enterable only by means of a tool. The screwless design prevents screws rusting over time due to moisture and always allows for easy re-entry. Screw caps are also supplied for the wall mounting screws along with 3 cable glands and a stopping plug for vertical filling.

## ADVANTAGES

- ▶ Can be insulated with *Magic Power Gel, Magic Gel, Wonder Gel (IP68)*.
- ▶ Re-enterable only with the use of a tool.
- ▶ Snap-shut closing (without screws).
- ▶ Also suitable for vertical filling.
- ▶ Excellent shock-resistance.



Snap-shut closing (without screws)



Pre - drilled walls



PRODUCT Item	Max N° of cables that can be jointed	Max Ø predrilling holes (mm)	Max Ø possible drilling (mm)	Max dimension housed cable glands (pass)		Dimension (mm)
				PG	METRIC	
<b>J-BOX 65</b> JBOX65	4	23	23	16	20	Ø 65 x h 35
<b>J-BOX 80</b> JBOX80	4	23	23	16	20	Ø 80 x h 40
<b>J-BOX100</b> JBOX100	8	29	29	21	25	100 x 100 x h 50
<b>J-BOX120</b> JBOX120	6	25	29	21	25	120 x 80 x h 50
<b>J-BOX150</b> JBOX150	10	29	37	29	32	150 x 110 x h 70
<b>J-BOX190*</b> JBOX190	10	37	37	29	32	190 x 140 x h 70
<b>J-BOX240*</b> JBOX240	12	37	37	29	32	240 x 190 x h 90

\* Supplied with extractable hinge for opening book type.  
Note: All boxes include 3 cable glands Ray Pass 16.

## J-BOX ACCESSORIES

### RAY-PRESS

METRIC pitch					
PRODUCT / Item	Metric pict	Assembly hole Ø (mm)	Cable range Ø		Pack of (PCS)
			min (mm)	max (mm)	
Ray PRESS-16 RAYPRESS16	M16 x 1.5	16	6	10	50
Ray PRESS-20 RAYPRESS20	M20 x 1.5	20	8	13	50
Ray PRESS-25 RAYPRESS25	M25 x 1.5	25	12	18	20
Ray PRESS-32 RAYPRESS32	M32 x 1.5	32	16	20	20



PG pitch					
PRODUCT / Item	PG pict	Assembly hole Ø (mm)	Cable range Ø		Pack of (PCS)
			min (mm)	max (mm)	
Ray PRESS-PG11 RAYPRESSPG11	11	19	6	9	50
Ray PRESS-PG13.5 RAYPRESSPG13.5	13,5	20	9	12	50
Ray PRESS-PG16 RAYPRESSPG16	16	23	11	14	50
Ray PRESS-PG21 RAYPRESSPG21	21	29	14	18	20



### RAY-PASS

PRODUCT / Item	For pipe Ø max external (mm)	Assembly hole Ø (mm)	Pack of (PCS)
Ray PASS 16 RAYPASS16	20	23	50
Ray PASS 21 RAYPASS21	23,5	29	50
Ray PASS 29 RAYPASS29	32	38	50









**LOW VOLTAGE**  
**CONNECTORS**  
**TERMINAL BLOCKS**  
**GEL COVER**  
**GEL BOX**

**RAY BLOCK**  
**SUPER BLOCK**  
**HAPPY LINE**  
**GEL BOX LINE**  
**NANO LINE**  
**BRAVO**



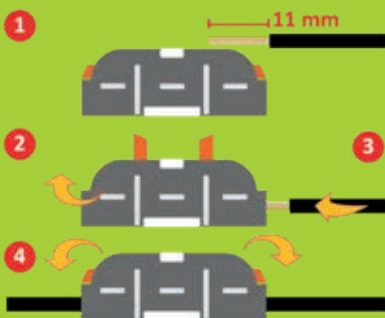
**NEW**

# LEVER CONNECTORS IN & OUT

CE UK  
CA  
RoHS  
Compliant



- MODULAR
- COMPOSABLE
- ULTRAFAST
- SELF-EXTINGUISHING



SECTION: 0.5-4 mm<sup>2</sup>  
VOLTAGE: 600V  
CAPACITY: 32A

RAY  
BLOCK



x 50

COD. ART.  
RAYBLOCK

MINIMUM ORDER QUANTITY  
1 DISPLAY  
OF 12 PACKS

RAY  
BLOCK uno



x 20

COD. ART.  
RAYBLOCKUNO

MINIMUM ORDER QUANTITY  
1 DISPLAY  
OF 20 BLISTER



# RAY BLOCK B

The new range of lever connectors, quick and safe, time and cost-saving.

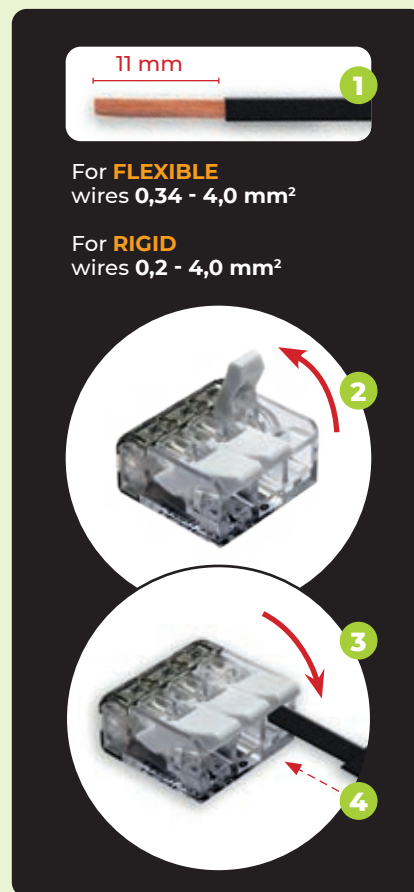
### ADVANTAGES

- ▶ Extra compact, robust, practical, safe and very quick to install.
- ▶ They do not require the use of tools.
- ▶ They allow independent locking and release of individual conductors.
- ▶ Equipped with 2 voltage test points: on front and on back side.
- ▶ With high-quality, acid-resistant stainless steel pressure spring.



OPERATING: **Max 105° C**  
 VOLTAGE: **450V**  
 CAPACITY: **32A**

CEI/IEC 60998-1  
 CEI/IEC 60998-2-2



**x 40** COD. ART.  
RAYBLOCKB2

**MINIMUM ORDER QUANTITY**  
 1 DISPLAY  
 OF 20 BLISTER



**x 30** COD. ART.  
RAYBLOCKB3

**MINIMUM ORDER QUANTITY**  
 1 DISPLAY  
 OF 20 BLISTER



**x 18** COD. ART.  
RAYBLOCKB5


**MINIMUM ORDER QUANTITY**  
 1 DISPLAY  
 OF 20 BLISTER

**NEW**



**Electrical performance:**

- CEI EN 50393 as applicable (testing under water head of the accessory installed in a box).
- Class 2 in accordance with CEI 64-8.
- CEI EN 60998-1 - CEI EN 60998-2

🔹 Gel: UL 94-HB 

🔹 Working temperature: 90°

🔹 Installation temperature: -40°C / +50°C

🔹 Fully submersible

🔹 Can be used underground

🔹 Halogen-free Gel

🔹 UV resistant

**IP68** | **IMQ**  
OFFICIALLY TESTED

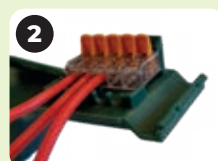
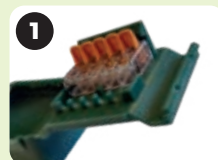
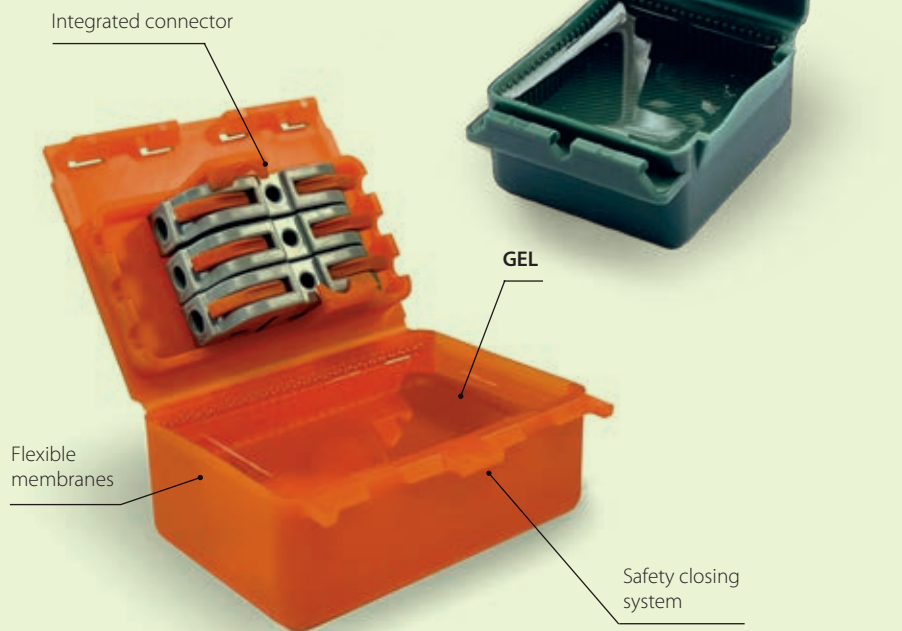
# SUPERBLOCK

The new Gel Box with integrated lever connectors: ready, complete, submersible and compact.

The GEL BOX range, designed in 2015, is enriched with a new range of compact and waterproof connecting devices. For increasingly secure and high-performance connections over time.

**ADVANTAGES**

- ▶ For straight or branch connections of 3 or 5 rigid or flexible wires up to 4 mm<sup>2</sup>.
- ▶ Tool-less.
- ▶ Can be powered immediately - Always re-enterable.
- ▶ Pre-filled with conforming viscoelastic gel, not classified as hazardous.
- ▶ Reusable.
- ▶ Without shelf-life.





### SUPER BLOCK IN-OUT M

Item  
SUPERBLOCKINOUTM

Up to 3 x 4 mm<sup>2</sup>

Dimensions:  
67 x 50 x 28 mm



### SUPER BLOCK 3W

Item  
SUPERBLOCK3W

Up to 3 x 4 mm<sup>2</sup>

Dimensions:  
57 x 47 x 26 mm



### SUPER BLOCK 3

Item  
SUPERBLOCK3

Up to 3 x 4 mm<sup>2</sup>

Dimensions:  
57 x 47 x 26 mm



### SUPER BLOCK 5W

Item  
SUPERBLOCK5W

Up to 5 x 2.5 mm<sup>2</sup>

Dimensions:  
57 x 47 x 26 mm



### SUPER BLOCK 5

Item  
SUPERBLOCK5

Up to 5 x 4 mm<sup>2</sup>

Dimensions:  
57 x 47 x 26 mm



### SUPER BLOCK IN-OUT W

Item  
SUPERBLOCKINOUTW

Up to 3 x 4 mm<sup>2</sup>

Dimensions:  
67 x 50 x 28 mm



### SUPER BLOCK IN-OUT

Item  
SUPERBLOCKINOUT

Up to 3 x 4 mm<sup>2</sup>

Dimensions:  
67 x 50 x 28 mm







# HAPPY LINE

The revolutionary mini accessories with 3 entrances, pre-filled with gel and suitable for submersible installations (IPX8).

Designed in 3 dimensions to rapidly insulate and seal the most commonly used connectors. The 3 entrances not only guarantee the extreme flexibility in the range of these products by making possible triple configurations but also by the housing accepting a wide variety of connectors.

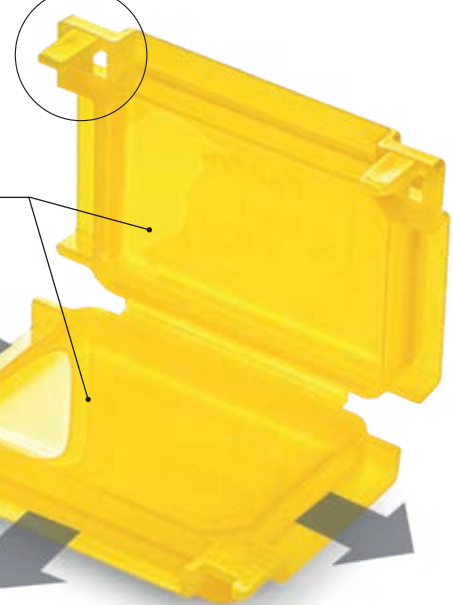
## ADVANTAGES

- ▶ Extremely versatile - Ready to use - Re-enterable.
- ▶ For rigid or flexible insulated wires up to 6 mm<sup>2</sup>.
- ▶ Pre-filled with a gel that is not-classified as hazardous under the CLP Directive and with no shelf life.
- ▶ Small compact and robust.

New closure safety



New closure safety



Extra flexible membranes



### Electrical performance:

- CEI EN 50393 as applicable (testing under water head of the accessory installed in a box).
- Class 2 in accordance with CEI 64-8.
- CEI EN 60998-1 - CEI EN 60998-2

🔧 Gel: UL 94-HB US

🌡 Working temperature: 90°

🌡 Installation temperature: -40°C / +50°C

🌊 Fully submersible

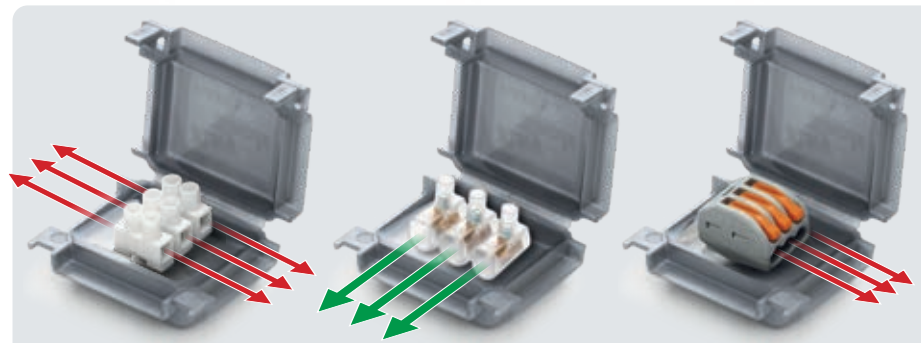
🔧 Can be used underground

🌿 Halogen-free Gel

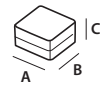
☀ UV resistant

**IPX8**  
OFFICIALLY TESTED | **IMQ**

## Configuration examples

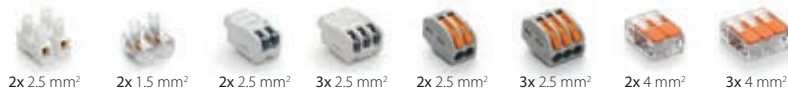


## HAPPY 0

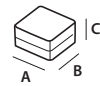


PRODUCT	Item	Colour	Pack of (PCS)	Description	Dimension (mm)
HAPPY 0	HAPPY0	●	4	Blister	41 x 28 x 19
HAPPY 0 BOX12	HAPPY0BOX12	○	12	Box	
GEL BOX 0	GELBOX0	○	20	Blister	

IDEAL FOR (or similar):



## HAPPY 1

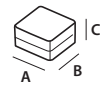


PRODUCT	Item	Colour	Pack of (PCS)	Description	Dimension (mm)
HAPPY 1	HAPPY1	●	2	Blister	45 x 37 x 24
HAPPY 1 BOX10	HAPPY1BOX10	○	10	Box	
GEL BOX 1	GELBOX1	○	15	Blister	

IDEAL FOR (or similar):

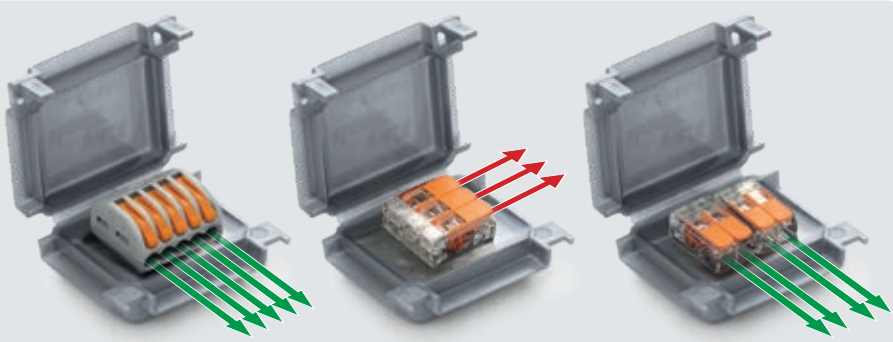


## HAPPY 2



PRODUCT	Item	Colour	Pack of (PCS)	Description	Dimension (mm)
HAPPY 2	HAPPY2	●	1	Blister	53 x 39 x 24
HAPPY 2 BOX7	HAPPY2BOX7	○	7	Box	
GEL BOX 2	GELBOX2	○	11	Blister	

IDEAL FOR (or similar):



Coloured casings are self-extinguishing according to the **UL 94-V2** standard.



# HAPPY JOINT LINE

The revolutionary mini accessories with 3 entrances, pre-filled with gel and suitable for submersible installations (IPX8) complete with connectors.

## ADVANTAGES

- ▶ Extremely versatile - ready to use - re-enterable.
- ▶ Small, compact and robust.
- ▶ No need for tools.
- ▶ Pre-filled with a gel that is not-classified as hazardous under the CLP Directive and with no shelf life.
- ▶ Can energise immediately.
- ▶ For straight and branch connections.
- ▶ For rigid or flexible insulated wires up to 6 mm<sup>2</sup>.
- ▶ Up to 5 conductors on one phase or up to two conductors on two or three phases.

New closure safety




**ULTRA-FLAT TERMINALS  
FOR WIRES UP TO  
6 mm<sup>2</sup>**

GEL



### Electrical performance:

- CEI EN 50393 as applicable (testing under water head of the accessory installed in a box).
- Class 2 in accordance with CEI 64-8.
- CEI EN 60998-1 - CEI EN 60998-2

🔧 Gel: UL 94-HB 

🌡️ Working temperature: 90°

🌡️ Installation temperature: -40°C / +50°C

🌊 Fully submersible

🔧 Can be used underground

🌿 Halogen-free Gel

☀️ UV resistant

**IPX8**  
OFFICIALLY TESTED | **IMQ**





### HAPPY JOINT 3



PRODUCT / Item	Formation and wires cross section (Max N° x mm <sup>2</sup> )	Combination	Pack of	Dimension (mm)
<b>HAPPY JOINT 3</b> HAPPYJOINT3	3 x 1 - 4	2 through / 1 branch	4 PCS/ Blister	41 x 28 x 19
<b>HAPPY JOINT 36</b> HAPPYJOINT36	3 x 1 - 6	2 through / 1 branch	2 PCS/ Blister	45 x 37 x 24



3 x 4 mm<sup>2</sup>



3 x 6 mm<sup>2</sup>



With one connector included for each Happy

### HAPPY JOINT 4



PRODUCT / Item	Formation and wires cross section (Max N° x mm <sup>2</sup> )	Combination	Pack of	Dimension (mm)
<b>HAPPY JOINT 4</b> HAPPYJOINT4	2+2 x 1 - 4	2 through / in/out	2 PCS/ Blister	45 x 37 x 24
<b>HAPPY JOINT 46</b> HAPPYJOINT46	2+2 x 1 - 6	2 through / in/out	2 PCS/ Blister	45 x 37 x 24



2+2 x 4 mm<sup>2</sup>



2+2 x 6 mm<sup>2</sup>



With two connectors included for each Happy

### HAPPY JOINT 5



PRODUCT / Item	Formation and wires cross section (Max N° x mm <sup>2</sup> )	Combination	Pack of	Dimension (mm)
<b>HAPPY JOINT 5</b> HAPPYJOINT5	5 x 1 - 4	2 through / 3 branch	2 PCS/ Blister	45 x 37 x 24
<b>Happy Joint 56</b> HAPPYJOINT56	5 x 1 - 6	2 through / 3 branch	1 PC/ Blister	53 x 39 x 24



5 x 4 mm<sup>2</sup>



5 x 6 mm<sup>2</sup>



With one connector included for each Happy

### HAPPY JOINT 6



PRODUCT / Item	Formation and wires cross section (Max N° x mm <sup>2</sup> )	Combination	Pack of	Dimension (mm)
<b>HAPPY JOINT 6</b> HAPPYJOINT6	6 x 1 - 4	3 through / in/out	1 PC/ Blister	53 x 39 x 24



6 x 4 mm<sup>2</sup>



With three connectors included for each Happy

# GEL BOX LINE

Gel pre-filled accessories for sealing, protecting and making safe electrical connections.

## ADVANTAGES

- ▶ Designed with dimensions suitable for the most commonly used connectors.
- ▶ To put household systems in order.
- ▶ For rigid or flexible insulated wires.
- ▶ For civil and industrial connections.
- ▶ Also for submersible use.
- ▶ Pre-filled with a gel that is not-classified as hazardous under the CLP Directive and with no shelf life.
- ▶ Versatile and ready to use.



### Electrical performance:

- CEI EN 50393 as applicable (testing under water head of the accessory installed in a box).
- Class 2 in accordance with CEI 64-8.

🔹 Gel: UL 94-HB 

🔹 Working temperature: 90°

🔹 Installation temperature: -40°C / +50°C

🔹 Fully submersible

🔹 Can be used underground

🔹 Halogen-free Gel

🔹 UV resistant

**IPX8**  
OFFICIALLY  
TESTED | **IMQ**



## ISAAC

PRODUCT	Item	Pack of	Pack type	Dimension (mm)
ISAAC 4	ISAAC4	4 PCS	Blister	30 x 27 x 23
ISAAC 4 P30	ISAAC4P30	30 PCS	Box	
ISAAC 4 MP *	ISAAC4MP	50 PCS	Multipack	



IDEAL FOR  
(or similar):



## PASCAL

PRODUCT	Item	Pack of	Pack type	Dimension (mm)
PASCAL 6	PASCAL6	2 PCS	Blister	36 x 37 x 26
PASCAL 6 P15	PASCAL6P15	15 PCS	Box	
PASCAL 6 MP *	PASCAL6MP	25 PCS	Multipack	



IDEAL FOR  
(or similar):



## WATT

PRODUCT	Item	Pack of	Pack type	Dimension (mm)
WATT	WATT	2 PCS	Blister	30 x 42 x 26
WATT P15	WATTP15	15 PCS	Box	
WATT MP *	WATT-MP	25 PCS	Multipack	



IDEAL FOR  
(or similar):



## JOULE

PRODUCT	Item	Pack of	Pack type	Dimension (mm)
JOULE	JOULE	1 PC	Blister	33 x 52 x 26
JOULE MP *	JOULEMP	20 PCS	Multipack	



IDEAL FOR  
(or similar):



## KELVIN

PRODUCT	Item	Pack of	Pack type	Dimension (mm)
KELVIN	KELVIN	1 PC	Blister	52 x 53 x 29
KELVIN P9	KELVINP9	9 PCS	Box	
KELVIN MP *	KELVINMP	20 PCS	Multipack	



IDEAL FOR  
(or similar):



\* Also available in the self-extinguishing version according to the **UL 94-V2** standard in the colours: yellow, orange, blue or black.





# GEL BOX LINE KIT

Complete with connectors.

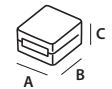
## PASCAL M2,5



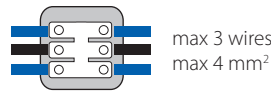
PRODUCT / Item	Pack content	Pack type	Dimension (mm)
PASCAL M2,5 PASCALM2,5	12 pieces + 36 terminal blocks (2.5 mm <sup>2</sup> )	Box	36 x 37 x 26



## KELVIN M4



PRODUCT / Item	Pack content	Pack type	Dimension (mm)
KELVIN M4 KELVINM4	6 pieces + 24 terminal blocks (4 mm <sup>2</sup> )	Box	52 x 53 x 29



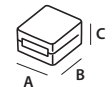
## WATT +



PRODUCT / Item	Pack content	Pack type	Dimension (mm)
WATT + 1.5 WATT-1.5	10 pieces + 30 end connectors/ terminal blocks (1.5 mm <sup>2</sup> )	Box	30 x 42 x 26
WATT + 2.5 WATT-2.5	10 pieces + 30 end connectors/ terminal blocks (2.5 mm <sup>2</sup> )	Box	



## KELVIN +



PRODUCT / Item	Pack content	Pack type	Dimension (mm)
KELVIN + 4 KELVIN-4	10 pieces + 30 end connectors/ terminal blocks (4 mm <sup>2</sup> )	Box	52 x 53 x 29
KELVIN + 6 KELVIN-6	10 pieces + 30 end connectors/ terminal blocks (6 mm <sup>2</sup> )	Box	
KELVIN 6+4 KELVIN6-4	6 pieces + 20 end connectors/ terminal blocks (4 mm <sup>2</sup> )	Box	
KELVIN 6+6 KELVIN6-6	6 pieces + 20 end connectors/ terminal blocks (6 mm <sup>2</sup> )	Box	



## COVERS FOR TERMINAL BLOCKS / CONNECTORS

# NANO JOINT LINE

Gel pre-filled accessories to seal, protect and make safe electrical connections.  
Inclusive of connectors.

### ADVANTAGES

- ▶ Ready to use, quick, re-enterable!
- ▶ No tools required.
- ▶ Can energise immediately.
- ▶ For straight & branch connections.
- ▶ For rigid or flexible insulated wires from 1 a 4 mm<sup>2</sup>.
- ▶ For 1, 2 and 3 cores connections.
- ▶ Up to 5 conductors on one phase or up to 2 conductors on two or three phase.
- ▶ Small, compact and resistant.
- ▶ Pre-filled with a gel that is not-classified as hazardous under the CLP Directive and with no shelf life.



CONNECTORS  
INCLUDED IN THE KIT

### Electrical performance:

- CEI EN 50393 as applicable (testing under water head of the accessory installed in a box).
- Class 2 in accordance with CEI 64-8.
- CEI EN 60998-1 - CEI EN 60998-2

🔧 Gel: UL 94-HB 

🌡️ Working temperature: 90°

🌡️ Installation temperature: -40°C / +50°C

🌊 Fully submersible

🔑 Can be used underground

🌿 Halogen-free Gel

☀️ UV resistant

🔥 Self-extinguishing according to UL 94-V2

IPX8  
OFFICIALLY  
TESTED | IMQ

# COVERS FOR TERMINAL BLOCKS / CONNECTORS

With extra flat connectors included



## NANO 3

PRODUCT / Item	Formation and wires cross section (Max N° x mm <sup>2</sup> )	Combination	Package	Dimension (mm)
NANO 3 NANO3	3 x 1 - 4	2 through / 1 branch	4 PCS Blister	30 x 27 x 23



## NANO 5

PRODUCT / Item	Formation and wires cross section (Max N° x mm <sup>2</sup> )	Combination	Package	Dimension (mm)
NANO 5 NANO5	5 x 1 - 4	2 through / 3 branch	2 PCS Blister	30 x 42 x 26



## NANO 6

PRODUCT / Item	Formation and wires cross section (Max N° x mm <sup>2</sup> )	Combination	Package	Dimension (mm)
NANO 6 NANO6	6 x 1 - 4	3 through / In/Out	1 PC Blister	33 x 52 x 26





With one connector included



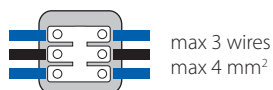
### NANO MAM 2,5

PRODUCT / Item	Formation and wires cross section (Max N° x mm <sup>2</sup> )	Combination	Package	Dimension (mm)
NANO MAM 2,5 NANOMAM-2.5	3 x 1 - 2,5	3 through	2 PCS/ Blister	36 x 37 x 26



### NANO MAM 4

PRODUCT / Item	Formation and wires cross section (Max N° x mm <sup>2</sup> )	Combination	Package	Dimension (mm)
NANO MAM 4 NANOMAM-4	3 x 1,5 - 4	3 through	1 PC/ Blister	52 x 53 x 29



### NANO FOR 2,5

PRODUCT / Item	Formation and wires cross section (Max N° x mm <sup>2</sup> )	Combination	Package	Dimension (mm)
NANO FOR 2,5 NANOFOR-2.5	3 x 1 - 2,5	3 connections / In/Out	1 PC/ Blister	33 x 52 x 26



### NANO FOR 4

PRODUCT / Item	Formation and wires cross section (Max N° x mm <sup>2</sup> )	Combination	Package	Dimension (mm)
NANO FOR 4 NANOFOR-4	3 x 1 - 4	3 connections / In/Out	1 PC/ Blister	52 x 53 x 29



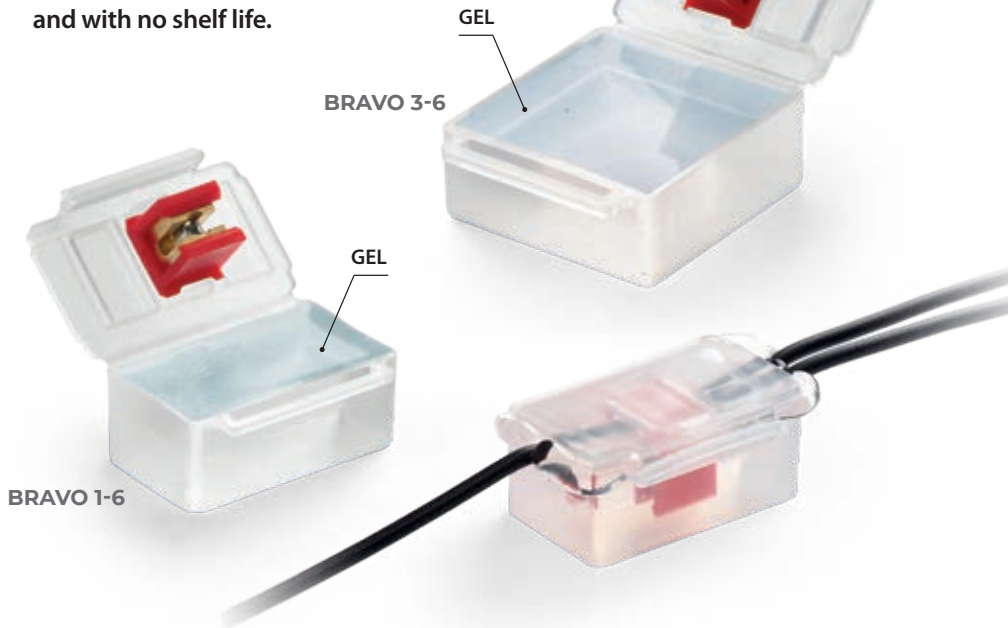


# BRAVO

The first "Gel-Box" with integrated connectors!


## ADVANTAGES

- ▶ Ready to use, quick, re-enterable!
- ▶ For rigid or flexible insulated wires from 1 to 6 mm<sup>2</sup>.
- ▶ It can be powered immediately.
- ▶ For straight & branch connections.
- ▶ For 1 or 3 cores connections.
- ▶ Small, compact and transparent.
- ▶ Pre-filled with a gel that is not-classified as hazardous under the CLP Directive and with no shelf life.



### Electrical performance:

- CEI EN 50393 as applicable (testing under water head of the accessory installed in a box).
- Class 2 in accordance with CEI 64-8.

🔹 Gel: UL 94-HB 

🌡 Working temperature: 90°

🌡 Installation temperature: -40°C / +50°C

🌊 Fully submersible

🔧 Can be used underground

🌿 Halogen-free Gel

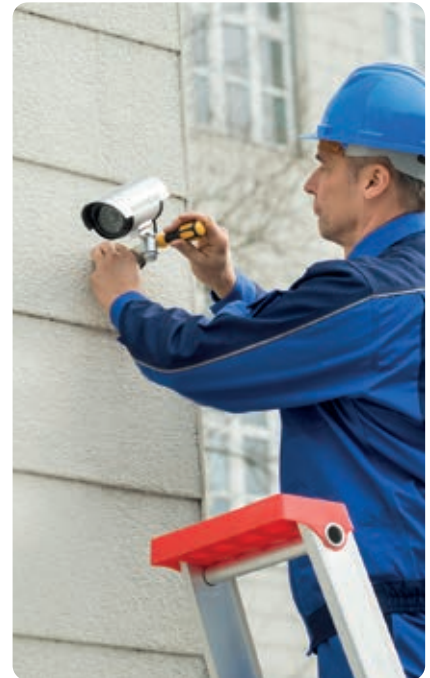
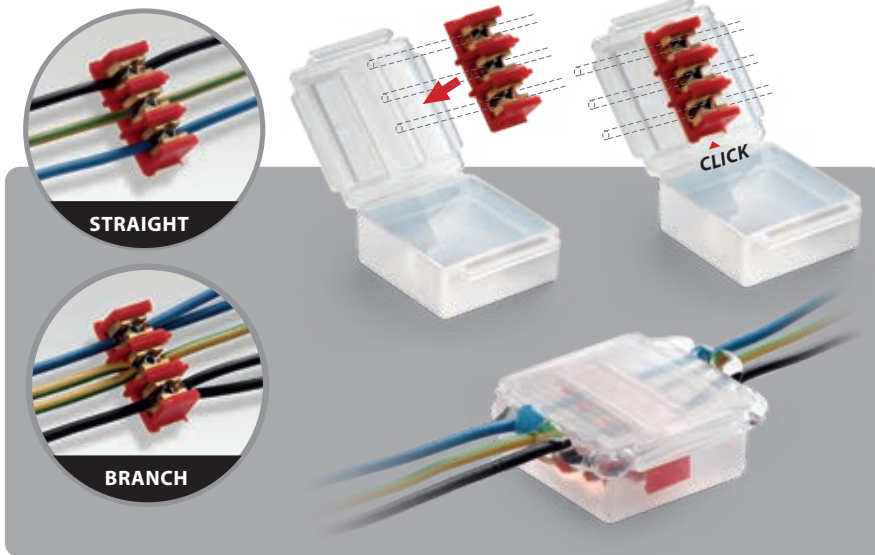
☀ UV resistant

**IPX8**  
OFFICIALLY  
TESTED | **IMQ**

## MINI BRAVO



- 1** CONNECT    **2** FIX    **3** CLOSE



**BRAVO**

PRODUCT / Item	Formation and wires cross section		Package	Dimension (mm)
	Straight or through (N° x mm²)	Branch (N° x mm²)		
<b>BRAVO 1-6</b> BRAVO1-6	1 x 1 - 6	1 x 1 - 6	1 PC/ Blister	50 x 29 x 22
<b>BRAVO 3-6</b> BRAVO3-6	2 x 1 - 6 3 x 1 - 6	2 x 1 - 6 3 x 1 - 6	1 PC/ Blister	53 x 49 x 22



**MINI BRAVO**

PRODUCT / Item	Formation and wires cross section		Package	Dimension (mm)
	Straight or through (N° x mm²)	Branch (N° x mm²)		
<b>MINI BRAVO 1</b> MINIBRAVO1	1 x 1 - 4	1 x 1 - 4	3 PCS/ Blister	41 x 28 x 19
<b>MINI BRAVO 2</b> MINIBRAVO2	2 x 1 - 4	2 x 1 - 4	1 PC/ Blister	45 x 37 x 24
<b>MINI BRAVO 3</b> MINIBRAVO3	3 x 1 - 4	3 x 1 - 4	1 PC/ Blister	53 x 39 x 24









## **LOW VOLTAGE JOINTS**

**PRE-FILLED FOR PHOTOVOLTAIC**  
SOLAR COVER

**PRE-FILLED IP68**  
LITTLE JOINT EASY  
LITTLE JOINT  
MINI RAPID JOINT IP68  
RAPID JOINT IP68  
READY CAST

**PRE-FILLED IPX8 - FLAT**  
GEL COVER LINE  
SUPERCLIK / CLIK / CLIK A2A

**PRE-FILLED IPX8 - CYLINDRICAL**  
KING JOINT  
RAPID JOINT

**FOR CASTING**  
MAGIC POWER JOINT  
MAGIC JOINT  
RUBBER JOINT  
RAY CAST

**HEAT-SHRINK**  
JOINTS / TERMINALS

**NEW**



**Electrical performance:**

- CEI EN 50393 as applicable
- Class 2 in accordance with CEI 64-8.

💧 Gel: UL 94-HB

💧 Casing mix: UL 94-V2

💡 Working temperature: 125°C

💡 Installation temperature: -40°C / +50°C

🌿 Halogen-free Gel

☀️ Loaded with CARBON BLACK  
UV resistant

🔥 No flame propagation:  
CEI 20-35 IEC 60332-1 HD405-1  
As applicable

🔥 Self-ignition temperature:  
> 400° C

⚠️ Operating voltage: 1500V DC

**IP68** | **IMQ**  
OFFICIALLY TESTED

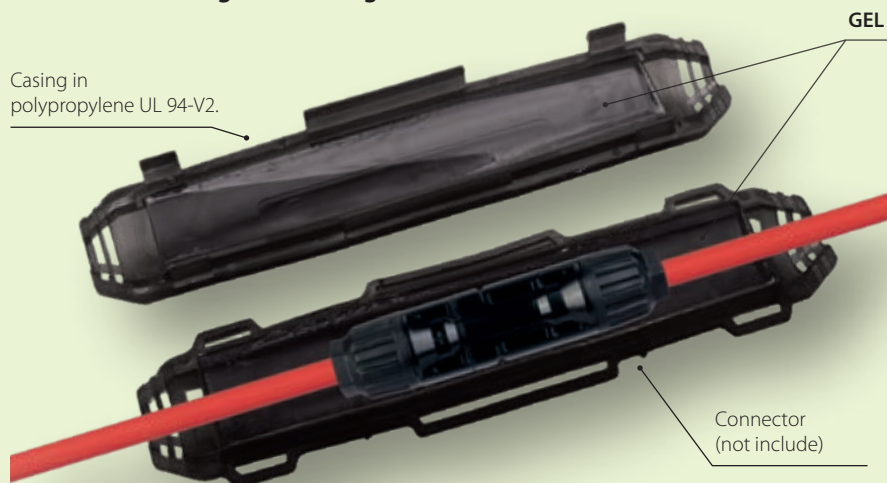
# SOLARCOVER

The extra dark cover with gel filler, for sealing connectors from 4 to 10 mm<sup>2</sup> for solar.

It prevents the deterioration of connectors, preserving their performance over time, thus avoiding malfunctions and difficult and expensive maintenance. Resistant to UV rays, corrosion and immersion in water, even if salty or chlorinated. Ready, fast and always inspectable.

**ADVANTAGES**

- ▶ Made of UL 94-V2 polypropylene.
- ▶ Highly resistant to water, corrosion and frost.
- ▶ Complete with sealing silicone gel filler, non-toxic and safe.
- ▶ It is the ideal accessory to protect cable connections for solar and photovoltaic systems over the seasons and consequently affected by variations in temperature and weather conditions.
- ▶ It allows the reduction of risks from electric arcs and the resulting overheating.







For connectors  
from 4 to 10 mm<sup>2</sup>



PRODUCT Item	Pieces / Pack	Dimension (mm)
SOLARCOVER-4 SOLARCOVER-4	2 pcs / Box	165 x 45 x 27
SOLARCOVER-6 SOLARCOVER-6	2 pcs / Box	220 x 52 x 32





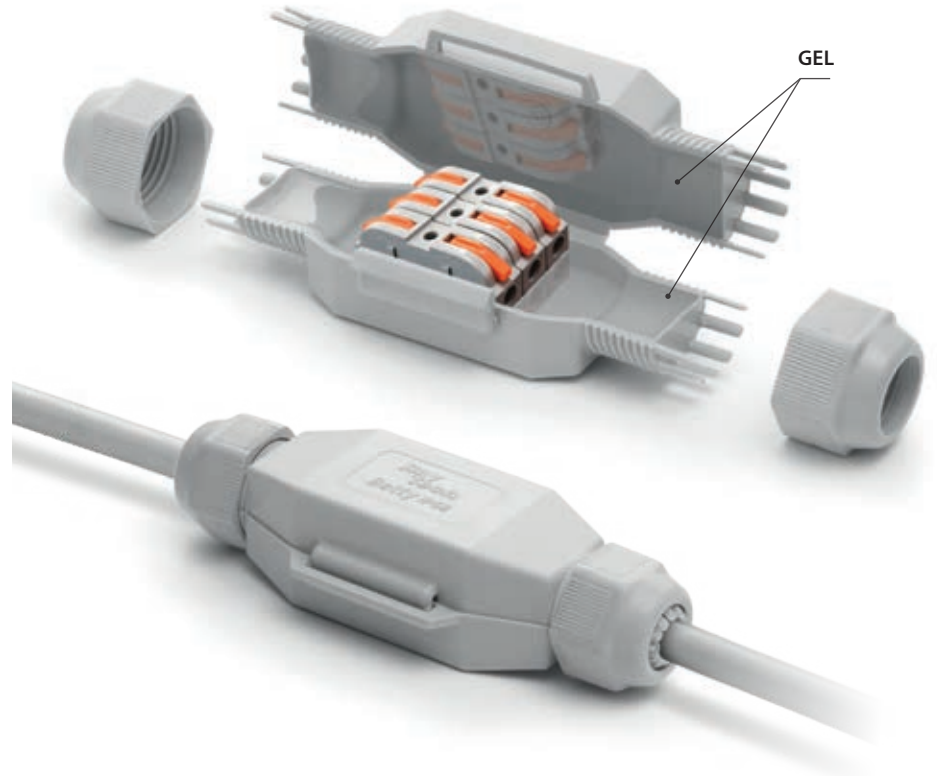
# LITTLE JOINT EASY

The IP68/IP69K mini joints, gel pre-filled, complete with in-out lever connectors.

Thanks to the integrated cable glands, they allow the degree of protection IP68 and IP69K and at the same time the locking of the joint on the cable. Suitable for all types of installation, even the most extreme.

## ADVANTAGES

- ▶ Pre-filled with a gel that is not-classified as hazardous under the CLP Directive and with no shelf life.
- ▶ Extremely compact and ready to install.
- ▶ Ideal for connections in lighting systems for gardens, steps and stairways, pedestrian crossings, etc.
- ▶ Always re-enterable.



### Electrical performance:

- CEI EN 50393 as applicable
- Class 2 in accordance with CEI 64-8.

🔧 Gel: UL 94-HB US

🌡 Working temperature: 90°

🌡 Installation temperature: -40°C / +50°C

🌊 Fully submersible

🔧 Can be used underground

🌿 Halogen-free Gel

☀ UV resistant

🔥 Self-extinguishing and resistant to abnormal heat and fire:  
Glow Wire Flammability Index at +960° C according to EN60695-2-12

**IP68**  
OFFICIALLY  
TESTED

**IMQ**

**IP69K**  
OFFICIALLY  
TESTED

## NEW IN-OUT LEVER CONNECTORS

- ▶ Modular, Composable, Ultra-fast, Self-extinguishing.



**FRED EASY**  
2x 4 mm<sup>2</sup>



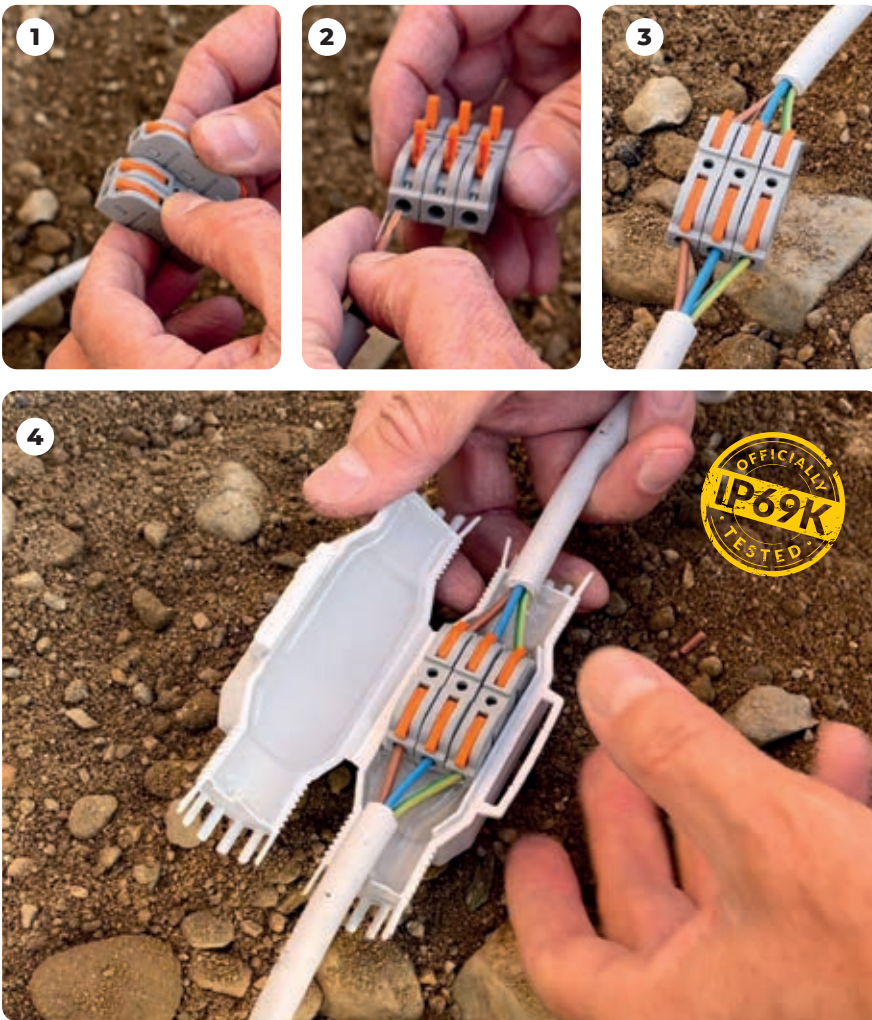
**DINO EASY**  
3x 4 mm<sup>2</sup>



**BETTY EASY**  
5x 4 mm<sup>2</sup>



JOINTS



For use in traps. The ideal accessory for connections to light fittings and spotlights. Suitable in applications where there is presence of water and moisture.



PRODUCT Item	Colour	Connector	Cable formation max (N° x mm <sup>2</sup> )	Cable Ø min - max (mm)	Pieces / Pack	Diagram Dimensions (mm)
FRED EASY FRED-EASY	●		2 x 4	8 - 13	1 / Blister	80 x 36 x 23
DINO EASY DINO-EASY	●		3 x 4	10 - 16	1 / Blister	125 x 43 x 35
BETTY EASY BETTY-EASY	●		5 x 4	10 - 16	1 / Blister	145 x 46 x 35

PRODUCT Item	NEW IN-OUT LEVER CONNECTORS 0,5 - 4 mm <sup>2</sup>	Pieces / Pack	Diagram Dimensions (mm)
RAYBLOCK RAYBLOCK	Modular, Composable, Ultra-fast, Self-extinguishing Sections: 0,5 - 4 mm <sup>2</sup>   Voltage: 600 V   Capacity: 32 A Operating temperature of the insulating material: up to 105°C	50 / Box	39 x 8 x 15







# LITTLE JOINT

The IP68 / IP69K micro-joints, gel pre-filled, complete with connector, suitable for any type of installation, even the most extreme.

Extremely compact and space-saving, pre-filled with soft, highly conformable gel. With minimal aesthetic impact and visually pleasing. Equipped with integrated cable glands for IP68 and IP69K degree of ingress protection and cable retention.

## ADVANTAGES




- ▶ Pre-filled with a gel that is not-classified as hazardous under the CLP Directive and with no shelf life.
- ▶ Extremely compact and ready to install.
- ▶ Ideal for connections in lighting systems for gardens, steps and stairways, pedestrian crossings, etc.
- ▶ Always re-enterable.

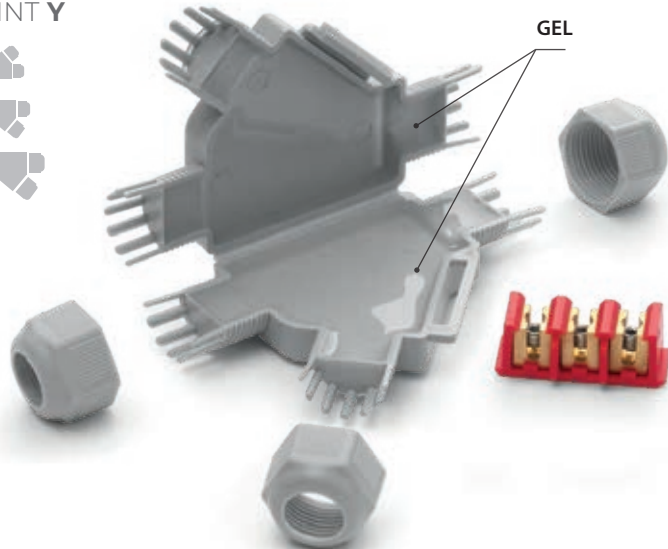
## LITTLE JOINT L

- Barney 
- Fred 
- Dino 
- Betty 
- Tom 



## LITTLE JOINT Y

- Barney Y 
- Fred Y 
- Dino Y 




### Electrical performance:


- CEI EN 50393 as applicable
- Class 2 in accordance with CEI 64-8.

 Gel: UL 94-HB 

 Working temperature: 90°


 Installation temperature: -40°C / +50°C

 Fully submersible

 Can be used underground

 Halogen-free Gel

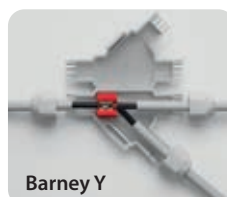
 UV resistant

 Self-extinguishing and resistant to abnormal heat and fire:  
Glow Wire Flammability Index at +960° C according to EN60695-2-12

**IP68**  
OFFICIALLY TESTED

**IMQ**





**IP69K**  
OFFICIALLY TESTED



JOINTS

PRODUCT Item	Colour	Connector	Max cable formation (N° x mm <sup>2</sup> )		Cable Ø min - max (mm)	Pieces / Pack	 (mm)
			Through	Branch			
<b>BARNEY</b> BARNEY	●					1 / Blister	75 x 28 x 19
<b>BARNEY - N</b> BARNEY-N	●		2 x 2,5		6 - 10	1 / Blister	
<b>BARNEY MP</b> BARNEY-MP	●					10 / Multipack	
<b>FRED</b> FRED	●					1 / Blister	80 x 36 x 23
<b>FRED - N</b> FRED-N	●		3 x 2,5		8 - 13	1 / Blister	
<b>FRED MP</b> FRED-MP	●					10 / Multipack	
<b>FRED/4</b> FRED/4	●					1 / Blister	80 x 36 x 23
<b>FRED/4 - N</b> FRED/4-N	●		3 x 4		8 - 13	1 / Blister	
<b>DINO</b> DINO	●					1 / Blister	125 x 43 x 35
<b>DINO - N</b> DINO-N	●		4 x 4		10 - 16	1 / Blister	
<b>DINO 6</b> DINO/6	●		3 x 6		10 - 16	1 / Blister	125 x 43 x 35
<b>BETTY/4</b> BETTY/4	●					1 / Blister	145 x 46 x 35
<b>BETTY/4 - N</b> BETTY/4-N	●		5 x 4		10 - 16	1 / Blister	
<b>BETTY/6</b> BETTY/6	●					1 / Blister	145 x 46 x 35
<b>BETTY/6 - N</b> BETTY/6-N	●		5 x 6		14 - 19	1 / Blister	
<b>TOM</b> TOM	●					1 / Blister	180 x 53 x 42
<b>TOM - N</b> TOM-N	●		5 x 6		19 - 23	1 / Blister	



PRODUCT Item	Colour	Connector	Max cable formation (N° x mm <sup>2</sup> )		Cable Ø min - max (mm)	Pieces / Pack	 (mm)
			Through	Branch			
<b>BARNEY Y</b> BARNEY-Y	●					1 / Blister	85 x 55 x 22
<b>BARNEY Y - N</b> BARNEY-Y/N	●		1 x 4 1 x 2,5	1 x 1,5 1 x 2,5	6 - 10	1 / Blister	
<b>FRED Y</b> FRED-Y	●					1 / Blister	110 x 72 x 25
<b>FRED Y - N</b> FRED-Y/N	●		3 x 4 3 x 2,5	3 x 1,5 3 x 2,5	8 - 13	1 / Blister	
<b>DINO Y</b> DINOY	●					1 / Blister	160 x 75 x 37
<b>DINO Y - N</b> DINOY-N	●		5 x 6 5 x 4*	5 x 1,5 5 x 2,5*	14 - 19	1 / Blister	

\* section for rigid cables





**INDUSTRIAL  
USE**

# MINI RAPID JOINT IP68

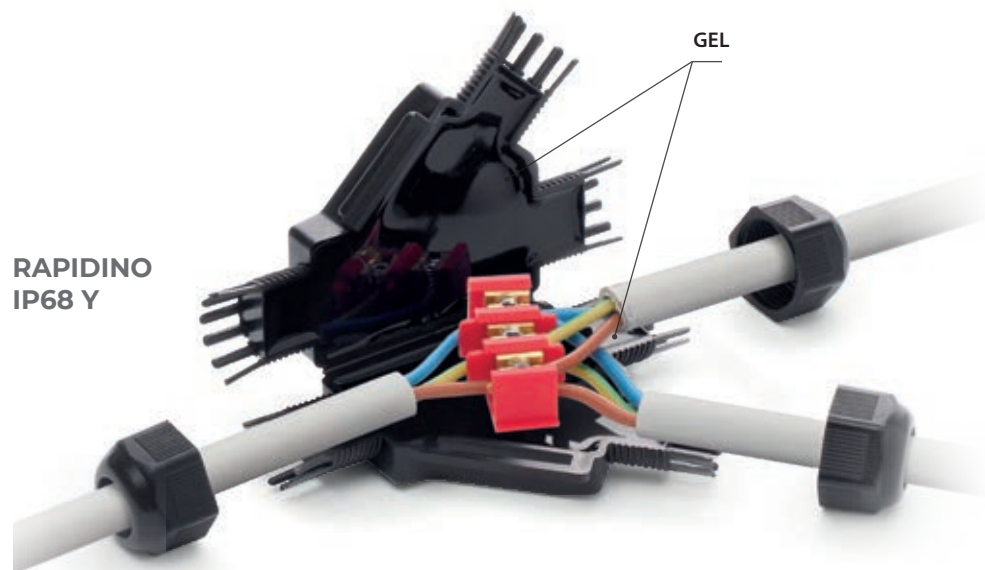
IP68 and IP69K joints for straight and branch connections, extremely compact and pre-filled with gel.

Extremely compact, ideal for lighting systems for gardens, steps and pedestrian crossings. Perfect for use in even small traps thanks to its very small overall dimensions. The cable glands supplied with the kit lock the joint on the cables.

## ADVANTAGES

- ▶ Complete with screw connectors.
- ▶ Pre-filled with a gel that is not-classified as hazardous under the CLP Directive and with no shelf life.
- ▶ Extremely compact and ready to install.
- ▶ Always re-enterable.
- ▶ Ideal for straight or branch connections in lighting systems for gardens, steps and stairways, pedestrian crossings, etc.

RAPIDINO  
IP68 Y



GEL

### Electrical performance:

- CEI EN 50393 as applicable
- Class 2 in accordance with CEI 64-8.

🔹 Gel: UL 94-HB 

🌡️ Working temperature: 90°

🌡️ Installation temperature: -40°C / +50°C

🌊 Fully submersible

🔑 Can be used underground

🌿 Halogen-free Gel

☀️ UV resistant

🔥 Self-extinguishing and resistant to abnormal heat and fire:  
Glow Wire Flammability Index at +960° C according to EN60695-2-12

**IP68**  
OFFICIALLY  
TESTED

**IMQ**

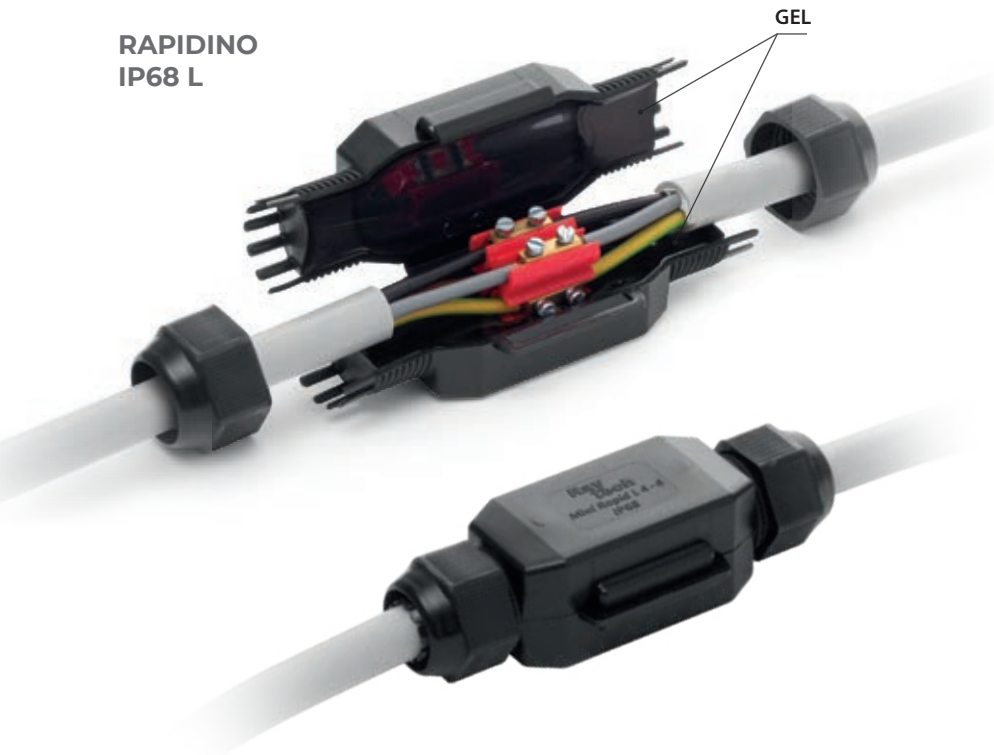
**IP69K**  
OFFICIALLY  
TESTED

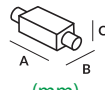










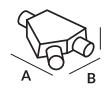




JOINTS

RAPIDINO  
IP68 L



PRODUCT Item	Cable	Connector	Max cable formation (N° x mm <sup>2</sup> )	Cable Ø min - max (mm)	Pieces / Pack	 (mm)
RAPIDINO IP68 L2 RAPIDINOL2			2 x 2,5	6 - 10	3 PCS / Box	75 x 28 x 19
RAPIDINO IP68 L3 RAPIDINOL3			3 x 2,5	8 - 13	3 PCS / Box	80 x 36 x 23
RAPIDINO IP68 L4 RAPIDINOL4			4 x 4	10 - 16	1 PCS / Box	125 x 43 x 35



PRODUCT Item	Cable	Connector	Max cable formation (N° x mm <sup>2</sup> )		Cable Ø min - max (mm)	Pieces / Pack	 (mm)
			Through	Branch			
RAPIDINO IP68 Y1 RAPIDINOY1			1 x 4 1 x 2,5	1 x 1,5 1 x 2,5	6 - 10	2 PCS / Box	85 x 55 x 22
RAPIDINO IP68 Y3 RAPIDINOY3			3 x 4 3 x 2,5	3 x 1,5 3 x 2,5	8 - 13	1 PCS / Box	110 x 72 x 25






**Electrical performance:**

- CEI EN 50393
- Class 2 in accordance with CEI 64-8.

 Gel: UL 94-HB 


 Working temperature: 90°


 Installation temperature: -40°C / +50°C

 Fully submersible

 Can be used underground

 Halogen-free Gel

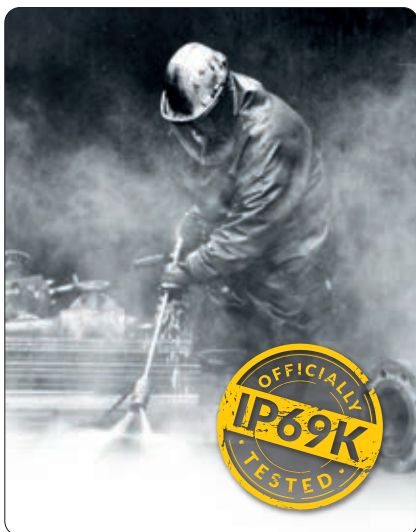
 UV resistant

 No flame propagation:  
CEI 20-35 • IEC 60332-1 • HD405-1  
(as applicable)

**IP68**  
OFFICIALLY  
TESTED

**IMQ**

**IP69K**  
OFFICIALLY  
TESTED



# RAPID JOINT IP68

Radial closing gel pre-filled joint for extruded insulation cables up to 1 kV.

Primary insulation, consisting of a cross-linked polymer gel, and the exceptionally robust insulating plastic casing render Class 2 joints in accordance with the definitions contained in standard CEI 64-8. The joint has been tested in accordance with the main international specifications, with repeated flexing and torsion tests and immersion in water, and has been declared as conforming to the mechanical, electrical and sealing specifications required for plastic cable accessories. The joint and its components have an unlimited shelf life, are chemically inert and therefore completely safe. Conductor connections are re-enterable even after long periods of operation. Made with self-extinguishing material, flame retardant, for cables at 90°C working temperature. The radial closing system facilitates joint application, making them re-enterable only by means of a tool.

## ADVANTAGES

- ▶ For straight connections (in line).
- ▶ For multi core cables of up to 5 cores.
- ▶ With suitable spacers.
- ▶ For all types of application, including submersible.
- ▶ Wide range of cable formations.
- ▶ Re-enterable only by means of a tool.
- ▶ Suitable for 3 core crossing.
- ▶ Pre-filled with a gel that is not-classified as hazardous under the CLP Directive and with no shelf life.



### IPX8

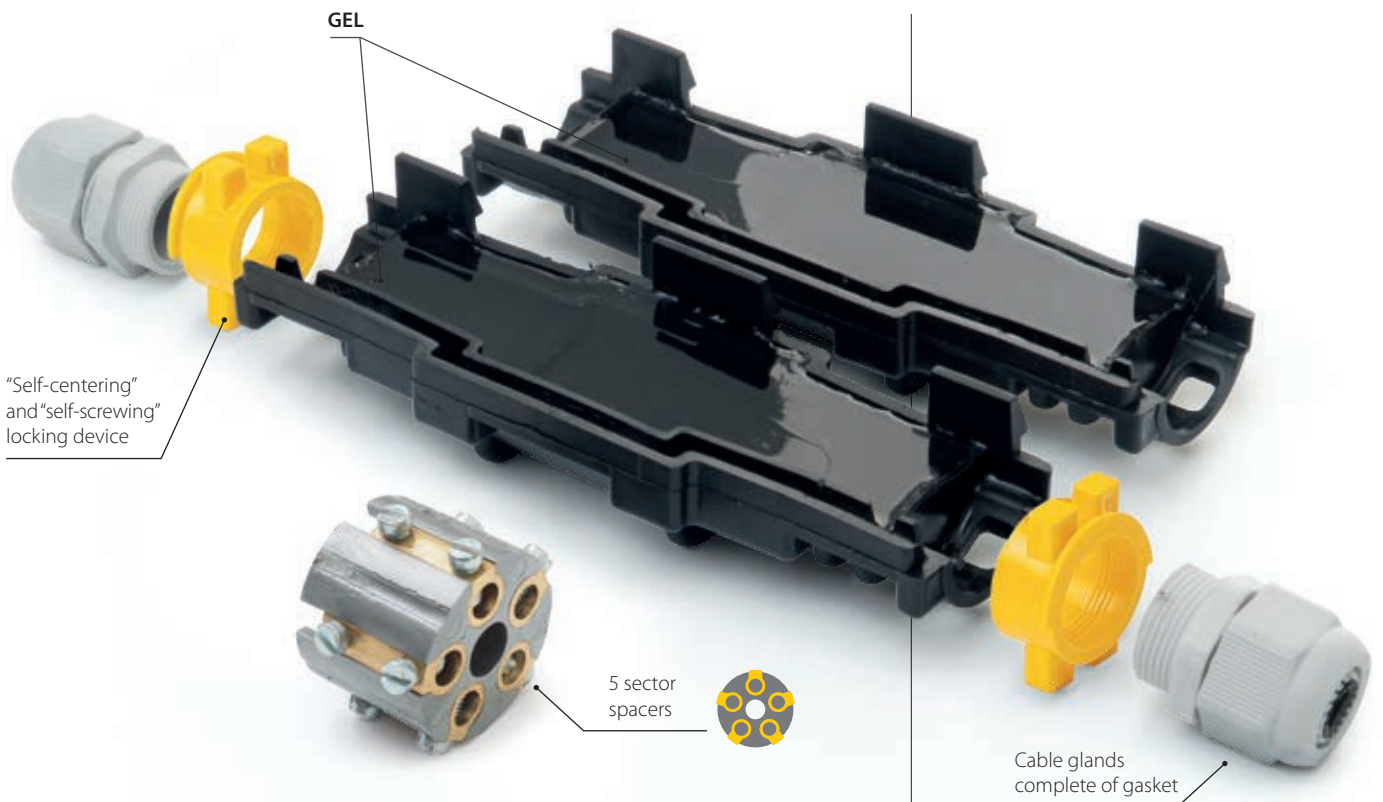
- Protected from permanent immersion in water.

### IP68

- Totally protected against dust and solid objects over 1 mm (tools, wires, and small wires).
- Protected from permanent immersion in water.

### IP69K

- Totally protected against dust and solid objects over 1 mm (tools, wires, and small wires).
- Protected against close-range high pressure, high temperature spray downs.



PRODUCT Item	Formation n°	Configuration IP68			Configuration IPX8		
		Section (mm²)	Cable Ø (mm)	A x B (mm)	Section (mm²)	Cable Ø (mm)	A x B (mm)
<b>Rapid Joint L1,5-IP68</b> RAPIDJL1,5-IP68	•	4 - 25			1,5 - 50		
	⊕	1,5 - 4			1,5 - 6		
	⊕	1,5 - 2,5	8 - 13	155 x 55	1,5 - 6	20,5	105 x 55
	⊕	1,5			1,5 - 6		
<b>Rapid Joint L6-IP68</b> RAPIDJL6-IP68	•	25 - 70			2,5 - 150		
	⊕	2,5 - 6			2,5 - 10		
	⊕	2,5 - 6	12 - 18	245 x 60	2,5 - 10	24	180 x 60
	⊕	2,5 - 6			2,5 - 10		
<b>Rapid Joint L10-IP68</b> RAPIDJL10-IP68	•	70 - 95			120 - 240		
	⊕	10			10 - 25		
	⊕	10	16 - 20	275 x 65	10 - 25	31	210 x 65
	⊕	10			10 - 25		
<b>Rapid Joint L25-IP68</b> RAPIDJL25-IP68	•	120 - 240			120 - 240		
	⊕	25			10 - 50		
	⊕	16 - 25	21 - 28	410 x 100	10 - 50	42	320 x 100
	⊕	16 - 25			10 - 50		



For single core cable: do not install the separator with screw connectors and connect with crimp connector.



# READY CAST

The new pre-filled resin joint for extruded insulation cables up to 1 kV.

Thanks to its innovative pre-engraved and fracture-facilitated cable entry system, Ready Cast adapts itself quickly and extremely easily to any cable diameter, while respecting the minimum and maximum diameters that can be housed in the range. With the quick and safe connection block included in the pack or with commonly used connectors that can always be housed in the practical 4x separator, included in the kit. Ready Cast is equipped with an anti-traction system of the cable since it can be secured to the casing using the supplied cable ties.

► Pre-filled with a gel that is not-classified as hazardous under the CLP Directive and with no shelf life.



READY  
CAST L



READY  
CAST Y



**Electrical performance:**

- CEI EN 50393 as applicable
- Class 2 in accordance with CEI 64-8.

- 💧 Resin: UL 94-HB
- 🌡️ Working temperature: 90°
- 🌡️ Installation temperature: -40°C / +50°C
- 🌊 Fully submersible
- 🔑 Can be used underground
- 🌿 Halogen-free Resin
- ☀️ UV resistant

**IP68**  
OFFICIALLY  
TESTED



## INNOVATIVE RESIN SOLUTIONS



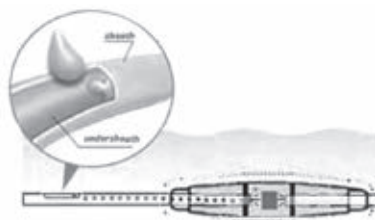
► **EASY!**  
Scissors and nothing more!



► **MULTICONNECTION!**  
Ideal for many types of connection

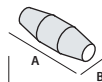


► **INTEGRATED SOLUTIONS!**  
**HOLE CASING** technology - Anti-traction cable system using the supplied cable ties secured to the casing.

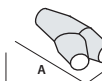


► **RELIABILITY!**  
Range compliant with EN 50393 which consists in a test in air and of prolonged immersion for about 30 days, with repeated temperature changes, after the intentional removal of the cable sheath at the inlet and outlet with consequent infiltration of water between the cores of the cable.

PRODUCT Item	Cable Ø (mm)	Cable formation (N° x mm <sup>2</sup> )					(mm)	
		1 x	2 x	3 x	4 x	5 x		
READY CAST L4 READYCASTL4	8-18		6-25	2,5-4	2,5-4	2,5-4	-	160x45
			-	2,5-4	2,5-4	-	-	
READY CAST L10 READYCASTL10	8-23		16-50	4-10	4-10	4-10	-	180x50
			-	2,5-6	2,5-6	2,5-6	2,5-6	
READY CAST L 16/25 READYCASTL16/25	8-30		35-150	10-25	6-25	4-25	-	215x55
			-	6-25	6-25	6-16	6-16	

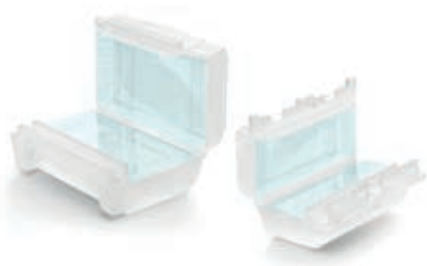


PRODUCT Item	Cable Ø (mm)	Cable formation (N° x mm <sup>2</sup> )					(mm)	
		1 x	2 x	3 x	4 x	5 x		
READY CAST Y6 READYCASTY6	T 8-20 B 8-20		T 16-50 B 6-35	T 4-10 B 2,5-4	T 2,5-6 B 1,5-4	T 2,5-6 B 1,5-2,5	-	180x100
			-	T 4-6 B 2,5-4	T 2,5-6 B 1,5-4	T 2,5-6 B 1,5-2,5	T 2,5-6 B 1,5-2,5	
READY CAST Y 16/25 READYCASTY16/25	T 8-30 B 8-30		T 70-150 B 50-150	T 10-25 B 6-25	T 6-25 B 6-16	T 6-25 B 6-10	-	220x105
			-	T 10-16 B 4	T 6-16 B 2,5-4	T 6-16 B 2,5-4	T 4-16 B 2,5-4	



- Each kit contains:**
- Enclosure, complete with filler
  - Cable ties
  - Screw connection system
  - 4x separator
  - Rayteam black insulating tape



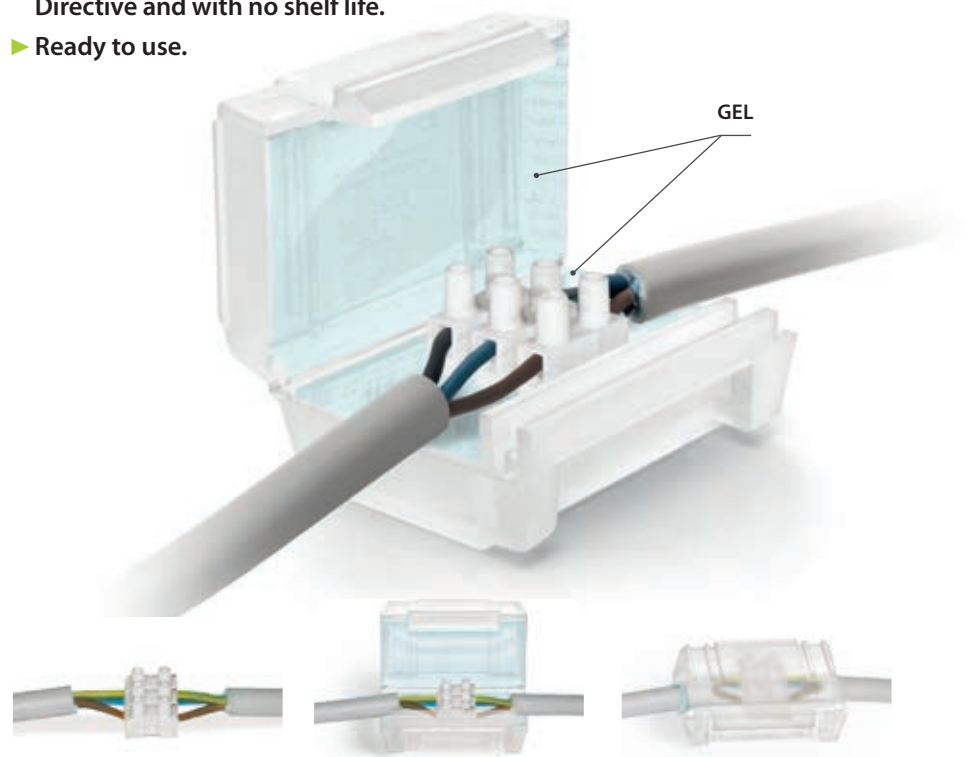


# GEL COVER LINE

Gel pre-filled accessories for straight connections, for the protection, safety and covering of electrical connections using strip connectors or alternatives.


## ADVANTAGES

- ▶ For 3 x 1 to 6 mm<sup>2</sup> cables or 3 insulated wires.
- ▶ For domestic and industrial connections.
- ▶ To put household systems in order.
- ▶ Also for underwater use.
- ▶ Pre-filled with a gel that is not-classified as hazardous under the CLP Directive and with no shelf life.
- ▶ Ready to use.



### Electrical performance:

- CEI EN 50393 as applicable
- Class 2 in accordance with CEI 64-8.

💧 Gel: UL 94-HB 

🌡 Working temperature: 90°

🌡 Installation temperature: -40°C / +50°C

🌊 Fully submersible

🔧 Can be used underground

🌿 Halogen-free Gel

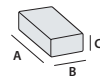
☀ UV resistant

**IPX8**  
OFFICIALLY  
TESTED | **IMQ**





JOINTS



PRODUCT Item	Colour	Housed connectors type	N° pieces	Package type	Dimension (mm)
<b>OHM</b> OHM	○	2 from 4 mm <sup>2</sup>	1	blister	61 x 35 x 28
<b>OHM PACK 11</b> OHMPACK11			11	box	
<b>BAR</b> BAR	○	3 from 4 mm <sup>2</sup> / 6 mm <sup>2</sup>	1	blister	63 x 41 x 28
<b>BAR PACK 9</b> BARPACK9			9	box	

PRODUCT Item	Colour	Housed connectors type	N° pieces	Package type	Dimension (mm)
<b>GEL COVER 4</b> GELCOVER4	●	2 from 4 mm <sup>2</sup>	1	blister	61 x 35 x 28
<b>MAMMUT GEL COVER</b> MAMMUTGELCOVER			8	box	
<b>GEL COVER 6</b> GELCOVER6	●	3 from 4 mm <sup>2</sup> / 6 mm <sup>2</sup>	1	blister	63 x 41 x 28
<b>MAMMUT GEL COVER 6</b> MAMMUTGELCOVER6			6	box	

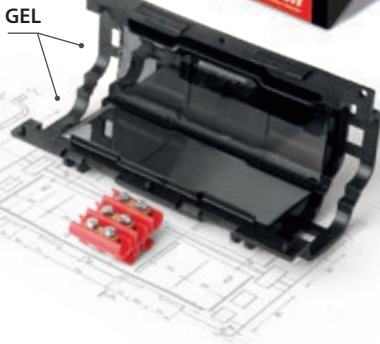


No flame propagation. CEI 20-35 • IEC 60332-1 • HD405-1 (as applicable). Casing mix: UL 94-V2


# SUPER CLIK

Range of fast gel pre-filled straight or branch type joints for 0.6/1 kV multi core cables of up to 5 conductors.

The combination of the primary insulation in a cross-linked polymer gel and the highly robust insulating plastic case makes this a Class 2 joint defined by CEI 64-8. The joint has been tested in accordance with the main international specifications, with repeated flexing and torsion tests and immersion in water, it has been declared as conforming to the mechanical, electrical and sealing specifications required for plastic cable accessories. The joint and its components have an unlimited shelf life, they are chemically inert and therefore completely safe; the connections are re-entrable even after long working periods. Made of self-extinguishing components the joint is flame retardant. For cables at 90°C working temperature.



**Electrical performance:**  
 • CEI EN 50393 as applicable  
 • Class 2 in accordance with CEI 64-8.

🔧 **Gel:** UL 94-HB 

🔧 **Casing mix:** UL 94-V2

🌡️ **Working temperature:** 90°

🌡️ **Installation temperature:** -40°C / +50°C

🌊 **Fully submersible**

🔧 **Can be used underground**

🌿 **Halogen-free Gel**

☀️ **UV resistant**

🔥 **No flame propagation:**  
 CEI 20-35 • IEC 60332-1 • HD405-1  
 (as applicable)

**IPX8** | **IMQ**  
 OFFICIALLY TESTED



## ADVANTAGES


- ▶ Complete with insulated terminal blocks.
- ▶ For straight and branch connections.
- ▶ For all types of application, including submersible.
- ▶ Re-accessible.
- ▶ Flame retardant.
- ▶ Pre-filled with a gel that is not-classified as hazardous under the CLP Directive and with no shelf life.



SUPER CLIK

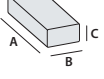
JOINTS

**SUPER CLIK MINI**

PRODUCT Item	Cable formation and conductor cross sections (n° x mm <sup>2</sup> )			max cables Ø (mm)	 (mm)
	Straight Connections In line	Branch connections T      B			
<b>SUPER CLIK MINI L</b> SUPERCLIKMINI-L	3 x 0,5 - 1,5	-	-	10	71 x 38 x 23
<b>SUPER CLIK MINI Y</b> SUPERCLIKMINI-Y	-	1 x 2,5 - 6	1 x 2,5	10	71 x 38 x 23

T : Through cable - B : Branch cable

**SUPER CLIK**

PRODUCT Item	Cable formation and conductor cross sections (n° x mm <sup>2</sup> )			max cables Ø (mm)	 (mm)
	Straight Connections In line	Branch connections T      B			
<b>SUPER CLIK 0</b> SUPERCLIK0	3 x 1,5 - 6	3 x 1,5 - 4	3 x 1,5 - 2,5	14	95 x 43 x 28

T : Through cable - B : Branch cable

PRODUCT	In line	T	B	max cables Ø (mm)	(mm)
<b>SUPER CLIK 1</b> SUPERCLIK1	2 x 1,5 - 6	2 x 4	2 x 2,5	20,5	150 x 56 x 30
	3 x 1,5 - 6	3 x 4	3 x 2,5		
	4 x 1,5 - 6	4 x 4	4 x 2,5		
	5 x 1,5 - 6	5 x 4	5 x 2,5		

T : Through cable - B : Branch cable

PRODUCT	In line	T	B	max cables Ø (mm)	(mm)
<b>SUPER CLIK 2</b> SUPERCLIK2	2 x 4 - 16	2 x 10	2 x 6	30	220 x 85 x 46
	3 x 4 - 16	3 x 10	3 x 6		
	4 x 4 - 16	4 x 10	4 x 6		
	5 x 4 - 16	5 x 10	5 x 6		

T : Through cable - B : Branch cable

PRODUCT	In line	T	B	max cables Ø (mm)	(mm)
<b>SUPER CLIK 3</b> SUPERCLIK3	-	2 x 4 - 25	2 x 1,5 - 16	30	220 x 85 x 46
		3 x 4 - 25	3 x 1,5 - 16		
		4 x 4 - 25	4 x 1,5 - 16		

T : Through cable - B : Branch cable





**Electrical performance:**

- CEI EN 50393  
with connectors complying with EN 61238-1
- Class 2 in accordance with CEI 64-8.

🔹 **Gel:** UL 94-HB 

🔹 **Casing mix:** UL 94-V2

🔧 **Working temperature:** 90°

🔧 **Installation temperature:** -40°C / +50°C

🌊 **Fully submersible**

🔧 **Can be used underground**

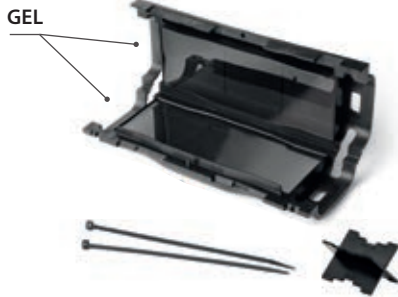
🌿 **Halogen-free Gel**

☀️ **UV resistant**

🔥 **No flame propagation:**  
CEI 20-35 • IEC 60332-1 • HD405-1  
(as applicable)



**IPX8**  
OFFICIALLY  
TESTED



Sections based on extruded 0,6/1 kV cable.

# CLIK FIRE

Straight or branch gel pre-filled joint, for multi core cables up to 4 cores.



► Pre-filled with a gel that is not-classified as hazardous under the CLP Directive and with no shelf life.

## STRAIGHT OR BRANCH MULTI CORE JOINTS

PRODUCT / Item	Cable formation and conductor cross sections (n° x mm <sup>2</sup> )		max cables Ø (mm)		Dimension (mm)
	Through or straight	1 or 2 branch cables	Through or straight	Branch	
<b>CLIK 0 Fire *</b> 214663-003	1 x 2,5 - 50	1 x 1,5 - 10	16	10	95 x 43 x 28
	2 x 2,5 - 6	2 x 1,5			
<b>CLIK 1 Fire *</b> 225449-001	1 x 6 - 95	1 x 1,5 - 35	20,5	15	150 x 56 x 30
	2 x 1,5 - 16	2 x 1,5 - 6			
	3 x 1,5 - 10	3 x 1,5 - 6			
<b>CLIK 2 Fire</b> 301096-001	4 x 1,5 - 10	4 x 1,5 - 4	30	29	220 x 85 x 46
	1 x 50 - 185	1 x 16 - 185			
	2 x 10 - 35	2 x 1,5 - 35			
	3 x 6 - 35	3 x 1,5 - 35			
	4 x 6 - 35	4 x 1,5 - 16			

\* Available in hangable BLISTER with the following Codes. Art.: CLIK0FIRE-BL and CLIK1FIRE-BL

## BRANCH JOINTS WITH 30° OUTPUT

PRODUCT / Item	Through	Branch	Through	Branch	Dimension (mm)
	<b>CLIK 2000 Fire</b> 214663-004	1 x 2,5 - 25			
<b>CLIK 2001 Fire</b> 225448-002	1 x 6 - 95	1 x 1,5 - 70	22,5	18,5	138 x 60 x 37
	2 x 1,5 - 16	2 x 1,5 - 10			
	3 x 2,5 - 16	3 x 1,5 - 10			
<b>CLIK 2002 Fire</b> 301096-005	4 x 2,5 - 10	4 x 1,5 - 6	26	18,5	194 x 74 x 43
	1 x 50 - 150	1 x 1,5 - 70			
	2 x 1,5 - 25	2 x 1,5 - 10			
	3 x 4 - 25	3 x 1,5 - 10			
	4 x 4 - 16	4 x 1,5 - 6			
<b>CLIK 2003 Fire</b> 301097-006	1 x 150 - 240	1 x 50 - 120	36	26	290 x 105 x 51
	2 x 16 - 50	2 x 10 - 25			
	3 x 16 - 50	3 x 10 - 25			
	4 x 16 - 50	4 x 6 - 16			










## CLIK FIRE A2A

Main line branch joint for parallel type public lighting systems.

Branch joints from main to main cable, from main to pole rise, from overhead line to pole equipment, from pre-assembled cable to pole equipment, of a type certified by Azienda Elettrica Milanese (A2A, ex AEM). Accessories are complete with mantel-type, pre-insulated Allen screw connectors and, for installations with traps, with the specific protection monitor plate. Joints are non-toxic, with no shelf life and re-enterable.



**Electrical performance:**  
• CEI EN 50393 • CEI 20-33 • IP 0033 (A2A)

-  **Gel:** UL 94-HB 
-  **Casing mix:** UL 94-V2
-  **Working temperature:** 90°
-  **Installation temperature:** -40°C / +50°C
-  **Fully submersible**
-  **Can be used underground**
-  **No flame propagation:**  
CEI 20-35 • IEC 60332-1 • HD405-1  
(as applicable)
-  **A2A Certified**

**IPX8**  
OFFICIALLY  
TESTED



PRODUCT Item	Approval code	Branch type	Through cable (n° x mm <sup>2</sup> )	Branch cable (n° x mm <sup>2</sup> )
<b>CLIK 2 Fire Dor/Palo</b> 301009-000	E 27.012	Main / Pole	RG7R 2 x 1 x 16	FG7OR 2 x 2,5
<b>CLIK 1 Fire Dor/Dor</b> 302009-000	E 27.013	Main / Main	RG7R 4 x 1 x 16	RG7R 4 x 1 x 16
<b>CLIK 1 Fire Aer/Dap</b> 302008-000	E 27.014	Overhead line / Equipment	UG7R 2 x 1 x 16	FG7R 2 x 1 x 4
<b>CLIK 2 Fire Prec/Dap</b> 301008-000	E 27.015	Pre-assembled / Equipment	RE4E4X 2 x 1 x 10	FG7OR 2 x 2,5

## CLIK FIRE A2A (FUSE)

Branch joint from main to pole rise, with protection fuse.

Branch joints from main to pole rise complete with disconnectable fuse holder and fuse with signal indicating intervention. Accessories are complete with mantel-type, pre-insulated Allen screw connectors and, for installations with traps, with the specific protection monitor plate. Joints are non-toxic, with no shelf life and re-enterable and flame retardant.



PRODUCT / Item	Fuse inserted	Branch type	Through cable (n° x mm <sup>2</sup> )	Branch cable (n° x mm <sup>2</sup> )
<b>CLIK 2 Fire Dor/Palo Fuse</b> 301010-000	2 A	Main / Pole	RG7R 4 x 1 x 16	FG7OR 2 x 2,5



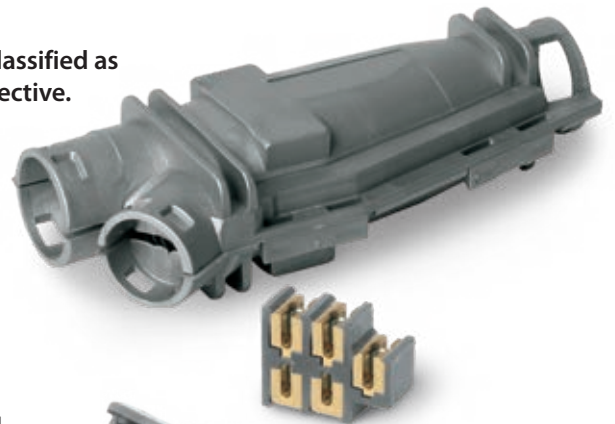
## KING JOINT

Range of fast gel pre-filled straight or branch type joints for 0.6/1 kV multi core cables of up to 5 conductors.

The primary insulation, consisting of a cross-linked polymer gel and extremely strong plastic insulating housing, make the Class 2, in accordance with the definitions contained in CEI Regulation 64-8. The joint, tested in accordance with the most important international specifications with repeated bending and twisting cycles and immersion in water, was found to comply with the mechanical, electrical and sealing requirements necessary for accessories for plastic cables. The joint and its components have no self life, are chemically inert and therefore completely safe; the conductor connections are re-accessible even after long operating periods. Packaged with self-extinguishing material, it is flame retardant. Suitable for cables with a temperature of +90°C.

### ADVANTAGES






- ▶ For multicore cables of up to 5 cores.
- ▶ 5 sector spacers for proper centring of five-core connection.
- ▶ Complete with screw connectors.
- ▶ For straight and branch connections, including armoured cable.
- ▶ For all types of application, including submersible.
- ▶ Re-accessible.
- ▶ Flame retardant.
- ▶ Non-toxic, safe and not classified as hazardous under CLP Directive.



KING  
JOINT Y

#### Electrical performance:

- CEI EN 50393
- Class 2 in accordance with CEI 64-8.

-  **Gel:** UL 94-HB 
-  **Casing mix:** UL 94-V2
-  **Working temperature:** 90°
-  **Installation temperature:** -40°C / +50°C
-  **Fully submersible**
-  **Can be used underground**
-  **Halogen-free Gel**
-  **No flame propagation:**  
 CEI 20-35 • IEC 60332-1 • HD405-1  
 (as applicable)  
 Low smoke and toxic and corrosive gas emissions.
-  **Degree of protection:** IPX8

KING  
JOINT L

GEL

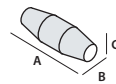
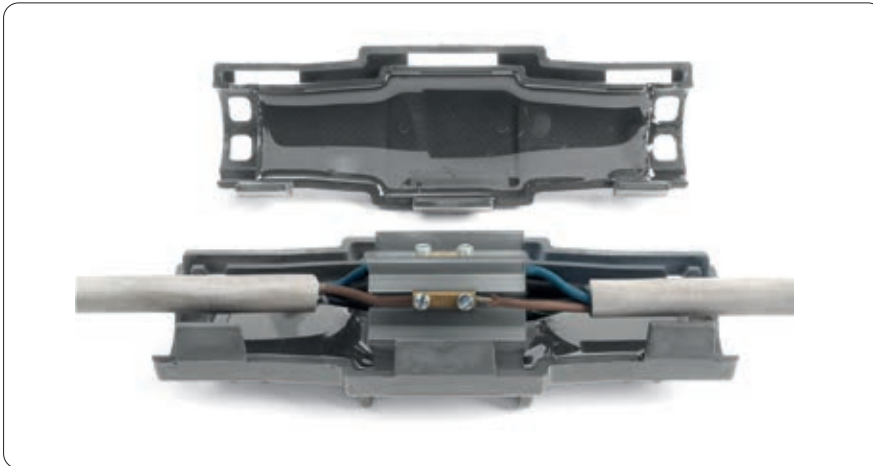
Screw  
connectors

5 sector  
spacers

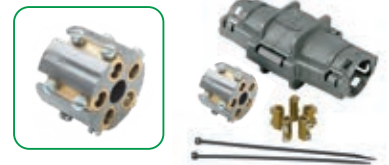


## KING JOINT L

Straight joints, including armoured cable.



PRODUCT / Item	LINE CONNECTIONS Cable formation and conductor cross sections (n° x mm <sup>2</sup> )	max cables Ø (mm)	Dimension (mm)
<b>KING JOINT 0 blister</b> RAYKJOINT0	2 x 1,5 - 6	20,5	105 x 55 x 55
	3 x 1,5 - 6		
	4 x 1,5 - 6		
	5 x 1,5 - 6		
<b>KING JOINT L6 box</b> RAYKJOINTL6	2 x 1,5 - 6	20,5	105 x 55 x 55
	3 x 1,5 - 6		
	4 x 1,5 - 6		
	5 x 1,5 - 6		



PRODUCT / Item	LINE CONNECTIONS Cable formation and conductor cross sections (n° x mm <sup>2</sup> )	max cables Ø (mm)	Dimension (mm)
<b>KING JOINT L10</b> RAYKJOINTL10	2 x 2,5 - 10	24	180 x 60 x 60
	3 x 2,5 - 10		
	4 x 2,5 - 10		
	5 x 2,5 - 10		
<b>KING JOINT L10 - ARM</b> RAYKJL10ARM	2 x 2,5 - 10	24	180 x 60 x 60
	3 x 2,5 - 10		
	4 x 2,5 - 10		
	5 x 2,5 - 10		



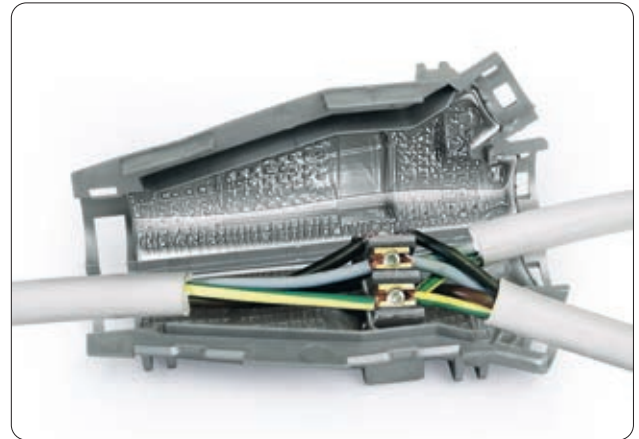
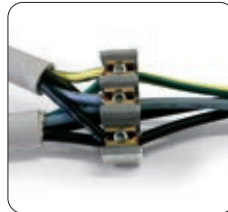
PRODUCT / Item	LINE CONNECTIONS Cable formation and conductor cross sections (n° x mm <sup>2</sup> )	max cables Ø (mm)	Dimension (mm)
<b>KING JOINT L25</b> RAYKJOINTL25	2 x 10 - 25	31	210 x 65 x 65
	3 x 10 - 25		
<b>KING JOINT L25 - ARM</b> RAYKJL25ARM	4 x 10 - 25	31	210 x 65 x 65
	5 x 10 - 25		



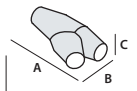
ARM type joints complete with continuity device suitable for connection to **armoured wire or steel tape cables**.

## KING JOINT Y

Branch joints, including armoured cable.



PRODUCT / Item	BRANCH CONNECTIONS Cable formation and conductor cross sections (n° x mm <sup>2</sup> )		max cables Ø (mm)		Dimension (mm)
	T	B	T	B	
<b>KING JOINT Y6</b> KINGJ-Y6	2 x 1,5 - 6	2 x 1,5 - 4	22,5	18,5	138 x 60 x 37
<b>KING JOINT Y6 - ARM</b> KINGJ-Y6ARM	3 x 1,5 - 6	3 x 1,5 - 4			
	4 x 1,5 - 6	4 x 1,5 - 4			
	5 x 1,5 - 6	5 x 1,5 - 4			



T: Through cable - B: Branch cable

PRODUCT / Item	BRANCH CONNECTIONS Cable formation and conductor cross sections (n° x mm <sup>2</sup> )		max cables Ø (mm)		Dimension (mm)
	T	B	T	B	
<b>KING JOINT Y16</b> KINGJ-Y16	2 x 4 - 16	2 x 1,5 - 4	26	18,5	194 x 74 x 43
<b>KING JOINT Y16 - ARM</b> KINGJ-Y16ARM	3 x 4 - 16	3 x 1,5 - 4			
	4 x 4 - 16*	4 x 1,5 - 4			
	5 x 4 - 16*	5 x 1,5 - 4			

T: Through cable - B: Branch cable

\* For armoured cables max conductor cross section 10 mm<sup>2</sup>.

PRODUCT / Item	BRANCH CONNECTIONS Cable formation and conductor cross sections (n° x mm <sup>2</sup> )		max cables Ø (mm)		Dimension (mm)
	T	B	T	B	
<b>KING JOINT Y35</b> KINGJ-Y35	2 x 10 - 35	2 x 1,5 - 6	36	26	290 x 105 x 51
<b>KING JOINT Y35 - ARM</b> KINGJ-Y35ARM	3 x 10 - 35	3 x 1,5 - 6			
	4 x 10 - 35*	4 x 1,5 - 6			

T: Through cable - B: Branch cable

\* For armoured cables max conductor cross section 10 mm<sup>2</sup>.

ARM type joints complete with continuity device suitable for connection to **armoured wire or steel tape cables**.

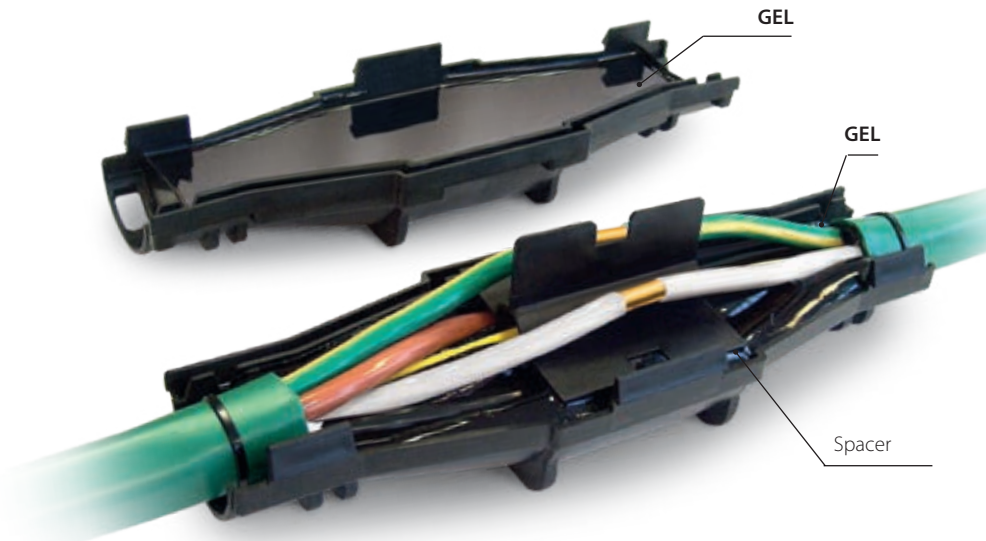
# RAPID JOINT

Radial closing gel pre-filled joint for extruded insulation cables up to 1 kV.

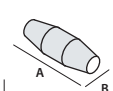
Made with self-extinguishing material, flame retardant, for cables at 90°C working temperature. The radial closing system facilitates joint application, making them re-enterable only by means of a tool.

## ADVANTAGES

- ▶ For straight connections (in line).
- ▶ With suitable spacers.
- ▶ For all types of application, including submersible.
- ▶ Wide range of cable formations.
- ▶ Pre-filled with a gel that is not-classified as hazardous under the CLP Directive and with no shelf life.



PRODUCT / Item	Cable formation and conductor cross sections (n° x mm <sup>2</sup> )				With fiber-optic separator 4x	Dimension (mm)
	1x	2x	3x	4x		
For <b>COPPER</b> cables						
<b>RAPID JOINT L6</b> 301098-037	1,5 - 50	1,5 - 10	1,5 - 10	1,5 - 6	-	105 x 55
<b>RAPID JOINT L10</b> 301098-004	2,5 - 150	2,5 - 25	2,5 - 16	2,5 - 16	-	180 x 60
<b>RAPID JOINT L25</b> 301098-006	120 - 240	6 - 50	6 - 35	4 - 35	-	210 x 65
<b>RAPID JOINT L95</b> 301098-003	185 - 400	35 - 95	25 - 70	25 - 70	16 - 50	320 x 100
For <b>ALUMINIUM</b> cables						
<b>RAPID JOINT L25</b> 301098-006	120 - 150	16 - 35	10 - 25	10 - 25	-	210 x 65
<b>RAPID JOINT L95</b> 301098-003	185 - 400	35 - 95	25 - 70	25 - 70	16 - 50	320 x 100



## Electrical performance:

- CEI EN 50393 with connectors complying with EN 61238-1
- Class 2 in accordance with CEI 64-8.

- Gel:** UL 94-HB
- Casing mix:** UL 94-V2
- Working temperature:** 90°
- Installation temperature:** -40°C / +50°C
- Fully submersible**
- Can be used underground**
- Halogen-free Gel**
- No flame propagation:** CEI 20-35 • IEC 60332-1 • HD405-1 (as applicable)
- Degree of protection:** IPX8

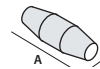




Joint supplied with  
armour continuity device

## RAPID JOINT S/ARM

For screened or tape or wire armoured cables.

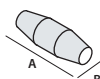


For <b>copper wire</b> SCREENED cables	Cable formation and conductor cross sections (n° x mm <sup>2</sup> )				With fiber-optic separator 4x	Dimension (mm)
	1x	2x	3x	4x		
<b>RAPID JOINT L 10-S</b> 301098-035	2,5 - 120	2,5 - 10	2,5 - 10	2,5 - 10	-	180 x 60
<b>RAPID JOINT L 25-S</b> 301098-036	120 - 185	16 - 25	10 - 25	10 - 25	-	210 x 65
<b>RAPID JOINT L 95-S</b> 301098-012	240 - 400	35 - 95	25 - 70	25 - 70	16 - 50	320 x 100

For ARMoured cables	1x	2x	3x	4x	(mm)
<b>RAPID JOINT L 10-ARM</b> 301098-10ARM	2,5 - 10	2,5 - 10	2,5 - 10	-	180 x 60
<b>RAPID JOINT L 25-ARM</b> 301098-25ARM	16 - 25	10 - 25	10 - 25	-	210 x 65
<b>RAPID JOINT L 95-ARM</b> 301098-016	35 - 95	25 - 70	25 - 70	16 - 50	320 x 100

## RAPID JOINT LS

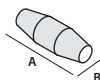
For signalling and control cables.



PRODUCT Item	Conductors (mm <sup>2</sup> )	Cable formation (n° conduttori)										Dimension (mm)
		5x	7x	10x	12x	16x	19x	24x	40x	75x	100x	
<b>RAPID JOINT-LS1</b> 301098-018	1,5	•	•	•	•	•	•					180 x 60
	2,5	•	•	•	•							
<b>RAPID JOINT-LS2</b> 301098-019	1,5					•	•	•	•			210 x 65
	2,5			•	•	•	•	•				
<b>RAPID JOINT-LS3</b> 301098-020	1,5						•	•	•	•	•	320 x 100
	2,5						•	•	•	•	•	

## RAPID JOINT T

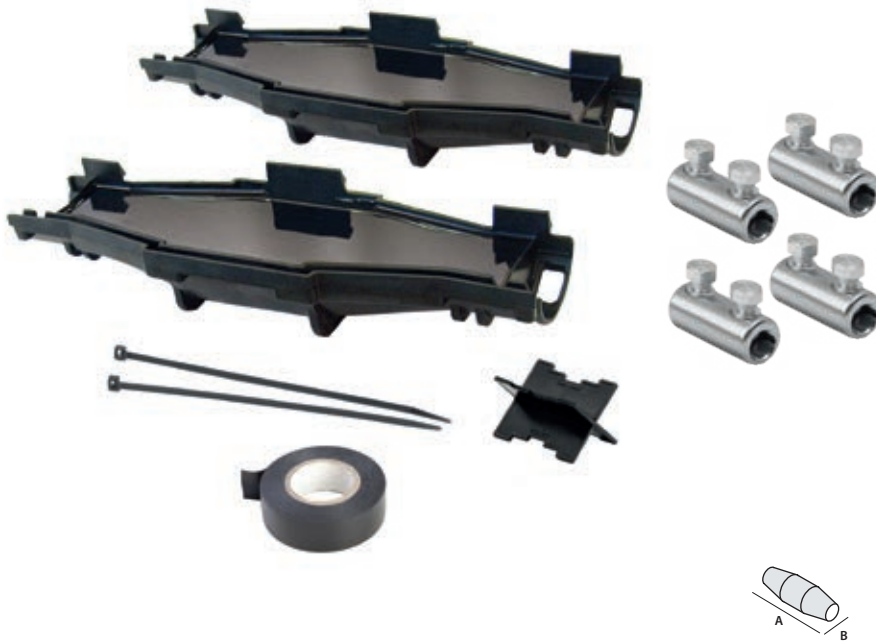
Straight joints for telephone cables.



UNScreened	SCREENED	N° pairs for conductor cross sections (n° x mm <sup>2</sup> )	Dimension (mm)
PRODUCT / Item	PRODUCT / Item		
<b>RAPID JOINT-T26</b> 301098-021	<b>RAPID JOINT-TS26</b> 301098-024	(1 - 26) x (0,5 - 0,6)	180 x 60
<b>RAPID JOINT-T61</b> 301098-022	<b>RAPID JOINT-TS61</b> 301098-025	(30 + 1 - 64 + 1) x (0,5 - 0,6)	210 x 65
<b>RAPID JOINT-T101</b> 301098-023	<b>RAPID JOINT-TS101</b> 301098-026	(60 + 1 - 100 + 1) x (0,5 - 0,6)	320 x 100

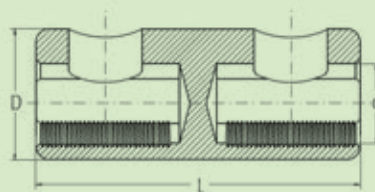
## RAPID JOINT SYSTEM FAST RP

Straight joint + Shear bolt connectors.



PRODUCT / Item	Cable formation from 2x a 4x (n° x mm <sup>2</sup> )	Dimension (mm)
<b>RAPID JOINT L 10 RP</b> RAPIDJL10RP	1,5 - 10	180 x 60
<b>RAPID JOINT L 25 RP</b> RAPIDJL25RP	10 - 25	210 x 65
<b>RAPID JOINT L 95 RP</b> RAPIDJL95RP	35 - 95	320 x 100

### Shear bolt connectors



PRODUCT / Item	Aluminium cross sections* (mm <sup>2</sup> )	Copper cross sections (mm <sup>2</sup> )	Breakaway torque (Nm)	Dimension		
				L	D (mm)	d
<b>RAY-TTF 1,5/16</b> RAY-TTF1,5/16	10 - 16	1,5 - 16	4	30	12	6,1
<b>RAY-TTF 10/35</b> RAY-TTF10/35	10 - 35	10 - 35	10	36	16	9,0
<b>RAY-TTF 25/50</b> RAY-TTF25/50	25 - 50	25 - 50	12	36	18	10,0
<b>RAY-TTF 35/150</b> RAY-TTF35/150	35 - 150	35 - 150	30	70	28	17,0

\* For round conductors.



**Electrical performance:**

- CEI EN 50393 with connectors complying with EN 61238-1
- Class 2 in accordance with CEI 64-8.

🔹 Gel: UL 94-HB

🔹 Working temperature: 90°

🔹 Installation temperature: -15°C / +55°C

🔹 Fully submersible

🔹 Can be used underground

🔹 Halogen-free Gel

**IP68**  
OFFICIALLY  
TESTED

# MAGIC POWER JOINT

Straight or branch joint with Magic Power Gel, for extruded insulation cables up to 1 kV.

Joints for extruded cables F(R)G7OR 0.6/1 kV. Easy installation, composed of two anti-fracture plastic shells, to be filled with non-toxic quick cross linking two-component insulation such as Magic Power Gel. Suitable for installation in traps, channels or directly underground or under water. Non-toxic, safe, light and re-enterable. Thanks to the softness of the insulation, they are able to absorb external shock without cracking or fracturing. The extreme stickiness of the insulation together with its softness allow it to transmit water pressure for installation even at high depths.

## ADVANTAGES

- ▶ Re-enterable and inspectable joint.
- ▶ Insulated with Magic Power Gel, the innovative self-amalgamating gel.
- ▶ For installations even in harsh conditions and high depths!
- ▶ Extremely adherent and tight sealing.
- ▶ The gel is not-classified as hazardous under the CLP Directive and it has no shelf life.

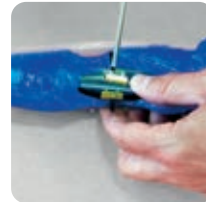
### RE-ENTERABLE



### REMOVABLE



### INSPECTIONABLE



### REUSABLE



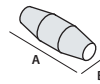
In 15 minutes, the gel is cross-linked and *Magic Power Joint* is ready!





## MAGIC POWER JOINT L

Straight joint for 0.6/1 kV extruded cables.



PRODUCT / Item	Cable formation and conductor cross sections (n° x mm <sup>2</sup> )				max cable Ø (mm)	Dimension (mm)
	1x	2x	3x	4x		
<b>MAGIC P JOINT L10</b> MPOWERJOINT-L10	2,5 - 50	1,5 - 10	1,5 - 10	1,5 - 10 *	8 - 16	180 x 50
<b>MAGIC P JOINT L25</b> MPOWERJOINT-L25	16 - 150	4 - 25	4 - 25	2,5 - 25	8 - 32	215 x 55
<b>MAGIC P JOINT L35</b> MPOWERJOINT-L35	16 - 185	16 - 35	16 - 35	16 - 35	12 - 33	232 x 70
<b>MAGIC P JOINT L50</b> MPOWERJOINT-L50	50 - 300	16 - 50	16 - 50	16 - 50	14 - 34	266 x 72
<b>MAGIC P JOINT L95</b> MPOWERJOINT-L95	120 - 400	25 - 95	25 - 95	25 - 95	15 - 42	330 x 95
<b>MAGIC P JOINT L120</b> MPOWERJOINT-L120	240 - 500	70 - 120	70 - 120	50 - 120	25 - 50	365 x 95
<b>MAGIC P JOINT L240</b> MPOWERJOINT-L240	400 - 1000	120 - 300	120 - 240	120 - 240	30 - 75	510 x 120
<b>MAGIC P JOINT L300</b> MPOWERJOINT-L300	630 - 2000	240 - 400	240 - 300	240 - 300	41 - 78	760 x 180

For ALUMINIUM cables	1x	2x	3x	4x	(mm)	(mm)
<b>MAGIC P JOINT L50</b> MPOWERJOINT-L50	16 - 150	16 - 25	16 - 25	16 - 25	14 - 34	266 x 72
<b>MAGIC P JOINT L120</b> MPOWERJOINT-L120	185 - 400	25 - 95	25 - 95	25 - 95	25 - 50	365 x 95
<b>MAGIC P JOINT L240</b> MPOWERJOINT-L240	400 - 630	95 - 185	95 - 185	95 - 185	30 - 75	510 x 120
<b>MAGIC P JOINT L300</b> MPOWERJOINT-L300	630 - 2000	185 - 300	185 - 300	185 - 300	41 - 78	760 x 180

\* Magic Power Joint 10 suggested for cable diameters smaller than 16 mm.

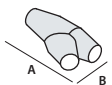


## MAGIC POWER JOINT Y

Branch joint for 0.6/1 kV extruded cables.

PRODUCT / Item	Cable formation and conductor cross sections (n° x mm <sup>2</sup> )								max cables Ø (mm)		Dimension (mm)
	1x		2x		3x		4x		T	B	
	T	B	T	B	T	B	T	B			
<b>MAGIC P JOINT Y6</b> MPOWERJOINT-Y6	4 - 50	4 - 50	4 - 10	4 - 10	2,5 - 6	2,5 - 6	2,5 - 6	2,5 - 6	8 - 27	8 - 27	180 x 90
<b>MAGIC P JOINT Y25</b> MPOWERJOINT-Y25	50 - 150	50 - 150	10 - 25	10 - 25	6 - 25	6 - 16	6 - 25	6 - 10	8 - 32	8 - 32	220 x 105
<b>MAGIC P JOINT Y95</b> MPOWERJOINT-Y95	120 - 400	95 - 240	25 - 95	16 - 50	25 - 95	16 - 50	25 - 95	10 - 50	15 - 42	8 - 32	315 x 115
<b>MAGIC P JOINT Y240*</b> MPOWERJOINT-Y240	240 - 630	240 - 630	95 - 240	50 - 240	95 - 240	50 - 240	95 - 240	50 - 240	65 max		600 x 285

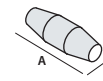
\* also for aluminium cables. T: Through - B: Branch





## MAGIC POWER JOINT L-S

Straight joint for 0.6/1 kV screened extruded cables.



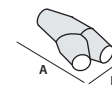
PRODUCT / Item	Cable formation and conductor cross sections (n° x mm <sup>2</sup> )				max cable Ø (mm)	Dimension (mm)
	1x	2x	3x	4x		
<b>MAGIC P JOINT L10-S</b> MPOWERJOINT-L10S	2,5 - 50	1,5 - 10	1,5 - 6	1,5 - 6	8 - 16	180 x 50
<b>MAGIC P JOINT L25-S</b> MPOWERJOINT-L25S	16 - 120	4 - 25	4 - 16	2,5 - 16	8 - 32	215 x 55
<b>MAGIC P JOINT L35-S</b> MPOWERJOINT-L35S	16 - 185	16 - 35	16 - 25	16 - 25	12 - 33	232 x 70
<b>MAGIC P JOINT L50-S</b> MPOWERJOINT-L50S	50 - 240	16 - 50	16 - 50	16 - 50	14 - 34	266 x 72
<b>MAGIC P JOINT L120-S</b> MPOWERJOINTL120S	240 - 500	70 - 120	70 - 120	50 - 95	25 - 50	365 x 95
<b>MAGIC P JOINT L240-S</b> MPOWERJOINTL240S	400 - 1000	120 - 300	120 - 185	120 - 185	30 - 75	510 x 120
<b>MAGIC P JOINT L300-S</b> MPOWERJOINTL300S	630 - 2000	240 - 400	240 - 300	240 - 300	41 - 78	760 x 180

For ALUMINIUM cables	1x	2x	3x	4x	(mm)	(mm)
<b>MAGIC P JOINT L50-S</b> MPOWERJOINT-L50S	16 - 150	16 - 25	16 - 25	16 - 25	14 - 34	266 x 72
<b>MAGIC P JOINT L120-S</b> MPOWERJOINTL120S	185 - 400	25 - 95	25 - 95	25 - 95	25 - 50	365 x 95
<b>MAGIC P JOINT L240-S</b> MPOWERJOINTL240S	400 - 630	95 - 185	95 - 185	95 - 185	30 - 75	510 x 120
<b>MAGIC P JOINT L300-S</b> MPOWERJOINTL300S	630 - 2000	185 - 300	185 - 300	185 - 300	41 - 78	760 x 180



## MAGIC POWER JOINT Y-S

Branch joint for 0.6/1 kV screened extruded cables.



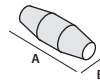
For COPPER cables

PRODUCT	Item	Cable formation and conductor cross sections (n° x mm <sup>2</sup> )								max cables Ø (mm)		Dimension (mm)
		1x		2x		3x		4x		T	B	
		T	B	T	B	T	B	T	B			
<b>MAGIC P JOINT Y6-S</b>	MPOWERJOINT-Y6S	4 - 35	4 - 35	4 - 10	4-10	2,5 - 6	2,5 - 6	2,5 - 6	2,5 - 6	8 - 27	8 - 27	180 x 90
<b>MAGIC P JOINT Y25-S</b>	MPOWERJOINT-Y25S	35 - 120	35 - 120	10 - 25	10-25	6 - 16	6 - 16	6 - 16	6 - 10	8 - 32	8 - 32	220 x 105
<b>MAGIC P JOINT Y95-S</b>	MPOWERJOINT-Y95S	95 - 300	70 - 150	25 - 95	16-50	16 - 70	16 - 35	16 - 50	10 - 35	15 - 42	8 - 32	315 x 115
<b>MAGIC P JOINT Y240-S*</b>	MPOWERJOINTY240S	240 - 630	150 - 630	95 - 240	50-240	70 - 240	35 - 240	50 - 240	35 - 240	65 max		600 x 285

\* also for aluminium cables. T: Through - B: Branch

## MAGIC POWER JOINT L-ARM

Straight joint for 0,6/1 kV extruded cables with tape, wire or plate armouring.



PRODUCT / Item	Cable formation and conductor cross sections (n° x mm <sup>2</sup> )			max cables Ø (mm)	Dimension (mm)
	2x	3x	4x		
<b>MAGIC P JOINT L10-ARM</b> MPJOINTL10-ARM	1,5 - 10	1,5 - 6	1,5 - 6	8 - 16	180 x 50
<b>MAGIC P JOINT L25-ARM</b> MPJOINTL25-ARM	4 - 25	4 - 16	2,5 - 16	8 - 32	215 x 55
<b>MAGIC P JOINT L35-ARM</b> MPJOINTL35-ARM	16 - 35	16 - 25	16 - 25	12 - 33	232 x 70
<b>MAGIC P JOINT L50-ARM</b> MPJOINTL50-ARM	16 - 50	16 - 50	16 - 50	14 - 34	266 x 72
<b>MAGIC P JOINT L120-ARM</b> MPJOINTL120-ARM	70 - 120	70 - 120	50 - 95	25 - 50	365 x 95
<b>MAGIC P JOINT L240-ARM</b> MPJOINTL240-ARM	120 - 300	120 - 185	120 - 185	30 - 75	510 x 120
<b>MAGIC P JOINT L300-ARM</b> MPJOINTL300-ARM	240 - 400	240 - 300	240 - 300	41 - 78	760 x 180

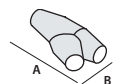


For ALUMINIUM cables	2x	3x	4x	(mm)	(mm)
<b>MAGIC P JOINT L50-ARM</b> MPJOINTL50-ARM	16 - 25	16 - 25	16 - 25	14 - 34	266 x 72
<b>MAGIC P JOINT L120-ARM</b> MPJOINTL120-ARM	25 - 95	25 - 95	25 - 95	25 - 50	365 x 95
<b>MAGIC P JOINT L240-ARM</b> MPJOINTL240-ARM	95 - 185	95 - 185	95 - 185	30 - 75	510 x 120
<b>MAGIC P JOINT L300-ARM</b> MPJOINTL300-ARM	185 - 300	185 - 300	185 - 300	41 - 78	760 x 180



## MAGIC POWER JOINT Y-ARM

Branch joint for 0,6/1 kV extruded cables with tape, wire or plate armouring.



PRODUCT	Item	Cable formation and conductor cross sections (n° x mm <sup>2</sup> )						max cables Ø (mm)		Dimension (mm)
		2x		3x		4x		T	B	
<b>MAGIC P JOINT Y6-ARM-F</b>	MPJOINTY6-ARM-F	T: 4 - 10	B: 4 - 10	T: 2,5 - 6	B: 2,5 - 6	T: 2,5 - 6	B: 2,5 - 6	8 - 27	8 - 27	180 x 90
<b>MAGIC P JOINT Y25-ARM-F</b>	MPJOINTY25-ARM-F	T: 10 - 25	B: 10 - 25	T: 6 - 16	B: 6 - 16	T: 6 - 16	B: 6 - 10	8 - 32	8 - 32	220 x 105
<b>MAGIC P JOINT Y95-ARM-F</b>	MPJOINTY95-ARM-F	T: 25 - 70	B: 16 - 50	T: 25 - 70	B: 16 - 35	T: 25 - 50	B: 10 - 35	15 - 42	8 - 32	315 x 115
<b>MAGIC P JOINT Y240-ARM-F*</b>	MPJOINTY240ARM-F	T: 70 - 240	B: 50 - 240	T: 70 - 240	B: 35 - 240	T: 50 - 240	B: 35 - 240	65 max		600 x 285

PRODUCT	Item	Cable formation and conductor cross sections (n° x mm <sup>2</sup> )						max cables Ø (mm)		Dimension (mm)
		2x		3x		4x		T	B	
<b>MAGIC P JOINT Y6-ARM</b>	MPJOINTY6-ARM	T: 4 - 10	B: 4 - 10	T: 2,5 - 6	B: 2,5 - 6	T: 2,5 - 6	B: 2,5 - 6	8 - 27	8 - 27	180 x 90
<b>MAGIC P JOINT Y25-ARM</b>	MPJOINTY25-ARM	T: 10 - 25	B: 10 - 25	T: 6 - 16	B: 6 - 16	T: 6 - 16	B: 6 - 10	8 - 32	8 - 32	220 x 105
<b>MAGIC P JOINT Y95-ARM</b>	MPJOINTY95-ARM	T: 25 - 70	B: 16 - 50	T: 25 - 70	B: 16 - 35	T: 25 - 50	B: 10 - 35	15 - 42	8 - 32	315 x 115
<b>MAGIC P JOINT Y240-ARM*</b>	MPJOINTY240ARM	T: 70 - 240	B: 50 - 240	T: 70 - 240	B: 35 - 240	T: 50 - 240	B: 35 - 240	65 max		600 x 285

\* also for aluminium cables. T: Through - B: Branch



## MAGIC POWER JOINT-SL

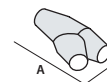
Straight joint for signaling and control multi core extruded 0,6/1 kV cables



PRODUCT	Item	Conductor (mm <sup>2</sup> )	Cable formation (n° conductors)												max cables Ø (mm)	Dimension (mm)		
			5x	7x	10x	12x	16x	19x	24x	40x	75x	100x	250x	500x				
MAGIC P JOINT SL11	MPOWERJOINTSL11	1,5	•	•	•	•	•										8 - 16	180 x 50
		2,5	•	•	•													
MAGIC P JOINT SL12	MPOWERJOINTSL12	1,5			•	•	•	•	•								8 - 32	215 x 55
		2,5			•	•	•	•										
MAGIC P JOINT SL13	MPOWERJOINTSL13	1,5					•	•	•	•							14 - 34	266 x 72
		2,5					•	•	•	•								
MAGIC P JOINT SL14	MPOWERJOINTSL14	1,5								•	•	•					15 - 42	330 x 75
		2,5								•	•	•						
MAGIC P JOINT SL15	MPOWERJOINTSL15	1,5									•	•	•				25 - 50	365 x 95
		2,5									•	•	•					
MAGIC P JOINT SL16	MPOWERJOINTSL16	1,5										•	•	•			30 - 75	510 x 120
		2,5										•	•	•				
MAGIC P JOINT SL17	MPOWERJOINTSL17	1,5											•	•	•		41 - 78	760 x 180
		2,5											•	•	•			

## MAGIC POWER JOINT-SY

Branch joint for signaling and control multi core extruded 0,6/1 kV cables.



PRODUCT	Item	Conductor (mm <sup>2</sup> )	Cable formation (n° conductors)												max cables Ø (mm)		Dimension (mm)		
			5x	7x	10x	12x	16x	19x	24x	40x	75x	100x	250x	500x	T	B			
MAGIC P JOINT SY1	MPOWERJOINTSY1	1,5	•	•	•	•	•	•									8 - 27	8 - 27	180 x 90
		2,5	•	•	•	•													
MAGIC P JOINT SY2	MPOWERJOINTSY2	1,5					•	•	•								8 - 32	8 - 32	220 x 105
		2,5			•	•	•	•	•										
MAGIC P JOINT SY3	MPOWERJOINTSY3	1,5						•	•	•	•						15 - 42	8 - 32	315 x 115
		2,5						•	•	•	•								
MAGIC P JOINT SY4	MPOWERJOINTSY4	1,5										•	•	•	•	•	65 max		600 x 285
		2,5										•	•	•	•	•			

T: Through - B: Branch

## MAGIC POWER JOINT-T e TS

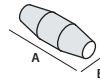
Straight joint for Telecom cables.



UNSCREENED		SCREENED		N° pairs per conductor cross sections (n° x mm <sup>2</sup> )	max cables Ø (mm)	Dimension (mm)
PRODUCT	Item	PRODUCT	Item			
MAGIC P JOINT T16	MPOWERJOINT-T16	MAGIC P JOINT TS16	MPOWERJOINT-TS16	1 - 16 x 0,5 - 0,6	8 - 16	180 x 50
MAGIC P JOINT T25	MPOWERJOINT-T25	MAGIC P JOINT TS25	MPOWERJOINT-TS25	16 - 25 x 0,5 - 0,6	8 - 32	215 x 55
MAGIC P JOINT T35	MPOWERJOINT-T35	MAGIC P JOINT TS35	MPOWERJOINT-TS35	25 - 35 x 0,5 - 0,6	12 - 33	266 x 72
MAGIC P JOINT T40	MPOWERJOINT-T40	MAGIC P JOINT TS40	MPOWERJOINT-TS40	35 - 40 x 0,5 - 0,6	15 - 42	330 x 75
MAGIC P JOINT T64	MPOWERJOINT-T64	MAGIC P JOINT TS64	MPOWERJOINT-TS64	40 - 64 x 0,5 - 0,6	25 - 50	365 x 95
MAGIC P JOINT T500	MPOWERJOINT-T500	MAGIC P JOINT TS500	MPOWERJOINT-TS500	60 - 500 x 0,5 - 0,6	30 - 75	510 x 120
MAGIC P JOINT T1000	MPOWERJOINT-T1000	MAGIC P JOINT TS1000	MPOWERJOINT-TS1000	450 - 1000 x 0,5 - 0,6	41 - 78	760 x 180

## MAGIC POWER JOINT SYSTEM PLUS L

Straight joint + Five-core spacer + Screw connectors.

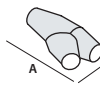


PRODUCT / Item	Cable formation and conductor cross sections (n° x mm²)				max cables Ø (mm)	Dimension (mm)
	2x	3x	4x	5x		
<b>MAGIC P JOINT SP L6</b> MPOWERJSPL6	1,5 - 6	1,5 - 6	1,5 - 6	1,5 - 6	8 - 16	180 x 50
<b>MAGIC P JOINT SP L16</b> MPOWERJSPL16	4 - 16	4 - 16	4 - 16	4 - 16	8 - 32	215 x 55
<b>MAGIC P JOINT SP L25</b> MPOWERJSPL25	4 - 25	4 - 25	4 - 25	4 - 25	8 - 32	215 x 65



## MAGIC POWER JOINT SYSTEM PLUS Y

Y Branch joint + Five-core spacer + Screw connectors.



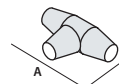
PRODUCT / Item	Cable formation and conductor cross sections (n° x mm²)								max cables Ø (mm)	Dimension (mm)
	2x		3x		4x		5x			
	T	B	T	B	T	B	T	B		
<b>MAGIC P JOINT SP Y6</b> MPOWERJSPY6	1,5-6	1,5-4	1,5-6	1,5-4	1,5-6	1,5-4	1,5-6	1,5-4	T 8 - 27 B 8 - 27	180 x 90
<b>MAGIC P JOINT SP Y16</b> MPOWERJSPY16	4-16	1,5-4	4-16	1,5-4	4-16	1,5-4	4-16	1,5-4	T 8 - 32 B 8 - 32	220 x 105

T: Through - B: Branch



## MAGIC POWER JOINT SYSTEM PLUS T

T Branch joint + Four-core spacer + Screw connectors.



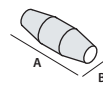
PRODUCT / Item	Cable formation and conductor cross sections (n° x mm²)						max cables Ø (mm)	Dimension (mm)
	2x		3x		4x			
	T	B	T	B	T	B		
<b>MAGIC P JOINT SP T35</b> MPOWERJSPT35	6 - 35	1,5 - 10	6 - 35	1,5 - 10	6 - 35	1,5 - 10	P 22 - 42 D 22 - 42	305 x 155

T: Through - B: Branch



## MAGIC POWER JOINT SYSTEM FAST RP

Straight joint + Shear bolt connectors.



PRODUCT / Item	Cable formation from 2x to 4x (n° x mm²)		max cables Ø (mm)	Dimension (mm)
<b>MAGIC P JOINT L 35- RP/16</b> MPOWERJL35RP16	Cu 1,5 - 16	Al 10 - 16	12 - 33	232 x 70
<b>MAGIC P JOINT L 35- RP/35</b> MPOWERJL35RP35	10 - 35		12 - 33	232 x 70
<b>MAGIC P JOINT L 50- RP/50</b> MPOWERJL50RP50	25 - 50		14 - 34	266 x 72
<b>MAGIC P JOINT L 120- RP/120</b> MPOWERJL120RP120	35 - 120		25 - 50	365 x 95
<b>MAGIC P JOINT L 240- RP/150</b> MPOWERJL240RP150	35 - 150		30 - 75	510 x 120



# MAGIC JOINT

Straight or branch joint with Magic Gel filling gel for extruded insulation cables up to 1 kV.


Joints for extruded cables F(R)G7OR 0.6/1 kV. Easy installation, composed of two anti-fracture plastic shells, to be filled with non-toxic quick cross linking two-component insulation with no shelf life, Magic Gel type. Suitable for installation in traps, channels or directly underground or under water. Non-toxic, safe, light and re-enterable. Thanks to the softness of the insulation, they are able to absorb external shock without cracking or fracturing. The extreme stickiness of the insulation, together with its softness allow it to transmit water pressure for installation even at high depths. Thanks to the materials used, joints are completely non-toxic, safe, re-enterable even after long periods of operation.

## ADVANTAGES

- ▶ Quick cross linking gel, (only 10 minutes at 23°C) .
- ▶ Extremely adherent and tight sealing.
- ▶ The gel is not-classified as hazardous under the CLP Directive and it has no shelf life.

### Electrical performance:

- CEI EN 50393  
with connectors complying with EN 61238-1
- Class 2 in accordance with CEI 64-8.

🔧 Gel: UL 94-HB 

🌡 Working temperature: 90°

🌡 Installation temperature: -15°C / +55°C

🌊 Fully submersible

🔧 Can be used underground

🌿 Halogen-free Gel

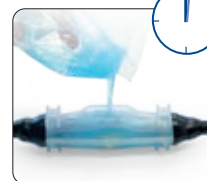
## IP68



Slip off the separator.



Mix for a minute.



Pour within a minute.

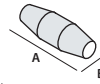


After 10 minutes, Magic joint is ready.



## MAGIC JOINT

Straight joint for 0.6/1 kV extruded cables.



For <b>COPPER</b> cables	Cable formation and conductor cross sections (n° x mm <sup>2</sup> )				max cables Ø (mm)	Dimension (mm)
PRODUCT / Item	1x	2x	3x	4x		
<b>MAGIC JOINT 4</b> 100004-002	1,5 - 25	1,5 - 4	1,5 - 4	1,5 - 4	10 - 18	160 x 45
<b>MAGIC JOINT 10</b> 100001-MAG	2,5 - 50	1,5 - 10	1,5 - 10	1,5 - 10 *	8 - 16	180 x 50
<b>MAGIC JOINT 25</b> 100002-MAG	16 - 150	4 - 25	4 - 25	2,5 - 25	8 - 32	215 x 55
<b>MAGIC JOINT 35</b> 100035-002	16 - 185	16 - 35	16 - 35	16 - 35	12 - 33	232 x 70
<b>MAGIC JOINT 50</b> 100005-MAG	50 - 300	16 - 50	16 - 50	16 - 50	14 - 34	266 x 72
<b>MAGIC JOINT 95</b> 100003-MAG	120 - 400	25 - 95	25 - 95	25 - 95	15 - 42	330 x 75
<b>MAGIC JOINT 120</b> 100007-MAG	240 - 500	70 - 120	70 - 120	50 - 120	25 - 50	365 x 95
<b>MAGIC JOINT 240</b> 100004-MAG	400 - 1000	120 - 300	120 - 240	120 - 240	30 - 75	510 x 120
<b>MAGIC JOINT 300</b> 100009-000	630 - 2000	240 - 400	240 - 300	240 - 300	41 - 78	760 x 180

For <b>ALUMINIUM</b> cables	1x	2x	3x	4x	(mm)	(mm)
<b>MAGIC JOINT 50</b> 100005-MAG	16 - 150	16 - 25	16 - 25	16 - 25	14 - 34	266 x 72
<b>MAGIC JOINT 120</b> 100007-MAG	185 - 400	25 - 95	25 - 95	25 - 95	25 - 50	365 x 95
<b>MAGIC JOINT 240</b> 100004-MAG	400 - 630	95 - 185	95 - 185	95 - 185	30 - 75	510 x 120
<b>MAGIC JOINT 300</b> 100009-000	630 - 2000	185 - 300	185 - 300	185 - 300	41 - 78	760 x 180

\* Magic Joint 10 suggested for cable diameters smaller than 16 mm.

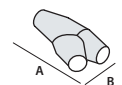


## MAGIC JOINT Y

Branch joint for 0.6/1 kV extruded cables.

For <b>COPPER</b> cables	Cable formation and conductor cross sections (n° x mm <sup>2</sup> )								max cables Ø (mm)		Dimension (mm)
	1x		2x		3x		4x		T	B	
PRODUCT	T	B	T	B	T	B	T	B	T	B	
<b>MAGIC JOINT Y6</b> 100006-MAG	4 - 50	4 - 50	4 - 10	4 - 10	2,5 - 6	2,5 - 6	2,5 - 6	2,5 - 6	8 - 27	8 - 27	180 x 90
<b>MAGIC JOINT Y25</b> 100025-MAG	50 - 150	50 - 150	10 - 25	10 - 25	6 - 25	6 - 16	6 - 25	6 - 10	8 - 32	8 - 32	220 x 105
<b>MAGIC JOINT Y95</b> 100095-MAG	120 - 400	95 - 240	25 - 95	16 - 50	25 - 95	16 - 50	25 - 95	10 - 50	15 - 42	8 - 32	315 x 115
<b>MAGIC JOINT Y240*</b> 100240-MAG	240 - 630	240 - 630	95 - 240	50 - 240	95 - 240	50 - 240	95 - 240	50 - 240	65 max		600 x 285

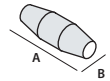
\* also for aluminium cables. T: Through - B: Branch



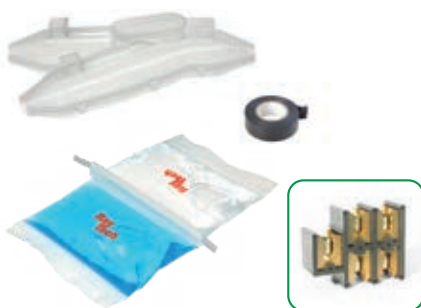


## MAGIC JOINT SYSTEM PLUS L

Straight joint + Five-core spacer + Screw connectors.

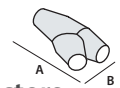


PRODUCT / Item	Cable formation and conductor cross sections (n° x mm <sup>2</sup> )				max cables Ø (mm)	Dimension (mm)
	2x	3x	4x	5x		
<b>Magic Joint SP L6</b> MAGICJSPL6	1,5 - 6	1,5 - 6	1,5 - 6	1,5 - 6	8 - 16	180 x 50
<b>Magic Joint SP L16</b> MAGICJSPL16	4 - 16	4 - 16	4 - 16	4 - 16	8 - 32	215 x 55
<b>Magic Joint SP L25</b> MAGICJSPL25	4 - 25	4 - 25	4 - 25	4 - 25	8 - 32	215 x 65



## MAGIC JOINT SYSTEM PLUS Y

Y branch joint with cast gel + Five-core spacer + Screw connectors.



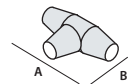
PRODUCT / Item	Cable formation and conductor cross sections (n° x mm <sup>2</sup> )								max cables Ø (mm)	Dimension (mm)
	2x		3x		4x		5x			
	T	B	T	B	T	B	T	B		
<b>MAGIC JOINT SP Y6</b> MAGICJSPY6	1,5-6	1,5-4	1,5-6	1,5-4	1,5-6	1,5-4	1,5-6	1,5-4	<b>T</b> 8 - 27 <b>B</b> 8 - 27	180 x 90
<b>MAGIC JOINT SP Y16</b> MAGICJSPY16	4-16	1,5-4	4-16	1,5-4	4-16	1,5-4	4-16	1,5-4	<b>T</b> 8 - 32 <b>B</b> 8 - 32	220 x 105

T: Through - B: Branch



## MAGIC JOINT SYSTEM PLUS T

T Branch joint + Four-core spacer + Screw connectors.



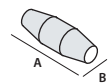
PRODUCT / Item	Cable formation and conductor cross sections (n° x mm <sup>2</sup> )						max cables Ø (mm)	Dimension (mm)
	2x		3x		4x			
	T	B	T	B	T	B		
<b>MAGIC JOINT SP T35</b> MAGICJSPT35	6 - 35	1,5 - 10	6 - 35	1,5 - 10	6 - 35	1,5 - 10	<b>T</b> 22 - 42 <b>B</b> 22 - 42	305 x 155

T: Through - B: Branch



## MAGIC JOINT SYSTEM FAST RP

Straight joint + Shear bolt connectors.



PRODUCT / Item	Cable formation from 2x a 4x (n° x mm <sup>2</sup> )	Max cables Ø (mm)	Dimension (mm)
<b>MAGIC JOINT L 35- RP/16</b> MAGICJL35RP16	1,5 - 16	12 - 33	232 x 70
<b>MAGIC JOINT L 35- RP/35</b> MAGICJL35RP35	10 - 35	12 - 33	232 x 70
<b>MAGIC JOINT L 50- RP/50</b> MAGICJL50RP50	25 - 50	14 - 34	266 x 72
<b>MAGIC JOINT L 120- RP/120</b> MAGICJL120RP120	35 - 120	25 - 50	365 x 95
<b>MAGIC JOINT L 240- RP/150</b> MAGICJL240RP150	35 - 150	30 - 75	510 x 120

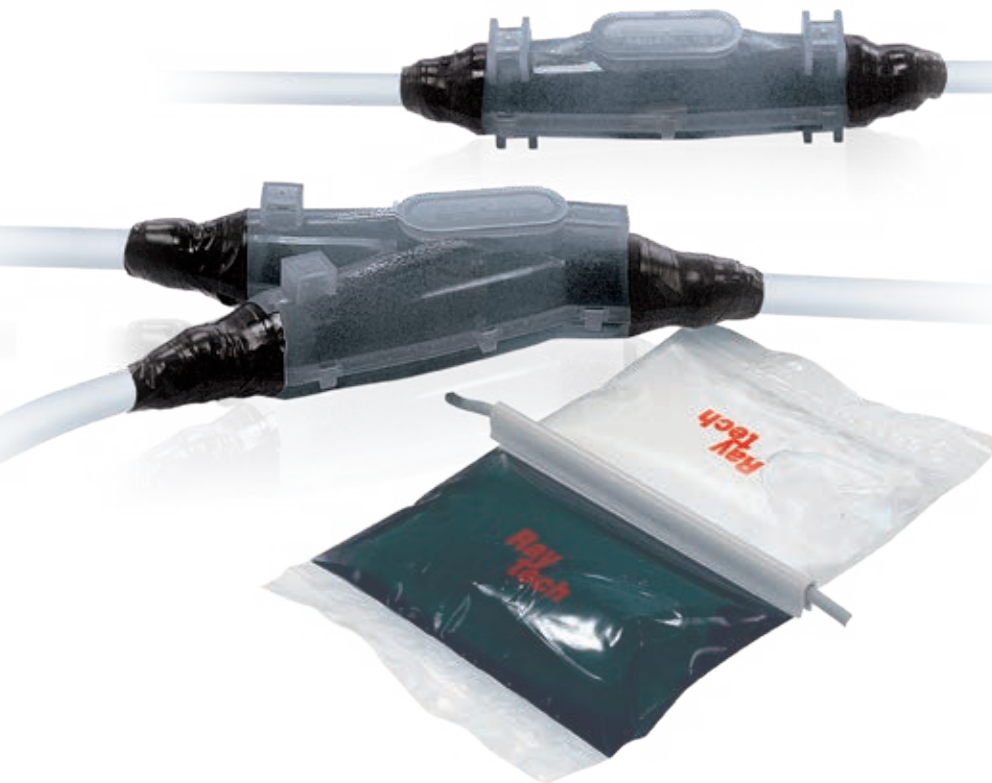
# RUBBER JOINT

Straight or branch joint with two-component cast quick cross linking rubber insulation for 0.6/1 kW cables.

With Magic Rubber insulation, designed and developed by Raytech for 0.6/1 kV cables. A range of accessories with extremely high mechanical characteristics, as well as dielectric and thermal properties. The range is re-enterable even after long periods of operation, is free of exotherm during cross linking, is extremely fast-acting and has no shelf life. Significant also for its very low emission of toxic and corrosive gases and fumes. Thanks to its exceptional mechanical characteristics, these joints are especially suitable for placement in traps or channels where there is the possibility of handling even after the laying of cables or, however, in cases of heavy abrasion, or mechanical stress within the normal parameters of installation and operation.


## ADVANTAGES

- ▶ Quick cross linking rubber (only 15 minutes).
- ▶ Very high mechanical and elastic characteristics.
- ▶ For 0.6/1 kV extruded cables.
- ▶ No shelf life.



### Electrical performance:

- CEI EN 50393  
with connectors complying  
with EN 61238-1
- Class 2 in accordance with CEI 64-8.

 Working temperature: 90°

 Installation temperature: -15°C / +55°C

 Can be used underground

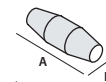
## IP68





## RUBBER JOINT

Straight joint for 0.6/1 kV extruded cables.



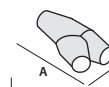
For <b>COPPER</b> cables <b>PRODUCT / Item</b>	Cable formation and conductor cross sections (n° x mm <sup>2</sup> )				max cables Ø (mm)	Dimension (mm)
	1x	2x	3x	4x		
<b>RUBBER JOINT 4</b> RUBBERJOINT4	1,5 - 25	1,5 - 4	1,5 - 4	1,5 - 4	10 - 18	160 x 45
<b>RUBBER JOINT 10</b> RUBBERJOINT10	2,5 - 50	1,5 - 10	1,5 - 10	1,5 - 10 *	8 - 16	180 x 50
<b>RUBBER JOINT 25</b> RUBBERJOINT25	16 - 150	4 - 25	4 - 25	2,5 - 25	8 - 32	215 x 55
<b>RUBBER JOINT 35</b> RUBBERJOINT35	16 - 185	16 - 35	16 - 35	16 - 35	12 - 33	232 x 70
<b>RUBBER JOINT 50</b> RUBBERJOINT50	50 - 300	16 - 50	16 - 50	16 - 50	14 - 34	266 x 72
<b>RUBBER JOINT 95</b> RUBBERJOINT95	120 - 400	25 - 95	25 - 95	25 - 95	15 - 42	330 x 75
<b>RUBBER JOINT 120</b> RUBBERJOINT120	240 - 500	70 - 120	70 - 120	50 - 120	25 - 50	365 x 95
<b>RUBBER JOINT 240</b> RUBBERJOINT240	400 - 1000	120 - 300	120 - 240	120 - 240	30 - 75	510 x 120
<b>RUBBER JOINT 300</b> RUBBERJOINT300	630 - 2000	240 - 400	240 - 300	240 - 300	41 - 78	760 x 180

\* Rubber Joint 10 suggested for cable diameters smaller than 16 mm.



## RUBBER JOINT Y

Branch joint for 0.6/1 kV extruded cables.



For <b>COPPER</b> cables <b>PRODUCT</b>	<b>Item</b>	Cable formation and conductor cross sections (n° x mm <sup>2</sup> )								max cables Ø (mm)		Dimension (mm)
		1x		2x		3x		4x		T	B	
		T	B	T	B	T	B	T	B			
<b>RUBBER JOINT Y6</b>	RUBBERJOINTY6	4 - 50	4 - 50	4 - 10	4 - 10	2,5 - 6	2,5 - 6	2,5 - 6	2,5 - 6	8 - 27	8 - 27	180 x 90
<b>RUBBER JOINT Y25</b>	RUBBERJOINTY25	50 - 150	50 - 150	10 - 25	10 - 25	6 - 25	6 - 16	6 - 25	6 - 10	8 - 32	8 - 32	220 x 105
<b>RUBBER JOINT Y95</b>	RUBBERJOINTY95	120 - 400	95 - 240	25 - 95	16 - 50	25 - 95	16 - 50	25 - 95	10 - 50	15 - 42	8 - 32	315 x 115
<b>RUBBER JOINT Y240*</b>	RUBBERJOINTY240	240 - 630	240 - 630	95 - 240	50 - 240	95 - 240	50 - 240	95 - 240	50 - 240	65 max		600 x 285

\* also for aluminium cables. T: Through - B: Branch

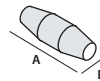
# RAY CAST

Straight or branch joint with two-component epoxy resin insulation for 0.6/1 kV cables.

Straight or branch joints for 0.6/1 kV extruded cables: easily installed, composed of two anti-fracture plastic shells, to be filled with two-component epoxy resin such as Rayresin. For installation in traps, channels or directly underground.

## RAYCAST L

Straight joint.



PRODUCT / Item	Cable formation and conductor cross sections (n° x mm <sup>2</sup> )				max cables Ø (mm)	Dimension (mm)
	1x	2x	3x	4x		
<b>RAYCAST L10</b> 100001-000	2,5 - 50	1,5 - 10	1,5 - 10	1,5 - 10 *	8 - 16	180 x 50
<b>RAYCAST L16/25</b> 100002-000	16 - 150	4 - 25	4 - 25	2,5 - 25	8 - 32	215 x 55
<b>RAYCAST L35</b> 100035-001	16 - 185	16 - 35	16 - 35	16 - 35	12 - 33	232 x 70
<b>RAYCAST L50</b> 100500-000	50 - 300	16 - 50	16 - 50	16 - 50	14 - 34	266 x 72
<b>RAYCAST L95</b> 100095-000	120 - 400	25 - 95	25 - 95	25 - 95	15 - 42	330 x 75
<b>RAYCAST L120</b> 100120-000	240 - 500	70 - 120	70 - 120	50 - 120	25 - 50	365 x 95
<b>RAYCAST L240</b> 100240-000	400 - 1000	120 - 300	120 - 240	120 - 240	30 - 75	510 x 120

PRODUCT / Item	Cable formation and conductor cross sections (n° x mm <sup>2</sup> )				max cables Ø (mm)	Dimension (mm)
	1x	2x	3x	4x		
<b>RAYCAST L50</b> 100500-000	16 - 150	16 - 25	16 - 25	16 - 25	14 - 34	266 x 72
<b>RAYCAST L120</b> 100120-000	185 - 400	25 - 95	25 - 95	25 - 95	25 - 50	365 x 95
<b>RAYCAST L240</b> 100240-000	400 - 630	95 - 185	95 - 185	95 - 185	30 - 75	510 x 120

\* Raycast L10 is suggested for cable diameters not exceeding 16 mm.

## RAYCAST D

Branch joint.

PRODUCT	Cable formation and conductor cross sections (n° x mm <sup>2</sup> )								max cables Ø (mm)		Dimension (mm)
	1x		2x		3x		4x		T	B	
<b>RAYCAST D6</b> 100006-000	T: 4-50 B: 4-50	T: 4-10 B: 4-10	T: 2,5-6 B: 2,5-6	T: 2,5-6 B: 2,5-6	T: 8-27 B: 8-27			180 x 90			
<b>RAYCAST D16/D25</b> 100016-000	T: 50-150 B: 50-150	T: 10-25 B: 10-25	T: 6-25 B: 6-16	T: 6-25 B: 6-10	T: 8-32 B: 8-32			220 x 105			
<b>RAYCAST D95</b> 100095-001	T: 120-400 B: 95-240	T: 25-95 B: 16-50	T: 25-95 B: 16-50	T: 25-95 B: 10-50	T: 15-42 B: 8-32			315 x 115			

T: Through - B: Branch

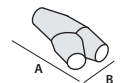
### Electrical performance:

- CEI EN 50393 with connectors complying with EN 61238-1
- Class 2 in accordance with CEI 64-8.

Working temperature: 90°

Installation temperature: 0°C / +45°C

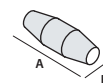
Can be used underground





## RAYCAST L-S

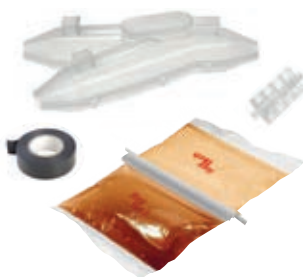
Screened joint.



For <b>COPPER</b> cables		Cable formation and conductor cross sections (n° x mm <sup>2</sup> )				max cables Ø (mm)	Dimension (mm)
PRODUCT / Item	1x	2x	3x	4x			
<b>RAYCAST L10-S</b> 100001-00S	2,5 - 50	1,5 - 10	1,5 - 6	1,5 - 6	8 - 16	180 x 50	
<b>RAYCAST L25-S</b> 100025-00S	16 - 120	4 - 25	4 - 16	2,5 - 16	8 - 32	215 x 55	
<b>RAYCAST L35-S</b> 100035-00S	16 - 185	16 - 35	16 - 25	16 - 25	12 - 33	232 x 70	
<b>RAYCAST L50-S</b> 100050-00S	50 - 240	16 - 50	16 - 50	16 - 50	14 - 34	266 x 72	
<b>RAYCAST L120-S</b> 100120-00S	240 - 500	70 - 120	70 - 120	50 - 95	25 - 50	365 x 95	
<b>RAYCAST L240-S</b> 100240-055	400 - 1000	120 - 300	120 - 185	120 - 185	30 - 75	510 x 120	

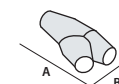
  

For <b>ALUMINIUM</b> cables		1x	2x	3x	4x	(mm)	(mm)
<b>RAYCAST L50-S</b> 100050-00S	16 - 150	16 - 25	16 - 25	16 - 25	16 - 25	14 - 34	266 x 72
<b>RAYCAST L120-S</b> 100120-00S	185 - 400	25 - 95	25 - 95	25 - 95	25 - 95	25 - 50	365 x 95
<b>RAYCAST L240-S</b> 100240-055	400 - 630	95 - 185	95 - 185	95 - 185	95 - 185	30 - 75	510 x 120



## RAYCAST D-S

Screened joint.



For **COPPER** cables

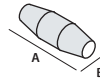
PRODUCT	Item	Cable formation and conductor cross sections (n° x mm <sup>2</sup> )								max cables Ø (mm)		Dimension (mm)
		1x		2x		3x		4x		T	B	
		T	B	T	B	T	B	T	B	T	B	
<b>RAYCAST D6-S</b>	100006-00S	4 - 35	4 - 35	4 - 10	4 - 10	2,5 - 6	1,5 - 6	2,5 - 6	2,5 - 6	8 - 27	8 - 27	180 x 90
<b>RAYCAST D25-S</b>	100017-00S	35 - 120	35 - 120	10 - 25	10 - 25	6 - 16	6 - 16	6 - 16	6 - 10	8 - 32	8 - 32	220 x 105
<b>RAYCAST D95-S</b>	100950-00S	95 - 300	70 - 150	25 - 95	16 - 50	16 - 70	16 - 35	16 - 50	10 - 35	15 - 42	8 - 32	315 x 115

T: Through - B: Branch



## RAYCAST L-ARM

Joint for tape, wire or plate armoured cables.

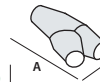


PRODUCT / Item	Cable formation and conductor cross sections (n° x mm <sup>2</sup> )			max cables Ø (mm)	Dimension (mm)
	2x	3x	4x		
<b>RAYCAST L10-ARM</b> 100001-001	1,5 - 10	1,5 - 6	1,5 - 6	8 - 16	180 x 50
<b>RAYCAST L25-ARM</b> 100002-002	4 - 25	4 - 16	2,5 - 16	8 - 32	215 x 55
<b>RAYCAST L35-ARM</b> 100035-ARM	16 - 35	16 - 25	16 - 25	12 - 33	232 x 70
<b>RAYCAST L50-ARM</b> 100003-001	16 - 50	16 - 50	16 - 50	14 - 34	266 x 72
<b>RAYCAST L120-ARM</b> 100120-002	70 - 120	70 - 120	50 - 95	25 - 50	365 x 95
<b>RAYCAST L240-ARM</b> 100240-LARM	120 - 300	120 - 185	120 - 185	30 - 75	510 x 120
For <b>ALUMINIUM</b> cables					
<b>RAYCAST L50-ARM</b> 100003-001	16 - 25	16 - 25	16 - 25	(mm) 14 - 34	(mm) 266 x 72
<b>RAYCAST L120-ARM</b> 100120-002	25 - 95	25 - 95	25 - 95	(mm) 25 - 50	(mm) 365 x 95
<b>RAYCAST L240-ARM</b> 100240-LARM	95 - 185	95 - 185	95 - 185	(mm) 30 - 75	(mm) 510 x 120

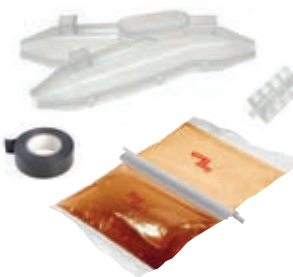


## RAYCAST D-ARM

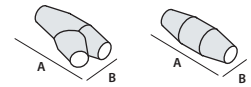
Joint for tape, wire or plate armoured cables.



PRODUCT / Item	Cable formation and conductor cross sections (n° x mm <sup>2</sup> )						max cables Ø (mm)		Dimension (mm)
	2x		3x		4x		T	B	
	T	B	T	B	T	B	T	B	(mm)
<b>RAYCAST D6-ARM-F</b> 100006-002	4 - 10	4 - 10	2,5 - 6	2,5 - 6	2,5 - 6	2,5 - 6	8 - 27	8 - 27	180 x 90
<b>RAYCAST D16-ARM-F</b> 100016-002	10 - 25	10 - 25	6 - 16	6 - 16	6 - 16	6 - 10	8 - 32	8 - 32	220 x 105
<b>RAYCAST D95-ARM-F</b> 100095-003	25 - 70	16 - 50	25 - 70	16 - 35	25 - 50	10 - 35	15 - 42	8 - 32	315 x 115
For TAPE OR PLATE armoured									
<b>RAYCAST D6-ARM</b> 100006-001	4 - 10	4 - 10	2,5 - 6	2,5 - 6	2,5 - 6	2,5 - 6	8 - 27	8 - 27	180 x 90
<b>RAYCAST D16-ARM</b> 100016-001	10 - 25	10 - 25	6 - 16	6 - 16	6 - 16	6 - 10	8 - 32	8 - 32	220 x 105
<b>RAYCAST D95-ARM</b> 100095-004	25 - 70	16 - 50	25 - 70	16 - 35	25 - 50	10 - 35	15 - 42	8 - 32	315 x 115





T: Through - B: Branch



## RAYCAST LPS / DPS

Joint for very deep submersible pumps.


For <b>COPPER</b> cables		Cable formation and conductor cross sections (n° x mm <sup>2</sup> )				max cables Ø (mm)	 (mm)
PRODUCT	Item	1x	2x	3x	4x		
RAYCAST LPS10	100010-LPS	2,5 - 50	1,5 - 10	1,5 - 10	1,5 - 10	8 - 16	180 x 50
RAYCAST LPS25	100025-LPS	16 - 150	4 - 25	4 - 25	2,5 - 25	8 - 32	215 x 55
RAYCAST LPS95	100095-LPS	120 - 400	25 - 95	25 - 95	25 - 95	15 - 42	330 x 75
RAYCAST LPS240	100240-LPS	400 - 1000	120 - 300	120 - 240	120 - 240	30 - 75	510 x 120


For <b>COPPER</b> cables		Cable formation and conductor cross sections (n° x mm <sup>2</sup> )								Ø max cables (mm)		 (mm)
PRODUCT	Item	1x		2x		3x		4x		T	B	
RAYCAST DPS56	100006-DPS	4 - 50	4 - 50	4 - 10	4 - 10	2,5 - 6	2,5 - 6	2,5 - 6	2,5 - 6	8 - 27	8 - 27	180 x 90
RAYCAST DPS25	100025-DPS	50 - 150	50 - 150	10 - 25	10 - 25	6 - 25	6 - 16	6 - 16	6 - 10	8 - 32	8 - 32	220 x 105
RAYCAST DPS95	100095-DPS	120 - 400	95 - 240	25 - 95	16 - 50	25 - 95	16 - 50	25 - 95	10 - 50	15 - 42	8 - 32	315 x 115

T: Through - B: Branch

## RAYCAST SL /SD

Joint for signalling and control.

PRODUCT	Item	Conductor (mm <sup>2</sup> )	Cable formation (n° conductors)											max cables Ø (mm)	 (mm)
			5x	7x	10x	12x	16x	19x	24x	40x	75x	100x	250x		
RAYCAST SL11	100011-OSL	1,5	•	•	•	•	•							8 - 16	180 x 50
		2,5	•	•											
RAYCAST SL12	100012-OSL	1,5			•	•	•	•	•					8 - 32	215 x 55
		2,5			•	•	•	•							
RAYCAST SL13	100013-OSL	1,5					•	•	•	•				14 - 34	266 x 72
		2,5					•	•	•						
RAYCAST SL14	100014-OSL	1,5						•	•	•			15 - 42	330 x 75	
		2,5						•	•						
RAYCAST SL15	100015-OSL	1,5							•	•	•		25 - 50	365 x 95	
		2,5							•	•					
RAYCAST SL16	100016-OSL	1,5								•	•	•	30 - 75	510 x 120	
		2,5								•	•	•			

PRODUCT	Item	Conductor (mm <sup>2</sup> )	Cable formation (n° conductors)							max cables Ø (mm)		 (mm)		
			5x	7x	10x	12x	16x	19x	24x	40x	75x		T	B
RAYCAST SD1	100001-OSD	1,5	•	•	•	•	•	•				8 - 27	8 - 27	180 x 90
		2,5	•	•	•	•								
RAYCAST SD2	100002-OSD	1,5					•	•	•			8 - 32	8 - 32	220 x 105
		2,5			•	•	•	•	•					
RAYCAST SD3	100003-OSD	1,5						•	•	•	•	15 - 42	8 - 32	315 x 115
		2,5							•	•	•			

T: Through - B: Branch

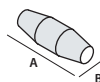
## RAYCAST TL AND TSL

Straight joint for telephone cable.

UNSCREENED		SCREENED		N° pairs per conductor cross sections (n° x mm <sup>2</sup> )	max cables Ø (mm)	Dimension (mm)
PRODUCT	Item	PRODUCT	Item			
RAYCAST TL16	100016-OTL	RAYCAST TSL16	100016-TSL	1 - 16 x 0,5 - 0,6	8 - 16	180 x 50
RAYCAST TL25	100025-OTL	RAYCAST TSL25	100025-TSL	16 - 25 x 0,5 - 0,6	8 - 32	215 x 55
RAYCAST TL35	100035-OTL	RAYCAST TSL35	100035-TSL	25 - 35 x 0,5 - 0,6	12 - 33	266 x 72
RAYCAST TL40	100040-OTL	RAYCAST TSL40	100040-TSL	35 - 40 x 0,5 - 0,6	15 - 42	330 x 75
RAYCAST TL64	100064-OTL	RAYCAST TSL64	100064-TSL	40 - 64 x 0,5 - 0,6	25 - 50	365 x 95
RAYCAST TL500	100500-OTL	RAYCAST TSL500	100500-TSL	60 - 500 x 0,5 - 0,6	30 - 75	510 x 120

## RAYCAST SYSTEM PLUS L

Straight joint + Five-core spacer + Screw connectors.

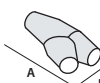


PRODUCT / Item	Cable formation and conductor cross sections (n° x mm²)				max cables Ø (mm)	Dimension (mm)
	2x	3x	4x	5x		
<b>RAYCAST SP L6</b> RAYCASTSPL6	1,5 - 6	1,5 - 6	1,5 - 6	1,5 - 6	8 - 16	180 x 50
<b>RAYCASTSP L16</b> RAYCASTSPL16	4 - 16	4 - 16	4 - 16	4 - 16	8 - 32	215 x 55
<b>RAYCASTSP L25</b> RAYCASTSPL25	4 - 25	4 - 25	4 - 25	4 - 25	8 - 32	215 x 65



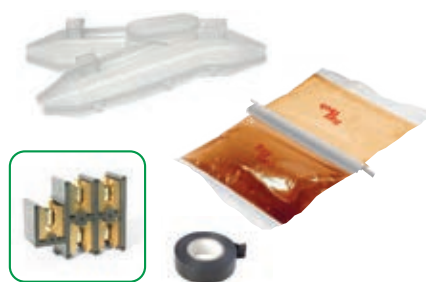
## RAYCAST SYSTEM PLUS Y

Y Branch joint + Five-core spacer + Screw connectors.



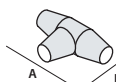
PRODUCT / Item	Cable formation and conductor cross sections (n° x mm²)								max cables Ø (mm)	Dimension (mm)
	2x		3x		4x		5x			
	T	B	T	B	T	B	T	B		
<b>RAYCAST SP D6</b> RAYCASTSPD6	1,5-6	1,5-4	1,5-6	1,5-4	1,5-6	1,5-4	1,5-6	1,5-4	T 8 - 27 B 8 - 27	180 x 90
<b>RAYCAST SP D16</b> RAYCASTSPD16	4-16	1,5-4	4-16	1,5-4	4-16	1,5-4	4-16	1,5-4	T 8 - 32 B 8 - 32	220 x 105

T: Through - B: Branch



## RAYCAST SYSTEM PLUS T

T Branch joint + Four-core spacer + Screw connectors.



PRODUCT / Item	Cable formation and conductor cross sections (n° x mm²)						max cables Ø (mm)	Dimension (mm)
	2x		3x		4x			
	T	B	T	B	T	B		
<b>RAYCAST SP T 35</b> RAYCASTSPT35	6 - 35	1,5 - 10	6 - 35	1,5 - 10	6 - 35	1,5 - 10	T 22 - 42 B 22 - 42	305 x 155

T: Through - B: Branch



## RAYCAST SYSTEM FAST RP

Straight joint + Shear bolt connectors.



PRODUCT / Item	Cable formation from 2x a 4x (n° x mm²)	max cables Ø (mm)	Dimension (mm)
<b>RAYCAST L 35- RP/16</b> RAYCASTL35RP16	1,5 - 16	12 - 33	232 x 70
<b>RAYCAST L 35- RP/35</b> RAYCASTL35RP35	10 - 35	12 - 33	232 x 70
<b>RAYCAST L 50- RP/50</b> RAYCASTL50RP50	25 - 50	14 - 34	266 x 72
<b>RAYCAST L 120- RP/120</b> RAYCASTL120RP120	35 - 120	25 - 50	365 x 95
<b>RAYCAST L 240- RP/150</b> RAYCASTL240RP150	35 - 150	30 - 75	510 x 120





# HEAT-SHRINK

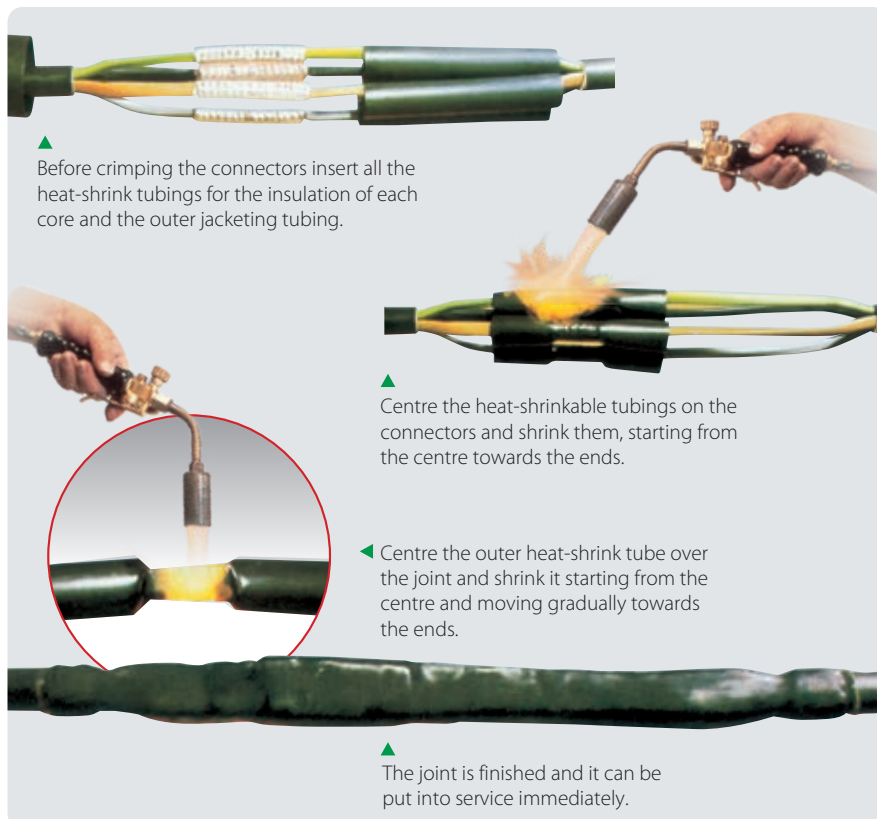
Straight or branch heat-shrinkable joints for extruded insulation cables up to a 1 kV.

## Electrical performance:

- CEI EN 50393 with connectors complying with EN 61238-1
- Class 2 in accordance with CEI 64-8.

 Working temperature: 90°

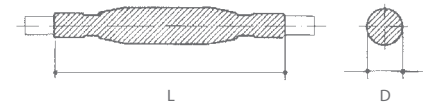
 Installation temperature: -15°C / +45°C



## GDL

Joint for single core cables including concentric neutral.

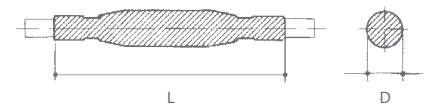
PRODUCT / Item	Conductor cross section mm <sup>2</sup>		Dimension L (mm)
	from	to	
<b>GDL 92 A1</b> 224578-TEC	4	10	300
<b>GDL 92 A2</b> 945252-TEC	16	150	300
<b>GDL 92 A3</b> 935251-000	185	400	300
<b>GDL 92 PA</b> 210254-TEC	10	50	300



## GLV

Joint for multi core cables (also for submersible pumps).

PRODUCT / Item	Conductor cross section mm <sup>2</sup>		Number of phases	Dimension	
	from	to		L (mm)	D (mm)
<b>GLV 0306</b> 254656-TEC	1,5	6	3	250	18
<b>GLV 0316</b> 224477-TEC	10	16	3	400	37
<b>GLV 0335</b> 554268-TEC	25	35	3	550	43
<b>GLV 0370</b> 457896-TEC	50	70	3	650	52
<b>GLV 3150</b> 789992-000	95	150	3	800	65
<b>GLV 3300</b> 789994-000	185	300	3	900	82
<b>GLV 0406</b> 336598-TEC	1,5	6	4	250	20
<b>GLV 0416</b> 789890-000	10	16	4	400	40
<b>GLV 0435</b> 789891-000	25	35	4	650	45
<b>GLV 0470</b> 234477-TEC	50	70	4	650	54
<b>GLV 4150</b> 482979-000	95	150	4	800	67
<b>GLV 4300</b> 609695-000	185	300	4	900	84
<b>GLV 2,5 - CP</b> 411124-TEC	2,5 complete with connectors		4	300	15

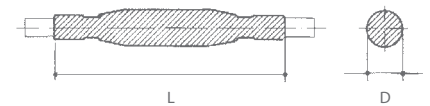


For both copper and aluminium cables. For aerial, underground, submerged installation.

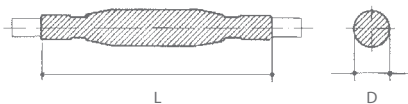
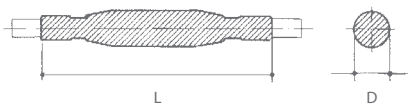
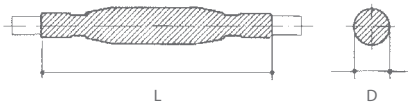
## GLV-N

Joint for multi core cables with concentric neutral.

PRODUCT / Item	Conductor cross section mm <sup>2</sup>		Number of phases	Dimension	
	from	to		L (mm)	D (mm)
<b>GLV 0306 - N</b> 788459-000	1,5	6	3	250	18
<b>GLV 0316 - N</b> 788429-000	10	16	3	400	37
<b>GLV 0335 - N</b> 788460-000	25	35	3	550	43
<b>GLV 0370 - N</b> 788461-000	50	70	3	650	52
<b>GLV 3150 - N</b> 788462-000	95	150	3	800	65
<b>GLV 3300 - N</b> 210054-TEC	185	300	3	900	82
<b>GLV 0406 - N</b> 789995-000	1,5	6	4	250	20
<b>GLV 0416 - N</b> 789996-000	10	16	4	400	40
<b>GLV 0435 - N</b> 789997-000	25	35	4	650	45
<b>GLV 0470 - N</b> 789998-000	50	70	4	650	54
<b>GLV 4150 - N</b> 405718-000	95	150	4	800	67
<b>GLV 4300 - N</b> 788463-000	185	300	4	900	84



These kits include components for the phase insulation, metallic braiding to replace the neutral and external self-sealing heat-shrinkable tube.



## GLV-ARM

Joint for armoured multi core cables.

For armoured <b>tape</b> cables		Conductor cross section (mm <sup>2</sup> )		Dimension	
PRODUCT / Item		from	to	L (mm)	D (mm)
<b>GLV 0406-ARM</b>	788969-000	1,5	6	300	25
<b>GLV 0416-ARM</b>	307689-000	6	16	400	40
<b>GLV 0450-ARM</b>	630855-000	25	50	800	60
<b>GLV 4150-ARM</b>	378703-000	70	150	1000	100
<b>GLV 4300-ARM</b>	152410-000	185	300	1000	120

## BOPA

Joint for MV cables for public lighting.

PRODUCT / Item	Operating voltage kV	Number of phases	Section (mm <sup>2</sup> )	Dimension	
				L (mm)	D (mm)
<b>BOPA 3</b> BOPA3-TEC	3	1	1x10	300	50
<b>BOPA 4</b> BOPA4-TEC	3	2	2x10	450	60
<b>BOPA 5</b> BOPA5-TEC	3	3	3x10	450	70
<b>BOPA 3/2</b> BOPA3/2-TEC	3,6	1 + concentric neutral	1 x 6 + 6 concentric	700	35
<b>BOPA 4/T transition</b> 784472-TEC	3	2	2,5 - 10 paper / 10 - 50 extruded	750	40

## DJ

LV branch joint.

PRODUCT / Item	Single core cables cross section (mm <sup>2</sup> )		Multi core cables cross section (mm <sup>2</sup> )		Dimension	
	Through	Branch	Through	Branch	L (mm)	D (mm)
<b>DJ01</b> 416127-000	1 x 4 - 50	1 x 2,5 - 50	4 x 1,5 - 10	2 x 1,5	200	25
<b>DJ02</b> 396633-000	1 x 50 - 120	1 x 6 - 120	4 x 16 - 25 2 single core cables 1 x 6 - 50	2 x 1,5 1 two core cable 2 x 2,5	250	40
<b>DJ03</b> 396634-000	1 x 150 - 300	1 x 6 - 300	4 x 25 - 3,5 x 50	4 x 2,5 - 25	400	70

## GLV SYSTEM FAST RP

Straight joint + Shear bolt connectors.

PRODUCT / Item		Cable formation 4x (n° x mm <sup>2</sup> )	Dimension L x D (mm)
<b>GLV 0435- RP/16</b>	GLV0435RP16	6 - 16	650 x 50
<b>GLV 0470- RP/35</b>	GLV0470RP35	25 - 35	650 x 70
<b>GLV 0470- RP/50</b>	GLV0470RP50	25 - 50	650 x 75
<b>GLV 4150- RP/150</b>	GLV4150RP150	50 - 150	800 x 80



## GLV F/R - GMP F/R

Joint for flame resistant cables (0,6/1 kV).

### For NAVAL TYPE POWER cables

UNARMoured	Cable formation (n° x mm²)	L (mm)	ARMoured	Cable formation (n° x mm²)	L (mm)
PRODUCT / Item			PRODUCT / Item		
GLV 4004-F/R GLV4004-F/R	4 x 1,5 - 4	300	GLV 4004-ARM-F/R GLV4004-ARM-F/R	4 x 1,5 - 4	400
GLV 4016-F/R GLV4016-F/R	4 x 6 - 16	300	GLV 4016-ARM-F/R GLV4016-ARM-F/R	4 x 6 - 16	400
GLV 4050-F/R GLV4050-F/R	4 x 25 - 50	400	GLV 4050-ARM-F/R GLV4050-ARM-F/R	4 x 25 - 50	500
GLV 4150-F/R GLV4150-F/R	4 x 70 - 150	500	GLV 4150-ARM-F/R GLV4150-ARM-F/R	4 x 70 - 150	750

### For NAVAL TYPE signalling and control cables

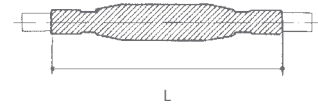
UNARMoured	Cable formation (n° x mm²)	L (mm)	ARMoured	Cable formation (n° x mm²)	L (mm)
PRODUCT / Item			PRODUCT / Item		
GMP 007-F/R GMP007-F/R	4 - 7 x 1,5 - 2,5	300	GMP 007-ARM-F/R GMP007-ARM-F/R	4 - 7 x 1,5 - 2,5	300
GMP 014-F/R GMP014-F/R	10 - 14 x 1,5 - 2,5	300	GMP 014-ARM-F/R GMP014-ARM-F/R	10 - 14 x 1,5 - 2,5	300
GMP 030-F/R GMP030-F/R	16 - 30 x 1,5 - 2,5	400	GMP 030-ARM-F/R GMP030-ARM-F/R	16 - 30 x 1,5 - 2,5	400

### For UNDERGROUND POWER cables

UNARMoured	Cable formation (n° x mm²)	L (mm)	ARMoured	Cable formation (n° x mm²)	L (mm)
PRODUCT / Item			PRODUCT / Item		
GLV 4006-F/R-G7 GLV4006-F/R-G7	4 x 1,5 - 6	300	GLV 4006-ARM-F/R-G7 GLV4006-ARM-F/R-G7	4 x 1,5 - 6	400
GLV 4016-F/R-G7 GLV4016-F/R-G7	4 x 6 - 16	300	GLV 4016-ARM-F/R-G7 GLV4016-ARM-F/R-G7	4 x 6 - 16	400
GLV 4050-F/R-G7 GLV4050-F/R-G7	4 x 25 - 50	400	GLV 4050-ARM-F/R-G7 GLV4050-ARM-F/R-G7	4 x 25 - 50	500
GLV 4150-F/R-G7 GLV4150-F/R-G7	4 x 70 - 150	500	GLV 4150-ARM-F/R-G7 GLV4150-ARM-F/R-G7	4 x 70 - 150	750

### For UNDERGROUND signalling and control cables

UNARMoured	Cable formation (n° x mm²)	L (mm)	ARMoured	Cable formation (n° x mm²)	L (mm)
PRODUCT / Item			PRODUCT / Item		
GMP 014-F/R-G7 GMP014-F/R-G7	Up to 14 x 1,5 - 2,5	300	GMP 014-ARM-F/R-G7 GMP014-ARM-F/R-G7	Up to 14 x 1,5 - 2,5	400
GMP 019-F/R-G7 GMP019-F/R-G7	Up to 19 x 1,5 - 2,5	400	GMP 019-ARM-F/R-G7 GMP019-ARM-F/R-G7	Up to 19 x 1,5 - 2,5	500



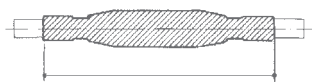
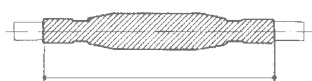
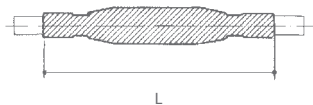
#### Electrical performance:

- CEI EN 50393  
with connectors complying with EN 61238-1
- Class 2 in accordance with CEI 64-8.

#### No flame propagation:

IEC 60331-21 • CEI 20-36/2-1  
(as applicable).

For other formations and cable sections please contact Raytech.



## DJ F/R

Branch joint for flame resistant cables (0,6/1 kV).

For POWER cables

UNARMOURED		ARMOURED		Cable formation (n° x mm <sup>2</sup> )		L (mm)
PRODUCT / Item		PRODUCT / Item		Through	Branch	
DJ 4016 - F/R DJ4016FR		DJ 4016 - ARM-F/R DJ4016-ARM-FR		3 - 4 x 1,5 - 16	3 - 4 x 1,5 - 16	300

## GMP

Jointing kits for multi conductor cables for signalling, command and control.

NON ARMOURED cable		N° of conductors		Section mm <sup>2</sup>		External Ø of cable	
PRODUCT / Item		from	to	from	to	min (mm)	max (mm)
GMP 007	786768-000	4	7	1,0	2,5	8	19
GMP 014	666635-TEC	8	14	1,0	2,5	12	22
GMP 021	786272-000	15	21	1,0	2,5	15	27
GMP 040	786684-000	22	40	1,0	2,5	20	35
GMP 075	786683-000	41	75	1,0	2,5	26	44
GMP 100	786688-000	76	100	1,0	2,5	26	60

ARMOURED cable		N° of conductors		Section mm <sup>2</sup>		External Ø of cable	
PRODUCT / Item		from	to	from	to	min (mm)	max (mm)
GMP 007-A	786686-000	4	7	1,0	2,5	14	23
GMP 014-A	786687-000	8	14	1,0	2,5	15	26
GMP 021-A	786785-000	15	21	1,0	2,5	24	35
GMP 040-A	786356-000	22	40	1,0	2,5	30	45
GMP 075-A	786689-000	41	75	1,0	2,5	39	55

## GMC

Jointing kits for multi pair cables for communication, command and control.

NON ARMOURED cable		N° of pairs		Section mm <sup>2</sup>		External Ø of cable	
PRODUCT / Item		from	to	from	to	min (mm)	max (mm)
GMC 010	939629-000	5	10	2 x 0,6	2 x 1,0	9	14
GMC 020	786828-000	11	20	2 x 0,6	2 x 1,0	13	20
GMC 030	946619-000	21	30	2 x 0,6	2 x 1,0	16	24
GMC 050	934676-000	31	50	2 x 0,6	2 x 1,0	22	29
GMC 100	156732-000	51	100	2 x 0,6	2 x 1,0	30	40

ARMOURED cable		N° of pairs		Section mm <sup>2</sup>		External Ø of cable	
PRODUCT / Item		from	to	from	to	min (mm)	max (mm)
GMC 004-A	802965-000	1	4	2 x 0,6	2 x 1,0	15	23
GMC 007-A	786769-000	5	7	2 x 0,6	2 x 1,0	15	26
GMC 019-A	803162-000	8	19	2 x 0,6	2 x 1,0	24	35
GMC 037-A	786412-000	20	37	2 x 0,6	2 x 1,0	30	45
GMC 061-A	786355-000	38	61	2 x 0,6	2 x 1,0	39	55

# TERMINATIONS HEAT-SHRINK

## TLV

Terminations for armoured and non armoured extruded cables up to 1 kV.

### NON ARMoured extruded cables

PRODUCT / Item		Extruded cables with <b>WIRE ARMOUR</b>		Conductor section mm <sup>2</sup>		Number of phases
		PRODUCT / Item		from	to	
TLV 0216	946613-000	TLV 0216 - AF	106391-000	4	16	2
TLV 0316	496973-000	TLV 0316 - AF	178316-000	4	16	3
TLV 0416	288775-000	TLV 0416 - AF	121775-000	4	16	4
TLV 0250	101526-000	TLV 0250 - AF	024865-000	25	50	2
TLV 0350	786134-000	TLV 0350 - AF	179335-000	25	50	3
TLV 0450	786200-000	TLV 0450 - AF	868777-000	25	50	4
TLV 3150	786220-000	TLV 3150 - AF	181196-000	70	150	3
TLV 4150	597107-000	TLV 4150 - AF	223409-000	70	150	4
TLV 3300	208159-000	TLV 3300 - AF	181097-000	185	300	3
TLV 4300	063097-000	TLV 4300 - AF	803719-000	185	300	4
		TLV 4500 - AF	915556-000	500		4

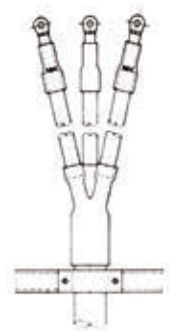
## TLV 500

Terminations for concentric neutral extruded cables up to 1 kV.

PRODUCT / Item		Conductor section mm <sup>2</sup>		Number of phases
		from	to	
TLV 0116 - 500	181198-000	4	16	1
TLV 0216 - 500	181198-001	4	16	2
TLV 0316 - 500	816659-000	4	16	3
TLV 0150 - 500	181198-002	25	50	1
TLV 0250 - 500	181198-003	25	50	2
TLV 0350 - 500	828617-000	25	50	3
TLV 2150 - 500	179925-000	70	150	2
TLV 3150 - 500	181198-004	70	150	3
TLV 2300 - 500	181198-005	185	300	2
TLV 3300 - 500	909765-000	185	300	3



Include sheath to cover phases, sealing of the point of divergence of phases and sealing between phase and cable terminal.



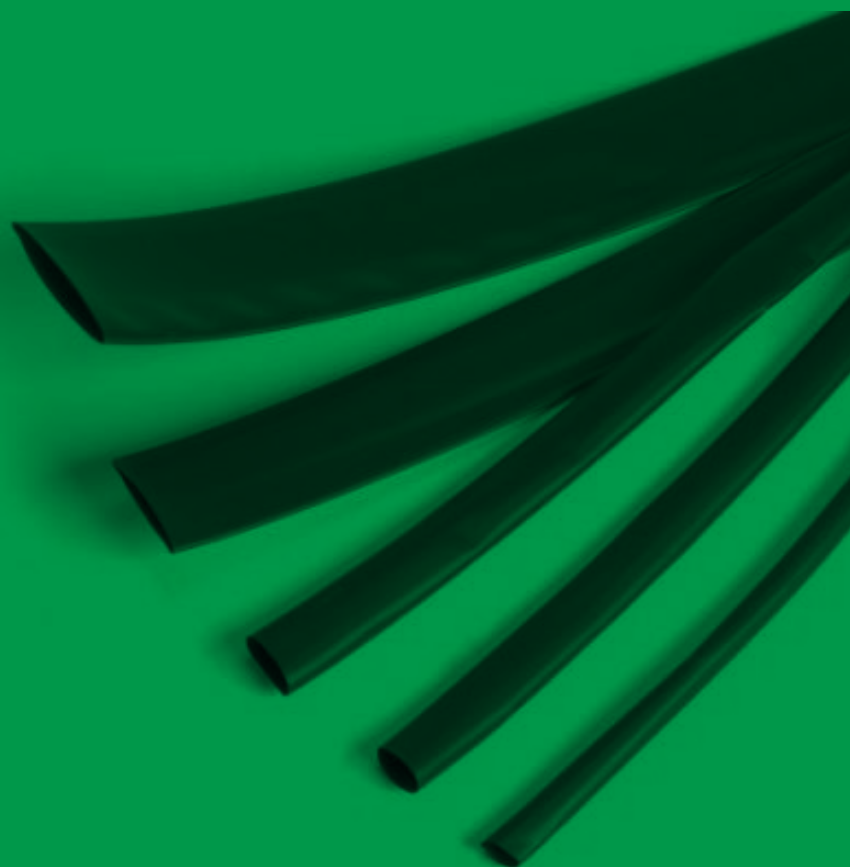
Include sheath to cover the concentric conductor.





**LOW VOLTAGE  
OTHERS**

**HEAT-SHRINK SHEATHS  
INSULATION TAPES  
CABLE PULLERS  
FIRE STOP BARRIERS  
SPECIALS**



Operating temperature: -55°C / +125°C

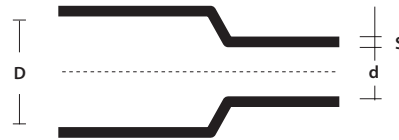
Tensile resistance	10,4 Min
Elongation	200 % Min
Tensile resistance after ageing	7,3 Min
Elongation after ageing	100 % Min
Dielectric strength	20 kV/mm
Flammability	VW1*
Minimum shrinkage temperature	110°C

\* except transparent sheath.

# THIN-WALL SHEATHS

Flexible heat-shrink modified polyolefin sheaths, cross linked by means of radiation. Longitudinal shortening up to 15%. Suitable for insulation and covering of conductors and their connections, bars. etc. Replace self-adhesive, self-amalgamating insulating tapes.

- Black
- Red
- Blue
- Yellow
- White
- Transparent
- Yellow Green



D = min. Ø before shrinkage

d = max. Ø after free shrinkage

S = min. rated thickness after free shrinkage (+/- 20%)



## LST-TEC

Heat-shrink sheaths in dispensers for commercial use.

PRODUCT	Item	Colour	D (mm)	d (mm)	S (mm)	Lenght (m)
LST-TEC 1,6 *	6635996003	●	1,6	0,8	0,50	10
LST-TEC 2,4 *	7284836003	●	2,4	1,2	0,55	10
LST-TEC 3,2 *	0316676003	●	3,2	1,6	0,55	10
LST-TEC 4,8 *	3876656003	●	4,8	2,4	0,55	9
LST-TEC 6,4 *	3363736003	●	6,4	3,2	0,65	8
LST-TEC 9,5 *	0915756003	●	9,5	4,8	0,65	6
LST-TEC 12,7 *	1963796004	●	12,7	6,4	0,65	6
LST-TEC 19,0 *	9601076004	●	19,0	9,5	0,80	5
LST-TEC 25,4 *	2348536003	●	25,4	12,7	0,95	3
LST-TEC-GV 3/1,5	5038106035	●	3	1,5	0,51	7
LST-TEC-GV 4,8/2,4	5038815824	●	4,8	2,4	0,55	10
LST-TEC-GV 6/3	5038606049	●	6	3	0,58	5
LST-TEC-GV 10/5	5038816019	●	10	5	0,64	4
LST-TEC-GV 12/6	5038812764	●	12	6	0,65	7
LST-TEC-GV 19/9	5038496027	●	19	9	0,74	3
LST-TEC-GV 26/13	5038186026	●	26	16	0,89	2,5

\* Also available in blue colour ● in red colour ● - See codes on page 120



## RAY ROLL

Heat-shrink sheaths in dispensers for industrial use.

PRODUCT	Item	Colour	D (mm)	d (mm)	S (mm)	Lenght (m)
RAY ROLL 1,6	RAYROLL-1.6	●	1,6	0,8	0,50	20
RAY ROLL 2,4	RAYROLL-2.4	●	2,4	1,2	0,55	20
RAY ROLL 3,2	RAYROLL-3.2	●	3,2	1,6	0,55	10
RAY ROLL 4,8	RAYROLL-4.8	●	4,8	2,4	0,55	10
RAY ROLL 6,4	RAYROLL-6.4	●	6,4	3,2	0,65	10
RAY ROLL 9,5	RAYROLL-9.5	●	9,5	4,8	0,65	10
RAY ROLL 12,7	RAYROLL-12.7	●	12,7	6,4	0,65	10
RAY ROLL 19,0	RAYROLL-19.0	●	19,0	9,5	0,80	5
RAY ROLL 25,4	RAYROLL-25.4	●	25,4	12,7	0,95	5



## MAXI ROLL

Heat-shrink sheaths in maxi dispensers for industrial use.

PRODUCT	Item	Colour	D (mm)	d (mm)	S (mm)	Spool (m)
MAXI ROLL 1,6	MAXIROLL-1.6	●	1,6	0,8	0,50	300
MAXI ROLL 2,4	MAXIROLL-2.4	●	2,4	1,2	0,55	300
MAXI ROLL 3,2	MAXIROLL-3.2	●	3,2	1,6	0,55	300
MAXI ROLL 4,8	MAXIROLL-4.8	●	4,8	2,4	0,55	150
MAXI ROLL 6,4	MAXIROLL-6.4	●	6,4	3,2	0,65	75
MAXI ROLL 9,5	MAXIROLL-9.5	●	9,5	4,8	0,65	150
MAXI ROLL 12,7	MAXIROLL-12.7	●	12,7	6,4	0,65	150
MAXI ROLL 19,0	MAXIROLL-19.0	●	19,0	9,5	0,80	75
MAXI ROLL 25,4	MAXIROLL-25.4	●	25,4	12,7	0,95	60

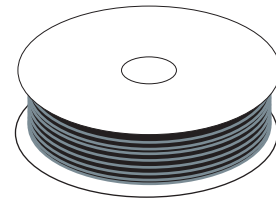


## CGP-TEC

Heat-shrink sheaths for commercial use.

PRODUCT	Item	Colour	D (mm)	d (mm)	S (mm)	Spool (m)
CGP-TEC 1,2/0,6	5069794007	●	1,2	0,6	0,45	600
CGP-TEC 1,6/0,8	5069804009	●	1,6	0,8	0,45	300
CGP-TEC 2,4/1,2	5069814012	●	2,4	1,2	0,50	300
CGP-TEC 3,2/1,6	5069824023	●	3,2	1,6	0,50	300
CGP-TEC 4,8/2,4	5069834023	●	4,8	2,4	0,50	150
CGP-TEC 6,4/3,2	5069844021	●	6,4	3,2	0,65	75
CGP-TEC 9,5/4,8	5069854021	●	9,5	4,8	0,65	150
CGP-TEC 12,7/6,4	5069864018	●	12,7	6,4	0,65	150
CGP-TEC 19/9,5	5069874011	●	19,0	9,5	0,75	75
CGP-TEC 25,4/12,7	5069884015	●	25,4	12,7	0,90	60
CGP-TEC 38/19	5069894005	●	38,0	19,0	1,00	60
CGP-TEC 51/26	5069904003	●	51,0	26	1,15	30
CGP-TEC 76/38	5067104003	●	76,0	38,0	1,27	15
CGP-TEC 102/51	5067164001	●	102,0	51,0	1,40	15

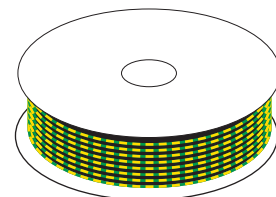
Also available in Red, Blue, Yellow, White, Transparent colours ●●●○⊕ - See codes on page 116



## DCP-TEC

Heat-shrink sheaths suitable for coating grounding cables.

PRODUCT	Item	Colour	D (mm)	d (mm)	S (mm)	Spool (m)
DCP-TEC 3/1,5	5038104002	●	3,0	1,5	0,51	300
DCP-TEC 6/3	5038604008	●	6,0	3,0	0,58	75
DCP-TEC 10/5	5038814001	●	10,0	5,0	0,64	75
DCP-TEC 12/6	5038114002	●	12,0	6,0	0,64	75
DCP-TEC 19/9	5038494001	●	19,0	9,0	0,74	75
DCP-TEC 26/13	5038184001	●	26,0	13,0	0,89	30
DCP-TEC 38/19	5673904001	●	38,0	19,0	1,00	60





**Operating temperature:** -55°C / +125°C

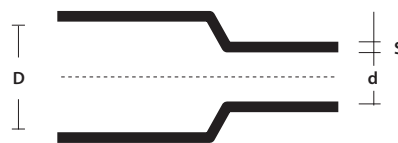
Tensile resistance	10,4 Min
Elongation	200 % Min
Tensile resistance after ageing	7,3 Min
Elongation after ageing	100 % Min
Dielectric strength	20 kV/mm
Flammability	VW1*
Minimum shrinkage temperature	110°C

\* except transparent sheath.

# SHEATHS IN BARS

Flexible heat-shrink modified polyolefin sheaths, cross linked by means of radiation. Longitudinal shortening up to 15%. Suitable for insulation and covering of conductors and their connections, bars. etc. Replace self-adhesive, self-amalgamating insulating tapes.

- Black
- Red
- Blue
- Yellow
- White
- ⊕ Transparent
- Yellow Green



**D** = min. Ø before shrinkage

**d** = max. Ø. after free shrinkage

**S** = min. rated thickness after free shrinkage (+/- 20%)

**Minimum shrinkage temperature:** 125°C

**Operating temperature:** -55°C / +120°C



## RDCT-B

Yellow green tube for general use in bars.

Shrinkage ratio 2:1

PRODUCT	Item	Colour	D (mm)	d (mm)	S (mm)	Bars (m)
RDCT-B 3/1,5	315002-BAR		3,0	1,5	0,51	1,2
RDCT-B 6/3	630045-BAR		6,0	3,0	0,58	1,2
RDCT-B 10/5	105004-BAR		10,0	5,0	0,64	1,2
RDCT-B 12/6	126040-BAR		12,0	6,0	0,64	1,2
RDCT-B 19/9	199550-BAR		19,0	9,0	0,74	1,2
RDCT-B 26/13	261345-BAR		26,0	13,0	0,89	1,2



## RGPO-B

Tube for general use in bars.

Shrinkage ratio 2:1

PRODUCT	Item	Colour	D (mm)	d (mm)	S (mm)	Lenght (m)
RGPO-B 2,4/1,2	241200-BAR	●	2,4	1,2	0,50	1,2
RGPO-B 3,2/1,6	321600-BAR	●	3,2	1,6	0,50	1,2
RGPO-B 4,8/2,4	482400-BAR	●	4,8	2,4	0,50	1,2
RGPO-B 6,4/3,2	643200-BAR	●	6,4	3,2	0,65	1,2
RGPO-B 9,5/4,8	954800-BAR	●	9,5	4,8	0,65	1,2
RGPO-B 12,7/6,4	127640-BAR	●	12,7	6,4	0,65	1,2
RGPO-B 19/9,5	199500-BAR	●	19,0	9,5	0,75	1,2
RGPO-B 25,4/12,7	254120-BAR	●	25,4	12,7	0,90	1,2
RGPO-B 38/19	381900-BAR	●	38,0	19,0	1,00	1,2
RGPO-B 51/26	512600-BAR	●	51,0	26	1,15	1,2

Also available in Red, Blue, White, Transparent colours ● ● ○ ⊕ - See codes on page 116

## RAY-TUM

Sheaths in bars with adhesive.

Shrinkage ratio 3:1		Colour	D (mm)	d (mm)	S <sub>2</sub> (mm)	S <sub>1</sub> (mm)	Bars (m)
PRODUCT	Item						
RAY-TUM-3/1-0	5504062059	●	3	1	1,00	0,5	1,2
RAY-TUM-6/2-0	5509092033	●	6	2	1,00	0,5	1,2
RAY-TUM-9/3-0	5507832055	●	9	3	1,40	0,6	1,2
RAY-TUM-12/4-0	5509102048	●	12	4	1,75	0,7	1,2
RAY-TUM-19/6-0	5067452035	●	19	6	2,25	0,8	1,2
RAY-TUM-24/8-0	5509112040	●	24	8	2,50	1,0	1,2
RAY-TUM-40/13-0	5509122053	●	40	13	2,50	1,0	1,2

Shrinkage ratio 4:1		Colour	(mm)	(mm)	(mm)	(mm)	(m)
RAY-TUM-4/1-0	550406260	●	4	1	1,00	0,5	1,2
RAY-TUM-8/2-0	5110554007	●	8	2	1,00	0,5	1,2
RAY-TUM-12/3-0	5634732003	●	12	3	1,40	0,6	1,2
RAY-TUM-16/4-0	8014642003	●	16	4	1,75	0,7	1,2
RAY-TUM-24/6-0	4177512003	●	24	6	2,25	0,8	1,2
RAY-TUM-32/8-0	4951522003	●	32	8	2,50	1,0	1,2
RAY-TUM-52/13-0	7024702003	●	52	13	2,50	1,0	1,2



D = min. Ø before shrinkage  
 d = max. Ø after free shrinkage  
 S1 = rated thickness as supplied  
 S2 = min. rated thickness after free shrinkage

Operating temperature: -55°C / +125°C

Tensile resistance	10,4 MPa min
Elongation	200 % min
Tensile resistance after ageing	7,3 MPa min
Elongation after ageing	100 % min
Thermal shock 4h a 250°C	No-drip No breaking
Flexibility at low temperature (1h a -30°C)	No breaking
Dielectric strength	Min 15,8 kV/mm
Resistance to fluids (lubricant oil, hydraulic fluid, diesel)	

## THERMO MINI MIX

Pre-cut heat-shrink sheaths kit.

Ready-for-installation heat-shrink sheaths in a practical, multi-compartment box divided by diameter. Indispensable for Electrical systems, as a replacement for taped insulation, wiring of all types, switchboards, Hi-Fi, hobbies, DIY.

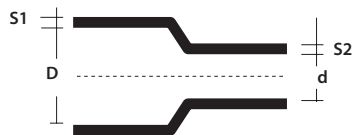
### ADVANTAGES

- Wide range of diameters and colours.
- Always ready, quick application.
- Flexible.

BLACK COLOUR	MIXED COLOURS	Ø before and after shrinkage (mm)	Length of sheath (mm)	Pieces for box
PRODUCT	PRODUCT			
THERMO MINI MIX-N THERMOMIN-N	THERMO MINI MIX-MC THERMOMIN-MC	1,0 / 0,5	97	60
		2,0 / 1,0	97	40
		3,0 / 1,5	97	30
		4,5 / 2,25	97	20
		6,0 / 3,0	97	10
		9,0 / 4,5	97	10







**D** = min. Ø before shrinkage  
**d** = max. Ø after free shrinkage  
**S1** = rated thickness as supplied  
**S2** = min. rated thickness after free shrinkage

**Operating temperature:** -55°C / +125°C

Tensile resistance	12 MPa min
Elongation	350% min
Tensile resistance after ageing	12 MPa
Elongation after ageing	300% min
Dielectric strength	12 kV/mm min
Minimum shrinkage temperature	125°C

**HF** Halogen Free

# MEDIUM-WALL SHEATHS

Heat-shrink modified polyolefin sheaths, cross linked by means of radiation for insulation, sealing and LV component protection. It is in fact used for restoring insulation and for the outer covering of LV cables and wherever optimal mechanical characteristics are required for resistance to impact, abrasion, general weathering including UV radiation, or for use in under water environments. Used for the insulation of bars or naked LV connections with optimal mechanical resistance for sealing, especially if used with hot-melt adhesive, and for anti-corrosion protection. Also replaces self-adhesive and self-amalgamating tapes.

MTR PRODUCT	WITH ADHESIVE	WITHOUT ADHESIVE	Applications by Ø		D (mm)	d (mm)	S <sub>1</sub> (mm)	S <sub>2</sub> (mm)
	Item	Item	from (mm)	to (mm)				
MTR 10/3*	488809-000	854745-000	3,5	9,0	10	3	0,3	1,0
MTR 16/5*	925679-000	411365-000	5,5	14,0	16	5	0,3	1,4
MTR 25/8*	717783-000	082743-000	8,5	22,0	25	8	0,4	2,0
MTR 35/12*	064641-000	089407-000	13,0	32,0	35	12	0,4	2,0
MTR 50/16*	046911-000	738765-000	17,5	45,0	50	16	0,5	2,0
MTR 63/19*	223993-000	644113-000	21,0	57,0	63	19	0,6	2,4
MTR 75/22*	237137-000	605711-000	24,0	68,0	75	22	0,6	2,7
MTR 85/25*	727282-000	917867-000	28,0	77,0	85	25	0,6	2,8
MTR 95/29*	498559-000	355919-000	32,0	86,0	95	29	0,7	3,1
MTR 115/34*	827835-000	036893-000	37,0	104,0	115	34	0,7	3,1
MTR 140/42*	891939-000	149759-000	46,0	126,0	140	42	0,7	3,1
MTR 160/55*	474381-000	938745-000	55,0	144,0	160	55	0,7	3,2
MTR 180/60*	323497-000	827643-000	66,0	162,0	180	60	0,7	3,2

\* Complete the item code adding the length (in mm), adhesive (/172) or without adhesive (/U).

## MTN

Suitable for submersible pumps

WITH ADHESIVE		Applications by Ø		D (mm)	d (mm)	S <sub>1</sub> (mm)	S <sub>2</sub> (mm)
PRODUCT	Item	from (mm)	to (mm)				
MTN 10/3*	MTN1031000172	3,5	9,0	10	3	0,3	1,0
MTN 16/5*	MTN1651000172	5,5	14,0	16	5	0,3	1,4
MTN 25/8*	MTN2581000172	8,5	22,0	25	8	0,4	2,0
MTN 35/12*	MTN35121000172	13,0	32,0	35	12	0,4	2,0
MTN 50/16*	MTN50161000172	17,5	45,0	50	16	0,5	2,0
MTN 63/19*	MTN63191000172	21,0	57,0	63	19	0,6	2,4
MTN 75/22*	MTN75221000172	24,0	68,0	75	22	0,6	2,7
MTN 85/25*	MTN85251000172	28,0	77,0	85	25	0,6	2,8
MTN 95/29*	MTN95291000172	32,0	86,0	95	29	0,7	3,1
MTN 115/34*	MTN115341000172	37,0	104,0	115	34	0,7	3,1

\* Complete the item code adding the length (in mm).

# HEAVY-WALL SHEATHS

RAY-CSM heat-shrink tubular sheath is very thick and has been designed for uses requiring exceptional mechanical characteristics. Its ideal field of application is in underwater or directly underground environments, or where exceptional resistance to abrasion and impact is required, but also outstanding resistance to weathering, including UV radiation, for sealing, especially if used with hot-melt adhesive, and for anti-corrosion protection.

## RAY-CSM

PRODUCT	Item	Applications by Ø		D (mm)	d (mm)	S <sub>1</sub> (mm)	S <sub>2</sub> (mm)
		from (mm)	to (mm)				
Ray-CSM 12/3*	672693-000	3,5	10	12	3	0,8	2,0
Ray-CSM 16/4*	542973-000	4,5	14	16	4	0,9	2,4
Ray-CSM 24/6*	050119-000	6,5	22	24	6	1,0	2,7
Ray-CSM 34/8*	453083-000	9	31	34	8	1,3	4,0
Ray-CSM 48/12*	582237-000	13	44	48	12	1,5	4,5
Ray-CSM 56/16*	898079-000	17,5	50	56	16	1,5	4,4
Ray-CSM 70/21*	862223-000	22	63	70	21	1,4	4,4
Ray-CSM 90/25*	862225-000	27	81	90	25	1,3	4,3
Ray-CSM 110/30*	934589-000	33	100	110	30	1,2	4,3
Ray-CSM 130/36*	833598-000	38	118	130	36	1,2	4,3
Ray-CSM 160/50*	430277-000	55	144	160	50	1,0	4,3
Ray-CSM 180/50*	237977-000	55	162	180	50	1,0	4,3

\* Complete the item code adding the length (mm), adhesive (/172).

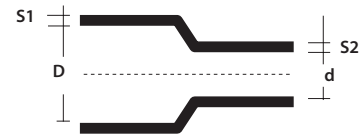
# WRAP AROUND

Wrap around heat-shrink sheath for repairing plastic or metal cable sheaths. It combines the previously seen mechanical, protective and sealing properties of tubular junctions with easy of application and closing. Indispensable when cable cutting is not possible. Does not require pre-insertion, reducing the space necessary for its application.

## RAY-RSM

PRODUCT	1000		1500		Ø Cable (mm)	D (mm)	d (mm)
	Item	Item	from	to			
Ray-RSM 34/10*	406345-000	240699-000	12	21	34	10	
Ray-RSM 53/13*	279727-000	505955-000	15	32	53	13	
Ray-RSM 84/20*	953639-000	219483-000	23	50	84	20	
Ray-RSM 107/29*	395359-000	546145-000	34	65	107	29	
Ray-RSM 143/36*	002611-000	091525-000	42	86	143	36	
Ray-RSM 198/55*	318575-000	247637-000	62	120	198	55	
Ray-RSM 250/98*	595947-000	247698-000	111	150	250	98	

\* Complete the item code adding the length (mm) and adhesive (/232).

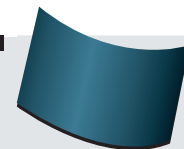


D = min. Ø before shrinkage  
 d = max. Ø after free shrinkage  
 S<sub>1</sub> = rated thickness as supplied  
 S<sub>2</sub> = min. rated thickness after free shrinkage

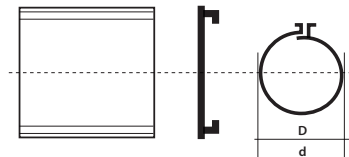
Operating temperature: -55°C / +125°C

Tensile resistance	12 MPa min
Elongation	350% min
Tensile resistance after ageing	12 MPa
Elongation after ageing	300% min
Dielectric strength	12 kV/mm min
Minimum shrinkage temperature	125°C

**HF** Halogen Free



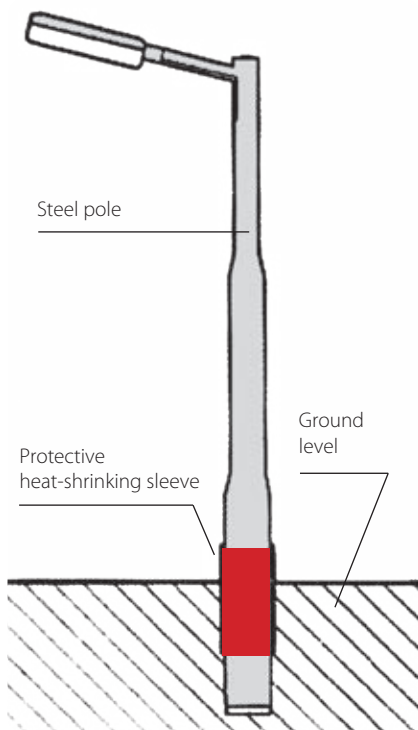
WRAP  
AROUND



D = min. Ø before shrinkage  
 d = max. Ø after free shrinkage

Tensile resistance	17 MPa (min)
Elongation	350 % (min)
Density	1,0-1,2 g/cm <sup>3</sup>
Hardness	50-70 Shore D
Thermal duration	120°C
Flexibility at low temperature	4h a -40°C Non-crackin
Dielectric strength	Wall 1 mm 180 kV/cm
	Wall 3,5 mm 120 kV/cm

**HF** Halogen Free



## ANTI-CORROSION POLE PROTECTION

On installed poles, the most section vulnerable to corrosion is right above and below ground. This section is attacked by corrosive agents that cause a rapid decay of the metal with a significant reduction of the operating life of the pole. Special heat-shrinking sheaths are suitable for the rust protection of public lighting and electric traction poles, traffic lights and traffic signs. They are composed of very thick cross linked polyolefin. The inside of the tubes and the ends are covered in a suitable thermal fuse adhesive that ensures perfect sealing without allowing moisture to enter.

### ADVANTAGES

- ▶ Ultra adhesive.
- ▶ Excellent electrical properties.
- ▶ Good chemical resistance.
- ▶ Resistant to mould and micro-organisms.
- ▶ Constant protection against stray electrical currents.
- ▶ Easy application.
- ▶ Long-term stability of all properties.



### WPCT

Open ends complete with closing pieces for already installed poles.

PRODUCT / Item	End height (mm)	Package roll (m)	Code for closing piece for pole diameter	
			Up to 450 mm	Over 450 mm
<b>WPCT-17X100-RL</b> WPCT17X100-RL	450	30	<b>WPCP-IV-4X17</b> WPCP-IV-4X17	<b>WPCP-IV-6X17</b> WPCP-IV-6X17
<b>WPCT-24X100-RL</b> WPCT24X100-RL	600	30	<b>WPCP-IV-4X24</b> WPCP-IV-4X24	<b>WPCP-IV-6X24</b> WPCP-IV-6X24

Closing pieces sold separately



### LTPSM

Tubular sleeve for poles for installation.

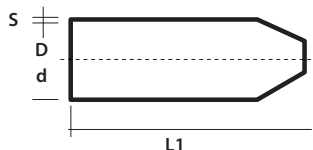
PRODUCT / Item	Diameter before/after shrinkage (mm)	Sleeve length (mm)
<b>LTPSM 180/58-500</b> LTPSM180/58-500	180/58	500
<b>LTPSM 245/80-500</b> LTPSM245/80-500	245/80	500



## SELF-SEALING CAP

Self-sealing heat-shrink cap with adhesive for sealing cable heads.

D= Ø min. before shrinkage  
d= Ø max. after free shrinkage  
S / L1 = min. rated size after free shrinkage



PRODUCT	Item	Ø Cable		D (mm)	d (mm)	S (±20% mm)	L1 (±10% mm)
		from (mm)	to (mm)				
RAYL011	334969-000	4	8	12	4,0	2,0	40
RAYL022	821617-000	8	17	20	6	2,3	55
RAYL033	692333-000	17	30	35	16	3,0	83
RAYL044	547889-000	30	45	55	26	3,3	103
RAYL048	068743-000	45	65	75	36	3,3	120
RAYL055	190805-000	65	95	100	52	3,8	140
RAYL066	855203-000	95	115	120	60	3,8	150



HF Halogen Free

Tensile resistance	12 MPa (min)	
Elongation	200 % (min)	
Density	0,9-1,2 g/cm <sup>3</sup>	
Hardness	50-70 Shore D	
Accelerated ageing (7 days at 150°C)	Tensile resistance	12 Mpa (min)
	Ultimate elongation	200% (min)
Flexibility at low temperature	4h a -40°C Non-cracking	
Water absorption	0,5% max after 24h a 23°C	

## SELF-SEALING TERMINATION



PRODUCT	LV cable conductor (mm <sup>2</sup> )		D1 (mm)	d1 (mm)	S1 ±20% (mm)	D2 (mm)	d2 (mm)	S2 ±20% (mm)	L1 ±10% (mm)	L2 ±10% (mm)
	from	to								
RayK333 324253-000	4	16	22	8	2	9	3,5	2	55	18
RayK224 522347-000	25	70	40	16	2	15	7,5	2	125	35
RayK466 556514-001	95	185	60	23	2,5	25	7,5	2,5	155	45



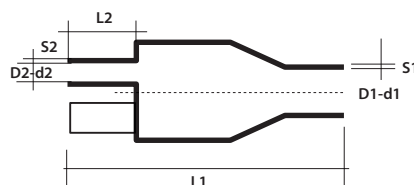
PRODUCT	LV cable conductor (mm <sup>2</sup> )		D1 (mm)	d1 (mm)	S1 ±20% (mm)	D2 (mm)	d2 (mm)	S2 ±20% (mm)	L1 ±10% (mm)	L2 ±10% (mm)
	from	to								
RayW533 443425-000	4	35	38	17	2,7	14	4,5	2,5	98	23
RayW516 519411-000	50	150	60	25	3	25	8	2,5	165	50
RayW526 395067-000	185	300	80	38	3,5	35	11	3,5	185	55
RayW248 102022-TEC	185	500	110	50	4,0	46	17,5	3,5	250	65



PRODUCT	LV cable conductor (mm <sup>2</sup> )		D1 (mm)	d1 (mm)	S1 ±20% (mm)	D2 (mm)	d2 (mm)	S2 ±20% (mm)	L1 ±10% (mm)	L2 ±10% (mm)
	from	to								
RayK033 645763-000	4	35	42	15	2,3	14	3,5	1,9	105	26
RayK046 747267-000	50	70	55	21	3,1	20	5	2,5	150	40
RayK016 119983-000	95	150	65	26	3,5	26	7	2,9	175	45
RayK026 017847-000	185	300	102	47	3,9	38	12	3	198	58

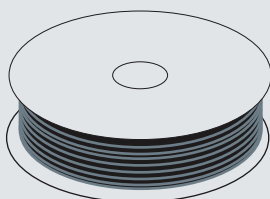


HF Halogen Free



D= min. Ø before shrinkage  
d= max. Ø after free shrinkage  
S1 / S2 = min. rated size after free L1 / L2 shrinkage

Tensile resistance	10,5 MPa (min)	
Elongation	300 % (min)	
Density	1,0-1,3 g/cm <sup>3</sup>	
Hardness	50-70 Shore D	
Accelerated ageing (7 days at 150°C)	Tensile resistance	8,5 Mpa (min)
	Ultimate elongation	100% (min)
Flexibility at low temperature	4h a -40°C Nessuna cricca	
Water absorption	0,5% max after 14 days at 23°C	



## OTHER AVAILABLE COLOURS

### LST-TEC



Blue



Red

PRODUCT	Item	Item
LST-TEC 1,6	5068276019	LSTTEC16-ROS
LST-TEC 2,4	5068286021	LSTTEC24-ROS
LST-TEC 3,2	5068296023	LSTTEC32-ROS
LST-TEC 4,8	5068306020	LSTTEC48-ROS
LST-TEC 6,4	5068316033	LSTTEC64-ROS
LST-TEC 9,5	5068326022	LSTTEC95-ROS
LST-TEC 12,7	5068336020	LSTTEC127-ROS
LST-TEC 19,0	5068346012	LSTTEC190-ROS
LST-TEC 25,4	5068356017	LSTTEC254-ROS

### CGP-TEC



Red



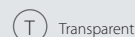
Blue



Yellow



White



Transparent

PRODUCT	Item	Item	Item	Item	Item
CGP-TEC 1,2/0,6	5069674009	5069674010	5069674011	5069914004	5069674008
CGP-TEC 1,6/0,8	5068034005	5068274004	5068154005	5069924005	5069684005
CGP-TEC 2,4/1,2	5068044005	5068284006	5068164005	5069934006	5069694007
CGP-TEC 3,2/1,6	5068054008	5068294010	5068174005	5069944006	5069704005
CGP-TEC 4,8/2,4	5068064006	5068304007	5068184005	5069954004	5069714007
CGP-TEC 6,4/3,2	5068074011	5068314009	5068194012	5069964007	5069724010
CGP-TEC 9,5/4,8	5068084007	5068324006	5068204006	5069974006	5069734006
CGP-TEC 12,7/6,4	5068094006	5068334005	5068214005	5069984005	5069744004
CGP-TEC 19/9,5	5068104006	5068344005	5068224005	5069944004	5069754005
CGP-TEC 25,4/12,7	5068114005	5068354006	5068234005	5068384005	5069764008
CGP-TEC 38/19	5068124001	5068364001	5068244001	5068004001	5068364005
CGP-TEC 51/26	5068134001	5068374001	5068254001	226598-TEC	5069784002
CGP-TEC 76/38	5067104002	889754-TEC	5067144001	230701-000	763800-TEC
CGP-TEC 102/51	5067204002	5068204003	5067204001	254199-TEC	5067214001

### RGPO-B



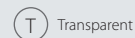
Red



Blue



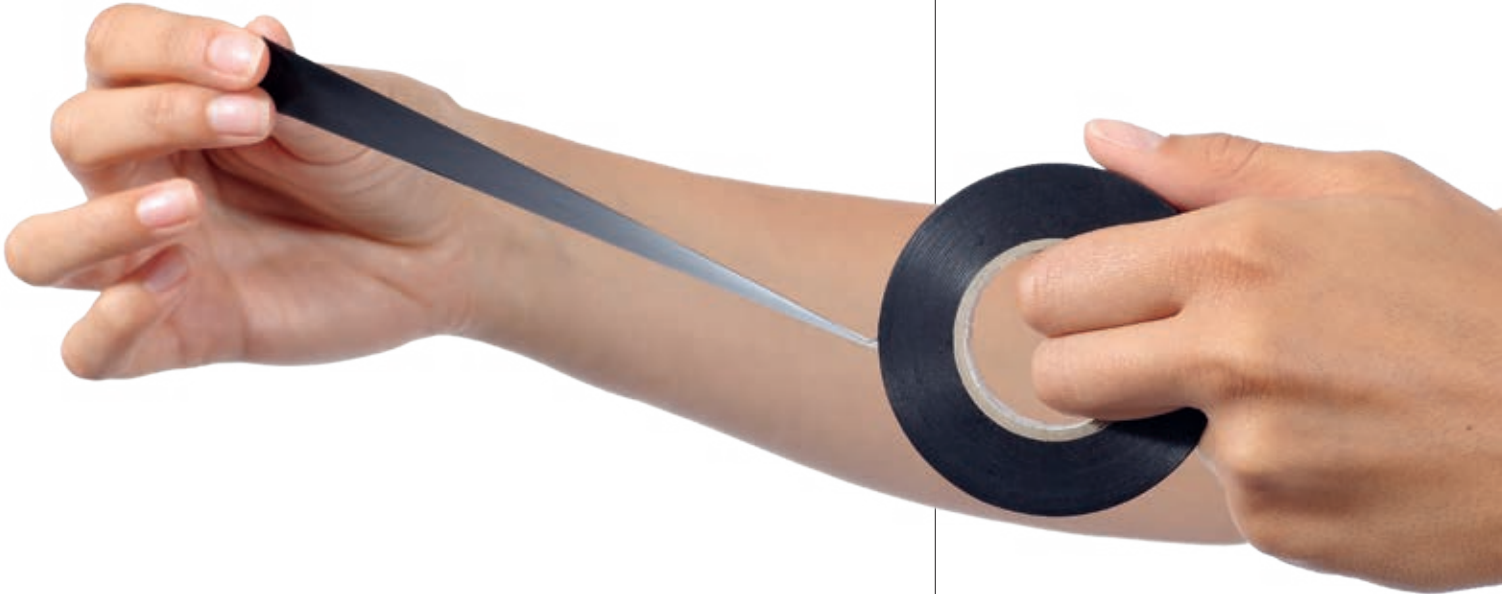
White



Transparent

PRODUCT	Item	Item	Item	Item
RGPO-B 2,4/1,2	241202-BAR	241206-BAR	241209-BAR	241201-BAR
RGPO-B 3,2/1,6	321602-BAR	321606-BAR	321609-BAR	321601-BAR
RGPO-B 4,8/2,4	482402-BAR	482806-BAR	482009-BAR	482401-BAR
RGPO-B 6,4/3,2	643202-BAR	643206-BAR	643209-BAR	643201-BAR
RGPO-B 9,5/4,8	954802-BAR	954806-BAR	954809-BAR	954801-BAR
RGPO-B 12,7/6,4	127642-BAR	127646-BAR	127649-BAR	127641-BAR
RGPO-B 19/9,5	199502-BAR	199506-BAR	199509-BAR	199501-BAR
RGPO-B 25,4/12,7	254722-BAR	254726-BAR	254129-BAR	254721-BAR
RGPO-B 38/19	381902-BAR	381906-BAR	381909-BAR	381901-BAR
RGPO-B 51/26	-	-	512609-BAR	-

# TAPES



## SELF-ADHESIVE TAPES IN PVC

### RAYTEAM

Self-adhesive for general use



### RAYTECH SUPER 3-3

Self-adhesive for low and high temperatures



## SELF-AMALGAMATING

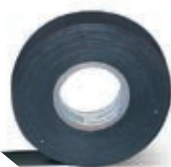
### RAYTECH 2.3

Insulation tape EPR



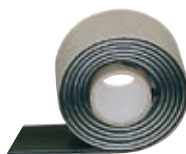
### RAYTECH 23 BT

LV insulation tape



### RAYTEFILL

Heavy duty insulation tape



### RAYTECH 7-0

Silicone insulation tape



## SPECIAL TAPES

### RAYCOPPER

Copper braid tape



### MCA-FV

Fibreglass self-adhesive tape



### MCA-ALL

Self-adhesive aluminium tape

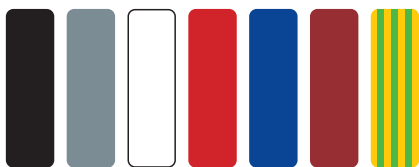






VDE marking

Complies with standards CEI 60454 (EN60454)



Available colours: black, grey, white, red, blue, brown, yellow/green.  
Contact Raytech for other sizes and thicknesses.

Property	Typical values
Breaking Strength (tensile)	30 N/cm min
Elongation at break	> 170 %
Adhesion to steel	1,8 N/cm
Adhesion to backing	1,8 N/cm
Self-extinguishing	Self-extinguishing
Operating temperature	-5°C / 85°C
Electric strength after exposure to damp environment	40 kV/mm min

## RAYTEAM

Self-adhesive tape for general use.

PVC adhesive tape for electrical applications and mechanical protection for general use. Recommended for insulating low-voltage joints and for covering cables, accessories and products in general. It is self-extinguishing and does not propagate fire. Excellent resistance to ageing, exposure to weather conditions, hydrocarbons and chemical solvents in general.

PRODUCT	Item	Item	Thickness	Width	Length
RAYTEAM 1925/13	270913-000	270913-008	0,13 mm	19 mm	25 m
RAYTEAM 1510/13	021513-000	021513-008		15 mm	10 m
RAYTEAM 1925	012141-000	012141-004	0,15 mm	19 mm	25 m
RAYTEAM 1510	021514-000	021514-006		15 mm	10 m
RAYTEAM 1525	270999-000	270999-008		15 mm	25 m
RAYTEAM 2525	280999-000	280997-000		25 mm	25 m

PRODUCT	Item	Item	Item	Item	Item
RAYTEAM 1925/13	270913-005	270913-002	270913-006	270913-001	270913-045
RAYTEAM 1510/13	021513-009	021513-002	021513-006	-	021513-045
RAYTEAM 1925	012141-007	012141-001	012141-002	012141-005	012141-003
RAYTEAM 1510	021514-004	021514-001	021514-002	021514-007	021514-003
RAYTEAM 1525	270999-009	270999-002	270999-006	-	270999-045
RAYTEAM 2525	280998-000	-	-	-	-

**NEW**

## RAYTEAM K20

20 RAYTEAM TAPES  
+ 3 MT MEASURING TAPE  
INCLUDED



### PRODUCT / Item

RAYTEAM K20  
RAYTEAM-K20

### Description

20 RAYTEAM 1925 PVC adhesive tapes dimension: 0,15 mm x 19 mm x 25 m + measuring tape in ABS with retractable belt clip and lanyard.

## RAYTECH SUPER 3-3

Self-adhesive tape for use at low and high temperatures.

PVC adhesive tape with excellent electrical and mechanical properties for a wide range of working temperatures. This tape is particularly suitable for use at low temperatures and in all weather conditions, including the most extreme. The tape is flame retardant and self-extinguishing. It is recommended as the primary insulation for joints up to 0.6/1 kV, and as the outer covering for joints and other products, and for all applications at low temperatures.

PRODUCT / Item	Colour	Width	Thickness	Length
RAYTECH SUPER 3-3 3-3061-00-13	●	19 mm	0,18 mm	20 m

Complies with standards  
CEI 60454 (EN60454)



Property	Typical values
Breaking Strength (tensile)	35 N/cm min
Elongation at break	180 %
Adhesion to steel	> 1,8 N/cm
Adhesion to backing	> 1,8 N/cm
Self-extinguishing	Self-extinguishing
Temperatura d'esercizio	-18°C / 105°C
Electric Strength after exposure to damp environment	40 kV/mm min

## RAYTECH 2.3

EPR Self-amalgamating tape low and high voltage tape.

This ethylene-propylene (EPR) self-amalgamating tape is used for insulating and sealing high voltage electrical joints for voltages up to Um 72 kV. It amalgamates rapidly, adapting itself to the product underneath, forming a solid unit without air bubbles. It is particularly resistant to partial discharges (corona), with the characteristics remaining unchanged with time. Joints must be protected with a PVC tape or similar.

PRODUCT / Item	Colour	Width	Thickness	Length
RAYTECH 2.3 3-2001-00-13	●	19 mm	0,76 mm	9 m



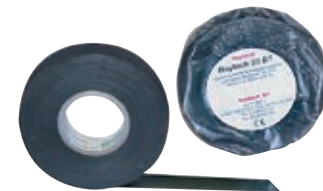
Property	Typical values
Breaking Strength (tensile)	2.2 MPa min
Elongation at break	800% min
Overload temperature	130°C
Operating temperature	90°C
Dielectric strength	38 kV/mm min
Volume resistivity	10 <sup>15</sup> Ω cm min
Resistance to ozone	Positive
Resistance to U.V.	Positive

## RAYTECH 23 BT

Low voltage Self-amalgamating tape.

This rubber self-amalgamating low voltage tape (0.6/1 kV) is used for insulating and sealing low voltage electrical joints. It amalgamates rapidly, adapting itself to the product underneath, forming a solid unit. The joints must be protected with a PVC tape. The characteristics remain unchanged with time.

PRODUCT / Item	Colour	Width	Thickness	Length
RAYTECH 23 BT 3-2002-96-13	●	19 mm	0,76 mm	6,7 m



Property	Typical values
Breaking Strength (tensile)	3 MPa min
Elongation at break	500% min
Operating temperature	80°C
Dielectric strength	20 kV/mm min



## RAYTEFILL

**Thick low voltage Self-amalgamating tape.**

This self-amalgamating thick-wall (3.2mm) has been specially designed for the rapid reconstruction of low-voltage cable insulation, to cover complex shapes (insulating and covering joints between busbars and relative bolts, clamps, etc.) and to seal against possible penetration of humidity. Once applied it becomes a solid, absolutely non-porous mass, with first class electrical qualities and ageing resistance, perfectly suited to the product it is covering.

Property	Typical values
Breaking Strength (tensile)	0,1 MPa
Operating temperature: Continuous	From -30°C to 80°C
Dielectric strength	23,0 kV/mm

PRODUCT / Item	Colour	Width	Thickness	Length
<b>RAYTEFILL</b> 3-2140-00-13	●	38 mm	3,2 mm	1,5 m



**Complies with standards**  
ASTM-D-2148

## RAYTECH 7-0

**Self-amalgamating silicone rubber tape.**

This self-amalgamating silicone rubber tape is used for covering medium and high voltage terminations on extruded cables up to Um 72 kV, because of its first-rate performance for electrical installations in damp or polluted environments, against corrosion, corona and against ageing. It is used as an insulation up to 180°C due to its excellent heat properties. It can be perfectly adapted to all the shapes to be covered.

Property	Typical values
Elongation at break	300%
Resistance to U.V.	Positive
Resistance to ozone	Positive
Working temperature maximum	180°C
Dielectric strength	24 kV/mm

PRODUCT / Item	Colour	Width	Thickness	Length
<b>RAYTECH 7-0</b> 3-2042-00-13	●	25 mm	0,51 mm	9,1 m



## RAYCOPPER

Tinned copper mesh tape for electrical screening.

Property	Typical values
Material	Tinned copper mesh tape with high flexibility
Elongation at break	70% min
Breaking Strength (tensile)	35 N/10 mm
Volume resistivity	0,3 cm

PRODUCT	Item	Colour	Width	Thickness	Length
RAYCOPPER 1000	COPPER-100	Silver	60 mm	0,3 mm	1 m
RAYCOPPER 2000	COPPER-200	Silver	60 mm	0,3 mm	2 m
RAYCOPPER 3000	COPPER-300	Silver	60 mm	0,3 mm	3 m
RAYCOPPER 5000	COPPER-500	Silver	60 mm	0,3 mm	5 m
RAYCOPPER 6000	COPPER-600	Silver	60 mm	0,3 mm	6 m

## MCA-FV

Fiberglass adhesive tape.

Self-adhesive mono-directional fibreglass tape with polypropylene support. Suitable for cable fixing on pipes (i.e.: Raytech MCA... cables for electrical tracing), and for any kind of strong fixing. Inextensible, it is suitable for temperatures up to 130°C.

Property	Typical values
Breaking Strength (tensile)	300 N/cm min
Ultimate elongation	8%
Adhesion to steel	2 N/cm min

PRODUCT / Item	Colour	Width	Thickness	Length
MCA-FV 012521-000	White	12 mm	0,13 mm	50 m

## MCA-ALL

Self-adhesive aluminium tape.

Self-adhesive adhesive aluminium tape suitable for fixing on flat surfaces (i.e.: for heating cable fixing on tanks outer surfaces); used also for holes or abrasion repairs on metallic or plastic surfaces. Strong adhesion.

Property	Typical values
Breaking Strength (tensile)	1,2 da N/cm min
Elongation at break	5% min
Adhesion to steel	4 N/cm min
Adhesion to backing	4,5 N/cm min
Flame resistance BS476-7	Class 1

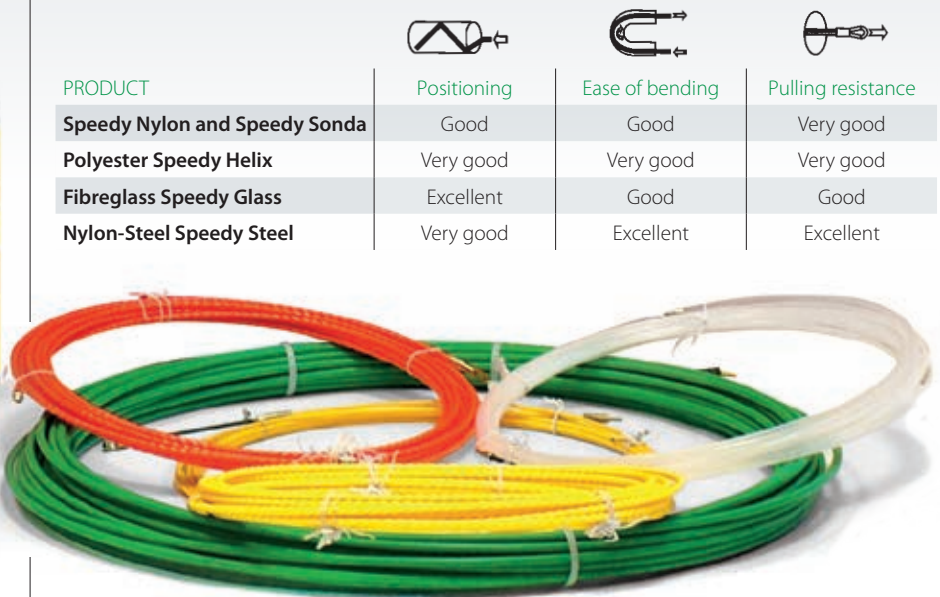
PRODUCT / Item	Colour	Width	Thickness	Length
MCA-ALL 75 R42562	Aluminium	75 mm	0,06 mm	50 m



# SPEEDY LINE

Raytech, leader in the field of cable accessories, has always based its research and product line on the quality. This is why Raytech offers in the field of pulling tapes and lubricants too, systems of extremely high reliability and quality, always over the conventional types offered by the market:

- These fixed head, interchangeable nylon fishtapes are constructed with very high mechanical characteristic, long-lasting materials. Speedy Sonda tapes are made of PERLON, a practically non-deformable nylon, protecting the installer from unexpected elongation or breakage of the probe in ducts.
- "Twisted" polyester tapes, self-lubricated, extremely flexible and light, with exceptional mechanical characteristics, able to be inserted into long cable ducts, avoid the need of intermediate cable boxes; allowable bending radius is very small and, once bent, they do not break and released they come back to their original shape.
- Fibreglass tapes, thanks to their "nervous" elasticity together with their strength, are easy to use in any type of conduit.
- Nylon-steel tapes, when an exceptional strength is required.
- The widest range of accessories for all the types.
- Raytech offers the widest range of high sliding, non-toxic lubricants that are easily removable from cables. Choose from lubricant oil, lubricant gel (non-drip, allowing for a savings of up to 3 times compared to conventional types) or lubricant spray (easy application directly into the cable ducts, non-drip and dramatically reducing friction and traction force).



PRODUCT	Positioning	Ease of bending	Pulling resistance
Speedy Nylon and Speedy Sonda	Good	Good	Very good
Polyester Speedy Helix	Very good	Very good	Very good
Fibreglass Speedy Glass	Excellent	Good	Good
Nylon-Steel Speedy Steel	Very good	Excellent	Excellent



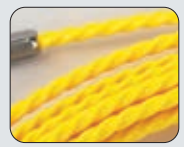
**Speedy Nylon**  
Fixed head Nylon probes



**Speedy Sonda 3**  
Fixed head or interchangeable Nylon Perlon® Ø 3 mm



**Speedy Sonda 4**  
Fixed head or interchangeable Nylon Perlon® Ø 4 mm



**Speedy Helix 5**  
Polyester Ø 5 mm with eyelet and fixed flexible head

## SPEEDY WIRE OIL - SPEEDY WIRE GEL SPEEDY WIRE SPRAY

Lubricants for threading any kind of cable, power, telecom and optical fibre in ducts, smooth or corrugated piping, etc. With a very high lubrication power, especially when compared to products for similar uses, these are easily removable from cables, and require very low installation strength, even in the case of bent conduits.

**Speedy Wire Oil** is a standard, fluid and low viscosity lubricant.

**Speedy Wire Gel**, thanks to its consistency, allows for savings of up to 3 times the amount used compared to other solutions.

**Speedy Wire Spray**, thanks to its canister and dispensing nozzle, allows for suitable guiding of the lubricant, including inside piping and ducts, greatly facilitating application.



PRODUCT / Item	Package	Wrapping	Appearance	PH	Density
<b>SPEEDY WIRE OIL</b> 900000-003	1 L bottle	12-piece pack	Transparent gel	6 - 8	About 1
<b>SPEEDY WIRE GEL</b> 900000-001	1 L bottle	12-piece pack	Milky liquid	6 - 8	About 1
<b>SPEEDY WIRE SPRAY</b> SPEEDYWSPRAY	400 ml can	12-piece pack	White foam	8,5 - 9	About 1,04

## SPEEDY NYLON

Fixed head Nylon transparent cable pullers.

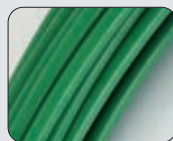
PRODUCT	Item	Ø (mm)	Length (m)	Pack of (PCS)
<b>SPEEDY NYLON 3/5-F</b>	SPEEDYNYLON3/5F	3	5	50
<b>SPEEDY NYLON 3/10-F</b>	SPEEDYNYLON3/10F	3	10	40
<b>SPEEDY NYLON 3/15-F</b>	SPEEDYNYLON3/15F	3	15	30
<b>SPEEDY NYLON 3/20-F</b>	SPEEDYNYLON3/20F	3	20	20
<b>SPEEDY NYLON 3/25-F</b>	SPEEDYNYLON3/25F	3	25	15
<b>SPEEDY NYLON 4/5-F</b>	SPEEDYNYLON4/5F	4	5	50
<b>SPEEDY NYLON 4/10-F</b>	SPEEDYNYLON4/10F	4	10	25
<b>SPEEDY NYLON 4/15-F</b>	SPEEDYNYLON4/15F	4	15	20
<b>SPEEDY NYLON 4/20-F</b>	SPEEDYNYLON4/20F	4	20	15
<b>SPEEDY NYLON 4/25-F</b>	SPEEDYNYLON4/25F	4	25	12



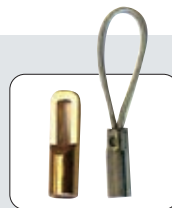
**Speedy Helix 4**  
Polyester Ø 4 mm  
with eyelet and fixed  
flexible head



**Speedy Glass**  
Interchangeable  
head fibreglass  
probe Ø 3 mm



**Speedy Steel**  
Nylon-steel  
probe Ø 6 mm



**Accessories**





### SPEEDY SONDA 3

Nylon tape PERLON® Ø 3 mm with fixed or interchangeable head\*.

**FIXED** head

PRODUCT	Item	Colour	Ø (mm)	Length (m)	Pack of (PCS)
SPEEDY SONDA 3/5-F	7139-0001	Transparent	3	5	50
SPEEDY SONDA 3/10-F	7139-0002		3	10	40
SPEEDY SONDA 3/15-F	7139-0003		3	15	30
SPEEDY SONDA 3/20-F	7139-0004		3	20	20

**INTERC.** head\*

SPEEDY SONDA 3/5-I	7139-0005	Transparent	3	5	50
SPEEDY SONDA 3/10-I	7139-0006		3	10	40
SPEEDY SONDA 3/15-I	7139-0007		3	15	30
SPEEDY SONDA 3/20-I	7139-0008		3	20	20

Other dimensions available on request

\* Supplied with flexible head curve guide and pulling eyelet.

### SPEEDY SONDA 4

Nylon tape PERLON® Ø 4 mm with fixed or interchangeable head\*.

**FIXED** head

PRODUCT	Item	Colour	Ø (mm)	Length (m)	Pack of (PCS)
SPEEDY SONDA 4/5-F	7139-0009	Transparent	4	5	35
SPEEDY SONDA 4/10-F	7139-0010		4	10	25
SPEEDY SONDA 4/15-F	7139-0015		4	15	20
SPEEDY SONDA 4/20-F	7139-0012		4	20	18
SPEEDY SONDA 4/25-F	7139-0059		4	25	15

**INTERC.** head\*

SPEEDY SONDA 4/5-I	7139-0017	Transparent	4	5	35
SPEEDY SONDA 4/10-I	7139-0018		4	10	25
SPEEDY SONDA 4/15-I	7139-0019		4	15	20
SPEEDY SONDA 4/20-I	7139-0020		4	20	18
SPEEDY SONDA 4/25-I	7139-0058		4	25	15

**FIXED** head

PRODUCT	Item	Colour	Ø (mm)	Length (m)	Pack of (PCS)
SPEEDY SONDA 4/5-F-N	7139-0013	Black	4	5	35
SPEEDY SONDA 4/10-F-N	7139-0014		4	10	25
SPEEDY SONDA 4/15-F-N	7139-0011		4	15	20
SPEEDY SONDA 4/20-F-N	7139-0016		4	20	18
SPEEDY SONDA 4/25-F-N	7139-0065		4	25	15

**INTERC.** head\*

SPEEDY SONDA 4/5-I-N	7139-0021	Black	4	5	35
SPEEDY SONDA 4/10-I-N	7139-0022		4	10	25
SPEEDY SONDA 4/15-I-N	7139-0023		4	15	20
SPEEDY SONDA 4/20-I-N	7139-0024		4	20	18
SPEEDY SONDA 4/25-I-N	7139-0066		4	25	15

Other dimensions available on request


\* Supplied with flexible head curve guide and pulling eyelet.



## SPEEDY HELIX 5

Polyester tape Ø 5 mm with fixed eyelet and flexible interchangeable head.

Twisted tapes, very strong, extremely flexible and light. They pass the "4 curves test" on both rigid and corrugated pipes, but they can also avoid to have an intermediate box, and even if bent on themselves they do not break.


PRODUCT / Item	Colour	Ø (mm)	Length (m)	Pack of (PCS)
<b>SPEEDY HELIX 5/10</b> 7139-0025	 Yellow	5	10	1
<b>SPEEDY HELIX 5/15</b> 7139-0026		5	15	1
<b>SPEEDY HELIX 5/20</b> 7139-0027		5	20	1
<b>SPEEDY HELIX 5/25</b> 7139-0064		5	25	1
<b>SPEEDY HELIX 5/30</b> 7139-0028		5	30	1
<b>SPEEDY HELIX 5/50</b> 7139-0029		5	50	1
<b>SPEEDY HELIX 5/60</b> 7139-0030		5	60	1

Other dimensions available on request

## SPEEDY HELIX 4

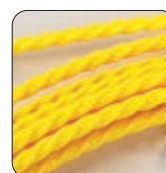
Polyester tape Ø 4 mm with interchangeable eyelet and head\*.

Twisted tapes, very strong, extremely flexible and light. They pass the "4 curves test" on both rigid and corrugated pipes, but they can also avoid to have an intermediate box, and even if bent on themselves they do not break.

PRODUCT / Item	Colour	Ø (mm)	Length (m)	Pack of (PCS)
<b>SPEEDY HELIX 4/10</b> 7139-0031	 Orange	4	10	1
<b>SPEEDY HELIX 4/15</b> 7139-0032		4	15	1
<b>SPEEDY HELIX 4/20</b> 7139-0033		4	20	1
<b>SPEEDY HELIX 4/30</b> 7139-0034		4	30	1

Other dimensions available on request

\* Supplied with flexible head curve guide and pulling eyelet






The tape is complete of repairing kit

## SPEEDY GLASS

Interchangeable head "self-starting" fibreglass Ø 3 mm cable pullers\*.

Suitable for light use, even on long lengths, easy to use thanks to their "nervous" elasticity which makes easier their positioning in pipes and conduits.

PRODUCT / Item	Colour	Ø (mm)	Length (m)	Pack of (PCS)
<b>SPEEDY GLASS 3/10</b> 7139-0035	 Yellow	3	10	10
<b>SPEEDY GLASS 3/15</b> 7139-0036		3	15	10
<b>SPEEDY GLASS 3/20</b> 7139-0037		3	20	10
<b>SPEEDY GLASS 3/25</b> 7139-0060		3	25	10
<b>SPEEDY GLASS 3/30</b> 7139-0038		3	30	10

Other dimensions available on request


\* Supplied with flexible head curve guide and pulling eyelet



## SPEEDY STEEL

Nylon-steel tape Ø 6 mm complete of all accessories.

Nylon-steel tapes are extremely robust, and are made of an internal core 4 x 1,5 mm steel made, coated with a nylon layer. Particularly suitable for industrial use with heavy duty. Use in installations without voltage.









PRODUCT / Item	Colour	Ø (mm)	Length (m)	Pack of (PCS)
<b>SPEEDY STEEL 6/20</b> 7139-0039	 Green	6	20	1
<b>SPEEDY STEEL 6/25</b> 7139-0061		6	25	1
<b>SPEEDY STEEL 6/30</b> 7139-0040		6	30	1
<b>SPEEDY STEEL 6/40</b> 7139-0041		6	40	1
<b>SPEEDY STEEL 6/50</b> 7139-0062		6	50	1
<b>SPEEDY STEEL 6/60</b> 7139-0063		6	60	1

Other dimensions available on request












## ACCESSORIES





For Speedy Sonda cable pullers.

PRODUCT	Item	Description	Pack of (PCS)	
Speedy TFG	7139-0042	Flexible head curve guide	3	
Speedy TFC	7139-0043	Flexible head with sheave	3	
Speedy OTL	7139-0047	Long pulling eyelet	3	
Speedy OTC	7139-0044	Short pulling eyelet	3	
Speedy BU	7139-0045	Joint bush for fishtapes	3	
Speedy PN	7139-0050	Pin M4 (for tape Ø 4 mm)	3	
Speedy AT	7139-0048	Pulling slot	3	
Speedy CA	7139-0049	Accessories kit	1	

For Speedy Glass cable pullers.

PRODUCT	Item	Description	Pack of (PCS)	
Speedy REP	7139-0051	Repairing kit	3	
Speedy TFG	7139-0042	Flexible head curve guide	3	
Speedy TFC	7139-0043	Flexible head with sheave	3	
Speedy OTL	7139-0047	Long pulling eyelet	3	
Speedy OTC	7139-0044	Short pulling eyelet	3	
Speedy BU	7139-0045	Joint bush for fishtapes	3	
Speedy PNG	7139-0046	Pin for Speedy Glass tape	3	
Speedy AT	7139-0048	Pulling slot	3	
Speedy CA	7139-0049	Accessories kit	1	

For Speedy Steel cable pullers.

PRODUCT	Item	Description	Pack of (PCS)	
Speedy MO	7139-0072	Snap link	3	
Speedy TS	7139-0069	Flexible head curve guide	3	
Speedy OL	7139-0071	Clamping device	3	
Speedy RS	7139-0070	Sliding wheel device	3	

Accessories available upon request for Speedy Helix and:

PRODUCT	Item	Description	Pack of (PCS)	
Speedy AS	7139-0054	Reels with support	1	(see A)
Speedy AF	7139-0053	Reels on frame	1	(see B)
Speedy AFS	7139-0055	Steel reels on frame	1	(see C)
Speedy PR Glass	7139-0052	Repairing pliers for Speedy Glass tapes	1	(see D)



(A)



(B)



(C)



(D)



# FIRE STOP BARRIERS

## FIRE STOP BAG

Fire stop barrier in an intumescent bag.

Intumescent incombustible bags which stop the passage of fire through openings in walls. They are available in different sizes and they have to be placed to seal the openings, both in walls and floor slabs. At a temperature of 200°C the material starts to compact sealing the gaps thus avoiding the passage of the flames.

- ▶ Made from a fireproof fabric.
- ▶ Contains intumescent putty seal inside.

PRODUCT / Item	Bag dimensions
FSB-11 FSB-11	mm 250 x 100 x 25
FSB-12 FSB-12	mm 250 x 200 x 35
FSB-13 FSB-13	mm 250 x 300 x 35

**INSTALLATION**  
Finish and opening then lay, the bags as bricks, staggered and overlapped.

For the application on plasterboard walls please contact Raytech.

## FIRE STOP PANEL

Fire stop barriers in panels.

Incombustible panels treated on the surface with putty to stop the passage of fire through openings in walls. This product allows for the sealing of cavities in walls safely and cost effectively.

- ▶ Manufactured from Rockwool.
- ▶ Coated with putty.
- ▶ Resistant to mould and bacteria .

PRODUCT / Item	Dimension (mm)
FSP-11 FSP-11	600 x 600 x 51

**INSTALLATION**  
Finish and clean the opening edges then cut the panels with a cutters and position them in the opening. The edges and the jointing lines, as well as the interstices among the cables, are sealed and covered with FIRE STOP SEAL FSS sealant.

For the application on plasterboard walls please contact Raytech.



**APPROVAL**

Class EI 120 Non toxic and asbestos free. In compliance with standard EN 1366-3.



**APPROVAL**

Class EI 120 Non toxic, asbestos and solvent free. In compliance with standard EN 1366-3.

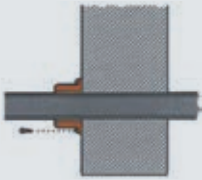
## FIRE STOP COLLAR

Fire stop transit collar for plastic pipes.

Fire stop barrier transit collar for plastic pipes (minimum wall thickness 200mm). Available in a wide range of dimensions to surround pipes that pass through walls.

- **Stainless steel outer band.**
- **Contains intumescent putty seal inside.**

PRODUCT / Item		Ø (mm)
<b>FSC 11</b>	FSC-11	from 63 to 110
<b>FSC 12</b>	FSC-12	from 110 to 160
<b>FSC 13</b>	FSC-13	200
<b>FSC 14</b>	FSC-14	250



**INSTALLATION**  
No special care is required: the collar, when opened, is positioned around the duct, closed and fastened by means of inserts.

For other dimensions and installation please contact Raytech.



**APPROVAL**

**Class** EI 120 non toxic and asbestos free.  
In compliance with standard EN 1366-3.

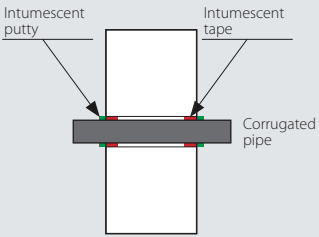
## FIRE STOP TAPE

Fire stop barrier in an intumescent tape for plastic corrugated pipes.

Fire stop barrier in an intumescent tape for the crossing closure of single corrugated pipes. Highly heat-sensitive, intumescent graphite tape with high expansion properties for the protection of corrugated electrical pipes containing cables. Applied on both sides of the pipe crossing through the wall so as to surround the pipe. The heat from a fire causes the tape to expand and fill all possible voids.

 **RECOMMENDATION**

The solution is 10m long, and it can be cut at the required length, saving the remaining parts for a future application. Can also be used in conjunction with FSCI, FSSE, FSCC box covering protections.



**INSTALLATION**  
Wrap the tape twice around the corrugation, on both sides of the wall, fitting it in the through hole. Seal with FIRE STOP SEAL (FSS) sealant putty. Let dry.

PRODUCT / Item	Application corrugated pipe diameter range (mm)	Width (mm)	Thickness (mm)	Length (m)
<b>FST-E-25/32</b> FST-E-25/32	da 25 a 32 *	20	2	10

\*containing cables up to 10 mm<sup>2</sup>



**APPROVAL**

**Class** EI 120 non toxic and asbestos free.  
In compliance with standard EN 1366-3.



**APPROVAL**

**Class** EI 120

Non toxic and asbestos free.

Does not emit toxic gases and dense fumes.

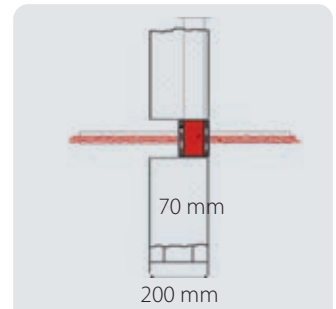
In compliance with standard EN 1366-3.

**FIRE STOP SEAL**

**Fire stop barrier in intumescent sealing mastic.**

Intumescent mastic to seal and close small voids in walls, also in addition to other types of barriers. It is applied to seal a void or to provide a barrier in a cable duct.

- ▶ **A polymer compound with fireproof fibres and intumescent in an aqueous solution.**
- ▶ **Non-hygroscopic and thixotropic.**
- ▶ **Can be applied with a spatula.**



**INSTALLATION**

Once the edges of the opening have been finished and cleaned, the sealant putty is put in place with a spatula in the case of boxed product, or with a spatula or silicone gun for cartridge product.

For other dimensions or the application on plasterboard walls please contact Raytech.

PRODUCT / Item	Package
<b>FSS 10</b> FSS-10	Spatula type, 10 kg drum



**APPROVAL**

**Class** EI 120

Non toxic and asbestos free.

Does not emit toxic gases and dense fumes.

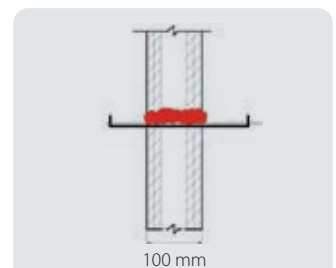
In compliance with standard EN 1366-3.

**FIRE STOP FOAM**

**Fire stop barriers in expanding foam.**

Single-component expandable sealant foam for filling and fire sealing of small crossing gates on cable duct channels that have been previously compartmented with FSB bags and small gaps. Each canister covers a volume of approximately 20 L.

- ▶ **Made from a fire resistant polyurethane based foam.**
- ▶ **Graphite fortified.**
- ▶ **Hardens upon contact with air.**
- ▶ **Suitable for the protection of plasterboard walls or slabs.**



**INSTALLATION**

After the edges of the openings have been cleaned, shake the can for at least 30 seconds, then turn upside down and spray the product.

PRODUCT / Item	Package
<b>FSF 700</b> FSF-700	Spray can of 750 ml



## FSC-TPC

### Fire stop barrier for plastic and/or corrugated pipes with cables.

Protection designed to be built into the wall after pipes have been installed. Can be installed in locations where the construction support is damaged and there is an annular space around the services. It is possible to protect mixed corrugated plastic pipes in the same crossing.

- For PE/PP, PVC, Abs pipes containing electrical cables or other services.
- Pipes can be grouped and protected in bundles.

PRODUCT / Item		For pipes with Ø (mm)
FSC-TPC 050	FSC-TPC-050	50
FSC-TPC 060	FSC-TPC-060	60
FSC-TPC 090	FSC-TPC-090	90
FSC-TPC 120	FSC-TPC-120	125

#### INSTALLATION

Clean the pipe. Open the sleeve longitudinally, place it around the pipe and clamp it on it using special metal tabs. Push the collar towards the centre of the wall.

Fix with FSS putty in the event of installation on a special crossover pipe.

Contact Raytech regarding through openings or installation on inclined piping.



#### APPROVAL

Class EI 120

Non toxic and asbestos free.

Does not emit toxic gases and dense fumes. In compliance with standard EN 1366-3.

## FSM

### Fire stop barriers in incombustible plaster.

Protective coating to seal and prevent fire propagation in wall cavities; it can be applied manually or sprayed. It can be easily mixed in big quantities with suitable mixer (e.g. concrete mixer).

- Made from mineral fibres.
- Simply mix with water and with or without cement mixes.
- For gates on walls or slabs.

PRODUCT / Item	Package
FSM 20 FSM-20	20 kg bag

#### INSTALLATION

After the edges of the openings have been finished and cleaned, the incombustible plaster is mixed with water, then applied manually, with a trowel or a pump, and left to dry in air. Water quantity: about 0,85 lt/kg (volume 1 kg = about 2,5 dm<sup>3</sup>).

For other applications please contact Raytech.



#### APPROVAL

Class EI 120

Non toxic and asbestos free.

Does not emit toxic gases and dense fumes. In compliance with standard EN 1366-3.

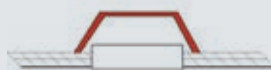
## FSCP

### Fire stop barriers for ceiling lights.

Fireproof barriers for fluorescent lights in suspended ceilings. Maintains conditions of fire resistance of ceilings and suspended ceilings. Slightly reduces the temperature in the space between the ceiling and the ceiling panel.

- Made from non-toxic mineral fibres.
- Prevents propagation.
- Flexible, light and self-supporting, easy to install and to remove.

PRODUCT / Item	Dimension (mm)	Weight (kg)
FSCP 600 FSCP-600	720 x 750 x 150	1,7 circa
FSCP 1200 FSCP-1200	1330 x 720 x 140	3,5 circa



#### INSTALLATION

No special care is required. The protection must be placed on the ceiling light grid adhering to the panel.



#### APPROVAL

Class EI 120

Non toxic and in compliance with standard EN 1365-2 + 1363-1.



**APPROVAL**

**Class** EI 120

Non toxic.

It expands up to 5 times.

In compliance with standard  
EN 1365-2 • 1363-1

**FSCF**

**Fire stop hoods for downlighters.**

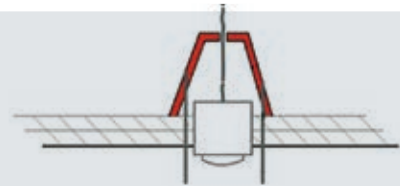
Fireproof dome shaped hood for downlighters in suspended ceilings. Maintains conditions of fire resistance of ceilings and suspended ceilings. Prevents fire propagation and slightly reduces the temperature in the void between the ceiling and the suspended ceiling.

- ▶ **Made from non-toxic mineral fibres.**
- ▶ **Resistant to fire and expandable compounds.**
- ▶ **Prevents lamp overheating.**
- ▶ **Flexible, light and self-supporting.**
- ▶ **Easy to install and to remove.**

**INSTALLATION**

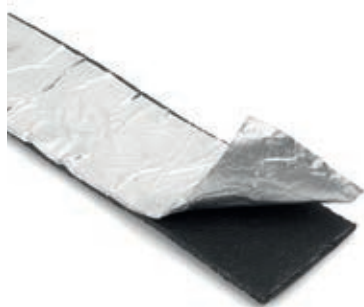
No special care is required.

The protection must be placed on the spotlight, adhering to the panel.



For other dimensions please contact Raytech.

PRODUCT / Item	Dimension (mm)	Type
<b>FSCF 250</b> FSCF-250	250 x 280	Cone-shaped
<b>FSCF 350</b> FSCF-350	350 x 230	Dome-shaped



**APPROVAL**

**Class** EI 120

Non toxic.

In compliance with standard  
EN 1364-1

**FSSE**

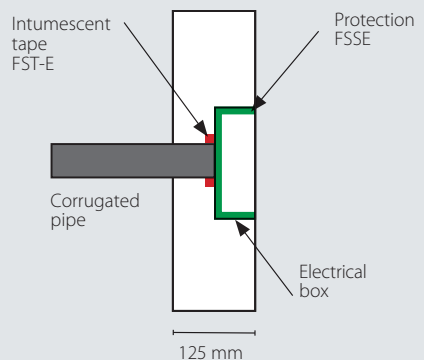
**Intumescent fire stop barrier for electrical boxes.**

Intumescent barrier for the fire protection of electrical system components built into walls.

- ▶ **Inserted in electrical boxes.**
- ▶ **Protection with high expansion properties.**
- ▶ **Guarantees wall conditions in the event of a fire.**

**INSTALLATION**

The protections are inserted inside the box before the insertion of modules. Protect corrugated pipes crossing walls with FST-E-25/32



PRODUCT / Item	For electric boxes
<b>FSSE 01</b> FSSE01	Up to three modules (type 503)
<b>FSSE 02</b> FSSE02	Up to six modules (type 506)

## FSCC

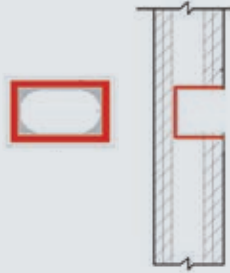
### Fire stop barriers for covering enclosures.

Fire protection system for electrical enclosures and junction boxes. These protect plasterboard wall compartments from heat and fire propagation.

- Made from calcium silicate.
- Contains enclosure.

#### INSTALLATION

After the opening edges have been finished and cleaned, the protection is properly placed and fixed to the wall by means of screws and putty.



PRODUCT / Item	External dimension (mm)	Internal dimension (mm)
FSCC 150 FSCC-150	150 x 120 x 75	110 x 80 x 55



#### APPROVAL

Class EI 120

Non toxic and asbestos free.

Does not emit toxic gases and dense fumes.

In compliance with standard EN 1364-1.

## FSCO T110

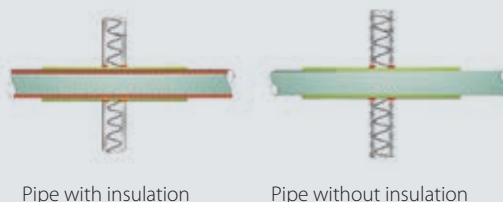
### Metal pipe insulating mat protective barrier.

The FSCO T110 barrier is made up a flexible and easily conformable, highly fire resistant insulating mat. It is clad with an aluminium sheet and protects insulated or non-insulated metal piping in wall crossings. The product is cut and modelled with ease, wrapped in a single layer around the pipe, and then closed with aluminised tape. Protects metal piping crossing walls or slabs, preventing longitudinal transmission of heat and fusion of any insulating material.

- Composed of fibres free of any resins or organic binders.
- For wall thicknesses of at least 125 mm.

#### INSTALLATION

The product is laid in a single layer around the pipe, matching the edges and fastening them with aluminised tape. The installation is then reinforced with wrapped steel wire pulled with pliers. It is positioned letting at least 430 mm come out from each side.



PRODUCT / Item	Colour	Width	Thickness	Length
FSCO T110 FSCO-T110	Aluminium	1 m	20 mm	5 m



#### APPROVAL

Class EI 120

Non toxic and asbestos free.

In compliance with standard

EN 1366-1 • EN 1366-3 • EN 1366-5

# SPECIALS

Kits for the connection, maintenance and protection of electrical systems.

## GALACTIC PROTECTION

**Two-component rubber for printed circuit protection including against animal intrusion.**

Protection for printed circuits which are especially exposed to dust, animal intrusion (insects, snails, snakes, etc., e.g. in automatic gate trays). Opaque but slightly translucent allows cover forming a protective film. It can be removed (adheres without sticking) even on a small area to access the underlying component. The replaced component is then covered with new filler material which adheres perfectly to the previous material. Composed of two-component rubber with no shelf life and insulating and resistant to UV rays and ageing.



**Kit composition:**  
One bottle for component (A+B)



PRODUCT / Item	Description	Rubber colour	Total quantity (ml)
GALACTIC PROTECTION GALACTIC-PROT	two-component rubber	●	300



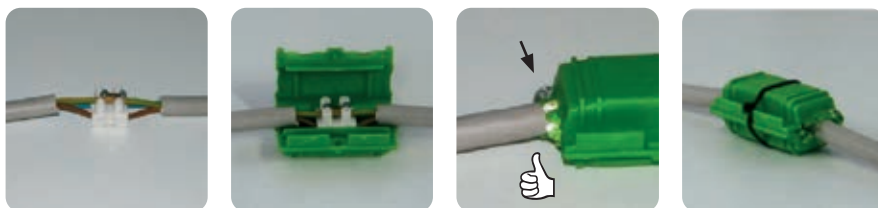
## GALACTIC MAMMUT SECURITY

Straight joint pre-filled with gel.

Galactic Mammut Security is an extremely compact accessory that is suitable for resolving insulation and sealing problems. Make reliable strip connector connections using the components found within the kit. Supplied with connectors for up to 3 core 4mm cables. Suitable for all types of domestic and industrial uses. Make safe temporary or uninsulated connections already in place. For quick repairs of damaged cable and extension cords. Suitable for outdoor use, in panels, within the kitchen etc. Non-toxic, no shelf life, easily re-enterable. Once closed the internal connectors are immediately protected. Galactic Mammut is essential in any area where water is present.

### ADVANTAGES

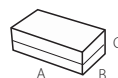
- ▶ No more tangled wires or uncovered connectors!
- ▶ A safe, reliable and quick solution *Galactic Mammut Security*.



### BEFORE



### AFTER



#### PRODUCT / Item

**GALACTIC MAMMUT SECURITY**  
GALACTIC-MAM

#### Cable formation

Cables 3 x 1 to 4 mm<sup>2</sup>  
3 insulated conductors  
with ground from 1 to 4 mm<sup>2</sup>

#### Dimension (mm)

61 x 35 x 28



#### Package:

3-piece blister pack

#### Electrical performance:

CEI EN 50393 as applicable  
(testing under water head  
of the accessory installed in a box)

SPECIALS



**Kit composition:**  
1 can for component (A+B)



IT BECOMES RUBBER  
IN 5 MINUTES



## GALACTIC ANIMAL BARRIER

Mouldable two-component rubber paste to prevent animal intrusion.

Galactic Animal Barrier is a two-component paste with no shelf life that can be easily be moulded before cross linking is complete. It can be applied to entries to protect against intrusion (conduits, cable ducts and pipes etc). It cross links quickly to form an effective barrier against small insects however it is easily removable. Ideal for electric gate type installations.



PRODUCT / Item	Description	Rubber colour	Total quantity (g)
GALACTIC ANIMAL BARRIER GALACTIC-ANIBAR	two-component rubber	●	250

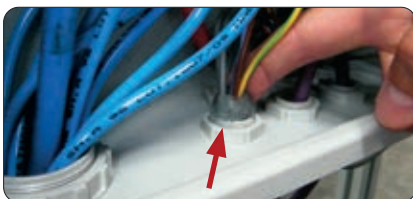
## GALACTIC WATER STOP

Ready to use single component gel.

The Galactic Water Stop single component gel is a soft, extremely sticky product supplied in convenient, ready to use packages: just tear open the quantity needed and place it at the entry point to protect from infiltration. Thanks to its stickiness, it provides stable and effective sealing over time. Easily removable and re-enterable, allowing repeated access to the protected component without leaving traces. Non-drip so it can also be installed vertically or on the ceiling. Highly sealant, lends itself to the insulation of small connections, or for the protection of particularly exposed connections (connections to external car battery terminals, etc.). This product can be applied wherever there may be leakages from pipes, corrugated pipes, channels, etc., or where there is a need for rapid and efficient insulation.



**Kit composition:** 2 cans, 100 g each



Corrugated pipe entry protection

Removal

PRODUCT / Item	Description	Gel colour	Package (g)
GALACTIC WATER STOP GALAWATERSTOP	single component gel	transparent	2 x 100

## RAY RTV

Fast cross linking two-component silicone rubber with high mechanical, thermal and elastic characteristics.

Ray-RTV cross links quickly at room temperature, transforming into a rubber with high mechanical, thermal and elastic characteristics. Available in single dose bags, bottles, tanks and boxes, in standard 30 Shore A hardness for black and 15 Shore A for pink. Fast cross linking (less than 8 minutes at 30°C) and easily re-enterable.

### ADVANTAGES

- ▶ Highly resistant, non-stick, insulating and sealing.
- ▶ No shelf life.

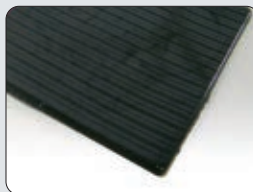
#### Applications Examples



Glass sealing



Pit sealing



Rubber mats



Extruded profiles



Rubber gaskets



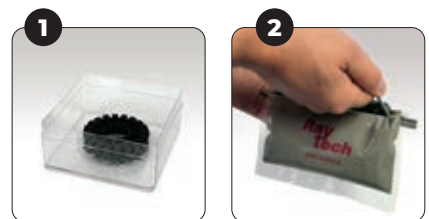
Profile reliefs



Anti-corrosion protection



Moulds for making models and for industry



PRODUCT / Item	Colour	Shore A hardness	Weight	Package type
BAG-RTV 200-N BAGRTV200-N	●	30	200 g	Single dose bag 
BAG-RTV 350-N BAGRTV350-N	●	30	350 g	Boxes  
RAY-RTV 10K-N RAYRTV10K-N	●	30	10 kg	
RAY-RTV 20K-N RAYRTV20K-N	●	30	20 kg	
RAY-RTV 400K-N RAYRTV400K-N	●	30	400 kg	

Other colours, hardness and cross linking times (pot life) are available upon request for tanks of 400 Kg. Ray-RTV is available in bags up to 600 g.

**Density:** about 1.24 gr/cm<sup>3</sup> (black)  
1.05 gr/cm<sup>3</sup> (pink)

**Cross linking:** (pot life) at +30°C: <8 minutes

**Viscosity:** 4000-6000 max MPas

**Elongation at break:** 350 %

**Tensile strength:** 2,8 MPa

**Operating temperature:** -60°C / +200°C

**Overload temperature:** +250°C

**Thermal conductivity:** 0,2 W/m<sup>2</sup>K

**Dielectric strength:** >21 kV/mm

**Volume resistivity:** >1,5 x 10 exp 15 Ω cm





**Kit composition:**

1 mould for elastic washers, insulating gaskets and rubber profiles.

1 bottle for component (A+B).

**Advantages:**

Use directly on site, usable in all weather conditions, easy installation, easy separation from the moulds.

Note: max thickness: 3 mm.



Side A



Side B



## GASKET KIT

Kit to produce rubber gaskets and profiles.

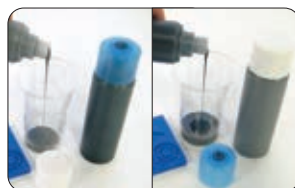
Kit for the assembly of elastic washers, insulating gaskets and rubber profiles, UV resistant and anti-aging, with working temperature up to 200°C and 30 Shore A hardness, suitable for any electrical, plumbing, or sealing work. The articles produced are suitable for the sealing of outdoor lamps, for the sealing and insulation of screwed and bolted components, for any maintenance, replacement or shimming work. Easy to use, the liquid component is poured and the pieces are ready in minutes, at room temperature and with no exothermic reaction. Easily removed from the mould. Rapid cross-linking at room temperature (<15 min). Elevated dielectric, mechanical, elastic and thermal properties.

- ▶ Without shelf life and re-enterable.
- ▶ Low emission of smoke and toxic and corrosive gases.
- ▶ Flexible and elastic over time.

FLAT GASKETS		RODS	PROFILES
External Ø (mm)	Internal Ø (mm)	Ø (mm)	L x L (mm)
30	22	30	130 x 6
25,5	17	25	130 x 5
24	18	20	130 x 4
22	16,5	15	130 x 3
21	15	10	130 x 2
18	12		
14	8		
11	6		
10	7		
8	4		

GASKETS FOR TAPS		ANTISLIP	CORRUGATED
External Ø (mm)	Internal Ø (mm)	L x L (mm)	L x L - Ø foro (mm)
22	4,5	30 x 30	30 x 30 - Ø foro 4,5
15,8	4,5	25 x 25	
14	4,5	20 x 20	
		15 x 15	
		10 x 10	

### Installation sequence



Pour the 2 components in a 1:1 ratio in a jug and mix.



Pour the product into the desired mould (30 sec max).

< 15 minutes at 23°C



Remove the object from the mould.

PRODUCT / Item	Description	Rubber colour	Package (g)
Gasket Kit RAYGASKIT	Mould + Two-component liquid rubber	●	360



## SHINY SOLAR

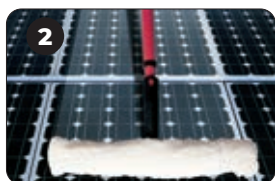
**Solution for solar and photovoltaic panel maintenance.**

Shiny Solar is a product for photovoltaic and solar module maintenance, for easy removal of grease, limestone and crystallised deposits, dust, smog, excrement, etc. A photovoltaic panel can reduce generated power by up to 15% for non-polluted areas and 25% for highly polluted areas, Regular use of Solar Shiny keeps systems running efficiently. Extremely effective and easy to apply, with no shelf life. To maintain system efficiency, proceed with 2-3 applications/year for medium-polluted areas. The degreasing and anti-static protection contained in the product allows excellent results even with rinsing with hard water (even higher than 30°F). Rapid application: treatment of a 6 kW system (approximately 50 m<sup>2</sup>), thanks to the fact that degreasing, cleaning and application of the anti-static protection are all part of one single operation, requires less than 20 minutes. Shiny Solar respects panel components, the aluminium frame, gaskets and protective glass. A single package of Shiny Solar can treat installed photovoltaic panel power from 10 to 15 kW, equal to a surface of about 80-120 m<sup>2</sup>. The order data table shows the power and surfaces which can be treated with different packages.

- For easy removal of grease, limestone and crystallised deposits, dust, smog, excrement, etc.
- Contains anti-static protection.



1 Spray the product evenly on the solar or photovoltaic panel or on the surface to be cleaned and protected.



2 Let stand for a few minutes, depending on the level of dirt to be cleaned, then wipe with a soft, non-abrasive, slightly damp pad or sponge.



3 Rinse with water or remove product with a paper towel. Repeat for especially dirty surfaces.



PRODUCT / Item	Product contents	Efficiency (kW/ surfaces treated per package)	
		Power in kW	Surfaces (m <sup>2</sup> )
Shiny Solar SHINYSOLAR	750 ml	10 - 15	80 - 120
Shiny Solar 5 SHINYSOLAR5	5 lt	70 - 100	530 - 800
Shiny Solar 1000 SHINYSOLAR-1000	1000 lt	14.000 - 20.000	106.000 - 160.000
Shiny Brush SB4 SHINYBRUSCH4	brush microfiber		



### Advantages:

The 750 ml and 5 lt kits are supplied together with a professional sprayer, with an adjustable spray jet nozzle with a range in the latter case of up to 3 m.

For proper application of the product even in hard to reach areas, a microfiber brush mounted on a telescopic arm which projects up to 4 m is available.



Shiny Brush SB4



**Self extinguishing:** according to UL94.  
**Halogen free.**

Excellent resistance to basis, oils, fats, hydrocarbons, chemicals, chlorinated solvents.

 **Operating temperature:** -40°C / +85°C

 **Installation temperature:** -10°C / +60°C



100-piece pack.



100-piece pack.

# CABLE TIES

Tilted tip for easy insertion into clamping head. Rounded corners for greater safety. Quick sliding thanks to a low material friction coefficient. Good UV resistance thanks to it's black colour.

## ESSENTIAL FOR:

- ▶ **Electrical installations.**
- ▶ **Industrial applications.**
- ▶ **Panels.**
- ▶ **Special applications.**

Colour <b>Black</b>		Width (mm)	Length (mm)	Appl. diameter		Strength	
PRODUCT	Item			min	max	(Kg)	(n)
Ray-fasc N 22/75	700000-050	2,2	75	0.75	15	6.12	60
Ray-fasc N 25/98	700000-026	2,5	98	1	21	8.16	80
Ray-fasc N 25/135	700000-027	2,5	135	1	32	8.16	80
Ray-fasc N 26/160	700000-028	2,6	160	1	40	8.16	80
Ray-fasc N 26/200	700000-029	2,6	200	2	52	8.16	80
Ray-fasc N 36/140	700000-030	3,6	140	2	35	13.26	130
Ray-fasc N 36/200	700000-031	3,6	200	2	50	13.26	130
Ray-fasc N 36/290	700000-032	3,6	290	2	80	13.26	130
Ray-fasc N 36/370	700000-033	3,6	370	2	103	13.26	130
Ray-fasc N 48/178	700000-035	4,8	178	2	45	22.44	220
Ray-fasc N 48/200	700000-036	4,8	200	3	50	22.44	220
Ray-fasc N 48/250	700000-037	4,8	250	3	68	22.44	220
Ray-fasc N 48/290	700000-038	4,8	290	3.5	79	22.44	220
Ray-fasc N 48/360	700000-039	4,8	360	3.5	103	22.44	220
Ray-fasc N 48/430	700000-041	4,8	430	3.5	115	22.44	220
Ray-fasc N 78/180	700000-051	7,8	180	3.5	45	55.08	540
Ray-fasc N 78/240	700000-043	7,8	240	3.5	63	55.08	540
Ray-fasc N 78/300	700000-044	7,8	300	4	80	55.08	540
Ray-fasc N 78/365	700000-045	7,8	365	8	100	55.08	540
Ray-fasc N 78/450	700000-046	7,8	450	35	130	55.08	540
Ray-fasc N 78/540	700000-047	7,8	540	35	158	55.08	540
Ray-fasc N 78/750	700000-048	7,8	750	35	220	55.08	540

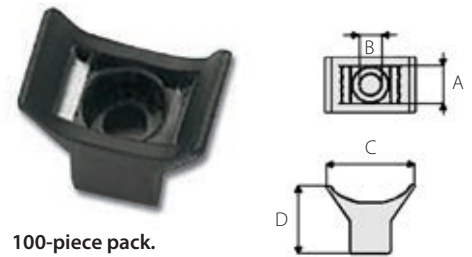
Colour <b>White</b>		Width (mm)	Length (mm)	Appl. diameter		Strength	
PRODUCT	Item			min	max	(Kg)	(n)
Ray-fasc B 22/75	700000-049	2,2	75	0.75	15	6.12	60
Ray-fasc B 25/98	700000-002	2,5	98	1	21	8.16	80
Ray-fasc B 25/135	700000-003	2,5	135	1	32	8.16	80
Ray-fasc B 26/160	700000-004	2,6	160	1	40	8.16	80
Ray-fasc B 26/200	700000-005	2,6	200	2	52	8.16	80
Ray-fasc B 36/140	700000-006	3,6	140	2	35	13.26	130
Ray-fasc B 36/200	700000-007	3,6	200	2	50	13.26	130

Ray-fasc B 36/290	700000-008	3,6	290	2	80	13,26	130
Ray-fasc B 36/370	700000-009	3,6	370	2	103	13,26	130
Ray-fasc B 48/178	700000-011	4,8	178	2	45	22,44	220
Ray-fasc B 48/200	700000-012	4,8	200	3	50	22,44	220
Ray-fasc B 48/250	700000-013	4,8	250	3	68	22,44	220
Ray-fasc B 48/290	700000-014	4,8	290	3,5	79	22,44	220
Ray-fasc B 48/360	700000-015	4,8	360	3,5	103	22,44	220
Ray-fasc B 48/430	700000-017	4,8	430	3,5	115	22,44	220
Ray-fasc B 78/180	700000-052	7,8	180	3,5	45	55,08	540
Ray-fasc B 78/240	700000-019	7,8	240	3,5	63	55,08	540
Ray-fasc B 78/300	700000-020	7,8	300	4	80	55,08	540
Ray-fasc B 78/365	700000-021	7,8	365	8	100	55,08	540
Ray-fasc B 78/450	700000-022	7,8	450	35	130	55,08	540
Ray-fasc B 78/540	700000-023	7,8	540	35	158	55,08	540
Ray-fasc B 78/750	700000-024	7,8	750	35	220	55,08	540

## CABLE TIE SUPPORT

Fastening with standard inserts for cable ties with widths up to 9 mm. UV resistant.

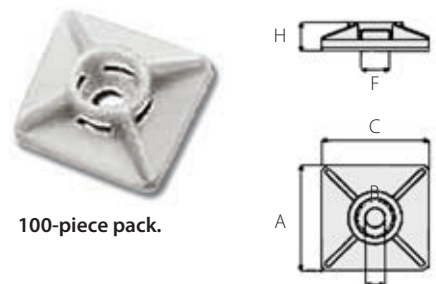
PRODUCT / Item	Dimension (mm)			
	A	B	C	D
Ray-fasc S 700001-000	9,4	5	23	17,6



## BI-DIRECTIONAL ADHESIVE FIXING DEVICE

Self adhesive, can be used on all materials. Suitable for cable ties up to 4.8 mm. Made from ABS with rubber based adhesive foam. UV resistant.

Colour <b>Black</b>	Colour <b>White</b>	Tie width (mm)	Dimension (mm)				
PRODUCT / Item	PRODUCT / Item		A	B	C	F	H
Ray-fasc NBA36 700003-000	Ray-fasc BBA36 700002-000	3,6	19	4,1	19	4	5
Ray-fasc NBA48 700005-000	Ray-fasc BBA48 700004-000	4,8	27	4,8	27	6	6,5



## BAYONET-JOINT SUPPORT

Push fit support for cable ties up to 7.8mm. Can be used on sheet surfaces with up to 3.2 mm thick. 6.2mm O/D hole required. Polyamide 6.6.

PRODUCT / Item	Dimension (mm)						Ø Hole (mm)
	A	B	C	D	E	F	
Ray-fasc SI 700006-000	10	10,6	8,1	3,2	8	7,1	6,2

