



Raycast

Electrical performance:
CEI EN 50393 with connectors
complying with EN 61238-1
(with testing under water head
and water between the cable cores)
Class 2 in accordance with CEI 64-8.

Operating temperature **90°**

Installation temperature: **0°C / +45°C**

Straight or branch joint with bicomponent 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 bicomponent epoxy resin such as Rayresin. For installation in traps, channels or directly underground.

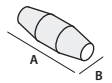


Installation sequence



Raycast L

Straight joint for 0.6/1 kV extruded cables.



Product	Cable formation and conductor cross sections (n° x mm ²)				Dimensions A x B (mm)
	1x	2x	3x	4x	
Raycast L10	2,5 - 50	1,5 - 10	1,5 - 10	1,5 - 10 *	180 x 50
Raycast L16/25	16 - 150	4 - 25	4 - 25	2,5 - 25	215 x 55
Raycast L35	16 - 185	16 - 35	16 - 35	16 - 35	232 x 70
Raycast L50	50 - 300	16 - 50	16 - 50	16 - 50	266 x 72
Raycast L95	120 - 400	25 - 95	25 - 95	25 - 95	330 x 75
Raycast L120	240 - 500	70 - 120	70 - 120	50 - 120	365 x 95
Raycast L240	400 - 1000	120 - 300	120 - 240	120 - 240	510 x 120

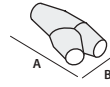
Product	Cable formation and conductor cross sections (n° x mm ²)				Dimensions (mm)
	1x	2x	3x	4x	
Raycast L50	16 - 150	16 - 25	16 - 25	16 - 25	266 x 72
Raycast L120	185 - 400	25 - 95	25 - 95	25 - 95	365 x 95
Raycast L240	400 - 630	95 - 185	95 - 185	95 - 185	510 x 120

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



Raycast D

Branch joint for 0.6/1 kV extruded cable with 30° output.



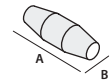
Product	Cable formation and conductor cross sections (n° x mm ²)								Dimensions A x B (mm)
	1x		2x		3x		4x		
	T	B	T	B	T	B	T	B	
Raycast D6	4 - 50	4 - 50	4 - 10	4 - 10	2,5 - 6	2,5 - 6	2,5 - 6	2,5 - 6	180 x 90
Raycast D16/D25	50 - 150	50 - 150	10 - 25	10 - 25	6 - 25	6 - 16	6 - 25	6 - 10	220 x 105
Raycast D95	120 - 400	95 - 240	25 - 95	16 - 50	25 - 95	16 - 50	25 - 95	10 - 50	315 x 115

T: Through - B: Branch



Raycast L-S

Straight joint for 0.6/1 kV screened extruded cables.



Product	Cable formation and conductor cross sections (n° x mm ²)				Dimensions A x B (mm)
	1x	2x	3x	4x	
Raycast L10-S	2,5 - 50	1,5 - 10	1,5 - 6	1,5 - 6	180 x 50
Raycast L25-S	16 - 120	4 - 25	4 - 16	2,5 - 16	215 x 55
Raycast L35-S	16 - 185	16 - 35	16 - 25	16 - 25	232 x 70
Raycast L50-S	50 - 240	16 - 50	16 - 50	16 - 50	266 x 72
Raycast L120-S	240 - 500	70 - 120	70 - 120	50 - 95	365 x 95
Raycast L240-S	400 - 1000	120 - 300	120 - 185	120 - 185	510 x 120

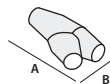
Product	Cable formation and conductor cross sections (n° x mm ²)				Dimensions A x B (mm)
	1x	2x	3x	4x	
Raycast L50-S	16 - 150	16 - 25	16 - 25	16 - 25	266 x 72
Raycast L120-S	185 - 400	25 - 95	25 - 95	25 - 95	365 x 95
Raycast L240-S	400 - 630	95 - 185	95 - 185	95 - 185	510 x 120

For ALUMINIUM cables



Raycast D-S

Branch joint for 0.6/1 kV screened extruded cables.



Product	Cable formation and conductor cross sections (n° x mm ²)								Dimensions A x B (mm)
	1x		2x		3x		4x		
	T	B	T	B	T	B	T	B	
Raycast D6-S	4 - 35	4 - 35	4 - 10	4 - 10	2,5 - 6	1,5 - 6	2,5 - 6	2,5 - 6	180 x 90
Raycast D25-S	35 - 120	35 - 120	10 - 25	10 - 25	6 - 16	6 - 16	6 - 16	6 - 10	220 x 105
Raycast D95-S	95 - 300	70 - 150	25 - 95	16 - 50	16 - 70	16 - 35	16 - 50	10 - 35	315 x 115

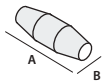
T: Through - B: Branch





Raycast L-ARM

Straight joint for tape, wire or plate armoured cables.



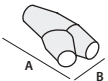
Product	Cable formation and conductor cross sections (n° x mm ²)			Dimensions A x B (mm)
	2x	3x	4x	
Raycast L10-ARM	1,5 - 10	1,5 - 6	1,5 - 6	180 x 50
Raycast L25-ARM	4 - 25	4 - 16	2,5 - 16	215 x 55
Raycast L35-ARM	16 - 35	16 - 25	16 - 25	232 x 70
Raycast L50-ARM	16 - 50	16 - 50	16 - 50	266 x 72
Raycast L120-ARM	70 - 120	70 - 120	50 - 95	365 x 95
Raycast L240-ARM	120 - 300	120 - 185	120 - 185	510 x 120

Product	Cable formation and conductor cross sections (n° x mm ²)			Dimensions A x B (mm)
	2x	3x	4x	
Raycast L50-ARM	16 - 25	16 - 25	16 - 25	266 x 72
Raycast L120-ARM	25 - 95	25 - 95	25 - 95	365 x 95
Raycast L240-ARM	95 - 185	95 - 185	95 - 185	510 x 120



Raycast D-ARM

Branch joint for tape, wire or plate armoured cable.



Product	Cable formation and conductor cross sections (n° x mm ²)						Dimensions A x B (mm)
	2x		3x		4x		
	T	B	T	B	T	B	
Raycast D6-ARM-F	4 - 10	4 - 10	2,5 - 6	2,5 - 6	2,5 - 6	2,5 - 6	180 x 90
Raycast D16-ARM-F	10 - 25	10 - 25	6 - 16	6 - 16	6 - 16	6 - 10	220 x 105
Raycast D95-ARM-F	25 - 70	16 - 50	25 - 70	16 - 35	25 - 50	10 - 35	315 x 115

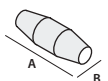
Product	Cable formation and conductor cross sections (n° x mm ²)						Dimensions A x B (mm)
	2x		3x		4x		
	T	B	T	B	T	B	
Raycast D6-ARM	4 - 10	4 - 10	2,5 - 6	2,5 - 6	2,5 - 6	2,5 - 6	180 x 90
Raycast D16-ARM	10 - 25	10 - 25	6 - 16	6 - 16	6 - 16	6 - 10	220 x 105
Raycast D95-ARM	25 - 70	16 - 50	25 - 70	16 - 35	25 - 50	10 - 35	315 x 115

T: Through - B: Branch



Raycast LPS

Straight joint for very deep submersible pumps.

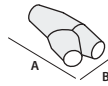


Product	Cable formation and conductor cross sections (n° x mm ²)				Dimensions A x B (mm)
	1x	2x	3x	4x	
Raycast LPS10	2,5 - 50	1,5 - 10	1,5 - 10	1,5 - 10	180 x 50
Raycast LPS25	16 - 150	4 - 25	4 - 25	2,5 - 25	215 x 55
Raycast LPS95	120 - 400	25 - 95	25 - 95	25 - 95	330 x 75
Raycast LPS240	400 - 1000	120 - 300	120 - 240	120 - 240	510 x 120



Raycast DPS

Branch joint for very deep submersible pumps.



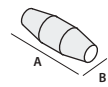
Product	Cable formation and conductor cross sections (n° x mm ²)								Dimensions A x B (mm)
	1x		2x		3x		4x		
	T	B	T	B	T	B	T	B	
Raycast DPS6	4-50	4-50	4-10	4-10	2,5-6	2,5-6	2,5-6	2,5-6	180 x 90
Raycast DPS25	50-150	50-150	10-25	10-25	6-25	6-16	6-16	6-10	220 x 105
Raycast DPS95	120-400	95-240	25-95	16-50	25-95	16-50	25-95	10-50	315 x 115

T: Through - B: Branch

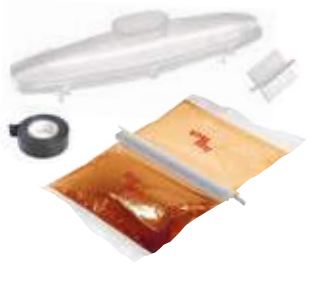


Raycast SL

Straight joint for signalling and control.

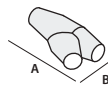


Product	Conductor cross sections (mm ²)	Cable formation (n° conductors)											Dimensions A x B (mm)		
		5x	7x	10x	12x	16x	19x	24x	40x	75x	100x	250x			
Raycast SL11	1,5 2,5	•	•	•	•	•									180 x 50
Raycast SL12	1,5 2,5			•	•	•	•								215 x 55
Raycast SL13	1,5 2,5					•	•	•	•						266 x 72
Raycast SL14	1,5 2,5							•	•	•					330 x 75
Raycast SL15	1,5 2,5								•	•	•				365 x 95
Raycast SL16	1,5 2,5									•	•	•			510 x 120



Raycast SD

Branch joint for signalling and control.

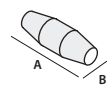


Product	Conductor cross sections (mm ²)	Cable formation (n° conductors)											Dimensions A x B (mm)		
		5x	7x	10x	12x	16x	19x	24x	40x	75x					
Raycast SD1	1,5 2,5	•	•	•	•	•	•								180 x 90
Raycast SD2	1,5 2,5			•	•	•	•	•							220 x 105
Raycast SD3	1,5 2,5							•	•	•	•				315 x 115



Raycast TL e TSL

Straight joint for telephone cable.



UNSCREENED Product	SCREENED Product	N° pairs per conductor cross sections (n° x mm ²)	Dimensions A x B (mm)
Raycast TL16	Raycast TSL16	1 - 16 x 0,5 - 0,6	180 x 50
Raycast TL25	Raycast TSL25	16 - 25 x 0,5 - 0,6	215 x 55
Raycast TL35	Raycast TSL35	25 - 35 x 0,5 - 0,6	266 x 72
Raycast TL40	Raycast TSL40	35 - 40 x 0,5 - 0,6	330 x 75
Raycast TL64	Raycast TSL64	40 - 64 x 0,5 - 0,6	365 x 95
Raycast TL500	Raycast TSL500	60 - 500 x 0,5 - 0,6	510 x 120





Wonder Joint

Straight or branch injectable joint using Wonder Fluid, single component insulating gel. Quick to use and can be installed at any temperature.

Joint equipped with injection valve; insert the cartridge in the gun, connect the nozzle stably on the valve and inject the gel until completely filled. The valve on the container prevents insulation from leaking out, ensuring perfect cleaning and reliability. Can be installed without any special tools: only requires a regular silicone gun.

- Joints insulated with **Wonder Fluid**, fluid, single-component, gel
- Clean installation, re-enterable and inspectable
- Container provided with no-return valve
- Immediately energizable
- Even suitable for high depths
- Non-toxic, with no expiry date



Electrical performance:
 CEI EN 50393 with connectors
 complying with EN 61238-1
 (with testing under water head
 and water between the cable cores)
 Class 2 in accordance with CEI 64-8.

Gel: UL 94-HB

Degree of protection: IP68

Operating temperature **90°**

Installation temperature: **-50°C / +60°C**

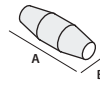
Installation sequence



Wonder Joint L

Straight joint with injected gel insulation for 0.6/1 kV extruded cables.

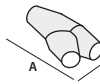
For COPPER cables	Cable formation and conductor cross sections (n° x mm ²)				Dimensions A x B (mm)
Product	1x	2x	3x	4x	
Wonder Joint L4	1,5 - 25	1,5 - 4	1,5 - 4	1,5 - 4	160 x 45
Wonder Joint L10	2,5 - 50	1,5 - 10	1,5 - 10	1,5 - 10	180 x 50
Wonder Joint L25	16 - 150	4 - 25	4 - 25	2,5 - 25	215 x 55



Wonder Joint Y

Branch joint with injected gel insulation for 0.6/1 kV extruded cables.

For COPPER cables	Cable formation and conductor cross sections (n° x mm ²)								Dimensions A x B (mm)
	1x		2x		3x		4x		
Product	T	B	T	B	T	B	T	B	
Wonder Joint Y6	4 - 50	4 - 50	4 - 10	4 - 10	2,5 - 6	2,5 - 6	2,5 - 6	2,5 - 6	180 x 90
Wonder Joint Y25	50 - 150	50 - 150	10 - 25	10 - 25	6 - 25	6 - 16	6 - 25	6 - 10	220 x 105



T: Through - B: Branch





SYSTEM PLUS

Range of straight and branch joints with cast or injection filling, equipped with **screw or Allen screw connection system** for extruded insulation cables up to 1 kV.

Five-core separator for linear junction connectors



Wonder Joint System Plus

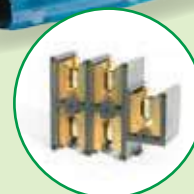
- Straight or branch joint with valve
- Integrated connection system
- *Wonder Fluid* cartridge



Magic Power Joint System Plus

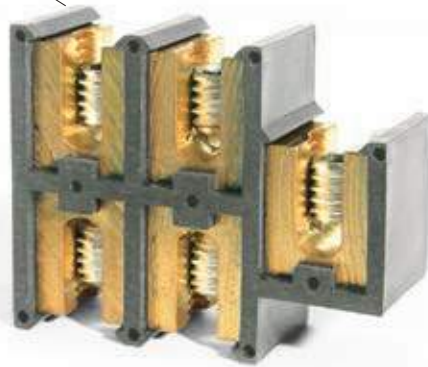
- Straight or branch "Y" joint or "T" branch joint
- Integrated connection system
- Single bottle of *Magic Power Gel*

With four-core separator for "T" branch joint





Five-core separator
with connectors
for "Y" branch joints



Four-core separator
with connectors
for "T" branch joints



Electrical performance:

CEI EN 50393 • CEI 20-33
(with testing under water head and water
between the cable cores)

Degree of protection: IP68

Magic Joint System Plus

- Straight or branch "Y" joint or "T" branch joint
- Integrated connection system
- Single dose bag of *Magic Gel*

With four-core separator for "T" branch joint

Raycast System Plus

- Straight or branch "Y" joint or "T" branch joint
- Integrated connection system
- Single dose bag of *Ray Resin*

With four-core separator for "T" branch joint

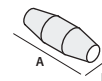




Wonder Joint System Plus L

Straight joint with **injected gel**

Five-core spacer + screw connectors.



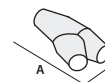
Product	Cable formation and conductor cross sections (n° x mm ²)				Dimensions A x B (mm)
	2x	3x	4x	5x	
Wonder Joint SP L6	1,5 - 6	1,5 - 6	1,5 - 6	1,5 - 6	180 x 50
Wonder Joint SP L25	4 - 25	4 - 25	4 - 25	4 - 25	215 x 55



Wonder Joint System Plus Y

Branch joint with **injected gel**

Five-core spacer + screw connectors.



Product	Cable formation and conductor cross sections (n° x mm ²)								Dimensions A x B (mm)
	2x		3x		4x		5x		
	T	B	T	B	T	B	T	B	
Wonder Joint SP Y6	1,5 - 6	1,5 - 4	1,5 - 6	1,5 - 4	1,5 - 6	1,5 - 4	1,5 - 6	1,5 - 4	180 x 90
Wonder Joint SP Y16	4 - 16	1,5 - 4	4 - 16	1,5 - 4	4 - 16	1,5 - 4	4 - 16	1,5 - 4	220 x 105

T: Through - B: Branch

- Joints insulated with **Wonder Fluid**, single component gel
- Clean installation, re-enterable and inspectable
- Containers provided with no-return valve
- Even suitable for high depths
- Non-toxic and no shelf life
- For 0.6/1 kV extruded cables

Operating temperature **90°**

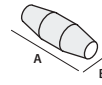
Installation temperature: **-50°C / +60°C**



Magic Power Joint System Plus L

Straight joint with **cast gel**

Five-core spacer + screw connectors.



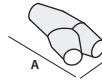
Product	Cable formation and conductor cross sections (n° x mm ²)				Dimensions A x B (mm)
	2x	3x	4x	5x	
Magic P Joint SP L6	1,5 - 6	1,5 - 6	1,5 - 6	1,5 - 6	180 x 50
Magic P Joint SP L16	4 - 16	4 - 16	4 - 16	4 - 16	215 x 55
Magic P Joint SP L25	4 - 25	4 - 25	4 - 25	4 - 25	215 x 65



Magic Power Joint System Plus Y

Y branch joint with **cast gel**

Five-core spacer + screw connectors.



Product	Cable formation and conductor cross sections (n° x mm ²)								Dimensions A x B (mm)
	2x		3x		4x		5x		
	T	B	T	B	T	B	T	B	
Magic P Joint SP Y6	1,5-6	1,5-4	1,5-6	1,5-4	1,5-6	1,5-4	1,5-6	1,5-4	180 x 90
Magic P Joint SP Y16	4-16	1,5-4	4-16	1,5-4	4-16	1,5-4	4-16	1,5-4	220 x 105

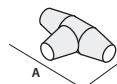
T: Through - B: Branch



Magic Power Joint System Plus T

T branch joint with **cast gel**

Four-core spacer + screw connectors.



Product	Cable formation and conductor cross sections (n° x mm ²)						Dimensions A x B (mm)
	2x		3x		4x		
	T	B	T	B	T	B	
Magic P Joint SP T35	6 - 35	1,5 - 10	6 - 35	1,5 - 10	6 - 35	1,5 - 10	305 x 155

T: Through - B: Branch



- Joints insulated with **Magic Power Gel**, the only agglomerating gel
- Re-enterable, removable, inspectable
- For installations even in harsh conditions and high depths
- Extremely adherent and tight sealing
- Non-toxic and no shelf life
- For 0.6/1 kV extruded cables

90° Operating temperature

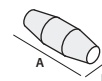
Installation temperature:
-15°C / +55°C

Ray
tech



Magic Joint System Plus L

Straight joint with **cast gel**
Five-core spacer + screw connectors.

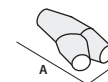


For COPPER cables	Cable formation and conductor cross sections (n° x mm ²)				Dimensions A x B (mm)
	2x	3x	4x	5x	
Product					
Magic Joint SP L6	1,5 - 6	1,5 - 6	1,5 - 6	1,5 - 6	180 x 50
Magic Joint SP L16	4 - 16	4 - 16	4 - 16	4 - 16	215 x 55
Magic Joint SP L25	4 - 25	4 - 25	4 - 25	4 - 25	215 x 65



Magic Joint System Plus Y

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

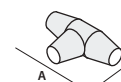


For COPPER cables	Cable formation and conductor cross sections (n° x mm ²)								Dimensions A x B (mm)
	2x		3x		4x		5x		
Product	T	B	T	B	T	B	T	B	
Magic Joint SP Y6	1,5-6	1,5-4	1,5-6	1,5-4	1,5-6	1,5-4	1,5-6	1,5-4	180 x 90
Magic Joint SP Y16	4-16	1,5-4	4-16	1,5-4	4-16	1,5-4	4-16	1,5-4	220 x 105



Magic Joint System Plus T

T branch joint with **cast gel**
Five-core spacer + screw connectors.



For COPPER cables	Cable formation and conductor cross sections (n° x mm ²)						Dimensions A x B (mm)
	2x		3x		4x		
Product	T	B	T	B	T	B	
Magic Joint SP T35	6-35	1,5-10	6-35	1,5-10	6-35	1,5-10	305 x 155

- Joints insulated with **Magic Gel**
- Quick cross linking gel (only 10 minutes)
- Extremely adherent and tight sealing
- Non-toxic and no shelf life
- For 0.6/1 kV extruded cables

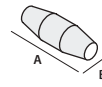
Operating temperature **90°**

Installation temperature:
-10°C / +45°C



Raycast System Plus L

Straight joint with **cast resin**
complete with spacer and screw connectors.

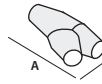


For COPPER cables	Cable formation and conductor cross sections (n° x mm ²)				Dimensions A x B (mm)
Product	2x	3x	4x	5x	
Raycast SP L6	1,5 - 6	1,5 - 6	1,5 - 6	1,5 - 6	180 x 50
Raycast SP L16	4 - 16	4 - 16	4 - 16	4 - 16	215 x 55
Raycast SP L25	4 - 25	4 - 25	4 - 25	4 - 25	215 x 65



Raycast System Plus Y

Y branch joint with **cast resin**
complete with spacer and screw connectors.



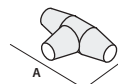
For COPPER cables	Cable formation and conductor cross sections (n° x mm ²)								Dimensions A x B (mm)
	2x		3x		4x		5x		
Product	T	B	T	B	T	B	T	B	
Raycast SP D6	1,5 - 6	1,5 - 4	1,5 - 6	1,5 - 4	1,5 - 6	1,5 - 4	1,5 - 6	1,5 - 4	180 x 90
Raycast SP D16	4 - 16	1,5 - 4	4 - 16	1,5 - 4	4 - 16	1,5 - 4	4 - 16	1,5 - 4	220 x 105

T: Through - B: Branch



Raycast System Plus T

T branch joint with **cast resin**
complete with spacer and screw connectors.



For COPPER cables	Cable formation and conductor cross sections (n° x mm ²)						Dimensions A x B (mm)
	2x		3x		4x		
Product	T	B	T	B	T	B	
Raycast SP T 35	6 - 35	1,5 - 10	6 - 35	1,5 - 10	6 - 35	1,5 - 10	305 x 155

T: Through - B: Branch



- Joints insulated with **Ray Resin** bicomponent epoxy resin
- For 0.6/1 kV extruded cables

90° Operating temperature

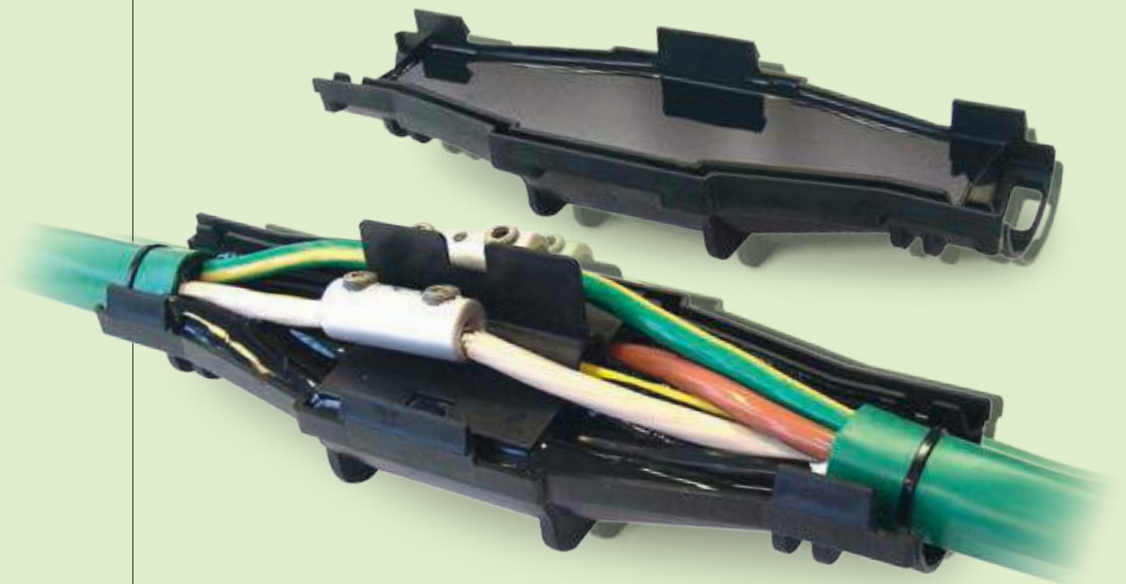
Installation temperature:
-0°C / +45°C

**Ray
tech**



SYSTEM FAST RP

Straight joints with four shear bolt connectors.
The reliability of Raytech joints coupled
with convenience and ease of installation.





- No more crimping or single screw connectors
- Screw connections break automatically when correct tightening torque is reached, ensuring perfect connection
- Suitable for copper and aluminium conductors (aluminium conductors with minimum section 10 mm²)

**Electrical performance:**

CEI EN 50393 • CEI 20-33
(with testing under water head and water between the cable cores)

Rapid Joint RIP 68**Rapid Joint RP****Magic Power Joint RP****Raycast RP****Magic Joint RP****GVL RP**



Operating temperature **90°**

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

Rapid Joint IP68 System Fast RP

Straight joint pre-filled with gel.

Product	Formation n°	Configuration IP68			Configuration IPX8		
		Section mm ²	Ø cable mm	A x B (mm)	Section mm ²	Ø cable mm	A x B (mm)
Rapid Joint L6-RIP68/1	o	25 - 50	12 - 18	245 x 60	25 - 50	24	180 x 60
Rapid Joint L6-RIP68/2	oo	1,5 - 10	12 - 18		1,5 - 10	24	
Rapid Joint L6-RIP68/3	ooo	1,5 - 6	12 - 18		1,5 - 10	24	
Rapid Joint L6-RIP68/4	oooo	1,5 - 6	12 - 18		1,5 - 10	24	
Rapid Joint L10-RIP68/1	o	70 - 95	16 - 20	275 x 65	35 - 150	31	210 x 65
Rapid Joint L10-RIP68/2	oo	10 - 16	16 - 20		10 - 25	31	
Rapid Joint L10-RIP68/3	ooo	10	16 - 20		10 - 25	31	
Rapid Joint L10-RIP68/4	oooo	10	16 - 20		10 - 25	31	



Rapid Joint System Fast RP

Straight joint pre-filled with gel.

Product	Cable formation from 2x a 4x (n° x mm ²)	Dimensions A x B (mm)
Rapid Joint L 10 RP	1,5 - 10	180 x 60
Rapid Joint L 25 RP	10 - 25	210 x 65
Rapid Joint L 95 RP	35 - 95	320 x 100

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

Operating temperature **90°**



Operating temperature **90°**

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

Magic Power Joint System Fast RP

Straight joint with Magic Power Gel.

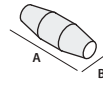
Product	Cable formation from 2x a 4x (n° x mm ²)	Dimensions A x B (mm)
Magic P Joint L 35- RP/16	1,5 - 16	232 x 70
Magic P Joint L 35- RP/35	10 - 35	232 x 70
Magic P Joint L 50- RP/50	25 - 50	266 x 72
Magic P Joint L 120- RP/120	35 - 120	365 x 95
Magic P Joint L 240- RP/150	35 - 150	510 x 120



Magic Joint System Fast RP

Straight joint with Magic Gel.

Product	Cable formation from 2x a 4x (n° x mm ²)	Dimensions A x B (mm)
Magic Joint 35- RP/16	1,5 - 16	232 x 70
Magic Joint 35- RP/35	10 - 35	232 x 70
Magic Joint 50- RP/50	25 - 50	266 x 72
Magic Joint 120- RP/120	35 - 120	365 x 95
Magic Joint 240- RP/150	35 - 150	510 x 120



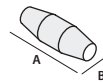
90° Operating temperature

Installation temperature: -10°C / +45°C

Raycast System Fast RP

Straight joint with Ray Resin epoxy resin.

Product	Cable formation from 2x a 4x (n° x mm ²)	Dimensions A x B (mm)
Raycast L 35- RP/16	1,5 - 16	232 x 70
Raycast L 35- RP/35	10 - 35	232 x 70
Raycast L 50- RP/50	25 - 50	266 x 72
Raycast L 120- RP/120	35 - 120	365 x 95
Raycast L 240- RP/150	35 - 150	510 x 120



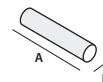
90° Operating temperature

Installation temperature: 0°C / +45°C

GLV System Fast RP

Straight heat-shrink joint.

Product	Cable formation 4x (n° x mm ²)	Dimensions A x B (mm)
GLV 0435- RP/16	6 - 16	650 x 50
GLV 0470- RP/35	25 - 35	650 x 70
GLV 0470- RP/50	25 - 50	650 x 75
GLV 4150- RP/150	50 - 150	800 x 80



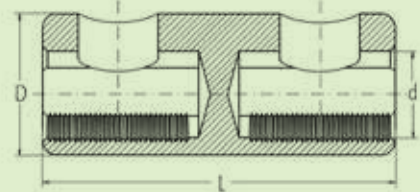
90° Operating temperature

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



Shear bolt connectors

Product	Aluminium cross sections (mm ²)	Copper cross sections (mm ²)	Breakaway torque (Nm)	Dimensions		
				L	D	d
Ray-TTF 1,5/16	10 - 16	1,5 - 16	4	30	12	6,1
Ray-TTF 10/35	10 - 35	10 - 35	10	36	16	9,0
Ray-TTF 25/50	25 - 50	25 - 50	12	36	18	10,0
Ray-TTF 35/150	35 - 150	35 - 150	30	70	28	17,0






Heat-shrink

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

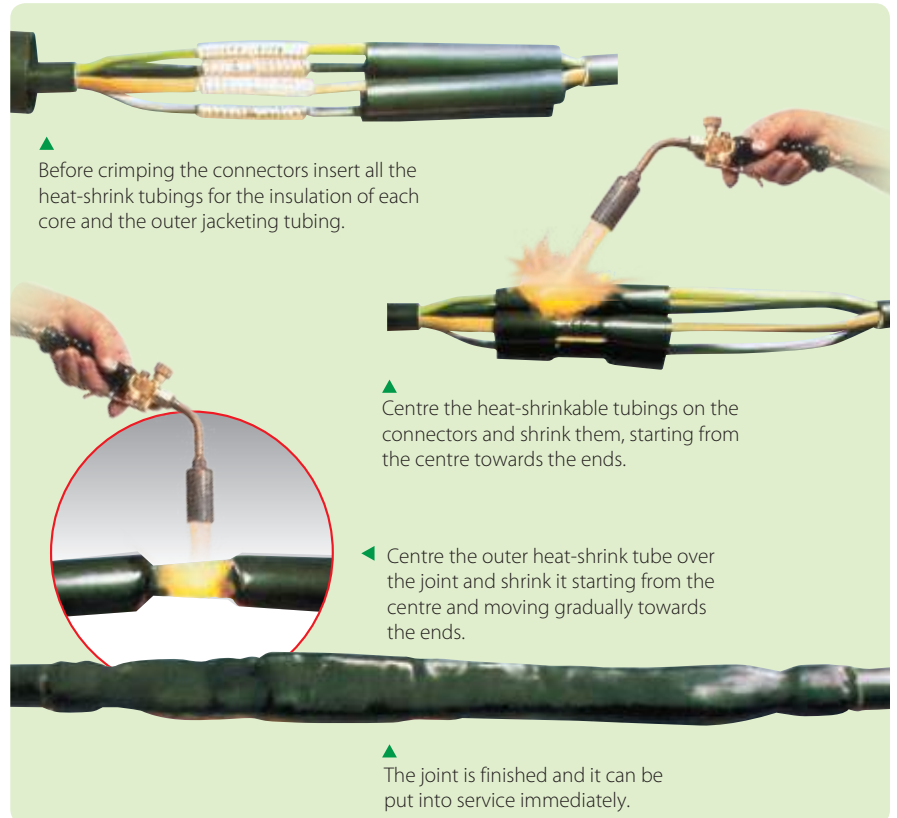
Electrical performance:
CEI EN 50393 with connectors complying with EN 61238-1 (with testing under water head and water between the cable cores)
Class 2 in accordance with CEI 64-8.

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

Operating temperature  90°

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

Installation sequence

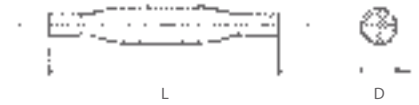




GDL

Joint for single core cables including concentric neutral.

Product	Conductor cross section mm ²		Dimensions L (mm)
	from	to	
GDL 92 A1	4	10	300
GDL 92 A2	16	150	300
GDL 92 A3	185	400	300
GDL 92 PA	10	50	300



GLV

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

Product	Conductor cross section mm ²		Number of phases	Dimensions	
	from	to		L (mm)	D (mm)
GLV 0306	1,5	6	3	250	18
GLV 0316	10	16	3	400	37
GLV 0335	25	35	3	550	43
GLV 0370	50	70	3	650	52
GLV 3150	95	150	3	800	65
GLV 3300	185	300	3	900	82
GLV 0406	1,5	6	4	250	20
GLV 0416	10	16	4	400	40
GLV 0435	25	35	4	650	45
GLV 0470	50	70	4	650	54
GLV 4150	95	150	4	800	67
GLV 4300	185	300	4	900	84
GLV 2,5 - CP	2,5 complete with connectors		4	300	15

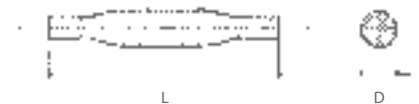


For both copper and aluminium cables. For aerial, underground, submerged installation.

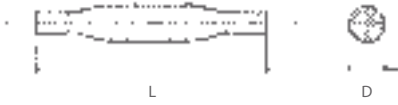
GLV-N

Joint for multi core cables with concentric neutral.

Product	Conductor cross section mm ²		Number of phases	Dimensions	
	from	to		L (mm)	D (mm)
GLV 0306 - N	1,5	6	3	250	18
GLV 0316 - N	10	16	3	400	37
GLV 0335 - N	25	35	3	550	43
GLV 0370 - N	50	70	3	650	52
GLV 3150 - N	95	150	3	800	65
GLV 3300 - N	185	300	3	900	82
GLV 0406 - N	1,5	6	4	250	20
GLV 0416 - N	10	16	4	400	40
GLV 0435 - N	25	35	4	650	45
GLV 0470 - N	50	70	4	650	54
GLV 4150 - N	95	150	4	800	67
GLV 4300 - N	185	300	4	900	84



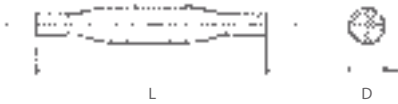
These kits include components for the phase insulation, metallic braiding to replace the neutral and external self-sealing heat-shrinkable tube.



GLV-ARM

Joint for armoured multi core cables.

For armoured tape cables		Conductor cross section (mm ²)		Dimensions	
Product		from	to	L (mm)	D (mm)
GLV 0406-ARM		1,5	6	300	25
GLV 0416-ARM		6	16	400	40
GLV 0450-ARM		25	50	800	60
GLV 4150-ARM		70	150	1000	100
GLV 4300-ARM		185	300	1000	120



BOPA

Joint for MV cables for public lighting.

Product	Operating voltage kV	Number of phases	Section (mm ²)	Dimensions	
				L (mm)	D (mm)
BOPA 3	3	1	1x10	300	50
BOPA 4	3	2	2x10	450	60
BOPA 5	3	3	3x10	450	70
BOPA 3/2	3,6	1 + concentric neutral	1 x 6 + 6 concentric	700	35
BOPA 4/T transition	3	2	2,5 - 10 paper / 10 - 50 extruded	750	40



DJ

LV branch joint.

Product	Single core cables cross section (mm ²)		Multi core cables cross section (mm ²)		Dimensions	
	Through	Branch	Through	Branch	L (mm)	D (mm)
DJ01	1 x 4 - 50	1 x 2,5 - 50	4 x 1,5 - 10	2 x 1,5	200	25
DJ02	1 x 50 - 120	1 x 6 - 120	4 x 16 - 25 2 single core cables 1 x 6 - 50	2x1,5 1 two core cable 2 x 2,5	250	40
DJ03	1 x 150 - 300	1 x 6 - 300	4 x 25 - 3,5 x 50	4 x 2,5 - 25	400	70



GLV F/R - GMP F/R

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

FOR NAVAL TYPE POWER CABLES

UNARMOURED			ARMOURED		
Product	Cable formation (n° x mm ²)	L (mm)	Product	Cable formation (n° x mm ²)	L (mm)
GLV 4004-F/R	4 x 1,5 - 4	300	GLV 4004-ARM-F/R	4 x 1,5 - 4	400
GLV 4016-F/R	4 x 6 - 16	300	GLV 4016-ARM-F/R	4 x 6 - 16	400
GLV 4050-F/R	4 x 25 - 50	400	GLV 4050-ARM-F/R	4 x 25 - 50	500
GLV 4150-F/R	4 x 70 - 150	500	GLV 4150-ARM-F/R	4 x 70 - 150	750

FOR NAVAL TYPE SIGNALLING AND CONTROL CABLES

UNARMOURED			ARMOURED		
Product	Cable formation (n° x mm ²)	L (mm)	Product	Cable formation (n° x mm ²)	L (mm)
GMP 007-F/R	4 - 7 x 1,5 - 2,5	300	GMP 007-ARM-F/R	4 - 7 x 1,5 - 2,5	400
GMP 014-F/R	10 - 14 x 1,5 - 2,5	300	GMP 014-ARM-F/R	10 - 14 x 1,5 - 2,5	400
GMP 030-F/R	16 - 30 x 1,5 - 2,5	400	GMP 030-ARM-F/R	16 - 30 x 1,5 - 2,5	500

FOR UNDERGROUND POWER CABLES

UNARMOURED			ARMOURED		
Product	Cable formation (n° x mm ²)	L (mm)	Product	Cable formation (n° x mm ²)	L (mm)
GLV 4006-F/R-G7	4 x 1,5 - 6	300	GLV 4006-ARM-F/R-G7	4 x 1,5 - 6	400
GLV 4016-F/R-G7	4 x 6 - 16	300	GLV 4016-ARM-F/R-G7	4 x 6 - 16	400
GLV 4050-F/R-G7	4 x 25 - 50	400	GLV 4050-ARM-F/R-G7	4 x 25 - 50	500
GLV 4150-F/R-G7	4 x 70 - 150	500	GLV 4150-ARM-F/R-G7	4 x 70 - 150	750

FOR UNDERGROUND SIGNALLING AND CONTROL CABLES

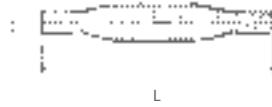
UNARMOURED			ARMOURED		
Product	Cable formation (n° x mm ²)	L (mm)	Product	Cable formation (n° x mm ²)	L (mm)
GMP 014-F/R-G7	Fino a 14 x 1,5 - 2,5	300	GMP 014-ARM-F/R-G7	Fino a 14 x 1,5 - 2,5	400
GMP 019-F/R-G7	Fino a 19 x 1,5 - 2,5	400	GMP 019-ARM-F/R-G7	Fino a 19 x 1,5 - 2,5	500

DJ F/R

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

FOR POWER CABLES

UNARMOURED		ARMOURED		L (mm)
Product	Product	Cable formation (n° x mm ²)		
		Through	Branch	
DJ 4016 - F/R	DJ 4016 - ARM-F/R	3 - 4 x 1,5 - 16	3 - 4 x 1,5 - 16	300



Electrical performance:

CEI EN 50393 with connectors complying with EN 61238-1 (with testing under water head and water between the cable cores)
Class 2 in accordance with CEI 64-8.

Flame resistance:

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

Contact Raytech for information regarding other formations and cable sections



GMP

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

NON ARMoured cable		N° of conductors		Section mm ²		External Ø of cable	
Product		from	to	from	to	min (mm)	max (mm)
GMP 007		4	7	1,0	2,5	8	19
GMP 014		8	14	1,0	2,5	12	22
GMP 021		15	21	1,0	2,5	15	27
GMP 040		22	40	1,0	2,5	20	35
GMP 075		41	75	1,0	2,5	26	44
GMP 100		76	100	1,0	2,5	26	60

ARMoured cable		N° of conductors		Section mm ²		External Ø of cable	
Product		from	to	from	to	min (mm)	max (mm)
GMP 007-A		4	7	1,0	2,5	14	23
GMP 014-A		8	14	1,0	2,5	15	26
GMP 021-A		15	21	1,0	2,5	24	35
GMP 040-A		22	40	1,0	2,5	30	45
GMP 075-A		41	75	1,0	2,5	39	55



GMC

Joint kits for multi pair cables for communication, command or control.

NON ARMoured cable		N° of pairs		Section mm ²		External Ø of cable	
Product		from	to	from	to	min (mm)	max (mm)
GMC 010		5	10	2 x 0,6	2 x 1,0	9	14
GMC 020		11	20	2 x 0,6	2 x 1,0	13	20
GMC 030		21	30	2 x 0,6	2 x 1,0	16	24
GMC 050		31	50	2 x 0,6	2 x 1,0	22	29
GMC 100		51	100	2 x 0,6	2 x 1,0	30	40

ARMoured cable		N° of pairs		Section mm ²		External Ø of cable	
Product		from	to	from	to	min (mm)	max (mm)
GMC 004-A		1	4	2 x 0,6	2 x 1,0	15	23
GMC 007-A		5	7	2 x 0,6	2 x 1,0	15	26
GMC 019-A		8	19	2 x 0,6	2 x 1,0	24	35
GMC 037-A		20	37	2 x 0,6	2 x 1,0	30	45
GMC 061-A		38	61	2 x 0,6	2 x 1,0	39	55

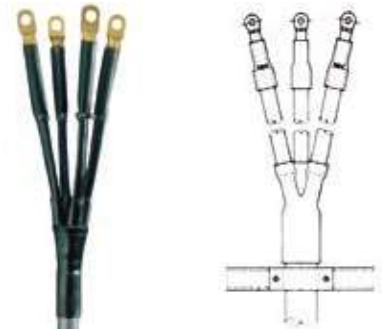


Terminals heat-shrink

TLV

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

NON ARMoured extruded cables	Extruded cables with WIRE ARMOUR	Section conductor mm ²		Number of phases
Product	Product	from	to	
TLV 0216	TLV 0216 - AF	4	16	2
TLV 0316	TLV 0316 - AF	4	16	3
TLV 0416	TLV 0416 - AF	4	16	4
TLV 0250	TLV 0250 - AF	25	50	2
TLV 0350	TLV 0350 - AF	25	50	3
TLV 0450	TLV 0450 - AF	25	50	4
TLV 3150	TLV 3150 - AF	70	150	3
TLV 4150	TLV 4150 - AF	70	150	4
TLV 3300	TLV 3300 - AF	185	300	3
TLV 4300	TLV 4300 - AF	185	300	4
	TLV 4500 - AF	500		4



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

TLV 500

Terminations for concentric neutral extruded cables up to 1 kV.

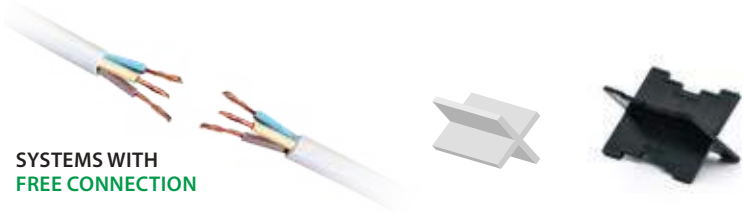
Product	Section conductor mm ²		Number of phases
	from	to	
TLV 0116 - 500	4	16	1
TLV 0216 - 500	4	16	2
TLV 0316 - 500	4	16	3
TLV 0150 - 500	25	50	1
TLV 0250 - 500	25	50	2
TLV 0350 - 500	25	50	3
TLV 2150 - 500	70	150	2
TLV 3150 - 500	70	150	3
TLV 2300 - 500	185	300	2
TLV 3300 - 500	185	300	3







Include sheath to cover the concentric conductor.



SYSTEMS WITH FREE CONNECTION



TYPE OF JOINT		Magic Power Joint	Magic Joint	Rapid Joint	Clic Joint	Rubber Joint	Raycast	Wonder Joint	GLV
	PRE-FILLED			●	●				
	FOR CASTING	●	●			●	●		
	INJECTABLE							●	
	HEAT-SHRINK								●
	extra-fast installation			●				●	
	fast installation	●	●		●	●	●		
	straight	●	●	●	●	●	●	●	●
	branch	●	●		●	●	●	●	●
	for copper cable	●	●	●	●	●	●	●	●
	for aluminium cable	●	●	●		●	●		●
	for screened cable	●		●			●		●
	for armoured cable	●		●			●		●
	for signalling and control	●		●			●		●
	for telephone cable	●		●			●		●
	1x single core cable	●	●	●	●	●	●	●	
	2x two-core cable	●	●	●	●	●	●	●	●
	3x three-core cable	●	●	●	●	●	●	●	●
	4x four-core cable	●	●	●	●	●	●	●	●
	5x five-core cable								
	for cables up to 630 mm ²	●	●				●		●
	flame retardant	●	●	●	●	●		●	●
	complete with separator	●	●	●	●	●	●	●	
	complete with screw connectors								
	for underwater use	●	●	●	●	●	●	●	●
	for high depth	●		●				●	●
	re-enterable	●	●	●	●	●		●	●
	Non-toxic / without shelf life	●	●	●	●	●		●	●

FILLERS

Insulators and sealing for protecting electrical connections.



Gel

BICOMPONENT CAST

page
90



Magic Power Gel
Self-amalgamating bicomponent gel in single bottles



Magic Gel
Bicomponent gel in bottles



Magic Fluid
Bicomponent gel in single dose bags



Ray Gel
Bicomponent gel in bottles for telephone and intercom systems



Bag Gel
Bicomponent gel in bags for telephone and intercom systems

Rubber

BICOMPONENT PASTE/CAST

page
105



Sky Plast
Mouldable bicomponent rubber



Magic Rubber & Rubber Fluid
Bicomponent rubber in bottles or single dose bags



Gel

SINGLE COMPONENT INJECTABLE

page
96


ITALIAN UTILITY MODEL



Wonder Gel
Single coloured
component



Wonder Gel
Invisible
Single transparent
component



Wonder Fluid
Single fluid
component



Monogel
Single coloured
component



Gelgum

BICOMPONENT CAST

page
102



TechnoGelGum
Bicomponent in single bottle

GelGum Joint

Kit Techno Gel Gum + joints



Resin

BICOMPONENT CAST

page
107



Ray Resin

Bicomponent epoxy resin in single dose bags



Magic Power Gel

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

- Very sticky
- Strong self amalgamating characteristics
- Single compact bottle; convenient twin compartment
- Re-usable as well as re-enterable, even after long working periods
- It doesn't give any waste
- Non toxic and safe

INSULATING and SEALING GEL



RE-ENTERABLE



RE-USABLE



GEL



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 characteristics to get an homogeneous and compact mass
- It can be therefore applied in multiple layers

Zero waste

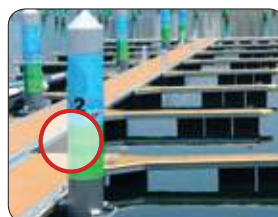
- Due to the nature of the product waste is eliminated; even residual product can be saved and used for the next application
- Also any left over product maintains it's high performance characteristics

Single bottle

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

Magic Power Gel

Product	Colour	Package type	Quantity
Magic Power Gel	●	1 single, bi-component bottle 1 small basin - 1 mixing spoon	1000 ml
Magic Power Gel 500	●	1 single, bi-component bottle 1 small basin - 1 mixing spoon	500 ml
Magic Power Gel 250	●	1 single, bi-component bottle	250 ml



Gel: UL 94-HB

Dielectric strength:

>23 kV/mm

Cross linking time:

fast (about 15 min. at 25°C)

Volume resistivity:>2 . 10¹⁵ Ω cm**Operating temperature:**

-60°C / +200°C

Overload temperature**for short periods:**

uo to 250°C

Stabilised for:

mould - UV

Degree of protection:

IP68 (in proper casings)

IP68 | **IMQ**
OFFICIALLY TESTED

Ray
tech

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



Gel: UL 94-HB **CE** **UL** **US**

Dielectric strength:
>23 kV/mm

Cross linking time:
fast (about 10 min. at 23°C)

Volume resistivity:
>2 · 10¹⁵ 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)

IP68
OFFICIALLY TESTED **IMQ**

Magic Gel & Magic Fluid

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

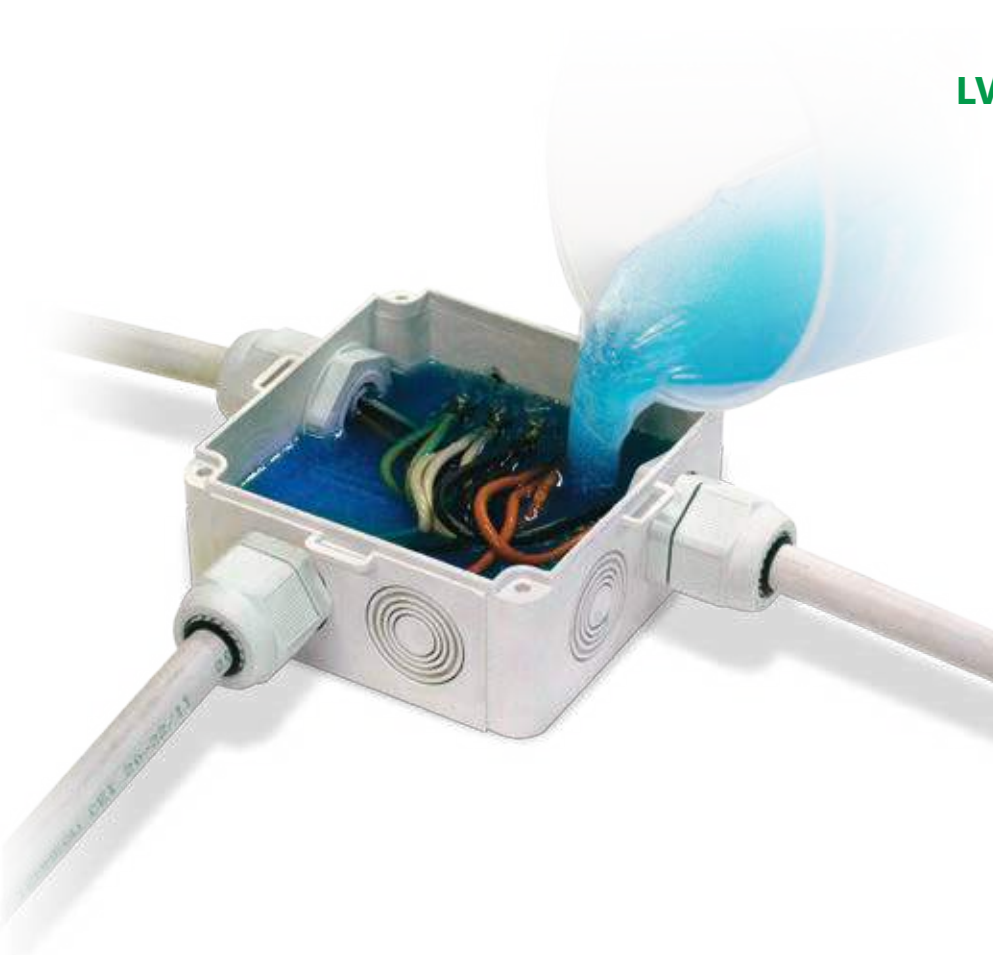
The insulating and sealing gel, when cast in suitable casings, ensures an IP68 degree of protection and it is able to replace all types of resins. This is a self-polymer insulation in two practical bottles or in a single use bag, with cold cross linking. Once poured, the insulation, characterized by 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 slow isothermal peak that does not thermally stress the materials it comes into contact with.

- For high temperature applications!
- Quick cross linking (only 10 minutes)
- Re-enterable also after long working periods
- Non-toxic and safe with no shelf life
- Low viscosity



Examples of use





Magic Gel

Product	Colour	Package type	Total quantity
Magic Gel 300	●	2 bottles	300 ml
Magic Gel 1000	●	2 bottles - 1 small basin - 1 mixing spoon	1000 ml
Magic Gel 2000	●	2 bottles - 1 small basin - 1 mixing spoon	2000 ml
Magic Gel 10000	●	2 tanks - 1 small basin - 1 mixing spoon	10 lt



Magic Fluid

Product	Colour	Package type	Total quantity
Magic Fluid 90	●	Bicomponent single dose bags	90 gr
Magic Fluid 110	●	Bicomponent single dose bags	110 gr
Magic Fluid 170	●	Bicomponent single dose bags	170 gr
Magic Fluid 210	●	Bicomponent single dose bags	210 gr
Magic Fluid 420	●	Bicomponent single dose bags	420 gr
Magic Fluid 550	●	Bicomponent single dose bags	550 gr



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!



Ray Gel

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

- Gel:** UL 94-HB 
- Dielectric strength:**
>23 kV/mm
- Cross linking time:**
fast (about 3 min. at 30°C)
- Volume resistivity:**
>1,5 x 10¹⁵ Ω cm
- Operating temperature:**
-60°C / +180°C
- Thermal conductivity:**
< 0,2 W/m²K
- Dielectric constant:**
< 7
- Degree of protection:**
IP68 (in proper casings)

IP68
OFFICIALLY
TESTED | **IMQ**

- Quick cross linking
- Antioxidant protection
- Low temperature resistant
- Non-toxic and safe with 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



Ray Gel / Bag Gel

Product	Colour	Package type	Total quantity
Bag Gel 200-T	○	Bicomponent single dose bags	200 gr
Bag Gel 400-T	○		400 gr
Bag Gel 200-R	●		200 gr
Bag Gel 400-R	●		400 gr
Ray Gel 300-T	○	2 bicomponent bottles	300 gr
Ray Gel 1000-T	○		1000 gr
Ray Gel 300-R	●		300 gr
Ray Gel 1000-R	●		1000 gr
Ray Gel 10K-T	○	2 bicomponent boxes	10 kg
Ray Gel 20K-T	○		20 kg
Ray Gel 10K-R	●		10 kg
Ray Gel 20K-R	●		20 kg

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






IP68
OFFICIALLY
TESTED | **IMQ**
(in proper casings)

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.

- 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
- Italian Utility Model 

VIDEO SURVEILLANCE SYSTEMS



CONNECTIONS IN MOIST ENVIRONMENTS



UNDERGROUND CONNECTIONS

***Time and
space-saver***

**EASY TO APPLY EVEN
IN AREAS WHICH ARE
DIFFICULT TO ACCESS!**



***Always at your
fingertips!***



INSPECTABLE



EXTERNAL SYSTEMS



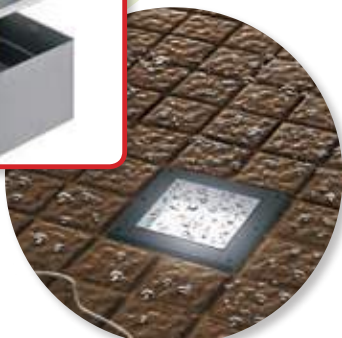
UNDERGROUND CONNECTIONS



SMALL-SCALE CONNECTIONS



GROUND LUMINAIRES



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



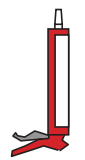
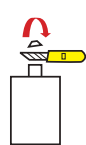


WonderGel & WonderGel INVISIBLE

Characteristics

- Single component gel which comes already cross-linked in a cartridge
- No mixing, no waiting time
- Visco-elastic gel which is extremely fluid
- Self-levelling and self-vulcanizing
- Can be applied using standard silicone ratchets
- Easy to measure
- Does not expire and does not harden
- Easy to apply even to inaccessible areas
- Characteristics do not deteriorate with the passing of time
- Re-enterable
- Non-toxic and safe
- Can be applied in all weather conditions, even when raining or in the heat of the summer sun
- Can be applied to powered appliances
- Dielectric strength > 23 kV/mm
- Volume resistivity > $2 \cdot 10^{15} \Omega \text{ cm}$
- Operating temperature from $-60 / +200^\circ\text{C}$
- Overload temperature for brief periods: 250°C
- Gel UL 94-HB

* Protection degree IP68 in proper casings



Wonder Gel

Product	Colour	Package type	Total quantity
Wonder Gel	●	Cartridge with measuring nozzle	280 ml
Wonder Gel Invisible	○	Cartridge with measuring nozzle	280 ml

Gel technology comparison

				
PRODUCT	MAGIC GEL Bi-component gel in 2 bottles	MAGIC POWER GEL Bi-component gel in single, 2 compartment bottle	WONDER GEL Ready-to-use single component gel in a cartridge	
METHOD OF APPLICATION	 MIX AND POUR	 1 MIX AND POUR	 2 MIX, WAIT & STICK	 INJECT
INSTALLATION TEMPERATURE (°C)	- 5 * -10 ** / +45 -15 ***	- 5 * -10 ** / +55 -15 ***	-40 / +60	-40 / +110
OPERATING TEMPERATURE (°C)	-60 / +200	-60 / +200	-60 / +200 Ready to use in 15 min	-60 / +200 Ready to use
CROSS LINKING TIME (minutes at 25°C)	< 10 min.	ca. 15 min.	-	-
PRINCIPAL CHARACTERISTICS	RE-ENTERABLE	RE-ENTERABLE REUSABLE	STICKY RE-ENTERABLE REUSABLE	INJECTABLE RE-ENTERABLE

* Poured at -5°C from bottles stored at >10°C.

** Poured at -10°C from bottles stored at >20°C.

*** Poured at -15°C from bottles stored at -15°C (cross linking within 48 hours).

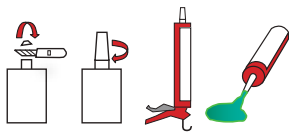
Raytech gels can be used for the filling and sealing of all junction boxes and are ideal to ensure maximum protection if applied in cable jointing systems of our production.

Wonder Fluid

Single component insulation fluid gel cartridge.

Gel: UL 94-HB

- Operating temperature:**
-60°C / +200°C
- Installation temperature:**
-40°C / +110°C
- Dielectric strength:**
> 23 kV/mm
- Degree of protection:**
IP68 (in proper casings)



- Ready-to-use fluid gel
- Created for filling new Raytech joint shells with no-return valves
- Suitable for filling trays
- Does not solidify when opened
- No waste
- No shelf life



Wonder Fluid

Product	Colour	Package type	Total quantity
Wonder Fluid 210	●	Cartridge with measuring nozzle	210 ml
Wonder Fluid 280	●	Cartridge with measuring nozzle	280 ml

Monogel

Single component transparent insulation gel for generic use.

- Ready to use
- No shelf life



Gel: UL 94-HB

Operating temperature:

-60°C / +200°C

Installation temperature:

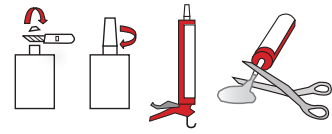
-40°C / +110°C

Dielectric strength:

> 23 kV/mm

Degree of protection:

IP68 (in proper casings)



Monogel

Product	Colour	Package type	Total quantity
Monogel	○	Cartridge with measuring 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.

Dielectric strength:
≥ 21 kV/mm
Cross linking time:
fast (about 10 min. at 25°C)
Volume resistivity:
>2 x 10¹⁴ 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)

IP68
OFFICIALLY
TESTED | IMQ

- For installations up to 1 kV
- Suitable for high temperatures
- Even suitable for high depths under water
- Waterproof > 1 MPa
- UV resistant
- Removable
- Vibration resistant
can act as a damper
- Suitable for installation in
salt water (sea) and in
chlorinated water (pools)
- Non toxic and safe

EXTREMELY FLEXIBLE
AND WATER-REPELLENT

NEW EXCEPTIONALLY
STRONG CONSISTENCY

TECHNO
GELGUM

FLEXIBLE LIKE GEL

STRONG LIKE RUBBER

BORN TO BE
UNIQUE

Ray
Tech

Not quite a GEL and not quite RUBBER,
BUT HAS THE BEST FEATURES OF BOTH!



SAFE



WATERPROOF



RE-ENTERABLE

Product	Colour	Package type	Quantity
Techno Gel Gum	●	1 single, bi-component bottle 1 small basin - 1 mixing spoon	1 kg
Techno Gel Gum 500	●	1 single, bi-component bottle 1 small basin - 1 mixing spoon	500 gr

Installation sequence



Shake before using.



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



Mix for 1 min. max.



Pour within 1 min. max.



In just 10 minutes the curing is completed.



Ray
tech

GelGum JOINT

Kit composed of 5 joint shells in fracture resistant plastic and 1 kg of Techno Gel Gum, bottled two-component waterproof and re-enterable insulation with very high dielectric, sealing and thermal characteristics. Techno Gel Gum is a strong flexible elastomer whose formula has been optimised for the protection of power cables, Telecom cables 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.



GelGum JOINT - L

KIT for line joints

art. **GELGUM JOINT-L**

Kit composed of:

- 1kg of Techno Gel Gum
- + 5 casings
- + a black 19x25, 0.13 mm-thick tape



Cable formation and conductor cross sections (n° x mm²)

	Cable formation and conductor cross sections (n° x mm ²)			
	1x	2x	3x	4x
4 L10 casings (180x50 mm)	2,5 - 50	1,5 - 10	1,5 - 10	1,5 - 10
1 L25 casing (215x55 mm)	16 - 150	4 - 25	4 - 25	2,5 - 25

GelGum JOINT - Y

KIT for branch joints

art. **GELGUM JOINT-Y**

Kit composed of:

- 1kg of Techno Gel Gum
- + 5 casings
- + a black 19x25, 0.13 mm-thick tape



Cable formation and conductor cross sections (n° x mm²)

	Cable formation and conductor cross sections (n° x mm ²)							
	1x		2x		3x		4x	
	T	B	T	B	T	B	T	B
4 LY6 casings (180x90 mm)	4-50	4-50	4-10	4-10	2,5-6	2,5-6	2,5-6	2,5-6
1 Y25 casing (220x105 mm)	50-150	50-150	10-25	10-25	6-25	6-16	6-25	6-10

Sky Plast

Bicomponent rubber in insulating, mouldable, self-extinguishing paste with high dielectric characteristics.

Thanks to Raytech's constant and careful research and development of new technologies comes Sky Plast, absolute technical innovation 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.

- Mouldable, non-toxic and safe paste
- Low smoke and toxic and corrosive gases emission
- Able to replace taping, heat-shrinking, resin finishes
- Flexible and elastic
- Quickly ready for use

Installation examples



Cable gland sealing



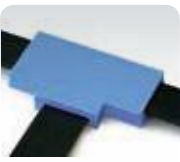
Creation of LV terminals



Insulation of multiple connections



Conduit protection



Drop line, bar, transformer through insulation



On-site preparation of braces and supports



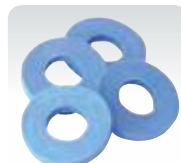
Preparation of deflectors, nozzles, flow deviators



Preparation on-site of expanders for inserts



Preparation on-site of small moulds for reliefs



Preparation of bars, washers, round wire insulators



Preparation on-site of seals

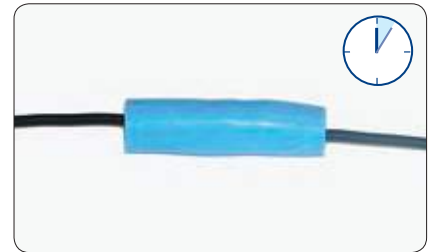
Sky Plast

Product	Colour	Package type	Total quantity
Sky Plast	●	2 bicomponent cans	500 gr
Sky Plast 250	●	2 bicomponent cans	250 gr

Dielectric strength:
> 23 kV/mm
Degree of protection:
IP68 (in proper casings)



Installation sequence



Raytech

Magic Rubber

Fast cross linking bicomponent rubber.

Bicomponent 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.

- Cross linking time:**
15 minutes at 23°C
- Volume resistivity:**
>2 10¹⁵ Ω cm
- Dielectric strength:**
> 23 kV/mm
- Specific weight:**
1,22 approx
- Degree of protection:**
IP68 (in proper casings)

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



Magic Rubber & Rubber Fluid

Product	Colour	Package type	Total quantity
Magic Rubber 500	●	2 bicomponent bottles 1 measuring cup - 1 mixing palette	500 gr
Magic Rubber 10	●	2 bicomponent tanks 1 measuring cup - 1 mixing palette	10 kg
Rubber Fluid 200	●	Bicomponent single dose bags	200 gr
Rubber Fluid 350	●	Bicomponent single dose bags	350 gr



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



Mix for max 30".



Pour the product into the casing to be filled.



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

Rayresin

Bicomponent 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.

Cross linking time:

20 minutes at 20°C

Hardness:

70 Shore D

Dielectric strength:

21 kV/mm

Specific weight:

1,07 kg/dm³

1,7 kg/dm³ for Rayresin Tan 3,8

Water absorption:

0,8% max



Rayresin

Product	Colour	Package type	Total quantity
Rayresin 170	●	Bicomponent single dose bags	170 gr
Rayresin 210	●	Bicomponent single dose bags	210 gr
Rayresin 420	●	Bicomponent single dose bags	420 gr
Rayresin Tan 3,8	●	Tin with mineral charge	3.8 kg



Remove the separator from the Rayresin bag.



Mix the 2 components (30" max).



Pour Rayresin in the tray (1" max).



Installation completed.



KIT IP68

Universal kits for branch or straight through connections complete with the appropriate amount of gel.



Power Kit IP68 Solution

CONNECTION KIT WITH POWER GEL

page
110



Magic Box

CONNECTION KIT WITH MAGIC FLUID

page
114





Wonder Box

New

IP68 COMPLETE CONNECTION KIT
ISOLATED WITH WONDER FLUID

page
113



J-Box

BRANCH KITS
WITH HOOK CLOSING

page
116



page
117 Accessories

page
118 Fittings

page
119 J-Box - DIY





Electrical Performance:

CEI EN 60529

Degree of protection: IP68

Class 2 in accordance with CEI 64-8.

Gel: UL 94-HB

Operating temperature **90°**

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

HF Halogen Free

in accordance with CEI EN 50267 2-2

IP68 OFFICIALLY TESTED **IMQ**

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!

- Kit complete with perfect IP68 connection
- 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



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 beaker and applied around the connection (Stick!). Mix the Magic Power gel in a 1:1 ratio in the supplied measuring beaker. 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 beaker 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 bicomponent 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



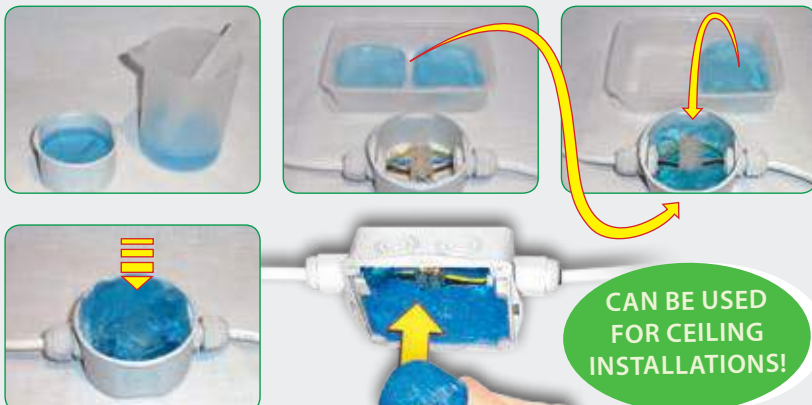
Thanks to Magic Power Gel, the box can be **re-opened, inspected** and **re-insulated** all using the original installed product.

STICK



Pour the components in the measuring beaker, 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 beaker 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 beaker and saved for later use.



Power Kit

Product	Box	Insulating
Power Kit 65	mm Ø 65 x h 35 + 2 cable glands PG16 / caps	Single bicomponent bottle 1 small basin - 1 mixing spoon
Power Kit 80	mm Ø 80 x h 40 + 3 cable glands PG16 / caps	Single bicomponent bottle 1 small basin - 1 mixing spoon
Power Kit 100	mm 100 x 100 x h 50 + 3 cable glands M25 x 1,5 / caps	Single bicomponent bottle 1 small basin - 1 mixing spoon
Power Kit 120	mm 120 x 80 x h 50 + 3 cable glands M25 x 1,5 / caps	Single bicomponent bottle 1 small basin - 1 mixing spoon

Wonder Box IP68

Complete IP68 connection kit insulated with Wonder Fluid.

Universal IP68 kit with no shelf life, mechanically robust, non-toxic, suitable for installation in even the most extreme conditions and re-enterable.

Protects from water, moisture, dust and accidental contact caused by insects.



IP68
OFFICIALLY
TESTED | **IMQ**

WonderBOX 65

Cod. Wonder Box 65

2 box Ø 65 x h 35 mm

+

4 cable glands PG16 / caps

+

1 single component cartridge



WonderBOX 80

Cod. Wonder Box 80

1 box Ø 80 x h 40 mm

+

3 cable glands PG16 / caps

+

1 single component cartridge



Electrical Performance:
CEI EN 60529

90° Operating temperature

Gel: UL 94-HB

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

HF Halogen Free

in accordance with
CEI EN 50267 2-2





Magic Box

Electrical Performance:
CEI EN 60529

Degree of protection: IP68
Class 2 in accordance
with CEI 64-8.

Gel: UL 94-HB  US

Operating temperature  90°

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

HF *Halogen Free*

in accordance with
CEI EN 50267 2-2

IP68
OFFICIALLY
TESTED 

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.

- 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
- Non toxic and safe



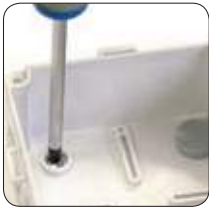
Magic Box is suitable for any kind of installation, even underground or directly submerged!

Magic Box is always re-enterable, even after long working periods!





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



Examples of application



PUBLIC LIGHTING



NAVAL SECTOR



OUTDOOR - GARDENS



ELECTRIC GATES

Magic Box

Product	Max external Ø housed in input cables (mm)	N° and type of cable glands	Internal kit dimensions (mm)	Composition Kit
Magic Box 65	22	3 x PG16	Ø 65 x h 35	Kit complete with cover
Magic Box 80	22	3 x PG16	Ø 80 x h 40	
Magic Box 100	20	3 x M25 x 1.5	100 x 100 x h 50	3 cable glands Series of closing plugs
Magic Box 120	20	3 x M25 x 1.5	120 x 80 x h 50	
Magic Box 150	26	3 x M25 x 1.5	150 x 110 x h 70	Insulating gel for complete filling
Magic Box 190	26	3 x M25 x 1.5	190 x 140 x h 70	
Magic Box 240	26	3 x M25 x 1.5	240 x 190 x h 90	



**Ray
tech**



J-Box

Snap shut closing enclosures with perforated knockouts.

Electrical Performance:

CEI 23-48, IEC 60670

Degree of protection:

empty IP55
filled with Gel Raytech IP68

Halogen free:

according to CEI EN 50267 2-2

Self-extinguishing and resistant to abnormal heat and fire:

Glow wire test a +960°C
according to EN 60695-2-11

Enclosure with snap shut cover and perforated knockouts for faster mounting of cable glands. Very high mechanical and flame retardant properties. Non-toxic, 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.

- 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
- Self-extinguishing
- Halogen Free

Snap-shut closing (without screws)



Pre - drilled walls





J-Box

Enclosures with perforated knockouts.

Product	N° max of cables that can be jointed	Ø max predrilling holes (mm)	Ø max possible drilling (mm)	Max dimension housed cable glands (pass)		Dimension (mm)
				PG	METRIC	
J-BOX 65	4	23	23	16	20	Ø 65 x h 35
J-BOX 80	4	23	23	16	20	Ø 80 x h 40
J-BOX100	8	29	29	21	25	100 x 100 x h 50
J-BOX120	6	25	29	21	25	120 x 80 x h 50
J-BOX150	10	29	37	29	32	150 x 110 x h 70
J-BOX190*	10	37	37	29	32	190 x 140 x h 70
J-BOX240*	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.



Accessories

Ray-PRESS

Cable glands.

METRIC pict Product	Metric pict	Assembly hole Ø (mm)	Cable range Ø		Item packaging
			min (mm)	max (mm)	
Ray PRESS-16	M16 x 1.5	16	6	10	50
Ray PRESS-20	M20 x 1.5	20	8	13	50
Ray PRESS-25	M25 x 1.5	25	12	18	20
Ray PRESS-32	M32 x 1.5	32	16	20	20

PG pict Product	PG pitch	Assembly hole Ø (mm)	Cable range Ø		Item packaging
			min (mm)	max (mm)	
Ray PRESS-PG11	11	19	6	9	50
Ray PRESS-PG13.5	13,5	20	9	12	50
Ray PRESS-PG16	16	23	11	14	50
Ray PRESS-PG21	21	29	14	18	20



Ray-PASS

Rubber flexible grommets.

Product	For pipe maximum external Ø (mm)	Assembly hole Ø (mm)	Item packaging
Ray PASS 16	20	23	50
Ray PASS 21	23,5	29	50
Ray PASS 29	32	38	50





Connectors

Temperature of use:
-5°C / +50°C
Insulation resistance:
> 100 MΩ
Reference standards:
CEI EN 50086-2-1

Self-extinguishing rigid PVC accessories
V0 - Standard UL94.



Ray RTC

Tube box connectors IP65 grey RAL 7035.

Product	Tube Ø (mm)	Item packaging
Ray RTC 16	16	50
Ray RTC 20	20	50
Ray RTC 25	25	50
Ray RTC 32	32	25
Ray RTC 40	40	20
Ray RTC 50	50	10



Ray RGC

Box straight connectors IP65 grey RAL 7035.

Product	Tube Ø (mm)	Item packaging
Ray RGC 16	16	50
Ray RGC 20	20	50
Ray RGC 25	25	25
Ray RGC 32	32	25
Ray RGC 40	40	20
Ray RGC 50	50	10



Ray CF

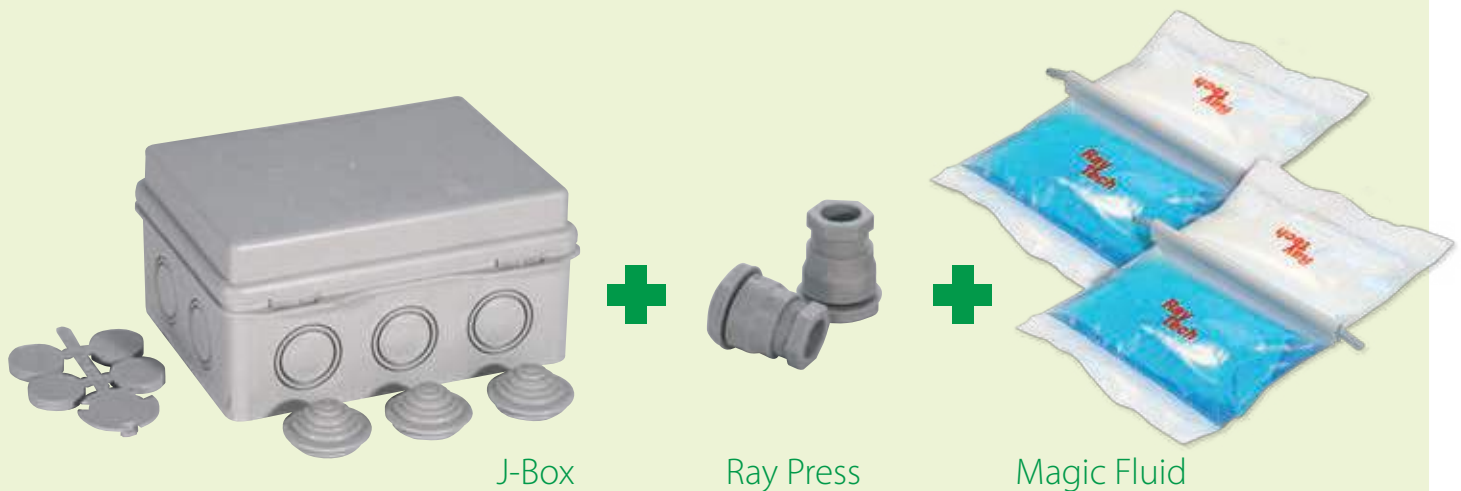
Flexible tube box bend IP65 grey RAL 7035.

Product	Tube Ø (mm)	Item packaging
Ray CF 16	16	70
Ray CF 20	20	60
Ray CF 25	25	50
Ray CF 32	32	30
Ray CF 40	40	20
Ray CF 50	50	10



J-Box KIT IP68 - Do It Yourself

Choose the box, the cable glands and the filler shown in the selection table. In just 3 steps you have a specific IP68 box just for you!



J-Box

Ray Press

Magic Fluid

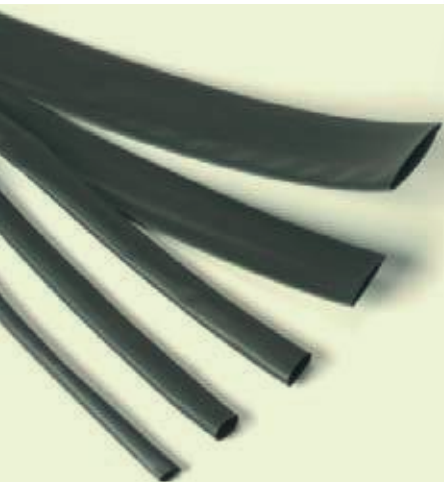
Box type	Dimension (mm)	Type of cable glands to be housed PG and metric pitch M	Insulating filler Magic Fluid*
J-Box 65	Ø 65 x 35	PG: 7 - 9 - 11 - 13,5 - 16 M: 12 - 16 - 20	1 x Magic Fluid 110
J-Box 80	Ø 80 x 40	PG: 7 - 9 - 11 - 13,5 - 16 M: 12 - 16 - 20	1 x Magic Fluid 210
J-Box 100	100 x 100 x h 50	PG: 7 - 9 - 11 - 13,5 - 16 - 21 M: 12 - 16 - 20 - 25	1 x Magic Fluid 420
J-Box 120	120 x 80 x h 50	PG: 7 - 9 - 11 - 13,5 - 16 - 21 M: 12 - 16 - 20 - 25	1 x Magic Fluid 420
J-Box 150	150 x 110 x h 70	PG: 13,5 - 16 - 21 - 29 M: 20 - 25 - 32	2 x Magic Fluid 420
J-Box 190	190 x 140 x h 70	PG: 13,5 - 16 - 21 - 29 M: 20 - 25 - 32	2 x Magic Fluid 420 1 x Magic Fluid 550
J-Box 240	240 x 190 x h 90	PG: 13,5 - 16 - 21 - 29 M: 20 - 25 - 32	4 x Magic Fluid 550 + 2 x Magic Fluid 210

*Note: the indicated quantities are for the complete filling of the box.



SHEATHS

Thin, Medium, Heavy-wall
heat shrink supplied in
dispensers, coils, bars,
wrap around and pieces.





Heat-shrink sheaths

THIN-WALL

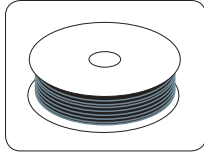
page
122



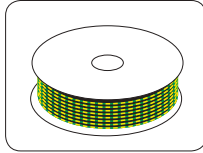
LST-TEC
Sheaths in dispensers
for commercial use



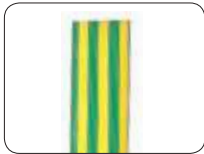
RayRoll / MaxiRoll
Sheaths in dispensers
for industrial use



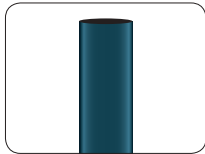
CGP-TEC
Sheaths in coils
or commercial use



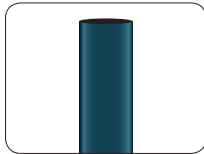
DCP-TEC
Sheaths in coils
for grounding cables



RDCT-B
Tubes in bars
for general use



RGPO-B
Tubes in bars
for general use



Ray-Tum
Semi-flexible sheath
in bars



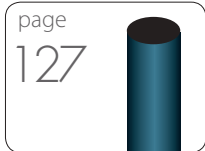
Thermo Mini Mix
Precut sheath kit

MEDIUM WALL



MTR

HEAVY WALL



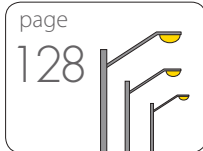
Ray-CSM

WRAP AROUND



Ray-RSM
Winding sheath

POLE PROTECTION



WPC / LTSPM
Sheaths for
lighting poles



Colour table

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

Moulded parts

CAPS

page
129

Self-sealing cap



TERMINATIONS

page
129

LV terminations



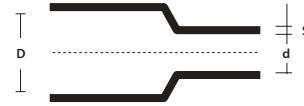


Tensile resistance	14,8 MPa
Elongation	460 %
Tensile resistance after ageing	14,5*
Elongation after ageing	480 %*
Dielectric strength	17 kV/mm*
Flammability	VW1*
Minimum shrinkage temperature	70°C

* (UL 224 test method)

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.



"UL" standard

Operating temperature: -55°C / +120°C

D = Ø min. before shrinkage

d = Ø max. after free shrinkage

S = min. rated thickness after free shrinkage



LST-TEC

Heat-shrink in dispensers for commercial use.

Product	Colour	D (mm)	d (mm)	S (mm)	Length (m)
LST-TEC 1,6	● ●	1,6	0,8	0,50	10
LST-TEC 2,4	● ●	2,4	1,2	0,55	10
LST-TEC 3,2	● ●	3,2	1,6	0,55	10
LST-TEC 4,8	● ●	4,8	2,4	0,55	9
LST-TEC 6,4	● ●	6,4	3,2	0,65	8
LST-TEC 9,5	● ●	9,5	4,8	0,65	6
LST-TEC 12,7	● ●	12,7	6,4	0,65	6
LST-TEC 19,0	● ●	19,0	9,5	0,80	5
LST-TEC 25,4	● ●	25,4	12,7	0,95	3
LST-TEC-GV 3/1,5	● ●	3	1,5	0,51	7
LST-TEC-GV 4,8/2,4	● ●	4,8	2,4	0,55	10
LST-TEC-GV 6/3	● ●	6	3	0,58	5
LST-TEC-GV 10/5	● ●	10	5	0,64	4
LST-TEC-GV 12/6	● ●	12	6	0,65	7
LST-TEC-GV 19/9	● ●	19	9	0,74	3
LST-TEC-GV 26/13	● ●	26	16	0,89	2,5



Ray Roll

Heat-shrink in dispensers for industrial use.

Product	Colour	D (mm)	d (mm)	S (mm)	Length (m)
Ray Roll 1,6	●	1,6	0,8	0,50	20
Ray Roll 2,4	●	2,4	1,2	0,55	20
Ray Roll 3,2	●	3,2	1,6	0,55	10
Ray Roll 4,8	●	4,8	2,4	0,55	10
Ray Roll 6,4	●	6,4	3,2	0,65	10
Ray Roll 9,5	●	9,5	4,8	0,65	10
Ray Roll 12,7	●	12,7	6,4	0,65	10
Ray Roll 19,0	●	19,0	9,5	0,80	5
Ray Roll 25,4	●	25,4	12,7	0,95	5

Maxi Roll

Heat-shrink in maxi dispensers for industrial use.

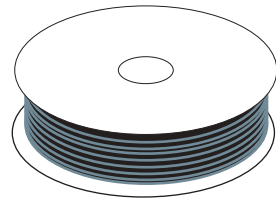
Product	Colour	D (mm)	d (mm)	S (mm)	Lenght (m)
Maxi Roll 1,6	●	1,6	0,8	0,50	300
Maxi Roll 2,4	●	2,4	1,2	0,55	300
Maxi Roll 3,2	●	3,2	1,6	0,55	300
Maxi Roll 4,8	●	4,8	2,4	0,55	150
Maxi Roll 6,4	●	6,4	3,2	0,65	75
Maxi Roll 9,5	●	9,5	4,8	0,65	150
Maxi Roll 12,7	●	12,7	6,4	0,65	150
Maxi Roll 19,0	●	19,0	9,5	0,80	75
Maxi Roll 25,4	●	25,4	12,7	0,95	60



CGP-TEC

Sheath for commercial use.

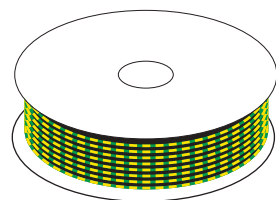
Product	Colour	D (mm)	d (mm)	S (mm)	Spool (m)
CGP-TEC 1,2/0,6	●●●●○Ⓟ	1,2	0,6	0,45	600
CGP-TEC 1,6/0,8	●●●●○Ⓟ	1,6	0,8	0,45	300
CGP-TEC 2,4/1,2	●●●●○Ⓟ	2,4	1,2	0,50	300
CGP-TEC 3,2/1,6	●●●●○Ⓟ	3,2	1,6	0,50	300
CGP-TEC 4,8/2,4	●●●●○Ⓟ	4,8	2,4	0,50	150
CGP-TEC 6,4/3,2	●●●●○Ⓟ	6,4	3,2	0,65	75
CGP-TEC 9,5/4,8	●●●●○Ⓟ	9,5	4,8	0,65	150
CGP-TEC 12,7/6,4	●●●●○Ⓟ	12,7	6,4	0,65	150
CGP-TEC 19/9,5	●●●●○Ⓟ	19,0	9,5	0,75	75
CGP-TEC 25,4/12,7	●●●●○Ⓟ	25,4	12,7	0,90	60
CGP-TEC 38/19	●●●●○Ⓟ	38,0	19,0	1,00	60
CGP-TEC 51/26	●●●●○Ⓟ	51,0	26	1,15	30
CGP-TEC 76/38	●●●●○Ⓟ	76,0	38,0	1,27	15
CGP-TEC 102/51	●●●●○Ⓟ	102,0	51,0	1,40	15



DCP-TEC

Sheath suitable for coating grounding cables.

Product	Colour	D (mm)	d (mm)	S (mm)	Spool (m)
DCP-TEC 3/1,5	●●	3,0	1,5	0,51	300
DCP-TEC 6/3	●●	6,0	3,0	0,58	75
DCP-TEC 10/5	●●	10,0	5,0	0,64	75
DCP-TEC 12/6	●●	12,0	6,0	0,64	75
DCP-TEC 19/9	●●	19,0	9,0	0,74	75
DCP-TEC 26/13	●●	26,0	13,0	0,89	30
DCP-TEC 38/19	●●	38,0	19,0	1,00	30





Minimum shrinkage temperature **125°**

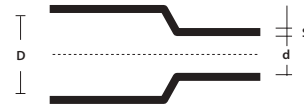
Operating temperature: **-55°C / +125°C**

Tensile resistance	14,8 MPa
Elongation	460 %
Tensile resistance after ageing	14,5*
Elongation after ageing	480 %*
Dielectric strength	17 kV/mm*
Flammability	VW1*

* (UL 224 test method)

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.



D = Ø min. before shrinkage

d = Ø max. after free shrinkage

S = min. rated thickness after free shrinkage

RDCT-B

Yellow green tube for general use in bars.



Product	Colour	D (mm)	d (mm)	S (mm)	Bars (m)
RDCT-B 3/1,5		3,0	1,5	0,51	1,2
RDCT-B 6/3		6,0	3,0	0,58	1,2
RDCT-B10/5		10,0	5,0	0,64	1,2
RDCT-B 12/6		12,0	6,0	0,64	1,2
RDCT-B 19/9		19,0	9,0	0,74	1,2
RDCT-B 26/13		26,0	13,0	0,89	1,2

RGPO-B

Tube for general use in bars.

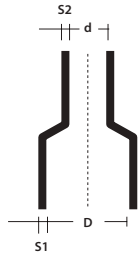


Product	Colour	D (mm)	d (mm)	S (mm)	Bars (m)
RGPO-B 2,4/1,2		2,4	1,2	0,50	1,2
RGPO-B 3,2/1,6		3,2	1,6	0,50	1,2
RGPO-B 4,8/2,4		4,8	2,4	0,50	1,2
RGPO-B 6,4/3,2		6,4	3,2	0,65	1,2
RGPO-B 9,5/4,8		9,5	4,8	0,65	1,2
RGPO-B 12,7/6,4		12,7	6,4	0,65	1,2
RGPO-B 19/9,5		19,0	9,5	0,75	1,2
RGPO-B 25,4/12,7		25,4	12,7	0,90	1,2
RGPO-B 38/19		38,0	19,0	1,00	1,2
RGPO-B 51/26		51,0	26	1,15	1,2



Ray-TUM

Sheaths in bars with adhesive.



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

Shrinkage ratio 3:1						
Product	Colour	D (mm)	d (mm)	S ₂ (mm)	S ₁ (mm)	Bars (m)
Ray-TUM-3/1-0	●	3	1	1,00	0,5	1,2
Ray-TUM-6/2-0	●	6	2	1,00	0,5	1,2
Ray-TUM-9/3-0	●	9	3	1,40	0,6	1,2
Ray-TUM-12/4-0	●	12	4	1,75	0,7	1,2
Ray-TUM-19/6-0	●	19	6	2,25	0,8	1,2
Ray-TUM-24/8-0	●	24	8	2,50	1,0	1,2
Ray-TUM-40/13-0	●	40	13	2,50	1,0	1,2

Shrinkage ratio 4:1						
Product	Colour	D (mm)	d (mm)	S ₂ (mm)	S ₁ (mm)	Bars (m)
Ray-TUM-4/1-0	●	4	1	1,00	0,5	1,2
Ray-TUM-8/2-0	●	8	2	1,00	0,5	1,2
Ray-TUM-12/3-0	●	12	3	1,40	0,6	1,2
Ray-TUM-16/4-0	●	16	4	1,75	0,7	1,2
Ray-TUM-24/6-0	●	24	6	2,25	0,8	1,2
Ray-TUM-32/8-0	●	32	8	2,50	1,0	1,2
Ray-TUM-52/13-0	●	52	13	2,50	1,0	1,2



125° Minimum shrinkage temperature

Operating temperature: -55°C / +120°C

Tensile resistance	ISO 37	9 MPa (min)
Elongation	ISO 37	300 % (min)
Internal wall adhesion	-	60 N x 25 mm (min)
Thermal shock	4 h at 225°C	No-drip No breaking
Thermal ageing	168 h at 225°C	No-drip No breaking
Flexibility at low temperature	4 h at -55°C	No breaking
Dielectric strength	IEC 243	12 MV/m (min)
Resistance to fluids (lubricant oil, hydraulic fluid, diesel)	ISO 37	Tensile resistance 7 Mpa (min)
	24 h	Elongation: 300% (min)
	at 23°C	Adhesion to int. walls: 60 N x 25 mm (min)

Thermo Mini Mix

Pre-cut heat-shrink sheaths kit.

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

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



COLOUR BLACK	MIXED COLOURS	Ø before and after shrinkage (mm)	Length of sheath (mm)	Pieces in the kit
Product	Product			
Thermo Mini Mix-N	Thermo Mini Mix-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



125° Minimum shrinkage temperature

Operating temperature: -55°C / +120°C





Minimum shrinkage temperature **125°**

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

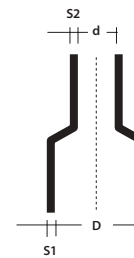
HF Halogen Free

Tensile resistance	14,8 MPa
Elongation	460 %
Tensile resistance after ageing	14,5*
Elongation after ageing	480 %*
Dielectric strength	17 kV/mm*

* (UL 224 test method)

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.



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

MTR

WITH OR WITHOUT ADHESIVE

Product	Applications by diameters from (mm)	to (mm)	D (mm)	d (mm)	S ₁ (mm)	S ₂ (mm)
MTR 10/3*	3,5	9,0	10	3	0,3	1,0
MTR 16/5*	5,5	14,0	16	5	0,3	1,4
MTR 25/8*	8,5	22,0	25	8	0,4	2,0
MTR 35/12*	13,0	32,0	35	12	0,4	2,0
MTR 50/16*	17,5	45,0	50	16	0,5	2,0
MTR 63/19*	21,0	57,0	63	19	0,6	2,4
MTR 75/22*	24,0	68,0	75	22	0,6	2,7
MTR 85/25*	28,0	77,0	85	25	0,6	2,8
MTR 95/29*	32,0	86,0	95	29	0,7	3,1
MTR 115/34*	37,0	104,0	115	34	0,7	3,1
MTR 140/42*	46,0	126,0	140	42	0,7	3,1
MTR 160/55*	55,0	144,0	160	55	0,7	3,2
MTR 180/60*	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

Product	Applications by diameters from (mm)	to (mm)	D (mm)	d (mm)	S ₁ (mm)	S ₂ (mm)
MTN 10/3*	3,5	9,0	10	3	0,3	1,0
MTN 16/5*	5,5	14,0	16	5	0,3	1,4
MTN 25/8*	8,5	22,0	25	8	0,4	2,0
MTN 35/12*	13,0	32,0	35	12	0,4	2,0
MTN 50/16*	17,5	45,0	50	16	0,5	2,0
MTN 63/19*	21,0	57,0	63	19	0,6	2,4
MTN 75/22*	24,0	68,0	75	22	0,6	2,7
MTN 85/25*	28,0	77,0	85	25	0,6	2,8
MTN 95/29*	32,0	86,0	95	29	0,7	3,1
MTN 115/34*	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	Applications by diameters		D	d	S ₁	S ₂
	from (mm)	to (mm)	(mm)	(mm)	(mm)	(mm)
Ray-CSM 12/3*	3,5	10	12	3	0,8	2,0
Ray-CSM 16/4*	4,5	14	16	4	0,9	2,4
Ray-CSM 24/6*	6,5	22	24	6	1,0	2,7
Ray-CSM 34/8*	9	31	34	8	1,3	4,0
Ray-CSM 48/12*	13	44	48	12	1,5	4,5
Ray-CSM 56/16*	17,5	50	56	16	1,5	4,4
Ray-CSM 70/21*	22	63	70	21	1,4	4,4
Ray-CSM 90/25*	27	81	90	25	1,3	4,3
Ray-CSM 110/30*	33	100	110	30	1,2	4,3
Ray-CSM 130/36*	38	118	130	36	1,2	4,3
Ray-CSM 160/50*	55	144	160	50	1,0	4,3
Ray-CSM 180/50*	55	162	180	50	1,0	4,3

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

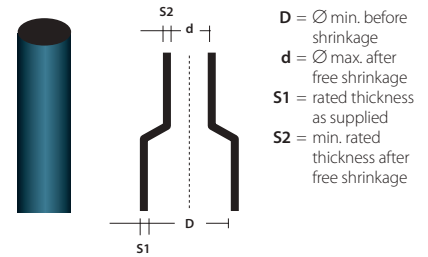
Wrap Around

Winding 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	Ø cable		D	d
	from (mm)	to (mm)		
Ray-RSM 34/10*	12	21	34	10
Ray-RSM 53/13*	15	32	53	13
Ray-RSM 84/20*	23	50	84	20
Ray-RSM 107/29*	34	65	107	29
Ray-RSM 143/36*	42	86	143	36
Ray-RSM 198/55*	62	120	198	55
Ray-RSM 250/98*	111	150	250	98

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

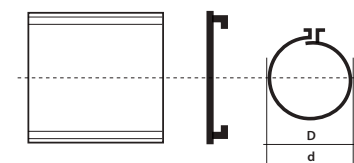


125° Minimum shrinkage temperature

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

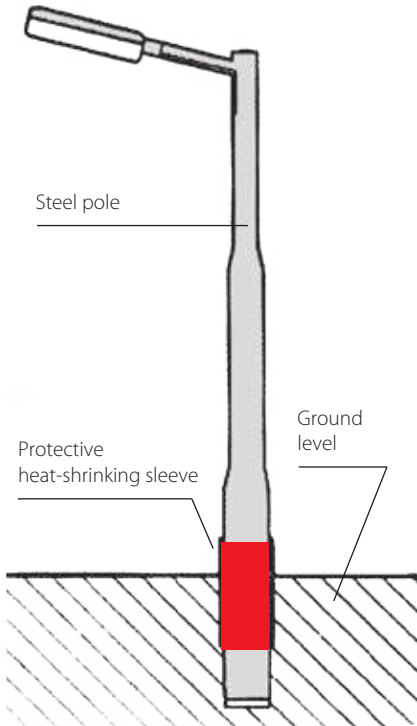
HF Halogen Free

Tensile resistance	ISO 37	12 MPa (min)
Elongation	ISO 37	350 % (min)
Thermal duration	IEC 60216	120°C
Dielectric strength	IEC 60243	1 mm wall
		180 kV/cm
		3.5 mm wall
		120 kV/cm



HF Halogen Free

Tensile resistance	ISO 37	17 MPa (min)
Elongation	ISO 37	350 % (min)
Density	ISO 1183	1,0-1,2 g/cm ³
Hardness	ISO 868	50-70 Shore D
Thermal duration	IEC 60216	120°C
Flexibility at low temperature	4 h at -40°C ASTM D2671	Non-cracking
Dielectric strength	IEC 60243	1 mm wall
		180 kV/cm
		3.5 mm wall
		120 kV/cm



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.

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

Closing pieces sold separately



LTPSM

Tubular sleeve for poles for installation.

Product	Diameter before/after shrinkage (mm)	Sleeve length (mm)
LTPSM 180/58-500	180/58	500
LTPSM 245/80-500	245/80	500