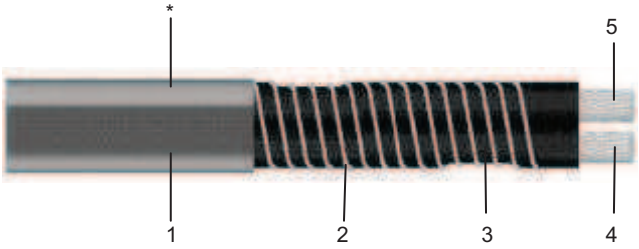
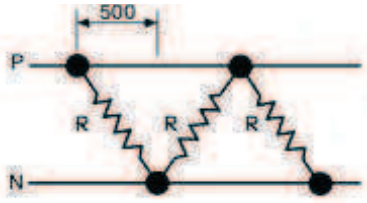
# SPC - CPC

**CONSTANT POWER PARALLEL HEATING CABLE – CPCx**

The structural technology of this heating wire allows to solve installation problems in a practical and safe way and at a reduced price. It is the ideal solution in situations requiring flexibility of use, an easy assembly and a quick performance. Thanks to its peculiarity of providing constant power per metre, both depending on temperature variations and on the length of the heating circuit, it can be cut, pieced and connected directly by the operator during the installation, with few easy and quick operations. Among the manifold advantages offered by this heating cable, attention should be paid to the possibility to control the operation status of each heating circuit, and to the easiness and low price of assembly thanks to the accessories that Calorflex can provide for its application (see technical specifications of accessories).

**STRUCTURAL SKETCH AND EQUIVALENT ELECTRIC CIRCUIT**




1 – Silicone rubber insulation with optional outer metal protection (* at request)
2 – Nickel-Chromium alloy heating wire (R)
3 – Contact points at intervals of 500mm
4 – Multi-wire copper conductor (N)
5 – Multi-wire copper conductor (P)

Two conductors with an appropriate section (P-N), insulated in silicone rubber, are wound in a Nickel-Chromium alloy wire which constitutes the active and heating part of the cable. This wire is alternatively connected to two conductors through contact points, specially positioned at regular intervals of 500mm, thus forming, from an electrical point of view, a series of parallel resistances of equal value (R). Applying the input voltage to one end of the heating circuit and leaving the other end open, all the resistances receive power with the same voltage and therefore dissipate the same power, owing to the Joule effect. Consequently, the power per meter provided will always be constant at any temperature, independently from the length of the circuit.
In order to guarantee electrical insulation, high temperature performance, flexibility and resistance to corrosion and to chemical agents, the cable is coated with a protective sheath made of silicone rubber with the adequate thickness that can be further clad in a multi-wire metal braiding in order to enhance resistance to shocks and
abrasions, improve the thermal exchange and guarantee the heating cable earthling when requested.

# CPC : CONSTANT POWER HEATING CABLE

| | Description | Code | Power | ø cable | Weight |
|---|---|---|---|---|---|
| | **SPCA 10** | 028010001 | 10 W/m | 3,5 mm | 0,020 kg/m |
| | **SPCA 15** | 028020001 | 15 W/m | 3,5 mm | 0,020 kg/m |
| | **SPCA 20** | 028030001 | 20 W/m | 3,5 mm | 0,020 kg/m |
| | **SPCA 25** | 028040001 | 25 W/m | 3,5 mm | 0,020 kg/m |
| | **SPCA 30** | 028050001 | 30 W/m | 3,5 mm | 0,020 kg/m |
| | **SPCA 40** | 028060001 | 40 W/m | 3,5 mm | 0,020 kg/m |
| | **CPCA 10** | 028110001 | 10 W/m | 5*7 mm | 0,058 kg/m |
| | **CPCA 15** | 028120001 | 15 W/m | 5*7 mm | 0,058 kg/m |
| | **CPCA 20** | 028130001 | 20 W/m | 5*7 mm | 0,058 kg/m |
| | **CPCA 25** | 028140001 | 25 W/m | 5*7 mm | 0,058 kg/m |
| | **CPCA 30** | 028150001 | 30 W/m | 5*7 mm | 0,058 kg/m |
| | **CPCA 40** | 028160001 | 40 W/m | 5*7 mm | 0,058 kg/m |

**We realize personalized power W/m - Look at page 98 the Technical sheet**

**External metal shield**

| | Description | Code | Power | ø cable | Weight |
|---|---|---|---|---|---|
| | **SPCB 10** | 028510001 | 10 W/m | 4 mm | 0,022 kg/m |
| | **SPCB 15** | 028520001 | 15 W/m | 4 mm | 0,022 kg/m |
| | **SPCB 20** | 028530001 | 20 W/m | 4 mm | 0,022 kg/m |
| | **SPCB 25** | 028540001 | 25 W/m | 4 mm | 0,022 kg/m |
| | **SPCB 30** | 028550001 | 30 W/m | 4 mm | 0,022 kg/m |
| | **SPCB 40** | 028560001 | 40 W/m | 4 mm | 0,022 kg/m |
| | **CPCB 10** | 028610001 | 10 W/m | 5*7 mm | 0,064 kg/m |
| | **CPCB 15** | 028620001 | 15 W/m | 5*7 mm | 0,064 kg/m |
| | **CPCB 20** | 028630001 | 20 W/m | 5*7 mm | 0,064 kg/m |
| | **CPCB 25** | 028640001 | 25 W/m | 5*7 mm | 0,064 kg/m |
| | **CPCB 30** | 028650001 | 30 W/m | 5*7 mm | 0,064 kg/m |
| | **CPCB 40** | 028660001 | 30 W/m | 5*7 mm | 0,064 kg/m |

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| | Description | Code | Height | Length | Weight |
|---|---|---|---|---|---|
| | **Assembling hit** | 028000000 | | | 0,010 kg |
| | **TAPE 25*** | 020000003 | 25 mm | 50 m | 0,215 kg |
| | **TAPE 50*** | 020000004 | 50 mm | 50 m | 0,430 kg |

* Aluminum tape reinforced with polyester, acrylic adhesive

**Assembling kit**

**Aluminum tape**

**GENERAL CHARACTERISTICS**

- Volt supply 230 Vac (on demand)
- Working temperatures from – 60°C to +200°C (+230°C for short periods)
- Maximum allowable length of cut for SPC: (Voltage x 5) / Wm
- Maximum allowable length of cut for CPC: (Voltage x 8) / Wm
- Minimum curvature radius: Ø cable * 4

**PROVISIONS AND REFERENCE HOMOLOGATIONS**

- Design, manufacture and testing in compliance with harmonized standards EN 60335
- In compliance with 73/23/EEC DIRECTIVE
- declaration of conformity on all items

**GENERAL TESTS AND PACKING**

The cable is supplied in measured plastic or cardboard bobbins for a further reworking on part of the customer. The standard measures of the bobbins are: 150m – 250m – 400m.