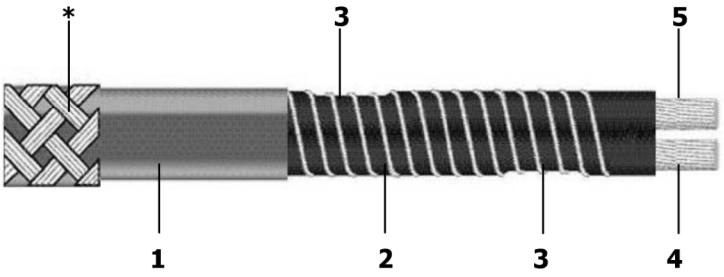
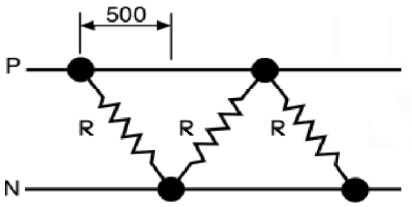
CONSTANT POWER PARALLEL HEATING CABLE - CPCx

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 meter, 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 thermic exchange and guarantee the heating cable earthing when requested.

GENERAL CHARACTERISTICS

- Input Voltage 12 ÷ 400 Volt (at request)
- Specific power per metre from 15 to 80 Watt (at request)
- Maximum outer dimensions 7x5mm (± 0.5)
- Operating temperatures from – 60°C to +200°C (+230°C for short periods of time)
- Maximum permissible cut length according to formula: (Voltage x 8) ÷ W/m
- Minimum bending radius: 15mm

PROVISIONS AND REFERENCE HOMOLOGATIONS

- Design, manufacture and testing in compliance with harmonized standards EN 60335
- In compliance with 2006/95/EEC DIRECTIVE
- CE declaration of conformity on all items

GENERAL TESTS AND PACKING

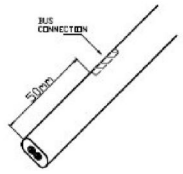
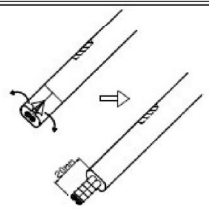
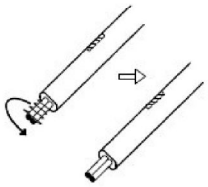
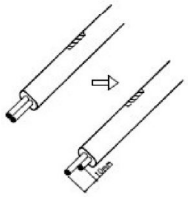
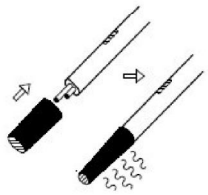
The cable is supplied in measured plastic or cardboard bobbins for a further reworking on part of the customer. The standard measures of the bobbins are: 100m – 250m – 400m – 500m.
At request, Calorflex can provide all the necessary accessories for the installation together with the heating cable.

Installation Instructions

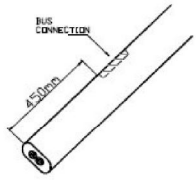
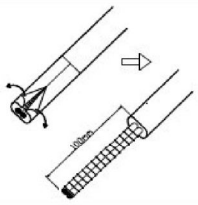
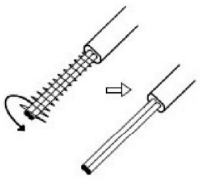
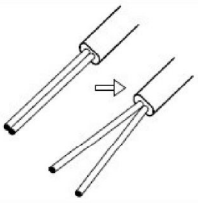
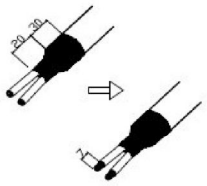
TOOLS REQUIRED:

Wire cutter; Trimming knife; Hot air gun

END SEAL

1	2	3	4	5
				
Cut the heating cable 50mm from the bus connection.	Cut and remove insulation jacket for 20mm.	Cut and remove heating element wire. Push any remaining heating element wire under the insulation jacket. Do not cut bus wire insulation.	Stagger cut one of the bus wires.	Slide end cap ECPC onto the end of the cable and shrink by hot air gun.

POWER CONNECTION

1	2	3	4	5
				
Cut the heating cable at least 450mm from the first bus connection.	Cut and remove insulation jacket for 100mm.	Cut and remove heating element wire. Push any remaining heating element wire under the insulation jacket. Do not cut bus wire insulation.	Divide bus wires cutting insulation jacket in the middle.	Position heat shrink sleeve SCPC as show and shrink by hot air gun. Remove for 7mm insulation jacket on conductors.