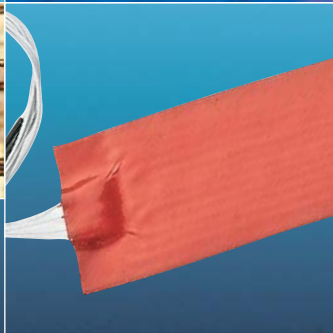




FLEXIBLE HEATING CABLES AND ELEMENTS  
TEMPERATURE MAINTENANCE SYSTEMS



## CSC2

## Silicon elastomer insulated drain-line heaters



## Characteristics

- Fully sealed.
- Double insulation.
- Extremely flexible.
- Voltage 230 V as standard.
- Power cable : Length 1m.
- Special production on request.

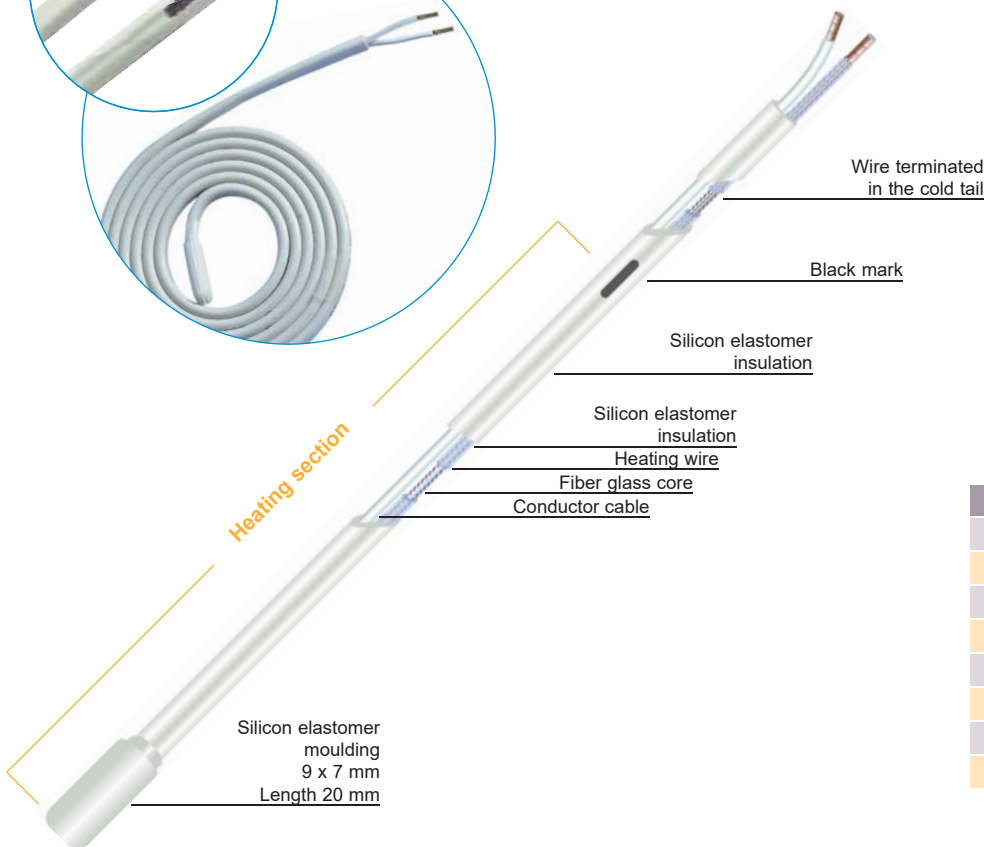
## Applications

CSC2 heaters are designed to be laid inside pipes for draining water from thawing refrigeration equipment installed in cold rooms.

They operate only during thawing cycles.

To ensure that these heating elements enjoy a long service life, we recommend using a control device.

Note: The most commonly used power rating is 50 W/m. However, for plastic pipes, we strongly recommend using the 40W/m range.



## Standard models

Length (m)	CSC2	
	40 W/m	50 W/m
1	40 W	50 W
1.3	52 W	65 W
1.5	60 W	75 W
2	80 W	100 W
3	120 W	150 W
4	160 W	200 W
5	200 W	250 W
6	240 W	300 W

**Caution**

These cables must never be cut to shorten the cold tail.

## Use

Drain-line heaters are serie resistors. Consult the pages of the catalogue devoted to the corresponding general operating principles, general instructions for use and accessories.

	CSC2
Heating wire	Nickel-Copper or Nickel-Chrome
Section	5 x 7 mm
Power	40 or 50 W/m
Voltage	Standard 230 V
Permissible surface temperature	from - 70°C to + 200°C
Tolerances	Power : ± 10 % Diameter : + 0.2 / - 0.1 mm Length : ± 1 %
Ingress protection code	IP67
Minimum bending radius	6 x the thickness

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## CSC2M

## Silicon elastomer insulated drain-line heaters

### "micro" size for refrigeration



### Characteristics

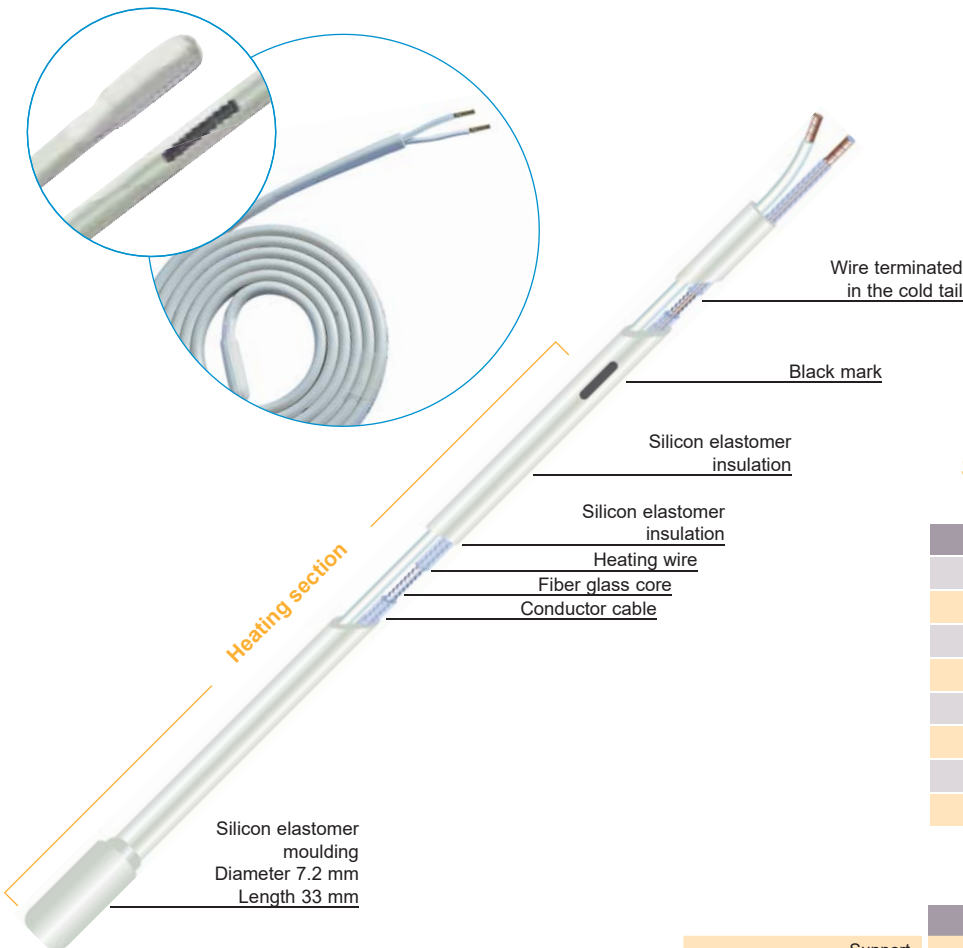
- Fully sealed.
- Double insulation.
- Extremely flexible.
- Voltage 230 V as standard.
- Power cable : length 1m.
- Very small size.
- Round shape.
- Special production on request.

### Applications

CSC2M heaters are designed to be laid inside pipes for draining water from thawing refrigeration equipment installed in cold rooms.

They operate only during thawing cycles.

To ensure that these heating elements enjoy a long service life, we recommend using a control device.



### Standard models

Length (m)	CSC2M
	40 W/m
1	40 W
1.3	52 W
1.5	60 W
2	80 W
3	120 W
4	160 W
5	200 W
6	240 W

### Caution

These cables must never be cut to shorten the cold tail.

### Use

Drain-line heaters are serie resistors. Consult the pages of the catalogue devoted to the corresponding general operating principles, general instructions for use and accessories.

	CSC2M
Support	Nickel-Copper or Nickel-Chrome
Diameter	4,8mm
Power	40 W/m
Voltage	Standard 230 V
Permissible surface temperature	From - 70°C to + 200°C
Tolerances	Power : ± 10 % Diameter : + 0.2 / - 0.1 mm Length : ± 1 %
Ingress protection code	IP67
Minimum bending radius	6 x the diameter

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### FST - FST/T - FST/I - FST/TP - FST/TF Self-regulating cables



#### Characteristics

- Can be cut to length on site.
- Will not self-destruct by overheating.
- Power supply 230 V.
- Available as 10, 15, 25, 30 or 40 W/m at + 10°C.
- FST : self-regulating cables thermoplastic insulation.
- FST/T : with tinned copper braid for mechanical protection and earthing.
- FST/I : with stainless steel braid for mechanical protection and earthing.
- FST/TP : with tinned copper braid and outer thermoplastic anticorrosion sheath.
- FST/TF : with tinned copper braid and outer fluoropolymer sheath, ideal for the chemical industry where corrosive products may be present.
- Special production on request.

#### Applications

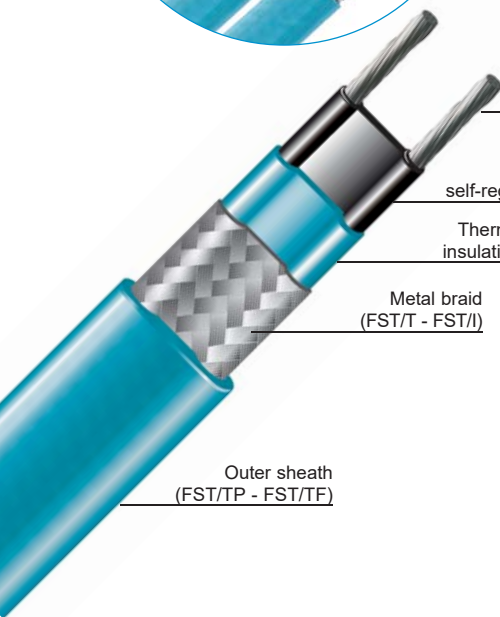
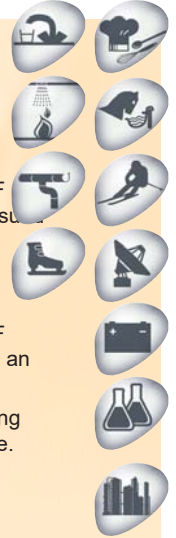
Self-regulating cables of the FST range are used to protect against freezing or to maintain moderate temperatures.

Cables of type FST/T, FST/I, FST/TP and FST/TF comply with the technical evaluation document issued by the CSTB.

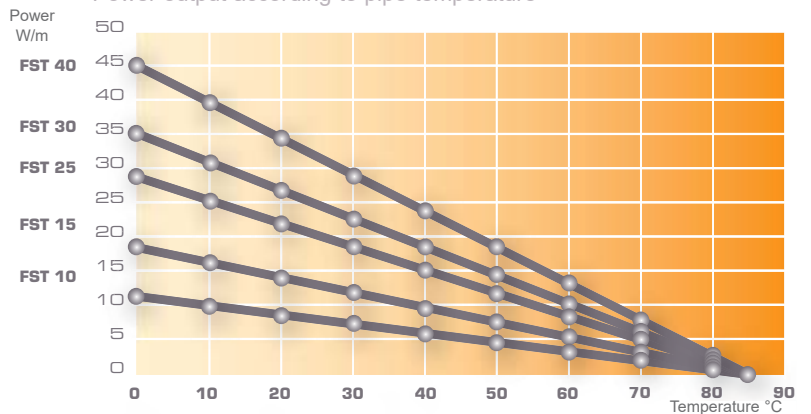
Cable FST/TP/30 is recommended for protecting against freezing in gutters.

Cables of type FST/T, FST/I, FST/TP and FST/TF can, with the appropriate accessories, be used in an explosive atmosphere.

To ensure that these heating elements enjoy a long service life, we recommend using a control device.



Power output according to pipe temperature



	FST 10	FST 15	FST 25	FST 30	FST 40
Dimensions	FST : 4 x 11 mm FST/T - FST/I : 4.7 x 11.8 mm FST/TP - FST/TF : 6 x 13 mm				
Power at 10°C	10 W/m	17 W/m	25 W/m	31 W/m	40W/m
Permissible surface temperature	Unenergized circuit : max. + 85°C				
Start-up current					
+10°C	0.07 A/m	0.1 A/m	0.13 A/m	0.16 A/m	0.21 A/m
0°C	0.08 A/m	0.12 A/m	0.16 A/m	0.19 A/m	0.26 A/m
- 20°C	0.12 A/m	0.15 A/m	0.21 A/m	0.24 A/m	0.32 A/m
Max. circuit length	198 m	154 m	124 m	110 m	88 m
Temperature class	T6 (85°C)		T4 (135°C)		
Ingress protection code	IP54 with our kits				
Min. bending radius	6 x the thickness of cable				

#### Use

Consult the pages of the catalogue devoted to the corresponding general operating principles, general instructions for use and accessories.

Certificat ATEX : CML 20ATEX3204 pour FST/TP et FST/TF  
Certificat IECEx : CML 20.0130 pour FST/TP et FST/TF

## TEMPERATURE MAINTENANCE SYSTEMS

### FTS0 - FTS0/T - FTS0/TS

## Silicon elastomer insulated constant power cables for refrigeration

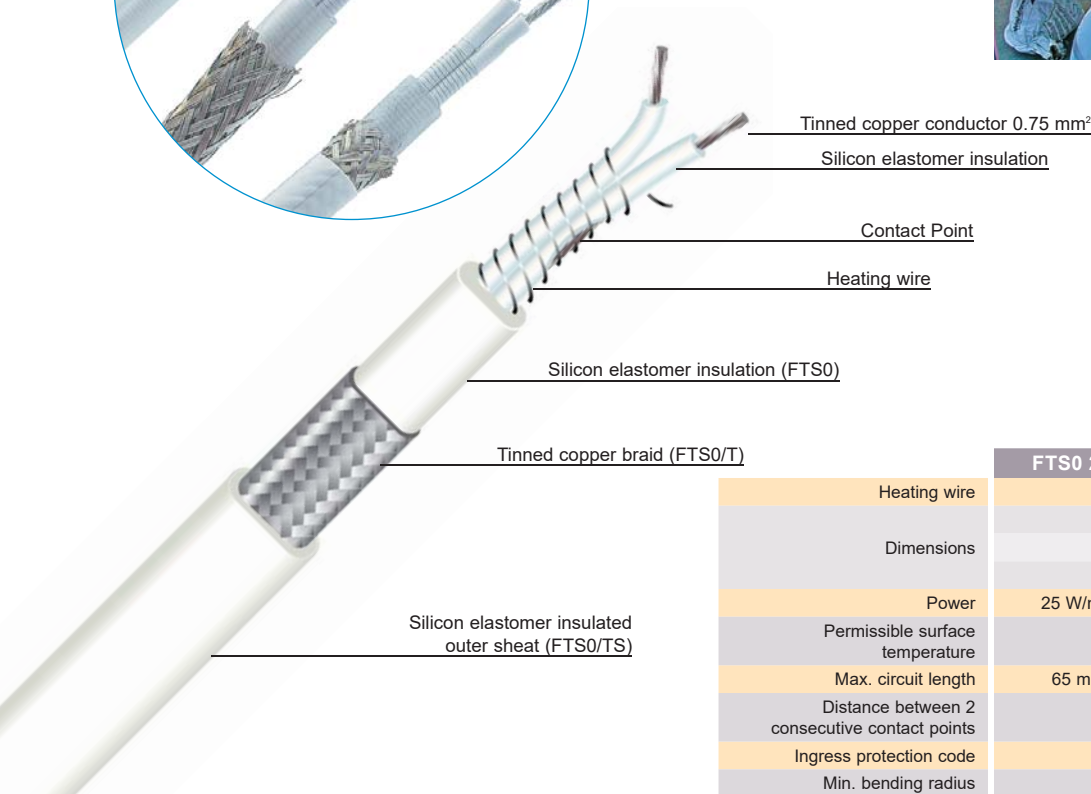
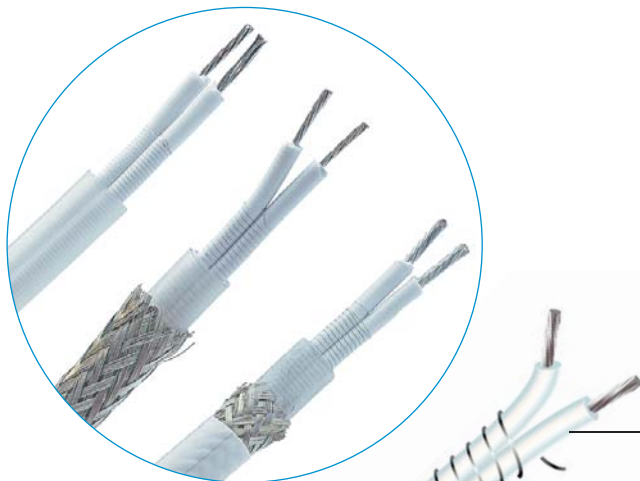


### Characteristics

- Can be cut to length on site.
- Extremely simple termination.
- Cold tail incorporated: no extra connection necessary.
- Available as 25, 40 or 50 W/m.
- Power supply: 230 V (24 V and 115 V on request).
- FTS0 : silicon elastomer insulated constant power cables.
- FTS0/T : with tinned copper braid for mechanical protection and earthing.
- FTS0/TS : with tinned copper braid and silicon elastomer insulated outer sheath.
- Special production on request.

### Applications

FTS0 cables are designed for use in industrial refrigeration. Their great flexibility means that they can be incorporated into cold room doors. They must not be used for temperature maintenance. To ensure that these heating elements enjoy a long service life, we recommend using a control device.



	FTS0 25	FTS0 40	FTS0 50
Heating wire	Nickel-Copper or Nickel-Chrome		
Dimensions	FTS0 : 5 x 7 mm		
	FTS0/T : 5.5 x 7.5 mm		
	FTS0/TS : 9 x 16 mm		
Power	25 W/m	40 W/m	50 W/m
Permissible surface temperature	from - 70°C to + 200°C		
Max. circuit length	65 m	50 m	44 m
Distance between 2 consecutive contact points	0.5 m		
Ingress protection code	IP54 with our kits		
Min. bending radius	6 x the thickness of cable		

### Use

Consult the pages of the catalogue devoted to the corresponding general operating principles, general instructions for use and accessories.



## FTSM - FTSM/T Silicon elastomer insulated constant power cable "micro"size for refrigeration



### Characteristics

- Very small diameter.
- Round shape.
- High flexibility
- Can be cut to length on site..
- Extremely simple termination.
- Cold tail incorporated: no extra connection necessary.
- Available as 10, 20, 30 et 40 W/m (others on request).
- Power supply: 230 V as standard (others on request).
- FTSM : silicon elastomer insulated constant power cable
- FTSM/T : with tinned copper braid for mechanical protection and earthing.

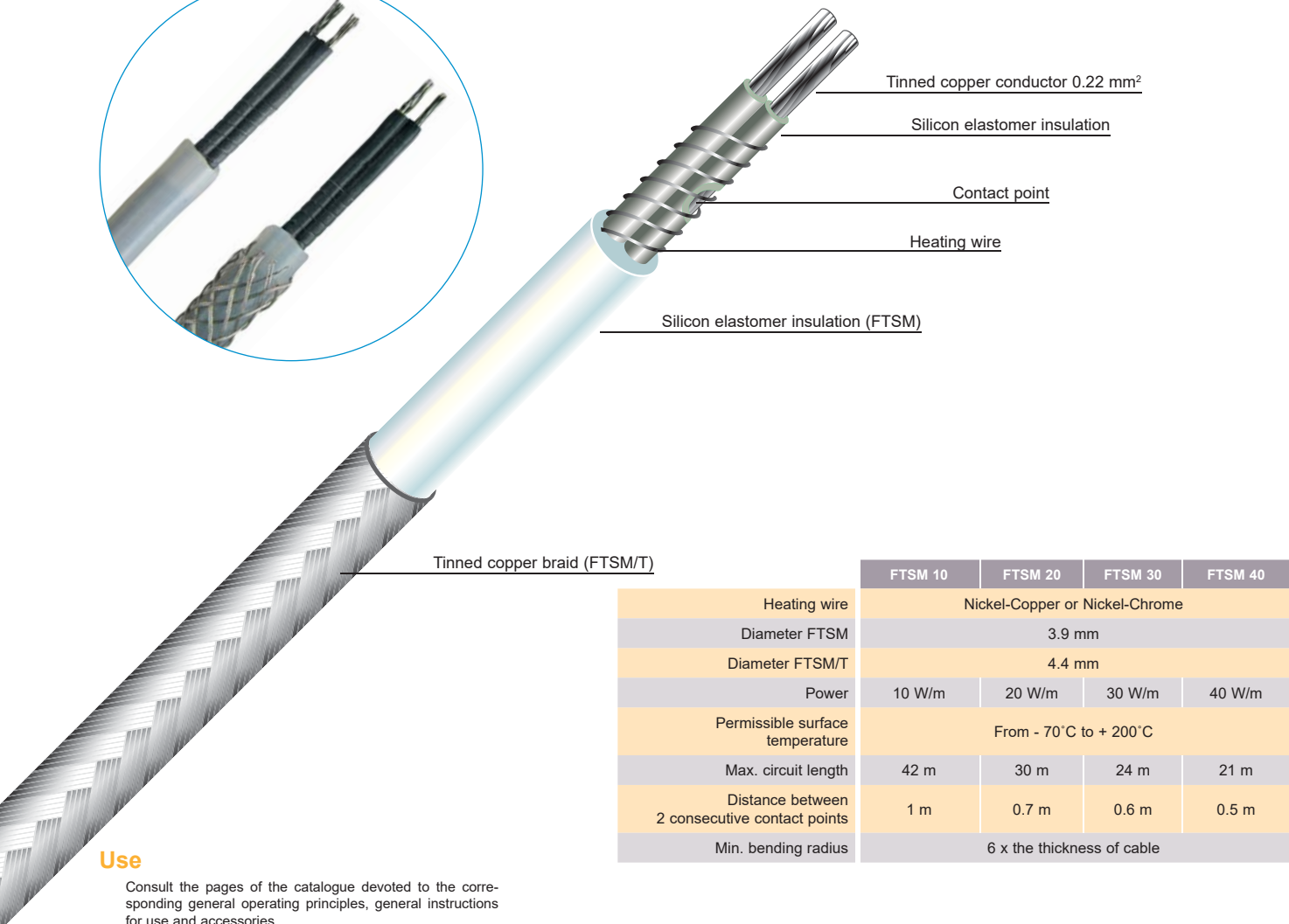
### Applications

FTSM cables are particularly suitable for applications in the refrigeration industry.

Its very small dimensions as well as its great flexibility down to -70°C means that this version is ideal for freeze protection and door frame heating in the refrigeration sector.

They must not be used for temperature maintenance.

To ensure that these heating elements enjoy a long service life, we recommend using a control device.



	FTSM 10	FTSM 20	FTSM 30	FTSM 40
Heating wire	Nickel-Copper or Nickel-Chrome			
Diameter FTSM	3.9 mm			
Diameter FTSM/T	4.4 mm			
Power	10 W/m	20 W/m	30 W/m	40 W/m
Permissible surface temperature	From - 70°C to + 200°C			
Max. circuit length	42 m	30 m	24 m	21 m
Distance between 2 consecutive contact points	1 m	0.7 m	0.6 m	0.5 m
Min. bending radius	6 x the thickness of cable			

### Use

Consult the pages of the catalogue devoted to the corresponding general operating principles, general instructions for use and accessories.



# FCH Heating belts for refrigeration compressors

### Characteristics

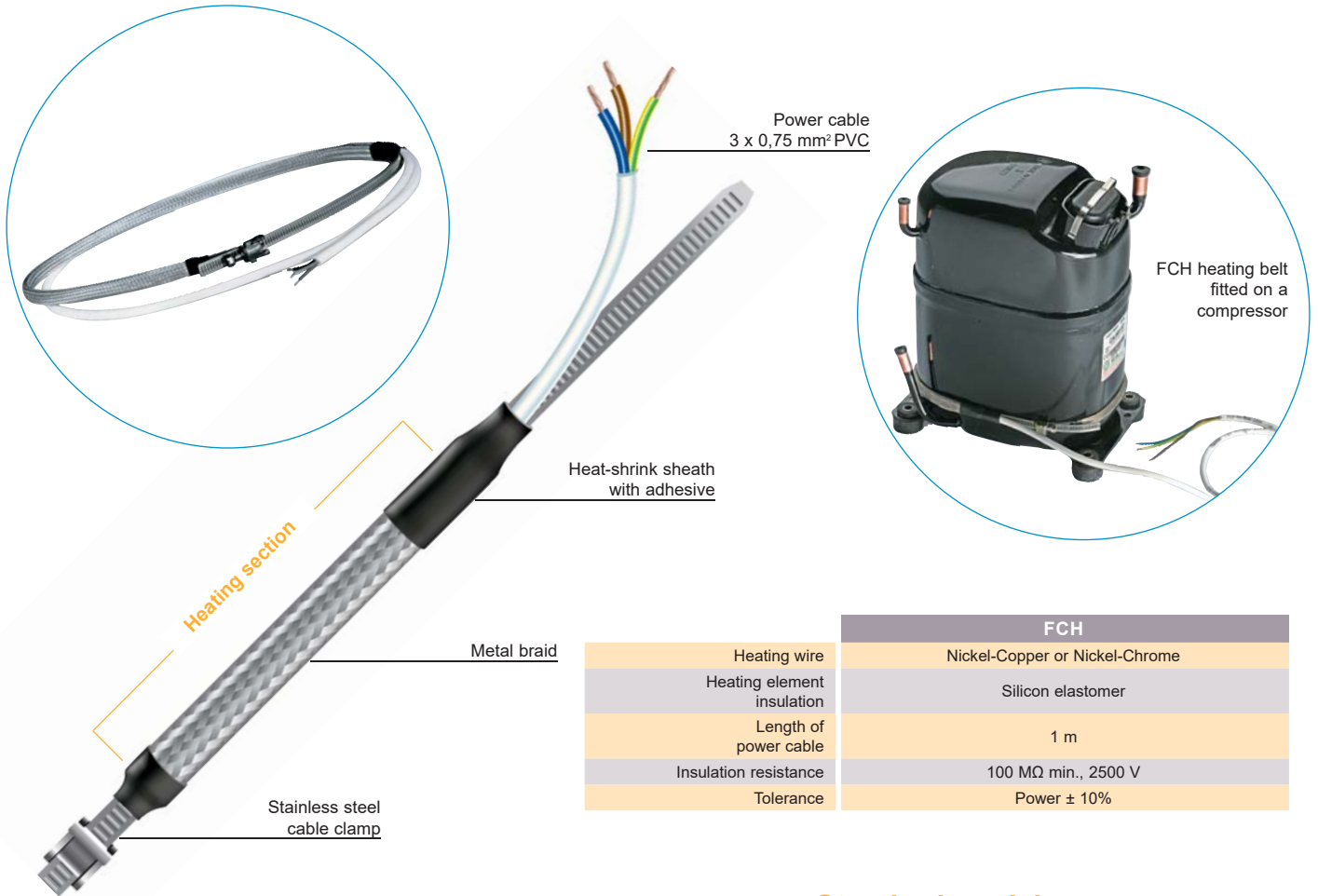
- Quick, safe and easy to fit.
- Sealed silicon insulated heating element.
- Metal braid for earthing.
- Voltage 230 V as standard.
- belts on request.
- Special production on request.
- Ingress protection code : IP54

### Applications

FCH heating belts are fitted to refrigerating compressors to prevent the coolant from being absorbed by the oil.

The lower the temperature, the quicker and the more complete the absorption, which can seriously damage the compressor, especially when starting up, through lack of lubrication.

To ensure that these heating elements enjoy a long service life, we recommend using a control device



	FCH
Heating wire	Nickel-Copper or Nickel-Chrome
Heating element insulation	Silicon elastomer
Length of power cable	1 m
Insulation resistance	100 MΩ min., 2500 V
Tolerance	Power ± 10%

### Standard models

	FCH-10	FCH-20	FCH-30	FCH-40	FCH-50	FCH-60
Power (W)	35	40	45	55	65	75
Min. clamping Ø (mm)	120	140	150	180	220	245
Max. clamping Ø (mm)	175	175	280	280	320	370

### Use

Heating belts are series resistors. Consult the pages of the catalogue devoted to the corresponding general operating principles, general instructions for use and accessories.

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