



RKF flat tubular elements have a wide range of applications. Its oval-shaped cross-section is particularly adapted to contact heating. The larger contact surface area of these resistors compared to round-tube resistors enables production of shorter resistors with higher load densities.

For oil heating, it is possible to install greater power with the same length as a round-tube resistor. As a result of its good flexibility, these elements can be bent to give shape to almost any application.



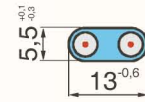
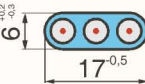
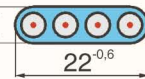
Common applications

- Gas or air heaters
- Fluid heating
- Oil heating
- Driers
- Friers
- Mould heating
- Filters
- Liquid containers
- Conveyor-belt heating
- **Special applications:** Railway and tramway heaters; needle changes.

General characteristics






- Flat tubular elements with stainless-steel AISI 321 sleeve, 80-20 grade nickelchromium alloy resistive wire insulated from the sleeve with highly compacted magnesium oxide of very good thermal conductivity.
- Ohmic values:
 - Minimum: 8 Ω per metre
 - Maximum: 1500 Ω per metre for a resistor of 2 conductors.
- Maximum length:
 - RKF 13 → 7000 mm
 - RKF 17 → 5,000 mm
 - RKF 22 → 5,000 mm
- Length tolerance: ±1% with a minimum of ±5 mm
- Inactive zone: Due to the production process, all RKF flat tubular elements have an inactive zone at the connections side of a minimum of 45 mm and at the tube end of a minimum of 25 mm.
- Connections: Smooth outlet Ø1.8 x 30 mm. Other connection possibilities on request.
- Special fabrications: RKF flat tubular elements can be supplied with longer inactive zones. They can also be fabricated with different power distributions over the length.

Sections

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 - **RKF 13. Section 13 x 5.5 mm**
 - In this section, the resistor has an approximate surface area of 3.3 cm² per cm of length. The maximum length is 7000 mm. In railway heating applications, we can supply standard models with different power densities and sealed connection.
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 - **RKF 17. Section 17 x 6 mm**
 - In this section, the resistor has an approximate surface area of 4.1 cm² per cm of length. The maximum length is 5,000 mm. This is the most commonly used model in industrial applications. Its greater length enables a wide variety of shapes to be produced, as well as different internal resistor layouts and power distributions.
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 - **RKF 22. Section 22 x 6 mm**
 - In this section, the resistor reaches an approximate surface area of 5.1 cm² per cm of length. The maximum length is 5,000 mm. As with type RKF 17, it is possible to produce a wide variety of internal resistor layouts.

Internal resistor layout

The RKF flat tubular elements can be fabricated with different internal resistor layouts. We can obtain different power levels in the same element by means of connections. The following illustrations show the connection possibilities for each model.

 <ul style="list-style-type: none"> • Profile type: RKF 13 / RKF 17 / RKF 22 • Description: Single-phase resistor with two outputs at one end 	 <ul style="list-style-type: none"> • Profile type: RKF 13 / RKF 17 / RKF 22 • Description: Two single-phase resistors with outputs at both ends 	 <ul style="list-style-type: none"> • Profile type: RKF 17 / RKF 22 • Description: Three single-phase resistors with outputs at both ends
 <ul style="list-style-type: none"> • Profile type: RKF 22 • Description: Single-phase resistor with two outputs at one end 	 <ul style="list-style-type: none"> • Profile type: RKF 22 • Description: Two single-phase resistors with four outputs at one end. Maximum voltage 400 V 	

Bending

RKF flat tubular elements are supplied straight unless specified otherwise. On request, these elements can be supplied bent according to the instructions given by the client, always taking into account the minimum radii of curvature.

In order to achieve maximum torsion of 90°, a minimum length of 25 mm is required. It is not recommended to change the shape of the resistor in any way between the inactive zone and the connection.

The following minimum radii of curvature must be taken into account when bending the resistor:

Minimum radius of curvature

	RKF 13	RKF 17	RKF 22
Flat-face curves	10 mm	12,5 mm	18 mm
Curves at edges	20 mm	25 mm	75 mm

