



## CRN TECNOPART, S.A.

Sant Roc 30  
 08340 VILASSAR DE MAR (Barcelona)  
 Tel 902 404 748 - 937 591 484 Fax 937 591 547  
 e-mail: [crn@crntp.com](mailto:crn@crntp.com) [http:// www.crntecnopart.com](http://www.crntecnopart.com)

**ELSTEIN**

**IRE-070.10E**



## ELSTEIN FSF PANEL RADIATORS ARE CERAMIC INFRARED RADIATORS WITH A LOW OVERALL HEIGHT

Elstein FSF panel radiators, are ceramic infrared radiators with a low overall height. They are produced using a full-pour casting ceramic process and are designed for operating temperatures up to 750 °C and surface ratings up to 64 kW/m<sup>2</sup>. Compared to other

Elstein panel radiators, the overall height of the FSF radiators, measured from the radiation surface up to the mounting plate, has been reduced by approximately 45%.

FSF series radiators can be used universally. The low overall height of the radiators enables space-saving installation, for example, which may be required to retrofit machines.

FSF radiators are available in four designs and cover the power range from 60 W to 1000 W.

Elstein FSF panel radiators have the customary market dimensions and can therefore be replaced with radiators with corresponding properties if the requirements change.



<b>Type, weight, wattage</b>	<b>FSF</b>	<b>122 x 122 mm</b>	<b>250</b>	<b>400</b>	<b>600</b>	<b>800</b>	<b>1000</b>	<b>W</b>
	<b>FSR</b>	<b>245 x 60 mm.</b>	<b>250</b>	<b>400</b>	<b>600</b>	<b>800</b>	<b>1000</b>	<b>W</b>
	<b>FSR/2</b>	<b>122 x 60 mm.</b>	<b>125</b>	<b>200</b>	<b>300</b>	<b>400</b>	<b>500</b>	<b>W</b>
	<b>FSR/4</b>	<b>60 x 60 mm.</b>	<b>60</b>	<b>100</b>	<b>150</b>	<b>200</b>	<b>250</b>	<b>W</b>
Surface rating			16	25,6	38,4	51,2	64	kW
Typical operating temperature			400	500	590	670	720	° C
Maximum permissible temperature			750	750	750	750	750	° C
Wavelength range			2 - 10					µm

Standard design	Thermocouple radiator	Variants
Operating voltage 230 V Ceramic full-pour casting Leads 85 mm Elstein standard socket Mounting set	Integrated thermocouple Type K (NiCr-Ni) Designation T-FSF, T-FSF/1, T-FSF/2, T-FSF/4 TC leads 100 mm	Special wattages Special voltages Extended leads Live leads with ring terminals

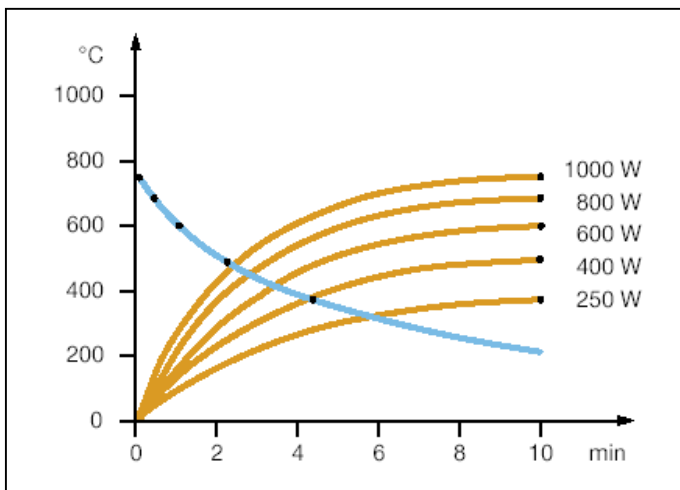
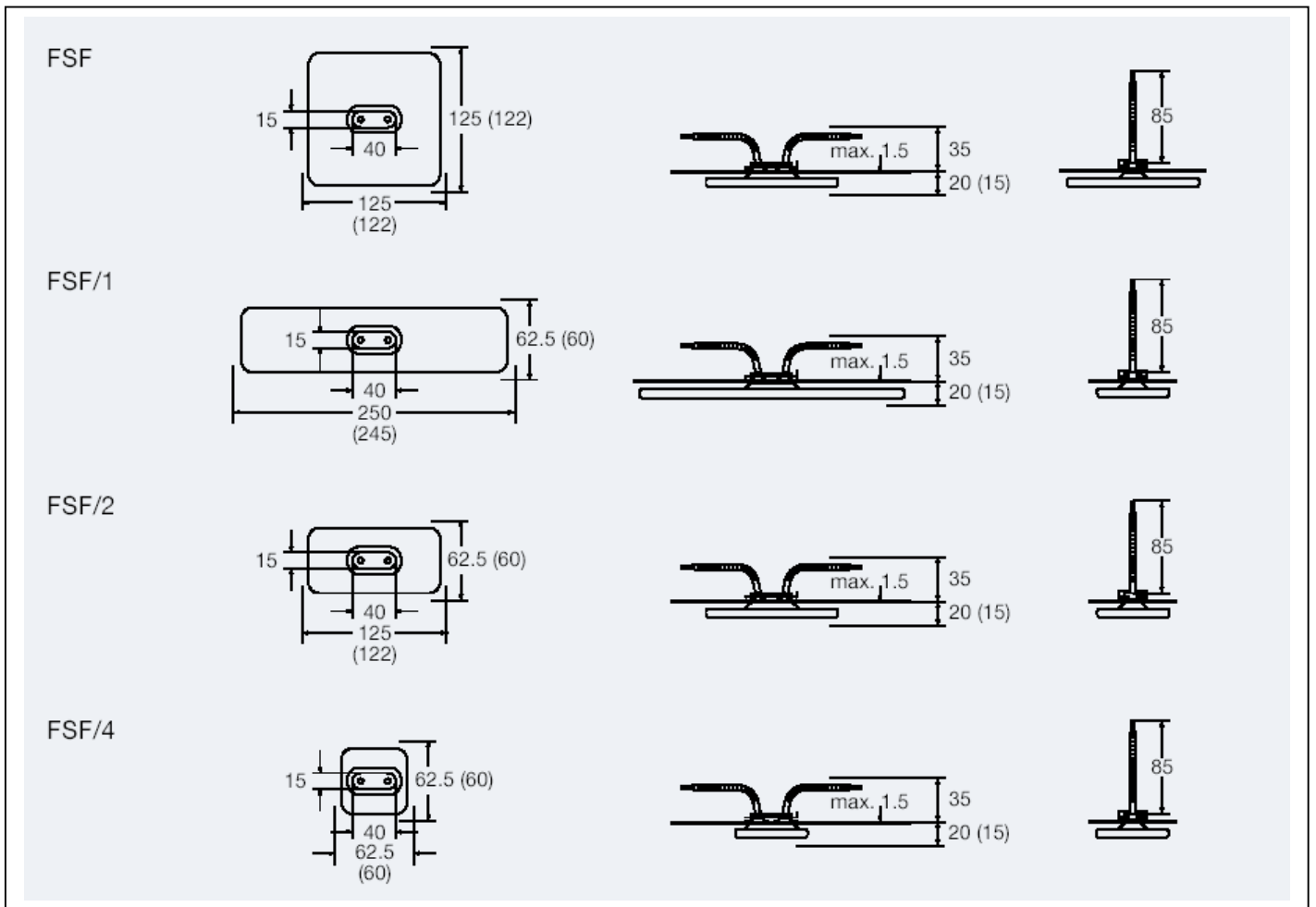
The power can be controlled using thermocouple radiators together with TRD temperature controllers, TSE thyristor switching units and other accessories.

IR radiation areas can be assembled using MBO mounting sheets.

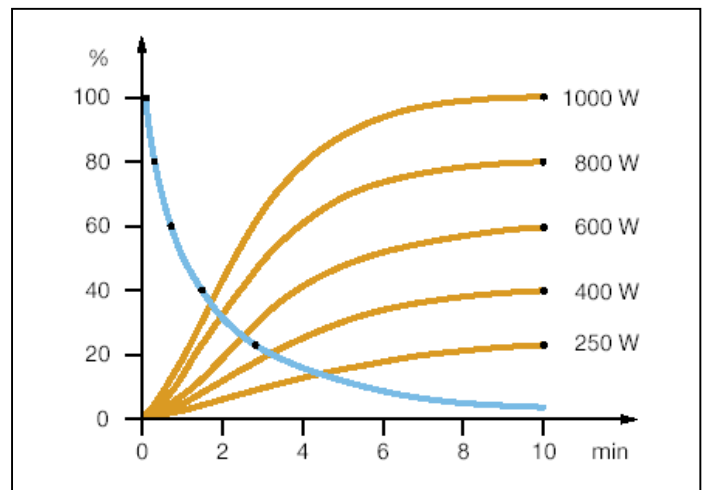
The national safety regulations must be complied with for the respective application, for example, the IEC or EN standard 60519-1, Safety in electrical heating installations.

Further information and safety information are given in the mounting instruction enclosed with each radiator.

**Mounting dimensions and radiator dimensions ( ) in mm**



**Radiator temperatures**  
 Heating-up: red curves  
 Cooling-down: blue curve



**Radiant powers**  
 Heating-up: red curves  
 Cooling-down: blue curve