



Figure 1: Elstein BSI construction panel 1250 x 1875 mm with HTS

Elstein BSI construction panels are infrared radiation areas, which can be equipped with the ceramic IR panel radiators HTS or HSR.

The ceramic infrared panel radiators are fixed to the MBO mounting sheets and surrounded with a housing of frame and capping sections.

All housing parts consist of stainless steel so that radiators with high power can be used, too.

The BSI construction panels are factory assembled so that the user only has to do the wiring, insert the BSI panel in a steel section frame to be made on site and connect the panel with the electricity mains.

Elstein BSI construction panels are available in dimensions from 125 x 250 mm to 1000 x 1500 mm and can be fitted with HTS radiators up to 800 W or rather with HSR radiators up to 1000 W.

Length in mm

Inner dim. (Outer dim.) [No. of rad.]	250 (303) [2]	375 (428) [3]	500 (553) [4]	625 (678) [5]	750 (803) [6]	875 (928) [7]	1000 (1053) [8]	1125 (1178) [9]	1250 (1303) [10]	1375 (1428) [11]	1500 (1553) [12]		Radiator wattage
125 (178) [1]	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	kW	250 W
	to 2.00	to 3.00	to 4.00	to 5.00	to 6.00	to 7.00	to 8.00	to 9.00	to 10.00	to 11.00	to 12.00	kW	1000 W
250 (303) [2]	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	kW	250 W
	to 4.00	to 6.00	to 8.00	to 10.00	to 12.00	to 14.00	to 16.00	to 18.00	to 20.00	to 22.00	to 24.00	kW	1000 W
375 (428) [3]	1.50	2.25	3.00	3.75	4.50	5.25	6.00	6.75	7.50	8.25	9.00	kW	250 W
	to 6.00	to 9.00	to 12.00	to 15.00	to 18.00	to 21.00	to 24.00	to 27.00	to 30.00	to 33.00	to 36.00	kW	1000 W
500 (553) [4]	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	kW	250 W
	to 8.00	to 12.00	to 16.00	to 20.00	to 24.00	to 28.00	to 32.00	to 36.00	to 40.00	to 44.00	to 48.00	kW	1000 W
625 (678) [5]	2.50	3.75	5.00	6.25	7.50	8.75	10.00	11.25	12.50	13.75	15.00	kW	250 W
	to 10.00	to 15.00	to 20.00	to 25.00	to 30.00	to 35.00	to 40.00	to 45.00	to 50.00	to 55.00	to 60.00	kW	1000 W
750 (803) [6]	3.00	4.50	6.00	7.50	9.00	10.50	12.00	13.50	15.00	16.50	18.00	kW	250 W
	to 12.00	to 18.00	to 24.00	to 30.00	to 36.00	to 42.00	to 48.00	to 54.00	to 60.00	to 66.00	to 72.00	kW	1000 W
875 (928) [7]	3.50	5.25	7.00	8.75	10.50	12.25	14.00	15.75	17.50	19.25	21.00	kW	250 W
	to 14.00	to 21.00	to 28.00	to 35.00	to 42.00	to 49.00	to 56.00	to 63.00	to 70.00	to 77.00	to 84.00	kW	1000 W
1000 (1053) [8]	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00	kW	250 W
	to 16.00	to 24.00	to 32.00	to 40.00	to 48.00	to 56.00	to 64.00	to 72.00	to 80.00	to 88.00	to 96.00	kW	1000 W

Maximum surface rating 64.0 kW/m²

Weight approx. 50 kg/m²

Other dimensions and surface ratings available on request

Figure 2: Overview of the standard dimensions, outer dimensions (), number of radiators [] and the connected loads in kW

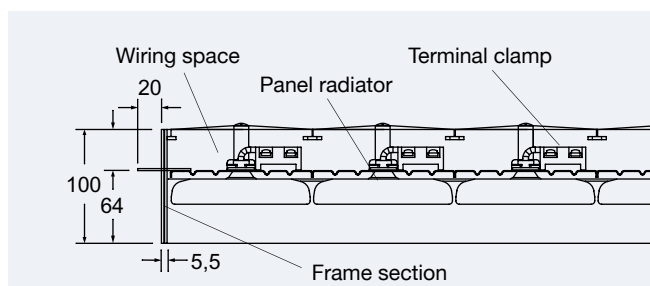


Fig. 3: Structural design of the BSI construction panel



Fig. 4: Wiring space of a BSI construction panel

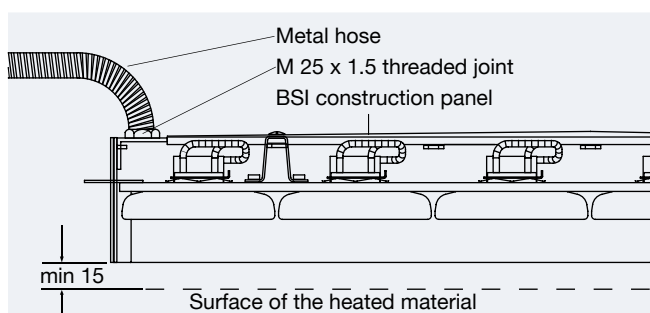


Fig. 5: Arrangement of the connection unit for establishing the mains connection



Fig. 6: BSI construction panel, inserted in a steel section frame

Standard scope of delivery (variants available on request)

Ceramic infrared radiators HSR or HTS, T-HTS, fitted

Radiators can be chosen from the radiator power ratings 250 W, 400 W, 600 W and 800 W. The HSR radiators can be fitted also up to 1000 W. Mixed radiator wattages can also be fitted. One thermocouple radiator is provided for each construction panel equipped with HTS.

Frame sections with mounting fishplates and capping sections both made from stainless steel, fitted

These components are used to surround the ceramic infrared radiators fixed to the MBO mounting sheets and to hang the BSI construction panel into a steel section frame to be built on site.

AK bipolar terminal clamps, fitted and connected with radiator power leads

For the electrical wiring of the individual radiators in connection with heat resistant insulated nickel wires and connection of the thermocouple radiator with the heat resistant insulated thermo line.

Mounting units, enclosed, individual parts are not fitted

A mounting unit contains an angle section, up to 3 heat resistant flexible metal hoses with a length of 1m and screw fitting accessories. The hoses are used to hold the nickel wire and thermo line and to protect them from mechanical stress. The mounting units can be fixed to anywhere on the BSI frame section.

Wiring material (nickel wire, thermo line), enclosed

Nickel wire (2.5 mm², max. 500 °C, max. 11 A) is supplied for the electrical wiring of the ceramic infrared radiators. The thermo line (1 mm², max. 400 °C) is used to connect the thermocouple to the controller. The Elstein product range includes a compensating line (1 mm², max. 100 °C) for extending this connection outside the IR radiation area.

Further information and safety information are given in the technical explanations of this brochure. The BSI mounting instruction also includes safety information as well as further details about the installation and the electrical connection.



Figure 1: Elstein FIS focus infrared radiator

Elstein focus infrared radiators FIS are ceramic IR-dark radiators with reflector made of aluminium and E27 screw caps.

The aluminium reflector focuses the infrared radiation being generated by a ceramic rod radiator so that the FIS radiator transmits a high radiation power to a small area.

This concentration of radiation power is especially suited for solving tasks dealing with the heating of selective or small areas.

The standardised E27 thread allows easy and safe installation, as the radiators can be screwed in like bulbs into porcelain or metal sockets with porcelain insert.

The standard power of Elstein focus infrared radiators FIS is 250 W.

FIS

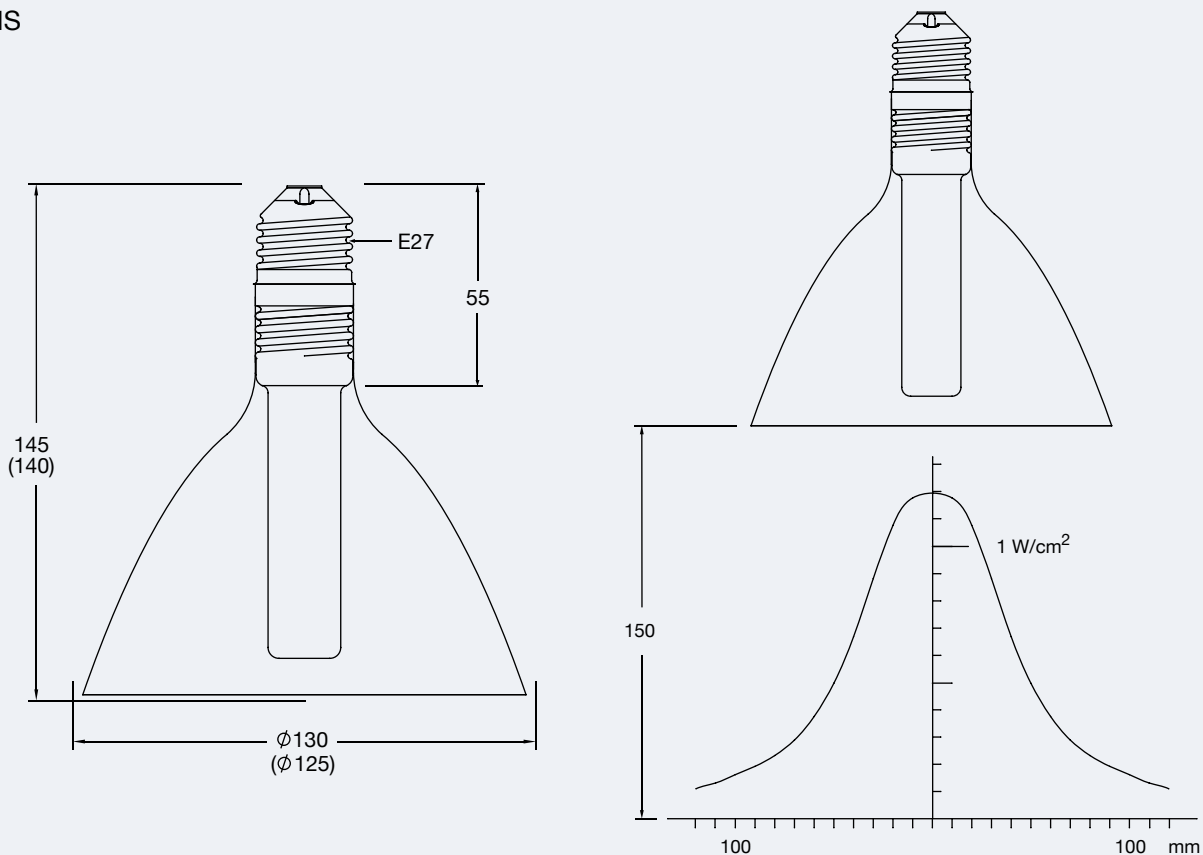


Figure 2: Mounting dimensions and radiator dimensions () in mm and power distribution

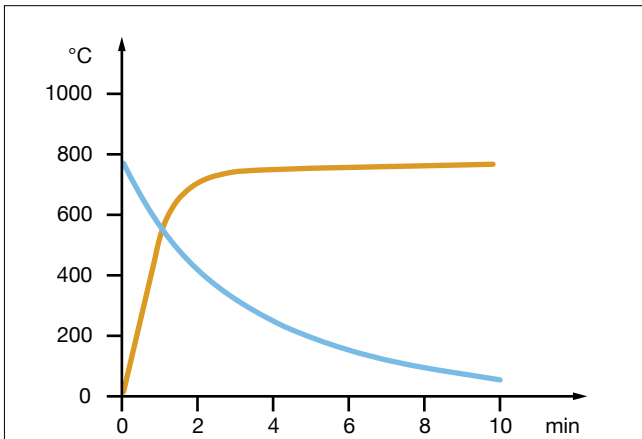


Fig. 3: Radiator temperatures
 Heating-up: red curve
 Cooling-down: blue curve

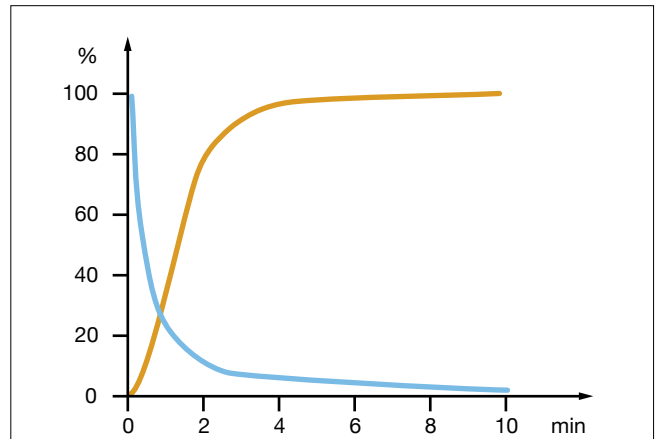


Fig. 4: Radiant powers
 Heating-up: red curve
 Cooling-down: blue curve

Type, weight, wattage	FIS	90 g	250	W
Surface rating			12.3	kW/m ²
Typical operating temperature			750	°C
Maximum permissible temperature			750	°C
Wavelength range			2 - 10	µm

<p>Standard design</p> <p>Operating voltage 230 V Aluminium reflector E27 Edison screw cap</p>	<p>Thermocouple radiators</p> <p>Not available.</p> <p>For means of controlling output see below.</p>	<p>Variants</p> <p>Special wattages Special voltages on request</p>
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The power can be adjusted using proprietary power controllers or dimmers.

Porcelain or metal sockets with porcelain inserts are to be used both for electrical and mechanical connection of Elstein FIS radiators. The sockets must not contain any plastic components.

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 is given in the safety information enclosed with each radiator.



Figure 1: Elstein HLF panel radiator

Elstein HLF panel radiators are ceramic infrared radiators, which can be used for operating temperatures up to 700°C and surface ratings up to 42 kW/m².

The elongated socket of the HLF radiators allows inserting of a heat insulation layer between the radiation surface and the mounting sheet.

Due to this design in connection with heat insulation the radiation efficiency of a ceramic radiator was increased significantly for the first time. On the other hand a relatively thick heating panel was the consequence.

In the course of the further development the heat insulation was integrated into the radiator. This led to our HTS high temperature radiator with short standard socket. Today the radiators of the HTS series are the industrial state-of-the-art for heating and drying machines.

Elstein HLF panel radiators cover the power range from 250 W to 650 W.

HLF

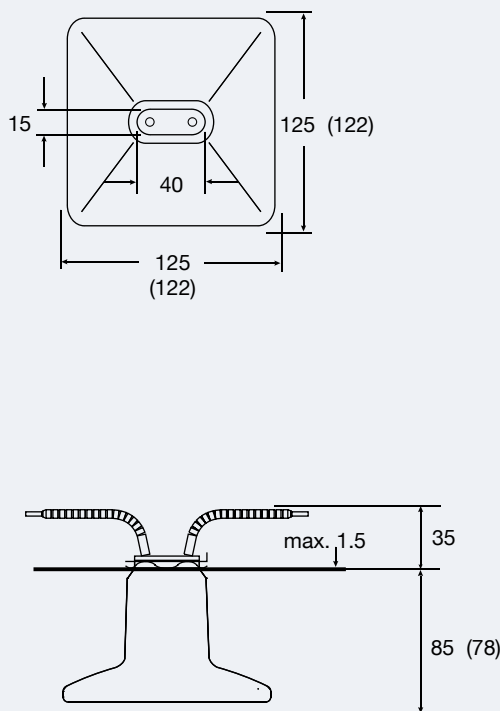
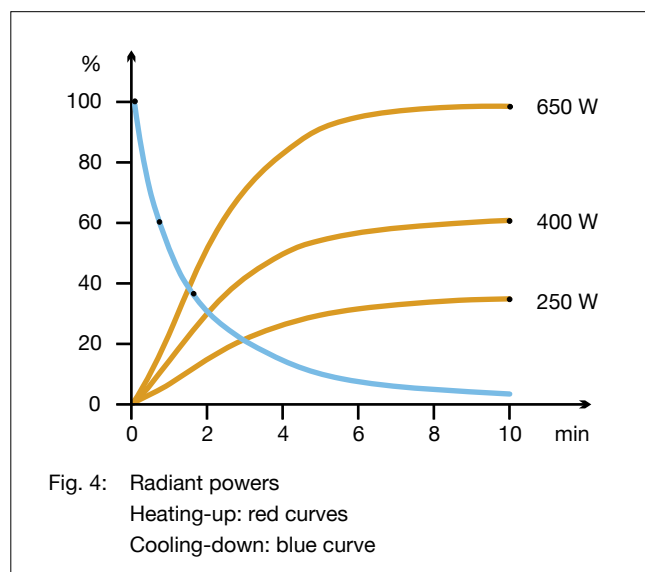
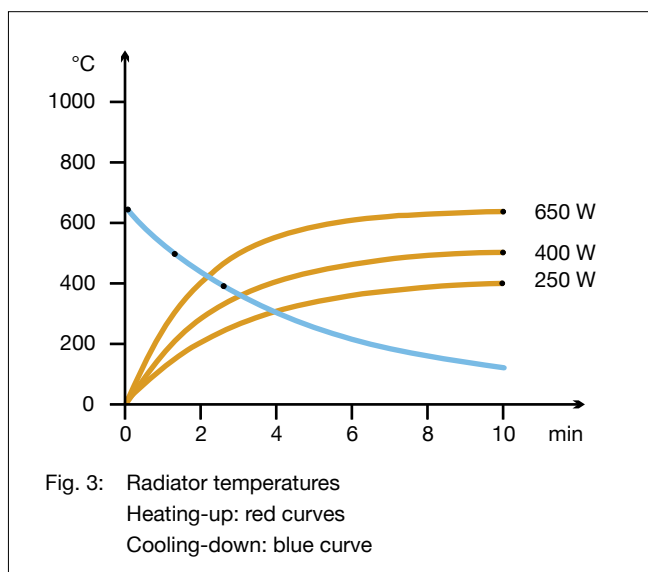


Figure 2: Mounting dimensions and radiator dimensions () in mm



Type, weight, wattage	HLF	270 g	250	400	650	W
Surface rating			16.0	25.6	41.6	kW/m ²
Typical operating temperature			420	510	630	°C
Maximum permissible temperature			700	700	700	°C
Wavelength range			2 - 10			µm

Standard design Operating voltage 230 V Ceramic hollow casting Leads 85 mm Elstein standard socket Mounting set	Thermocouple radiators Integrated thermocouple Type K (NiCr-Ni) Designation T-HLF TC leads 100 mm	Variants Special wattages Special voltages Extended leads Live leads with ring terminals
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The power can be controlled using thermocouple radiators together with TRD temperature controllers, TSE thyristor switching units and other accessories.

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.



Figure 1: Elstein HLF/S panel radiator

Elstein HLF/S panel radiators are ceramic infrared radiators, which can be used for operating temperatures up to 750 °C and surface ratings up to 64 kW/m².

Compared to other Elstein panel radiators the design of HLF/S-radiators is characterised by a heightened back with an extended socket.

HLF/S panel radiators are used in heating panels or machines, which are designed for the model of HLF/S radiators.

Since the Elstein HTS series with integrated thermal insulation was developed the HTS radiators represent the industrial state-of-the-art and are preferred for implementing projects of new machines and plants.

Elstein HLF/S panel radiators cover the power range from 250 W to 1000 W.

HLF/S

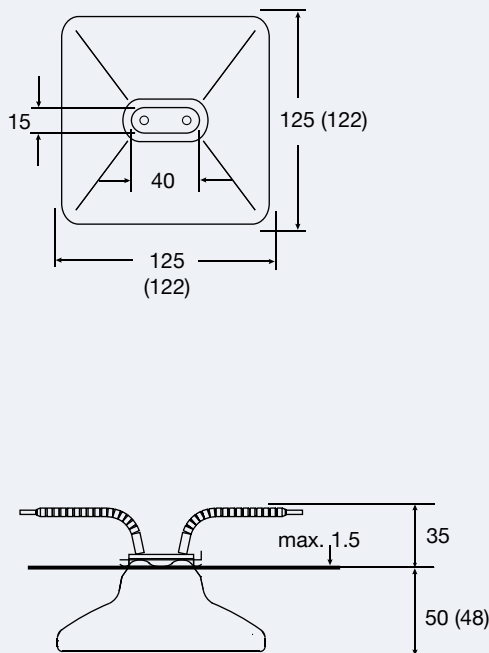
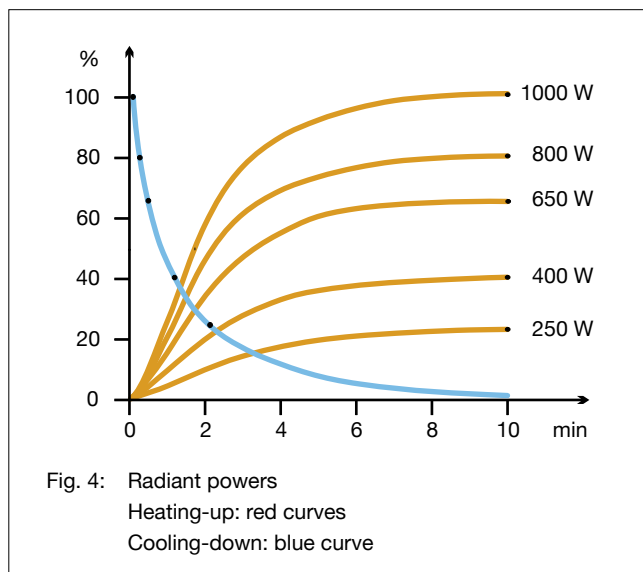
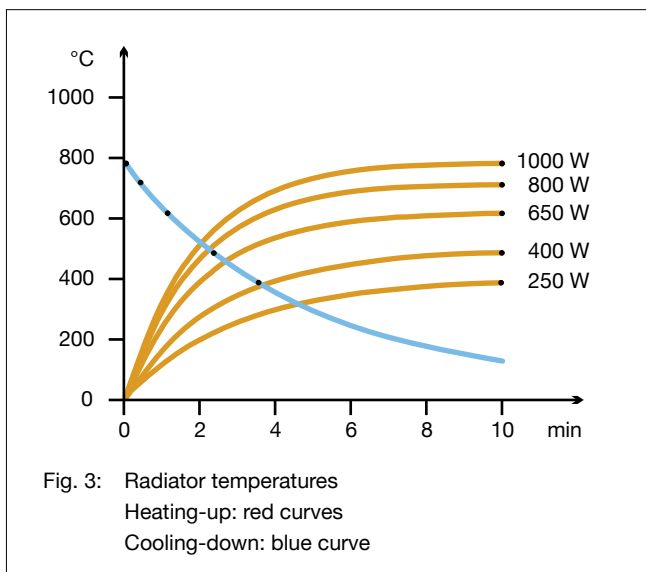


Figure 2: Mounting dimensions and radiator dimensions () in mm



Type, weight, wattage	HLF/S	220 g	250	400	650	800	1000	W
Surface rating			16.0	25.6	41,6	51.2	64.0	kW/m ²
Typical operating temperature			420	530	660	700	720	°C
Maximum permissible temperature			750	750	750	750	750	°C
Wavelength range			2 - 10					µm

Standard design Operating voltage 230 V Ceramic hollow casting Leads 120 mm Elstein standard socket Mounting set	Thermocouple radiators Integrated thermocouple Type K (NiCr-Ni) Designation T-HLF/S TC leads 120 mm	Variants Special wattages Special voltages Extended leads Live leads with ring terminals
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The power can be controlled using thermocouple radiators together with TRD temperature controllers, TSE thyristor switching units and other accessories.

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.



Figure 1: Elstein IPO screw radiator

Elstein radiators IPO are ceramic infrared dark radiators with E27 screw cap.

The standardised E27 thread allows easy and safe installation, as the radiators can be screwed in like bulbs into porcelain or metal sockets with porcelain insert.

Due to their simple connection, IPO infrared radiators are suitable both for individual operation and for configuring groups of radiators.

An example for an application is shown in our product catalog. A three dimensional heating panel for laminating door trims was built by using IPO radiators (page 5, figure 8).

The power can be adjusted using a proprietary dimmer.

Elstein screw radiators IPO have a power of 150 W.

IPO

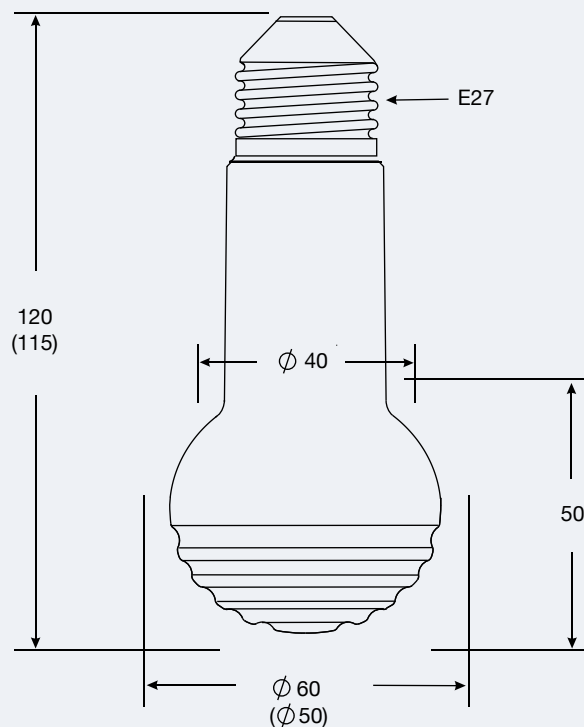
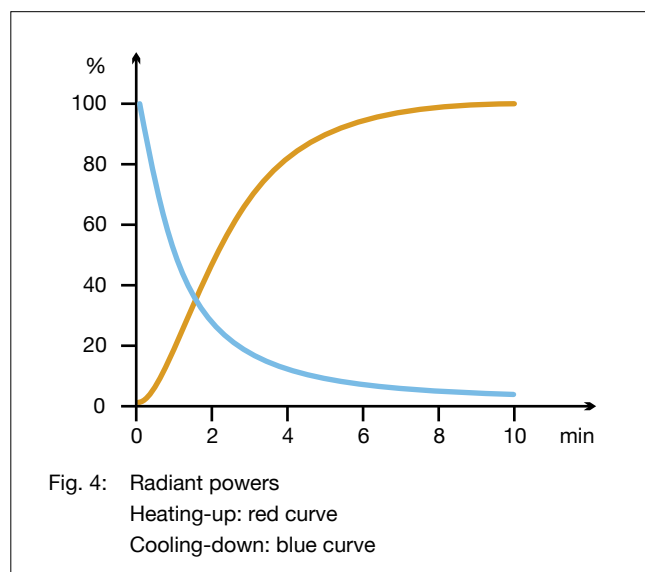
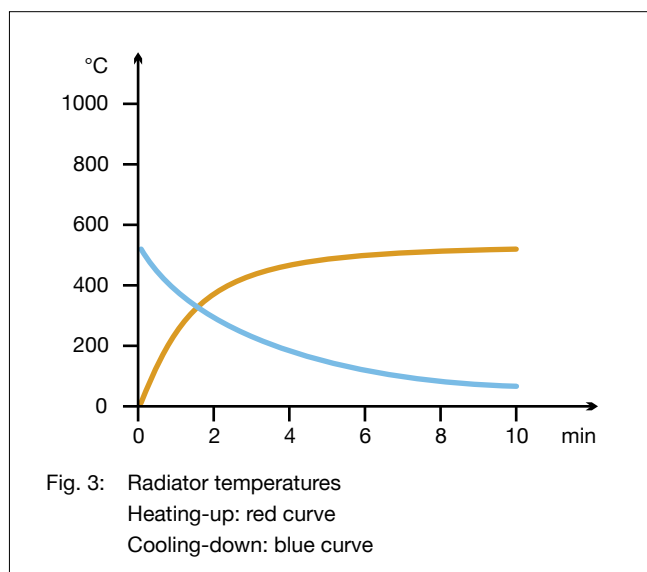


Figure 2: Mounting dimensions and radiator dimensions () in mm



Type, weight, wattage	IPO	75 g	150	W
Surface rating			38.4	kW/m ²
Typical operating temperature			510	°C
Maximum permissible temperature			550	°C
Wavelength range			2 - 10	µm

Standard design Operating voltage 230 V Ceramic hollow casting E27 Edison screw cap	Thermocouple radiators Not available. For means of controlling output see below.	Variants Special wattages Special voltages
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The power can be adjusted using proprietary power controllers or dimmers.

Porcelain or metal sockets with porcelain inserts are to be used both for electrical and mechanical connection of Elstein IPO radiators. The sockets must not contain any plastic components.

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 is given in the safety information enclosed with each radiator.



Figure 1: Elstein IPT screw radiator

Elstein IPT radiators are ceramic infrared dark radiators with E27 screw caps.

The standardised E27 thread allows easy and safe installation, as the radiators can be screwed in like bulbs into porcelain or metal sockets with porcelain insert.

Due to their simple connection, IPT infrared radiators are suitable both for individual operation and for configuring groups of radiators.

They have diverse applications, in particular they range over terrariums/pets and livestock as well as breeding.

The power can be adjusted using a proprietary dimmer.

Elstein IPT ceramic infrared radiators are available with a power of 100 W.

IPT

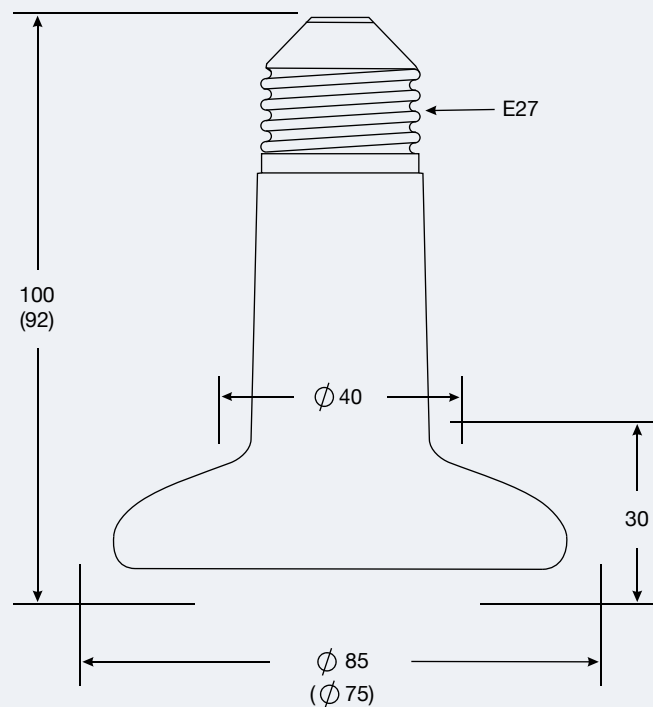
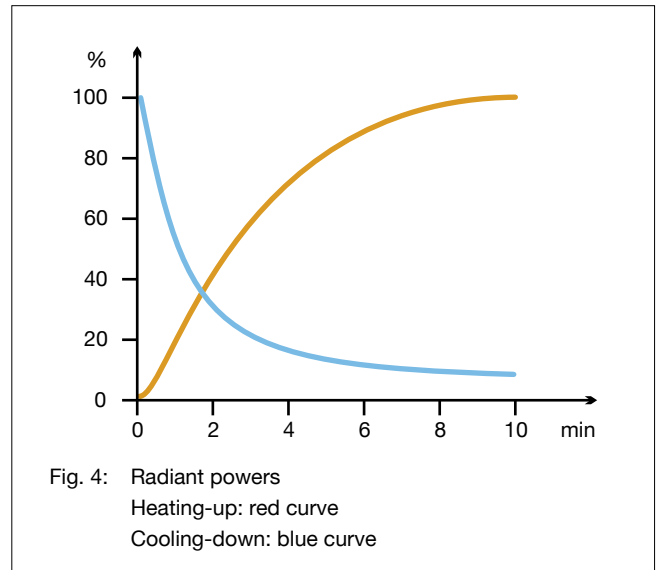
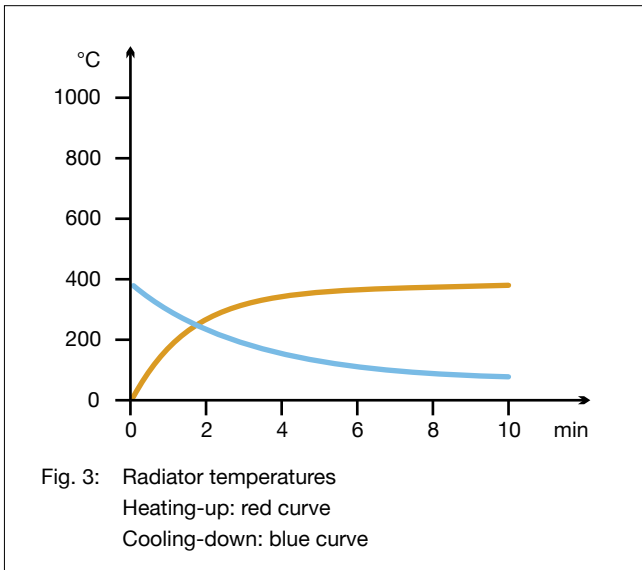


Figure 2: Mounting dimensions and radiator dimensions () in mm



Type, weight, wattage	IPT	85 g			
Surface rating			100		W
Typical operating temperature			14.4		kW/m ²
Maximum permissible temperature			380		°C
Wavelength range			530		°C
			2 - 10		μm

<p>Standard design</p> <p>Operating voltage 230 V Ceramic hollow casting E27 Edison screw cap</p>	<p>Thermocouple radiators</p> <p>Not available.</p> <p>For means of controlling output see below.</p>	<p>Variants</p> <p>Special wattages Special voltages</p>
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The power can be adjusted using proprietary power controllers or dimmers.

Porcelain or metal sockets with porcelain inserts are to be used both for electrical and mechanical connection of Elstein IPT radiators. The sockets must not contain any plastic components.

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 and VDE 0700 Part 71 or EN 60335-2-71, Regulations for Electrical heaters in animal breeding and keeping of livestock.

Further information is given in the safety information enclosed with each radiator.



Figure 1: Elstein IRS/330 rod radiator

Elstein IRS/330 rod radiators are ceramic infrared radiators with operating temperatures up to 750 °C and surface ratings up to 36 kW/m². They have one mounting socket on each side, with which they can be fixed to a mounting sheet with fixing springs.

The IRS/330 rod radiators replace the ISS radiators. They have larger mounting sockets and the heating rod has a bigger diameter. Both lead to an improved mechanical strength and high service life.

IRS/330 can be used in already existing ISS-systems or reflectors. Only the holes need to be enlarged so that the bigger sockets of IRS/330 can be inserted.

Next to linear heating tasks IRS/330 rod radiators are used as room, comfort or patio heater as well as heating element on terrasses.

Elstein IRS/330 rod radiators are available with a power of 250 W and 400 W.

IRS/330

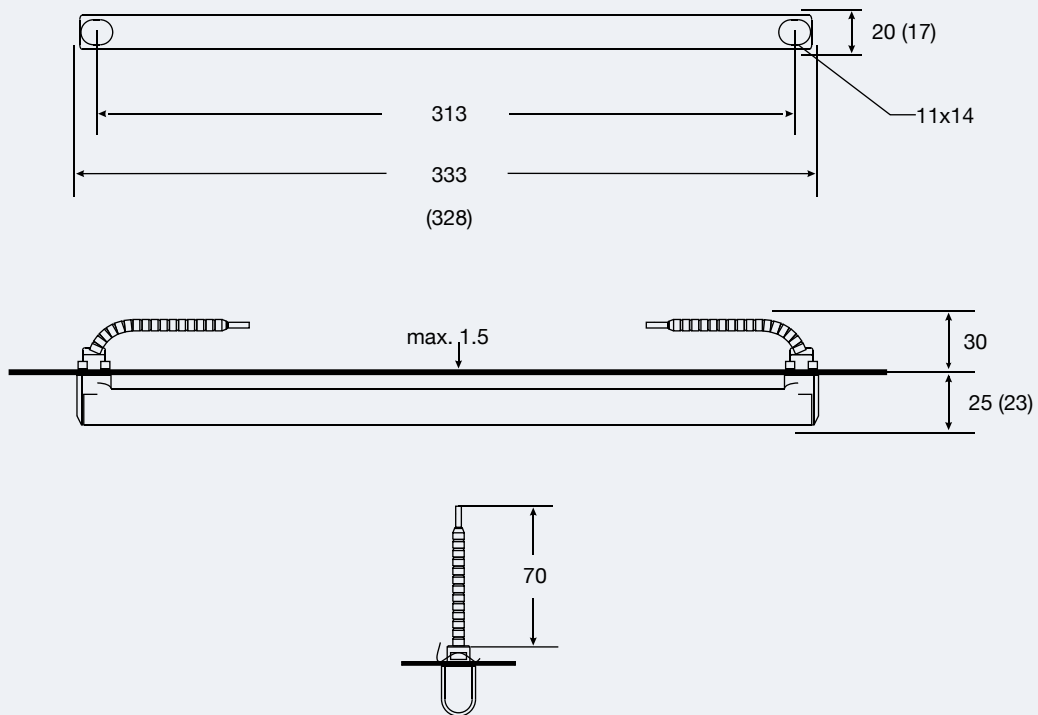
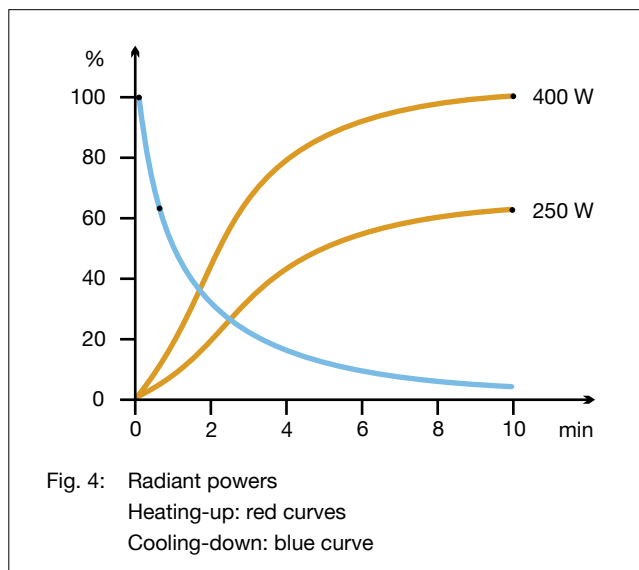
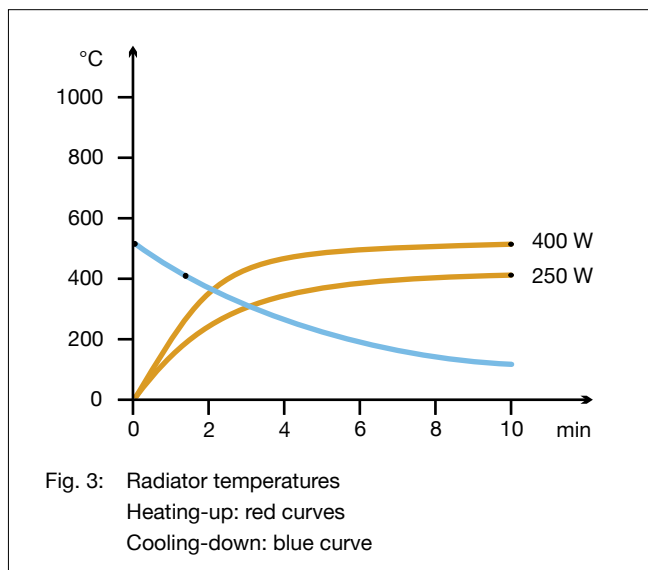


Figure 2: Mounting dimensions and radiator dimensions () in mm



Type, weight, wattage	IRS/330	130 g	250	400	W
Surface rating			22.8	36.4	kW/m ²
Typical operating temperature			400	530	°C
Maximum permissible temperature			750	750	°C
Wavelength range			2 - 10		µm

Standard design Operating voltage 230 V Leads 70 mm Two mounting sockets Two fixing springs	Thermocouple radiators Integrated thermocouple Type K (NiCr-Ni) Designation T-IRS/330 TC leads 100 mm	Variants Special wattages Special voltages Extended leads Live leads with ring terminals
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The power can be controlled using thermocouple radiators together with TRD temperature controllers, TSE thyristor switching units and other accessories.

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.



Figure 1: Elstein IRS/K series

Elstein IRS/K rod radiators are ceramic infrared radiators, which are available in different lengths of up to 300 mm and surface ratings of up to 75 kW/m²

Unlike the IRS series radiators, which have the leads running through the mounting sockets on each side, the leads of IRS/K series lie only on one side (see figure 1).

Thus IRS/K radiators make the heating of the interior of hollow bodies like tubes or bottles possible.

Linear heating tasks that need one-sided leads can be solved, too.

If required IRS/K rod radiators are available with double sided leads.

Elstein IRS/K rod radiators cover the power range from 125 W to 750 W.

IRS/K

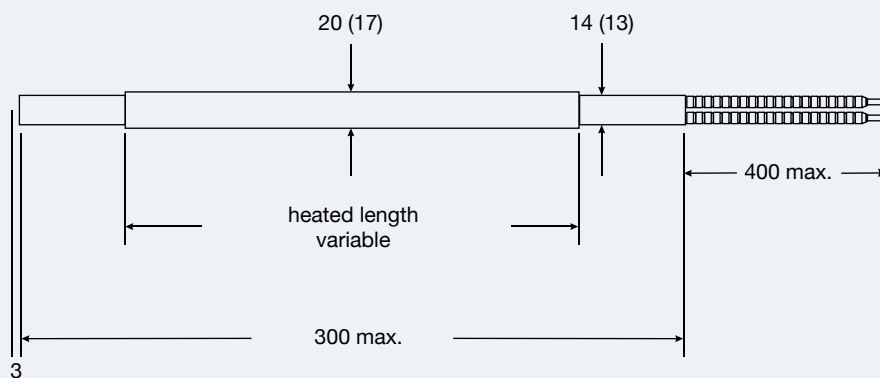
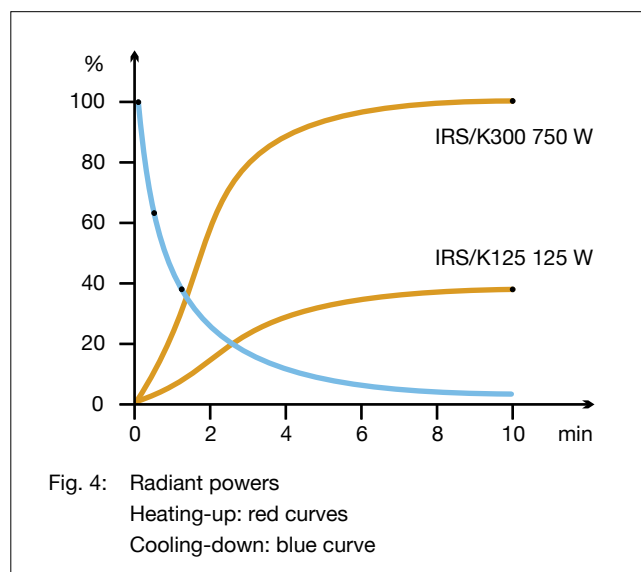
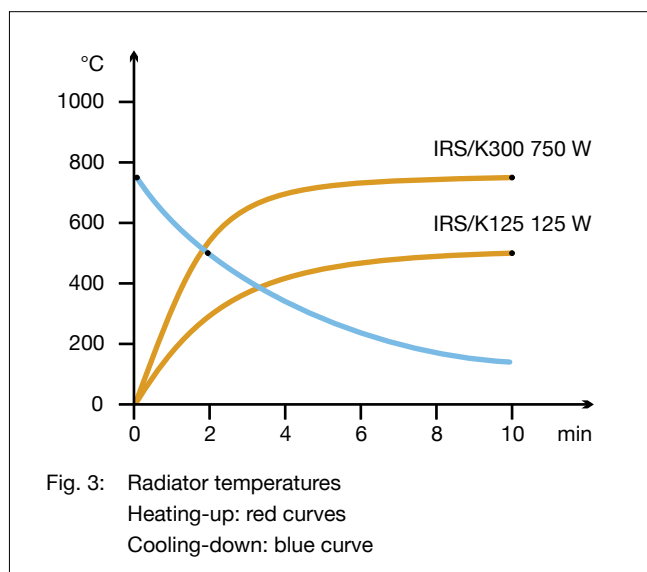


Figure 2: Mounting dimensions and radiator dimensions () in mm



Type, weight, wattage	IRS/K 300 mm 100 g	300	to	750	W
	to				
	IRS/K 125 mm 40 g	125	to	300	W
Surface rating		30.0	to	75.0	kW/m ²
Typical operating temperature		400	to	700	°C
Maximum permissible temperature		750		750	°C
Wavelength range		2 - 10			μm

Standard design Operating voltage 230 V Leads up to 400 mm Rod heated completely or partly	Thermocouple radiators Integrated thermocouple Type K (NiCr-Ni) Designation T-IRS/K + Length TC leads up to 400 mm	Variants Special lengths Special wattages Special voltages Extended leads Double sided leads Live leads with ring terminals
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The power can be controlled using thermocouple radiators together with TRD temperature controllers, TSE thyristor switching units and other accessories.

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.



Figure 1: Elstein ISN series

Elstein ISN rod radiators are ceramic infrared radiators, designed for surface ratings of up to 72 kW/m² and operating temperatures of up to 750 °C.

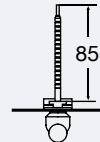
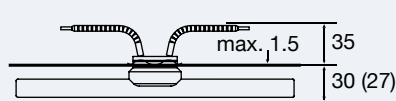
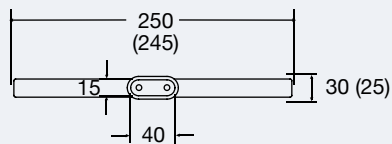
Within the product group of the ceramic infrared rod radiators only the radiators of the ISN series have the Elstein standard socket.

The Elstein standard socket makes a simple fixing to the mounting sheet possible. If required an exchange against other Elstein radiator types with standard socket is possible.

The rod shaped design makes ISN series radiators preferably suitable for linear heating tasks.

Elstein ISN rod radiators are available in two designs and cover the power range from 400 W to 600 W.

ISN



ISN/2

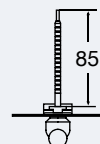
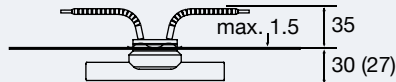
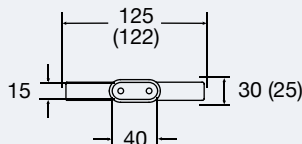
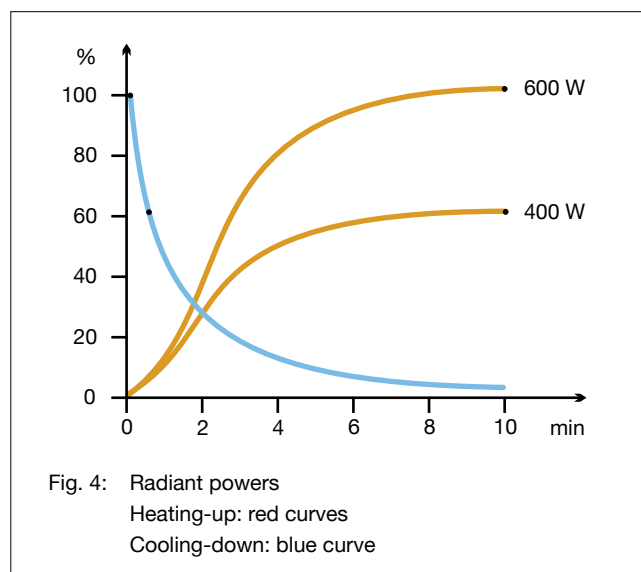
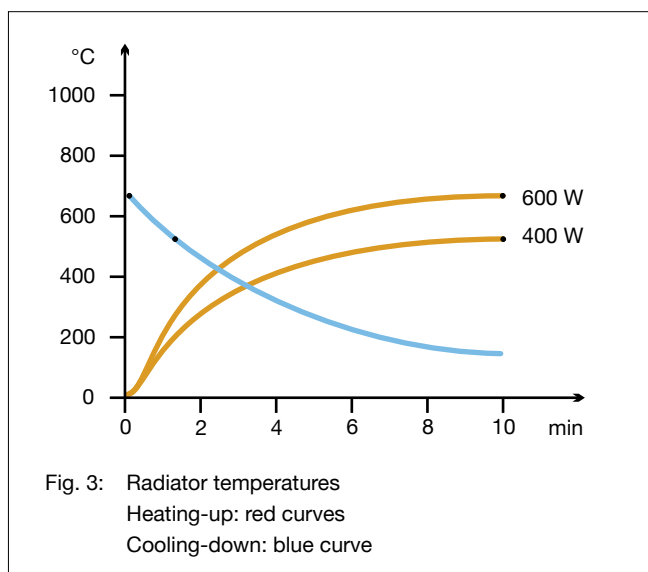


Figure 2: Mounting dimensions and radiator dimensions () in mm



Type, weight, wattage	ISN	120 g	400	600	W
	ISN/2	75 g	200	300	W
Surface rating			48.0	72.0	kW/m ²
Typical operating temperature			550	650	°C
Maximum permissible temperature			750	750	°C
Wavelength range			2 - 10		µm

Standard design Operating voltage 230 V Leads 85 mm Elstein standard socket Mounting set	Thermocouple radiators Integrated thermocouple Type K (NiCr-Ni) Designation T-ISN, T-ISN/2 TC leads 100 mm	Variants Special wattages Special voltages Extended leads Live leads with ring terminals
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The power can be controlled using thermocouple radiators together with TRD temperature controllers, TSE thyristor switching units and other accessories.

For building IR radiation areas with ISN series radiators the Elstein REO reflectors, REF construction sets, and EBF construction elements are suitable.

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.



Figure 1: Elstein ISS rod radiator

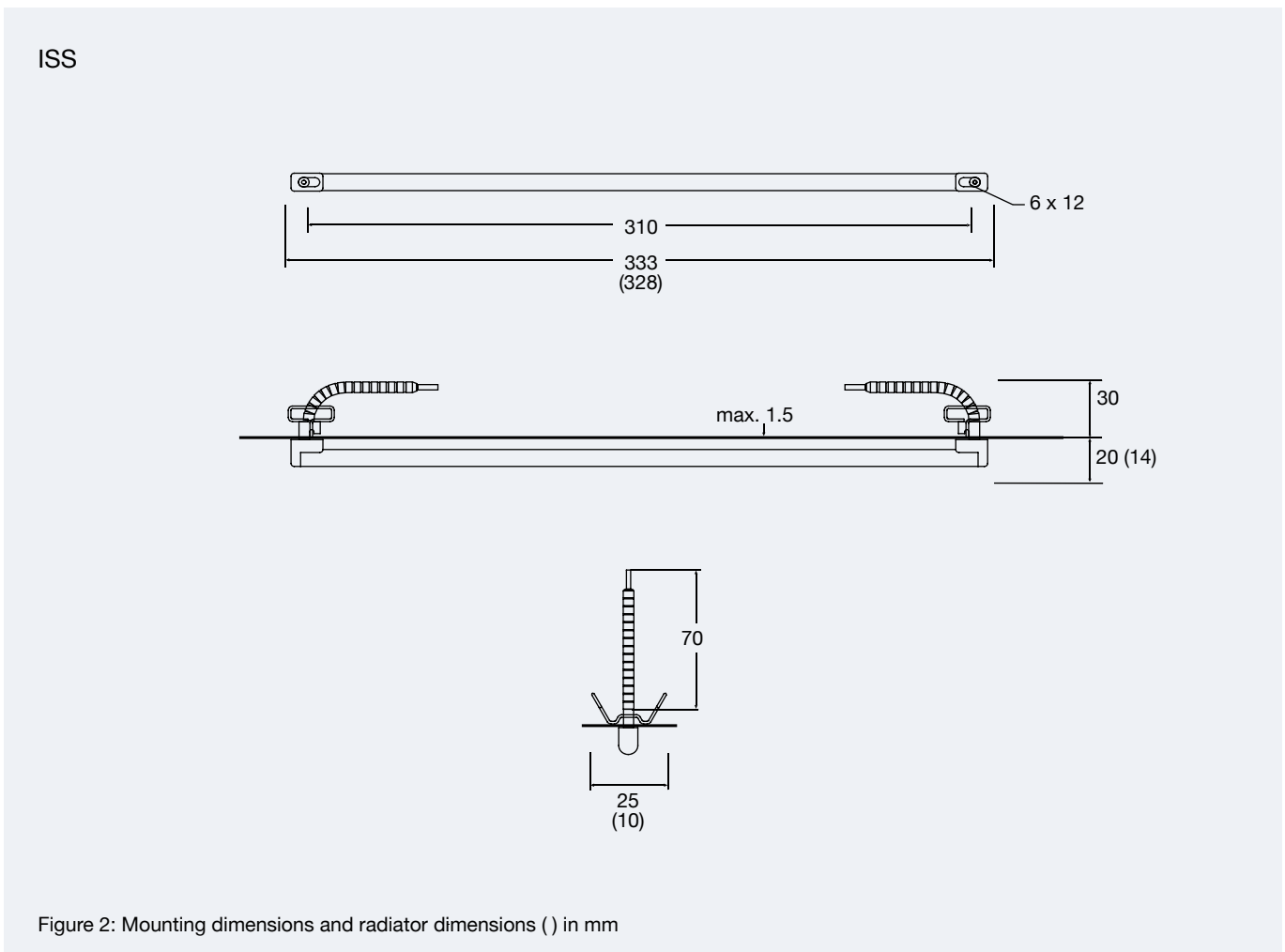
Elstein ISS rod radiators are ceramic infrared radiators with operating temperatures of up to 650 °C and surface ratings of up to 48 kW/m².

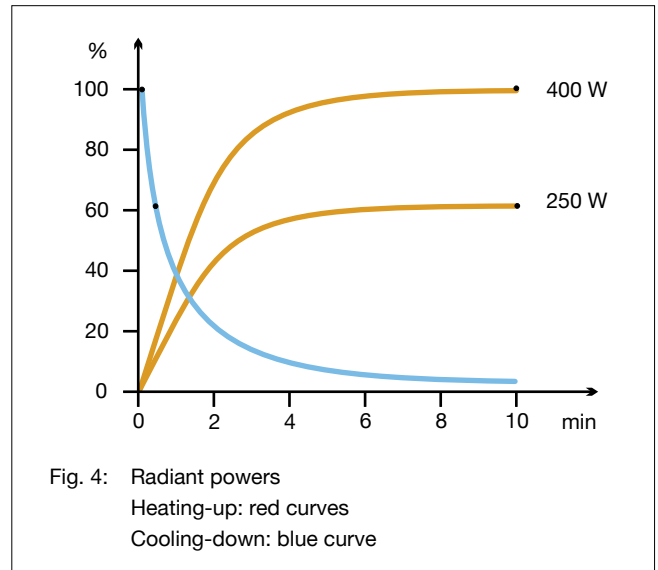
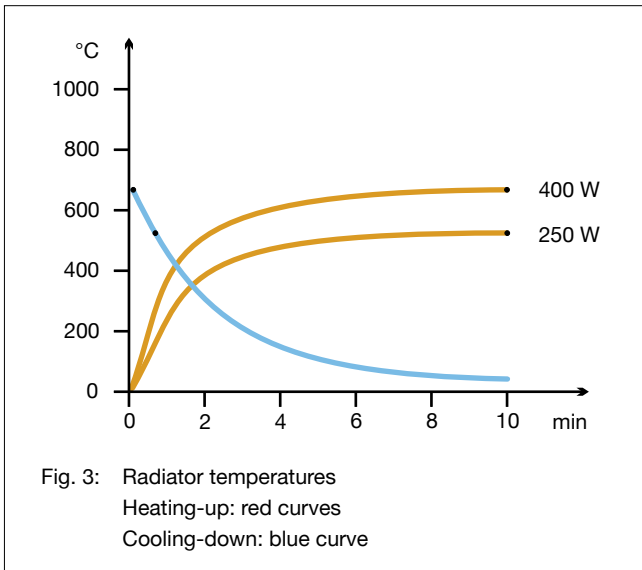
The ISS radiators have one mounting socket on each side, with which they can be fixed to a mounting profile using fixing springs.

Within the group of ceramic infrared rod radiators they are the rod radiators with the smallest diameter and enable therefore a space-saving installation.

Next to linear heating tasks ISS radiators are used as room, comfort or patio heater as well as heating element on terrasses.

Elstein ISS rod radiators are available with a power of 250 W and 400 W.





Type, weight, wattage	ISS	45 g	250	400	W
Surface rating			30.0	48.0	kW/m ²
Typical operating temperature			500	630	°C
Maximum permissible temperature			650	650	°C
Wavelength range			2 - 10		µm

<p>Standard design</p> <p>Operating voltage 230 V Leads 70 mm Two mounting sockets Two fixing springs</p>	<p>Thermocouple radiators</p> <p>Not available</p> <p>For means of controlling output see below.</p>	<p>Variants</p> <p>Special wattages Special voltages Extended leads Live leads with ring terminals</p>
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The power can be controlled using proprietary power controllers or dimmers.

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.



Figure 1: Elstein KSS/60 sphere radiators

Elstein KSS/60 sphere radiators are ceramic infrared radiators, which are designed for operating temperatures up to 750 °C and surface ratings of up to 38 kW/m²

Three dimensional heating panels can be built with KSS/60 sphere radiators by arranging the radiators in higher or lower position.

This enables the adaptation of the heating panel to the design of three dimensional components. Such components are for example door trims for vehicles.

In this way KSS/60 sphere radiators enable an optimum heating of the three dimensional part.

Elstein KSS/60 sphere radiators are available with a power of 250 W.

KSS/60

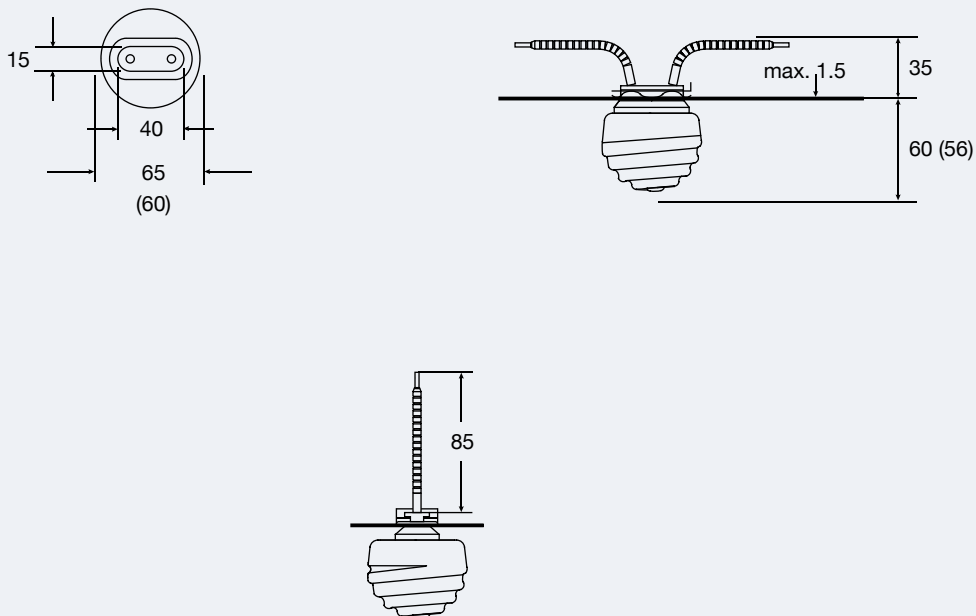
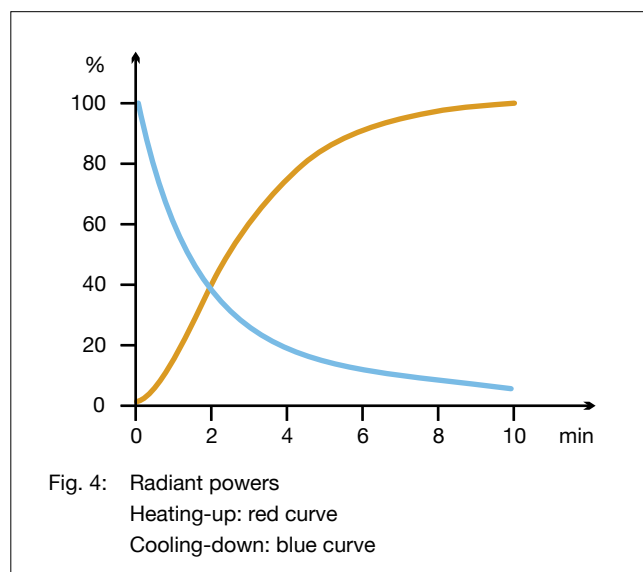
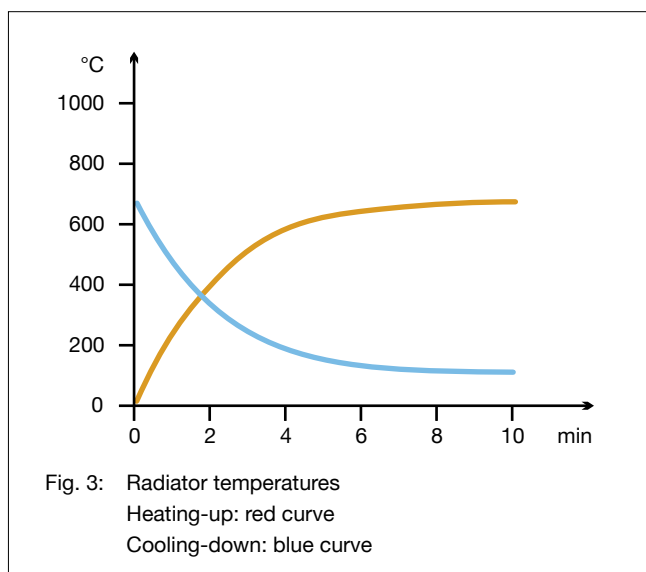


Figure 2: Mounting dimensions and radiator dimensions () in mm



Type, weight, wattage	KSS/60	90 g	250	W
Surface rating			38.0	kW/m ²
Typical operating temperature			670	°C
Maximum permissible temperature			750	°C
Wavelength range			2 - 10	µm

<p>Standard design</p> <p>Operating voltage 230 V Ceramic hollow casting Leads 85 mm Elstein standard socket Mounting set</p>	<p>Thermocouple radiators</p> <p>Integrated thermocouple Type K (NiCr-Ni) Designation T-KSS/60 TC leads 100 mm</p>	<p>Variants</p> <p>Special wattages Special voltages Extended leads Live leads with ring terminals</p>
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The power can be controlled using thermocouple radiators together with TRD temperature controllers, TSE thyristor switching units and other accessories.

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.



Figure 1: Elstein LCR large curved radiator

Elstein LCR large curved radiators are ceramic infrared panel radiators, which are designed for operating temperatures up to 750 °C. Surface ratings of up to 60 kW/m² can be installed.

LCR radiators are made using a full-pour casting ceramic process and are characterised by their large size and concave design. Due to the latter, there is a space between the radiator and mounting plate, which reduces the heat absorbed by the wiring space.

For some special applications the large size can reduce the mounting and installation work compared to the regular sizes of ceramic infrared radiators.

Elstein LCR large curved radiators are for universal use and are suitable for assembling radiation areas with any geometry required.

The covered power range is 400 W up to 1500 W.

LCR

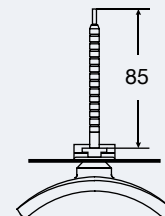
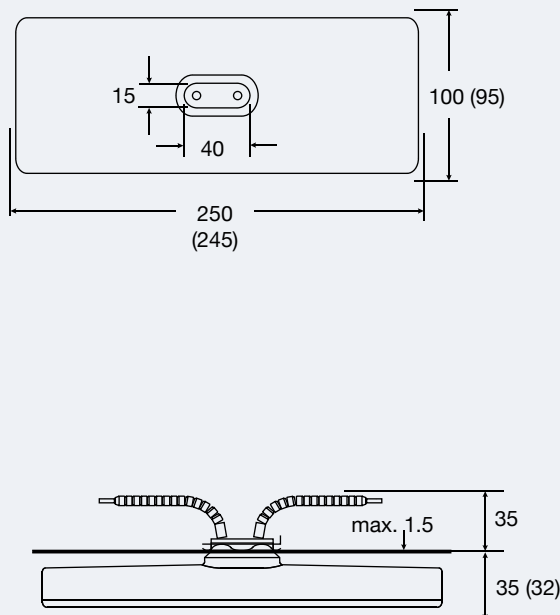
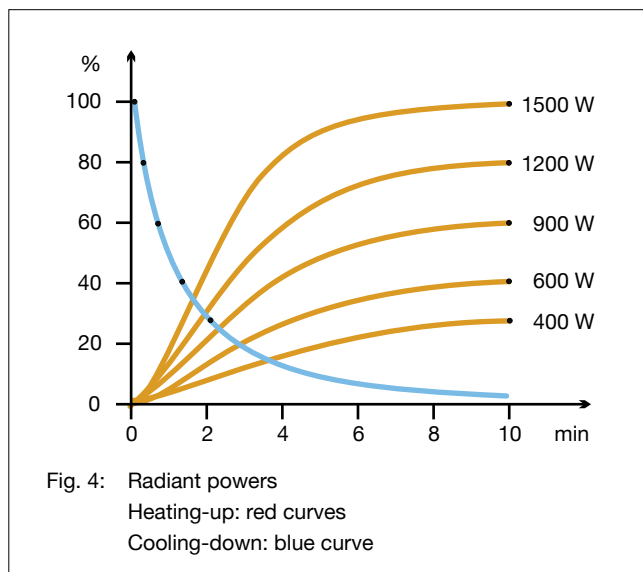
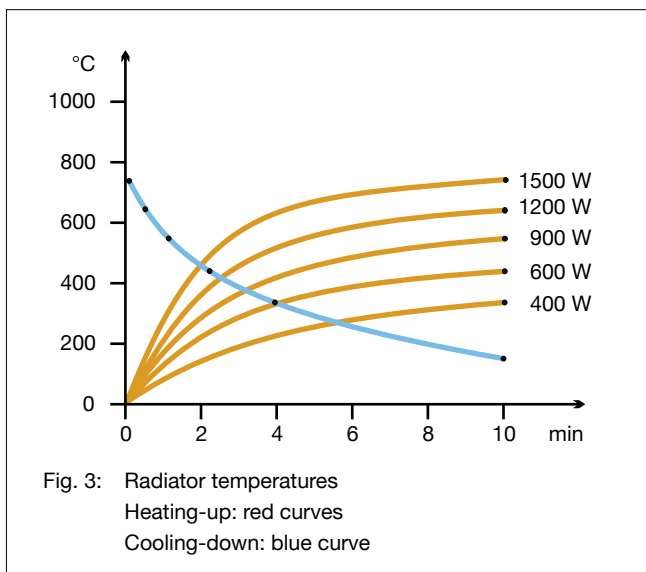


Figure 2: Mounting dimensions and radiator dimensions () in mm



Type, weight, wattage	LCR	350 g	400	600	900	1200	1500	W
Surface rating			16.0	24.0	36.0	48.0	60.0	kW/m ²
Typical operating temperature			400	490	580	660	710	°C
Maximum permissible temperature			750	750	750	750	750	°C
Wavelength range			2 - 10					µm

Standard design Operating voltage 230 V Ceramic full-pour casting Leads 85 mm Elstein standard socket Mounting set	Thermocouple radiators Integrated thermocouple Type K (NiCr-Ni) Designation T-LCR TC leads 100 mm	Variants Special wattages Special voltages Extended leads Live leads with ring terminals
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The power can be controlled using thermocouple radiators together with TRD temperature controllers, TSE thyristor switching units and other accessories.

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.



Figure 1: Elstein RFS series

Elstein RFS round panel radiators are ceramic infrared radiators with round design and can be used for operating temperatures up to 700 °C and surface ratings up to 46 kW/m².

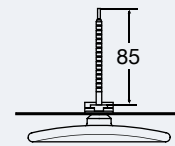
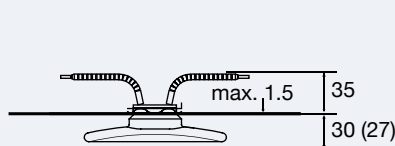
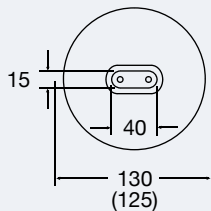
Radiators of the RFS series are used for example in small thermoform devices of dental technique. Such devices are used for manufacturing dental prostheses.

The round design enables additionally an optimal heating of corresponding materials to be heated like the bottom of bottles.

Radiators of the RFS series are available in two sizes: RFS/100 with a diameter of 100 mm and RFS/125 with 125 mm.

Elstein RFS series radiators cover the power range of 150 W to 500 W with these two designs.

RFS/125



RFS/100

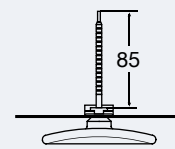
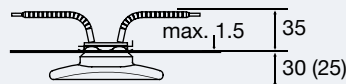
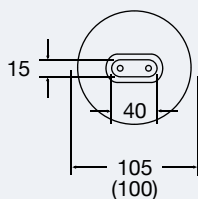
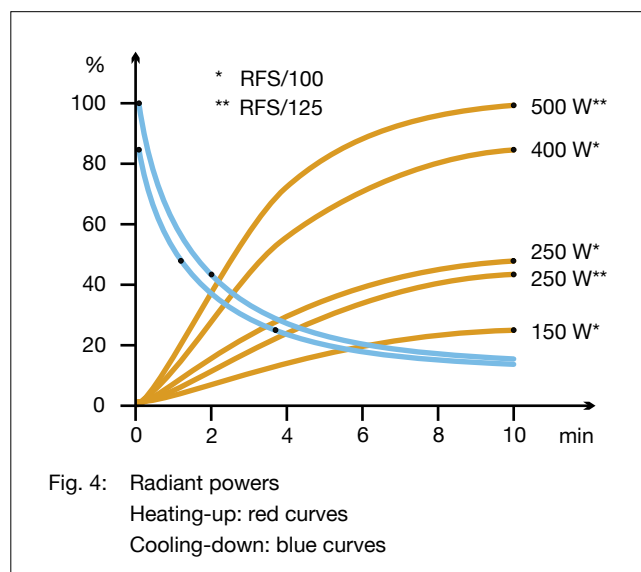
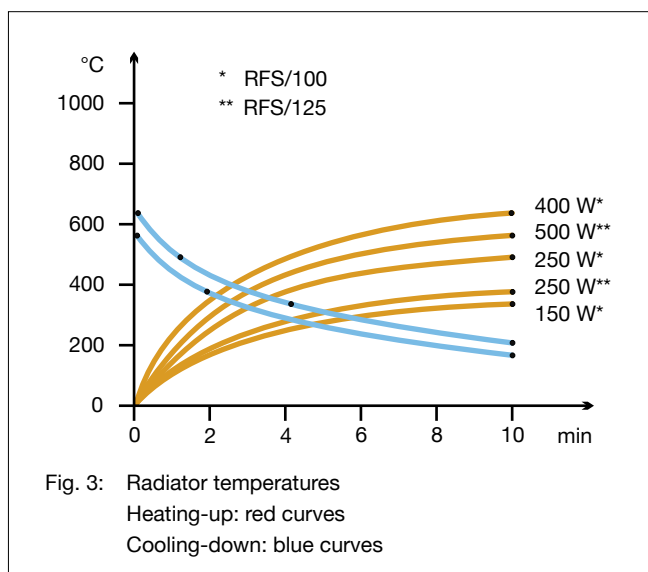


Figure 2: Mounting dimensions and radiator dimensions () in mm



Type, weight, wattage	RFS/100	145 g	150	250	400	-	-	W
	RFS/125	175 g	-	-	-	250	500	W
Surface rating			17.3	28.9	46.2	18.8	37.6	kW/m ²
Typical operating temperature			300	430	610	330	550	°C
Maximum permissible temperature			700	700	700	700	700	°C
Wavelength range			2 - 10					µm

Standard design Operating voltage 230 V Ceramic full-pour casting Leads 85 mm Elstein standard socket Mounting set	Thermocouple radiators Integrated thermocouple Type K (NiCr-Ni) Designation T-RFS/100, T-RFS/125 TC leads 100 mm	Variants Special wattages Special voltages Extended leads Live leads with ring terminals
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The power can be controlled using thermocouple radiators together with TRD temperature controllers, TSE thyristor switching units and other accessories.

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.



Figure 1: Elstein SSH switchboard heater

Elstein SSH switchboard heaters are ceramic infrared radiators in round design with surface ratings of up to 18 kW/m². The typical operating temperature is 200 °C up to 280 °C.

The SSH infrared radiators are used for switchboards in order to avoid the formation of condensation water.

SSH switchboard heaters are delivered with a fixing clip, which allows an easy mounting of the SSH radiator onto 35-mm standard rails. Such standard rails have been mounted already in many switchboards.

The low overall height enables space-saving installation so that the radiator can be mounted in small switchboards and in switchboards being densely equipped.

Elstein SSH switchboard heaters are available with a power of 60 W and 100 W.

SSH

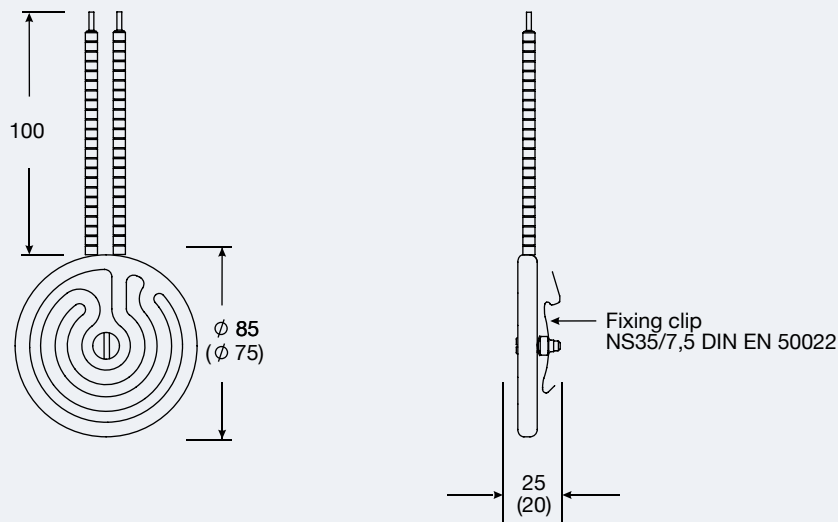
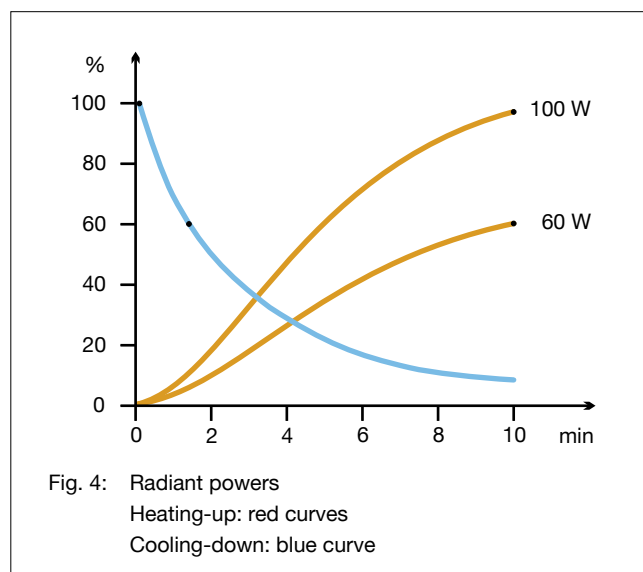
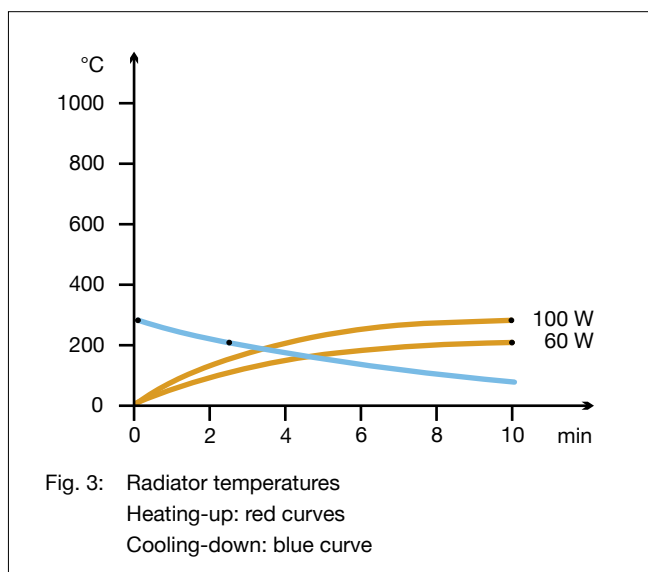


Figure 2: Mounting dimensions and radiator dimensions () in mm



Type, weight, wattage	SSH	75 g	60	100	W
Surface rating			10,6	17,6	kW/m ²
Typical operating temperature			200	280	°C
Maximum permissible temperature			700	700	°C
Wavelength range			2 - 10		μm

Standard design Operating voltage 230 V Ceramic full-pour casting Leads 100 mm Fixing clip Screw M4 x 16 2x toothed disc A 4,3 Nut M4	Thermocouple radiators Not available. For means of controlling output see below.	Variants Special wattages Special voltages Extended leads Live leads with ring terminals
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The power can be adjusted using proprietary power controllers or dimmers.

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.