

The service life of ceramic infrared heaters
is
5 000 to 10 000 hours.



The service life of ceramic infrared heaters
of the brand **ELSTEIN** is
up to **20 000** hours.



MaxLife

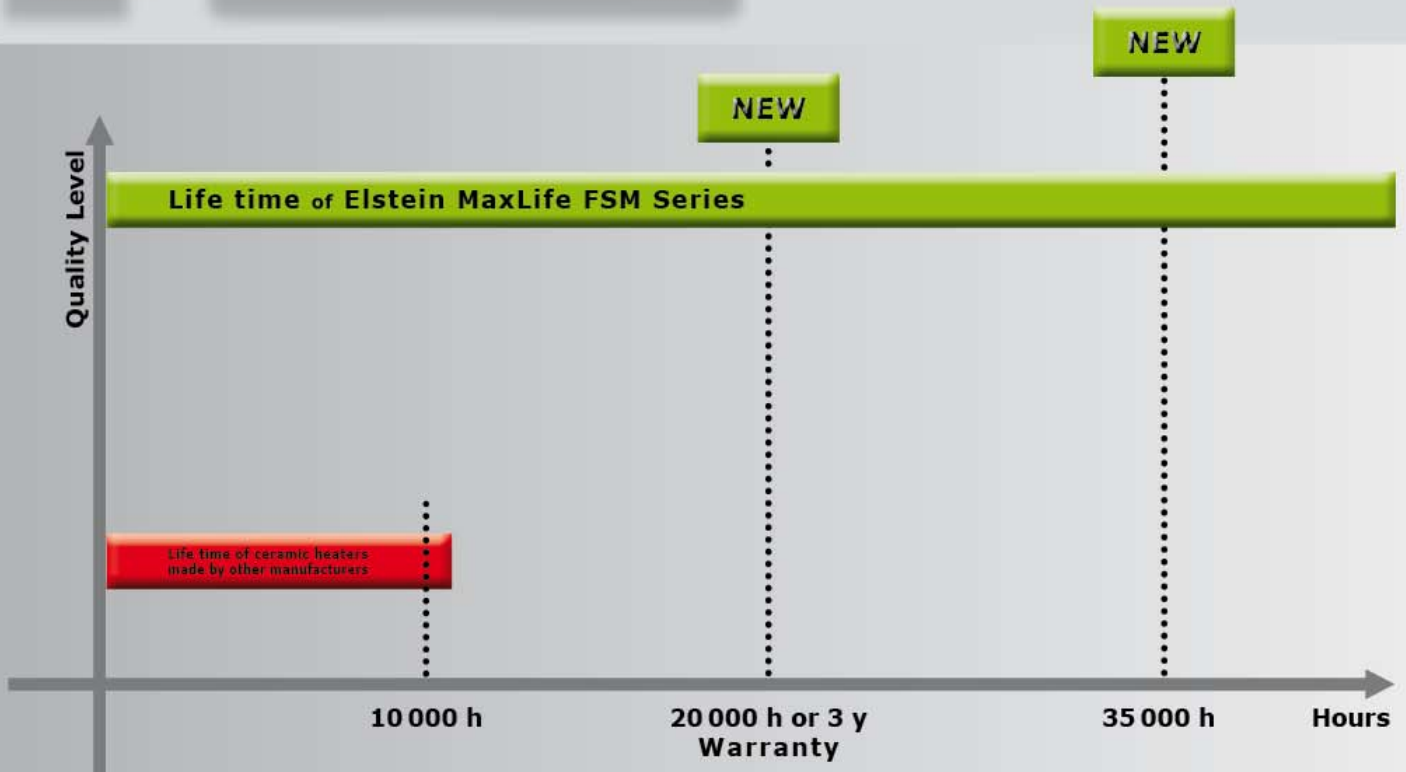
The service life of ceramic infrared heaters
of the brand **ELSTEIN MaxLife FSM** is
up to **35 000** hours and more.

Thereof 20 000 hours or 3 years are
guaranteed.



MaxLife Ceramic Heaters

Durability through Quality



This picture shows the screenshot of MaxLife FSM banner. The original size of the pdf-file is 2200 x 1500 mm. We provide you this file with pleasure for your advertising activities.



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Information about Elstein MaxLife FSM

Often users, machine builders and resellers are not aware about the quality differences of ceramic infrared heaters. Therefore sometimes they decide for lower quality products of our competitors due to price reasons, however this decision is disadvantageous.

The reason for this is, that there seems to be a price advantage in the purchasing stage of the heater. The consequences of this purchasing decision for heaters of the competition are higher cost for machine maintenance as well as heater exchange and also for operating of the heaters. The sum of these higher costs is much higher than the savings, which may have been generated when the heaters were purchased.

It is important that you prevent your customers from such wrong decisions. You as Elstein agency help your customers already, because you supply the best product by using the brand ELSTEIN. By using Elstein Max Life FSM you can transfer this information more clearly as well as easily to your customers and consequently your own position in the market becomes stronger.

The heaters of the FSM series have the same design like FSR copies of the competition. You should start with Elstein MaxLife FSM in all those areas, where the competitors sell copies of Elstein FSR heaters. The objective is to get market shares from our common competitors.

Tasks regarding Elstein MaxLife FSM

We would like you to do the following actions:

1. At first present FSM series to those companies, where the competition sells its ceramic heaters.
2. Send information to your most important customers, which already purchase Elstein heaters from you.
3. Look for new customers by researching business directories (like yellow pages) and supplier search engines.

Please find further information and sales assistance material on the following pages. Samples and printed data sheets are available on request.

We would appreciate your feedback until 27 Jul 2009 and are for questions at your disposal.

Peter Sewzyk
General Manager

Lothar Keune
Marketing

6 Jul 2009



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FSM-Heater specification and comparison to FSR-copies

Specification	Series FSM	FSR copies
Dimensions (in mm)	FSM 245 x 60 FSM/2 122 x 60 FSM/4 60 x 60	245 x 60 122 x 60 60 x 60
Glaze	Grey	White, black, color change (yellow, pink)
Wattages	from 60 W to 1000 W	from 60 W to 1000 W
Operating temperatures	up to 750 °C	up to 750 °C
Service life	35 000 hours and more. Thereof 20 000 hours or 3 years warranty.	5 000 to 10 000 hours.



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Arguments

Why should your customer decide for FSM?

Customer group	Argument
Machine builder, OEM, Resellers	FSM series reduces service cost.
End users	Reduction of operating cost and machine downtime due to maintainance, heater exchange.

A calculation example, which you may show to your customers and interersted people:

	FSM 650 W	FSR copy 650 W
Sales price to end user	35,30 Euro	18,00 Euro
Service life	35 000 hours	5 000 to 10 000 hours = average 7 500 hours
Required number of heaters for 35 000 hours	1	4,67
Total cost	1 x 35,30 Euro = 35,30 Euro	4,67 x 18,00 Euro = 84,06 Euro
Savings	84,06 - 35,30 = 48,76 Euro. If 200 heaters are required for a machine, the saving amounts to 9 752,- Euro. The saved cost for machine down-time due to maintainance / heater exchange are to be added.	

Which kind of benefit do you have as agency, when selling FSM series?

By offering this heater you can compete against the competitors without price discussions, because the competitors cannot offer a similar product. Consequently you can go ahead with a higher sales price and generate more profit.

Make use of this chance now.



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Branches and keywords

As minimum requirement you should look in the following branches for new customers:

Branch (selection)	Keyword proposals (selection)
Thermoform machines - Manufacturers - Used machines - Suppliers of replacements	Thermoform machine, thermoforming, vacuum forming machine, vacuum forming, ...
Thermoform machines - Users	Plastic parts, plastic components, plastic cups, plastic formed parts, ...
Machine builders, specialised in heating technology	Heating panels, infrared panels, heating devices, ...
Machine builders (often manufacturers of special machines)	Plant building, machinery, ...
Catering, canteen kitchen	Warming bridge, heating counter, ...
Dealers	Heating elements, infrared heaters, electric heat, ...

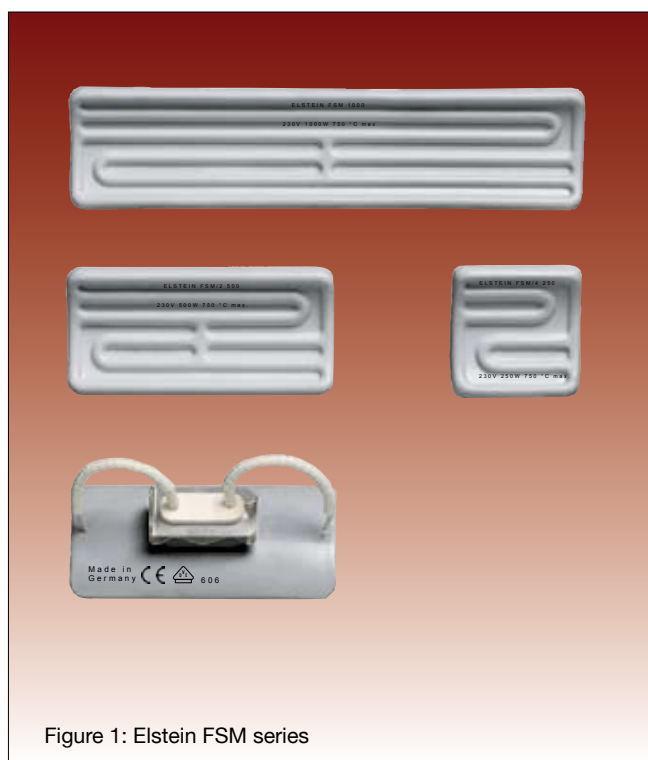


Figure 1: Elstein FSM series

Elstein MaxLife FSM panel radiators are ceramic infrared radiators, which are designed for operating temperatures up to 720 °C. Surface ratings of up to 64 kW/m² can be installed.

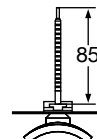
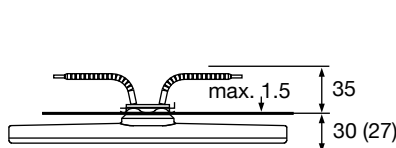
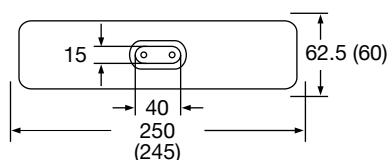
The durability of MaxLife panel radiators FSM has been maximized. Thus they are usable for 35000 hours and more when operated correctly and under normal conditions.

Due to this significantly longer service life of MaxLife radiators the cost for heater exchange is reduced. Thus there are much lower cost per operating hour.

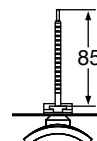
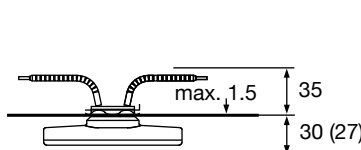
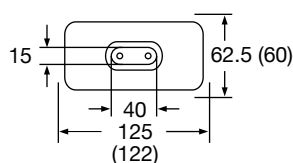
A guarantee of operation about 20000 hours or 3 years beginning from the manufacturing date exists for radiators of the FSM series on the basis of correct heater use and normal operating conditions.

Elstein MaxLife panel radiators FSM are available in three designs and cover the power range from 60 W to 1000 W.

FSM



FSM/2



FSM/4

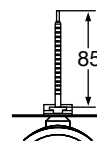
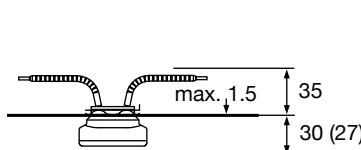
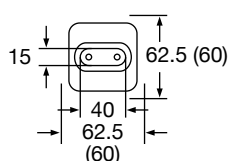
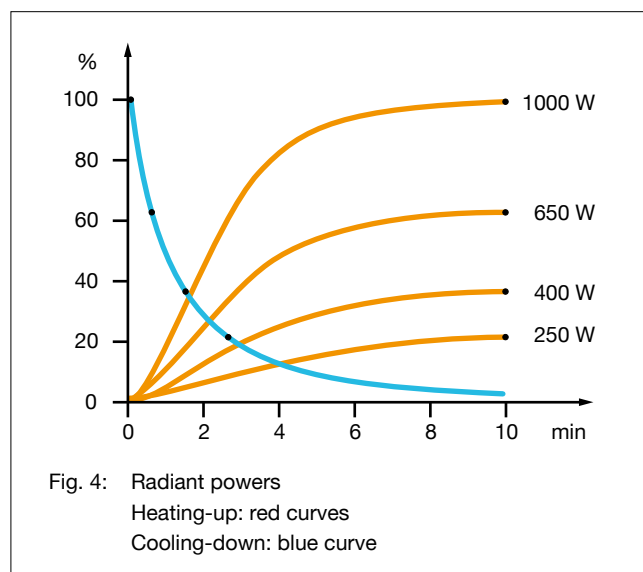
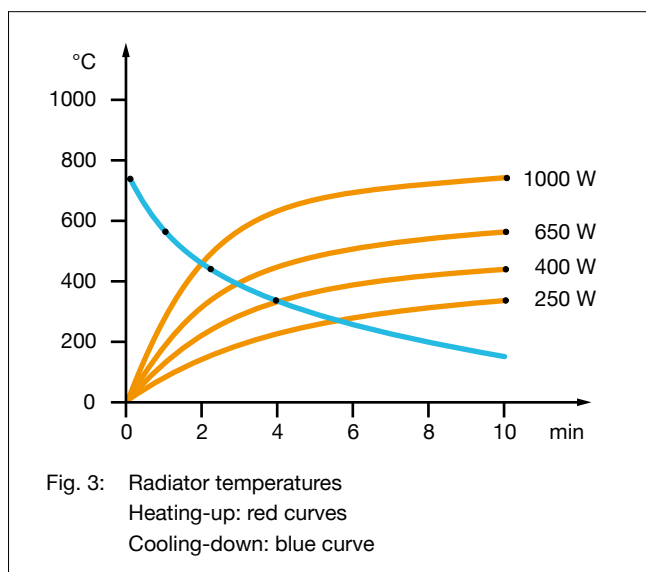
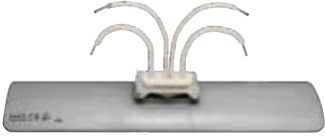


Figure 2: Mounting dimensions and radiator dimensions () in mm



Type, weight, wattage	FSM	220 g	250	400	650	1000	W
	FSM/2	125 g	125	200	325	500	W
	FSM/4	75 g	60	100	200	250	W
Surface rating			16.0	25.6	41.6	64.0	kW/m ²
Typical operating temperature			400	500	620	720	°C
Maximum permissible temperature			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 Grey glaze	Thermocouple radiators Designation T-FSM, T-FSM/2, T-FSM/4 Integrated thermocouple Type K (NiCr-Ni) TC leads 100 mm 	Variants Special wattages Special voltages Extended leads Leads with ring terminals
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The power can be controlled using thermocouple radiators together with TRD 1 temperature controllers, TSE thyristor switching units and other accessories.

IR radiation areas can be assembled using REO reflectors, REF construction sets, EBF construction elements and 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.

Our instructions for mounting, operation and safety must be observed.

Elstein-Werk - Agency Price List, April 2009



Ceramic IR Radiators

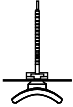
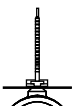
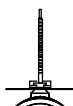
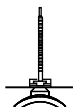
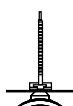
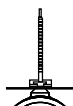
Price Basis: FOB German airport, net, including standard packaging

Payment: 60 days net

TC = Leads of the thermocouple

T_{typ} = Typical operating temperature

T_{max} = Maximum permissible temperature

Product	Wattage	Voltage	Dimension	T _{typ}	T _{max}	Price	Drawing
Elstein FSM MaxLife panel radiator, grey, concave, leads 85 mm with pin, standard product							 
FSM	250 W	230 V	245 x 60 mm	400°C	750°C	14,10 €	
FSM	400 W	230 V	245 x 60 mm	500°C	750°C	17,40 €	
FSM	650 W	230 V	245 x 60 mm	620°C	750°C	21,60 €	
FSM	1000 W	230 V	245 x 60 mm	720°C	750°C	27,10 €	
Elstein T-FSM MaxLife panel radiator, grey, concave, with thermocouple type K (NiCr-Ni), leads 85 mm / TC 100 mm with pin, standard product							 
T-FSM	250 W	230 V	245 x 60 mm	400°C	750°C	24,30 €	
T-FSM	400 W	230 V	245 x 60 mm	500°C	750°C	27,60 €	
T-FSM	650 W	230 V	245 x 60 mm	620°C	750°C	31,80 €	
T-FSM	1000 W	230 V	245 x 60 mm	720°C	750°C	37,30 €	
Elstein FSM/2 MaxLife panel radiator, grey, concave, leads 85 mm with pin, standard product							 
FSM/2	125 W	230 V	122 x 60 mm	400°C	750°C	11,00 €	
FSM/2	200 W	230 V	122 x 60 mm	500°C	750°C	12,10 €	
FSM/2	325 W	230 V	122 x 60 mm	620°C	750°C	14,10 €	
FSM/2	500 W	230 V	122 x 60 mm	720°C	750°C	16,20 €	
Elstein T-FSM/2 MaxLife panel radiator, grey, concave, with thermocouple type K (NiCr-Ni), leads 85 mm / TC 100 mm with pin, standard product							 
T-FSM/2	125 W	230 V	122 x 60 mm	400°C	750°C	21,20 €	
T-FSM/2	200 W	230 V	122 x 60 mm	500°C	750°C	22,30 €	
T-FSM/2	325 W	230 V	122 x 60 mm	620°C	750°C	24,30 €	
T-FSM/2	500 W	230 V	122 x 60 mm	720°C	750°C	26,40 €	
Elstein FSM/4 MaxLife panel radiator, grey, concave, leads 85 mm with pin, standard product							 
FSM/4	60 W	230 V	60 x 60 mm	400°C	750°C	9,60 €	
FSM/4	100 W	230 V	60 x 60 mm	500°C	750°C	11,00 €	
FSM/4	200 W	230 V	60 x 60 mm	620°C	750°C	13,30 €	
FSM/4	250 W	230 V	60 x 60 mm	720°C	750°C	14,10 €	
Elstein T-FSM/4 MaxLife panel radiator, grey, concave, with thermocouple type K (NiCr-Ni), leads 85 mm / TC 100 mm with pin, standard product							 
T-FSM/4	60 W	230 V	60 x 60 mm	400°C	750°C	19,80 €	
T-FSM/4	100 W	230 V	60 x 60 mm	500°C	750°C	21,20 €	
T-FSM/4	200 W	230 V	60 x 60 mm	620°C	750°C	23,50 €	
T-FSM/4	250 W	230 V	60 x 60 mm	720°C	750°C	24,30 €	