

Figure 59: Elstein HLS (middle picture) and HLS/2 (lower left). Optional are MPO (top) and MPO/2 (lower right).

Elstein HLS high performance heaters are ceramic infrared rod heaters, which can be used for operating temperatures up to 1000 °C and surface ratings up to 87 kW/m<sup>2</sup>.

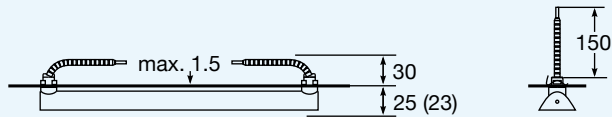
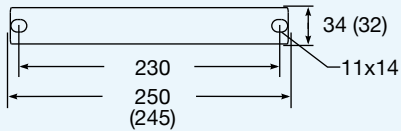
HLS series heaters have a gold-plated ceramic parabolic reflector and transfer up to 80% of the energy supplied as infrared radiation to the material to be heated.

In this way, HLS heaters allow material temperatures of up to 700 °C or high throughput speeds. The typical operating temperature of 1000 °C is reached in less than one minute.

HLS series heaters are therefore particularly suitable for use in plant construction, in which special solutions have to be drawn up for the customer's specific needs and for applications requiring high outputs.

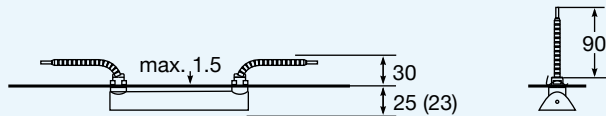
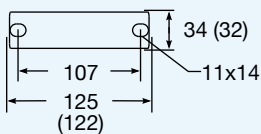
Elstein HLS high performance heaters are available in two designs with 750 W / 230 V and for pairwise serial connection with 375 W / 115 V.

## HLS



T-HLS: The length 250 (245) extends due to the thermocouple clamp by 6 mm

## HLS/2



T-HLS/2: The length 125 (122) extends due to the thermocouple clamp by 6 mm

## T-HLS and T-HLS/2

HLS series with platinum thermocouple type S (blue printed), assembled

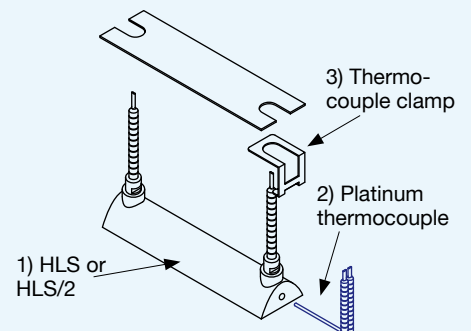
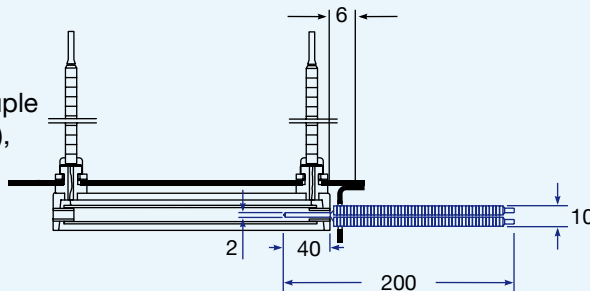
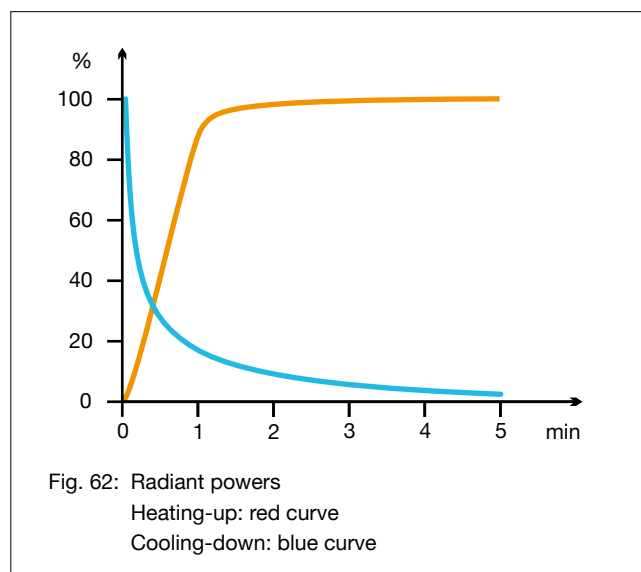
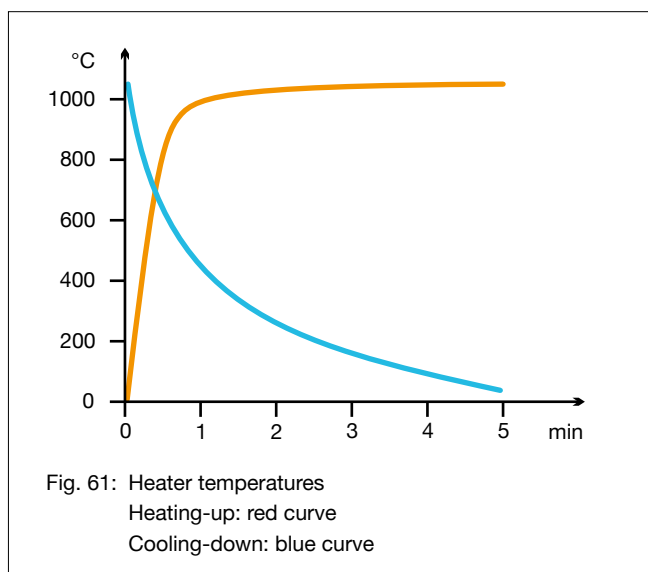
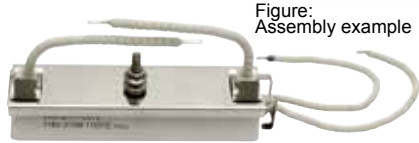


Figure 60: Mounting dimensions and heater dimensions ( ) in mm



Type, weight, wattage	HLS	120 g	750	W
	HLS/2	60 g	375	W
Installable surface rating			87.0	kW/m <sup>2</sup>
Typical operating temperature			to 1000	°C
Maximum permissible temperature			1100	°C
Wavelength range			2 - 10	μm

Standard design	Thermocouple heaters	Variants
HLS operating voltage 230 V HLS/2 operating voltage 115 V HLS leads 150 mm HLS/2 leads 90 mm Parabolic reflector gold-plated on the inside	Kit T-HLS and T-HLS/2 for self-assembly, consisting of 1) HLS or HLS/2 2) Platinum-thermocouple type S 3) Thermocouple clamp	Special wattages Special voltages Extended leads Leads with ring terminals
	 <p>Figure: Assembly example</p>	

Elstein HLS heaters must be operated with temperature control to avoid damage due to overheating. The power can be controlled using proprietary sheathed thermocouples as well as Elstein platinum-thermocouples (both type S, Pt-PtRh) in conjunction with TRD 1 temperature controllers, TSE thyristor switching units and further accessories.

IR radiation areas can be assembled using MPO mounting profiles.

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.