

Create comfort and prolong the outdoor season

**Open air restaurants**



air curtains · radiant heaters · fan heaters



## What is radiant heating?

### Frico's radiant heaters heat like the sun

The most magnificent radiant heater is the sun. The heat emitted from this hot source is essential for all life on earth. The infrared rays of the sun can travel a long distance, with a minimal loss of energy. When the infrared rays hit a surface, the energy is converted to heat. Warm objects then heat the surrounding air.

Even though the sun is so far away it heats the surface of the earth, while the space in between remains cold. Nature's own way of heating is fantastic! Frico radiant heaters imitate the sun, the most comfortable and economical heat source available.

Radiant heaters are available in various designs – it is primarily the installation height and surrounding environment that determine the choice of product.

### Advantages

- simple installation
- requires a minimum of maintenance
- no air movement
- silent
- mounting on the ceiling leaves the walls free
- produces instant heat
- high level of comfort for personnel and customers

### Comfort

Radiant heaters give an intense, comfortable heat and prolong the summer season. No moving parts mean a silent system that does not cause air movements or the spreading of particles.

### Operation and economy

Radiant heaters give instant heat, have an easy and flexible installation and require minimum maintenance. People and objects are heated but not the surrounding air, which makes radiant heaters very efficient. This is especially effective outdoors. The more the space is protected from wind, the less energy will be required to heat it.

### Good reasons to choose an electric radiant heater for your terrace

- An electric radiant heater is energy-efficient as a result of all the heat being focused on heating up the surface, which, in turn, reflects heat back, and no extra energy is used to heat the surrounding air. It uses minimal electricity in proportion to the heat given off, resulting in low operating costs.
- An electric radiant heater requires minimal maintenance.
- An electric radiant heater begins heating as soon as you press the button, and the effect is immediate.
- An electric radiant heater is easy to position due to its small size and can be installed even where it is exposed to wind and weather. There are electric radiant heaters that can be mounted directly under an awning or a parasol.



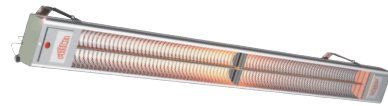


#### **Patios/open-air restaurants with roofs but no protective walls**

In such environments, conventional heaters do not raise the temperature sufficiently. Instead, a heater with a high surface temperature is required, providing a type of radiant heat contribution to improve comfort levels. Suitable heaters include the IH and ELIR halogen infrared heaters.

The heaters can be positioned so that the radiant heat comes from various directions, increasing comfort significantly.

For optimum comfort, and the possibility to increase the temperature by 10°C, it is not uncommon for the power to be set to 750 – 1000 W/m<sup>2</sup>.



CIR

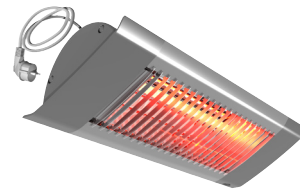


ELIR

#### **Patios/open-air restaurants with roofs and protective walls**

Here the CIR infrared heater as well as IH halogen infrared heaters will also be useful if walls/roofs/floors are of a simple type. The better (tighter) the room is sealed, the more the air temperature increases. This means you are not as dependent on heaters with a high surface temperature.

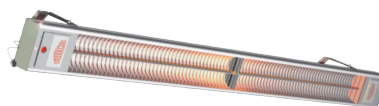
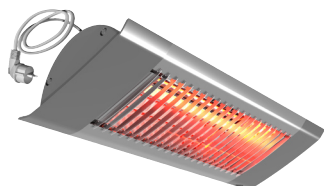
Reckon on a power requirement of 250 – 600 W/ m<sup>2</sup> depending on the degree of enclosure and desired temperature increase.



IH

#### **Patios/open-air restaurants with insulation in walls, roof and floor and triple glazing**

Here the power requirement is really lowered, to 75 – 150 W/m<sup>2</sup>. Window areas and ceiling heights also affect the power requirement. Contact us for advice.



### For exposed outdoor environments with design demands

Infrared heater IH is the perfect choice for exposed outdoor environments where design is important, for example balconies, pavement cafés, etc. IH can also be used as local heating in large premises such as churches, industries and warehouses. IH is available in two different designs. IHW gives a comfortable heat in the occupied zone from close range and also wider heat distribution. IHF has more direct heat distribution and is designed to be installed higher up. Installation height: 1,8-3,5 m

#### Infrared heater IH (IPX4)

Type	Voltage [V]	Heat output [W]
IHW/F10	230V~	1000
IHW/F15	230V~	1500

#### Accessories - IH

Type	Description
CBT	Electronic timer, IP44
IHUB	Universal bracket for IH
IHXH	Extension bracket for installing high up
IHXL	Extension bracket for installing low down
IHT	Triple bracket
IHP	Post for freestanding installation
IHL1000	Halogen lamp 1000W
IHL1500	Halogen lamp 1500W



### For all outdoor applications where a high flexibility is desired

Infrared heater ELIR gives an intense heat suitable for all outdoor applications and rough industrial premises. While ELIR is light, stable and portable it is also well suited for temporary heating on building sites etc. High protection class (IP65) makes it possible to install the heater in almost any environment. Installation height: 2-3 m

#### Infrared heater ELIR (IP65)

Type	Voltage [V]	Output [W]	LxHxW [mm]	Weight [kg]
ELIR12	230V~	1200	712x112x83	1,0

#### Accessories - ELIR

Type	Description
CBT	Electronic timer 4 hours
ELIRC	Chain for ceiling mounting
ELIRS	Floor stand for portable use
ELIRB	Universal bracket for floor stand
IREL12	Extra lamp

### For applications where discreet design and operation is desired

Infrared heater CIR provide comfort all year around on terraces, balconies and open-air restaurants. CIR can also be used for spot heating in workshops and warehouses. Requires no protection against bad weather and has five-year corrosion warranty. Installation height: 2-2,5 m

#### Comfortinfra CIR100 without built-in switch (IP24)

Type	Voltage [V]	Output [W]	LxHxW [mm]	Weight [kg]
CIR10521	230V~	500	710x44x94	1,5
CIR11021	230V~	1000	1250x44x94	2,2
CIR11031	400V2~	1000	1250x44x94	2,2
CIR11521	230V~	1500	1755x44x94	3,0
CIR11531	400V2~	1500	1755x44x94	3,0
CIR12021	230V~	2000	2180x44x94	3,7
CIR12031	400V2~	2000	2180x44x94	3,7

#### Comfortinfra CIR200 with built-in switch (IP24)

Type	Voltage [V]	Output [W]	LxHxW [mm]	Weight [kg]
CIR20521	230V~	500	710x44x94	1,5
CIR21021	230V~	1000	1250x44x94	2,2
CIR21031	400V2~	1000	1250x44x94	2,2
CIR21531	400V2~	1500	1755x44x94	3,0
CIR22031	400V2~	2000	2180x44x94	3,7

#### Accessories - Comfortinfra CIR

Type	Description
CIRT	Stepless output control with timer, 3500/6000W, 230/400V
CBT	Electronic timer 4 hours
ERP	Electrical heating control

For more information on our full range, please contact Frico or visit our website [www.frico.se](http://www.frico.se).