



## Winterwarm WRU and WRL radiant tubes

Winterwarm presents the WRU and WRL series: robust radiant tubes that ensure comfortable warmth in draughty rooms.



**Winterwarm**  
heating solutions 

### Features WRU and WRL:

- patented burner with a long, noiseless flame
- special quality burner tubes for maximum radiant intensity
- patented reflector system for optimal warmth utilisation
- plug-in burner box
- fast and easy to install

## General

Radiant heat is the transfer of heat between two objects of different temperatures. Only the person or the surface that is within the irradiated area is warmed up - not the air. The emitted radiation is absorbed by the irradiated body and converted into heat. This heat then warms up the environment. The process is similar to heating up by solar heat. That is why radiation heat feels very pleasant.

that 1°C lower temperature means energy savings of 6%).

- The effect of radiant heat is felt immediately (the heat does not have to be transported first).
- The radiant tube remains warm for a while after it has been switched off, so the tubes can be switched off well before the end of the working day.



Upon request the WRU 22- 50 can also be supplied as sealed model with concentric flue terminal (diam. 100).

## Energy-saving

Using Winterwarm Radiant tubes saves energy for several reasons:

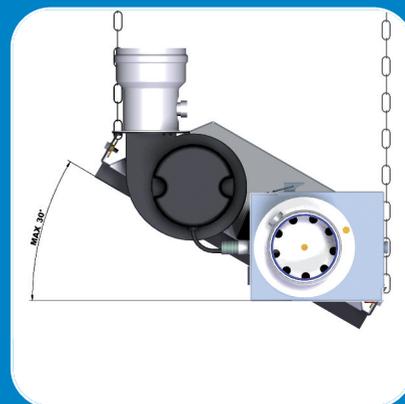
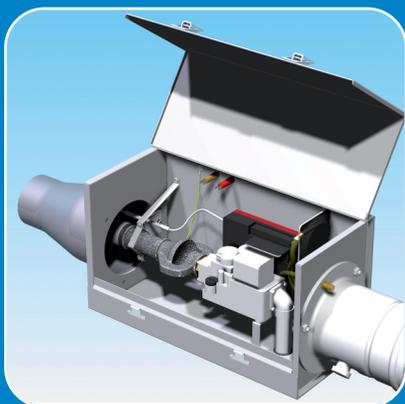
- The entire room does not need to be heated - only those spots where people are working.
- As soon as the employee leaves his working area, he can switch off the radiant tube.
- The sense of comfort of people is at a lower temperature in the case of radiant heat compared with convected heat. Therefore, the thermostat can be set a few degrees lower (the general rule is

## Application

Radiant tubes are particularly suitable in combination with gasfired unit air heaters. A relatively small unit air heater can keep the room at a certain minimum temperature while a radiant tube can pleasantly heat the specific work areas as required.

Additionally, radiant tubes are a very good solution as a main heating system for old, poorly insulated buildings, for buildings with extensive ventilation and for buildings that are completely or partly open. In such cases, the natural ventilation is such

that heated air would quickly be lost but, as the radiant heat produced by radiant tubes is absorbed by the bodies situated within the area of the radiation, these bodies give their warmth to the environment. Radiant tubes are also used in environments where air circulation is not wanted such as sports halls (badminton!), and heavy polluted environments.



## Advantages of radiant heating

- comfortable heat (feels like sunshine)
- short heat-up time, long period of retained heat
- low noise level
- no air movement
- zone-heating possible
- low energy consumption
- easy to install and maintain

## Selection

Always bear in mind that the surfaces to be heated must be situated within the area of radiation produced by the radiant tube. The radiant area can be estimated as follows:

Width: 2x the installation height (distance floor to radiant tube).  
 Length: 1.5x the length of the radiant tube. If you want to heat the whole room by radiant tubes, it is necessary to make a heat loss calculation first in order to determine the required total capacity. Once the required total capacity is known, this must be divided between the radiant tubes so that the total surface is irradiated. If the whole area is not covered, you will need to install additional capacity in excess of the heat loss calculation. The radiation areas should overlap each other, preferably at about 2.5m height, in order to achieve an even temperature.

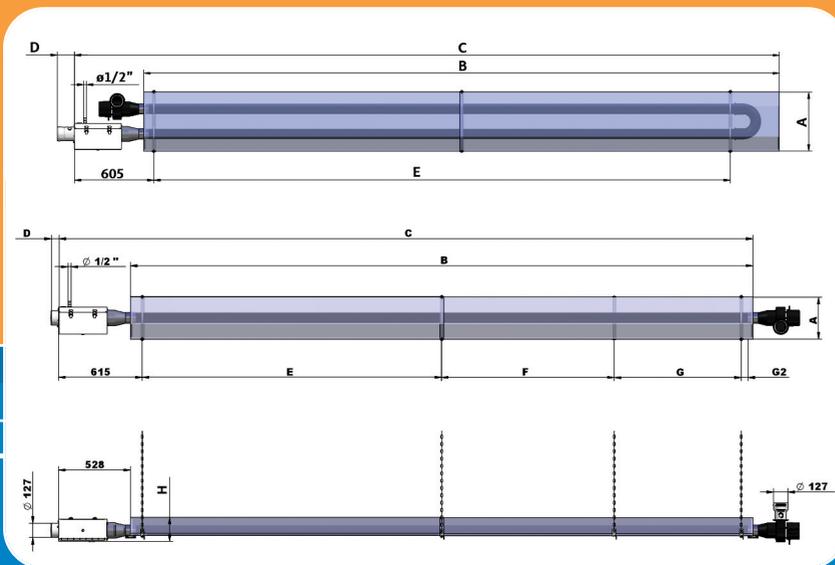
## Technical construction

The WRU and WRL are both equipped with a burner box and a reflector of high quality aluminium that maximises downward radiation. The WRU is a U-tube model and the WRL is a linear tube model. Both models are available in 8 capacities from 9 kW up to 47 kW. The radiant tubes can be mounted by means of chains and suspension brackets.

## Controls

In order to regulate the radiant tubes, Winterwarm offers the Economy Controller which is a clock thermostat with 7-day programming, self-learning optimiser, over-ride facility, frost protection and built-in or remote temperature sensor - suitable for max. 6 radiant tubes.

An other option is to control the radiant tubes in zones using an SRK controller with 1 or more black bulb sensors.



Type	WRU 10-12-15	WRU 22	WRU 28-33	WRU 42-50	WRL 10-12-15	WRL 22	WRL 28-33	WRL 42-50
A	465	715	715	715	340	340	340	340
B	2440	4850	4725	6310	4900	9000	9000	12000
C	3100	5385	5510	6970	5495	10065	9955	13000
D	55	55	55	55	55	55	55	55
E	1950	4270	4270	3885	4272	2950	2930	2960
F	-	-	-	1970	-	3065	3065	2886
G	-	-	-	-	-	2850	2850	3086
G2	-	-	-	-	-	-	-	2960
H	175	210	210	210	180	180	180	180

## Technical data

Type	Unit	10	12	14	22	28	33	42	50
Heat input (Hs)	kW	9.0	11.4	15.0	23.0	29.2	34.5	42.2	47.0
Heat input (Hi)	kW	8.1	10.3	13.5	20.7	26.3	31.1	38.0	42.3
Heat output	kW	7.7	9.8	12.9	19.8	25.1	29.7	36.3	40.4
Heater category		I12L3P	I12L3P	I12L3P	I12L3P	I12L3P	I12L3P	I12L3P	I12L3P
Appliance category	mbar	I12ELL3P, I2E+, I12H3P, I2H							
Appliance type		A2, B22, C12, C32, C52							
Gas consumption G20	m <sup>3</sup> /h	0.84	1.07	1.40	2.15	2.73	3.23	3.95	4.40
Electrical supply	W	125	125	125	125	125	125	125	125
Fuse externally	A	3	3	3	3	3	3	3	3
Weight	Kg	WRU WRL 31   27	WRU WRL 31   27	WRU WRL 31   27	WRU WRL 47   46	WRU WRL 66   62	WRU WRL 66   62	WRU WRL 81   79	WRU WRL 81   79
Gas connection	R	½" ext.	½" ext.	½" ext.	½" ext.	½" ext.	½" ext.	½" ext.	½" ext.
Flue size	mm	127	127	127	127	127	127	127	127

## Winterwarm: leading

Winterwarm has been engaged in the development, production and sales of industrial heating in Europe since 1936.

The company not only specialises in indirect fired unit air heaters, but also sells radiant tubes, rooftops, water heaters, destratification fans and direct fired heaters for the agricultural and horticultural industry.



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heating solutions

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## Winterwarm quality

- 70 years of experience
- ISO 9001-2000 certified
- Telephone helpdesk