



Winterwarm HR-series

The condensing unit air heater which combines efficient heating with energy savings and high comfort.



Winterwarm
heating solutions 

Characteristics Winterwarm HR:

- High efficiency
- Energysaving (up to 25% compared to conventional heaters)
- Stainless steel heatexchanger as standard
- Modulating burner
- Vertical gradient control
- Variable air distribution

For many years now, suspended unit air heaters have been employed worldwide to heat industrial buildings. Research from the 'Gasunie' (NL) regarding various industrial heating systems has confirmed that direct heated gas-fired air heating is one of the most efficient heating methods.

In general

The Winterwarm HR series (high system efficiency) combines efficiency, energy savings and total comfort control through several unique characteristics. Compared to the successful non-condensing XR-range of Winterwarm, energy savings up to 15% can be realised, while compared to standard unit air heaters savings up to 25% are possible. The compact measurements and the attractive design make the HR heaters suitable for installation in different environments such as showrooms, retail stores, sports centers but also in the traditional industrial environments.

Technical features

The HR heater is a condensing unit air heater with axial fan. The efficiency of the heaters is more than 106%. The premix burner allows the heater to modulate back to 20% of its maximum capacity. This implicates that the heater can very precisely adjust its heat output to the demand received through the room thermostat. Additional efficiency is realised by the vertical gradient control which measures continuously the temperature gradient by means of a sensor in the heater and one in the room thermostat. Should the temperature gradient increase above the set value, the unit will switch on the fan and bring down the warm air assembled underneath the ceiling. Consequently, the burner will start operating later.

The heat exchanger of the HR is manufactured from high grade stainless steel and has a warranty period of 5 years. There are 9 capacities available ranging from 10 kW to 120 kW.

Condensation discharge

The high efficiency requires a condensation discharge system which is located at the bottom of the heater. For the installation on the heater unit a siphon is supplied. Any further required drain pipes are not supplied. This means that an extra siphon or gooseneck is required to be fitted before the sewage.

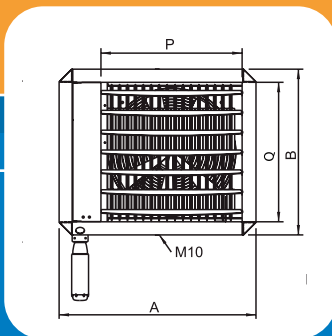
Low noise and less electricity consumption

As an option it is possible to equip the HR-heaters with an EC-fan instead of the standard AC-fan. This means a quieter heater with more air output and 25% reduction of the electricity consumption.

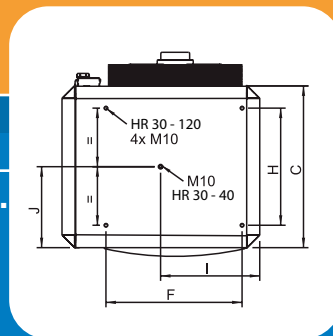


Suspension

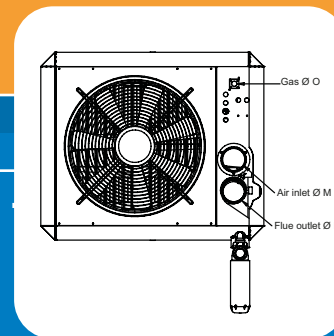
Unique for a condensing heater is that the models HR10-HR 60 can be suspended at an angle (max. 45°), in which case the condensation discharge should be placed at the front of the heater.



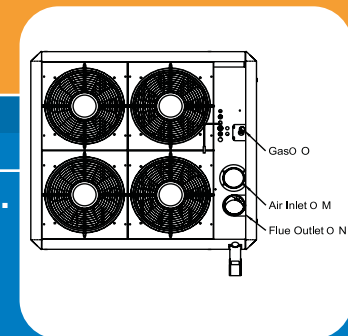
front view HR30-HR120



top view HR30-HR120



rear view HR30-HR60



rear view HR80-HR120

Measurement

	A	B	C	F	H	I	J	M	N	O	P	Q
HR10-20	650	495	530	470	400	325	280	ø80	ø80	1/2"	415	420
HR30	795	670	650	545	470	400	325	ø80	ø80	3/4"	575	565
HR40	795	670	650	545	470	400	325	ø80	ø80	3/4"	575	565
HR50-60	1065	670	650	143	815	175	90	ø80	ø80	3/4"	840	565
HR80-100	1135	1040	1010	822	700	235	155	100	100	1"	855	935
HR120	1280	1040	1010	972	700	235	155	130	130	1"	1005	935

HR10-20: provided with 2 centered M10 suspension points on top and bottom. Suspension by one design bracket (0°-45° variable) or by a standard bracket (horizontal air discharge).
 HR30-40: provided with 2 centered M10 suspension points on top and bottom, as well as 4 suspension points in the corners for suspension on threaded bar or by standard U-section brackets. With these brackets the HR 30-40 can also be suspended at an angle (15°, 30° or 45°).
 HR50-120: provided with 4 M10 suspension points in the corners for suspension on threaded bar or by standard U-section brackets. Suspension in an angle only allowed for types HR50 and HR60.

should not exceed 10 m taking into account that each 45° elbow counts as 1 m length and each 90° elbow counts as 2 m length.

Controls

There are various control options for the HR-series: Most often used are the MultiTherm standard and the MultiTherm Comfort thermostat, both intelligent thermostats which get the best from the HR heater. Thanks to a number of functions which are simple to operate, a maximum comfort level can be achieved. By means of an interface board (0-10V input), HR heaters can also be connected to a climate computer. Furthermore, modbus and 0-10V connection kits are available.

Intake of outside air

The HR30-HR60 can be equipped with a fanbox for intake of outside air; the fanbox is supplied as an accessory, including connection piece and 2 dampers on top/rear or bottom/rear and connection in between.



Fanbox

Flue terminal

The installation of the combustion air supply and the combustion gas discharge must meet the general regulations for high efficiency flue terminals. As the HR is provided with a flue booster one can apply either a horizontal (wall) or a vertical (roof) flue terminal. The length of the flue

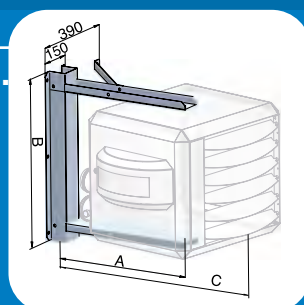


MultiTherm S

MultiTherm C



HR10 + HR20: model with 45° air discharge upon request



HR10-HR40



HR30-HR120



HR50-HR120



HR30-HR60: model with 45° air discharge upon request

	A	B	C	D	E
HR10-20	550	640	800		
HR30-40	665	815	990	1200	1200
HR50-60				1200	1200
HR80-120				1357	1600

Technical data

Type	Unit	HR 10	HR 20	HR 30	HR 40	HR 50	HR 60	HR80	HR100	HR120
Maximum nominal heat input (H.I.)	kW	12.5	20.0	30.0	40.0	50.0	60.0	72.0	91.0	111.0
Minimum nominal heat input (H.I.)	kW	4.0	6.0	9.0	12.0	15.0	18.0	24.0	30.0	36.0
Efficiency max. power	%	96.0	96.0	96.5	97.0	96.5	96.6	97.0	96.3	96.9
Efficiency 30% power	%	106	106	106	106	106	106	106	106	106
Maximum heat output	kW	12.0	19.2	29.0	38.8	48.3	58.0	69.8	88.3	107.7
Minimum heat output	kW	4.2	6.4	9.5	12.8	15.9	19.1	25.4	26.5	38.2
Max air output (warm)	m ³ /h	2,000	2,600	3,000	4,500	6,000	7,500	11,000	12,900	14,600
Throw horizontal (max)	m	15	20	23	26	28	30	42	48	49
Electrical Voltage (50 Hz)	V	230	230	230	230	230	230	230	230	230
Electrical power	W	250	250	275	450	450	600	780	790	1,240
Electrical current	A	1.1	1.1	1.2	2.0	2.6	2.6	3.5	3.7	5.5
Sound level (@ 4 meter), range	dB(A)	56-58	56-58	56-58	57-61	61-64	61-64	56-61	56-61	56-62
Weight	kg	45	50	75	85	105	110	190	200	225
Max gas consumption (G20)	m ³ /h	1.3	2.1	3.2	4.2	5.3	6.3	7.6	9.6	11.7
Max gas consumption (G31)	kg/h	1.0	1.6	2.4	3.2	4.0	4.8	5.8	7.3	8.9
Gas connection	G"	1/2	1/2	3/4	3/4	3/4	3/4	1	1	1
Max. length flue*	m	9	9	9	9	9	9	9	9	9

*) for each 90° elbow, 1.5m. less; for each 45° elbow, 1 m. less.



All HR-models are available with an EC-motor resulting in a lower sound level, a higher air out put and 25% reduction of the electricity consumption.

Winterwarm: leading

Winterwarm has been engaged in the development, production and sales of air heating in Europe since 1936. The company not only specialises in indirect fired unit air heaters, but also sells water heaters, electric heaters, air curtains, destratification fans and gas and oil fired heaters for the agricultural and horticultural industry.



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Version February 2023

Famous Winterwarm quality

- More than 85 years of experience
- ISO 9001-2015 certified
- Quick delivery
- Reliable

