



## Schwank HR-series

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

### Characteristics of the Schwank HR:

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



**Schwank**  
Heating. Cooling. Systems.

**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 Schwank HR series (*high system efficiency*) combines efficiency, energy savings and total comfort control through several unique characteristics. Compared to the successful XR-range of Schwank, 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 centres 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.

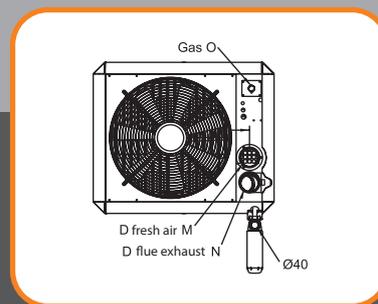
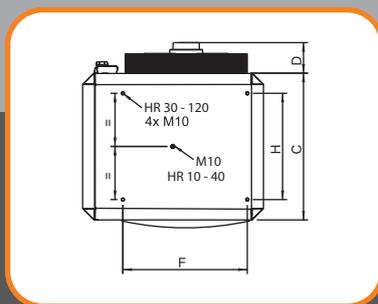
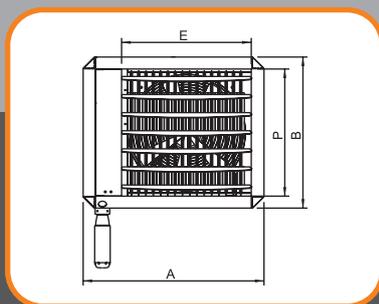
### Condensation discharge

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.

### Suspension

Unique for a condensing heater is that the models HR 10-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.

HR 10-20: provided with 2 centred M10 suspension points on top and bottom. Suspension by design bracket (*0°-45° variable*) or by standard bracket (*horizontal air discharge*). 4-point suspension with threaded bar possible with separate suspension kit.



	A	B	C	D	E	F	H	M	N	O	P
<b>HR10</b>	680	495	490	125	420	n/a	n/a	ø80	ø80	1/2"	420
<b>HR20</b>	680	495	490	125	420	n/a	n/a	ø80	ø80	1/2"	420
<b>HR30</b>	795	670	650	125	575	545	470	ø80	ø80	3/4"	565
<b>HR40</b>	795	670	650	125	575	545	470	ø80	ø80	3/4"	565
<b>HR50</b>	1065	670	650	125	885	815	470	ø80	ø80	3/4"	565
<b>HR60</b>	1065	670	650	125	885	815	470	ø80	ø80	3/4"	565
<b>HR80</b>	1115	1195	812	75	840	815	600	ø130	ø130	1"	1090
<b>HR100</b>	1115	1195	812	75	840	815	600	ø130	ø130	1"	1090
<b>HR120</b>	1115	1195	812	75	840	815	600	ø130	ø130	1"	1090

HR 30-40: provided with 2 centred 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°)

HR 50-120: 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 HR 50 and HR 60.

## 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 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. The dimensions of the flue are either 80mm (HR 10-60) or 130mm (HR 80-120).

## Controls

There are 3 control options for the HR-series: 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.

Features:	MultiTherm S	MultiTherm C
7 day program		X
10 programmable time blocks		X
Manual override		X
Summer/winter time		X
Modulates the heater according to the room temperature	X	X
Summer ventilation	X	X
Compensation wall influence	X	X
Keyboard locking		X
Frost protection	X	X
Failure diagnosis and reset per unit air heater	X	X
Low voltage current	X	X
Controls 1-8 heaters HR10-60 or 1-4 heaters HR80-120	X	X
IP20	X	X



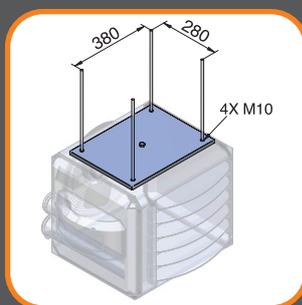
MultiTherm S



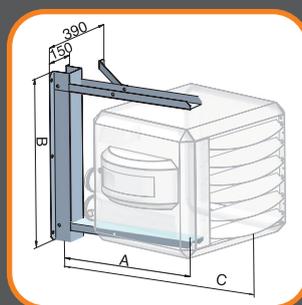
MultiTherm C



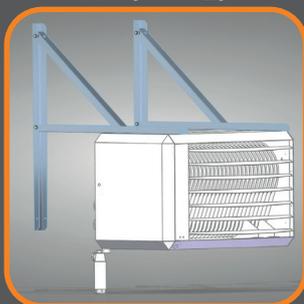
HR 10 + HR 20



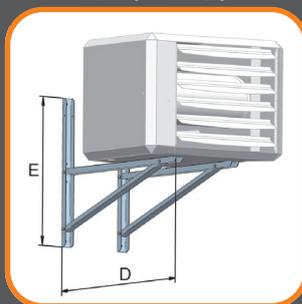
HR 10 + HR 20



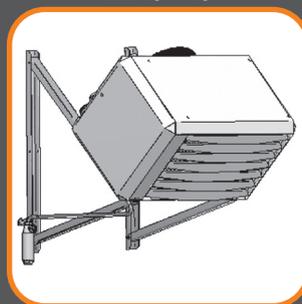
HR 10 - 40



HR 30 - 120



HR 30 - 120



HR 30 - 60

	A	B	C	D	E
HR 10-20	550	640	800		
HR 30-40	665	815	990	1200	1200
HR 50-120				1200	1200

## 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	80.0	100.0	120.0
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	96.8	96.5
Efficiency 30% power	%	106	106	106	106	106	106	105	105	105
Maximum heat output	kW	12.0	19.2	29.0	38.8	48.3	58.0	77.6	96.8	115.8
Minimum heat output	kW	4.2	6.4	9.5	12.8	15.9	19.1	25.2	31.5	37.8
Max air output (warm)	m <sup>3</sup> /h	2000	2600	3000	4500	5000	6000	8.500	10.000	12.000
Throw horizontal (max)	m	15	20	23	26	28	30	30	30	33
Electrical Voltage (50 Hz)	V	230	230	230	230	230	230	230	230	230
Electrical power	W	250	250	275	450	450	600	900	1000	1050
Electrical current	A	1.1	1.1	1.2	2.0	2.0	2.6	3.9	4.4	4.7
Sound level (@ 4 meter)	dB(A)	45	45	45	47	48	49	50	51	52
Weight	kg	45	50	75	85	105	110	85	105	110
Max gas consumption (G20)	m <sup>3</sup> /h	1.3	2.1	3.2	4.2	5.3	6.3	8.4	10.6	12.6
Max gas consumption (G31)	kg/h	1.0	1.6	2.4	3.2	4.0	4.8	6.4	8.0	9.6
Gas connection	G"	1/2	1/2	3/4	3/4	3/4	3/4	1	1	1
Minimum suspension height horizontal throw	m	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
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. Condensation exhaust necessary when flue > 4m

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