



RHE

SP91192SCO750V0 - RHE D 6000 HDR



High efficient heat recovery units up to 88% with rotary wheel, plug-fans with backward curved blades and EC external-rotor motor.

Pre-configured control system for easy start-up.

The casing is made of 50 mm, self-supporting double skinned panels (mineral wool, 40 kg/m³, thermal conductivity 0.037 W/ mK). The outer skin is made from coated steel (RAL7024) with a high resistance against corrosion (class: RC3) and UV light (class: RUV3) according to EN 10169 and the inner skin is made from galvanised steel.

Support feet are made from 3 mm, RAL9011 coated, 100 mm height (except RHE 6000 to 10000 models, which are base-mounted), with possibility to fit anti-vibration mounts or leveling feet (as accessories).

Easy access to all components via large hinged front doors.

Circular inlet and discharge connection flanges with EPDM rubber seal strip, VELODUCT® tightness class D up to size 3500 HD, rectangular connections for the sizes 4500 VD, 6000, 8000, 10000 and 15000.

Fan / Motor

Plug-fan with backward curved blades, external rotor EC motor with maintenance free ball bearings and permanent lubrication, with integrated electronic protection (locked rotor, phase failure, under-voltage, overtemperature, short-circuit).

Protection IP54, Class B.

(RHE-8000, 10000 and 15000 models, Class F)

Application

Public buildings, offices, stores, schools, restaurants.

Range

Versions:

- horizontal discharge HD
- vertical discharge VD
- horizontal discharge for outdoor installation HD OI

Sizes: 700 m³/h, 1300 m³/h, 1900 m³/h, 2500 m³/h, 3500 m³/h, 4500 m³/h, 6000 m³/h, 8000 m³/h, 10000 m³/h and 15.000 m³/h.

Models:

- RHE D: without additional heater
- RHE DI: with built-in electric post-heating
- RHE DC: with built-in hot water coil
- RHE DFR: with 2-row coil built-in reversible hot/chilled water integrated (the cold water version coil only for the models HD).
- RHE DFR4R: with 4-row coil built-in reversible hot/chilled water integrated (for models 6000, 8000, 10000 and 15000)
- RHE DC/DF: with 2 independent integrated coils (chilled water and hot water).
- RHE DX: direct expansion integrated coil (only for horizontal discharge, HD versions, except for models 15000).

Control (PulgPlay):

VAV - variable air volume

Fan speed can be adjusted with a 0 - 10V signal from the remote touchscreen panel (included) or an external CO₂, temperature or humidity sensor (accessories).

CAV - constant air volume

Manual pre-setting of 2 working points. The fans are controlled separately.

COP - constant pressure

Constant pressure measured by an external sensor (accessory).

Theoretical Working Point

	Supply	Extract
Airflow	1,20 m ³ /s	1,20 m ³ /s
External static pressure	200 Pa	200 Pa
Frequency	50 Hz	
Density	1,204 kg/m ³	

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**Working Point**

	Supply	Extract
Airflow	1,20 m ³ /s	1,20 m ³ /s
Static Pressure	200 Pa	200 Pa
Outlet temperatures Winter/Summer	-5 °C	

Fan

	Supply	Extract
Motor type	EC	EC
Voltage	400 V	400 V
Speed	1677 rpm	1698 rpm
Supply control voltage	6,9 V	7 V
Power	0,860 kW	0,890 kW
Absorbed Fan Current	2,9 A	2,9 A
SFPv	1,00 W/l/s	1,00 W/l/s
Electrical protection	IP 54	IP 54
Motor class	B	B

Heat exchanger

	Supply	Extract
General		
Type of Rotary heat exchanger	Rotary heat exchanger	
Winter - Air Inlet		
Temperature	-5 °C	22 °C
Relative humidity	100 %	60 %
Winter - Air Outlet		
Temperature	16,3 °C	0,8 °C
Relative humidity	58 %	99 %
Pressure drop	132 Pa	138 Pa
Thermal Efficiency	78,9 %	
Sensible Heat Recovery	30,91 kW	
Latent Heat Recovery	15,19 kW	
Thermal Power	46,1 kW	
Summer - Air Inlet		
Temperature	30 °C	20 °C
Relative humidity	40 %	40 %
Summer - Air Outlet		
Temperature	22,1 °C	27,9 °C
Relative humidity	64 %	25 %
Pressure drop	132 Pa	138 Pa
Thermal Efficiency	78,9 %	
Sensible Heat Recovery	11,52 kW	
Thermal Power	11,52 kW	

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Filter

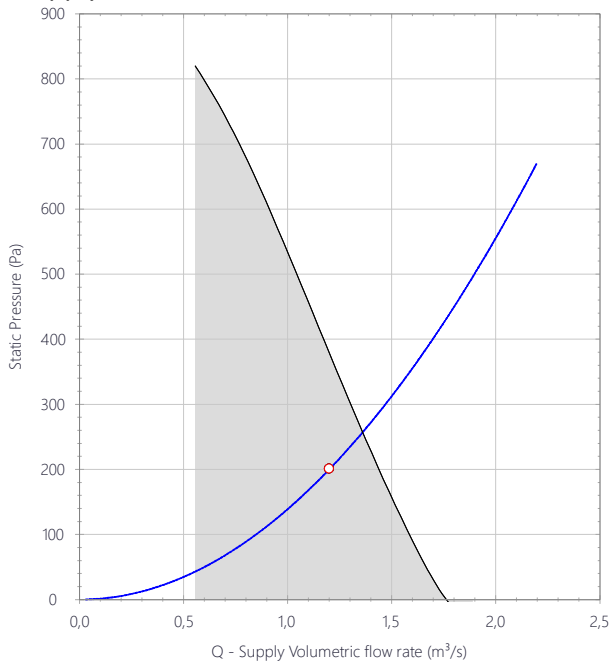
	Supply	Extract
EN 779 Filter class	F7	M5
Height	655 mm	655 mm
Width	600 mm	600 mm
Quantity	2	
Initial pressure drop	68 Pa	53 Pa
Pressure drop medium life	118 Pa	103 Pa
Max, for replacement	168 Pa	153 Pa
Front speed	1,7 m/s	1,7 m/s

Unit Summary

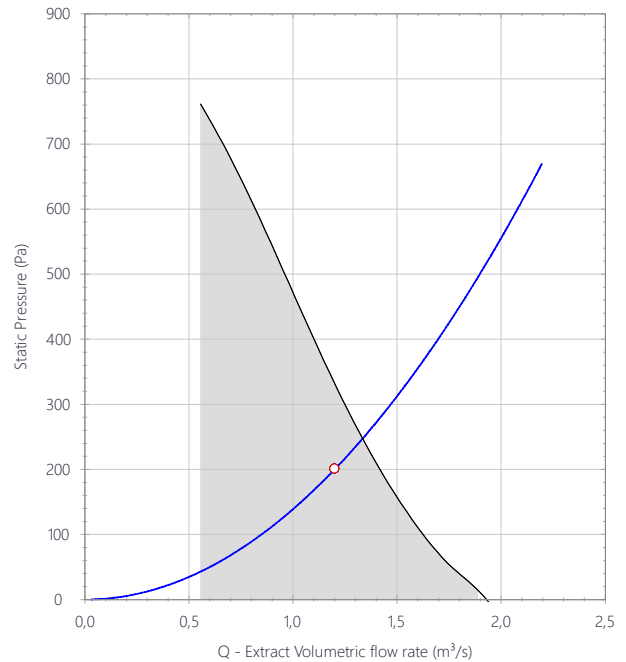
Voltage	400 V
Frequency	50 Hz
Max Absorbed Current	2,9 A
Max. Abs. Power	0,890 kW
SFP EN 13779	1,45 W/l/s

Performance Chart

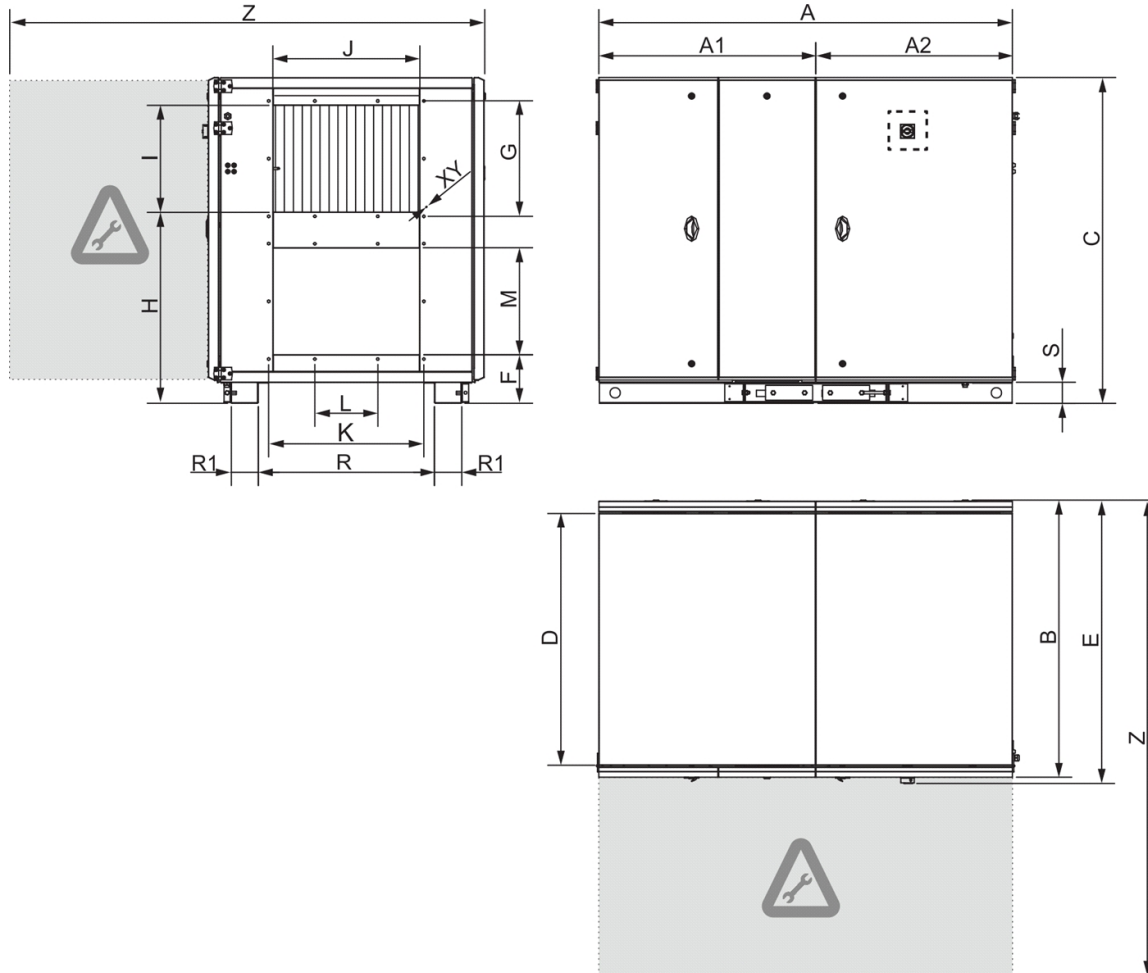
Supply



Extract



Dimensions and weights



A	A1	A2	B	C	D	E	F	G	H	I	J	K	L	M	R	R1	S	XY (M8)	Z
1972	1034	938	1315	1553	1200	1350	235	550	915	510	700	740	300	510	840	130	100		2515

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Acoustic data**Supply - Lw**

63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	dB(A)	
66	79	72	69	65	58	55	45	71	Outdoor air
68	79	67	78	76	70	68	59	80	Supply

Extract - Lw

63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	dB(A)	
66	79	72	69	65	59	56	45	71	Extract
68	80	67	78	77	70	68	59	80	Exhaust

Breakout - Lw

63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	dB(A)	
67	63	55	46	53	51	45	35	58	Breakout

Sound pressure at 3m. 37 dB(A), isolated source / spherical field (Q=1)



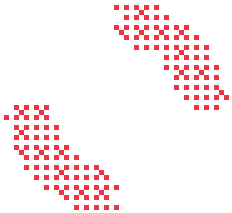
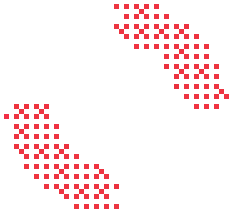
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Accessories

5407072500

PRRE 600x400/500



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ErP Data**Ecodesign**

Commission regulation (EU) No. 1253/2014 of July 2014

RHE**Information requirements (Annex V)****Ecodesign**

Commission regulation (EU) N°1253/2014 of July 2014

Information requirements (Annex V)**Product description**

RHE-6000-H

Manufacturer's Info

S&P

Identifier

-

Typology

NRVU bidirectional

Drive

Variable EC motor

Type of HRC

Other

Thermal efficiency (%)

79,9

Qnom (m3/s)

1,39

Pelec (kW)

3,76

SFPint (W/m3/s)

1094

Face velocity (m/s)

2

 $\Delta p_{s,ext}$ (Pa)

483

 $\Delta p_{s,int}$ (Pa)

695

 $\Delta p_{s,add}$ (Pa)

NA

Static efficiency fans (%)

63,3

External leakage rate (%)

2

Internal leakage rate (%)

NA

Filter performance

NA

Filter warning

Differential pressure switch

LWA dB(A)

64

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