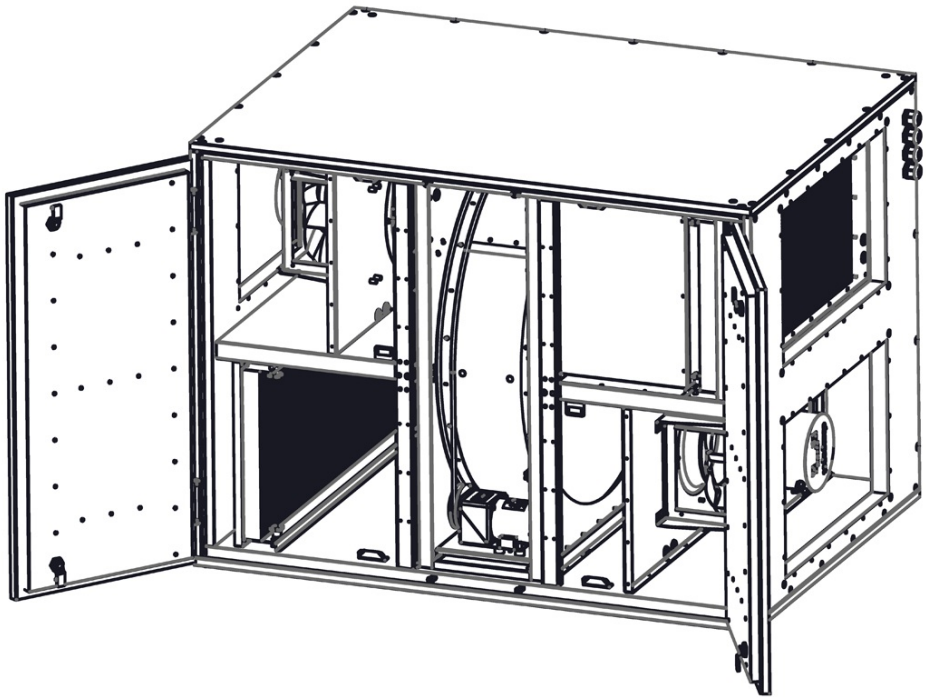
HR Rotor-6000Bu

Artikel 1675



		Supply	Extract
Air flow	[m^3/h]	6000	6000
External pressure	[Pa]	250	250
Inlet temperature, summer	[°C]	28	24
Relative humidity, summer	[%]	60	50
Inlet temperature, winter	[°C]	-7	21
Relative humidity, winter	[%]	95	50

Unit SFP	[W/(m^3/s)]	1940.3

Heat exchanger, summer

Supply			Extract		
Temperature after heat exchanger	[°C]	24.7	Temperature after heat exchanger	[°C]	27.2
Relative humidity after heat exchanger	[%]	72.7	Relative humidity after heat exchanger	[%]	41.3
Exchange efficiency dry	[%]	81.6	Exchange efficiency dry	[%]	80.6
Exchange efficiency wet	[%]	0	Exchange efficiency wet	[%]	0
Heat recovery wet	[kW]	-6.6	Air pressure drop	[Pa]	217.1
Air pressure drop	[Pa]	215.2	Face air velocity	[m/s]	3
Face air velocity	[m/s]	3.1			
Thermal efficiency (ηt_nrvu) EN308 at balanced flow	[%]	77.3			

Heat exchanger, winter

Supply			Extract		
Temperature after heat exchanger	[°C]	14.2	Temperature after heat exchanger	[°C]	-1.6
Relative humidity after heat exchanger	[%]	42.9	Relative humidity after heat exchanger	[%]	94.3
Exchange efficiency dry	[%]	75.7	Exchange efficiency dry	[%]	80.8
Exchange efficiency wet	[%]	40.2	Exchange efficiency wet	[%]	80.3
Heat recovery wet	[kW]	60	Air pressure drop	[Pa]	199.7
Air pressure drop	[Pa]	212	Face air velocity	[m/s]	3
Face air velocity	[m/s]	2.7			
Thermal efficiency (ηt_nrvu) EN308 at balanced flow	[%]	77.3			

EC fans

Supply fan, winter		
Number of fans		1
RPM	[1/min]	1437.4
Electric power consumption	[W]	1614.49
Current, A	[A]	2.5
Airflow at operating point	[m^3/h]	6000
Total fan pressure, Pa	[Pa]	630.5
Static fan pressure, Pa	[Pa]	596.2
Static fan efficiency η es	[%]	61.6
Phase/voltage	[50/60Hz VAC]	~3, 380/480
Power rated	[W]	2550
Current rated	[A]	3.9
Control voltage	[V]	8.4
Sound pressure level to environment @3m with A filter	[dB(A)]	38.5

Extract fan, winter		
Number of fans		1
RPM	[1/min]	1439
Electric power consumption	[W]	1619.27
Current, A	[A]	2.5
Airflow at operating point	[m^3/h]	6000
Total fan pressure, Pa	[Pa]	632.3
Static fan pressure, Pa	[Pa]	598.1
Static fan efficiency η es	[%]	61.6
Phase/voltage	[50/60Hz VAC]	~3, 380/480
Power rated	[W]	2550
Current rated	[A]	3.9
Control voltage	[V]	8.5
Sound pressure level to environment @3m with A filter	[dB(A)]	38.5

Fans sound power, winter

Sound power level		Octave frequency bands [Hz]								Gen.
Frequency		63	125	250	500	1000	2000	4000	8000	[dB(A)]
Lwa (to inlet)	[dB]	60	63	67	67	65	62	55	54	70
Lwa (to outlet)	[dB]	72	70	74	75	76	71	66	60	79
Lwa (to environment)	[dB]	59	53	67	47	41	33	33	24	59
Lpa (to inlet), 3 m	[dB]									49
Lpa (to outlet), 3 m	[dB]									58
Lpa (to environment), 3 m	[dB]									38

Fans sound power, winter

Sound power level		Octave frequency bands [Hz]								Gen.
Frequency		63	125	250	500	1000	2000	4000	8000	[dB(A)]
Lwa (to inlet)	[dB]	60	63	68	67	65	62	55	54	70
Lwa (to outlet)	[dB]	72	70	74	75	76	72	66	60	79
Lwa (to environment)	[dB]	59	53	67	47	41	34	33	24	59
Lpa (to inlet), 3 m	[dB]									49
Lpa (to outlet), 3 m	[dB]									58
Lpa (to environment), 3 m	[dB]									38

SFP, winter		
Unit external SFP, real at operation point	[W/(m^3/s)]	1940.3

Filter

Supply

Parameters		
Type		panel
Make		TECHNOGAJA
Filter class		ePM1 70%/F7/MERV13
Energy Efficiency Class		E
Filter Size (WxHxD)	[mm]	2x653x608x48
Face air velocity	[m/s]	1.93
Initial Pressure Drop	[Pa]	81
Final Pressure Drop	[Pa]	181
Design Pressure Drop	[Pa]	131
Filter Media		Synthetic fiber PES

*the filter is not Eurovent certified

Extract

Parameters		
Type		panel
Make		TECHNOGAJA
Filter class		ePM1 70%/F7/MERV13
Energy Efficiency Class		E
Filter Size (WxHxD)	[mm]	2x653x608x48
Face air velocity	[m/s]	1.93
Initial Pressure Drop	[Pa]	81
Final Pressure Drop	[Pa]	181
Design Pressure Drop	[Pa]	131
Filter Media		Synthetic fiber PES

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Casing

Double skin frameless casing with 40 mm (1.5inch) mineral wool 90 kg/m3; non-flammable; outer skin: zinc-aluminum; inner skin: zinc-aluminum; EN1886 class: D1, T3, TB4.
Insulation class B

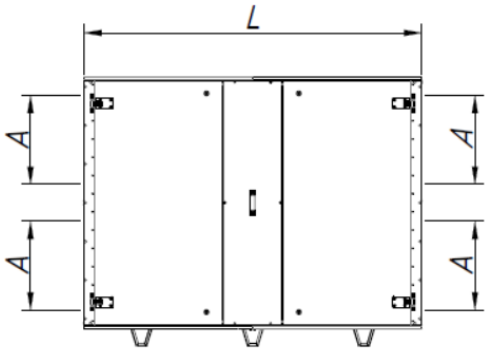
Units	L	W	H	W1	H1	A	B	L1	L2
mm	1910	1390	1420	1280	710	500	1000	360	505
inch	75	55	56	50	20	19	39	14	20

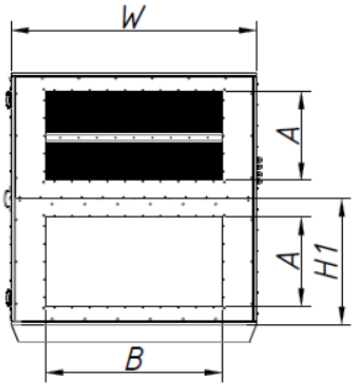
Unit Weight (without water cooler , DX coil, water heater), [Kg] - 573, [lb] - 1263

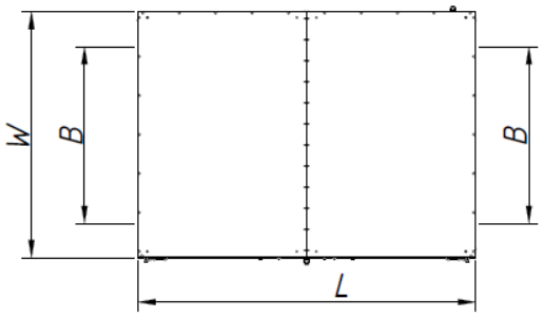
DX coil/water cooler weight , [Kg] - 79, [lb] - 174

Water heater weigh , [Kg] - 65, [lb] - 143

Electric heater weigh , [Kg] - 55, [lb] - 121







Controls

Built-in smart control system S21

Fully integrated factory-tested plug-and-play control solution.

NOTE: remote control panel is not included in the delivery set and should be ordered as an accessory if needed.

Control system features:

Remote panels and BMS:

- S22 simple remote control panel input (RS485);
- S25 advanced remote LCD touch panel 4.3” input (RS485) with integrated indoor temperature and humidity sensors;
- S22 WI-FI wireless simple remote control panel input;
- BMS inputs (RS-485, WI-FI, Ethernet, MODBUS (RTU, TCP));
- Remote control via AT cloud server;
- Remote control via mobile app (android, iOS)

Air flow regulation:

- Pre-adjusted fan speed selection and re-adjustment for supply and exhaust separately (three speeds);
- RH% input for remote sensor;
- CO2 input for remote sensor;
- VOC input for remote sensor;
- PM2.5 input for remote sensor;
- Fan boost signal input;
- Fireplace mode signal input;
- Daily/weekly schedule.

M1	Supply fan	0-10V/Tacho
M2	Extract fan	0-10V/Tacho
SM1	Outdoor/Exhaust air damper	NO
SM3	Water heater regulation valve	0-10V
SM5	Bypass damper	3P
TE1	Outdoor air temperature sensor	NTC
TE2	Supply air temperature sensor	NTC
TE3	Extract air temperature sensor	NTC
TE4	Exhaust air temperature sensor	NTC
TE5	Back water temperature sensor	NTC
PD1, PD2	Filter pressure switch	NO
PD3	Supply fan pressure switch (electric heater protection)	NO
TK	Overheating thermostat	NC
TS	Water heater frost protection thermostat	NC
KAM	Fireplace mode	NO
BST	Boost mode	NO
PK1	Fire alarm	NO

PM 2.5	PM2.5 sensor	0-10V
VOC	VOC sensor (air quality)	0-10V
RH	RH% sensor	0-10V
CO2	CO2 sensor	0-10V
S22	Remote control panel	RS485
S25	Remote LCD control panel	RS485
S22 Wi-Fi	Wireless remote control panel	Wi-fi
Triac	Electrical heater controller	PVM

ERP		
Trade mark		AT
Model		HR Rotor-6000Bu
Declared typology		NRVU BVU
Type of drive installed		Integrated MSD
Type of heat recovery system		Rotary
Thermal efficiency (ηt_nrvu)	[%]	77.3
Supply flow rate	[m^3/s]	1.67
Effective electric power input	[W]	3233.8
SFPint	[$W/(m^3/s)$]	1124.9
Face velocity at design flow rate	[m/s]	1.9
External pressure	[Pa]	250
Internal pressure drop of ventilation components	[Pa]	346.2
Static efficiency of fans	[%]	61.6
Maximum leakage rates	[%]	2.7
Maximum leakage rates	[%]	2.7
Filtration class		B
Visual filter warning		Visual filter warning
Sound power level	[db]	59
Internet address		https://www.air-transfer.nl/

Erp 2018 compliant according to Commission Regulation EU No 1253/2014, 7 July 2014

Accessories

SKU	Title	QTY
AT 25		1

The control panel is for control of industrial and domestic air handling units with an A21 automation system.
Functions:

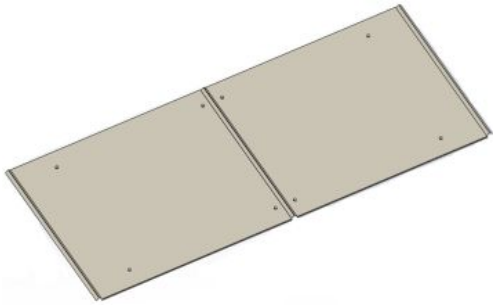
- Control via Wi-Fi using a mobile application
- Speed selection
- Speed adjustment
- Filter replacement indication according to hour meter or differential pressure relay readings
- Alarm indication with full alarm description in the mobile application
- Week-scheduled operation
- Automatic bypass
- Timers
- Boost mode
- Fireplace mode
- Freeze protection through cyclic stops of the supply fan, optional preheating or using bypass
- Optional reheater connection
- Optional cooler connection
- Supply air temperature control
- Fire alarm system connection
- Humidity control with optional HV2, HR-S or DPWC11200 sensor
- CO2 control with optional CO2-1, CO2-2 or DPWQ40200 sensor
- VOC control with optional DPWQ30600 sensor
- Optional PM2.5 control

*Option. The functionality is available with the appropriate accessory purchased.

Filter pressure switch	2

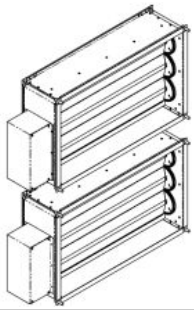
The pressure differential switch is used to determine air rarefaction or air (non-aggressive gases) pressure drop. It is used in ventilation systems to determine air filter clogging degree or belt breaking in centrifugal fans, etc.

Roof for outdoor installation	1



Set of automatic dampers with Belimo drives	1

The case is made of galvanized steel. Aluminum blades driven by plastic gears. Lever with removable metal handle and locking clip. Standard connection flange for rectangular ducts or other ventilation system components. The flanges must be connected with galvanized bolts and clamps.



Flexible duct connection	2

Flexible connectors are flanges interconnected by antvibration material. The inserts are made of galvanized steel and polyethylene tape reinforced with polyamide textile cloth.

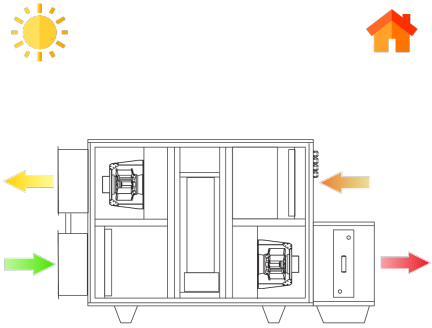
Dimentions [mm]

Size	L	H
VVG 1000x500	1000	500

Weather hood for outdoor installation	2

With IP20 grid; W=1000 mm; H=500 mm

Right service side
Access side view



Supply air Fresh air Extract air Exhaust air