

Company :	Date :	2018/06/11.
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Subject :		
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Model :	<b>GLOBAL LP 450 FW L</b>
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The GLOBAL LP FW heat recovery unit is compact unit with self-contained casing from galvanized metal sheet. The outside of the casing has a lacquered finish. The casing's insulation thickness is 30 mm. The unit is equipped with radial fans with TAC motors with low electrical consumption. On both inlet and outlet the unit is fitted with compact filters M5 (G4 for GLOBAL LP FW 450). Furthermore, the unit is equipped with counterflow heat exchangers with efficiency up to 90%, condensation tray, 100% modulating by-pass and an automatic condensation pump. Total height of the unit enables easy mounting into ceiling. Condens water does not drop into siphon but is drained away with the pump. The unit is delivered with an prewired controller. More details on our website.

EN1886 Classification :

Mechanical resistance class of the envelope: D1  
 Thermal transmittance class U : T3  
 Thermal bridge class Kb : TB3  
 Airtightness of the envelope class (exhaust and supply airstreams) : L2  
 Airtightness around the filters class (exhaust and supply airstreams) : F9

**Supply : Fans + Controls**

Voltage : 1 x 230 V - 50 Hz  
 Intensity : 2,4 A max.  
 Electrical protection : D8A - 10kA - AC3

**Fans - TAC**

Units are equipped with high efficiency TAC (Total Airflow Control) technology fans. They are driven by electronically commutated motors and allow accurate control of the fan's actual working point. The efficiency of the motor remains between 85% and 60%, whatever the working point. The motor is a permanent magnet DC driven motor but AC power supplied.

	Supply	Exhaust		Fan name :	DS 140-59 TAC 170w
Airflow :	450	450	m <sup>3</sup> /h	Number of fans :	1 + 1
Internal pressure drop :	154	198	Pa	Sound power spectrum (fan only)-(dB re.10E-12 W/m <sup>2</sup> )	
External pressure drop :	189	147	Pa		
Extra available pressure drop :	2	0	Pa		
Rotation speed :	2890	2890	rpm		
Voltage :	230	230	V		
Intensity :	1,13	1,13	A		
Power :	166	166	W		
Specific fan power, SFPv (clean filters) :	2,66		kW/(m <sup>3</sup> /s)		

	63	125	250	500	1000	2000	4000	8000	Hz
S	83,0	78,0	73,0	66,0	66,0	63,0	56,0	51,0	dB
E	83,1	78,1	73,1	66,1	66,1	63,1	56,1	51,1	dB

Radiated A weighted Sound pressure level for ducted unit in free field (d=3m) **40,4 dBA**  
(RF=600000000/DF=1/ZF=20,40)-(dB re. 20 µPa)

**Controls**

The units are delivered fully pre-wired as standard ('plug & play') with main switch and complete control of the unit. The latter includes all the necessary components and is fully wired to T° probes, fans, main switch, by-pass. Connect the power supply and configure the parameters and the unit is ready to run.

The controller monitors each component:

- Setting and piloting of TAC fans in selected mode: CA (constant flow), CP (constant pressure measured by an optional external sensor) or LS (link with signal 0 - 10V, for example a CO2 air quality sensor).
- Automatic freecooling control with bypass
- Antifrost system of the air/air heat exchanger (airflow modulation or electrical coil). Device mounted outside the unit
- Control of external post-heating coil (water or electrical) or cooling coil (water), or reversible coil (heating or cooling water coil)
- Open/Close motorized dampers
- Time slot management (scheduling)
- Alarms management (fire, pressure, maintenance, component failure,...)
- Display and management of all system parameters via TACtouch, BMS or web page (option)
- MODBUS communication (RTU, TCP/IP and GPRS) (option)

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**Heat Recovery unit - CF**

The heat exchanger is an air/air high efficiency counterflow heat exchanger, executed in sea water resistant aluminium, at a temperature of up to 80°C. The airtightness tests according to DIN1946 show a leakage rate of 0.017 % at 400 Pa difference between the 2 air streams. The heat exchanger is compliant to standard EN 308. The technical selection as presented below is realised with the Eurovent certified selection software from our supplier of the rotary heat exchanger.

Eurovent Certification Diploma N° : 05.03.243 & 11.07.006

Updates of this document are available via: <http://www.eurovent-certification.com>.

Air pressure :	1013 mbar					
	<u>Supply</u>	<u>Exhaust</u>		<u>Supply</u>	<u>Exhaust</u>	
Airflow :	450	450	m³/h	Air outlet temperature :	17,5	-5,9 °C
	0,13	0,13	m³/s	Relative humidity out :	4,2	100,0 %
Airspeed through HRU :	1,88	2,21	m/s	Humidity out :	0,5	2,3 g/kg
Air inlet temperature :	-21,0	22,0	°C	Capacity (W.B.) :	5,8	kW
Relative humidity in :	90,0	40,0	%	Efficiency HRU (W.B.) :	89,6	%
Humidity in :	0,5	6,6	g/kg	Capacity (D.B.) :	5,2	kW
Pressure drop in HRU :	117	162	Pa	Efficiency HRU (D.B.) :	79,8	%

**Filter - G/F**

The heat recovery ventilation unit is equipped with M5 (G4 for 450) class plane filters at the inlet of the polluted air and M5 (G4 for 450) class plane filters at inlet of the fresh air, to correctly protect the heat exchanger and guarantee optimum air quality inside the building. However, the unit is originally delivered with a G4/G4 starter kit of filter. Once the unit has been running for a few weeks, filters need to be replaced by a M5/M5 (G4/G4 for 450) filters kit. Filters are easily accessible through the access doors for maintenance purposes. M5/F7 (G4/F7 for 450) filters kit are available as an additional option.

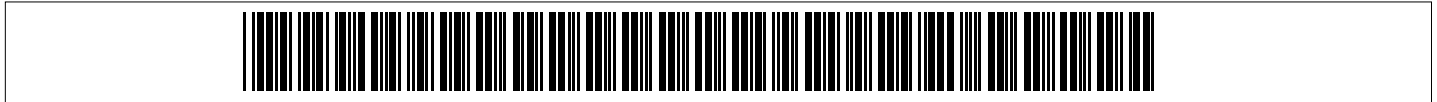
				<u>Supply</u>	<u>Exhaust</u>	
Filter class :	G4	Dimensions :	245 x 295 x 50 mm	Air speed :	1,73	m/s
		Quantity :	1	Filter pressure drop :	37	Pa
Filter class :	G4	Dimensions :	245 x 295 x 50 mm	Air speed :	1,73	m/s
		Quantity :	1	Filter pressure drop :	37	Pa

<b>Circular inlet - ER ø 200 mm</b>	<b>Circular outlet - SR ø 200 mm</b>
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Model :	<b>GLOBAL LP 450 FW L</b>
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<b>Manufacturing info</b>
886140

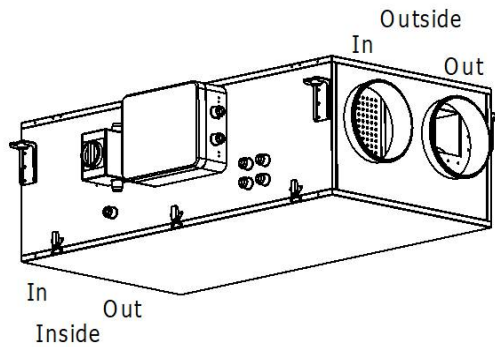
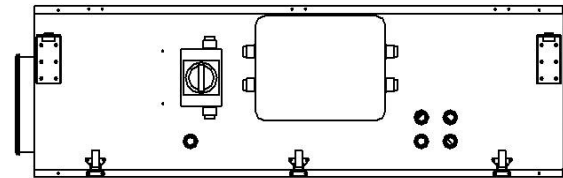
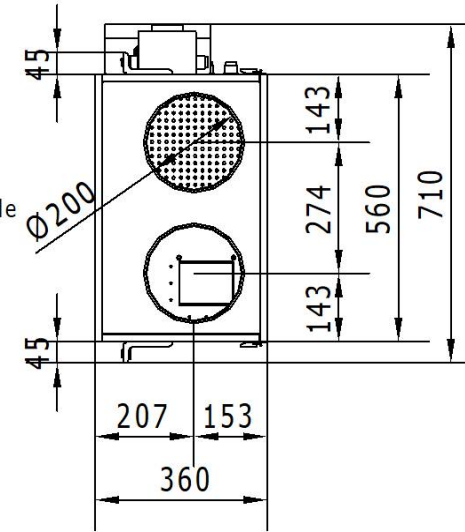
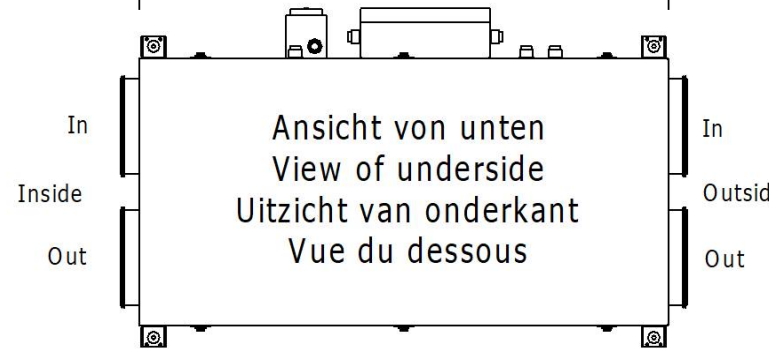
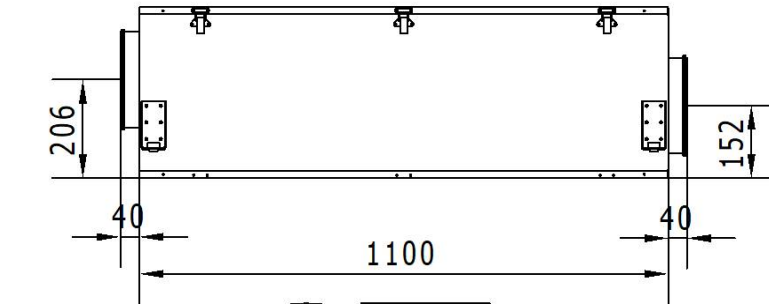
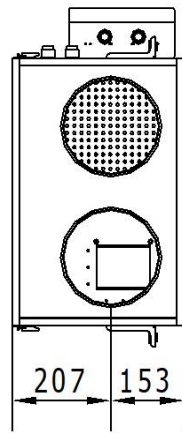


<b>Detail</b>	
<u>IDCode</u>	<u>Description</u>
886140	GLOBAL LP 450 FW L

<b>Accessories (included)</b>		
<u>IDCode</u>	<u>Quantity</u>	<u>Description</u>
372102	1	HMI TACtouch touchscreen LP & CU
370005	1	SAT3 Relay satellite (fan ON or CT+ AL dPA)

<b>Options (not included)</b>		
<u>IDCode</u>	<u>Quantity</u>	<u>Description</u>
510045	1	GF Filter kit GLOBAL LP 450 FW (G4/G4)

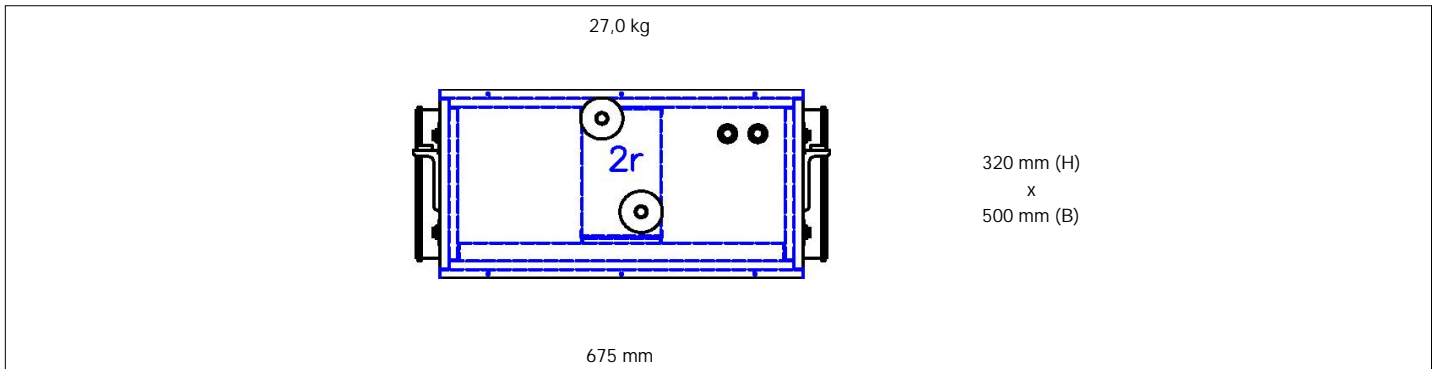
SERVOLUX SIA Gan bu dambis 30/1-303 Gan bu dambis 30/1-303 Tel.+371.29167325 Fax.+46(0)31/899469 info@servolux.lv



Index	Date	Modification	Par	Contrôlé
Toutes les cotes sont des cotes extérieures / All dimensions are outside dimensions				
Titre :		GLOBAL LP 450 FW L		
Date :		Client/Customer :		Numéro de plan :
Unité :		Code client/Customer code:		Drawing number :
Révisé par :				886140
Drawn by :				

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Model :	<b>GLOBAL LP 450/600 BA Empty box external coil / BA 2r+ (Heating (water) (2r))</b>
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<b>Manufacturing info</b>	
882745	882748

This extra module comprises either a warm / cold water coil (2-4 rows) or an evaporation / condensation coil (DX) (4 rows). If you have selected the 3-way-valve kit (not available for DX coil), this water coil will be controlled by the TAC5 unit. The 3WV kit includes control circuit SAT BA/KW, suitable 3-way valve with actuator and temperature sensors.

<b>Heating coil - BAext+</b>			Connection diam. :	3/4"	
Coil name :	HRf 450-2	Inlet air T° :	12,5 °C	Fluid type :	Water
Number of rows :	2	Outlet air T° :	20,1 °C	Glycol %age :	%
Number of circuits :	2	Airflow :	450 m³/h	Fluid T° in/out :	80,0 / 60,0 °C
Total capacity :	1,19 kW	Air speed :	1,85 m/s	Fluid flow :	52 l/h
		Air pressure drop :	20 Pa	Fluid pressure drop :	0,15 kPa

<b>Circular inlet - ER Ø 250 mm</b>	<b>Circular inlet - ER Ø 250 mm</b>
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<b>Detail</b>	
<u>IDCode</u>	<u>Description</u>
882745	GLOBAL LP 450/600 BA Empty box external coil
882748	BA 2r+ (Heating (water) (2r))