

Company :	Date :	2018/06/11.
To :	From :	agrava
Subject :		
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Model :	MURAL PX 450 FW
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The MURAL PX series is a complete range of double flow mechanical ventilation unit with high efficiency heat recovery (90% and more). The unit features an aluminium counterflow plate heat exchanger, drainpan, M5 class filters for exhaust and supply (G4 for MURAL PX 450), and high efficiency TAC technology centrifugal fans. It will be delivered ready to use, entirely pre-cabled. All that'll need to be done is to connect the power (outside the unit) and to set the parameters and that's it ! The device will be delivered as standard with a by-pass, and its pre-cabled control. The new control is designed to receive and monitor the different options available according to your needs. The structure of the unit is made of anodized extruded aluminum profiles, assembled together with reinforced polypropylene corner pieces. The 15mm panels are double skin steel plates. The heat and sound insulation is made of mineral wool. The outside panels are 0,8mm thick pre-painted (5 µm primer + 20 µm polyester) gray RAL 9002 color. The inside panels are 0,8mm thick galvanized steel (DIN 17162). The heat exchanger is a counterflow air/air construction made from "seawater resistant" aluminum. All the access door are equipped with handles.

when the ventilation unit is installed in a cold location and remains off for an extended period of time, be sure to always equip the unit with motorized dampers, installed between the building and the unit. This in order to avoid the condensation of the extract air inside of the unit. The GLOBAL PX TOP FW solution can solve many space availability problems, up to 2.000 m³/h (555l/s). In case of limited height, we can also offer the GLOBAL LP FW range, up to 2.000 m³/h (555l/s) as well.

Supply : Fans + Controls	
Voltage :	1 x 230 V
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.																																																			
	<table border="0"> <tr> <td style="text-align: center;"><u>Supply</u></td> <td style="text-align: center;"><u>Exhaust</u></td> <td></td> <td>Fan name :</td> <td>DS 140-59 TAC 170w</td> </tr> <tr> <td>Airflow :</td> <td>450</td> <td>450 m³/h</td> <td>Number of fans :</td> <td>1 + 1</td> </tr> <tr> <td>Internal pressure drop :</td> <td>147</td> <td>191 Pa</td> <td>Sound power spectrum (fan only)-(dB re.10E-12 W/m²)</td> <td></td> </tr> <tr> <td>External pressure drop :</td> <td>200</td> <td>200 Pa</td> <td></td> <td></td> </tr> <tr> <td>Extra available pressure drop :</td> <td>47</td> <td>3 Pa</td> <td></td> <td></td> </tr> <tr> <td>Rotation speed :</td> <td>2820</td> <td>2918 rpm</td> <td></td> <td></td> </tr> <tr> <td>Voltage :</td> <td>230</td> <td>230 V</td> <td></td> <td></td> </tr> <tr> <td>Intensity :</td> <td>1,06</td> <td>1,13 A</td> <td></td> <td></td> </tr> <tr> <td>Power :</td> <td>154</td> <td>165 W</td> <td></td> <td></td> </tr> <tr> <td>Specific fan power, SFPv (clean filters) :</td> <td colspan="2">2,55 kW/(m³/s)</td> <td></td> <td></td> </tr> </table>	<u>Supply</u>	<u>Exhaust</u>		Fan name :	DS 140-59 TAC 170w	Airflow :	450	450 m³/h	Number of fans :	1 + 1	Internal pressure drop :	147	191 Pa	Sound power spectrum (fan only)-(dB re.10E-12 W/m²)		External pressure drop :	200	200 Pa			Extra available pressure drop :	47	3 Pa			Rotation speed :	2820	2918 rpm			Voltage :	230	230 V			Intensity :	1,06	1,13 A			Power :	154	165 W			Specific fan power, SFPv (clean filters) :	2,55 kW/(m³/s)			
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	Radiated A weighted Sound pressure level for ducted unit in free field (d=3m) 40,1 dBA <small>(RF=600000000/DF=1/ZF=20,40)-(dB re. 20 µPa)</small>																																																		

Controls	
The units are delivered fully pre-wired as standard ('plug & play') with main switch (except MURAL PX 450 FW with plug) 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 , as well as all options. Connect the power supply and configure the parameters and the unit is ready to run.	
The controller monitors each component:	
<ul style="list-style-type: none"> •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) •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 or KNX (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 :	17,2	-7,1 °C
	0,13	0,13	m³/s	Relative humidity out :	4,3	100,0 %
Airspeed through HRU :	1,88	2,20	m/s	Humidity out :	0,5	2,1 g/kg
Air inlet temperature :	-21,0	22,0	°C	Capacity (W.B.) :	5,8	kW
Relative humidity in :	90,0	35,0	%	Efficiency HRU (W.B.) :	88,9	%
Humidity in :	0,5	5,7	g/kg	Capacity (D.B.) :	5,2	kW
Pressure drop in HRU :	117	162	Pa	Efficiency HRU (D.B.) :	79,7	%

Filter - G/F

The heat recovery ventilation unit is equipped with M5 (G4 for 300/400/450) class plane filters at the inlet of the polluted air and M5 (G4 for 300/400/450) class plane filters at inlet of the fresh air, to correctly protect the heat exchanger and guarantee optimum air quality inside the building. Filters are easily accessible through the access doors for maintenance purposes. M5/F7 (G4/F7 for 300/400/450) filters kit are available as an additional option.

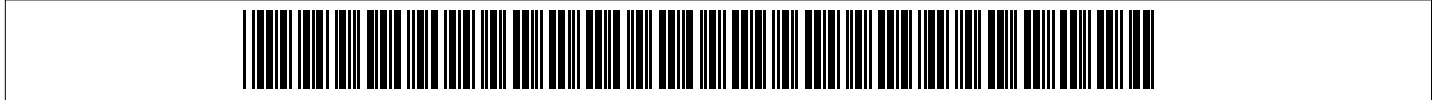
				<u>Supply</u>	<u>Exhaust</u>	
Filter class :	G4	Dimensions :	415 x 200 x 50 mm	Air speed :	1,51	m/s
		Quantity :	1	Filter pressure drop :	30	Pa
Filter class :	G4	Dimensions :	415 x 200 x 50 mm	Air speed :	1,51	m/s
		Quantity :	1	Filter pressure drop :	30	Pa

Circular inlet - ER ø 200 mm	Circular outlet - SR ø 200 mm
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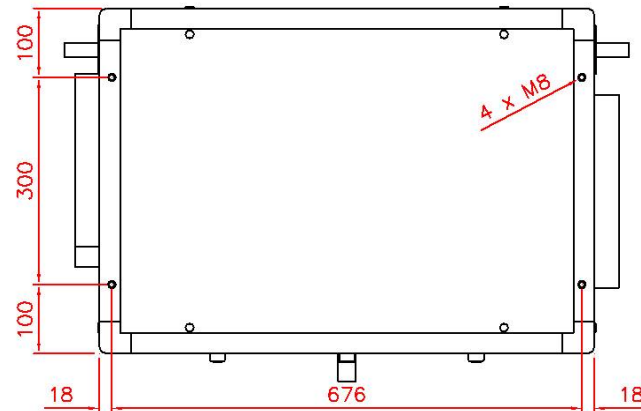
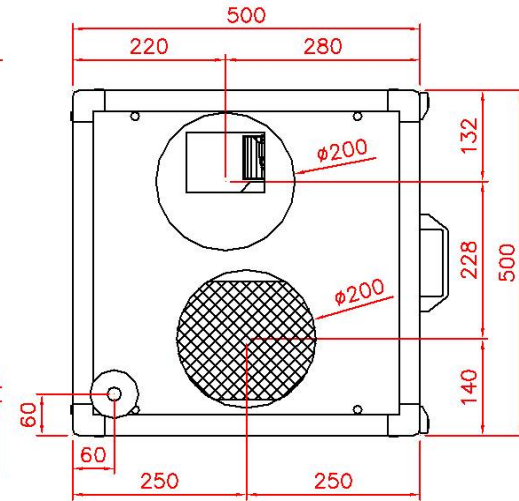
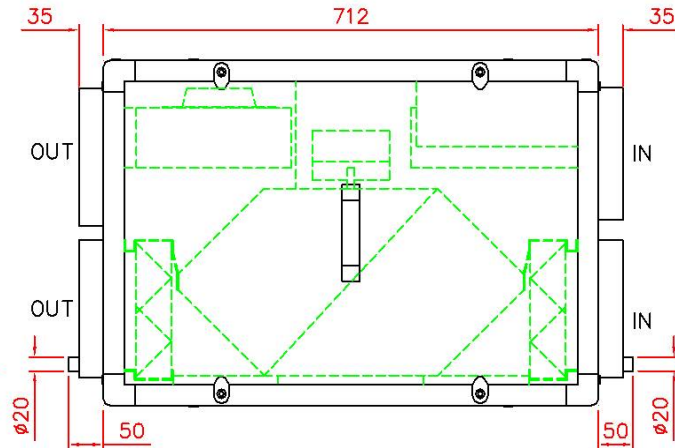
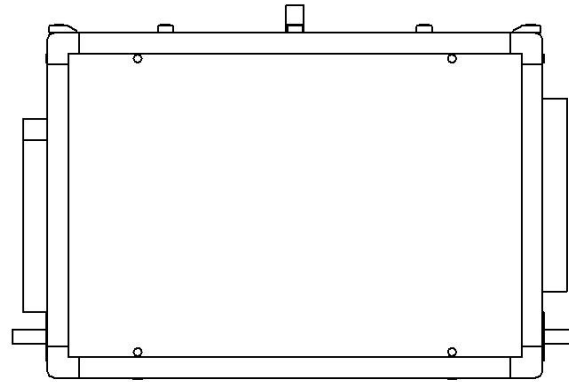
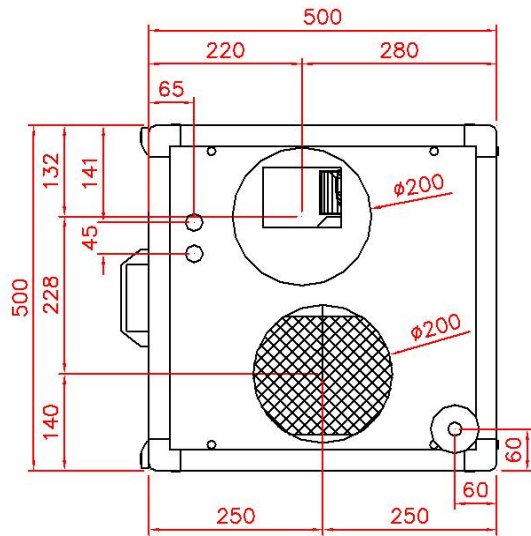
Manufacturing info
884291



Detail	
<u>IDCode</u>	<u>Description</u>
884291	MURAL PX 450 FW

Options (not included)		
<u>IDCode</u>	<u>Quantity</u>	<u>Description</u>
510042	1	GF Filter kit MURAL PX 450 FW(G4/G4)
370005	1	SAT3 Relay satellite (fan ON or CT+ AL dPA)

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	Contrôle
Toutes les cotes sont des cotes extérieures / All dimensions are outside dimensions				
Titre : Title : MURAL PX 450 FW				
Date : 09/08/12		Client/Customer :		Numéro de plan : Drawing number :
Unité : mm		Code client/Customer code:		884291
Dessiné par : Drawn by : Henrot M.				