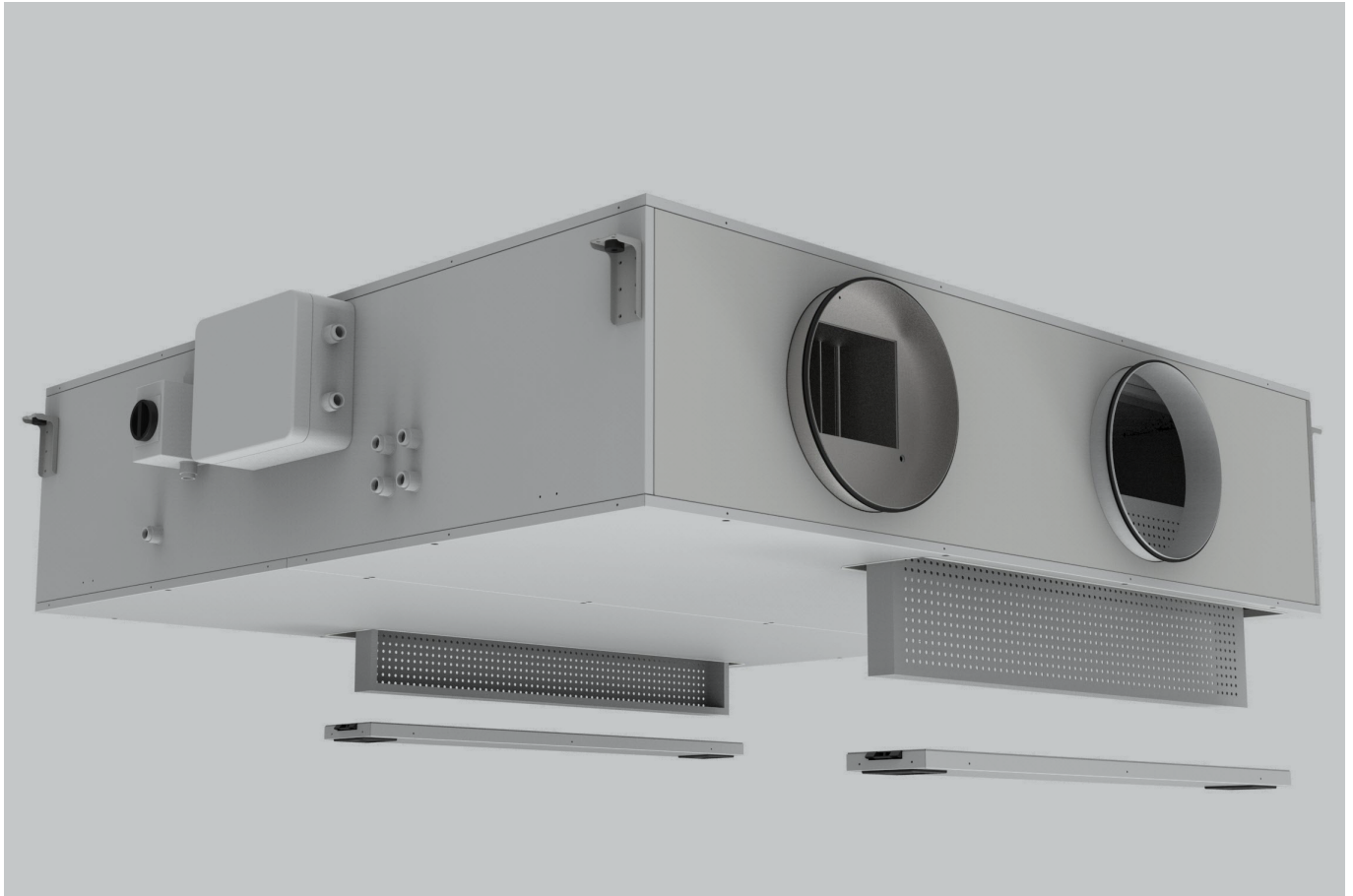


# GLOBAL LP<sup>FW</sup>

Ceiling-mounted ventilation unit with plate heat exchanger



- ▶ Ventilation unit with plate heat exchanger for commercial applications. Well-suited for both newly constructed buildings and renovation projects
- ▶ Maximum airflow 2.100m<sup>3</sup>/h or 580 l/s.
- ▶ Temperature efficiency: up to 85 %
- ▶ Energy-efficient EC fans
- ▶ For installation indoors against ceiling
- ▶ Premium control technique with touchscreen HMI

## GLOBAL LP<sup>FW</sup>: HIGH EFFICIENCY DOUBLE FLOW VENTILATION UNITS

P.LEMMENS has since 1997 specialised in the design and production of double flow ventilation units with energy recovery. The aim from the outset was to focus on efficiency. Brochures of that period stressed that "it is absurd to want to recover heat energy when electric energy was being wasted..." That is why first generation TAC technology was already applied to this product. Accordingly, direct current Electronically Commutated Motor (ECM) fans with permanent magnets were selected systematically for the development of the range. With this decision, the HR range anticipated the most exacting levels of electricity consumption to come such as the ErP2013/2015 standards, simply by a philosophical choice...

The motors have been further improved since as have the control systems which are now open to MODBUS communication and all its advantages.

### PLUG & PLAY

All the HR range units are supplied as 'Plug&Play'. The standard settings are pre-programmed in the factory, so it suffices to connect the power supply and the control signals and/or the remote control, and to enter the specific settings for the application.

Putting the units into use becomes a breeze...

### ACCESSIBILITY OF COMPONENTS

The units are designed to give the user easy access to the different components. The doors are largely sized and fitted with handles. They can be withdrawn, for easy access, even when installed in limited space. The control panel is likewise easy to access and centralises all the wiring.

### COUNTERFLOW EXCHANGERS

The same focus on efficiency led us to opt for counterflow exchangers.

- These are far superior to other types of exchanger (96%).
- They ensure flawless tightness between the 2 airflows, thereby constituting great **advantage in terms of hygiene compared with rotary exchangers.** ...

The exchangers are in "salt-air resistant" aluminium and are suitable for temperatures up to 80°C. They are compliant with the DIN1946 tightness standard and are Eurovent approved according to the EN 308 standard (measurement of heat efficiency and validity of technical data).



### HIGH EFFICIENCY FANS

The TAC fans are equipped with high efficiency DC motors at the cutting edge of the latest technologies. They can achieve sizeable external pressure levels, whilst guaranteeing low consumption throughout the entire operating range.

The TAC control system guarantees the known precision from the operating point of view and makes an active contribution to optimising consumption.

The efficiency levels are naturally compliant with the ErP2013/2015 standards. P.LEMMENS has opted for a forward curved fan for its HR range for 2 reasons:

- Its characteristics relating to the tolerance system variations of pressure losses. In fact, it preserves good efficiency throughout the entire range of its use;
- Its lower noise level, thanks to a lower rotation speed and a higher number of blades.

### TAC5 REGULATION COMPLETES THE SYSTEM

The HR units are fitted with a complete electronic regulation system used to operate the fans, the bypass, the anti-freeze protection of the exchanger, the valves, the pre-heating coil (option), and post-heating coil (option) as well as the external hot and/or cold exchangers (option).

It is equipped with a MODBUS communication bus used for its interfacing and complete integration with a standard centralised control system.

## FIRE ALARM MANAGEMENT

The TAC5 regulation is provided with complete management of supply and exhaust airflow in case of fire alarm: for setting the airflow rate if the alarm is activated and for stopping or starting the supply and exhaust airflow independently via external contacts, intended for the fire brigade.

## FREE COOLING FOR SUMMER NIGHTS

The GLOBAL LP<sup>FW</sup> range is equipped with a 100% bypass. Operated entirely by regulation, this system cools the rooms during the night when the differences of indoor and outdoor temperature permit. This system can be connected to a ground-coupled heat exchanger to improve efficiency even more. The control settings can be adjusted by the operator.

## NON-RETURN VALVES (OPTION CT)

A non-return valve can be mounted to avoid undesirable (natural) draughts on the incoming and outgoing airflows when the unit is stopped. It can be operated by the TAC regulation. A delay is provided when starting the fans.

## AIR FILTERS

The GLOBAL LP<sup>FW</sup> units are supplied as a standard with oversized air filters (to reduce the pressure drop) that protect the exchanger and improve the quality of the incoming air. G4 filters are mounted on the fresh air suction (outdoor air – F7 available in option) and G4 filters on the room suction (indoor air). Replacement filter kits are also available.

## INTERNAL PRE-HEATING (OPTION KWin)

The GLOBAL LP<sup>FW</sup>-range can be equipped in the factory with an electric pre-heating system built in the unit. The purpose is to avoid the risk of frosting of the exchanger when the temperatures are too low. The capacity of the exchanger is modulated automatically by the TAC regulation. It is delivered "ready to use."

## EXTERNAL POST-HEATING/ COOLING (OPTION BA+/-)

The HR ranges can be equipped with external post-heating and/or cooling exchangers. These exchangers are fitted outside the unit, but designed to be assembled harmoniously. The TAC regulation is provided to manage this option fully. It is delivered "ready to use."

## AIRFLOW OR PRESSURE

Whether the ventilation system is operated on the basis of constant pressure or constant airflow or via a 0–10V control system depends on the area of application and the specific on-site requirements. The integrated master/slave control system ensures that operation is always well-balanced.

### THE ADVANTAGES IN DETAIL

- Sufficiently high external pressure
- Constant airflow
- Demand control: constant airflow controlled by a 0–10 V signal
- Constant pressure via an external pressure sensor

#### Constant airflow mode

A typical area of application is non-

residential buildings, e.g. offices and business premises as well as schools, nurseries and sports halls with stable volumes of air.

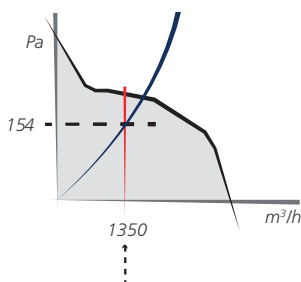
#### Demand control mode

Alternatively, the airflow can be automatically adapted in line with the ventilation requirements and on a user-specific basis via the 0–10 V input, e.g. by means of a CO<sub>2</sub> sensor, or the control system can be used via the customer's building service management/ instrumentation and control system.

#### Constant pressure mode

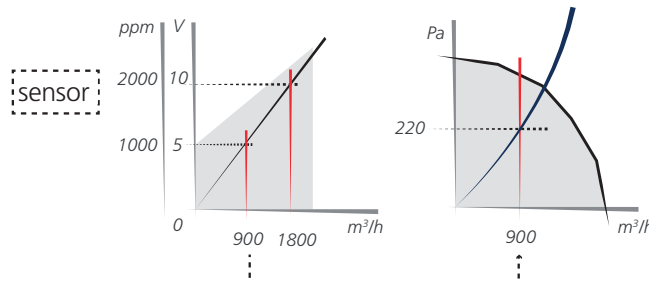
A prime example is undoubtedly apartment buildings with the opportunity to control the ventilation in individual apartments separately. The pressure remains constant even when the ventilation is increased or decreased in one apartment as required, by means of an airflow control unit. The airflow stays the same in all the other apartments, i.e. the ventilation system always runs within the ideal range. An external pressure sensor is required for constant pressure mode.

### THE 3 MAIN OPERATING MODES:



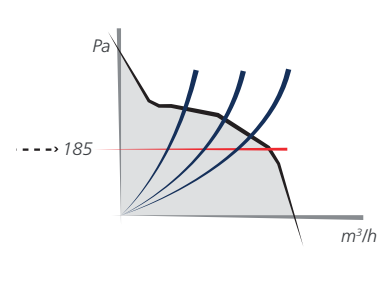
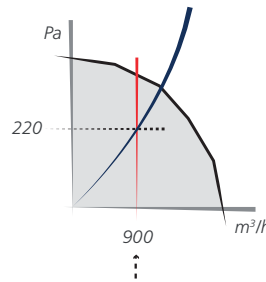
#### Constant Airflow mode

The airflow is kept constant, irrespective of external changes in pressure.



#### Demand control mode

A linear voltage/airflow ratio. The airflow can be regulated, e.g. by a CO<sub>2</sub> sensor, via a 0–10 Volt signal.



#### Constant pressure mode

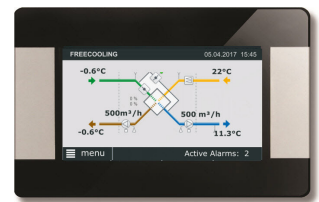
The pressure is kept constant, irrespective of external changes in pressure. An external pressure sensor is required.

### Touchscreen REMOTE CONTROL

Remote control with touchscreen display and integrated timer with 4 actions per day and 'off day' functionality. For configuring and controlling the operation of 1 heat recovery unit. The comissing menu, alarm history and maintenance menu are all of them focussed on

efficient operation.

Article	CID
TACtouch	372096



### 4 POSITION SWITCH

With the four position switch, a unit can be switched to one its three configurable operating speeds and the off-position.

Article	CID
COM4	010007



### SAT MODBUS

Interface for configuration, visual display and controlling the operation via MODBUS RTU

Article	CID
SAT MODBUS	025006



### SAT ETHERNET

Interface for configuration, visual display and controlling the operation via MODBUS TCP/IP

Article	CID
SAT Ethernet	025072



### BACnet gateway

For communicating with the heat recovery devices via a BACnet TCP/IP protocol. Up to four units can ben integrated through the interface. The optional SAT Ethernet interface is required.

Article	CID
BACnet	025095



### SAT Wifi

The Wifi interface with MODBUS TCP/IP, allows for a wireless connection to the air handling unit. Typically this accessory would be used in order to control the unit with the smart phone application.

Article	CID
SAT wifi	025071



### SAT KNX

Interface for configuration, visual display and controlling the operation via KNX

Article	CID
SAT KNX	025045



### SAT3

The SAT3 combined with the TAC5 controller allows signalling the following with 2 free of potential contacts: Fan is actually running and alarm on a pre-set pressure variation. This status is expressed by closing the contact.

Article	CID
SAT3	370005



# GLOBAL LPFW

## GLOBAL LP<sup>FW</sup>

### For installation against ceilings.

GLOBAL LP is a range of controlled mechanical ventilation units with high efficiency heat recovery (up to 96%), composed of a counter flow aluminium plate exchanger, a stainless steel condensate collection tray, filters (class G4/F7), a 100% bypass and centrifugal fans with high efficiency electronic motor (TAC series), from which it draws

all the advantages. It is designed for applications going up to 2000 m<sup>3</sup>/h. The efficiency of the heat exchanger often makes adding a post-heating (or post-cooling) system superfluous, although such a system is provided as an option (external module).

Their "flat" design (320 to 400 mm high) makes them ideal for false ceiling applications, which means substantial savings in terms of the use of the available surface area (€/m<sup>2</sup>).

It is delivered ready to use, entirely pre-wired - the options too -- and with a remote control (to choose) or

a MODBUS/KNX communication for controlling the device without opening it... Just connect it to the power supply (outside the unit and to the remote control or the MODBUS/KNX communication to activate the unit, and it's ready to run -- irrespective of the options chosen: electric preheating (anti-frosting), water or electric post-heating, post-cooling, valves, etc.

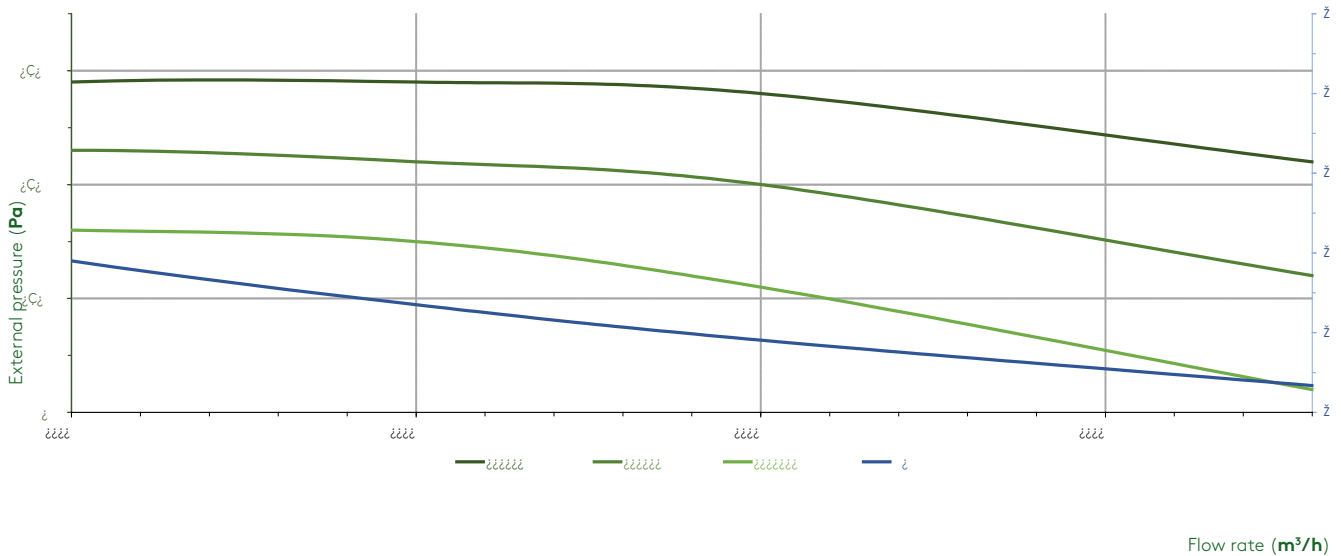
MODEL	CID LEFT	CID RIGHT	AIRFLOW RATE
GLOBAL LP 450 <sup>FW</sup>	886140	886141	50 - 475 m <sup>3</sup> /h
GLOBAL LP 600 <sup>FW</sup>	886271	886272	100 - 630 m <sup>3</sup> /h
GLOBAL LP 1000 <sup>FW</sup>	886249	886254	100 - 1050 m <sup>3</sup> /h
GLOBAL LP 1300 <sup>FW</sup>	886270	886269	100 - 1350 m <sup>3</sup> /h
GLOBAL LP 1600 <sup>FW</sup>	886250	886255	100 - 1680 m <sup>3</sup> /h
GLOBAL LP 2000 <sup>FW</sup>	886251	886256	100 - 2100 m <sup>3</sup> /h



## TECHNICAL CHARACTERISTICS

- High efficiency counter flow heat exchanger (up to 96%) in aluminium resistant to salt air and for temperatures between -30° C and +100° C. Eurovent approved according to EN308.
  - High efficiency centrifugal fans: direct current motor with permanent magnets and electronic commutation (ECM):
  - 3 operating modes possible: constant airflow rate (CA), link with signal 0-10V (LS) and constant pressure (CPs).
  - Compact housing made of an anodised aluminium structure and acoustically and thermally insulated panels in painted steel on the outside (RAL9002) and galvanised steel inside.
  - Stainless steel condensate tray.
  - Filtrés: EPM10≥50% for incoming and outgoing air
  - Filter replacement alarm based on a pressure measurement and/or operating time of the unit.
  - Automatic 100% bypass activated by an actuator for free cooling in summer (temperature settings adjustable by the user). The bypass can also be operated by a built-in clock and/or by external contact.
  - Automatic anti-frosting system by means of modulating air flows or by electric preheating battery (option KWin), or via the modulating bypass.
  - Operation and control (if water coil) of an external reversible water exchanger or with direct expansion (evaporation/condensation) for post-heating/cooling.
  - Non-return damper, motorised or operated by regulation (option CT).
  - Fire alarm management by activation of supply and exhaust air flow with possible exemption by the fire brigade via external contacts.
  - Connection to a BMS system via a digital and/or analogue signal (if the MODBUS communication cannot be used).
  - BMC control functions via a MODBUS RTU protocol (SAT MODBUS option).
  - The units are supplied with access panels from underneath (?) for easy access in a false ceiling.
  - The units are available in a left or right version.
- All the units of the GLOBAL LP series are supplied complete with general switch, temperature sensors, servomotors where necessary, optional heat exchangers, wiring, etc. They are delivered plug & play and are individually factory tested in the after the final assembling with the options.
- Only the external control instruments (RC, GRC, TCP/IP module, GPRS module, any external pressure sensors, etc.) require connection on the spot by qualified staff.

# GLOBAL LP 450<sup>FW</sup>



## GENERAL TECHNICAL SPECIFICATIONS

<b>AIRFLOWS</b>	50 - 475 m <sup>3</sup> /h 15 - 130 l/s
• DIMENSIONS (L X W X H)	1100 x 560 x 360
• WEIGHT	75 kg
• NOMINAL VOLTAGE	1 x 230 V
• MAXIMUM INTENSITY	2.5 A
• RECOMMENDED ELECTRICAL PROTECTION	D4A - 10kA - AC3
• SUPPLY/EXTRACTION AIR FILTER	COARSE 65%/COARSE 65%
• AVAILABLE OPTIONS	KWin/BA+/-/CTm/ER and SR par default
• AUTOMATIC FREE COOLING	Oui, modulant 100%
• OPERATING TEMPERATURE RANGE	-20°C ... +50°C
• COLOUR OF PANELS	RAL 9002

FLOW RATE	POWER ABSORBED	SFP	EXCHANGER EFFICIENCY	OUTLET T° AFTER EXCHANGER	SOUND LEVEL
m <sup>3</sup> /h	W	W/m <sup>3</sup> /h	%	°C	dBA
200	96	1,73	83,5	19,5	31,5
250	126	1,81	82,4	19,3	33,1
300	163	1,96	81,5	19,1	34,1
380	251	2,38	80,4	18,8	36,5

Conditions :

1. All values at 100 Pa external pressure
2. Thermal efficiency at -10 °C, 90% HR et internes de +22°C, 50% HR.
3. Sound level calculated in free field conditions at 3m.

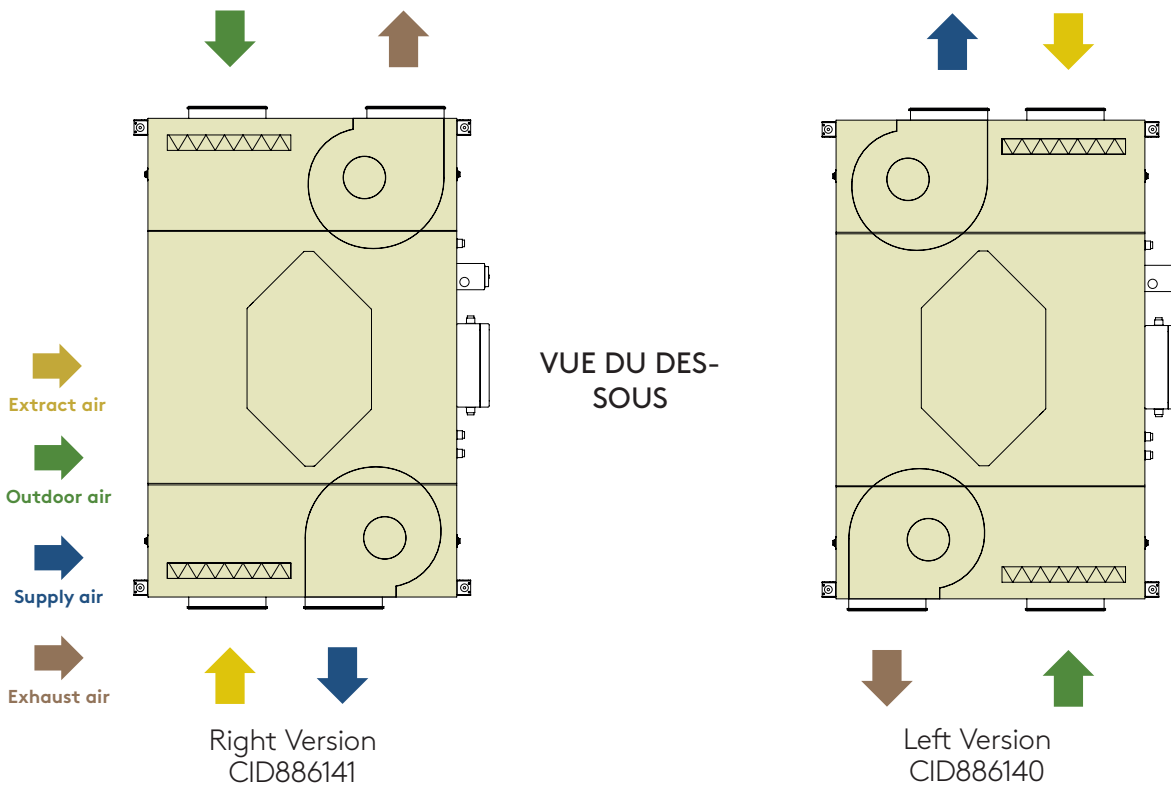
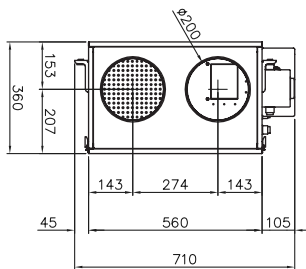
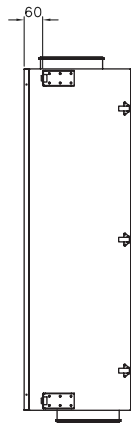
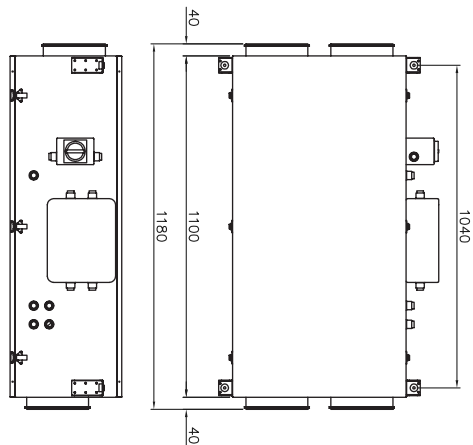
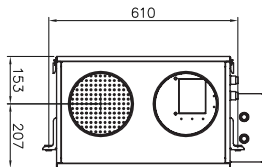


# Product Information Sheet

Delegated Regulation (EU) 1254/2014

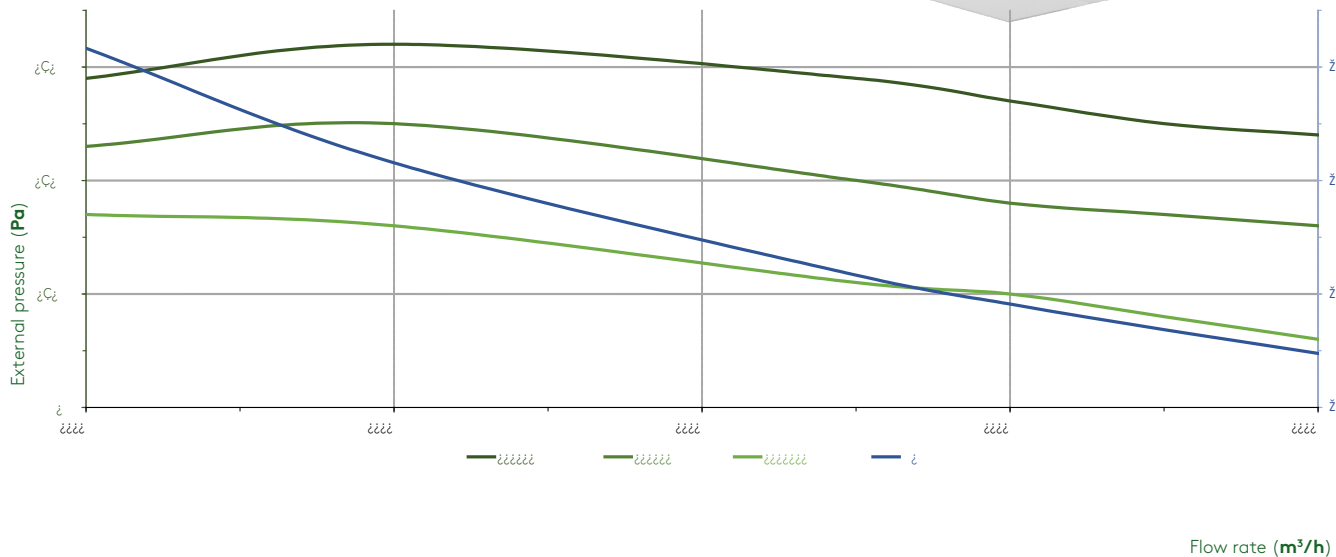
Supplier name or trademark	<b>Swegon Operations Belgium</b>
Model identifier	<b>GLOBAL LP 450 FW</b>
Specific energy consumption (cold zone)	<b>-78 kWh/(m<sup>2</sup> x a)</b>
Specific energy consumption class (average zone)	<b>A</b>
Specific energy consumption (average zone)	<b>-40 kWh/(m<sup>2</sup> x a)</b>
Specific energy consumption (warm zone)	<b>-16 kWh/(m<sup>2</sup> x a)</b>
Typology	<b>Bidirectional Ventilation Unit (BVU)</b>
Type of drive	<b>Variable speed drive</b>
Type of heat recovery system	<b>Recuperative</b>
Thermal efficiency of heat recovery	<b>81 %</b>
Maximum flow rate	<b>450 m<sup>3</sup>/h</b>
Electric power input of the fan drive	<b>291 W</b>
Sound power level	<b>59 dB</b>
Reference flow rate	<b>0.088 m<sup>3</sup>/s</b>
Reference pressure difference	<b>50 Pa</b>
Specific Power Input	<b>0.36 W/(m<sup>3</sup>/h)</b>
Control factor	<b>0.65</b>
Control typology	<b>Local demand control</b>
Maximum internal leakage rates	<b>2 %</b>
Maximum external leakage rates	<b>5 %</b>
Position of visual filter warning	<b>On TACTouch touchscreen controller wired to unit main board</b>
Description of visual filter warning	<b>Red lighted indication on main board and alarm text indication on TACTouch screen. A regular filter change will improve performance and energy efficiency of the unit during its lifetime</b>
Pre-/dis-assembly instructions URL	<b><a href="http://www.swegon.com">www.swegon.com</a></b>
Annual Electricity Consumption	<b>233 kWh electricity/annum</b>
Annual Heating Saved at cold climate	<b>8808 kWh primary energy/annum</b>
Annual Heating Saved at average climate	<b>4502 kWh primary energy/annum</b>
Annual Heating Saved at warm climate	<b>2036 kWh primary energy/annum</b>

GLOBAL LP 450<sup>FW</sup>





# GLOBAL LP 600<sup>FW</sup>



## GENERAL TECHNICAL SPECIFICATIONS

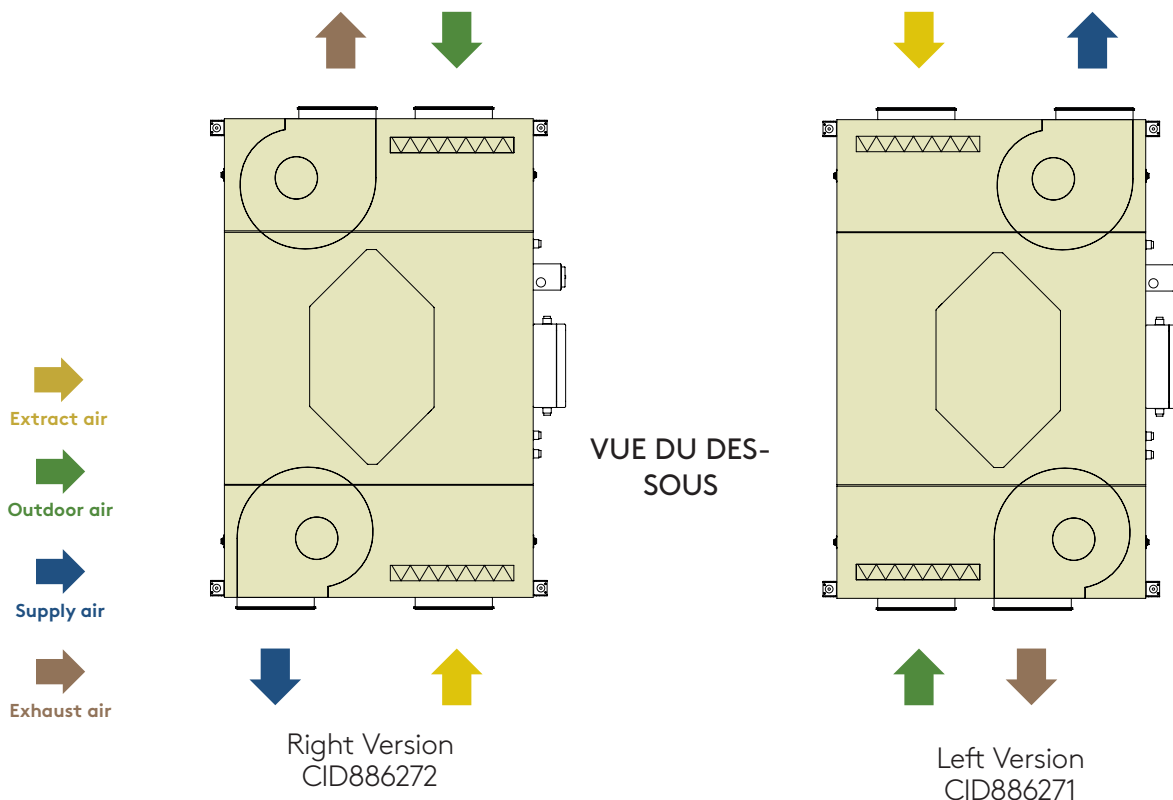
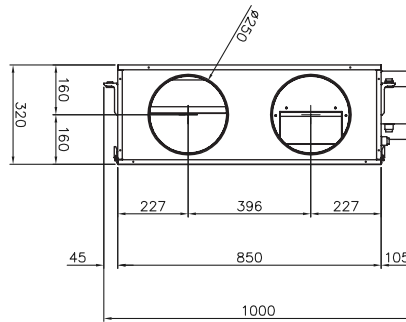
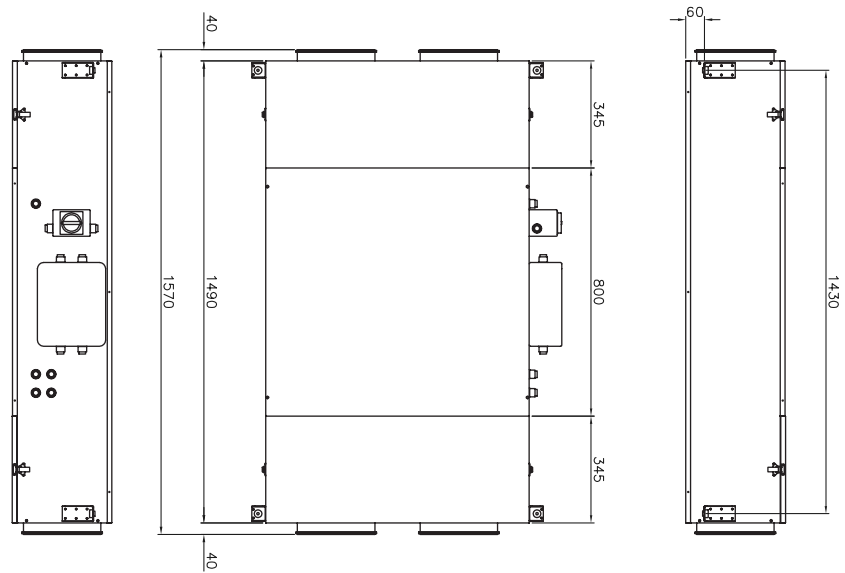
• AIR FLOW	100 - 630 m <sup>3</sup> /h 28 - 175 l/s
• DIMENSIONS (L X W X H)	1490 x 850 x 320
• WEIGHT	110 kg
• NOMINAL VOLTAGE	1 x 230 V
• MAXIMUM INTENSITY	3.1 A
• RECOMMENDED ELECTRICAL PROTECTION	D4A - 10kA - AC3
• SUPPLY/EXTRACTION AIR FILTER	COARSE 65% / COARSE 65%
• AVAILABLE OPTIONS	KWin/BA+/- /CTm/ER and SR par défaut
• AUTOMATIC FREE COOLING	Oui, modulant 100%
• OPERATING TEMPERATURE RANGE	-20°C ... +50°C
• COLOUR OF PANELS	RAL 9002
• SPECIFIC ENERGY CONSUMPTION CLASS (AVERAGE ZONE)	A

FLOW RATE	POWER ABSORBED	SFP	EXCHANGER EFFICIENCY	OUTLET T° AFTER EXCHANGER	SOUND LEVEL
m <sup>3</sup> /h	W	W/m <sup>3</sup> /h	%	°C	dBA
150	79	1,9	86,0	22,2	34,6
400	209	1,9	81,1	21,2	35,3
500	287	2,1	80,1	21,0	37,1
600	370	2,2	79,2	20,8	38,3

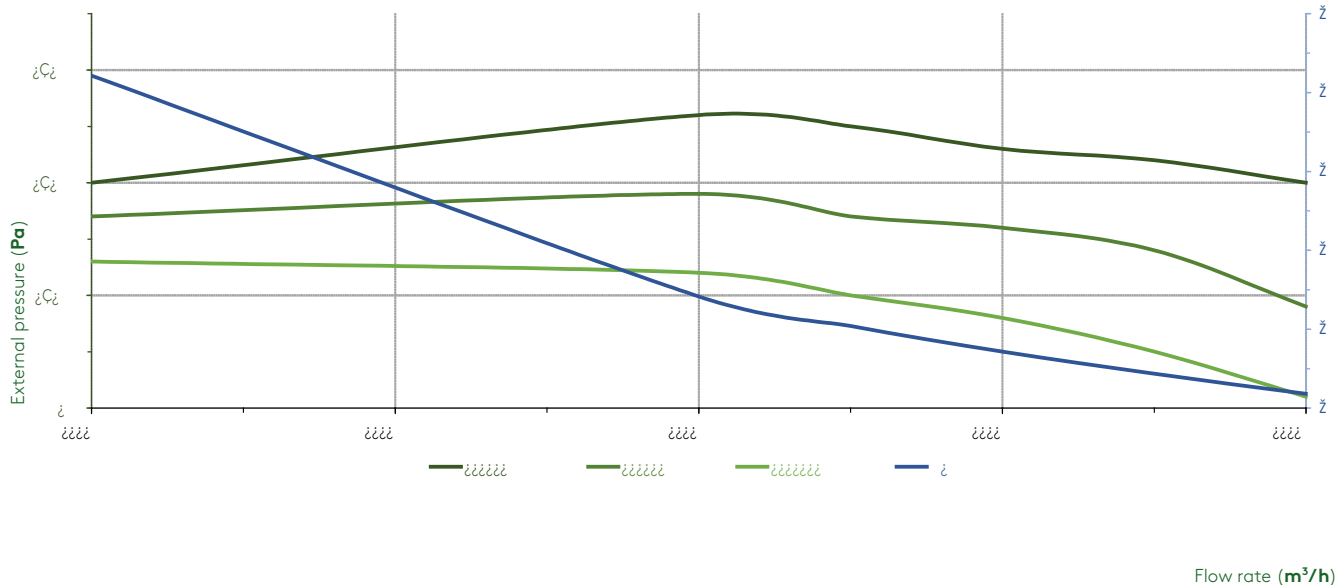
Conditions :

1. All values at 100 Pa external pressure
2. Thermal efficiency at -10 c°, 90% HR et internes de +22°C, 50% HR.
3. Sound level calculated in free field conditions at 3m.

GLOBAL LP 600<sup>FW</sup>



# GLOBAL LP 1000<sup>FW</sup>



## GENERAL TECHNICAL SPECIFICATIONS

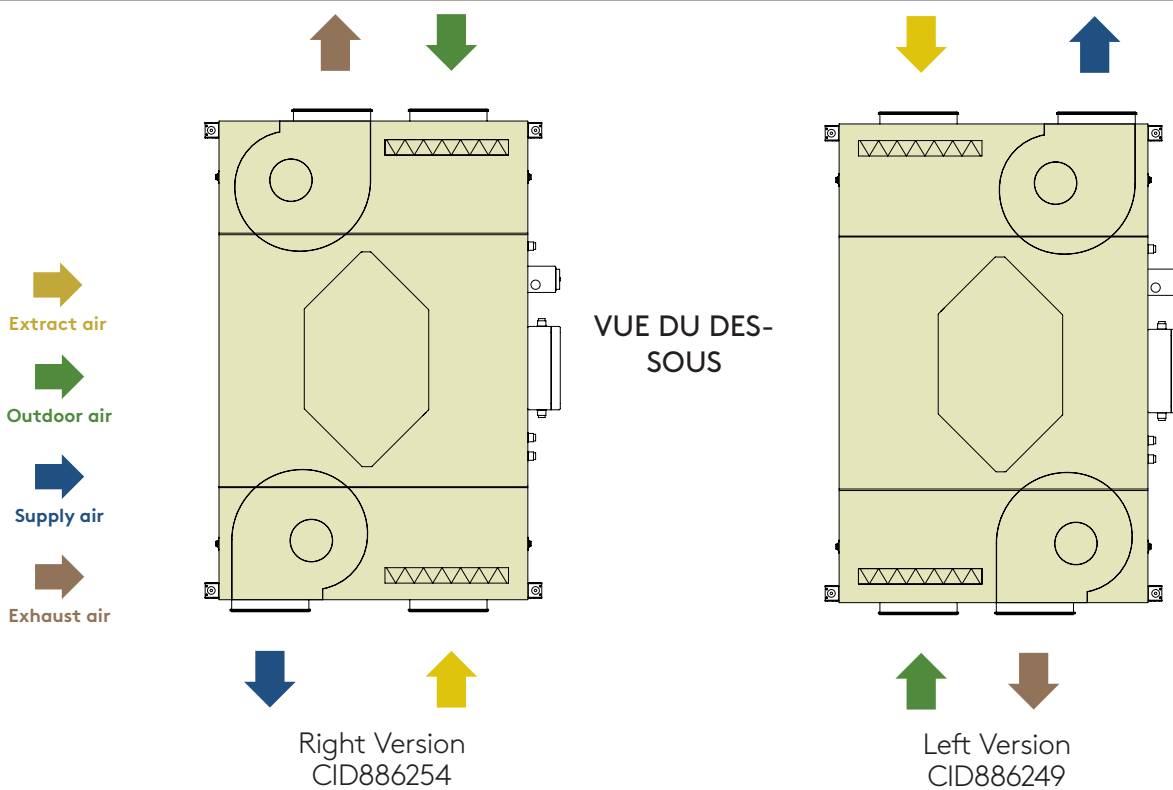
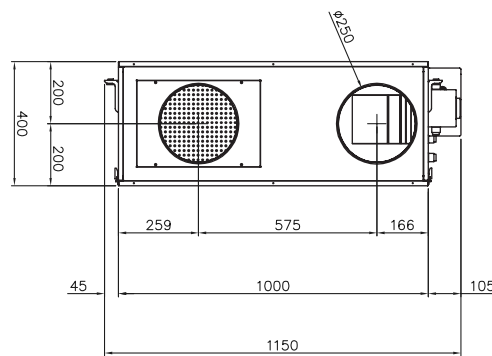
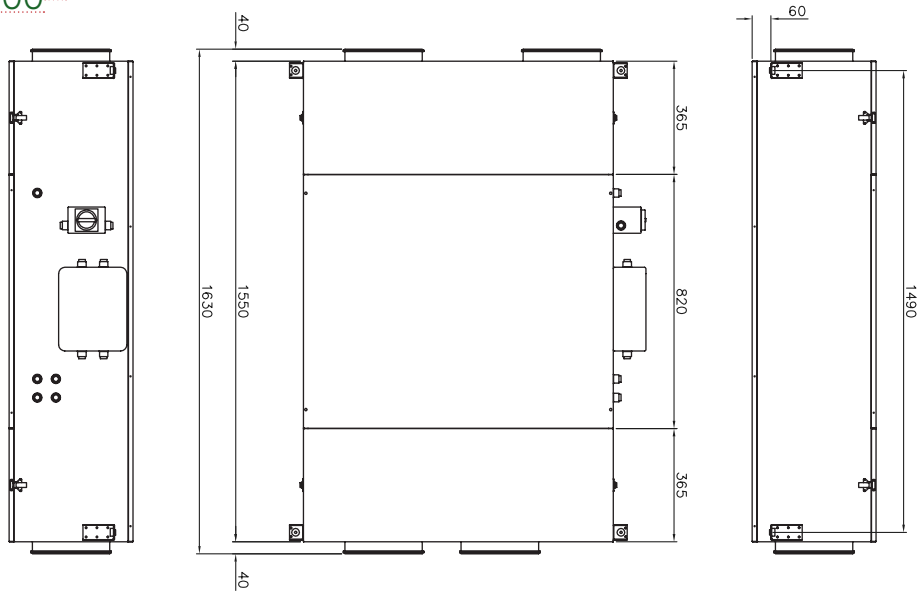
• AIR FLOW	100 - 1050 m <sup>3</sup> /h 28 - 290 l/s
• DIMENSIONS (L X W X H)	1550 x 1000 x 400
• WEIGHT	160 kg
• NOMINAL VOLTAGE	1 x 230 V
• MAXIMUM INTENSITY	7.7 A
• RECOMMENDED ELECTRICAL PROTECTION	D10A - 10kA - AC3
• SUPPLY/EXTRACTION AIR FILTER	ePM10 50% / ePM10 50%
• AVAILABLE OPTIONS	KWin/BA+/-/CTm/SR and ER par défaut
• AUTOMATIC FREE COOLING	Oui, modulant 100%
• OPERATING TEMPERATURE RANGE	-20°C ... +50°C
• COLOUR OF PANELS	RAL 9002

FLOW RATE	POWER ABSORBED	SFP	EXCHANGER EFFICIENCY	OUTLET T° AFTER EXCHANGER	SOUND LEVEL
m <sup>3</sup> /h	W	W/m <sup>3</sup> /h	%	°C	dBA
200	132	2,4	87,7	22,5	35,5
600	341	2,0	82,1	21,4	37,1
800	493	2,2	80,7	21,1	39,2
1000	683	2,5	79,6	20,9	41,1

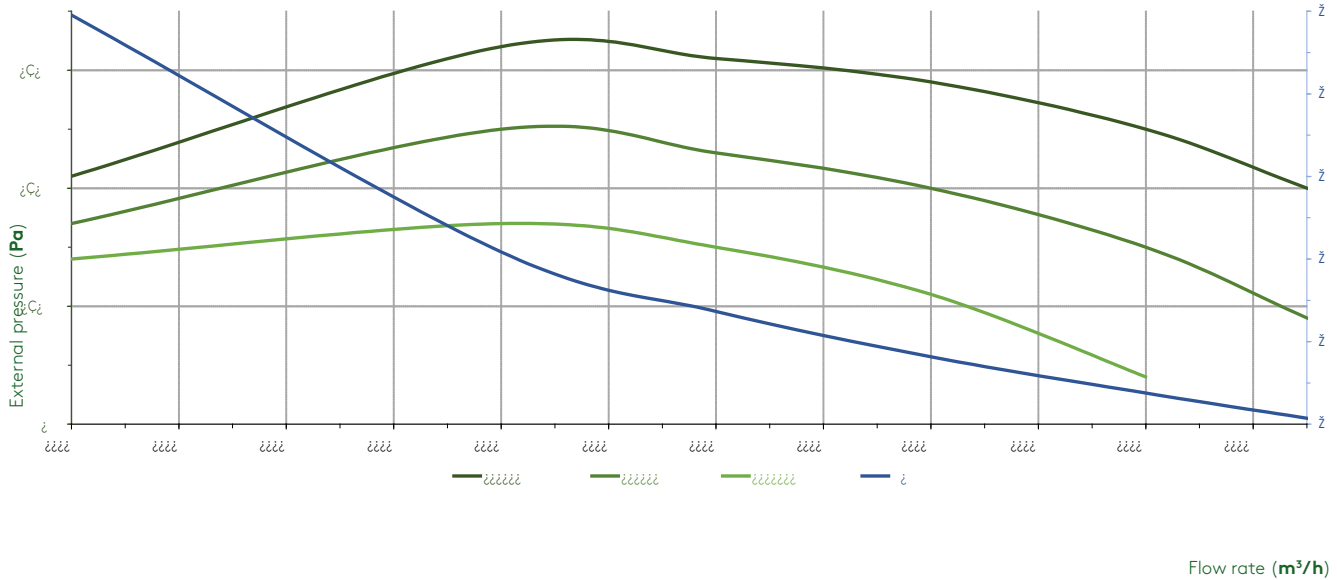
Conditions :

1. All values at 100 Pa external pressure
2. Thermal efficiency at -10 °C, 90% HR et internes de +22°C, 50% HR.
3. Sound level calculated in free field conditions at 3m.

GLOBAL LP 1000<sup>FW</sup>



# GLOBAL LP 1300<sup>FW</sup>



## GENERAL TECHNICAL SPECIFICATIONS

• AIR FLOW	100 - 1350 m <sup>3</sup> /h 30 - 375 l/s
• DIMENSIONS (L X W X H)	1550 x 1640 x 400
• WEIGHT	225 kg
• NOMINAL VOLTAGE	1 x 230 V
• MAXIMUM INTENSITY	11.9 A
• RECOMMENDED ELECTRICAL PROTECTION	D16A/AC3/10kA
• SUPPLY/EXTRACTION AIR FILTER	ePM10 50% / ePM10 50%
• AVAILABLE OPTIONS	KWin/BA+/-/CTm/IRS/SR par défaut
• AUTOMATIC FREE COOLING	Oui, modulant 100%
• OPERATING TEMPERATURE RANGE	-20°C ... +50°C
• COLOUR OF PANELS	RAL 9002

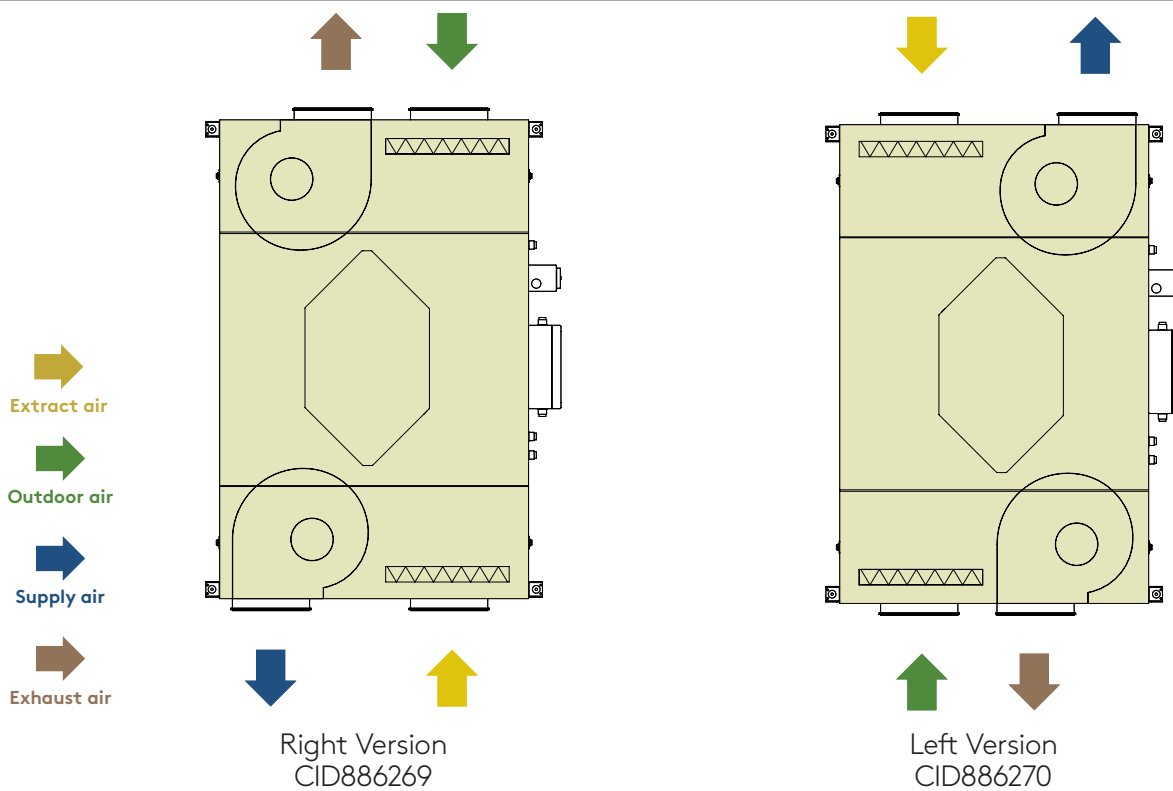
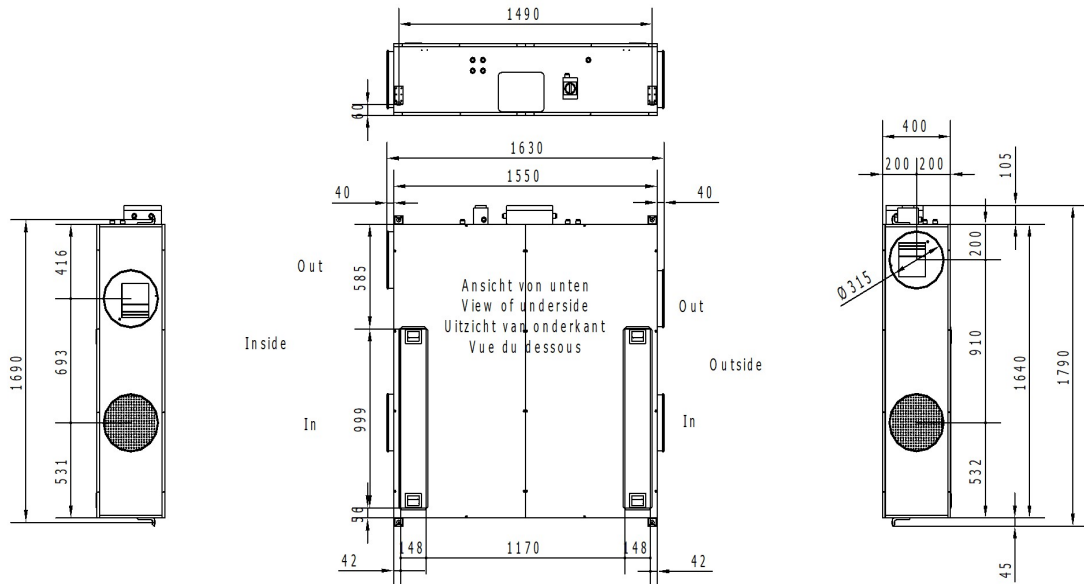
FLOW RATE	POWER ABSORBED	SFP	EXCHANGER EFFICIENCY	OUTLET T° AFTER EXCHANGER	SOUND LEVEL
m <sup>3</sup> /h	W	W/m <sup>3</sup> /h	%	°C	dB(A)
400	215	1,9	84,1	21,8	35,3
800	493	2,2	80,7	21,1	38,4
1000	683	2,5	79,6	20,9	40,0
1300	1068	3,0.	78,4	20,7	42,6

Conditions :

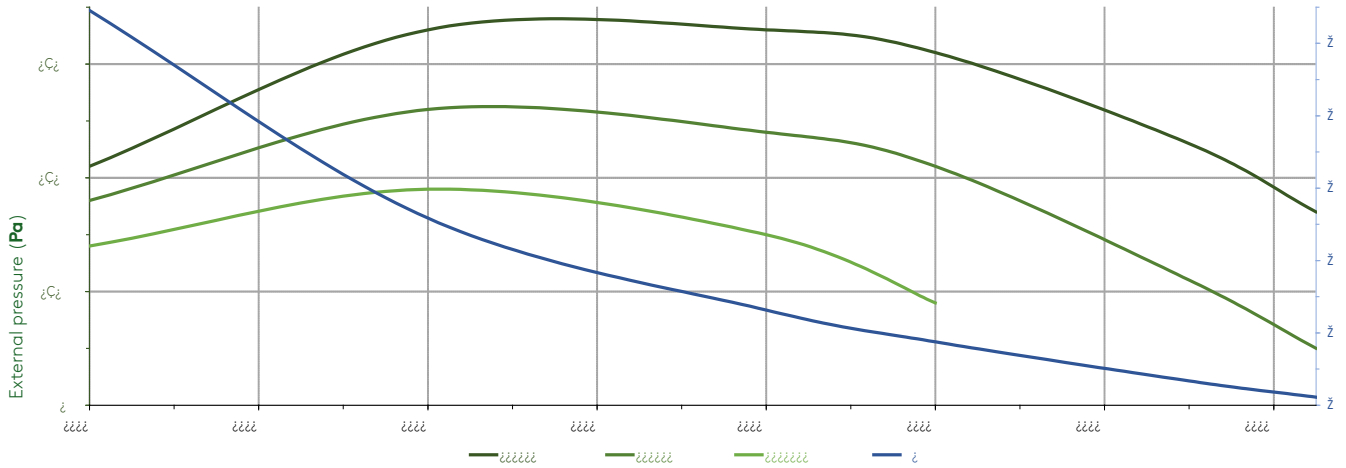
1. All values at 100 Pa external pressure
2. Thermal efficiency at -10 °C, 90% HR et internes de +22°C, 50% HR.
3. Sound level calculated in free field conditions at 3m.



GLOBAL LP 1300<sup>FW</sup>



# GLOBAL LP 1600<sup>FW</sup>



Flow rate (m<sup>3</sup>/h)

## GENERAL TECHNICAL SPECIFICATIONS

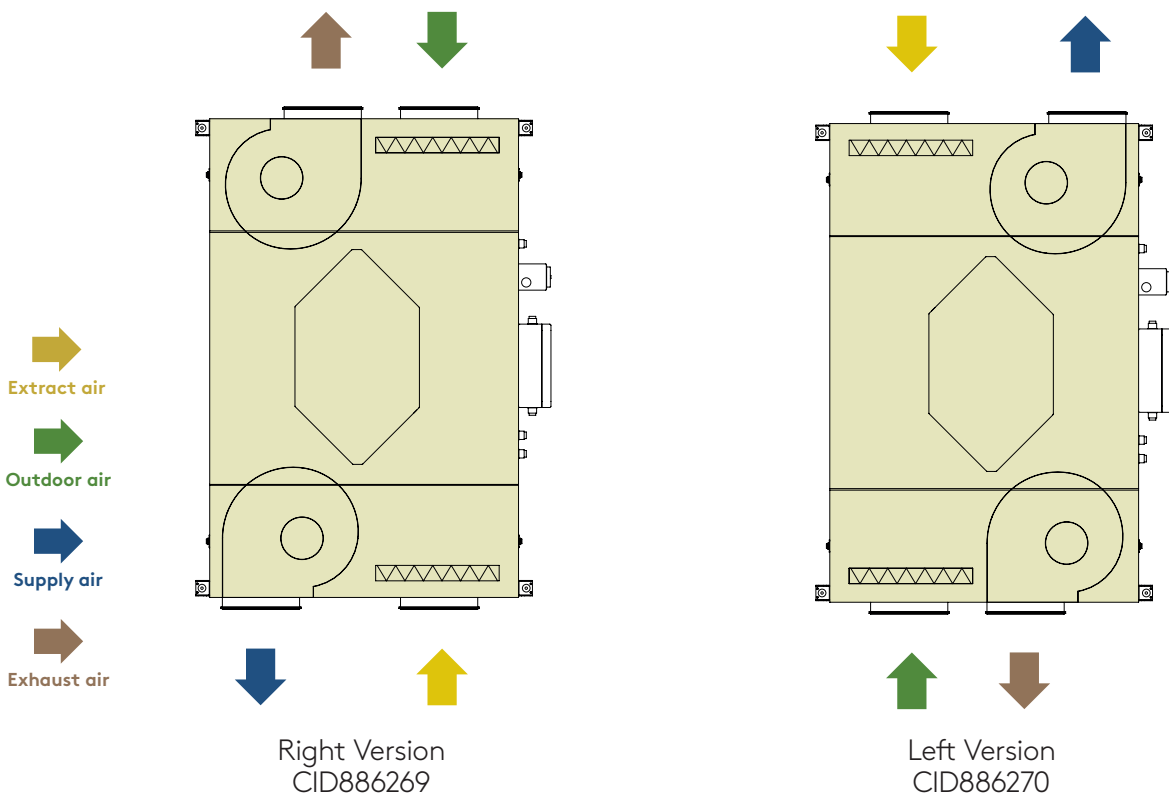
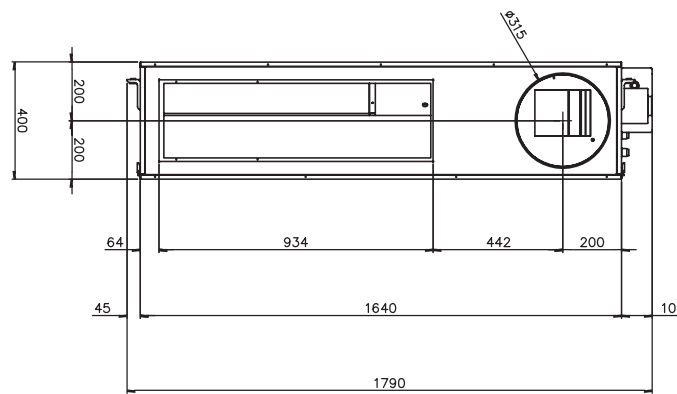
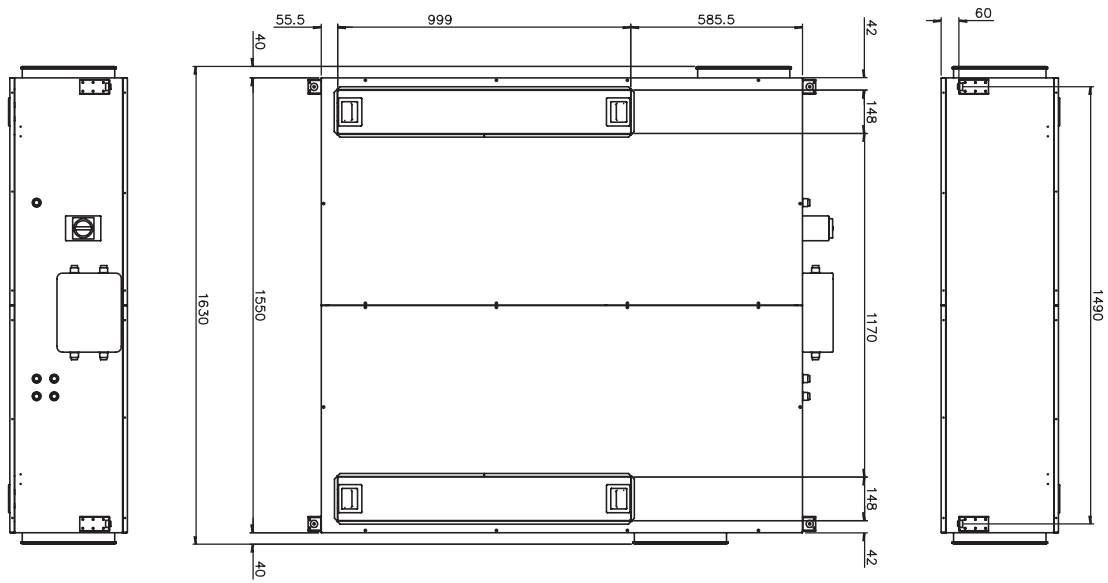
• AIR FLOW	100 - 1680 m <sup>3</sup> /h 28 - 465 l/s
• DIMENSIONS (L X W X H)	1550 x 1640 x 400
• WEIGHT	225 kg
• NOMINAL VOLTAGE	1 x 230 V
• MAXIMUM INTENSITY	11.9 A
• RECOMMENDED ELECTRICAL PROTECTION	D16A - 10kA - AC3
• SUPPLY/EXTRACTION AIR FILTER	ePM10 50% / ePM10 50%
• AVAILABLE OPTIONS	KWin/BA+/-/CTm/IRS/SR par défaut
• AUTOMATIC FREE COOLING	Oui, modulant 100%
• OPERATING TEMPERATURE RANGE	-20°C ... +50°C
• COLOUR OF PANELS	RAL 9002

FLOW RATE	POWER ABSORBED	SFP	EXCHANGER EFFICIENCY	OUTLET T° AFTER EXCHANGER	SOUND LEVEL
m <sup>3</sup> /h	W	W/m <sup>3</sup> /h	%	°C	dB(A)
800	356	1,6	83,0	21,6	37,6
1000	479	1,7	81,9	21,4	39,0
1400	851	2,2	80,2	21,1	42,3
1600	1110	2,5	79,6	21,0	45,7

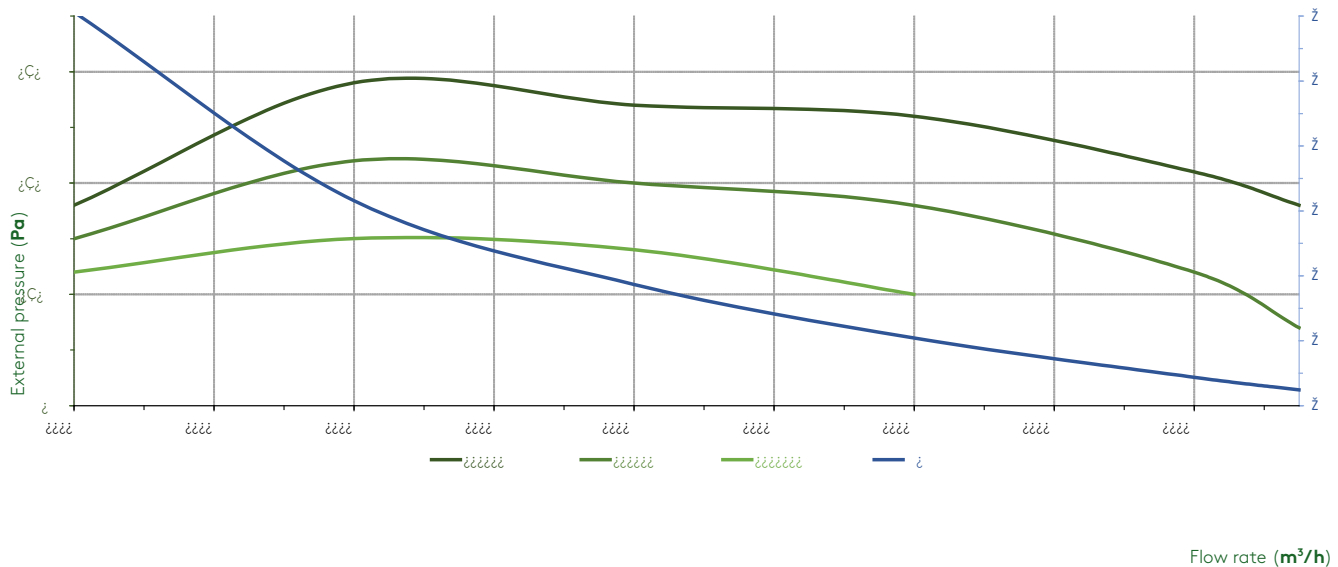
Conditions :

1. All values at 100 Pa external pressure
2. Thermal efficiency at -10 °C, 90% HR et internes de +22°C, 50% HR.
3. Sound level calculated in free field conditions at 3m.

GLOBAL LP 1600<sup>FW</sup>



# GLOBAL LP 2000<sup>FW</sup>



## GENERAL TECHNICAL SPECIFICATIONS

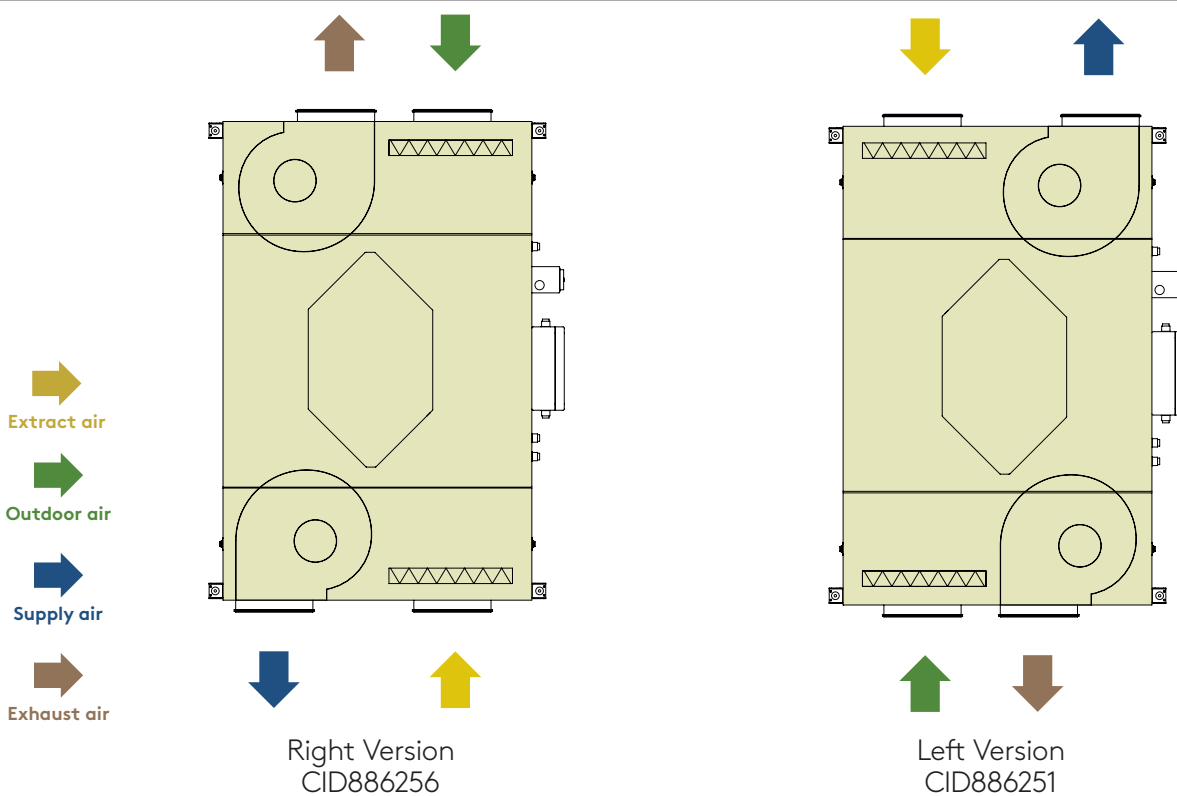
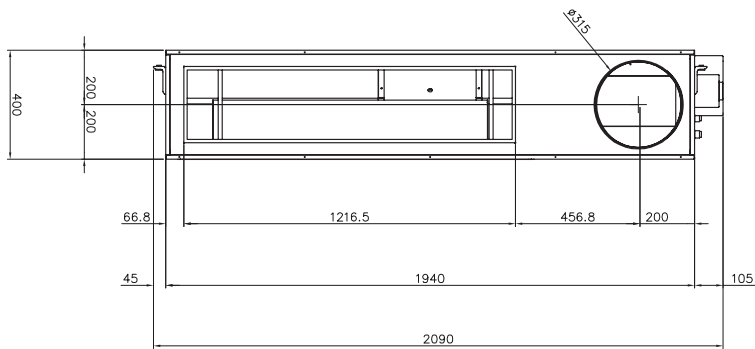
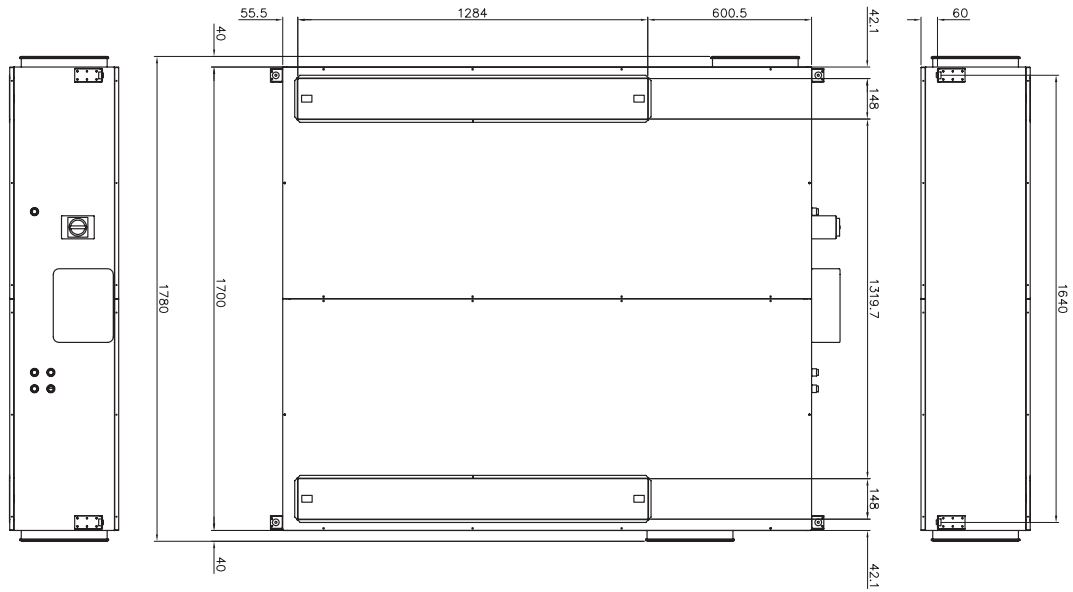
• AIR FLOW	100 - 2100 m <sup>3</sup> /h 28 - 580 l/s
• DIMENSIONS (L X W X H)	1700 x 1940 x 400
• WEIGHT	275 kg
• NOMINAL VOLTAGE	1 x 230 V
• MAXIMUM INTENSITY	11.7 A
• RECOMMENDED ELECTRICAL PROTECTION	D16A - 10kA - AC3
• SUPPLY/EXTRACTION AIR FILTER	ePM10 50% / ePM10 50%
• AVAILABLE OPTIONS	KWin/BA+/-/CTm/IRS/SR par défaut
• AUTOMATIC FREE COOLING	Oui, modulant 100%
• OPERATING TEMPERATURE RANGE	-20°C ... +50°C
• COLOUR OF PANELS	RAL 9002

FLOW RATE	POWER ABSORBED	SFP	EXCHANGER EFFICIENCY	OUTLET T° AFTER EXCHANGER	SOUND LEVEL
m <sup>3</sup> /h	W	W/m <sup>3</sup> /h	%	°C	dBA
1000	533	1,9	83,0	21,6	38,5
1500	889	2,1	81,0	21,2	41,4
1800	1195	2,4	79,9	21,0	42,8
2000	1445	2,6	79,6	20,9	43,8

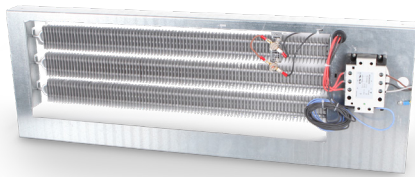
Conditions :

1. All values at 100 Pa external pressure
2. Thermal efficiency at -10 c°, 90% HR et internes de +22°C, 50% HR.
3. Sound level calculated in free field conditions at 3m.

GLOBAL LP 2000<sup>FW</sup>



## ELECTRIC PRE-HEATING (KW<sub>IN</sub>)



The GLOBAL LP<sup>FW</sup> units can be equipped with heating elements (pre-heating). On the incoming air side.

It is possible to insert an electric pre-heating coil to avoid the risk of the exchanger frosting in case of very low exterior suction temperatures. It is supplied entirely pre-wired to the TAC4 regulation and can withstand a temperature as low as about -40°C (see table below) for suction at an interior temperature of +22°C, without risk of frosting, depending on the flow and humidity rates

concerned. The power of the KW<sub>in</sub> exchanger is modulated to maintain the post-exchange temperature equal to the no frost set point of the counter flow exchanger. If the temperatures are such that this temperature cannot be attained even though the KW<sub>in</sub> is at maximum power, the regulation will reduce the supply and exhaust air flow rates (balance maintained) to attain the set point.

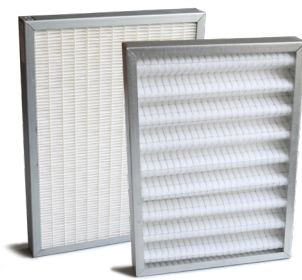
MODEL	MAXIMUM CAPACITY [kW]	ΔT <sup>(1)</sup> [°C]	MINIMUM EXTE- RIOR T° <sup>(1) (3)</sup> [°C]	MAXIMUM INTENSITY PER PHASE [A]	PRESSURE DROP <sup>(2)</sup> [Pa]	CID
GLOBAL LP 450 <sup>FW</sup>	1.5	9/14	-22/-26	6.5	12 Pa	882435
GLOBAL LP 600 <sup>FW</sup>	2.0	9/14	-22/-26	8.7	12 Pa	882436
GLOBAL LP 1000 <sup>FW</sup>	3.0	8/13	-21/-25	13.0	13 Pa	882437
GLOBAL LP 1300/ 1600 <sup>FW</sup>	6.0	11/16	-23/-28	8.7	8 Pa	882438
GLOBAL LP 2000 <sup>FW</sup>	6.0	8/13	-21/-25	8.7	7 Pa	882438

<sup>(1)</sup> Calculated at 100 %, 66% and 33% of the maximum flow rate.

<sup>(2)</sup> Calculated at maximum flow rate.

<sup>(3)</sup> Calculated with interior air at 22°C - 50%RH.

## REPLACEMENT FILTER KITS



The GLOBAL LP<sup>FW</sup> units are delivered as a standard with ePM10≥50% filters on incoming and outgoing airstreams.

A replacement kit with all the necessary filters is available for each unit.

MODEL	CID	Filters fresh air in	Filters stale airout	Dimensions
GLOBAL LP 450 <sup>FW</sup>	510045	COARSE 65%	COARSE 65%	245 x 295 x 50
GLOBAL LP 600 <sup>FW</sup>	510046	COARSE 65%	COARSE 65%	390 x 255 x 50
GLOBAL LP 1000 <sup>FW</sup>	510086	ePM10 50%	ePM10 50%	465 x 337 x 50
GLOBAL LP 1300/1600 <sup>FW</sup>	510087	ePM10 50%	ePM10 50%	965 x 337 x 50
GLOBAL LP 2000 <sup>FW</sup>	510088	ePM10 50%	ePM10 50%	1250 x 337 x 50

## DIRECT EXPANSION COIL



This external module is provided for the GLOBAL LP<sup>FW</sup> models and can be mounted either in the supply air ductway, or directly on the unit. It comprises a water (+/-) or evaporation/condensation 4-row coil . It can be used for the post-heating and/or post-cooling of the supply airstream. If the module takes a water coil, it is supplied ready to be connected to the hydraulic

network (+/-), with the full regulation and a motorised 3-way valve. It suffices to set the requested supply air temperature; the regulation will modulate the capacity of the coil to attain it.

## CONDENSATION ⊕

MODEL	CONNECTIONS	HEATING CAPACITY (1) (3)	$\Delta T$ (1) (3)	PRESSURE DROP AIR (2)	FLUID FLOW RATE (2) (3)	PRESSURE DROP FLUID (2) (3)	CID
	[mm]	[kW]	[°C]	[Pa]	[kg/h]	[kPa]	
GLOBAL LP 450 <sup>FW</sup>	22/12	1,9 / 1,2	13 / 16	40	27,2	0,1	882751
GLOBAL LP 600 <sup>FW</sup>	22/12	2,3 / 1,4	11 / 14	61	32,3	0,1	882751
GLOBAL LP 1000 <sup>FW</sup>	28/12	6,0 / 3,5	18 / 21	37	83,5	0,6	882755
GLOBAL LP 1300/1600 <sup>FW</sup>	28/12	9,5 / 5,6	18 / 21	47	132,6	1,8	882759
GLOBAL LP 2000 <sup>FW</sup>	28/12	10,9 / 6,6	16 / 20	65	152,5	2,4	882759

**Conditions :** Exterior air: -10°C and 90% RH, Interior air: +22°C and 50% RH, exit air temperature without BA: 19 °C (at max airflow)

<sup>(1)</sup> Calculated at 100% and 50% of the maximum flow rate.

<sup>(2)</sup> Calculated at maximum flow rate.

<sup>(3)</sup> R410A / Condensation temperature = 40°C

## EVAPORATION ⊖

MODEL	CONNECTIONS	COLD POWER (2) (3)	$\Delta T$ (1) (3)	PRESSURE DROP AIR (2)	FLOW RATE DE FLUIDE (2) (3)	PRESSURE DROP FLUID (2) (3)	CID
	[mm]	[kW]	[°C]	[Pa]	[kg/h]	[kPa]	
GLOBAL LP 450 <sup>FW</sup>	22/12	2,5 / 1,6	11 / 13	53	61,1	0,6	882751
GLOBAL LP 600 <sup>FW</sup>	22/12	3,0 / 1,9	10 / 12	80	73,1	0,8	882751
GLOBAL LP 1000 <sup>FW</sup>	28/12	6,1 / 3,7	12 / 14	48	147,9	4,9	882755
GLOBAL LP 1300/1600 <sup>FW</sup>	28/12	10,1 / 5,7	12 / 13	62	243,6	16,0	882759
GLOBAL LP 2000 <sup>FW</sup>	28/12	11,9 / 6,9	11 / 13	86	286,0	22,5	882759

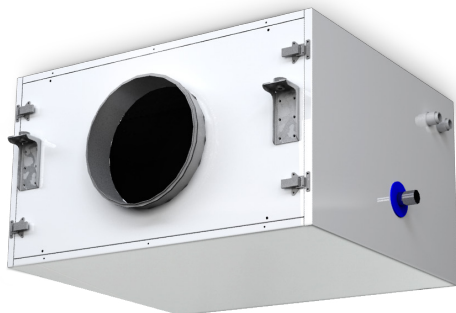
**Conditions :** Exterior air: 30°C and 40% RH, Interior air: +22°C and 50% RH, exit air temperature without BA: 23.5°C (at max airflow)

<sup>(1)</sup> Calculated at 100% and 50% of the maximum flow rate.

<sup>(2)</sup> Calculated at maximum flow rate.

<sup>(3)</sup> R410A / Evaporation temperature = 4°C

## EXTERNAL INSULATED CASINGS



The external insulated casings are fabricated in galvanized steel sheet. The outer sheet is painted in RAL9002. The double-skin panels contain 30mm mineral wool. The casings can be used to integrate external cooling, heating, direct expansion coils (EBA).

The EBA coil uses hot /cold water for post-heating/cooling the supply air. The coil is to be integrated in an insulated casing ECA. The finned-tube heat exchangers consist of copper tubes and aluminum fins with 2,5mm spacing (cooling) and 2,1mm spacing (heating).

Les sections avec batteries froides sont équipées d'un bac de condensats en inox et d'une pompe à condensats.

Les sections avec batteries hydrauliques peuvent être configurées avec le kit de régulation comprenant la vanne 3 voies motorisée, la sonde antigel et la régulation.

## HEATING COIL (BA+) - 2RANGS

MODEL	CONNECTIONS	PUISSANCE	WATER	PERTE DE CHARGE AIR	DEBIT EAU	PERTE DE CHARGE EAU	CID
		(1)	T°C	(2)	(2)	(2)	
		[kW]	[°C]	[Pa]	[l/h]	[kPa]	
GLOBAL LP 450 <sup>FW</sup>	3/4"	4,0 / 2,4	26 / 31	21	174	1,2	882745
		1,9 / 1,1	13 / 15	21	169	1,3	882748
		1,5 / 0,9	10 / 11	20	256	2,7	
GLOBAL LP 600 <sup>FW</sup>	3/4"	4,8 / 2,9	25 / 29	32	209	1,7	882745
		2,3 / 1,4	12 / 23	31	202	1,7	882748
		1,8 / 1	9 / 10	31	309	3,8	
GLOBAL LP 1000 <sup>FW</sup>	3/4"	9,6 / 5,7	28 / 34	19	420	3,7	882746
		4,8 / 2,8	14 / 17	19	415	4	882752
		3,5 / 2	10 / 12	18	613	8,2	
GLOBAL LP 1300/1600 <sup>FW</sup>	3/4"	13,9 / 8,4	26 / 31	24	609	1,7	882747
		6,9 / 4	13 / 15	23	592	1,8	882756
		5,1 / 3	10 / 12	23	890	3,9	
GLOBAL LP 2000 <sup>FW</sup>	3/4"	16 / 9,9	24 / 29	33	704	2,3	882747
		7,9 / 4,7	12 / 14	32	685	2,3	882756
		5,9 / 3,5	9 / 10	32	1029	5	

Conditions : Air extérieur : 30°C et 40% HR, Air intérieur : +22°C et 50% HR, T° soufflage sans BA- : 23,5°C

(1) Calculé à 100% et 50% du débit maximum.

(2) Calculé à débit maximum.



## HEATING COIL (BA+) - 4RANGS

MODEL	CONNEXIONS	TEMPERA- TURE EAU	PUISSANCE (1)	$\Delta T$ (1)	PERTE DE CHARGE AIR (2)	DEBIT EAU (2)	PERTE DE CHARGE EAU (2)	CID
		[°C]	[kW]	[°C]	[Pa]	[l/h]	[kPa]	
GLOBAL LP 450 <sup>FW</sup>	3/4"	80°C / 60°C	6,2 / 3,5	41 / 46	43	274	0,8	882745
		50°C / 40°C	3 / 1,6	20 / 21	41	262	0,8	882749
		40°C / 35°C	2,2 / 1,2	15 / 16	40	387	1,8	
GLOBAL LP 600 <sup>FW</sup>	3/4"	80°C / 60°C	7,8 / 4,4	38 / 44	65	341	1,2	882745
		50°C / 40°C	3,8 / 2,1	19 / 20	62	327	1,3	882749
		40°C / 35°C	2,8 / 1,5	14 / 15	61	483	2,6	
GLOBAL LP 1000 <sup>FW</sup>	3/4"	80°C / 60°C	14,8 / 8,2	44 / 49	39	651	2,6	882746
		50°C / 40°C	7,3 / 4	22 / 24	37	638	2,7	882752
		40°C / 35°C	5,3 / 2,8	16 / 17	36	915	5,4	
GLOBAL LP 1300/1600 <sup>FW</sup>	3/4"	80°C / 60°C	22,9 / 12,8	42 / 48	49	1006	3,6	882747
		50°C / 40°C	11,3 / 6,2	21 / 23	47	986	3,7	882757
		40°C / 35°C	8,2 / 4,4	15 / 16	46	1416	7,4	
GLOBAL LP 2000 <sup>FW</sup>	3/4"	80°C / 60°C	27,1 / 15,5	40 / 46	68	1191	4,8	882747
		50°C / 40°C	13,4 / 7,5	20 / 22	65	1167	5,1	882757
		40°C / 35°C	9,7 / 5,3	14 / 16	64	1680	10,1	

Conditions : Air extérieur : -10°C et 90% HR, Air intérieur : +22°C et 50% HR, T° soufflage sans BA+ : 19°C

(1) Calculé à 100% et 50% du débit maximum.

(2) Calculé à débit maximum.

## COOLING COIL (BA-) - 4RANGS

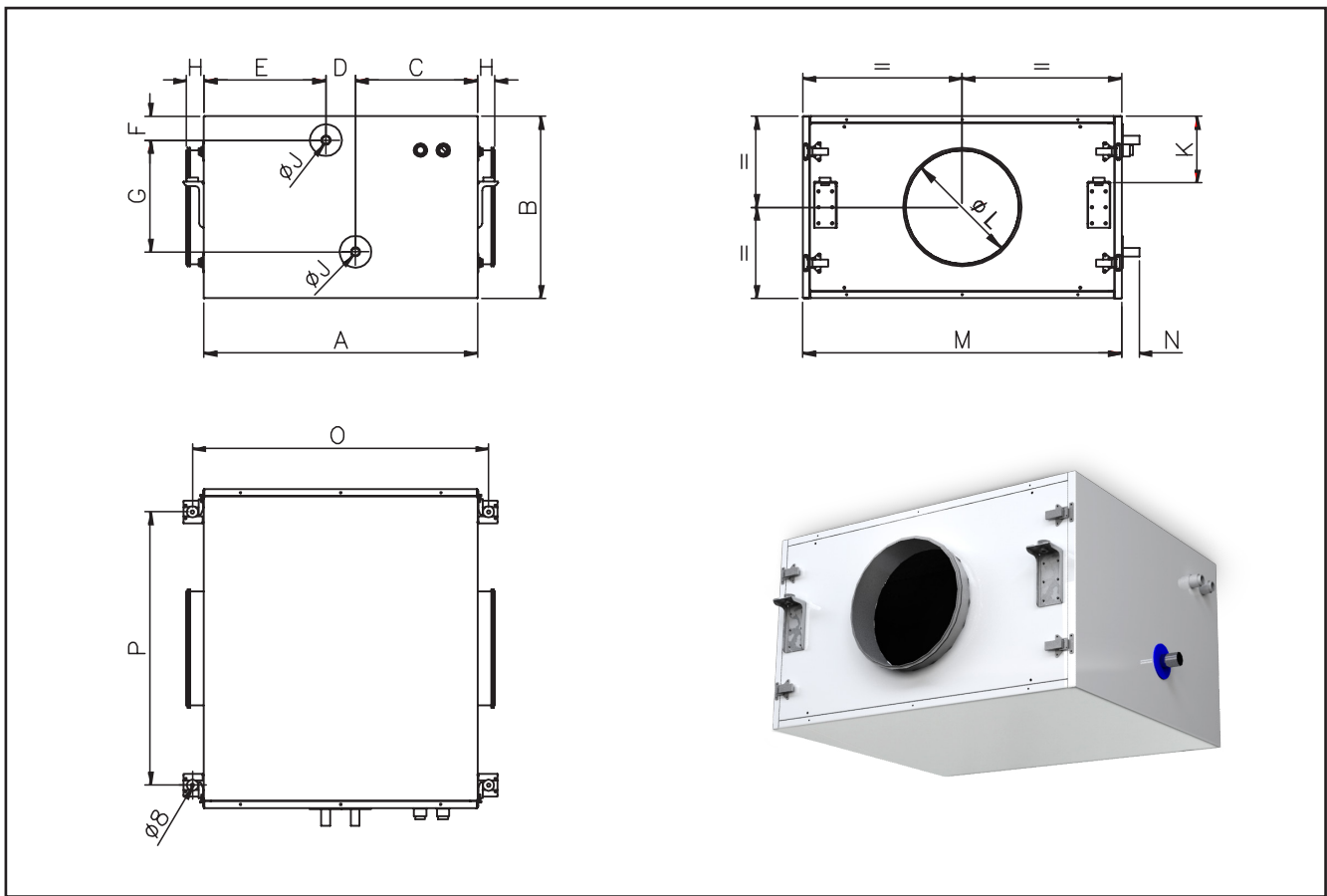
MODEL	CONNECTIONS	WATER T°C	PUISSANCE (1)	$\Delta T$ (1)	PERTE DE CHARGE AIR (2)	DEBIT EAU (2)	PERTE DE CHARGE EAU (2)	CID
		[°C]	[kW]	[°C]	[Pa]	[l/h]	[kPa]	
GLOBAL LP 450 <sup>FW</sup>	3/4"	7°C/12°C	1,4 / 1,0	8 / 10	44	239	0,9	882745
		10°C/15°C	1,0 / 0,7	7 / 8	39	170	0,5	882750
		13°C/18°C	0,7 / 0,5	5 / 6	38	117	0,3	
GLOBAL LP 600 <sup>FW</sup>	3/4"	7°C/12°C	1,6 / 1,1	7 / 9	66	273	1,2	882745
		10°C/15°C	1,1 / 0,8	6 / 7	58	195	0,6	882750
		13°C/18°C	0,8 / 0,5	4 / 5	59	134	0,3	
GLOBAL LP 1000 <sup>FW</sup>	3/4"	7°C/12°C	4,5 / 2,3	10 / 10	44	770	4,9	882746
		10°C/15°C	2,8 / 1,5	7 / 8	38	482	2,1	882754
		13°C/18°C	1,6 / 1,0	5 / 6	35	266	0,7	
GLOBAL LP 1300/1600 <sup>FW</sup>	3/4"	7°C/12°C	6,9 / 3,8	9 / 10	57	1188	6,7	882745
		10°C/15°C	4,5 / 2,2	7 / 8	49	767	3,0	882750
		13°C/18°C	2,2 / 1,5	4 / 5	44	373	0,8	
GLOBAL LP 2000 <sup>FW</sup>	3/4"	7°C/12°C	8,3 / 4,8	9 / 10	79	1394	8,9	882747
		10°C/15°C	5,5 / 2,5	7 / 7	68	915	4,1	882758
		13°C/18°C	3 / 1,7	4 / 5	61	474	1,3	

Conditions : Air extérieur : 30°C et 40% HR, Air intérieur : +22°C et 50% HR, T° soufflage sans BA- : 23,5°C

(1) Calculé à 100% et 50% du débit maximum.

(2) Calculé à débit maximum.

## DIMENSIONS BA W (HOT WATER/COLD WATER)



MODÈLE	CID	A	B	L	M	O	P	Poids
				[mm]				[kg]
GLOBAL LP 450 / 600 <sup>FW</sup>	882745	500	500	250	320	550	400	20
GLOBAL LP 1000 <sup>FW</sup>	882746	600	700	250	400	750	600	25
GLOBAL LP 1300/1600 / 2000 <sup>FW</sup>	882747	800	900	660 x225	400	850	800	30

## MOTORISED DAMPER (CTm)



The GLOBAL LP<sup>FW</sup> units can be equipped with motorised dampers delivered pre-wired to cut draughts when the unit is deactivated. They are delivered with a pre-wired servomotor and are controlled entirely by the regulation system. A starting delay of the fans is designed to allow the damper to open first.

They are made of galvanised steel and are designed and sized to reduce the air resistance optimally. They are airtight thanks to the particular design of blades that fit into each other.

They are 130 mm deep.

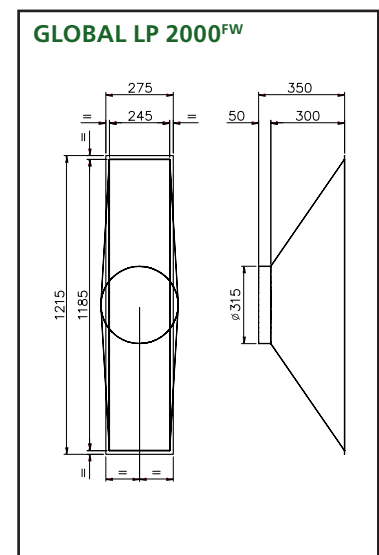
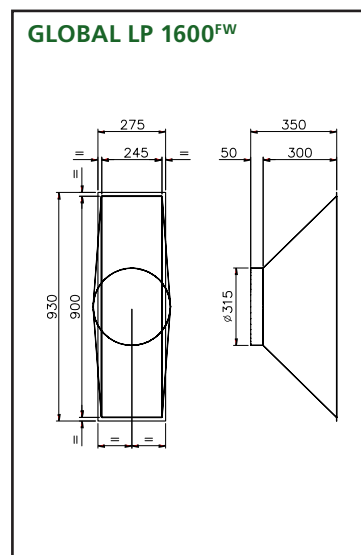
MODEL	CID	INTERIOR DIMENSIONS [mm]	EXTERIOR DIMENSIONS [mm]
CTm GLOBAL LP 450 <sup>FW</sup>	882454	288 x 288	368 x 368
CTm GLOBAL LP 600 <sup>FW</sup>	882455	290 x 490	368 x 568
CTm GLOBAL LP 1000 <sup>FW</sup>	882456	290 x 390	368 x 468
CTm GLOBAL LP 1300/1600/2000 <sup>FW</sup>	882457	290 x 920	368 x 998
CT200	882861	DN200	DN200
CT250	882862	DN250	DN250
CT315	882863	DN315	DN315

## ROUND/SQUARE INLET (IRS)



The inlet side of the GLOBAL LP 1600<sup>FW</sup> and 2000<sup>FW</sup> models is rectangular.

A round/square adaptation is available as an option for these 2 models to allow the use of a circular ducting.



MODEL	CID
GLOBAL LP 1600 <sup>FW</sup>	882451
GLOBAL LP 2000 <sup>FW</sup>	882452
GLOBAL LP 1300/2000 BA	882726



**We make every breath count.**