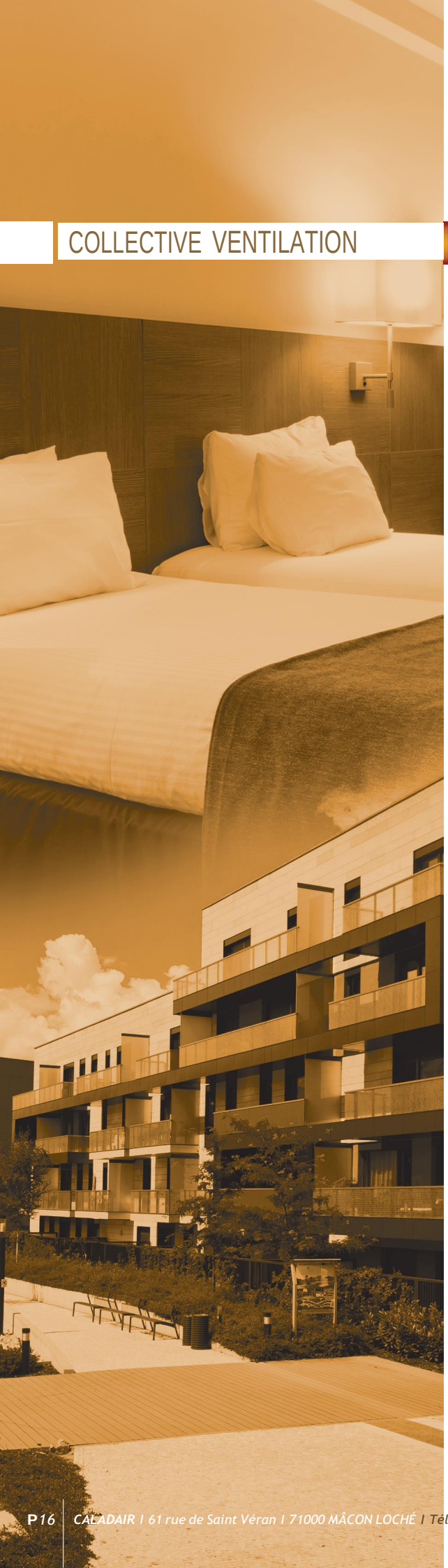


ECOVOR®

RANGE

C4 - 400° C - 1/2 hrs
Very low consumption
CMV/Collective extraction units Air flow 200 to 5000 m³/h

Ventilation unit

EC MOTOR (direct current), air flow 200 to 5 000 m³/h

CTICM C4 - 400° C - 1/2 h approved
Report no. 09-E-18

CSTB technical notification for Hygro A, Hygro B and Hygro Gas usage

CMV POWER selection software
Econological® solution

APPLICATION

- Intended mainly for air extraction in houses and public assembly buildings requiring low and average air flows.
- C4, 400° C 1/2 h certified 50 Hz and 60 Hz.

s ECOVOR® units fitted with the EC motor (direct current) fulfil the requirements of directive ErP 2009/125/EC (2nd phase, 2015).
Fitted with a **MODBUS RS485** smart regulation system, the ECOVOR® unit operates in accordance with 2 pre-programmed regulation modes:
Mode 1 : LOBBY® regulation.
The ECOVOR® self-regulates in constant pressure mode. Factory-set at 150 Pa, this pressure may be adjusted from the built-in control panel.
Mode 2 : "Pre-programmed rising curve" regulation.
20 curves, by unit size, factory pre-regulated using a new and innovative program which provides maximum optimization of consumption according to the actual requirements of the building and also guarantees very low noise levels.
These features reduce the energy consumption of collective buildings **to very low levels**. This innovative regulation system enables the ECOVOR® unit to be combined with a high-efficiency energy recovery unit from the CARMA® range in accordance with CH41 or CH43 installation principles.

RANGE

- Comprising 3 models, the range covers air flows from 200 to 5000 m³/h.

INSTALLATION

- Can be installed inside or outside.
- Its cubic shape adapts to all intake/discharge combinations.
- Easy access to all internal parts.

CONSTRUCTION

- Housing: galvanized steel sheet. Amply dimensioned, it offers powerful air handling and acoustic performance characteristics.
- Removable access panels.
- Bird protection grid on discharge.
- Two circular nozzles with double lipseal for watertight networks (ATEC CSTB No. 13-224-V2).
- Local padlockable switch on front panel.

s Control panel with IP54 LCD display.

- The ECOVOR® incorporates an **air flow defect relay.** This is programmed using the following information:
Defect: contact signal if pressure less than 80.
Mistral 60 S: time delay of 60 secs on the **defect** contact in order not to trigger spurious alarms
Indicator light: this spare contact enables a green indicator light to be connected showing the unit is in operation.

MOTOR FAN

s Direct drive DC motor with high efficiency electronic commutation (EC) (ErP 2009/125/EC, 2nd phase 2015 compliant).

- High efficiency epoxy-treated reaction turbine.
The combination within the ECOVOR® unit of an EC motor and a reaction coil guarantees very high efficiency and very low consumption using an **econological® solution** which complies with RT2012.

CONTROL PANEL

ECOVOR® has an LCD control panel providing access to all functions (2 control modes: constant pressure or pre-programmed rising curves). Easy to use, it displays the setpoint and instantaneous data for the selected operating mode.

CAISSON DE COUPLAGE

- 400° C 1/2 h certified. The use of this unit insulated with 25 mm A2-s1, do (Mo) mineral wool coupled to the ECOVOR® allows the already excellent acoustic performance characteristics to be improved still more and to obtain the following configurations:
- 3 intakes + 1 horizontal or vertical discharge.
- 1 intake and offset in-line discharge.

ELECTRICAL CHARACTERISTICS — ECOVOR®

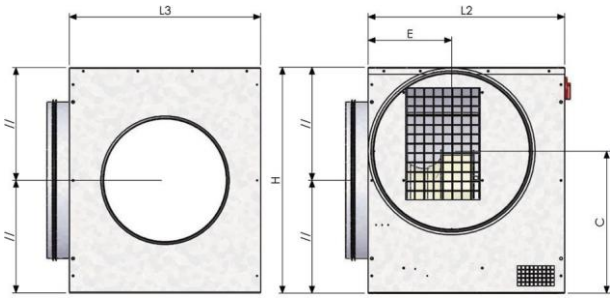
ECOVOR® Model	Power supply voltage (V / Ph / Hz)	Electrical power (W)	Protection current (A)	Usage temp. (°C /°C)	Motor IP/Class	Thermal protection *
ECOVOR® 1500	*230 / 1 / 50*	*360*	*1,9*	*-20 / 40*	*IP54 / F*	*PTI*
ECOVOR® 3000	*230 / 1 / 50*	*650*	*3,5*	*-20 / 40*	*IP54 / F*	*PTI*
ECOVOR® 5000	*400 / 3 / 50*	*1200*	*2,7*	*-20 / 40*	*IP44 / F*	*PTI*

** PTI: Integrated thermal cutout*

DIMENSIONS CHARACTERISTICS ECOVOR®

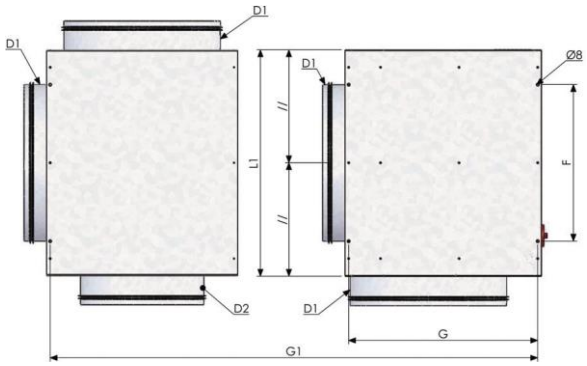
SIDE VIEW

CCA acoustic coupling unit — Ecovor® unit



TOP VIEW

CCA acoustic coupling unit — Ecovor® unit



Reference	Dim. Unit overall			Dim. CCA	Ground fixing			Discharge position		Branch connection		Weight	
	Length	Width	Height.	Width	Length	Width	Width CCA	Height.	Width	Diam.	Diam.		
ECOVOR®	L1 (mm)	L2 (mm)	H (mm)	L3 (mm)	F (mm)	G (mm)	G1 (mm)	C (mm)	E (mm)	D1 (mm)	D2 (mm)	ECOVOR® (kg)	CCA
1500	*520*	*510*	*520*	*390*	*370*	*490*	*860*	*335*	*185*	*315*	*250*	*35*	*9*
3000	*650*	*565*	*650*	*550*	*450*	*545*	*1075*	*410*	*240*	*450*	*355*	*50*	*13*
5000	*730*	*670*	*730*	*650*	*550*	*650*	*1280*	*460*	*290*	*500*	*400*	*63*	*17*

ACOUSTIC CHARACTERISTICS ECOVOR®

The Lp4m dB(A) (◠) values shown on the curves relate to the average overall acoustic pressure level radiated in a free field on a reflecting plane, unit discharge not connected. These values are also valid for **ECOVOR®** *units with* **CCA acoustic unit**.

The Lw cond dB(A) (□) values shown on the curves relate to the average overall acoustic pressure level radiated in the intake duct.

To obtain the overall Lw cond dB(A) for an **ECOVOR®** *fitted with a* **CCA** *unit, subtract 4 dB(A) from the overall Lw cond dB(A) (□) value shown on the curves.*

To obtain the acoustic power spectrum radiated in the intake duct in dB(A), add the correction coefficients from the table below to the Lw cond dB(A) (□) value shown on the curves.

Acoustic spectrum weighting on Lw cond dB(A) ( ) shown on the curves								
Frequency	*63 Hz*	*125 Hz*	*250 Hz*	*500 Hz*	*1000 Hz*	*2000 Hz*	*4000 Hz*	*8000 Hz*
Weighting ECOVOR® 1500 dB(A)	*-25*	*-12*	*-8*	*-8*	*-6*	*-9*	*-8*	*-17*
Weighting ECOVOR® 1500 + CCA dB(A)	*-26*	*-13*	*-11*	*-11*	*-11*	*-16*	*-16*	*-26*
Weighting ECOVOR® 3000 dB(A)	*-32*	*-13*	*-8*	*-6*	*-8*	*-8*	*-10*	*-17*
Weighting ECOVOR® 3000 + CCA dB(A)	*-33*	*-14*	*-11*	*-9*	*-13*	*-15*	*-18*	*-26*
Weighting ECOVOR® 5000 dB(A)	*-28*	*-14*	*-15*	*-5*	*-8*	*-7*	*-9*	*-16*
Weighting ECOVOR® 5000 + CCA dB(A)	*-29*	*-15*	*-18*	*-8*	*-13*	*-14*	*-17*	*-25*

To define the average overall acoustic pressure level radiated at a certain distance in dB(A) in free field on a reflecting plane, discharge unit not connected, add the value from the table below to the Lp4m dB(A) (◠) value shown on the curves.

Lp weighting at various distances						
Distance	*2 m*	*3 m*	*4 m*	*5 m*	*7 m*	*10 m*
Distance weighting	*6*	*2*	*0*	*-2*	*-5*	*-8*

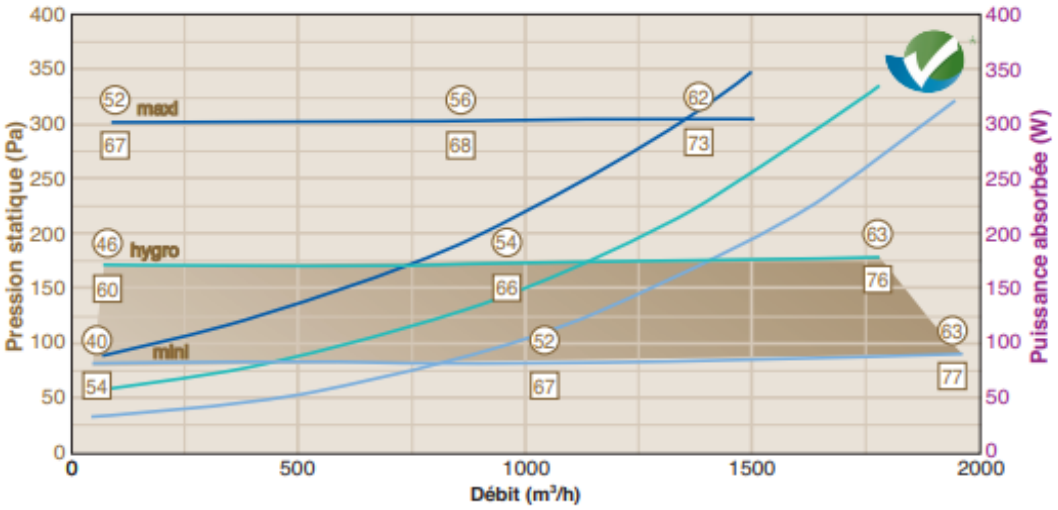
Tolerance: *Overall values +/- 3 dB(A)*
Acoustic spectrum +/- 5 dB(A)

- *Overall acoustic pressure level radiated rejection :*

Lw rejet dB(A) = Lp4m dB(A) (◠) + 20

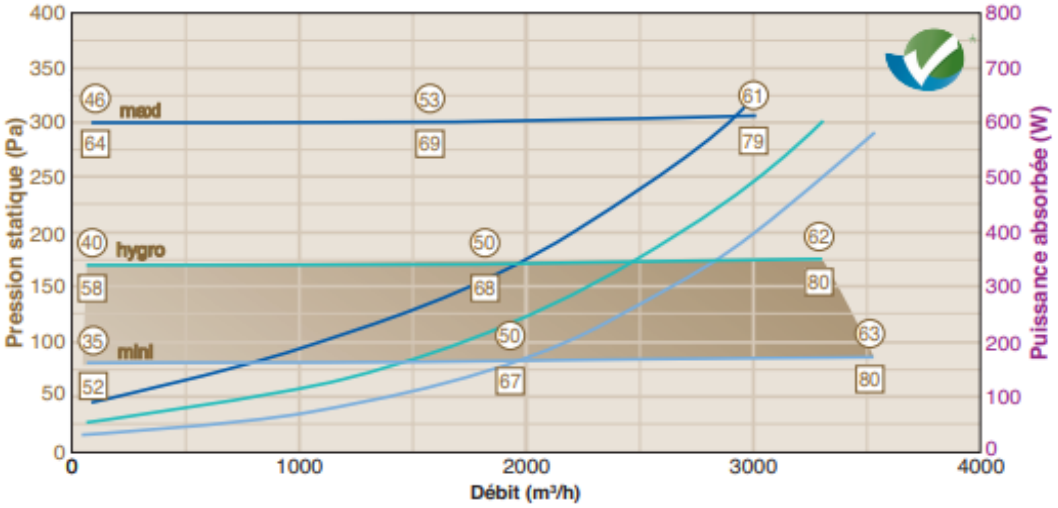
ECOVOR® 1500
Mode : LOBBY®

90 Pa
200 Pa
300 Pa



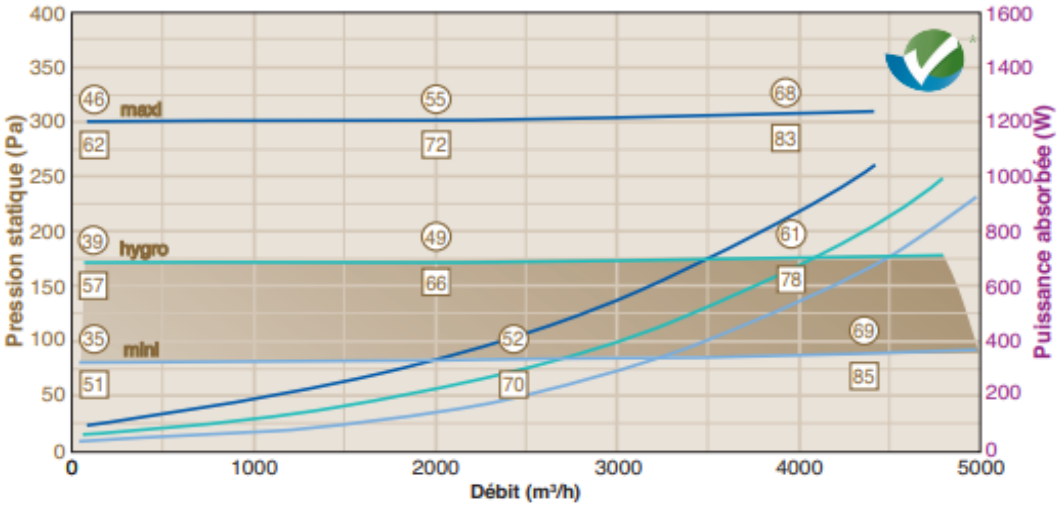
ECOVOR® 3000
Mode : LOBBY®

90 Pa
200 Pa
300 Pa



ECOVOR® 5000
Mode : LOBBY®

90 Pa
200 Pa
300 Pa

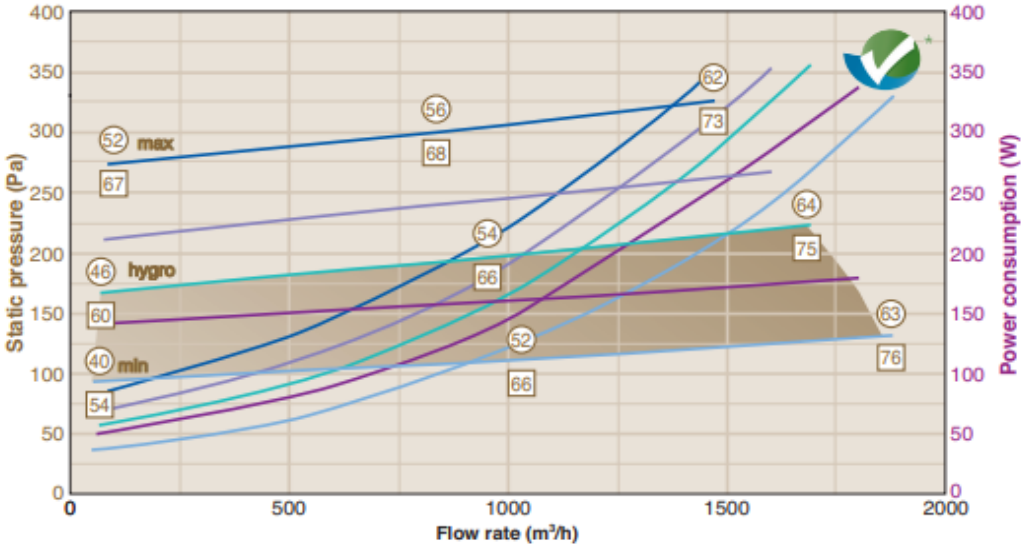


NOTA : *The curves are made with a suction and discharge nozzle connected sub- woofer is not connected (C configuration according to NF N 13141-4).*

ECOVOR® 1500

Mode : Rising pressure

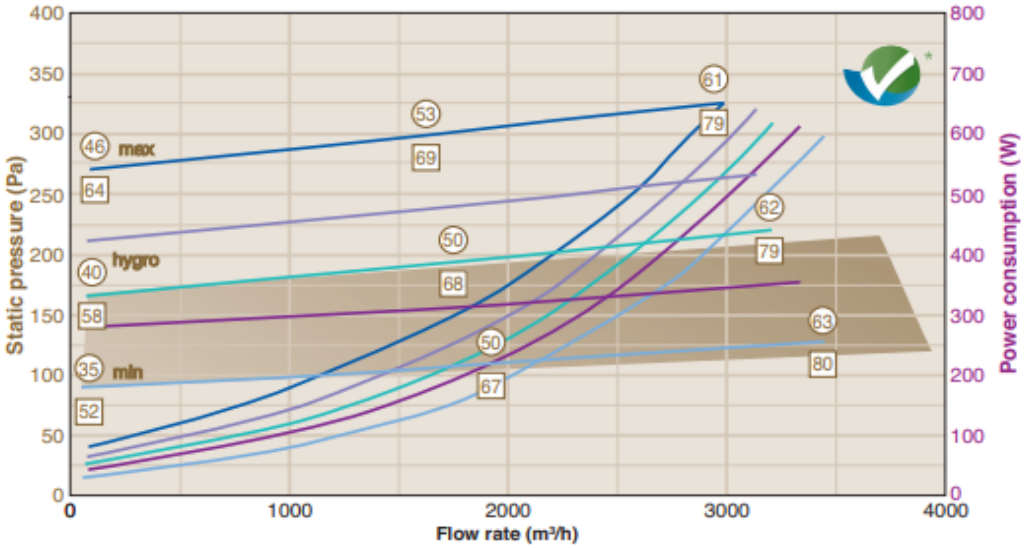
320 Pa
260 Pa
215 Pa
170 Pa
120 Pa



ECOVOR® 3000

Mode : Rising pressure

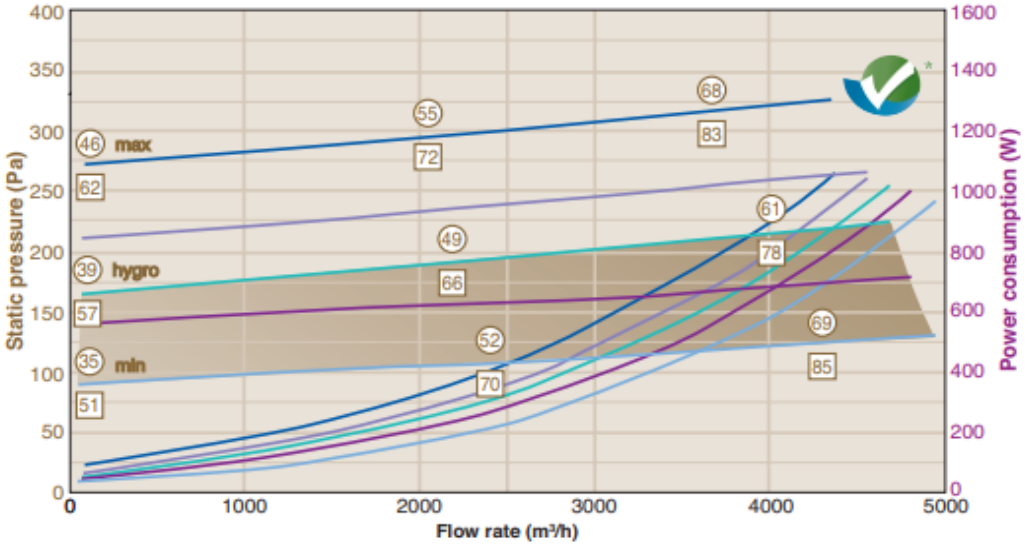
320 Pa
260 Pa
215 Pa
170 Pa
120 Pa



ECOVOR® 5000

Mode : Rising pressure

320 Pa
260 Pa
215 Pa
170 Pa
120 Pa



NOTE: The other pre-programmed curves (20 in all) are available in the start-up manual delivered with the unit and also available from our Web site.