



### VMC DF ventilation, intelligent heat recovery unit.

#### Description.

The Classphere 3V unit is a controlled mechanical ventilation system with double flow and high thermal efficiency, it has an automated ventilation technology that stabilizes and equalizes the flow of the two centrifugal fans at a preset flow rate that adapts to the characteristics of the environment, controlling the levels of temperature, relative humidity and CO<sub>2</sub> measured by the unit's sensors, offering precise flow control, optimal air quality, acoustic comfort and reduced electrical consumption.

#### Characteristics.

- ✓ Automated ventilation technology.
- ✓ Flow balancing system.
- ✓ Configuration and self-regulation of the relative humidity comfort zone.
- ✓ Configuration and self-regulation of particles per million CO<sub>2</sub> in the environment.
- ✓ Control and self-regulation of temperature.
- ✓ Available in two installation configurations: Right (VR) and Left (VL).



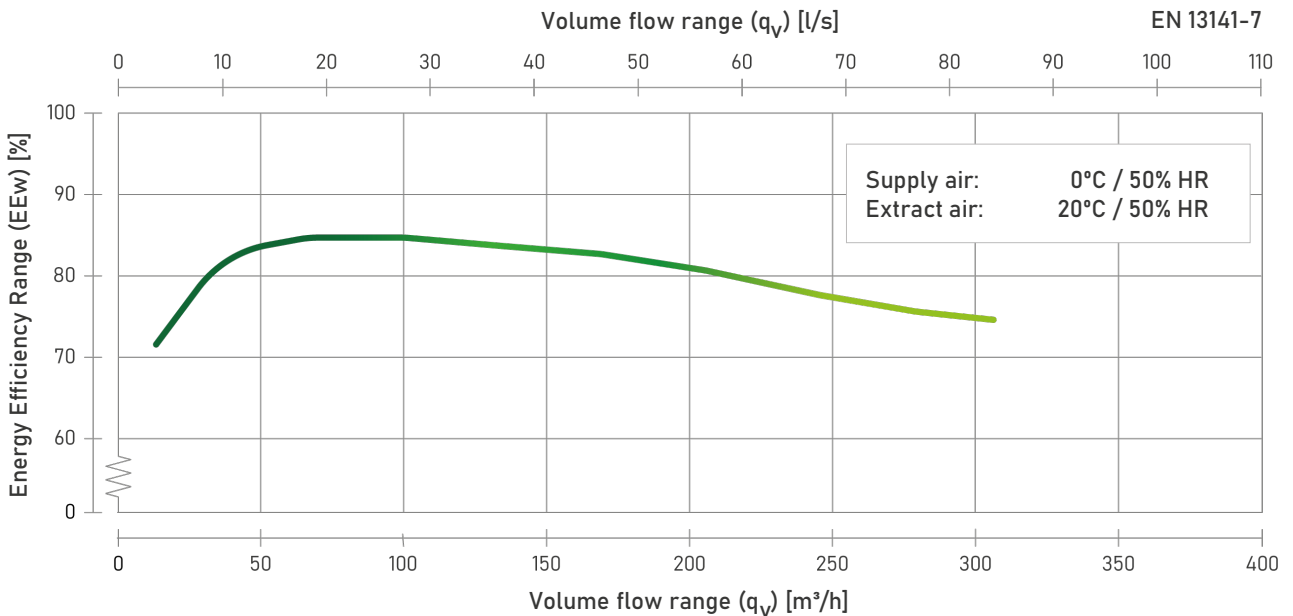
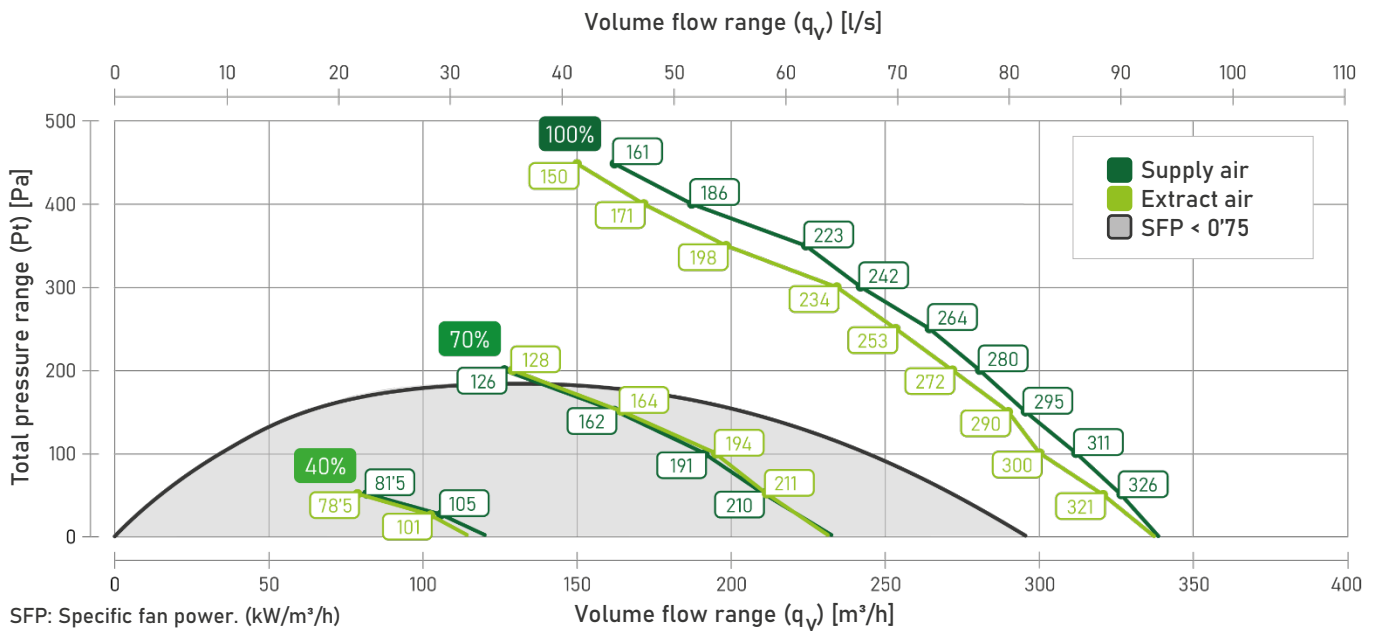
#### Technical specifications.

EMKA Classphere 3V		EN 60335 - 2 - 30 EN 60335 - 2 - 80	
Rated voltage:	230 V / 50/60 Hz	Fan type:	EC centrifugal
Rated power:	150 W / 0'8 A	Maximum fan power:	2 x 96 W / 0'8 A
Maximum power:	1550 W / 6'8 A	Filter class:	F7 ePM1 ≥ 50%
Maximum electrical resistance power:	1400 W / 6 A (Specific for cold weather)	Type of recuperator of heat:	Molecular sieve (Adsorption)
Standby power:	6 W	Dimensions (L x H x D):	819 x 680 x 470 mm
Fuse type:	T 6'3 mA / 250 V	Tube connection:	Ø 160 mm
Energy efficiency:	A	Weight:	63 Kg

# Acoustic level ( $L_{WA}$ ).

<b>EMKA Classphere 3V</b>		UNE EN 13141-7 UNE EN ISO 3744	UNE EN ISO 3741 UNE EN ISO 5135	
Static pressure:	Ventilation air flow:	Box irradiation:	Air Supply duct:	Air extract duct:
50 Pa	260 m <sup>3</sup> /h	44'3 (dB(A))	60'8 (dB(A))	47'0 (dB(A))
100 Pa	350 m <sup>3</sup> /h	51'8 (dB(A))	66'8 (dB(A))	53'6 (dB(A))

## Graphic ventilation curves.



# Specifications Ecodesign ErP 2018.

COMMISSION REGULATION (EU) N° 1253/2014 of 7 July 2014  
COMMISSION DELEGATED REGULATION (EU) N° 1254/2014 of 11 July 2014

## EMKA Classphere 3V

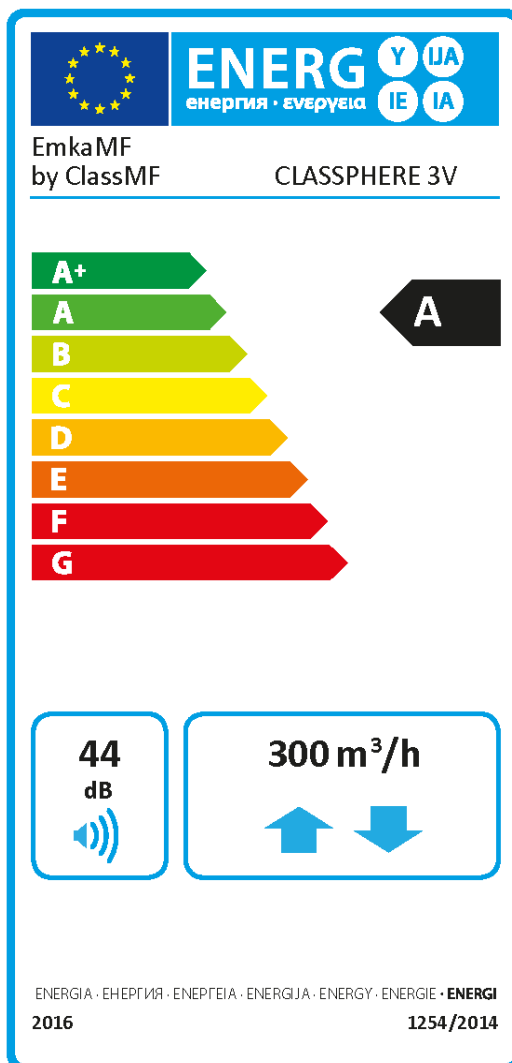
Supplier's name:	EMKA Manufacturing, S.L.
Model identification:	Classphere 3VR / 3VL
<b>Specific energy consumption:</b>	
$SEC = t_a \cdot p_{ef} \cdot q_{net} \cdot MISC \cdot CTRL^x \cdot SPI - t_h \cdot \Delta T_h \cdot \eta_h^{-1} \cdot c_{air} \cdot (q_{ref} - q_{net} \cdot CTRL \cdot MISC \cdot (1 - \eta_t)) + Q_{defr}$	
SEC Average climate	-37'3 kWh/(m <sup>2</sup> .a)
SEC Cold climate	-74'1 kWh/(m <sup>2</sup> .a)
SEC Warm climate	-13'6 kWh/(m <sup>2</sup> .a)
Declared type of unit:	Bi-directional, residential ventilation unit
Type of operation:	Variable speed
Recovery system of heat:	Regenerative (Cross-flow heat recovery)
Thermal efficiency:	82 %
Maximum flow:	300 m <sup>3</sup> /h (100 Pa)
Drive input electrical power:	173'5 W
Acoustic power level (L <sub>WA</sub> )	44 dB(A)
Reference airflow	0'0583 m <sup>3</sup> /s
Reference pressure diff.:	50 Pa
SPI*	885'09 Joules/m <sup>3</sup>
Control factor:	0'85
Control typology:	Central demand control
Maximum internal leakage	3 % (Class A2)
Maximum external leakage	0'9 % (Class A1)
Mixing rate:	Not applicable
Visual filter warning	An alarm is activated in the control, when the unit detects that the filter is clogged**
Unidirectional units:	Not applicable
Unit instructions:	<a href="http://www.emkamf.es">www.emkamf.es</a>
<b>Ductless Units:</b>	
Pressure variations:	Not applicable
Tightness:	Not applicable

### Annual electricity consumption:

$AEC = t_a \cdot q_{net} \cdot MISC \cdot CTRL^x \cdot SPI + Q_{defr}$	
AEC Average climate	298 kWh/a
AEC Cold climate	835 kWh/a
AEC Warm climate	253 kWh/a

### Annual heating savings:

$AHS = t_h \cdot \Delta T_h \cdot \eta_h^{-1} \cdot c_{air} \cdot (q_{ref} - q_{net} \cdot CTRL \cdot MISC \cdot (1 - \eta_t))$	
AHS Average climate	4413 kWh/a
AHS Cold climate	8633 kWh/a
AHS Warm climate	1996 kWh/a



\* Specific power input.

\*\* Changing the filters regularly is important for the operation and maintenance of the unit.

## Sustainability.

### 99% RECYCLED

Manufactured in galvanized steel and expanded polystyrene, it allows recycling up to 99% of the unit, and also helps reduce the consumption of resources and the degradation of the planet.

### NO CARBON FOOTPRINT

We are committed to helping reduce the gas emissions of the greenhouse effect, collaborating to reduce the impact of climate change in the world.



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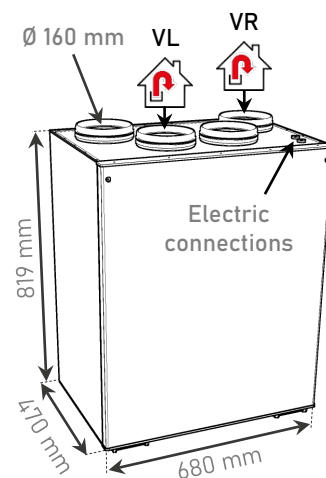
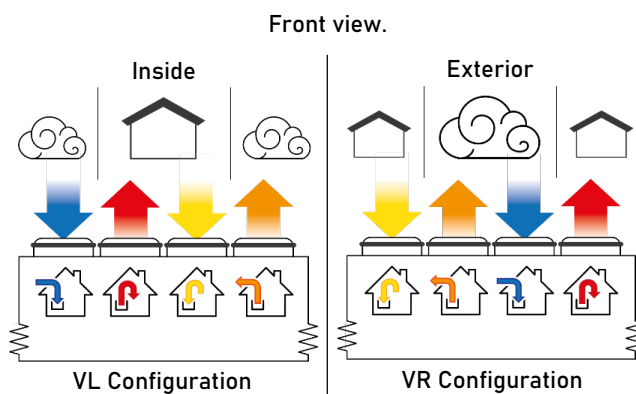
Annual electricity consumption:		Annual economic consumption:		Annual CO <sub>2</sub> emissions:	
AEC Average climate	298 kWh/a	65'32 Euros/a		74'50 kg CO <sub>2</sub> /kWh/a	
AEC Cold climate	835 kWh/a	183'03 Euros/a		208'75 kg CO <sub>2</sub> /kWh/a	
AEC Warm climate	253 kWh/a	55'45 Euros/a		63'25 kg CO <sub>2</sub> /kWh/a	
Annual heating savings:		Annual economic savings:		Saving of annual CO <sub>2</sub> emissions:	
AHS Average climate	4413 kWh/a	967'32 Euros/a		1103'25 kg CO <sub>2</sub> /kWh/a	
AHS Cold climate	8633 kWh/a	1892'35 Euros/a		2158'25 kg CO <sub>2</sub> /kWh/a	
AHS Warm climate	1996 kWh/a	437'52 Euros/a		499'0 kg CO <sub>2</sub> /kWh/a	

Average price in the US of electricity for home consumers.  
Last update: 1 Semester of 2021  
€0.2192/kWh. Source: Eurostat.

Emission factor of electrical energy.  
Last update April 16, 2021.  
0.25kg CO<sub>2</sub>/kWh. Source: CNMC Spain.

## Position identification and dimensions.

-  Fresh air input from outdoor.
-  New air supply to the house.
-  Extraction of stale air from the house.
-  Exhaust of stale air to the outside.



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