



MASS ENERGY



TFD

C L I M A

DYNAMIC FLOW TECHNOLOGY
CLIMA

VENT 800 EC

INTELLIGENT USE OF ENERGY



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VENT 800 EC

DYNAMIC FLOW TECHNOLOGY
CLIMA



Maximum flow rate (SFPlimit2018) 7300 m³/h with 420 Pa of useful pressure



Aluminum, counter-current flow heat recuperator, with ~90% efficiency



Energy efficient, EC centrifugal fans with backward-curved blades



Low pressure drop filters: F7 (ePM1 70%) for fresh air and M5 (ePM10 50%) for extraction



Structure with aluminum profiles and sandwich panels (external pre-painted sheet, internal galvanized sheet) 50 mm-thick stone wool thermal/sound insulation



Nominal voltage: 400 V 3F 50-60 Hz



Maximum power input: 7,6A 5,0 kW



Vertical configuration with the possibility to integrate a water battery



Free-cooling / free-heating built-in bypass (either manual, engine-driven or automatic)



Available with the following controls:

3 speed EVO (3E), electronics with black LCD (EL), electronics with white LCD (EB), electronics with COLOR-TOUCH display (ET)



Built-in antifreeze protection



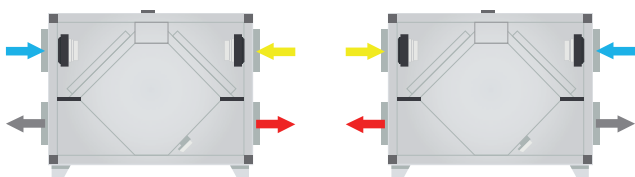
Operating conditions: ambient temperature 0 °C - 45 °C, humidity <80%



CONFIGURATIONS

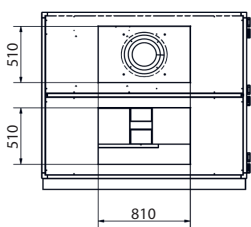
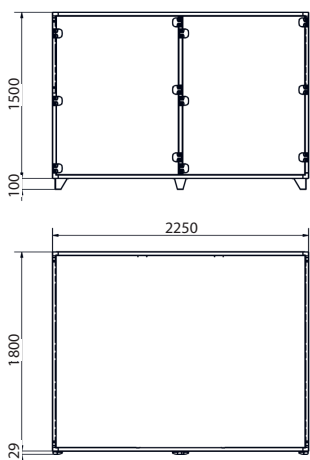
VERTICAL INSTALLATION

V1(standard) ————— V5



- FRESH AIR (external air intake)
- EXHAUST AIR (expulsion to the outside)
- RETURN AIR (extraction from the ambient)
- SUPPLY AIR (supplied to ambient)

DIMENSIONS



Dimensions, excluding sleeves and condensation drain (w x d x h):
2250x1800x1500 mm

Nominal pipes size:
810x510 mm

Weight:
780 kg



PRODUCT FICHE

According to EU regulation no. 1253/2014 and no. 1254/2014
Data refers to the maximal nominal power
(for the other work's points verify graph of aeraulic performance)



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C L I M A

Supplier's name		MASS ENERGY Srl	
Model identification code		CLIMA VENT 800 EC	
Typology of product		CLIMA VENT, bidirectional	
Type of drive		Variable speed	
Heat recovery system		Counter-current flow	
Thermal efficiency of heat recovery*		81,5%	
Nominal flow rate (m ³ /s)		2,028 m ³ /s	
Effective electric power input (kW)		4,936 kW	
Specific internal fan power SFPint (W/(m ³ /s))*		1050 W/(m ³ /s)	
Face velocity at nominal flow rate (m/s)*		1,92 m/s	
Nominal External Pressure Δps,ext (Pa)		422 Pa	
Internal pressure drop of ventilation components Δps,int (Pa)*		334 Pa	
Static efficiency of fans ηs,Fan**		64,0%	
Leakage rate (%)	Cold climate	1,9%	
	Average climate	1,7%	
	Warm climate	not applicable	
Classification of air filters		M5 (extraction) F7 (fresh air)	
Position and description of visual filter warning		3E version: LED signal on remote control EL, EB e ET version: Alarm displayed on remote display	
Sound power level (Lwa in dB(A))*		71 dB(A)	
Internet address for preassembly and disassembly instructions		www.massenergy.it	

* according to EU regulation no. 1253/2014

** calculated according to EU regulation no. 327/2011

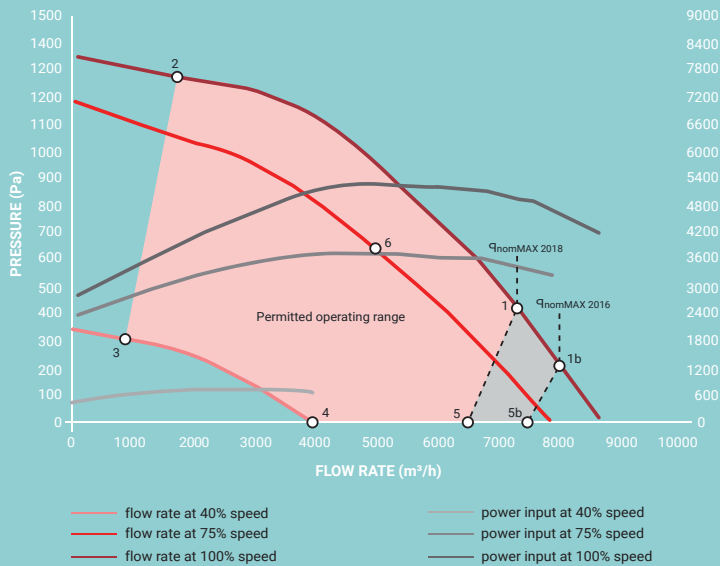


AERAULIC PERFORMANCE

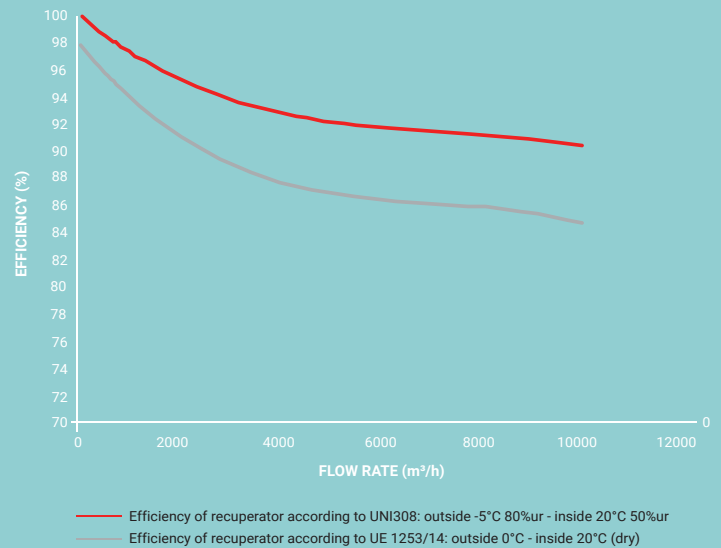
	Nominal Flow Rate (m ³ /h)	Nominal Flow Rate Q _{nom} (m ³ /s)	Fan Efficiency η _{s,Fan} (%)	Exchanger Efficiency η _{t_nrvu} (%)	Sound Power Lwa (dB(A))	Internal Specific Power SFPint (W/(m ³ /s))	Nominal External Pressure Δps,ext (Pa)
1	7300	2.028	64	81.5	71	1049.6	422
1b	8000	2.222	58.5	81.3	73	1289.6	219
2	1753	0.487	34.4	89.3	77	436.3	1273
3	882	0.245	27.5	92.9	59	166.1	305
4	3950	1.097	46.7	83.9	61	587.2	0
5	6400	1.778	50.2	81.8	63	1079	0
5b	7400	2.056	50.5	81.5	66	1322.2	0
6	4981	1.384	64	82.7	67	637.6	637



AEREAULIC PERFORMANCE



THERMAL EFFICIENCY OF HEAT RECUPERATOR



PERFORMANCE OF THE WATER EXCHANGER (OPTIONAL)

HEATING

Ambient pressure	760	mmHg
Capacity	60.00	kW
Gas quantity	8000	Sm ³ /h
Air treated weight	9634	kg/h
Intel temperature	15.00	°C
Relative humidity	50.00	%
Outlet temperature	37.04	°C
Outlet relative humidity	13.49	%
Sensible heat factor	1	
Condensed water	0.00	kg/h
Actual velocity	2,81	m/s
Pressure drop	92	Pa
Dry fin pressure drop	92	Pa

INTERNAL FLUID: water

Inlet temperature	50.00	°C
Outlet temperature	40.00	°C
Liquid weight	5161	kg/h
Liquid volume	5207	l/h
Actual velocity	0.54	m/s
Pressure drop	7.20	kpa
Density	991	kg/m ³
Viscosity	0.59	mPa.s
Conductivity	0.64	W/mK
Specific heat	4194.66	J/kgK

COOLING

Ambient pressure	760	mmHg
Capacity	43.26	kW
Gas quantity	8000	Sm ³ /h
Air treated weight	9634	kg/h
Intel temperature	27.00	°C
Relative humidity	60.00	%
Outlet temperature	16.48	°C
Outlet relative humidity	96.91	%
Sensible heat factor	0.66	
Condensed water	20.20	kg/h
Actual velocity	2.97	m/s
Pressure drop	135	Pa
Dry fin pressure drop	93	Pa

INTERNAL FLUID: water

Inlet temperature	7.00	°C
Outlet temperature	12.00	°C
Liquid weight	7431	kg/h
Liquid volume	7435	l/h
Actual velocity	0.77	m/s
Pressure drop	9.00	kpa
Density	999	kg/m ³
Viscosity	1.33	mPa.s
Conductivity	0.59	W/mK
Specific heat	4190.22	J/kgK



MASS ENERGY

INTELLIGENT USE OF ENERGY

DESIGN

REALIZATION

SUPPLY

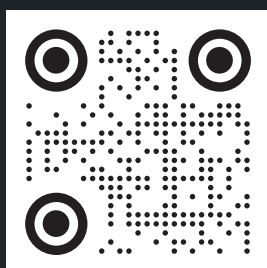
INSTALLATION

TESTING

AFTER SALES SERVICE



FORNITURA CHIAVI IN MANO
PER UNO DEI NOSTRI SERVIZI



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