



DECENTRALISED ENERGY RECOVERY UNIT WITH ENTHALPIC HEAT EXCHANGER

APPLICATION

Decentralised dual-flow unit with sensible and latent heat recovery, suitable for wall installation in premises such as offices, waiting rooms and school rooms, up to 75m².

SPECIFICATION

Outer fan casing manufactured from high quality ABS providing long lasting and robust construction. The unit is finished in white RAL 9010.

Internal structure manufactured from expanded polypropylene providing reduced sound emissions and maximised air tightness and thermal insulation.

EC external rotor motors fitted as standard for energy saving. Provided with integral thermal protection, mounted on sealed for life ball bearings.

Backward curved **centrifugal impeller** dynamically balanced and directly driven by the motor to provide a smooth airflow through the unit.

Enthalpic heat exchanger with high thermal and latent efficiency. Made of antimicrobial technology, the built-in polymer membrane is mould and bacteria resistant: it also prevents the air flows contamination and block the odours. The special configuration generates low pressure drop.

FEATURES & BENEFITS

Ease of installation & money saving: no need to plan/install any complicated ducting system.

Silent operation thanks to the fact that the brushless motors are inside the EPP (expanded polypropylene) structure which attenuates the sound.

Enthalpic heat exchanger suitable to transfer thermal energy and humidity from one airflow to the other, keeping the correct indoor humidity level (40-60%). During winter time, for example, it prevents that indoor air becomes too dry: in summer, instead, the humidity of the outdoor warm air is not transferred to the indoor cool air.

ISO ePM10 50% (M5) filters easy removable for cleaning. ISO ePM1 50% (F7) filter on request.

Automatic anti-frost protection to prevent frost building up on the exhaust side of the heat exchanger.

No condensate drain required

Tested to the latest standards: units are tested in the TÜV Rheinland accredited internal laboratory at Aerauliqua according to the operating document IEC OD 2048 (level CTF1) for the IEC 60335-1 and IEC 60335-2-80 Standards, meaning accurate, up to date information on electrical safety, performance and noise level that can be relied upon.

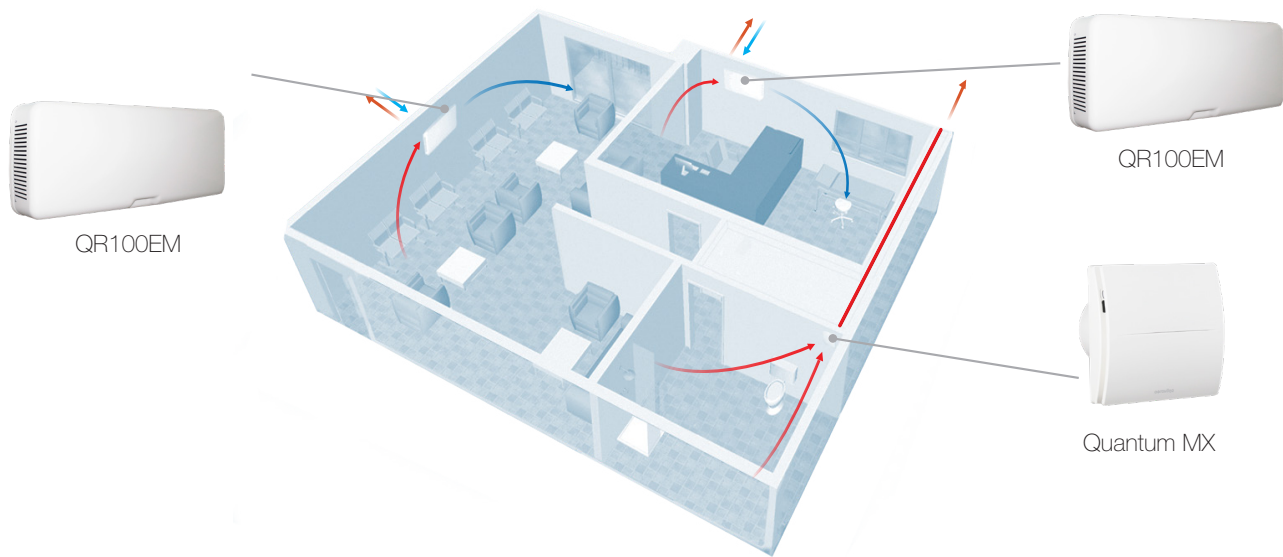
Designed and manufactured in accordance with EN60335-2-80 (Low Voltage Directive) and the EMC Directive (Electromagnetic Compatibility).

OPERATION

- One speed.
- Two speed.
- Variable speed with remote control CTRL-M.
- Variable speed with remote home automation system (BMS) or ballast potentiometer.
- 3 speed and free cooling option via remote controller CTRL-S.

QR100EM

Example of a complete ventilation system



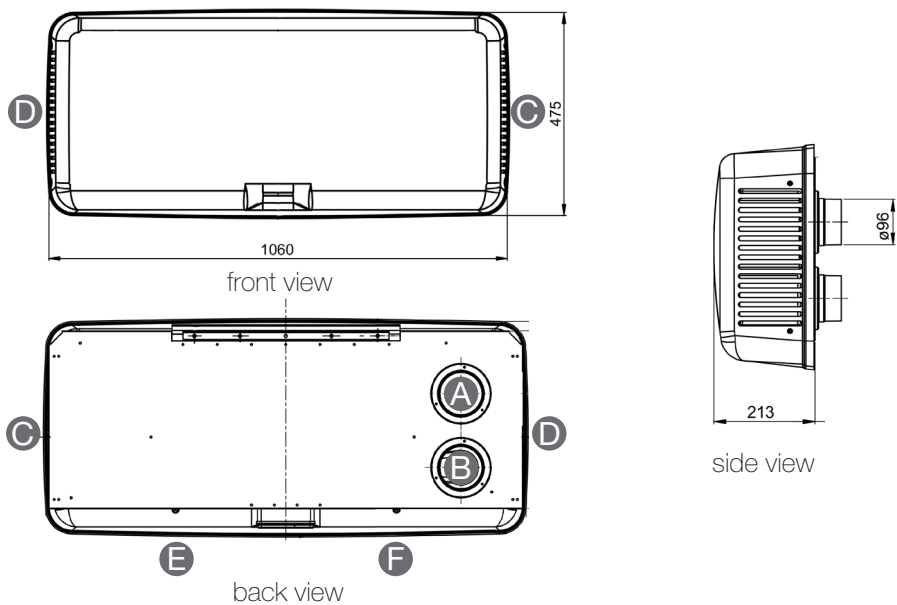
Application: new build/renovation.

How it works: a continuous running decentralised energy recovery unit with enthalpic heat exchanger (QR100EM) transfers thermal energy and humidity of extracted air from indoor rooms to incoming fresh air, with top acoustic comfort. The system can also include a single flow decentralised unit (Quantum MX) mounted in the wet room. No air distribution system is needed.

Energy saving: the preheated/precooled fresh air and continuous air changes reduce the demand for additional heating/air-conditioning. The EC brushless motors significantly reduce the electricity consumption.

Indoor Air Quality: a correctly specified mechanical ventilation system can ensure the quality of the indoor air and the humidity level is constantly maintained for the health and well-being of the occupants as well as of the building. Duly maintained filters of the QR100EM ensure that incoming air is suitably filtered of dust and pollen before it enters the home.

Dimensions (mm) and Weight (kg)



Model	QR100EM
Weight	12,5
A	Intake air from outside
B	Exhaust air to outside
C	Supply air to inside
D	Extract air from inside
E	Summer condensation drainage
F	Winter condensation drainage

QR100EM

Product fiche - ErP Directive, Regulations 1253/2014 - 1254/2014

a)	Mark	-	AERAULIQA	
b)	Model	-	QR100EM	
c)	SEC class	-	A	B
c1)	SEC warm climates	kWh/m ² .a	-15,9	-8,8
c2)	SEC average climates	kWh/m ² .a	-40,2	-32,0
c3)	SEC cold climates	kWh/m ² .a	-78,1	-67,9
	Energy label	-	Yes	
d)	Unit typology	-	Residential - bidirectional	
e)	Type of drive	-	Variable speed drive	
f)	Type of Heat Recovery System	-	Heat recovery	
g)	Thermal efficiency of heat recovery	%	83	
h)	Maximum flow rate @ 0 Pa	m ³ /h	83	
i)	Electric power input (alla Maximum flow rate)	W	43	
j)	Sound power level (L _{WA})	dBA	56	
k)	Reference flow rate	m ³ /h	58	
l)	Reference pressure difference	Pa	0	
m)	Specific power input (SPI)	W/m ³ /h	0,310	
n1)	Control factor	-	0,65	1
n2)	Control typology	-	Local demand control	Manual control (no DCV)
o1)	Maximum internal leakage rate	%	1	
o2)	Maximum external leakage rate	%	1	
p1)	Internal mixing rate	%	1	
p2)	External mixing rate	%	2	
q)	Visual filter warning	-	Absent	
r)	Instructions to install regulated grilles	-	N/A	
s)	Internet address for pre/disassembly instructions	-	www.aerauliqa.com	
t)	Airflow sensitivity to pressure variations	%	7	
u)	Indoor/outdoor air tightness	m ³ /h	20	
v1)	AEC - Annual electricity consumption - warm climates	kWh	1,8	4,3
v2)	AEC - Annual electricity consumption - average climates	kWh	2,3	4,7
v3)	AEC - Annual electricity consumption - cold climates	kWh	7,6	10,1
w1)	AHS - Annual heating saved - warm climates	kWh	20,4	19,5
w2)	AHS - Annual heating saved - average climates	kWh	45,2	43,2
w3)	AHS - Annual heating saved - cold climates	kWh	88,4	84,4
	Sound pressure @ 3m ⁽¹⁾	dB(A)	29	
	Ambient temperature max	°C	+40	
	Degree of protection IP	-	X4	
	Marking	-	CE	

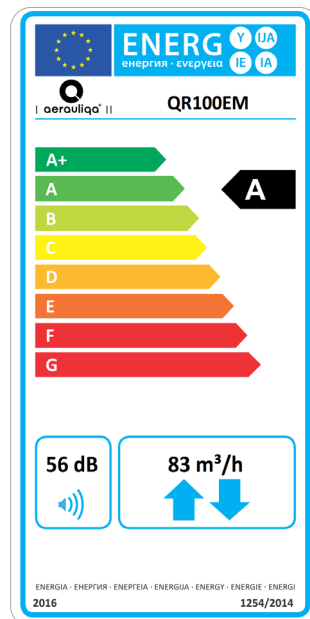
- 220-240V ~ 50/60Hz

- air performance measured according to ISO 5801 a 230V 50Hz, air density 1,2Kg/m³

- data measured in the TÜV Rheinland recognised laboratory in Aerauliqa

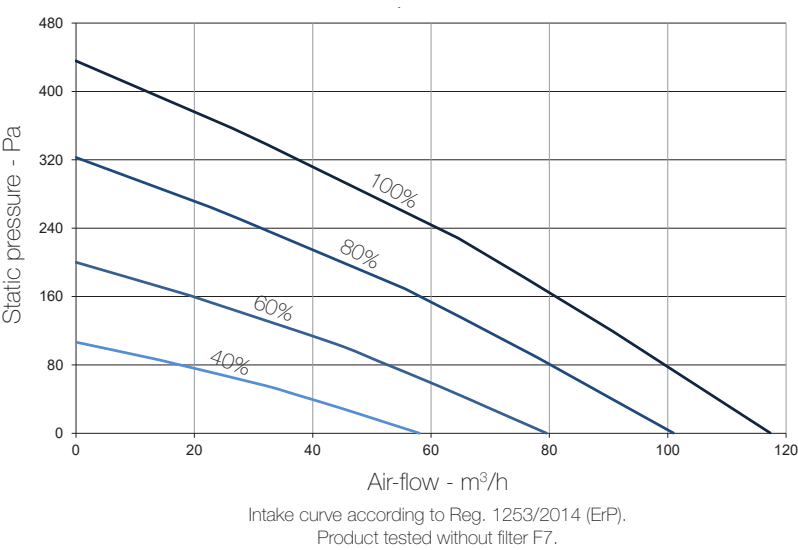
- thermal performances according to EN 13141-8

(1) sound pressure level @ 3m in free field, breakout, speed 40%, for comparative purposes only.



QR100EM

Performance curve



Speed %	W max	m³/h max
40	12	58
60	22	79
80	39	101
100	58	117

Details

