QR120EP

ErP 2018 | IPX2 | Modbus

SLIM-LINE
CENTRALISED
HEAT RECOVERY UNIT

APPLICATION

Whole-house heat recovery unit, suitable for horizontal installation at ceiling or false ceiling or wall vertical installation, in 1 o 2 bedroom apartments, hotel rooms, student accommodations.

SPECIFICATION

Outer panels manufactured from powder coated galvanised sheet steel. The unit is finished in white RAL 9010.

Main structure manufactured from EPP (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

Compact size: 171mm height (190mm max., including fixing brackets) to overcome shallow voids.

A single versatile model suitable for either horizontal installation at ceiling / false-ceiling or wall vertical installation.

Ease of installation and maintenance.

Simplified electric wiring: the unit is supplied pre-cabled.

ISO Coarse 60% (G4) filters easy removable for cleaning: no need to remove the access panel.
ISO ePM1 60% filter (F7) on request.

Integrated condensation drainage.

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

Tested to the latest standards: units are tested in the TÜV Rheinland accredited internal laboratory at Aerauliqa 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

The unit is supplied with a multi-function control panel (CTRL-V1) for control and convenience, providing:

- 3 speed settings (to be set during installation)
- BOOST option
- Filter reset
- On/off
- Keypad lock
- Anti-frost indicator
- Failure indicator
- Filter replacement indicator
- Suitable for remote ambient sensors (SEN-HY, SEN-PIR).
- Modbus interface.

CTRL-V1
(supplied as standard)

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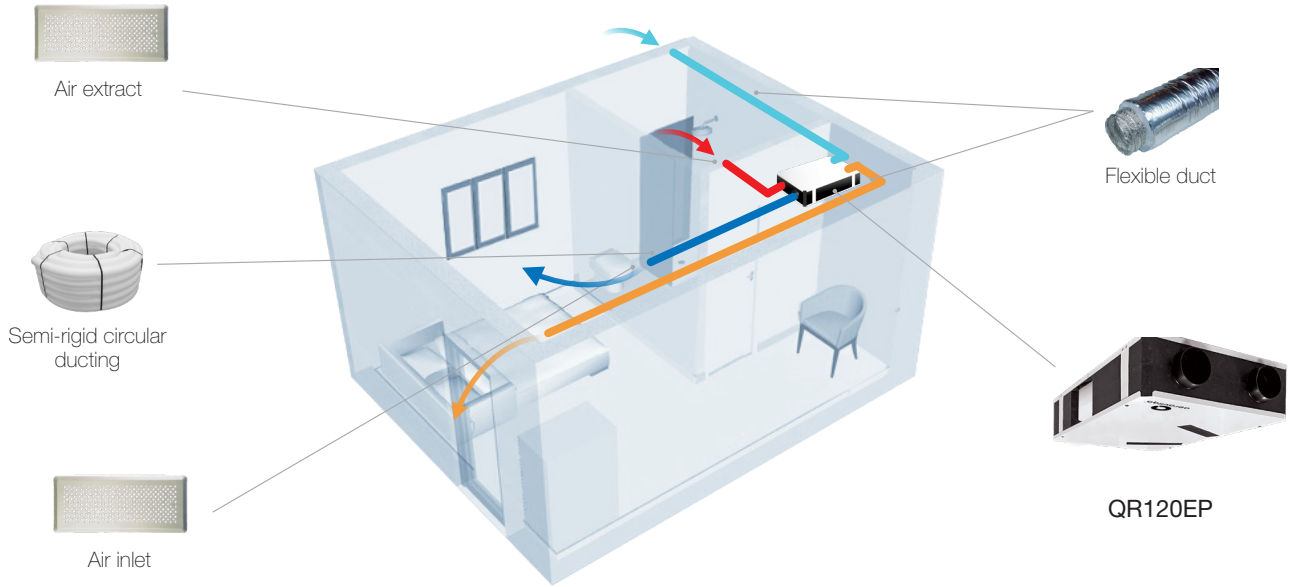
Example of a complete ventilation system

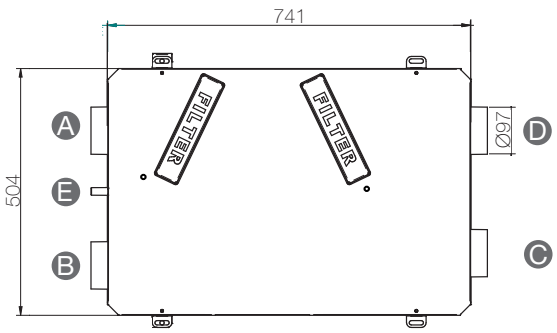


How it works: a continuous running centralised heat recovery unit (QR120EP) transfers thermal energy and humidity from extracted humid air to warm incoming fresh air, with top acoustic comfort.
It is necessary to provide an adequate air distribution system so that each individual indoor environment is suitably ventilated.

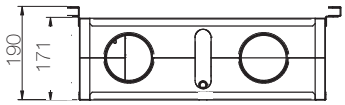
Energy saving: the preheated/precooled fresh air and continuous air changes reduce the demand for additional heating/ airconditioning. The EC brushless motors significantly reduce the electricity consumption.

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

Dimensions (mm) and Weight (kg)



Bottom view



Side view

Model	QR120EP
Weight	13
A	Intake air from outiside
B	Exhaust air to outside
C	Supply air to inside
D	Extract air from inside
E	Condensation drainage

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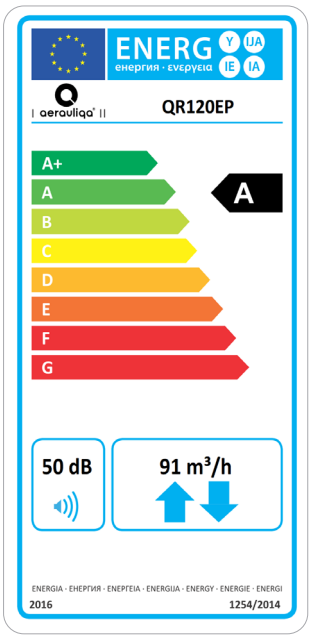
Product fiche - ErP Directive, Regulations 1253/2014 - 1254/2014

a)	Mark	-	AERAULIQA	
b)	Model	-	QR120EP	
c)	SEC class	-	A	B
c1)	SEC warm climates	kWh/m².a	-10,8	-7,9
c2)	SEC average climates	kWh/m².a	-34,0	-30,6
c3)	SEC cold climates	kWh/m².a	-70,0	-65,6
	Energy label	-	Yes	
d)	Unit typology	-	Residential - bidirectional	
e)	Type of drive	-	Multiple speed drive	
f)	Type of Heat Recovery System	-	Heat recovery	
g)	Thermal efficiency of heat recovery	%	79	
h)	Maximum flow rate @ 100 Pa	m³/h	91	
i)	Electric power input (maximum flow rate)	W	56	
j)	Sound power level (L_{WA})	dBA	50	
k)	Reference flow rate	m³/h	64	
l)	Reference pressure difference	Pa	50	
m)	Specific power input (SPI)	W/m³/h	0,359	
n1)	Control factor	-	0,85	1
n2)	Control typology	-	Central demand control	Manual control (no DCV)
o1)	Maximum internal leakage rate	%	0,90	
o2)	Maximum external leakage rate	%	2,80	
p1)	Internal mixing rate	%	N/A	
p2)	External mixing rate	%	N/A	
q)	Visual filter warning	-	Visual warning	
r)	Instructions to install regulated grilles	-	N/A	
s)	Internet address for pre/disassembly instructions	-	www.aerauliqa.com	
t)	Airflow sensitivity to pressure variations	%	N/A	
u)	Indoor/outdoor air tightness	m³/h	N/A	
v1)	AEC - Annual electricity consumption - warm climates	kWh	3,5	4,5
v2)	AEC - Annual electricity consumption - average climates	kWh	4,0	5,0
v3)	AEC - Annual electricity consumption - cold climates	kWh	9,4	10,3
w1)	AHS - Annual heating saved - warm climates	kWh	19,6	19,1
w2)	AHS - Annual heating saved - average climates	kWh	43,3	42,3
w3)	AHS - Annual heating saved - cold climates	kWh	84,7	82,7
	Sound pressure @ 3m(1)	dB(A)	18	
	Ambient temperature max	°C	+40	
	Degree of protection IP	-	X2	
	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 accredited internal laboratory at Aerauliqa according to the operating document IEC OD 2048 (level CTF1) for the IEC 60335-1 and IEC 60335-2-80 Standards.

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

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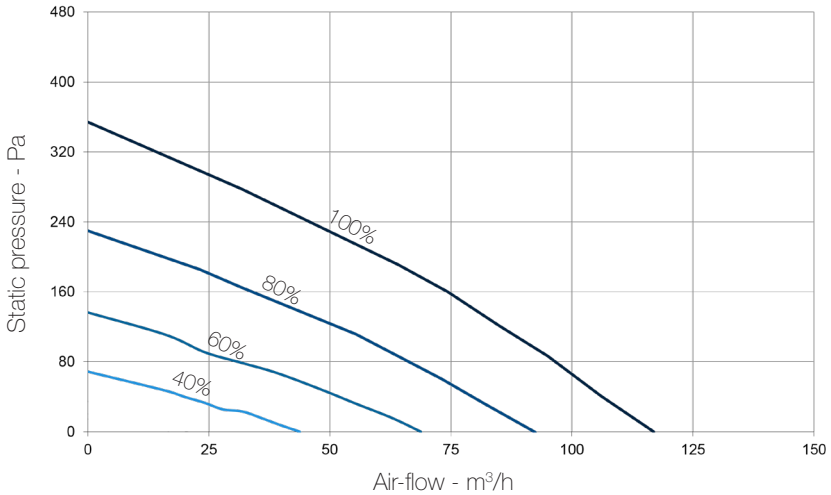
Performance curve



Intake curve according to Reg. 1253/2014 (ErP).

Speed %	W max	m³/h max
40	13	48
60	20	71
80	32	96
100	56	114

Sound level

Speed 100%	Lw dB - SOUND POWER OCTAVE BAND								Lp dB(A)
	125	250	500	1 K	2 K	4 K	8K	Tot	@3m
	48	52	58	54	47	43	36	61	38

Speed 80%	Lw dB - SOUND POWER OCTAVE BAND								Lp dB(A)
	125	250	500	1 K	2 K	4 K	8K	Tot	@3m
	43	52	53	49	42	37	28	57	33

Speed 60%	Lw dB - SOUND POWER OCTAVE BAND								Lp dB(A)
	125	250	500	1 K	2 K	4 K	8K	Tot	@3m
	38	46	45	43	36	29	18	50	26

Speed 40%	Lw dB - SOUND POWER OCTAVE BAND								Lp dB(A)
	125	250	500	1 K	2 K	4 K	8K	Tot	@3m
	34	40	37	35	26	18	14	43	18

Lp dB(A) @3m, breackout, for comparative purposes only.