QR120P-W













SLIM-LINE CENTRALISED HEAT RECOVERY UNIT

APPLICATION

Whole-house heat recovery unit, suitable for 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.

Highly efficient **counterflow heat exchanger** to maximise thermal recovery.

FEATURES & BENEFITS

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

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

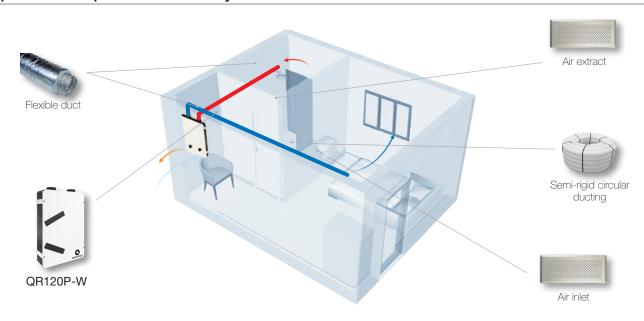
The unit is supplied with a multi-function control panel (CTRL-V1) for control and convenience, providing:

- 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)

Example of a complete ventilation system



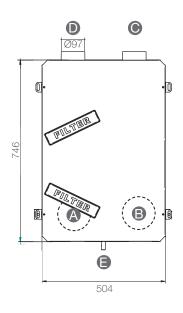
How it works: a continuous running centralised heat recovery unit (QR120P) transfers thermal energy and humidity from extracted humid air to warm incoming fresh air, with top acoustic comfort.

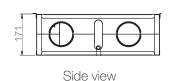
It is necessary to provide an adequate air distribution system so that each individual indoor environment is suitably ventilated.

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)





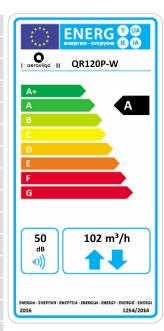
Model	QR120P-W				
Weight	11,5				
A	Intake air from outiside				
B	Exhaust air to outside				
•	Supply air to inside				
D	Extract air from inside				
(3	Condensation drainage				

Front view

QR120P-W

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

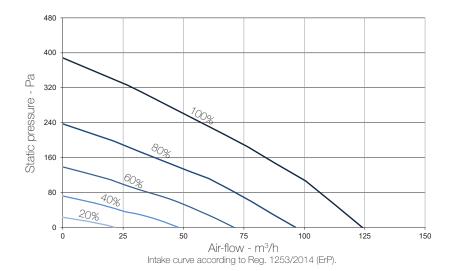
b) Model	a)	Mark	-	AERAULIQA			
c1) SEC warm climates KWh/m².a -14,7 -11,3 -8,5 c2) SEC average climates kWh/m².a -39,5 -35,5 -31,8 c3) SEC cold climates kWh/m².a -82,8 -77,7 -67,8 Energy label - Yes d) Unit typology - Residential - bidirectional i) Type of theat Recovery System - Multiple speed drive g) Type of Heat Recovery System - Heat recovery g) Maximum flow rate @ 100 Pa m²/h 102 h) Bectric power input (maximum flow rate) W 58 j) Sound powor lovol (L _{vw}) dBA 50 k) Reference pressure difference Pa 50 m) Specific power input (SR) W/m²/h 0,352 n1) Control factor - 0,65 0,85 1 n2 Control factor - 0,65 0,85 1 n2 Control typology - Local de	b)	Model	-	QR120P-W			
c2) SEC average climates RWh/m².a -39,5 -35,5 -31,8 c3) SEC cold climates RWh/m².a -82,8 -77,7 -67,8 Energy label Yes d) Unit typology - Residential bidirectional d) Unit typology - Multiple speed drive f) Type of Heat Recovery System - Heat recovery g) Thermal efficiency of heat recovery % 82 h) Maximum flow rate @ 100 Pa m³/h 102 j) Beatric power input (maximum flow rate) W 58 j) Sound power level (I _{vw}) dBA 50 k) Reference flow rate m³/h 71 l) Reference flow rate m³/h 71 l) Reference pressure difference Pa 50 w) Specific power input (SPI) W/m³/h 71 l) Reference flow rate m³/h 71 l) Maximum internal leakage rate % 1 v) M	C)	SEC class	-	Α	А	В	
Cold climates	c1)	SEC warm climates	kWh/m².a	-14,7	-11,3	-8,5	
Energy label	c2)	SEC average climates	kWh/m².a	-39,5	-35,5	-31,8	
Dinit typology	c3)	SEC cold climates	kWh/m².a	-82,8	-77,7	-67,8	
Type of drive		Energy label	-	Yes			
Type of Heat Recovery System - Heat recovery G Thermal efficiency of heat recovery S 82	d)	Unit typology	-	Residential - bidirectional			
Second S	e)	Type of drive	-	Multiple speed drive			
h) Maximum flow rate @ 100 Pa m³/h 102 i) Electric power input (maximum flow rate) W 58 j) Sound power level (L₂₀) dBA 50 k) Reference flow rate m³/h 71 l) Reference pressure difference Pa 50 m) Specific power input (SPI) W/m²/h 0,352 n1) Control factor - 0,65 0,85 1 n2) Control typology - Local demand control Central demand control Control typology Central demand control Manual demand control Control typology Central demand control Manual demand control Central demand control free Rentral sentral sentral sentral sentral se	f)	Type of Heat Recovery System	-	Heat recovery			
	g)	Thermal efficiency of heat recovery	%		82		
	h)	Maximum flow rate @ 100 Pa	m³/h		102		
Reference flow rate m³/h 71	i)	Electric power input (maximum flow rate)	W	58			
	j)	Sound power level (L _{wa})	dBA	50			
m) Specific power input (SPI) W/m³/h 0,352 n1) Control factor - 0,65 0,85 1 n2) Control typology - demand demand control (no control of DCV) 01) Maximum internal leakage rate % 2 02) Maximum external leakage rate % 1 p1) Internal mixing rate % N/A p2 External mixing rate % N/A p2 External mixing rate % N/A p2 External mixing rate % N/A p3 Instructions to install regulated grilles - N/A p4 Instructions to install regulated grilles - N/A p5 Internet address for pre/disassembly instructions - www.aerauliqa.com p6 N/A N/A p7 Internet address for pre/disassembly instructions - www.aerauliqa.com p7 Internet address for pre/disassembly instructions - www.aerauliqa.com p7 Internet address for pre/disassembly instructions - www.aerauliqa.com p7	k)	Reference flow rate	m³/h	71			
n1) Control factor - 0,65 0,85 1 n2) Control typology - demand control Central demand control Manual demand control Control (no DCV) o1) Maximum internal leakage rate % 1 Visual filter warning rate % N/A p1) Internal mixing rate % N/A N/A p2) External mixing rate % N/A N/A p2) Usual filter warning - Visual warning N/A N/A p3) Instructions to install regulated grilles - N/A N/A N/A s) Internet address for pre/disassembly instructions - www.aerauliqa.com N/A 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 2,3 3,5 4,4 v2) AEC - Annual electricity consumption - cold climates kWh 2,3 3,5 10,2 w1) AHS - Annual heatin	l)	Reference pressure difference	Pa	50			
Control typology - Local demand control - Maximum internal leakage rate - W	m)	Specific power input (SPI)	W/m³/h	0,352			
Control typology - demand control demand control DCV) 1 Maximum internal leakage rate % 2 2 Maximum external leakage rate % NVA p2) External mixing rate % NVA p2) External mixing rate % NVA p3 Visual filter warning r1 Instructions to install regulated grilles r2 NVA s) Internet address for pre/disassembly instructions t) Airflow sensitivity to pressure variations m3/h NVA v1) AEC - Annual electricity consumption - average climates kWh p2, AEC - Annual electricity consumption - cold climates kWh p3, AEC - Annual electricity consumption - cold climates kWh p3, AEC - Annual heating saved - warm climates kWh p4, AHS - Annual heating saved - average climates kWh p3, AHS - Annual heating saved - cold climates kWh p4, AHS - Annual heating saved - cold climates kWh p4, AHS - Annual heating saved - cold climates kWh p4, AHS - Annual heating saved - cold climates kWh p6, AHS - Annual heating saved - cold climates kWh p6, AHS - Annual heating saved - cold climates kWh p6, AHS - Annual heating saved - cold climates kWh p6, AHS - Annual heating saved - cold climates kWh p6, AHS - Annual heating saved - cold climates kWh p6, AHS - Annual heating saved - cold climates kWh p6, AHS - Annual heating saved - cold climates kWh p6, AHS - Annual heating saved - cold climates kWh p6, AHS - Annual heating saved - cold climates kWh p6, AHS - Annual heating saved - cold climates kWh p6, AHS - Annual heating saved - cold climates kWh p7, AHS - Annual heating saved - cold climates kWh p7, AHS - Annual heating saved - cold climates kWh p7, AHS - Annual heating saved - cold climates kWh p7, AHS - Annual heating saved - cold climates kWh p7, AHS - Annual heating saved - cold climates kWh p7, AHS - Annual heating saved - cold climates kWh p7, AHS - Annual heating saved - cold climates kWh p7, AHS - Annual heating saved - cold climates kWh p7, AHS - Annual heating saved - cold climates kWh p7, AHS - Annual heating saved - cold climates kWh p7, AHS - Annual heating sav	n1)	Control factor	-	0,65	0,85	1	
o2) Maximum external leakage rate % 1 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 2,3 3,5 4,4 v2) AEC - Annual electricity consumption - average climates kWh 2,3 3,5 4,9 v3) AEC - Annual heating saved - warm climates kWh 2,3 3,5 10,2 w1) AHS - Annual heating saved - average climates kWh 20,5 20,0 19,6 w2) AHS - Annual heating saved - cold climates kWh 88,6 86,3 84,6 Sound pressure @ 3m¹¹¹) dB(A) 18 Ambient temperature max	n2)	Control typology	-	demand	demand	control (no	
p1) Internal mixing rate	01)	Maximum internal leakage rate	%	2			
p2) External mixing rate	02)	Maximum external leakage rate	%	1			
q) Visual filter warning r) Instructions to install regulated grilles	p1)	Internal mixing rate	%	N/A			
r) Instructions to install regulated grilles s) Internet address for pre/disassembly instructions - www.aerauliqa.com t) Airflow sensitivity to pressure variations What Indoor/outdoor air tightness m³/h N/A v1) AEC - Annual electricity consumption - warm climates kWh 2,3 3,5 4,4 v2) AEC - Annual electricity consumption - average climates kWh 2,3 3,5 4,9 v3) AEC - Annual electricity consumption - cold climates kWh 2,3 3,5 10,2 w1) AHS - Annual heating saved - warm climates kWh 20,5 20,0 19,6 w2) AHS - Annual heating saved - average climates kWh 45,3 44,1 43,3 w3) AHS - Annual heating saved - cold climates kWh 88,6 86,3 84,6 Sound pressure @ 3m(1) dB(A) Ambient temperature max °C +40 Degree of protection IP	p2)	External mixing rate	%	N/A			
s) Internet address for pre/disassembly instructions t) Airflow sensitivity to pressure variations www.aerauliqa.com N/A u) Indoor/outdoor air tightness m³/h N/A v1) AEC - Annual electricity consumption - warm climates kWh 2,3 3,5 4,4 v2) AEC - Annual electricity consumption - average climates kWh 2,3 3,5 4,9 v3) AEC - Annual electricity consumption - cold climates kWh 2,3 3,5 10,2 w1) AHS - Annual heating saved - warm climates kWh 20,5 20,0 19,6 w2) AHS - Annual heating saved - average climates kWh 45,3 44,1 43,3 w3) AHS - Annual heating saved - cold climates kWh 88,6 86,3 84,6 Sound pressure @ 3m(1) dB(A) 18 Ambient temperature max °C +40 Degree of protection IP	q)	Visual filter warning	-	Visual warning			
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 2,3 3,5 4,4 v2) AEC - Annual electricity consumption - average climates kWh 2,3 3,5 4,9 v3) AEC - Annual electricity consumption - cold climates kWh 2,3 3,5 10,2 w1) AHS - Annual heating saved - warm climates kWh 20,5 20,0 19,6 w2) AHS - Annual heating saved - average climates kWh 45,3 44,1 43,3 w3) AHS - Annual heating saved - cold climates kWh 88,6 86,3 84,6 Sound pressure @ 3m(1) dB(A) 18 Ambient temperature max °C +40 Degree of protection IP - X4	r)	Instructions to install regulated grilles	-	N/A			
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v1) AEC - Annual electricity consumption - warm climates kWh 2,3 3,5 4,4 v2) AEC - Annual electricity consumption - average climates kWh 2,3 3,5 4,9 v3) AEC - Annual electricity consumption - cold climates kWh 2,3 3,5 10,2 w1) AHS - Annual heating saved - warm climates kWh 20,5 20,0 19,6 w2) AHS - Annual heating saved - average climates kWh 45,3 44,1 43,3 w3) AHS - Annual heating saved - cold climates kWh 88,6 86,3 84,6 Sound pressure @ 3m(1) dB(A) 18 Ambient temperature max °C +40 Degree of protection IP - X4	t)	Airflow sensitivity to pressure variations	%	N/A			
v2)AEC - Annual electricity consumption - average climateskWh2,33,54,9v3)AEC - Annual electricity consumption - cold climateskWh2,33,510,2w1)AHS - Annual heating saved - warm climateskWh20,520,019,6w2)AHS - Annual heating saved - average climateskWh45,344,143,3w3)AHS - Annual heating saved - cold climateskWh88,686,384,6Sound pressure @ 3m(1)dB(A)18Ambient temperature max°C+40Degree of protection IP-X4	u)	Indoor/outdoor air tightness	m³/h	N/A			
v3) AEC - Annual electricity consumption - cold climates kWh 2,3 3,5 10,2 w1) AHS - Annual heating saved - warm climates kWh 20,5 20,0 19,6 w2) AHS - Annual heating saved - average climates kWh 45,3 44,1 43,3 w3) AHS - Annual heating saved - cold climates kWh 88,6 86,3 84,6 Sound pressure @ 3m(1) dB(A) 18 Ambient temperature max °C +40 Degree of protection IP - X4	v1)	AEC - Annual electricity consumption - warm climates	kWh	2,3	3,5	4,4	
w1) AHS - Annual heating saved - warm climates kWh 20,5 20,0 19,6 w2) AHS - Annual heating saved - average climates kWh 45,3 44,1 43,3 w3) AHS - Annual heating saved - cold climates kWh 88,6 86,3 84,6 Sound pressure @ 3m(1) dB(A) 18 Ambient temperature max °C +40 Degree of protection IP - X4	v2)	AEC - Annual electricity consumption - average climates	kWh	2,3	3,5	4,9	
w2) AHS - Annual heating saved - average climates kWh 45,3 44,1 43,3 w3) AHS - Annual heating saved - cold climates kWh 88,6 86,3 84,6 Sound pressure @ 3m(1) dB(A) 18 Ambient temperature max °C +40 Degree of protection IP - X4	v3)	AEC - Annual electricity consumption - cold climates	kWh	2,3	3,5	10,2	
w3) AHS - Annual heating saved - cold climates kWh 88,6 86,3 84,6 Sound pressure @ 3m(1) dB(A) 18 Ambient temperature max °C +40 Degree of protection IP - X4	w1)	AHS - Annual heating saved - warm climates	kWh	20,5 20,0 19		19,6	
Sound pressure @ 3m ⁽¹⁾ Ambient temperature max °C +40 Degree of protection IP - X4	w2)	AHS - Annual heating saved - average climates	kWh	45,3	44,1	43,3	
Ambient temperature max °C +40 Degree of protection IP - X4	w3)	AHS - Annual heating saved - cold climates	kWh	88,6	86,3	84,6	
Degree of protection IP - X4		Sound pressure @ 3m ⁽¹⁾	dB(A)		18		
		Ambient temperature max	°C	+40			
Marking - CE		Degree of protection IP	-	X4			
		Marking	-		C€		



^{- 220-240}V ~ 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.

Performance curve



Speed %	W max	m³/h max			
20	9	22			
40	13	48			
60	20	71			
80	32	96			
100	58	124			

Sound level

	Lw dB - SOUND POWER OCTAVE BAND							Lp dB(A)	
Speed 100%	125	250	500	1 K	2 K	4 K	8K	Tot	@3m
	48	52	58	54	47	43	36	61	38
	Lw dB - SOUND POWER OCTAVE BAND						Lp dB(A)		
Speed 80%	125	250	500	1 K	2 K	4 K	8K	Tot	@3m
	43	52	53	49	42	37	28	57	33
	Lw dB - SOUND POWER OCTAVE BAND						Lp dB(A)		
Speed 60%	125	250	500	1 K	2 K	4 K	8K	Tot	@3m
	38	46	45	43	36	29	18	50	26
	Lw dB - SOUND POWER OCTAVE BAND					Lp dB(A)			
Speed 40%	125	250	500	1 K	2 K	4 K	8K	Tot	@3m
	34	40	37	35	26	18	14	43	18
	Lw dB - SOUND POWER OCTAVE BAND						Lp dB(A)		
Speed 20%*	125	250	500	1 K	2 K	4 K	8K	Tot	@3m
	-	-	-	-	-	-	-	-	<9

Lp dB(A) @3m, breackout, for comparative purposes only. * measurements comparable with test chamber background noise.