

CENTRALISED ENERGY RECOVERY UNIT WITH ENTHALPIC HEAT EXCHANGER

IPX4

Modbus

ErP

2018

APPLICATION

Whole-house energy recovery unit, suitable for ceiling or false-ceiling installation, for horizontal mounting.

SPECIFICATION

Outer fan casing manufactured from powder coated galvanised sheet steel providing long lasting and robust construction. The unit is finished in white RAL 9010.

Internal 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 builtin 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.

Very easy to be cleaned. Average efficiency: 85% thermal; 65% humidity.

FEATURES & BENEFITS

Easy of installation: 243mm height (259mm max., including fixing brackets) to overcome shallow ceiling voids.

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

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.

G4 filters easy removable for cleaning from the outside: no need to remove the access panel. External F7 filter cassette on request.

Integral automatic bypass for free cooling during the summer season.

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

No condensation drainage is required.

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

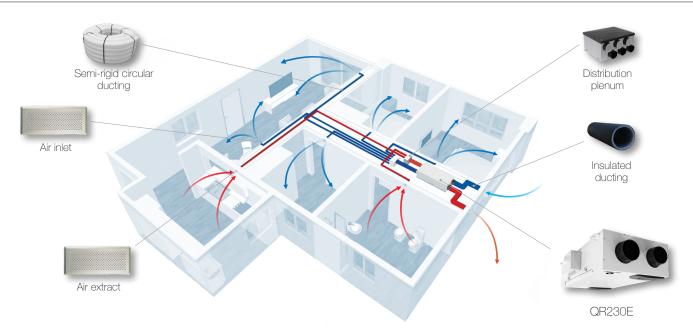
The unit is supplied with a multi-function LCD display (CTRL-DSP) for automatic control and convenience, providing:

- 3 speed settings (adjustable).
- Boost option.
- Holiday mode.
- Night mode.
- Weekly timer.
- Bypass setting.
- Airflow balancing.
- Filter replacement and fan failure indicator.
- Working hour counter.
- Setting saving and loading.
- Suitable for remote ambient sensors (SEN-HY, SEN-PIR).
- ModBus interface.
- Connection to remote pre/post heating element.



CTRL-DSP (supplied as standard)

Example of a complete ventilation system



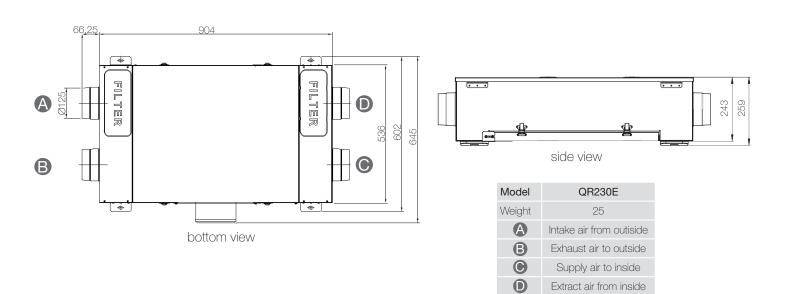
Application: new build.

How it works: a continuous running energy recovery unit (QR230E) transfers thermal energy and humidity from humid air extracted from wet rooms to warm incoming fresh air which is ducted to habitable rooms. Thanks to the easy-to-fit air distribution system each single ambient can be properly ventilate: the boost function enables rapid extract of increased moisture or pollutant levels. It also provides discrete installation and very quite operation. QR230E does not need any condensation drainage.

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.

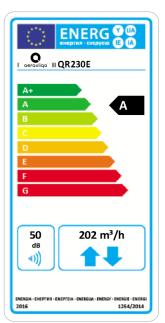
Indoor Air Quality: a correctly specified mechanical ventilation system can ensure the quality of the indoor air is constantly maintained for the health and well-being of the occupants as well as of the building. Duly maintained filters ensure that incoming air is suitably filtered of dust and pollen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

Dimensions (mm) and Weight (kg)



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

C2SEC average climatesKWh/m².a-37.6-32.3-27.8G3SEC cold climatesKWh/m².a-73.1-66,0-60,1Energy label-Residurest intermational states intermation	a)	Mark	-		AERAULIQ/	Ą		
C1SEC warm climatesKWh/m², a-14, 6-14, 714, 714, 714, 714, 714, 714, 714, 714, 714, 714, 714, 714, 7<	b)	Model	-	QR230E				
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Ambient temperature max°C+40Degree of protection IP-X2	w3)	AHS - Annual heating saved - cold climates	kWh	83,7	80,0	77,2		
Degree of protection IP - X2		Sound pressure @ 3m ⁽¹⁾	dB(A)		21			
		Ambient temperature max	°C		+40			
Marking - CE		Degree of protection IP	-		X2			
		Marking	-		CE			



- 220-240V ~ 50/60Hz.

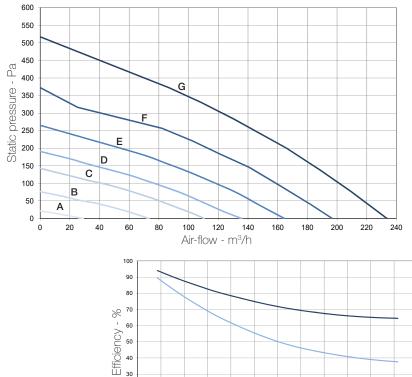
- air performance measured according to ISO 5801 a 230V 50Hz, air density 1,2Kg/m³.

- data measured in the TÜV Rheinland accredited internal laboratory at Aerauliga 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.

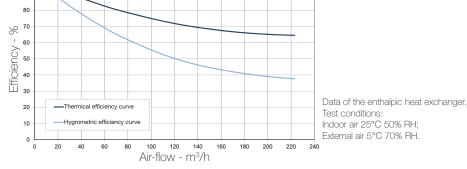
aerauliqa*

Performance curve



Curve	Speed %	W max	m ³ /h max
A (min)	20	10	29
В	40	16	73
С	53	26	110
D	60	36	136
E	72	51	165
F	84	76	197
G (max)	100	114	234

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



Sound level

		Lw dB - SOUND POWER OCTAVE BAND								Lp dB(A)	
	Speed 100%	63	125	250	500	1 K	2 K	4 K	8K	Tot	@3m
Intake		57	62	69	64	58	56	49	46	71	45
Supply		56	62	65	61	55	50	40	31	68	41
Extract		57	61	65	60	55	49	41	32	68	41
Exhaust		59	64	68	62	57	57	54	47	71	44
Breakout		56	61	64	59	58	50	40	35	68	41
		Lw dB - SOUND POWER OCTAVE BAND							Lp dB(A)		
	Speed 80%	63	125	250	500	1 K	2 K	4 K	8K	Tot	@3m
Intake		55	59	65	60	53	50	44	40	67	41
Supply		55	59	62	57	51	44	35	28	65	37
Extract		55	58	62	55	51	43	35	28	65	37
Exhaust		58	61	65	58	53	52	49	41	68	40
Breakout		55	58	60	55	53	45	35	28	64	37
		Lw dB - SOUND POWER OCTAVE BAND							Lp dB(A)		
	Speed 60%	63	125	250	500	1 K	2 K	4 K	8K	Tot	@3m
		50	55	61	51	45	42	36	31	63	34
Intake		52	00	01	51	10					
Intake Supply		52 51	54	56	47	42	37	27	25	59	30
							37 35	27 27	25 23	59 60	30 30
Supply		51	54	56	47	42					
Supply Extract		51 51	54 54	56 57	47 46	42 42	35	27	23	60	30
Supply Extract Exhaust		51 51 52	54 54 57	56 57 61	47 46 49 45	42 42 45 44	35 44 37	27 40	23 32 24	60 63	30 34
Supply Extract Exhaust	Speed 40%	51 51 52	54 54 57	56 57 61 55	47 46 49 45	42 42 45 44	35 44 37	27 40 29	23 32 24	60 63	30 34 29
Supply Extract Exhaust	Speed 40%	51 51 52 51	54 54 57 54	56 57 61 55 Lw dB	47 46 49 45 - SOUN	42 42 45 44 D POWE	35 44 37 ER OCTA	27 40 29 AVE BAN	23 32 24	60 63 59	30 34 29 Lp dB(A)
Supply Extract Exhaust Breakout	Speed 40%	51 51 52 51 63	54 54 57 54 125	56 57 61 55 Lw dB 250	47 46 49 45 - SOUN 500	42 42 45 44 D POWE 1 K	35 44 37 ER OCTA 2 K	27 40 29 AVE BAN 4 K	23 32 24 ID 8K	60 63 59 Tot	30 34 29 Lp dB(A) @3m
Supply Extract Exhaust Breakout	Speed 40%	51 51 52 51 63 47	54 54 57 54 125 50	56 57 61 55 Lw dB 250 50	47 46 49 45 - SOUN 500 42	42 42 45 44 D POWE 1 K 35	35 44 37 ER OCTA 2 K 32	27 40 29 AVE BAN 4 K 25	23 32 24 ID 8K 22	60 63 59 Tot 54	30 34 29 Lp dB(A) @3m 24
Supply Extract Exhaust Breakout Intake Supply	Speed 40%	51 51 52 51 63 47 47	54 54 57 54 125 50 48	56 57 61 55 Lw dB 250 50 48	47 46 49 45 - SOUN 500 42 38	42 42 45 44 D POWE 1 K 35 33	35 44 37 ER OCTA 2 K 32 27	27 40 29 AVE BAN 4 K 25 22	23 32 24 ID 8K 22 20	60 63 59 Tot 54 53	30 34 29 Lp dB(A) @3m 24 21
Supply Extract Exhaust Breakout Intake Supply Extract	Speed 40%	51 51 52 51 63 47 47 47	54 54 57 54 125 50 48 49	56 57 61 55 Lw dB 250 50 48 48	47 46 49 45 - SOUN 500 42 38 37	42 42 45 44 D POWE 1 K 35 33 33	35 44 37 ER OCT/ 2 K 32 27 25	27 40 29 AVE BAN 4 K 25 22 20	23 32 24 ID 8K 22 20 20	60 63 59 Tot 54 53 53	30 34 29 Lp dB(A) @3m 24 21 21

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