



## CENTRALISED ENERGY RECOVERY UNIT WITH ENTHALPIC HEAT EXCHANGER

### APPLICATION

Whole-house heat recovery unit, suitable for vertical installation. Can be installed in cupboard or narrow spaces thanks to its compact sizes.

### 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 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.

Very easy to be cleaned.

Average efficiency:

85% thermal;

65% humidity.

### FEATURES & BENEFITS

**Ease of installation:** fixing brackets supplied to hang the unit easily on the wall.

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

**Removable front panel** for quick access to filters and heat exchanger.

**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 prevent 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. 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 intake side of the heat exchanger.

**No condensation drainage** is required.

**Left and right hand** unit configuration for installation flexibility.

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

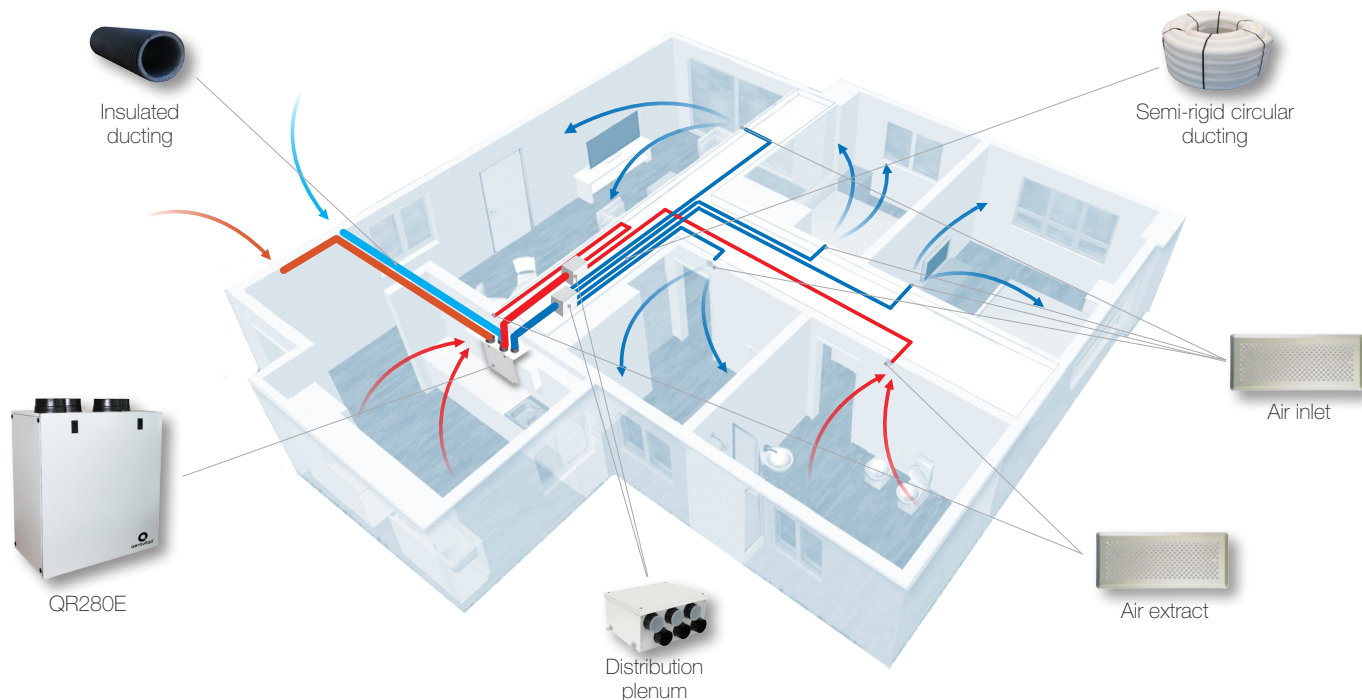
- 3 speed settings (adjustable).
- Boost option.
- Holiday mode.
- Night mode.
- Weekly timer.
- Bypass setting.
- Airflow balancing.
- Filter replacement and fan failure indicator.
- Working hour counter.
- Setting saving and loading.
- Suitable for remote ambient sensors (SEN-HY, SEN-PIR, SEN-CO2).
- ModBus interface.
- Connection to remote pre/post heating element.
- Possible change of orientation of the atmosphere spigots.



**CTRL-DSP**  
(supplied as standard)

# QR280E

## Example of a complete ventilation system



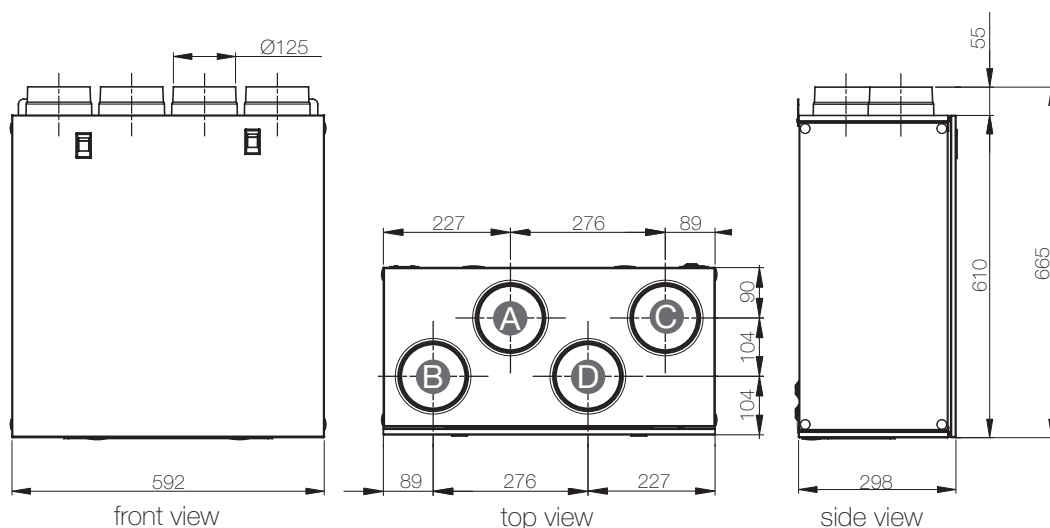
**Application:** new build.

**How it works:** a continuous running heat recovery unit (QR280E) transfers heat 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. QR280E does not need any condensation drainage.

**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 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 it enters the home.

## Dimensions (mm) and Weight (kg)

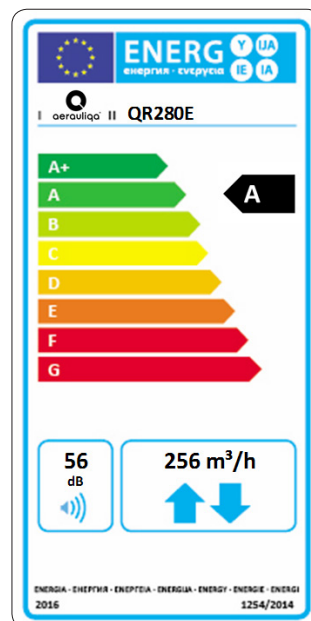


Model	QR280E
Weight	26
A	Intake air from outside
B	Exhaust air to outside
C	Supply air to inside
D	Extract air from inside

LEFT orientation

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

a)	Mark	-	AERAULIQA		
b)	Model	-	QR280E		
c)	SEC class	-	A	B	B
c1)	SEC warm climates	kWh/m <sup>2</sup> .a	-14,3	-9,8	-5,8
c2)	SEC average climates	kWh/m <sup>2</sup> .a	-37,2	-31,7	-26,9
c3)	SEC cold climates	kWh/m <sup>2</sup> .a	-72,8	-65,4	-59,3
	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	%	70		
h)	Maximum flow rate @ 100 Pa	m <sup>3</sup> /h	256		
i)	Electric power input (maximum flow rate)	W	160		
j)	Sound power level (L <sub>WA</sub> )	dB(A)	56		
k)	Reference flow rate	m <sup>3</sup> /h	179		
l)	Reference pressure difference	Pa	50		
m)	Specific power input (SPI)	W/m <sup>3</sup> /h	0,385		
n1)	Control factor	-	0,65	0,85	1,0
n2)	Control typology	-	Local demand control	Central demand control	Manual control (no DCV)
o1)	Maximum internal leakage rate	%	1,5		
o2)	Maximum external leakage rate	%	1,5		
p1)	Internal mixing rate	%	N/A		
p2)	External mixing rate	%	N/A		
q)	Visual filter warning	-	Visual filter warning on display		
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	m <sup>3</sup> /h	N/A		
v1)	AEC - Annual electricity consumption - warm climates	kWh	2,0	3,5	4,8
v2)	AEC - Annual electricity consumption - average climates	kWh	2,5	3,9	5,3
v3)	AEC - Annual electricity consumption - cold climates	kWh	7,9	9,3	10,7
w1)	AHS - Annual heating saved - warm climates	kWh	19,4	18,5	17,8
w2)	AHS - Annual heating saved - average climates	kWh	42,8	40,9	39,4
w3)	AHS - Annual heating saved - cold climates	kWh	83,7	80,0	77,2
	Sound pressure @ 3m <sup>(1)</sup>	dB(A)	27		
	Ambient temperature max	°C	+40		
	Degree of protection IP	-	X2		
	Marking/Mark	-	CE		



- 220-240V ~ 50/60Hz.

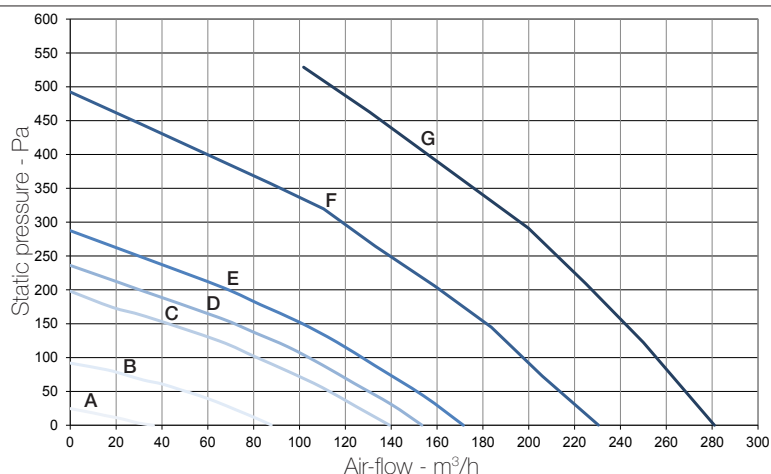
- air performance measured according to ISO 5801 a 230V 50Hz, air density 1,2Kg/m<sup>3</sup>.

- 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.

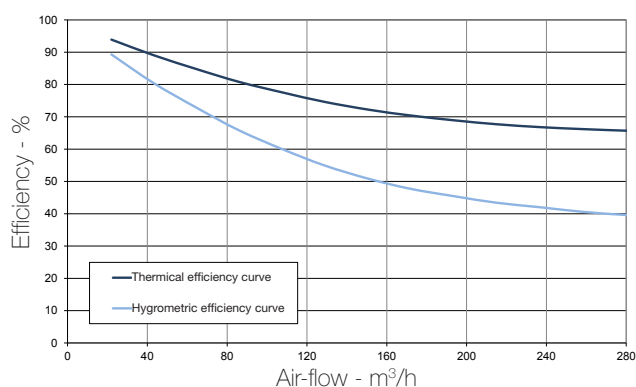
# QR280E

## Performance curve



Curve	Speed %	W max	m³/h max
A (min)	23	9	36
B	30	17	88
C	46	33	139
D	60	41	153
E	77	51	172
F	92	100	230
G (max)	100	160	281

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



Data of the enthalpic heat exchanger.

Test conditions:  
Indoor air 25°C 50% RH;  
External air 5°C 70% RH.

## Sound level

		Lw dB - SOUND POWER OCTAVE BAND									Lp dB(A)
		63	125	250	500	1 K	2 K	4 K	8K	Tot	@3m
Speed 100%											
Intake		76	64	70	72	62	59	53	46	78	50
Supply		75	64	66	68	59	53	44	34	77	6
Extract		76	63	66	68	60	54	45	34	77	47
Exhaust		76	64	69	70	61	58	52	44	78	49
Breakout		74	67	65	70	62	56	48	36	77	48
Speed 80%											
Intake		67	63	70	69	60	58	51	43	74	48
Supply		65	61	65	66	57	51	42	31	71	44
Extract		66	61	65	65	58	53	43	32	71	44
Exhaust		66	62	68	69	59	56	50	43	71	47
Breakout		61	66	65	67	57	53	45	33	71	45
Speed 60%											
Intake		57	57	69	57	51	49	42	33	70	41
Supply		55	55	64	54	49	43	34	24	65	37
Extract		60	54	62	53	49	44	34	24	65	36
Exhaust		57	56	68	57	51	49	42	33	69	41
Breakout		56	55	61	54	50	45	35	25	64	36
Speed 40%											
Intake		51	51	58	47	40	38	28	21	60	31
Supply		53	51	57	44	37	31	23	16	59	29
Extract		53	48	55	44	38	32	22	16	58	27
Exhaust		52	50	56	48	40	37	29	22	59	30
Breakout		53	48	53	45	39	32	22	16	57	27

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