



### CENTRALISED HEAT RECOVERY UNIT

#### APPLICATION

Whole-house heat recovery unit, suitable for vertical installation.

#### **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.

Highly	effic	ient	counterflo	w heat
exchan	ger	to	maximise	thermal
recovery	/.			

#### FEATURES & BENEFITS

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

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

**G4 filters** easy removable for cleaning. The unit is also provided with the **F7 filter** accessory at the intake side.

**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.

Two drainage holes to meet climate requirement.

Tested to the latest standards: units are tested in the TÜV Rheinland recognised laboratory at Aerauliqa, meaning accurate, up to date information on electrical safety, performance and noise level that can be relied upon. Unit thermal efficiency, air-leakage and energy efficiency measured at indipendent laboratory BRE (UK).

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

#### OPERATION

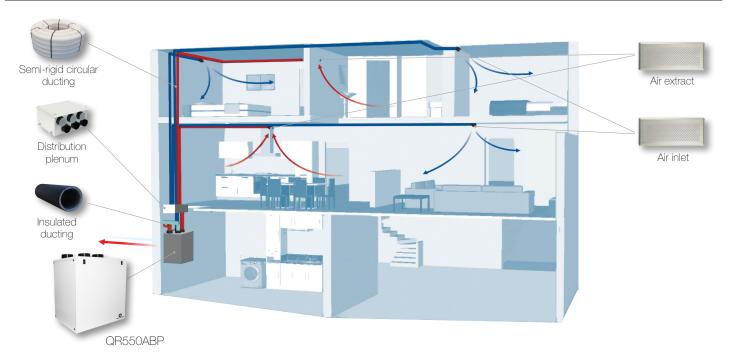
The unit is supplied with a multi-function LCD display (CTRL-DSP) for automatic control and convenience, providing:

- 3 speeds setting (adjustable).
- Boost option.
- Holiday mode.
- Night mode: during night time the automatic operation via sensors is deactivated to prevent undesired speed rise and consequent noise increase.
- Automatic Bypass.
- Airflow balancing.
- Filter replacement and fan failure indicator.
- Working hour counter.
- Setting saving and loading.
- Volt-free contacts for remote ambient sensors (SEN-HY, SEN-PIR, SEN-CO2).
- MODBUS interface option.
- Integral S/L terminal for boost from remote switch, i.e. light or dedicated switch.
- Connection to remote pre/post heating element.
- Connection to remote water coil for heating/ dehumidification.
- Possible change of orientation of the atmosphere spigots.



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

#### Example of a complete ventilation system



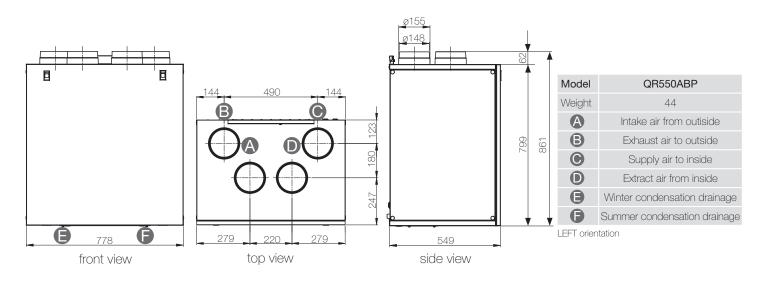
Application: recommended in case of new build.

How it works: a continuous running heat recovery unit (QR550ABP) 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.

**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.

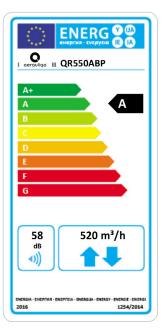
#### Dimensions (mm) and Weight (kg)



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

a)	Mark	-		AERAULIQA	<b>\</b>
b)	Model	-	QR550ABP		
C)	SEC class	-	А	А	В
c1)	SEC warm climates	kWh/m².a	-15	-10,7	-6,7
c2)	SEC average climates	kWh/m².a	-39,4	-34,4	-30
сЗ)	SEC cold climates	kWh/m².a	-77,4	-71,3	-66,1
	Energy label	-		Yes	
d)	Unit typology	-	Reside	ential - bidire	ectional
e)	Type of drive	-	Varia	able speed (	drive
f)	Type of Heat Recovery System	-	F	leat recover	у
g)	Thermal efficiency of heat recovery	%		82	
h)	Maximum flow rate @ 100 Pa	m³/h		520	
i)	Electric power input (maximum flow rate)	W		333	
j)	Sound power level ( $L_{_{WA}}$ )	dBA		58	
k)	Reference flow rate	m³/h		364	
)	Reference pressure difference	Pa		50	
m)	Specific power input (SPI)	W/m³/h		0,412	
n1)	Control factor	-	0,65	0,85	1
n2)	Control typology	-	Local demand control	Central demand control	Manual control (no DCV)
01)	Maximum internal leakage rate	%		0,8	
02)	Maximum external leakage rate	%		0,5	
p1)	Internal mixing rate	%		N/A	
p2)	External mixing rate	%		N/A	
q)	Visual filter warning	- Visual filter warning on di		n display	
r)	Instructions to install regulated grilles	-		N/A	
S)	Internet address for pre/disassembly instructions	-	~~~~	w.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	2,2	3,7	5,2
v2)	AEC - Annual electricity consumption - average climates	kWh	2,6	4,2	5,6
V3)	AEC - Annual electricity consumption - cold climates	kWh	8	9,6	11
w1)	AHS - Annual heating saved - warm climates	kWh	20,5	20	19,6
w2)	AHS - Annual heating saved - average climates	kWh	45,3	44,2	43,4
w3)	AHS - Annual heating saved - cold climates	kWh	88,7	86,5	84,8
	Sound pressure @ 3m <sup>(1)</sup>	dB(A)		34	
	Ambient temperature max	°C		+40	
	Degree of protection IP	-		X4	
	Marking	-		CE	



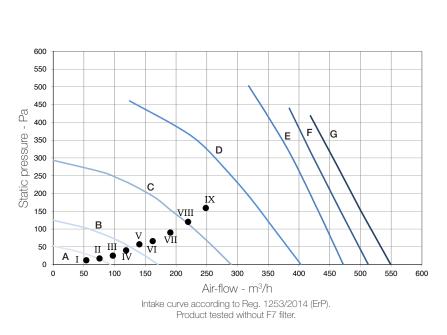
- 220-240V ~ 50/60Hz.

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

- data measured in the TÜV Rheinland recognised laboratory in Aerauliqa.

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

#### Performance curve



Curve	Speed %	W max	m³/h max
A (min)	23	10	94
В	32	24	170
С	46	68	289
D	60	150	403
E	75	286	472
F	90	311	513
G (max)	100	333	550

Working point	W	m³/h	SPI (W/m³/h)	ηt %(1)
1	8,6	54	0,1585	93
	10,7	76	0,1413	93
	13,9	97	0,1431	93
IV	19,3	119	0,1621	92
V	25,5	140	0,1818	91
VI	32,2	162	0,1990	91
VII	46,1	191	0,2414	90
VIII	63,4	220	0,2885	89
IX	84,5	248	0,3402	89

(1) thermal efficiency of the unit.

#### Sound level

Speed 100%         63         125         250         500         1 K         2 K         4 K         8 K         Tot         @@m           Intake         83         66         70         73         62         58         63         47         84         51           Supply         81         65         66         66         60         54         45         34         78         47           Extract         78         65         70         71         62         59         53         45         80         50           Breakout         78         65         70         71         62         59         53         45         80         50           Breakout         78         67         69         62         56         48         36         62         43         36         64         43         75         48           Speed 80%         63         125         250         500         14         24         31         74         43           Extract         73         61         63         65         56         50         41         31         74         44			Lw dB - SOUND POWER OCTAVE BAND						Lp dB(A)			
Supply         B1         65         65         66         57         51         42         33         B1         45           Extract         B0         63         66         68         60         54         45         34         78         47           Exhaust         78         65         70         71         62         59         53         45         80         50           Breakout         81         69         67         69         62         56         48         36         82         48           Extract         B1         69         67         69         62         56         48         36         82         48           Extract         Speed 80%         63         155         250         500         1 K         2 K         4 K         70         @23         47           Supply         72         61         63         65         56         50         41         31         74         44           Extract         73         61         66         67         58         65         49         41         75         46           Breakout         71		Speed 100%	63	125	250	500	1 K	2 K	4 K	8K	Tot	@3m
Extract         80         63         66         68         60         54         45         34         78         47           Exhaust         78         65         70         71         62         59         53         45         80         50           Breakout         81         69         67         69         62         56         48         36         82         48           Speed 80%         63         125         250         500         1 K         2 K         4 K         8K         Tot         @3m           Intake         73         61         67         69         59         56         50         41         31         74         43           Extract         73         61         66         56         50         41         31         74         44           Extract         73         61         66         67         58         55         49         41         75         46           Breakout         71         64         62         67         59         53         45         33         74         45           Breakout         71         64	Intake		83	65	70	73	62	58	53	47	84	51
Exhaust         78         65         70         71         62         59         63         45         80         50           Breakout         81         69         67         69         62         56         48         36         82         48           Speed 80%         63         125         250         500         1 K         2 K         4 K         8K         Tot         @3m           Intake         73         61         67         69         59         56         50         43         75         47           Supply         72         61         63         65         57         51         42         31         74         43           Extract         73         60         63         65         57         51         42         31         74         46           Breakout         71         64         66         67         58         55         49         41         75         46           Breakout         71         64         66         67         58         56         49         41         72         46           Supply         63         125	Supply		81	65	65	66	57	51	42	33	81	45
Breakout         81         69         67         69         62         56         48         36         82         48           Speed 80%         63         125         250         500         1 K         2 K         4 K         8 K         Tot         @3m           Intake         73         61         67         69         56         50         43         75         47           Supply         72         61         63         65         50         41         31         74         43           Extract         73         60         63         65         55         49         41         75         46           Breakout         71         64         62         67         58         55         49         41         75         46           Breakout         71         64         62         67         58         55         49         41         75         46           Breakout         71         64         62         67         58         55         49         41         72         46           Supply         63         125         250         500         1 K	Extract		80	63	66	68	60	54	45	34	78	47
Speed 80%         63         125         250         500         1 K         2 K         4 K         8 K         Tot         @3m           Intake         73         61         67         69         59         56         50         41         31         74         43           Supply         72         61         63         65         56         50         41         31         74         44           Extract         73         60         63         65         57         51         42         31         74         44           Exhaust         73         61         66         67         58         55         49         41         75         46           Breakout         71         64         62         67         59         53         45         33         74         45           Speed 60%         63         125         250         500         1 K         2 K         4 K         8 K         Tot         @3m           Intake         66         61         68         67         58         56         49         41         72         46           Supply         63	Exhaust		78	65	70	71	62	59	53	45	80	50
Speed 80%         63         125         250         500         1 K         2 K         4 K         8 K         Tot         @3m           Intake         73         61         67         69         59         56         50         43         75         47           Supply         72         61         63         65         56         50         41         31         74         43           Extract         73         60         63         65         57         51         42         31         74         44           Extract         73         61         66         67         58         55         49         41         75         46           Breakout         71         64         62         67         59         53         45         33         74         45           Breakout         71         64         62         67         58         56         49         41         72         46           Supply         63         125         250         500         1 K         2 K         4 K         8K         10         93         42           Extract         63	Breakout		81	69	67	69	62	56	48	36	82	48
Speed 80%         63         125         250         500         1 K         2 K         4 K         8 K         Tot         @3m           Intake         73         61         67         69         59         56         50         43         75         47           Supply         72         61         63         65         56         50         41         31         74         43           Extract         73         60         63         65         57         51         42         31         74         44           Extract         73         61         66         67         58         55         49         41         75         46           Breakout         71         64         62         67         59         53         45         33         74         45           Breakout         71         64         62         67         58         56         49         41         72         46           Speed 60%         63         125         250         500         1 K         2 K         4 K         8K         Tot         @0m           Supply         63         59 <td></td> <td></td> <td></td> <td></td> <td>l w dB</td> <td>- SOUN</td> <td>D POWF</td> <td></td> <td>VF BAN</td> <td>D</td> <td></td> <td>l n dB(A)</td>					l w dB	- SOUN	D POWF		VF BAN	D		l n dB(A)
Intake         73         61         67         69         59         56         50         43         75         47           Supply         72         61         63         65         56         50         41         31         74         43           Extract         73         60         63         65         57         51         42         31         74         44           Exhaust         73         61         66         67         58         55         49         41         75         46           Breakout         71         64         62         67         59         53         45         33         74         45           Breakout         71         64         62         67         59         53         45         33         74         45           Intake         50         500         1 K         2 K         4 K         8K         Tot         @3m           Intake         665         61         68         67         58         56         49         41         71         45           Supply         63         59         63         63         55		Speed 80%	63	125							Tot	,
Extract         73         60         63         65         57         51         42         31         74         44           Exhaust         73         61         66         67         58         55         49         41         75         46           Breakout         71         64         62         67         59         53         45         33         74         45           Speed 60%         63         125         250         500         1 K         2 K         4 K         8K         Tot         @3m           Intake         65         61         68         67         58         56         49         41         72         46           Supply         63         59         63         64         55         49         40         29         69         42           Extract         64         59         63         63         56         51         41         30         69         42           Exhaust         64         60         66         67         57         54         48         41         71         45           Breakout         59         64	Intake					69						
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Supply         63         59         63         64         55         49         40         29         69         42           Extract         64         59         63         63         56         51         41         30         69         42           Exhaust         64         60         66         67         57         54         48         41         71         45           Breakout         59         64         63         65         57         51         43         31         70         44           Speed 40%         63         125         250         500         1 K         2 K         4 K         8 K         Tot         @3m           Intake         55         55         67         55         49         47         40         31         68         39           Supply         53         53         62         52         47         41         32         22         63         35           Supply         53         53         62         52         47         41         32         22         63         35           Extract         58         52 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>												
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Supply53536252474132226335Extract58526051474232226334Exhaust55546655494740316739	Supply Extract Exhaust		65 63 64 64 59	61 59 59 60 64	68 63 66 63 63 Lw dB	67 64 63 67 65 - SOUN	58 55 56 57 57 57	56 49 51 54 51 51 ER OCTA	49 40 41 48 43 WE BAN	41 29 30 41 31 D	72 69 69 71 70	@3m 46 42 42 45 45 44 Lp dB(A)
Extract58526051474232226334Exhaust55546655494740316739	Supply Extract Exhaust Breakout		65 63 64 64 59 63	61 59 59 60 64 125	68 63 66 63 Lw dB 250	67 64 63 67 65 - SOUN	58 55 56 57 57 D POWE 1 K	56 49 51 54 51 ER OCTA 2 K	49 40 41 48 43 VE BAN 4 K	41 29 30 41 31 D 8K	72 69 69 71 70 Tot	@3m 46 42 42 45 45 44 Lp dB(A) @3m
	Supply Extract Exhaust Breakout		65 63 64 64 59 63 55	61 59 59 60 64 125 55	68 63 66 63 63 Lw dB 250 67	67 64 63 67 65 - SOUN 500 55	58 55 57 57 D POWE 1 K 49	56 49 51 54 51 51 ER OCTA 2 K 47	49 40 41 48 43 VE BAN 4 K 40	41 29 30 41 31 D 8K 31	72 69 69 71 70 Tot 68	@3m 46 42 42 45 44 Lp dB(A) @3m 39
	Supply Extract Exhaust Breakout Intake Supply		65 63 64 64 59 63 63 55 53	61 59 60 64 125 55 53	68 63 66 63 Lw dB 250 67 62	67 64 63 67 65 - SOUN 500 55 52	58 55 57 57 D POWE 1 K 49 47	56 49 51 54 51 8 OCTA 2 K 47 41	49 40 41 48 43 WE BAN 4 K 40 32	41 29 30 41 31 D 8K 31 22	72 69 69 71 70 Tot 68 63	@3m 46 42 42 45 44 Lp dB(A) @3m 39 35
Breakout         54         53         59         52         48         43         33         23         62         34	Supply Extract Exhaust Breakout Intake Supply Extract		65 63 64 64 59 63 63 55 53 58	61 59 60 64 125 55 53 52	68 63 66 63 Lw dB 250 67 62 62	67 64 63 67 65 - SOUN 500 55 52 52 51	58 55 57 57 D POWE 1 K 49 47 47	56 49 51 54 51 8 OCTA 2 K 47 41 42	49 40 41 48 43 WE BAN 4 K 40 32 32	41 29 30 41 31 D 8K 31 22 22	72 69 69 71 70 Tot 68 63 63	@3m 46 42 42 45 44 Lp dB(A) @3m 39 35 34

RESIDENTIAL VENTILATION CATALOGUE

Qaerauliqa

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