Quantum HR

ErP 2018 | from 1,4W | from 10 dB(A) | IPX4 | TÜVRheinland CERTIFIED



DECENTRALISED HEAT RECOVERY UNIT

APPLICATION

Decentralised Mechanical Ventilation unit, with alternate flow and heat recovery core ("push-pull" type), **available in Ø100mm and Ø150mm**: extremely low energy consumption.

For installation in single room such as living room and bedroom: for a better flow balancing two units are commonly used in parallel operation, having opposite and synchronised flows.
Suitable for mounting on perimetral walls.

Ideal solution for removal of CO_2 or any other indoor volatile pollutants and to prevent condensation and mould problems which inevitably damage the building as well as the occupants' health.

SPECIFICATION

Internal ventilation unit made of high quality ABS providing long lasting shock-proof and robust construction. The unit is finished in white RAL 9010 and are UV resistant.

Unique design winglet-type impeller, providing enhanced aerodynamic properties, low noise and increased efficiency.

High efficient reversible EC motor with integral thermal protection, mounted on sealed for life high quality ball bearings. Designed for continuous running.

Anti-dust filter removable from inside by the tenant for maintenance.

Regenerative heat exchanger with ceramic core; high thermal efficiency.

Telescopic pipe made from 100% recycled ABS, adaptable to the wall thickness.

External grille with anti-insect net and water drip guard.

FEATURES & BENEFITS

IPX4 protection degree.

Aesthetic flat front cover for modern interior design, easily removable for cleaning without the need of tools.

Alternate flow with flow reversal approx. every 70 seconds.

Free cooling to prevent heat exchange when not requested.

Integral led to indicate when the "free cooling" option is active.

Simplified synchronisation of the units.

Easy maintenance of the parts, heat exchanger included.

Totally recyclable plastic components, environmentally friendly.

Double insulated: no earth connection is required.

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.
Thermal efficiency tested at the HLK laboratory of University of Stuttgart (Germany).
Designed and manufactured in accordance with EN60335-2-80 (Low Voltage Directive) and the EMC Directive (Electromagnetic Compatibility).

OPERATION

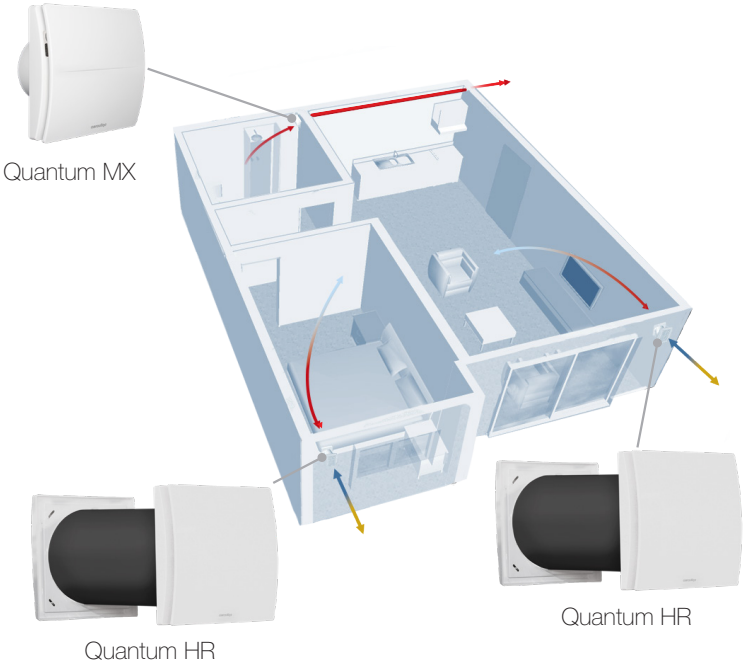
Multi-speed
The 3 speeds and the free-cooling mode can be selected via the CTRL-S control panel (accessory on request) or through simple switches.
The maximum speed is automatically activated via remote room sensor (SEN-HY, SEN-PIR, CO2).

Two-speed
The continuous speed is selected during installation, while the maximum speed is activated via external LS control (room sensor, light switch, or dedicated switch).

One speed
The operating speed is selected from 3 available options during installation.

Quantum HR

Example of a complete ventilation system



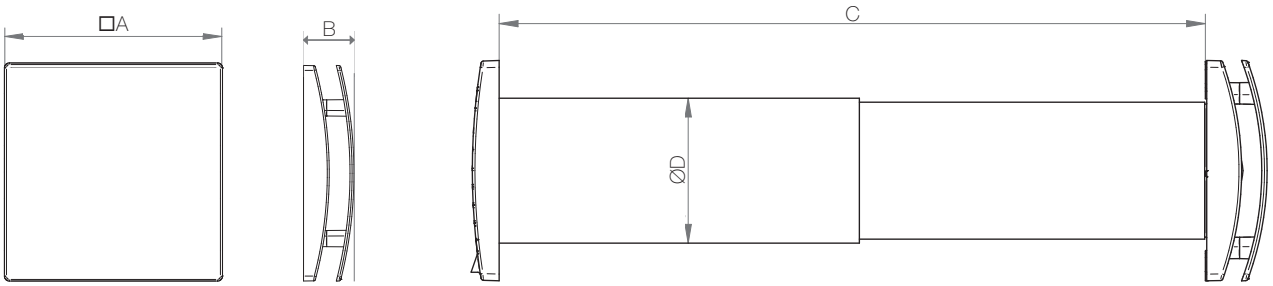
Application: ideal solution in case of renovation.

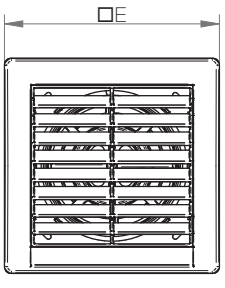
How it works: the continuous running decentralised heat recovery units (Quantum HR) transfer thermal energy from air extracted from indoor rooms to incoming fresh air. Two units can work synchronised with balanced air flows and top acoustic comfort.
The system can also include a single flow decentralised unit (Quantum MX) mounted in the wet room.
No air distribution system is needed.

Energy saving: the preheated supplied fresh air and continuous air changes reduce the demand for additional heating. Quantum HR and Quantum MX are equipped with EC brushless motors which 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 on Quantum HR ensure that incoming air is suitably filtered before if enters the home.

Dimensions (mm) and Weight (kg)





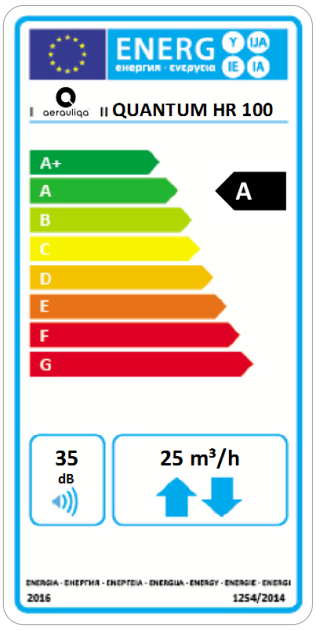
External grille

Model	Quantum HR 100	Quantum HR 150
Weight	2,3	3,9
□A	164	218
B	46	51
C	300÷570	300÷570
ØD	110	159
□E	164	218

Quantum HR

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

a)	Mark	-	AERAULIQA
b)	Model	-	QUANTUM HR 100
c)	SEC class	-	A
c1)	SEC warm climates	kWh/m².a	-14,1
c2)	SEC average climates	kWh/m².a	-36,0
c3)	SEC cold climates	kWh/m².a	-74,1
	Energy label	-	Yes
d)	Unit typology	-	Residential - bidirectional
e)	Type of drive	-	Variable speed drive
f)	Type of Heat Recovery System	-	Rigenerative
g)	Thermal efficiency of heat recovery	%	74
h)	Maximum flow rate @ 0 Pa	m³/h	25
i)	Electric power input @ maximum flow rate	W	2,6
j)	Sound power level (L_{WA})	dBA	35
k)	Reference flow rate	m³/h	15
l)	Reference pressure difference	Pa	0
m)	Specific power input (SPI)	W/m³/h	0,113
n1)	Control factor	-	1
n2)	Control typology	-	Manual control (no DCV)
o1)	Maximum internal leakage rate	%	1,6
o2)	Maximum external leakage rate	%	1
p1)	Internal mixing rate	%	N/A
p2)	External mixing rate	%	N/A
q)	Visual filter warning	-	N/A
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	21
v1)	AEC - Annual electricity consumption - warm climates	kWh	1,6
v2)	AEC - Annual electricity consumption - average climates	kWh	1,6
v3)	AEC - Annual electricity consumption - cold climates	kWh	1,6
w1)	AHS - Annual heating saved - warm climates	kWh	18
w2)	AHS - Annual heating saved - average climates	kWh	39,9
w3)	AHS - Annual heating saved - cold climates	kWh	78
	Air-flow at different speed	m³/h	25/15/10
	Power consumption at different speed	W	2,6/1,8/1,4
	Sound pressure @ 3m(1) at different speed	dB(A)	29/15/10
	Thermal efficiency(2)	%	70/74,3/82
	Ambient temperature max	°C	-20°C ÷ +50°C
	Degree of protection IP	-	X4
	Marking/Mark	-	CE



- 220-240V ~ 50Hz - Air performance measured according to ISO 5801 a 230V 50Hz, air density 1,2 Kg/m³.
- data measured in the TÜV Rheinland recognised laboratory in Aerauliqa.

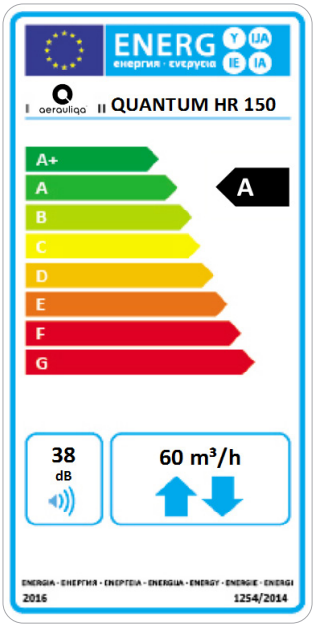
(1) sound pressure level @ 3m in free field, for comparative purposes only.
(2) measured at the independent laboratory HLK of the University of Stuttgart (Germany).

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Type Approved
Safety
Regular Production
Surveillance
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ID 0217007721

Quantum HR

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

a)	Mark	-	AERAULIQA
b)	Model	-	QUANTUM HR 150
c)	SEC class	-	A
c1)	SEC warm climates	kWh/m².a	-16,1
c2)	SEC average climates	kWh/m².a	-38,0
c3)	SEC cold climates	kWh/m².a	-76,3
	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	%	74
h)	Maximum flow rate @ 0 Pa	m³/h	60
i)	Electric power input (alla Maximum flow rate)	W	3,5
j)	Sound power level (L_{WA})	dBA	38
k)	Reference flow rate	m³/h	40
l)	Reference pressure difference	Pa	0
m)	Specific power input (SPI)	W/m³/h	0,058
n1)	Control factor	-	1
n2)	Control typology	-	Manual control (no DCV)
o1)	Maximum internal leakage rate	%	1,2
o2)	Maximum external leakage rate	%	1
p1)	Internal mixing rate	%	N/A
p2)	External mixing rate	%	N/A
q)	Visual filter warning	-	N/A
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	60
v1)	AEC - Annual electricity consumption - warm climates	kWh	0,8
v2)	AEC - Annual electricity consumption - average climates	kWh	0,8
v3)	AEC - Annual electricity consumption - cold climates	kWh	0,8
w1)	AHS - Annual heating saved - warm climates	kWh	18,1
w2)	AHS - Annual heating saved - average climates	kWh	40
w3)	AHS - Annual heating saved - cold climates	kWh	78,2
	Air-flow at different speed	m³/h	60/40/20
	Power consumption at different speed	W	3,5/2,4/1,4
	Sound pressure @ 3m(1) at different speed	dB(A)	26/18/10
	Thermal efficiency(2)	%	70/74,3/82
	Ambient temperature max	°C	-20°C ÷ +50°C
	Degree of protection IP	-	X4
	Marking/Mark	-	CE



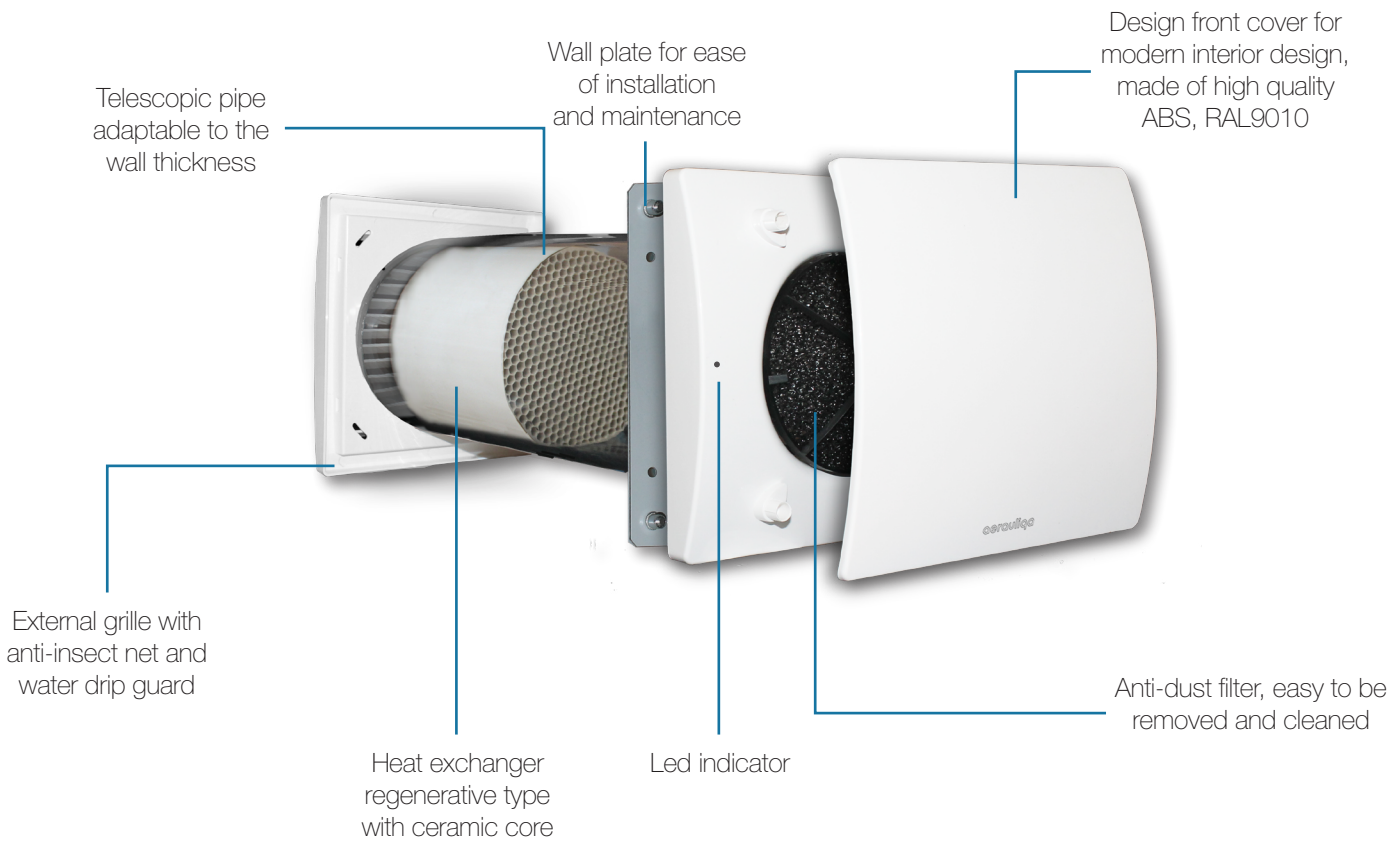
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Details



Multi-speed operation through CTRL-S (accessory on request):

- 3 speeds.
- Free-cooling option (bypass) with LED indicator (extract or intake).
- Automatic speed increase by means of ambient sensors (SEN-HY, SEN-PIR).
- Control up to 10 units at the same time.
- Automatic reset of the flows synchronisation of two or more units, even after one or more units have been switched off or are turned from free-cooling operation to heat exchange.
- CTRL-S can be surface (CTRL-S-P) or recessed mounted (CTRL-S-I).



CTRL-S