QR350

CENTRALISED HEAT RECOVERY UNIT

NEWS 2016

APPLICATION

Whole-house heat recovery unit, suitable for vertical 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.

Highly efficient counter flow heat exchanger to maximise thermal recovery. Thermal efficiency of the heat exchanger upto 90% (test method in conformity with the norm EN308).

FEATURES & BENEFITS

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

Heat exchange of the unit upto 90% efficiency**.**

Quick access to filters and heat exchanger for maintenance.
QR350 is equipped with an external sheet metal cover, finished in white RAL9010.

G4 filters, removable for cleaning.

Integrated bypass for free cooling; manual, automatic.

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

VERSIONS

QR350MBP

- One speed
- Two speed
- Variable speed with remote control CTRL-M
- Variable speed with remote home automation system (BMS) or ballast potentiometer
- 3 speed with remote control CTRL-S: free cooling option included.
- Manual Bypass on QR550MBP.

QR350ABP

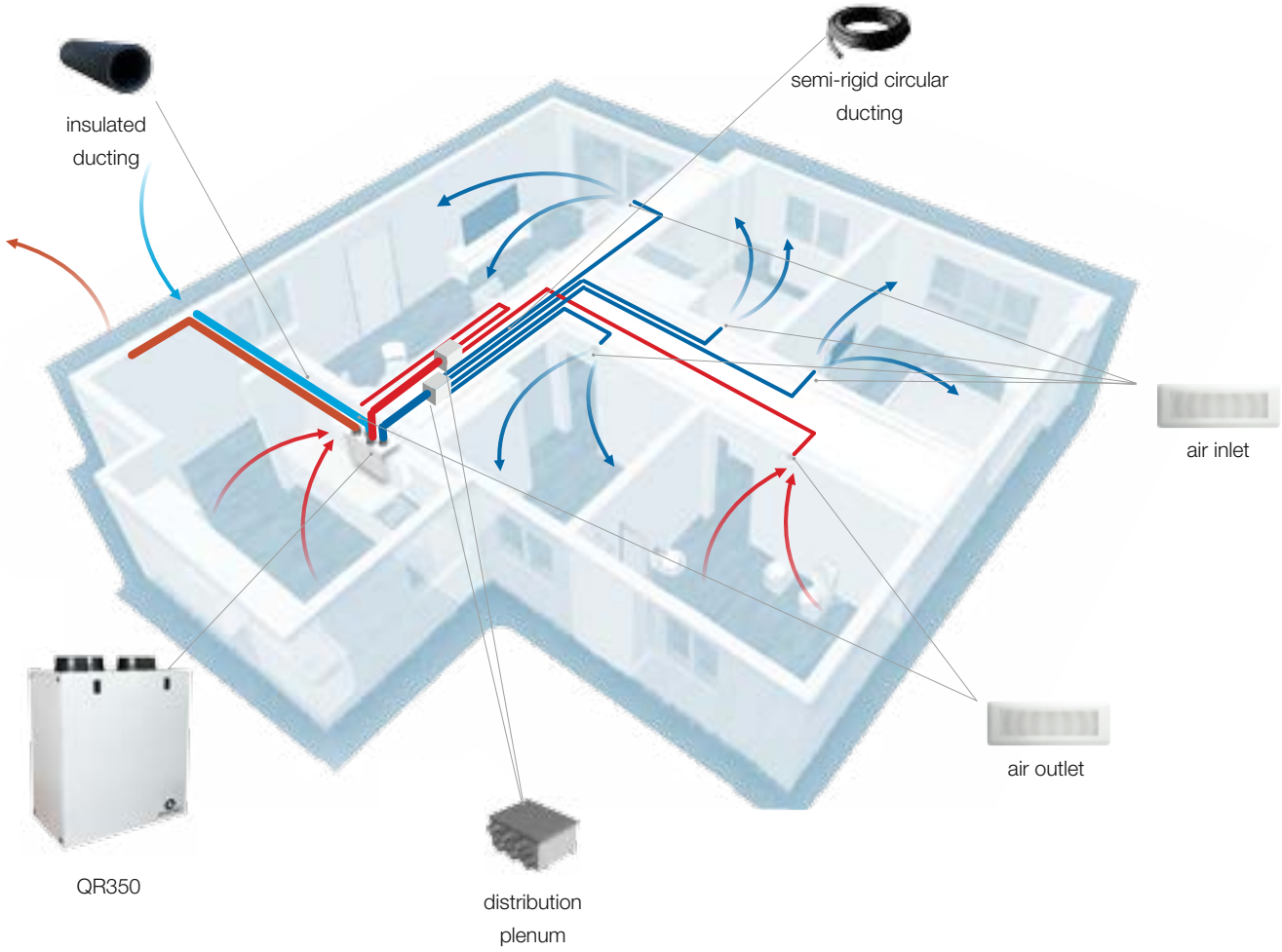
The unit is supplied with a multi-function LCD display (CTRL-DSP) for automatic control and convenience, providing:

- 3 speeds setting
- 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-CO_2).
- Analogic input 1-10V for “slave” function if connected to BMS (home automation) system.
- 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 dehumidifying element.

CTRL-DSP

QR350

Example of a complete ventilation system



Application: New Build / Retro Fit Houses and Apartments

The How it works: a continuous running heat recovery unit 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 fresh air and continuous air changes reduce the demand for additional heating. 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.

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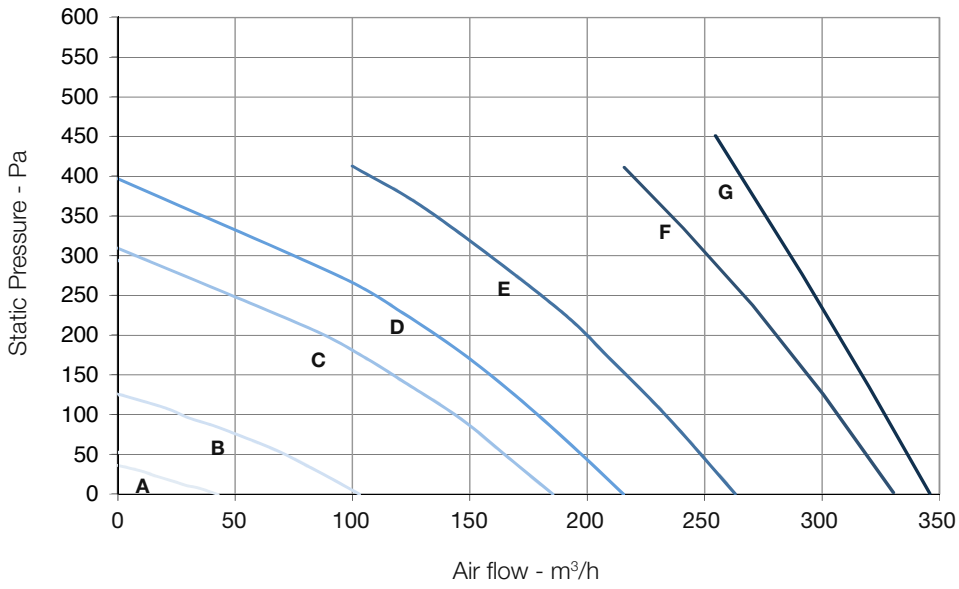
Performances

Model	QR350
Air flow m³/h max	346
Power W max (total)	325
Sound Pressure dB(A) @3m*	34
Unit Efficiency %	90
Ambient temperature °C max	40
Marking	CE

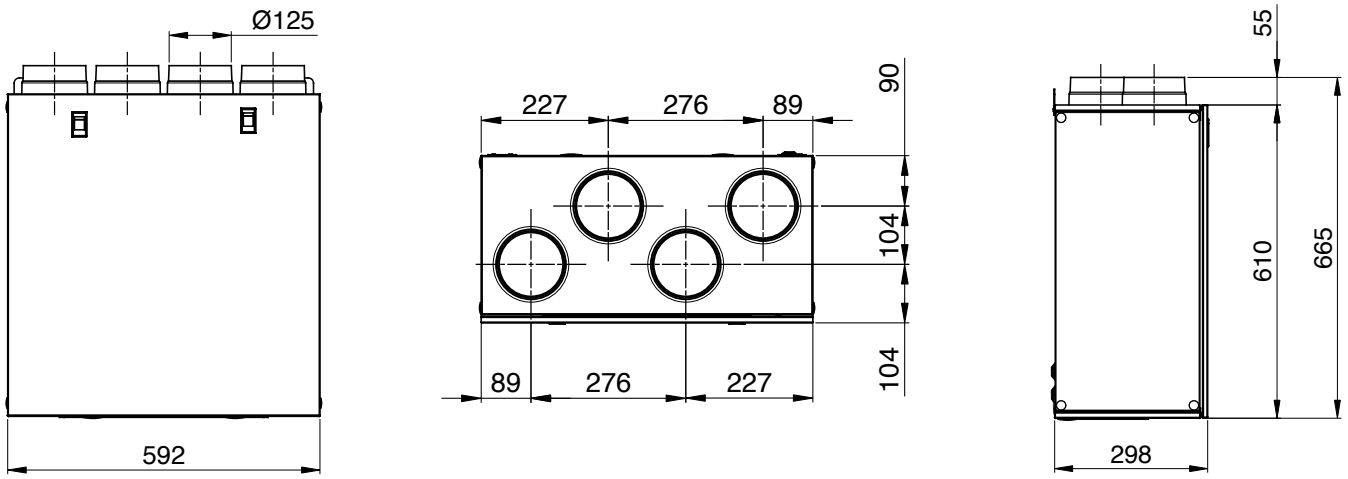
- 220-240 V ~ 50-60Hz
- air performance measured according to ISO 5801 at 230V 50Hz, air density 1,2 Kg/m3
- data measured in the TÜV Rheinland recognised laboratory in Aerauliqa
- sound pressure level at 3m in free field, 40% speed
- * preliminary data

Curve



Position	W max	m³/h max
A (min)	8	43
B	24	103
C	70	185
D	98	215
E	155	263
F	275	330
G (max)	325	346

Dimensions (mm)



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Sound level*

10V	Lw dB - SOUND POWER OCTAVE BAND									Lp dB(A)
	63	125	250	500	1 K	2 K	4 K	8K	Tot	@3m
Intake	83	65	70	73	62	58	53	47	84	**51**
Supply	81	65	65	66	57	51	42	33	81	**45**
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**

8V	Lw dB - SOUND POWER OCTAVE BAND									Lp dB(A)
	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	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**

6V	Lw dB - SOUND POWER OCTAVE BAND									Lp dB(A)
	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	63	65	57	51	43	31	70	**44**

4V	Lw dB - SOUND POWER OCTAVE BAND									Lp dB(A)
	63	125	250	500	1 K	2 K	4 K	8K	Tot	@3m
Intake	55	55	67	55	49	47	40	31	68	**39**
Supply	53	53	62	52	47	41	32	22	63	**35**
Extract	58	52	60	51	47	42	32	22	63	**34**
Exhaust	55	54	66	55	49	47	40	31	67	**39**
Breakout	54	53	59	52	48	43	33	23	62	**34**

*preliminary data

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