

HRQ

Low Energy Heat Recovery Systems



The EnviroVent HRQ range of high efficiency Mechanical Ventilation with Heat Recovery (MVHR) units provide constant, controlled ventilation to homes without increasing the heat loss normally caused by ventilation. By using our range of MVHR units the calculated heat loss is actually reduced, making homes much more energy efficient, with the added confidence that all products have been independently tested by BRE and are included in SAP Appendix Q.

Stale moist air, will be continuously extracted from the “wet rooms”, traditionally the kitchen, utility, bathroom and cloakroom areas, and ducted to the central MVHR unit. This extracted air passes through a counter-flow heat exchanger before being ducted to outside. Simultaneously fresh air is drawn into the unit from outside via a G6 pollen filter, and is warmed by the high efficiency, counter flow heat exchanger. This tempered fresh air is then delivered through into the living, dining and bedroom areas.

Features

- Ultra Low Watt DC Motor Technology
- G6 pollen filter
- Frost protection
- Ultra efficient heat exchange cell transferring 95% of the heat
- Night ventilation option
- Summer bypass option

Benefits

- Expert fitting staff
- Quiet operation
- Eliminates mould
- Removes musty odours
- Improves air quality
- Enhances heat distribution
- SAP Appendix Q eligible
- Filters can be easily removed

Optional Features



Wireless Remote Control

A wireless remote control is also available to control the ventilation system from anywhere in the house. Several remote controls (transmitters) can be set for one receiver.



Bypass Facility

This bypass facility shuts off the heat exchanger and ensures that cooler outdoor air replaces the indoor air that has been heated during the day.

A Compact MVHR Unit In All Sizes

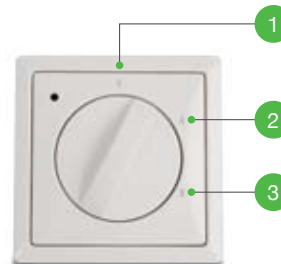
The HRQ Range of MVHR units are available in three different sizes, suitable for every application:

- EnviroVent HR180Q - airflow capacity of 180m³/hr @ 150pa
- EnviroVent HR300Q - airflow capacity of 300m³/hr @ 150pa
- EnviroVent HR400Q - airflow capacity of 400m³/hr @ 150pa

Constant Flow Fans

The MVHR units have low energy Constant Flow DC motors that will constantly maintain the required ventilation rates at the various speed settings. The airflow rate is kept constant under all conditions, and is not affected by an increase in system pressure.

3-Way Switch With Filter Indication



The units are provided complete with a 3-way speed switch that allows the user to choose the appropriate airflow rates. The 3-way speed switch is connected quickly and easily to the MVHR unit via a data cable connector. Additional switches can also be connected and fitted to any room in the dwelling. For convenience, a 3-way speed switch is available with a filter indicator light which indicates when the filter requires cleaning.

ORDER CODE	HR180Q	HR300Q	HR400Q
Frost Protection Facility	•	•	•
G6 Pollen Filters	•	•	•
3 Way Speed Switch	•	•	•
Wireless Remote Control	•	•	•
Bypass Facility		•	•

Acoustic Insulation

A good ventilation system should not cause nuisance noise. EnviroVent supply as standard acoustically insulated flexible ductwork that will act as an attenuator. These attenuators are available with all products.

Wireless Remote Control



A wireless remote control is also available to control the ventilation system from anywhere in the house. Several remote controls (transmitters) can be set for one receiver.

Frost Protection Facility

All the MVHR units have a Frost Protection System that provides the optimum protection from freezing, which preserves the high efficiency of the system even at extreme temperatures.

Filter Cleaning

The MVHR units have two G6 pollen filters fitted as standard to protect the fans - these filters that can be easily removed and cleaned or replaced. They remove 95% of the all particulates from the air. A high performance fine dust filter is optionally available.



Bypass Unit For Summer Or Night Time Ventilation



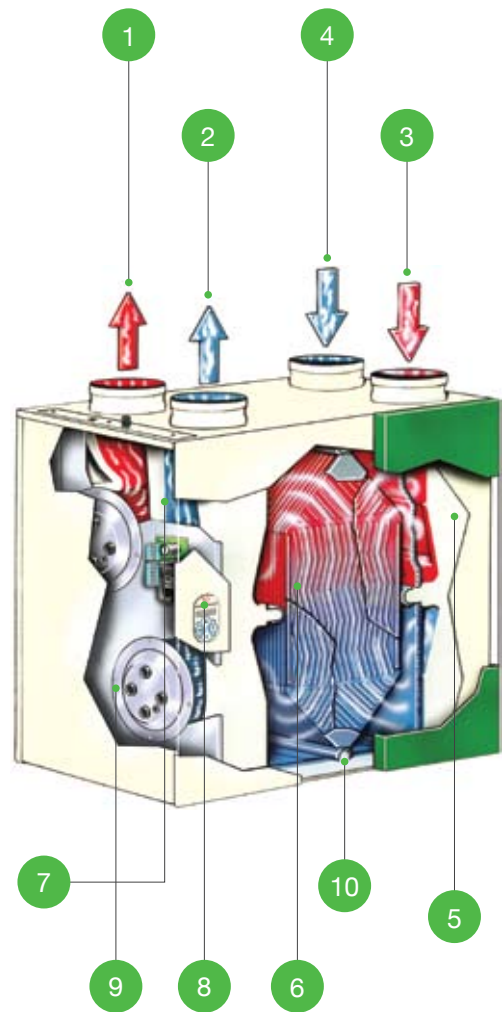
EnviroVent's HR300Q and HR400Q MVHR units are available with the optional extra of a bypass facility for summer or night time ventilation. This bypass facility shuts off the heat exchanger and ensures that cooler outdoor air replaces the indoor air that has been heated during the day. This air is routed through the bypass unit and not through the heat exchanger.

The bypass unit comes with an automatic control system that opens and closes the bypass valve. A bypass unit can be retrofitted by the installer or the user and circulates approx. 70% of the input air around the heat exchanger.

[Note: not currently available for the HR180Q model]



So how does it work? ▾



Key ▾

- 1 Heated fresh air to living rooms, dining rooms and bedrooms
- 2 Cold stale air to outside
- 3 Warm stale air from kitchen, bathrooms and cloak rooms
- 4 Fresh cold air from the outside
- 5 Filters
- 6 Heat exchanger
- 7 Control PCB
- 8 Settings display
- 9 Direct current fans (for constant volume)
- 10 Condensate discharge

SAP Appendix Q Calculations

HR180Q

Exhaust Terminal Configuration	Fan Speed Setting	Specific Fan Power (W/l/s)	Heat Exchange Efficiency (%)	Energy Saving Trust Best Practice Performance Compliant
Kitchen + 1 additional wet room	50m³/hr	1.13	86	No
Kitchen + 2 additional wet rooms	85m³/hr	1.01	86	No
Kitchen + 3 additional wet rooms	110m³/hr	1.14	86	No
Kitchen + 4 additional wet rooms	130m³/hr	1.32	84	No
Kitchen + 5 additional wet rooms	150m³/hr	1.48	84	No

HR300Q

Exhaust Terminal Configuration	Fan Speed Setting	Specific Fan Power (W/l/s)	Heat Exchange Efficiency (%)	Energy Saving Trust Best Practice Performance Compliant
Kitchen + 1 additional wet room	50m³/hr	0.94	84	No
Kitchen + 2 additional wet rooms	80m³/hr	0.72	84	No
Kitchen + 3 additional wet rooms	110m³/hr	0.76	84	No
Kitchen + 4 additional wet rooms	135m³/hr	0.88	83	No
Kitchen + 5 additional wet rooms	150m³/hr	0.92	82	No
Kitchen + 6 additional wet rooms	165m³/hr	1.05	81	No
Kitchen + 7 additional wet rooms	185m³/hr	1.17	80	No

HR400Q


Exhaust Terminal Configuration	Fan Speed Setting	Specific Fan Power (W/l/s)	Heat Exchange Efficiency (%)	Energy Saving Trust Best Practice Performance Compliant
Kitchen + 1 additional wet room	85m³/hr	1.07	82	No
Kitchen + 2 additional wet rooms	110m³/hr	0.94	83	No
Kitchen + 3 additional wet rooms	135m³/hr	0.93	83	No
Kitchen + 4 additional wet rooms	160m³/hr	1.03	81	No
Kitchen + 5 additional wet rooms	185m³/hr	1.12	81	No
Kitchen + 6 additional wet rooms	195m³/hr	1.17	82	No
Kitchen + 7 additional wet rooms	210m³/hr	1.40	80	No

Options & Ancillaries

HR180Q

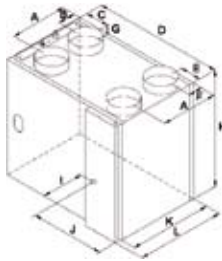
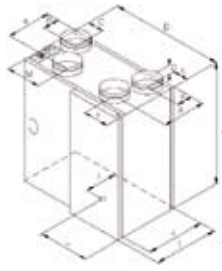
Product	Description	EnviroVent Code
	Round Rigid Ducting 125mm	1RD 125 X 2M
	Insulated Flexible Hose Ducting 125mm	1RD INS FLEX 125
	Slimline Airbrick	1FD HOR LOUV 1FD VER LOUV
	Five In One Roof Vent Kit	1RV VENT 5 IN 1
	Adjustable Ceiling Vent	1DIF VALVE 125

HR300Q & HR400Q

Product	Description	EnviroVent Code
	Round Rigid Ducting 150mm	1RD 150 X 2M
	Insulated Flexible Hose Ducting 150mm	1RD INS FLEX 150
	Five In One Roof Vent Kit	1RV VENT 5 IN 1
	Adjustable Ceiling Vent	1DIF VALVE 125

Dimensions (mm) ▼

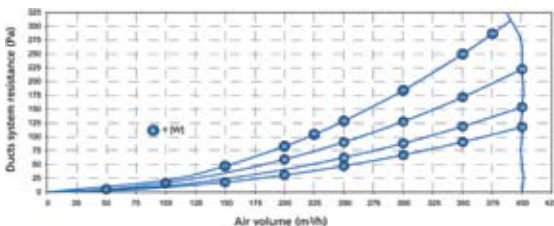
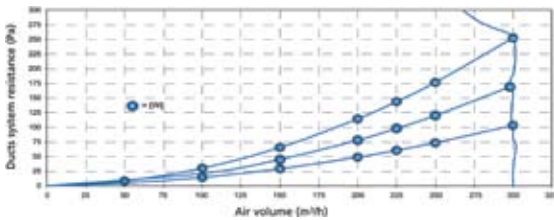
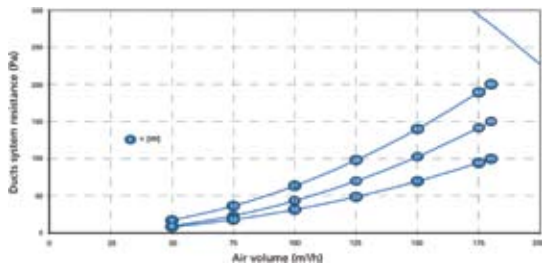
	HR180Q	HR300Q	HR400Q
A	213	321	336
B	77	121	126
C	79	165	165
D	560	675	675
E	75	89	89
F	125	99	114
G	45	45	53
H	600	602	602
I	50	210	220
J	210	385	385
K	290	420	430
L	455	455	455
M	168	-	-



Key

I	To Dwelling	IV	From Atmosphere
II	To Atmosphere	V	Electric Connections
III	From Dwelling	VI	Condensation discharge

Performance Curves ▼



Technical Specifications ▼

Product

Low energy heat recovery system for all types of properties.

Example Specification

Supply and installation of a HR180Q/HR300Q/HR400Q Mechanical Ventilation with Heat Recovery ducted system.

Appendix Q

The product will have been independently tested by BRE, and the performance figures shall be listed on the Appendix Q website.

Performance of Units

HR180Q - Maximum Ventilation Rate - 180m³/hr @ 150Pa

HR300Q - Maximum Ventilation Rate - 300m³/hr @ 150Pa

HR400Q - Maximum Ventilation Rate - 400m³/hr @ 150Pa

Heat Exchanger Efficiency

The Heat Exchanger within the MVHR Units shall be a counter-flow, multi plate heat exchanger manufactured from the polyester (PETG) with ultra sonic welded joints. The Heat Exchanger shall be 95% efficient.

Motors

The motors are low energy, constant flow DC motors. The motors shall operate up to an ambient temperature of 40°C and are fitted with an electronic thermal overload protective device.

Fans

The impellers on the fans are forward curved centrifugal type impellers.

Controls

The MVHR unit contains an integral driver circuit that provides the unit with a constant airflow volume - and is controlled by a 3-way switch. This switch has a filter indicator included to detect when the filter requires cleaning/replacing.

Condensate Drainage

The HRQ MVHR Units have a condensate drain located centrally at the bottom of the unit.

MVHR Unit Construction

The unit is manufactured from expanded polystyrene with a sheet metal outer case - powder coated. The Filter doors are powder coated green.

Sound Pressure Levels

When using 1m acoustic hose, the sound pressures shown in tables 1 and 2 can be expected in a living room.

Table 1: Sound pressure for HR300Q

Frequency	125	250	500	1000	2000	4000	Total (dBa) @ 3m
100m ³ /h, 40 pa	-5	-6.3	4.5	8.4	-13.2	-17.5	10.2
150m ³ /h, 60 pa	5.7	6.2	14	15.2	2	-2.5	18.3
300m ³ /h, 160 pa	18.1	23.8	33.9	30.8	12.6	23.8	36.3

Table 2: Sound pressure for HR400Q

Frequency	125	250	500	1000	2000	4000	Total (dBa) @ 3m
100m ³ /h, 40 pa	-5	-6.3	4.5	8.4	-13.2	-17.5	10.2
150m ³ /h, 60 pa	0.6	0	10.4	11.2	-5.3	-9.8	14.3
300m ³ /h, 160 pa	11.8	13.8	24	22.2	10.3	5	26.7

Main Electrical Supply

230V AC 50Hz

Complies to the following approvals/directives

CE
LVD
EMC
SAP Q