Whole House Mechanical Ventilation with Heat Recovery - MVHR

Mini







Web: www.vectaire.co.uk



Mini

- with summer bypass and frost-stat
- efficient, low energy solution to controlling condensation and pollution in residential properties up to 70m²
- up to 83% heat exchange efficiency
- variable choice of low (trickle), boost and purge speed at installation
- for ceiling, loft or void installation

- low noise levels
- low running costs
- complies with Building Regulations
- manufactured in UK to ISO 9001:2015 and 14001:2015
- accurate commissioning via remote LCD commissioning unit
- non-bypass models available

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GENERAL FEATURES

- for 1 or 2 bedroom apartments, hotel rooms, student accommodation, extra care facilities, multi-occupancy establishments etc
- Up to 30 litre/sec at 50Pa max 34 litre/sec capacity
- sfp down to 1.11 W/l/s
- summer bypass which allows the airflow to bypass the heat exchanger automatically when internal and external temperatures are between adjustable setpoints.
- frost-stat proportionally reduces intake motor speed as temperature falls - activated when the outside temperature between +3°C and -8°C..
- run-time and power outage counters
- easy to install and maintain
- for ceiling, loft or void in-line installation
- variable low (trickle), boost and purge options for each motor
- boost speed can be activated by a 230V switched live from:
 - A light switch (if more than one light switch is used, each one must be a double pole switch)
 - Remote humidistat (230V DRH240)
 - Passive infra red (230V PIRFF)
 - Thermostat (230V THM)
 - Remote switch/pull cord 230V
- very low noise levels
- low running costs
- 5 year warranty 1 year parts and labour, 4 years parts only

TECHNICAL FEATURES

- compact low profile unit with galvanised sheet steel casing
- thermo-acoustic lining
- pre-wired for easy electrical connection
- low energy EC brushless motor with single width, single inlet, direct drive, backward curved impellors
- operates in temperature up to 60°C
- easy to access standard, disposable G3 filters
- counter flow heat exchanger
- all models bottom access only with right or left drain. Allow clearance on discharge side of unit for access to wiring connections. Sufficient allowance also required to remove lid

CONTROL FEATURES - STANDARD

- independent variable speed adjustment for each motor for trickle, boost and purge speeds.
- adjustable boost speed over-run timer from 0 to 90 minutes.
- adjustable boost speed delay from 0 to 5 minutes
- remote purge cable connection on circuit board (for optional purge facility)
- adjustable night time boost and purge inhibitor
- integral frost-stat proportionally reduces intake motor speed as temperature falls
- automatic summer bypass (except non-bypass models)

CONTROL FEATURES - FACTORY SET

- change of ductwork handing on humidistat version (humidity threshold can be set at manufacture)
- integral humidistat proportionally increases motor speeds with rising humidity
- 0-10V connections can be added for:
 - BMS for remote motor shut-off
 - CO2 detector
 - home automation system
- relay for external pre-heater
- 3 speed selector switch
- optional remote purge cable factory connected adjustable over-run timer from 0 to 250 minutes, Pre-set to 15 minutes (adjustable at factory)
- holiday mode for reduced speeds when property is unoccupied (factory set option) - default setting is 50% of trickle speed
- run-time and power outage counters downloadable via QR code.

COMPLIES WITH

- Building Regulations for enhanced energy saving capability
- Building Regulations for reliable, efficient ventilation
- EU RoHS Directive Compliant.
- Complies with IEC60335-2-80, LVD2006/95/CE and EMC2014/30/UE (European Directive against radio interference and electro-magnetic compatibility
- manufactured in UK to ISO 9001:2015 and 14001:2015
- CE marked
- SAP PCDB listed

TYPICAL SPECIFICATION AVAILABLE AT

http://www.vectaire.co.uk/downloads

fnach ain

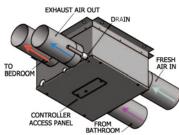
- Incoming fresh air Warmed fresh air
- Extracted warm, moist, stale air
- Cooled outgoing stale air
- WHHR Mini DC

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WHHR MINI DC OPTION 2 (LEFT HAND DRAIN)

TO BEDROOM FROM BATHROOM DRAIN CONTROLLER ACCESS PANEL FRESH AIR IN

WHHR MINI DC OPTION 1 (RIGHT HAND DRAIN)



MODELS AVAILABLE:

- WHHR Mini LB left drain, bypass
- WHHR Mini RB right drain, bypass
- WHHR Mini LBH left drain, bypass, humidistat,
- WHHR Mini RBH right drain, bypass, humidistat
- WHHR Mini L left drain
- WHHR Mini R right drain
- WHHR Mini LH left drain, humidistat
- WHHR Mini RH right drain, humidistat

also available with 100mm spigot

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TECHNICAL CHARACTERISTICS											
Model	Airflow I/sec						Operating Current				
	100%	80%	60%	40%	20%	100%	80%	60%	40%	20%	(Amps)
Mini	34	24	15	7	2	83	42	19	7	2	0.93

Mini		Sound Power Levels, $L_{\scriptscriptstyle W}$ (dB) - Octave Bands Frequency Hz.								Sound Pressure	
Curve Ref		63	125	250	500	1k	2k	4k	8k	dBA @ 3m	
100% [34 l/sec]	Extract	63	69	69	69	63	59	56	50		
	Supply	68	74	74	74	68	64	61	55		
	Breakout	66	67	61	55	43	33	24	16	39.3	
80% (24 l/sec)	Extract	59	65	64	64	58	54	50	43		
	Supply	64	70	69	69	63	59	55	48		
	Breakout	62	63	56	50	38	28	18	9	34.6	
60% (15 l/sec)	Extract	54	59	58	58	51	47	42	33		
	Supply	59	64	63	63	56	52	47	38		
	Breakout	57	57	50	44	31	21	10	<5	28.6	
40% (7 l/sec)	Extract	47	52	50	49	43	39	32	21		
	Supply	52	57	55	54	48	44	37	26		
	Breakout	50	50	42	35	23	13	<5	<5	20.7	
20% (2 l/sec)	Extract	36	41	37	36	29	24	15	<5		
	Supply	41	46	42	41	34	29	20	7		
	Breakout	39	39	29	22	9	5	<5	<5	<10.0	

The breakout dB(A) sound pressure values are given for hemispherical free field propagation at a distance of 3m from the unit Extract and Supply values are in-duct sound power levels

RESULTS for SAP CALCULATIONS ENERGY LEVEL PERFORMANCE - using rigid ducting only										
	2009	Data	2012	Data	SAP 10 Data					
Exhaust Terminal Configuration	Specific Fan Power (W/I/sec)	Heat Exchange Efficiency	Specific Fan Power (W/I/sec)	Heat Exchange Efficiency	Specific Fan Power (W/I/sec)	Heat Exchange Efficiency				
Kitchen + 1 additional wet room	1.11	83%	1.40	82%	1.40	82%				
Kitchen + 2 additional wet rooms	1.40	82%								
Figures at minimum flow rate conditions										

Vectaire Ltd can supply all accessories for use with these units, including product filters, air filter cassettes, silencers, fire dampers, air valves, ducting, outside grilles and wall cowls. Additionally, Vectaire offers a design service to ensure that the unit installed is the best possible to provide efficient, effective, low energy and low running cost ventilation. Vectaire can also organise installation, commissioning and maintenance of these products.

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PERFORMANCE (curves are for guidance only)

