

MRXBOXAB-ECO-LP1

(including opposite handed versions)

ACHIEVES
100%
DUTY IN BYPASS
MODE

MRXBOXAB-ECO-LP1 and MRXBOXAB-ECO-LP1-OH are specifically designed for apartment applications where space is a premium.



The new MRXBOX95-LP1 offers the lowest specific fan power of any low-profile, void-mounted MVHR system and is specifically designed to fit easily into apartments with ceiling void restrictions where space is at a premium.

The MRXBOX-ECO-LP1 has been designed with automatic 100% bypass as listed on the SAP Product Characteristics Database (PCDB). Due to its intelligent and smart design there will be no reduction in airflow when operating in bypass mode resulting in enhanced performance.

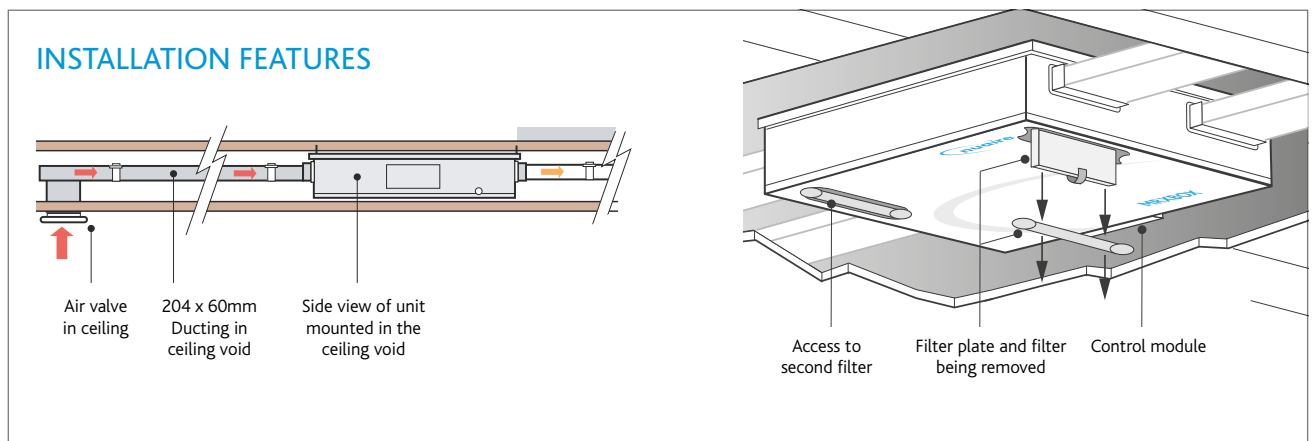
The MRXBOX-ECO-LP1 is designed to provide optimised balanced (supply and extract) mechanical ventilation with heat recovery and listed on the PCDB.

The unit operates by continuously extracting moisture laden air from 'wet' rooms within the property and at the same time drawing in fresh supply air from outside. The heat from the extracted stale air is recovered via a heat exchanger inside the heat recovery unit, which becomes tempered then filtered before supplying into the habitable rooms creating comfortable and well ventilated homes.

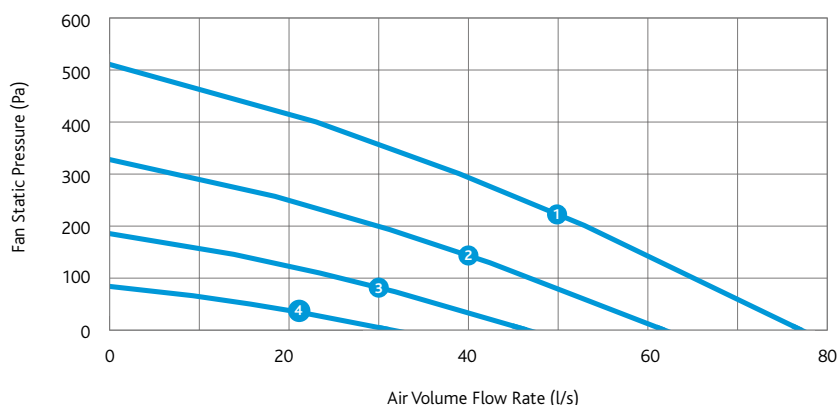
The heat exchanger block within the units can recover up to 95% of the normally wasted heat. The two independent fans have full speed control for background and boost ventilation rates.

The MRXBOX-ECO-LP1 has a summer bypass function. In warmer months this function automatically switches off to ensure the property is being well ventilated and comfort levels are maintained in the home by continuously drawing in fresh filtered air into the habitable rooms.

Typical Installation ▼



Performance — MRXBOXAB-ECO-LP1 ▼



CODE DESCRIPTION

MRXBOXAB-ECO-LP1

Low profile multi-room supply and extract heat recovery, up to 95% efficient with automatic summer by-pass.

MRXBOXAB-ECO-LP1-OH

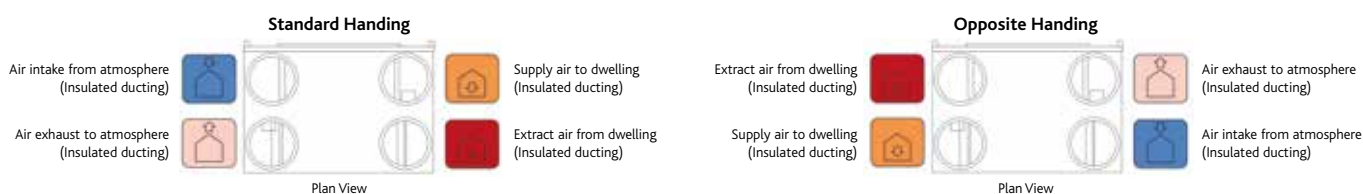
Low profile multi-room supply and extract heat recovery, up to 95% efficient with automatic summer by-pass with reverse handing.

Electrical & Sound ▼

	Maximum power consumption	Frequency/Hz	63	125	250	500	1K	2K	4K	8K	dBA @3m
Curve	(Watts)		Sound Power Levels dB re 1pW								
1	147	Open inlet	50	56	55	55	46	42	32	23	
		Open outlet	57	66	67	68	66	65	55	48	
		Breakout	65	64	63	62	52	47	38	30	52
2	75	Open inlet	49	51	54	49	41	37	25	<16	
		Open outlet	55	61	63	63	61	57	48	39	
		Breakout	61	61	60	56	47	41	30	17	35
3	32	Open inlet	43	46	45	41	33	27	18	<16	
		Open outlet	51	55	55	56	53	51	38	29	
		Breakout	55	55	52	47	38	30	21	<16	27
4	9	Open inlet	38	40	34	32	23	17	<16	<16	
		Open outlet	45	48	45	46	43	41	26	<16	
		Breakout	48	47	41	36	26	<16	<16	<16	16

The maximum power consumption shown above (Watts) is consumed on units running continuously, not taking into account any heat recovery saving based on SAP Product Characteristic Database (PCDB) testing. The breakout case-radiated dBA values are given for Hemispherical free field radiation at 3m - to obtain the Spherical radiated data, subtract 3 dBA.

Please note sound data is provided at a particular duty point for 25%, 50%, 75% and 100%. For accurate sound data at a specific speed duty, please use Nuair's fan selector or call the office on 029 2085 8500.



MRXBOXAB-ECO-LP1

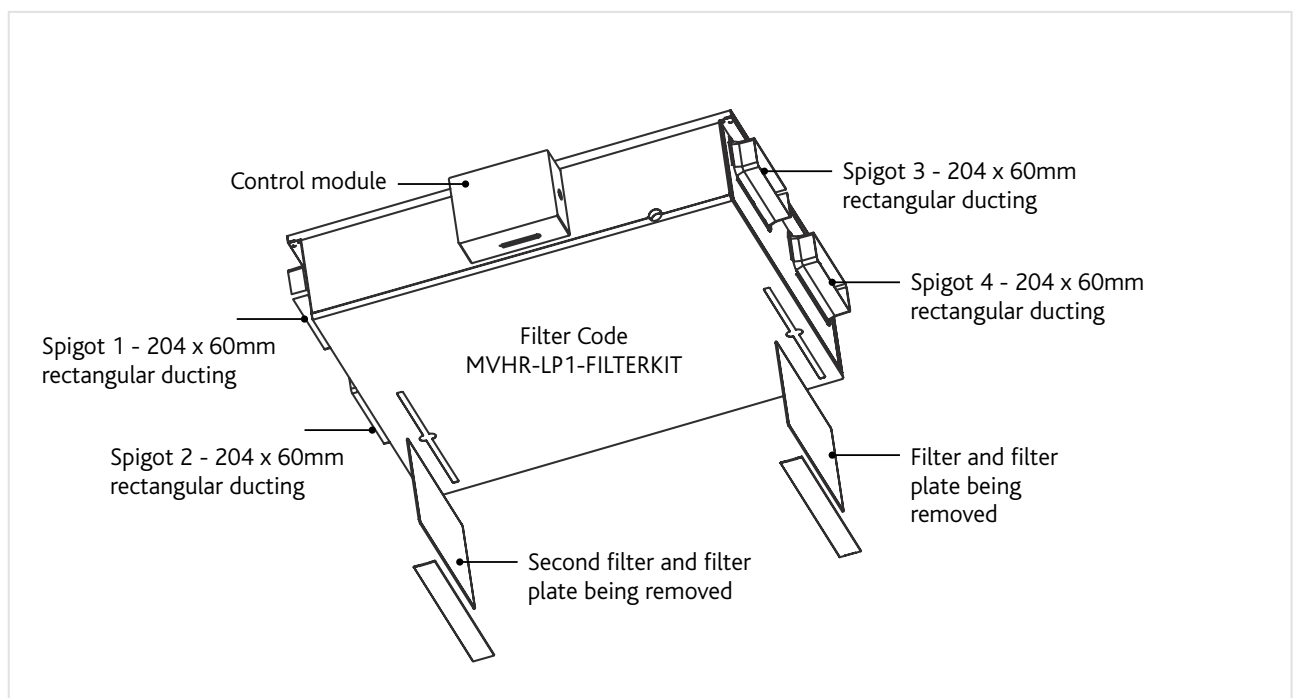
SAP 2009 Test Results ▼

Product Code	MRXBOXAB-ECO-LP1		
Exhaust terminal Configuration	Specific Fan Power (W/l/s)	Heat Exchange Efficiency	Energy Saving Trust Best Practice Compliant
Kitchen + 1 Wet Room	0.54	75%	Yes
Kitchen + 2 Wet Room	0.60	76%	Yes
Kitchen + 3 Wet Room	0.69	77%	Yes
Kitchen + 4 Wet Room	0.79	78%	Yes
Kitchen + 5 Wet Room	0.85	78%	Yes

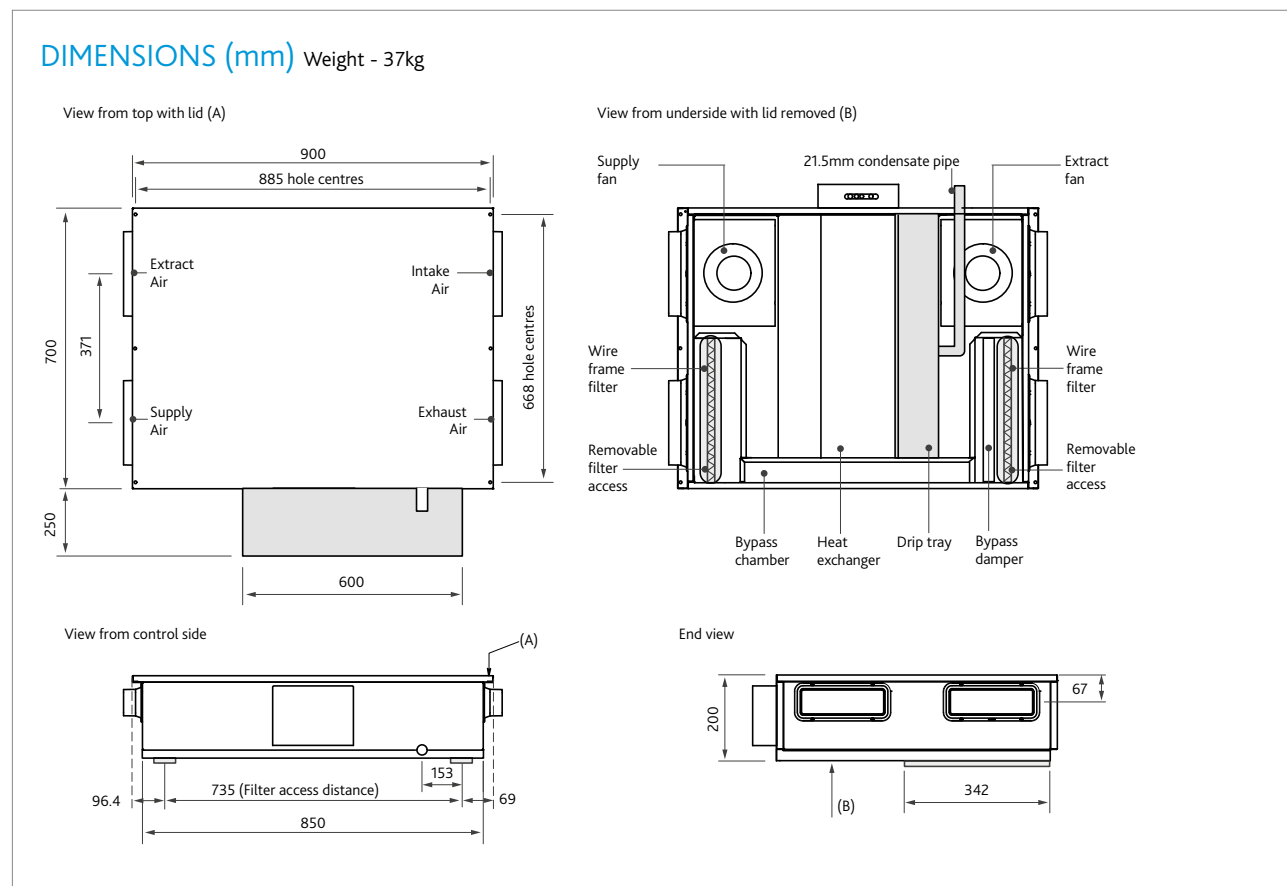
SAP 2012 Test Results ▼

Product Code	MRXBOXAB-ECO-LP1		
Exhaust Terminal Configuration	Specific Fan Power (W/l/s)	Heat Exchange Efficiency	Energy Saving Trust Best Practice Compliant
Kitchen + 1 Wet Room	0.59	76%	Yes
Kitchen + 2 Wet Room	0.71	76%	Yes
Kitchen + 3 Wet Room	0.91	78%	Yes
Kitchen + 4 Wet Room	1.15	79%	Yes
Kitchen + 5 Wet Room	1.40	79%	Yes

General Arrangement ▼



Technical - MRXBOXAB-ECO-LP1 ▼



Electrical Details ▼

Please note: the electrical connection of the unit must be carried out by a qualified electrician.

The unit is supplied with a flexible cord for connection to the mains supply.

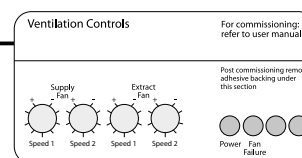
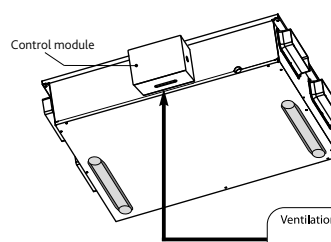
NOTE: This unit must be earthed.

The three core cable from the mains power supply should be connected to a fixed wiring installation in accordance with current IEE wiring regulations.

ELECTRICAL DETAILS: MRXBOXAB-ECO-LP1

Voltage:	230V 1ph 50Hz
Consumption:	1.3 Amp
Fuse rating:	3 Amp

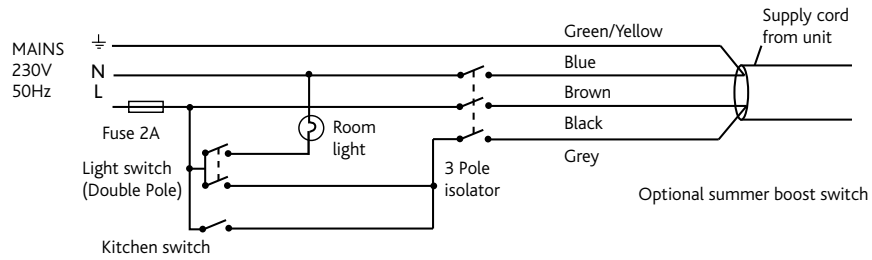
Detail of unit control on control panel.



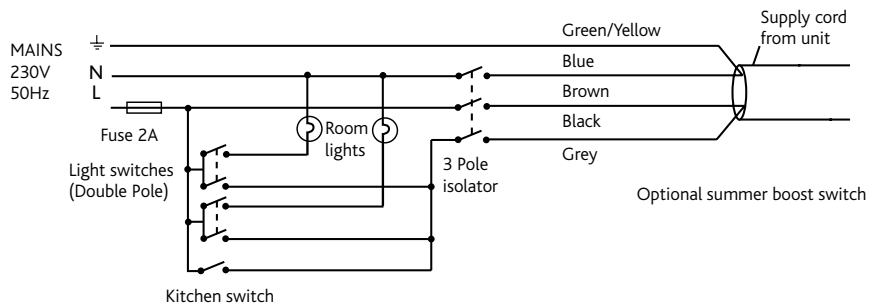
Tamper proof label following commissioning, includes system status indication.

Wiring - MRXBOXAB-ECO-LP1 ▼

UNIT SERVING KITCHEN & BATHROOM



UNIT SERVING KITCHEN & TWO BATHROOMS



OPTIONAL SENSORS AND DETECTORS ▼

Customise MRXBOXAB-ECO-LP1 for enhanced performance. All supplied with pre-plugged 10m data cable and incorporates status LED.

MRXBOX95-PIR (Passive Infrared)

A low voltage sensor, detects movement and activates system. Incorporates overrun timer and timer adjustments.

MRXBOX95-HUM (Relative Humidity)

A low voltage sensor, activates the system when the RH level is above set point. Incorporates overrun timer and RH setpoint level adjustment.

MRXBOX95-RFI (Remote Fail Indicator)

If fan failure occurs the audio visual indicator will flash a warning.



Consultants Specification

SPECIFICATION

The unit shall be manufactured from galvanised sheet steel with a white, pre-painted removable access panel. The unit shall be fully insulated providing excellent thermal and acoustic characteristics and shall be complete with a multi plate, aluminium, counter flow high efficiency heat exchanger block, with a thermal efficiency of up to 80%. The heat exchanger shall be protected by G3 grade filters on fresh air inlet and system extract. The heat exchanger and filters shall be accessible via the underside access panels, enabling quick and easy maintenance.

The unit shall have a maximum depth of 200mm to fit within ceiling void restrictions. The unit shall have low energy, high efficiency EC fan/motor assemblies with sealed for life bearings, the impellers shall be backward curved centrifugal type.

The motors shall be suitable of an ambient temperature of 40°C.

Motor assemblies shall be removable from the underside of the unit and will not require the unit to be removed from situ.

The unit shall be supplied complete with a condensate drip tray and 21.5mm drain connection.

The unit shall be suitable for 204x60mm rectangular ducting.

Note: The unit is also available in opposite handed format, refer to spigot configuration for set up.

The breakout noise level and power requirements shall be as detailed by the unit manufacturer and in accordance with the ventilation equipment schedule.

Units shall be MRXBOXAB-ECO-LP1 and MRXBOXAB-ECO-LP1-OH as manufactured by Nuaire and shall be listed on the PCDB database.

OPERATION

The supply and extract ventilation unit shall be positioned as indicated on the drawings and shall be in accordance with the particular fan schedule in the specification.

The combined supply and extract with heat recovery unit shall supply filtered fresh air to each of the habitable rooms and moisture-laden air shall be extracted from the wet areas e.g. bathroom, en-suite, w.c, kitchen, utility rooms, etc. The supply air shall be pre-heated by the warm extract air via the integrated counter-flow heat exchanger element.

The extracted air shall also be filtered before it reaches the heat exchanger block. The ventilation unit shall vary its speed and therefore the ventilation rate, as it receives signals from one of the following:

- Switched live signal from light/remote switches.

When signals are received, the fan shall alter its speed to adjustable, normal and boost rates.

The unit shall have the facility to commission the supply and extract fans independently on minimum speed (continuous background ventilation), and boost speed, via inbuilt minimum and maximum speed adjustment. The fans shall have infinitely variable speed control.

INTEGRAL AUTOMATIC SUMMER BYPASS

The bypass damper shall open automatically via a wax actuator, allowing the air to bypass the heat exchanger to deliver fresh filtered air during the warmer months.

CONTROL OPTIONS

All versions shall have the following functions integrally mounted within the fan unit on a purpose made PCB, all such components are pre-wired and factory fitted by the manufacturer:

- Independent control of background supply and extract flow rates.
- Independent control of boost speed supply and extract flow rates.
- Integral heat exchanger frost protection.
- Fan failure indication.
- Integral S/L terminal for boost from remote switch, e.g. light switch.
- Additional S/L terminal for 100% boost speed from remote switch, e.g. plate switch.
- Discreet daily run monitor.
- Remote fail indicator (part number MRXBOX95-RFI).
- Indication and controls – The unit shall have clear LED visual indication for maintenance, servicing and operation mode, i.e. summer bypass, frost protection.

MRXBOX-VSC (VISUAL SYSTEM CONTROLLER)

The MRXBOX-VSC is compatible with the Nuaire MRXBOXAB-ECO-LP1 heat recovery units and can be purchased separately. The controller comes complete with commissioning and end user functions.

The display will be a 3.5" LCD display and will remain on standby until such time the screen is touched.

The initial display will show the MVHR system status as listed below:

- Current Fan Speed.
- Current indoor/outside temperature.
- Indicate when the summer bypass is activated.
- Indicate when frost protection is activated.
- Indicate when the filters require cleaning/changing.