

Low Profile Unit

MRXBOXAB-ECO-LP2



The MRXBOXAB-ECO-LP2 low profile MVHR unit with 100% automatic bypass as listed on the SAP Product Characteristics Database (PCDB).

This model is mounted within the ceiling void space and is specifically designed to fit easily into apartments with ceiling void restrictions, where space is at a premium.

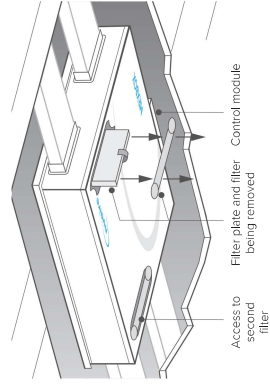
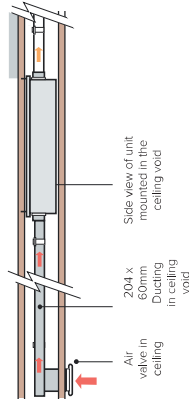
The LP2 has a Summer Bypass function which automatically activates in warmer months to ensure the property is well-ventilated and comfort levels are maintained in the home by continuously drawing in fresh filtered air into the habitable rooms.

It is also designed to be compatible with the latest generation of controls and sensors. Suitable for small to medium-sized properties with a kitchen plus 4 wet rooms.

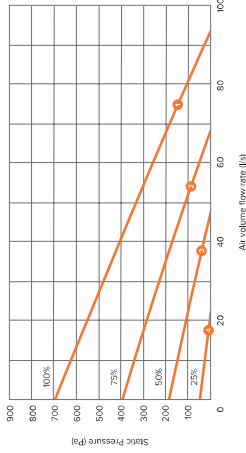
Units are available as SW versions with a third controllable speed for Approved Document F&O purge rates and additional SW switch to select between seasonal bypass logic profiles.

Opposite Handed (OH) configuration available.

Installation Features:



Performance



MRXBOXAB-ECO-LP2

Low profile multi-room supply and extract heat recovery with automatic Summer Bypass.

MRXBOXAB-ECO-LP2-OH

Low profile multi-room supply and extract heat recovery with automatic Summer bypass with reverse handing.

SUMMER/WINTER SWITCH ONLY (SW)

Units are available as SW versions with a third controllable speed and a Summer/Winter switch allowing selection of seasonal bypass logic profiles.

Electrical & Sound

LP2 Sound Data		Sound Power Levels dB re 1pW (Frequency Hz)								dBA @3m
	Maximum power consumption									
Curve	(Watts)	63	125	250	500	1k	2k	4k	8k	
1	163	Open inlet	51	45	50	48	40	42	29	19
		Open outlet	54	49	59	64	61	60	51	43
		Breakout	58	60	61	58	48	41	33	25
2	69	Open inlet	51	43	46	44	36	36	22	<16
		Open outlet	51	45	54	59	55	54	44	34
		Breakout	54	57	56	52	41	34	25	18
3	22	Open inlet	45	37	34	32	24	23	<16	<16
		Open outlet	44	37	43	46	43	41	29	19
		Breakout	47	50	44	40	30	22	<16	<16
4	7	Open inlet	38	31	24	22	<16	<16	<16	<16
		Open outlet	37	30	33	36	33	31	19	<16
		Breakout	40	43	34	30	20	<16	<16	<16

The maximum power consumption shown above (Watts) is consumed on units running continuously, not taking into account any heat recovery saving and based on SAP Product Characteristics 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 Nuaire's fan selector or call the office on 029 2085 8500.

Technical – MRXBOXAB-ECO-LP2

Dimensions (mm) – Standard Unit Configuration

The diagram shows a perspective view of the ventilation control unit. A rectangular control module is mounted on the front panel. An arrow points from the 'Ventilation Controls' section of the control panel to this module. The control panel itself is a vertical rectangle with a 'Ventilation Controls' section at the top and a 'Part commissioning' section at the bottom. The 'Ventilation Controls' section includes a 'Supply' fan speed selector (Speed 1, Speed 2) and an 'Extract' fan speed selector (Speed 1, Speed 2). The 'Part commissioning' section includes a 'Power' button, a 'Fan' button, and a 'Faults' button. A note at the bottom of the panel states: 'For commissioning, refer to user manual'.

The diagram shows a perspective view of the ventilation unit. A control module is connected to the unit via a cable. An arrow points from the control module to the 'Ventilation Controls' section of the user manual. The 'Ventilation Controls' section includes a speed selector with five positions: Speed 1, Speed 2, Speed 3, Supply Extract, and Supply Extract. Below the speed selector is a power switch with a power symbol and a power failure symbol.

Control module

Ventilation Controls

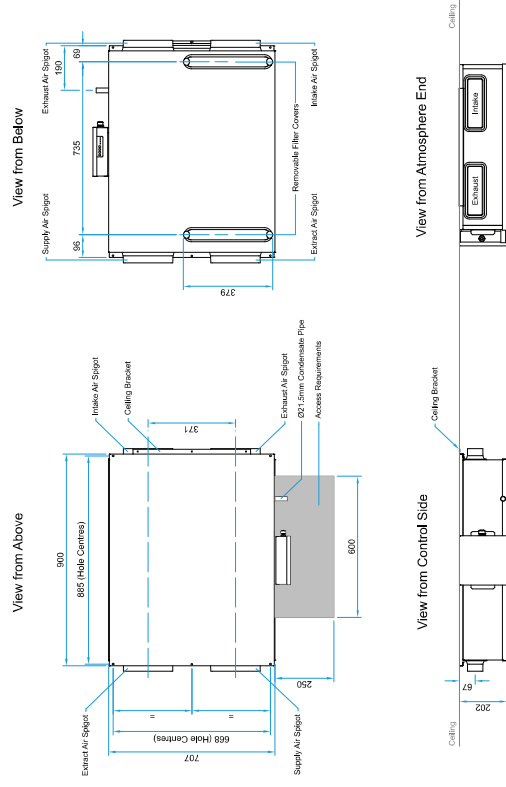
Speed 1 Speed 2 Speed 3 Supply Extract Supply Extract

Power Power failure

For commissioning, refer to user manual

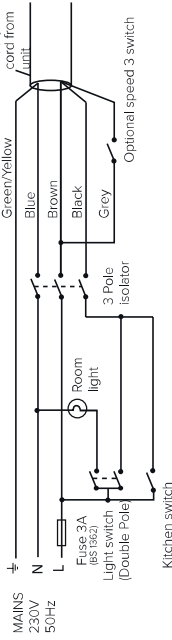
First commissioning remove the cover and follow the instructions in this section

Dimensions (mm) – Standard Unit Configuration

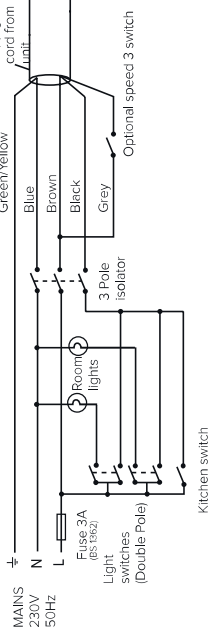


Wiring – MRXBOXAB-ECO-LP2

Unit Serving Kitchen & Bathroom



Unit Serving Kitchen & Two Bathrooms



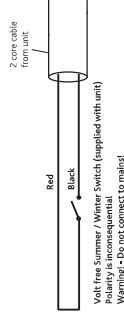
Electrical Details

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 mains power supply cable should be connected to a fixed wiring installation, via a fused isolator, in accordance with current **IEE** wiring regulations.

Summer/Winter Switch



Specification

MRXBOXAB-ECO-LP2

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-block, aluminium, counter-flow, high-efficiency heat exchanger block, with a thermal efficiency of up to 80%. The heat exchanger shall be protected by ISO Coarse 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 for 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-LP2 and MRXBOXAB-ECO-LP2-OH as manufactured by Nuair and shall be listed on the PCDB database.

OPERATION FOR TWO SPEED (STANDARD MODEL)

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/remote switch/humidistat switch

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

Including Automatic Summer Bypass where intake and return air temperatures shall be measured so that supply air temperatures can be maximised during winter months and minimised as external ambient temperature rises. The Summer bypass damper shall be opened by a wax actuator. Supply and Extract air shall be **filtered** (irrespective of the bypass setting (open or closed)).

SUMMER/WINTER (SW) SWITCH THIRD SPEED

The unit shall feature **volt-free** connections for a positional switch controlling the bypass logic profile. Summer setting shall target under 20 degrees C internal dwelling temperature. Winter setting shall ensure heat recovery at all times. Temperature control logic shall be factory pre-set and require no on-site programming. The unit shall feature 3 commissionable speeds for both supply and unit exhaust. It shall be possible to enable the unit to its 3rd speed by means of a switch or a programmable thermostat with occupant override **CM-THERM-CONTROL**. The 3rd speed (overheating) shall be inhibited when outside air temperature exceeds inside temperature and bypass closes so that extracted air cools incoming fresh air.

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.
- Run/fault indication to external control systems/BMS via ES-VF.
- 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.
- Indication and controls – The unit shall have **clear LED visual** indication for maintenance, servicing and operation mode, i.e. Summer Bypass, frost protection.

The unit comes with 2 years warranty (including parts and labour).