MRXBOX95-WH1 MECHANICAL VENTILATION WITH HEAT RECOVERY

UP TO 95% EFFICIENT, SAP APPENDIX Q RECOGNISED.
WALL/CUPBOARD MOUNTING DESIGN FOR MEDIUM TO LARGE HOUSES & APARTMENTS.

BENEFITS

MRXBOX95-WH1 **is designed to provide optimised balanced (supply & extract) mechanical ventilation with heat recovery. Tempered air is delivered into 'living' areas whilst extracting moisture laden air from 'wet' areas creating comfortable well ventilated homes. The unit has the facility to commission the supply & extract fans independently on both minimum and maximum speeds. The heat exchanger block can recover up to 95% of normally wasted heat.**

MEETS BUILDING REGULATIONS
SAP Appendix Q recognised. Part F&L - England & Wales. Scottish technical handbook (BRE398 referenced). Technical booklet K1998.

OPTIMUM PERFORMANCE
Low Specific Fan power and high efficiency results in SAP Q.

SUITABLE FOR LARGER APPLICATIONS
Designed to meet the duty for medium to large properties including 3 storey.

COMPACT
The unit fits easily into cupboards not taking up valuable storage space.

EXTREMELY LOW NOISE LEVELS
Quiet running unit ensuring occupant acceptability.

ADDED SECURITY
Windows may be kept closed.

IMPROVES INDOOR AIR QUALITY
High efficiency filters helps to create a healthy living environment.

LOW & EASY MAINTENANCE
Easy accessible filters from front cover – no tools required. Filter replacement typically every 12 - 18 months.

DESCREET RUN MONITOR
Records units operational time.

INTEGRAL FROST PROTECTION
Protects the unit during extreme cold spells.

PRE-COMMISSIONING FILTER PROTECTION
Filters are covered in a removable protective film to prevent clogged up filters prior to occupant handover.

SIMPLE FAN CONTROLS
Independent controls for supply & extract for quick and easy commissioning.

NO REQUIREMENT FOR TRICKLEVENTS
Reduces noise from outside - overcome draught issues.

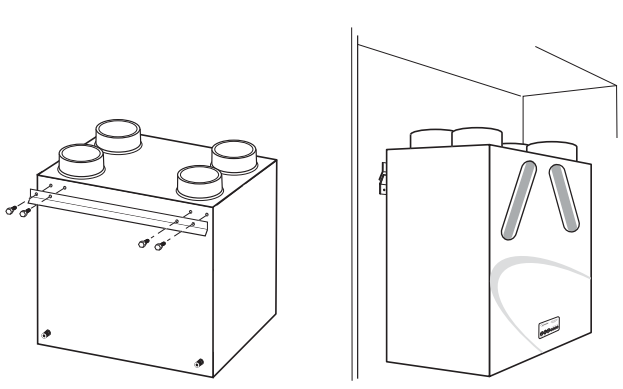
OPTIONAL INTEGRAL HUMIDISTAT AVAILABLE
To automatically boost the fan when humidity levels exceeds the adjustable set point.

OPTIONAL SUMMER BYPASS
Unit delivers fresh clean air during warmer months.

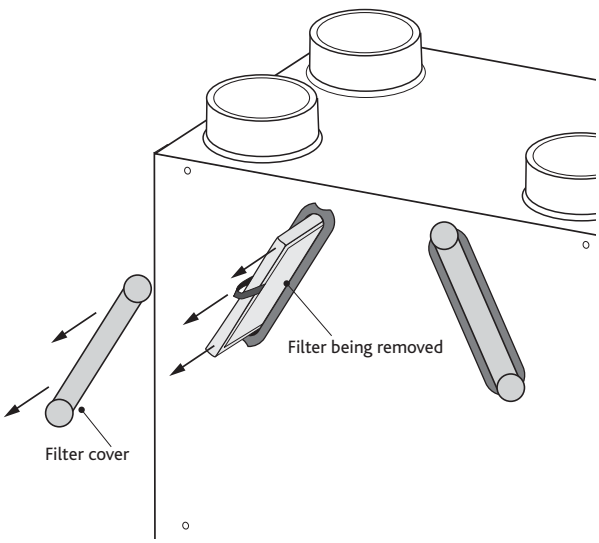
SUMMERTIME BOOST
Boost facility to provide additional fresh air when required.

5 YEAR WARRANTY
5 year parts and 1 year labour warranty guarantee reduced life costs and peace of mind.

INSTALLATION FEATURES



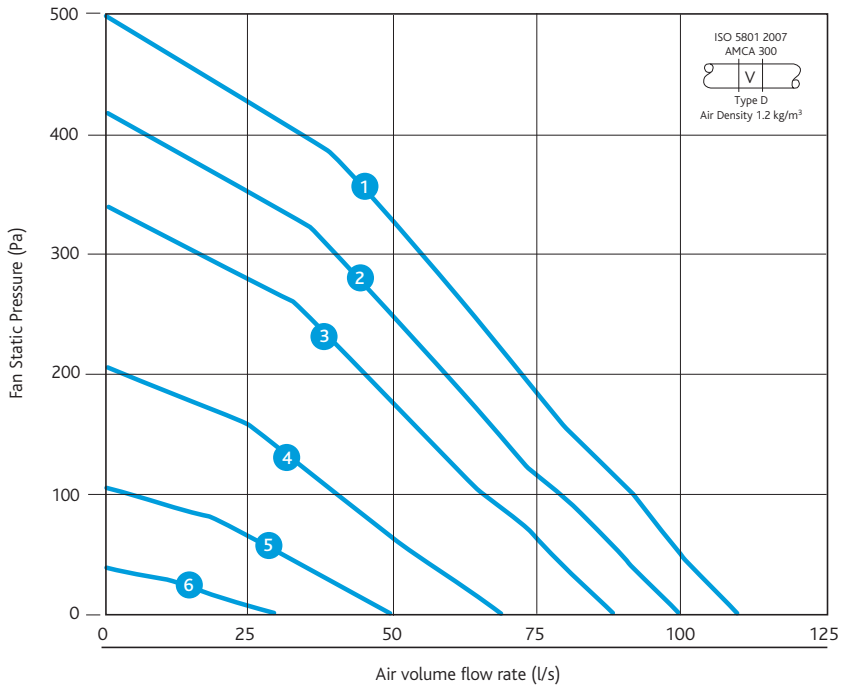
Typical cupboard installation of MRXBOX95-WH1.



Removeable filters without removing front cover.

PERFORMANCE

MRXBOX95-WH1



Code descriptions

MR-XBOX95-WH1

1 2 3 4 5

1. Multi-room supply and extract heat recovery
2. Product range
3. Efficiency
4. Wall/cupboard application
5. High 1 Model

MRXBOX95B-WH1
Multi-room supply and extract heat recovery unit with summer bypass facility.
'B' = Bypass facility

MRXBOX95B-WH1H
Multi-room supply and extract heat recovery unit with summer bypass facility and integral humidistat.
'B' = Bypass facility
'H' = Integral humidistat

MRXBOX95-WH1H
Multi-room supply and extract heat recovery unit with integral humidistat.
'H' = Integral humidistat

MRXBOX95-WH1

ELECTRICAL & SOUND

Curve	Maximum power consumption (Watts)		Sound Power Levels dB re 1pW 63	125	250	500	1K	2K	4K	8K	dBA @3m
1	150	Open inlet	48	51	58	49	47	39	25	<16	31
		Open outlet	56	63	67	67	62	60	50	41	47
		Breakout	56	61	59	53	43	40	25	<16	33
2	114	Open inlet	48	50	57	48	45	37	23	<16	30
		Open outlet	56	62	66	66	60	58	48	39	45
		Breakout	56	60	58	52	41	38	23	<16	32
3	75	Open inlet	47	50	56	46	43	35	21	<16	29
		Open outlet	55	62	65	64	58	56	46	37	44
		Breakout	55	60	57	50	39	36	21	<16	31
4	36	Open inlet	46	48	53	43	37	29	<16	-	25
		Open outlet	54	60	62	61	52	50	40	31	40
		Breakout	54	58	54	47	33	30	<16	<16	28
5	14	Open Inlet	44	45	50	38	30	22	<16	<16	22
		Open outlet	52	57	59	56	45	43	33	24	35
		Breakout	52	55	51	42	26	23	<16	<16	24
6	8	Open inlet	41	42	44	30	19	<16	<16	<16	<16
		Open outlet	49	54	53	48	34	32	22	<16	27
		Breakout	49	52	45	34	<16	<16	<16	<16	19

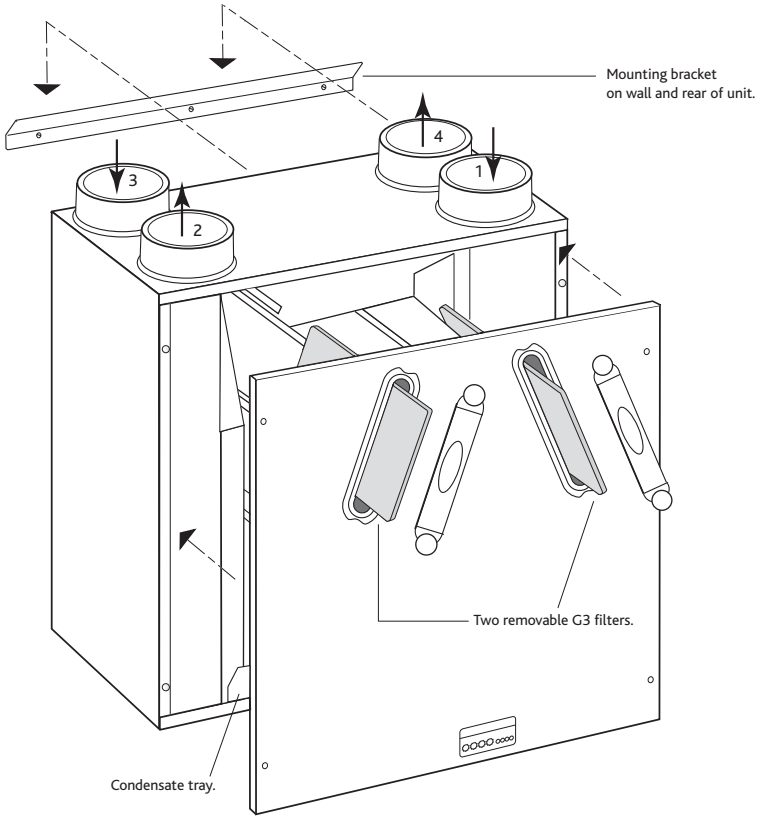
The maximum power consumption shown above (Watts) is consumed on units running continuously, not taking into account any heat recovery saving based on SAP Appendix Q testing.

SAP APPENDIX Q TEST RESULTS

Application	Specific fan power (W/l/s)	Heat exchange efficiency %	Energy Saving Trust Best Practice Compliant
Kitchen Plus 1 wet room	0.41	91	Yes
Kitchen Plus 2 wet rooms	0.40	91	Yes
Kitchen Plus 3 wet rooms	0.46	90	Yes
Kitchen + 4 wet rooms	0.53	90	Yes

Application	Specific fan power (W/l/s)	Heat exchange efficiency %	Energy Saving Trust Best Practice Compliant
Kitchen + 5 wet rooms	0.62	89	Yes
Kitchen + 6 wet rooms	0.72	88	Yes
Kitchen + 7 wet rooms	0.83	87	Yes

GENERAL ARRANGEMENT MRXBOX95-WH1

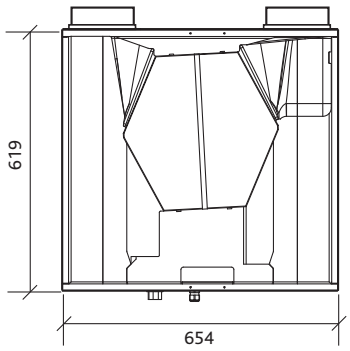


SPIGOT LOCATION & DUCTING REFERENCES

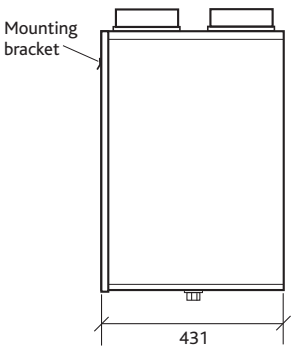
Spigot 1. 150mm dia. = extract air from dwelling.
Spigot 2. 150mm dia. = exhaust air to outside.
Spigot 3. 150mm dia. = intake air from outside.
Spigot 4. 150mm dia. = supply air to house.

MRXBOX95-WH1 - DIMENSIONS (mm)

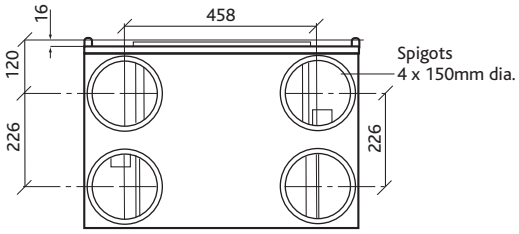
View from front with cover removed



Side view



View from top



ELECTRICAL CONNECTION

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

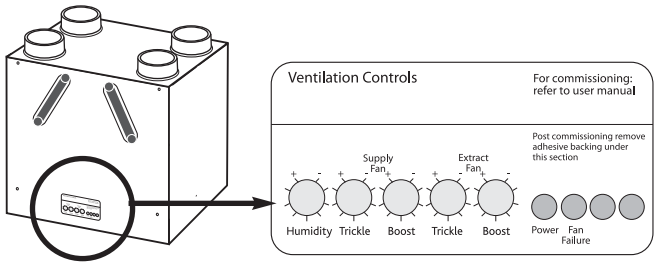
The unit is supplied with a flexible cord for connection to the mains supply.

Electrical details:-

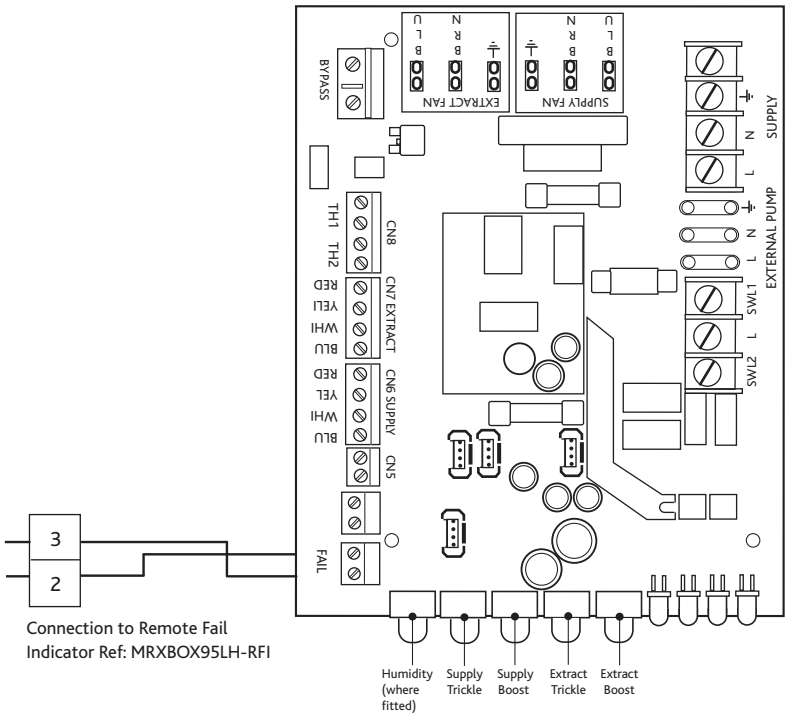
Voltage:	240V 1ph 50Hz
Consumption:	WH1 - 1.3 Amp
Fuse rating:	3 Amp

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.



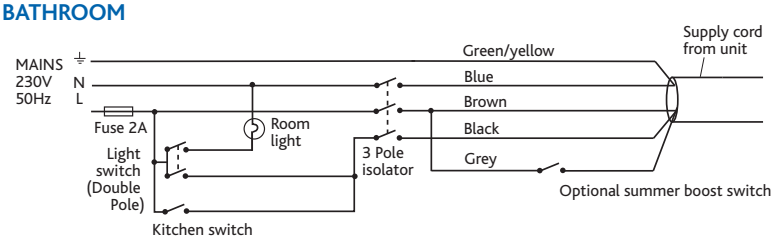
Detail of unit control on front panel.
Tamper proof label following commissioning.



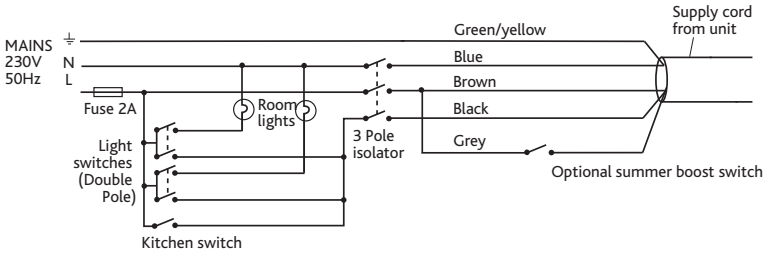
Connection to Remote Fail Indicator Ref: MRXBOX95LH-RFI

Note: Wiring is for reference purposes only as the connections above are factory fitted.
The unit is pre-wired with a 2 metre fly lead.

UNIT SERVING KITCHEN AND BATHROOM



UNIT SERVING KITCHEN AND TWO BATHROOMS



CONSULTANTS SPECIFICATION

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 vitiated 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.

SPECIFICATION

The unit shall be fully insulated providing excellent thermal and acoustic characteristics and shall be complete with a multi plate counter flow high efficiency heat exchanger block, with a thermal efficiency of up to 95%. 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 front access panel, enabling quick and easy maintenance.

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.

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

The unit shall be suitable for 150mm diameter circular ducting.

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 MRXBOX95-WH1 as manufactured by Nuaire.

OPTIONAL FEATURE CODES

OPTIONAL SUMMER BYPASS (MRXBOX95B-WH1)

The bypass opens automatically when outside temperature exceeds 20°C.

This opens the damper via an actuator. Outside air supplied through the bypass is still filtered, so the air quality is optimal, irrespective of the bypass setting (open or closed).

OPTIONAL INTEGRAL HUMIDITY SENSOR (MRXBOX95-WH1H)

The integral humidity sensor incorporated within the extract fan chamber will automatically boost both the extract and supply fan, to the commissioned boost speed, when the humidity level exceeds that set by the front panel mounted adjustment potentiometer.

OPTIONAL SUMMER BYPASS & INTEGRAL HUMIDITY SENSOR (MRXBOX95B-WH1H)

CONTROL OPTIONS

All versions shall have the following functions integrally mounted within the fan unit on a purpose made PCB, all such components 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 fan failure indication.
- Integral S/L terminal for boost to commissioned level, from remote switch, e.g. light switch.
- Additional S/L terminal for 100% boost speed, from remote switch e.g. plate switch.
- Integral heat exchanger frost protection.
- Discreet daily run monitor.
- Remote fail indicator (Part number-MRXBOX95LH-RFI).

The unit shall be offered with a 5 year warranty.

The manufacturer's recommendations should be observed at all times.
The unit shall be the MRXBOX95-WH1 and shall be manufactured by Nuaire.