

# MRXBOX95AB-WM1 (with automatic summer bypass) & MRXBOX95-WM1

The MRXBOX95AB-WM1 has been designed with automatic summer bypass and the facility to commission the supply and extract fans independently on both minimum and maximum speeds, in addition to the features you will find on the standard MRXBOX95-WM1.

Both the MRXBOX95AB-WM1 and MRXBOX95-WM1 are designed to provide optimised balanced (supply and 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 uses the latest generation of low voltage DC fans and motors, counter flow heat exchanger and easy accessible controls. The heat exchanger block can recover up to 95% of the normally wasted heat. The two independent fans have full speed control for background and boost ventilation rates, as well as a run-on timer facility. Both units are listed on the SAP Product Characteristics Database.

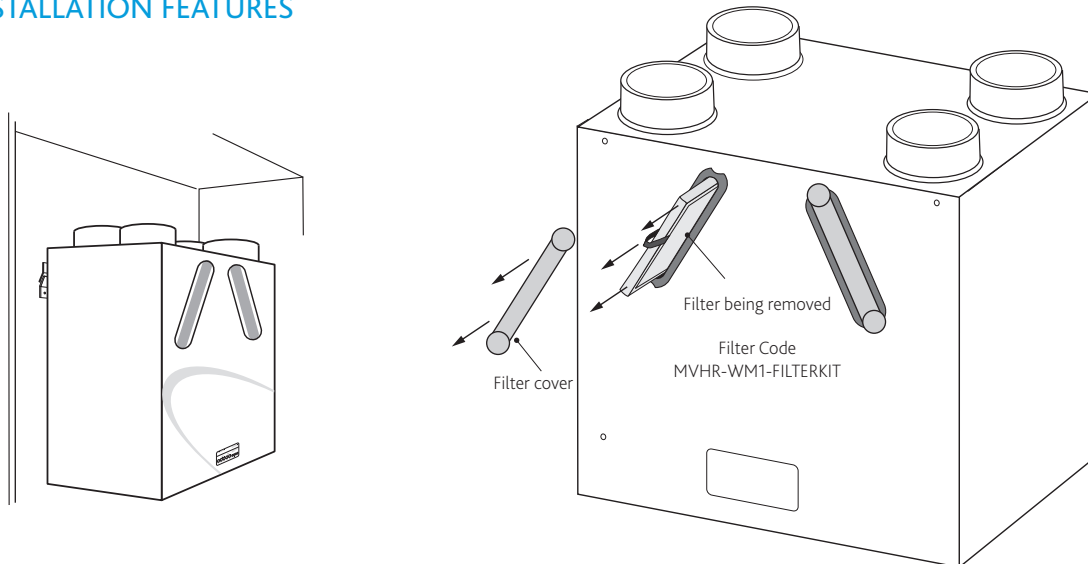
Sensors for the MRXBOX95(AB)-WM1 include:

- MRXBOX95-PIR (Passive Infrared) - A low voltage sensor, detects movement and activates system. Incorporates overrun timer and timer adjustments.
- MRXBOX95-HUM (Humidity) - A low voltage sensor, activates the system when the RH (Relative Humidity) sensor level is above set point. Incorporates overrun timer and RH set point level adjustment.
- MRXBOX95-RFI (Remote Fail Indicator) - If fan failure occurs, the audio visual indicator will flash a warning.

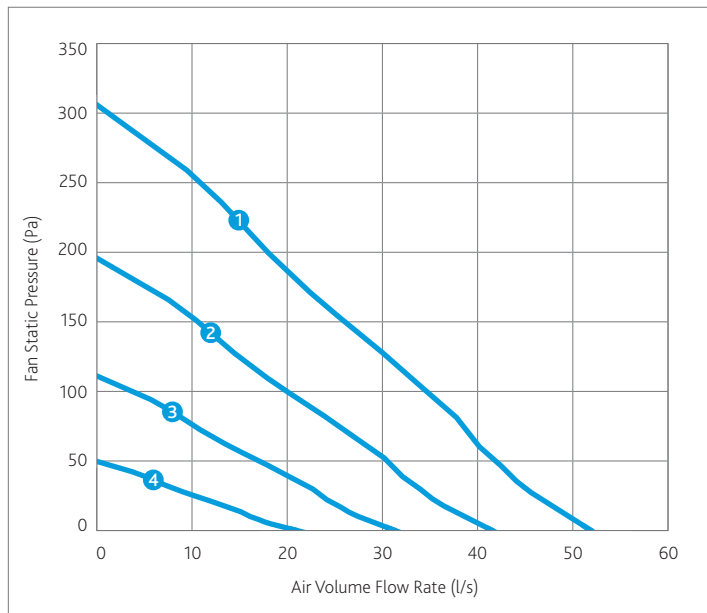


## Typical Installation

### INSTALLATION FEATURES



## Performance - MRXBOX95(AB)-WM1



### CODE DESCRIPTION

#### MRXBOX95-WM1

1 2 3 4

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

#### MRXBOX95AB -WM1

1 2 3 4 5 6

1. Multi-room supply and extract heat recovery
2. Product range
3. Efficiency
4. Automatic Summer Bypass
5. Wall/cupboard application
6. Medium duty

## Electrical & Sound

Curve	Maximum power consumption (Watts)	Frequency/Hz	Sound Power Levels dB re 1pW								dBA @3m
			63	125	250	500	1K	2K	4K	8K	
1	71	Open inlet	45	41	48	47	41	39	24	24	33
		Open Outlet	48	51	57	59	54	47	39	33	
		Breakout	51	50	53	51	43	38	30	26	
2	36	Open inlet	43	39	45	43	36	34	19	19	26
		Open Outlet	46	49	54	55	49	42	34	28	
		Breakout	49	48	50	47	38	33	25	21	
3	15	Open inlet	42	37	42	39	30	28	<16	<16	22
		Open Outlet	45	47	51	51	43	36	28	22	
		Breakout	48	46	47	43	32	27	19	<16	
4	5	Open inlet	40	34	38	33	21	19	<16	<16	17
		Open Outlet	43	44	47	45	34	27	19	<16	
		Breakout	46	43	43	37	23	18	<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 Appendix Q 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.

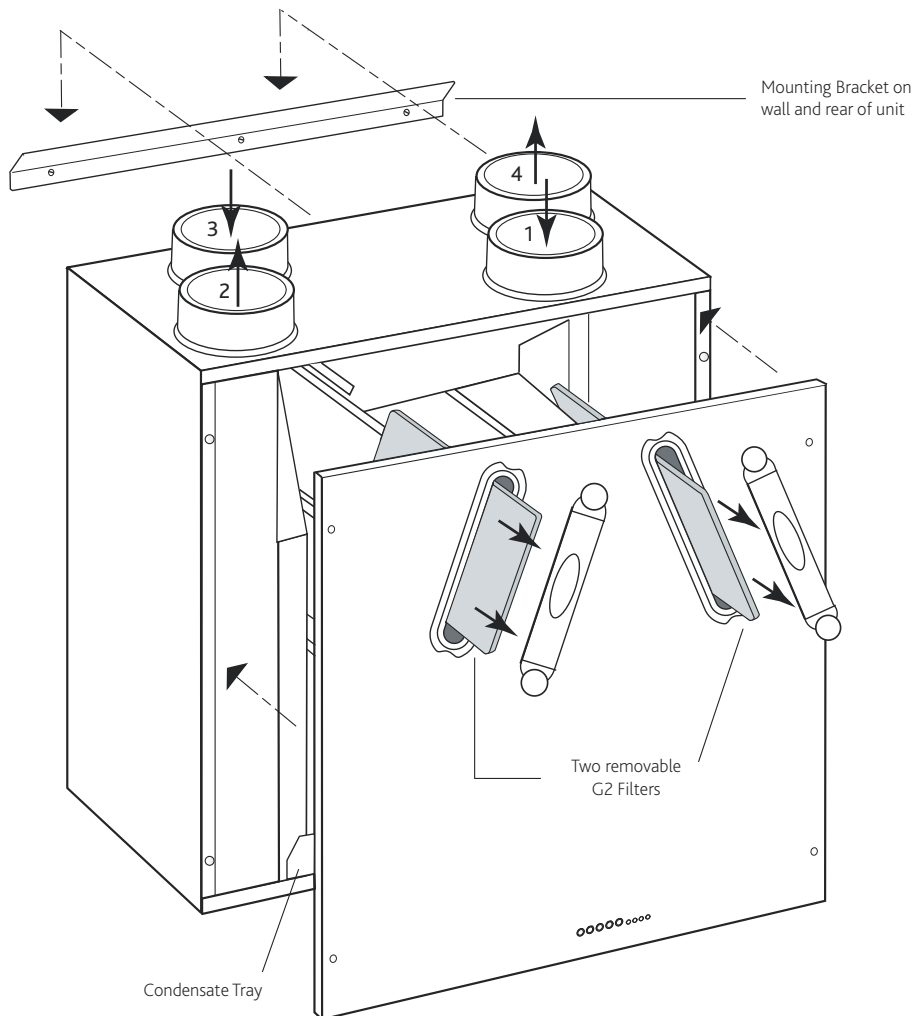
## SAP 2012 Test Results

	MRXBOX95AB-WM1			MRXBOX95-WM1		
Application	Specific Fan Power (W/l/s)	Heat Exchange Efficiency	Energy Saving Trust Best Practice Compliant	Specific Fan Power (W/l/s)	Heat Exchange Efficiency	Energy Saving Trust Best Practice Compliant
Kitchen + 1 Wet Room	0.91	86%	Yes	0.72	92%	Yes
Kitchen + 2 Wet Room	1.26	85%	Yes	0.99	91%	Yes

## General Arrangement

### SPIGOT LOCATION & DUCTING REFERENCES

- Spigot 1. 125mm dia. = Extract air from dwelling.
- Spigot 2. 125mm dia. = Exhaust air to outside.
- Spigot 3. 125mm dia. = Intake air from outside.
- Spigot 4. 125mm dia. = Supply air to property.

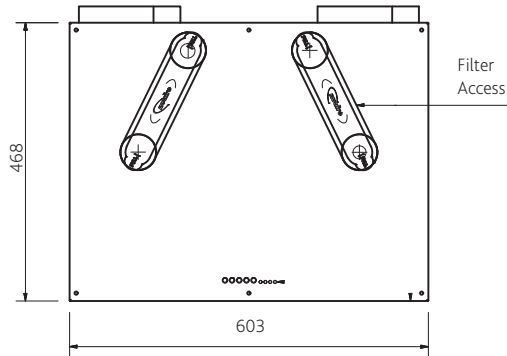


## Technical - MRXBOX95(AB)-WM1

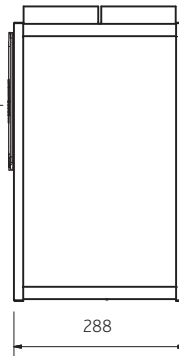
### DIMENSIONS (mm)

Weight - 16kg

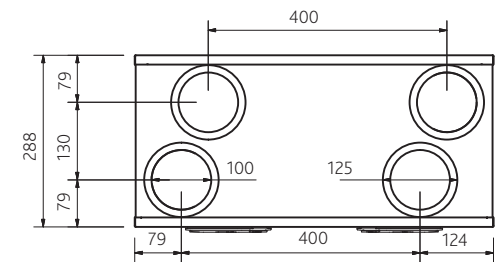
Front View



Side View



View from top



## 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.

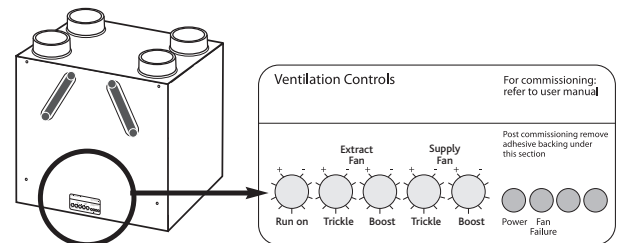
NOTE: This unit must be earthed.

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

#### ELECTRICAL DETAILS: MRXBOX95-WM1

Voltage:	230V 1ph 50Hz
Consumption:	75W - 0.6 Amp
Fuse rating:	3 Amp

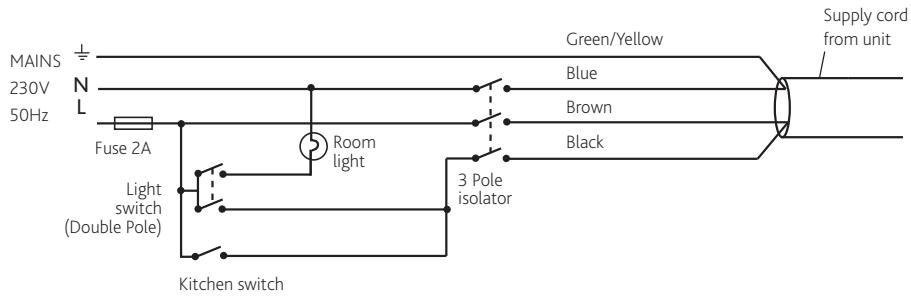
#### Detail of unit control on front panel.



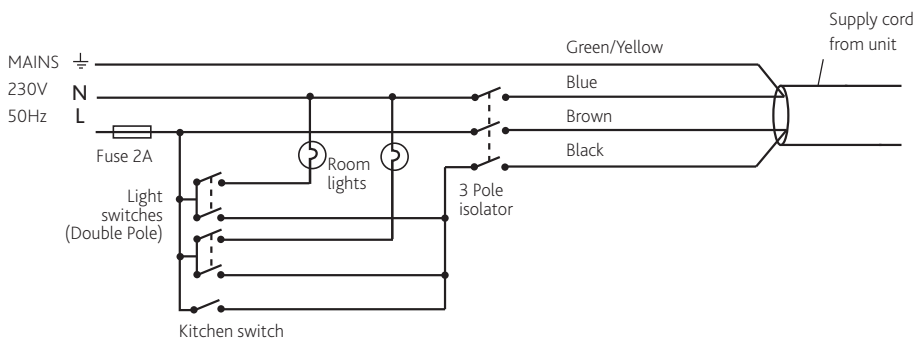
Tamper proof label following commissioning, includes system status indication.

# Wiring - MRXBOX95(AB)-WM1

## UNIT SERVING KITCHEN & BATHROOM



## UNIT SERVING KITCHEN & TWO BATHROOMS



### OPTIONAL SENSORS AND DETECTORS

Customise MRXBOX95AB-WM1 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 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 G2 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 d.c. 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 an insulated condensate drip tray and 21.5mm drain connection.

The unit shall be suitable for 125mm circular 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 MRXBOX95-WM1 or MRXBOX95AB-WM1 as manufactured by Nuair and shall be listed on the SAP Appendix Q database.

## OPERATION

The supply and extract system shall be wall/cupboard mounted in accordance with 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 all 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 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.
- Optional externally interconnected sensors.

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

An adjustable run-on facility is integrated into the unit which allows the fans to run-on for between 1 and 60 minutes after the signals have been switched off.

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 – (MRXBOX95AB-WM1)

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 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.
- Integral adjustable run on timer.
- Fan failure indication.
- Integral S/L terminal for boost from remote switch, e.g. light switch.
- Indication and controls – The unit shall have clear LED visual indication for maintenance, servicing and operation mode, i.e. summer bypass, frost protection.

# MRXBOX95AB-WM1-OH (with automatic summer bypass) & MRXBOX95-WM1-OH

The MRXBOX95AB-WM1-OH has been designed with automatic summer bypass and the facility to commission the supply and extract fans independently on both minimum and maximum speeds, in addition to the features you will find on the standard MRXBOX95-WM1-OH.

Both the MRXBOX95AB-WM1-OH and MRXBOX95-WM1-OH are designed to provide optimised balanced (supply and 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 uses the latest generation of low voltage DC fans and motors, counter flow heat exchanger and easy accessible controls. The heat exchanger block can recover up to 95% of the normally wasted heat. The two independent fans have full speed control for background and boost ventilation rates, as well as a run-on timer facility. Both units are listed on the SAP Product Characteristics Database.

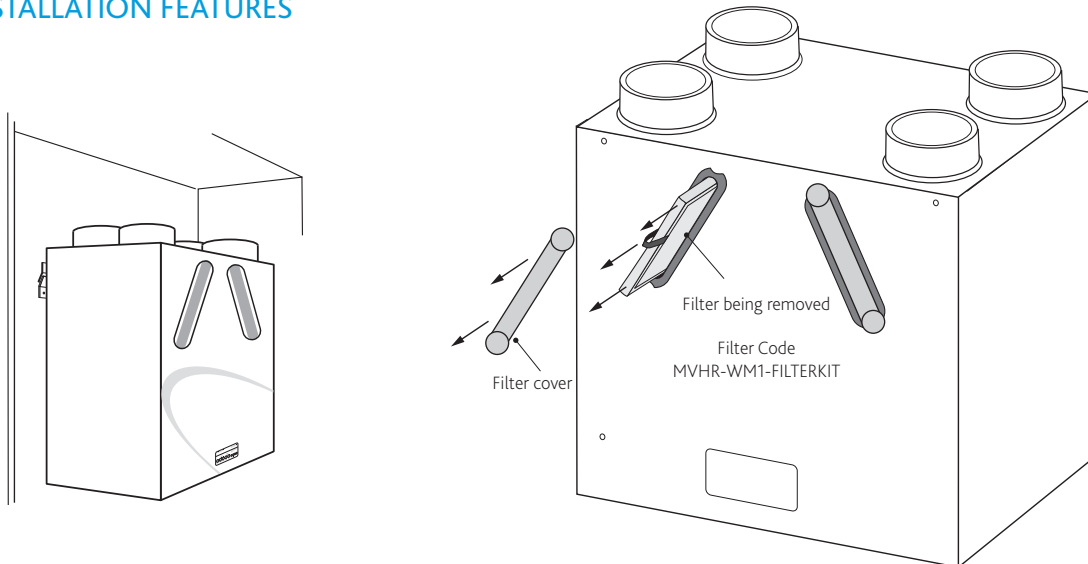
Sensors for the MRXBOX95(AB)-WM1-OH include:

- MRXBOX95-PIR (Passive Infrared) - A low voltage sensor, detects movement and activates system. Incorporates overrun timer and timer adjustments.
- MRXBOX95-HUM (Humidity) - A low voltage sensor, activates the system when the RH level is above set point. Incorporates overrun timer and RH set point level adjustment.
- MRXBOX95-RFI (Remote Fail Indicator) - If fan failure occurs, the audio visual indicator will flash a warning.

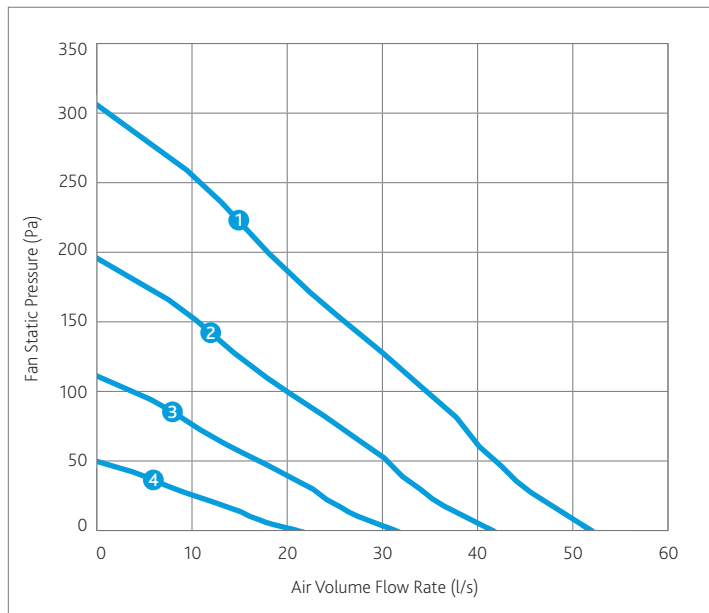


## Typical Installation

### INSTALLATION FEATURES



## Performance - MRXBOX95(AB)-WM1-OH



### CODE DESCRIPTION

MRXBOX95-WM1-OH

1 2 3 4 5 6

1. Multi-room supply and extract heat recovery
2. Product range
3. Efficiency
4. Wall/cupboard application
5. Medium duty
6. Opposite hand

MRXBOX95AB -WM1-OH

1 2 3 4 5 6 7

1. Multi-room supply and extract heat recovery
2. Product range
3. Efficiency
4. Automatic Summer Bypass
5. Wall/cupboard application
6. Medium duty
7. Opposite hand

## Electrical & Sound

	Maximum power consumption (Watts)	Frequency/Hz	63	125	250	500	1K	2K	4K	8K	dBa @3m
Curve			Sound Power Levels dB re 1pW								
1	71	Open inlet	45	41	48	47	41	39	24	24	
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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 Appendix Q 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.



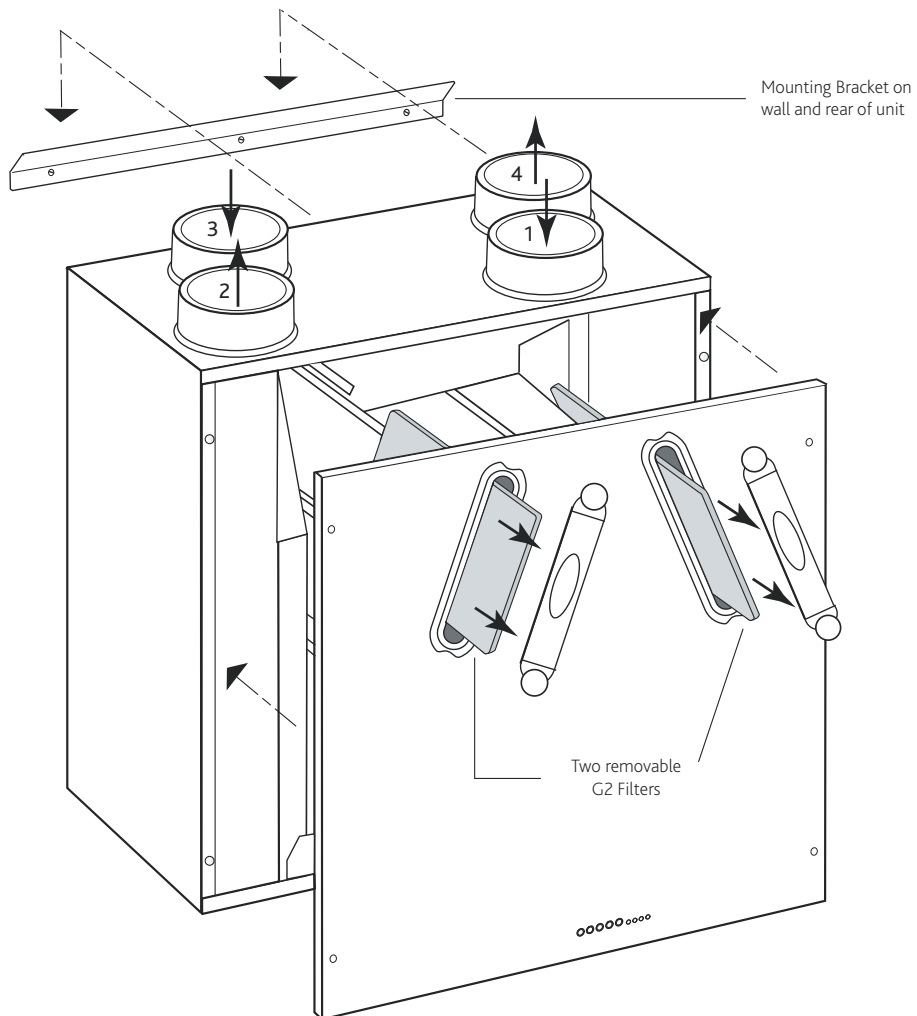
## SAP 2012 Test Results

Product Code	MRXBOX95AB-WM1-OH			MRXBOX95-WM1-OH		
SAP Identifier	MRXBOX95AB-WM1			MRXBOX95-WM1		
Application	Specific Fan Power (W/l/s)	Heat Exchange Efficiency	Energy Saving Trust Best Practice Compliant	Specific Fan Power (W/l/s)	Heat Exchange Efficiency	Energy Saving Trust Best Practice Compliant
Kitchen + 1 Wet Room	0.91	86%	Yes	0.72	92%	Yes
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## General Arrangement

### SPIGOT LOCATION & DUCTING REFERENCES

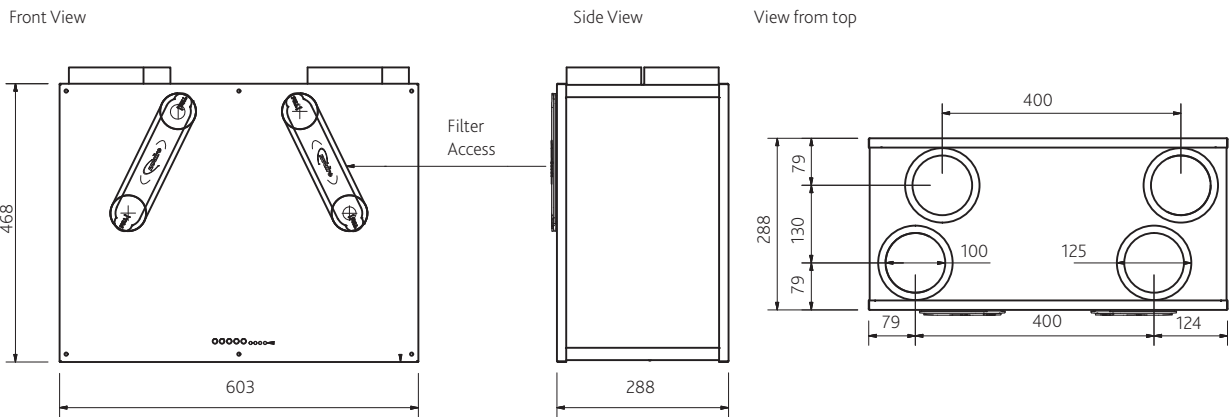
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- Spigot 4. 125mm dia. = Exhaust air to outside.



# Technical - MRXBOX95(AB)-WM1-OH

## DIMENSIONS (mm)

Weight - 16kg



## Electrical Details

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

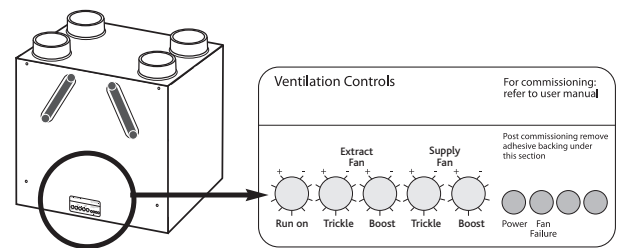
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NOTE: This unit must be earthed.

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

ELECTRICAL DETAILS: MRXBOX95-WM1-OH	
Voltage:	230V 1ph 50Hz
Consumption:	75W - 0.6 Amp
Fuse rating:	3 Amp

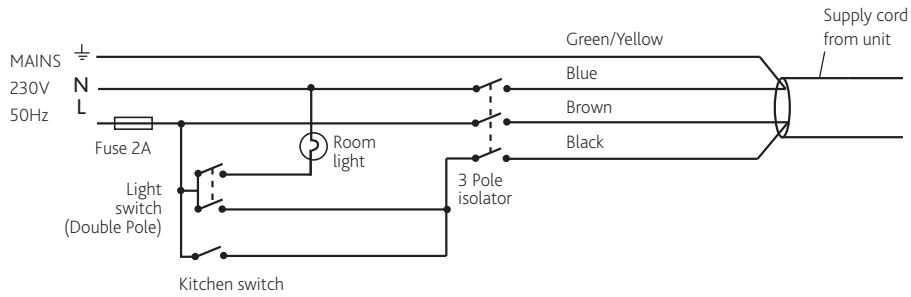
### Detail of unit control on front panel.



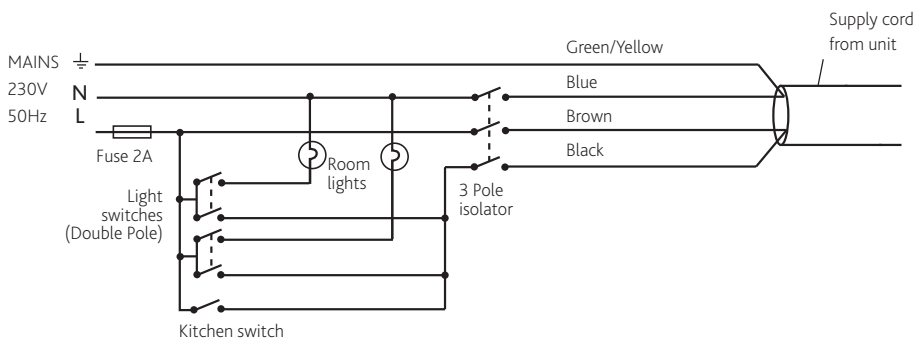
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# Wiring - MRXBOX95(AB)-WM1-OH

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## UNIT SERVING KITCHEN & TWO BATHROOMS



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Units shall be MRXBOX95-WM1-OH or MRXBOX95AB-WM1-OH as manufactured by Nuaire and shall be listed on the SAP Appendix Q database under product codes MRXBOX95-WM1 and MRXBOX95AB-WM1 respectively.

## OPERATION

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