

MRXBOX95AB-WH1 (with automatic summer bypass) & MRXBOX95-WH1

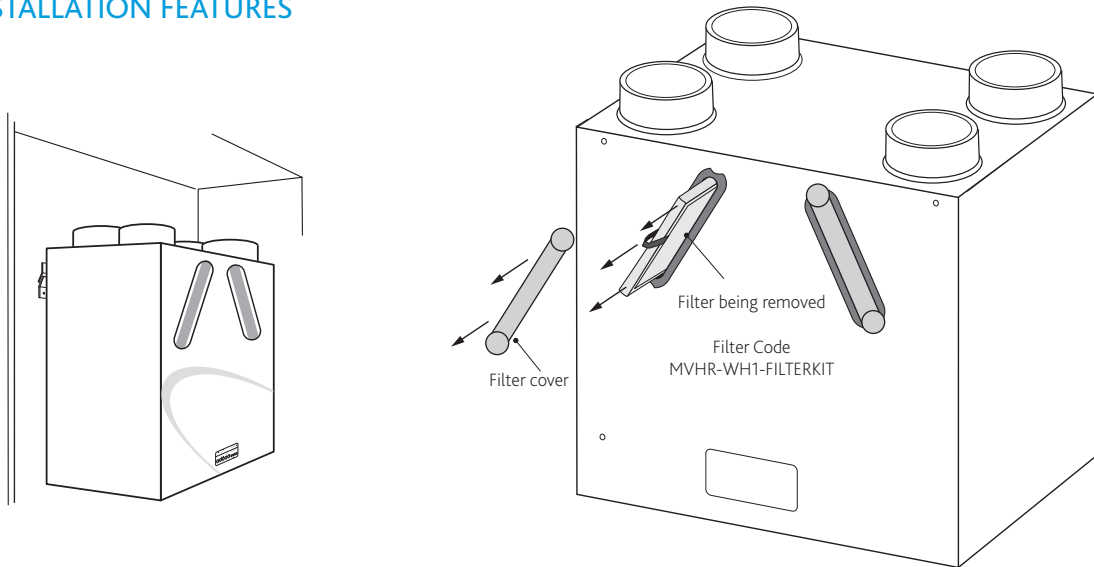
The MRXBOX95AB-WH1 has been designed with automatic summer bypass and the facility to commission the supply and extract fans independently on both minimum and maximum speeds, in addition to the features you will find on the standard MRXBOX95-WH1.

Both the MRXBOX95AB-WH1 and MRXBOX95-WH1 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 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. Both units are listed on the SAP Product Characteristics Database.

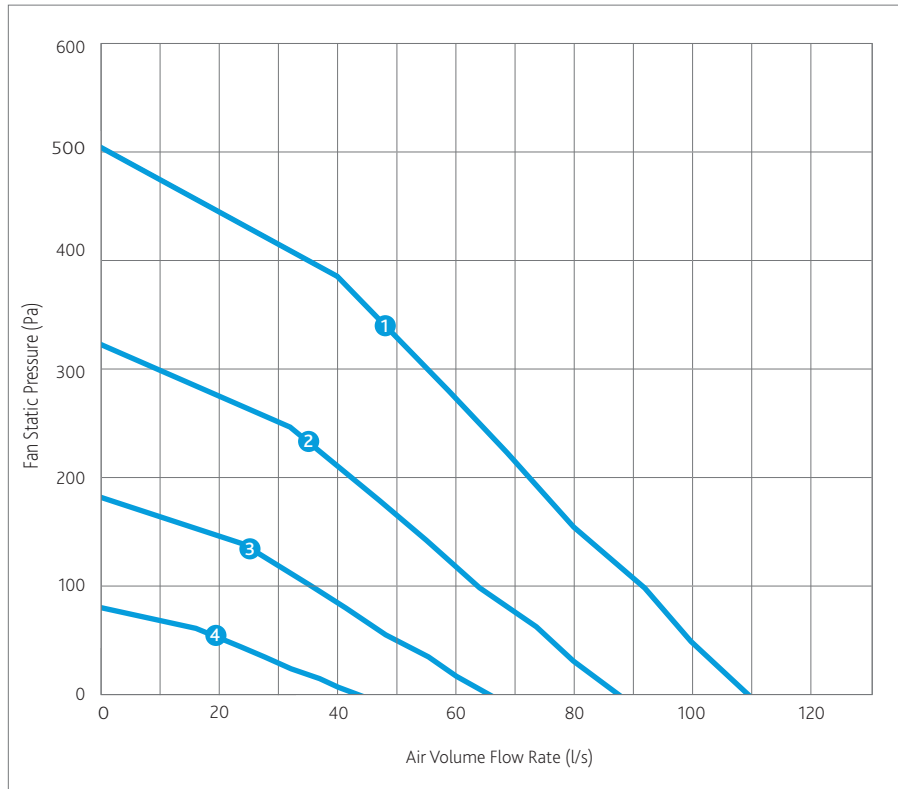


Typical Installation

INSTALLATION FEATURES



Performance - MRBOX95(AB)-WH1



CODE DESCRIPTION

MRXBOX95-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

MRXBOX95AB-WH1

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. High 1 Model

Electrical & Sound

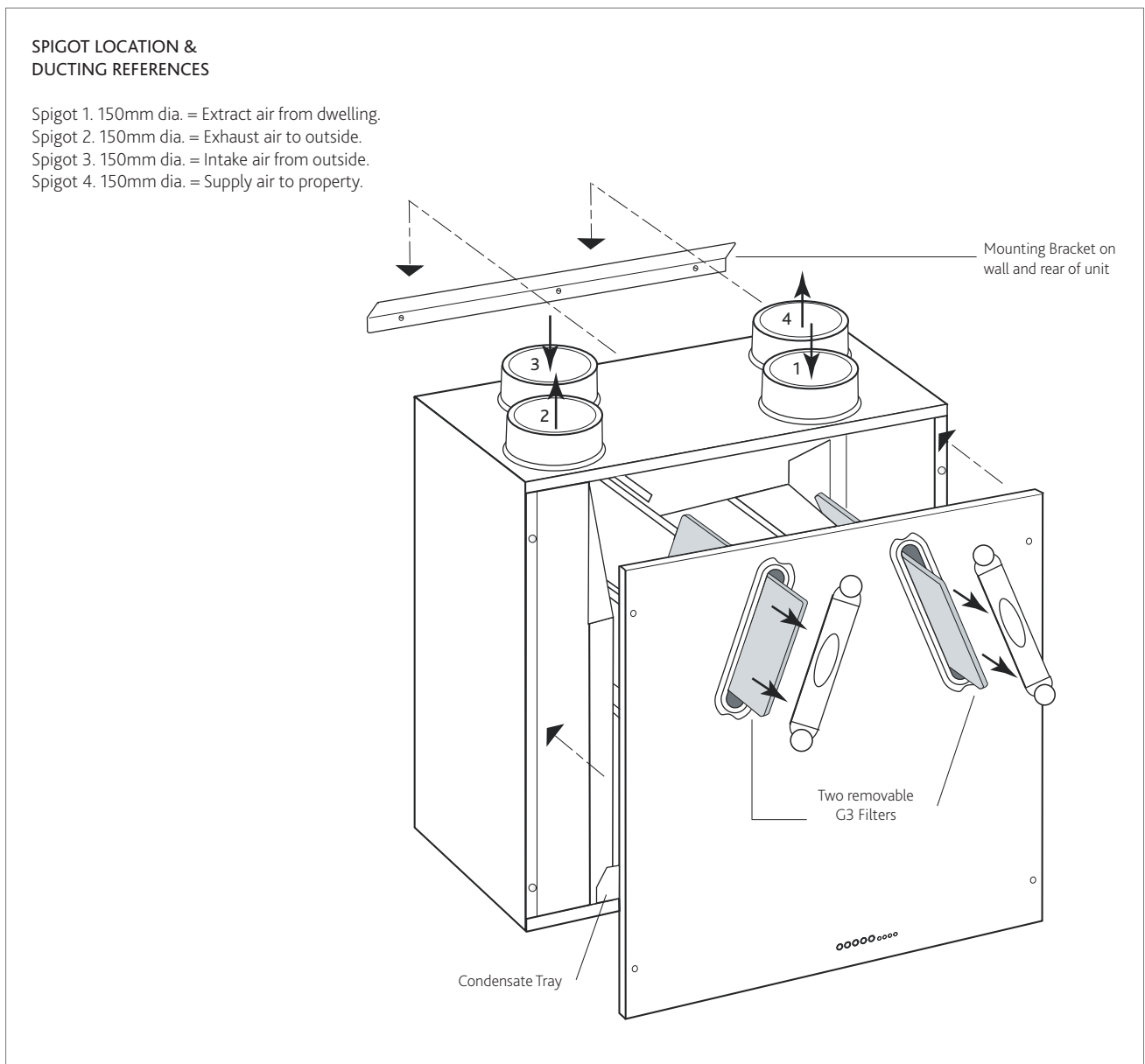
Curve	Maximum power consumption (Watts)	Frequency/Hz	Sound Power Levels dB re 1pW								dBA @3m
			63	125	250	500	1K	2K	4K	8K	
1	158	Open inlet	48	51	58	49	47	39	25	<16	36
		Open Outlet	56	63	67	67	62	60	50	41	
		Breakout	56	61	59	53	43	40	25	<16	
2	81	Open inlet	46	49	55	45	42	34	20	<16	30
		Open Outlet	54	61	64	63	57	55	45	36	
		Breakout	54	59	56	49	38	35	20	<16	
3	34	Open inlet	45	47	52	41	36	28	<16	<16	27
		Open Outlet	53	59	61	59	51	49	39	30	
		Breakout	53	57	53	45	32	29	<16	<16	
4	10	Open inlet	43	44	48	35	27	19	<16	<16	22
		Open Outlet	51	56	57	53	42	40	30	21	
		Breakout	51	54	49	39	23	20	<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

Product Code	MRXBOX95AB-WH1			MRXBOX95-WH1		
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	0.52	88%	Yes	0.42	91%	Yes
Kitchen + 2 Wet Room	0.56	88%	Yes	0.50	91%	Yes
Kitchen + 3 Wet Room	0.67	88%	Yes	0.61	89%	Yes
Kitchen + 4 Wet Room	0.78	86%	Yes	0.75	88%	Yes
Kitchen + 5 Wet Room	0.95	86%	Yes	0.90	87%	Yes
Kitchen + 6 Wet Room	1.16	85%	Yes	1.05	85%	Yes
Kitchen + 7 Wet Room	1.40	85%	Yes	-	-	Yes

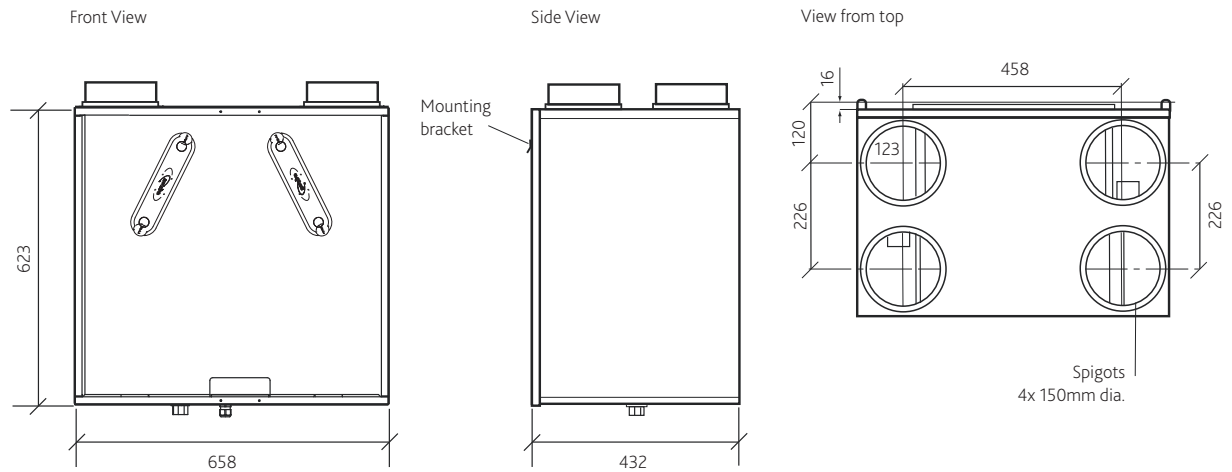
General Arrangement



Technical - MRBOX95(AB)-WH1

DIMENSIONS (mm)

Weight - 24kg



Electrical Details

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

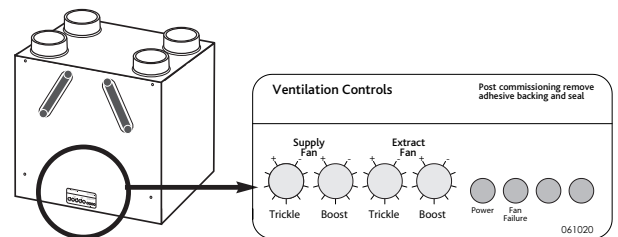
The unit is supplied with a flexible cord for connection to the mains supply.

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-WH1	
Voltage:	230V 1ph 50Hz
Consumption:	WH1 - 1.3 Amp
Fuse rating:	3 Amp

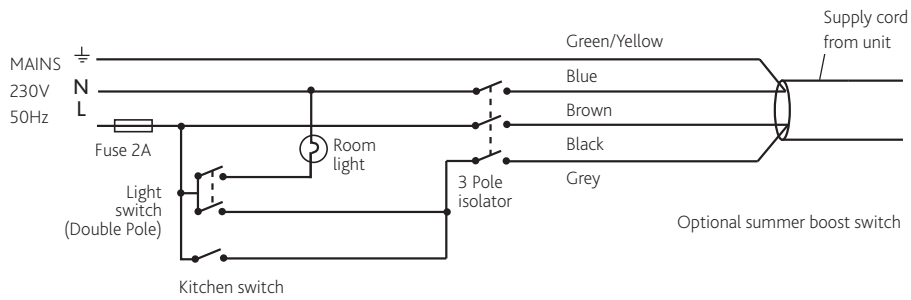
Detail of unit control on front panel.



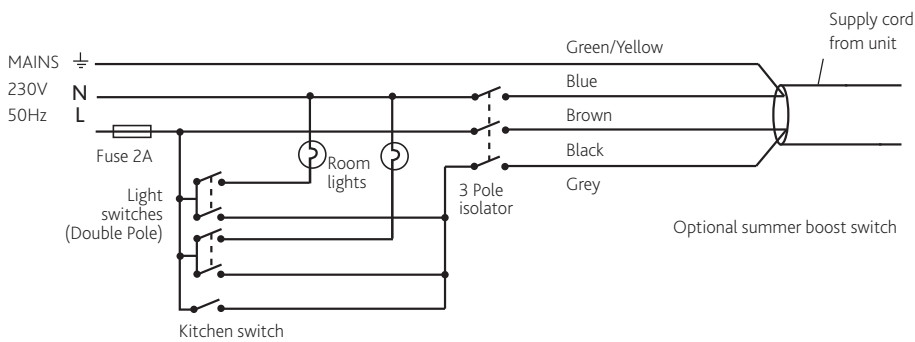
Tamper proof label following commissioning, includes system status indication.

Wiring - MRBOX95(AB)-WH1

UNIT SERVING KITCHEN & BATHROOM



UNIT SERVING KITCHEN & TWO BATHROOMS



OPTIONAL SENSORS AND DETECTORS

Customise MRBOX95(AB)-WH1 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.



MRXBOX-VSC CONTROL SCREEN COMPATIBLE WITH THIS UNIT

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 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 an insulated condensate drip tray and 21.5mm drain connection.

The unit shall be suitable for 150mm 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-WH1 or MRXBOX95AB-WH1 as manufactured by Nuair and shall be listed on the SAP Appendix Q database.

OPERATION

The supply and extract system 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 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 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

(MRXBOX95AB-WH1)

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.

INTEGRAL HUMIDITY SENSOR

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.

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.
- 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 Nuair MRXBOX95(AB)-WH1 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.

MRXBOX95AB-WH1-OH (with automatic summer bypass) & MRXBOX95-WH1-OH

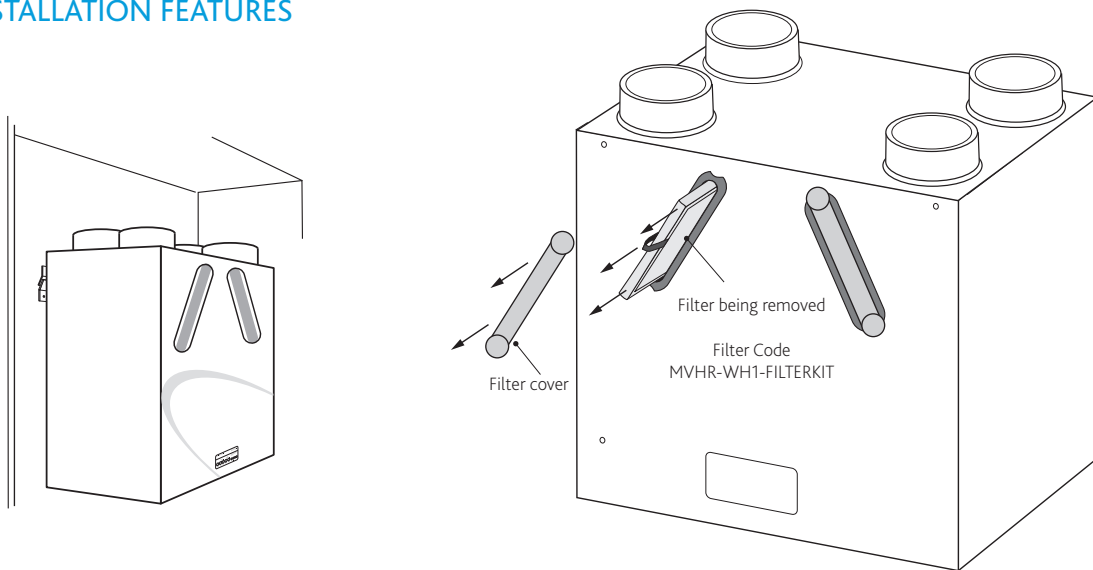
The MRXBOX95AB-WH1-OH has been designed with automatic summer bypass and the facility to commission the supply and extract fans independently on both minimum and maximum speeds, in addition to the features you will find on the standard MRXBOX95-WH1-OH.

Both the MRXBOX95AB-WH1-OH and MRXBOX95-WH1-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 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. Both units are listed on the SAP Product Characteristics Database.

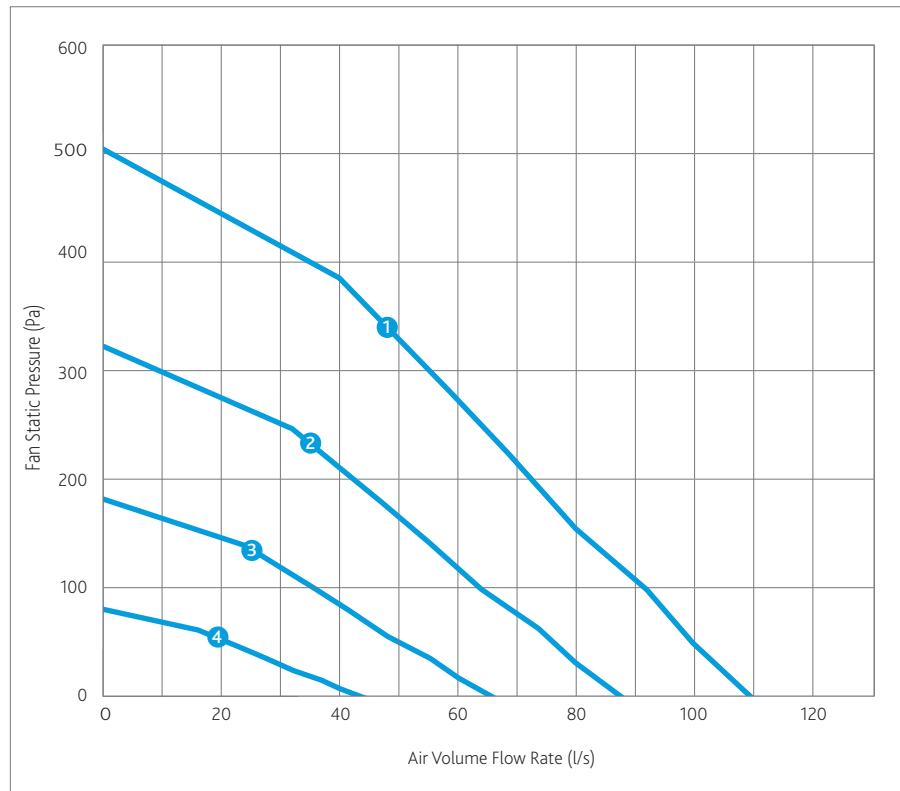


Typical Installation

INSTALLATION FEATURES



Performance - MRBOX95(AB)-WH1-OH



CODE DESCRIPTION

MRXBOX95-WH1-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. High 1 Model
6. Opposite hand

MRXBOX95AB-WH1-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. High 1 Model
7. Opposite hand

Electrical & Sound

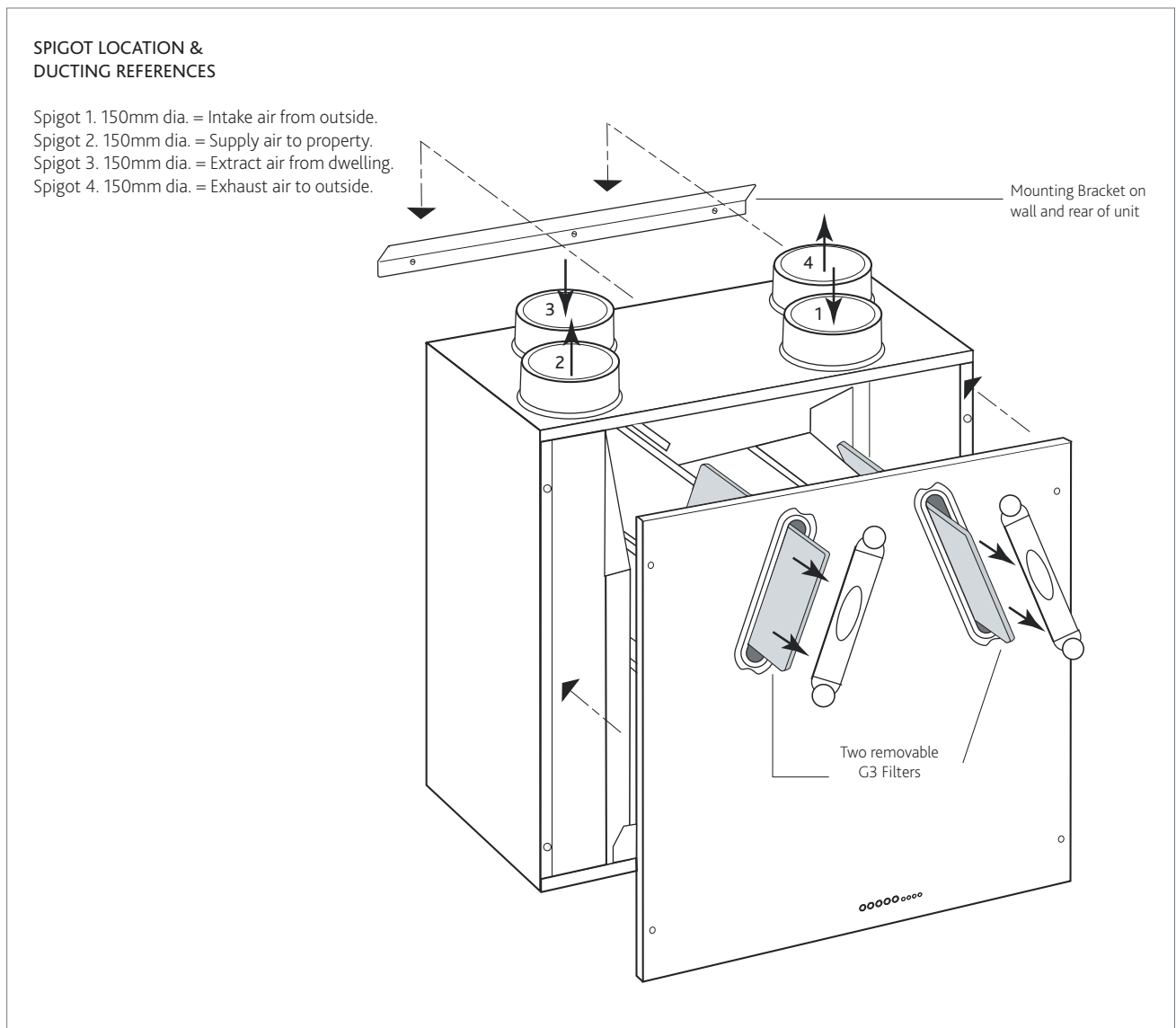
Curve	Maximum power consumption (Watts)	Frequency/Hz	Sound Power Levels dB re 1pW								dBA @3m
			63	125	250	500	1K	2K	4K	8K	
1	158	Open inlet	48	51	58	49	47	39	25	<16	36
		Open Outlet	56	63	67	67	62	60	50	41	
		Breakout	56	61	59	53	43	40	25	<16	
2	81	Open inlet	46	49	55	45	42	34	20	<16	30
		Open Outlet	54	61	64	63	57	55	45	36	
		Breakout	54	59	56	49	38	35	20	<16	
3	34	Open inlet	45	47	52	41	36	28	<16	<16	27
		Open Outlet	53	59	61	59	51	49	39	30	
		Breakout	53	57	53	45	32	29	<16	<16	
4	10	Open inlet	43	44	48	35	27	19	<16	<16	22
		Open Outlet	51	56	57	53	42	40	30	21	
		Breakout	51	54	49	39	23	20	<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

Product Code	MRXBOX95AB-WH1-OH			MRXBOX95-WH1-OH		
SAP Identifier	MRXBOX95AB-WH1			MRXBOX95-WH1		
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	0.52	88%	Yes	0.42	91%	Yes
Kitchen + 2 Wet Room	0.56	88%	Yes	0.50	91%	Yes
Kitchen + 3 Wet Room	0.67	88%	Yes	0.61	89%	Yes
Kitchen + 4 Wet Room	0.78	86%	Yes	0.75	88%	Yes
Kitchen + 5 Wet Room	0.95	86%	Yes	0.90	87%	Yes
Kitchen + 6 Wet Room	1.16	85%	Yes	1.05	85%	Yes
Kitchen + 7 Wet Room	1.40	85%	Yes	-	-	Yes

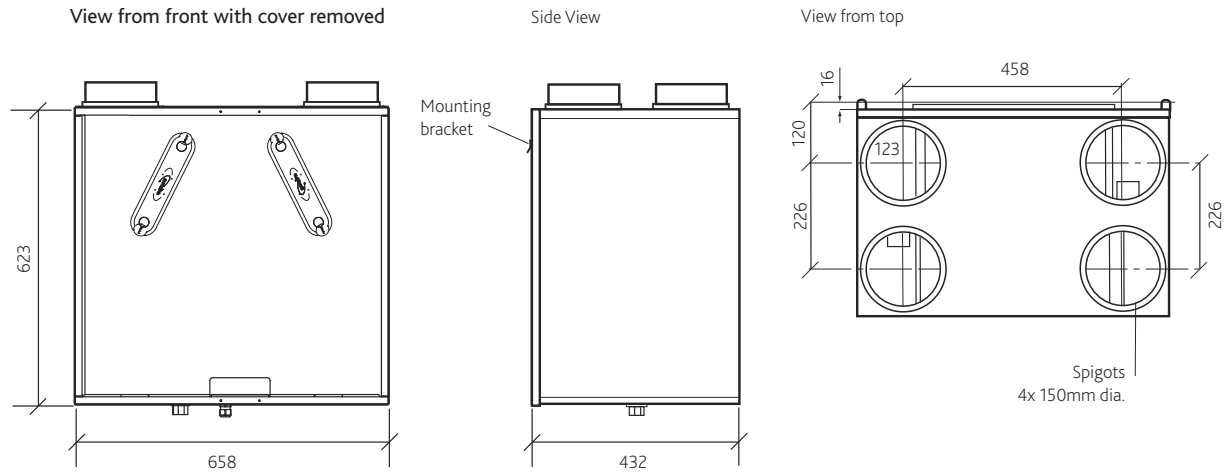
General Arrangement



Technical - MRBOX95(AB)-WH1-OH

DIMENSIONS (mm)

Weight - 24kg



Electrical Details

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

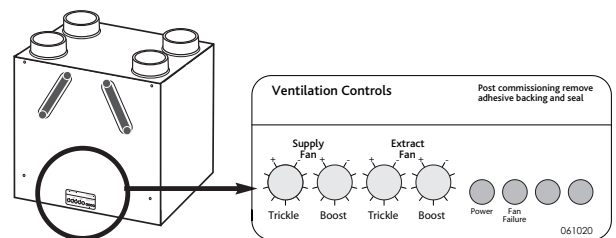
The unit is supplied with a flexible cord for connection to the mains supply.

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-WH1-OH	
Voltage:	230V 1ph 50Hz
Consumption:	WH1 - 1.3 Amp
Fuse rating:	3 Amp

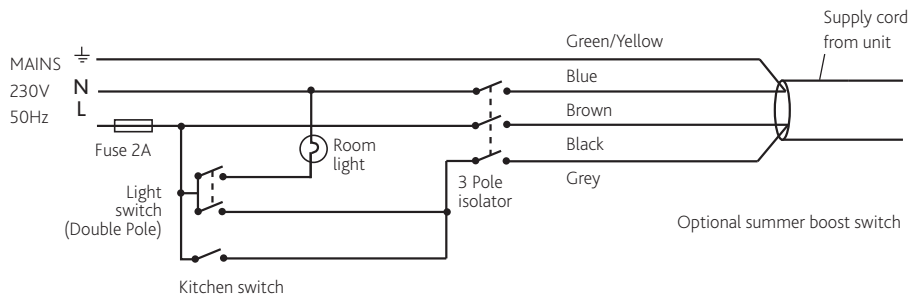
Detail of unit control on front panel.



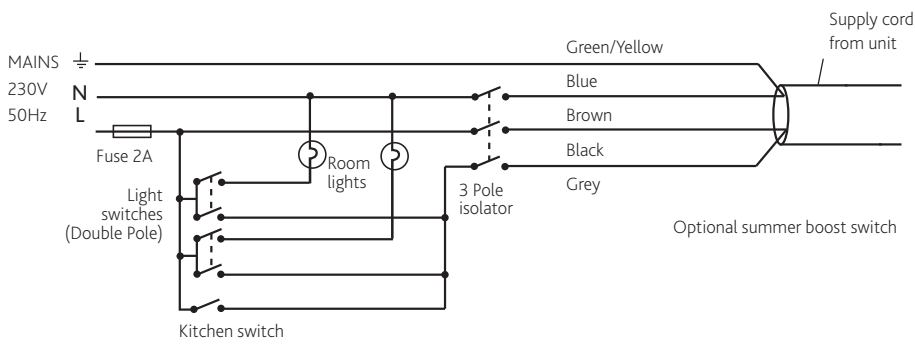
Tamper proof label following commissioning, includes system status indication.

Wiring - MRBOX95(AB)-WH1-OH

UNIT SERVING KITCHEN & BATHROOM



UNIT SERVING KITCHEN & TWO BATHROOMS



OPTIONAL SENSORS AND DETECTORS

Customise MRBOX95(AB)-WH1-OH 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.



MRXBOX-VSC CONTROL SCREEN COMPATIBLE WITH THIS UNIT

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 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 an insulated condensate drip tray and 21.5mm drain connection.

The unit shall be suitable for 150mm circular ducting.

Note: The unit is also available in standard 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-WH1-OH or MRXBOX95AB-WH1-OH as manufactured by Nuaire and shall be listed on the SAP Appendix Q database under product codes MRXBOX95-WH1 and MRXBOX95AB-WH1 respectively.

OPERATION

The supply and extract system 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 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 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

(MRXBOX95AB-WH1-OH)

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.

INTEGRAL HUMIDITY SENSOR

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.

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.
- 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 MRXBOX95(AB)-WH1-OH 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.