

Technical Submittal Sheet

Project No Belle Vue Academy
Project No 376948/001
Directed to: Sir Robert McAlpine



Plant Item: Fans & HRU's
Integral Ref: 009433-IUL-XX-ZZ-SB-M-TS3 - Fans & HRU's

Date: 17/12/2021
Revision: C02
Status: S4

Information "Issued for Approval"

Please find attached technical information for the fans & HRU's
Proposed manufacture is Nuaire, the only exception is the three large HRU's on the roof which will be manufactured by air handling systems
Technical Submittal revised to include the addition of EF/00/03 Kitchen WC & COSHH store

Print Name : P Thompson - Operations Manager

Approval required By: 24/12/2021

Response:

Signed: _____

For: _____

Print Name : _____

Date _____



SUMMARY FAN DATA SHEET

Nuaire, Western Industrial Estate, Caerphilly, CF83 1NA, United Kingdom. email:info@nuaire.co.uk

UK Commercial enquiries T:029 2085 8200 UK Residential enquiries T:029 2085 8500 International enquiries T:+44.29 2085 8497

Whilst the information given on this data sheet is fan specific, it is in summary and reference to the product selection catalogue and installation & maintenance documents is recommended.

This data sheet produced on 16 Dec 2021 15:35 using software version 5.4.4176.0

Project Details

Location: HRU/00/01 - Office Y7

Technical Data

UNI-X - Supply & Extract HX Unit

Fan Code: **UNI-X220**
Installation Manual Links: 671789
Required duty: 0.024 m³/s at 70 Pa
Actual duty: 0.049 m³/s at 290 Pa
Actual at required flow: 0.024 m³/s at 467 Pa

When speed controlled to required duty (48.97%):

Motor Input Power: **0.019 kW**
Specific Fan Power: **0.8 W/(l/s)**
Velocity at required duty: 1.212 m/s

At full speed:

Motor Input Power: 0.164 kW
Specific Fan Power: 3.3 W/(l/s)
Maximum Fan Speed: 3,200 RPM
Electrical Supply: 230V, 1 Phase, 50 Hz
Nominal Motor Rating: 0.166 kW
Motor current (flc): 1.32 A
Motor starting current (sc): 1.32 A

Max. operating temp: 40°C
Weight: 40 kg

Starting currents are nominal.

Sound Data

Acoustic performance to ISO 13347 and AMCA 300.

Noise calculated speed controlled to required duty (48.97%)

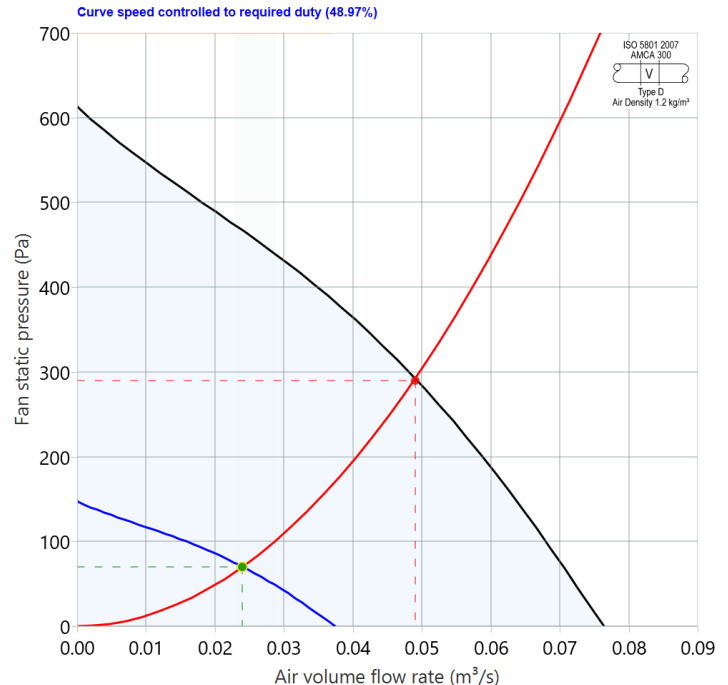
Sound Power Levels re 1 pWatts (Hz):

Hz	63	125	250	500	1k	2k	4k	8k	dBA
Open Inlet	52	51	56	53	39	38	28	25	
Open Outlet	52	47	54	48	41	36	26	20	
Breakout	51	50	55	57	32	26	16	<16	34
For 100% speed:	+4	+6	+8	+11	+16	+16	+16	+16	

dBA is spherical at 3 metres. For hemi-spherical add 3 dBA.

Please note that the noise data stated on this data sheet for the unit and/or silencer is tested in accordance with UK, European and International industry laboratory standards. However onsite conditions may vary and we would recommend that this information is verified by an acoustic specialist in order to ensure its suitability for the intended application.

Performance Chart



Additional Notes

Selected Ancillaries

1 x ES-VF Ecosmart volt free box
1 x MVHR-DRAIN Inline Condensate Drain

Specification

The unit shall be manufactured from high density EPS (Expanded polystyrene) with galvanised sheet steel casing to provide excellent thermal and acoustic characteristics, while providing a lightweight and low profile casing. Incorporating a high efficiency, aluminium counter flow heat exchanger block with a thermal efficiency of up to 90%. The heat exchanger will be protected by two G3 grade filters in the fresh inlet and system extract air streams, with both filters being accessible from the underside of the unit allowing for quick and easy maintenance.

The unit shall have a maximum height less than 300mm to fit within ceiling voids.

The unit will contain two, low energy, high efficiency EC fan assemblies, with centrifugal backward curved impellers. The fans will have the facility for variable speed control at trickle (continuous background ventilation), and boost speed to allow for individual specific adjustment during commissioning. The motors shall be suitable for use in ambient temperatures of 40°C.

The control shall be capable of 3 speed operation.

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

The unit shall be fitted as standard with a full summer bypass. The bypass opens automatically when the supply air exceeds 20°C, this opens the bypass channel via actuators and allow the outside air to bypass the heat exchanger. The air which is bypassed will still pass through the filter to ensure that the air quality remains the same regardless of the external temperatures.

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

~~The unit shall be suitable for 220 x 90mm Rectangular ducting.

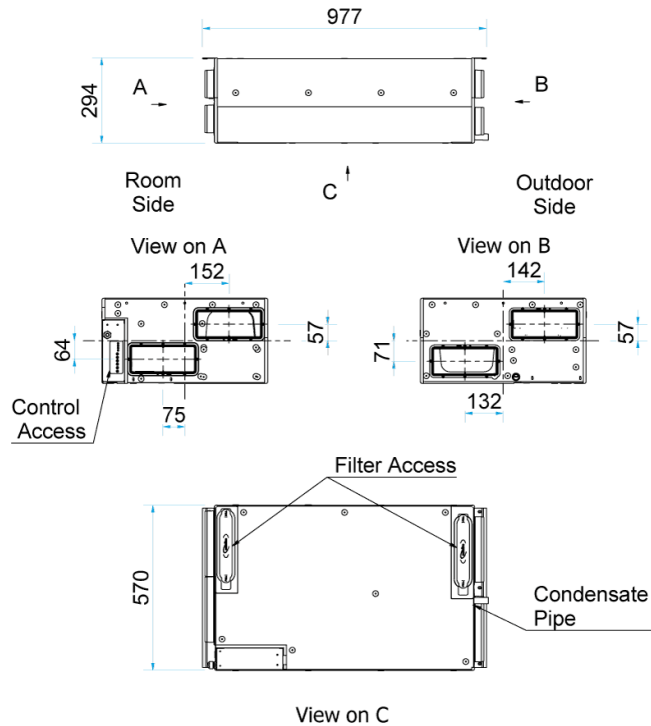
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Fan Dimensions



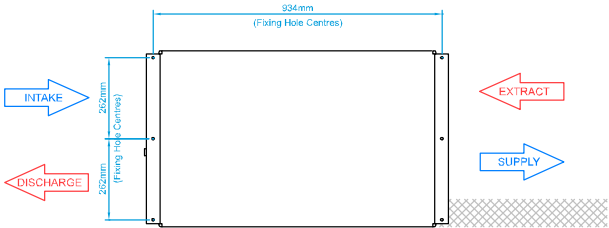
Length: Width: Height:

977 569 294

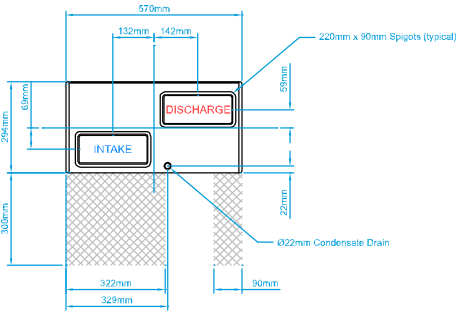
Spigot size: 220X90

Drawing is for dimensional purposes only. Dimensions in mm.

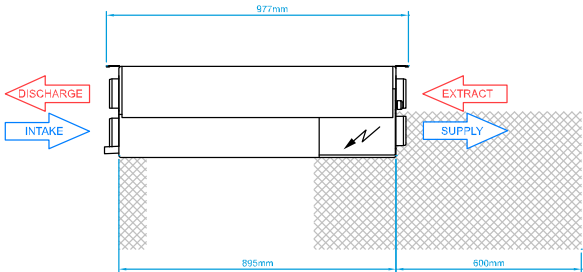
VIEW FROM ABOVE



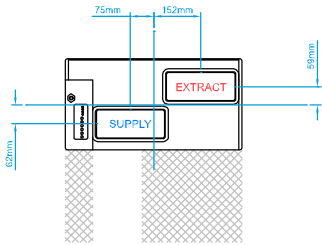
VIEW FROM END (ATMOSPHERE SIDE)



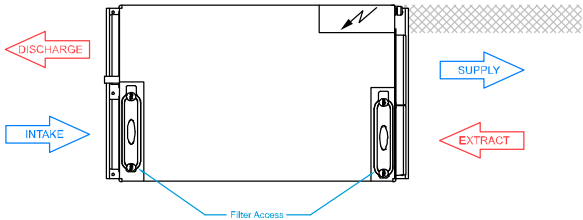
VIEW FROM SUPPLY/DISCHARGE SIDE



VIEW FROM END (ROOM SIDE)



VIEW FROM BELOW



You can download this CAD drawing from <http://int.nuaire.info/CAD/uni-x220.dwg>

Please Note: This drawing details the factory-standard unit ONLY (unless silencers are shown too). The total length or footprint may differ from that shown depending on the additional ancillaries offered on the quote or if the unit code ends in -QA*****

Please DO NOT sign this drawing to confirm handings.
Please request the official handing drawings from Nuaire.

Drawing generated automatically by Nuaire Selector

Do NOT scale from this drawing.



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Tel: 02920 858 8200 <https://www.nuaire.co.uk>



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Project Details

Location: HRU/00/02 - Office SLT 4

Technical Data

UNI-X - Supply & Extract HX Unit

Fan Code: **UNI-X360**
Installation Manual Links: 671789
Required duty: 0.084 m³/s at 90 Pa
Actual duty: 0.094 m³/s at 111 Pa
Actual at required flow: 0.084 m³/s at 178 Pa

When speed controlled to required duty (89.8%):

Motor Input Power: **0.12 kW**
Specific Fan Power: **1.4 W/(l/s)**
Velocity at required duty: 4.242 m/s

At full speed:

Motor Input Power: 0.166 kW
Specific Fan Power: 1.8 W/(l/s)
Maximum Fan Speed: 3,200 RPM
Electrical Supply: 230V, 1 Phase, 50 Hz
Nominal Motor Rating: 0.166 kW
Motor current (flc): 1.32 A
Motor starting current (sc): 1.32 A

Max. operating temp: 40°C
Weight: 55 kg

Starting currents are nominal.

Sound Data

Acoustic performance to ISO 13347 and AMCA 300.

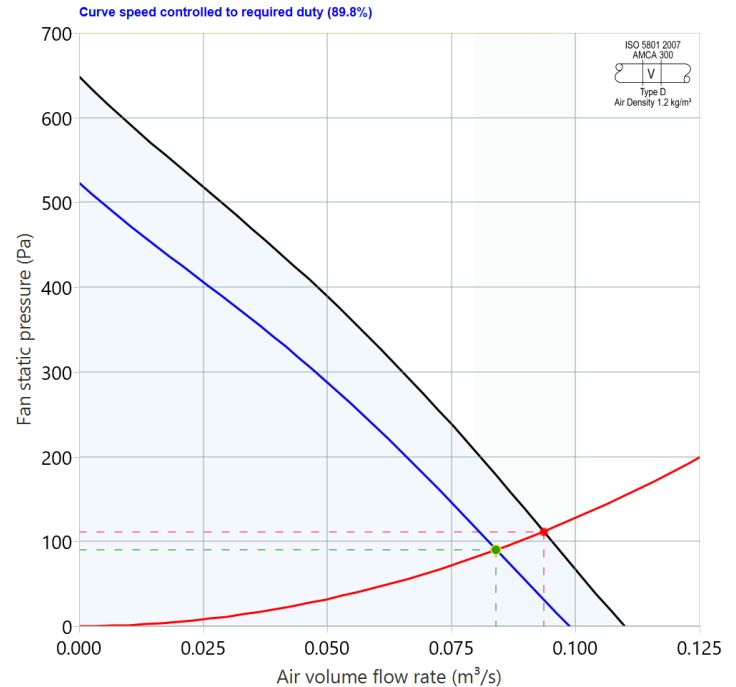
Noise calculated speed controlled to required duty (89.8%)

Sound Power Levels re 1 pWatts (Hz):									
Hz	63	125	250	500	1k	2k	4k	8k	dBA
Open Inlet	58	51	65	62	49	50	42	39	
Open Outlet	57	48	61	61	50	48	39	32	
Breakout	52	54	64	62	45	41	33	32	40
For 100% speed:	+1	+1	+2	+2	+3	+3	+3	+3	

dBA is spherical at 3 metres. For hemi-spherical add 3 dBA.

Please note that the noise data stated on this data sheet for the unit and/or silencer is tested in accordance with UK, European and International industry laboratory standards. However onsite conditions may vary and we would recommend that this information is verified by an acoustic specialist in order to ensure its suitability for the intended application.

Performance Chart



Additional Notes

Selected Ancillaries

1 x ES-VF Ecosmart volt free box
1 x MVHR-DRAIN Inline Condensate Drain

Specification

The unit shall be manufactured from high density EPS (Expanded polystyrene) with galvanised sheet steel casing to provide excellent thermal and acoustic characteristics, while providing a lightweight and low profile casing. Incorporating a high efficiency, aluminium counter flow heat exchanger block with a thermal efficiency of up to 90%. The heat exchanger will be protected by two G3 grade filters in the fresh inlet and system extract air streams, with both filters being accessible from the underside of the unit allowing for quick and easy maintenance.

The unit shall have a maximum height less than 300mm to fit within ceiling voids.

The unit will contain two, low energy, high efficiency EC fan assemblies, with centrifugal backward curved impellers. The fans will have the facility for variable speed control at trickle (continuous background ventilation), and boost speed to allow for individual specific adjustment during commissioning. The motors shall be suitable for use in ambient temperatures of 40°C.

The control shall be capable of 3 speed operation.

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

The unit shall be fitted as standard with a full summer bypass. The bypass opens automatically when the supply air exceeds 20°C, this opens the bypass channel via actuators and allow the outside air to bypass the heat exchanger. The air which is bypassed will still pass through the filter to ensure that the air quality remains the same regardless of the external temperatures.

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

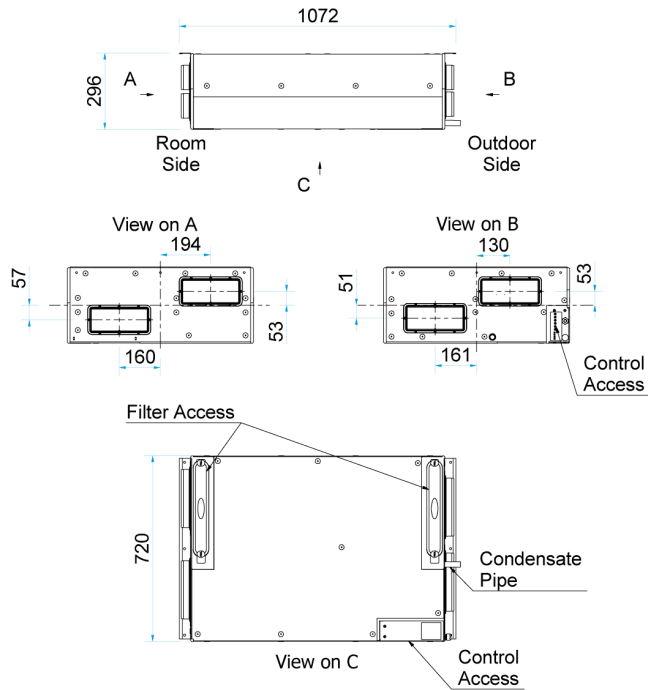
~~The unit shall be suitable for 220 x 90mm Rectangular ducting.

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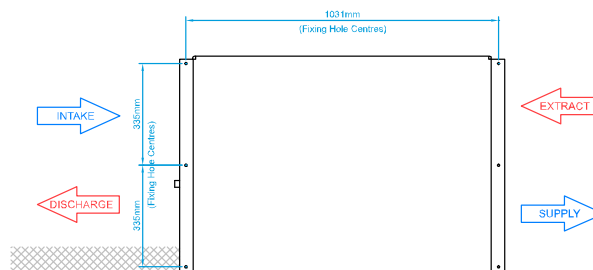
Fan Dimensions



Length: Width: Height:
1072 721 296

Spigot size: 220 x 90

Drawing is for dimensional purposes only. Dimensions in mm.



Technical drawing of the front panel of the 220V 10A 1000W Electric Kettle. The drawing shows a rectangular panel with a width of 720mm and a height of 296mm. It features an 'INTAKE' port on the left, a 'DISCHARGE' port on the right, and a '220V 10A 1000W' label. Dimensions for the ports and the panel are provided: the intake port is 163mm wide and 52mm high; the discharge port is 129mm wide and 55mm high. The panel is mounted on a base with a 421mm wide opening and a 440mm wide base. A 24mm high section on the right side contains a Ø22mm Condensate Drain. The panel is also labeled with '220V 10A 1000W' and '220V 10A 1000W Spigots (typical)'.

Diagram illustrating the intake and discharge points for the 1072mm wide machine. The machine is shown with a width of 1072mm. The intake point is located on the left side, and the discharge point is located on the right side. The machine is shown with a width of 1072mm. The intake point is located on the left side, and the discharge point is located on the right side. The machine is shown with a width of 1072mm. The intake point is located on the left side, and the discharge point is located on the right side.

Technical drawing of a control panel with dimensions. The panel is 27mm high. The 'SUPPLY' button is 158mm wide and 195mm high. The 'EXTRACT' button is 195mm wide and 195mm high. The panel is mounted on a wall with a cross-hatched pattern.

Please DO NOT sign this drawing to confirm handings.
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Project Details

Location: HRU/00/03 - Level 0 Reception Area

Technical Data

UNI-X - Supply & Extract HX Unit

Fan Code: **UNI-X580**
Installation Manual Links: 671789
Required duty: 0.096 m³/s at 100 Pa
Actual duty: 0.123 m³/s at 163 Pa
Actual at required flow: 0.096 m³/s at 315 Pa

When speed controlled to required duty (78.22%):

Motor Input Power: **0.139 kW**
Specific Fan Power: **1.4 W/(l/s)**
Velocity at required duty: 4.848 m/s

At full speed:

Motor Input Power: 0.29 kW
Specific Fan Power: 2.4 W/(l/s)
Maximum Fan Speed: 2,860 RPM
Electrical Supply: 230V, 1 Phase, 50 Hz
Nominal Motor Rating: 0.34 kW
Motor current (flc): 2 A
Motor starting current (sc): 2 A

Max. operating temp: 40°C
Weight: 69 kg

Starting currents are nominal.

Sound Data

Acoustic performance to ISO 13347 and AMCA 300.

Noise calculated speed controlled to required duty (78.22%)

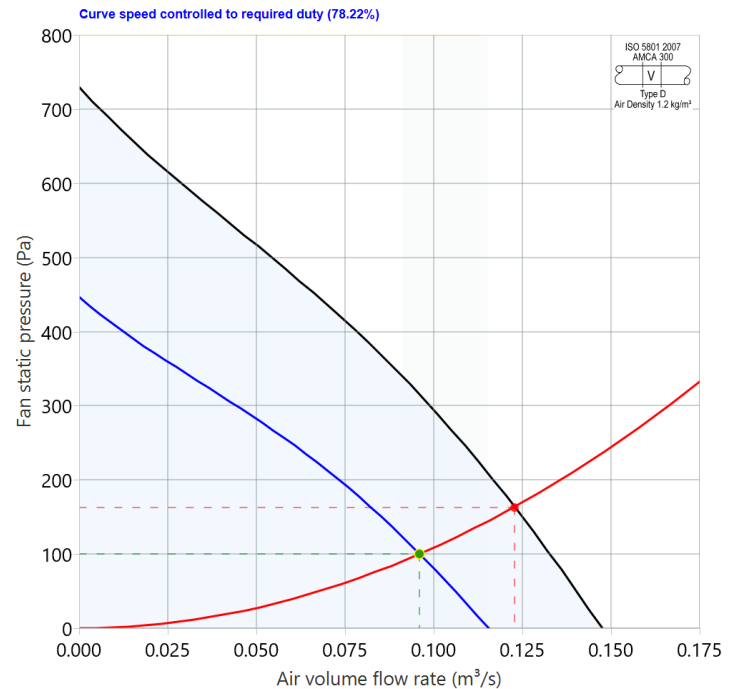
Sound Power Levels re 1 pWatts (Hz):

Hz	63	125	250	500	1k	2k	4k	8k	dBA
Open Inlet	60	58	67	58	49	50	38	33	
Open Outlet	55	55	64	56	50	47	37	27	
Breakout	64	67	65	60	46	41	32	27	39
For 100% speed:	+2	+2	+3	+4	+6	+6	+6	+6	

dBA is spherical at 3 metres. For hemi-spherical add 3 dBA.

Please note that the noise data stated on this data sheet for the unit and/or silencer is tested in accordance with UK, European and International industry laboratory standards. However onsite conditions may vary and we would recommend that this information is verified by an acoustic specialist in order to ensure its suitability for the intended application.

Performance Chart



Additional Notes

Selected Ancillaries

1 x ES-VF Ecosmart volt free box
1 x MVHR-DRAIN Inline Condensate Drain

Specification

The unit shall be manufactured from high density EPS (Expanded polystyrene) with galvanised sheet steel casing to provide excellent thermal and acoustic characteristics, while providing a lightweight and low profile casing. Incorporating a high efficiency, aluminium counter flow heat exchanger block with a thermal efficiency of up to 90%. The heat exchanger will be protected by two G3 grade filters in the fresh inlet and system extract air streams, with both filters being accessible from the underside of the unit allowing for quick and easy maintenance.

The unit shall have a maximum height less than 300mm to fit within ceiling voids.

The unit will contain two, low energy, high efficiency EC fan assemblies, with centrifugal backward curved impellers. The fans will have the facility for variable speed control at trickle (continuous background ventilation), and boost speed to allow for individual specific adjustment during commissioning. The motors shall be suitable for use in ambient temperatures of 40°C.

The control shall be capable of 3 speed operation.

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

The unit shall be fitted as standard with a full summer bypass. The bypass opens automatically when the supply air exceeds 20°C, this opens the bypass channel via actuators and allow the outside air to bypass the heat exchanger. The air which is bypassed will still pass through the filter to ensure that the air quality remains the same regardless of the external temperatures.

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

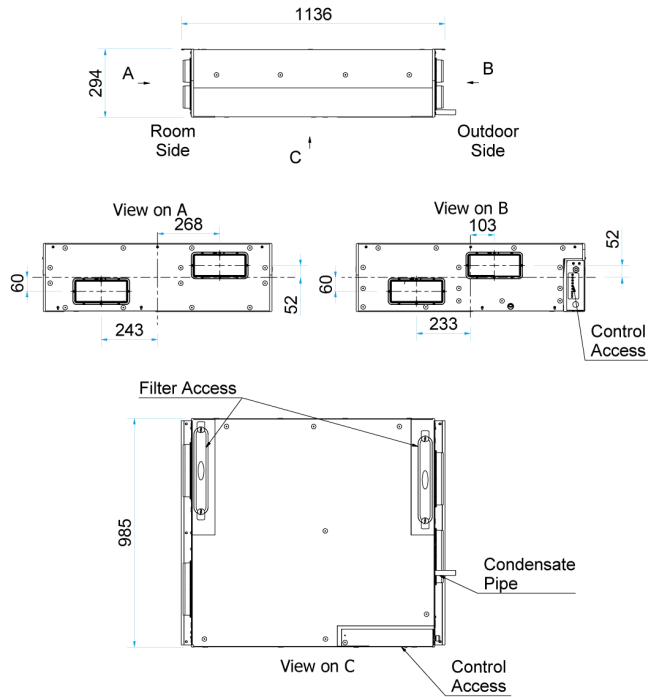
~~The unit shall be suitable for 220 x 90mm Rectangular ducting.

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Fan Dimensions

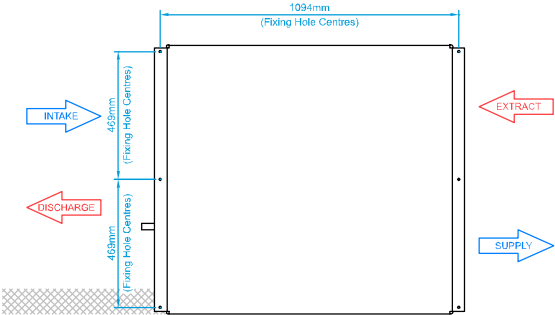


Length: 1136
Width: 985
Height: 294

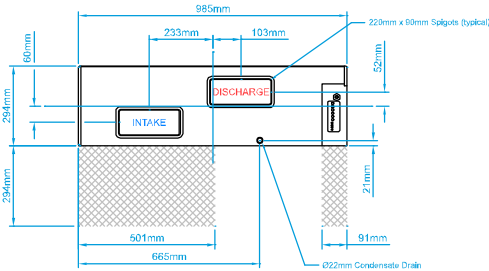
Spigot size: 220 x 90

Drawing is for dimensional purposes only. Dimensions in mm.

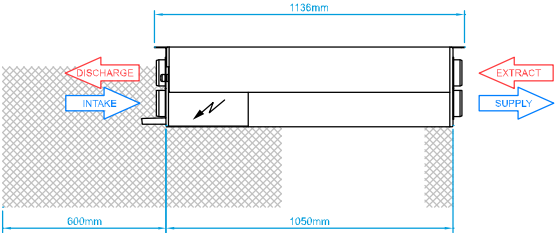
VIEW FROM ABOVE



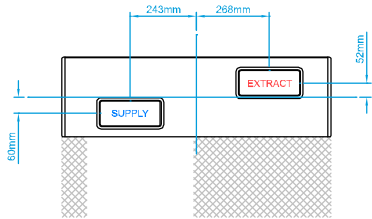
VIEW FROM END (ATMOSPHERE SIDE)



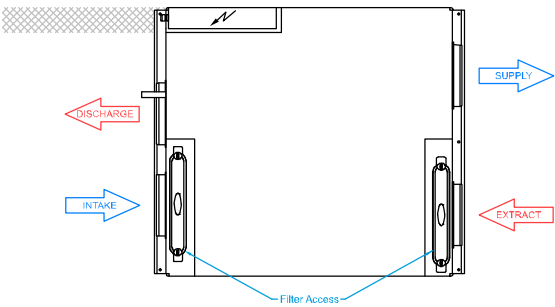
VIEW FROM SUPPLY/DISCHARGE SIDE



VIEW FROM END (ROOM SIDE)



VIEW FROM BELOW



You can download this CAD drawing from <http://int.nuaire.info/CAD/uni-x580.dwg>

Please Note: This drawing details the factory-standard unit ONLY (unless silencers are shown too). The total length or footprint may differ from that shown depending on the additional ancillaries offered on the quote or if the unit code ends in -QA*****

Please DO NOT sign this drawing to confirm handings.
Please request the official handing drawings from Nuaire.

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Project Details

Location: HRU/00/04 - female changing

Technical Data

XBC+

Fan Code: **XBC45HA-NNN-E-LB1S**
Installation Manual Links: 671948

Supply

Required duty: 0.405 m³/s at 180 Pa
Actual duty: 0.435 m³/s at 208 Pa
Actual at required flow: 0.405 m³/s at 267 Pa

Extract

Required duty: 0.405 m³/s at 180 Pa
Actual duty: 0.435 m³/s at 208 Pa
Actual at required flow: 0.405 m³/s at 267 Pa

When speed controlled to required duty:

Motor input power: **0.756 kW**

Specific Fan Power: **1.9 W/(l/s)**

At full speed:

Motor input power: 0.939 kW

Specific Fan Power: 2.2 W/(l/s)

Maximum Fan Speed: 2,400 RPM

Electrical Supply: 230V 1 Phase 50 Hz

Nominal Motor Rating 1 kW

Motor Current (flc): 5.1 A

Motor Current (sc): 5.1 A

Max. operating temp: 45°C

Weight: 298 kg

Sound Data

Noise calculated speed controlled to required duty (93.02%)

Sound Power Levels re 1 pWatts (Hz):

Hz	63	125	250	500	1k	2k	4k	8k	dBA
Breakout	72	63	60	45	43	42	38	27	34
Induct Intake	81	73	73	62	62	60	52	43	48
Induct Supply	85	78	83	69	70	69	64	60	56
Induct Discharge	86	79	83	69	70	70	64	62	57
Induct Extract	82	73	74	61	62	61	51	42	48
For 100% speed:	+2	+2	+2	+2	+2	+2	+2	+2	

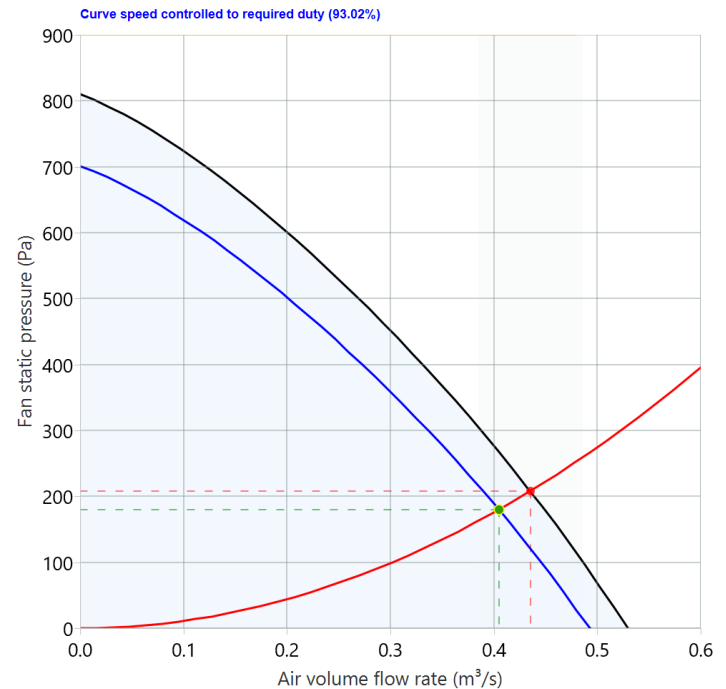
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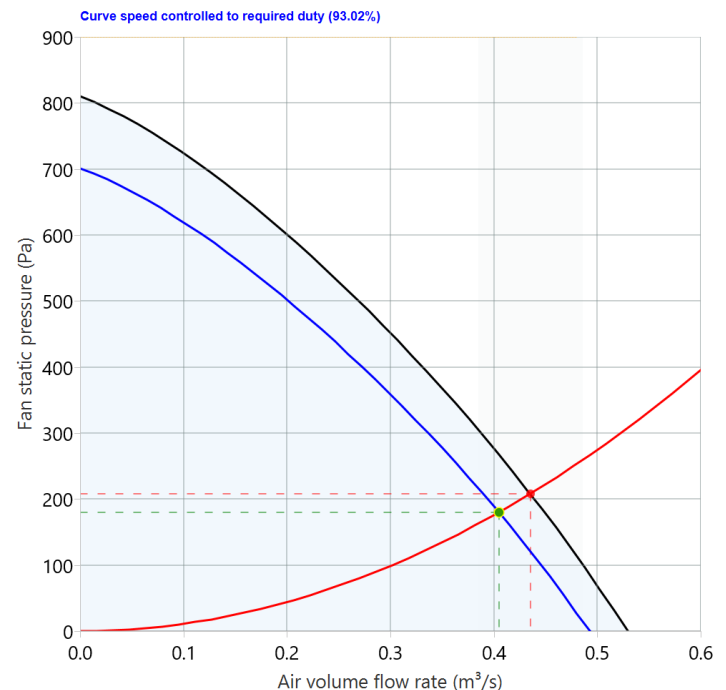
Specification

XBC45HA-NNN-E-LB1S. Nuaire XBOXER Supply & Extract HX unit. Incorporating high efficiency Counterflow plate heat exchanger 100% bypass facility (patent app. for) automatic control and actuator. Backward curved impellers, IP54 EC motors and speed control. Double skinned construction (patented). G4 Supply G4 Extract panel filters (spares included). EcoSmart Classic control of ventilation/heating. For ceiling/underfloor/slab mounted applications. Supply/Discharge connections on unit centreline; Intake/Extract connections are configurable on site to either side of unit. Rotational side mounted control. Unit will be supplied LEFT HANDED with bottom access for filter removal and replacement. 5 year warranty (UK and Ireland only)

Performance Chart (supply)



Performance Chart (extract)



Additional Notes

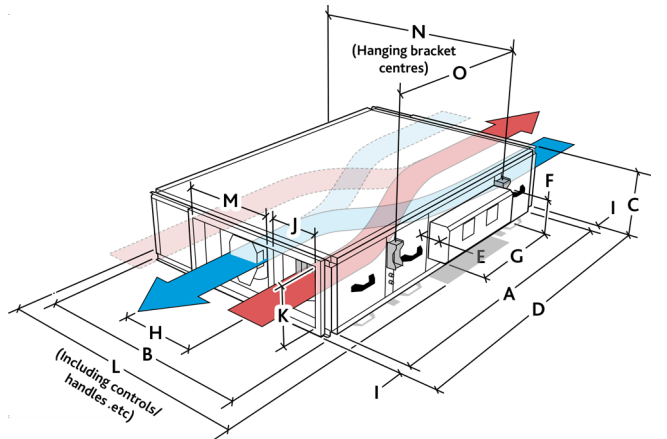
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Fan Dimensions

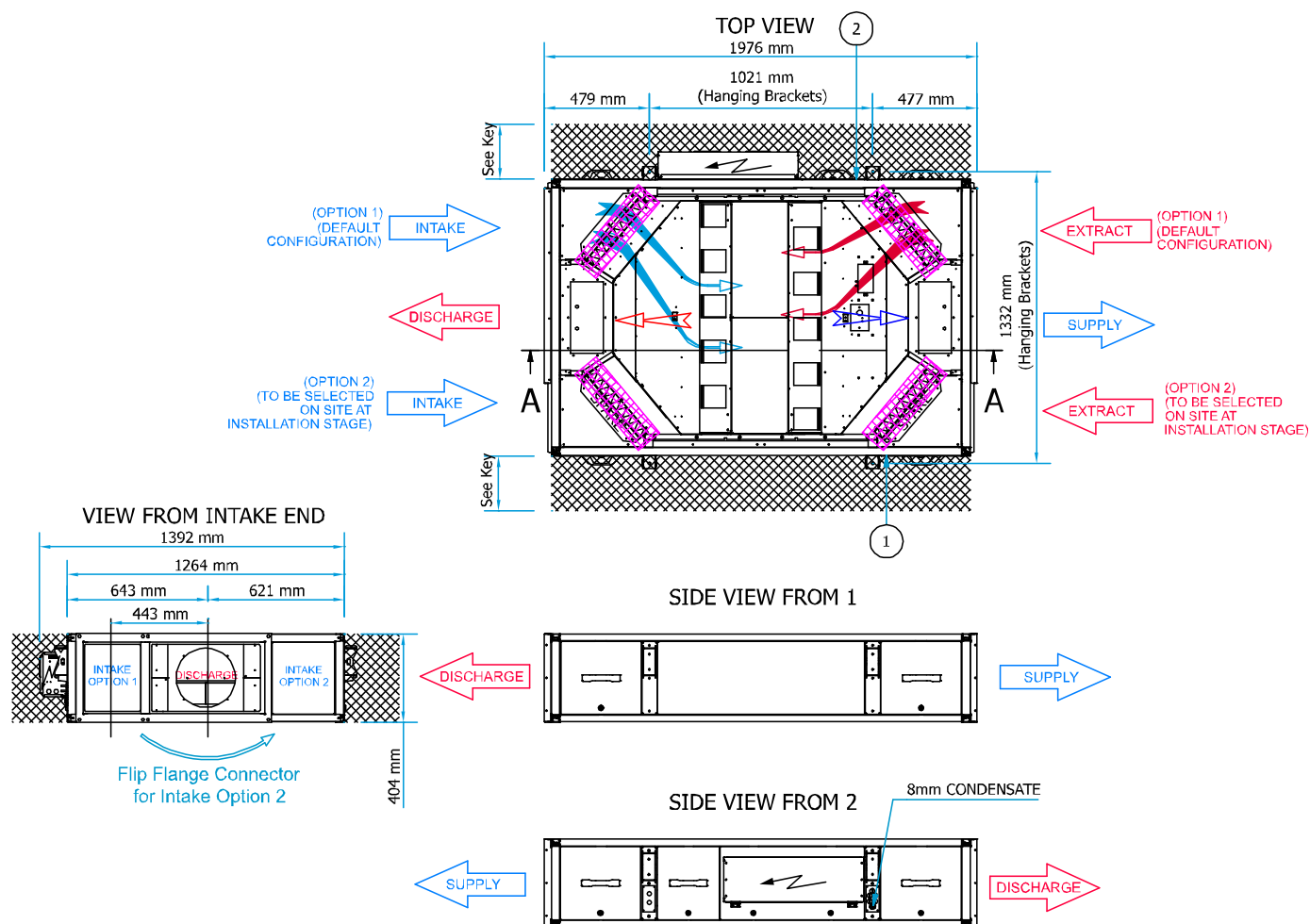
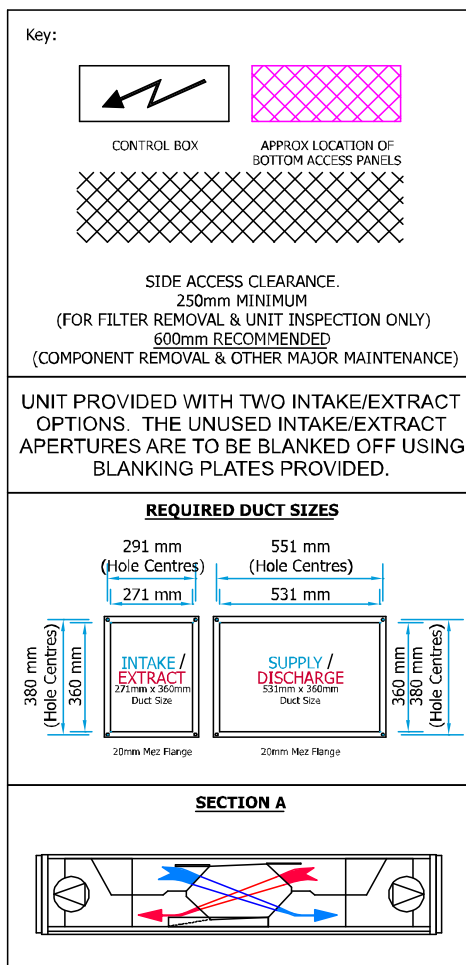


A	B	C	D	E	F	G	H	I
1913	1262	405	1973	140	210	640	443	30
J	K	L	M	N	O	kg		
270	360	1461	531	1332	1020	298.0		

Length: Width: Height:

1913 1262 405

Drawing is for dimensional purposes only. Dimensions in mm.



You can download this CAD drawing from <http://int.nuaire.info/CAD/xbcplus45-hn-ba-l.dwg>

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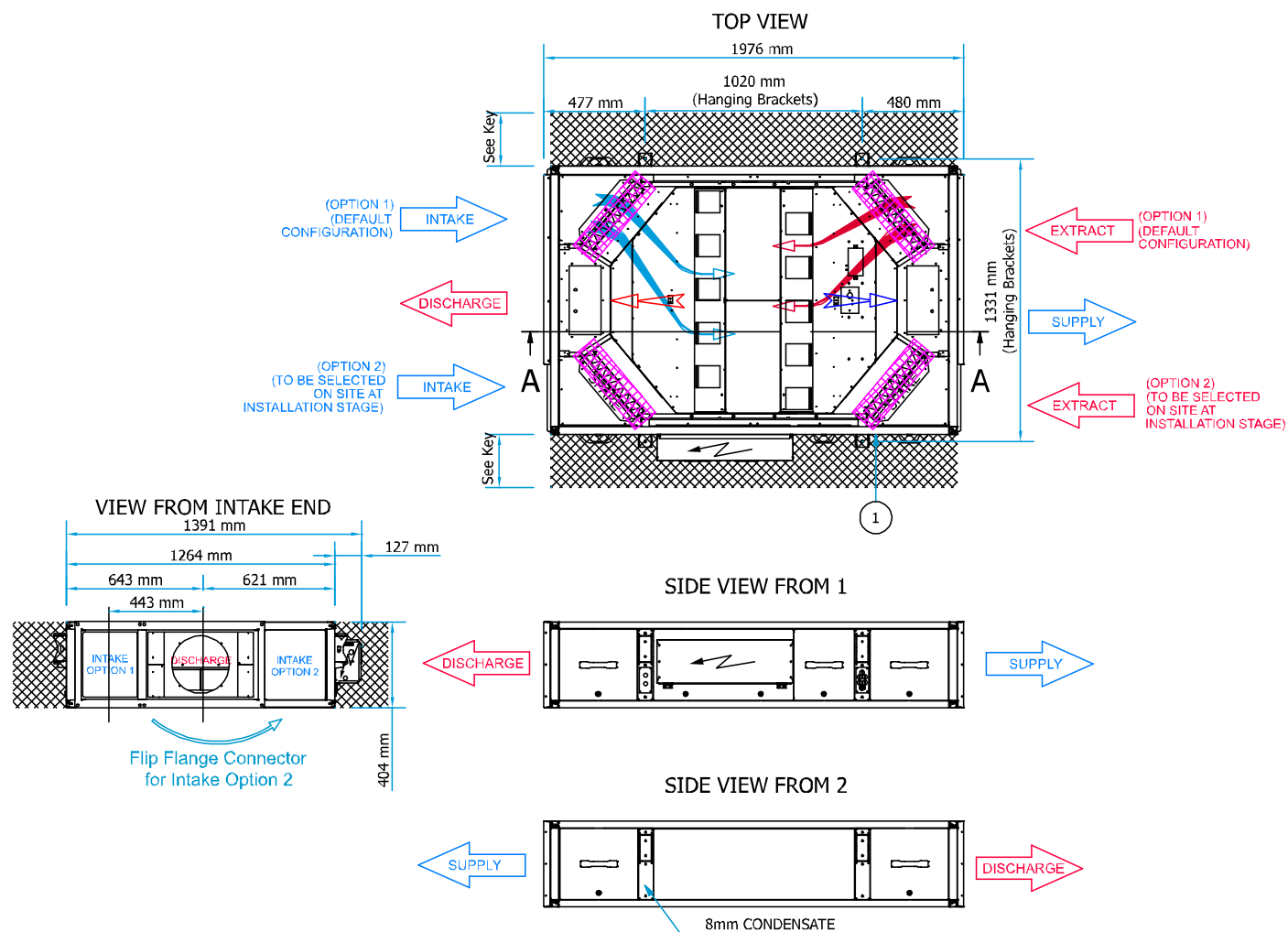
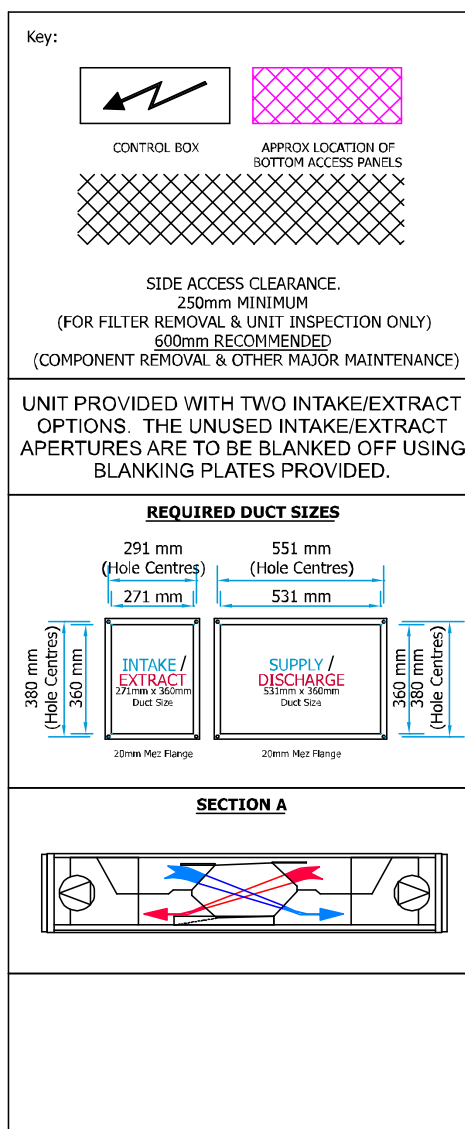
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You can download this CAD drawing from <http://int.nuaire.info/CAD/xbcplus45-hn-ba-r.dwg>

Please Note: This drawing details the factory-standard unit ONLY (unless silencers are shown too). The total length or footprint may differ from that shown depending on the additional ancillaries offered on the quote or if the unit code ends in -QA*****

Please DO NOT sign this drawing to confirm handings.
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UK Commercial enquiries T:029 2085 8200 UK Residential enquiries T:029 2085 8500 International enquiries T:+44.29 2085 8497

Whilst the information given on this data sheet is fan specific, it is in summary and reference to the product selection catalogue and installation & maintenance documents is recommended.

This data sheet produced on 16 Dec 2021 15:35 using software version 5.4.4176.0

Project Details

Location: HRU/00/05 - Male - Changing - Area

Technical Data

XBC+

Fan Code: **XBC45HA-NNN-E-LB1S**
Installation Manual Links: 671948

Supply

Required duty: 0.353 m³/s at 180 Pa
Actual duty: 0.415 m³/s at 249 Pa
Actual at required flow: 0.353 m³/s at 362 Pa

Extract

Required duty: 0.353 m³/s at 180 Pa
Actual duty: 0.415 m³/s at 249 Pa
Actual at required flow: 0.353 m³/s at 362 Pa

When speed controlled to required duty:

Motor input power: 0.575 kW

Specific Fan Power: 1.6 W/(l/s)

At full speed:

Motor input power: 0.933 kW

Specific Fan Power: 2.2 W/(l/s)

Maximum Fan Speed: 2,400 RPM

Electrical Supply: 230V 1 Phase 50 Hz

Nominal Motor Rating 1 kW

Motor Current (flc): 5.1 A

Motor Current (sc): 5.1 A

Max. operating temp: 45°C

Weight: 298 kg

Sound Data

Noise calculated speed controlled to required duty (85.12%)

Sound Power Levels re 1 pWatts (Hz):

Hz	63	125	250	500	1k	2k	4k	8k	dBA
Breakout	70	61	58	43	41	40	36	25	32
Induct Intake	79	71	71	60	60	58	50	41	46
Induct Supply	83	76	81	67	68	67	62	58	54
Induct Discharge	84	77	81	67	68	68	62	60	55
Induct Extract	80	71	72	59	60	59	49	40	46
For 100% speed:	+4	+4	+4	+4	+4	+4	+4	+4	

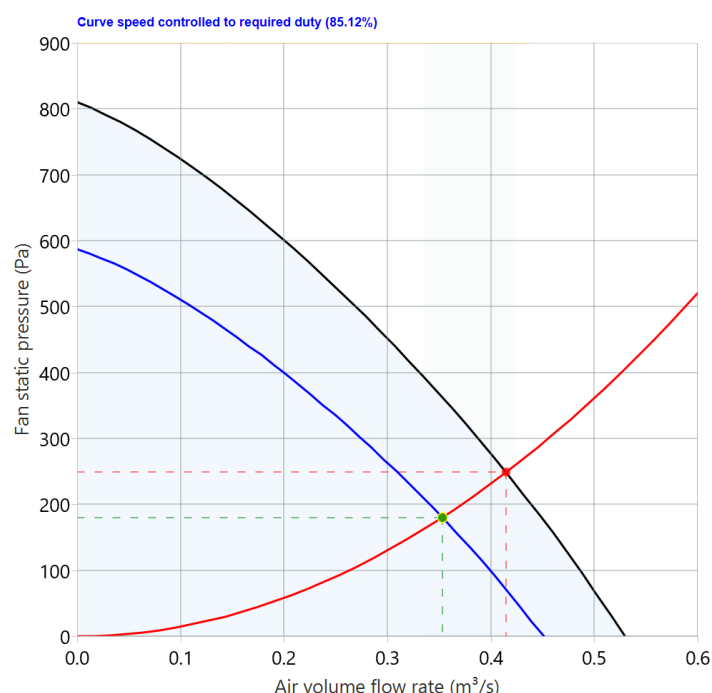
dBA is spherical at 3 metres. For hemi-spherical add 3 dBA.

Please note that the noise data stated on this data sheet for the unit and/or silencer is tested in accordance with UK, European and International industry laboratory standards. However onsite conditions may vary and we would recommend that this information is verified by an acoustic specialist in order to ensure its suitability for the intended application.

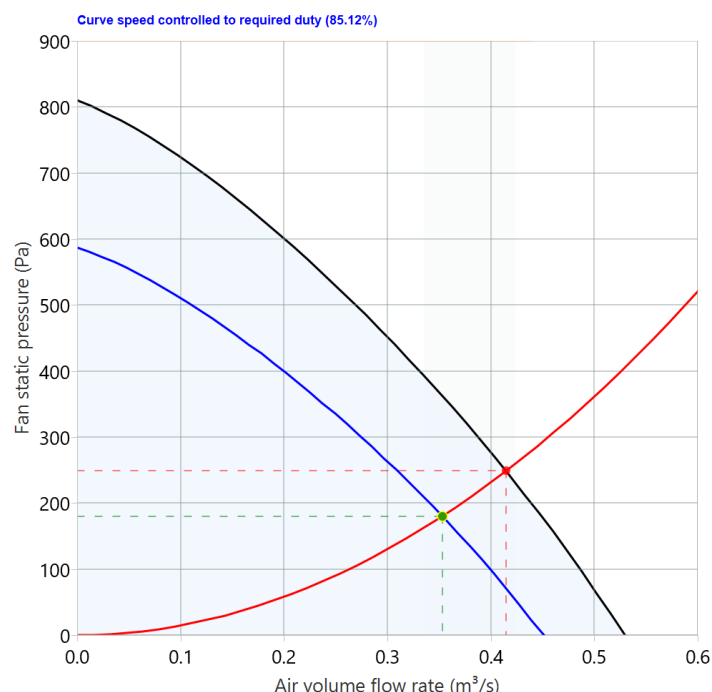
Specification

XBC45HA-NNN-E-LB1S. Nuaire XBOXER Supply & Extract HX unit. Incorporating high efficiency Counterflow plate heat exchanger 100% bypass facility (patent app. for) automatic control and actuator. Backward curved impellers, IP54 EC motors and speed control. Double skinned construction (patented). G4 Supply G4 Extract panel filters (spares included). EcoSmart Classic control of ventilation/heating. For ceiling/underfloor/slab mounted applications. Supply/Discharge connections on unit centreline; Intake/Extract connections are configurable on site to either side of unit. Rotational side mounted control. Unit will be supplied LEFT HANDED with bottom access for filter removal and replacement. 5 year warranty (UK and Ireland only)

Performance Chart (supply)



Performance Chart (extract)



Additional Notes

Please note to achieve an SFP of 1.6W/l/s the external resistance has been reduced to 180Pa as per the selection.

An alternative selection can be found on the following options pages.

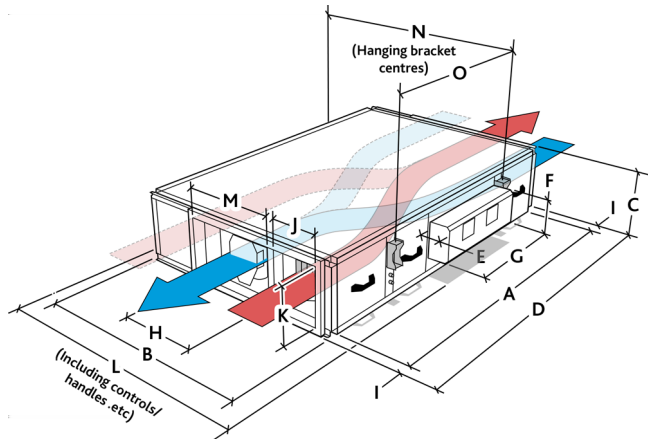
Please see the unit data sheets for the full technical, dimensional and sound information on the unit offered.

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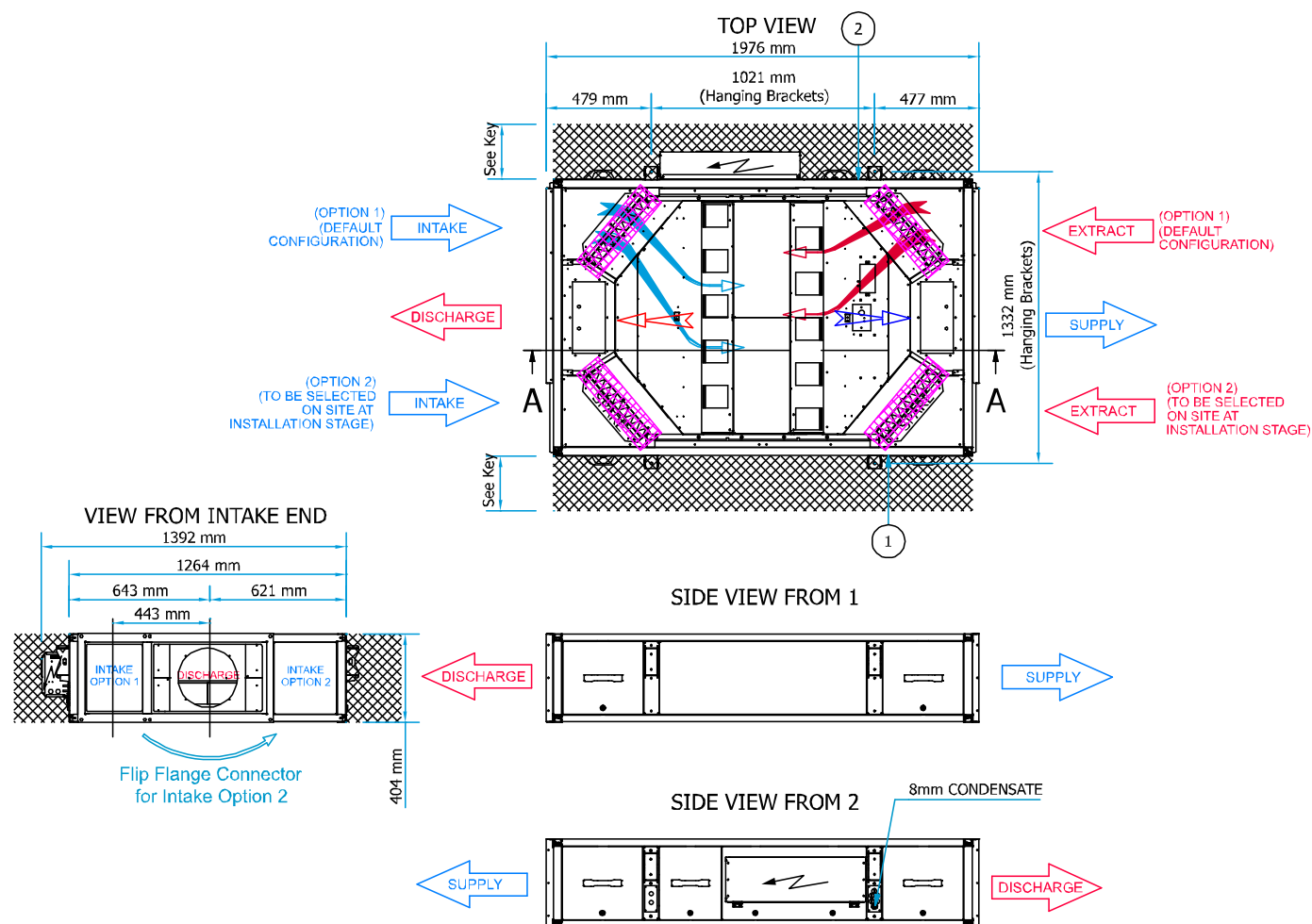
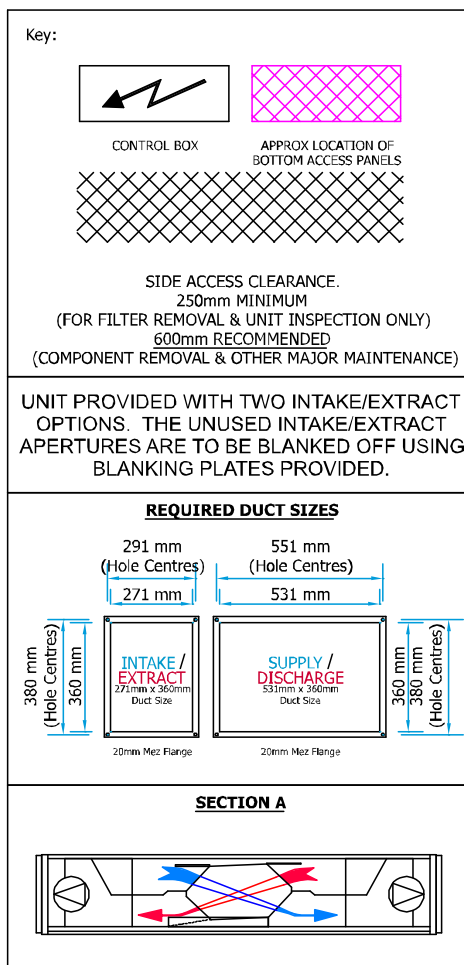
Whilst the information given on this data sheet is fan specific, it is in summary and reference to the product selection catalogue and installation & maintenance documents is recommended.
This data sheet produced on 16 Dec 2021 15:35 using software version 5.4.4176.0

Fan Dimensions



A	B	C	D	E	F	G	H	I
1913	1262	405	1973	140	210	640	443	30
J	K	L	M	N	O	kg		
270	360	1461	531	1332	1020	298.0		
Length: Width: Height:								
1913	1262	405						

Drawing is for dimensional purposes only. Dimensions in mm.



You can download this CAD drawing from <http://int.nuaire.info/CAD/xbcplus45-hn-ba-l.dwg>

Please Note: This drawing details the factory-standard unit ONLY (unless silencers are shown too). The total length or footprint may differ from that shown depending on the additional ancillaries offered on the quote or if the unit code ends in -QA*****

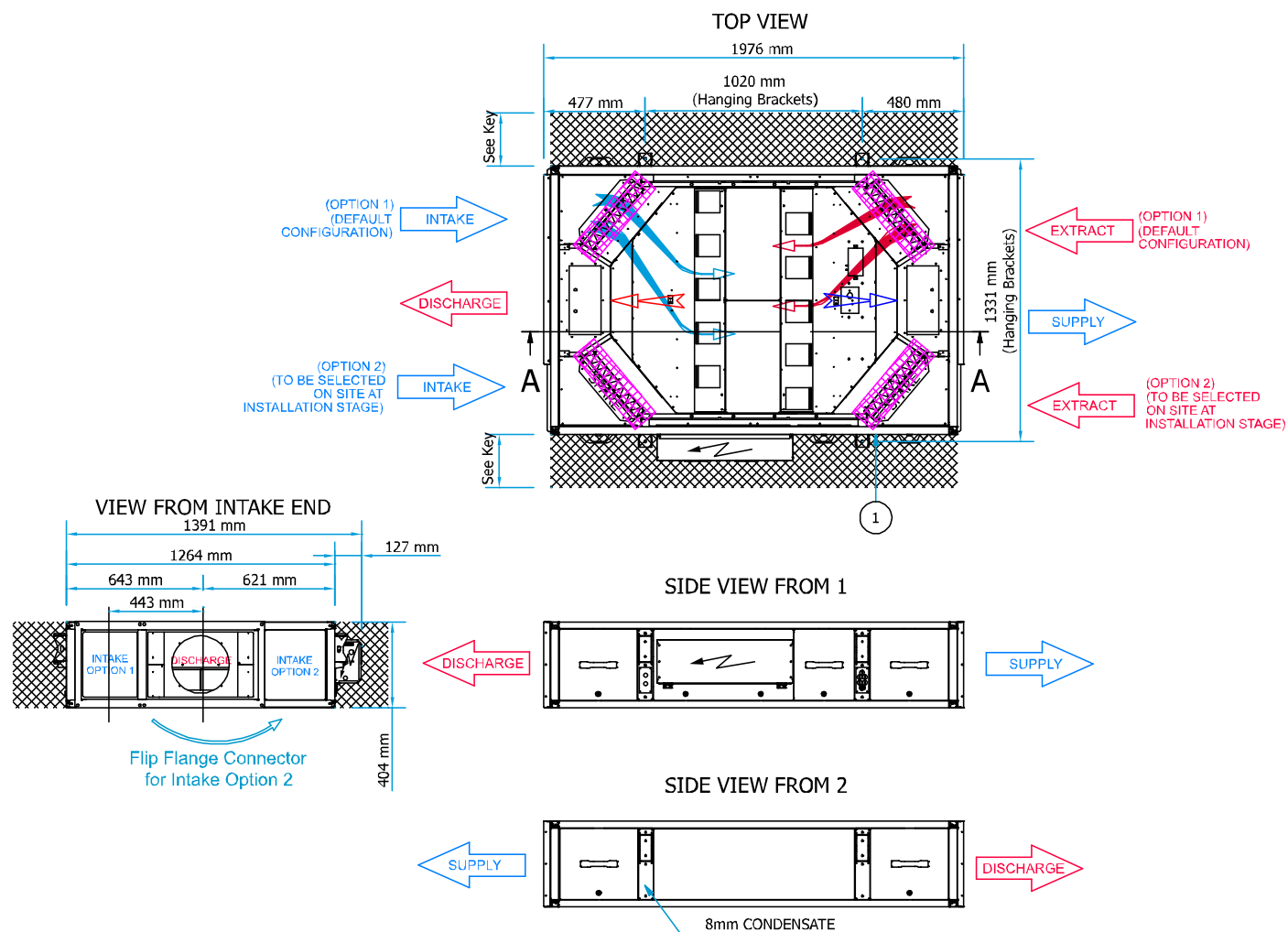
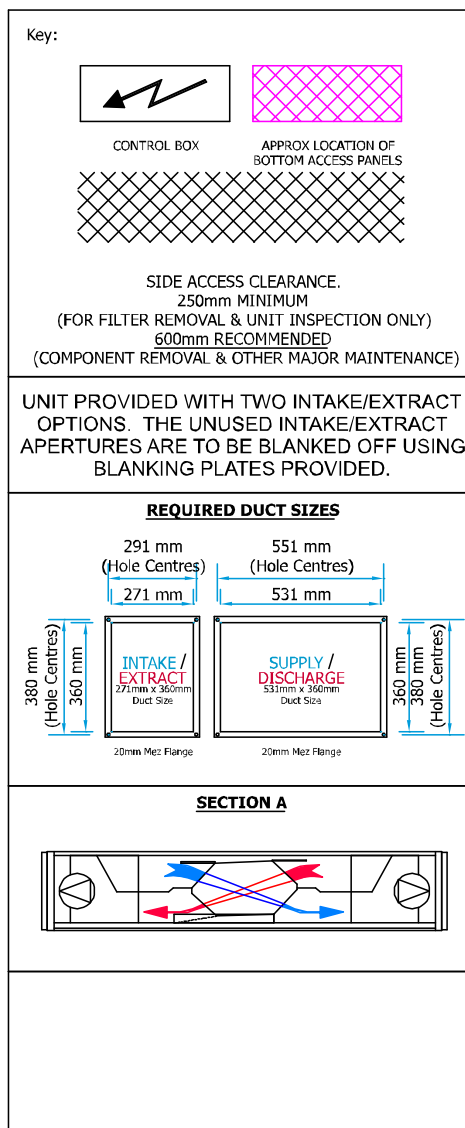
Please DO NOT sign this drawing to confirm handings.
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SUMMARY FAN DATA SHEET

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UK Commercial enquiries T:029 2085 8200 UK Residential enquiries T:029 2085 8500 International enquiries T:+44.29 2085 8497

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This data sheet produced on 16 Dec 2021 15:35 using software version 5.4.4176.0

Project Details

Location: HRU/00/05 - Male - Changing - Area

Technical Data

XBC+

Fan Code: **XBC55HA-NNN-E-LB1S**
Installation Manual Links: 671948

Supply

Required duty: 0.353 m³/s at 206 Pa
Actual duty: 0.442 m³/s at 323 Pa
Actual at required flow: 0.353 m³/s at 450 Pa

Extract

Required duty: 0.353 m³/s at 206 Pa
Actual duty: 0.442 m³/s at 323 Pa
Actual at required flow: 0.353 m³/s at 450 Pa

When speed controlled to required duty:

Motor input power: **0.48 kW**
Specific Fan Power: **1.4 W/(l/s)**
At full speed:
Motor input power: 0.941 kW
Specific Fan Power: 2.1 W/(l/s)

Maximum Fan Speed: 2,400 RPM
Electrical Supply: 230V 1 Phase 50 Hz
Nominal Motor Rating: 1 kW
Motor Current (flc): 5.1 A
Motor Current (sc): 5.1 A

Max. operating temp: 45°C
Weight: 375 kg

Sound Data

Noise calculated speed controlled to required duty (79.89%)

Sound Power Levels re 1 pWatts (Hz):

Hz	63	125	250	500	1k	2k	4k	8k	dBA
Breakout	67	61	54	40	39	36	32	21	29
Induct Intake	76	70	68	56	58	54	45	34	43
Induct Supply	80	76	77	64	66	63	58	54	51
Induct Discharge	81	77	77	64	66	64	58	56	51
Induct Extract	77	71	68	56	58	55	45	36	43
For 100% speed:	+5	+4	+7	+7	+6	+7	+8	+7	

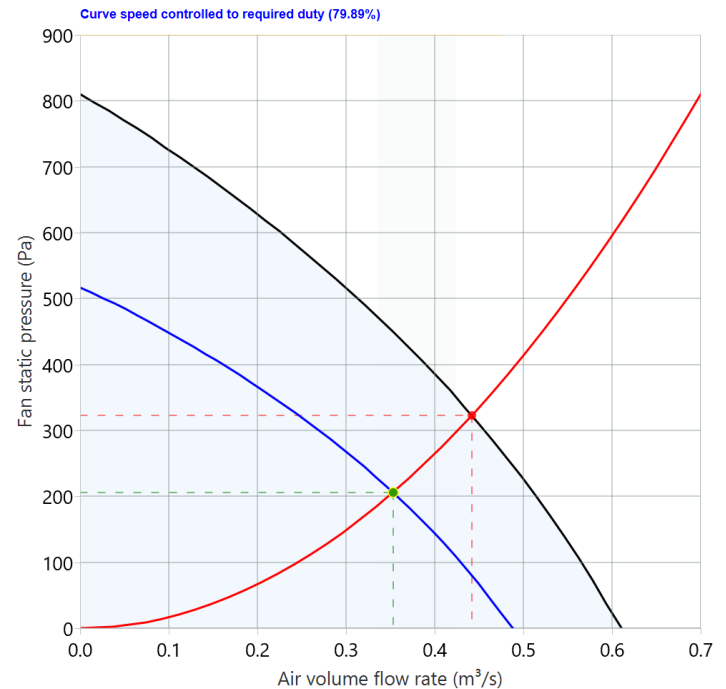
dBA is spherical at 3 metres. For hemi-spherical add 3 dBA.

Please note that the noise data stated on this data sheet for the unit and/or silencer is tested in accordance with UK, European and International industry laboratory standards. However onsite conditions may vary and we would recommend that this information is verified by an acoustic specialist in order to ensure its suitability for the intended application.

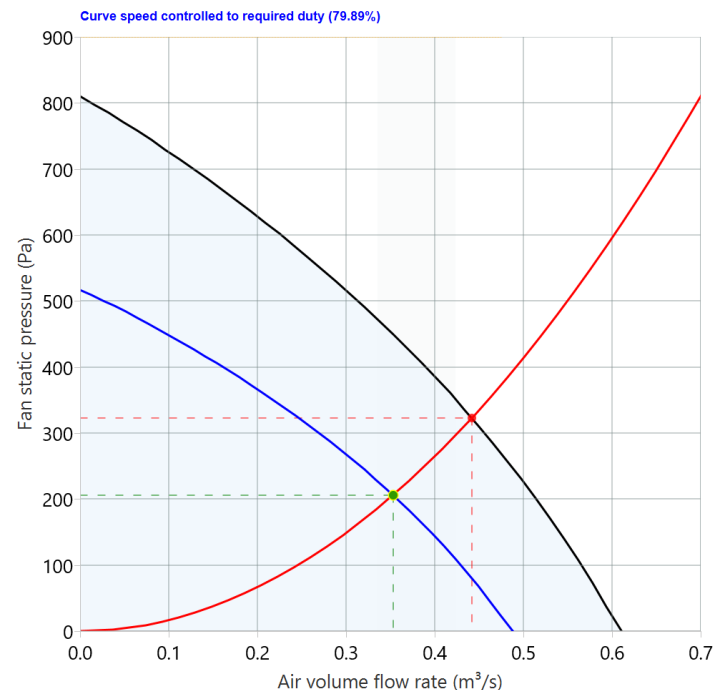
Specification

XBC55HA-NNN-E-LB1S. Nuaire XBOXER Supply & Extract HX unit. Incorporating high efficiency Counterflow plate heat exchanger 100% bypass facility (patent app. for) automatic control and actuator. Backward curved impellers, IP54 EC motors and speed control. Double skinned construction (patented). G4 Supply G4 Extract panel filters (spares included). EcoSmart Classic control of ventilation/heating. For ceiling/underfloor/slab mounted applications. Supply/Discharge connections on unit centreline; Intake/Extract connections are configurable on site to either side of unit. Rotational side mounted control. Unit will be supplied LEFT HANDED with bottom access for filter removal and replacement. 5 year warranty (UK and Ireland only)

Performance Chart (supply)



Performance Chart (extract)



Additional Notes

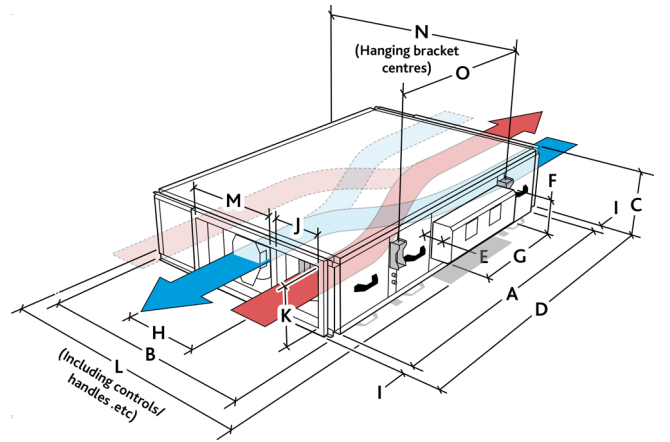
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Fan Dimensions

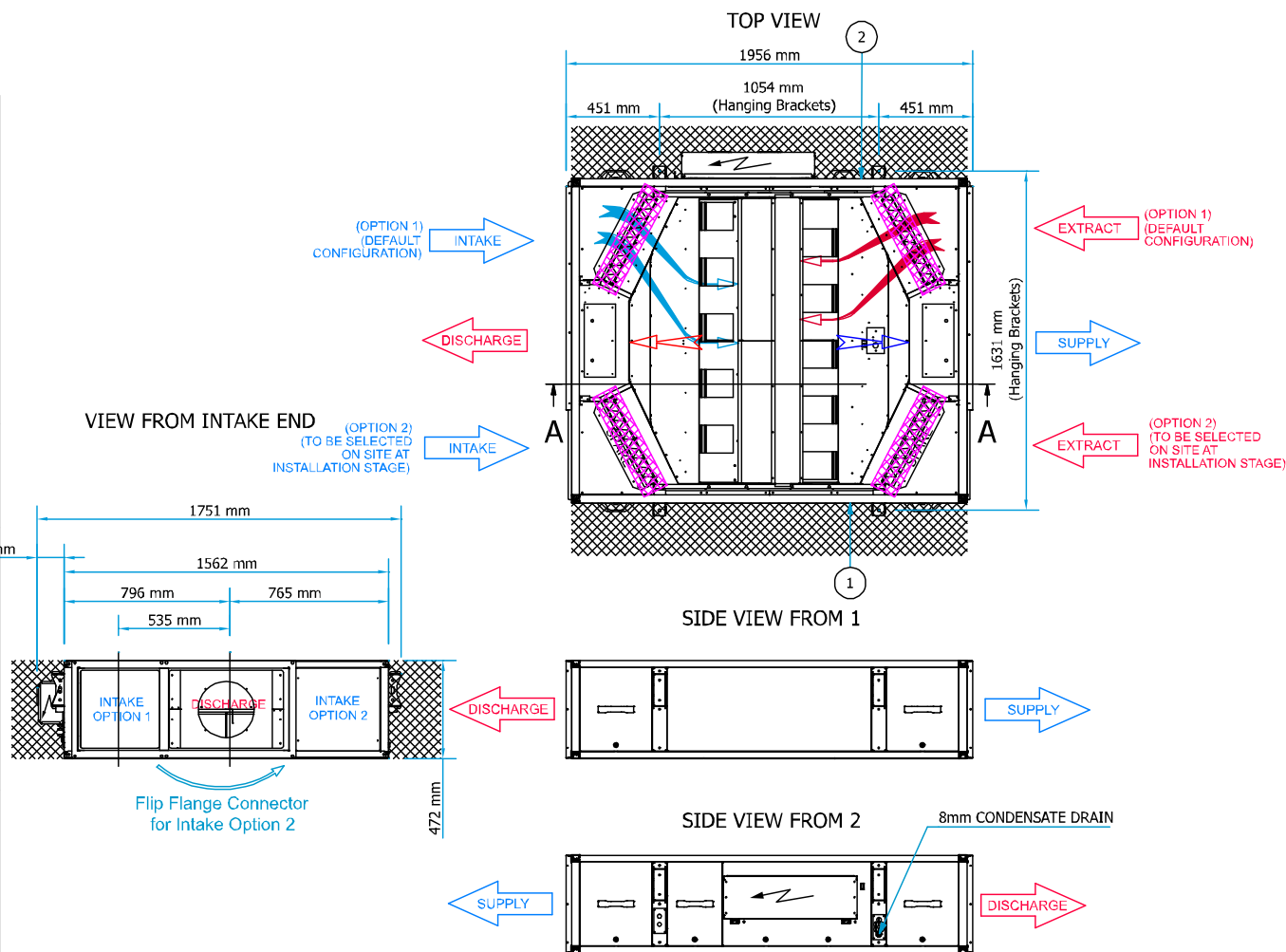
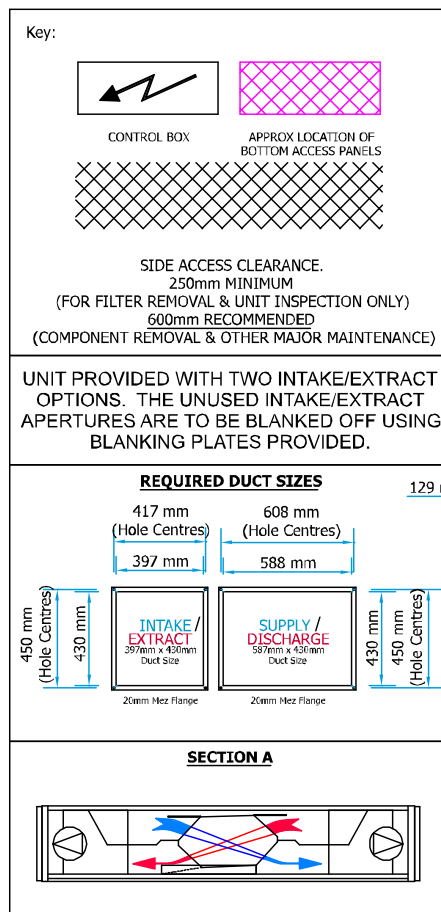


A	B	C	D	E	F	G	H	I
1900	1560	470	1960	140	210	640	535	30
J	K	L	M	N	O	kg		
397	430	1751	587	1632	1052	375.0		

Length: Width: Height:

1900 1560 470

Drawing is for dimensional purposes only. Dimensions in mm.



You can download this CAD drawing from <http://int.nuaire.info/CAD/xbcplus55-hn-ba-l.dwg>

Please Note: This drawing details the factory-standard unit ONLY (unless silencers are shown too). The total length or footprint may differ from that shown depending on the additional ancillaries offered on the quote or if the unit code ends in -QA*****

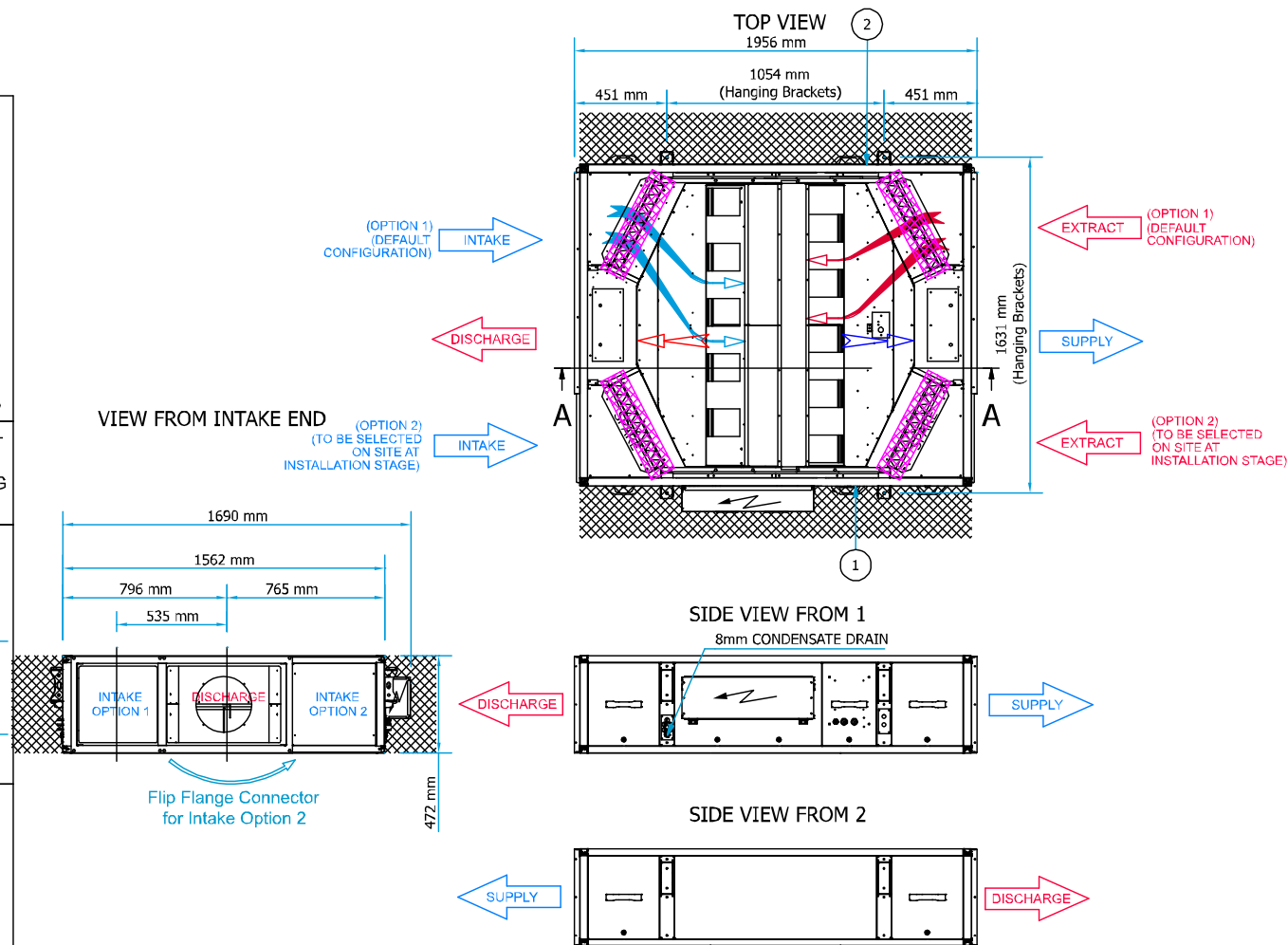
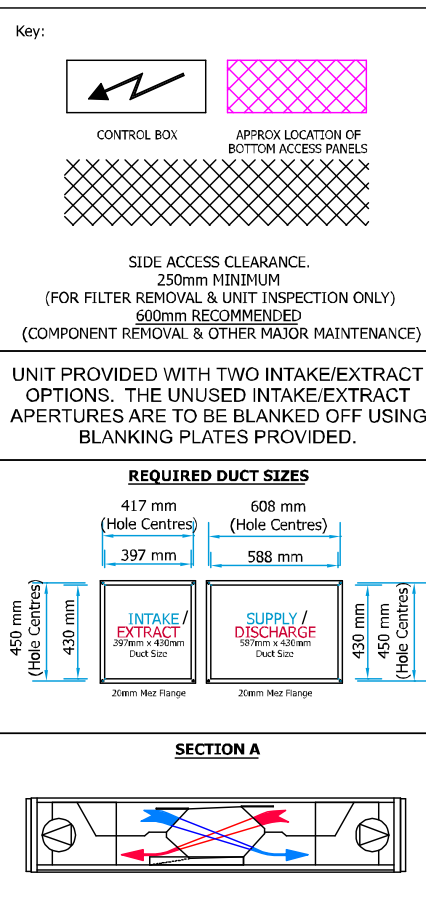
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SUMMARY FAN DATA SHEET

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Whilst the information given on this data sheet is fan specific, it is in summary and reference to the product selection catalogue and installation & maintenance documents is recommended.

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Project Details

Location: HRU/00/06 - Dining Area

Technical Data

XBC+

Fan Code: **XBC45HA-NNN-E-LS1S**
Installation Manual Links: **671948**

Supply

Required duty: 0.424 m³/s at 145 Pa
Actual duty: 0.455 m³/s at 167 Pa
Actual at required flow: 0.424 m³/s at 231 Pa

Extract

Required duty: 0.424 m³/s at 145 Pa
Actual duty: 0.455 m³/s at 167 Pa
Actual at required flow: 0.424 m³/s at 231 Pa

When speed controlled to required duty:

Motor input power: **0.762 kW**

Specific Fan Power: **1.8 W/(l/s)**

At full speed:

Motor input power: 0.944 kW

Specific Fan Power: 2.1 W/(l/s)

Maximum Fan Speed: 2,400 RPM

Electrical Supply: 230V 1 Phase 50 Hz

Nominal Motor Rating 1 kW

Motor Current (flc): 5.1 A

Motor Current (sc): 5.1 A

Max. operating temp: 45°C

Weight: 298 kg

Sound Data

Noise calculated speed controlled to required duty (93.12%)

Sound Power Levels re 1 pWatts (Hz):

Hz	63	125	250	500	1k	2k	4k	8k	dBA
Breakout	72	63	60	45	43	42	38	27	34
Induct Intake	81	73	73	62	62	60	52	43	48
Induct Supply	85	78	83	69	70	69	64	60	56
Induct Discharge	86	79	83	69	70	70	64	62	57
Induct Extract	82	73	74	61	62	61	51	42	48
For 100% speed:	+2	+2	+2	+2	+2	+2	+2	+2	

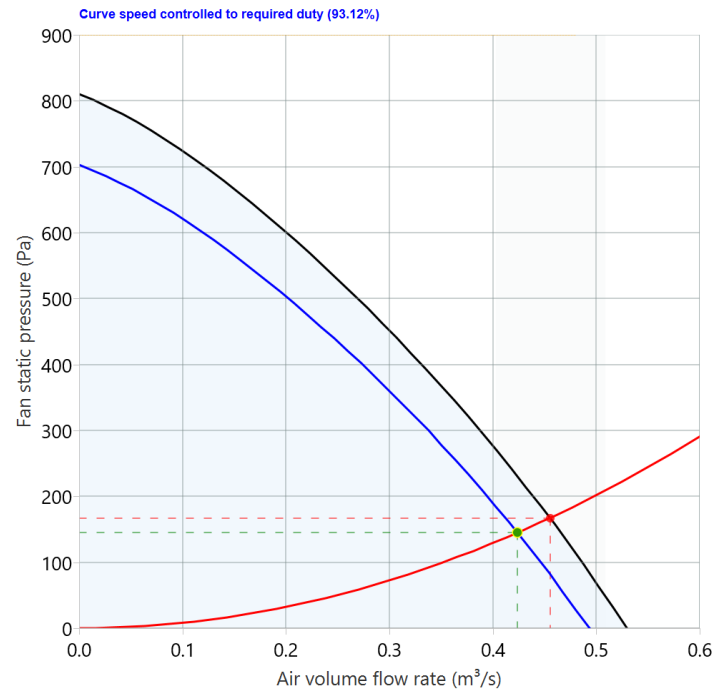
dBA is spherical at 3 metres. For hemi-spherical add 3 dBA.

Please note that the noise data stated on this data sheet for the unit and/or silencer is tested in accordance with UK, European and International industry laboratory standards. However onsite conditions may vary and we would recommend that this information is verified by an acoustic specialist in order to ensure its suitability for the intended application.

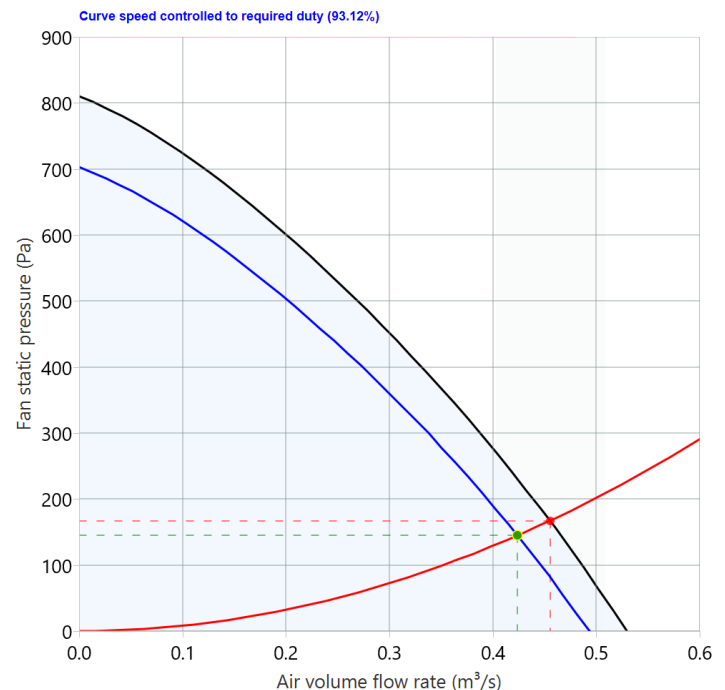
Specification

XBC45HA-NNN-E-LS1S. Nuaire XBOXER Supply & Extract HX unit. Incorporating high efficiency Counterflow plate heat exchanger 100% bypass facility (patent app. for) automatic control and actuator. Backward curved impellers, IP54 EC motors and speed control. Double skinned construction (patented). G4 Supply G4 Extract panel filters (spares included). EcoSmart Classic control of ventilation/heating. For ceiling/underfloor/slab mounted applications. Supply/Discharge connections on unit centreline; Intake/Extract connections are configurable on site to either side of unit. Rotational side mounted control. Unit will be supplied LEFT HANDED. 5 year warranty (UK and Ireland only)

Performance Chart (supply)



Performance Chart (extract)



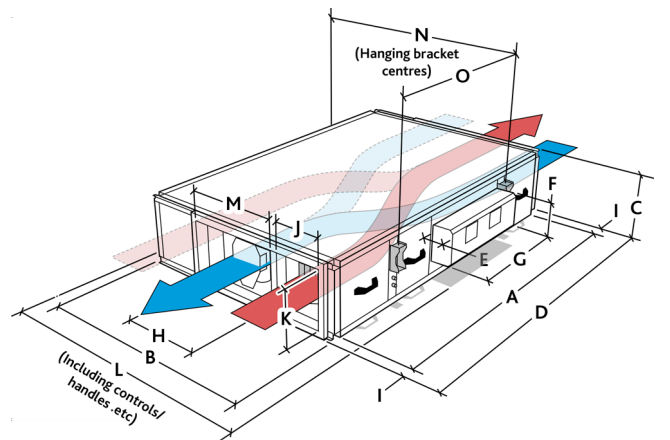
Additional Notes

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This data sheet produced on 16 Dec 2021 15:35 using software version 5.4.4176.0

Fan Dimensions

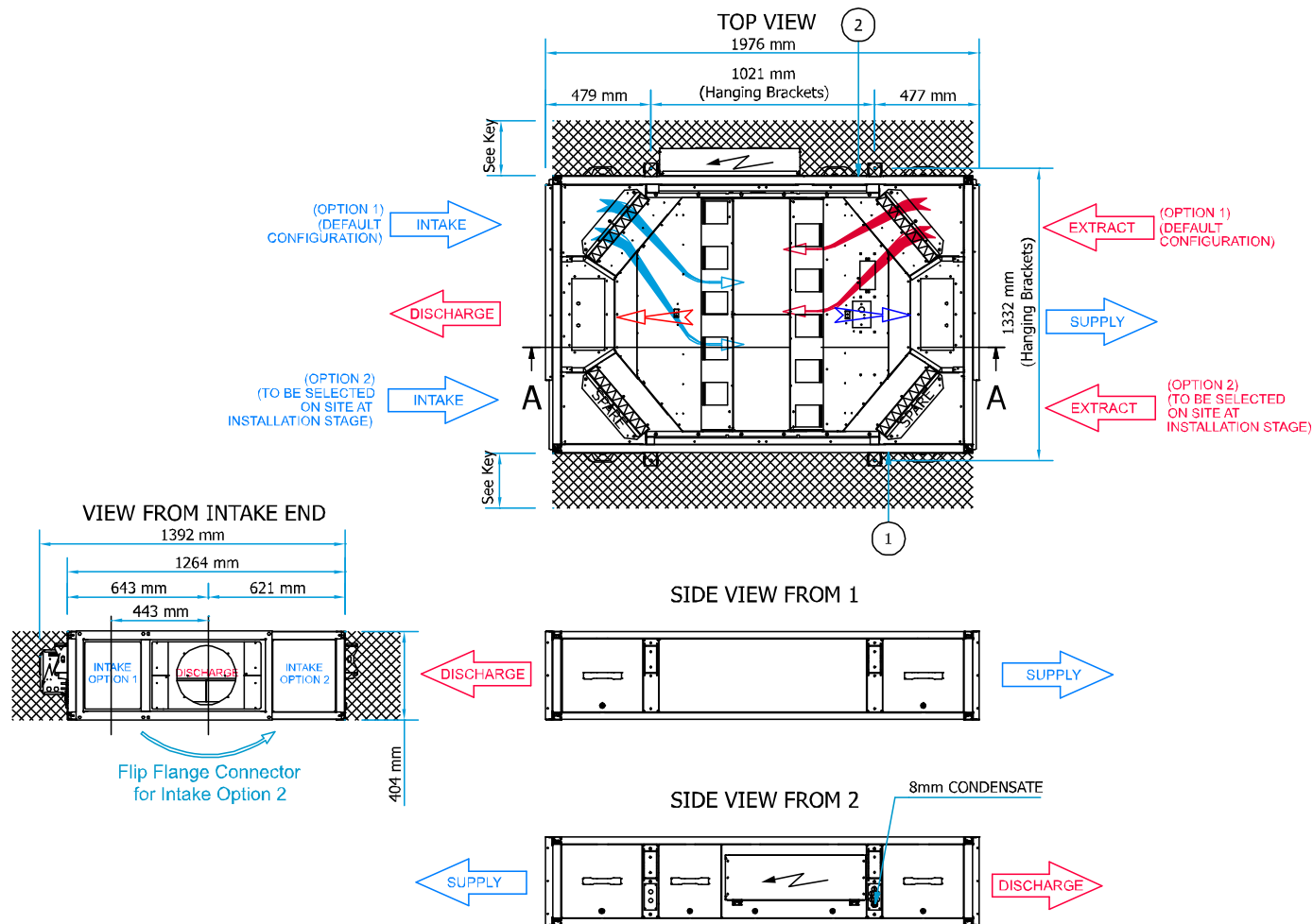
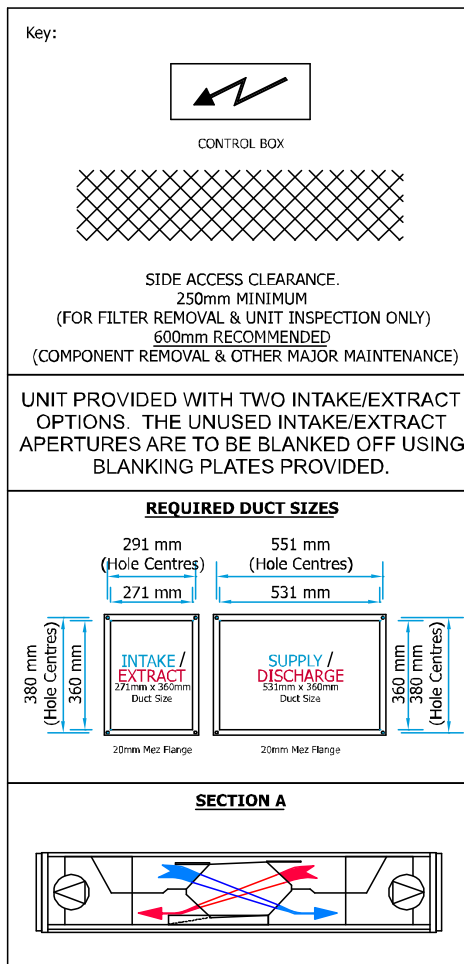


A	B	C	D	E	F	G	H	I
1913	1262	405	1973	140	210	640	443	30
J	K	L	M	N	O	kg		
270	360	1461	531	1332	1020	298.0		

Length: Width: Height:

1913 1262 405

Drawing is for dimensional purposes only. Dimensions in mm.



You can download this CAD drawing from <http://int.nuaire.info/CAD/xbcplus45-hn-l.dwg>

Please Note: This drawing details the factory-standard unit ONLY (unless silencers are shown too). The total length or footprint may differ from that shown depending on the additional ancillaries offered on the quote or if the unit code ends in -QA*****

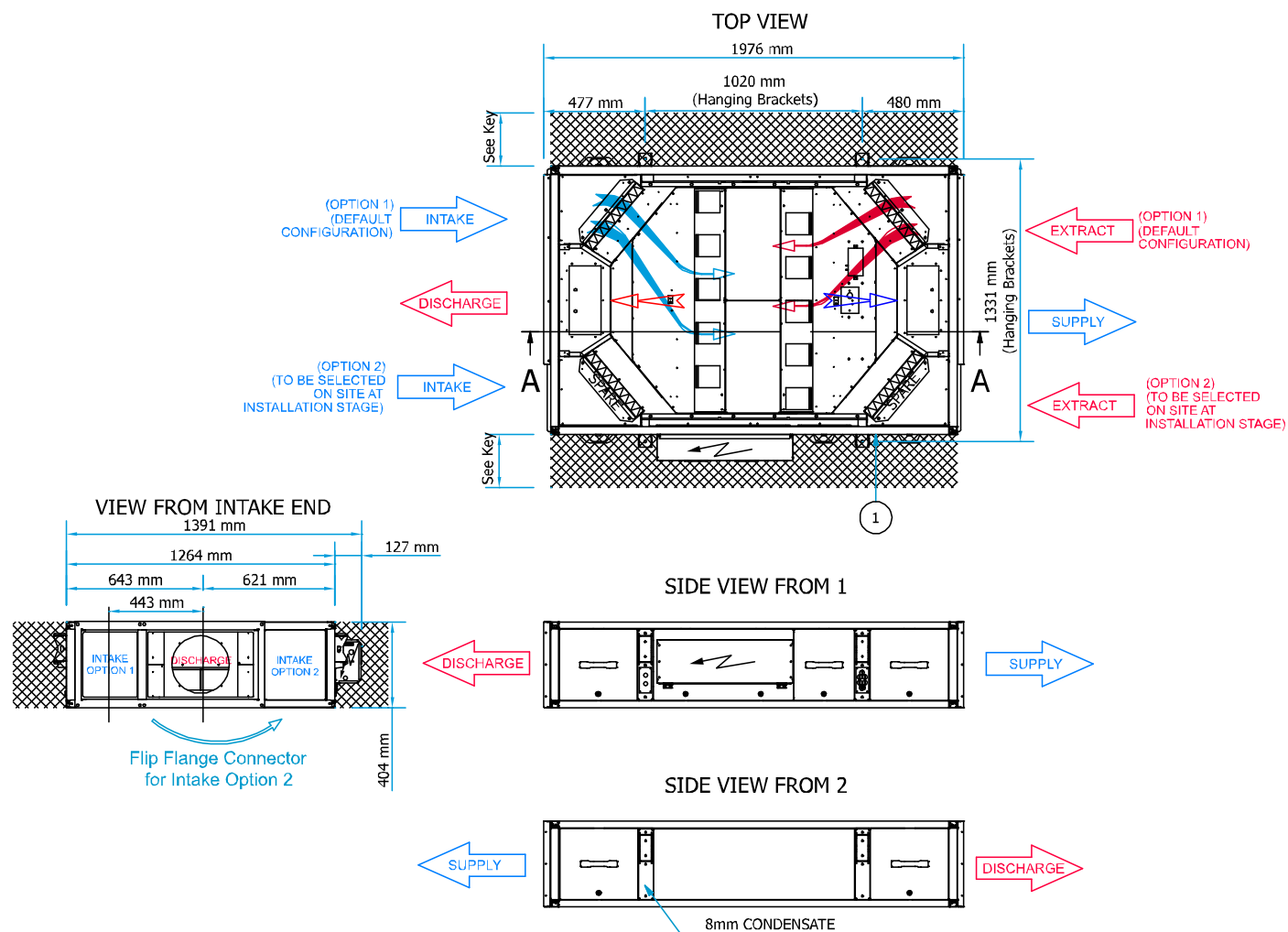
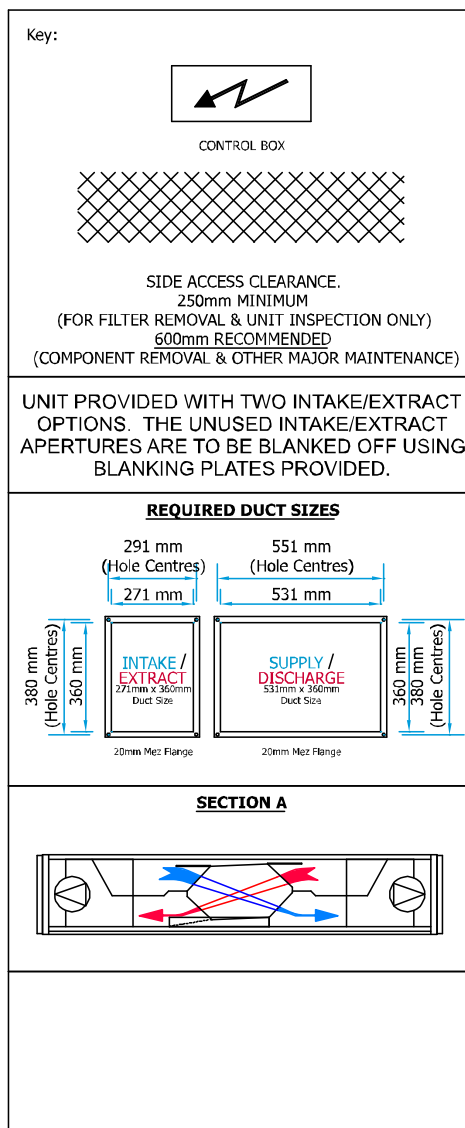
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You can download this CAD drawing from <http://int.nuaire.info/CAD/xbcplus45-hn-r.dwg>

Please Note: This drawing details the factory-standard unit ONLY (unless silencers are shown too). The total length or footprint may differ from that shown depending on the additional ancillaries offered on the quote or if the unit code ends in -QA*****

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SUMMARY FAN DATA SHEET

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UK Commercial enquiries T:029 2085 8200 UK Residential enquiries T:029 2085 8500 International enquiries T:+44.29 2085 8497

Whilst the information given on this data sheet is fan specific, it is in summary and reference to the product selection catalogue and installation & maintenance documents is recommended.

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Project Details

Location: HRU/00/07 - Dining Area

Technical Data

XBC+

Fan Code: **XBC45HA-NNN-E-LS1S**
Installation Manual Links: **671948**

Supply

Required duty: 0.424 m³/s at 145 Pa
Actual duty: 0.455 m³/s at 167 Pa
Actual at required flow: 0.424 m³/s at 231 Pa

Extract

Required duty: 0.424 m³/s at 145 Pa
Actual duty: 0.455 m³/s at 167 Pa
Actual at required flow: 0.424 m³/s at 231 Pa

When speed controlled to required duty:

Motor input power: **0.762 kW**
Specific Fan Power: **1.8 W/(l/s)**

At full speed:

Motor input power: 0.944 kW
Specific Fan Power: 2.1 W/(l/s)

Maximum Fan Speed: 2,400 RPM
Electrical Supply: 230V 1 Phase 50 Hz
Nominal Motor Rating 1 kW
Motor Current (flc): 5.1 A
Motor Current (sc): 5.1 A

Max. operating temp: 45°C
Weight: 298 kg

Sound Data

Noise calculated speed controlled to required duty (93.12%)

Sound Power Levels re 1 pWatts (Hz):

Hz	63	125	250	500	1k	2k	4k	8k	dBA
Breakout	72	63	60	45	43	42	38	27	34
Induct Intake	81	73	73	62	62	60	52	43	48
Induct Supply	85	78	83	69	70	69	64	60	56
Induct Discharge	86	79	83	69	70	70	64	62	57
Induct Extract	82	73	74	61	62	61	51	42	48
For 100% speed:	+2	+2	+2	+2	+2	+2	+2	+2	

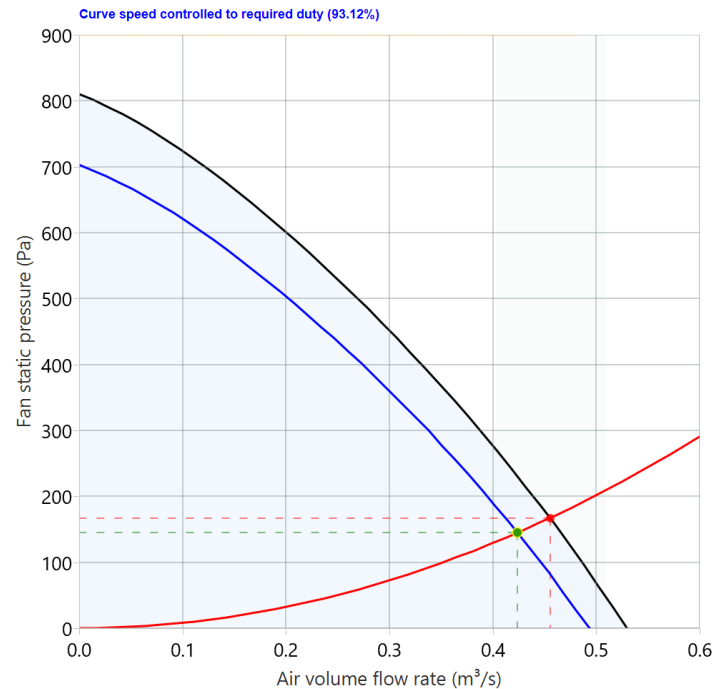
dBA is spherical at 3 metres. For hemi-spherical add 3 dBA.

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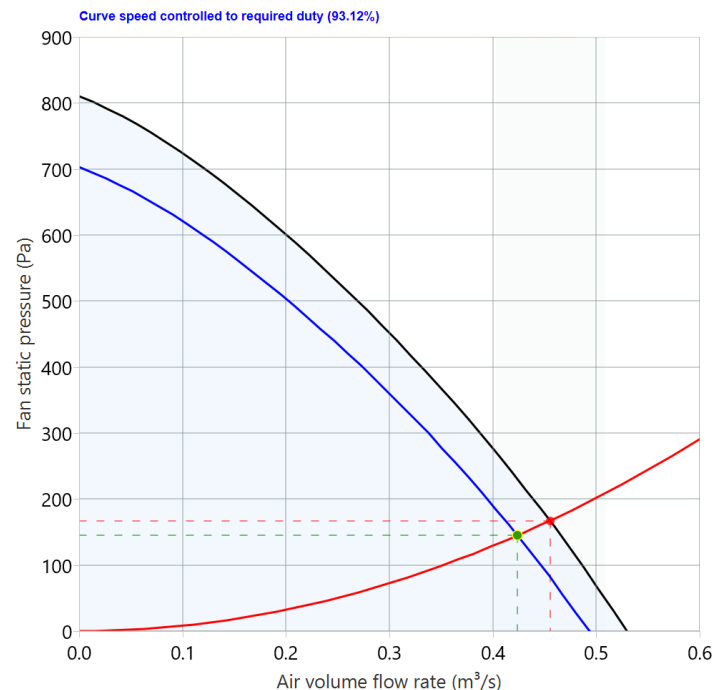
Specification

XBC45HA-NNN-E-LS1S. Nuaire XBOXER Supply & Extract HX unit. Incorporating high efficiency Counterflow plate heat exchanger 100% bypass facility (patent app. for) automatic control and actuator. Backward curved impellers, IP54 EC motors and speed control. Double skinned construction (patented). G4 Supply G4 Extract panel filters (spares included). EcoSmart Classic control of ventilation/heating. For ceiling/underfloor/slab mounted applications. Supply/Discharge connections on unit centreline; Intake/Extract connections are configurable on site to either side of unit. Rotational side mounted control. Unit will be supplied LEFT HANDED. 5 year warranty (UK and Ireland only)

Performance Chart (supply)



Performance Chart (extract)



Additional Notes

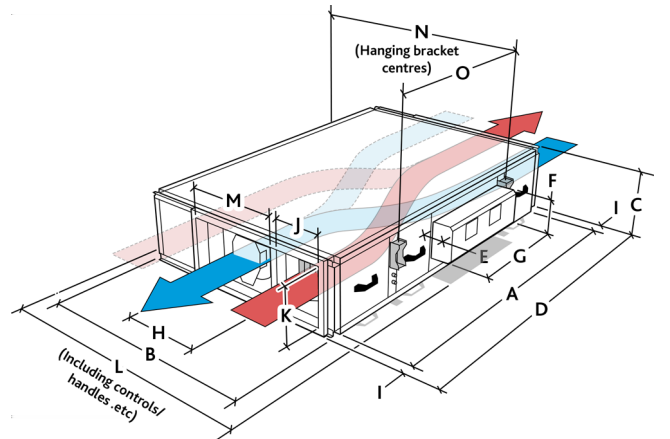
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Fan Dimensions

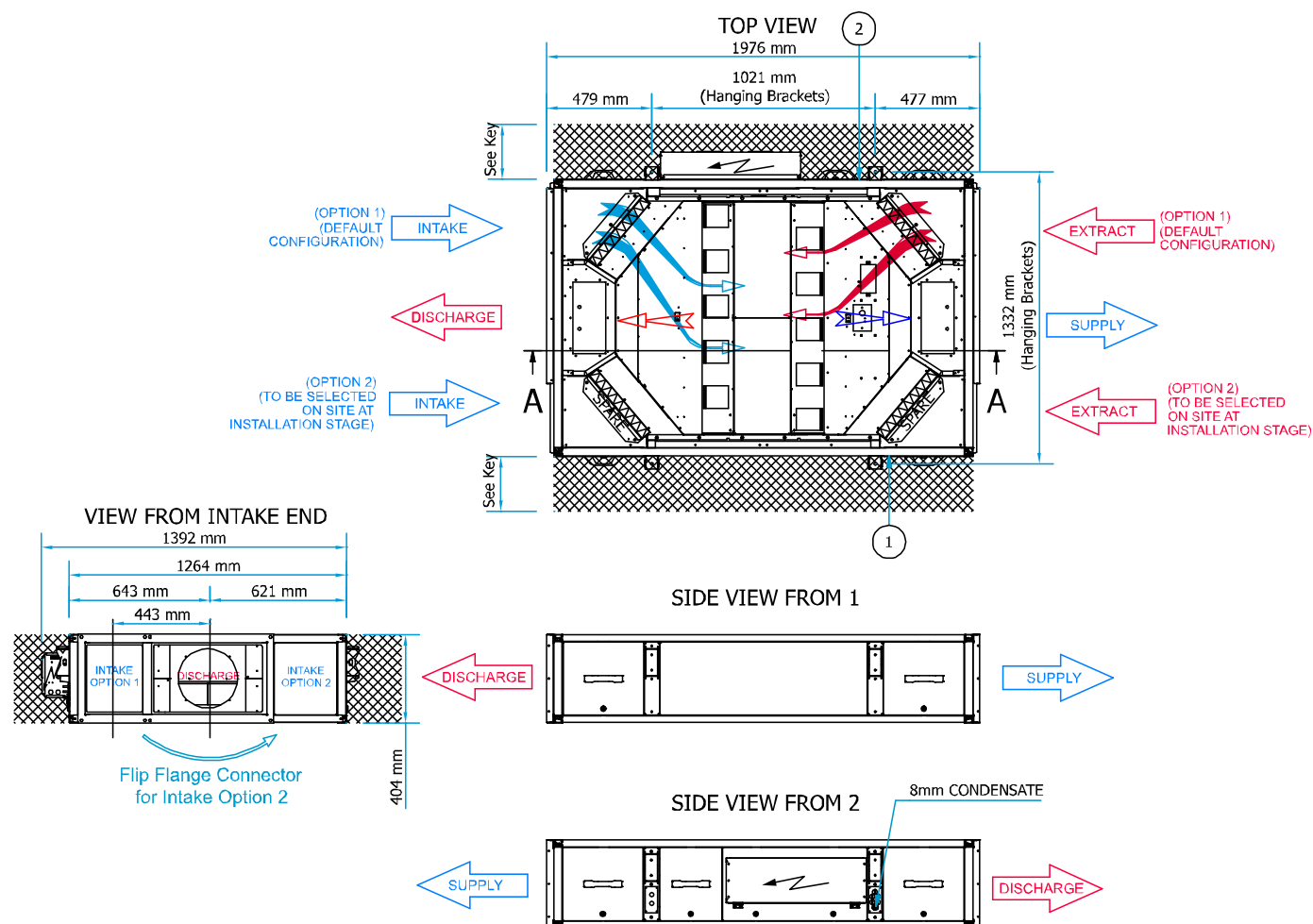
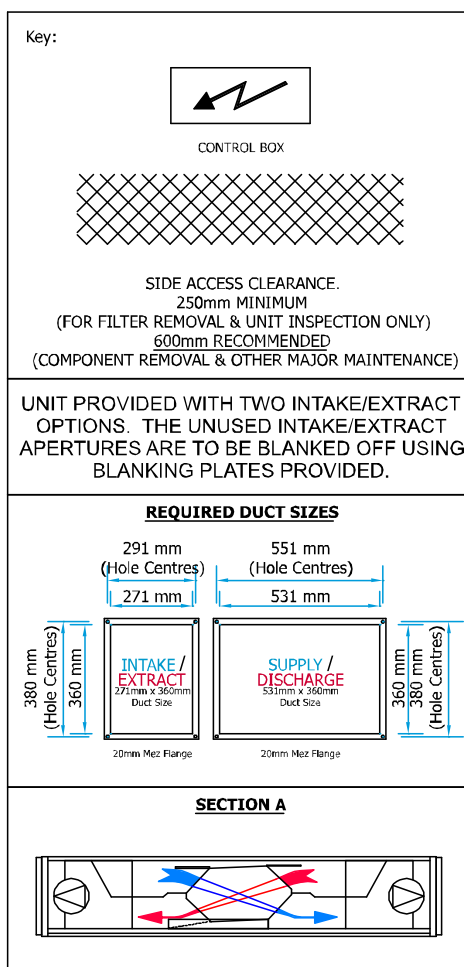


A	B	C	D	E	F	G	H	I
1913	1262	405	1973	140	210	640	443	30
J	K	L	M	N	O	kg		
270	360	1461	531	1332	1020	298.0		

Length: Width: Height:

1913 1262 405

Drawing is for dimensional purposes only. Dimensions in mm.



You can download this CAD drawing from <http://int.nuaire.info/CAD/xbcplus45-hn-l.dwg>

Please Note: This drawing details the factory-standard unit ONLY (unless silencers are shown too). The total length or footprint may differ from that shown depending on the additional ancillaries offered on the quote or if the unit code ends in -QA*****

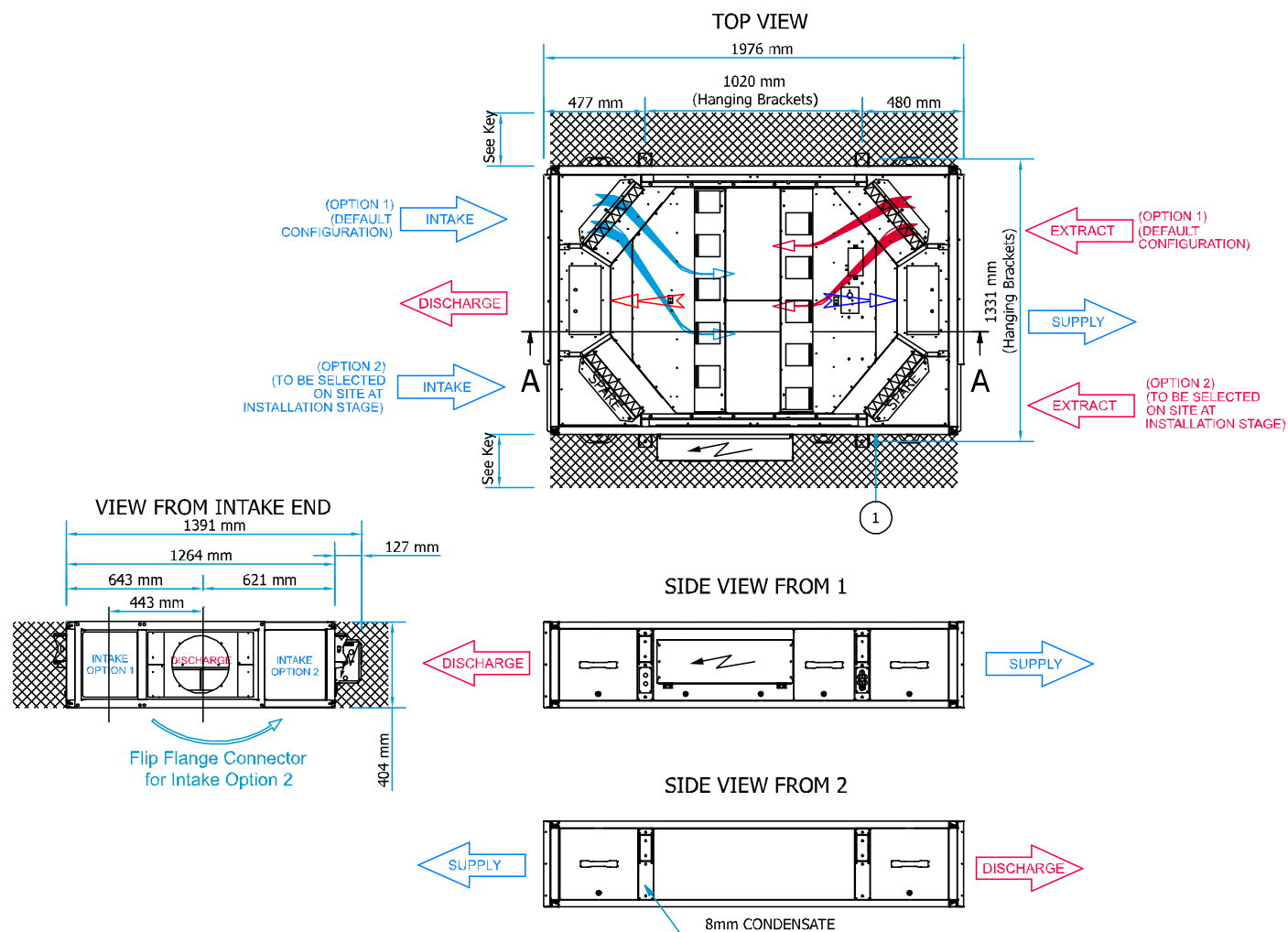
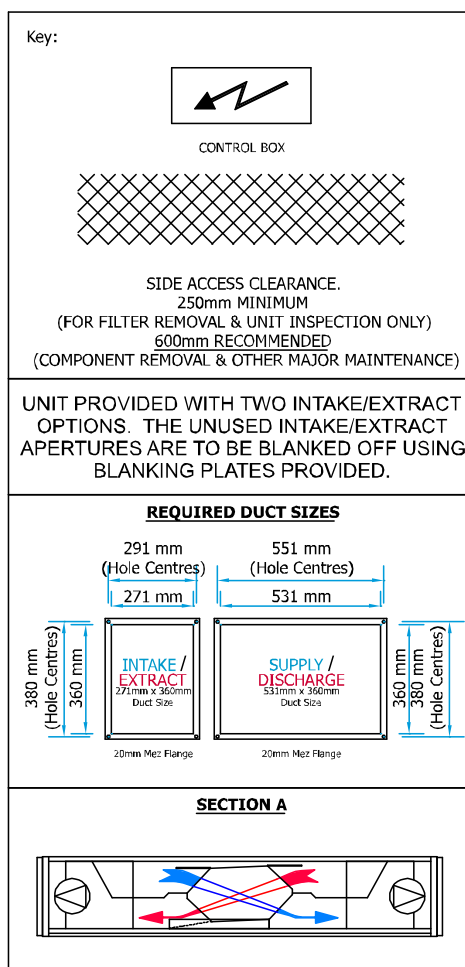
Please DO NOT sign this drawing to confirm handings.
Please request the official handing drawings from Nuaire.

Drawing generated automatically by Nuaire Selector

Do NOT scale from this drawing.

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You can download this CAD drawing from <http://int.nuaire.info/CAD/xbcplus45-hn-r.dwg>

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SUMMARY FAN DATA SHEET

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UK Commercial enquiries T:029 2085 8200 UK Residential enquiries T:029 2085 8500 International enquiries T:+44.29 2085 8497

Whilst the information given on this data sheet is fan specific, it is in summary and reference to the product selection catalogue and installation & maintenance documents is recommended.

This data sheet produced on 16 Dec 2021 15:35 using software version 5.4.4176.0

Project Details

Location: HRU/01/01 - Drama Studio

Technical Data

XBC+

Fan Code: **XBC25HA-NNN-E-LS1S**
Installation Manual Links: 671948

Supply

Required duty: 0.256 m³/s at 185 Pa
Actual duty: 0.343 m³/s at 331 Pa
Actual at required flow: 0.256 m³/s at 620 Pa

Extract

Required duty: 0.256 m³/s at 185 Pa
Actual duty: 0.343 m³/s at 331 Pa
Actual at required flow: 0.256 m³/s at 620 Pa

When speed controlled to required duty:

Motor input power: **0.413 kW**
Specific Fan Power: **1.6 W/(l/s)**

At full speed:

Motor input power: 0.991 kW
Specific Fan Power: 2.9 W/(l/s)

Maximum Fan Speed: 3,740 RPM
Electrical Supply: 230V 1 Phase 50 Hz
Nominal Motor Rating: 1 kW
Motor Current (flc): 5.1 A
Motor Current (sc): 5.1 A

Max. operating temp: 60°C
Weight: 242 kg

Sound Data

Noise calculated speed controlled to required duty (74.68%)

Sound Power Levels re 1 pWatts (Hz):

Hz	63	125	250	500	1k	2k	4k	8k	dBA
Breakout	65	64	51	54	41	40	40	32	33
Induct Intake	73	67	65	67	62	58	50	49	47
Induct Supply	78	79	74	78	68	68	64	66	57
Induct Discharge	79	80	74	77	68	68	66	67	57
Induct Extract	72	66	64	67	61	58	50	50	46
For 100% speed:	+7	+7	+7	+7	+7	+7	+7	+7	

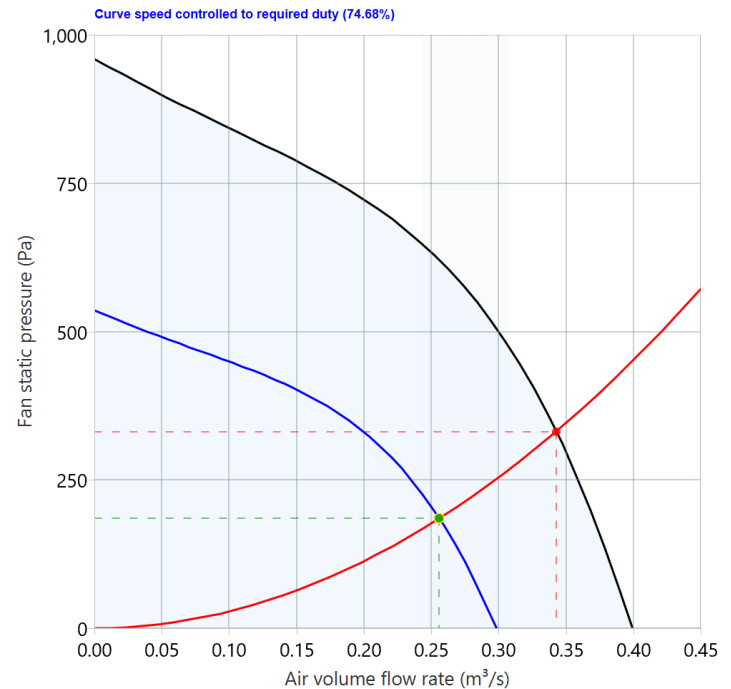
dBA is spherical at 3 metres. For hemi-spherical add 3 dBA.

Please note that the noise data stated on this data sheet for the unit and/or silencer is tested in accordance with UK, European and International industry laboratory standards. However onsite conditions may vary and we would recommend that this information is verified by an acoustic specialist in order to ensure its suitability for the intended application.

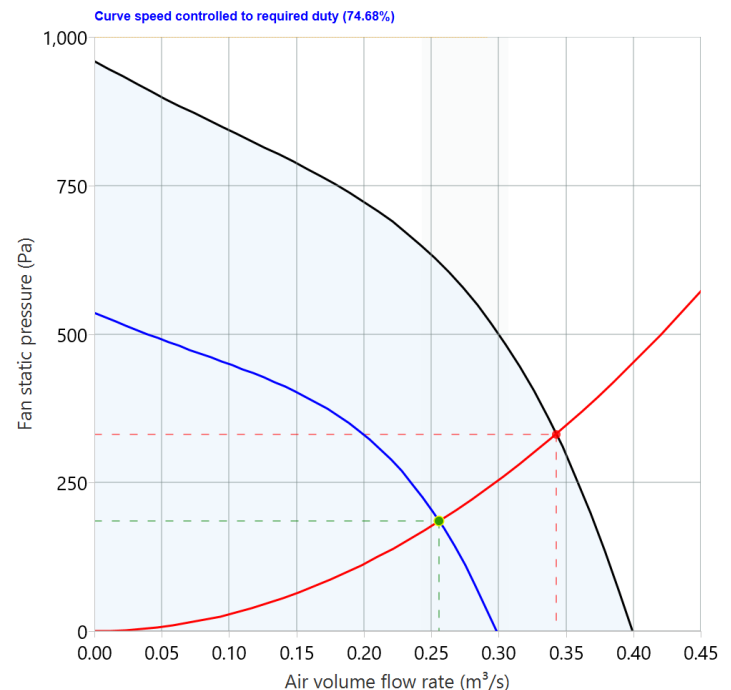
Specification

XBC25HA-NNN-E-LS1S. Nuaire XBOXER Supply & Extract HX unit. Incorporating high efficiency Counterflow plate heat exchanger 100% bypass facility (patent app. for) automatic control and actuator. Backward curved impellers, IP54 EC motors and speed control. Double skinned construction (patented). G4 Supply G4 Extract panel filters (spares included). EcoSmart Classic control of ventilation/heating. For ceiling/underfloor/slab mounted applications. Supply/Discharge connections on unit centreline; Intake/Extract connections are configurable on site to either side of unit. Rotational side mounted control. Unit will be supplied LEFT HANDED. 5 year warranty (UK and Ireland only)

Performance Chart (supply)



Performance Chart (extract)



Additional Notes

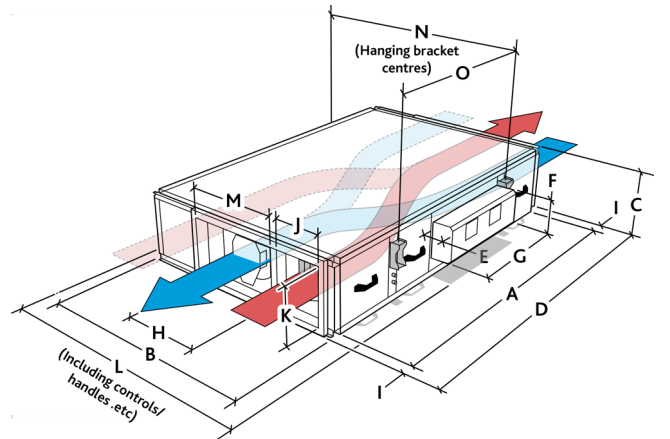
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Fan Dimensions

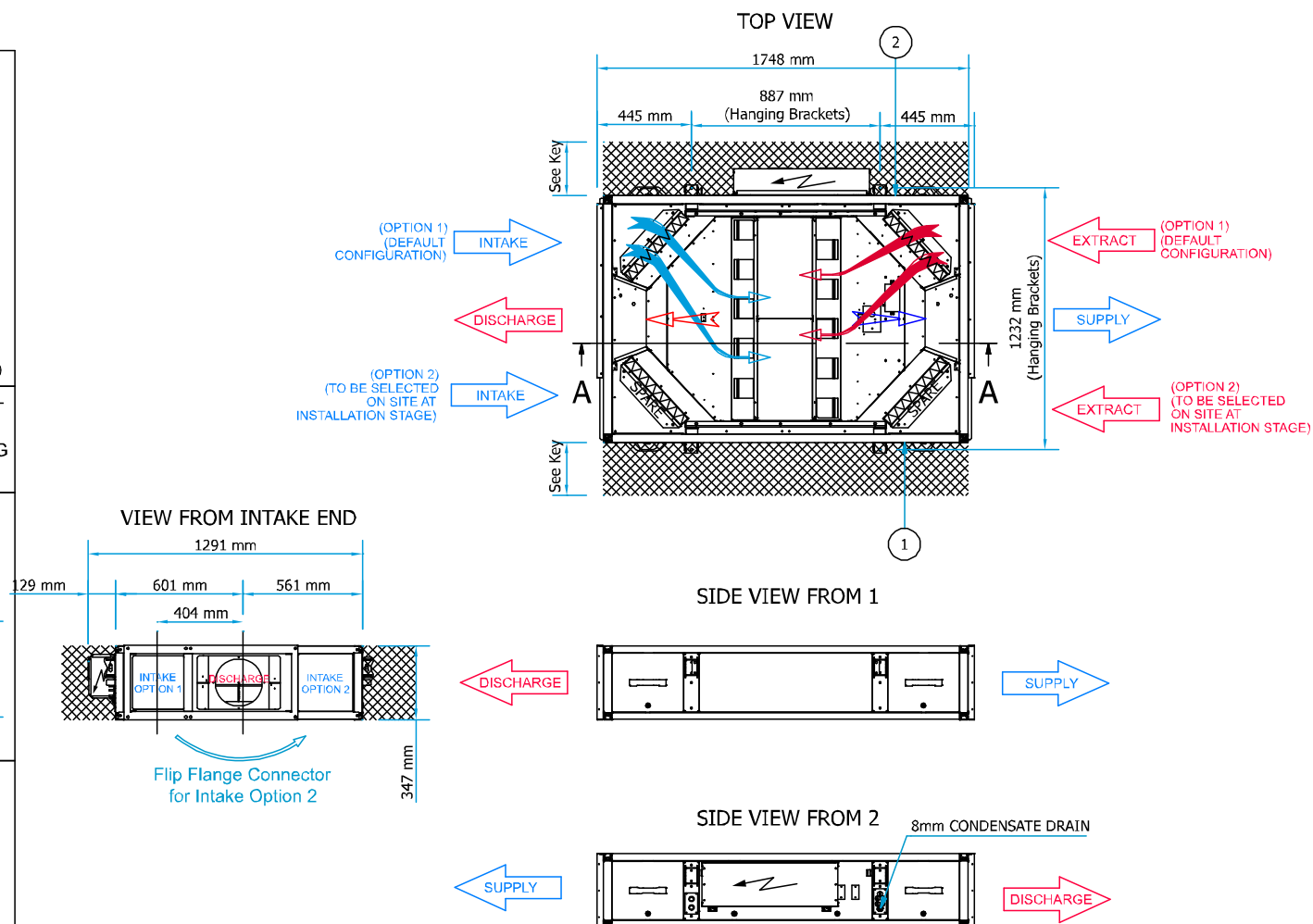
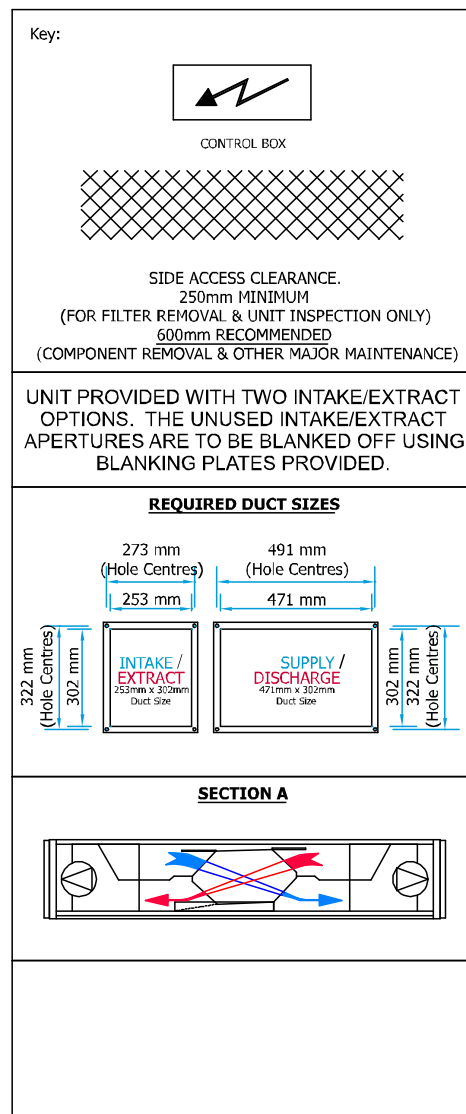


A	B	C	D	E	F	G	H	I
1713	1160	346	1773	140	210	640	413	30
J	K	L	M	N	O	kg		
252	302	1350	471	1232	884	242.0		

Length: Width: Height:

1713 1160 346

Drawing is for dimensional purposes only. Dimensions in mm.



You can download this CAD drawing from <http://int.nuaire.info/CAD/xbcplus25-hn-l.dwg>

Please Note: This drawing details the factory-standard unit ONLY (unless silencers are shown too). The total length or footprint may differ from that shown depending on the additional ancillaries offered on the quote or if the unit code ends in -QA*****

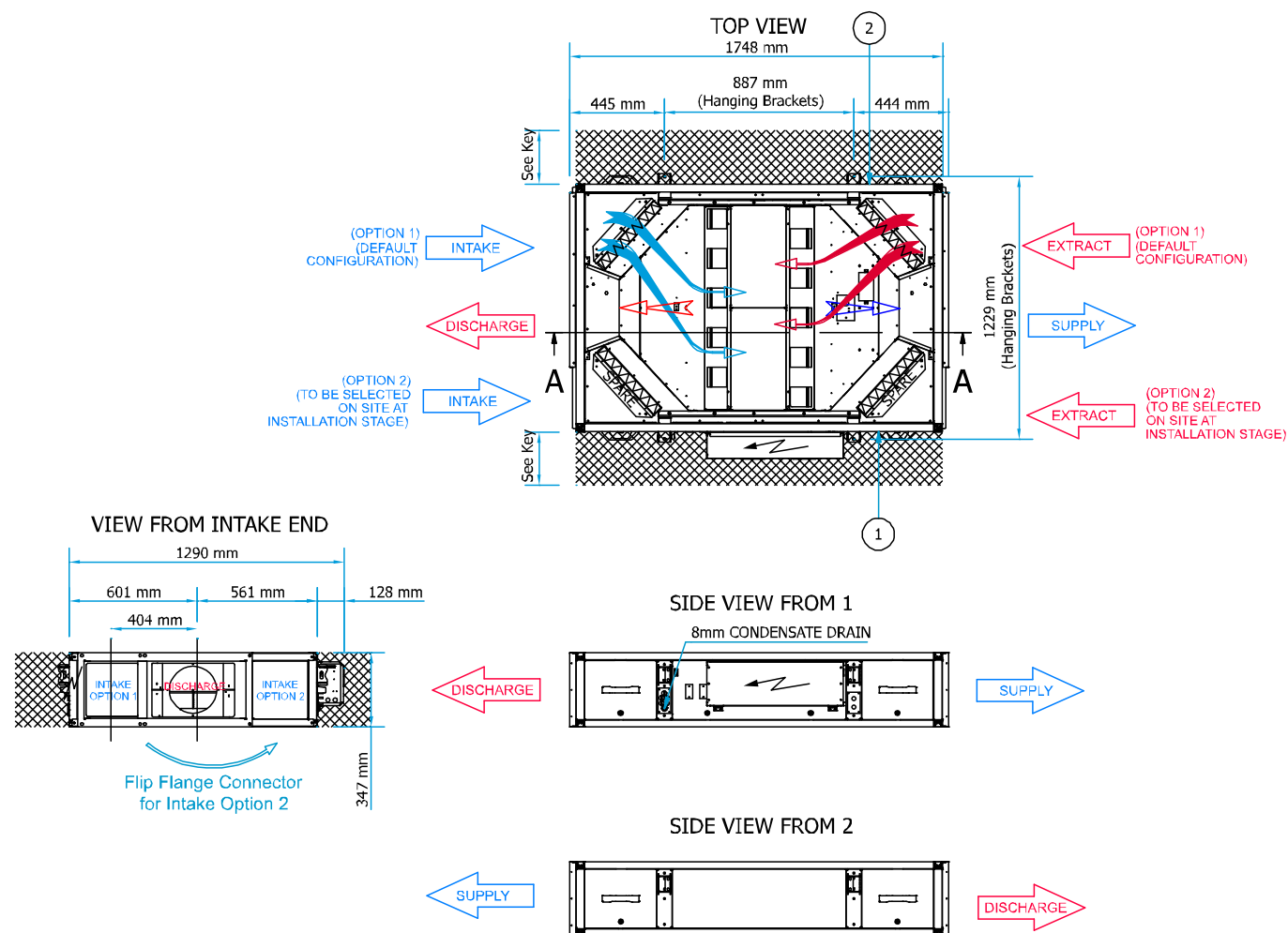
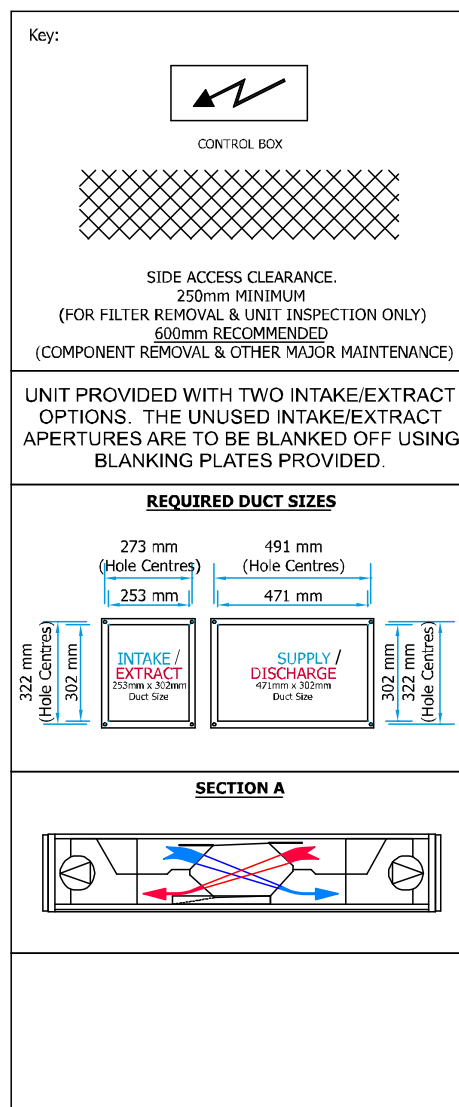
Please DO NOT sign this drawing to confirm handings.
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You can download this CAD drawing from <http://int.nuaire.info/CAD/xbcplus25-hn-r.dwg>

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Project Details

Location: HRU/01/02 - L1 Office SLT1 and Intervention

Technical Data

UNI-X - Supply & Extract HX Unit

Fan Code: **UNI-X360**
 Installation Manual Links: **671789**
 Required duty: **0.06 m³/s at 90 Pa**
 Actual duty: **0.084 m³/s at 176 Pa**
 Actual at required flow: **0.06 m³/s at 332 Pa**

When speed controlled to required duty (71.35%):

Motor Input Power: **0.06 kW**
 Specific Fan Power: **1.0 W/(l/s)**
 Velocity at required duty: **3.03 m/s**

At full speed:

Motor Input Power: **0.166 kW**
 Specific Fan Power: **2.0 W/(l/s)**
 Maximum Fan Speed: **3,200 RPM**
 Electrical Supply: **230V, 1 Phase, 50 Hz**
 Nominal Motor Rating: **0.166 kW**
 Motor current (flc): **1.32 A**
 Motor starting current (sc): **1.32 A**

Max. operating temp: **40°C**
 Weight: **55 kg**

Starting currents are nominal.

Sound Data

Acoustic performance to ISO 13347 and AMCA 300.

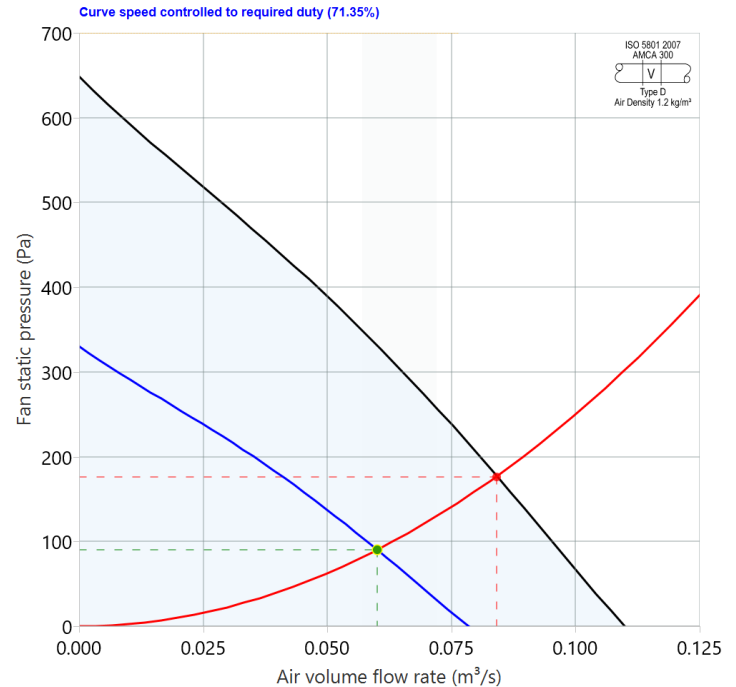
Noise calculated speed controlled to required duty (71.35%)

Sound Power Levels re 1 pWatts (Hz):									
Hz	63	125	250	500	1k	2k	4k	8k	dBA
Open Inlet	57	49	63	59	44	45	37	34	
Open Outlet	56	46	59	58	45	43	34	27	
Breakout	51	52	62	59	40	36	28	27	37
For 100% speed:	+2	+3	+4	+5	+8	+8	+8	+8	

dBA is spherical at 3 metres. For hemi-spherical add 3 dBA.

Please note that the noise data stated on this data sheet for the unit and/or silencer is tested in accordance with UK, European and International industry laboratory standards. However onsite conditions may vary and we would recommend that this information is verified by an acoustic specialist in order to ensure its suitability for the intended application.

Performance Chart



Additional Notes

Selected Ancillaries

1 x ES-VF Ecosmart volt free box
 1 x MVHR-DRAIN Inline Condensate Drain

Specification

The unit shall be manufactured from high density EPS (Expanded polystyrene) with galvanised sheet steel casing to provide excellent thermal and acoustic characteristics, while providing a lightweight and low profile casing. Incorporating a high efficiency, aluminium counter flow heat exchanger block with a thermal efficiency of up to 90%. The heat exchanger will be protected by two G3 grade filters in the fresh inlet and system extract air streams, with both filters being accessible from the underside of the unit allowing for quick and easy maintenance.

The unit shall have a maximum height less than 300mm to fit within ceiling voids.

The unit will contain two, low energy, high efficiency EC fan assemblies, with centrifugal backward curved impellers. The fans will have the facility for variable speed control at trickle (continuous background ventilation), and boost speed to allow for individual specific adjustment during commissioning. The motors shall be suitable for use in ambient temperatures of 40°C.

The control shall be capable of 3 speed operation.

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

The unit shall be fitted as standard with a full summer bypass. The bypass opens automatically when the supply air exceeds 20°C, this opens the bypass channel via actuators and allow the outside air to bypass the heat exchanger. The air which is bypassed will still pass through the filter to ensure that the air quality remains the same regardless of the external temperatures.

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

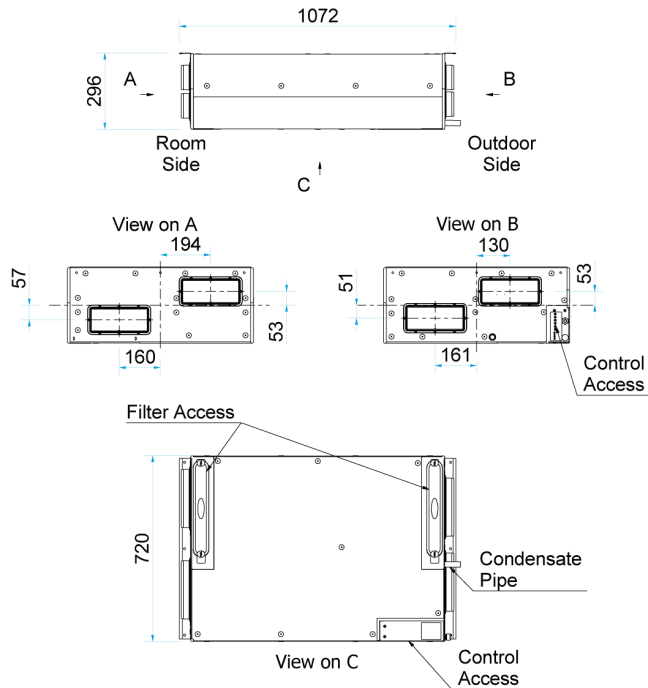
~~The unit shall be suitable for 220 x 90mm Rectangular ducting.

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Whilst the information given on this data sheet is fan specific, it is in summary and reference to the product selection catalogue and installation & maintenance documents is recommended.
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Fan Dimensions

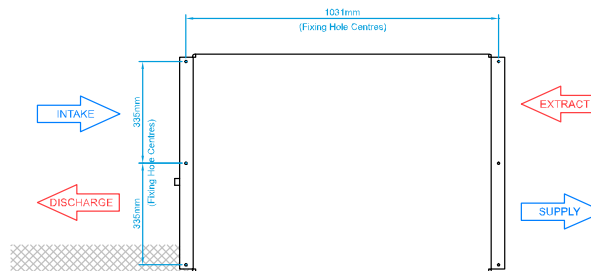


Length: Width: Height:

1072 721 296

Spigot size: 220 x 90

Drawing is for dimensional purposes only. Dimensions in mm.



Technical drawing of the front view of the 2000 Series 2000W Electric Radiant Heater. The drawing shows a rectangular unit with a textured base. Key dimensions include a total width of 720mm, a total height of 296mm, and a base width of 440mm. The unit features an 'INTAKE' grille on the left, a 'DISCHARGE' grille in the center, and a control panel on the right. A condensate drain is located at the bottom right. Callouts indicate '220mm x 90mm Spigots (typical)' and 'Ø22mm Condensate Drain'.

Diagram illustrating the front view of the device with dimensions and flow directions:

- Overall width: 1072mm
- Left side width: 600mm
- Right side width: 980mm
- Flow directions indicated by arrows:
 - DISCHARGE (Red arrow pointing left)
 - INTAKE (Blue arrow pointing right)
 - EXTRACT (Red arrow pointing right)
 - SUPPLY (Blue arrow pointing left)
- A lightning bolt symbol is shown on the right side of the device.

Please DO NOT sign this drawing to confirm handings.
Please request the official handing drawings from Nuaire.

Do NOT scale from this drawing.



SUMMARY FAN DATA SHEET

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Whilst the information given on this data sheet is fan specific, it is in summary and reference to the product selection catalogue and installation & maintenance documents is recommended.

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Project Details

Location: HRU/02/01 - L1 Office SLT2 and Intervention

Technical Data

UNI-X - Supply & Extract HX Unit

Fan Code: **UNI-X360**
Installation Manual Links: **671789**
Required duty: **0.06 m³/s at 95 Pa**
Actual duty: **0.083 m³/s at 182 Pa**
Actual at required flow: **0.06 m³/s at 332 Pa**

When speed controlled to required duty (72.09%):

Motor Input Power: **0.062 kW**
Specific Fan Power: **1.0 W/(l/s)**
Velocity at required duty: **3.03 m/s**

At full speed:

Motor Input Power: **0.166 kW**
Specific Fan Power: **2.0 W/(l/s)**
Maximum Fan Speed: **3,200 RPM**
Electrical Supply: **230V, 1 Phase, 50 Hz**
Nominal Motor Rating: **0.166 kW**
Motor current (flc): **1.32 A**
Motor starting current (sc): **1.32 A**

Max. operating temp: **40°C**
Weight: **55 kg**

Starting currents are nominal.

Sound Data

Acoustic performance to ISO 13347 and AMCA 300.

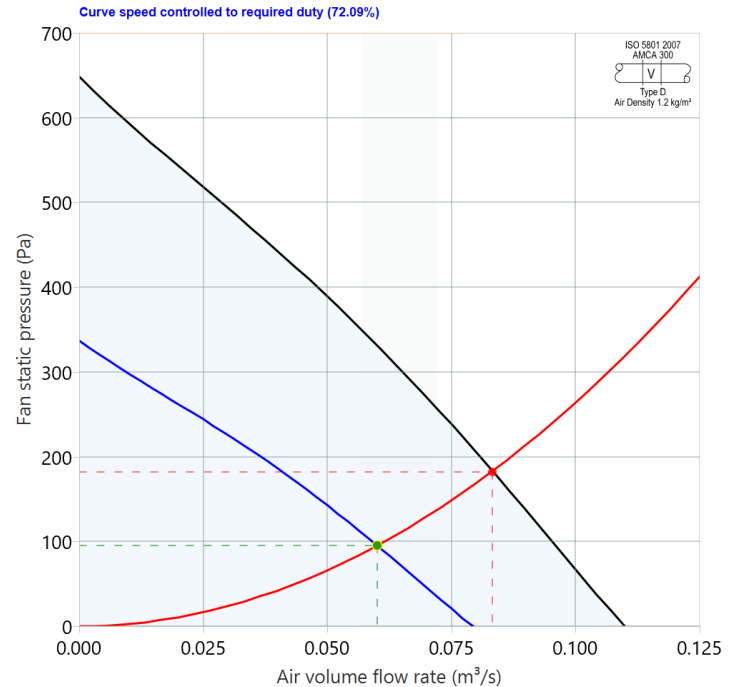
Noise calculated speed controlled to required duty (72.09%)

Sound Power Levels re 1 pWatts (Hz):									
Hz	63	125	250	500	1k	2k	4k	8k	dBA
Open Inlet	57	49	63	59	44	45	37	34	
Open Outlet	56	46	59	58	45	43	34	27	
Breakout	51	52	62	59	40	36	28	27	37
For 100% speed:	+2	+3	+4	+5	+8	+8	+8	+8	

dBA is spherical at 3 metres. For hemi-spherical add 3 dBA.

Please note that the noise data stated on this data sheet for the unit and/or silencer is tested in accordance with UK, European and International industry laboratory standards. However onsite conditions may vary and we would recommend that this information is verified by an acoustic specialist in order to ensure its suitability for the intended application.

Performance Chart



Additional Notes

Selected Ancillaries

1 x ES-VF Ecosmart volt free box
1 x MVHR-DRAIN Inline Condensate Drain

Specification

The unit shall be manufactured from high density EPS (Expanded polystyrene) with galvanised sheet steel casing to provide excellent thermal and acoustic characteristics, while providing a lightweight and low profile casing. Incorporating a high efficiency, aluminium counter flow heat exchanger block with a thermal efficiency of up to 90%. The heat exchanger will be protected by two G3 grade filters in the fresh inlet and system extract air streams, with both filters being accessible from the underside of the unit allowing for quick and easy maintenance.

The unit shall have a maximum height less than 300mm to fit within ceiling voids.

The unit will contain two, low energy, high efficiency EC fan assemblies, with centrifugal backward curved impellers. The fans will have the facility for variable speed control at trickle (continuous background ventilation), and boost speed to allow for individual specific adjustment during commissioning. The motors shall be suitable for use in ambient temperatures of 40°C.

The control shall be capable of 3 speed operation.

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

The unit shall be fitted as standard with a full summer bypass. The bypass opens automatically when the supply air exceeds 20°C, this opens the bypass channel via actuators and allow the outside air to bypass the heat exchanger. The air which is bypassed will still pass through the filter to ensure that the air quality remains the same regardless of the external temperatures.

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

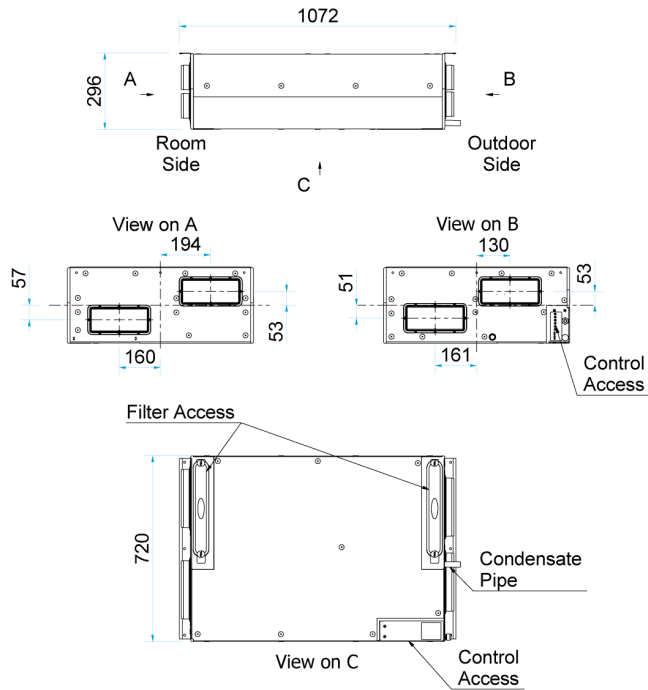
~~The unit shall be suitable for 220 x 90mm Rectangular ducting.

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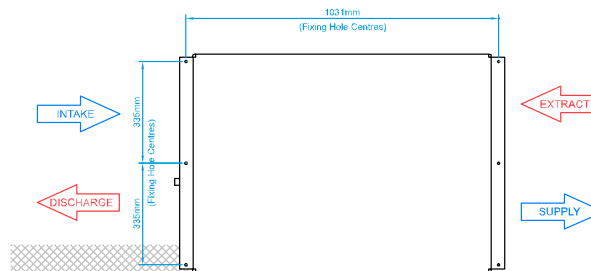
Fan Dimensions



Length: Width: Height:
1072 721 296

Spigot size: 220 x 90

Drawing is for dimensional purposes only. Dimensions in mm.



Technical drawing of the front panel of the 2000 Series 2000W Electric Water Dispenser. The drawing shows a rectangular panel with a "DISCHARGE" button on the right and an "INTAKE" button on the left. Dimensions are provided in millimeters: overall width 720mm, overall height 296mm, button width 163mm, button height 53mm, and a 24mm gap between the buttons. A 220mm x 90mm spigot is located on the right side. A 42mm wide, 440mm long area at the bottom is designated for the condensate drain. A 20mm wide area on the right side is designated for the condensate drain.

Diagram illustrating the front view of the device with dimensions and flow directions:

- Overall width: 1072mm
- Left side width: 600mm
- Right side width: 980mm
- Flow directions indicated by arrows:
 - DISCHARGE (Red arrow pointing left)
 - INTAKE (Blue arrow pointing right)
 - EXTRACT (Red arrow pointing right)
 - SUPPLY (Blue arrow pointing left)
- A lightning bolt symbol is shown on the right side of the device.

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Please request the official handing drawings from Nuaire.

Do NOT scale from this drawing.

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Project Details

Location: EF/00/02 - Io.o4 ST-VIS WC

Technical Data

MEVDC - Multi Point Extract Fans

Fan Code: **MEVDC**
Installation Manual Links: **671382**
Required duty: 0.029 m³/s at 75 Pa
Actual duty: 0.054 m³/s at 259 Pa
Actual at required flow: 0.029 m³/s at 400 Pa

When speed controlled to required duty (53.95%):

Motor Input Power: **0.008 kW**
Specific Fan Power: **0.3 W/(l/s)**

At full speed:

Motor Input Power: 0.052 kW
Specific Fan Power: 1.0 W/(l/s)
Maximum Fan Speed: 2,900 RPM
Electrical Supply: 230V, 1 Phase, 50 Hz
Nominal Motor Rating: 0.06 kW
Motor current (flc): 0.38 A
Motor starting current (sc): 0.38 A

Max. operating temp: 40°C
Weight: 5 kg
Starting currents are nominal.

Sound Data

Acoustic performance to ISO 13347 and AMCA 300.

Noise calculated speed controlled to required duty (53.95%)

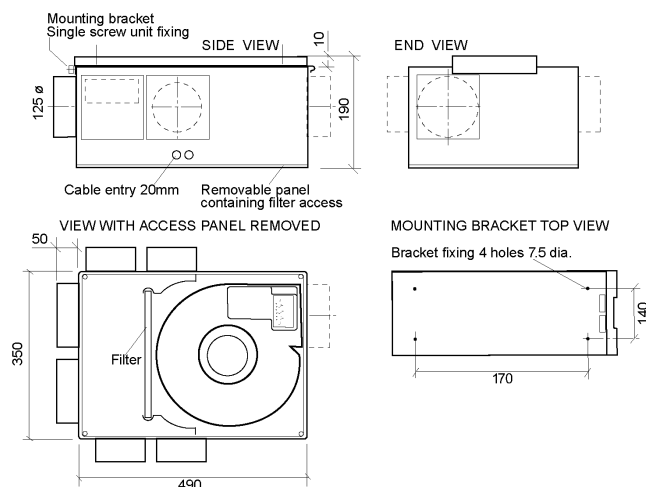
Sound Power Levels re 1 pWatts (Hz):

Hz	63	125	250	500	1k	2k	4k	8k	dBA
Open Inlet	41	39	47	43	30	21	17	<16	22
Breakout									25
For 100% speed:	+4	+5	+7	+9	+14	+14	+14	+14	

dBA is spherical at 3 metres. For hemi-spherical add 3 dBA.

Please note that the noise data stated on this data sheet for the unit and/or silencer is tested in accordance with UK, European and International industry laboratory standards. However onsite conditions may vary and we would recommend that this information is verified by an acoustic specialist in order to ensure its suitability for the intended application.

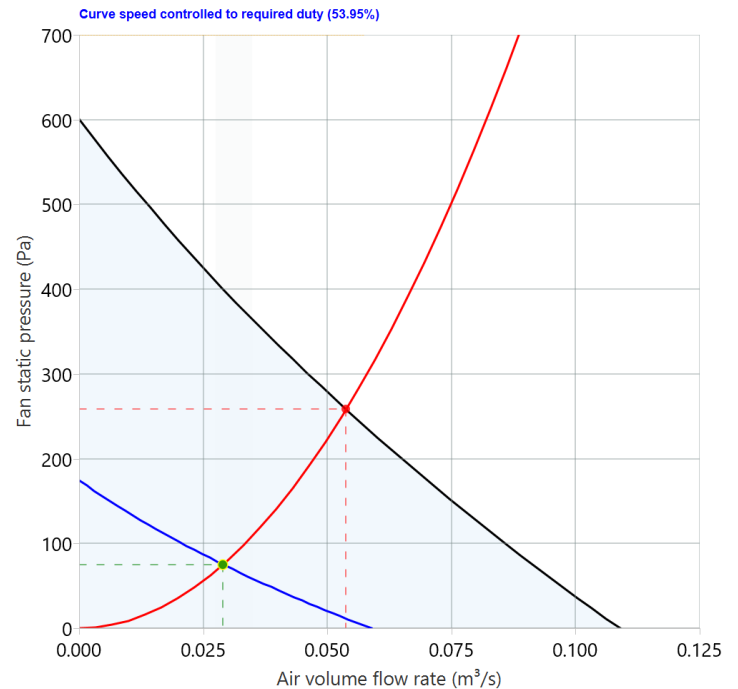
Fan Dimensions



Length: Width: Height:
490 350 190

Drawing is for dimensional purposes only. Dimensions in mm.

Performance Chart



Additional Notes

Selected Ancillaries

1 x ES-PIR2 Ecosmart PIR Sensor

Specification

The casing shall be of ABS moulded plastic with a part lined lid of high density class "O" flame retardant acoustic insulation. Maximum breakout shall be 34dBA (hemi-spherical radiation). A low profile single point mounting bracket allows for horizontal or vertical mounting. When installed the unit shall not project any further than 190mm from the surface onto which it is installed. Air discharge shall be via 125mm diameter tapered spigot for easy connection to ducting. The unit shall be capable of multiple air inlets formatting. The unit casing allows the connection (via tapered air inlet spigots supplied with the unit) of up to 4 100mm diameter and 2 125mm diameter air inlet ducts. A quick release access panel allows for easy maintenance if filter is fitted. The unit shall incorporate a fully speed adjustable low energy, high efficiency DC fan/motor assembly with sealed for life ball bearings designed to operate continuously at a pre-set "background" design airflow rate with the ability to increase to a pre-set "boost" design airflow rate as and when required. It shall operate up to an ambient temperature of 40°C and be fitted with a one shot thermal overload protective device. A centrifugal backward curved impellor is dynamically balanced directly onto the motor. The unit incorporates electrical connections to allow for the unit's "boost" airflow to be triggered by either a switched live signal or a remote speed control. When "boost" has been triggered by the switched live signal the unit shall incorporate an adjustable "run on" facility (optional).

ES-PIR2

Circular PIR sensor - supplied with pre-plugged 10m length of communication cable. The sensor will activate the system when movement is detected

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Project Details

Location: EF/00/03 - Kitchen WC & COSHH

Technical Data

MEVDC - Multi Point Extract Fans

Fan Code: **MEVDC**
 Installation Manual Links: **671382**
 Required duty: 0.039 m³/s at 75 Pa
 Actual duty: 0.064 m³/s at 202 Pa
 Actual at required flow: 0.039 m³/s at 340 Pa

When speed controlled to required duty (60.76%):

Motor Input Power: **0.012 kW**
 Specific Fan Power: **0.3 W/(l/s)**

At full speed:

Motor Input Power: 0.052 kW
 Specific Fan Power: 0.8 W/(l/s)
 Maximum Fan Speed: 2,900 RPM
 Electrical Supply: 230V, 1 Phase, 50 Hz
 Nominal Motor Rating: 0.06 kW
 Motor current (flc): 0.38 A
 Motor starting current (sc): 0.38 A

Max. operating temp: 40°C
 Weight: 5 kg
 Starting currents are nominal.

Sound Data

Acoustic performance to ISO 13347 and AMCA 300.

Noise calculated speed controlled to required duty (60.76%)

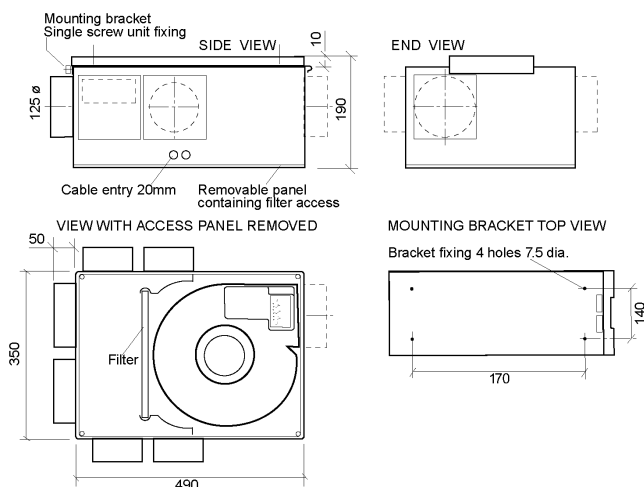
Sound Power Levels re 1 pWatts (Hz):

Hz	63	125	250	500	1k	2k	4k	8k	dBA
Open Inlet	42	40	48	44	33	24	20	17	23
Breakout									26
For 100% speed:	+3	+4	+6	+8	+11	+11	+11	+11	

dBA is spherical at 3 metres. For hemi-spherical add 3 dBA.

Please note that the noise data stated on this data sheet for the unit and/or silencer is tested in accordance with UK, European and International industry laboratory standards. However onsite conditions may vary and we would recommend that this information is verified by an acoustic specialist in order to ensure its suitability for the intended application.

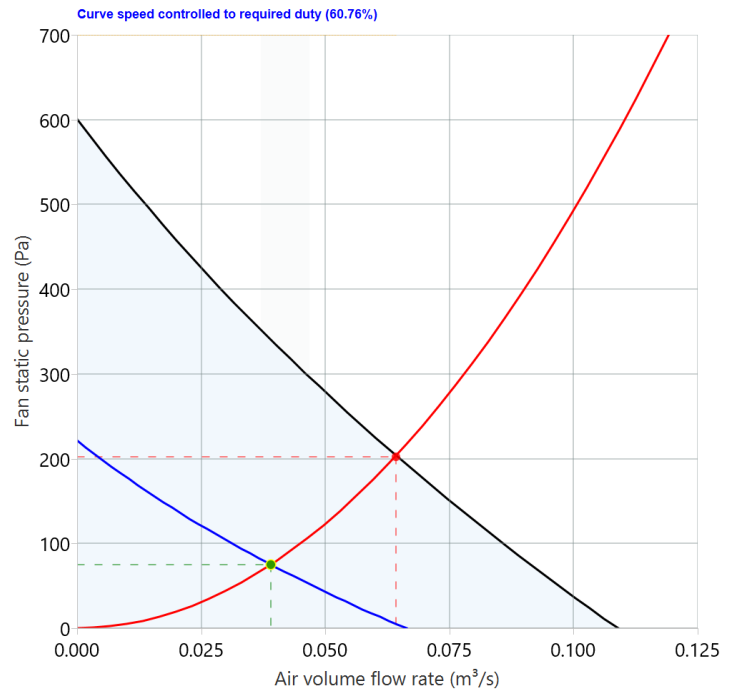
Fan Dimensions



Length: Width: Height:
 490 350 190

Drawing is for dimensional purposes only. Dimensions in mm.

Performance Chart



Additional Notes

Specification

The casing shall be of ABS moulded plastic with a part lined lid of high density class "O" flame retardant acoustic insulation. Maximum breakout shall be 34dBA (hemi-spherical radiation). A low profile single point mounting bracket allows for horizontal or vertical mounting. When installed the unit shall not project any further than 190mm from the surface onto which it is installed. Air discharge shall be via 125mm diameter tapered spigot for easy connection to ducting. The unit shall be capable of multiple air inlets formatting. The unit casing allows the connection (via tapered air inlet spigots supplied with the unit) of up to 4 100mm diameter and 2 125mm diameter air inlet ducts. A quick release access panel allows for easy maintenance if filter is fitted. The unit shall incorporate a fully speed adjustable low energy, high efficiency DC fan/motor assembly with sealed for life ball bearings designed to operate continuously at a pre-set "background" design airflow rate with the ability to increase to a pre-set "boost" design airflow rate as and when required. It shall operate up to an ambient temperature of 40°C and be fitted with a one shot thermal overload protective device. A centrifugal backward curved impellor is dynamically balanced directly onto the motor. The unit incorporates electrical connections to allow for the unit's "boost" airflow to be triggered by either a switched live signal or a remote speed control. When "boost" has been triggered by the switched live signal the unit shall incorporate an adjustable "run on" facility (optional).

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UK Commercial enquiries T:029 2085 8200 UK Residential enquiries T:029 2085 8500 International enquiries T:+44.29 2085 8497

Whilst the information given on this data sheet is fan specific, it is in summary and reference to the product selection catalogue and installation & maintenance documents is recommended.

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Project Details

Location: EF/RF/01 - ACC WCs / Cleaners

Technical Data

DE - DAVE Extract Fans

Fan Code: **DE2-ES**
Installation Manual Links: **611280**
Required duty: 0.088 m³/s at 130 Pa
Actual duty: 0.117 m³/s at 231 Pa
Actual at required flow: 0.088 m³/s at 317 Pa

When speed controlled to required duty (75.18%):

Motor Input Power: **0.039 kW**
Specific Fan Power: **0.4 W/(l/s)**
Velocity at required duty: 2.801 m/s

At full speed:

Motor Input Power: 0.093 kW
Specific Fan Power: 0.8 W/(l/s)
Maximum Fan Speed: 3,200 RPM
Electrical Supply: 230V, 1 Phase, 50 Hz
Nominal Motor Rating: 0.088 kW
Motor current (flc): 0.75 A
Motor starting current (sc): 0.75 A

Max. operating temp: 60°C
Weight: 25 kg

All Ecosmart fans feature soft-starting and stepless variable speed control. A switch disconnector is required to isolate the fan from the electrical supply.

Sound Data

Acoustic performance to ISO 13347 and AMCA 300.

Noise calculated speed controlled to required duty (75.18%)

Sound Power Levels re 1 pWatts (Hz):

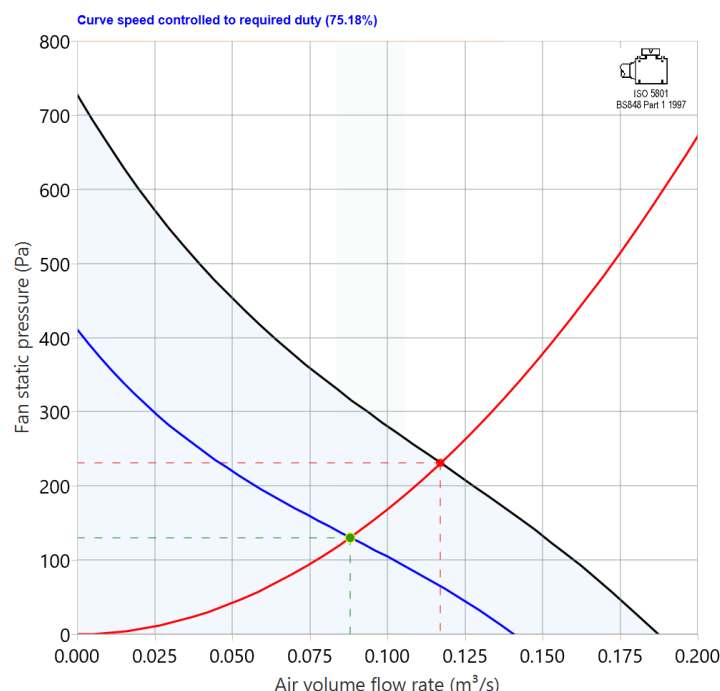
Hz	63	125	250	500	1k	2k	4k	8k	dBA
Induct Inlet	67	63	56	54	47	45	46	45	
Induct Outlet	72	64	62	53	50	51	47	46	
Breakout	53	47	43	37	30	29	26	23	22
For 100% speed:	+2	+3	+4	+5	+7	+7	+7	+7	

dBA is hemi-spherical at 3 metres. For spherical deduct 3 dBA.

Values shown are for inlet Lw, outlet Lw sound power & breakout levels for Installation Type D: ducted inlet, ducted outlet. Ratings include the effects of duct end correction.

Please note that the noise data stated on this data sheet for the unit and/or silencer is tested in accordance with UK, European and International industry laboratory standards. However onsite conditions may vary and we would recommend that this information is verified by an acoustic specialist in order to ensure its suitability for the intended application.

Performance Chart



Additional Notes

Please note the unit has been selected as a single fan.

Please see the unit data sheets for the full technical, dimensional and sound information on the unit offered.

Selected Ancillaries

2 x CFC20 Flexible connector

CFC20 - Flexible connector

Weight: 0.5 kg

Specification

Dave high performance extract fan, standard case with patented 'Floating fan' construction. Single skin, with infill panels and manufactured from heavy gauge, corrosion resistant Magnelis steel. The unit is suitable for internal or external mounting, in any orientation and incorporates a full length top or bottom access panel. The fan impeller and EC motors are selected to provide optimum performance and energy efficiency conforming to Part L regulations. Units are suitable for operation in ambient temperatures of up to 60°C (sizes 1-5), 40°C (sizes 6-7) and are Class L2 leakage. The unit shall be controlled by an integrated Ecosmart control mounted externally to the case. The fans shall have the following energy saving and operational functions integrally installed with in it, all components will be pre-wired and fitted by the manufacturer:

- Integral Frequency inverter/speed controller.
- Integral adjustable run-on timer.
- Maximum and minimum speed adjustment/setting (trickle and boost).
- Volt free run & failure/status indication.
- 0-10V BMS interface for remote operation.
- Multiple low voltage sockets for interconnection of sensors or fans.
- Background ventilation/trickle enable switch.

The unit is supplied with circular spigots and set of four mounting brackets. The Fan unit shall have a 5 year warranty. The product warranty applies to the UK mainland and in accordance with Clause 14 of our Conditions of Sale. Customers purchasing from outside of the UK should contact Nuaire International Sales office for further details.

CFC20

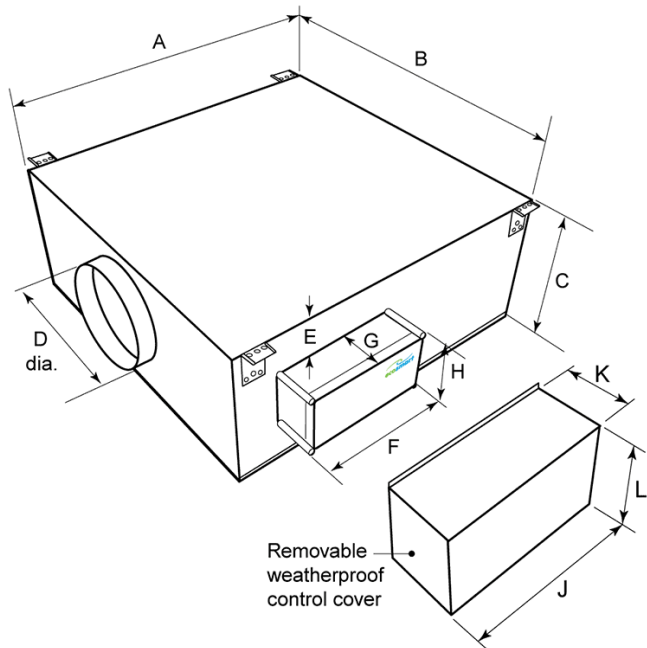
Circular flexible connector without flanges. Flexible duct material is flameproof and resistance to heat up to 132°C, chemicals, ozone, oil and grease. The material is airtight, waterproof and tested to BS476 Part 7. Supplied complete with fixing straps.

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Whilst the information given on this data sheet is fan specific, it is in summary and reference to the product selection catalogue and installation & maintenance documents is recommended.
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Fan Dimensions



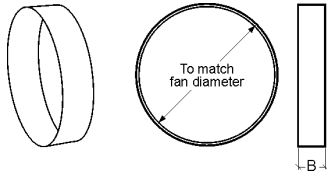
A	B	C	D	E	F	G	H	J
605	703	310	200	85	370	96	150	470
K	L	kg						
120	170	25.0						
Length:	Width:	Height:						
605	703	310						

Drawing is for dimensional purposes only. Dimensions in mm.

Ancillary Dimensions

CFC20 - Flexible connector

B=150 mm





SUMMARY FAN DATA SHEET

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Project Details

Location: EF/RF/02 - Pupil Wc's

Technical Data

AVT - External Roof Mounted Twinfans

Fan Code: **AVT7-R**

Installation Manual Links: 671590

Required duty: 0.81 m³/s at 250 Pa

Actual duty: 0.952 m³/s at 345 Pa

Actual at required flow: 0.81 m³/s at 454 Pa

When speed controlled to required duty (85.05%):

Motor Input Power: **0.464 kW**

Specific Fan Power: **0.6 W/(l/s)**

Velocity at required duty: 6.446 m/s

At full speed:

Motor Input Power: 0.754 kW

Specific Fan Power: 0.8 W/(l/s)

Maximum Fan Speed: 1,700 RPM

Electrical Supply: 230V, 1 Phase, 50 Hz

Nominal Motor Rating: 0.79 kW

Motor current (flc): 3.3 A

Motor starting current (sc): 3.3 A

Max. operating temp: 40°C

Weight: 164 kg

All Ecosmart fans feature soft-starting and stepless variable speed control. A switch disconnector is required to isolate the fan from the electrical supply.

Sound Data

Acoustic performance to ISO 13347 and AMCA 300.

Noise calculated speed controlled to required duty (85.05%)

Sound Power Levels re 1 pWatts (Hz):

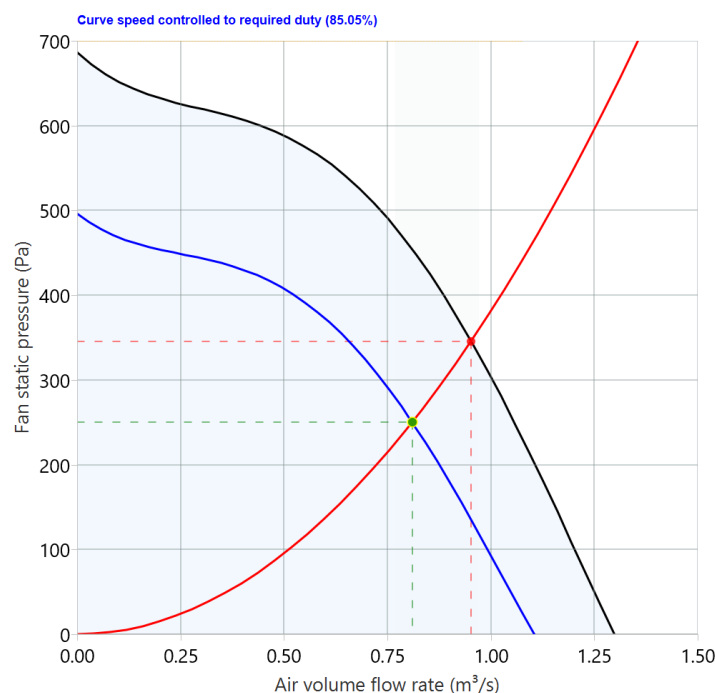
Hz	63	125	250	500	1k	2k	4k	8k	dBA
Induct Inlet	79	75	73	72	65	62	59	54	
Open Outlet	79	76	77	78	75	71	66	59	59
For 100% speed:	+1	+2	+2	+3	+4	+4	+4	+4	

dBA is spherical at 3 metres. For hemi-spherical add 3 dBA.

Values shown are for inlet Lw, outlet Lw sound power & breakout levels for: Installation Type C: ducted inlet, free outlet. Ratings include the effects of duct end correction.

Please note that the noise data stated on this data sheet for the unit and/or silencer is tested in accordance with UK, European and International industry laboratory standards. However onsite conditions may vary and we would recommend that this information is verified by an acoustic specialist in order to ensure its suitability for the intended application.

Performance Chart



Additional Notes

Please note the SFP for this selection is 0.6w/l/s. To achieve 0.5w/l/s the resistance must be no more than 237Pa.

Please note only matched attenuators can be used with the grilled outlet model.

Please see the unit data sheets for the full technical, dimensional and sound information on the unit offered.

Selected Ancillaries

1 x CFC40	Flexible connector
1 x AVT-MF-6	Kit of adjustable feet with support brackets - set of 6
CFC40 - Flexible connector	
Weight:	0.5 kg

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Specification

The AVT-R weatherproof external inline unit with grille outlet shall be double skinned and manufactured from heavy gauge, corrosion resistant Magnelis steel, internally coated with acoustic material to lid. A pitched roof with hinge facility provides access for maintenance/service and pressure tapping. The fan should be with 'inline assembly', positioned in series for optimum performance. Run and standby fan assemblies to incorporate fan impeller and EC motors selected to provide the most energy efficient solution conforming to Part L regulations.

Units have EN60034-30 motors fitted with integral Hall effect sensor. Units suitable for operation in ambient temperatures of 40°C. Units are fitted with a manometer and are class L2 leakage.

The twin fan shall be controlled by an integrated Ecosmart control panel mounted externally to the case. The fans shall have the following energy saving and operational functions integrally installed with in it, all components will be pre-wired and fitted by the manufacturer:

- Auto change-over on fan failure.
- Auto duty share every 12 hours of run time.
- Integral Frequency inverter/speed controller.
- Integral adjustable run-on timer.
- Maximum and minimum speed adjustment/setting (trickle and boost).
- Volt free run & failure/status indication.
- 0-10V BMS interface for remote operation.
- Low voltage interface with second fan or supply fan.
- Multiple low voltage sockets for interconnection of sensors or fans.
- Background ventilation/trickle enable switch.

Fan, Ecosmart controls and associated sensors/controllers shall be manufactured by Nuaire.

The Fan unit shall have a 5 year warranty. The product warranty applies to the UK mainland and in accordance with Clause 14 of our Conditions of Sale. Customers purchasing from outside of the UK should contact Nuaire International Sales office for further details.

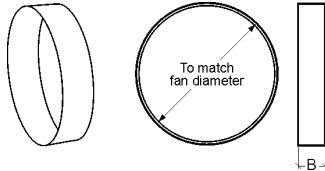
CFC40

Circular flexible connector without flanges. Flexible duct material is flameproof and resistance to heat up to 132°C, chemicals, ozone, oil and grease. The material is airtight, waterproof and tested to BS476 Part 7. Supplied complete with fixing straps.

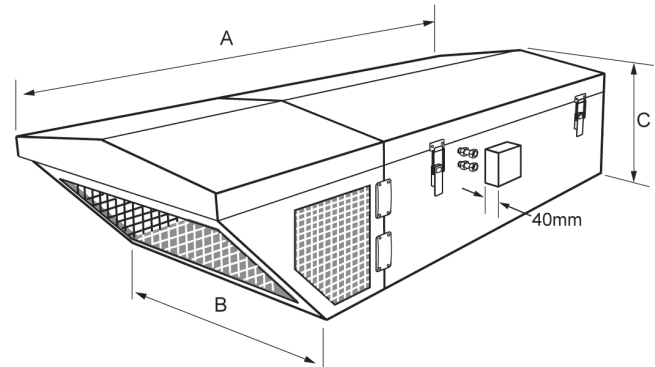
Ancillary Dimensions

CFC40 - Flexible connector

B=150 mm



Fan Dimensions



A	B	C	D	kg
2573	1053	656	400	164.0

Length: Width: Height:

2573 1053 656

Spigot size: 400

Drawing is for dimensional purposes only. Dimensions in mm.

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Project Details

Location: EF/RF/03 - Food Science

Technical Data

DE - DAVE Extract Fans

Fan Code: **DE6-ES**
 Installation Manual Links: **611280**
 Required duty: 0.39 m³/s at 220 Pa
 Actual duty: 0.533 m³/s at 411 Pa
 Actual at required flow: 0.39 m³/s at 504 Pa

When speed controlled to required duty (73.17%):

Motor Input Power: **0.209 kW**
 Specific Fan Power: **0.5 W/(l/s)**
 Velocity at required duty: 3.104 m/s

At full speed:

Motor Input Power: 0.534 kW
 Specific Fan Power: 1.0 W/(l/s)
 Maximum Fan Speed: 1,710 RPM
 Electrical Supply: 230V, 1 Phase, 50 Hz
 Nominal Motor Rating: 0.45 kW
 Motor current (flc): 2.9 A
 Motor starting current (sc): 2.9 A

Max. operating temp: 40°C
 Weight: 69 kg

All Ecosmart fans feature soft-starting and stepless variable speed control. A switch disconnector is required to isolate the fan from the electrical supply.

Sound Data

Acoustic performance to ISO 13347 and AMCA 300.

Noise calculated speed controlled to required duty (73.17%)

Sound Power Levels re 1 pWatts (Hz):

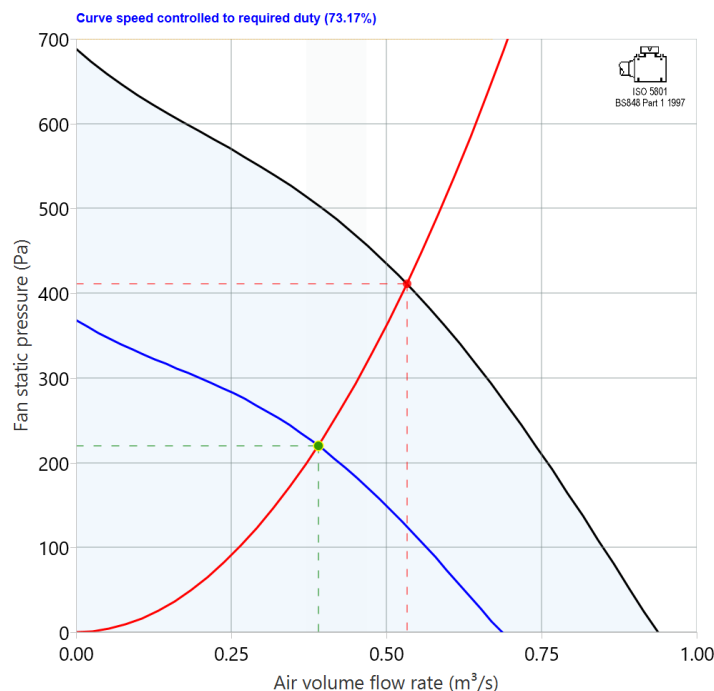
Hz	63	125	250	500	1k	2k	4k	8k	dBA
Induct Inlet	89	85	72	63	60	56	54	47	
Induct Outlet	89	85	72	63	60	55	51	44	
Breakout	73	65	63	48	47	36	31	25	39
For 100% speed:	+2	+3	+4	+5	+7	+7	+7	+7	

dBA is hemi-spherical at 3 metres. For spherical deduct 3 dBA.

Values shown are for inlet Lw, outlet Lw sound power & breakout levels for Installation Type D: ducted inlet, ducted outlet. Ratings include the effects of duct end correction.

Please note that the noise data stated on this data sheet for the unit and/or silencer is tested in accordance with UK, European and International industry laboratory standards. However onsite conditions may vary and we would recommend that this information is verified by an acoustic specialist in order to ensure its suitability for the intended application.

Performance Chart



Additional Notes

Please note the in-line single fan selected has the motor contained in the airstream. Please advise if this is required outside of the airstream as this would cause a reselection.

Please see the unit data sheets for the full technical, dimensional and sound information on the unit offered.

Selected Ancillaries

2 x CFC40 Flexible connector

CFC40 - Flexible connector

Weight: 0.5 kg

Specification

Dave high performance extract fan, standard case with patented 'Floating fan' construction. Single skin, with infill panels and manufactured from heavy gauge, corrosion resistant Magnelis steel. The unit is suitable for internal or external mounting, in any orientation and incorporates a full length top or bottom access panel. The fan impeller and EC motors are selected to provide optimum performance and energy efficiency conforming to Part L regulations. Units are suitable for operation in ambient temperatures of up to 60°C (sizes 1-5), 40°C (sizes 6-7) and are Class L2 leakage. The unit shall be controlled by an integrated Ecosmart control mounted externally to the case. The fans shall have the following energy saving and operational functions integrally installed with in it, all components will be pre-wired and fitted by the manufacturer:

- Integral Frequency inverter/speed controller.
- Integral adjustable run-on timer.
- Maximum and minimum speed adjustment/setting (trickle and boost).
- Volt free run & failure/status indication.
- 0-10V BMS interface for remote operation.
- Multiple low voltage sockets for interconnection of sensors or fans.
- Background ventilation/trickle enable switch.

The unit is supplied with circular spigots and set of four mounting brackets. The Fan unit shall have a 5 year warranty. The product warranty applies to the UK mainland and in accordance with Clause 14 of our Conditions of Sale. Customers purchasing from outside of the UK should contact Nuaire International Sales office for further details.

CFC40

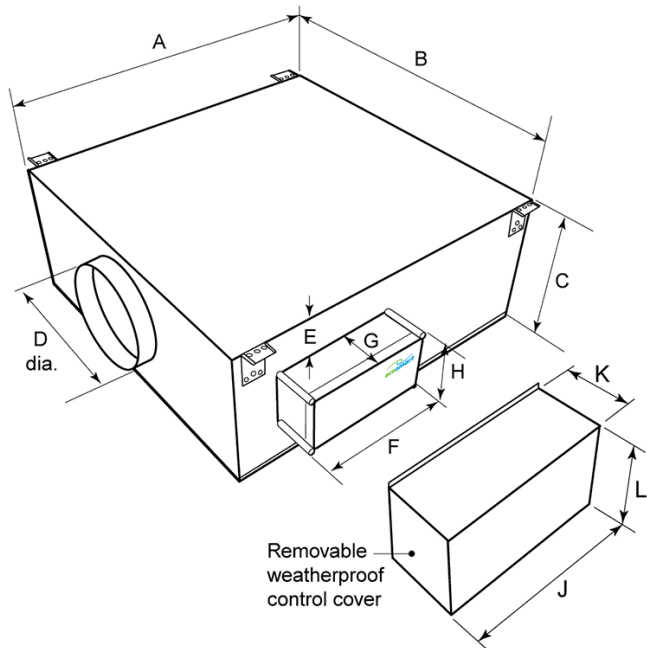
Circular flexible connector without flanges. Flexible duct material is flameproof and resistance to heat up to 132°C, chemicals, ozone, oil and grease. The material is airtight, waterproof and tested to BS476 Part 7. Supplied complete with fixing straps.

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UK Commercial enquiries T:029 2085 8200 UK Residential enquiries T:029 2085 8500 International enquiries T:+44.29 2085 8497

Whilst the information given on this data sheet is fan specific, it is in summary and reference to the product selection catalogue and installation & maintenance documents is recommended.
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Fan Dimensions



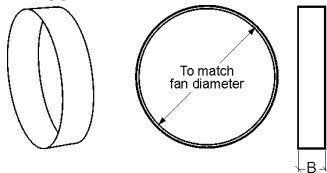
A	B	C	D	E	F	G	H	J
605	1100	465	400	162	370	96	150	470
K	L	kg						
120	170	69.0						
Length:	Width:	Height:						
605	1100	465						

Drawing is for dimensional purposes only. Dimensions in mm.

Ancillary Dimensions

CFC40 - Flexible connector

B=150 mm



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Whilst the information given on this data sheet is fan specific, it is in summary and reference to the product selection catalogue and installation & maintenance documents is recommended.

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Project Details

Location: EF/RF/04 - Chemical Store

Technical Data

DE - DAVE Extract Fans

Fan Code: **DE1-ES**
 Installation Manual Links: **611280**
 Required duty: 0.035 m³/s at 65 Pa
 Actual duty: 0.052 m³/s at 141 Pa
 Actual at required flow: 0.035 m³/s at 249 Pa

When speed controlled to required duty (67.65%):

Motor Input Power: **0.011 kW**
 Specific Fan Power: **0.3 W/(l/s)**
 Velocity at required duty: 1.981 m/s

At full speed:

Motor Input Power: 0.034 kW
 Specific Fan Power: 0.7 W/(l/s)
 Maximum Fan Speed: 3,770 RPM
 Electrical Supply: 230V, 1 Phase, 50 Hz
 Nominal Motor Rating: 0.03 kW
 Motor current (flc): 0.27 A
 Motor starting current (sc): 0.27 A

Max. operating temp: 60°C
 Weight: 25 kg

All Ecosmart fans feature soft-starting and stepless variable speed control. A switch disconnector is required to isolate the fan from the electrical supply.

Sound Data

Acoustic performance to ISO 13347 and AMCA 300.

Noise calculated speed controlled to required duty (67.65%)

Sound Power Levels re 1 pWatts (Hz):

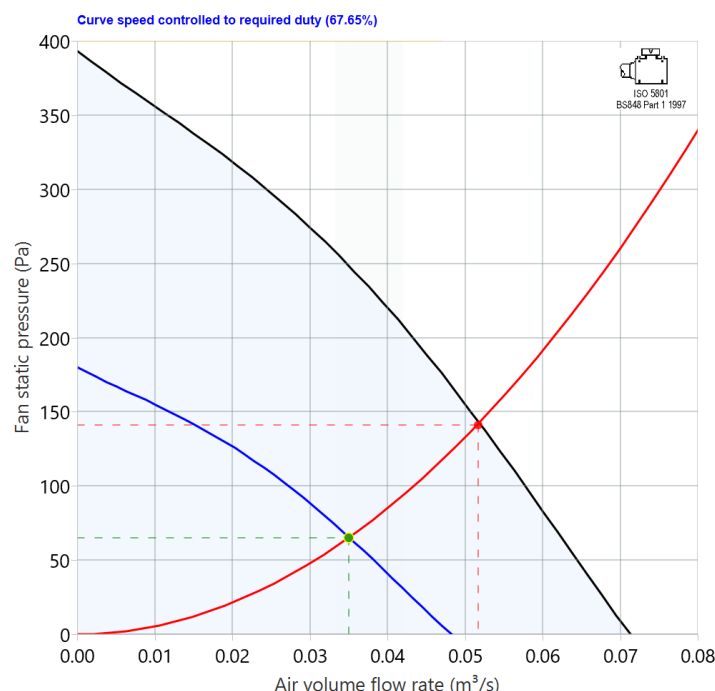
Hz	63	125	250	500	1k	2k	4k	8k	dBA
Induct Inlet	68	58	58	47	42	37	36	34	
Induct Outlet	70	62	62	55	46	41	41	34	
Breakout	49	49	40	36	21	19	16	<16	20
For 100% speed:	+3	+3	+5	+6	+9	+9	+9	+9	

dBA is hemi-spherical at 3 metres. For spherical deduct 3 dBA.

Values shown are for inlet Lw, outlet Lw sound power & breakout levels for Installation Type D: ducted inlet, ducted outlet. Ratings include the effects of duct end correction.

Please note that the noise data stated on this data sheet for the unit and/or silencer is tested in accordance with UK, European and International industry laboratory standards. However onsite conditions may vary and we would recommend that this information is verified by an acoustic specialist in order to ensure its suitability for the intended application.

Performance Chart



Additional Notes

Please note the unit selected is suitable for general ambient ventilation only. As such it is not suitable for corrosive atmospheres. If this is required this may need to be supplied by a specialist.

Please see the unit data sheets for the full technical, dimensional and sound information on the unit offered.

Selected Ancillaries

2 x CFC16 Flexible connector

CFC16 - Flexible connector

Weight: 0.5 kg

Specification

Dave high performance extract fan, standard case with patented 'Floating fan' construction. Single skin, with infill panels and manufactured from heavy gauge, corrosion resistant Magnelis steel. The unit is suitable for internal or external mounting, in any orientation and incorporates a full length top or bottom access panel. The fan impeller and EC motors are selected to provide optimum performance and energy efficiency conforming to Part L regulations. Units are suitable for operation in ambient temperatures of up to 60°C (sizes 1-5), 40°C (sizes 6-7) and are Class L2 leakage. The unit shall be controlled by an integrated Ecosmart control mounted externally to the case. The fans shall have the following energy saving and operational functions integrally installed with in it, all components will be pre-wired and fitted by the manufacturer:

- Integral Frequency inverter/speed controller.
- Integral adjustable run-on timer.
- Maximum and minimum speed adjustment/setting (trickle and boost).
- Volt free run & failure/status indication.
- 0-10V BMS interface for remote operation.
- Multiple low voltage sockets for interconnection of sensors or fans.
- Background ventilation/trickle enable switch.

The unit is supplied with circular spigots and set of four mounting brackets. The Fan unit shall have a 5 year warranty. The product warranty applies to the UK mainland and in accordance with Clause 14 of our Conditions of Sale. Customers purchasing from outside of the UK should contact Nuaire International Sales office for further details.

CFC16

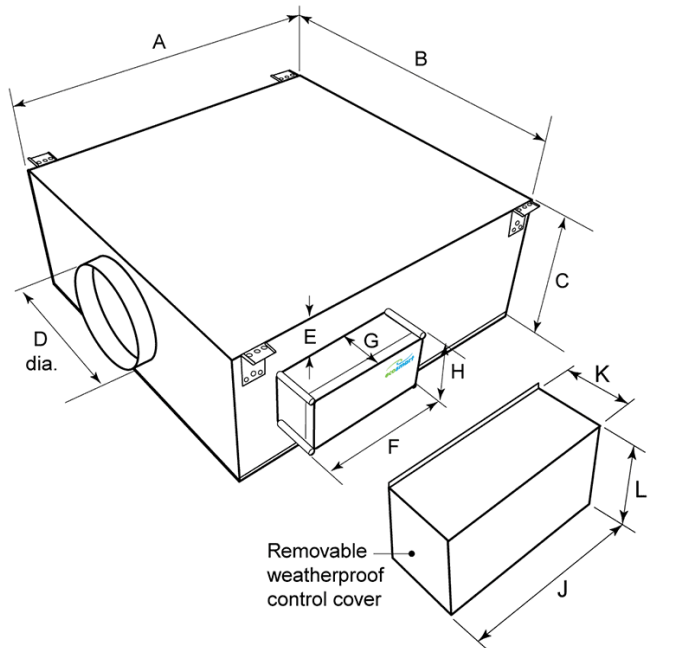
Circular flexible connector without flanges. Flexible duct material is flameproof and resistance to heat up to 132°C, chemicals, ozone, oil and grease. The material is airtight, waterproof and tested to BS476 Part 7. Supplied complete with fixing straps.

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Fan Dimensions



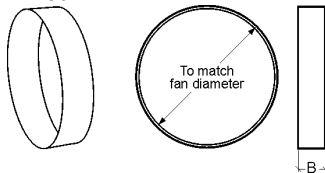
A	B	C	D	E	F	G	H	J
605	567	243	150	51	370	96	150	470
K	L	kg						
120	170	25.0						
Length:	Width:	Height:						
605	567	243						

Drawing is for dimensional purposes only. Dimensions in mm.

Ancillary Dimensions

CFC16 - Flexible connector

B=150 mm



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Whilst the information given on this data sheet is fan specific, it is in summary and reference to the product selection catalogue and installation & maintenance documents is recommended.

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Project Details

Location: EF/RF/06

Technical Data

DE - DAVE Extract Fans

Fan Code: **DE4H-ES**
 Installation Manual Links: **611280**
 Required duty: 0.192 m³/s at 165 Pa
 Actual duty: 0.341 m³/s at 519 Pa
 Actual at required flow: 0.192 m³/s at 810 Pa

When speed controlled to required duty (56.38%):

Motor Input Power: **0.096 kW**
 Specific Fan Power: **0.5 W/(l/s)**
 Velocity at required duty: 3.911 m/s

At full speed:

Motor Input Power: 0.538 kW
 Specific Fan Power: 1.6 W/(l/s)
 Maximum Fan Speed: 3,700 RPM
 Electrical Supply: 230V, 1 Phase, 50 Hz
 Nominal Motor Rating: 0.49 kW
 Motor current (flc): 3.3 A
 Motor starting current (sc): 3.3 A

Max. operating temp: 60°C
 Weight: 40 kg

All Ecosmart fans feature soft-starting and stepless variable speed control. A switch disconnector is required to isolate the fan from the electrical supply.

Sound Data

Acoustic performance to ISO 13347 and AMCA 300.

Noise calculated speed controlled to required duty (56.38%)

Sound Power Levels re 1 pWatts (Hz):

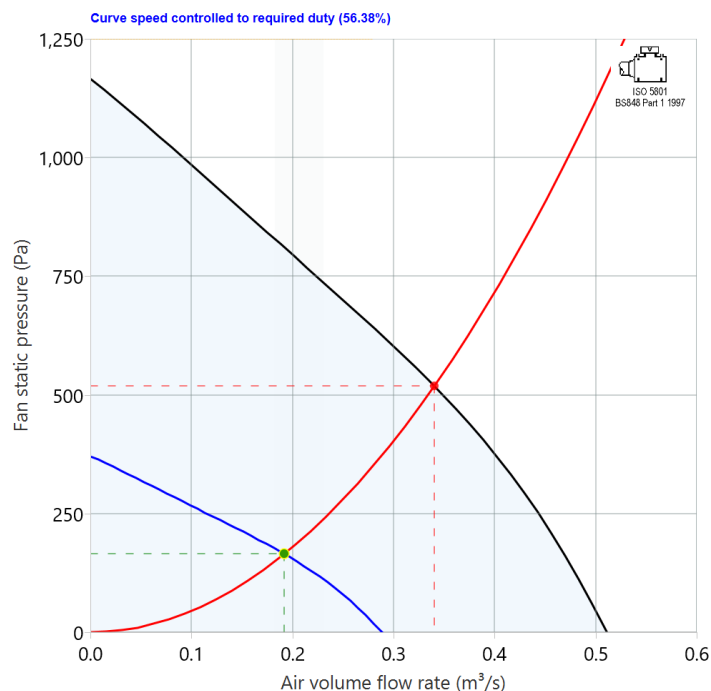
Hz	63	125	250	500	1k	2k	4k	8k	dBA
Induct Inlet	77	75	62	69	56	55	51	58	
Induct Outlet	86	86	68	65	59	57	52	53	
Breakout	62	60	49	48	37	33	26	24	31
For 100% speed:	+4	+5	+7	+9	+13	+13	+13	+13	

dBA is hemi-spherical at 3 metres. For spherical deduct 3 dBA.

Values shown are for inlet Lw, outlet Lw sound power & breakout levels for Installation Type D: ducted inlet, ducted outlet. Ratings include the effects of duct end correction.

Please note that the noise data stated on this data sheet for the unit and/or silencer is tested in accordance with UK, European and International industry laboratory standards. However onsite conditions may vary and we would recommend that this information is verified by an acoustic specialist in order to ensure its suitability for the intended application.

Performance Chart



Additional Notes

Selected Ancillaries

2 x CFC25 Flexible connector
CFC25 - Flexible connector
 Weight: 0.5 kg

Specification

Dave high performance extract fan, standard case with patented 'Floating fan' construction. Single skin, with infill panels and manufactured from heavy gauge, corrosion resistant Magnelis steel. The unit is suitable for internal or external mounting, in any orientation and incorporates a full length top or bottom access panel. The fan impeller and EC motors are selected to provide optimum performance and energy efficiency conforming to Part L regulations. Units are suitable for operation in ambient temperatures of up to 60°C (sizes 1-5), 40°C (sizes 6-7) and are Class L2 leakage. The unit shall be controlled by an integrated Ecosmart control mounted externally to the case. The fans shall have the following energy saving and operational functions integrally installed with in it, all components will be pre-wired and fitted by the manufacturer:

- Integral Frequency inverter/speed controller.
- Integral adjustable run-on timer.
- Maximum and minimum speed adjustment/setting (trickle and boost).
- Volt free run & failure/status indication.
- 0-10V BMS interface for remote operation.
- Multiple low voltage sockets for interconnection of sensors or fans.
- Background ventilation/trickle enable switch.

The unit is supplied with circular spigots and set of four mounting brackets. The Fan unit shall have a 5 year warranty. The product warranty applies to the UK mainland and in accordance with Clause 14 of our Conditions of Sale. Customers purchasing from outside of the UK should contact Nuaire International Sales office for further details.

CFC25

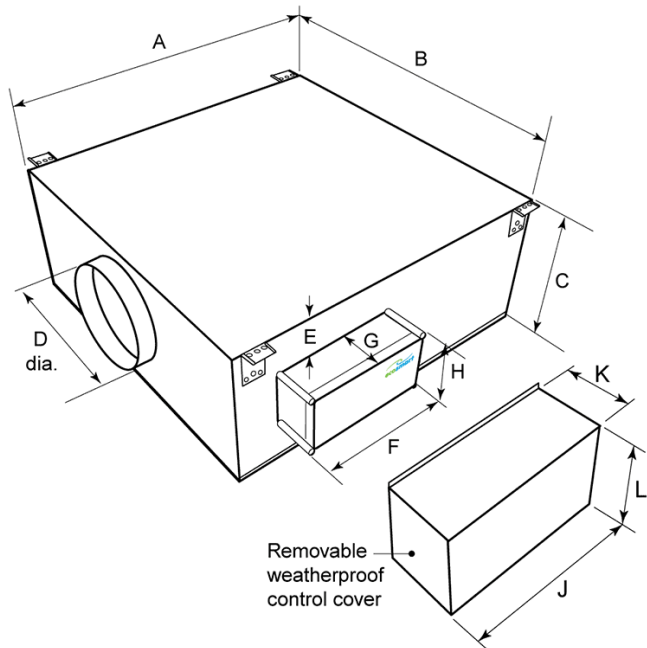
Circular flexible connector without flanges. Flexible duct material is flameproof and resistance to heat up to 132°C, chemicals, ozone, oil and grease. The material is airtight, waterproof and tested to BS476 Part 7. Supplied complete with fixing straps.

Nuaire, Western Industrial Estate, Caerphilly, CF83 1NA, United Kingdom. email:info@nuaire.co.uk

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Whilst the information given on this data sheet is fan specific, it is in summary and reference to the product selection catalogue and installation & maintenance documents is recommended.
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Fan Dimensions



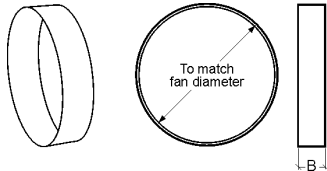
A	B	C	D	E	F	G	H	J
605	848	380	250	131	370	96	150	470
K	L	kg						
120	170	40.0						
Length:	Width:	Height:						
605	848	380						

Drawing is for dimensional purposes only. Dimensions in mm.

Ancillary Dimensions

CFC25 - Flexible connector

B=150 mm



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Whilst the information given on this data sheet is fan specific, it is in summary and reference to the product selection catalogue and installation & maintenance documents is recommended.

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Project Details

Location: KEF/RF/01 Kitchen

Technical Data

SQF - Squif Single In-line Fans

Fan Code: **SQFA45ES**
 Installation Manual Links: 671175
 Required duty: 2.88 m³/s at 393 Pa
 Actual duty: 3.359 m³/s at 535 Pa
 Actual at required flow: 2.88 m³/s at 719 Pa

When speed controlled to required duty (85.74%):

Fan Input Power: **2.533 kW**
 Motor Input Power: **3.02 kW**
 Specific Fan Power: **1.0 W/(l/s)**
 Velocity at required duty: 4 m/s
 Fan Total Efficiency: 46%

At full speed:

Fan Input Power: 4.018 kW
 Maximum Fan Input Power: 4.089 kW
 Motor Input Power: 4.728 kW
 Specific Fan Power: 1.4 W/(l/s)
 Fan Total Efficiency: 34%
 Maximum Fan Speed: 4 pole, 1,450 RPM
 Electrical Supply: 400V, 3 Phase, 50 Hz
 Nominal Motor Rating: 4 kW
 Motor current (flc): 7.95 A
 Motor starting current (sc): 7.95 A
 Motor Efficiency: IE3 / Premium Efficiency

Max. operating temp: 90°C
 Weight: 150 kg
 Starting currents are nominal for D.O.L. starting.

Sound Data

Acoustic performance to ISO 13347 and AMCA 300.

Noise calculated speed controlled to required duty (85.74%)

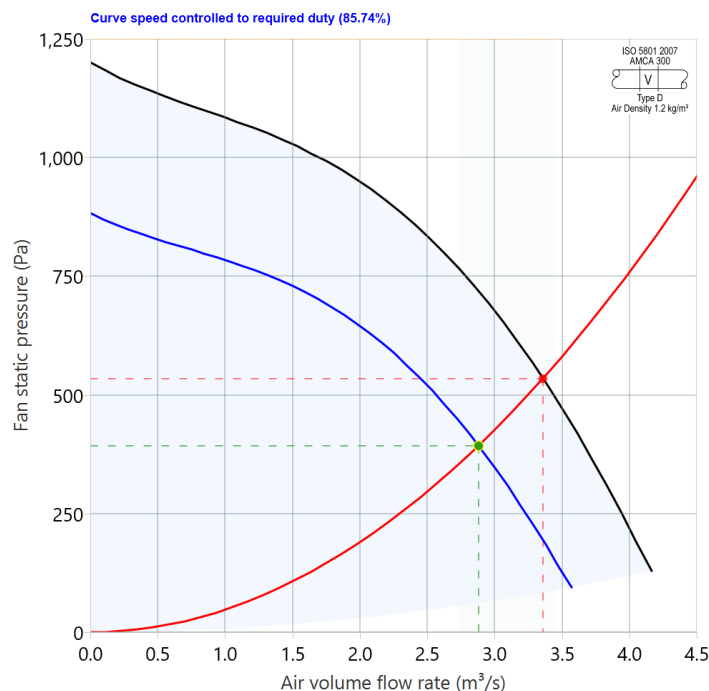
Sound Power Levels re 1 pWatts (Hz):								
Hz	63	125	250	500	1k	2k	4k	8k
Induct Inlet	88	97	85	82	81	80	79	77
Induct Outlet	86	98	81	79	85	85	80	79
Breakout	82	91	77	74	72	71	64	56
For 100% speed:	+1	+2	+2	+3	+4	+4	+4	+4

dBA is spherical at 3 metres. For hemi-spherical add 3 dBA.

Values shown are for inlet Lw, outlet Lw sound power & breakout levels for: Installation Type D: ducted inlet, ducted outlet. Ratings include the effects of duct end correction.

Please note that the noise data stated on this data sheet for the unit and/or silencer is tested in accordance with UK, European and International industry laboratory standards. However onsite conditions may vary and we would recommend that this information is verified by an acoustic specialist in order to ensure its suitability for the intended application.

Performance Chart



Additional Notes

Please note the external static has been reduced to 393Pa to achieve and SFP of 1.0W/l/s.

Please see the unit data sheets for the full technical, dimensional and sound information on the unit offered.

Selected Ancillaries

1 x NAV3	Anti-vibration mounting kit
2 x SQFF5	Square flexible connector double flanged
1 x ES-ISC-WPB	Weatherproof Enclosure for Inverter

Specification

In-line centrifugal fan suitable for both vertical & horizontal mounting. The unit casing shall be heavy gauge galvanised steel. The fans shall be of high efficiency backward curved centrifugal design, manufactured in galvanised steel. Fans shall be direct drive with IE2 high efficiency motors to BS5000 as standard, where appropriate. The unit motor shall be positioned outside the ventilation airflow path. The unit shall be capable of continuous operation at 90°C.

Unit fitted with full Ecosmart controls, BMS interfaces and commissioning controls. Ecosmart fans incorporate (in a convenient separate enclosure) a control package providing full Ecosmart functionality. The fan shall have the following energy saving functions integrally mounted within the fan unit on a purpose made PCB, all components pre-wired by the manufacturer: integral maximum and minimum speed adjustment/setting; integral adjustable run on timer; integral BMS interfaces, 0-10v and volt free failure indication.

NAV3

Resilient rubber anti-vibration mountings, supplied as a set of 4.

SQFF5

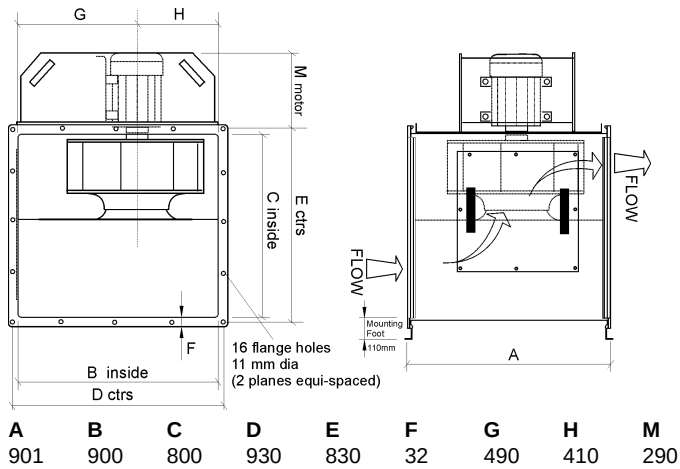
Double flanged flexible connector manufactured from flame proof material. Heat resistant to 400°C with excellent resistance to chemicals, ozone, oil and grease. The connector is air-tight, waterproof and tested to BS476 Part 7.

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Fan Dimensions



kg

150.0

Length: Width: Height:

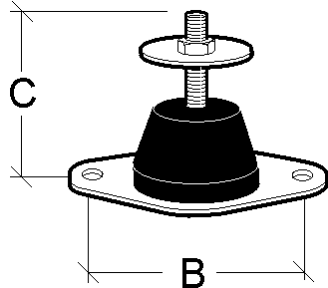
901 930 1120

Drawing is for dimensional purposes only. Dimensions in mm.

Ancillary Dimensions

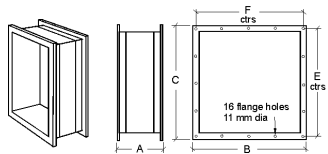
NAV3 - Anti-vibration mounting kit

B=45 C=75 mm



SQFF5 - Square flexible connector double flanged

A=150 B=980 C=880 E=830 F=930 mm



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Project Details

Location: DWE/RF/01

Technical Data

SQF - Squif Single In-line Fans

Fan Code: **SQFA42-3ES**
Installation Manual Links: 671175

Required duty: 0.88 m³/s at 250 Pa
Actual duty: 1.014 m³/s at 332 Pa
Actual at required flow: 0.88 m³/s at 381 Pa

When speed controlled to required duty (86.82%):

Fan Input Power: 0.36 kW
Motor Input Power: 0.485 kW
Specific Fan Power: 0.6 W/(l/s)
Velocity at required duty: 2.095 m/s
Fan Total Efficiency: 62%

At full speed:

Fan Input Power: 0.55 kW
Maximum Fan Input Power: 0.565 kW
Motor Input Power: 0.733 kW
Specific Fan Power: 0.7 W/(l/s)
Fan Total Efficiency: 47%

Maximum Fan Speed: 4 pole, 1,440 RPM
Electrical Supply: 400V, 3 Phase, 50 Hz
Nominal Motor Rating: 0.75 kW
Motor current (flc): 1.9 A
Motor starting current (sc): 1.9 A
Motor Efficiency: IE3 / Premium Efficiency

Max. operating temp: 90°C
Weight: 77 kg
Starting currents are nominal for D.O.L. starting.

Sound Data

Acoustic performance to ISO 13347 and AMCA 300.

Noise calculated speed controlled to required duty (86.82%)

Sound Power Levels re 1 pWatts (Hz):

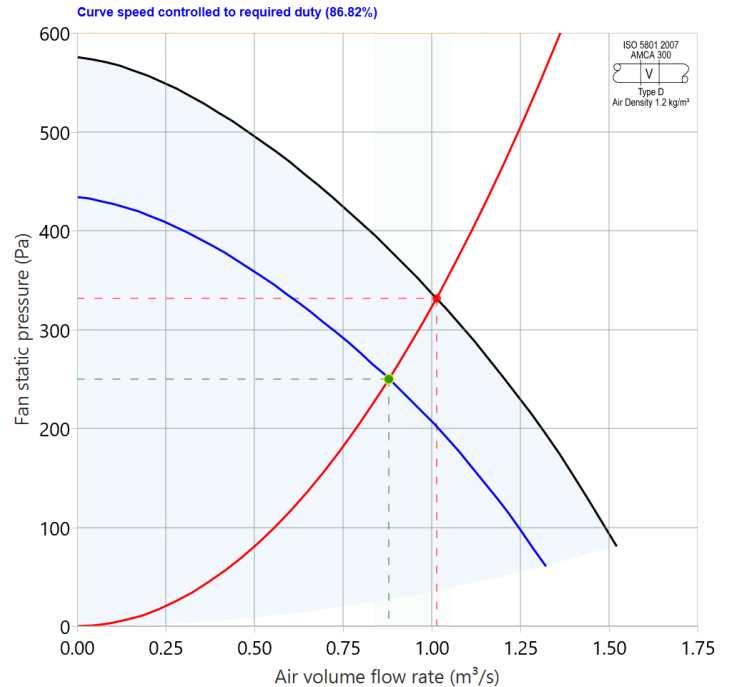
Hz	63	125	250	500	1k	2k	4k	8k	dBA
Induct Inlet	84	90	80	74	70	72	71	63	
Induct Outlet	81	91	76	71	74	76	73	65	
Breakout	77	84	72	66	61	63	56	41	51
For 100% speed:	+1	+2	+2	+3	+4	+4	+4	+4	

dBA is spherical at 3 metres. For hemi-spherical add 3 dBA.

Values shown are for inlet Lw, outlet Lw sound power & breakout levels for: Installation Type D: ducted inlet, ducted outlet. Ratings include the effects of duct end correction.

Please note that the noise data stated on this data sheet for the unit and/or silencer is tested in accordance with UK, European and International industry laboratory standards. However onsite conditions may vary and we would recommend that this information is verified by an acoustic specialist in order to ensure its suitability for the intended application.

Performance Chart



Additional Notes

Please note the SFP for this selection is 0.6w/l/s. To achieve 0.5w/l/s the resistance must be no more than 249Pa.

Please see the unit data sheets for the full technical, dimensional and sound information on the unit offered.

Selected Ancillaries

1 x NAV2 Anti-vibration mounting kit
2 x SQFF2 Square flexible connector double flanged

Specification

In-line centrifugal fan suitable for both vertical & horizontal mounting. The unit casing shall be heavy gauge galvanised steel. The fans shall be of high efficiency backward curved centrifugal design, manufactured in galvanised steel. Fans shall be direct drive with IE2 high efficiency motors to BS5000 as standard, where appropriate. The unit motor shall be positioned outside the ventilation airflow path. The unit shall be capable of continuous operation at 90°C.

Unit fitted with full Ecosmart controls, BMS interfaces and commissioning controls. Ecosmart fans incorporate (in a convenient separate enclosure) a control package providing full Ecosmart functionality. The fan shall have the following energy saving functions integrally mounted within the fan unit on a purpose made PCB, all components pre-wired by the manufacturer: integral maximum and minimum speed adjustment/setting; integral adjustable run on timer; integral BMS interfaces, 0-10v and volt free failure indication.

NAV2

Resilient rubber anti-vibration mountings, supplied as a set of 4.

SQFF2

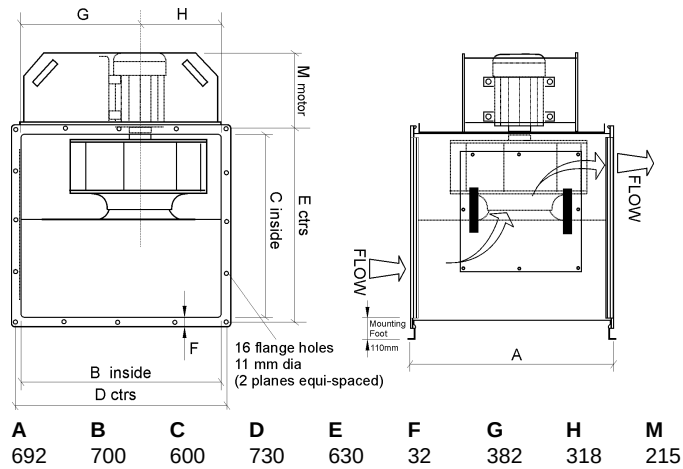
Double flanged flexible connector manufactured from flame proof material. Heat resistant to 400°C with excellent resistance to chemicals, ozone, oil and grease. The connector is air-tight, waterproof and tested to BS476 Part 7.

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Fan Dimensions



kg

77.0

Length: Width: Height:

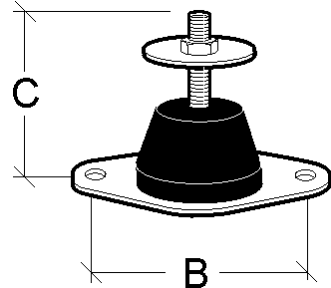
692 730 845

Drawing is for dimensional purposes only. Dimensions in mm.

Ancillary Dimensions

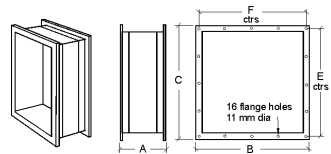
NAV2 - Anti-vibration mounting kit

B=45 C=75 mm



SQFF2 - Square flexible connector double flanged

A=150 B=760 C=660 E=630 F=730 mm



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Project Details

Location: DEF/00/01 - L0.18 Cleaners

Technical Data

DE - DAVE Extract Fans

Fan Code: **DE1-ES**
 Installation Manual Links: **611280**
 Required duty: **0.01 m³/s at 100 Pa**
 Actual duty: **0.018 m³/s at 329 Pa**
 Actual at required flow: **0.01 m³/s at 356 Pa**

When speed controlled to required duty (55.59%):

Motor Input Power: **0.006 kW**
 Specific Fan Power: **0.6 W/(l/s)**
 Velocity at required duty: **0.566 m/s**

At full speed:

Motor Input Power: **0.035 kW**
 Specific Fan Power: **2.0 W/(l/s)**
 Maximum Fan Speed: **3,770 RPM**
 Electrical Supply: **230V, 1 Phase, 50 Hz**
 Nominal Motor Rating: **0.03 kW**
 Motor current (flc): **0.27 A**
 Motor starting current (sc): **0.27 A**

Max. operating temp: **60°C**
 Weight: **25 kg**

All Ecosmart fans feature soft-starting and stepless variable speed control. A switch disconnector is required to isolate the fan from the electrical supply.

Sound Data

Acoustic performance to ISO 13347 and AMCA 300.

Noise calculated speed controlled to required duty (55.59%)

Sound Power Levels re 1 pWatts (Hz):

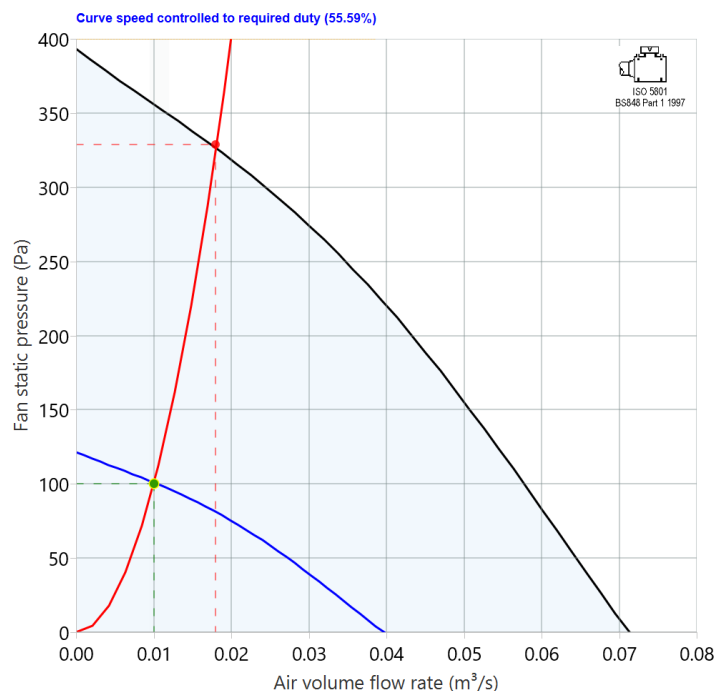
Hz	63	125	250	500	1k	2k	4k	8k	dBA
Induct Inlet	67	56	56	44	38	33	32	30	
Induct Outlet	69	60	60	52	42	37	37	30	
Breakout	48	47	38	33	17	<16	<16	<16	17
For 100% speed:	+4	+5	+7	+9	+13	+13	+13	+13	

dBA is hemi-spherical at 3 metres. For spherical deduct 3 dBA.

Values shown are for inlet Lw, outlet Lw sound power & breakout levels for Installation Type D: ducted inlet, ducted outlet. Ratings include the effects of duct end correction.

Please note that the noise data stated on this data sheet for the unit and/or silencer is tested in accordance with UK, European and International industry laboratory standards. However onsite conditions may vary and we would recommend that this information is verified by an acoustic specialist in order to ensure its suitability for the intended application.

Performance Chart



Additional Notes

Please note the SFP for this selection is 0.6w/l/s. To achieve 0.5w/l/s the resistance must be no more than 92Pa.

Please see the unit data sheets for the full technical, dimensional and sound information on the unit offered.

Selected Ancillaries

2 x CFC16 Flexible connector

CFC16 - Flexible connector

Weight: 0.5 kg

Specification

Dave high performance extract fan, standard case with patented 'Floating fan' construction. Single skin, with infill panels and manufactured from heavy gauge, corrosion resistant Magnelis steel. The unit is suitable for internal or external mounting, in any orientation and incorporates a full length top or bottom access panel. The fan impeller and EC motors are selected to provide optimum performance and energy efficiency conforming to Part L regulations. Units are suitable for operation in ambient temperatures of up to 60°C (sizes 1-5), 40°C (sizes 6-7) and are Class L2 leakage. The unit shall be controlled by an integrated Ecosmart control mounted externally to the case. The fans shall have the following energy saving and operational functions integrally installed with in it, all components will be pre-wired and fitted by the manufacturer:

- Integral Frequency inverter/speed controller.
- Integral adjustable run-on timer.
- Maximum and minimum speed adjustment/setting (trickle and boost).
- Volt free run & failure/status indication.
- 0-10V BMS interface for remote operation.
- Multiple low voltage sockets for interconnection of sensors or fans.
- Background ventilation/trickle enable switch.

The unit is supplied with circular spigots and set of four mounting brackets. The Fan unit shall have a 5 year warranty. The product warranty applies to the UK mainland and in accordance with Clause 14 of our Conditions of Sale. Customers purchasing from outside of the UK should contact Nuaire International Sales office for further details.

CFC16

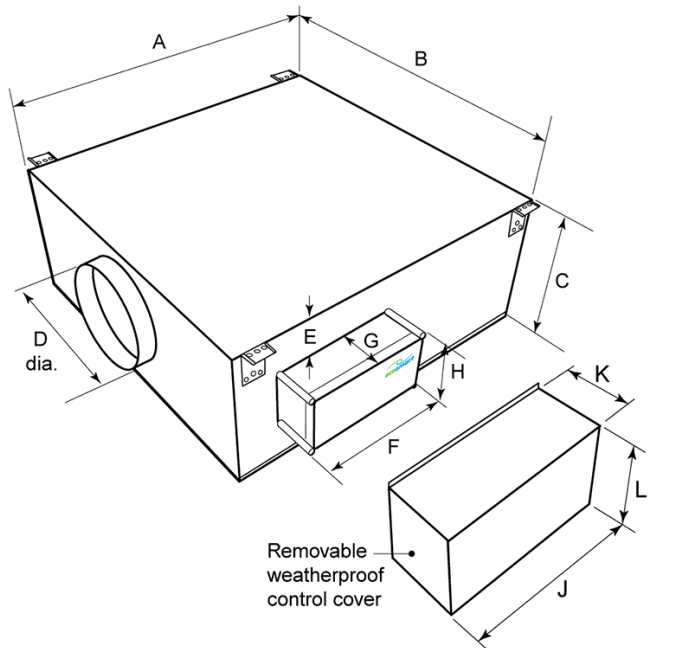
Circular flexible connector without flanges. Flexible duct material is flameproof and resistance to heat up to 132°C, chemicals, ozone, oil and grease. The material is airtight, waterproof and tested to BS476 Part 7. Supplied complete with fixing straps.

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Fan Dimensions



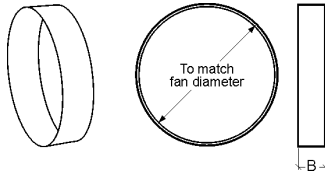
A	B	C	D	E	F	G	H	J
605	567	243	150	51	370	96	150	470
K	L	kg						
120	170	25.0						
Length:	Width:	Height:						
605	567	243						

Drawing is for dimensional purposes only. Dimensions in mm.

Ancillary Dimensions

CFC16 - Flexible connector

B=150 mm



air-HRU

PROJECT DETAILS

Project Name	Belle Vue CO-OP Academy	Quote No.	22446
Unit Reference	HRU/RF/01	Revision	5
Unit Model	AIR-HRU 7 / SL / EM / BAC / X / X / X / X	Date	07/10/2021

PERFORMANCE DATA

SUPPLY

Air Volume	1.066	m ³ /s
Ext. Stat. Pressure	195	Pa

EXTRACT

Air Volume	1.066	m ³ /s
Ext. Stat. Pressure	195	Pa

SFP

1.60 W/l/s

UNIT DIMENSIONS

O/ALL

Width	2,155	mm
Height	715	mm

O/ALL

Length	2,150	mm
Weight	515	kg

CONNECTIONS

Spigot HxW	670x515mm
Access	SL

COUNTERFLOW HEAT EXCHANGER

INLET

Air On	-5.0	°C
Return Air	21.0	°C

OUTLET

Air Off	18.4	°C
Efficiency (EN308)	90	%

STANDARD OPTIONS

Bypass Damper	YES
Drain Tray	YES

ACOUSTICS

Sound Power Levels (Lw)	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply Fan Inlet (dB)	74	74	73	73	72	75	68
Supply Fan Outlet (dB)	75	75	75	78	78	80	73
Extract Fan Inlet (dB)	74	74	73	73	72	75	68
Extract Fan Outlet (dB)	75	75	75	78	78	80	73

BREAKOUT NOISE

Free Field SPL	41 dbA	@3m
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ROOM SIDE ATTENUATORS

Excluded

AIR SIDE ATTENUATORS

Excluded

CONTROLS

Controller	BACnet	Constant Volume/Constant Temp
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SELECTED OPTIONS

Pitched Roof	√
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ELECTRICAL DETAILS (EXCLUDES SELECTED ANCILLARIES)

Electrical Supply	400V/3PH	F.L.C.	4.80	A	Protection Level	IP54
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PLEASE NOTE : All specific data points (noise levels, specific fan power, etc) are subject to design fluctuations and are to be used for indicative purposes only.

air-HRU

PROJECT DETAILS

Project Name	Belle Vue CO-OP Academy	Quote No.	22446
Unit Reference	HRU/RF/02	Revision	5
Unit Model	AIR-HRU 6 / SL / EM / BAC / X / X / X / X	Date	07/10/2021

PERFORMANCE DATA

SUPPLY

Air Volume	0.600	m ³ /s
Ext. Stat. Pressure	170	Pa

EXTRACT

Air Volume	0.600	m ³ /s
Ext. Stat. Pressure	145	Pa

SFP

1.30 W/l/s

UNIT DIMENSIONS

O/ALL

Width	1,575	mm
Height	715	mm

O/ALL

Length	2,150	mm
Weight	400	kg

CONNECTIONS

Spigot HxW	600x515	mm
Access	SL	

COUNTERFLOW HEAT EXCHANGER

INLET

Air On	-5.0	°C
Return Air	21.0	°C

OUTLET

Air Off	18.7	°C
Efficiency (EN308)	91	%

STANDARD OPTIONS

Bypass Damper	YES
Drain Tray	YES

ACOUSTICS

Sound Power Levels (Lw)	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply Fan Inlet (dB)	69	69	67	65	63	64	62
Supply Fan Outlet (dB)	77	77	74	74	73	68	66
Extract Fan Inlet (dB)	69	69	67	65	63	64	62
Extract Fan Outlet (dB)	77	77	74	74	73	68	66

BREAKOUT NOISE

Free Field SPL	40 dbA	@3m
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ROOM SIDE ATTENUATORS

Excluded

AIR SIDE ATTENUATORS

Excluded

CONTROLS

Controller	BACnet	Constant Volume/Constant Temp
------------	--------	-------------------------------

SELECTED OPTIONS

Pitched Roof	√
--------------	---

ELECTRICAL DETAILS (EXCLUDES SELECTED ANCILLARIES)

Electrical Supply	400V/3PH	F.L.C.	4.40	A	Protection Level	IP54
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PLEASE NOTE : All specific data points (noise levels, specific fan power, etc) are subject to design fluctuations and are to be used for indicative purposes only.

air-HRU

PROJECT DETAILS

Project Name	Belle Vue CO-OP Academy	Quote No.	22446
Unit Reference	HRU/RF/03	Revision	5
Unit Model	AIR-HRU 5 / SL / EM / BAC / X / X / X / X	Date	07/10/2021

PERFORMANCE DATA

SUPPLY

Air Volume	0.288	m ³ /s
Ext. Stat. Pressure	260	Pa

EXTRACT

Air Volume	0.288	m ³ /s
Ext. Stat. Pressure	180	Pa

SFP

1.40 W/l/s

UNIT DIMENSIONS

O/ALL

Width	1,505	mm
Height	478	mm

O/ALL

Length	1,950	mm
Weight	250	kg

CONNECTIONS

Spigot WxH	460x378 mm
Access	SL

COUNTERFLOW HEAT EXCHANGER

INLET

Air On	-5.0	°C
Return Air	21.0	°C

OUTLET

Air Off	18.4	°C
Efficiency (EN308)	90	%

STANDARD OPTIONS

Bypass Damper	YES
Drain Tray	YES

ACOUSTICS

Sound Power Levels (Lw)	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply Fan Inlet (dB)	68	67	65	62	59	57	51
Supply Fan Outlet (dB)	73	72	70	67	64	62	56
Extract Fan Inlet (dB)	68	67	65	62	59	57	51
Extract Fan Outlet (dB)	73	72	70	67	64	62	56

BREAKOUT NOISE

Free Field SPL	35 dbA	@3m
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ROOM SIDE ATTENUATORS

Excluded

AIR SIDE ATTENUATORS

Excluded

CONTROLS

Controller	BACnet	Constant Volume/Constant Temp
------------	--------	-------------------------------

SELECTED OPTIONS

Pitched Roof	√
--------------	---

ELECTRICAL DETAILS (EXCLUDES SELECTED ANCILLARIES)

Electrical Supply	230V/1PH	F.L.C.	5.40	A	Protection Level	IP54
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PLEASE NOTE : All specific data points (noise levels, specific fan power, etc) are subject to design fluctuations and are to be used for indicative purposes only.