

Project Title:			Submission no:	M/002
Contract No:	HWS 0358			
To:	Andrew Haines Dave Finley	Company:	Hydrock	
Approval of the following equipment is required:				
Equipment:	Air Handling units (AHU) , Heat Recovery Units (HRU) , Supply and Extract fan			
Manufacturer:	Nuaire			
Description:	Manufacture and delivery of the ventilation Plant			
Specification References: M&E Scope of works specification PPT-HYD-XX-XX-SP-ME-0001 Stage 4a issued 30/09/2020. Mechanical equipment schedules PPT-HYD-XX-XX-SH-M-0002 Rev C03 Heating and cooling layout PPT-HYD-XX-00-DR-M-0400 & 0401 Rev C01 Heating and cooling layout PPT-HYD-XX-01-DR-M-0402 & 0403 Rev C01 Heating and cooling layout PPT-HYD-XX-02-DR-M-0405 & 0406 Rev C01				
Attached Detail Documents:				
Equipment specifying schedule.	Yes			
Manufacturer's quotation.	Yes			
Manufacturer's details.	Yes			
Design check calculations.	Yes			
Certified performance levels.	Yes			
Builderswork requirements.	No			
Assembly and installation details.	No			
Operation and maintenance details.	No			
List of recommended spares.	No			
OTHER				
Electrical requirements for equipment: No				
Planned site delivery: March 2021				
Issued by: BAM Construction Ltd.	Jerry Sellers	Date	30/10/2020	
Please return comments by: 06/11/2020 to achieve construction delivery dates.				

To be completed and returned by MEPH Consultant Design Engineer
Technical submission is ** approved / approved with comments / not approved. (**delete as appropriate)

Returned by:		Company:	
Signature:		Date:	

 Castlebridge 5 5-19 Cowbridge Road East CARDIFF CF11 9AB t: +44(0)2920 023665 e: cardiff@hydrock.com		
A: NO COMMENTS	B: SUBJECT TO COMMENTS	C: REVISE & RESUBMIT
STATUS A		
By: AH	Date: 02/11/2020	

M - Supply Grilles Schedule									
Reference	Volume Airflow (l/s)	Location	Height (mm)	Width (mm)	Length (mm)	Diameter (mm)	Maximum Pressure Drop (Pa)	Description	
SG/00/01	70.0 L/s	Space				300	20.0 Pa	Disc Valve	
SG/00/02	30.0 L/s	Studio lobby				150	20.0 Pa	Disc Valve	
SG/00/02a	30.0 L/s	Multi-purpose 2				150	20.0 Pa	Disc Valve	
SG/00/03	30.0 L/s	Breakout space	150	200			20.0 Pa	Rectangular Supply Air Grille	
SG/00/04	0.0 L/s	Reception	150	200			20.0 Pa	Rectangular Supply Air Grille	
SG/00/05	0.0 L/s	Reception	150	200			20.0 Pa	Rectangular Supply Air Grille	
SG/00/06	70.0 L/s	lobby				300	20.0 Pa	Disc Valve	
SG/00/07	90.0 L/s	Reception	200	950			20.0 Pa	Duct Mounted	
SG/00/08	90.0 L/s	Reception	200	950			20.0 Pa	Duct Mounted	
SG/00/10	128.0 L/s	Reception	225	1000			20.0 Pa	Duct Mounted	
SG/00/11	128.0 L/s	Reception	225	1000			20.0 Pa	Duct Mounted	
SG/00/12	128.0 L/s	Reception	225	1000			20.0 Pa	Duct Mounted	
SG/00/13	128.0 L/s		225	1000			20.0 Pa	Duct Mounted	
SG/00/14	128.0 L/s		225	1000			20.0 Pa	Duct Mounted	
SG/00/15	128.0 L/s	Reception	225	1000			20.0 Pa	Duct Mounted	
SG/00/16	90.0 L/s	Reception	200	950			20.0 Pa	Duct Mounted	
SG/00/17	90.0 L/s	Kitchen/training	200	950			20.0 Pa	Duct Mounted	
SG/00/18	84.0 L/s	Multi-purpose 1	150	725			20.0 Pa	Duct Mounted	
SG/00/19	84.0 L/s	Multi-purpose 1	150	725			20.0 Pa	Duct Mounted	
SG/00/20	110.0 L/s		100	700			20.0 Pa	Duct Mounted	
SG/00/21	84.0 L/s	Multi-purpose 1	150	725			20.0 Pa	Duct Mounted	
SG/00/22	84.0 L/s	Multi-purpose 1	150	725			20.0 Pa	Duct Mounted	
SG/00/23	25.0 L/s	Corridor				150	20.0 Pa	Disc Valve	
SG/00/24	40.0 L/s	Changing place				200	20.0 Pa	Disc Valve	
SG/00/25	100.0 L/s	Changing room female				300	20.0 Pa	Disc Valve	
SG/00/26	55.0 L/s	Corridor				200	20.0 Pa	Disc Valve	
SG/00/27	115.0 L/s	Changing room male				300	20.0 Pa	Disc Valve	
SG/00/30	110.0 L/s	Multi-purpose 1	100	650			20.0 Pa	Duct Mounted	
SG/01/01	40.0 L/s		100	500			20.0 Pa	Duct Mounted	
SG/01/02	80.0 L/s		150	600			20.0 Pa	Duct Mounted	
SG/01/03	113.0 L/s		150	825			20.0 Pa	Duct Mounted	
SG/01/04	113.0 L/s	office 1-2	150	825			20.0 Pa	Duct Mounted	
SG/01/05	113.0 L/s	office 1-2	150	825			20.0 Pa	Duct Mounted	
SG/01/06	113.0 L/s		150	825			20.0 Pa	Duct Mounted	
SG/01/07	60.0 L/s	office 1-2				400	20.0 Pa	Bellmouth	
SG/01/08	83.5 L/s		125	725			20.0 Pa	Duct Mounted	
SG/01/09	83.5 L/s		125	725			20.0 Pa	Duct Mounted	
SG/01/10	40.0 L/s	Breakout space	75	375			20.0 Pa	Duct Mounted	
SG/01/11	90.0 L/s	Lobby				300	20.0 Pa	Disc Valve	
SG/01/12	65.0 L/s	Lobby				200	20.0 Pa	Disc Valve	
SG/01/13	100.0 L/s		100	700			20.0 Pa	Duct Mounted	
SG/01/14	100.0 L/s		100	700			20.0 Pa	Duct Mounted	
SG/01/15	234.0 L/s					350	20.0 Pa	Disc Valve	
SG/01/16	234.0 L/s					350	20.0 Pa	Disc Valve	
SG/01/17	117.0 L/s		175	1025			20.0 Pa	Duct Mounted	
SG/01/18	117.0 L/s		175	1025			20.0 Pa	Duct Mounted	
SG/01/19	50.0 L/s		100	600			20.0 Pa	Duct Mounted	
SG/01/20	117.0 L/s		175	1025			20.0 Pa	Duct Mounted	
SG/01/21	117.0 L/s		175	1025			20.0 Pa	Duct Mounted	
SG/01/22	117.0 L/s		175	1025			20.0 Pa	Duct Mounted	
SG/01/23	117.0 L/s		175	1025			20.0 Pa	Duct Mounted	
SG/01/24	50.0 L/s		100	600			20.0 Pa	Duct Mounted	
SG/01/25	117.0 L/s		175	1025			20.0 Pa	Duct Mounted	
SG/01/26	117.0 L/s		175	1025			20.0 Pa	Duct Mounted	
SG/01/27	30.0 L/s		75	400			20.0 Pa	Duct Mounted	
SG/01/28	15.0 L/s		75	400			20.0 Pa	Duct Mounted	
SG/01/29	15.0 L/s		75	400			20.0 Pa	Duct Mounted	
SG/01/30	78.0 L/s	Bio-circuits	150	800			20.0 Pa	Duct Mounted	
SG/01/31	78.0 L/s	Space	150	800			20.0 Pa	Duct Mounted	
SG/01/32	117.0 L/s	Bio-circuits	175	1025			20.0 Pa	Duct Mounted	
SG/01/33	117.0 L/s	Space	175	1025			20.0 Pa	Duct Mounted	
SG/01/34	130.0 L/s	Space	200	1200			20.0 Pa	Duct Mounted	
SG/01/35	117.0 L/s	Bio-circuits	175	1025			20.0 Pa	Duct Mounted	
SG/01/36	117.0 L/s	Bio-circuits	175	1025			20.0 Pa	Duct Mounted	
SG/01/37	78.0 L/s	Bio-circuits	150	800			20.0 Pa	Duct Mounted	
SG/01/38	78.0 L/s	Space	150	800			20.0 Pa	Duct Mounted	
SG/01/39	117.0 L/s	Bio-circuits	175	1025			20.0 Pa	Duct Mounted	
SG/01/40	117.0 L/s	Space	175	1025			20.0 Pa	Duct Mounted	
SG/01/41	130.0 L/s	Space	200	1200			20.0 Pa	Duct Mounted	
SG/01/42	117.0 L/s	Bio-circuits	175	1025			20.0 Pa	Duct Mounted	
SG/01/43	117.0 L/s	Bio-circuits	175	1025			20.0 Pa	Duct Mounted	
SG/01/44	78.0 L/s	Bio-circuits	150	800			20.0 Pa	Duct Mounted	
SG/01/45	78.0 L/s	Space	150	800			20.0 Pa	Duct Mounted	
SG/01/46	389.0 L/s	Space	40			600	20.0 Pa	Disc Valve	
SG/01/47	389.0 L/s	Space	40			600	20.0 Pa	Disc Valve	
SG/01/48	389.0 L/s	Space	40			600	20.0 Pa	Disc Valve	
SG/01/49	389.0 L/s	Space	40			600	20.0 Pa	Disc Valve	
SG/01/50	389.0 L/s	Space	40			600	20.0 Pa	Disc Valve	
SG/01/51	389.0 L/s	Space	40			600	20.0 Pa	Disc Valve	
SG/01/52	389.0 L/s	Space	40			600	20.0 Pa	Disc Valve	
SG/01/53	389.0 L/s	Space	40			600	20.0 Pa	Disc Valve	
SG/01/54	389.0 L/s	Space	40			600	20.0 Pa	Disc Valve	
SG/01/55	100.0 L/s		100	750			20.0 Pa	Duct Mounted	
SG/02/01	0.0 L/s		100	600			20.0 Pa	Duct Mounted	
SG/02/02	0.0 L/s		100	600			20.0 Pa	Duct Mounted	
SG/02/03	81.0 L/s	office 1-2	100	650			20.0 Pa	Duct Mounted	
SG/02/04	100.0 L/s					400	20.0 Pa	Bellmouth	
SG/02/05	100.0 L/s	office 1-2	150	700			20.0 Pa	Duct Mounted	
SG/02/06	100.0 L/s		150	700			20.0 Pa	Duct Mounted	
SG/02/07	81.0 L/s	office 1-2	100	650			20.0 Pa	Duct Mounted	
SG/02/08	160.0 L/s		150	700			20.0 Pa	Duct Mounted	
SG/02/09	75.0 L/s		100	650			20.0 Pa	Duct Mounted	
SG/02/10	81.0 L/s	office 1-2	100	650			20.0 Pa	Duct Mounted	
SG/02/11	75.0 L/s		100	650			20.0 Pa	Duct Mounted	
SG/02/12	75.0 L/s		100	650			20.0 Pa	Duct Mounted	

M-Electric Hot Water Cylinder					
Reference	Location	Description	Dimensions H/W	Storage Volume	Electrical Power
HWC/00/01	Plant	Hot Water Cylinder	2074/730/	300.0 L	18 kW
HWC/00/02	Plant	Hot Water Cylinder	2074/730/	300.0 L	18 kW

M - Instantaneous Electric Hot Water Heater						
Reference	Location	Electrical Power	Stored Capacity	Depth	Width	Height
IHW/00/01		2.8 kW	0.2 L	87 mm	186 mm	135 mm
IHW/00/02		2.8 kW	0.2 L	87 mm	186 mm	135 mm
IHW/00/03	Female wc	2.8 kW	0.2 L	87 mm	186 mm	135 mm
IHW/00/04	Female wc	2.8 kW	0.2 L	87 mm	186 mm	135 mm
IHW/00/05	Cleaner	2.0 kW	5.7 L	215 mm	255 mm	390 mm
IHW/00/06	Changing place	2.8 kW	0.2 L	87 mm	186 mm	135 mm
IHW/01/01		2.0 kW	5.7 L	215 mm	255 mm	390 mm
IHW/01/02	Male wc	2.8 kW	0.2 L	87 mm	186 mm	135 mm
IHW/01/03	Male wc	2.8 kW	0.2 L	87 mm	186 mm	135 mm
IHW/01/04	Female wc	2.8 kW	0.2 L	87 mm	186 mm	135 mm
IHW/01/05	Acc. WC	2.8 kW	0.2 L	87 mm	186 mm	135 mm
IHW/01/06	Staff room	2.0 kW	5.7 L	215 mm	255 mm	390 mm
IHW/01/07	Cleaner	2.0 kW	5.7 L	215 mm	255 mm	390 mm
IHW/01/08	WC	2.8 kW	0.2 L	87 mm	186 mm	135 mm
IHW/02/01	breakout space	2.8 kW	0.2 L	87 mm	186 mm	135 mm

M - Fresh Air Louvres				
Reference	Flow	Velocity	Minimum Free Area Required	
SL/00/01	130.0 L/s	2.0 m/s	0.065 m²	
SL/00/03	220.0 L/s	2.0 m/s	0.110 m²	
SL/00/05	250.0 L/s	2.0 m/s	0.125 m²	
SL/00/06	180.0 L/s	2.0 m/s	0.090 m²	

M - Attenuators						
Reference	Flowrate	Length (mm)	Width (mm)	Height (mm)	Diameter (mm)	Description
ATT/00/01	130.0 L/s	800			300	Round Attenuator
ATT/00/02	130.0 L/s	800			300	Round Attenuator
ATT/00/03	160.0 L/s	800			300	Round Attenuator
ATT/00/04	-100.0 L/s	800			300	Round Attenuator
ATT/00/09	220.0 L/s	800			400	Round Attenuator
ATT/00/10	220.0 L/s	800			400	Round Attenuator
ATT/00/11	220.0 L/s	800			400	Round Attenuator
ATT/00/12	220.0 L/s	800			400	Round Attenuator
ATT/00/13	0.0 L/s	800			450	Round Attenuator
ATT/00/14	335.0 L/s	800			450	Round Attenuator
ATT/00/15	335.0 L/s	800			450	Round Attenuator
ATT/00/16	0.0 L/s	800			450	Round Attenuator
ATT/00/17	108.0 L/s	800			450	Round Attenuator
ATT/00/18	25.0 L/s	800			450	Round Attenuator
ATT/00/19	25.0 L/s	800			450	Round Attenuator
ATT/00/20	25.0 L/s	800			450	Round Attenuator
ATT/00/21	180.0 L/s	800			450	Round Attenuator
ATT/00/22	180.0 L/s	800			450	Round Attenuator
ATT/00/23	180.0 L/s	800			450	Round Attenuator
ATT/00/24	180.0 L/s	800			450	Round Attenuator
ATT/01/01	220.0 L/s	800			350	Round Attenuator
ATT/01/02	220.0 L/s	800			350	Round Attenuator
ATT/01/03	220.0 L/s	800			350	Round Attenuator
ATT/01/04	220.0 L/s	800			350	Round Attenuator
ATT/01/05	180.0 L/s	800			350	Round Attenuator
ATT/01/06	180.0 L/s	800			350	Round Attenuator
ATT/01/07	180.0 L/s	800			350	Round Attenuator
ATT/01/08	180.0 L/s	800			350	Round Attenuator
ATT/01/09	180.0 L/s	800			350	Round Attenuator
ATT/01/10	180.0 L/s	800			350	Round Attenuator
ATT/01/11	180.0 L/s	800			350	Round Attenuator
ATT/01/12	180.0 L/s	800			350	Round Attenuator
ATT/01/13	155.0 L/s	800			350	Round Attenuator
ATT/01/14	-155.0 L/s	800			350	Round Attenuator
ATT/01/15	-155.0 L/s	800			350	Round Attenuator
ATT/01/16	155.0 L/s	800			350	Round Attenuator
ATT/01/17	130.0 L/s	800			350	Round Attenuator
ATT/01/18	130.0 L/s	800			350	Round Attenuator
ATT/01/19	130.0 L/s	800			350	Round Attenuator
ATT/01/20	130.0 L/s	800			350	Round Attenuator
ATT/01/21	130.0 L/s	800			350	Round Attenuator
ATT/01/22	130.0 L/s	800			350	Round Attenuator
ATT/01/23	130.0 L/s	800			350	Round Attenuator
ATT/01/24	130.0 L/s	800			350	Round Attenuator
ATT/01/25	0.0 L/s	800			300	Round Attenuator
ATT/01/26	180.0 L/s	800			300	Round Attenuator
ATT/01/27	180.0 L/s	800			300	Round Attenuator
ATT/01/28	0.0 L/s	800			300	Round Attenuator
ATT/02/01	200.0 L/s	800			350	Round Attenuator
ATT/02/02	200.0 L/s	800			350	Round Attenuator
ATT/02/03	200.0 L/s	800			350	Round Attenuator
ATT/02/04	200.0 L/s	800			350	Round Attenuator
ATT/02/05	260.0 L/s	800			400	Round Attenuator
ATT/02/06	260.0 L/s	800			400	Round Attenuator
ATT/02/07	260.0 L/s	800			400	Round Attenuator
ATT/02/08	260.0 L/s	800			400	Round Attenuator
ATT/RF/01	0.0 L/s	1200			450	Rectangular Crosstalk Attenuator
ATT/RF/02	0.0 L/s	1200	450	450		Rectangular Attenuator
ATT/RF/03	0.0 L/s	1200	550	350		Rectangular Attenuator
ATT/RF/04	0.0 L/s	1100	450	450		Rectangular Attenuator
ATT/RF/05	1875.0 L/s	1200	900	500		Rectangular Attenuator
ATT/RF/06	1250.0 L/s	1200	900	500		Rectangular Attenuator
ATT/RF/07	3501.0 L/s	1200	1100	650		Rectangular Attenuator
ATT/RF/08	3500.0 L/s	1200	1100	650		Rectangular Attenuator
ATT/RF/09	1250.0 L/s	1200	1700	650		Rectangular Attenuator
ATT/RF/10	1875.0 L/s	1200	1700	650		Rectangular Attenuator
CTA/00/01	310.0 L/s	800			450	Round Crosstalk Attenuator
CTA/00/02	65.0 L/s	800			250	Round Crosstalk Attenuator
CTA/00/03	100.0 L/s	800			300	Round Crosstalk Attenuator
CTA/00/04	170.0 L/s	800			350	Round Crosstalk Attenuator
CTA/00/05	180.0 L/s	800			350	Round Crosstalk Attenuator
CTA/00/06	115.0 L/s	800			300	Round Crosstalk Attenuator
CTA/00/07	150.0 L/s	800			350	Round Crosstalk Attenuator
CTA/00/08	115.0 L/s	800			300	Round Crosstalk Attenuator
CTA/00/09	120.0 L/s	800			300	Round Crosstalk Attenuator

Mr Jerry Sellers
Bam Construction Ltd
Millennium Gate
Gifford Court
Fox Den Road, Stoke Gifford
Bristol
BS34 8TT

Project Reference: 19/08218/COM
Quote Number: H 1663229 AA

23-Oct-2020

Dear Sir / Madam,

Re: Port Talbot'S Plaza Cinema

Thank you for your enquiry for the above project. Please note the attached quotation is valid for 30 days.

Please refer to the Technical Submission for quotation H 1663229 AA attached to this email communication. If the Technical Submission has not been provided with this email, please contact Nuaire for a copy to be provided.

In selecting Nuaire products you can be certain that the quality is of the highest standard. All of Nuaire's products have been developed to be energy efficient and compliant with the latest legislation.

We offer an excellent after sales service and a technical help line with a team of experts available to help and advise you. We are renowned for our outstanding customer service and on time delivery performance to help you to manage your project successfully.

To secure this price and the best possible lead times please place your order as soon as possible. Simply call me on my direct line referencing the quotation number above or send your order by email, post or facsimile. In the meantime if I can be of further help please do not hesitate to contact me.

Following recent conversations with your area sales manager, this quotation is based on our new pricing structure. Please note the standard discount is no longer shown but is applied to the line price of each item.

We look forward to being your preferred supplier on this and future projects.

Yours faithfully

Thomas Hughes

T 029 2085 8576
F 029 2085 8222
E Thomas.Hughes@nuaire.co.uk

PROJECT SUMMARY

Please refer to quote number H 1663229 AA in all correspondence

Clients Name & Address

Mr Jerry Sellers
Bam Construction Ltd
Millennium Gate
Gifford Court
Fox Den Road, Stoke Gifford
Bristol
BS34 8TT

Quotation Number

H 1663229 AA

Project Reference

19/08218/COM
Port Talbot'S Plaza Cinema
14 Talbot Road

Quotation Date

23-Oct-2020

Account Number

5725780-13

Nuaire Contact

Thomas Hughes
Tel: 029 2085 8576

Your Sales Engineer

Chris Kilbane
Tel: 07767 298 058

Contact

Mr Jerry Sellers
Tel: 0117 9448800

Item	Code	Description	Duty m³/s	Duty Pa	Qty	Price each	Total
Location 1 - HRU/00/01							
10	XBC25HA-NNN-E-LS4S	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. Suitable for Coastal Environment. 1 year UK and Ireland warranty.	0.16	150.0	1		
11	ES-LCD	NUAIRE ECOSMART USER CONTROL WITH TOUCH SCREEN. C/W TIME CLOCK. fitted with cable extender 830272			1		
Location 2 - HRU/00/03							
20	XBC25HA-NNN-E-LS4S	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. Suitable for Coastal Environment. 1 year UK and Ireland warranty.	0.22	200.0	1		
21	ES-LCD	NUAIRE ECOSMART USER CONTROL WITH TOUCH SCREEN. C/W TIME CLOCK. fitted with cable extender 830272			1		
Location 3 - HRU/00/04							
30	XBC55HA-NNN-E-LS4S	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. Suitable for Coastal Environment. 1 year UK and Ireland warranty.	0.335	200.0	1		
31	ES-LCD	NUAIRE ECOSMART USER CONTROL WITH TOUCH SCREEN. C/W TIME CLOCK. fitted with cable extender 830272			1		
Location 4 - HRU/00/05							
40	XBC25HA-NNN-E-LS4S	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. Suitable for Coastal Environment. 1 year UK and Ireland warranty.	0.25	200.0	1		

continued ...

PROJECT SUMMARY

Please refer to quote number H 1663229 AA in all correspondence

Quotation Number H 1663229 AA **Account Number** 5725780-13

... continued

Item	Code	Description	Duty m³/s	Duty Pa	Qty	Price each	Total
Location 4 - HRU/00/05							
41	ES-LCD	NUAIRE ECOSMART USER CONTROL WITH TOUCH SCREEN. C/W TIME CLOCK. fitted with cable extender 830272			1		
Location 5 - HRU/00/06							
50	XBC25HA-NNN-E-LS4S	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. Suitable for Coastal Environment. 1 year UK and Ireland warranty.	0.18	200.0	1		
51	ES-LCD	NUAIRE ECOSMART USER CONTROL WITH TOUCH SCREEN. C/W TIME CLOCK. fitted with cable extender 830272			1		
Location 6 - HRU/01/01							
60	XBC25HA-NNN-E-LS4S	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. Suitable for Coastal Environment. 1 year UK and Ireland warranty.	0.22	200.0	1		
61	ES-LCD	NUAIRE ECOSMART USER CONTROL WITH TOUCH SCREEN. C/W TIME CLOCK. fitted with cable extender 830272			1		
Location 7 - HRU01/02							
70	XBC15HA-NNN-E-LS4S	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. Suitable for Coastal Environment. 1 year UK and Ireland warranty.	0.1	150.0	1		
71	ES-LCD	NUAIRE ECOSMART USER CONTROL WITH TOUCH SCREEN. C/W TIME CLOCK. fitted with cable extender 830272			1		
Location 8 - HRU01/03							
80	XBC15HA-NNN-E-LS4S	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. Suitable for Coastal Environment. 1 year UK and Ireland warranty.	0.1	150.0	1		
81	ES-LCD	NUAIRE ECOSMART USER CONTROL WITH TOUCH SCREEN. C/W TIME CLOCK. fitted with cable extender 830272			1		
Location 9 - HRU/01/04							
90	XBC25HA-NNN-E-LS4S	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. Suitable for Coastal Environment. 1 year UK and Ireland warranty.	0.135	200.0	1	£ 4996.49	£ 4996.49

continued ...

PROJECT SUMMARY

Please refer to quote number H 1663229 AA in all correspondence

Quotation Number H 1663229 AA **Account Number** 5725780-13

... continued

Item	Code	Description	Duty m³/s	Duty Pa	Qty	Price each	Total
Location 9 - HRU/01/04							
91	ES-LCD	NUAIRE ECOSMART USER CONTROL WITH TOUCH SCREEN. C/W TIME CLOCK. fitted with cable extender 830272			1		
Location 10 - HRU01/05							
100	XBC15HA-NNN-E-LS4S	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. Suitable for Coastal Environment. 1 year UK and Ireland warranty.	0.1	150.0	1		
101	ES-LCD	NUAIRE ECOSMART USER CONTROL WITH TOUCH SCREEN. C/W TIME CLOCK. fitted with cable extender 830272			1		
Location 11 - HRU01/06							
110	XBC15HA-NNN-E-LS4S	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. Suitable for Coastal Environment. 1 year UK and Ireland warranty.	0.1	150.0	1		
111	ES-LCD	NUAIRE ECOSMART USER CONTROL WITH TOUCH SCREEN. C/W TIME CLOCK. fitted with cable extender 830272			1		
Location 12 - HRU/01/07							
120	XBC15HA-NNN-E-LS4S	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. Suitable for Coastal Environment. 1 year UK and Ireland warranty.	0.06	150.0	1	1	
121	ES-LCD	NUAIRE ECOSMART USER CONTROL WITH TOUCH SCREEN. C/W TIME CLOCK. fitted with cable extender 830272			1		
Location 13 - HRU/02/01							
130	XBC25HA-NNN-E-LS4S	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. Suitable for Coastal Environment. 1 year UK and Ireland warranty.	0.2	150.0	1		
131	ES-LCD	NUAIRE ECOSMART USER CONTROL WITH TOUCH SCREEN. C/W TIME CLOCK. fitted with cable extender 830272			1		
Location 14 - HRU/02/02							
140	XBC25HA-NNN-E-LS4S	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. Suitable for Coastal Environment. 1 year UK and Ireland warranty.	0.16	150.0	1		

continued ...

PROJECT SUMMARY

Please refer to quote number H 1663229 AA in all correspondence

Quotation Number H 1663229 AA **Account Number** 5725780-13

... continued

Item	Code	Description	Duty m³/s	Duty Pa	Qty	Price each	Total
Location 14 - HRU/02/02							
141	ES-LCD	NUAIRE ECOSMART USER CONTROL WITH TOUCH SCREEN. C/W TIME CLOCK. fitted with cable extender 830272			1		
Location 15 - AHU/RF/02							
150	XBC25HA-NNN-E-LS4W	Room must be up to temperature before the DX coil is switched to heatint cycle for winter heating. DX Coil will not function below 10°C. Nuair 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. Weatherproof and Suitable for Coastal Environment. 1 year UK and Ireland warranty.	0.26	50.0	1		
151	XBC25H-DX-DUCTO-LWP4	XBC25 Horizontal, Remote duct mounted DX Coil. Comes with weather proof roof. Max volume 1.9 litres. Left handed connections in the direction of airflow. Provided with bare tails. All controls, sensors, condensers and additional pipework are to be supplied and installed by others. Unit has been treated for C4 coastal applications			1		
152	ES-LCD	NUAIRE ECOSMART USER CONTROL WITH TOUCH SCREEN. C/W TIME CLOCK. fitted with cable extender 830272			1		
Location 16 - Bespoke Unit (AHU/RF/01) - Control Notes							
		This AHU is supplied as a non-controlled unit. DX coil is supplied with bare tail and any connecting pipework including valves, actuators, temperature sensors, condensers and condensation trap being supplied, installed and commissioned by others. All additional controls are to be supplied, installed and commissioned by a controls specialist. Please see the attached supporting AHU technical data sheet confirming the required running frequency for each selected fan. The fans will require an inverter to comply with the current ERP legislation requirements. This inverter is to be provided as part of the control specialist package. If the controls specialist is not providing the required inverter control, please contact Nuair for a suitable option to be added to our submission.					
Location 17 - Bespoke Unit (AHU/RF/01) - Construction Notes							
		Unit offered is for external mounting. Unit is manufactured from 50mm pent-a-post framework. Unit is constructed from Aluzinc double skinned infilled panels. Unit components are protected for a saline enviroment. Motors are suitable for inverter control (by others). Units are manufactured to Leakage Classification L2. Casing strength D2. Thermal Transmittance T4. Thermal Bridging TB4. Any order placed against this quotation and technical submission will be deemed as your full acceptance of the suitability and compliance of the equipment offered.					
Location 18 - AHU/RF/01							
180	Q1562921-02-B (BOXER AHU)	BOXER AHU: Mixing Box(SUPPLY), Panel & Bag Filter(SUPPLY), Heat Wheel(DUAL), DX Cooling Coil(SUPPLY), Plenum (SUPPLY), Plenum Fan(SUPPLY), Bag Filter(EXHAUST), Plenum Fan(EXHAUST), Mixing Box(EXHAUST)	3.5	90.0	1		
Location 19 - KEF/RF/01 - Kitchen Extract Fan							
190	SQFA42-3ES-QA14606	Nuair SQUIF Square cased unit centrigal impeller, motor out of airstream c/w frequency inverter with full ECOSMART compatibility in a remote box QA = The unit will be treated for a coastal environment	0.6	250.0	1		

continued ...

PROJECT SUMMARY

Please refer to quote number H 1663229 AA in all correspondence

Quotation Number H 1663229 AA **Account Number** 5725780-13

... continued

Item	Code	Description	Duty m³/s	Duty Pa	Qty	Price each	Total
Location 19 - KEF/RF/01 - Kitchen Extract Fan							
191	NAV2	ANTI-VIBRATION MOUNTING KIT. (540822)			1		
192	SQFF2	DOUBLE FLANGED FLEXIBLE CONNECTOR			2		
193	ES-ISC-WPA	WEATHERPROOF ENCLOSURE FOR ES-ISC1.2A TO ES-ISC4.1A WP = WEATHERPROOF ENCLOSURE			1		
Location 20 - KSF/RF/01 - Kitchen Supply Fan							
200	ESBHS2H-D-QA14606	We would recommend the use of an Electric Frost coil to aid the DX coil in it's heating cycle. And for cold start situations. NUAIRE ECOSMART BOXER LPHW AND DX SUPPLY SYSTEM. THIS DX COIL UNIT OPTION HAS BEEN OFFERED FOR QUOTATION PURPOSES ONLY PENDING CONFIRMATION OF THE COOLING COIL REQUIREMENT AND THE CONDENSER TO BE USED. PLEASE NOTE: THE DX COIL IS TO BE SUPPLIED BARE, WITH ALL CONTROLS, SENSORS, CONDENSER AND ALL ASSOCIATED PIPEWORK BEING SUPPLIED BY OTHERS. PLEASE COMPLETE THE DX COIL REQUEST FOR INFORMATION DOCUMENT PROVIDED WITH THIS QUOTATION TO ENSURE THE DX COIL IS MATCHED TO YOUR CONDENSER QA = The unit will have the LPHW coil removed and a project specific DX coil added (BUDGET provided) the unit will have the controls removed and fan only control provided. All DX controls are to be provided by others.	0.51	200.0	1		
201	ES-LCD	NUAIRE ECOSMART USER CONTROL WITH TOUCH SCREEN. C/W TIME CLOCK. fitted with cable extender 830272			1		
202	ESBD2-QA14606	NUAIRE ECOSMART BOXER DAMPER c/w 240V MOTOR OPEN MOTOR CLOSED (SM230A) NO LIMIT SWITCHES FITTED. QA = the damper will be treated for a coastal environment			1		
203	ESBRT2	NUAIRE ECOSMART BOXER INLET/OUTLET COWL			1		
204	ESBFCE2-QA14606	NUAIRE ECOSMART BOXER FROST COIL ELECTRIC 12KW SIZE 2. Suitable for RH and LH applications. QA = The frost coil will be suitable for a coastal environment and have heater settings to allow air off set point			1		
205	ESBBF2-1730	NUAIRE ECOSMART BOXER SUPPLY UNIT, BASE FRAME 1730mm LONG.			1		
206	ESBBF2-900	NUAIRE ECOSMART BOXER SUPPLY UNIT, BASE FRAME 900mm LONG.			1		
Total							
Discount							
Packing and Transport							
Total Exclusive of VAT							

Please note that we require signed approval drawings before final delivery dates can be confirmed.

Exclusions to Quotation

We have pleasure in submitting herewith our quotation for the above project, which we trust will prove acceptable. In considering our offer we would like to draw your attention to the following exclusions, which unless specifically written into this document, will be excluded from our quote:

General Exclusions

1. Works/site testing and commissioning of equipment.
2. Offloading, lifting equipment, site positioning and assembly of equipment.
3. Any other items not specifically mentioned in this quotation.

Delivery Exclusions

1. Special vehicle delivery requests such as HIAB's or Carriers other than our standard mode of transport. i.e. Curtain Sided Rigid Distribution.
2. Re-delivery and storage charges.
3. Out of hours delivery.
4. Phased deliveries.
5. Restricted Site Access and associated costs.

AHU specific Exclusions

1. Starting gear, sequence operating & temperature controls.
2. Supply / fix of pipe work, valves or any associated plumbing work.
3. Fixing of control stats or sensors.
4. Control items, terminal boxes and associated wiring.
5. Drain traps from drain trays and any height adjustment to accommodate traps.
6. Any disinfection of cooling coils/recuperators or any other components which may require disinfections.
7. Supply or fitting of damper actuators/mounting brackets.
8. Pump packs, pressurization vessel, expansion tank or interconnecting pipework for runaround coils.
9. Transformers for bulkhead lights to be supplied by others.
10. Standby motors.
11. Isolation plates for the cooling coils.
12. Silencers.
13. Frequency inverters supplied by the control specialists.
14. Inertia bases.
15. Inlet louvres & discharge cowls by other.
16. Any building structural checks of specialist bases for the proposed equipment.
17. Any site measurement checks for the proposed fan equipment.
18. For additional information on bespoke units, which are all unit codes beginning 'Q', the installation and Maintenance manual can be found at <http://nuaire.info/landM/671506.pdf>.

Note: Exclusions 1-18 are applicable to unit codes prefixed with a 'Q'.

XBC+

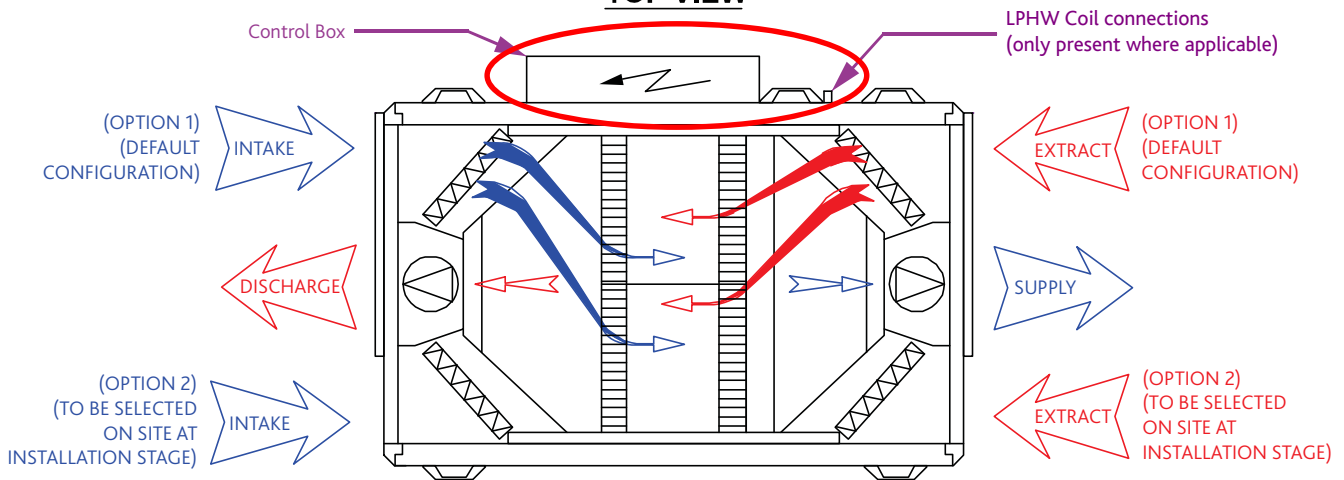
UNIT HANDING

IMPORTANT

All XBC10-65 units are supplied as LEFT hand units as standard, unless otherwise stated on your order as 'right hand'.

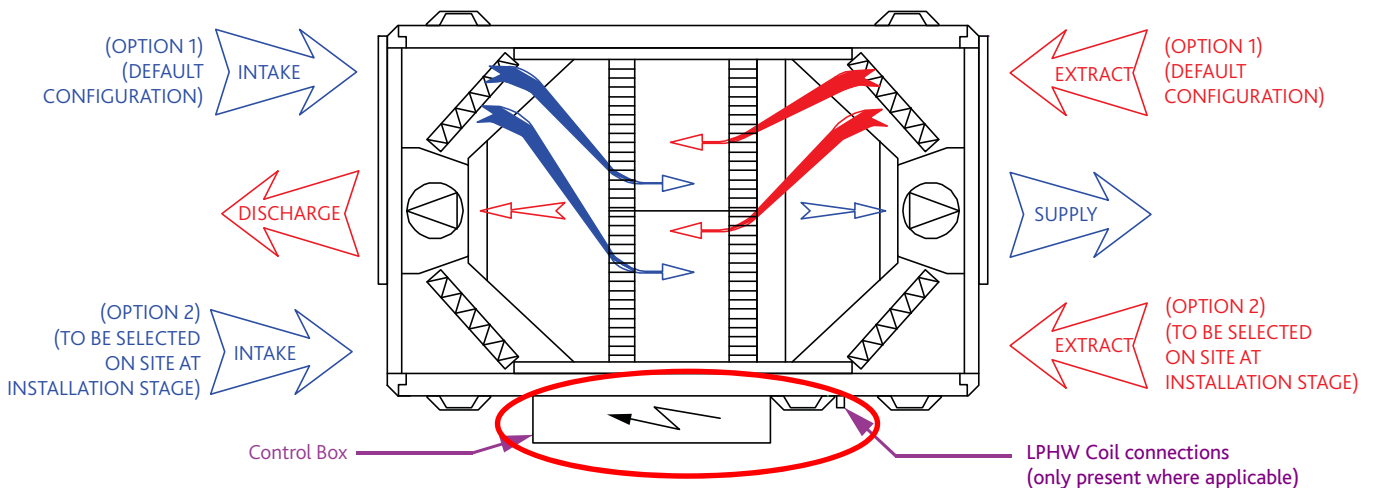
Standard LEFT Hand Option (Example Code: XBC25HA-NNN-E-LS1S)

TOP VIEW



Alternative RIGHT Hand Option (available upon request) (Example Code: XBC25HA-NNN-E-RS1S)

TOP VIEW



NUAIRE CONDITIONS OF SALE

These terms form part of a contract. You should particularly note the provisions on limiting liability (Condition 15)

INTERPRETATION

In these Conditions the following definitions apply:

- "Buyer" means the person or firm whose details are set out in the Order Acknowledgement;
- "Conditions" means these terms and conditions and "Condition" shall be construed accordingly;
- "Contract" means a contract for the sale and purchase of the Goods or Services (or both) on these Conditions;
- "Delivery" has the meaning ascribed to it in Condition 8.1 in respect of Goods delivered in the UK and Condition 19 (Export Terms) in respect of Goods delivered outside the UK;
- "Goods" means the goods (or any part of them) specified in the Order Acknowledgement;
- "Incoterms" means the rules governing the terms of trade published by the International Chamber of Commerce in force at the date when the Contract is made;
- "Information" means any specifications, instructions, drawings, data sheets, calculations, samples or other information supplied by the Buyer;
- "Instalment Contract" a Contract where the Goods are to be manufactured or delivered (or both) in instalments;
- "Instalment Order" means the agreed order under an Instalment Contract for the manufacture and/or delivery (or both) of part of the volume of Goods;
- "Intellectual Property Rights" means all patents, rights to inventions, utility models, copyright and related rights, trademarks, service marks, trade, business and the main names rights and designs, rights in computer software, topography rights, moral rights, rights in confidential information (including knowhow and trade secrets) and any other intellectual property rights, in each case whether registered or unregistered and including all applications for and renewals or extensions of such rights, and all similar or equivalent rights or forms of protection in any part of the world;
- "Normal Working Hours" means the hours of 09.00 to 17.30 hours Monday to Friday apart from Bank Holidays and other public holidays;
- "Order" means an order from a Buyer for which an Order Acknowledgement has been issued (and is thus the subject of a Contract);
- "Order Acknowledgement" means the written acknowledgement issued by the Seller accepting the order of the Buyer subject to these Conditions;
- "Price" means the price for the Goods or Services (or both) as identified in the Order Acknowledgement;
- "Quote" means a written quote issued by the Seller in relation to the Goods or Services (or both);
- "Seller" means Nuaire, a trading division of Polypipe Limited and a company registered with number 1099323 whose registered office is at Broomhouse Lane, Edlington, Doncaster, DN12 1ES, United Kingdom;
- "Services" means the design or other services relating to the Goods as specified in the Order Acknowledgement;
- "Specification" the description or specification (or both) for the Goods or Services (or both) agreed in writing by the parties;
- "Standard Delivery" means a single delivery per Order or Instalment Order during Normal Working Hours using a Standard Vehicle;
- "Standard Vehicle" means an articulated curtain-sided vehicle; and
- "Working Days" means any day from Monday to Friday (inclusive) except Bank Holidays or other public holidays.

1 BASIS OF SALE

- 1.1 Any order sent to the Seller by the Buyer shall be accepted entirely at the discretion of the Seller, and if so accepted will only be accepted upon these Conditions and by the means of the Seller issuing its Order Acknowledgement. An Order Acknowledgement may be issued subject to the provisions of Condition 5 (Drawing Approval). If the Order Acknowledgement is subject to the approval of any drawing in accordance with Condition 5, the Order Acknowledgement will indicate this
- 1.2 The Contract (which shall be in writing) constitutes the entire agreement between the parties. The Buyer acknowledges that it has not relied on any statement, promise or representation made or given by (or on behalf of) the Seller which is not set out in the Contract.
- 1.3 These Conditions apply to the Contract to the exclusion of any given terms that the Buyer seeks to impose or incorporate, or which may be implied by trade, custom, practice or cause of dealing.
- 1.4 If performance of the Contract requires any government licence or permit, then performance of the Seller's obligations in the Contract shall be conditional upon such licence or permit being available and these shall be at the Buyer's expense.
- 1.5 Any Quote shall not constitute an offer and is valid for a period of 30 days from its date of issue unless withdrawn before then.

2 CANCELLATION OF ORDERS AND INSTALMENT ORDERS

- 2.1 If the Buyer cancels an Order or Instalment Order or fails to take delivery of the Goods that comprise an Order or Instalment Order, it shall indemnify the Seller in full against all costs (including labour and materials) and expenses incurred by the Seller in the execution or anticipated execution of an Order or Instalment Order.
- 2.2 Except in the case of force majeure (where Condition 20 will apply), if the Buyer suspends or delays the manufacture or delivery of any Goods relating to an Order or an Instalment Order for longer than 60 days, the Seller may (without prejudice to its other rights) terminate the Contract in accordance with Condition 16.1.2 as being a material breach of the Contract.

3 DESCRIPTION AND SPECIFICATION OF GOODS

- 3.1 All samples, drawings, descriptions, specifications and advertising in respect of Goods are issued to give an approximate idea of the Goods only. They shall not form part of the Contract and this is not a sale by sample.
- 3.2 The Seller reserves the right to change all samples, drawings, descriptions, specifications and advertising of the Goods from time to time.
- 3.3 The Goods shall be in accordance with the Specification in all material respects.

4 DESIGN AND SUITABILITY OF GOODS

- 4.1 The Goods chosen have been selected by the Seller on the basis of the information supplied by the Buyer. The use of and reference to, drawings, data sheets, specifications, calculations, samples or other information provided to the Seller by the Buyer or any nominated third party, shall not relieve the Buyer of its liabilities with regard to ensuring the accuracy, integrity, suitability and general fitness for purpose of this information and its subsequent use.
- 4.2 It is the responsibility of the Buyer to seek approval from the appropriate authorities, regulatory bodies, client or authorised client representative for the proposed design concept and ventilation strategy prior to placing their order. The Buyer shall ensure the selected Goods and design are fit for purpose and meet all regulatory, legislative and specified requirements for the proposed application.
- 4.3 The Buyer shall be deemed to have satisfied itself as to the suitability of the design, performance characteristics and materials to meet local conditions, building requirements or any other factors which may in any way affect the operation of the Goods supplied.
- 4.4 The Buyer warrants and undertakes that all design information provided by the Buyer is accurate at the time of the parties agreeing the Specification. Any alterations or deviations in the Buyer's requirements shall be notified in writing to, and approved by, the Seller prior to purchase or installation (whichever occurs first) and a revised specification shall be issued by the Seller.
- 4.5 Unless expressly set out in the Contract any condition, warranty, statement or undertaking as to the quality of the Goods or their fitness or suitability for any purpose however or whenever expressed or which may be implied by statute, custom of the trade or otherwise is hereby excluded, except to the extent such exclusion is prevented by law.
- 4.6 Without prejudice to Condition 4.5, no statement or undertaking contained in any national standard, national addition of a European standard, ISO standard, or other standard or technical specification as to the suitability of the Goods for any purpose shall give rise to any legal liability of the Seller, except to the extent such exclusion is prevented by law.
- 4.7 The Seller accepts no responsibility for the accuracy of Information.
- 4.8 The Buyer shall indemnify and keep indemnified the Seller (and its employees and agents) fully from and against any and all actions, claims, costs, losses, damages, demands, expenses, proceedings, charges and other liabilities arising, suffered or incurred in respect of:
- 4.8.1 Any error in or omission from Information;
- 4.8.2 Any threats, claims or allegations that any Information or the use thereof infringes any Intellectual Property or other rights of any third party;
- 4.8.3 Any threats, claims or allegations that any Information or the use therefore breaches the provisions of any statute, statutory instrument or regulation or other law of any applicable country or territory; and
- 4.8.4 The use of reliance upon any Information by the Seller including, without limit, any claim made against the Seller by any third party as a result thereof.

5 DRAWING APPROVAL

- 5.1 The Seller shall endeavour to issue design drawings to the Buyer to enable the Buyer to approve them as soon as possible. The parties acknowledge that on occasion it may not be reasonably possible for the Seller to issue the design drawings prior to the issue of the Order Acknowledgement.
- 5.2 If an Order Acknowledgement is issued before any design drawings are approved by the Buyer its issue will constitute an acceptance of the order from the Buyer once the Buyer approves the Seller's design drawings in writing. In these circumstances the Buyer agrees there is a separate collateral contract with the Seller that imposes an obligation on the Buyer to use its reasonable efforts to approve the relevant design drawings as soon as reasonably possible (the consideration for which is the issue of the design drawings by the Seller).
- 6 PRICE
- 6.1 The Price excludes value added tax ("VAT") unless the Order Acknowledgement explicitly provides otherwise.
- 6.2 All amounts payable by the Buyer under the Contract are exclusive of amounts in respect of VAT. Where any taxable supply for VAT purposes is made under the Contract by the Seller to the Buyer, the Buyer shall, on receipt of a valid VAT invoice from the Seller, pay to the Seller such additional amounts in respect of VAT as are chargeable on the supply of the Goods or Services (or both) at the same time as payment is due for the supply of the Goods or Services (or both).
- 6.3 Save in respect of Goods being exported outside the UK where Condition 19 (Export Terms) applies and unless the parties agree otherwise in writing, the Price includes the cost of Standard Delivery only and any delivery requirements in addition to this shall incur an additional charge.

7 TERMS OF PAYMENT

- 7.1 The Seller shall invoice the Buyer on or after Delivery.
- 7.2 Save in respect of Goods being exported outside the UK where Condition 19 (Export Terms) applies and subject to Condition 7.6, the Buyer shall pay each invoice within 30 days of the date of invoice.
- 7.3 The Buyer shall pay each invoice in full and in cleared funds to the bank account nominated in writing by the Seller.
- 7.4 If the Buyer fails to pay any invoice in accordance with the terms of Condition 7.2 the Seller may without prejudice to its other rights or remedies:
- 7.4.1 Terminate the Contract or suspend further deliveries to the Buyer of Goods; and/or
- 7.4.2 Charge interest on the unpaid amount at the rate specified under the Late Payment of Commercial Debts (Interest) Act 1998.
- 7.5 If the Buyer fails to take delivery, or fails to give the Seller adequate delivery instructions, the Seller may invoice for the Goods and any re-delivery or storage costs incurred.
- 7.6 The Seller reserves the right at any time to request payment in advance in cleared funds to be made to the Seller prior to delivery of the Goods (or part thereof).

8 DELIVERY AND INSPECTION

- 8.1 Delivery shall be made by the Seller delivering the Goods to the UK mainland address specified in the Order Acknowledgement (or as the parties agree in writing) and shall be deemed to be effected when the Goods are removed from the delivery vehicle ("Delivery"). The Buyer shall be responsible for offloading the Goods from the delivery vehicle.
- 8.2 The Seller shall allow one standard delivery per Order or Instalment Order; phased or multiple deliveries will incur additional delivery charges unless otherwise agreed in writing by the Seller.
- 8.3 The Seller shall allow one hour standing/unloading time for each delivery vehicle after which standing/unloading time will be charged at the hourly rate applicable per vehicle for each whole hour or part hour thereafter.
- 8.4 The Buyer may postpone a delivery by giving 5 Working Days written notice to the Seller.
- 8.5 If the Buyer postpones a pre-arranged delivery other than in accordance with Clause 8.4, the Seller shall be entitled to charge the Buyer for the full costs of the cancelled vehicle and charge an additional fee for the re-delivery of the Goods.
- 8.6 All deliveries exclude the hire of hoists, cranes, site placement, commissioning and setting to work.
- 8.7 The Buyer shall at its own cost and in a timely manner, obtain all statutory or regulatory consents, approvals, permits or licences required to facilitate delivery and offloading, including unrestricted site access or street closures and shall arrange relevant safety equipment, banks-men or other personnel as necessary to enable the seller to comply with its obligations of delivering the Goods.
- 8.8 The Seller shall use reasonable efforts to deliver the Goods by the specified time. Time for delivery is not of the essence. If the Supplier is late for reasons other than due to reasons of force majeure, the Buyer is entitled to liquidated damages at the rate of 2% of the price of those Goods which are in delay for each full week of delay or part thereof, subject to a maximum of 20% of the Price of those Goods in delay.
- 8.9 The signing of a delivery note is deemed to be acceptance of the Goods with regard to the arrival and number of items delivered.
- 8.10 The Buyer shall be deemed to have accepted the Goods and that the Goods comply with the Contract unless in the case of a defect in the quality or state of the Goods or the Goods otherwise not complying with the Specification, which defect or non-compliance was apparent upon a careful inspection or reasonable testing of the Goods (or would have been had a careful inspection or reasonable test been carried out, the Buyer gives the Seller a notice specifying such defect or non-compliance within 2 Working Days after Delivery and in any event prior to their use, and after doing so, gives the Seller a reasonable opportunity to inspect or test the Goods before they are used. Such notification shall not discharge the Buyer's liability for storing and maintaining the Goods until such time as they can be inspected by the Seller.
- 8.11 If the Buyer fails to take delivery of any Goods (except where such failure is caused by force majeure or by the failure of the Seller to comply with its obligations under the Contract in respect of the Goods) or to give the Seller adequate delivery instructions which results in the Goods being returned to the Seller, the Seller may, without prejudice to its other rights or remedies, issue an invoice for any re-delivery charge or issue an invoice for that part of the Price relating to those Goods and store those Goods until the actual delivery date, charge the Buyer reasonable costs for storage, (including insurance and re-delivery) or any of these as appropriate.
- 8.12 If the Seller is storing any Goods in accordance with Condition 8.11 it may request in writing that the Buyer take delivery of those Goods within 30 days of the date of that request. If after that time the Buyer has not accepted or taken delivery of them the Seller may re-sell or otherwise dispose of all or part of those Goods, and after deducting reasonable storage and selling costs, account to the Buyer for any excess over the Price of the Goods.
- 8.13 The Buyer may only return Goods to the Seller after Delivery with the prior written agreement of the Seller and any return is at the Seller's sole discretion. All Goods shall be returned at the Buyer's risk and expense and will be subject to inspection and testing. A re-stocking charge based on a percentage of the Price (or part thereof) that relates to the Goods to be returned will be invoiced to the Buyer for any returned Goods accepted by the Seller.
- 8.14 All packaging is non-fire retardant and recyclable but not returnable unless by prior agreement within mainland UK and returned packaging will be subject to collection charges.

9 OBLIGATIONS OF THE BUYER

- 9.1 The Buyer shall:
- 9.1.1 Ensure that the terms of any order or specification submitted by it are complete and accurate;
- 9.1.2 Co-operate with the Seller in all matters relating to the Goods or Services (or both); and
- 9.1.3 Provide the Seller, its employees, agents, consultants and sub-contractors with access to any premises of the Buyer, office accommodation and other facilities as are reasonably required by the Seller to undertake the Seller's obligations under the Contract.

10 NON-DELIVERY & DAMAGE

- 10.1 The quantity of any consignment as recorded by the Seller upon despatch shall be conclusive evidence of the quantity received by the Buyer on delivery, unless the Buyer can provide reasonable conclusive evidence to the contrary.
- 10.2 If the Seller fails to deliver the Goods, its liability shall be limited to the costs and expenses incurred by the Buyer in obtaining replacement goods of similar description and quality in the cheapest market available, less the Price of the Goods. The Seller shall have no liability for any failure to deliver the Goods to the extent that such failure is caused by a force majeure event (as identified in Condition 20), the failure of the Buyer to provide the Seller with adequate delivery instructions for the Goods or any relevant instructions related to the supply of the Goods.

11 RISK AND PROPERTY

- 11.1 Risk in the Goods shall pass to the Buyer on Delivery.
- 11.2 Notwithstanding delivery and the passing of risk, property in and title to the Goods shall remain with the Seller until the Seller has received payment of the full Price of (a) all Goods and/or Services that are the subject of the Contract and (b) all other Goods and/or services supplied by the Seller to the Buyer under any other contract. Payment of the full Price shall include, without limitation, the amount of any interest or other sum payable under the terms of this and all other contracts between the Seller and the Buyer.
- 11.3 Subject to Condition 11.4 until title to the Goods has passed to the Buyer, the Buyer shall:
- 11.3.1 Hold the Goods on a fiduciary basis as a bailee on behalf of the Seller;
- 11.3.2 Not remove, deface or obscure any identifying mark on or relating to the Goods;
- 11.3.3 Maintain the Goods in good condition and keep them insured against all risks for their full Price on behalf of the Seller from the date of Delivery;
- 11.3.4 Store the Goods separately from all other goods held by the Buyer so that they remain readily identifiable as the property of the Seller;
- 11.3.5 Notify the Seller immediately if it becomes subject to any of the events listed in Conditions 16.1.4 to 16.1.11 (Termination); and

NUAIRE CONDITIONS OF SALE

- 11.3.6 Give the Seller such information relating to the Goods as the Seller may require from time to time.
- 11.4 The Buyer may resell the Goods in the ordinary course of its business and the Buyer shall hold any such part of the proceeds of sale as represents the amount owed by the Buyer to the Seller in trust on behalf of the Seller and the Buyer shall account to the Seller accordingly;
- 11.5 If before title of the Goods passes to the Buyer, the Buyer becomes subject to any of the events listed in Condition 16.1.4 to 16.1.11 (Termination) or the Seller reasonably believes that any such event is about to happen and notifies the Buyer accordingly, then, provided the Goods have not been resold, or irrevocably incorporated into a structure and become annexed to the land, and without limiting any right or remedy the Seller may have, the Seller may at any time require the Buyer to deliver up the Goods and, if the Buyer fails to do so promptly, enter any premises of the Buyer or of any third party where the Goods are stored in order to recover them. The rights of the Seller under this Condition are without prejudice to any other rights it may have against the Buyer.
- 11.6 The Buyer acknowledges and agrees that the Seller shall be entitled to recover from the Buyer payment for any Goods notwithstanding that title to them has not passed from the Seller.
- 12 SUPPLY OF SERVICES**
- 12.1 The Seller shall provide the Services to the Buyer in accordance with the Specification in all material respects.
- 12.2 The Seller shall provide the Services using reasonable care and skill;
- 12.3 The Seller shall have the right to make any changes to the Services which are necessary to comply with any applicable law or safety requirement, or which do not materially affect the nature or quality of the Services and the Seller shall notify the Buyer in any such event.
- 13 INTELLECTUAL PROPERTY RIGHTS**
- 13.1 All Intellectual Property Rights in or arising out of or in connection with the Services shall be owned by the Seller.
- 13.2 The Buyer acknowledges that, in respect of any third party Intellectual Property Rights in the Services, the use of any such Intellectual Property Rights by the Buyer is conditional on the Seller obtaining a written licence from the relevant licensor on such terms as will entitle the Seller to licence such rights to the Buyer.
- 13.3 The Seller retains all Intellectual Property Rights in the Goods whether pre-existing or developed specifically for the purposes of the Contract. The Buyer shall be granted a royalty free, non-assignable, non-transferable licence to use the Intellectual Property Rights of the Seller for the purposes of operation or maintenance of the Goods.
- 14 QUALITY, TESTING AND WARRANTY**
- 14.1 The Seller shall carry out testing on all Goods in accordance with its manufacturing and quality management processes. If the Buyer requires supplementary tests or witness testing, then the Seller shall be granted an extension of time to any timescales in the Contract to facilitate such tests and shall be entitled to recover any additional costs reasonably incurred.
- 14.2 Subject always to Condition 14.3 and Condition 14.7, the Seller warrants that, upon Delivery and for a period of 12 months or, as otherwise specified in the Order Acknowledgment or other information available from the Seller's web site from time to time, ("the Warranty Period") the Goods shall:
- 14.2.1 Conform to the Specification;
- 14.2.2 Be within the tolerances allowed by relevant BSI and/or ISO standards; and
- 14.2.3 Be free from material defects arising from faulty materials and workmanship.
- 14.3 The Seller shall not be liable for defects:
- 14.3.1 Arising from fair wear and tear, wilful damage, negligence, abnormal conditions, failure to follow instructions, lack of maintenance, misuse or unauthorised alteration or repair.
- 14.3.2 Arising from the Buyer's interpretation and application of the Seller's indicative technical data. For further clarification the Buyer should refer to the Seller's document known as "Nuair Testing Standards and Application Guidance Notes document NA-QS-W040-3" (or other product or technical information available from the Seller's web site) from time to time.
- 14.3.3 Drawn to the attention of the Buyer before acceptance or which were (or ought to have been) discovered on inspection of the Goods by the Buyer before acceptance of the Goods.
- 14.4 Subject to Condition 15.2 the Seller's liability for breach of the warranty in Condition 14.2 shall be limited to repairing or (at its option) replacing the Goods so that they comply with the terms of the warranty set out in Condition 11.1.
- 14.5 The Seller shall not be liable for a breach of the warranty in Condition 14.2:
- 14.5.1 Unless the Buyer gives the Seller written notice of the defect within 2 days of the time when the Buyer discovers, or ought to have discovered it;
- 14.5.2 If the Buyer has breached any of its obligations in the Contract or as set out in the Seller's operating manual, the Seller's document known as the "Warranty Guidance Notes document NA-QS-W040-0" (or other product or technical information available from the Seller's web site) from time to time.
- 14.6 The Seller shall be given the opportunity of examining the Goods and the Buyer shall arrange for unencumbered access to the Goods at his expense to facilitate such inspection.
- 14.7 The liability of the Seller for defective Goods under the warranty contained in this Condition 14 is limited to, at the sole option of the Seller, repairing or replacing such Goods (or parts thereof) or crediting the account of the Buyer to the invoice value of such Goods (or part thereof) and the Buyer shall accept such of these remedies as the Seller shall offer as being in complete satisfaction of the obligations of the Seller under the warranty.
- 14.8 Any Goods which are repaired or any replacement Goods issued by the Seller pursuant to its obligations under this Condition 14 shall be warranted on the terms of this Condition 14 for the unexpired period of the Warranty Period.
- 15. LIABILITY**
- 15.1 These Conditions set out the entire liability of the Seller in respect of any negligence or breach of the Contract, any use made (or resale) by the Buyer of the Goods, or the provisions of the Services.
- 15.2 Nothing in these Conditions shall exclude or restrict the liability of the Seller for any matter in respect of which it would be illegal or unlawful for the Seller so to do including:
- 15.2.1 Death or personal injury caused by its negligence, or the negligence of its employees, agents or subcontractors;
- 15.2.2 Fraud or fraudulent misrepresentation;
- 15.2.3 Breach of the terms implied by Section 2 of the Supply of Goods and Services Act 1982 (Title and quiet possession);
- 15.2.4 Breach of the terms implied by Section 12 of the Sales of Goods Act 1979 (Title and quiet possession); or
- 15.2.5 Defective products under Section 2(3) of the Consumer Protection Act 1987
- 15.3 Subject to condition 15.2 the Seller shall not be liable in respect of any misrepresentation, breach of any implied or express warranty or condition, breach of any term or be otherwise liable in a contract, tort or otherwise for indirect or consequential loss, loss of revenue, loss of profits, loss of business, contracts or goodwill, loss of, damage to or loss of the use of any equipment or process or loss of operational time howsoever caused and of whatsoever nature suffered or incurred by the Buyer or any third party which arises out of or in connection with the provision of any Goods or Services or otherwise under the Contract.
- 15.4 Subject to condition 15.2 and condition 15.3 the Buyer accepts that the total liability of the Seller arising out of or in connection with the Contract shall in any event be limited to damages of an amount not exceeding the Price.
- 15.5 The Buyer agrees that it is in a better position to foresee and evaluate any loss it may suffer in connection with the Contract and that the terms therefore have been calculated on the basis of the limitations and exclusions in this Condition 15 and the Buyer will effect such insurance as is suitable having regard to its particular circumstances in the terms of the Contract.
- 15.6 Subject to Condition 15.2 all warranties, conditions and other terms implied by statute or common law (including without limitation, as to the quality or fitness for any particular purpose of the Goods) are, to the fullest extent permitted by law, excluded from the Contract.
- 16 TERMINATION**
- 16.1 A party shall be entitled to terminate the Contract with immediate effect by giving written notice to the other party if:
- 16.1.1 The other party fails to pay any undisputed amount due under this agreement on the due date for payment and remains in default not less than 30 days after being notified in writing to make such payment; or
- 16.1.2 The other party commits a material breach of its obligations under this agreement and (if such breach is remediable) fails to remedy that breach within a period of 30 days after receipt of notice in writing requiring it to do so; or
- 16.1.3 The other party commits a series of persistent minor breaches which when taken together amount to a material breach; or
- 16.1.4 The other party suspends, or threatens to suspend, payment of its debts or is unable to pay its debts as they fall due or admits inability to pay its debts or is deemed unable to pay its debts within the meaning of section 123 of the Insolvency Act 1986; or

NA-QS-W040-1

- 16.1.5 The other party commences negotiations with all or any class of its creditors with a view to rescheduling any of its debts, or makes a proposal for or enters into any compromise or arrangement with its creditors other than for the sole purpose of a scheme for a solvent amalgamation of that other party with one or more other companies or the solvent reconstruction of that other party; or
- 16.1.6 A petition is filed, a notice is given, a resolution is passed, or an order is made, for or in connection with the winding up of that other party (other than for the sole purpose of a scheme for a solvent amalgamation of that other party with one or more other companies or the solvent reconstruction of that other party); or
- 16.1.7 A creditor or encumbrancer of the other party attaches or takes possession of, or a distress, execution, sequestration or other such process is levied or enforced on or sued against, the whole or any part of its assets and such attachment or process is not discharged within 14 days; or
- 16.1.8 An application is made to court, or an order is made, for the appointment of an administrator or if a notice of intention to appoint an administrator is given or if an administrator is appointed over the other party; or
- 16.1.9 A floating charge holder over the assets of that other party has become entitled to appoint or has appointed an administrative receiver; or
- 16.1.10 A person becomes entitled to appoint a receiver over the assets of the other party or a receiver is appointed over the assets of the other party; or
- 16.1.11 Any event occurs, or proceeding is taken, with respect to the other party in any jurisdiction to which it is subject that has an effect equivalent or similar to any of the events mentioned in Condition 16.1.4 to Condition 16.1.10 (inclusive); or
- 16.1.12 The other party ceases, or threatens to cease, to carry on all or substantially the whole of its business; or
- 16.1.13 There is a change of control of the other party (within the meaning of section 840 of the Income and Corporation Taxes Act 1988); or
- 16.1.14 Any event of force majeure prevents the other party from performing its obligations under this agreement for any continuous period of three months.
- 16.2 Termination of the contract shall not prejudice any of the parties' rights and remedies which have accrued as at termination.
- 17 OBLIGATIONS ON TERMINATION**
- 17.1 On termination of the Contract each party shall promptly:
- 17.1.1 Return to the other party all equipment, materials and property belonging to the other party that the other party had supplied to it in connection with the supply and purchase of the Goods or Services;
- 17.1.2 Return to the other party all documents and materials (and any copies) containing the other party's Confidential Information;
- 17.1.3 Erase all the other party's Confidential Information from its computer systems (to the extent possible); and
- 17.1.4 On request, certify in writing to the other party that it has complied with the requirements of this clause.
- 18 SURVIVAL OF OBLIGATIONS**
- 18.1 On termination of the Contract this Condition and the following Conditions shall survive and continue in full force and effect:
- 18.1.1 Condition 7
- 18.1.2 Condition 8.7
- 18.1.3 Condition 9
- 18.1.4 Condition 11
- 18.1.5 Condition 13
- 18.1.6 Condition 14
- 18.1.7 Condition 15
- 18.1.8 Condition 17
- 18.1.9 Condition 20
- 18.1.10 Condition 21; and
- 18.1.11 Condition 22.
- 19 EXPORT TERMS**
- 19.1 If Goods are to be delivered by the Seller outside the United Kingdom the provisions of this Condition 19 shall apply and the transport of Goods outside the United Kingdom will (subject to condition 19.4) be governed by the relevant Incoterms agreed by the parties.
- 19.2 Unless otherwise agreed between the parties, the Price shall be secured by an irrevocable letter of credit satisfactory to the Seller, established by the Buyer in favour of the Seller immediately upon receipt of the Order Acknowledgement by the Buyer or within the number of days agreed in writing by the parties from the date of the Order Acknowledgement, and confirmed by a bank acceptable to the Seller. The letter of credit shall be for the Price or value of the relevant Order or Instalment Order (together with any tax or duty payable) payable to the Seller and shall be valid for three months. The Seller shall be entitled to payment within the time-scale agreed between the parties in writing on presentation of the relevant Contract documentation to the Seller's nominated bank.
- 19.3 Unless otherwise agreed between the parties, the Buyer shall be responsible for complying with any legislation or regulations governing the importation of the Goods into the country of destination and for the payment of any duties thereon or licences in connection therewith.
- 19.4 Notwithstanding the terms of condition 19.1 the Seller shall be under no obligation to give notice under section 32(3) of the Sale of Goods Act 1979.
- 20 FORCE MAJEURE**
- Neither party shall be liable to the other for any failure to perform its obligations under the Contract where the failure is due to circumstances beyond the reasonable control of the affected party, including, without limitation, lock-outs, strikes or labour disputes (whether or not relating to either party's workforce), adverse weather conditions including snow or flood, acts of God, governmental actions, war or national emergency, acts of terrorism, protests, riot, civil commotion, fire, explosion, epidemic, civil war, insurrection, restraints or delays affecting carriers or inability or delay in obtaining supplies of adequate or suitable materials. If the delaying event continues uninterrupted for 90 days, either party may give notice in writing to terminate the Contract. In the event of termination in accordance with this Condition 20, the Supplier shall be entitled to be paid all costs incurred prior to the date of termination.
- 21 GENERAL**
- 21.1 The Contract may only be varied in writing with the prior written agreement of a Director of the Seller.
- 21.2 The Contract shall be governed by and interpreted in accordance with English law and the Seller and the Buyer both submit to the jurisdiction of courts of England and Wales.
- 21.3 The Buyer shall not assign any of its rights without the Seller's prior written consent.
- 21.4 Nothing in this Agreement shall create any rights for third parties under the Contracts (Rights of Third Parties) Act 1999.
- 21.5 Notices shall be in writing and addressed to a party at its registered office or principal place of business or such other notified address.
- 21.6 A failure by the Seller to act on a breach of the Contract by the Buyer shall not constitute a waiver of that breach or any other breach.
- 21.7 If a Condition is held by a competent authority to be invalid or unenforceable in whole or in part but would be valid and enforceable if part of it were deleted, that Condition shall be deemed to apply with such modifications as may be necessary to make it valid and enforceable, and any such modification shall not affect the validity of any other Condition and/or the Contract.
- 22 CONFIDENTIALITY**
- 22.1 The parties shall treat as strictly confidential and not disclose to any third party (except as expressly agreed between them or as required by law or on a strictly confidential basis to their respective legal and insurance advisors and auditors) any information exchanged between them, if and to the extent that it is stated or known by them to be confidential, and shall use such information only for the purposes of the provision of Goods and services and each party shall ensure that its employees understand and abide by the confidentiality obligations under this agreement.

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.

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Project Details

Location: HRU/00/01

Technical Data

XBC+
Fan Code: **XBC25HA-NNN-E-LS4S**
Installation Manual Links: 671948

Required duty: 0.16 m³/s at 150 Pa
Actual duty: 0.3 m³/s at 512 Pa
Actual at required flow: 0.16 m³/s at 775 Pa

When speed controlled to required duty (54.07%):

Motor Input Power: 0.153 kW
Specific Fan Power: 1.0 W/(l/s)

At full speed:

Motor Input Power: 0.97 kW
Specific Fan Power: 3.3 W/(l/s)

Maximum Fan Speed: 3,700 RPM
Electrical Supply: 230V 1 Phase 50 Hz
Nominal Motor Rating: 1 kW
Motor current (flc): 6.9 A
Motor starting current (sc): 6.9 A

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

Sound Data

Noise calculated speed controlled to required duty (54.07%)

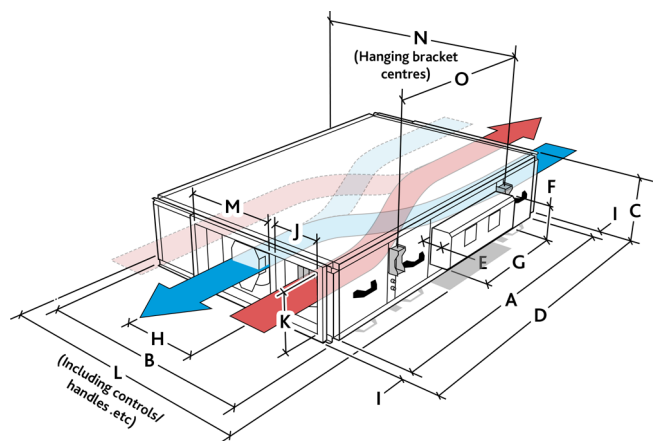
Sound Power Levels re 1 pWatts (Hz):

Hz	63	125	250	500	1k	2k	4k	8k	dBA
Breakout	58	57	44	47	34	33	33	25	36
Induct Intake	66	60	58	60	55	51	43	42	49
Induct Supply	71	72	67	71	61	61	57	59	59
Induct Discharge	72	73	67	70	61	61	59	60	59
Induct Extract	65	59	57	60	54	51	43	43	49
For 100% speed:	+14	+14	+14	+14	+14	+14	+14	+14	

dBA is spherical at 1 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.

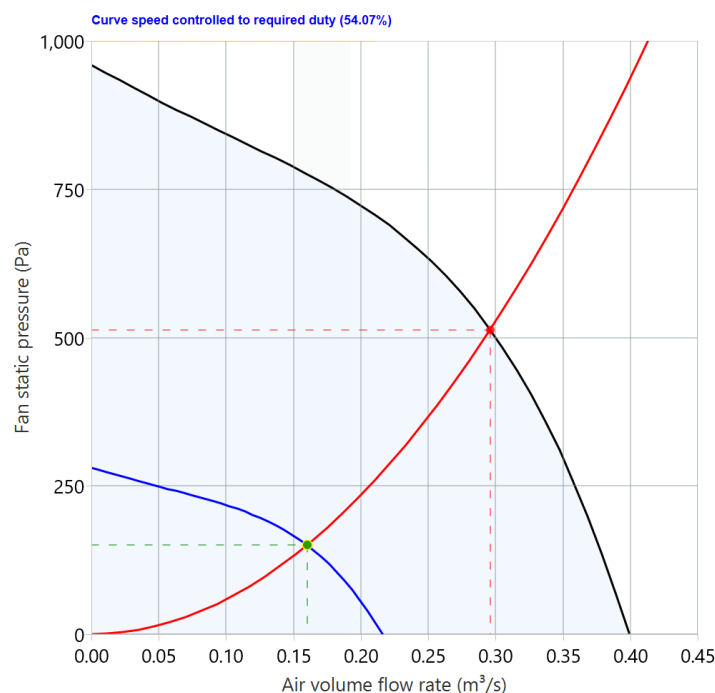
Fan Dimensions



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.

Performance Chart



Additional Notes

Selected Ancillaries

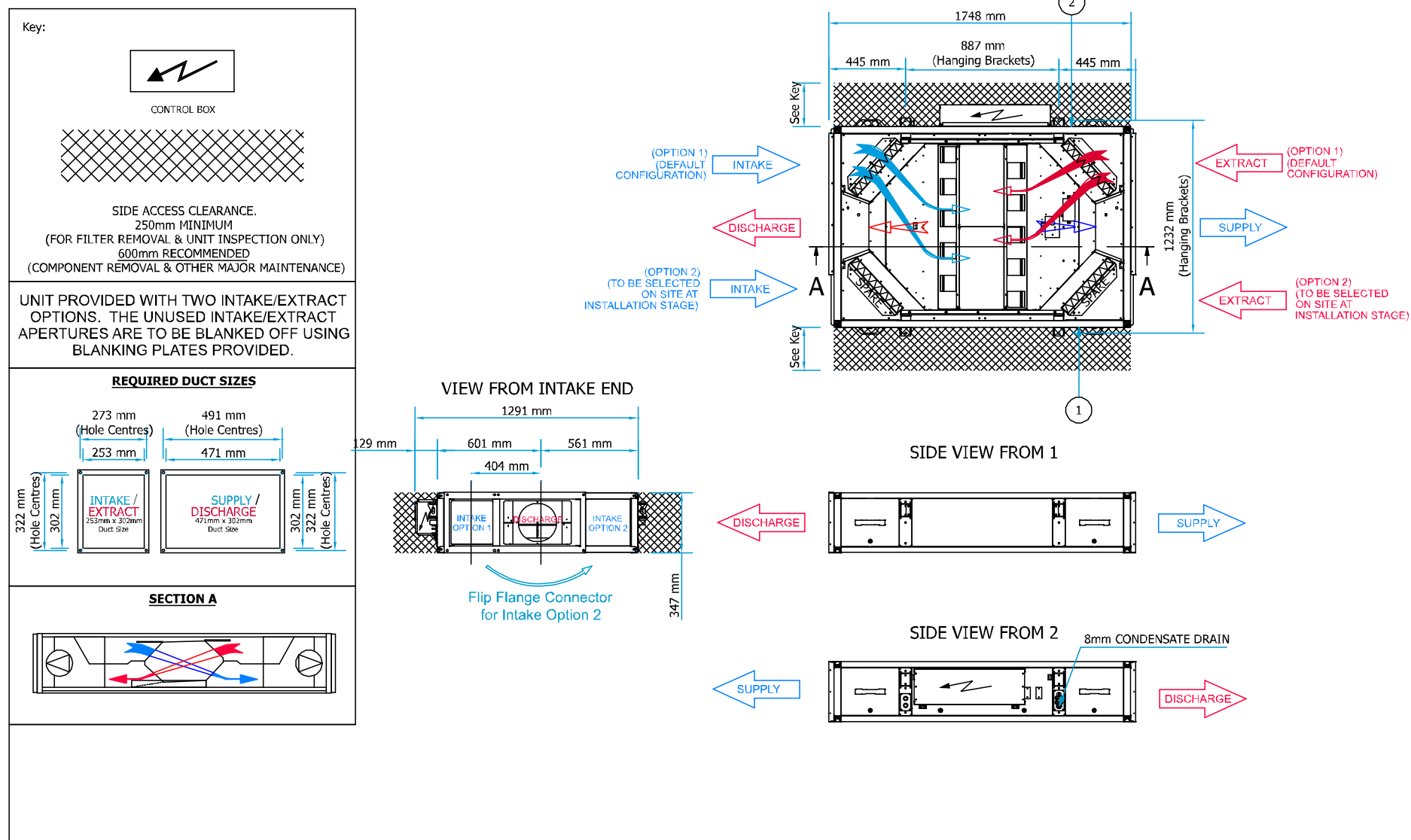
1 x ES-LCD Ecosmart LCD Touch Screen User Control (White)

Specification

XBC25HA-NNN-E-LS4S. 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. Suitable for Coastal Environment. 1 year warranty (UK and Ireland only)

ES-LCD

LCD touch screen ventilation user control panel in white compatible with Ecosmart system. Control has built in time clock. Supplied with pre-plugged 10m length of communication cable.



You can download this CAD drawing from <http://www.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*****

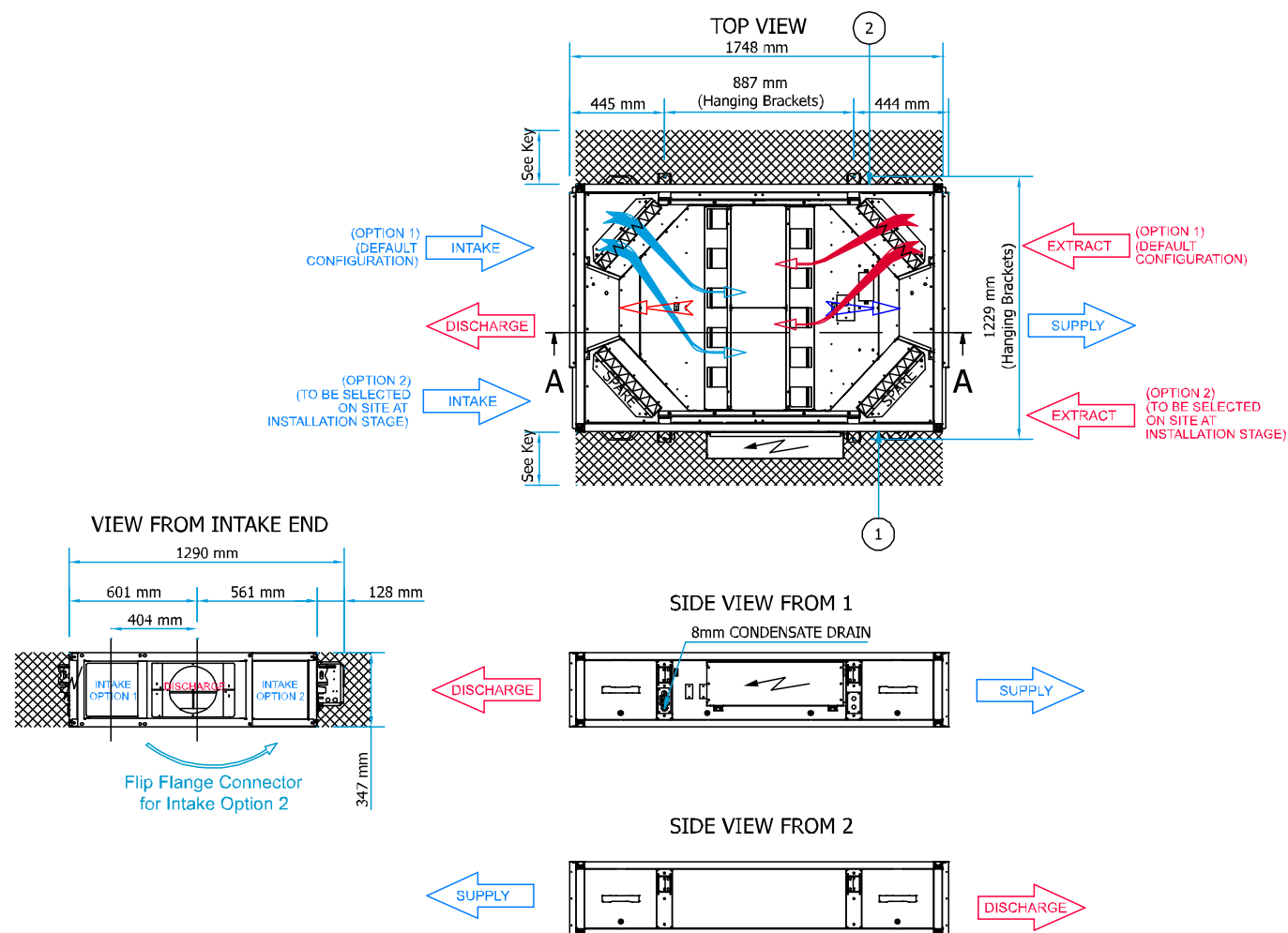
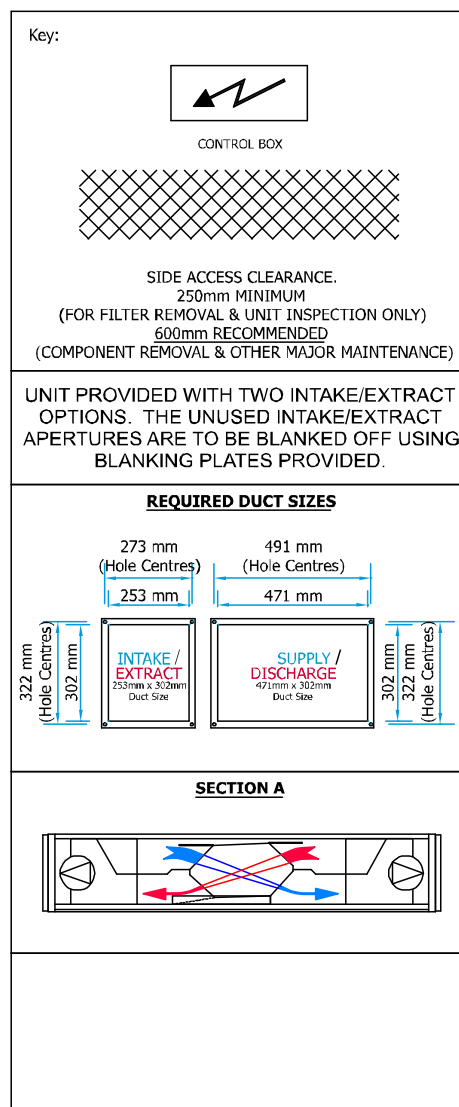
Please DO NOT sign this drawing to confirm handings.
Please request the official handing drawings from Nuaire.

Drawing generated automatically by Nuaire Selector

Do NOT scale from this drawing.

nuaire

Nuaire, Western Ind Est, Caerphilly, Wales, CF83 1NA
Tel: 02920 858 6200 <https://www.nuaire.co.uk>



You can download this CAD drawing from <http://www.nuaire.info/CAD/xbcplus25-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*****

Please **DO NOT** sign this drawing to confirm handings.
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This data sheet produced on 23 Oct 2020 10:28 using software version 4.6.3730.0; by user thomashu

Project Details

Location: HRU/00/03

Technical Data

XBC+

Fan Code: **XBC25HA-NNN-E-LS4S**
Installation Manual Links: 671948

Required duty: 0.22 m³/s at 200 Pa
Actual duty: 0.32 m³/s at 425 Pa
Actual at required flow: 0.22 m³/s at 691 Pa

When speed controlled to required duty (68.56%):

Motor Input Power: 0.317 kW
Specific Fan Power: 1.4 W/(l/s)

At full speed:

Motor Input Power: 0.983 kW
Specific Fan Power: 3.1 W/(l/s)

Maximum Fan Speed: 3,700 RPM
Electrical Supply: 230V 1 Phase 50 Hz
Nominal Motor Rating: 1 kW
Motor current (flc): 6.9 A
Motor starting current (sc): 6.9 A

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

Sound Data

Noise calculated speed controlled to required duty (68.56%)

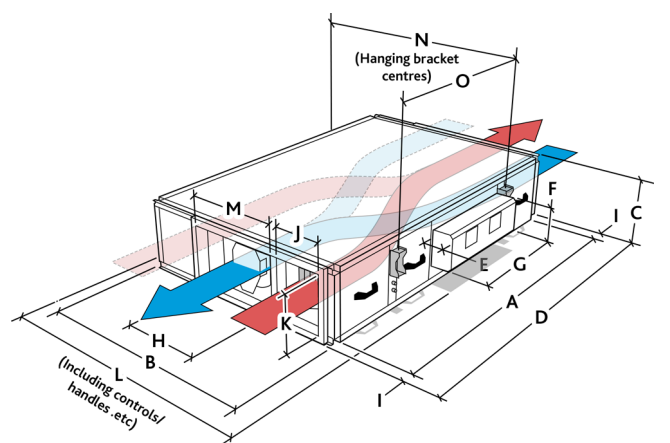
Sound Power Levels re 1 pWatts (Hz):

Hz	63	125	250	500	1k	2k	4k	8k	dBA
Breakout	63	62	49	52	39	38	38	30	41
Induct Intake	71	65	63	65	60	56	48	47	54
Induct Supply	76	77	72	76	66	66	62	64	64
Induct Discharge	77	78	72	75	66	66	64	65	64
Induct Extract	70	64	62	65	59	56	48	48	54
For 100% speed:	+9	+9	+9	+9	+9	+9	+9	+9	

dBA is spherical at 1 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.

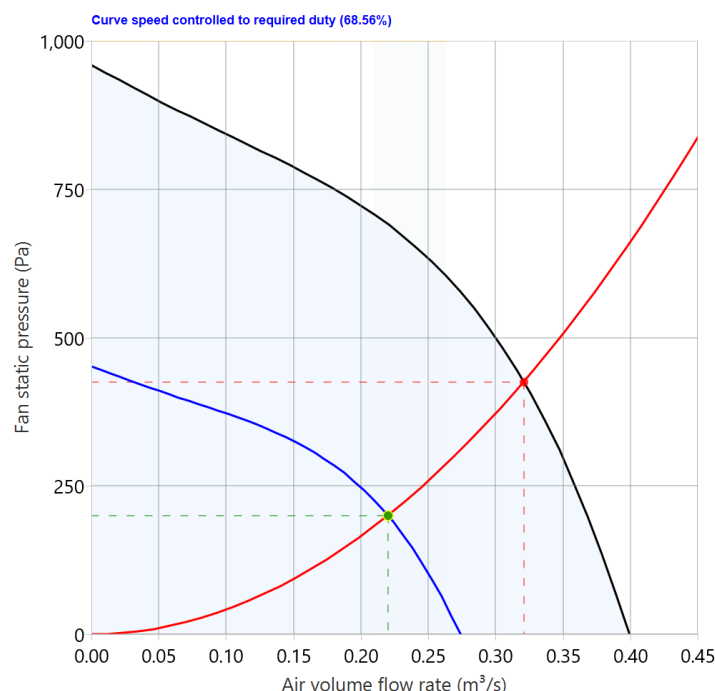
Fan Dimensions



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.

Performance Chart



Additional Notes

Selected Ancillaries

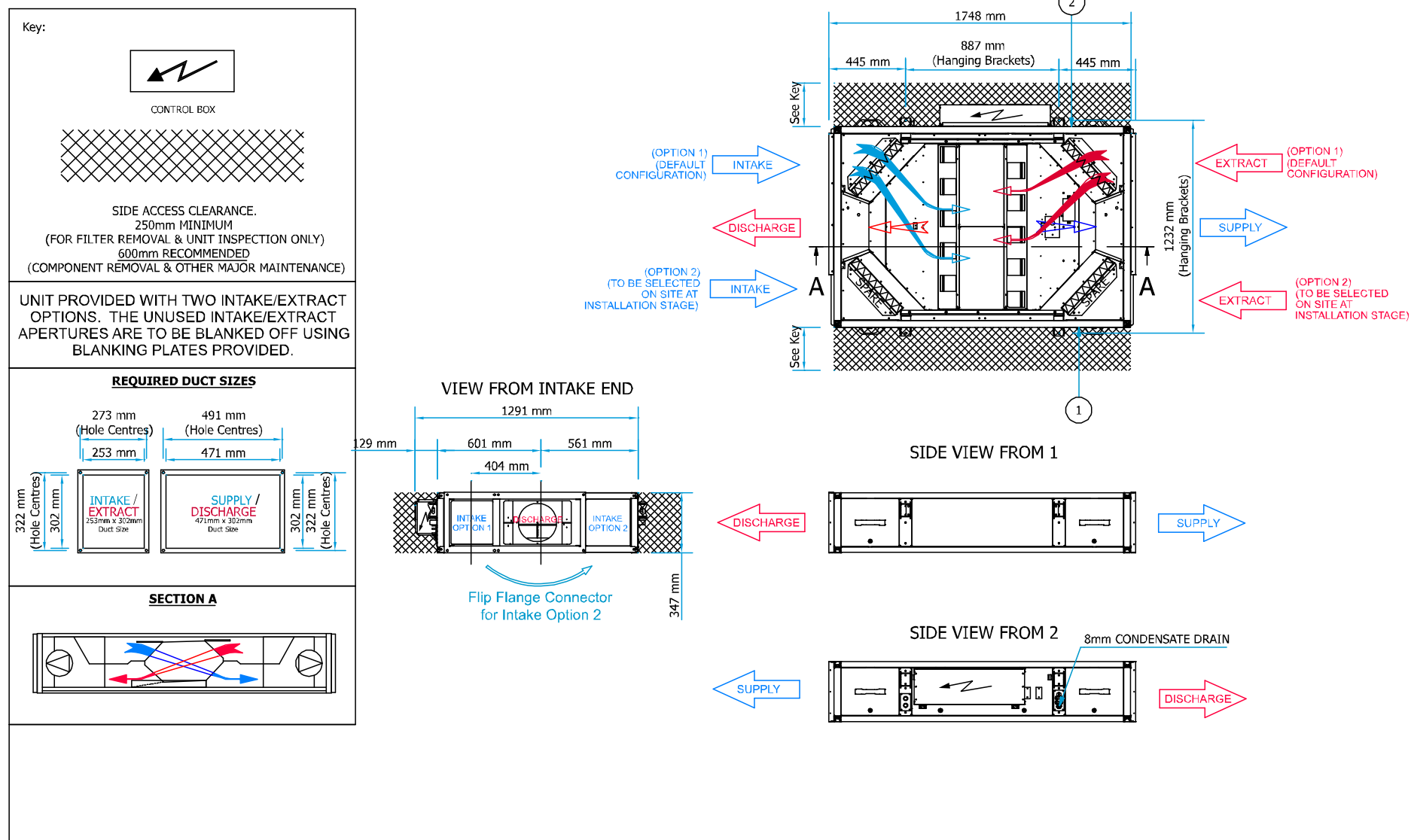
1 x ES-LCD Ecosmart LCD Touch Screen User Control (White)

Specification

XBC25HA-NNN-E-LS4S. 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. Suitable for Coastal Environment. 1 year warranty (UK and Ireland only)

ES-LCD

LCD touch screen ventilation user control panel in white compatible with Ecosmart system. Control has built in time clock. Supplied with pre-plugged 10m length of communication cable.



You can download this CAD drawing from <http://www.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*****

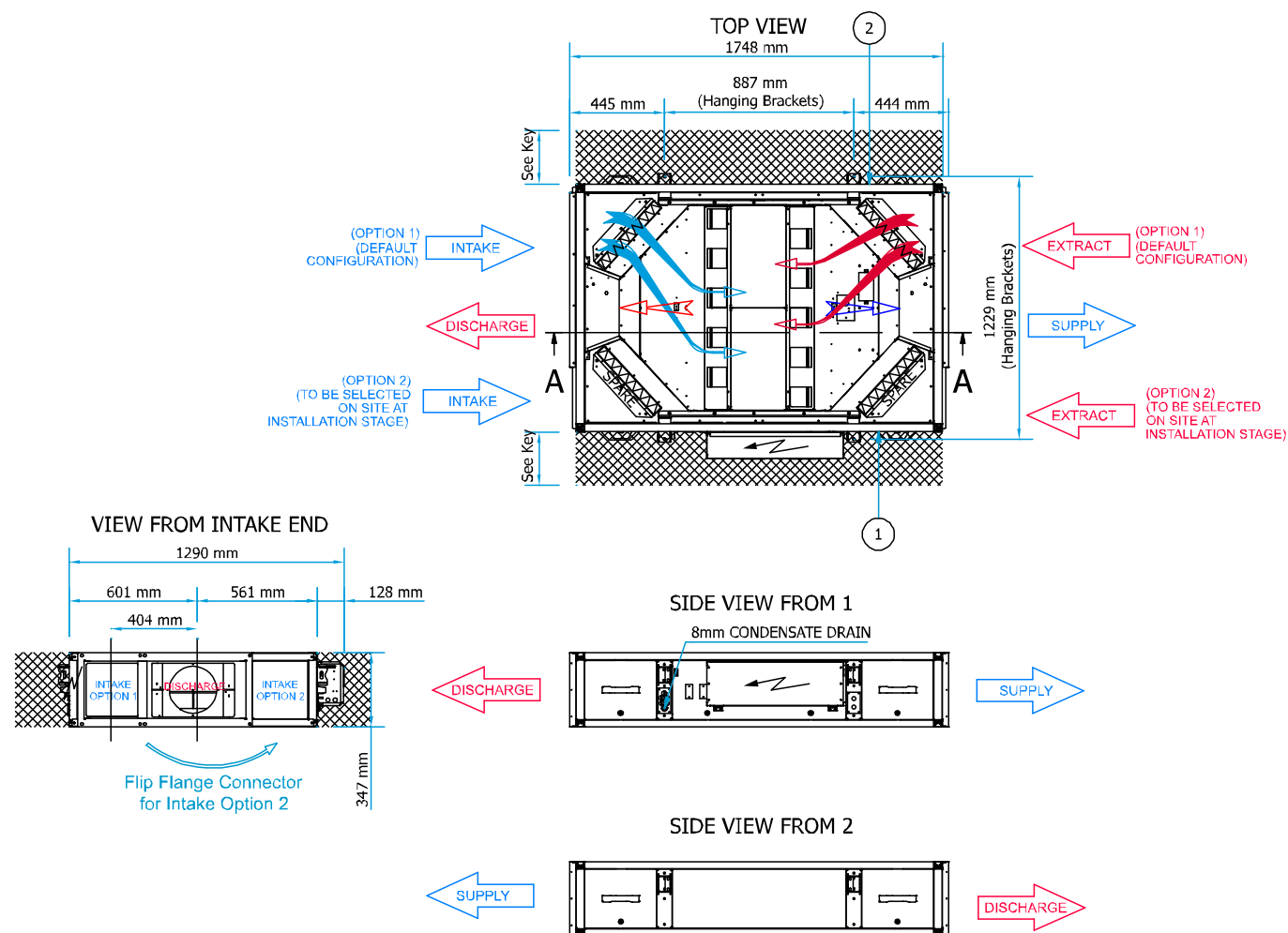
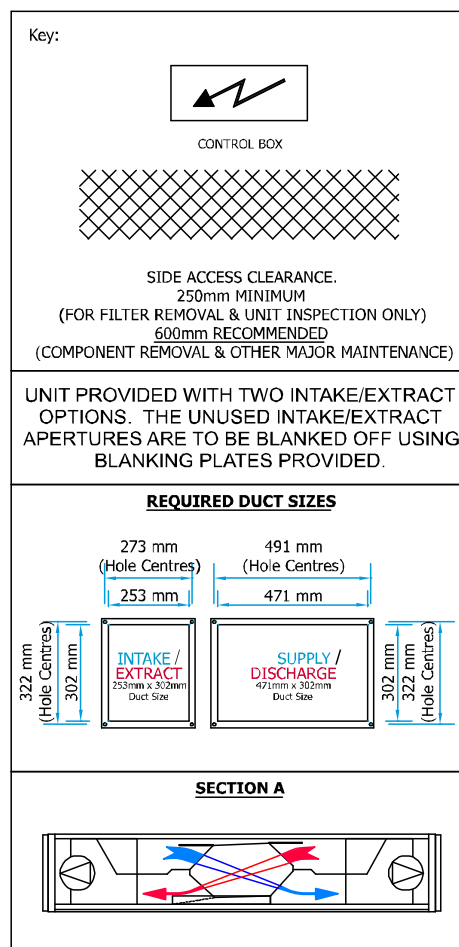
Please DO NOT sign this drawing to confirm handings.
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You can download this CAD drawing from <http://www.nuaire.info/CAD/xbcplus25-hn-r.dwg>

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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 23 Oct 2020 10:28 using software version 4.6.3730.0; by user thomashu

Project Details

Location: HRU/00/04

Technical Data

XBC+
Fan Code: **XBC55HA-NNN-E-LS4S**
Installation Manual Links: 671948

Required duty: 0.34 m³/s at 200 Pa
Actual duty: 0.43 m³/s at 336 Pa
Actual at required flow: 0.34 m³/s at 473 Pa

When speed controlled to required duty (77.22%):

Motor Input Power: 0.432 kW
Specific Fan Power: 1.3 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 starting current (sc): 5.1 A

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

Sound Data

Noise calculated speed controlled to required duty (77.22%)

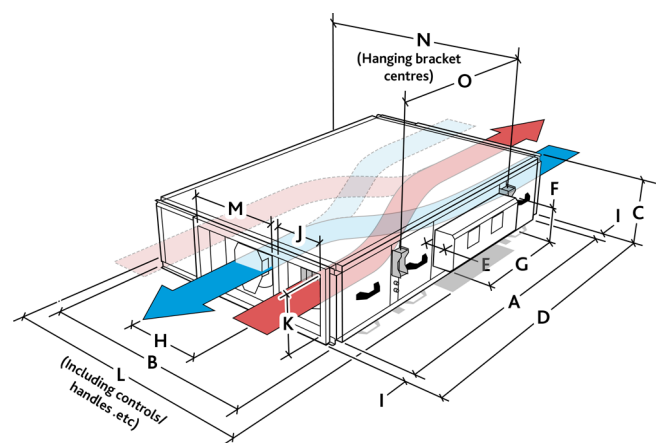
Sound Power Levels re 1 pWatts (Hz):

Hz	63	125	250	500	1k	2k	4k	8k	dBA
Breakout	67	61	53	39	38	35	31	20	38
Induct Intake	76	70	67	55	57	53	44	33	51
Induct Supply	80	76	76	63	65	62	57	53	60
Induct Discharge	81	77	76	63	65	63	57	55	60
Induct Extract	77	71	67	55	57	54	44	35	52
For 100% speed:	+5	+4	+8	+8	+7	+8	+9	+8	

dBA is spherical at 1 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

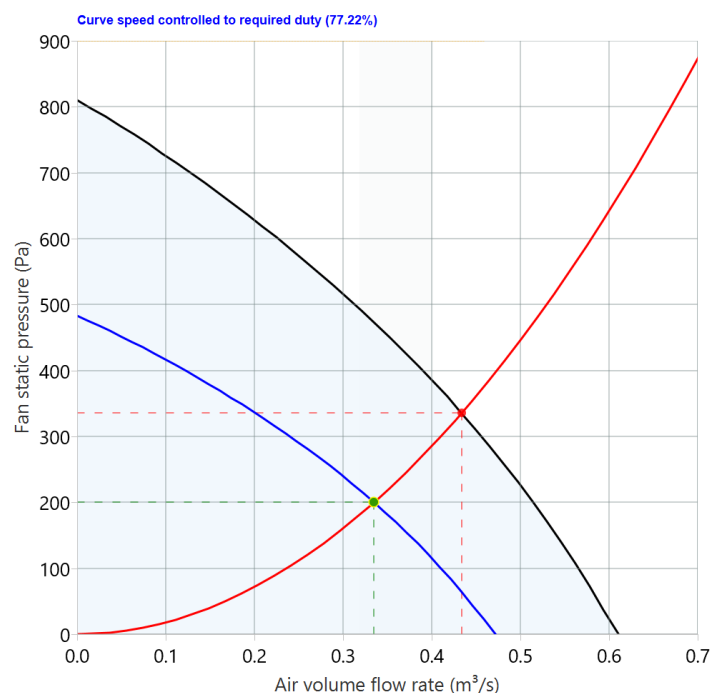


A	B	C	D	E	F	G	H	I
1900	1560	470	1960	140	210	640	535	30
J	K	L	M	N	O	kg		
397	430	1751	587	1632	1052	375.0		

Length: Width: Height:
1900 1560 470

Drawing is for dimensional purposes only. Dimensions in mm.

Performance Chart



Additional Notes

Selected Ancillaries

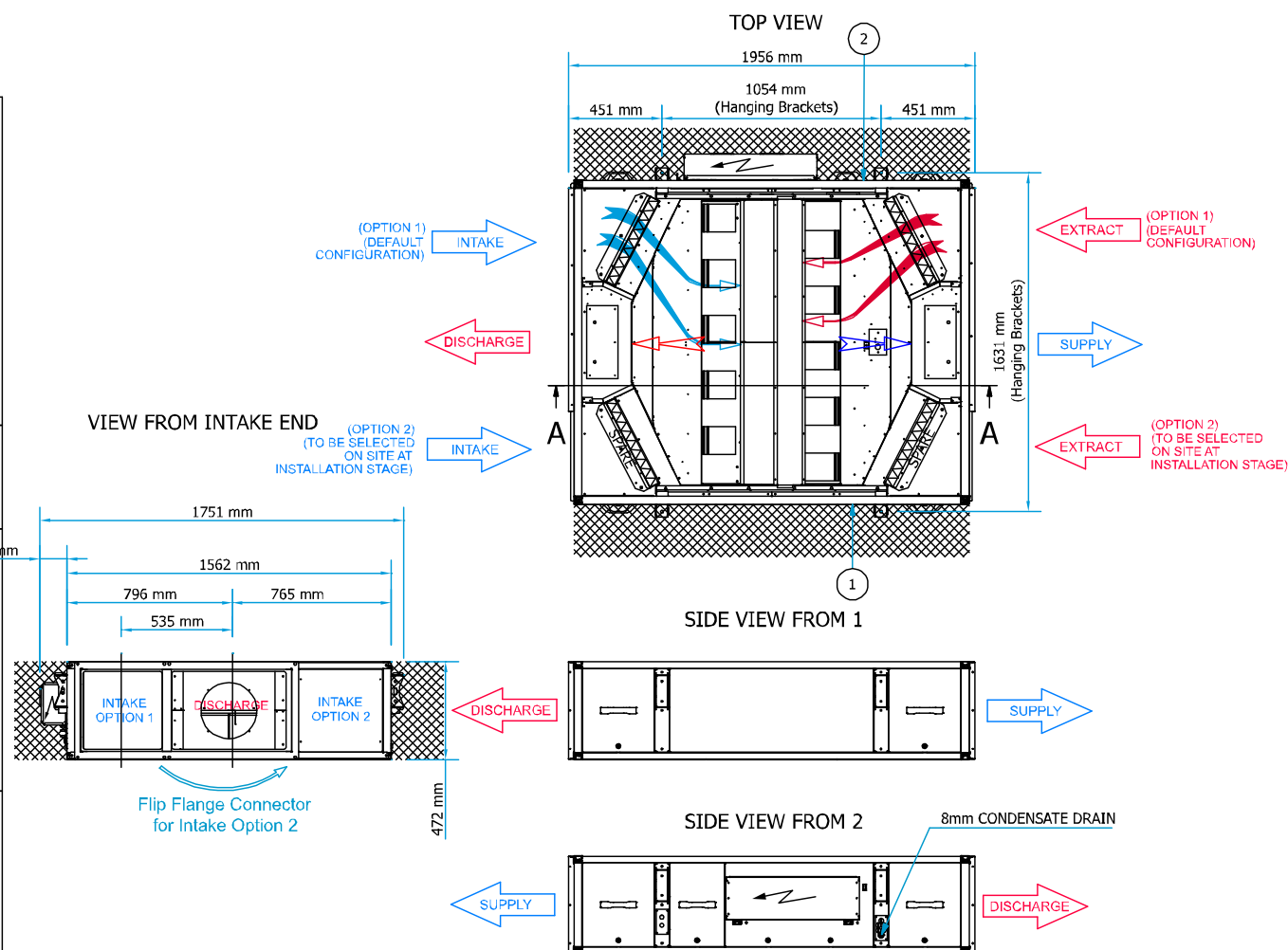
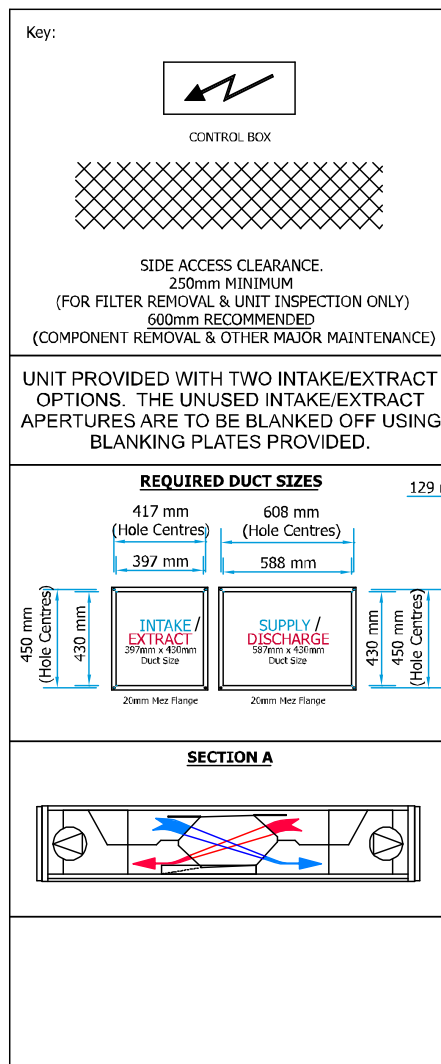
1 x ES-LCD Ecosmart LCD Touch Screen User Control (White)

Specification

XBC55HA-NNN-E-LS4S. 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. Suitable for Coastal Environment. 1 year warranty (UK and Ireland only)

ES-LCD

LCD touch screen ventilation user control panel in white compatible with Ecosmart system. Control has built in time clock. Supplied with pre-plugged 10m length of communication cable.



You can download this CAD drawing from <http://www.nuaire.info/CAD/xbcplus55-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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Key:

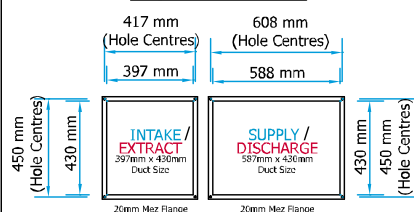
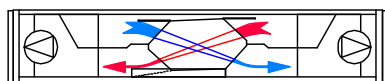
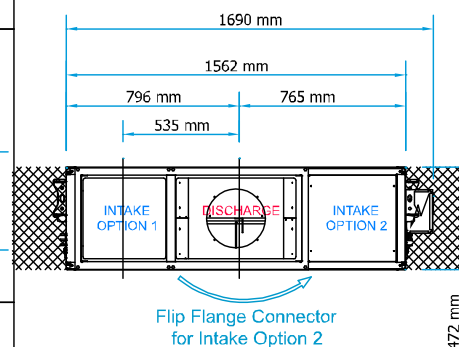
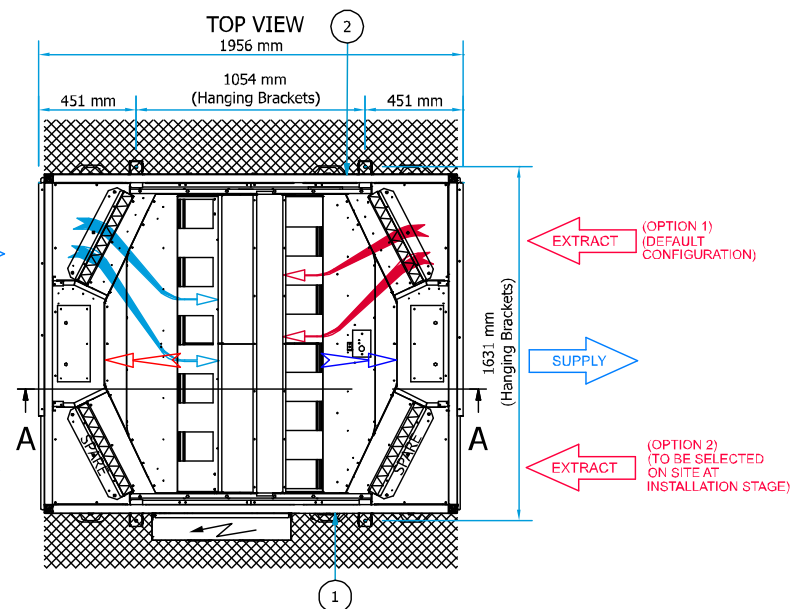
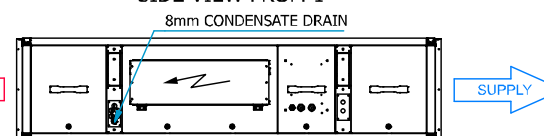
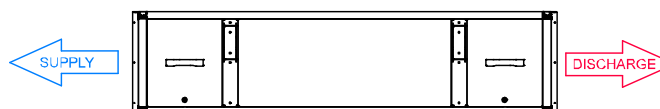


CONTROL BOX



SIDE ACCESS CLEARANCE:
250mm MINIMUM
(FOR FILTER REMOVAL & UNIT INSPECTION ONLY)
600mm RECOMMENDED
(COMPONENT REMOVAL & OTHER MAJOR MAINTENANCE)

UNIT PROVIDED WITH TWO INTAKE/EXTRACT
OPTIONS. THE UNUSED INTAKE/EXTRACT
APERTURES ARE TO BE BLANKED OFF USING
BLANKING PLATES PROVIDED.

REQUIRED DUCT SIZES**SECTION A****VIEW FROM INTAKE END****TOP VIEW****SIDE VIEW FROM 1****SIDE VIEW FROM 2**

You can download this CAD drawing from <http://www.nuaire.info/CAD/xbcplus55-hn-r.dwg>

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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 23 Oct 2020 10:28 using software version 4.6.3730.0; by user thomashu

Project Details

Location: HRU/00/05

Technical Data

XBC+
Fan Code: **XBC25HA-NNN-E-LS4S**
Installation Manual Links: 671948

Required duty: 0.25 m³/s at 200 Pa
Actual duty: 0.34 m³/s at 362 Pa
Actual at required flow: 0.25 m³/s at 634 Pa

When speed controlled to required duty (74.38%):

Motor Input Power: 0.407 kW
Specific Fan Power: 1.6 W/(l/s)

At full speed:

Motor Input Power: 0.989 kW
Specific Fan Power: 2.9 W/(l/s)

Maximum Fan Speed: 3,700 RPM
Electrical Supply: 230V 1 Phase 50 Hz
Nominal Motor Rating: 1 kW
Motor current (flc): 6.9 A
Motor starting current (sc): 6.9 A

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

Sound Data

Noise calculated speed controlled to required duty (74.38%)

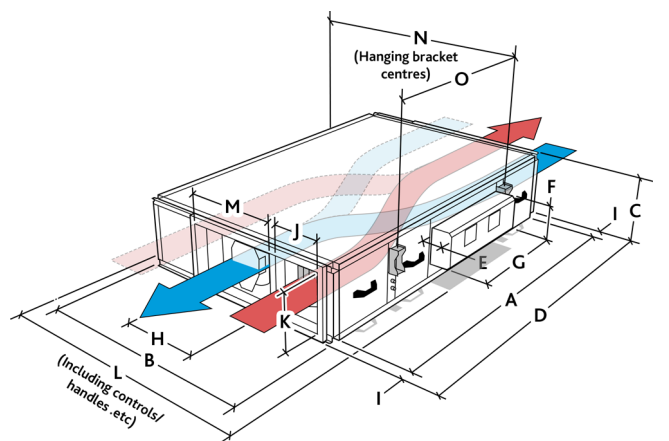
Sound Power Levels re 1 pWatts (Hz):

Hz	63	125	250	500	1k	2k	4k	8k	dBA
Breakout	65	64	51	54	41	40	40	32	43
Induct Intake	73	67	65	67	62	58	50	49	56
Induct Supply	78	79	74	78	68	68	64	66	66
Induct Discharge	79	80	74	77	68	68	66	67	66
Induct Extract	72	66	64	67	61	58	50	50	56
For 100% speed:	+7	+7	+7	+7	+7	+7	+7	+7	

dBA is spherical at 1 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.

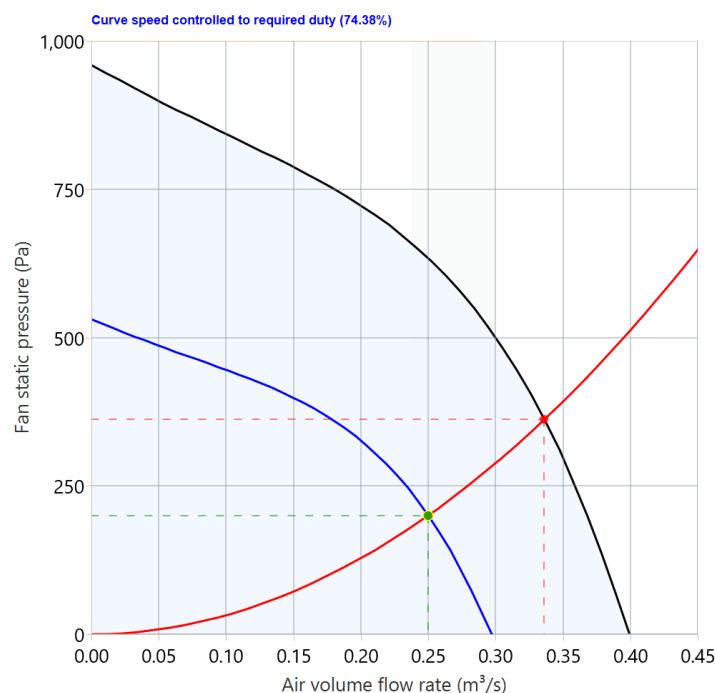
Fan Dimensions



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.

Performance Chart



Additional Notes

Selected Ancillaries

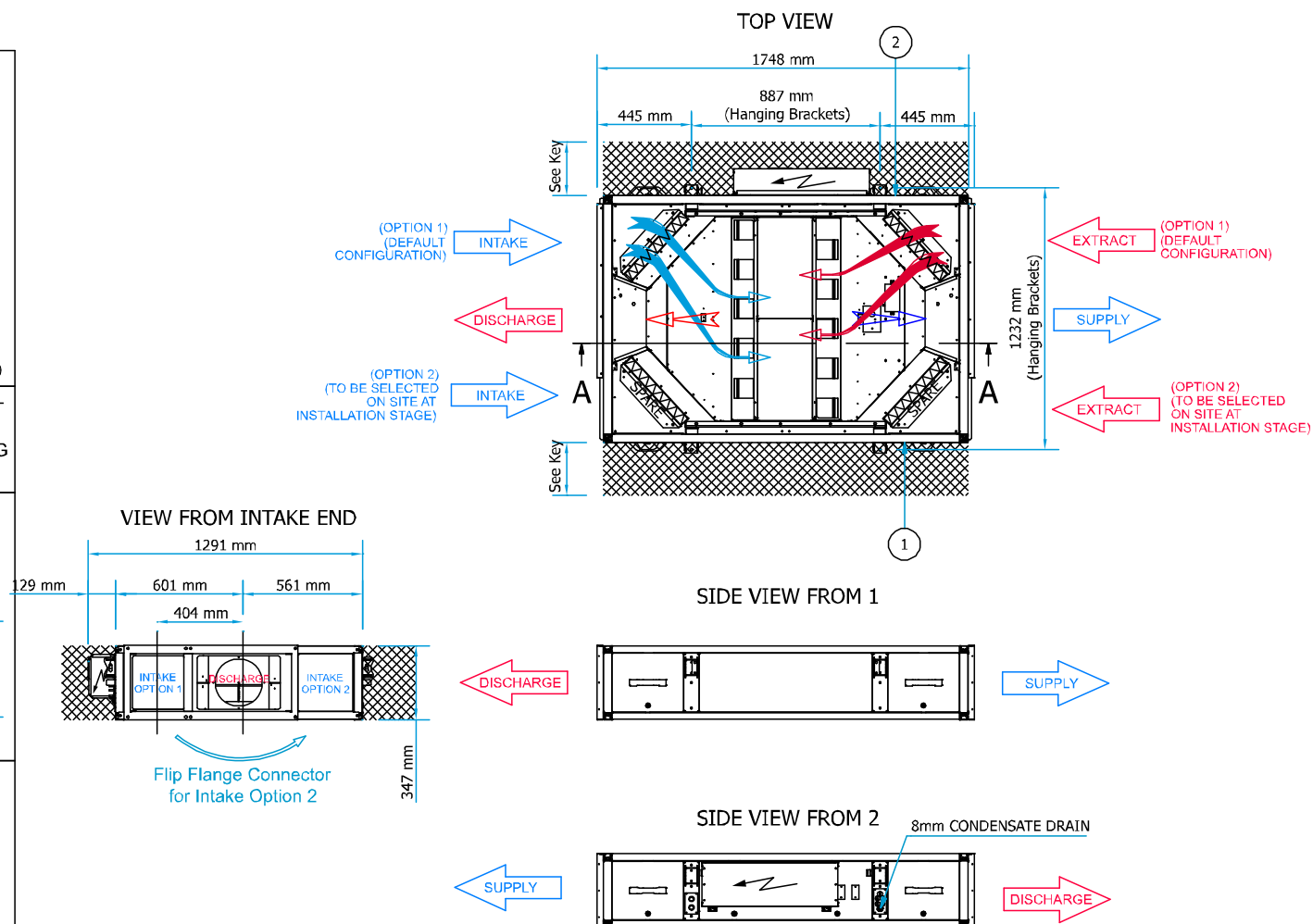
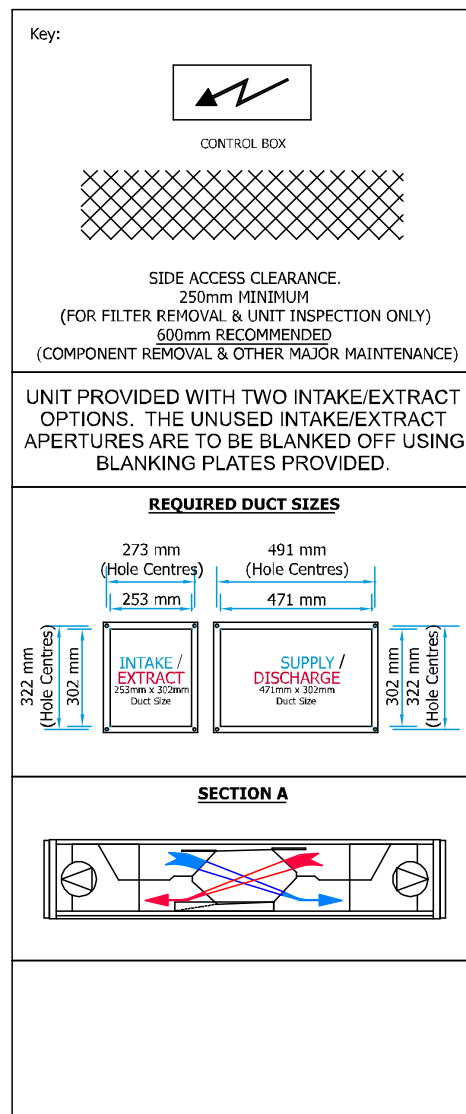
1 x ES-LCD Ecosmart LCD Touch Screen User Control (White)

Specification

XBC25HA-NNN-E-LS4S. 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. Suitable for Coastal Environment. 1 year warranty (UK and Ireland only)

ES-LCD

LCD touch screen ventilation user control panel in white compatible with Ecosmart system. Control has built in time clock. Supplied with pre-plugged 10m length of communication cable.



You can download this CAD drawing from <http://www.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*****

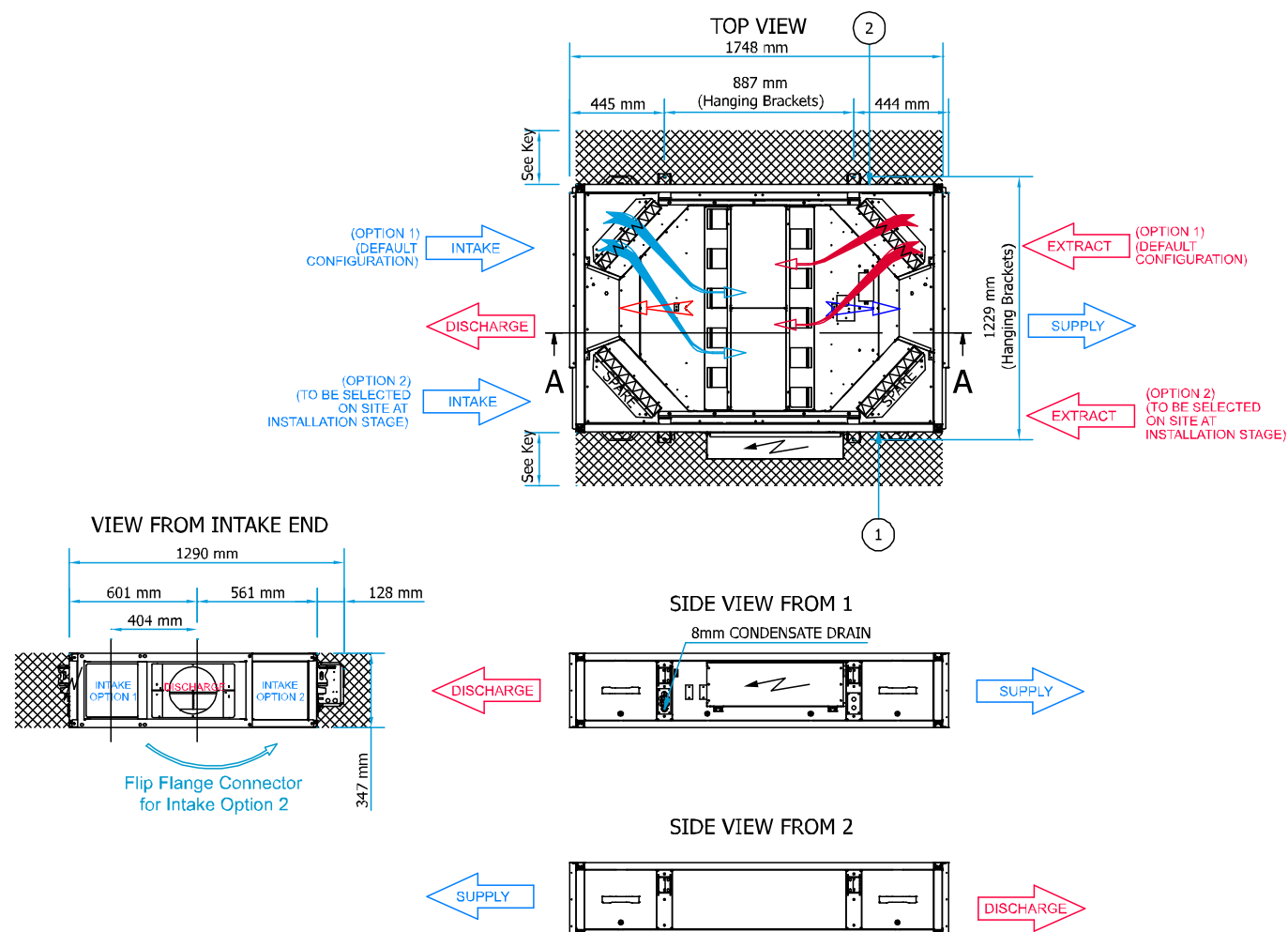
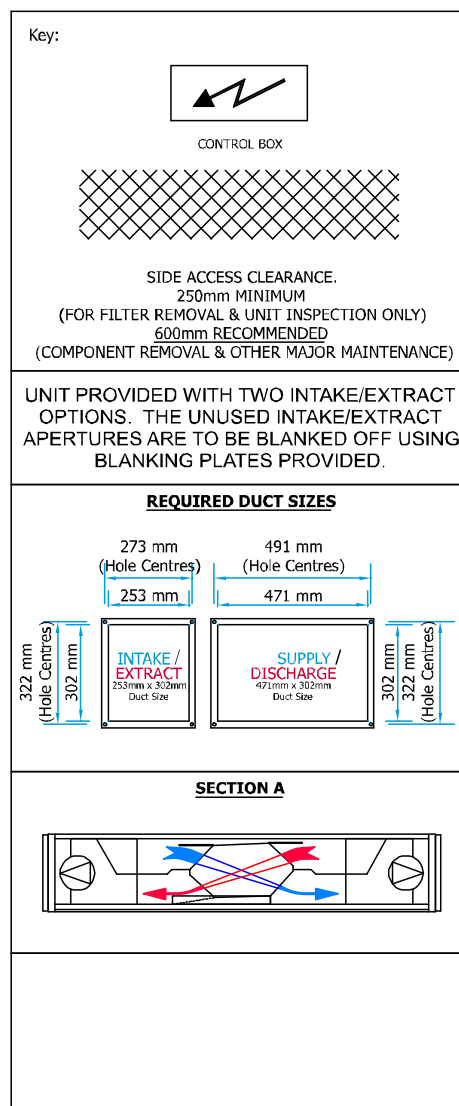
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You can download this CAD drawing from <http://www.nuaire.info/CAD/xbcplus25-hn-r.dwg>

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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 23 Oct 2020 10:28 using software version 4.6.3730.0; by user thomashu

Project Details

Location: HRU/00/06

Technical Data

XBC+

Fan Code: **XBC25HA-NNN-E-LS4S**
Installation Manual Links: 671948

Required duty: 0.18 m³/s at 200 Pa
Actual duty: 0.29 m³/s at 526 Pa
Actual at required flow: 0.18 m³/s at 750 Pa

When speed controlled to required duty (61.65%):

Motor Input Power: 0.227 kW
Specific Fan Power: 1.3 W/(l/s)

At full speed:

Motor Input Power: 0.967 kW
Specific Fan Power: 3.3 W/(l/s)

Maximum Fan Speed: 3,700 RPM
Electrical Supply: 230V 1 Phase 50 Hz
Nominal Motor Rating: 1 kW
Motor current (flc): 6.9 A
Motor starting current (sc): 6.9 A

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

Sound Data

Noise calculated speed controlled to required duty (61.65%)

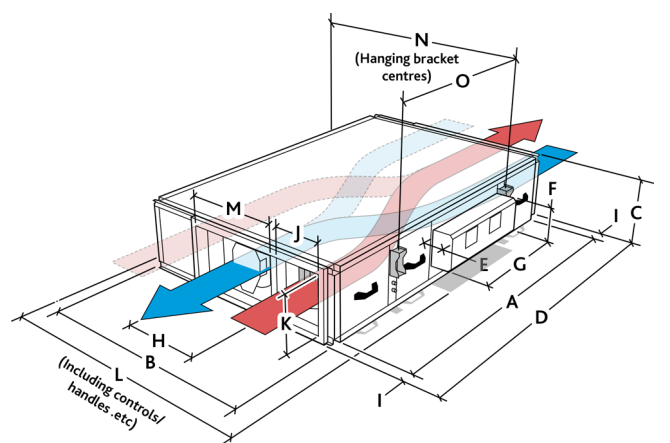
Sound Power Levels re 1 pWatts (Hz):

Hz	63	125	250	500	1k	2k	4k	8k	dBA
Breakout	61	60	47	50	37	36	36	28	39
Induct Intake	69	63	61	63	58	54	46	45	52
Induct Supply	74	75	70	74	64	64	60	62	62
Induct Discharge	75	76	70	73	64	64	62	63	62
Induct Extract	68	62	60	63	57	54	46	46	52
For 100% speed:	+11	+11	+11	+11	+11	+11	+11	+11	

dBA is spherical at 1 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

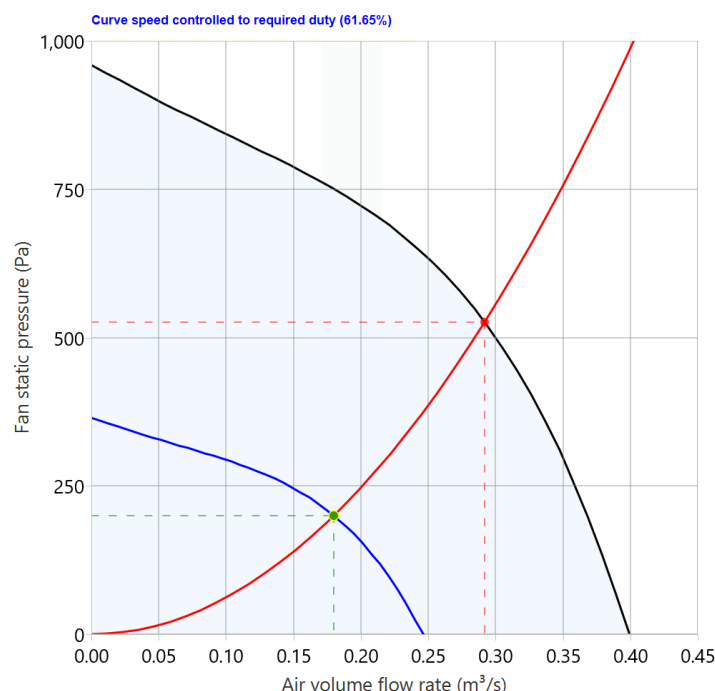


A	B	C	D	E	F	G	H	I
1713	1160	346	1773	140	210	640	413	30
J	K	L	M	N	O	kg		
252	302	1350	471	1232	884	242.0		

Length: Width: Height:
1713 1160 346

Drawing is for dimensional purposes only. Dimensions in mm.

Performance Chart



Additional Notes

Selected Ancillaries

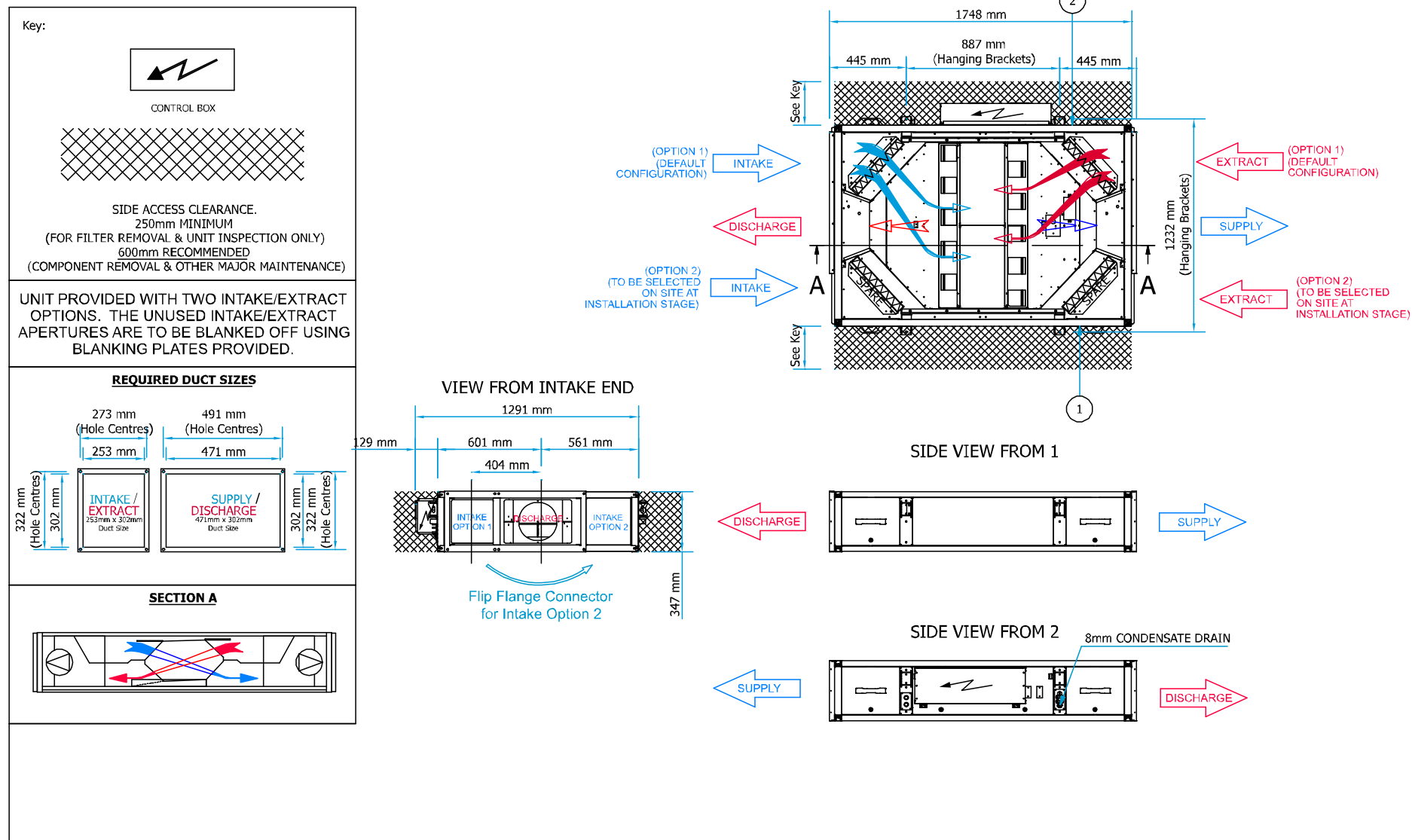
1 x ES-LCD Ecosmart LCD Touch Screen User Control (White)

Specification

XBC25HA-NNN-E-LS4S. 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. Suitable for Coastal Environment. 1 year warranty (UK and Ireland only)

ES-LCD

LCD touch screen ventilation user control panel in white compatible with Ecosmart system. Control has built in time clock. Supplied with pre-plugged 10m length of communication cable.



You can download this CAD drawing from <http://www.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*****

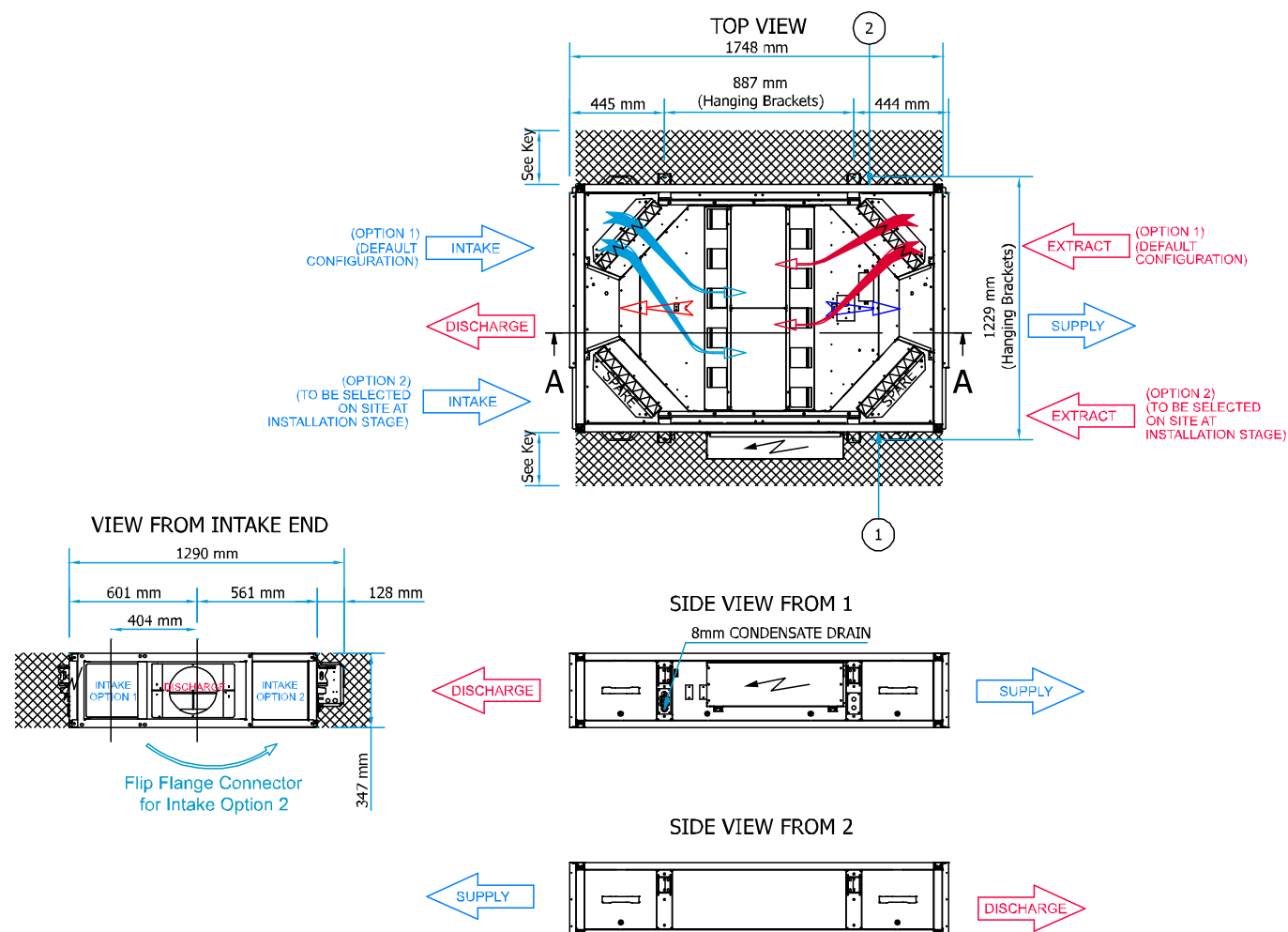
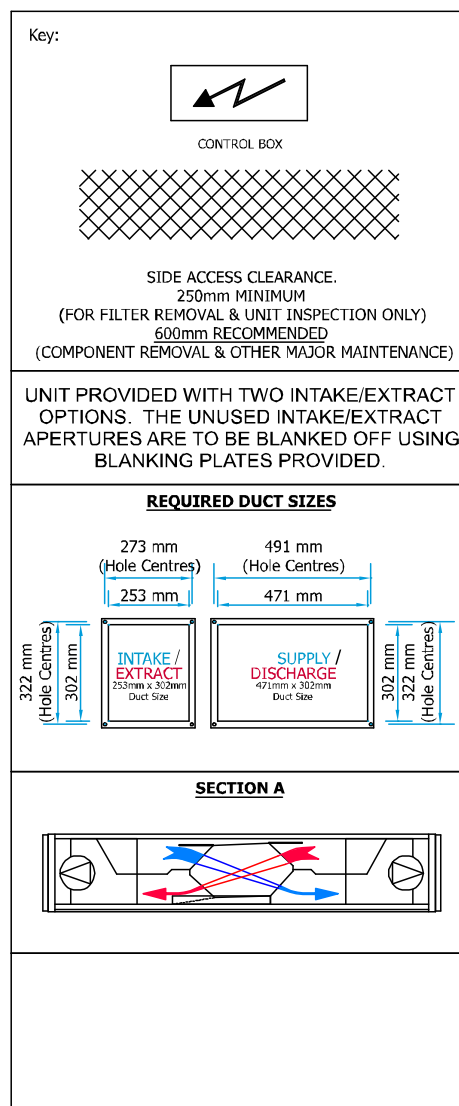
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You can download this CAD drawing from <http://www.nuaire.info/CAD/xbcplus25-hn-r.dwg>

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Project Details

Location: HRU/01/01

Technical Data

XBC+

Fan Code: **XBC25HA-NNN-E-LS4S**
Installation Manual Links: 671948

Required duty: 0.22 m³/s at 200 Pa
Actual duty: 0.32 m³/s at 425 Pa
Actual at required flow: 0.22 m³/s at 691 Pa

When speed controlled to required duty (68.56%):

Motor Input Power: 0.317 kW
Specific Fan Power: 1.4 W/(l/s)

At full speed:

Motor Input Power: 0.983 kW
Specific Fan Power: 3.1 W/(l/s)

Maximum Fan Speed: 3,700 RPM
Electrical Supply: 230V 1 Phase 50 Hz
Nominal Motor Rating: 1 kW
Motor current (flc): 6.9 A
Motor starting current (sc): 6.9 A

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

Sound Data

Noise calculated speed controlled to required duty (68.56%)

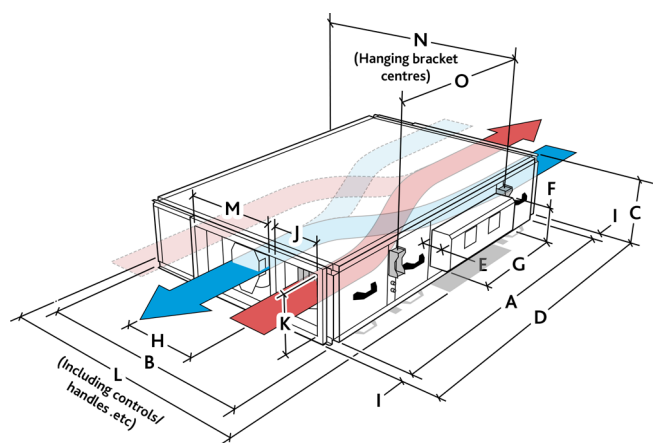
Sound Power Levels re 1 pWatts (Hz):

Hz	63	125	250	500	1k	2k	4k	8k	dBA
Breakout	63	62	49	52	39	38	38	30	41
Induct Intake	71	65	63	65	60	56	48	47	54
Induct Supply	76	77	72	76	66	66	62	64	64
Induct Discharge	77	78	72	75	66	66	64	65	64
Induct Extract	70	64	62	65	59	56	48	48	54
For 100% speed:	+9	+9	+9	+9	+9	+9	+9	+9	

dBA is spherical at 1 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.

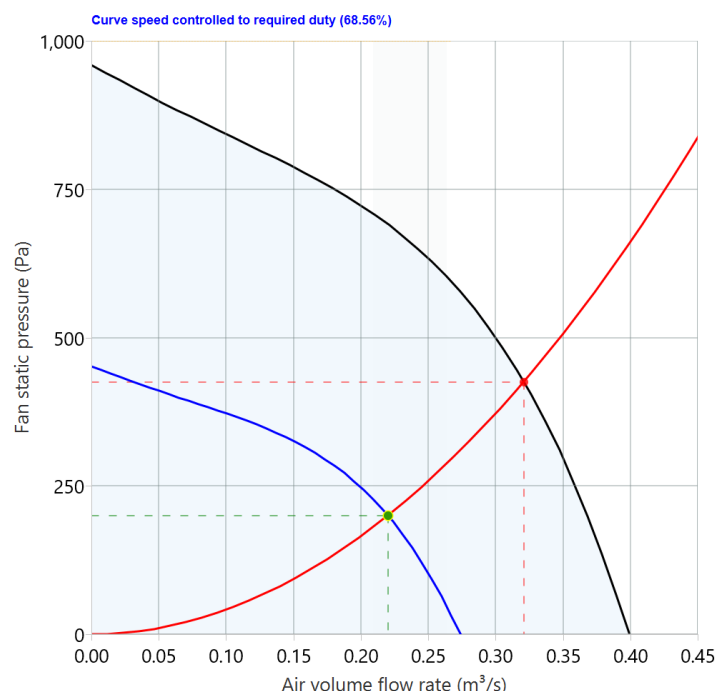
Fan Dimensions



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.

Performance Chart



Additional Notes

Selected Ancillaries

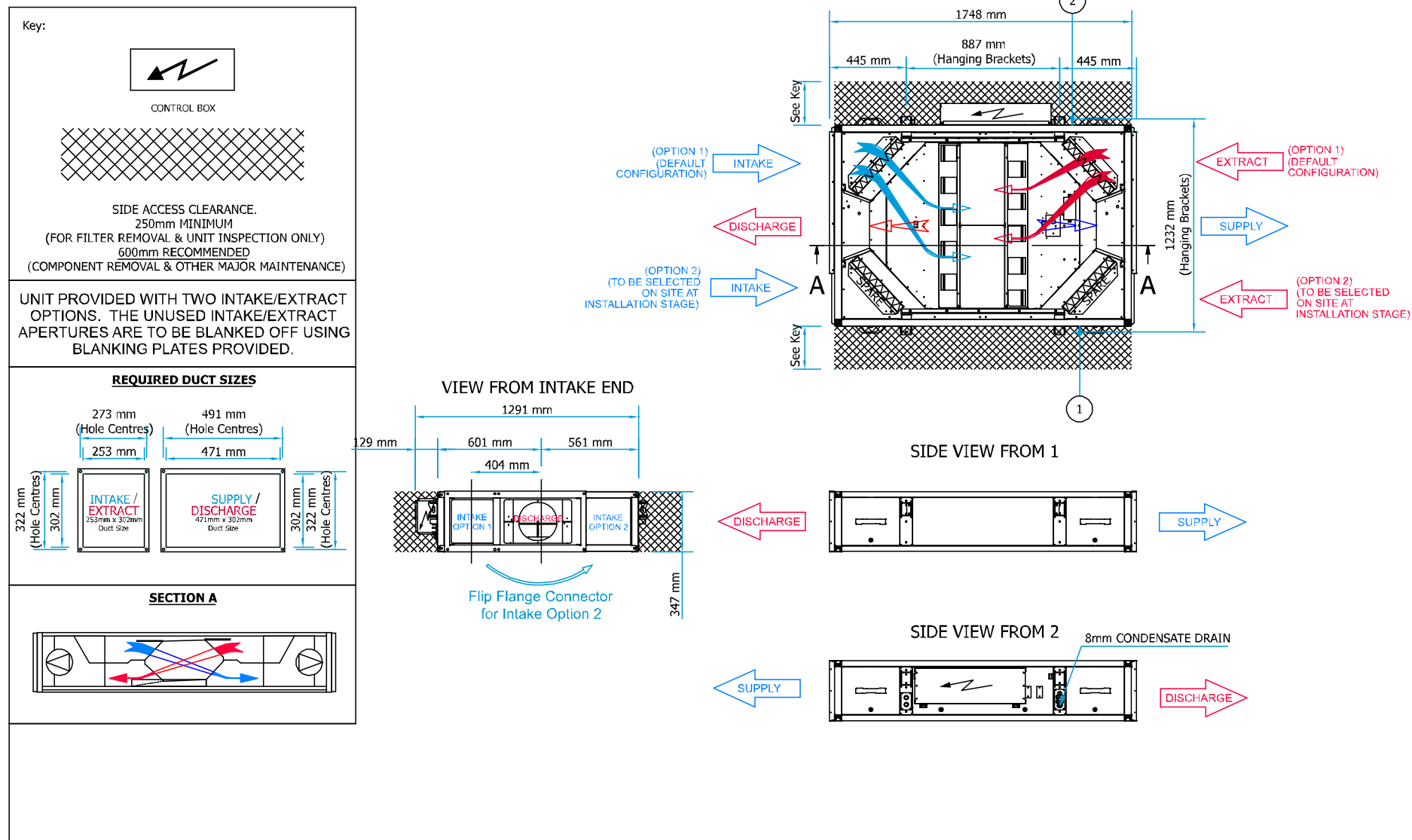
1 x ES-LCD Ecosmart LCD Touch Screen User Control (White)

Specification

XBC25HA-NNN-E-LS4S. 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. Suitable for Coastal Environment. 1 year warranty (UK and Ireland only)

ES-LCD

LCD touch screen ventilation user control panel in white compatible with Ecosmart system. Control has built in time clock. Supplied with pre-plugged 10m length of communication cable.



You can download this CAD drawing from <http://www.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*****

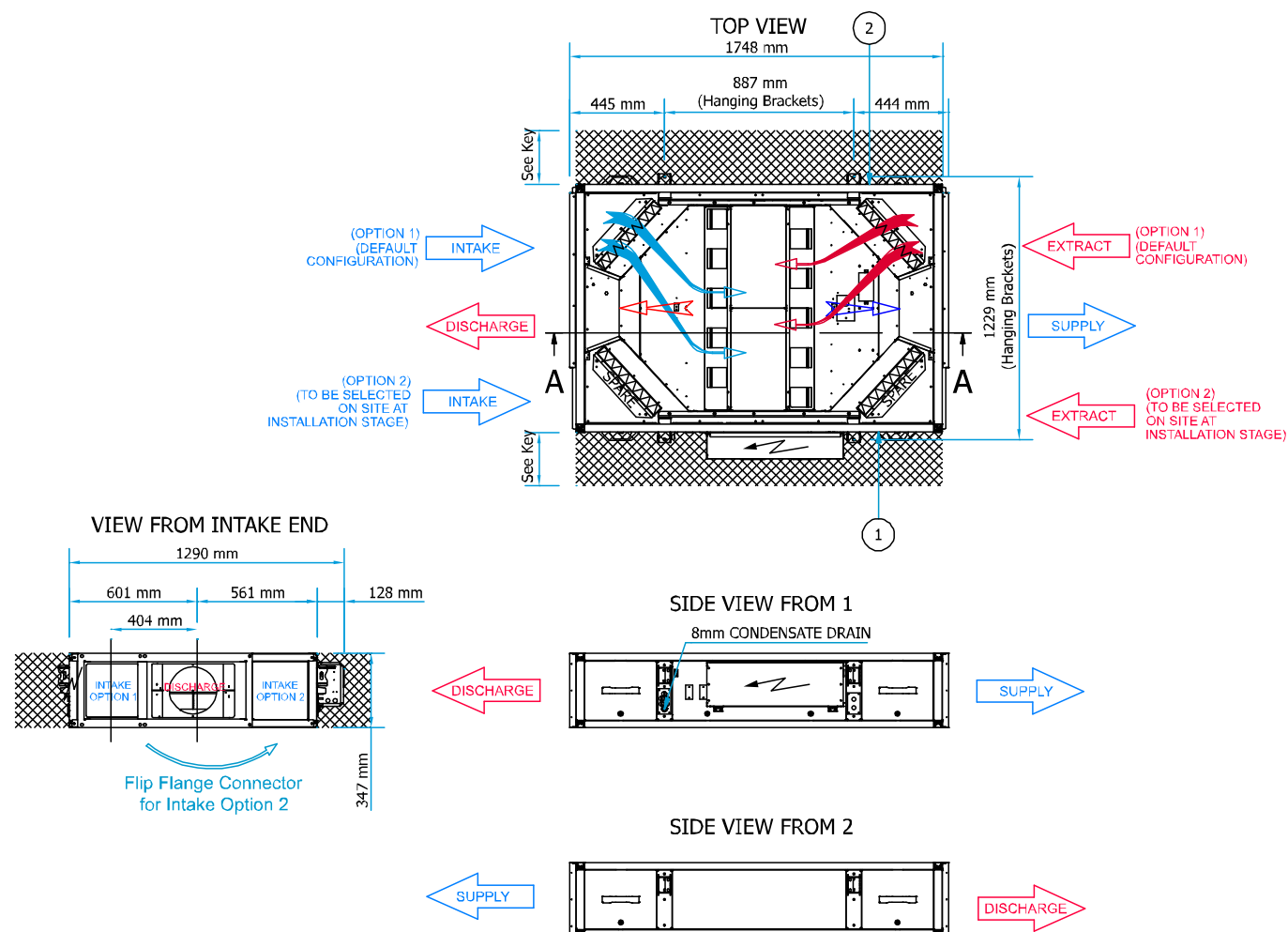
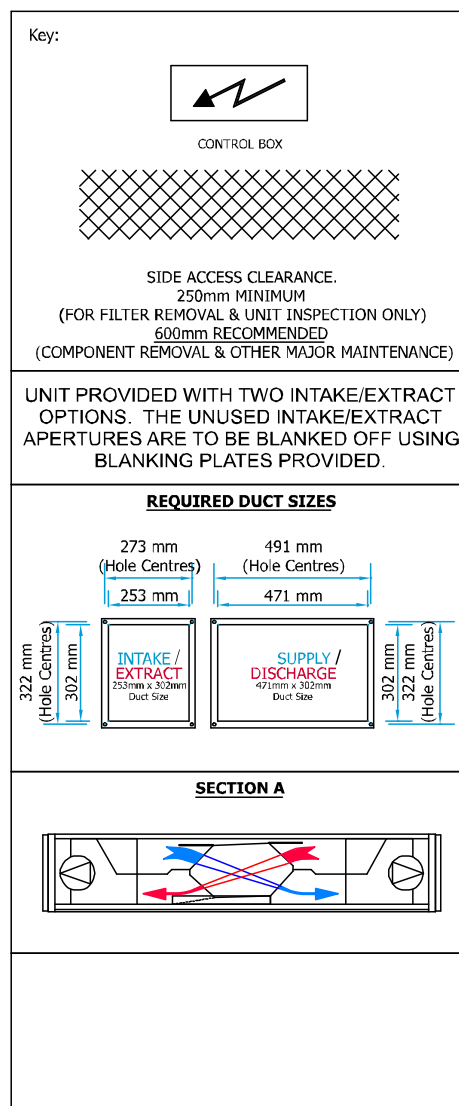
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You can download this CAD drawing from <http://www.nuaire.info/CAD/xbcplus25-hn-r.dwg>

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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: HRU01/02

Technical Data

XBC+

Fan Code: **XBC15HA-NNN-E-LS4S**
Installation Manual Links: 671948

Required duty: 0.1 m³/s at 150 Pa
Actual duty: 0.14 m³/s at 284 Pa
Actual at required flow: 0.1 m³/s at 464 Pa

When speed controlled to required duty (72.73%):

Motor Input Power: 0.136 kW
Specific Fan Power: 1.4 W/(l/s)

At full speed:

Motor Input Power: 0.353 kW
Specific Fan Power: 2.6 W/(l/s)

Maximum Fan Speed: 4,000 RPM
Electrical Supply: 230V 1 Phase 50 Hz
Nominal Motor Rating: 0.34 kW
Motor current (flc): 2.8 A
Motor starting current (sc): 2.8 A

Max. operating temp: 60°C
Weight: 195 kg

Sound Data

Noise calculated speed controlled to required duty (72.73%)

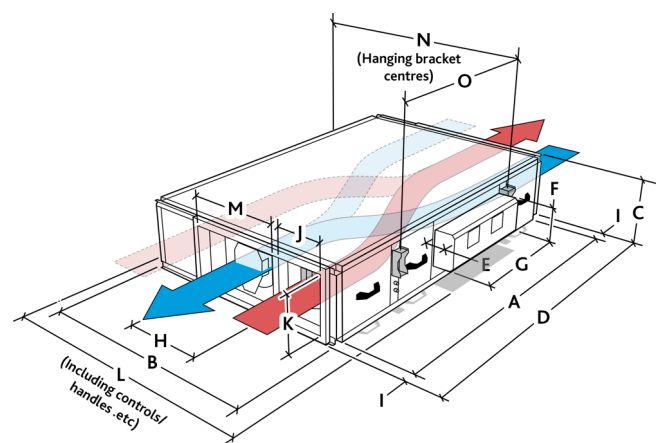
Sound Power Levels re 1 pWatts (Hz):

Hz	63	125	250	500	1k	2k	4k	8k	dBA
Breakout	54	50	35	36	34	30	27	<16	19
Induct Intake	63	53	48	49	55	48	40	36	35
Induct Supply	68	65	58	59	61	57	52	50	43
Induct Discharge	68	66	58	60	61	58	53	51	44
Induct Extract	62	52	48	48	54	48	38	34	34
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.

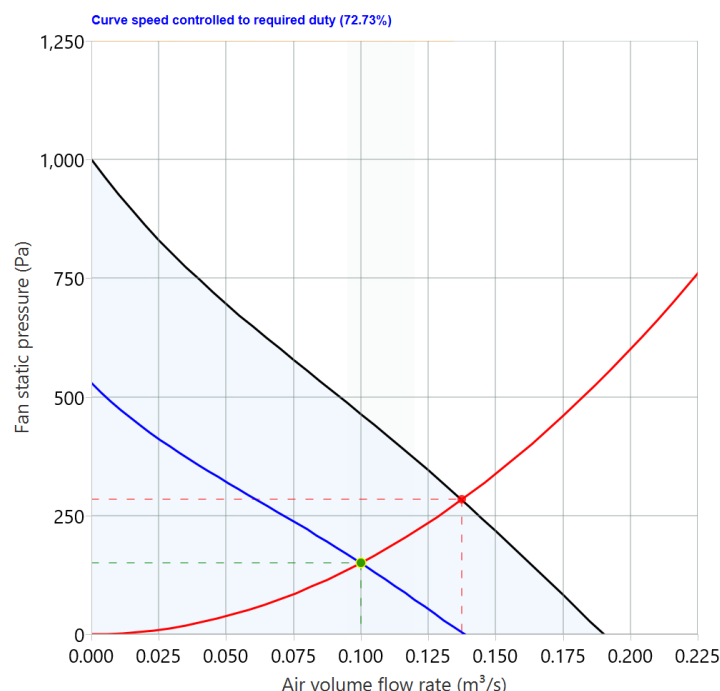
Fan Dimensions



A	B	C	D	E	F	G	H	I
1600	1000	260	1660	140	210	640	334	30
J	K	L	M	N	O	kg		
238	220	1205	347	1068	832	195.0		
Length: Width:		Height:						
1600		1000		260				

Drawing is for dimensional purposes only. Dimensions in mm.

Performance Chart



Additional Notes

Selected Ancillaries

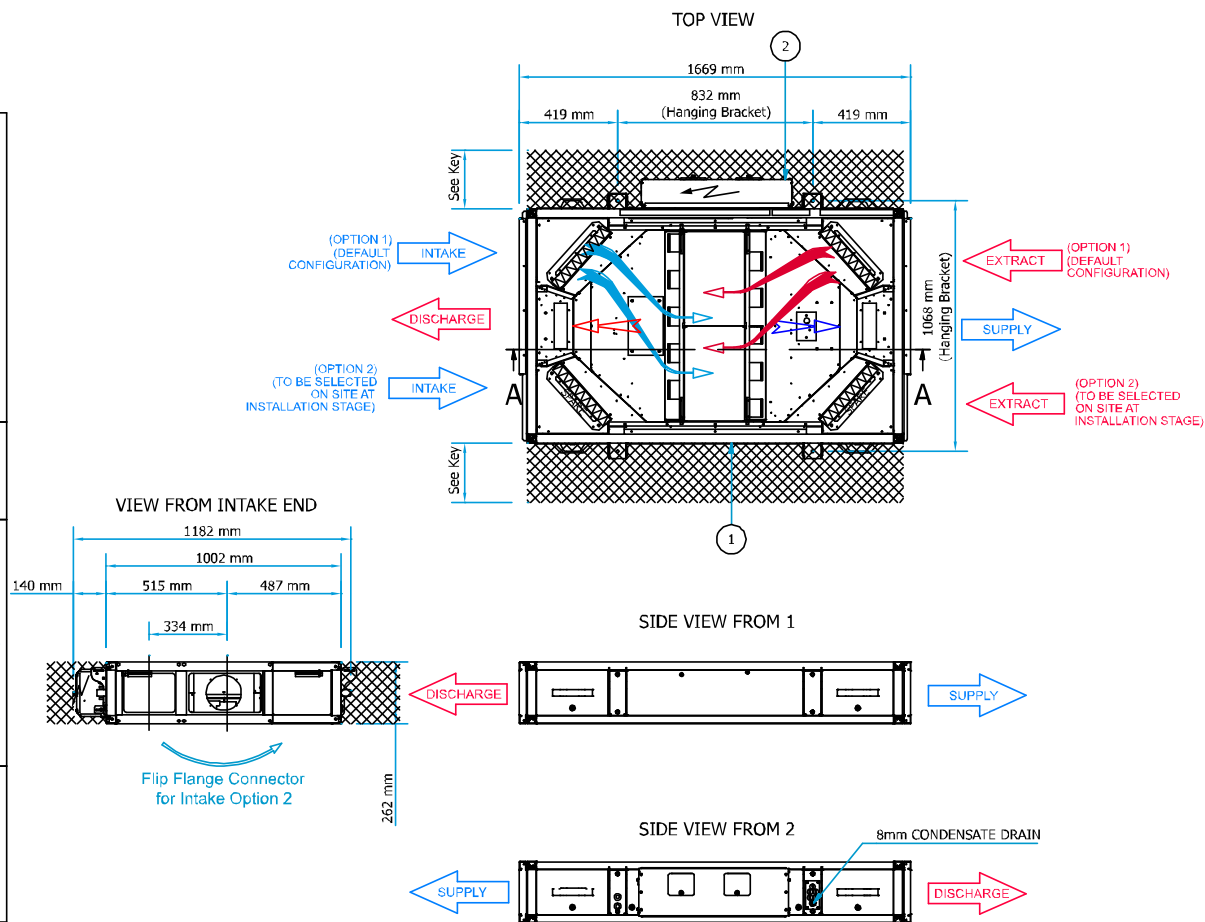
1 x ES-LCD Ecosmart LCD Touch Screen User Control (White)

Specification

XBC15HA-NNN-E-LS4S. 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. Suitable for Coastal Environment. 1 year warranty (UK and Ireland only)

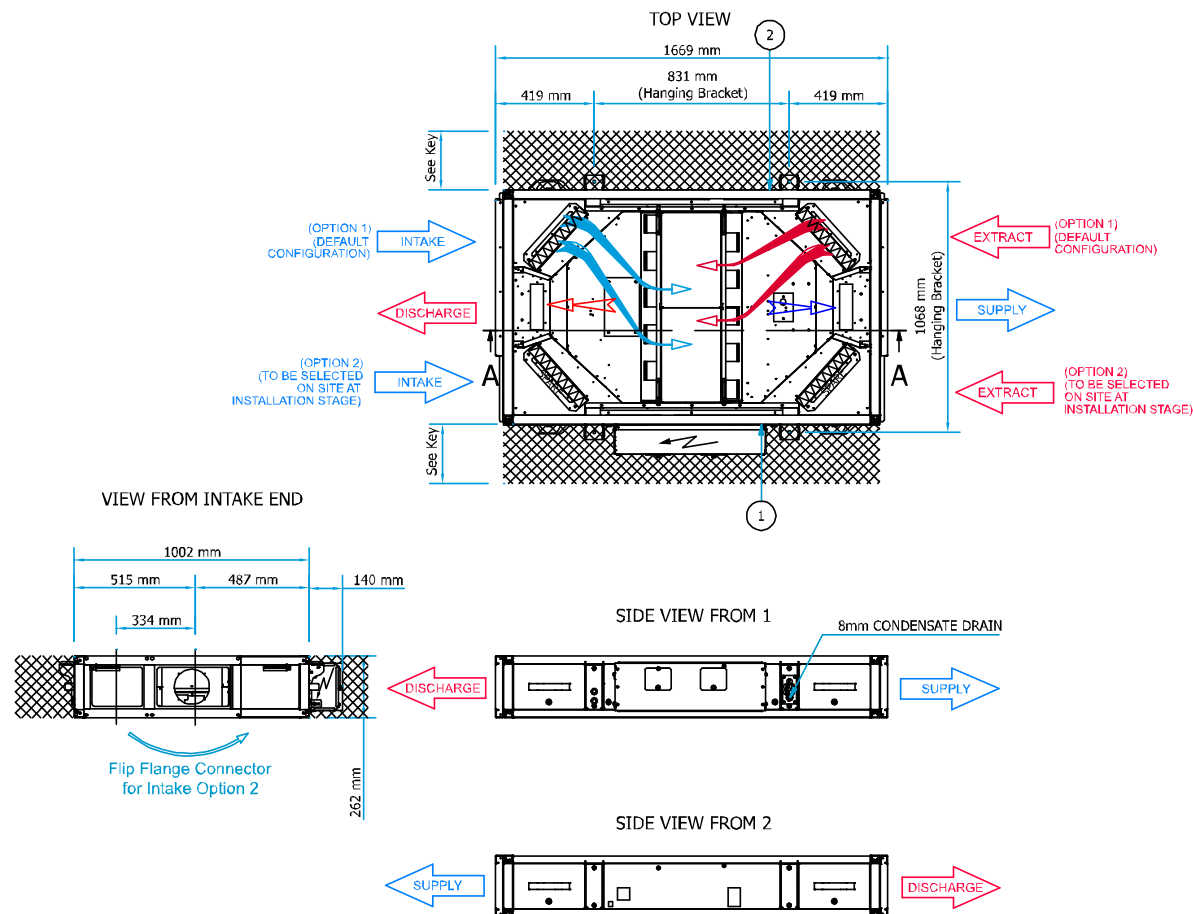
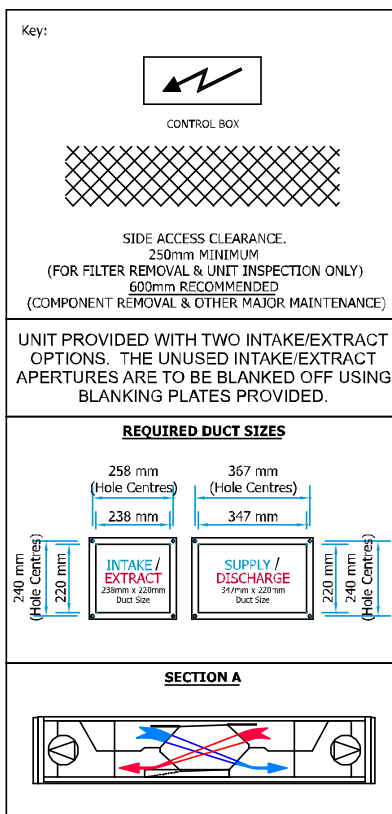
ES-LCD

LCD touch screen ventilation user control panel in white compatible with Ecosmart system. Control has built in time clock. Supplied with pre-plugged 10m length of communication cable.



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A-A (0.06 : 1)



You can download this CAD drawing from <http://www.nuaire.info/CAD/xbcplus15-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*****

Please **DO NOT** sign this drawing to confirm handings.
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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 23 Oct 2020 10:28 using software version 4.6.3730.0; by user thomashu

Project Details

Location: HRU01/03

Technical Data

XBC+

Fan Code: **XBC15HA-NNN-E-LS4S**
Installation Manual Links: 671948

Required duty: 0.1 m³/s at 150 Pa
Actual duty: 0.14 m³/s at 284 Pa
Actual at required flow: 0.1 m³/s at 464 Pa

When speed controlled to required duty (72.73%):

Motor Input Power: 0.136 kW
Specific Fan Power: 1.4 W/(l/s)

At full speed:

Motor Input Power: 0.353 kW
Specific Fan Power: 2.6 W/(l/s)

Maximum Fan Speed: 4,000 RPM
Electrical Supply: 230V 1 Phase 50 Hz
Nominal Motor Rating: 0.34 kW
Motor current (flc): 2.8 A
Motor starting current (sc): 2.8 A

Max. operating temp: 60°C
Weight: 195 kg

Sound Data

Noise calculated speed controlled to required duty (72.73%)

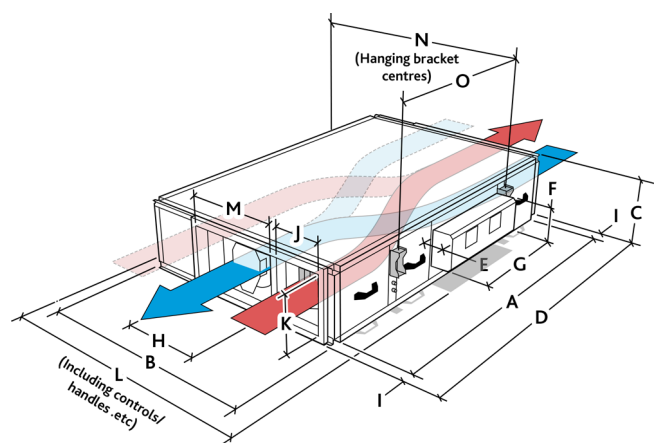
Sound Power Levels re 1 pWatts (Hz):

Hz	63	125	250	500	1k	2k	4k	8k	dBA
Breakout	54	50	35	36	34	30	27	<16	19
Induct Intake	63	53	48	49	55	48	40	36	35
Induct Supply	68	65	58	59	61	57	52	50	43
Induct Discharge	68	66	58	60	61	58	53	51	44
Induct Extract	62	52	48	48	54	48	38	34	34
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.

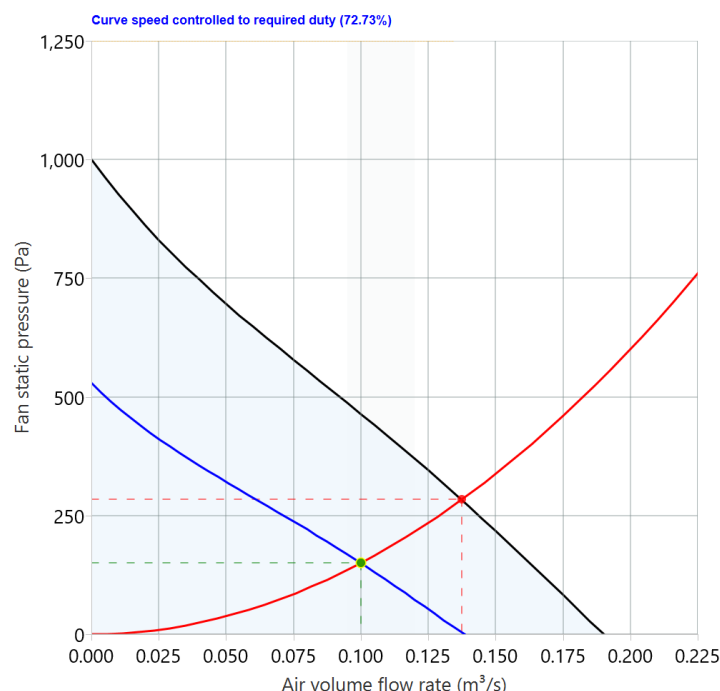
Fan Dimensions



A	B	C	D	E	F	G	H	I
1600	1000	260	1660	140	210	640	334	30
J	K	L	M	N	O	kg		
238	220	1205	347	1068	832	195.0		
Length:	Width:	Height:						
1600	1000	260						

Drawing is for dimensional purposes only. Dimensions in mm.

Performance Chart



Additional Notes

Selected Ancillaries

1 x ES-LCD Ecosmart LCD Touch Screen User Control (White)

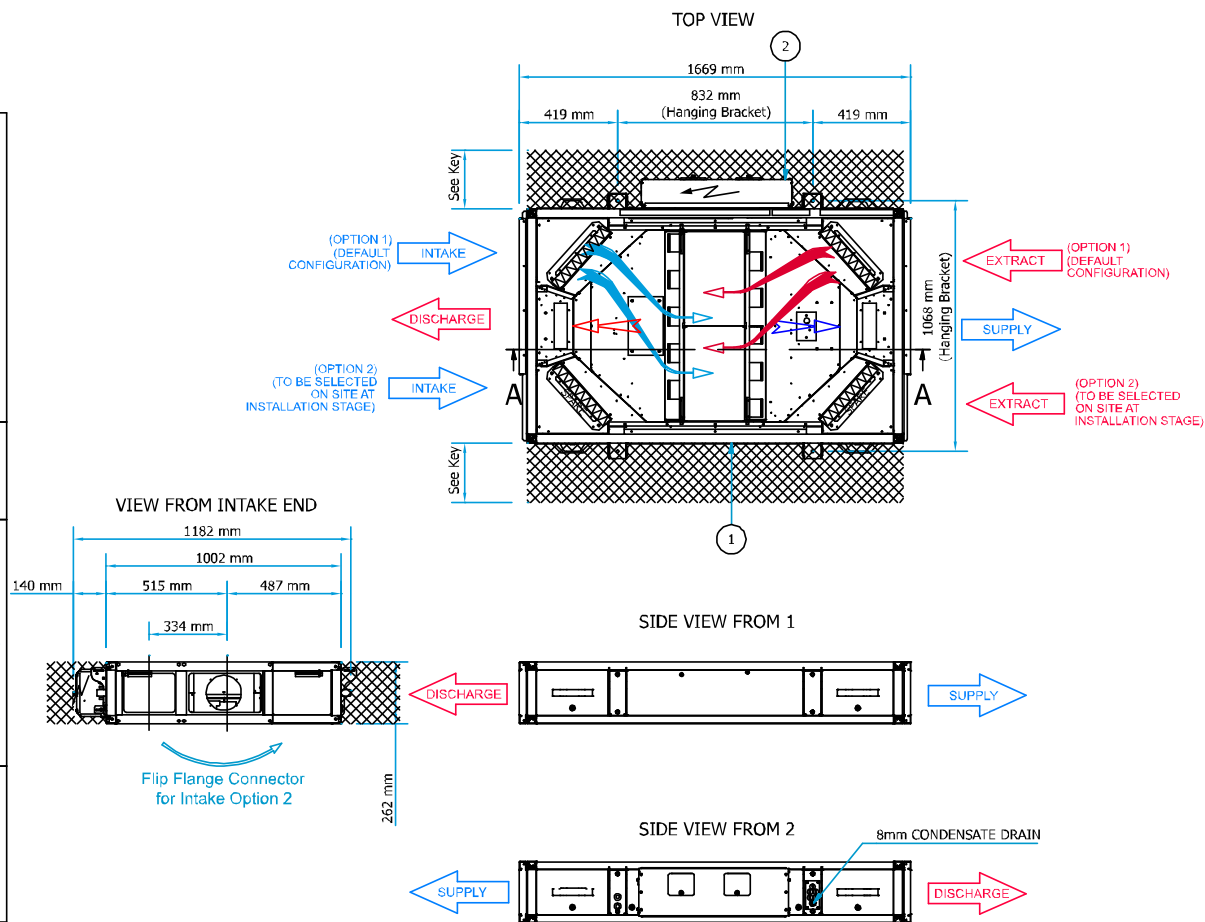
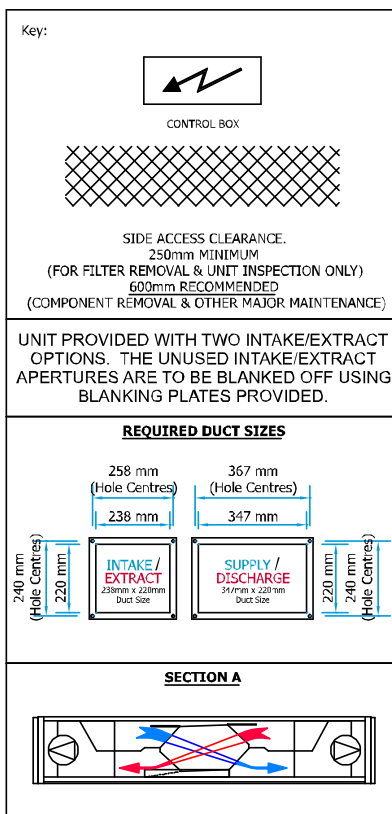
Specification

XBC15HA-NNN-E-LS4S. 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. Suitable for Coastal Environment. 1 year warranty (UK and Ireland only)

ES-LCD

LCD touch screen ventilation user control panel in white compatible with Ecosmart system. Control has built in time clock. Supplied with pre-plugged 10m length of communication cable.

A-A (0.06 : 1)



You can download this CAD drawing from <http://www.nuaire.info/CAD/xbcplus15-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.

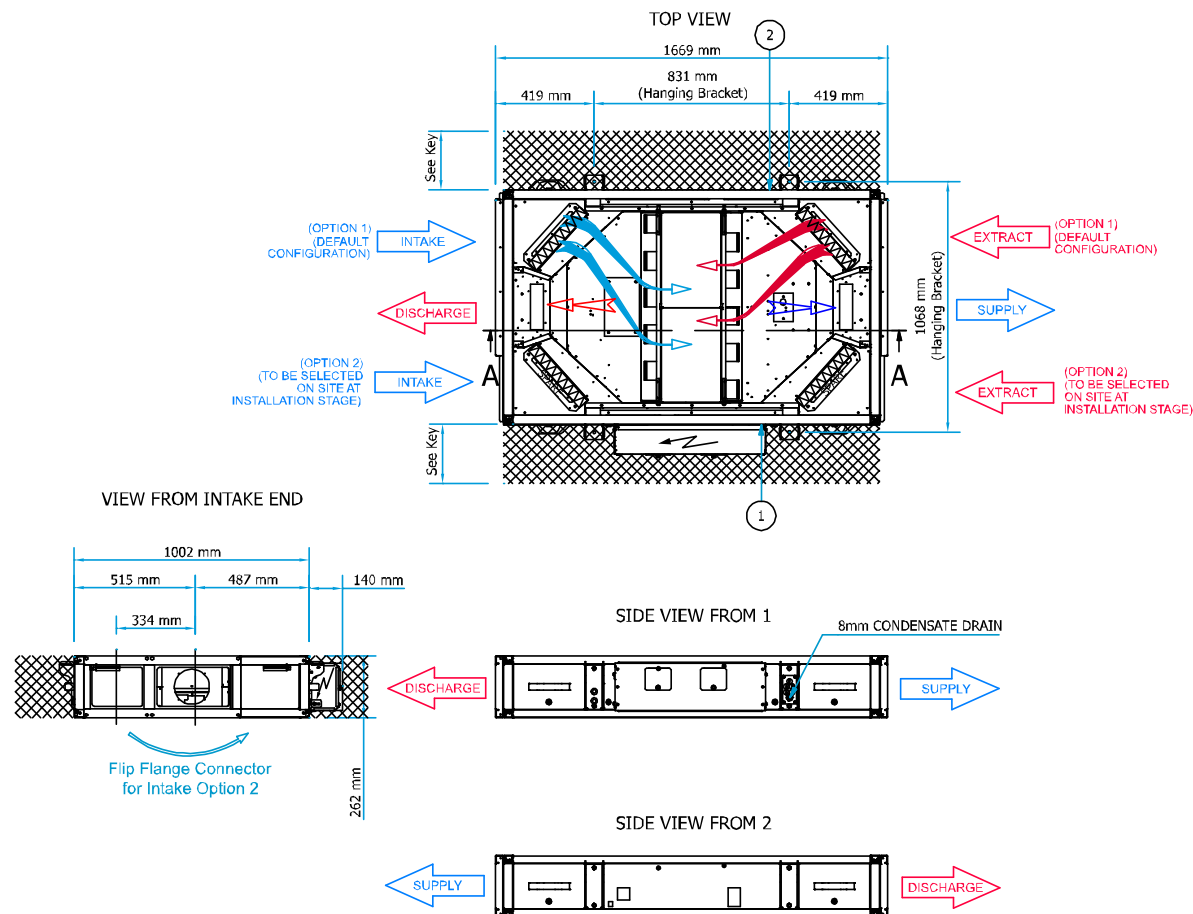
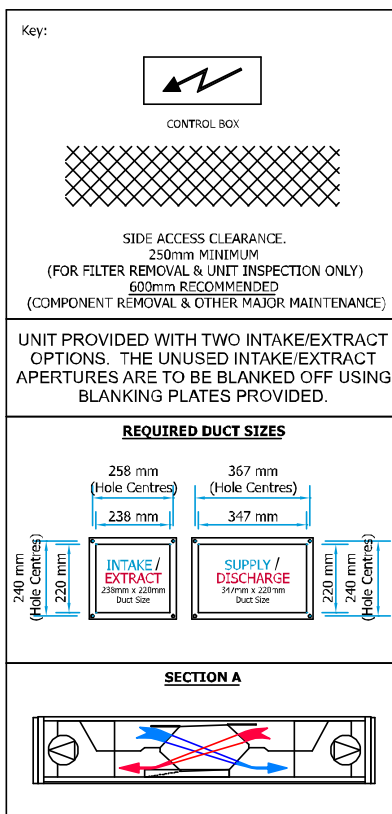
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A-A (0.06 : 1)



You can download this CAD drawing from <http://www.nuaire.info/CAD/xbcplus15-hn-r.dwg>

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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/01/04

Technical Data

XBC+
Fan Code: **XBC25HA-NNN-E-LS4S**
Installation Manual Links: 671948

Required duty: 0.14 m³/s at 200 Pa
Actual duty: 0.24 m³/s at 650 Pa
Actual at required flow: 0.14 m³/s at 804 Pa

When speed controlled to required duty (55.52%):

Motor Input Power: 0.158 kW
Specific Fan Power: 1.2 W/(l/s)

At full speed:

Motor Input Power: 0.924 kW
Specific Fan Power: 3.8 W/(l/s)

Maximum Fan Speed: 3,700 RPM
Electrical Supply: 230V 1 Phase 50 Hz
Nominal Motor Rating: 1 kW
Motor current (flc): 6.9 A
Motor starting current (sc): 6.9 A

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

Sound Data

Noise calculated speed controlled to required duty (55.52%)

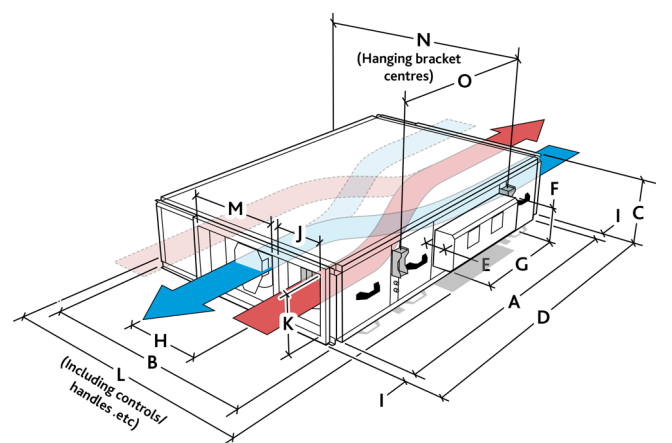
Sound Power Levels re 1 pWatts (Hz):

Hz	63	125	250	500	1k	2k	4k	8k	dBA
Breakout	59	58	45	48	35	34	34	26	36
Induct Intake	67	61	59	61	56	52	44	43	50
Induct Supply	72	73	68	72	62	62	58	60	60
Induct Discharge	73	74	68	71	62	62	60	61	60
Induct Extract	66	60	58	61	55	52	44	44	49
For 100% speed:	+13	+13	+13	+13	+13	+13	+13	+13	

dBA is spherical at 1 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

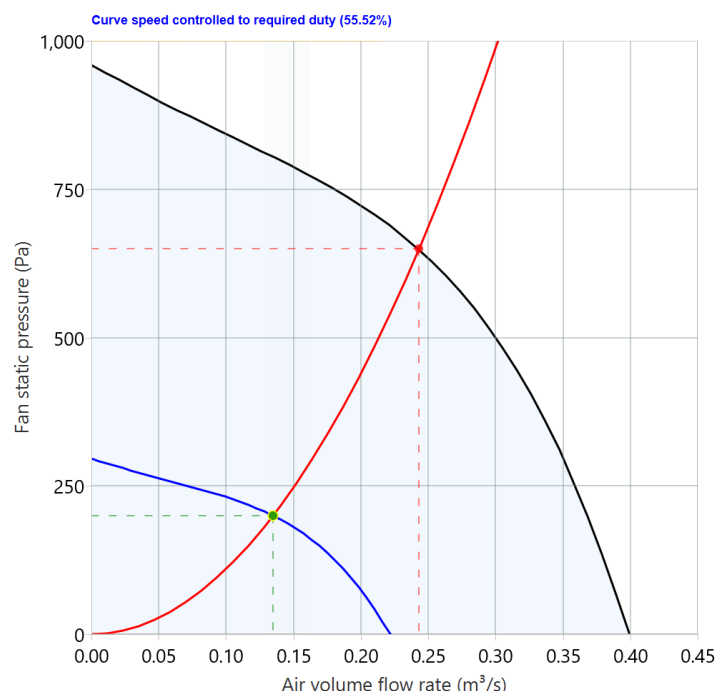


A	B	C	D	E	F	G	H	I
1713	1160	346	1773	140	210	640	413	30
J	K	L	M	N	O	kg		
252	302	1350	471	1232	884	242.0		

Length: Width: Height:
1713 1160 346

Drawing is for dimensional purposes only. Dimensions in mm.

Performance Chart



Additional Notes

Selected Ancillaries

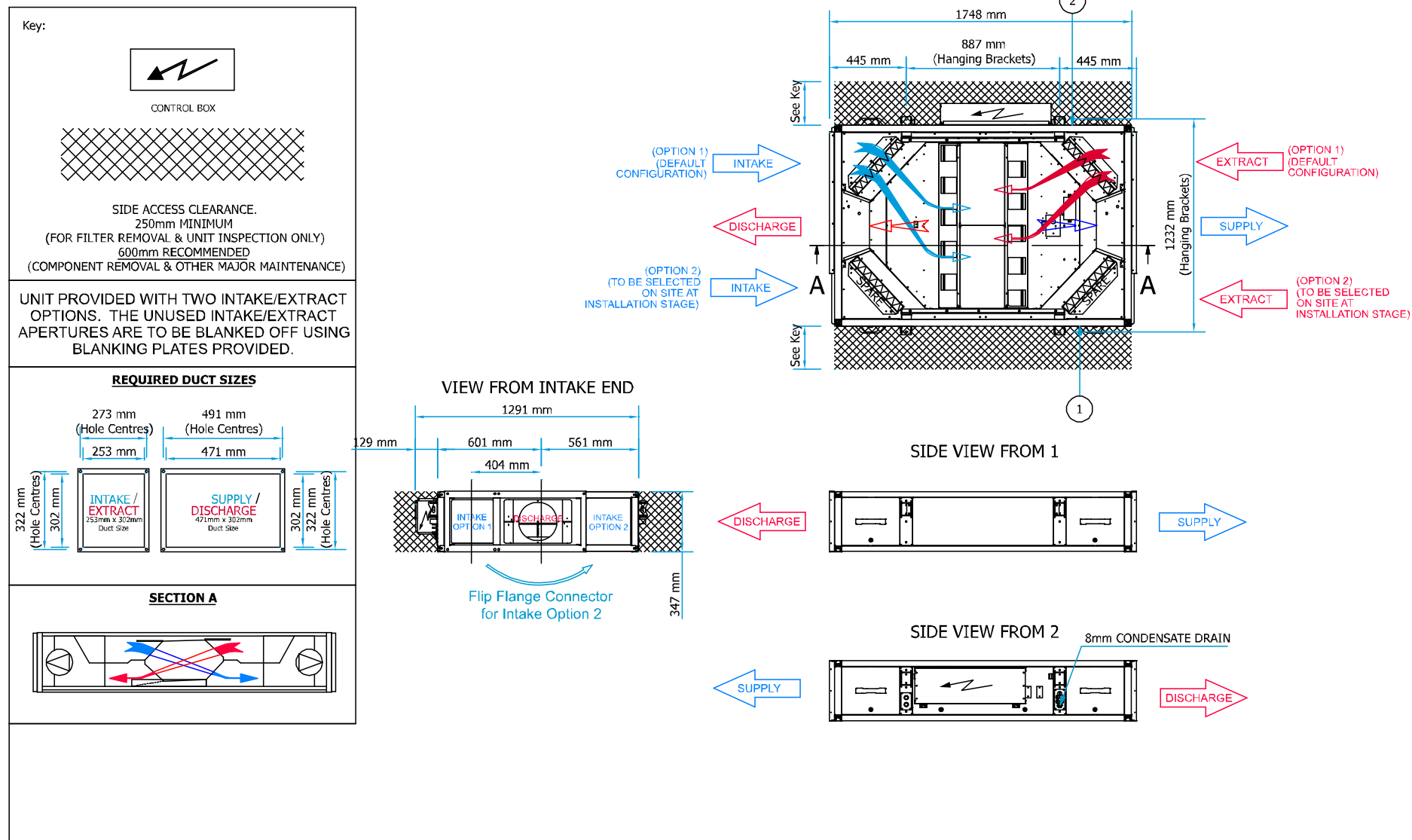
1 x ES-LCD Ecosmart LCD Touch Screen User Control (White)

Specification

XBC25HA-NNN-E-LS4S. 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. Suitable for Coastal Environment. 1 year warranty (UK and Ireland only)

ES-LCD

LCD touch screen ventilation user control panel in white compatible with Ecosmart system. Control has built in time clock. Supplied with pre-plugged 10m length of communication cable.



You can download this CAD drawing from <http://www.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*****

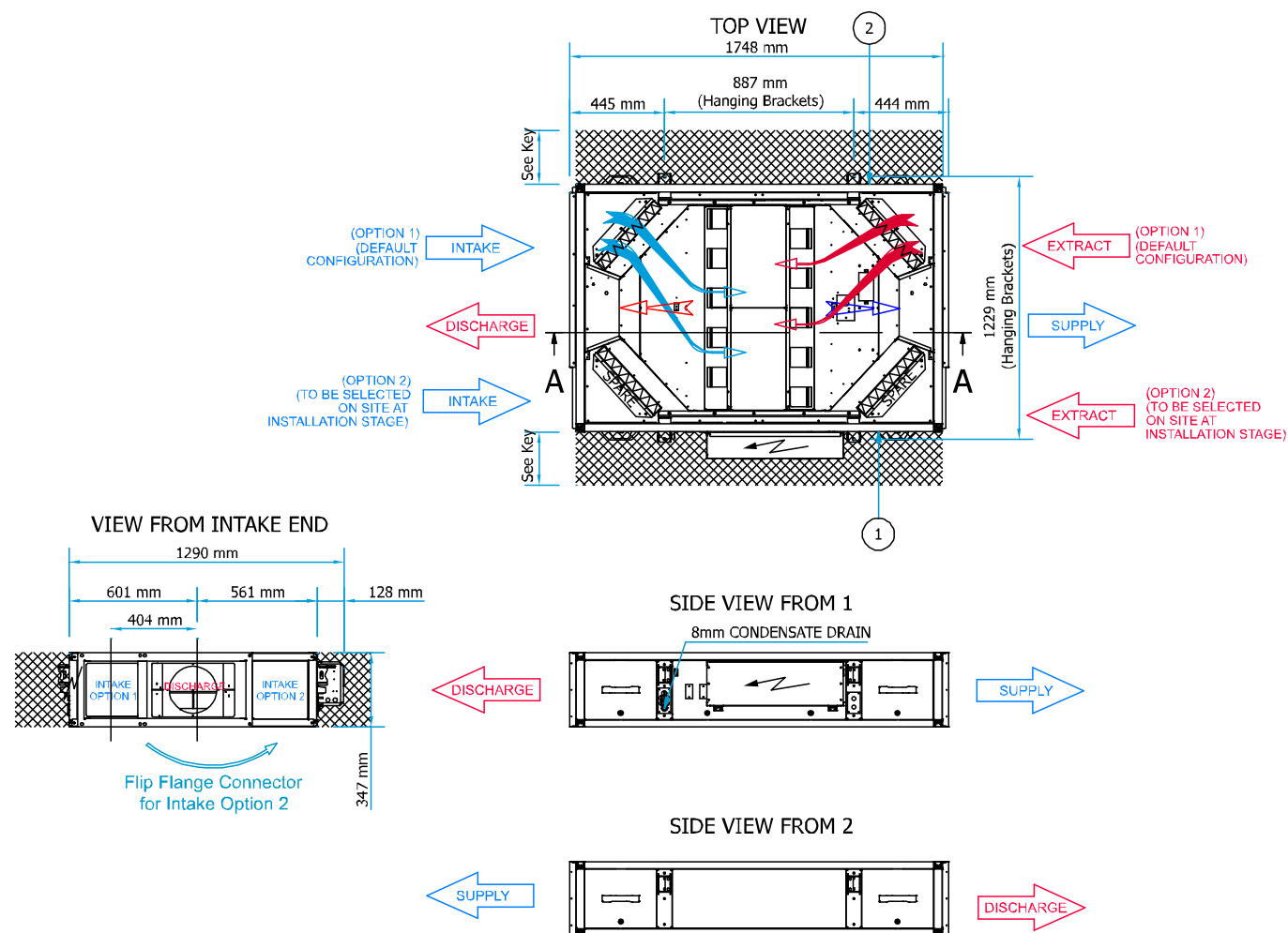
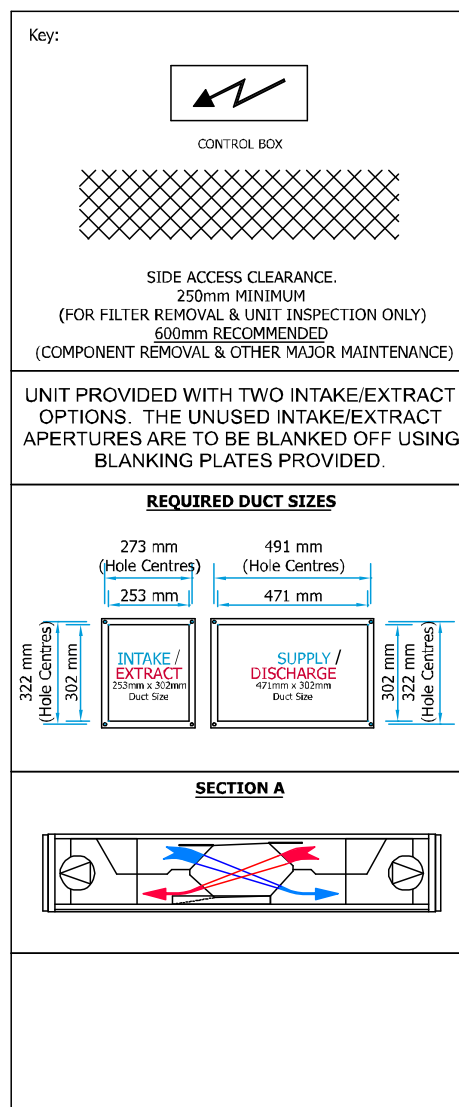
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You can download this CAD drawing from <http://www.nuaire.info/CAD/xbcplus25-hn-r.dwg>

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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 23 Oct 2020 10:28 using software version 4.6.3730.0; by user thomashu

Project Details

Location: HRU01/05

Technical Data

XBC+

Fan Code: **XBC15HA-NNN-E-LS4S**
Installation Manual Links: 671948

Required duty: 0.1 m³/s at 150 Pa
Actual duty: 0.14 m³/s at 284 Pa
Actual at required flow: 0.1 m³/s at 464 Pa

When speed controlled to required duty (72.73%):

Motor Input Power: 0.136 kW
Specific Fan Power: 1.4 W/(l/s)

At full speed:

Motor Input Power: 0.353 kW
Specific Fan Power: 2.6 W/(l/s)

Maximum Fan Speed: 4,000 RPM
Electrical Supply: 230V 1 Phase 50 Hz
Nominal Motor Rating: 0.34 kW
Motor current (flc): 2.8 A
Motor starting current (sc): 2.8 A

Max. operating temp: 60°C
Weight: 195 kg

Sound Data

Noise calculated speed controlled to required duty (72.73%)

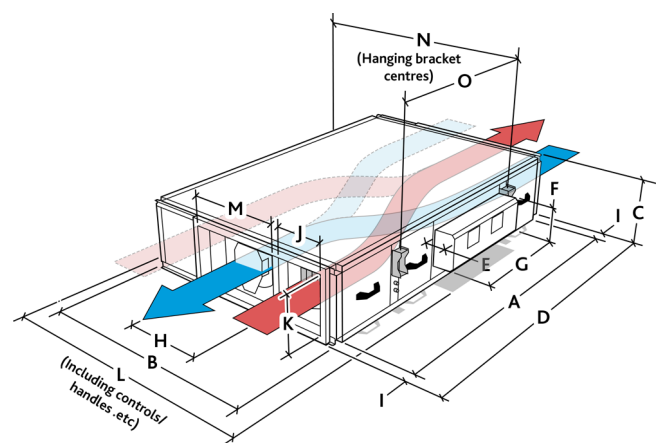
Sound Power Levels re 1 pWatts (Hz):

Hz	63	125	250	500	1k	2k	4k	8k	dBA
Breakout	54	50	35	36	34	30	27	<16	19
Induct Intake	63	53	48	49	55	48	40	36	35
Induct Supply	68	65	58	59	61	57	52	50	43
Induct Discharge	68	66	58	60	61	58	53	51	44
Induct Extract	62	52	48	48	54	48	38	34	34
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.

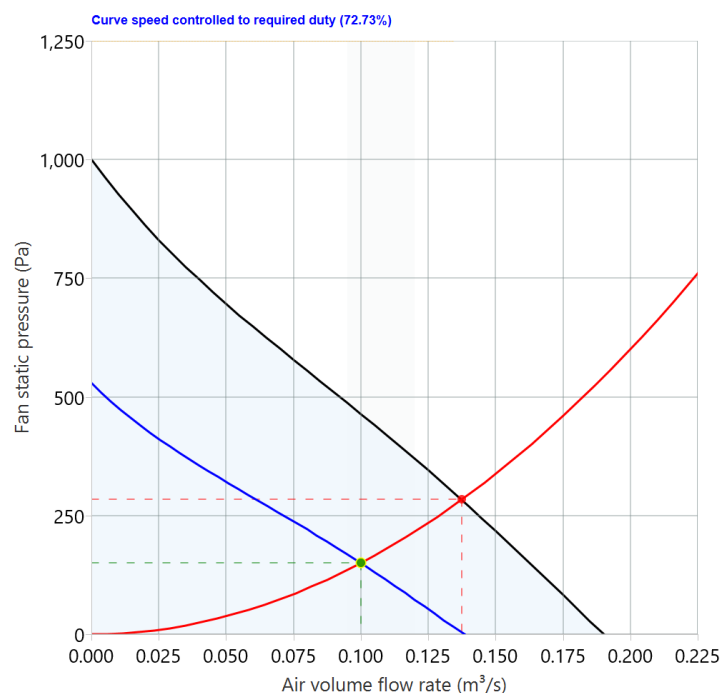
Fan Dimensions



A	B	C	D	E	F	G	H	I
1600	1000	260	1660	140	210	640	334	30
J	K	L	M	N	O	kg		
238	220	1205	347	1068	832	195.0		
Length: Width:		Height:						
1600		1000		260				

Drawing is for dimensional purposes only. Dimensions in mm.

Performance Chart



Additional Notes

Selected Ancillaries

1 x ES-LCD Ecosmart LCD Touch Screen User Control (White)

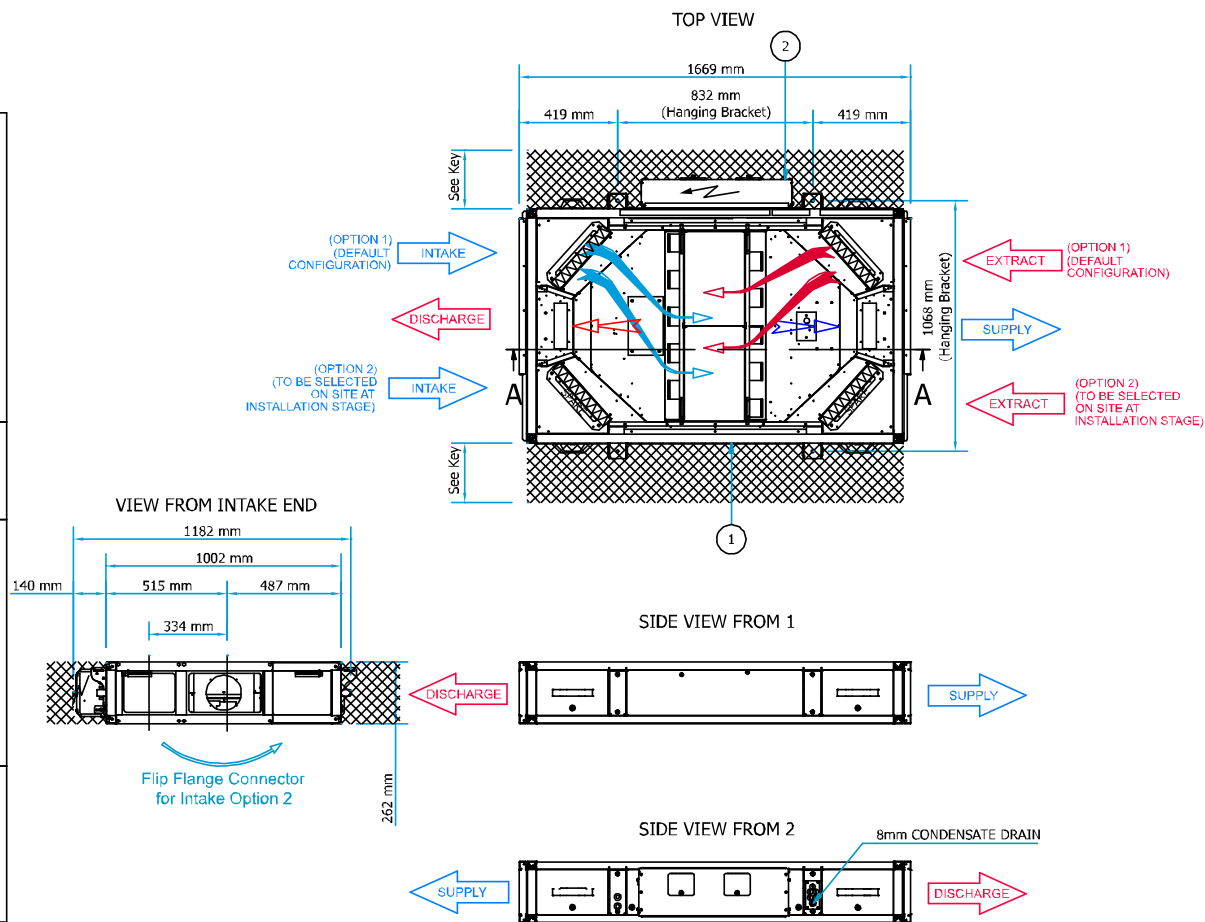
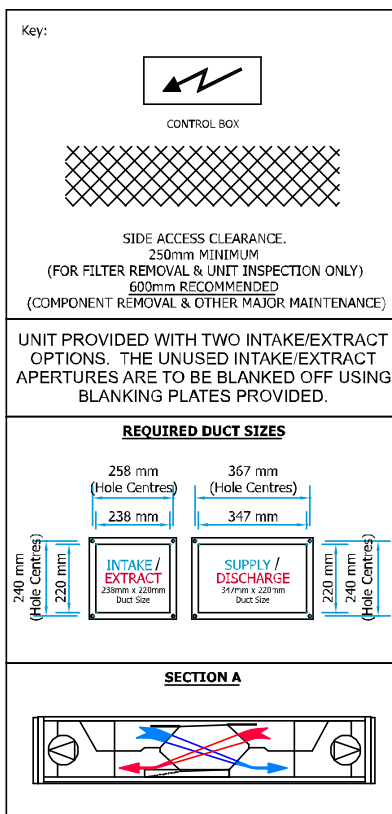
Specification

XBC15HA-NNN-E-LS4S. 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. Suitable for Coastal Environment. 1 year warranty (UK and Ireland only)

ES-LCD

LCD touch screen ventilation user control panel in white compatible with Ecosmart system. Control has built in time clock. Supplied with pre-plugged 10m length of communication cable.

A-A (0.06 : 1)



You can download this CAD drawing from <http://www.nuaire.info/CAD/xbcplus15-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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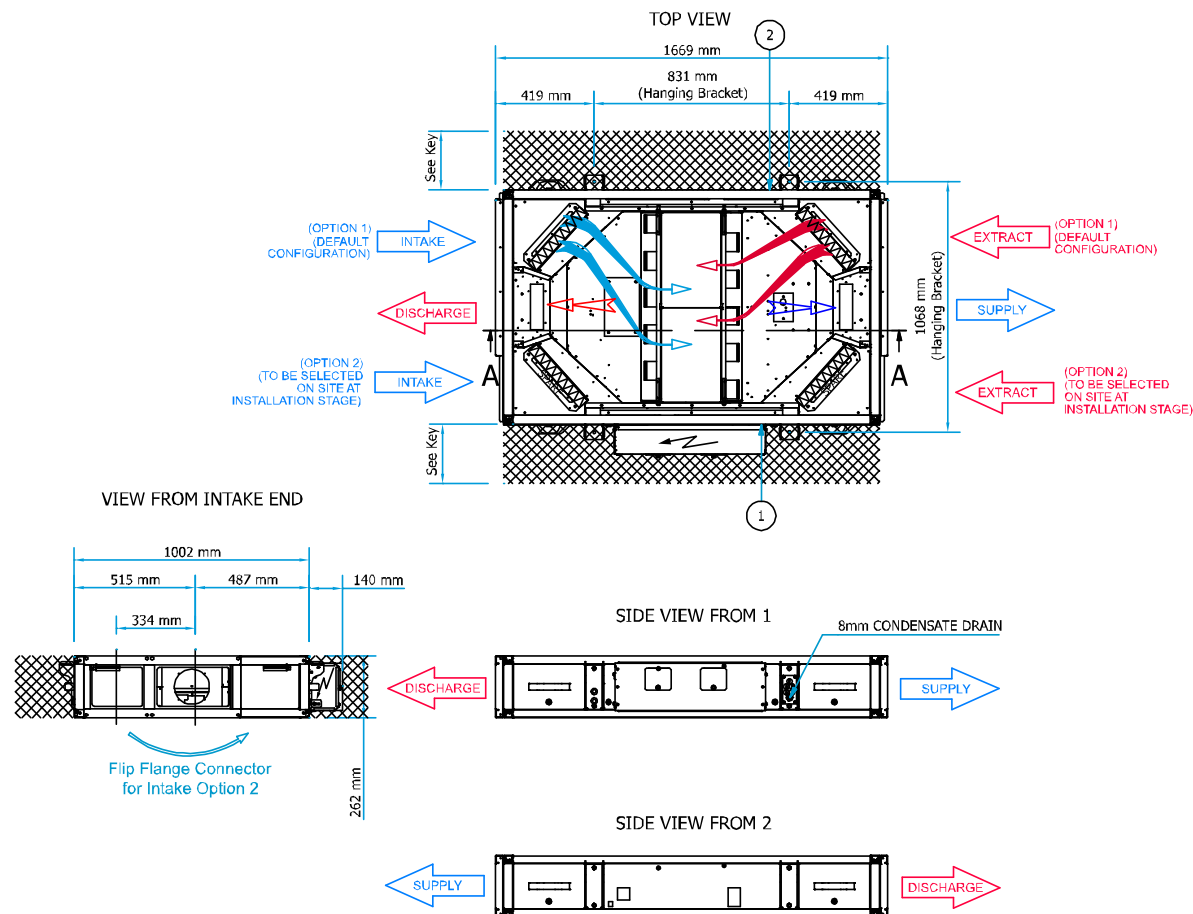
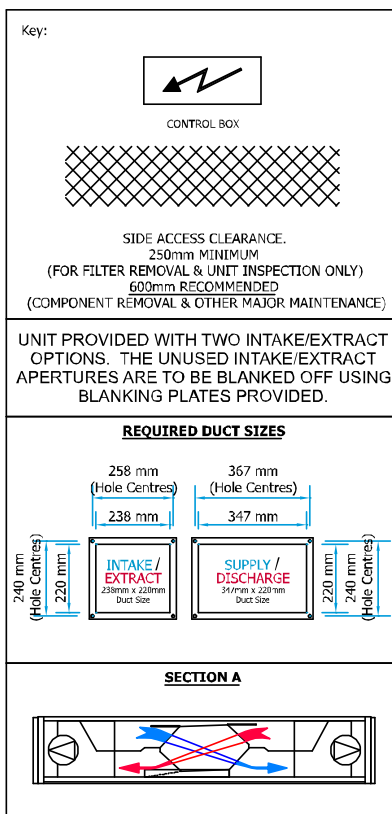
Drawing generated automatically by Nuaire Selector

Do NOT scale from this drawing.



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A-A (0.06 : 1)



You can download this CAD drawing from <http://www.nuaire.info/CAD/xbcplus15-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*****

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

Drawing generated automatically by Nuaire Selector

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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 23 Oct 2020 10:28 using software version 4.6.3730.0; by user thomashu

Project Details

Location: HRU01/06

Technical Data

XBC+

Fan Code: **XBC15HA-NNN-E-LS4S**
Installation Manual Links: 671948

Required duty: 0.1 m³/s at 150 Pa
Actual duty: 0.14 m³/s at 284 Pa
Actual at required flow: 0.1 m³/s at 464 Pa

When speed controlled to required duty (72.73%):

Motor Input Power: 0.136 kW
Specific Fan Power: 1.4 W/(l/s)

At full speed:

Motor Input Power: 0.353 kW
Specific Fan Power: 2.6 W/(l/s)

Maximum Fan Speed: 4,000 RPM
Electrical Supply: 230V 1 Phase 50 Hz
Nominal Motor Rating: 0.34 kW
Motor current (flc): 2.8 A
Motor starting current (sc): 2.8 A

Max. operating temp: 60°C
Weight: 195 kg

Sound Data

Noise calculated speed controlled to required duty (72.73%)

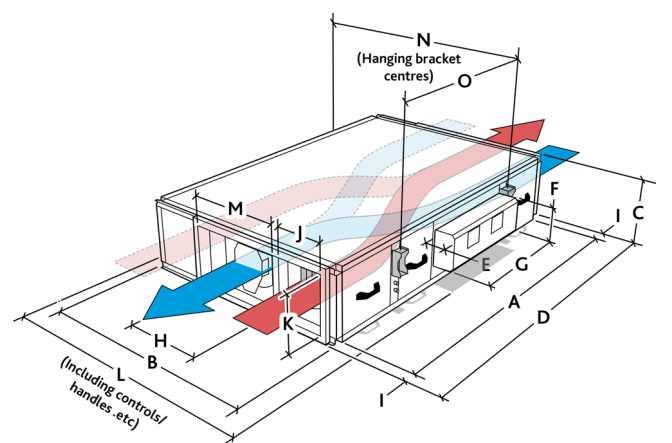
Sound Power Levels re 1 pWatts (Hz):

Hz	63	125	250	500	1k	2k	4k	8k	dBA
Breakout	54	50	35	36	34	30	27	<16	19
Induct Intake	63	53	48	49	55	48	40	36	35
Induct Supply	68	65	58	59	61	57	52	50	43
Induct Discharge	68	66	58	60	61	58	53	51	44
Induct Extract	62	52	48	48	54	48	38	34	34
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.

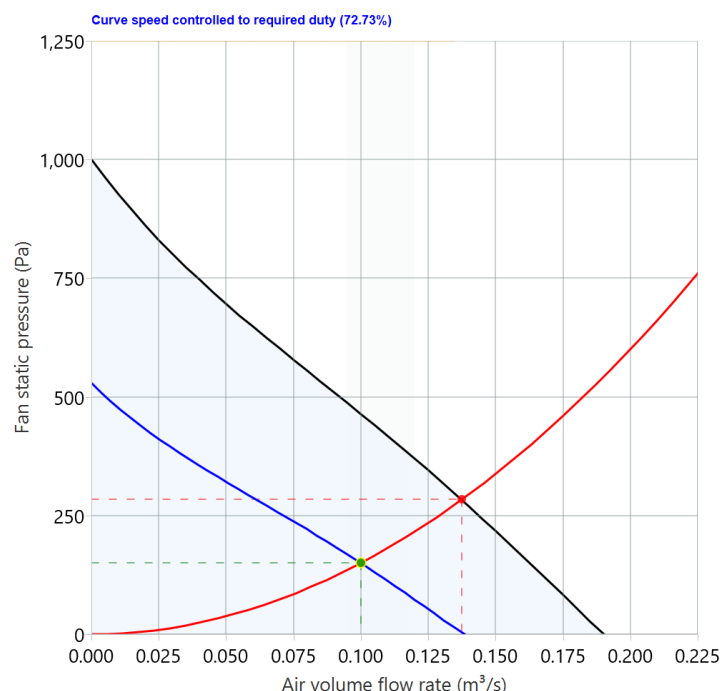
Fan Dimensions



A	B	C	D	E	F	G	H	I
1600	1000	260	1660	140	210	640	334	30
J	K	L	M	N	O	kg		
238	220	1205	347	1068	832	195.0		
Length:	Width:	Height:						
1600	1000	260						

Drawing is for dimensional purposes only. Dimensions in mm.

Performance Chart



Additional Notes

Selected Ancillaries

1 x ES-LCD Ecosmart LCD Touch Screen User Control (White)

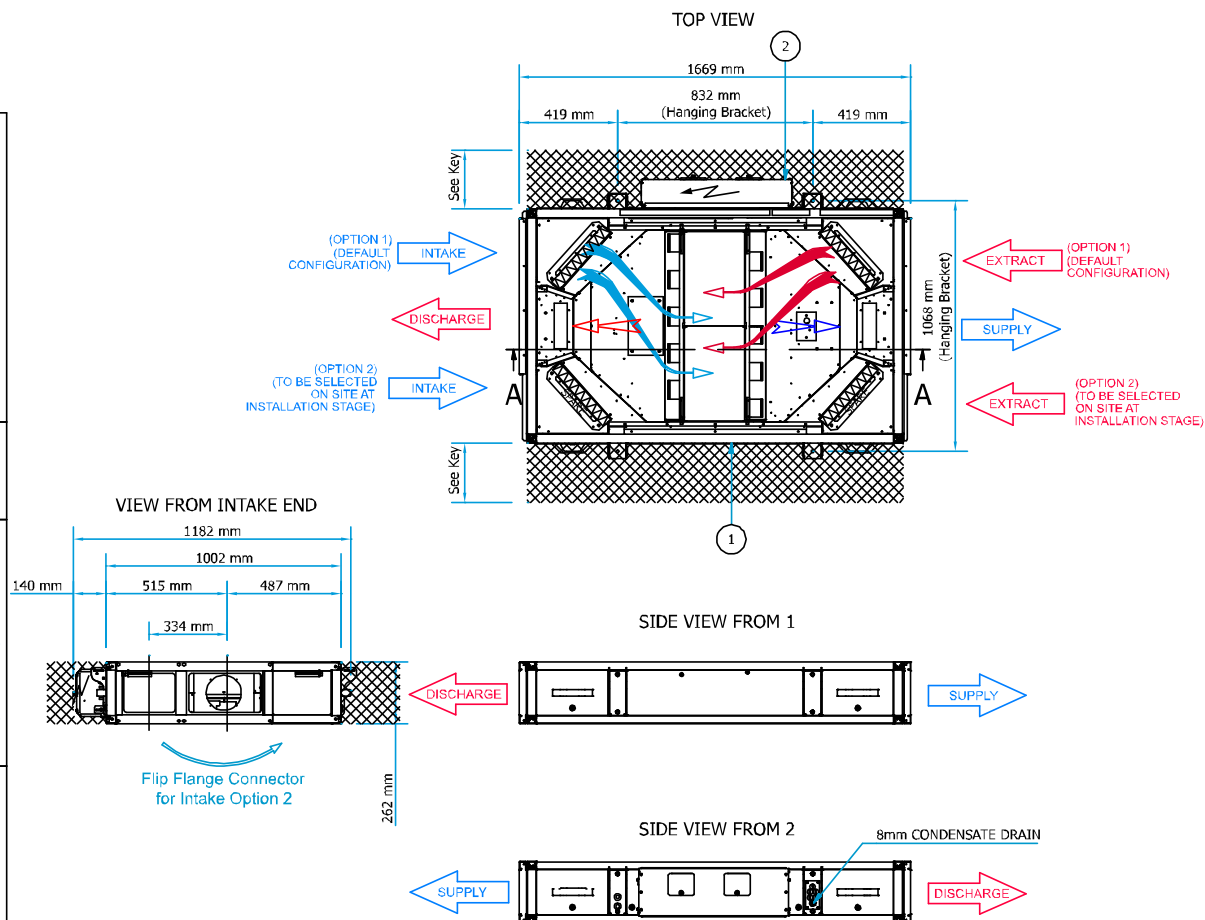
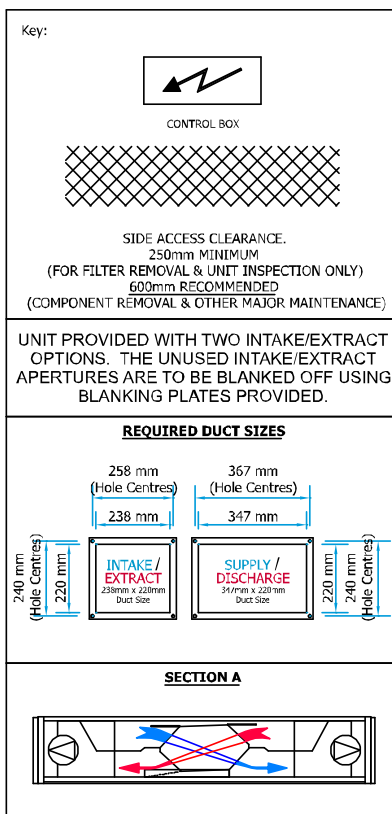
Specification

XBC15HA-NNN-E-LS4S. 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. Suitable for Coastal Environment. 1 year warranty (UK and Ireland only)

ES-LCD

LCD touch screen ventilation user control panel in white compatible with Ecosmart system. Control has built in time clock. Supplied with pre-plugged 10m length of communication cable.

A-A (0.06 : 1)



You can download this CAD drawing from <http://www.nuaire.info/CAD/xbcplus15-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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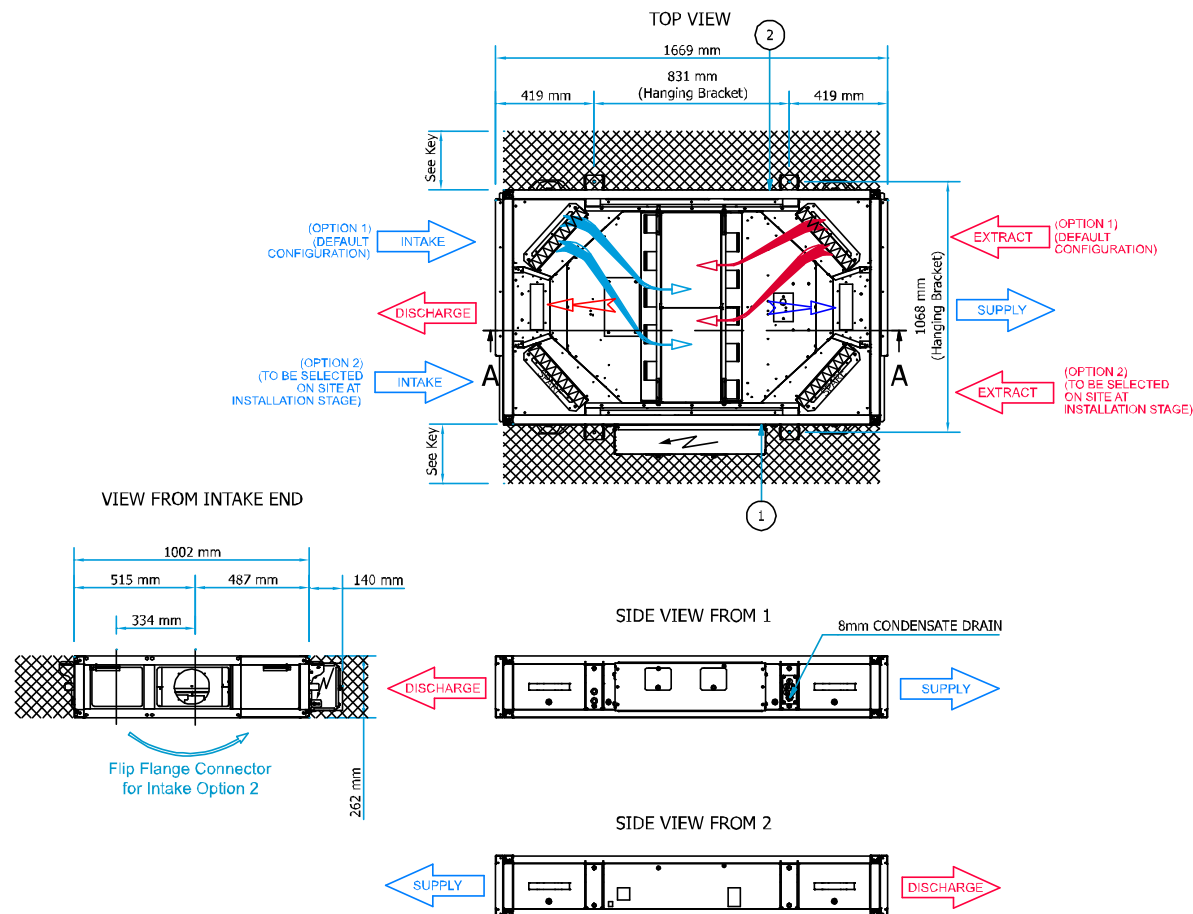
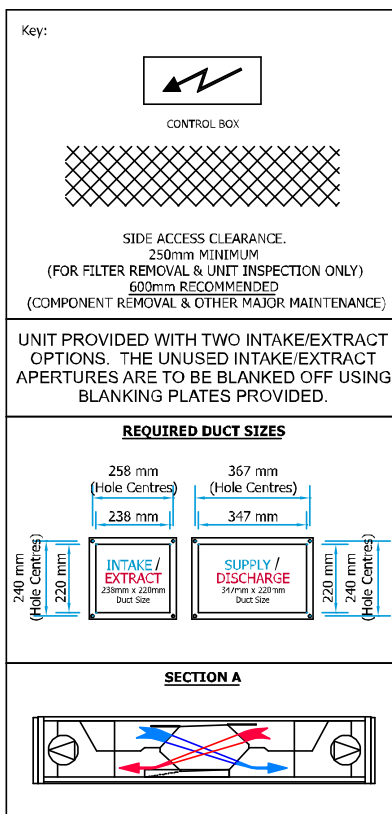
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A-A (0.06 : 1)



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This data sheet produced on 23 Oct 2020 10:28 using software version 4.6.3730.0; by user thomashu

Project Details

Location: HRU/01/07

Technical Data

XBC+
Fan Code: **XBC15HA-NNN-E-LS4S**
Installation Manual Links: 671948

Required duty: 0.06 m³/s at 150 Pa
Actual duty: 0.1 m³/s at 447 Pa
Actual at required flow: 0.06 m³/s at 648 Pa

When speed controlled to required duty (57.85%):

Motor Input Power: 0.067 kW
Specific Fan Power: 1.1 W/(l/s)

At full speed:

Motor Input Power: 0.345 kW
Specific Fan Power: 3.3 W/(l/s)

Maximum Fan Speed: 4,000 RPM
Electrical Supply: 230V 1 Phase 50 Hz
Nominal Motor Rating: 0.34 kW
Motor current (flc): 2.8 A
Motor starting current (sc): 2.8 A

Max. operating temp: 60°C
Weight: 195 kg

Sound Data

Noise calculated speed controlled to required duty (57.85%)

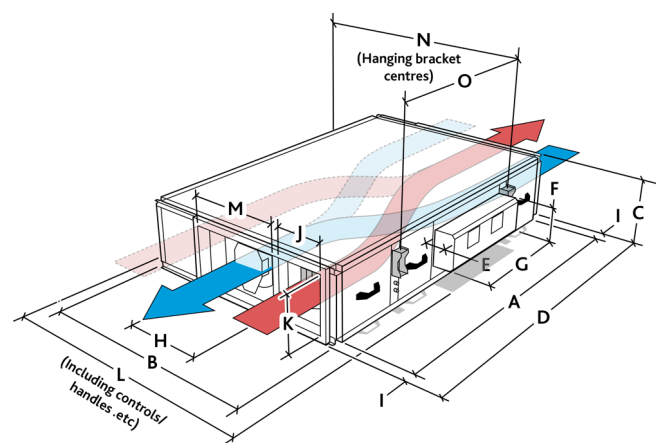
Sound Power Levels re 1 pWatts (Hz):

Hz	63	125	250	500	1k	2k	4k	8k	dBA
Breakout	49	45	30	31	29	25	22	<16	14
Induct Intake	58	48	43	44	50	43	35	31	30
Induct Supply	63	60	53	54	56	52	47	45	38
Induct Discharge	63	61	53	55	56	53	48	46	39
Induct Extract	57	47	43	43	49	43	33	29	30
For 100% speed:	+12	+12	+12	+12	+12	+12	+12	+12	

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

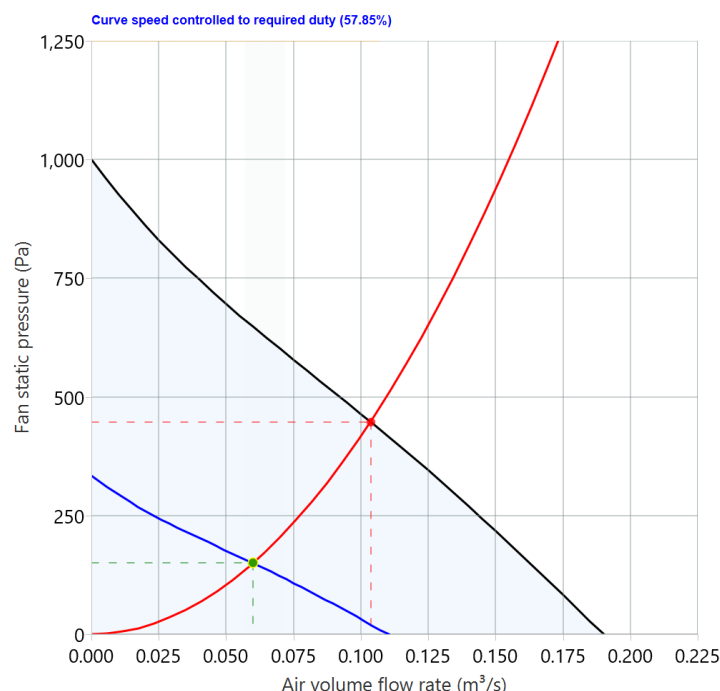


A	B	C	D	E	F	G	H	I
1600	1000	260	1660	140	210	640	334	30
J	K	L	M	N	O	kg		
238	220	1205	347	1068	832	195.0		

Length: 1600
Width: 1000
Height: 260

Drawing is for dimensional purposes only. Dimensions in mm.

Performance Chart



Additional Notes

Selected Ancillaries

1 x ES-LCD Ecosmart LCD Touch Screen User Control (White)

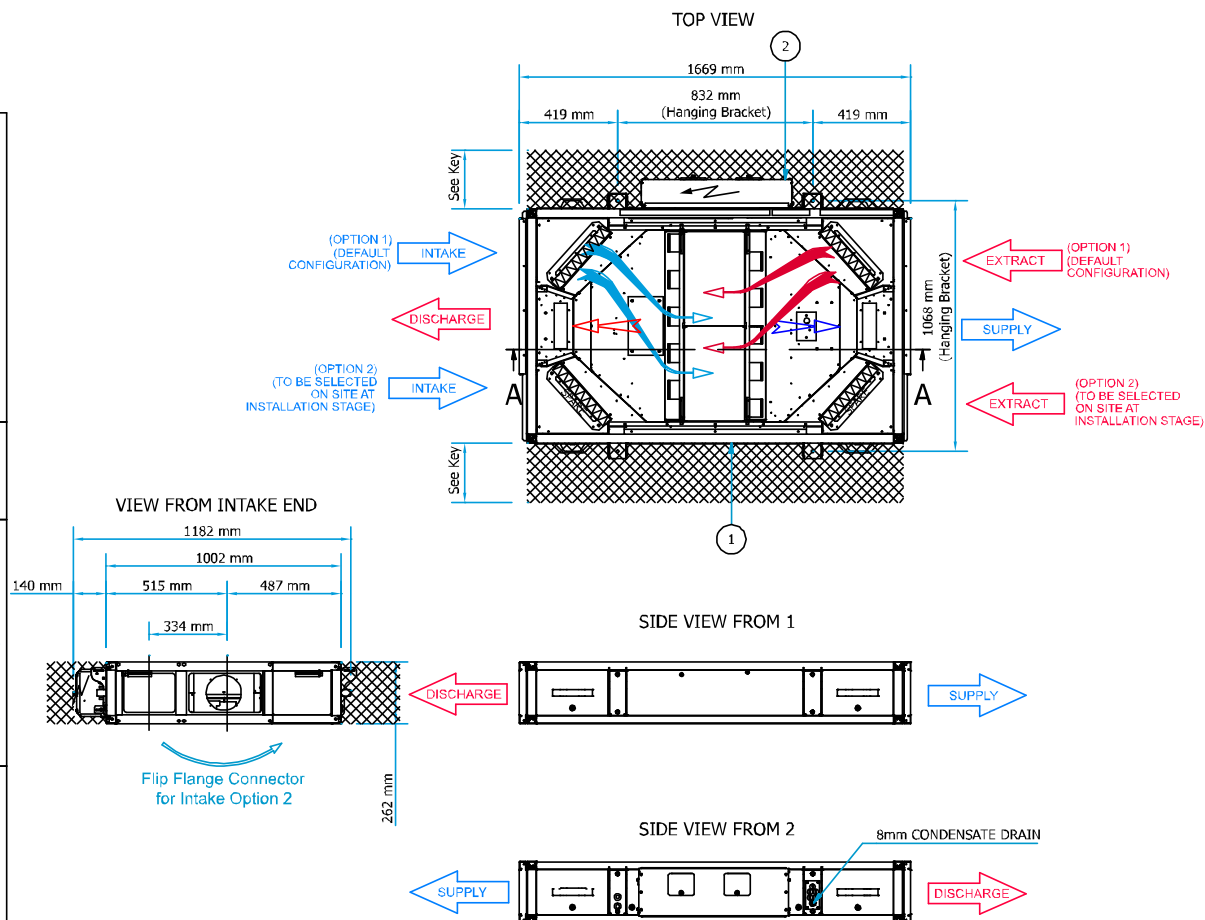
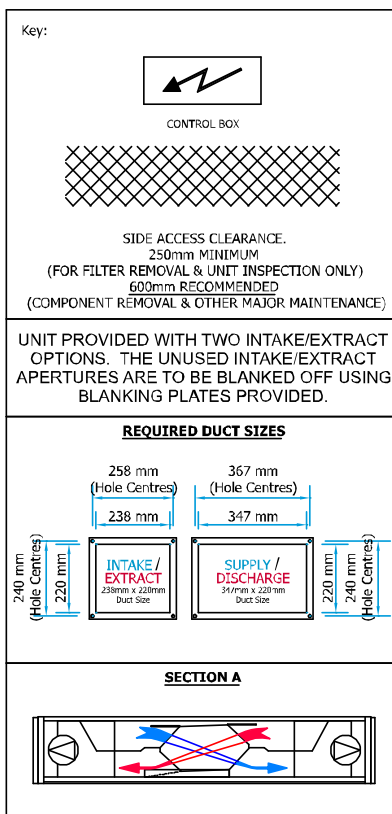
Specification

XBC15HA-NNN-E-LS4S. 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. Suitable for Coastal Environment. 1 year warranty (UK and Ireland only)

ES-LCD

LCD touch screen ventilation user control panel in white compatible with Ecosmart system. Control has built in time clock. Supplied with pre-plugged 10m length of communication cable.

A-A (0.06 : 1)



You can download this CAD drawing from <http://www.nuaire.info/CAD/xbcplus15-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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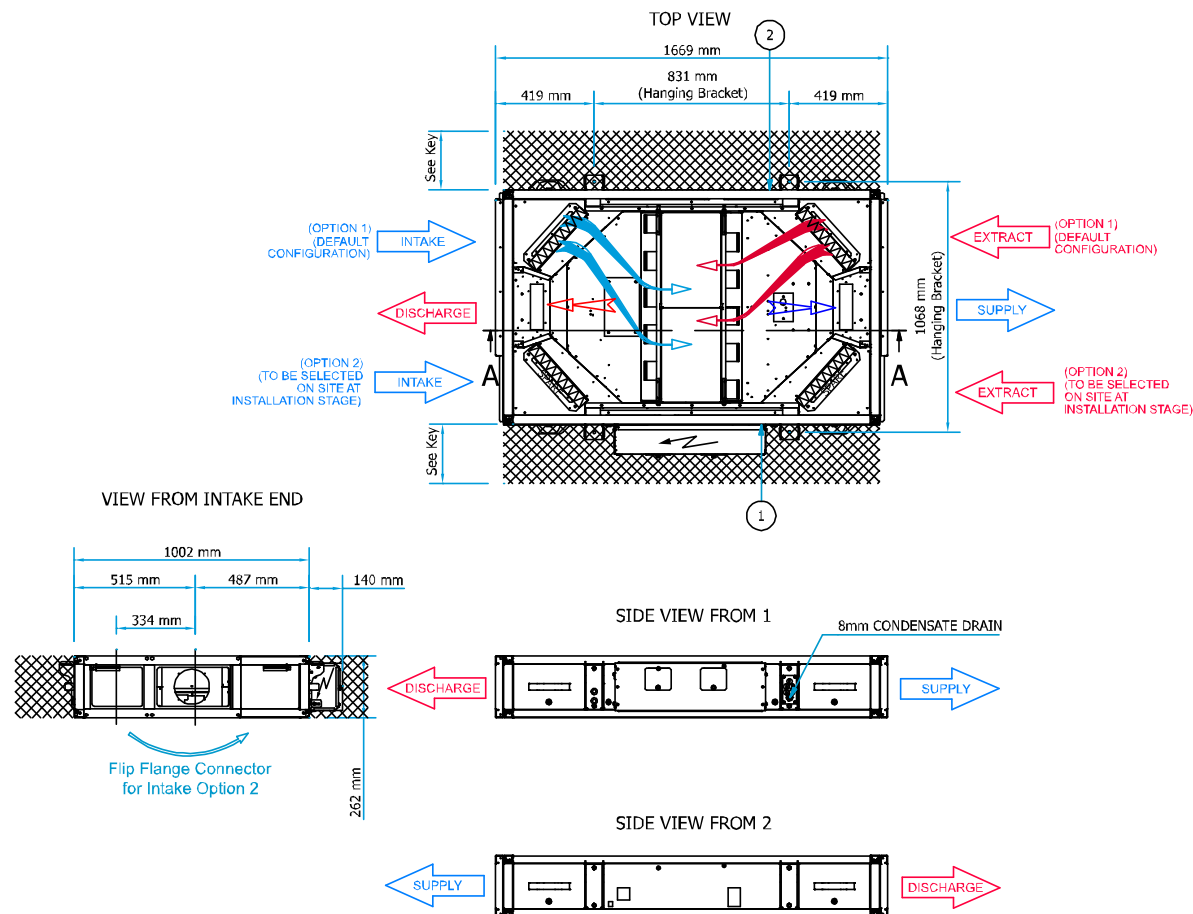
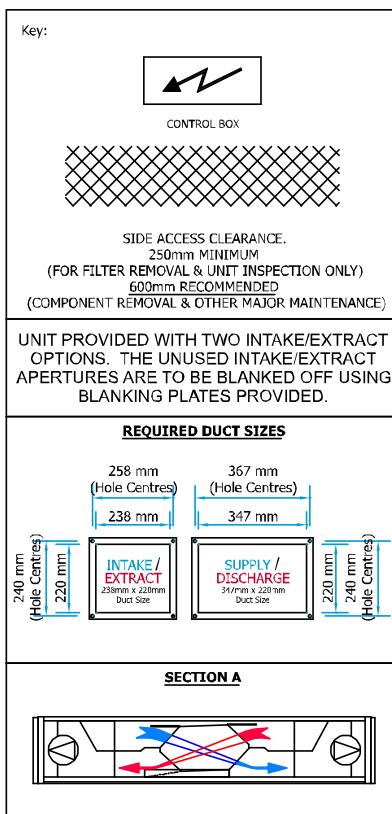
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This data sheet produced on 23 Oct 2020 10:28 using software version 4.6.3730.0; by user thomashu

Project Details

Location: HRU/02/01

Technical Data

XBC+

Fan Code: **XBC25HA-NNN-E-LS4S**
Installation Manual Links: 671948

Required duty: 0.2 m³/s at 150 Pa
Actual duty: 0.33 m³/s at 401 Pa
Actual at required flow: 0.2 m³/s at 722 Pa

When speed controlled to required duty (61.13%):

Motor Input Power: 0.225 kW
Specific Fan Power: 1.1 W/(l/s)

At full speed:

Motor Input Power: 0.986 kW
Specific Fan Power: 3.0 W/(l/s)

Maximum Fan Speed: 3,700 RPM
Electrical Supply: 230V 1 Phase 50 Hz
Nominal Motor Rating: 1 kW
Motor current (flc): 6.9 A
Motor starting current (sc): 6.9 A

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

Sound Data

Noise calculated speed controlled to required duty (61.13%)

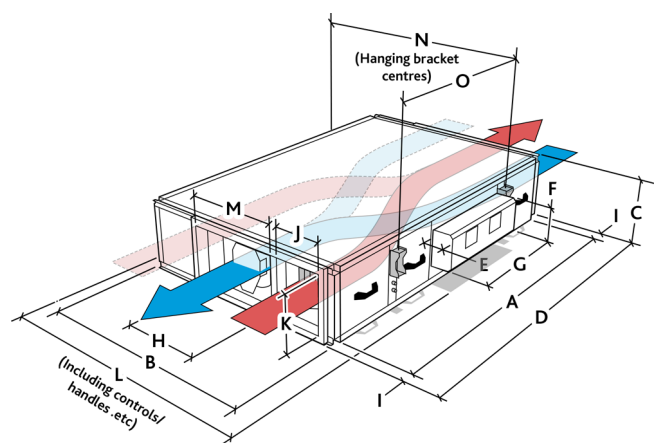
Sound Power Levels re 1 pWatts (Hz):

Hz	63	125	250	500	1k	2k	4k	8k	dBA
Breakout	61	60	47	50	37	36	36	28	38
Induct Intake	69	63	61	63	58	54	46	45	52
Induct Supply	74	75	70	74	64	64	60	62	62
Induct Discharge	75	76	70	73	64	64	62	63	62
Induct Extract	68	62	60	63	57	54	46	46	52
For 100% speed:	+11	+11	+11	+11	+11	+11	+11	+11	

dBA is spherical at 1 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.

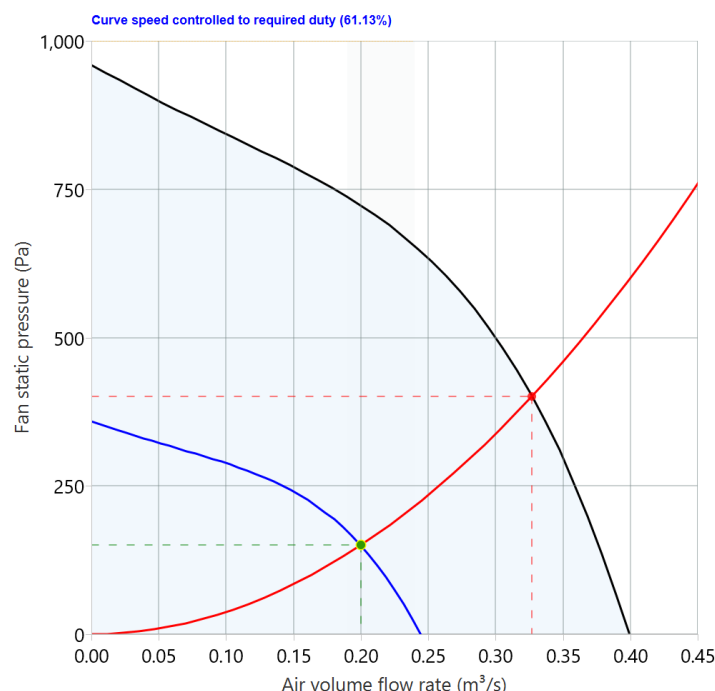
Fan Dimensions



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.

Performance Chart



Additional Notes

Selected Ancillaries

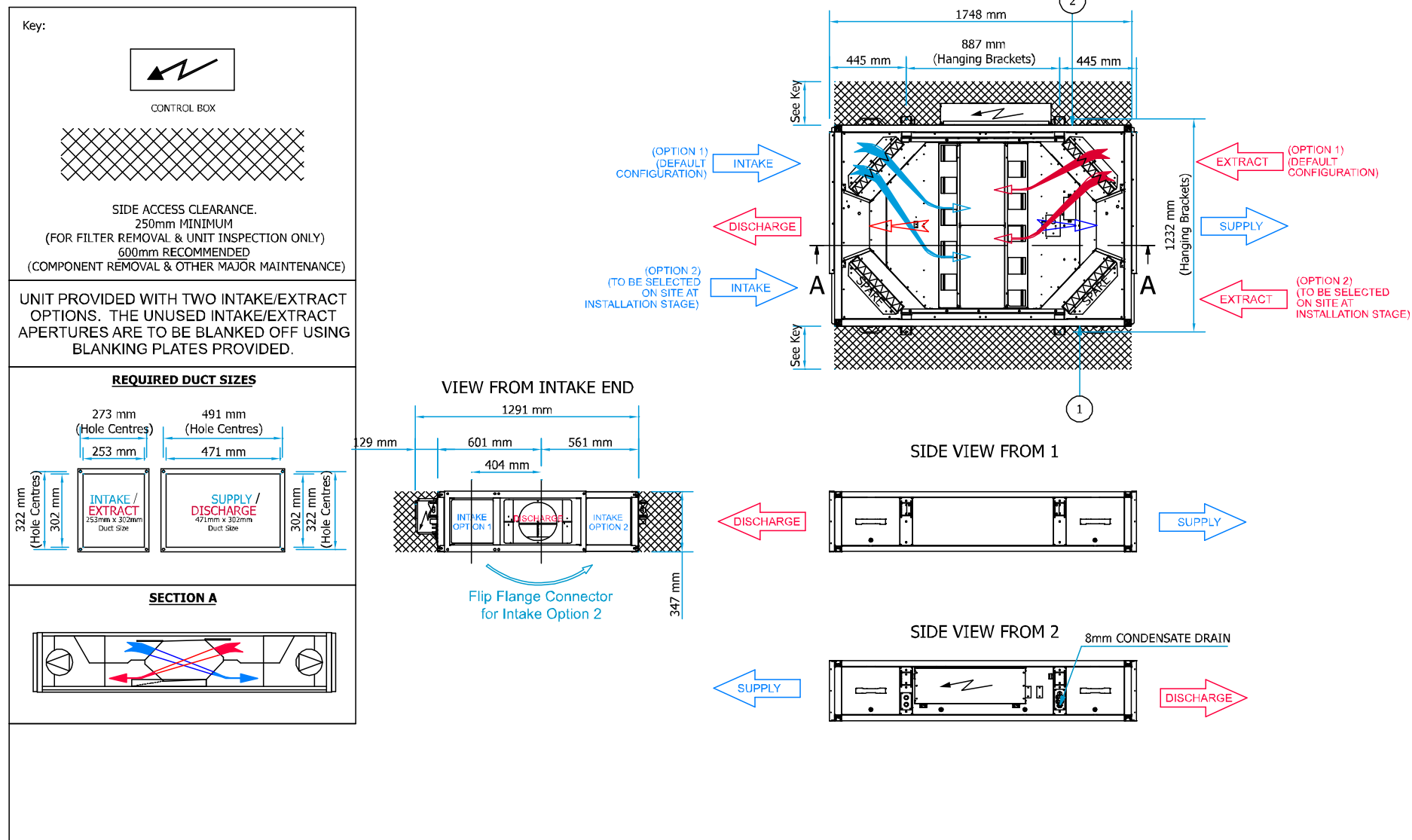
1 x ES-LCD Ecosmart LCD Touch Screen User Control (White)

Specification

XBC25HA-NNN-E-LS4S. 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. Suitable for Coastal Environment. 1 year warranty (UK and Ireland only)

ES-LCD

LCD touch screen ventilation user control panel in white compatible with Ecosmart system. Control has built in time clock. Supplied with pre-plugged 10m length of communication cable.



You can download this CAD drawing from <http://www.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*****

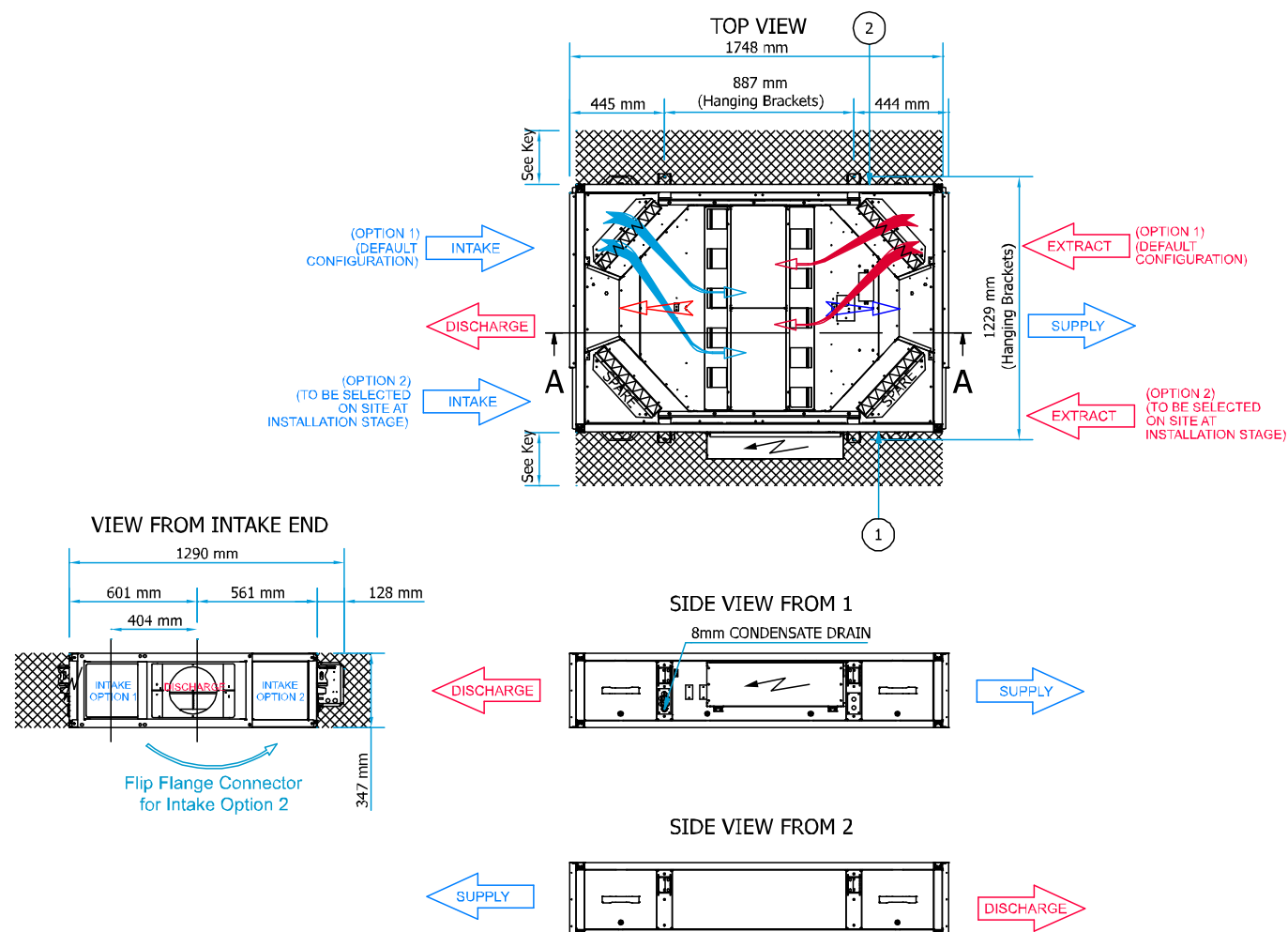
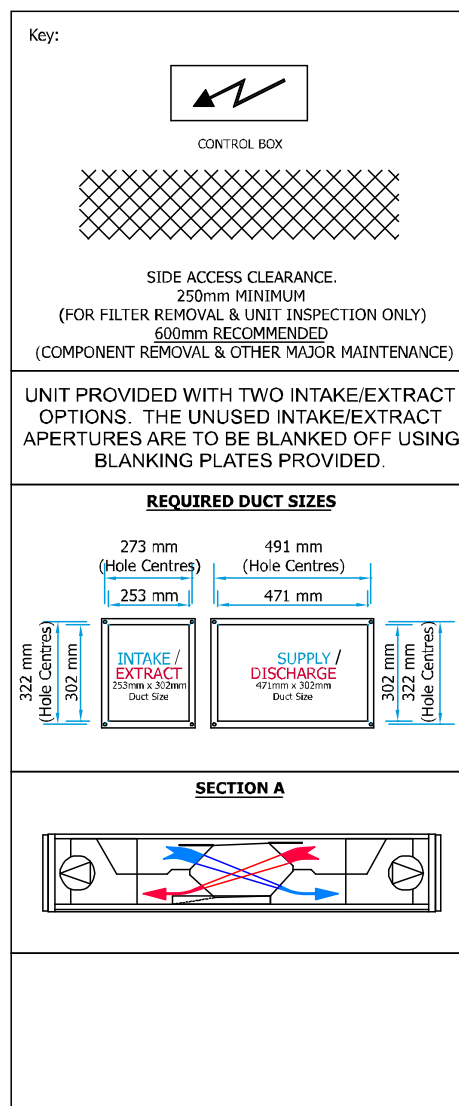
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Drawing generated automatically by Nuaire Selector

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

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This data sheet produced on 23 Oct 2020 10:28 using software version 4.6.3730.0; by user thomashu

Project Details

Location: HRU/02/02

Technical Data

XBC+
Fan Code: **XBC25HA-NNN-E-LS4S**
Installation Manual Links: 671948

Required duty: 0.16 m³/s at 150 Pa
Actual duty: 0.3 m³/s at 512 Pa
Actual at required flow: 0.16 m³/s at 775 Pa

When speed controlled to required duty (54.07%):

Motor Input Power: 0.153 kW
Specific Fan Power: 1.0 W/(l/s)

At full speed:

Motor Input Power: 0.97 kW
Specific Fan Power: 3.3 W/(l/s)

Maximum Fan Speed: 3,700 RPM
Electrical Supply: 230V 1 Phase 50 Hz
Nominal Motor Rating: 1 kW
Motor current (flc): 6.9 A
Motor starting current (sc): 6.9 A

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

Sound Data

Noise calculated speed controlled to required duty (54.07%)

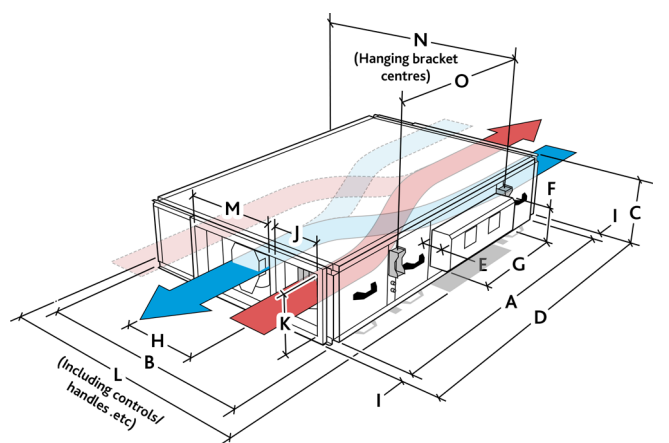
Sound Power Levels re 1 pWatts (Hz):

Hz	63	125	250	500	1k	2k	4k	8k	dBA
Breakout	58	57	44	47	34	33	33	25	36
Induct Intake	66	60	58	60	55	51	43	42	49
Induct Supply	71	72	67	71	61	61	57	59	59
Induct Discharge	72	73	67	70	61	61	59	60	59
Induct Extract	65	59	57	60	54	51	43	43	49
For 100% speed:	+14	+14	+14	+14	+14	+14	+14	+14	

dBA is spherical at 1 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.

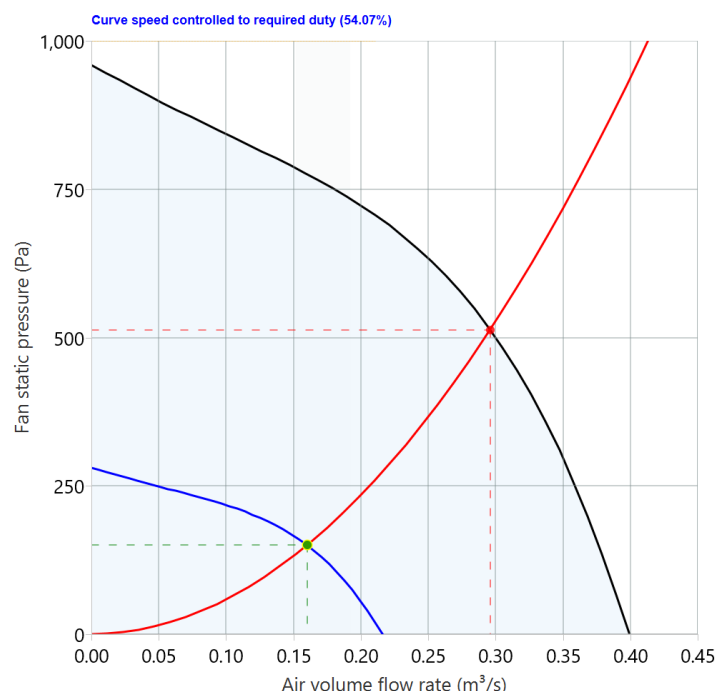
Fan Dimensions



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.

Performance Chart



Additional Notes

Selected Ancillaries

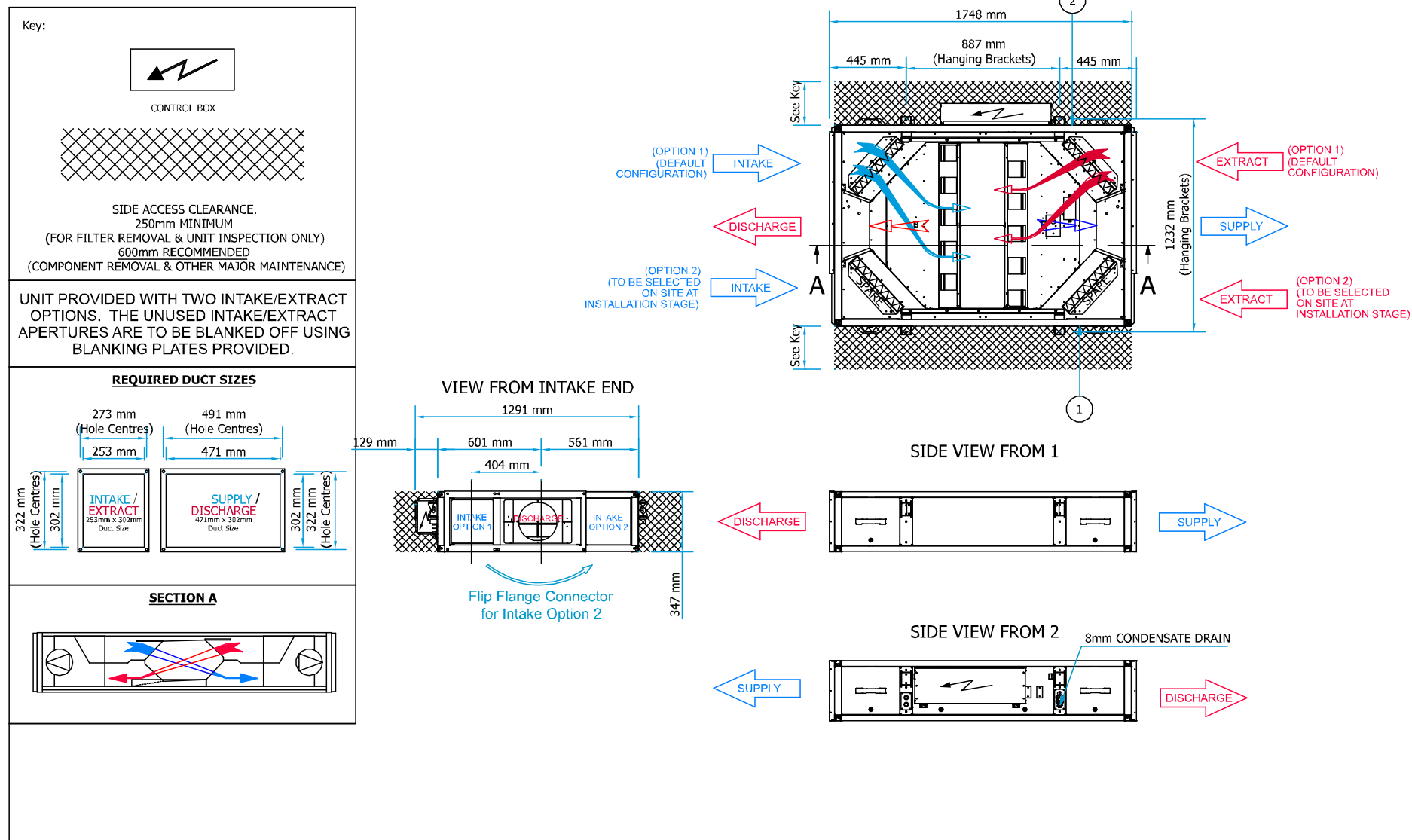
1 x ES-LCD Ecosmart LCD Touch Screen User Control (White)

Specification

XBC25HA-NNN-E-LS4S. 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. Suitable for Coastal Environment. 1 year warranty (UK and Ireland only)

ES-LCD

LCD touch screen ventilation user control panel in white compatible with Ecosmart system. Control has built in time clock. Supplied with pre-plugged 10m length of communication cable.



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

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Please DO NOT sign this drawing to confirm handings.
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Key:

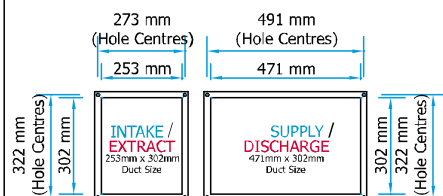
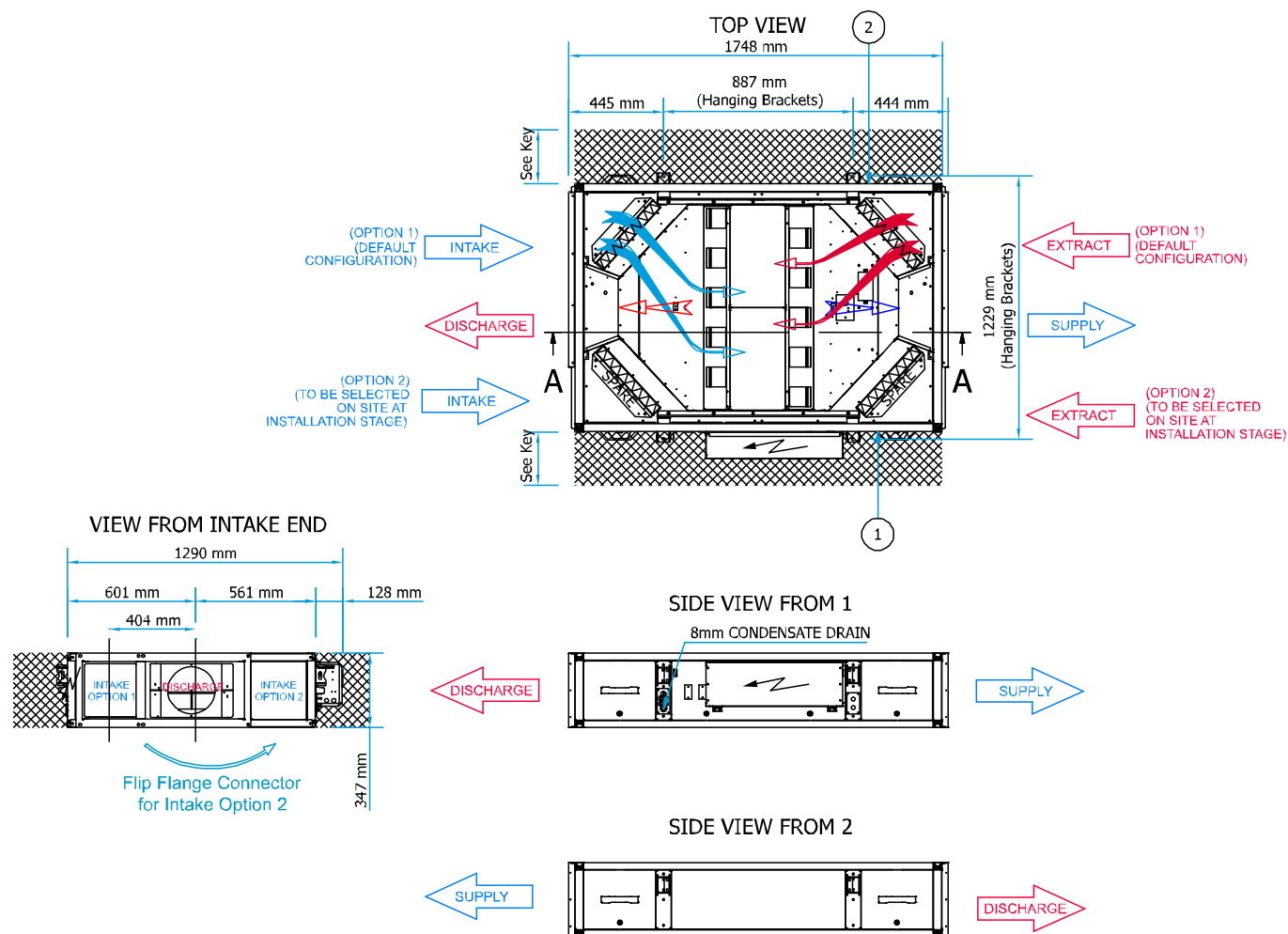
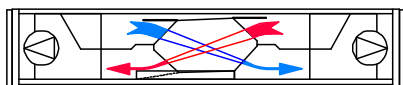


CONTROL BOX



SIDE ACCESS CLEARANCE.
250mm MINIMUM
(FOR FILTER REMOVAL & UNIT INSPECTION ONLY)
600mm RECOMMENDED
(COMPONENT REMOVAL & OTHER MAJOR MAINTENANCE)

UNIT PROVIDED WITH TWO INTAKE/EXTRACT
OPTIONS. THE UNUSED INTAKE/EXTRACT
APERTURES ARE TO BE BLANKED OFF USING
BLANKING PLATES PROVIDED.

REQUIRED DUCT SIZES**SECTION A**

You can download this CAD drawing from <http://www.nuaire.info/CAD/xbcplus25-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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Project Details

Location: AHU/RF/02

Technical Data

XBC+

Fan Code: **XBC25HA-NNN-E-LS4W**
Installation Manual Links: 671948

Required duty: 0.26 m³/s at 50 Pa
Addition for ancillaries: +113.42 Pa
Actual duty: 0.35 m³/s at 297 Pa
Actual at required flow: 0.26 m³/s at 611 Pa

When speed controlled to required duty (74.24%):

Motor Input Power: 0.406 kW
Specific Fan Power: 1.6 W/(l/s)

At full speed:

Motor Input Power: 0.993 kW
Specific Fan Power: 2.8 W/(l/s)

Maximum Fan Speed: 3,700 RPM
Electrical Supply: 230V 1 Phase 50 Hz
Nominal Motor Rating: 1 kW
Motor current (flc): 6.9 A
Motor starting current (sc): 6.9 A

Max. operating temp: 60°C
Weight: 267 kg

Sound Data

Noise calculated speed controlled to required duty (74.24%)

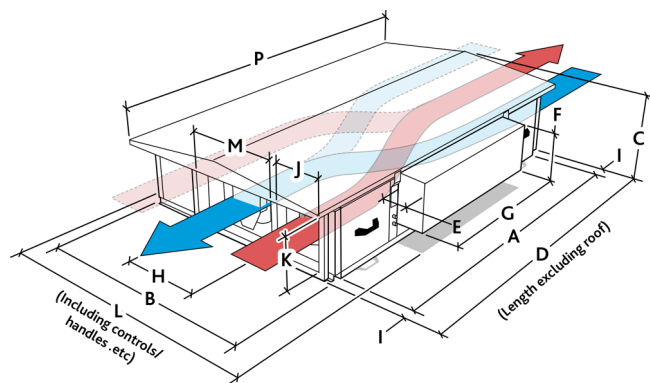
Sound Power Levels re 1 pWatts (Hz):

Hz	63	125	250	500	1k	2k	4k	8k	dBA
Breakout	65	64	51	54	41	40	40	32	43
Induct Intake	73	67	65	67	62	58	50	49	56
Induct Supply	78	79	74	78	68	68	64	66	66
Induct Discharge	79	80	74	77	68	68	66	67	66
Induct Extract	72	66	64	67	61	58	50	50	56
For 100% speed:	+7	+7	+7	+7	+7	+7	+7	+7	

dBA is spherical at 1 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

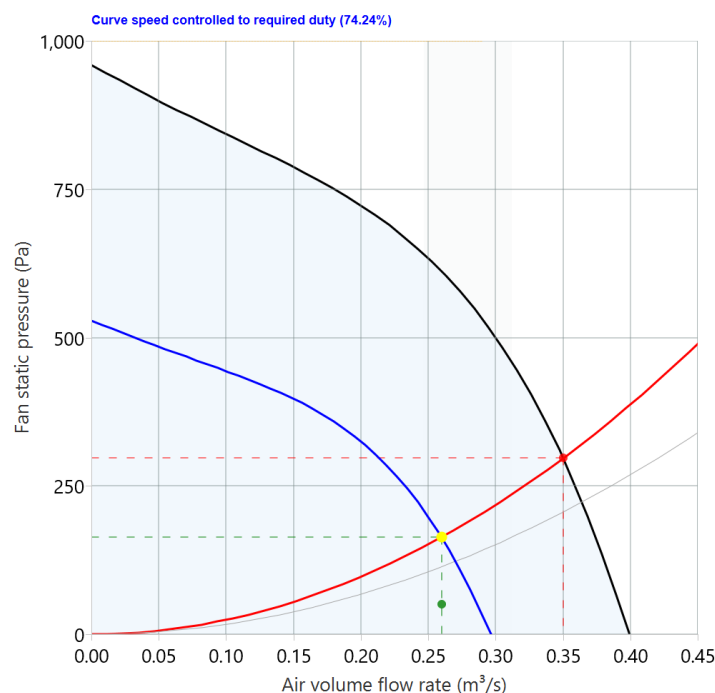


A	B	C	D	E	F	G	H	I
1713	1160	426	1773	160	285	820	413	30
J	K	L	M	P	kg			
252	302	1340	471	1984	267.0			

Length: Width: Height:
1713 1160 426

Drawing is for dimensional purposes only. Dimensions in mm.

Performance Chart



Additional Notes

Room must be up to temperature before the DX coil is switched to heatint cycle for winter heating. DX Coil will not function below 10°C.

Selected Ancillaries

1 x XBC25H-DX-DUCTO-LWP Horizontal, Remote duct mounted DX Coil, Left handed, with weather proof roof
1 x ES-LCD Ecosmart LCD Touch Screen User Control (White)

XBC25H-DX-DUCTO-LWP - Horizontal, Remote duct mounted DX Coil, Left handed, with weather proof roof

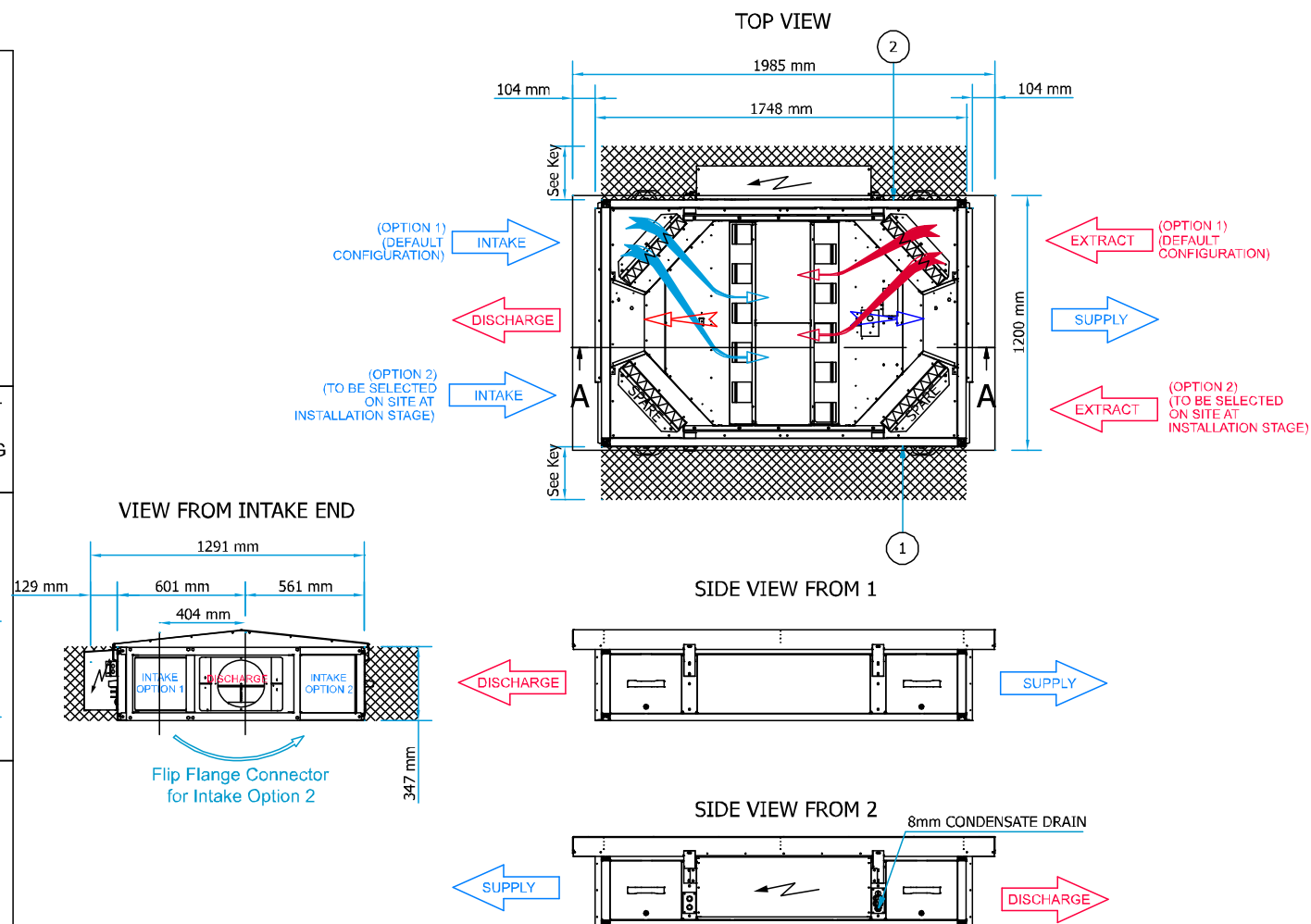
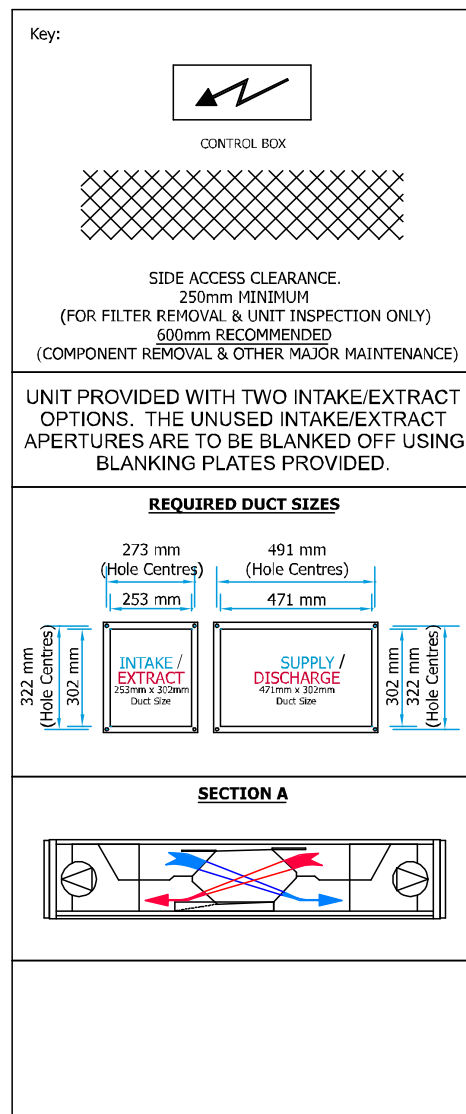
Resistance at required duty 113.42 Pa @ 0.26 m³/s
Size: 670 mm (L) 580 mm (W) 487 mm (H)
Weight: 32.0 kg

Specification

XBC25HA-NNN-E-LS4W. 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. Weatherproof & Suitable for Coastal Environment. 1 year warranty (UK and Ireland only)

ES-LCD

LCD touch screen ventilation user control panel in white compatible with Ecosmart system. Control has built in time clock. Supplied with pre-plugged 10m length of communication cable.



You can download this CAD drawing from http://www.nuaire.info/CAD/xbcplus25-hn-l_w.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*****

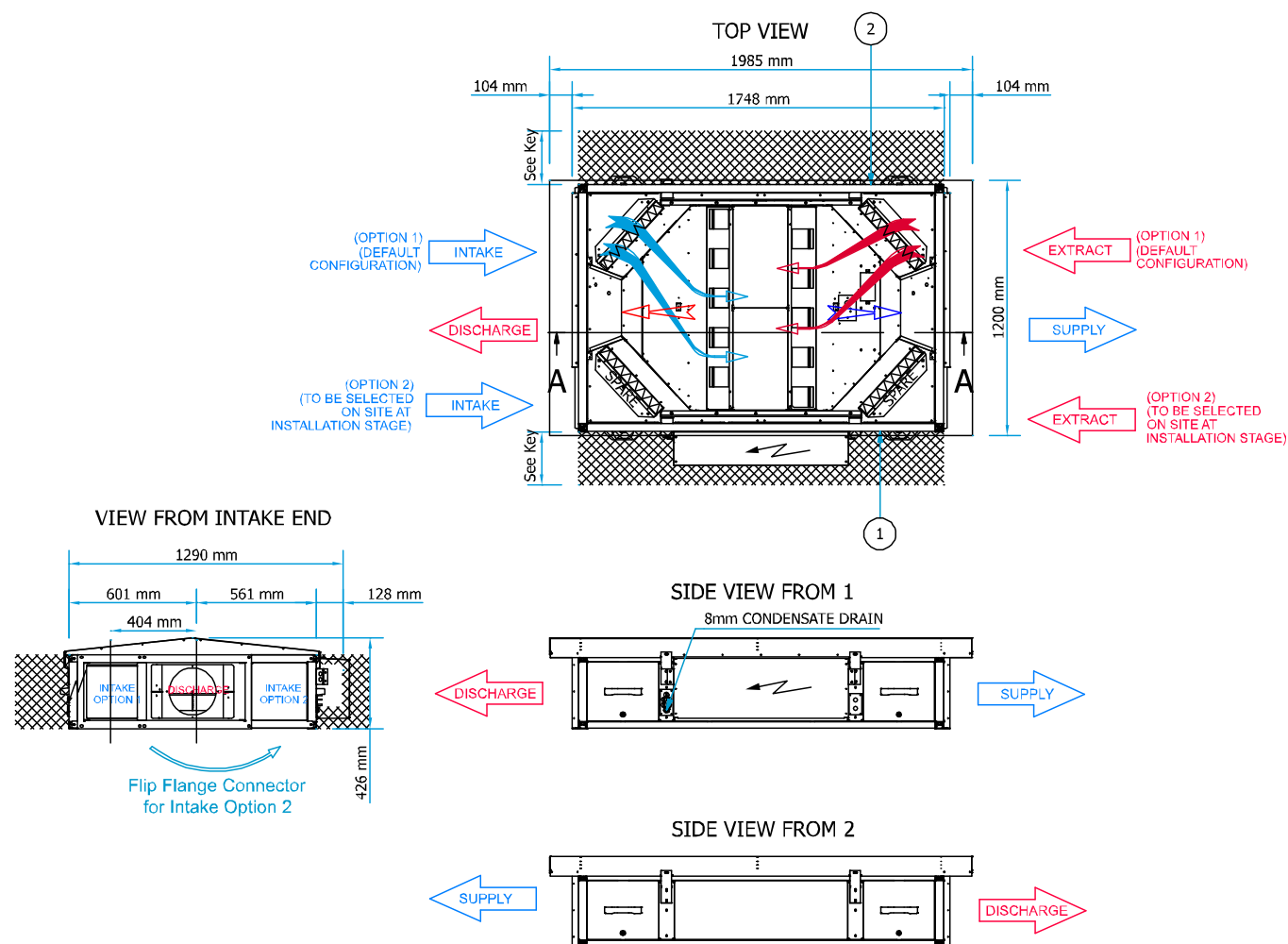
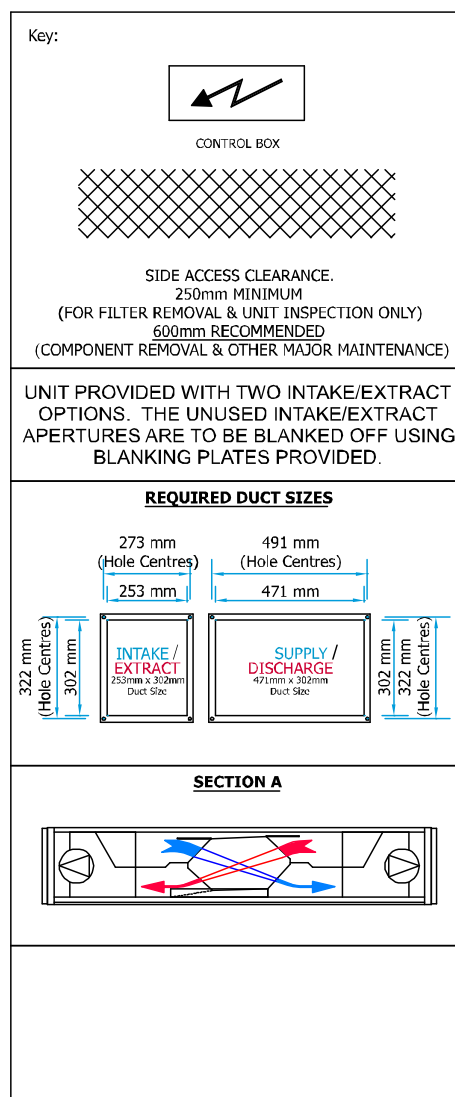
Please DO NOT sign this drawing to confirm handings.
Please request the official handing drawings from Nuaire.

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>



You can download this CAD drawing from http://www.nuaire.info/CAD/xbcplus25-hn-r_w.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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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 23 Oct 2020 10:28 using software version 4.6.3730.0; by user thomashu

Project Details

Location: KEF/RF/01 - Kitchen Extract Fan

Technical Data

SQF - Squif Single In-line Fans

Fan Code: **SQFA42-3ES-QA14606**
Installation Manual Links: 671175

Required duty: 0.6 m³/s at 250 Pa
Actual duty: 0.77 m³/s at 417 Pa
Actual at required flow: 0.6 m³/s at 469 Pa

When speed controlled to required duty (77.49%):

Fan Input Power: **0.263 kW**
Motor Input Power: **0.37 kW**
Specific Fan Power: **0.6 W/(l/s)**
Velocity at required duty: 1.429 m/s
Fan Total Efficiency: 57%

At full speed:

Fan Input Power: 0.565 kW
Maximum Fan Input Power: 0.565 kW
Motor Input Power: 0.779 kW
Specific Fan Power: 1.0 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: 0.75 kW
Motor current (flc): 1.7 A
Motor starting current (sc): 1.7 A
Motor Efficiency: IE2 / High 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 (77.49%)

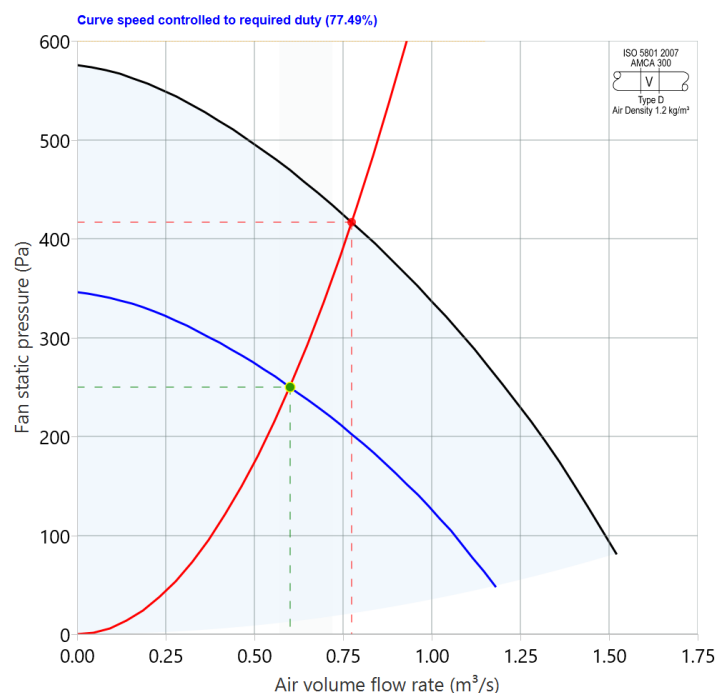
Sound Power Levels re 1 pWatts (Hz):									
Hz	63	125	250	500	1k	2k	4k	8k	dBA
Induct Inlet	83	90	79	73	68	70	69	61	
Induct Outlet	80	91	75	70	72	74	71	63	
Breakout	76	84	71	65	59	61	54	39	50
For 100% speed:	+2	+2	+3	+4	+6	+6	+6	+6	

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

Selected Ancillaries

1 x NAV2	Anti-vibration mounting kit
2 x SQFF2	Square flexible connector double flanged
1 x ES-ISC-WPA	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 protected for a saline environment

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.



SUMMARY FAN DATA SHEET

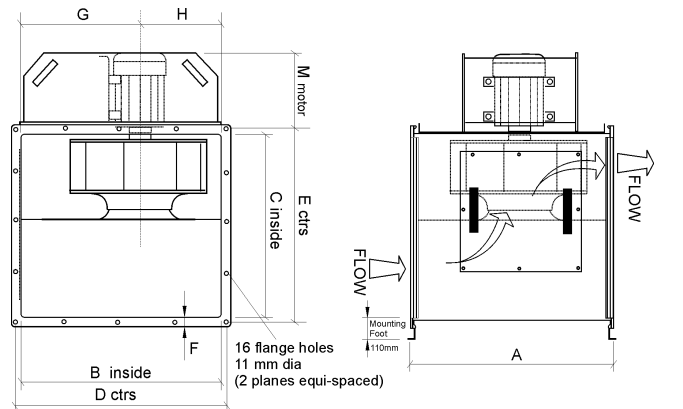
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Fan Dimensions



A	B	C	D	E	F	G	H	M
692	700	600	730	630	32	382	318	215

kg

77.0

Length: Width: Height:

692 730 845

Drawing is for dimensional purposes only. Dimensions in mm.

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Project Details

Location: KSF/RF/01 - Kitchen Supply Fan

Technical Data

ESBHS - Ecosmart Boxer Supply AHU

Fan Code: **ESBHS2H-D-QA14606**

Installation Manual Links: 671188

Required duty: 0.51 m³/s at 200 Pa

Addition for ancillaries: +19.51 Pa

Actual duty: 0.56 m³/s at 269 Pa

Actual at required flow: 0.51 m³/s at 312 Pa

When speed controlled to required duty (90.27%):

Motor Input Power: 0.562 kW

Specific Fan Power: 1.1 W/(l/s)

Velocity at required duty: 2.597 m/s

At full speed:

Motor Input Power: 0.764 kW

Specific Fan Power: 1.4 W/(l/s)

Maximum Fan Speed: 1,065 RPM

Electrical Supply: 230V 1 Phase 50 Hz

Nominal Motor Rating: 1.6 kW

Motor current (flc): 9.4 A

Motor starting current (sc): 9.4 A

Max. operating temp: 40°C

Weight: 264 kg

All Ecosmart fans feature soft-starting and stepless variable speed control. A switch disconnecter 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 (90.27%)

Sound Power Levels re 1 pWatts (Hz):

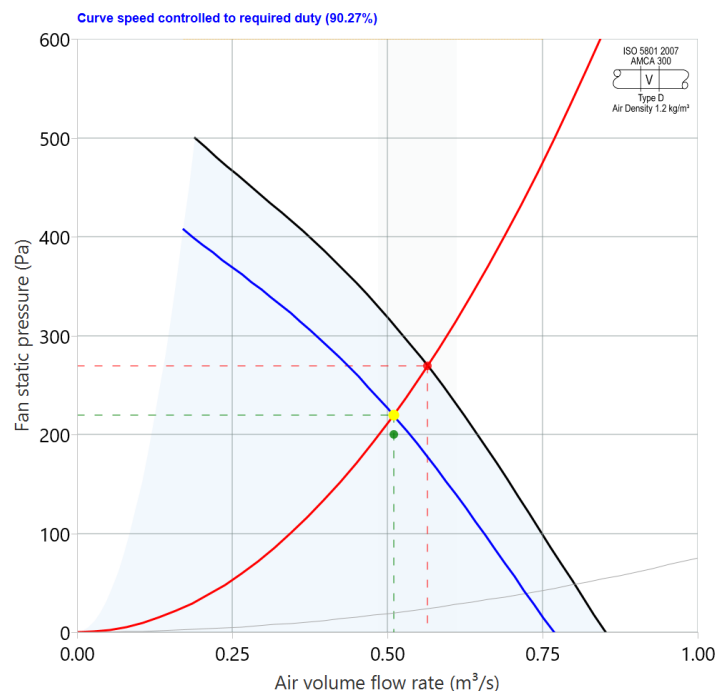
Hz	63	125	250	500	1k	2k	4k	8k	dBA
Induct Inlet	83	78	72	67	66	62	57	51	
Induct Outlet	85	80	79	76	73	69	66	60	
Breakout	72	63	59	39	32	28	30	20	32
For 100% speed:	+1	+1	+2	+2	+3	+3	+3	+3	

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

We would recommend the use of an Electric Frost coil to aid the DX coil in it's heating cycle. And for cold start situations.

Selected Ancillaries

1 x ES-LCD	Ecosmart LCD Touch Screen User Control (White)
1 x ESD2	Motorized damper 230v open/shut
1 x ESBRT2	Inlet/Exhaust Terminal
1 x ESBFCE2	Electric heater 12kW 3 phase (L 600mm)
1 x ESBBF2-1730	Base frame
1 x ESBBF2-900	Base frame
ESBD2 - Motorized damper 230v open/shut	
Resistance at required duty	6.5 Pa @ 0.51 m³/s
Size:	160 mm (L) 625 mm (W) 557 mm (H)
Weight:	14.0 kg
ESBFCE2 - Electric heater 12kW 3 phase (L 600mm)	
Resistance at required duty	13.01 Pa @ 0.51 m³/s

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Specification

Air handling unit shall consist of fan, G4 filter, Reverse Cycle Heating & Cooling DX coil. Air handling unit shall be constructed with double skinned aluzinc panels on an aluminium Pentapost frame. Air handling unit shall incorporate full Ecosmart control package.

Please note that the DX coil included in this unit is configured as a twin coil interlaced arrangement. The cooling duty is equally split between the coils, and two sets of connections are required.

Unit protected for a saline environment

ES-LCD

LCD touch screen ventilation user control panel in white compatible with Ecosmart system. Control has built in time clock. Supplied with pre-plugged 10m length of communication cable.

ESBD2

- ESBD - Opposed blade design with quick fit flanges. 240v Open/Shut model for efficient back draught protection or 24v modulating version for balancing and control.

ESBRT2

- ESBRT - Manufactured from galvanised sheet steel for inlet or extract air and including bird guards.

ESBFCE2

- ESBFCE - Incorporate stainless steel sheathed single phase elements. A thermal cut-out with manual reset is fitted as standard. NB minimum air velocity over elements is 1.5m/s.

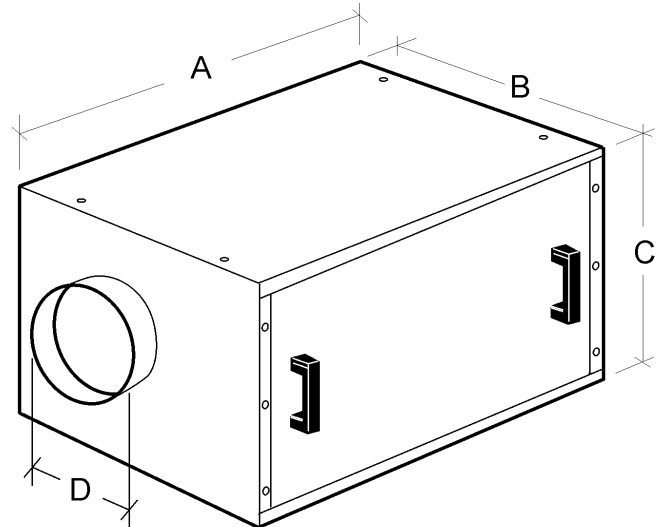
ESBBF2-1730

AHU base frame section manufactured from galvanised steel.

ESBBF2-900

AHU base frame section manufactured from galvanised steel.

Fan Dimensions



A	B	C	D	P	kg
1730	954	670	500	700	264.0

Length: Width: Height:

1730 954 670

Spigot size: 500

Drawing is for dimensional purposes only. Dimensions in mm.



SUMMARY FAN DATA SHEET

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Attached documents

Additional file

TECHNICAL SPECIFICATION SHEET

File: Q1562921-02-B

PROJECT DETAILS			
Date	Project no	Project Reference	Unit No
28 Aug 2019	1562921	Port Talbot Plaza - 19/08218/COM	Q1562921-02-B
Customer	Rev date	Unit Reference	Unit Model
	28 Aug 2019	Hall AHU	Non-standard
Supply Air Flow	Supply External Static	Extract Air Flow	Extract External Static
3.500 m ³ /s	90 Pa	3.500 m ³ /s	90 Pa

UNIT CONSTRUCTION			
Panel Thickness	Panel Insulation	Aluminium frame work	Frame Coating
50mm Thick (Nom.) Double Skinned	Rockwool 45mm (1000x600) RW3 Semi Rigid Slab	50mm Pentapost Corner Extrusion	Natural Finish
Panel external Sheet	Panel internal Sheet	Base frame	Unit Location
Aluzinc(0.9) 517757 AZ185 BS EN 10215	Aluzinc(0.9) 517757 AZ185 BS EN 10215	150x50x3.0 Fabricated Base	External
Access side	Unit Model	Roof type	Leakage Class
Right	Non-standard / Non-standard	Twin Pitched Roof	Class B L2
Thermal Bridging	Thermal Transmittance	Deflection Class	Environment
TB4	T4	D2M	Saline / Coastal(NOT MARINE)

SECTION WEIGHTS AND DIMENSIONS - (NOT including transport packaging and pallets)				
Section No	Length	Width	Height	Weight
A	1050 mm	2100 mm	1200 mm	249 kg
B	1098 mm	2100 mm	1200 mm	209 kg
C	950 mm	2100 mm	2378 mm	466 kg
D	1375 mm	2100 mm	1200 mm	408 kg
E	1098 mm	2100 mm	1200 mm	363 kg
F	800 mm	2100 mm	1178 mm	127 kg
G	1098 mm	2100 mm	1178 mm	311 kg
H	1050 mm	2100 mm	1178 mm	255 kg

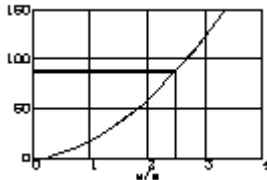
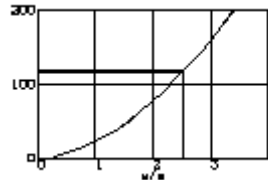
OVERALL UNIT DIMENSIONS			
Length	Width	Height	Total Weight
5571 mm	2100 mm	2378 mm	2388 kg

001 DAMPER/FLEX.CONN/LOUVRE							
Flow	Dimensions	Model	Air vel.	Damper	Spigot connection	Louvre	Actuator
3.5000 m3/s	1600.00 x 550.00 mm	165.00	3.98	Yes	Yes	No	No

001 DAMPER/FLEX.CONN/LOUVRE							
Flow	Dimensions	Model	Air vel.	Damper	Spigot connection	Louvre	Actuator
3.5000 m3/s	0.00 x 0.00 mm	0.00	0.00	No	No	No	No

001 REMOVABLE PANEL	
Dimensions	Type
950 x 950 mm	Removable panel

002 FILTERS

Stage #	Air Volume	Class	Type	Model	Media	Qty Size 1	Qty Size 2	Length mm
1	3.5000 m3/s	G4	Panel	EnergySaver M7	Intrepid	3x594x495	3x594x292	50
2	3.5000 m3/s	F7	Bag	CP7 Bag	synthetic	3x592x492	3x592x289	600
1				2				
Clean	Final	Average		Clean	Final	Average		
25 Pa	150 Pa	87 Pa		83 Pa	150 Pa	116 Pa		
								

002 Accessories

- Magnehelic pressure guage 0-500Pa surface mounted
- Stainless steel fittings

002 HINGED ACCESS DOOR

Dimensions	Type
998 x 950 mm	Hinged door

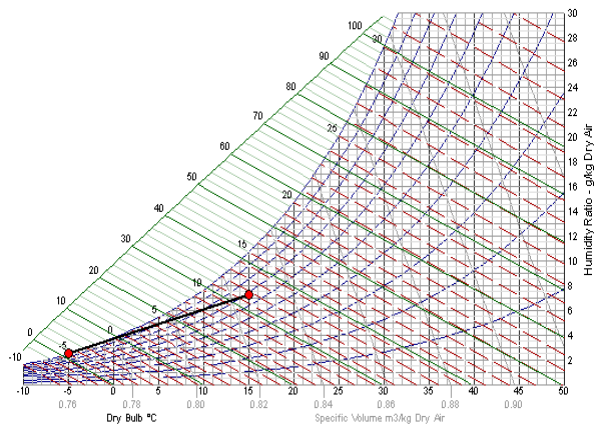
003 Heat Wheel Exchanger

Model	Qty	Material	Dry EFF ERP %
ST1-ML-WV-1810-CS-V1-A1-3,W1910,H1910-ErP-2018.00	1		74.50

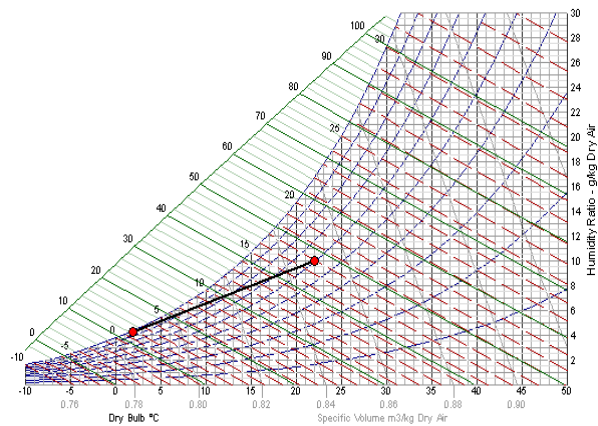
WINTER

Fresh Air								Exhaust							
m3/s	kW	Eff.%	Inlet		Outlet		Pa	m3/s	kW	Eff.%	Inlet		Outlet		Pa
			C	%	C	%					C	%	C	%	
3.5000	137.60	74.50	-5.00	100.0	15.10	67.70	122.00	3.5000	137.60	74.50	22.00	60.0	1.90	99.00	134.00

Psychrometric Chart @CCSI
Barometric Pressure 101.325 kPa

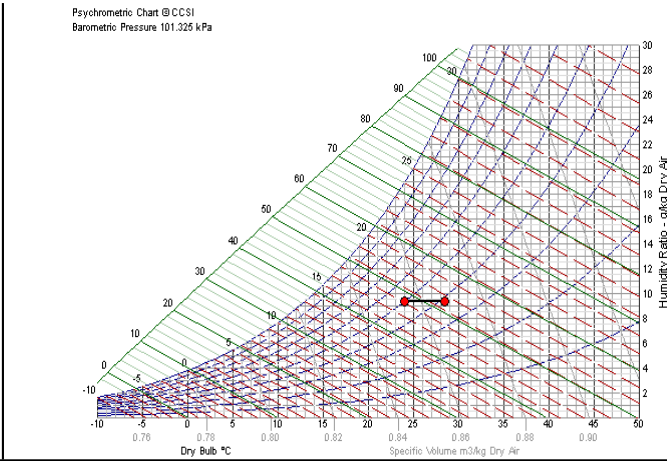
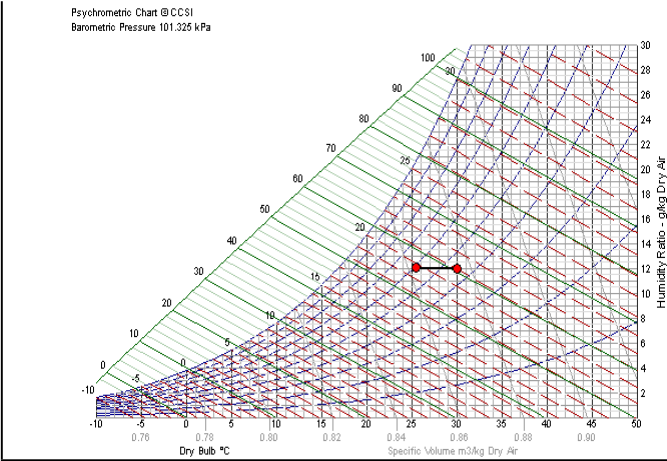


Psychrometric Chart @CCSI
Barometric Pressure 101.325 kPa



SUMMER

Fresh Air								Exhaust							
m3/s	kW	Eff.%	Inlet		Outlet		Pa	m3/s	kW	Eff.%	Inlet		Outlet		Pa
			C	%	C	%					C	%	C	%	
3.5000	19.70	74.50	30.00	45.0	25.50	58.50	138.00	3.5000	19.70	74.50	24.00	50.0	28.50	38.40	135.00

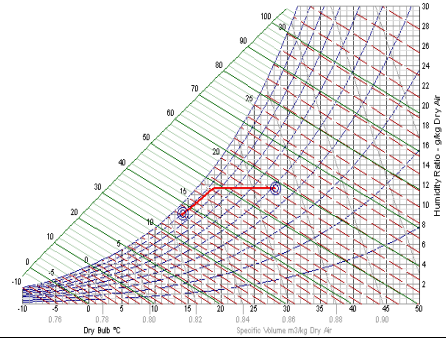


003 Accessories

- Stainless steel fittings
- Matrix Edge protection

003 REMOVABLE PANEL

Dimensions	Type
850 x 2000 mm	Removable panel 2HS

004 COIL												
Flow	Qty	Model					Internal Volume		Rows	Fin Spacing	Face Area	
3.5000 m3/s	1	DXR-1/2-24-5-12-1700(05+05+05+05INT)-H-RHS LIDAF-Cu 0.51/Alup 0.18/Galv-4 x 1/2" o.d. inlet+4 x 1,1/8" o.d. outlet -28mm"Y"+4mm Cap-P400-AHU + st.st. d/tray-o/a 866H 1890W 500D -MaxW.P.x33-T.P.x47-DrainSize=3/4"					27.50		5	2.12mm (12/inch)	1700 x 762	
Air side	DB	WB	RH	Total Load	Sensible Load	Face Velocity	Pressure Drop	Psychrometric Chart @CC31 Barometric Pressure 101.325 kPa 				
On	28.3 °C	20.2 °C	48.1 %	86.67 kW	60.67 kW	2.70 m/s	158 Pa					
Off	14.0 °C	13.3 °C	92.4 %									
Refrig	Evap Temp.	Mass Flow.	Refrig Type.	Refrig P.D.	Circuit loading		Connection Size					
-	6.0 °C	kg/s	R410a	13 kPa	-	Liquid	4 x 1/2" x 16off					
						Suction	4 x 1,1/8" x 16off					
Circuits	Duty Margin		Fin Material		Tube Material	Fin Treatment	Case Material	Sectioning	Distributors	.		
20	20%		0.18 mm Polyester Coated Aluminium		1/2"	Copper	Galvanised			-		

004 Accessories

• DX HEATING: Air on: 11°C. Air off: 26°C. Hot Gas Temp.:65°C. Condensing Temp.: 40 -> 39.9°C. Hot Gas Vol. Flow: 12.1m3/h. IN: 4 x 22.0 Gas 3.6m/s. OUT: 4 x 22.0 Liquid 0.3m/s.

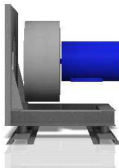
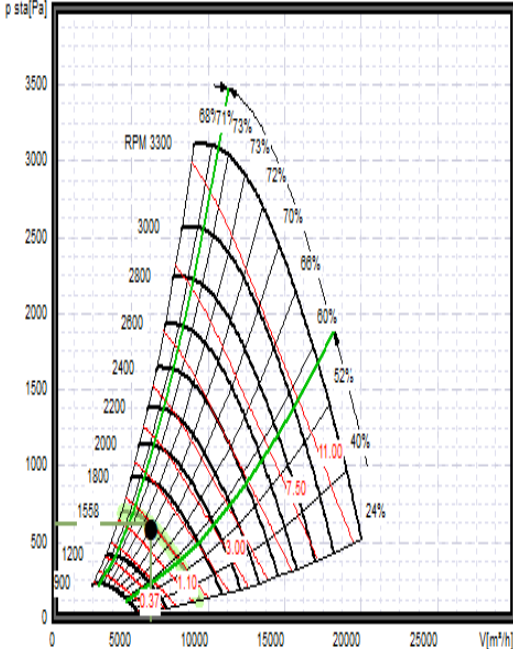
004 COIL PANEL	
Dimensions	Type
725 x 950 mm	Coil Panel

004 DRAIN PAN	
Material	Drain size
Galvanised Steel	2000 mm

005 PLENUM	
Length	550 mm

005 REMOVABLE PANEL	
Dimensions	Type
500 x 950 mm 500 x 950 mm	Removable panel

006 PLENUM FAN

Volume per Fan	Ext Static		Fan Make		Motor Make						
1.750 m3/s	90 Pa		Comefri								
Configuration	Unit static		Fan Type		Motor Poles						
Free Outlet	524 Pa		NPA450-IE2-0220-4P-3		4						
Outlet Velocity	Fan Static Pressure		Fan Blade Type		Motor Nom. speed						
1.8 m/s	614 Pa		Backward Curve		1440 rpm						
	Static Efficiency		Fan Speed		Motor Size						
	70.1 %		1558 rpm		W2.20x24Ø						
THIS FAN SECTION CONTAINS 2 FANS											
	Fan 1		Fan 2		Total						
Power Input	1.53 kW		1.53 kW		3.06 kW						
Power	2.20 kW		2.20 kW		4.40 kW						
FLC	4.64 A		4.64 A		9.28 A						
Volts/Ph/Hz	380/3/50		380/3/50		-						
Inverter Freq	VSD		AV Mount Type		-						
			Comefri Spring		1	2	3	4			
54.10	Inverter		AVM Code		MSO1-B Green	MSO1-B Green	MSO1-B Green	MSO1-B Green			
			AVM Colour		Green	Green	Green	Green			
Frequency	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	Description		
Inlet	72	74	86	80	72	72	67	62	SWL Inside the Inlet Duct (dB)		
Outlet	79	75	83	81	80	75	70	66	SWL Inside the Outlet Duct (dB)		

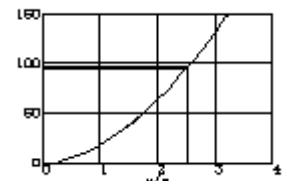
006 Accessories

- IP66 Metal terminal box fitted
- VSD required. To be supplied and fitted by others, unless otherwise stated.
- Stainless steel fittings
- Fans painted for saline enviroment

006 HINGED ACCESS DOOR

Dimensions	Type
600 x 950 mm	Hinged door

007 FILTERS

Stage #	Air Volume	class	Type	Model	Media	Qty.Size 1	Qty.Size 2	Length mm
1	3.5000 m ³ /s	F5	Bag	CP5 Bag	synthetic	3x592x492	3x592x289	600
1								
Clean	Final	Average						
42 Pa	150 Pa	96 Pa						
								

007 Accessories

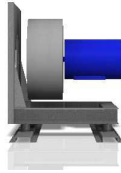
- Magnehelic pressure guage 0-500Pa surface mounted
- Stainless steel fittings

007 HINGED ACCESS DOOR

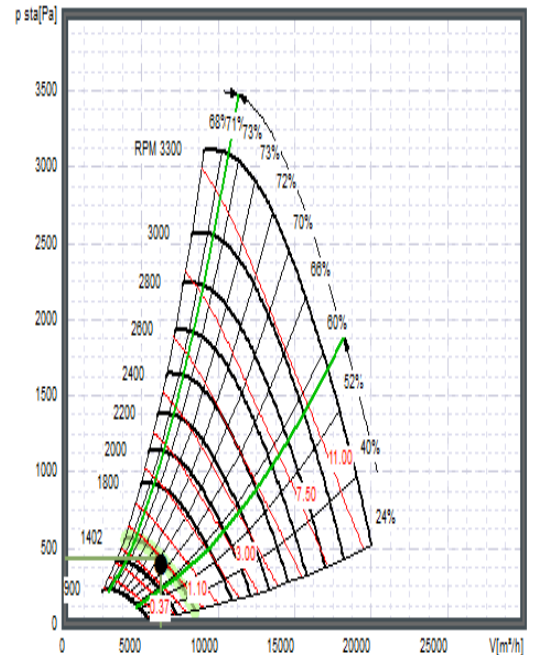
Dimensions	Type
700 x 950 mm	Hinged door

008 PLENUM FAN

Volume per Fan	Ext Static	Fan Make	Motor Make
1.750 m3/s	90 Pa	Comefri	
Configuration	Unit static	Fan Type	Motor Poles
Free Outlet	255 Pa	NPA450-IE2-0150-4P-3	4
Outlet Velocity	Fan Static Pressure	Fan Blade Type	Motor Nom. speed
1.8 m/s	345 Pa	Backward Curve	1445 rpm
	Static Efficiency	Fan Speed	Motor Size
	62.9 %	1323 rpm	W1.50x24Ø

**THIS FAN SECTION CONTAINS 2 FANS**

	Fan 1	Fan 2	Total
Power Input	0.96 kW	0.96 kW	1.92 kW
Power	1.50 kW	1.50 kW	3.00 kW
FLC	3.39 A	3.39 A	6.78 A
Volts/Ph/Hz	380/3/50	380/3/50	-
Inverter Freq	VSD	AV Mount Type	-
		Comefri Spring	1234
45.78	Inverter	AVM Code	MSO1-B Green MSO1-B Green MSO1-B Green MSO1-B Green
		AVM Colour	Green Green Green Green



Frequency	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	Description
Inlet	69	73	82	76	71	70	62	58	SWL Inside the Inlet Duct (dB)
Outlet	77	73	81	79	78	73	68	64	SWL Inside the Outlet Duct (dB)

008 Accessories

- IP66 Metal terminal box fitted
- VSD required. To be supplied and fitted by others, unless otherwise stated.
- Stainless steel fittings
- Fans painted for saline enviroment

008 HINGED ACCESS DOOR

Dimensions	Type
600 x 950 mm	Hinged door

009 DAMPER/FLEX.CONN/LOUVRE

Flow	Dimensions	Model	Air vel.	Damper	Spigot connection	Louvre	Actuator
3.5000 m3/s	1600.00 x 550.00 mm	165.00	3.98	Yes	Yes	No	No

009 DAMPER/FLEX.CONN/LOUVRE

Flow	Dimensions	Model	Air vel.	Damper	Spigot connection	Louvre	Actuator
3.5000 m3/s	1600.00 x 600.00 mm	165.00	3.65	Yes	No	No	No

009 Accessories

- Stainless steel fittings

009 REMOVABLE PANEL

Dimensions	Type
950 x 950 mm	Removable panel

AHU ACOUSTIC DATA SUPPLY SECTION									
Freq	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	Total A Weighted Sound Power Level (dB re 1pW)	Description
	60	67	63	58	52	45	31	64	Unit Induct Inlet A Weighted Sound Power Level (dB re 1pW)
	78	86	84	83	78	73	69	87	Unit Induct Outlet A Weighted Sound Power Level (dB re 1pW)
	67	69	54	54	52	46	36	62	Unit Casing Radiated A Weighted Sound Power Level (dB re 1pW)
								45	Non-Weighted dB level @ 3m
AHU ACOUSTIC DATA EXHAUST SECTION									
Freq	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	Total A Weighted Sound Power Level (dB re 1pW)	Description
	52	68	68	65	61	53	41	73	Unit Induct Inlet A Weighted Sound Power Level (dB re 1pW)
	56	69	73	78	74	69	63	81	Unit Induct Outlet A Weighted Sound Power Level (dB re 1pW)
	49	58	48	52	51	45	33	60	Unit Casing Radiated A Weighted Sound Power Level (dB re 1pW)
								43	Non-Weighted dB level @ 3m
AHU SPECIFIC FAN POWER									
Supply Fan					Extract Fan				
Filter Conditions					Clean				
Absorbed Power					2.64 Kw				
Drive Efficiency					100%				
Invertor Efficiency					100%				
Motor Efficiency					84%				
Air Volume					3.5m ³ /s				
AHU SFP					1.4 Kw/m ³ /s				

Project: Port Talbot Plaza - 19/08218/COM

Client:

Quote No: 1562921

Please note: Overall height dimensions are for the unit only. Please allow up to 300mm additional for transport packaging.

Supply:

Size: Non-standard

Airflow: 3.5000 m3/s

E.S.P.: 90 Pa

Exhaust:

Size: Non-standard

Airflow: 3.5000 m3/s

E.S.P.: 90 Pa

Unit Wgt: 2387.77 kg

SECTION A-Q1562921-02-B-A:

Component	Length(mm)
1 Mixing Box	1050

SECTION B-Q1562921-02-B-B:

Component	Length(mm)
2 Panel & Bag Filter	1098

SECTION C-Q1562921-02-B-C:

Component	Length(mm)
3 Heat Wheel	950

SECTION D-Q1562921-02-B-D:

Component	Length(mm)
4 DX Cooling Coil	800
5 Plenum	575

SECTION E-Q1562921-02-B-E:

Component	Length(mm)
6 Plenum Fan	1098

SECTION F-Q1562921-02-B-F:

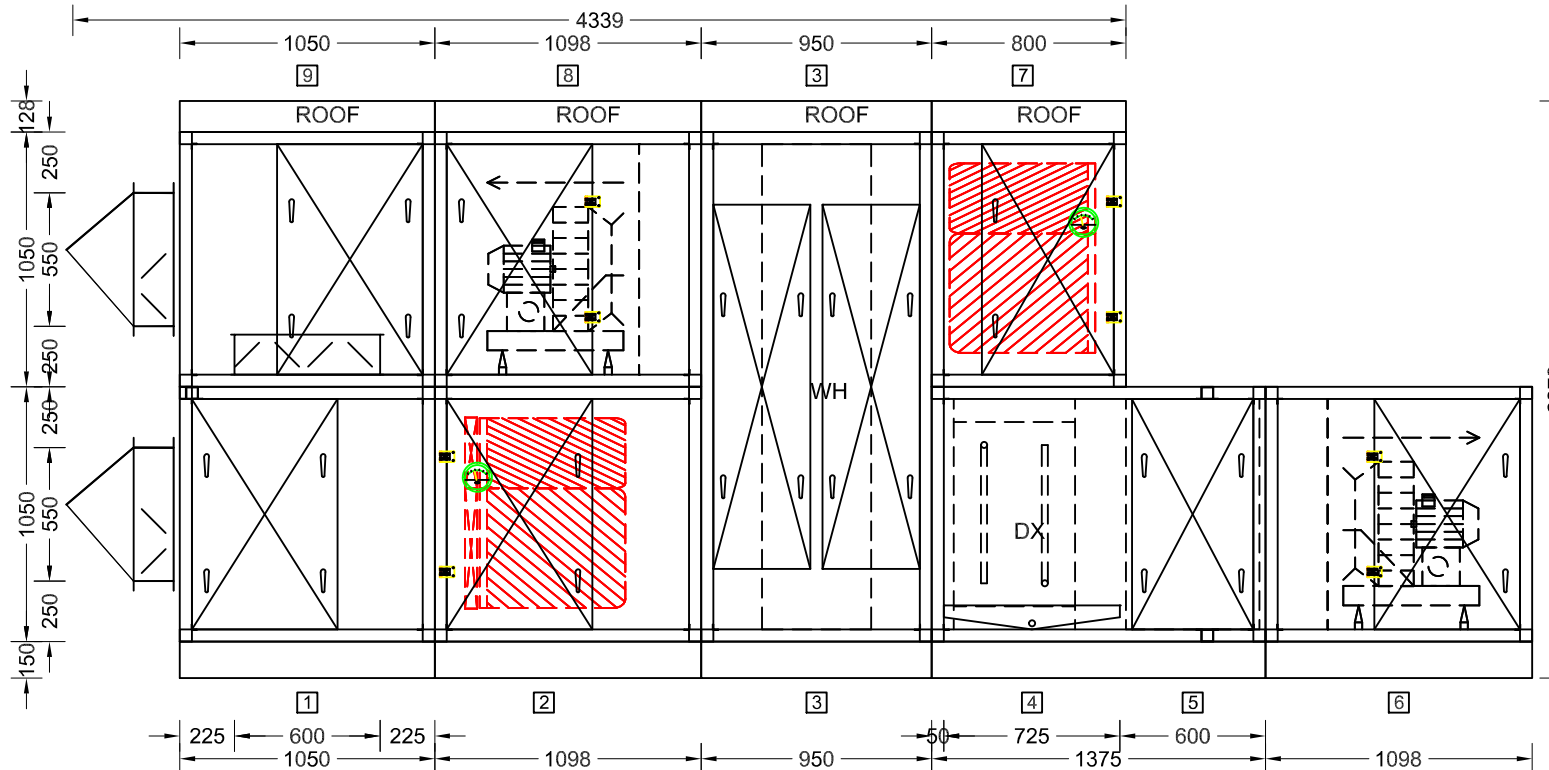
Component	Length(mm)
7 Bag Filter	800

SECTION G-Q1562921-02-B-G:

Component	Length(mm)
8 Plenum Fan	1098

SECTION H-Q1562921-02-B-H:

Component	Length(mm)
9 Mixing Box	1050



ELEVATION

NOTES:

- 1) Please refer to the Installation & Maintenance manual and the Nuair website www.nuair.co.uk for further information.
- 2) Please note that double deck sections of AHU's will leave Nuair already assembled where possible.
- 3) While the overall unit and section dimensions are accurate, the component and access locations are for illustration purposes only and may vary along the length of the unit. *Please contact Nuair if you require more detailed information.*



Nuair
Western Industrial Estate
Caerphilly CF83 1NA
United Kingdom
www.nuair.co.uk
(+44) 2920 858 200

AHU No.	2	Quantity	1	This Drawing is property of NUAIRE and should not be re-produced in any form	All dimensions are in mm Do Not Scale
Unit:	Q1562921-02-B			Initial	Date
Location:	Hall AHU			Selected	
Model	Non-standard / Non-standard			Approved	

Please Note: This drawing must be signed and returned with the official order for manufacturing to be scheduled. Nuair will then advise delivery detail with order acknowledgement. Approval refers to CAD drawing only and not any other images.

Arrangement Approval

Date: Signature:

Name (please print):

Project: Port Talbot Plaza - 19/08218/COM

Client:

Quote No: 1562921

Please note: Overall height dimensions are for the unit only. Please allow up to 300mm additional for transport packaging.

Supply:

Size: Non-standard

Airflow: 3.5000 m³/s

E.S.P.: 90 Pa

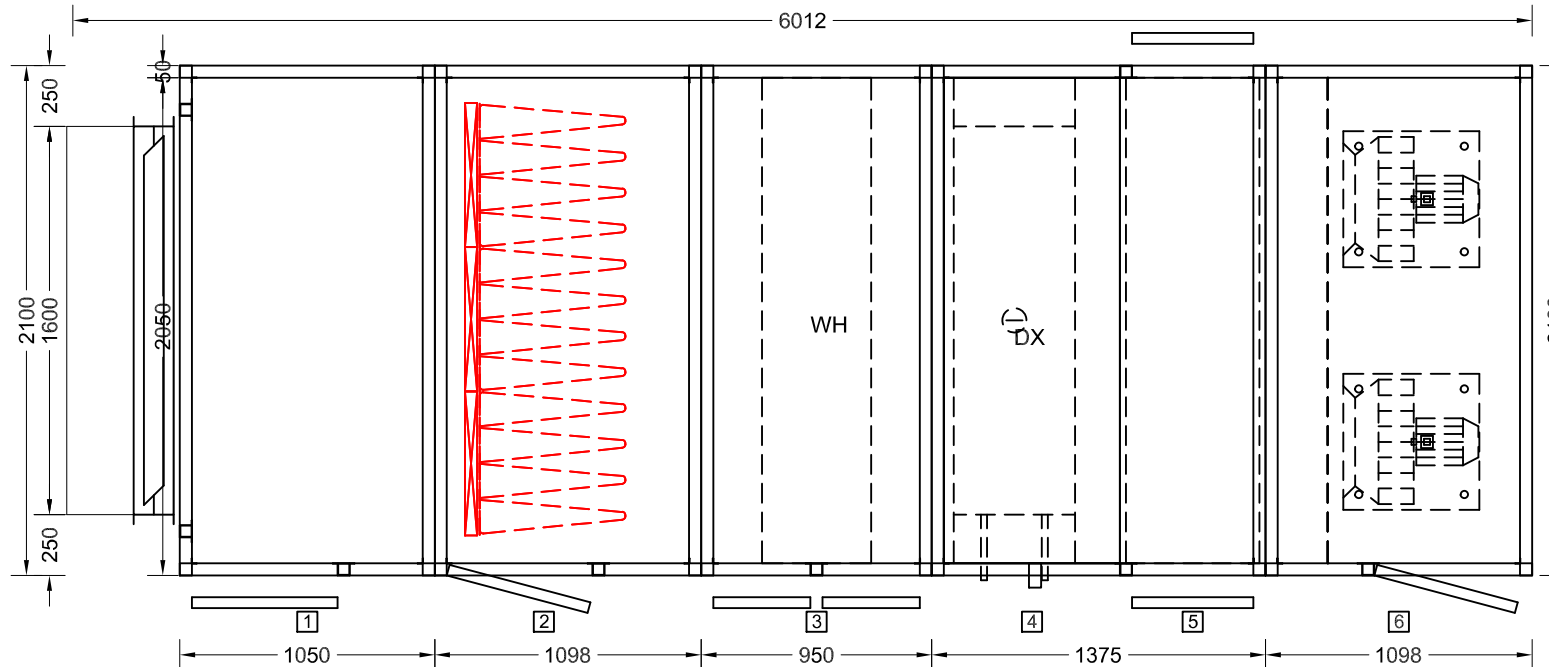
Exhaust:

Size: Non-standard

Airflow: 3.5000 m³/s

E.S.P.: 90 Pa

Unit Wgt: 2387.77 kg



SECTION A-Q1562921-02-B-A:

Component	Length(mm)
1 Mixing Box	1050

SECTION B-Q1562921-02-B-B:

Component	Length(mm)
2 Panel & Bag Filter	1098

SECTION C-Q1562921-02-B-C:

Component	Length(mm)
3 Heat Wheel	950

SECTION D-Q1562921-02-B-D:

Component	Length(mm)
4 DX Cooling Coil	800
5 Plenum	575

SECTION E-Q1562921-02-B-E:

Component	Length(mm)
6 Plenum Fan	1098

SECTION F-Q1562921-02-B-F:

Component	Length(mm)
7 Bag Filter	800

SECTION G-Q1562921-02-B-G:

Component	Length(mm)
8 Plenum Fan	1098

SECTION H-Q1562921-02-B-H:

Component	Length(mm)
9 Mixing Box	1050

PLAN LOWER DECK

NOTES:

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AHU No.	2	Quantity	1	This Drawing is property of NUAIRE and should not be re-produced in any form	All dimensions are in mm Do Not Scale
Unit:	Q1562921-02-B			Initial	Date
Location:	Hall AHU			Selected	
Model	Non-standard / Non-standard			Approved	

Please Note: This drawing must be signed and returned with the official order for manufacturing to be scheduled. Nuair will then advise delivery detail with order acknowledgement. Approval refers to CAD drawing only and not any other images.

Arrangement Approval

Date: Signature:

Name (please print):

Project: Port Talbot Plaza - 19/08218/COM

Client:

Quote No: 1562921

Please note: Overall height dimensions are for the unit only. Please allow up to 300mm additional for transport packaging.

Supply:

Size: Non-standard

Airflow: 3.5000 m³/s

E.S.P.: 90 Pa

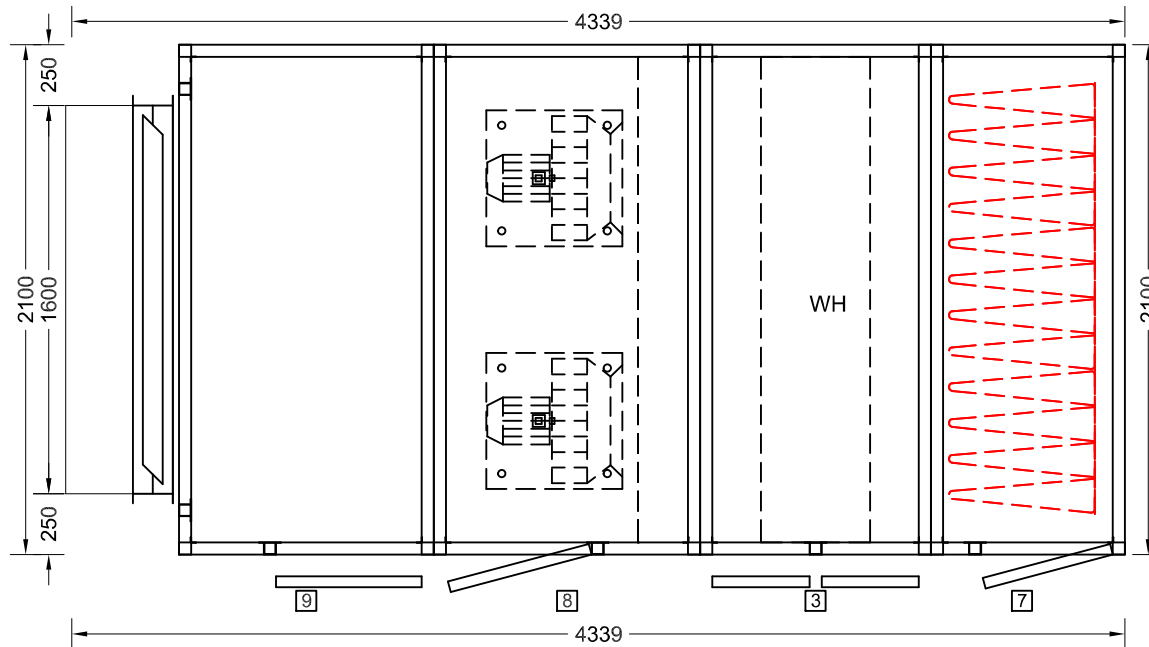
Exhaust:

Size: Non-standard

Airflow: 3.5000 m³/s

E.S.P.: 90 Pa

Unit Wgt: 2387.77 kg



SECTION A-Q1562921-02-B-A:

Component	Length(mm)
1 Mixing Box	1050

SECTION B-Q1562921-02-B-B:

Component	Length(mm)
2 Panel & Bag Filter	1098

SECTION C-Q1562921-02-B-C:

Component	Length(mm)
3 Heat Wheel	950

SECTION D-Q1562921-02-B-D:

Component	Length(mm)
4 DX Cooling Coil	800
5 Plenum	575

SECTION E-Q1562921-02-B-E:

Component	Length(mm)
6 Plenum Fan	1098

SECTION F-Q1562921-02-B-F:

Component	Length(mm)
7 Bag Filter	800

SECTION G-Q1562921-02-B-G:

Component	Length(mm)
8 Plenum Fan	1098

SECTION H-Q1562921-02-B-H:

Component	Length(mm)
9 Mixing Box	1050

PLAN UPPER DECK

NOTES:

1) Please refer to the Installation & Maintenance manual and the Nuair website www.nuair.co.uk for further information.

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AHU No.	2	Quantity	1	This Drawing is property of NUAIRE and should not be re-produced in any form	All dimensions are in mm Do Not Scale
Unit:	Q1562921-02-B			Initial	Date
Location:	Hall AHU			Selected	
Model	Non-standard / Non-standard			Approved	

Please Note: This drawing must be signed and returned with the official order for manufacturing to be scheduled. Nuair will then advise delivery detail with order acknowledgement. Approval refers to CAD drawing only and not any other images.

Arrangement Approval

Date: Signature:

Name (please print):