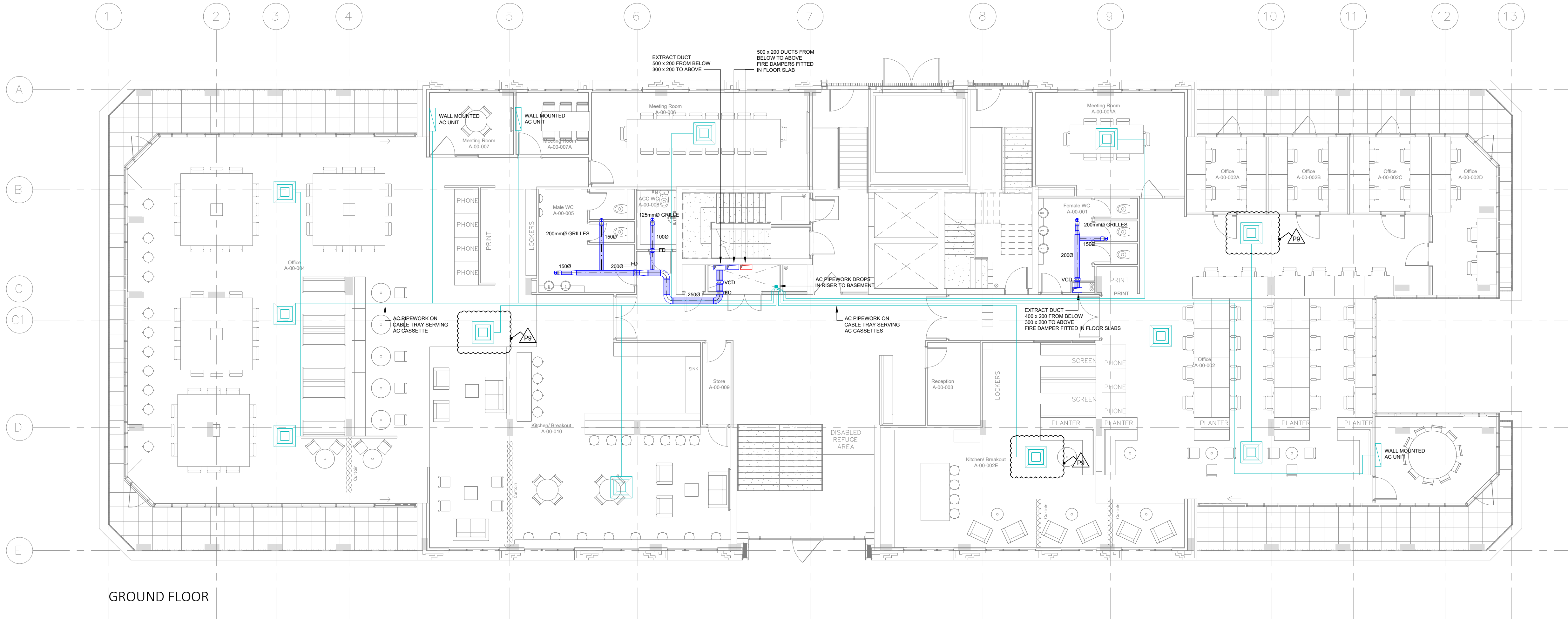


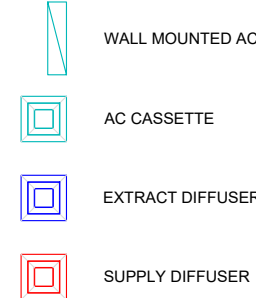


Extract Grille Schedule					
Location	Type	Size	Volume	Qty	
Basement - Cleaners	SEV Valve	1250	15 L/s	1	
Basement - Shower	SEV Valve	1250	15 L/s	2	
Basement - Residential Refuse - A-B1-017	ECG Grille	400 sq	210 L/s	1	
Basement - Office Refuse - A-B1-018	ECG Grille	300 sq	120 L/s	1	
Basement - Lockers/Drying A-B1-036	SEV Valve	1250	15 L/s	1	
Basement - Acc. Shower - A-B1-037	SEV Valve	1250	15 L/s	1	
Ground Floor - Female WC - A-00-001	SEV Valve	2000	50 L/s	2	
Ground Floor - Male WC - A-00-005	SEV Valve	2000	66 L/s	2	
Ground Floor - ACC WC - A-00-008	SEV Valve	1250	15 L/s	1	
First Floor - Female WC - A-01-001	SEV Valve	2000	52 L/s	2	
First Floor - Breakout - A-01-002	CMD Diff	2000	70 L/s	2	
First Floor - Breakout - A-01-011	CMD Diff	2500	160 L/s	1	
First Floor - Breakout - A-01-011A	CMD Diff	2500	120 L/s	1	
First Floor - ACC WC - A-01-012	SEV Valve	1250	15 L/s	1	
First Floor - Male WC - A-01-013	SEV Valve	2000	49 L/s	2	
Second Floor - Female WC - A-02-001	SEV Valve	2000	57 L/s	2	
Second Floor - ACC WC - A-02-013	SEV Valve	1250	15 L/s	1	
Second Floor - Male WC - A-02-014	SEV Valve	2000	60 L/s	2	

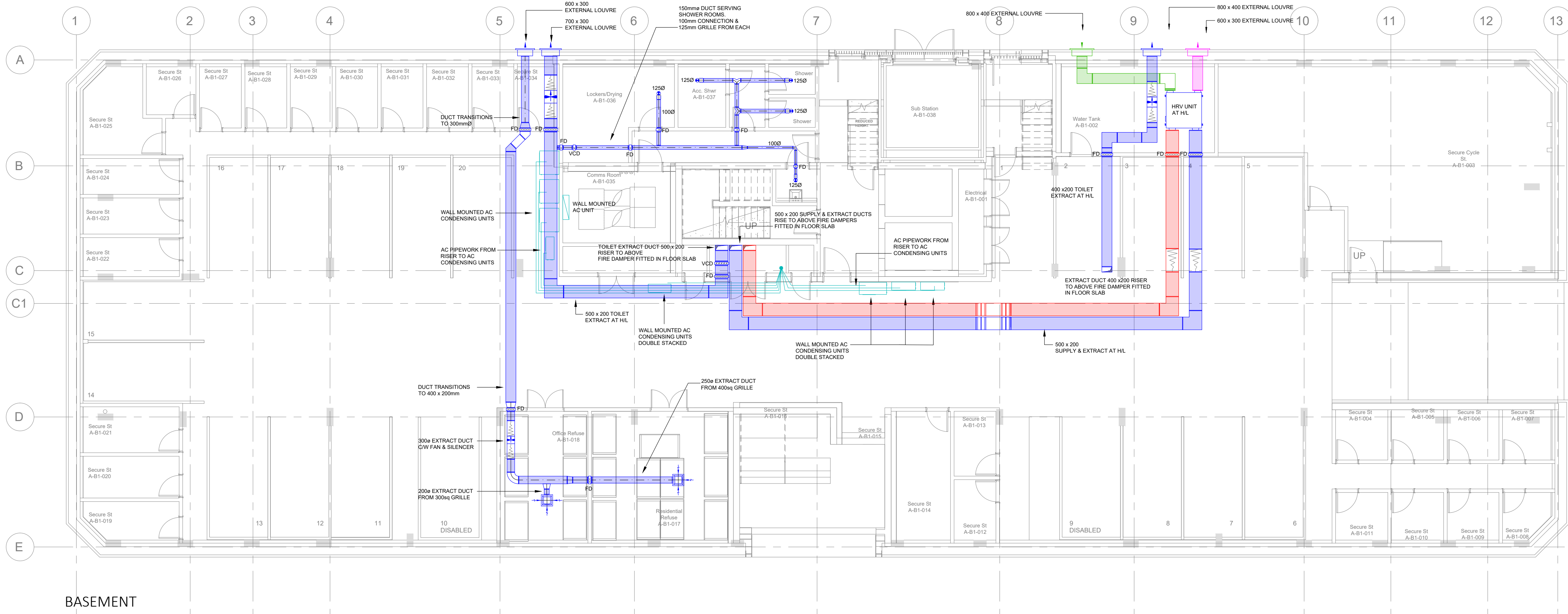
Supply Grille Schedule					
Location	Type	Size	Volume	Qty	
First Floor - Breakout - A-01-002	CMD Diff	2000	70 L/s	2	
First Floor - Breakout - A-01-011	CMD Diff	2500	160 L/s	1	
First Floor - Breakout - A-01-011A	CMD Diff	2500	120 L/s	1	

All grilles by RCM Products

LEGEND



GROUND FLOOR



PRELIMINARY

P	D	Rev	Date	Detail	Chk
P9	11-03-21			Co-ordination review - Lighting/containment/AC units	CT
P8	15-01-21			Grille sizes update, schedule shown, AC cassettes relocated as client request	CT
P7	08-01-21			Bin store extract duct route updated	CT
P6	02-12-20			Updated following co-ordination review	CT
P5	13-10-20			Architects bases updated (rec'd 12-10-20) Additional Condensers shown, client comments incorporated	CT
P4	21-05-20			Dis Shower Ventilation	CT
P3	12-05-20			Air Conditioning & MVHR Ventilation updated	CT
P2	31-01-20			Architects base updated (1st & 2nd Floors - rec'd 23-01-20) Cleaners Cupboard Extract Ducting Added/Bin Store Vent added	CT
P1	08-01-20			Preliminary issue	CT
Rev	Date			Detail	Chk



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Project **BENGAL STREET
MANCHESTER**

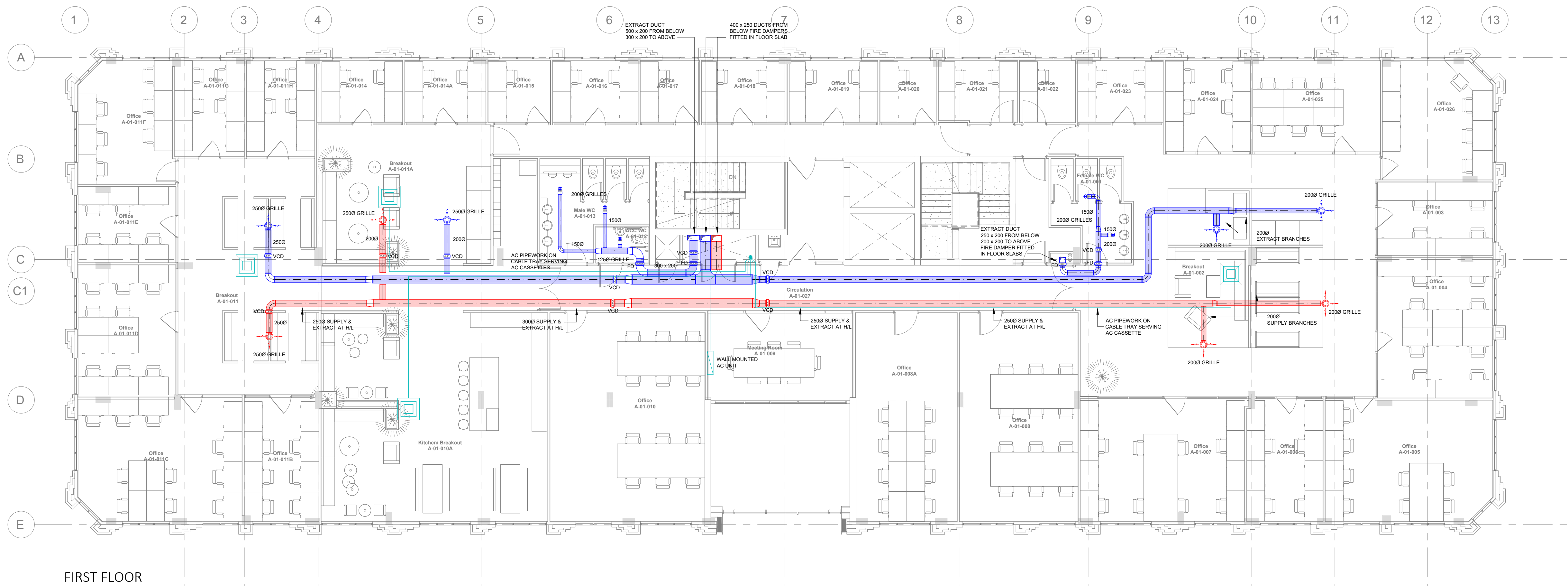
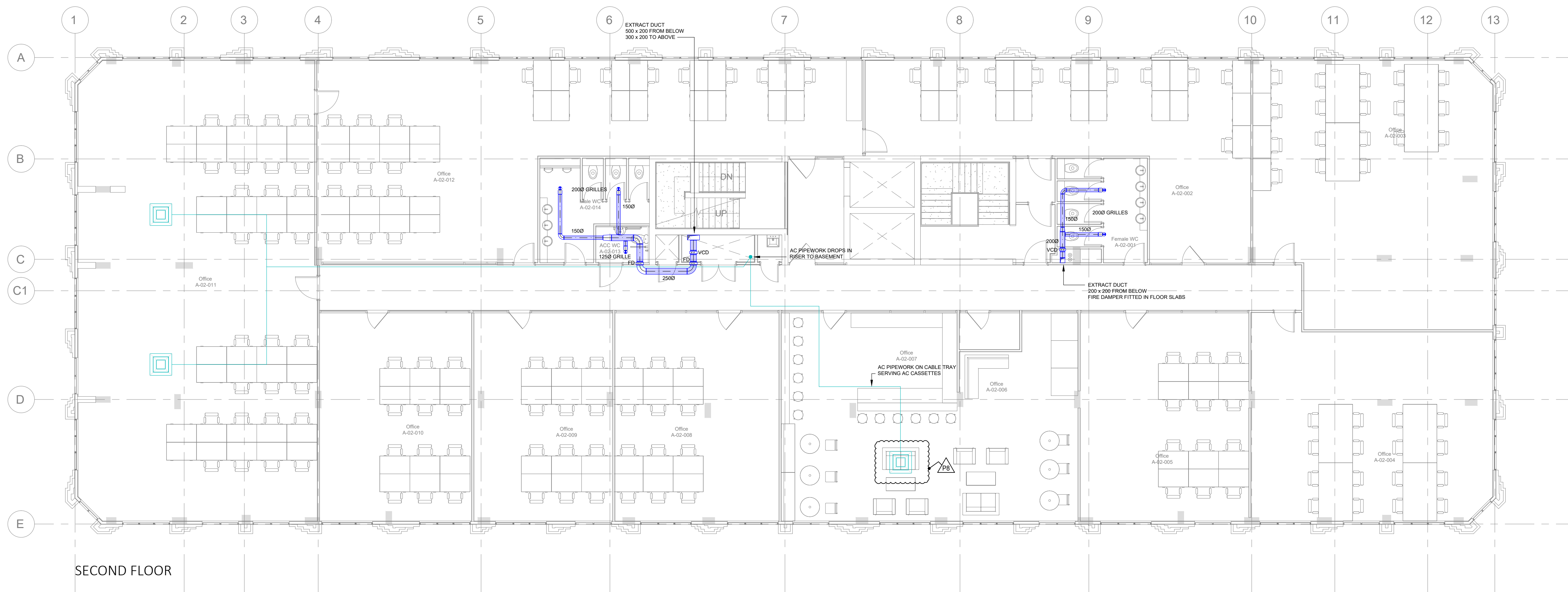
Drawing **Basement & Ground Floors
Ventilation & Air Conditioning Installation**

Scale	Date	Design	CAD	Checked
1:100 @ A1	May 2019	CT	PR	CT

Drawing No. **153 - M - 57- 01** Rev **P9**

Base Dwg xref.

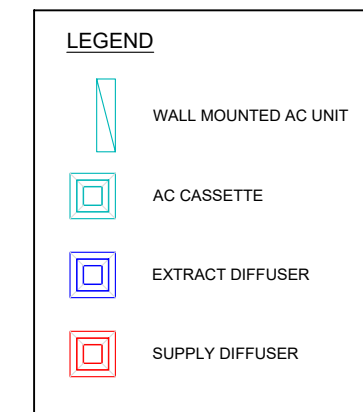
© West Lancashire Electrical Contractors Ltd 11/03/2021 09:44:58



Extract Grille Schedule				
Location	Type	Size	Volume	Qty
Basement - Cleaners	SEV Valve	1250	15 L/s	1
Basement - Shower	SEV Valve	1250	15 L/s	2
Basement - Residential Refuse - A-B1-017	ECG Grille	400 sq	210 L/s	1
Basement - Office Refuse - A-B1-018	ECG Grille	300 sq	120 L/s	1
Basement - Lockers/Drying A-B1-036	SEV Valve	1250	15 L/s	1
Basement - Acc. Shower - A-B1-037	SEV Valve	1250	15 L/s	1
Ground Floor - Female WC - A-00-001	SEV Valve	2000	50 L/s	2
Ground Floor - Male WC - A-00-005	SEV Valve	2000	66 L/s	2
Ground Floor - ACC WC - A-00-008	SEV Valve	1250	15 L/s	1
First Floor - Female WC - A-01-001	SEV Valve	2000	52 L/s	2
First Floor - Breakout - A-01-002	CMD Diff	2000	70 L/s	2
First Floor - Breakout - A-01-011	CMD Diff	2500	160 L/s	1
First Floor - Breakout - A-01-011A	CMD Diff	2500	120 L/s	1
First Floor - ACC WC - A-01-012	SEV Valve	1250	15 L/s	1
First Floor - Male WC - A-01-013	SEV Valve	2000	49 L/s	2
Second Floor - Female WC - A-02-001	SEV Valve	2000	57 L/s	2
Second Floor - ACC WC - A-02-013	SEV Valve	1250	15 L/s	1
Second Floor - Male WC - A-02-014	SEV Valve	2000	60 L/s	2

Supply Grille Schedule				
Location	Type	Size	Volume	Qty
First Floor - Breakout - A-01-002	CMD Diff	2000	70 L/s	2
First Floor - Breakout - A-01-011	CMD Diff	2500	160 L/s	1
First Floor - Breakout - A-01-011A	CMD Diff	2500	120 L/s	1

All grilles by RCM Products



PRELIMINARY

P8	11-03-21	1st floor ductwork co-ordinated with containment (corridor) 2nd floor AC unit relocated	CT
P7	15-01-21	Grille sizes update, schedule shown, AC cassettes relocated as client request	CT
P6	08-01-21	Female WC extract duct re-routed	CT
P5	02-12-20	Updated following co-ordination review	CT
P4	13-10-20	Architects bases updated (rec'd 12-10-20)	CT
P3	12-05-20	Air Conditioning & MVHR Ventilation updated	CT
P2	31-01-20	Architects base updated (1st & 2nd Floors - rec'd 23-01-20)	CT
P1	08-01-20	Cleaners Cupboard Extract Ducting Added	CT
Rev	Date	Preliminary issue	Chk
Rev	Date	Detail	Chk

Client

northern group.co.uk

WEST LANCASHIRE GROUP
Electrical • Mechanical • EHV • Facilities Maintenance

West Lancs House - Wynefields - Poulton Business Park
Poulton-Le-Flyde - Lancashire - FY6 8JX
t: 01253 884 501
e: admin@westlancsgroup.co.uk w: www.westlancsgroup.co.uk

Project **BENGAL STREET MANCHESTER**

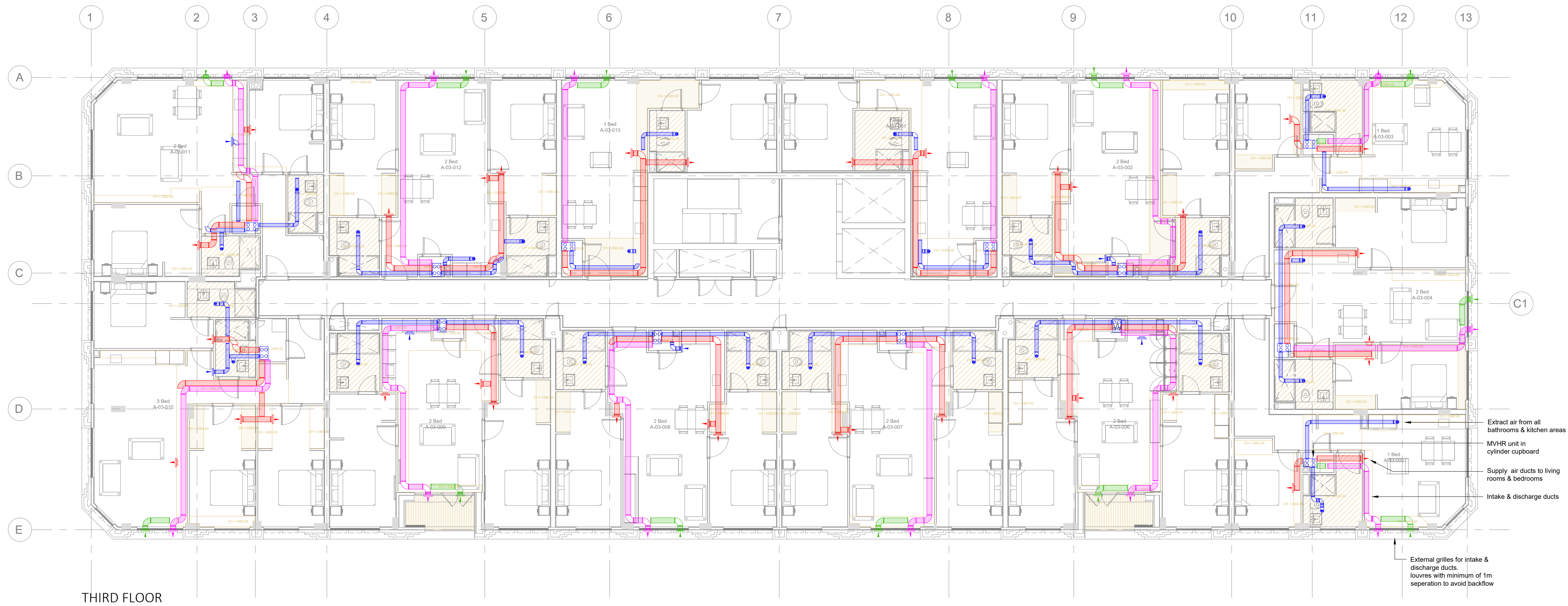
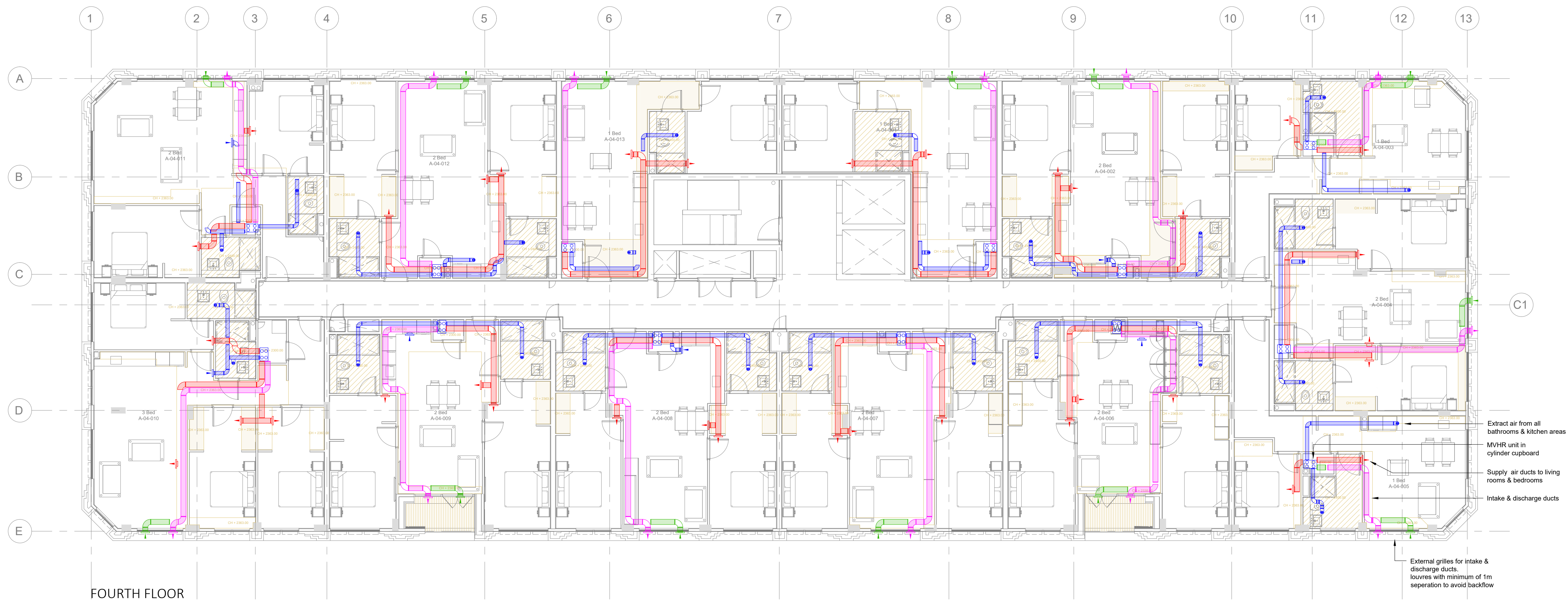
Drawing **First & Second Floors Ventilation & Air Conditioning Installation**

Scale	Date	Design	CAD	Checked
1:100 @ A1	May 2019	CT	PR	CT

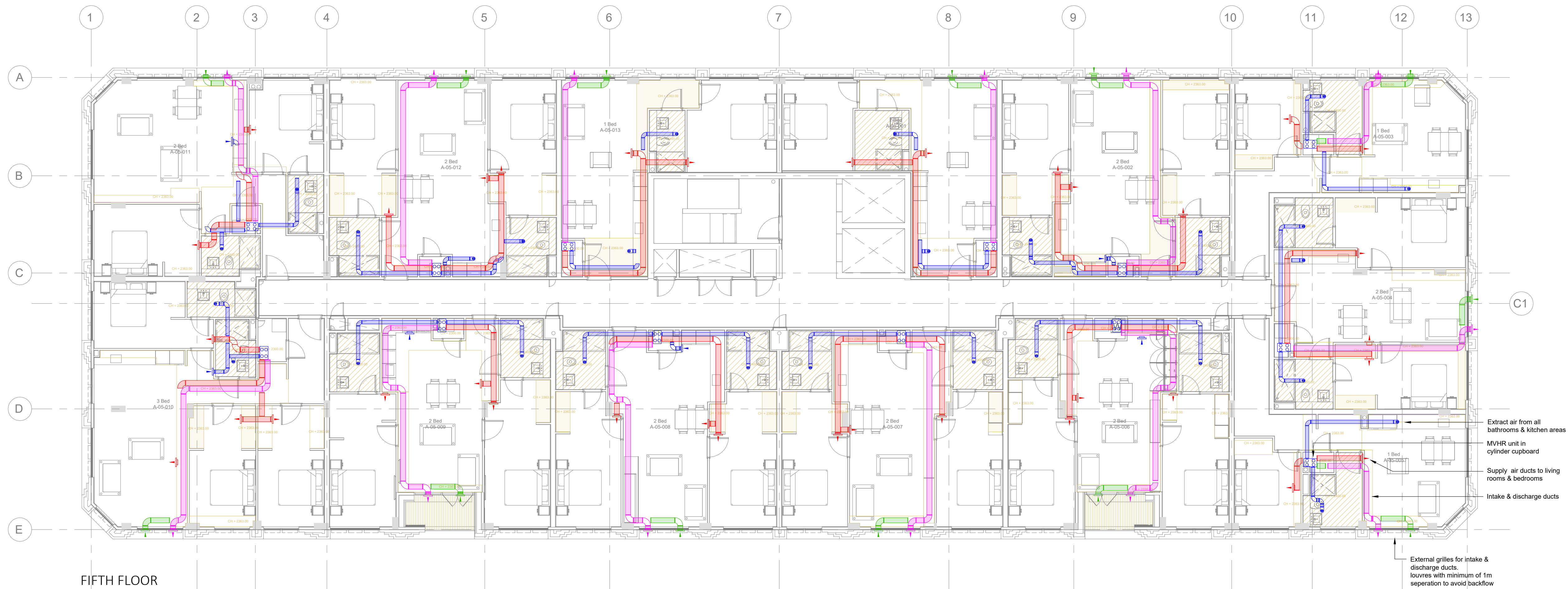
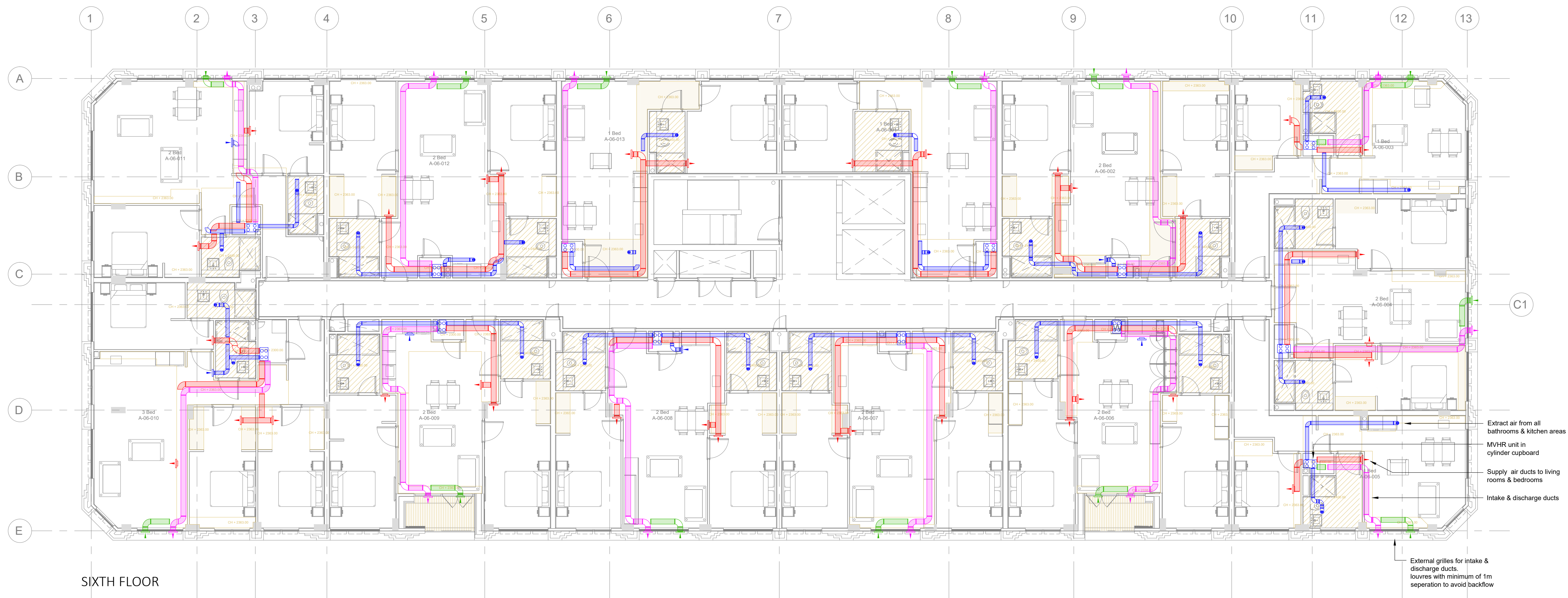
Drawing No. **153 - M - 57 - 02** Rev **P8**

Base Dwg xref.

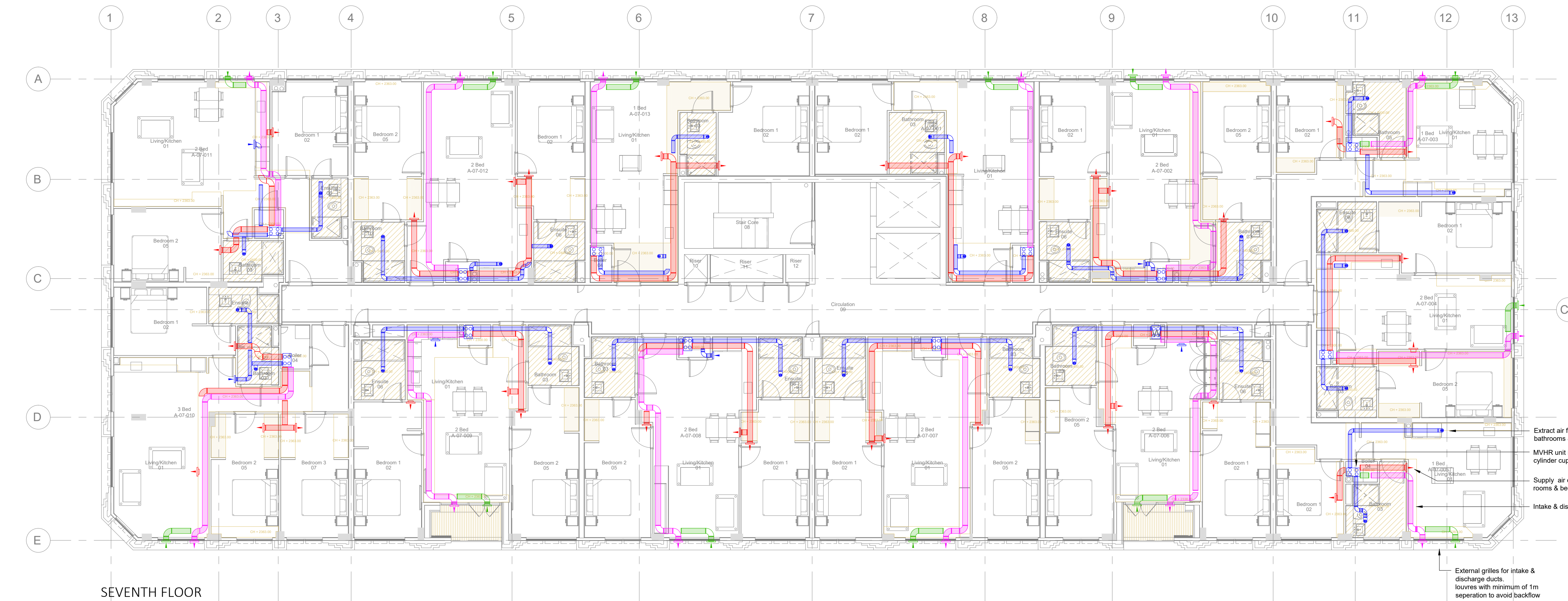
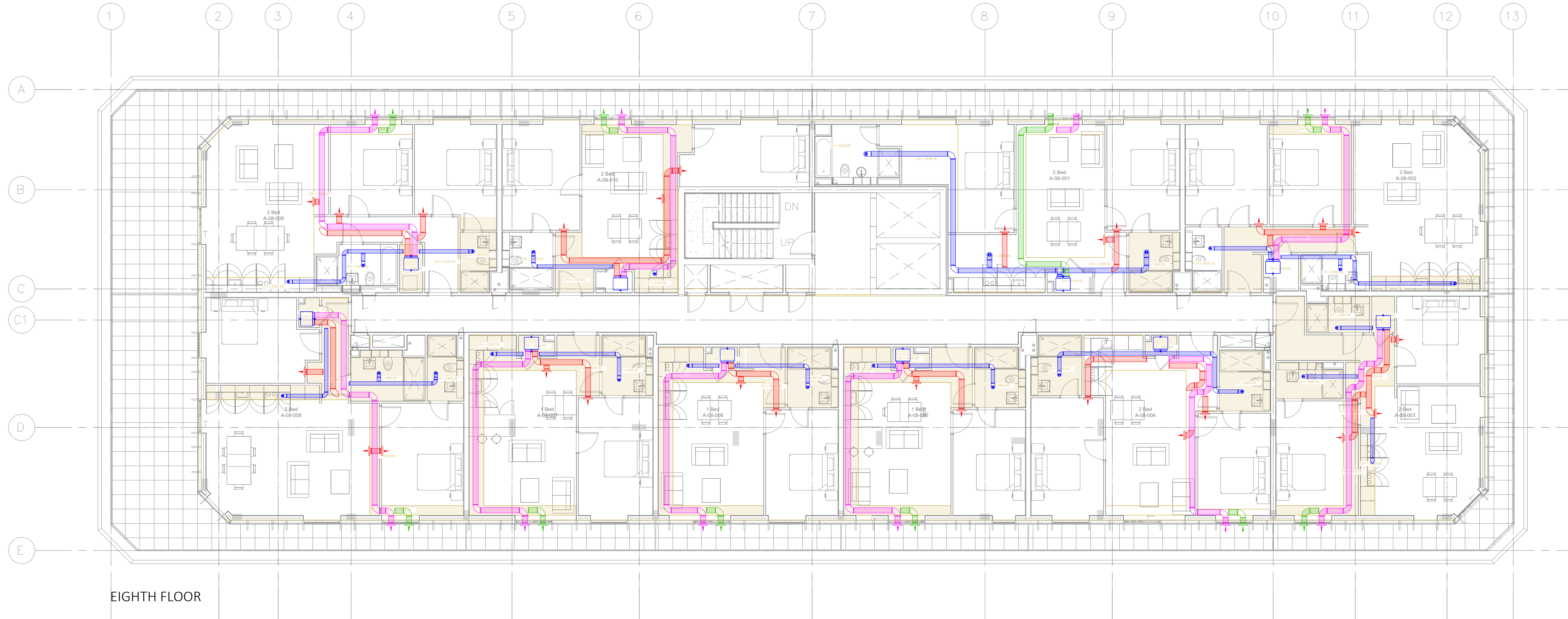
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PRELIMINARY				
P4	28-01-21	Updated to client comments		CIB
P3	09-11-20	Arch bases updated to include ceilings/bulkheads		CIB
P2	07-05-20	Ducting re-routed as FCH comments		CT
P1	04-11-19	Intake and discharge ducting routes as discussed		CT
		Preliminary issue		CT
Rev	Date	Detail		Chk
Client				
				
				
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Project				
BENGAL STREET MANCHESTER				
Drawing				
Third & Fourth Floors Ventilation Installation Services				
Scale	Date	Design	CAD	Checked
1:100 @ A1	May 2019	CT	PR	CT
Drawing No.	153 - M - 57 - 03			Rev P4
Base Dwg xref.				
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28/01/2021 17:03:58				



		PRELIMINARY												
P4	28-01-21	Updated to client comments		CIB										
P3	09-11-20	Arch bases updated to include ceilings/bulkheads Ducting re-routed as FCH comments		CT										
P2	07-05-20	Intake and discharge ducting routes as discussed		CT										
P1		Preliminary issue		CT										
Rev	Date	Detail		Chk										
Client														
														
														
West Lancs House - Wyrefields - Poulton Business Park Poulton-Le-Fylde - Lancashire - FY6 8JX t: 01253 884 501 e: admin@westlancsgroup.co.uk w: www.westlancsgroup.co.uk														
Project														
BENGAL STREET MANCHESTER														
Drawing														
Fifth & Sixth Floors Ventilation Installation Services														
<table><tr><td>Scale</td><td>Date</td><td>Design</td><td>CAD</td><td>Checked</td></tr><tr><td>1:100 @ A1</td><td>May 2019</td><td>CT</td><td>PR</td><td>CT</td></tr></table>					Scale	Date	Design	CAD	Checked	1:100 @ A1	May 2019	CT	PR	CT
Scale	Date	Design	CAD	Checked										
1:100 @ A1	May 2019	CT	PR	CT										
Drawing No. 153 - M - 57 - 04				Rev P4										
Base Dwg xref.														
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		PRELIMINARY			
P4	28-01-21	Updated to client comments			CIB
P3	09-11-20	Arch bases updated to include ceilings/bulkheads			CIB
P2	07-05-20	Ducting re-routed as FCH comments			CIB
P1		Intake and discharge ducting routes as discussed			CIB
		Preliminary issue			CIB
Rev	Date	Detail			Chk
Client					
					
					
WEST LANCASHIRE GROUP <i>Electrical • Mechanical • C&I • Facilities Maintenance</i>					
West Lancs House - Wyrefields - Poulton Business Park Poulton-Le-Fylde - Lancashire - FY6 8JX t: 01253 884 501 e: admin@westlancsgroup.co.uk w: www.westlancsgroup.co.uk					
Project					
BENGAL STREET MANCHESTER					
Drawing					
Seventh & Eighth Floors Ventilation Installation Services					
Scale		Date		Design	CAD Checked
1:100 @ A1		May 2019		CT	PR CT
Drawing No. 153 - M - 57 - 05				Rev P4	
Base Dwg xref.					
© West Lancashire Electrical Contractors Ltd					

28/01/2021 17:06:16

Extract air from all
bathrooms & kitchen areas

MVHR unit in
cylinder cupboard

Supply air ducts to living
rooms & bedrooms

Intake & discharge ducts

External grilles for intake &
discharge ducts
louvres with minimum of 1m
separation to avoid backflow

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 14 Dec 2020 14:36 using software version 4.7.3780.0

Project Details

Location: MVHR

Technical Data

XBC+
Fan Code: **XBC55HA-NNN-E-LS1S**
Installation Manual Links: 671948

Required duty: 0.42 m³/s at 238 Pa
Actual duty: 0.46 m³/s at 289 Pa
Actual at required flow: 0.42 m³/s at 356 Pa

When speed controlled to required duty (90.71%):

Motor Input Power: 0.706 kW
Specific Fan Power: 1.7 W/(l/s)

At full speed:

Motor Input Power: 0.946 kW
Specific Fan Power: 2.0 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 (90.71%)

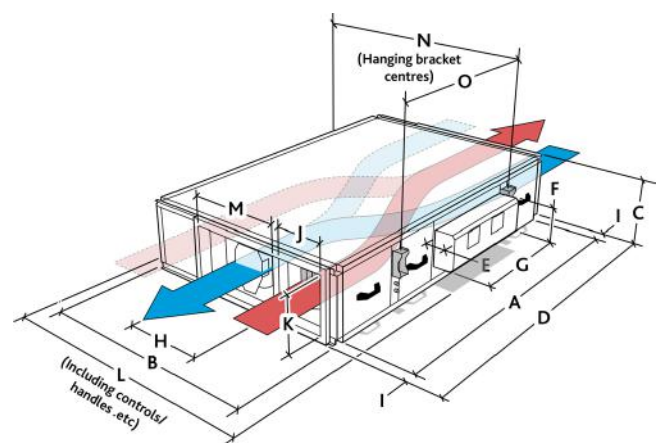
Sound Power Levels re 1 pWatts (Hz):

Hz	63	125	250	500	1k	2k	4k	8k	dBA
Breakout	70	64	58	44	42	40	37	25	32
Induct Intake	79	73	72	60	61	58	50	38	46
Induct Supply	83	79	81	68	69	67	63	58	55
Induct Discharge	84	80	81	68	69	68	63	60	55
Induct Extract	80	74	72	60	61	59	50	40	47
For 100% speed:	+2	+1	+3	+3	+3	+3	+3	+3	

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

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

Fan Dimensions

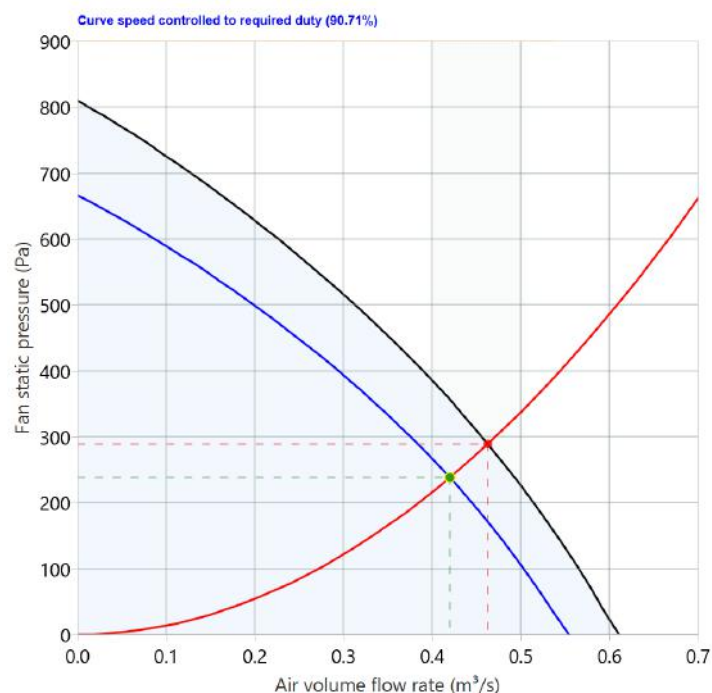


A	B	C	D	E	F	G	H	I
1900	1560	470	1960	140	210	640	535	30
J	K	L	M	N	O	kg		
397	430	1751	587	1632	1052	375.0		

Length: Width: Height:
1900 1560 470

Drawing is for dimensional purposes only. Dimensions in mm.

Performance Chart



Additional Notes

Selected Ancillaries

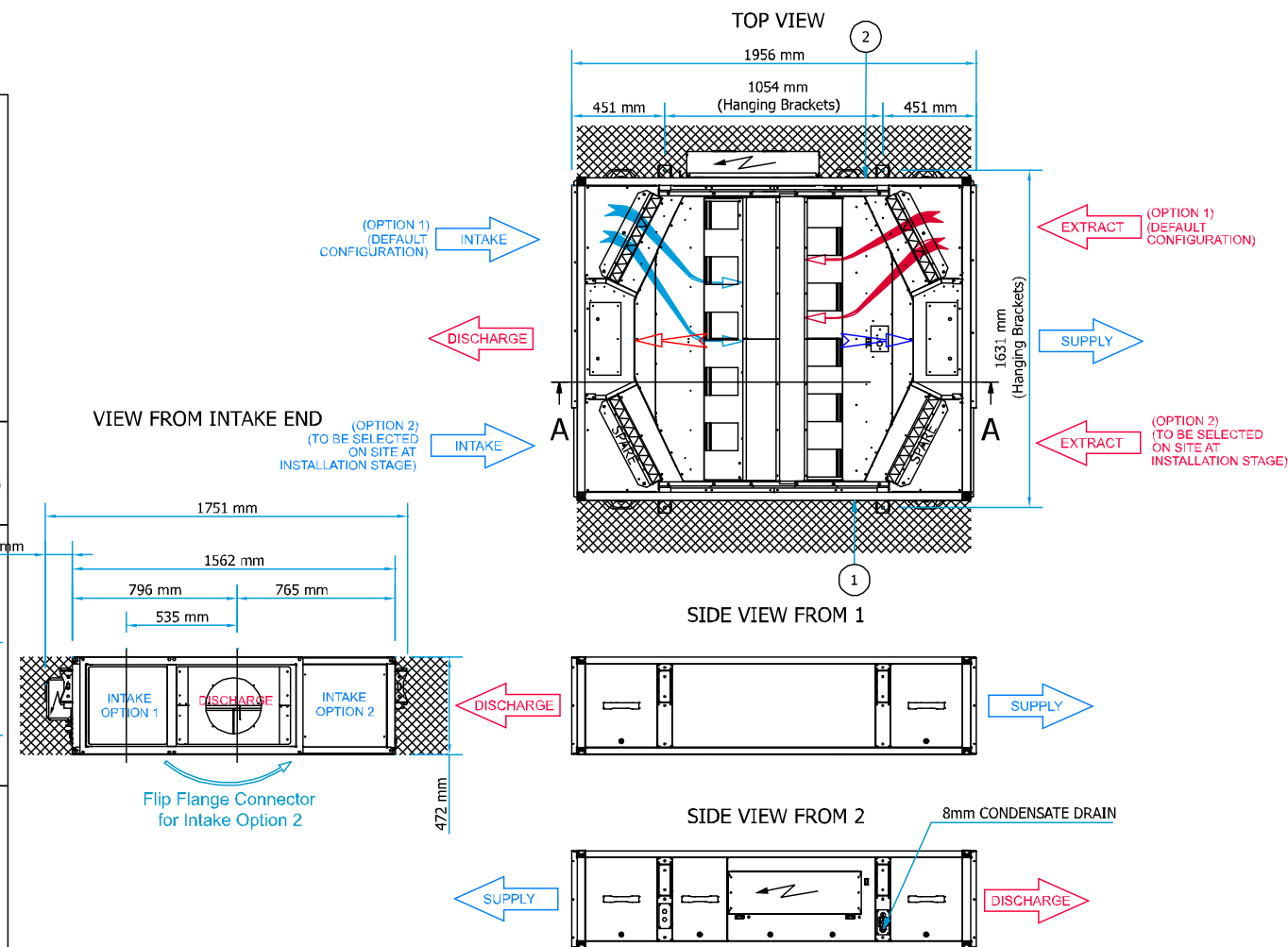
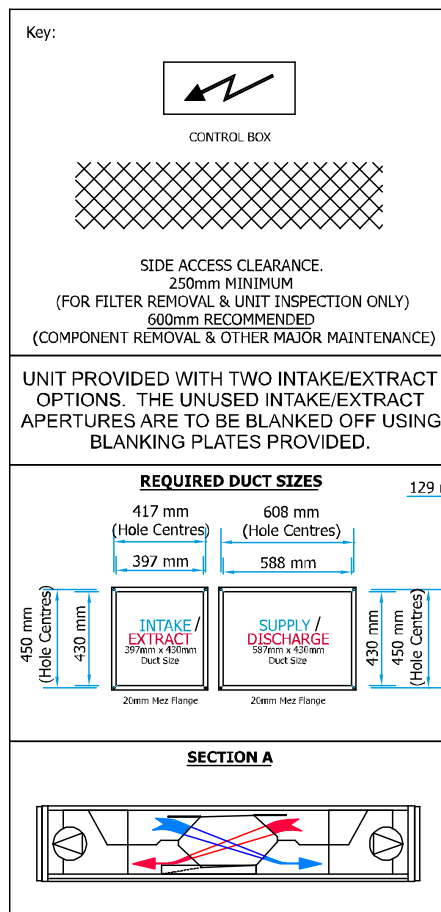
1 x ES-LCD Ecosmart LCD Touch Screen User Control (White)

Specification

XBC55HA-NNN-E-LS1S. Nuaire XBOXER Supply & Extract HX unit. Incorporating high efficiency Counterflow plate heat exchanger 100% bypass facility (patent app. for) automatic control and actuator. Backward curved impellers, IP54 EC motors and speed control. Double skinned construction (patented). G4 Supply G4 Extract panel filters (spares included). EcoSmart Classic control of ventilation/heating. For ceiling/underfloor/slab mounted applications. Supply/Discharge connections on unit centreline; Intake/Extract connections are configurable on site to either side of unit. Rotational side mounted control. Unit will be supplied LEFT HANDED. 5 year warranty (UK and Ireland only)

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*****

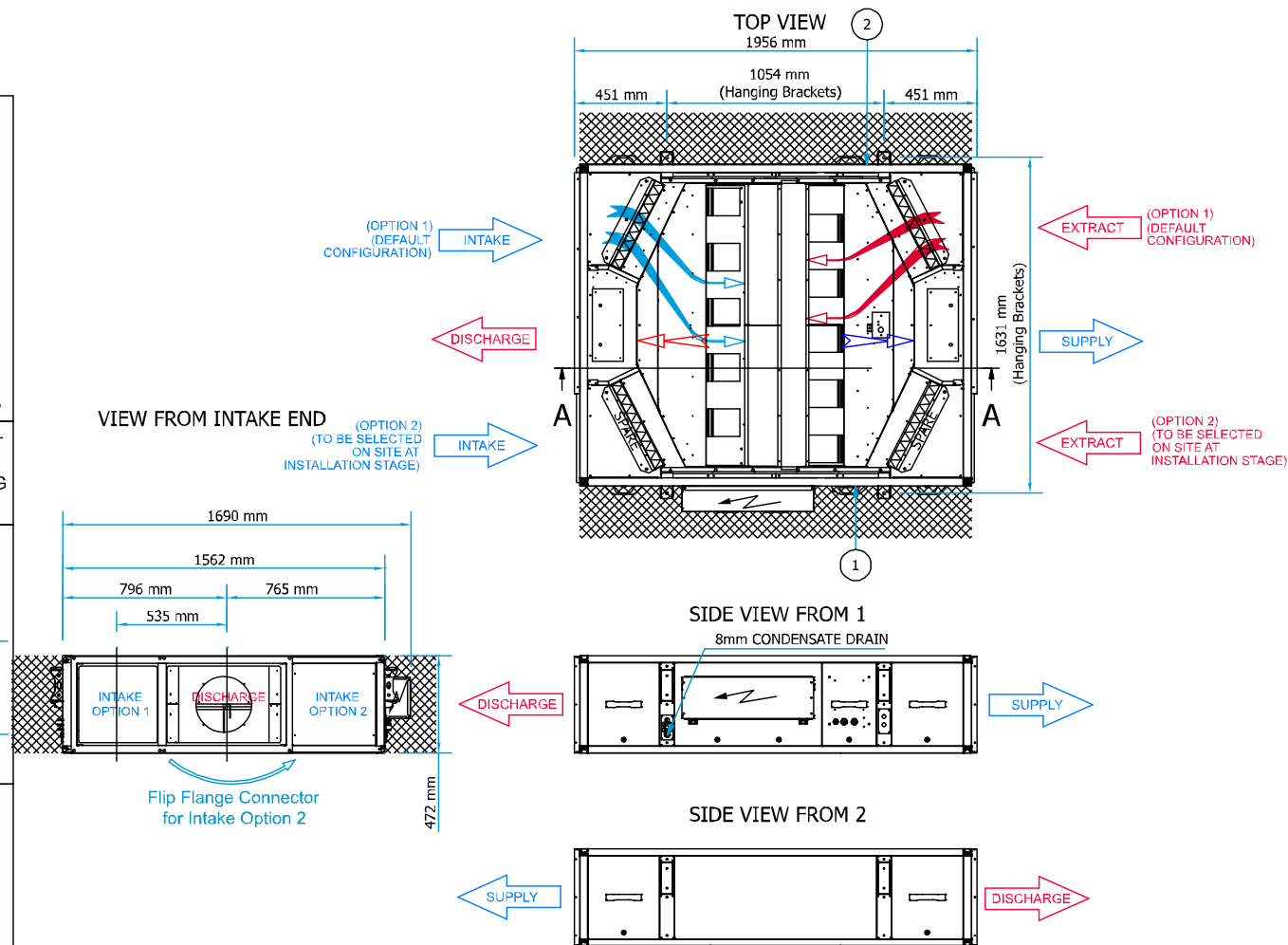
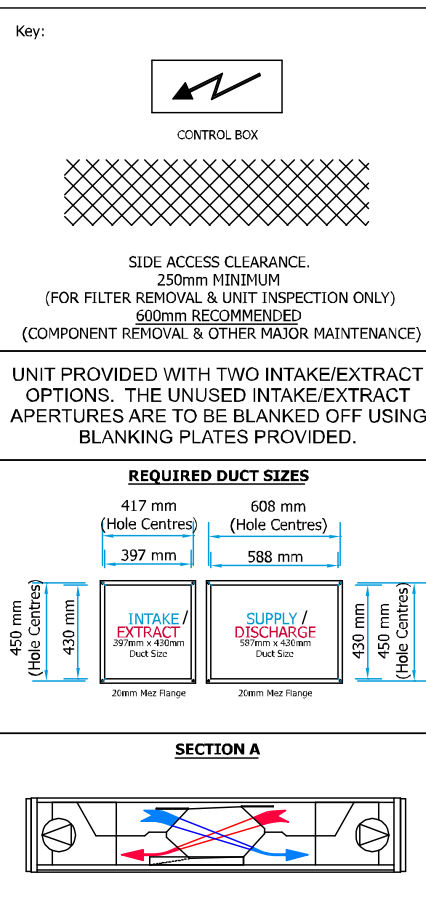
Please **DO NOT** sign this drawing to confirm handings.
Please request the official handing drawings from Nuaire.

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/xbcplus55-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

Do **NOT** scale from this drawing.



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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 14 Dec 2020 14:36 using software version 4.7.3780.0

Project Details

Location: Bin Store

Technical Data

DE - DAVE Extract Fans

Fan Code: **DE6-ES**

Installation Manual Links: **611280**

Required duty: **0.34 m³/s at 160 Pa**

Actual duty: **0.54 m³/s at 405 Pa**

Actual at required flow: **0.34 m³/s at 529 Pa**

When speed controlled to required duty (62.84%):

Motor Input Power: **0.132 kW**

Specific Fan Power: **0.4 W/(l/s)**

Velocity at required duty: **2.706 m/s**

At full speed:

Motor Input Power: **0.533 kW**

Specific Fan Power: **1.0 W/(l/s)**

Maximum Fan Speed: **1,710 RPM**

Electrical Supply: **230V 1 Phase 50 Hz**

Nominal Motor Rating: **0.45 kW**

Motor current (flc): **2.9 A**

Motor starting current (sc): **2.9 A**

Max. operating temp: **40°C**

Weight: **69 kg**

All Ecosmart fans feature soft-starting and stepless variable speed control. A switch 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 (62.84%)

Sound Power Levels re 1 pWatts (Hz):

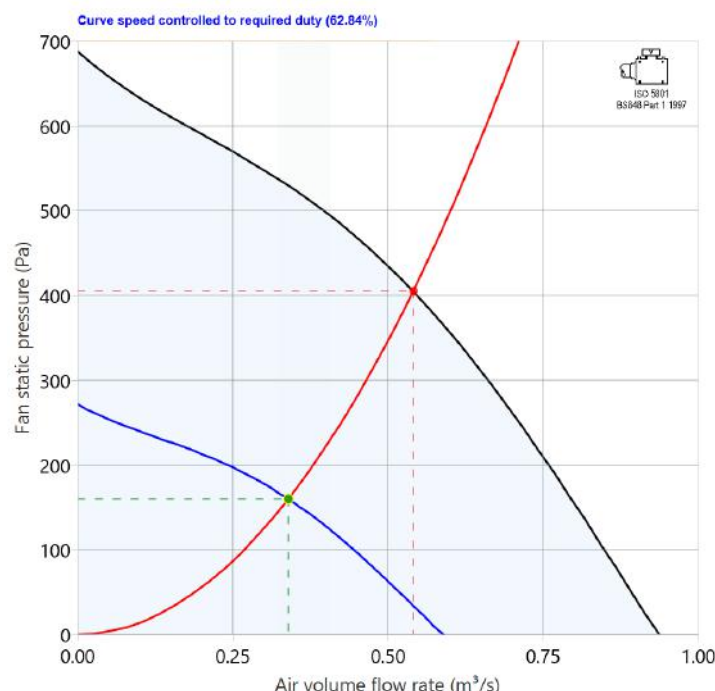
Hz	63	125	250	500	1k	2k	4k	8k	dBa
Induct Inlet	88	84	70	61	56	52	50	43	
Induct Outlet	88	84	70	61	56	51	47	40	
Breakout	72	64	61	46	43	32	27	21	37
For 100% speed:	+3	+4	+6	+7	+11	+11	+11	+11	

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

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

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

Performance Chart



Additional Notes

Selected Ancillaries

1 x ES-UCF

Ecosmart Fan User Control

Specification

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

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

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

ES-UCF

Ventilation user control compatible with Ecosmart system.

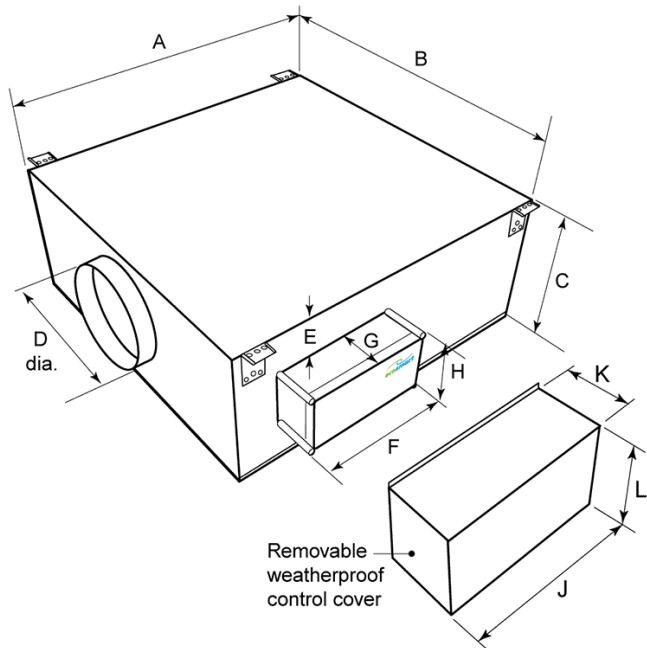
- ES-UCF User Control - supplied with a pre-plugged, 10M length of communications cable. The ES-UCF control is used to switch the fan on/off and adjust the fan speed.

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

Whilst the information given on this data sheet is fan specific, it is in summary and reference to the product selection catalogue and installation & maintenance documents is recommended.
This data sheet produced on 14 Dec 2020 14:36 using software version 4.7.3780.0

Fan Dimensions



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

Drawing is for dimensional purposes only. Dimensions in mm.

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

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

This data sheet produced on 14 Dec 2020 14:36 using software version 4.7.3780.0

Project Details

Location: Toilete Extract

Technical Data

DE - DAVE Extract Fans

Fan Code: **DE6-ES**
 Installation Manual Links: **611280**
 Required duty: 0.42 m³/s at 220 Pa
 Actual duty: 0.56 m³/s at 390 Pa
 Actual at required flow: 0.42 m³/s at 487 Pa

When speed controlled to required duty (75.08%):

Motor Input Power: **0.225 kW**
 Specific Fan Power: **0.5 W/(l/s)**
 Velocity at required duty: 3.342 m/s

At full speed:

Motor Input Power: 0.532 kW
 Specific Fan Power: 1.0 W/(l/s)
 Maximum Fan Speed: 1,710 RPM
 Electrical Supply: 230V 1 Phase 50 Hz
 Nominal Motor Rating: 0.45 kW
 Motor current (flc): 2.9 A
 Motor starting current (sc): 2.9 A

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

All Ecosmart fans feature soft-starting and stepless variable speed control. A switch 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 (75.08%)

Sound Power Levels re 1 pWatts (Hz):

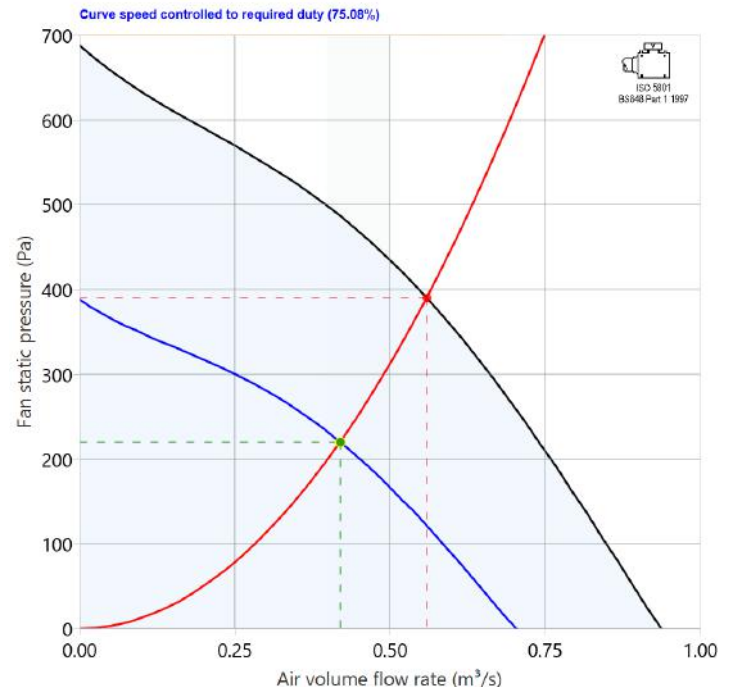
Hz	63	125	250	500	1k	2k	4k	8k	dBA
Induct Inlet	89	85	72	63	60	56	54	47	
Induct Outlet	89	85	72	63	60	55	51	44	
Breakout	73	65	63	48	47	36	31	25	39
For 100% speed:	+2	+3	+4	+5	+7	+7	+7	+7	

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

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

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

Performance Chart



Additional Notes

Specification

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

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

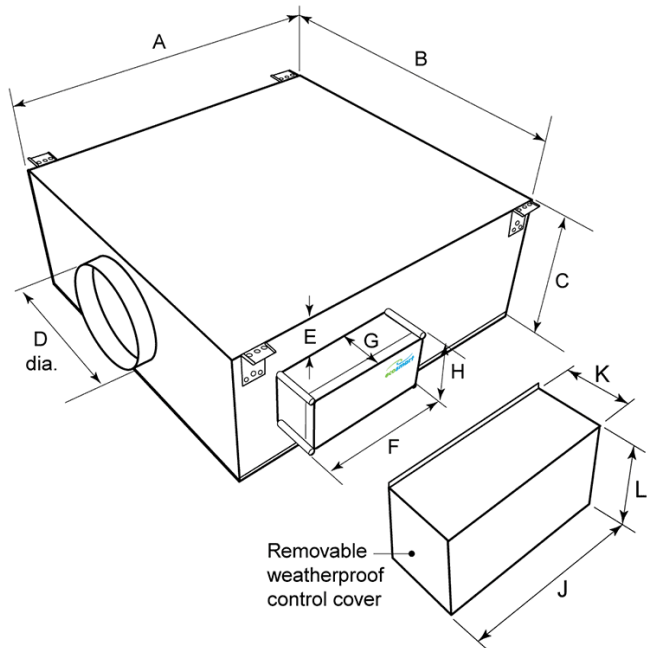
The unit is supplied with crinkle spigots and set of four mounting brackets. The Fan unit shall have a 5 year warranty. The product warranty applies to the UK mainland and in accordance with Clause 14 of our Conditions of Sale. Customers purchasing from outside of the UK should contact Nuaire International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

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 14 Dec 2020 14:36 using software version 4.7.3780.0

Fan Dimensions



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

Drawing is for dimensional purposes only. Dimensions in mm.

ACM® 250-315

In-Line Mixed Flow Fan Models



Features & Benefits

- Available in two sizes
- Simple Installation
- Supplied complete for installation
- Optimise fan performance by using an approved Vent Axia controller
- Diagonal impeller with stator
- Galvanized metal housing
- Integrated thermal switch
- Includes a mounting bracket
- Designed to meet IP54

Ducted Ventilation

Vent Axia has designed a complete range of energy efficient Mixed Flow In-Line fans for use with rigid and flexible ducting.

In-line Mixed Flow fans offer two and half times the pressure of conventional axial fans and are dimensionally more compact making them ideal for many ducted applications.

The ACM Mixed Flow In-Line fan can operate in both horizontal and vertical positions and can be mounted to meet its optimum performance.

Motor

All motors are fitted with Standard Thermal Overload Protection (S.T.O.P.). Designed for ambient temperatures up to +50°C. All sizes with capacitor run motors. ACM 250 and 315 are Class I appliances. Supply voltage 220-240V/1/50Hz.

Models

Model	Stock Ref
ACM250	17110010
ACM315	17112010

Controller

For optimum performance use a Vent-Axia electronic controller. Surface mounted providing variable speed control with an On/Off/sensor slider with indication light. There is an adjustable minimum speed setting. The controller is radio suppressed to BS EN 55014 and electrical connections for use with suitable external sensors are provided.

1.5 Amp Controller - Suitable for 250mm model
Dimensions: 86 x 156 x 53mm (H x W x D).

Stock Ref
W300310

Used in conjunction with speed controllable fans to provide 5 stepped speed without electronic motor 'hum'. Several fans can be connected to one transformer provided their combined load does not exceed the controller rating.

Single phase: 3.0amp. Rotary switch giving On/Off and five speeds.

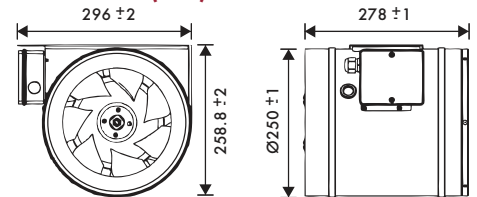
Output voltages at 240V/1PH/50Hz 0, 90, 115, 140, 175, 240 volts.

Neon indicator. Enclosures are protected to IP54.

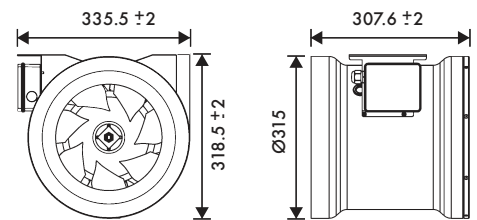
Dimensions: 135 x 170 x 117mm (H x W x D).

Stock Ref
10314103

Dimensions (mm)

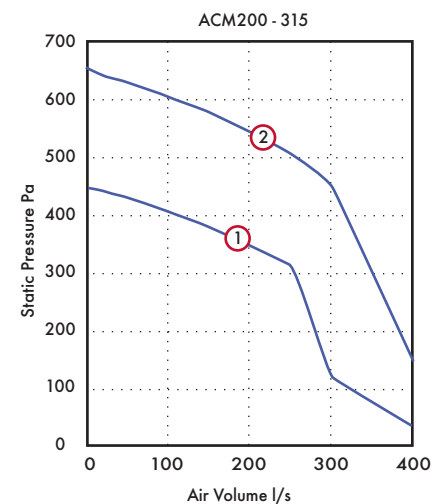


ACM250



ACM315

Performance



		Nominal					dB(A)
Size	Curve	r.p.m	l/s @ 0Pa	Watts	Amps	at 3m	
250	①	H 2720	450	145	0.8	52	
315	②	H 2840	653	270	1.2	56	

NEW
RANGE

BROOKVENT aircycle[↻]

1.3 RANGE

**QUIET, EFFICIENT
AND HIGHLY
VERSATILE**

Heat Recovery Ventilation



Wall Mount



Ceiling Mount



Floor Mount

Range down to

0.42 W/l/s
SPECIFIC FAN
POWER

Range up to

92%
HEAT RECOVERY
EFFICIENCY

Suitable for
Small to Medium
Dwellings and
Apartments



brookvent.co.uk

BROOKVENT aircycle^{1.3}

5 Year
Manufacturers
Guarantee

► ENGINEERED FOR RELIABILITY

*in a range of options to meet
your project demands*



The **aircycle 1.3** range operates by efficiently recovering heat from the air extracted from wet rooms (bathroom, kitchen etc.) that would normally be expelled to the atmosphere.

This heat is then transferred to the fresh air being drawn into the system, which is then filtered and distributed throughout the habitable rooms (living room, bedroom etc.).

The **aircycle 1.3** range can significantly reduce the space heating demand of a property whilst also delivering a healthier and more comfortable indoor environment for the occupier.

Core Features

- Up to 92% heat recovery efficiency
- Down to 0.42 w/l/s specific fan power
- 100% Variable fan speed control
- Independent fan speed control
- 230v Auto-boost integration
- Potentiometer or digital control models
- Variable boost over-run timer
- Tempering summer bypass, 100% filtered
- Integral humidistat
- Automated frost protection
- Wall, floor or ceiling mount models
- Standard or inverted (LH, RH duct connection) options
- Easy access filters
- 5 year guarantee



Paper from
responsible sources

► UNRIVALLED PERFORMANCE

delivered by true innovation



EXTRACT
FROM INSIDE

Warm, moisture-laden, polluted air extracted from wet rooms (bathroom, kitchen etc.)



SUPPLY
TO INSIDE

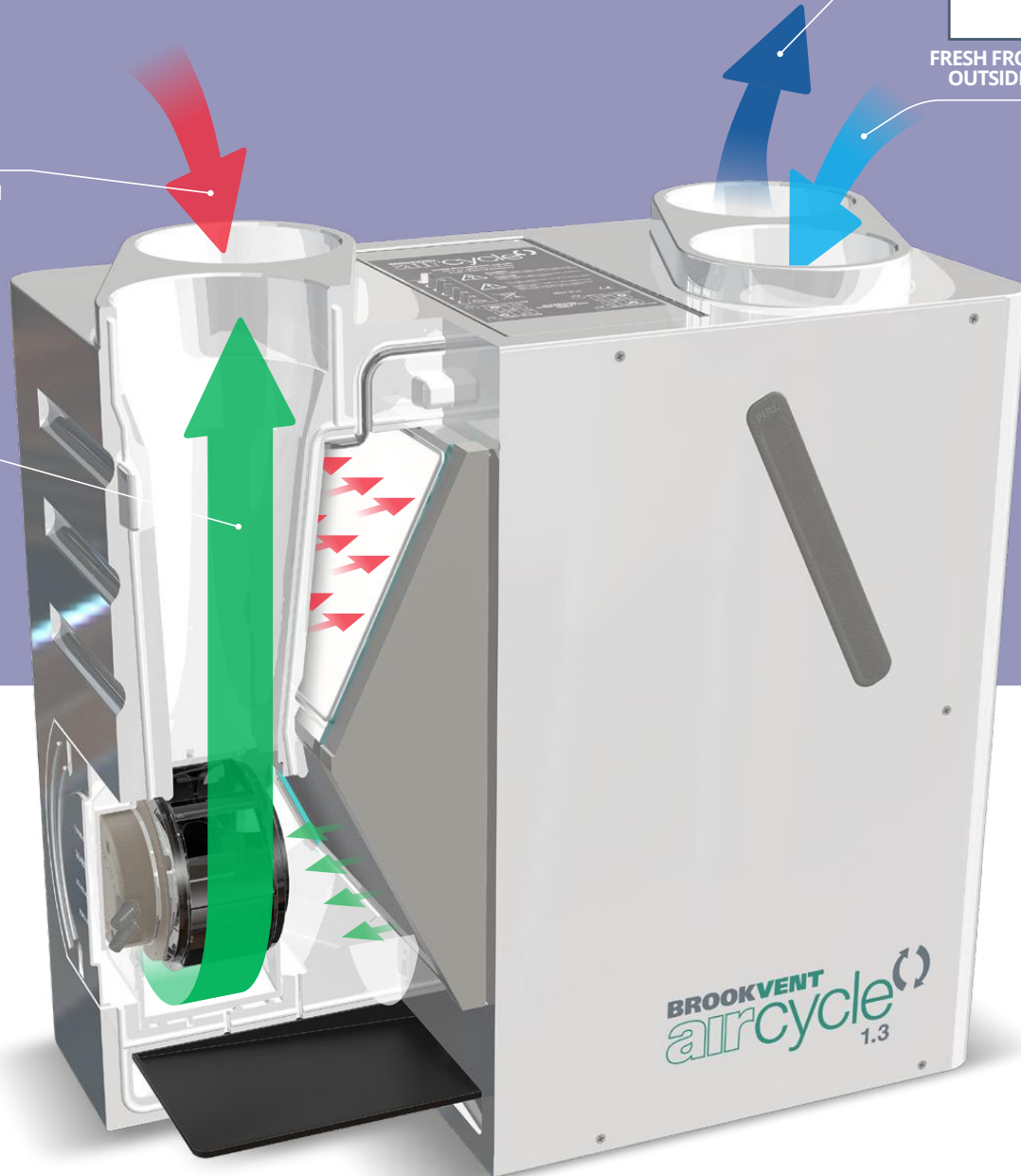
Warm, filtered, fresh air supplied to the habitable rooms (living room, bedroom etc.)



EXHAUST
TO OUTSIDE



FRESH FROM
OUTSIDE



Range down to

0.42 W/l/s

Specific Fan Power

Streamlined, low-turbulence airflow path design coupled with state of the art EC fan technology ensures the **aircycle 1.3** range has one of the *lowest power consumption* (W) per volume of air (l/s) outputs in its class, minimising running costs and setting a new standard in HRV system efficiency.

Range up to

92%

Heat Recovery Efficiency

Incorporating the market leading Recair™ counter-flow, air-to-air heat exchanger, the **aircycle 1.3** range succeeds in transferring up to 92% of the heat from the extract air being taken from the wet rooms to that of the fresh air supply stream.

This ensures *high levels of indoor air quality* can be maintained while greatly minimising heat loss.

► VERSATILE INSTALLATION

options for a quick and easy fit

Suitable for
Small to Medium
Dwellings and
Apartments



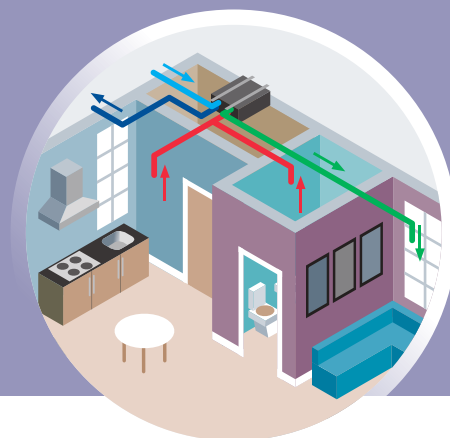
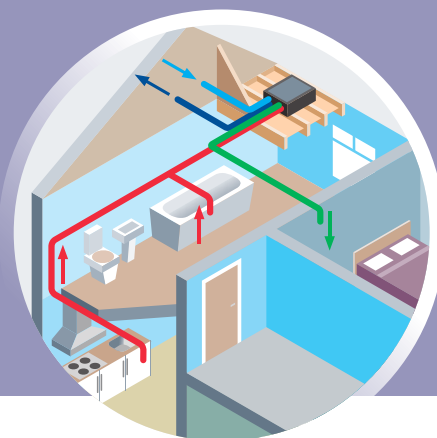
WALL, FLOOR or CEILING Mount

Three different mounting types to suit your project requirements. One performance standard. Zero compromise. Unlike competitor products, the **aircycle 1.3** range allows it to be supplied in wall, floor or ceiling mount while retaining the same high efficiency, low specific fan power and airflow performance.

WALL MOUNT

FLOOR MOUNT

CEILING MOUNT

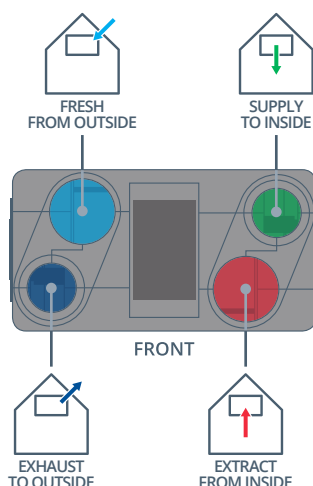
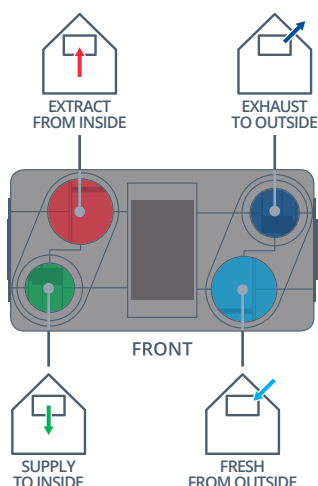


DUCT CONFIGURATION Set-up

The ducting configuration of **aircycle 1.3** range is factory set and supplied to order, changing the external duct connections from the right to the left of the system as required for specific property types thus minimising ducting runs, system pressure and installation time.

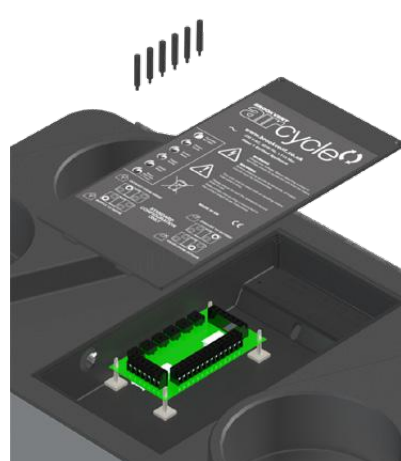
STANDARD CONFIGURATION

INVERTED CONFIGURATION



POTENTIOMETER or Digital Control Options

Benefit from precise and responsive potentiometer controls or, for added intelligence, choose our new digital option that sets a new benchmark in engineer and end user control.



Potentiometer



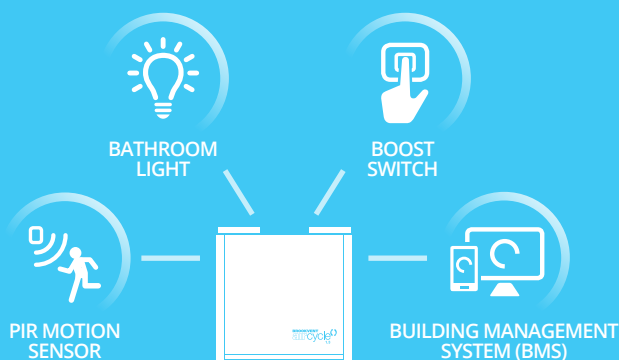
Digital Control

AIR QUALITY CONTROL

delivered by intelligent sensor technology

AUTO-BOOST Integration

The programmed boost (high) speed setting can be easily triggered via any 230v switched live signal (e.g. bathroom light, PIR motion sensor, boost switch, BMS) offering multiple means of intelligent, automatic control integration. This ensures pollutants are extracted immediately when created and at a much quicker rate.



Integral HUMIDISTAT

Continuously monitoring the humidity level (% RH) of the extract air from the property, the system's integral humidistat automatically operates the boost (high) setting of each fan to reduce indoor humidity levels to the preferred, adjustable RH comfort level.

Tempering SUMMER BYPASS

A variable, tempering summer bypass mechanism operates by gradually increasing the amount of air directed around the heat recovery core as the temperature of the supply air from outside rises. This automatic feature helps to ensure total user comfort during warmer summer months by reducing the amount of heat being added to the fresh, filtered supply air.

QUIET by Design

Streamlined airflow path design coupled with custom engineered fan scrolls help to ensure low internal air turbulence and guaranteed balanced fan operation, *greatly minimising occurrences of in-duct noise transference.*

A high density, expanded polypropylene casing further succeeds in limiting any potential break-out noise from the fan operation.

Aircycle 1.3 Acoustic Performance													
Airflow l/s	Speed %		Frequency Hz										LwA dB @3m
			63	125	250	500	1 k	2 k	4 k	8 k	Lw dB	LwA dB	
20.6	30%	Inlet	30.1	30.8	33.3	30.3	22.1	7.8	7.2	17.8	37.5	30.3	20.5
		Outlet	16.0	24.7	25.3	22.8	10.8	7.5	7.4	17.6	29.8	23.4	13.6
		Breakout	23.3	22.6	26.6	22.3	11.2	5.5	6.9	17.6	30.4	23.4	8.8
34.5	50%	Inlet	27.8	30.4	33.2	30.7	24.9	7.6	7.2	17.8	37.3	31.0	21.2
		Outlet	18.4	29.2	28.3	23.0	14.7	9.6	8.6	18.0	32.8	24.9	15.2
		Breakout	20.0	21.7	26.4	22.3	10.5	5.7	7.1	17.7	29.7	23.3	8.8
48.7	70%	Inlet	26.5	30.3	31.3	35.9	26.0	7.7	7.2	17.8	38.6	34.1	24.3
		Outlet	15.3	24.2	23.5	20.2	13.6	7.2	7.4	17.6	28.6	22.3	12.5
		Breakout	21.3	22.4	25.7	22.8	11.3	5.6	6.9	17.6	29.8	23.4	8.8
62.8	90%	Inlet	36.2	40.3	45.6	48.5	37.1	21.1	12.9	18.2	51.1	46.5	36.7
		Outlet	23.1	36.0	39.3	37.4	26.4	20.5	17.9	21.5	42.8	36.7	27.0
		Breakout	25.2	28.7	39.6	36.4	23.8	13.4	8.3	17.6	41.7	35.7	21.1
69.4	100%	Inlet	35.3	41.3	48.6	49.6	40.1	28.1	14.2	18.4	52.8	48.2	38.4
		Outlet	27.1	42.6	43.5	39.8	27.6	21.5	18.4	22.1	47.1	39.6	29.8
		Breakout	24.4	28.1	40.1	36.5	23.1	13.3	8.6	17.6	42.0	35.9	21.3

Aircycle 1.3+ Acoustic Performance													
Airflow l/s	Speed %		Frequency Hz										LwA dB @3m
			63	125	250	500	1 k	2 k	4 k	8 k	Lw dB	LwA dB	
24.6	30%	Inlet	28.1	30.3	34.1	33.0	23.6	7.6	7.0	17.6	38.2	32.1	22.4
		Outlet	18.1	27.8	28.0	23.3	12.9	8.6	7.7	17.6	32.1	24.6	14.8
		Breakout	20.4	23.3	28.0	30.6	13.5	5.8	6.9	17.6	33.4	28.6	11.1
41.3	50%	Inlet	27.5	30.8	33.8	33.2	23.7	7.2	7.0	17.6	38.2	32.2	22.4
		Outlet	17.4	31.8	30.0	23.7	14.6	9.7	8.4	17.6	34.6	25.8	16.1
		Breakout	20.3	22.7	27.7	30.6	12.6	5.9	7.2	17.7	33.3	28.6	11.0
57.6	70%	Inlet	28.0	29.7	31.6	42.1	29.9	12.4	7.2	17.6	43.1	39.6	29.8
		Outlet	15.4	20.1	21.0	18.5	14.0	7.1	7.4	17.6	26.3	21.4	11.6
		Breakout	21.2	24.0	27.9	31.1	13.4	6.5	6.9	17.6	33.8	29.0	11.4
74.1	90%	Inlet	36.7	40.2	49.4	45.7	38.0	22.9	14.5	18.4	51.7	45.7	35.9
		Outlet	24.6	39.3	41.6	37.6	28.2	22.6	20.1	22.9	44.8	37.9	28.1
		Breakout	27.0	30.1	40.0	38.9	26.9	15.2	9.2	17.5	43.0	37.6	20.0
82.4	100%	Inlet	35.8	39.6	45.4	46.8	38.7	24.1	15.3	18.5	50.2	45.6	35.8
		Outlet	22.7	38.4	42.8	37.6	29.2	23.0	20.5	24.0	45.2	38.5	28.7
		Breakout	26.5	28.9	40.6	38.6	27.1	15.3	9.8	17.6	43.1	37.6	20.0

Tested according to BS EN 13141-7:2010; Breakout quoted spherical. Supply and extract quoted hemispherical. For sound data at a specific airflow duty, please contact us directly for a bespoke acoustic schedule for your project. Further sound data at increasing pressure (Pa) levels is also available in the O&M manual.

aircycle 1.3 Range Specification

Weight: 11kg **Guarantee Period:** 5 Years

Materials:

- Main enclosure: High density, impact resistant EPP (Expanded Polypropylene)
- PCB & control panel enclosure: ABS FR
- Filters: Polyester media (G3)
- Filter cover: Rubber
- Mounting Bracket: Zinc Plated Steel
- Fan Scrolls: ABS

Electrical & Controls:

- 230v EC Low energy, backward curved centrifugal fans
- Supplied complete with 4 core flying lead: (Live: Brown), (Neutral: Black), (Earth: Yellow & Green), (230v Switched Live (Boost): Grey)
- Plug and play fan components for easy maintenance

Control Features	Potentiometer Model	Digital Model
Independent fan speed control, 100% variable (Trickle & Boost)	•	• +/- 1%
230v boost input (light switch, PIR, etc.)	•	•
Boost over-run timer (0-15 mins)	•	•
Integral humidity sensor (Boost activation) - Variable RH%, Factory set: 70%	•	• +/- 1%
Frost protection, factory set at 5°C	•	•
Tempering Summer Bypass - Automatic	•	•
100% variable (3rd Purge Speed)		•
Fault alert/ diagnostics		•
Filter check reminder		•
Hours run meter		•
Status indication (Summer bypass, frost protection, etc.)		•
Performance indication (W/l/s, Temp)		•
PIN Protect engineering settings		•
Commissioning settings upload		•
Night mode		•

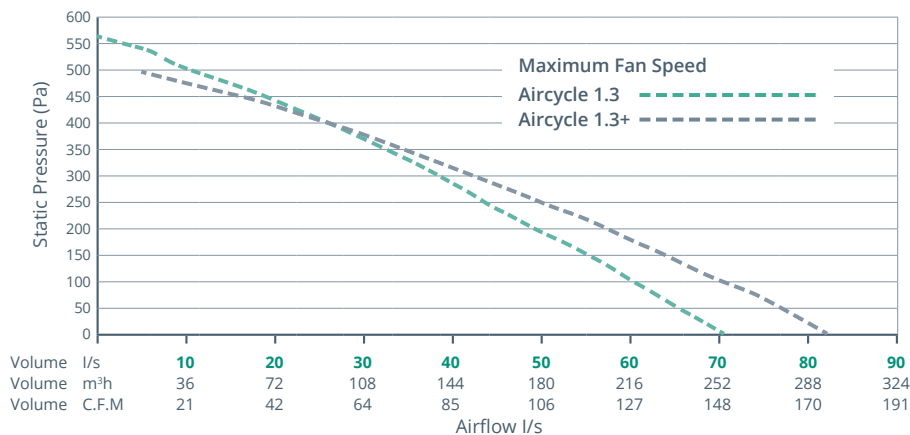
Standards:

Fully complies with Building Regulations for UK & Ireland
SAP Appendix Q Listed | Energy Savings Trust Best Practice | CE

SAP Appendix Q: Listed Results

Model	Aircycle 1.3				Aircycle 1.3+			
	Specific Fan Power (W/l/s)		Heat Exchange Efficiency (%)		Specific Fan Power (W/l/s)		Heat Exchange Efficiency (%)	
	SAP 2009	SAP 2012	SAP 2009	SAP 2012	SAP 2009	SAP 2012	SAP 2009	SAP 2012
Kitchen + 1 Wet Room	0.51	0.57	92	90	0.42	0.45	88	87
Kitchen + 2 Wet Rooms	0.54	0.68	90	87	0.43	0.54	87	84
Kitchen + 3 Wet Rooms	0.63	0.85	88	85	0.5	0.67	85	83
Kitchen + 4 Wet Rooms	0.75	1.1	86	84	0.6	0.87	84	81
Kitchen + 5 Wet Rooms	0.91	-	85	-	0.72	-	83	-
Kitchen + 6 Wet Rooms	1.08	-	84	-	0.85	-	81	-

Airflow: Pressure / Performance Curve

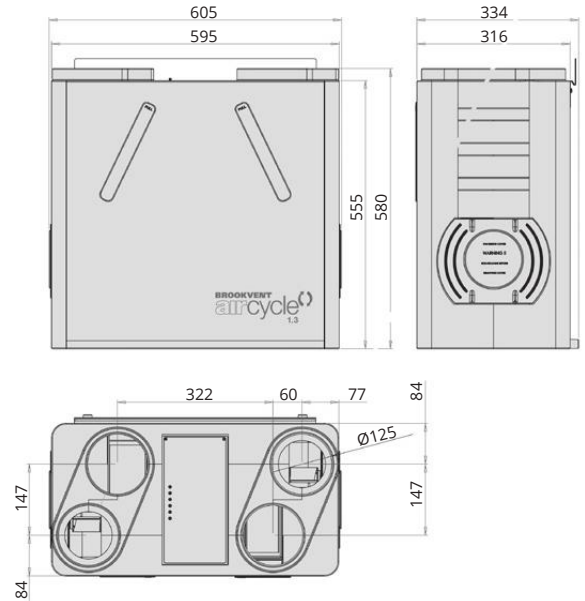


Aircycle MVHR Product Type	Aircycle 1.3 Potentiometer Control	Aircycle 1.3 Digital Control	Aircycle 1.3+ Potentiometer Control	Aircycle 1.3+ Digital Control
c/w Humidistat, Bypass - Wall Mount	AS 90-0103-WINS-01	AS 90-0103-WDS-01	AS 90-0103P-WINS-01	AS 90-0103P-WDS-01
c/w Humidistat, Bypass - Floor Mount	AS 90-0103-FINS-01	AS 90-0103-FDS-01	AS 90-0103P-FINS-01	AS 90-0103P-FDS-01
c/w Humidistat, Bypass - Ceiling Mount	AS 90-0103-CINS-01	AS 90-0103-CDS-01	AS 90-0103P-CINS-01	AS 90-0103P-CDS-01

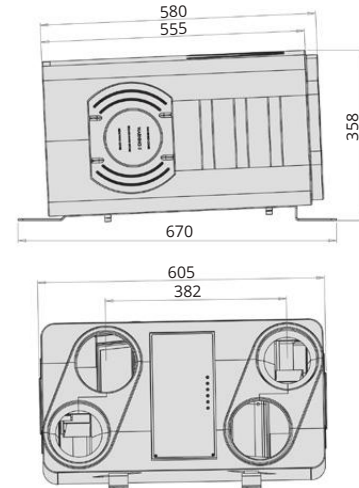
Product codes shown refer to 'standard' duct configuration.
Add 'V' to the end of each product code for an 'inverted' duct configuration.

Product Dimensions

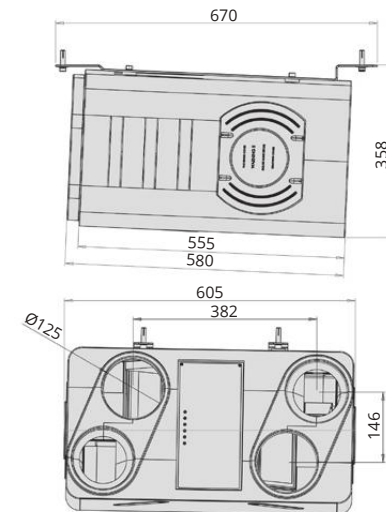
Wall Mount



Floor Mount



Ceiling Mount



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