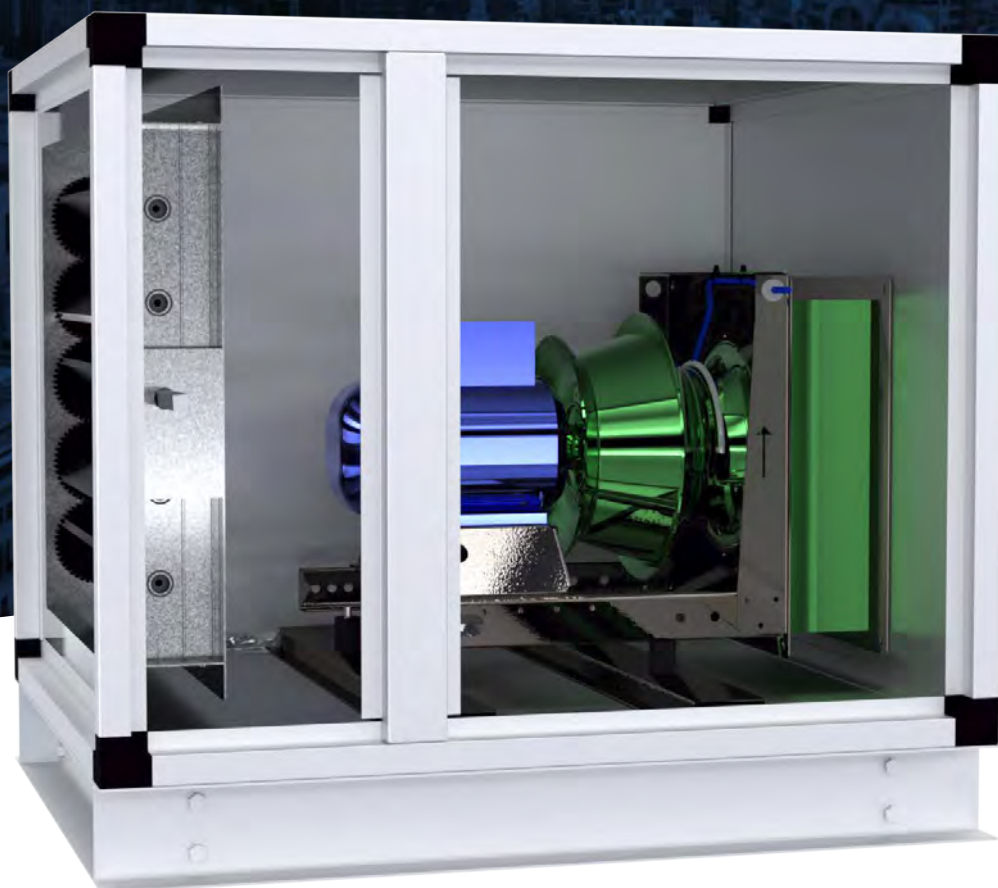


Extract Unit ^{EU}



Selection Data

Company Profile

ECE UK Ltd is a privately owned company that was established in 1979 by the existing directors and shareholders. We operate from our 4,000m² manufacturing facility in Rochester where we produce air handling / conditioning units and controls of the highest quality; which is reflected by our level of customer retention.

With forty years of experience, we are a leader in the field of air handling, conditioning and control systems.

Our experienced and knowledgeable members of staff have obtained qualifications from HNC to Master's Degree. To compliment this we provide an in-house and external training programme. We are committed to working in partnership with Consultants, Contractors and End-Users, providing added value through technical innovation, service excellence and the ability to provide energy efficient solutions.

ECE UK offers a wide range of Products and Services that complement our EU range of Air Handling Units including

Air Conditioning

Heat pump units and interconnecting refrigeration pipe work.

Controls

Trend Control systems either mounted internal to AHU or remote.

Site Wiring

Our qualified engineers would install all interconnecting control wiring external to the air handling unit along agreed routes.

Plant Movement

Refurbishment, Removal, and Installation of Air Handling Units, Air Conditioning Units and Controls.

After Sales

Warranty assistance and troubleshooting of site issues for Air Handling Units, Air Conditioning Units and Control Systems.

Service & Maintenance

Platinum, Gold and Silver maintenance packages for Air Handling Units, Air Conditioning Units and Control Systems.

By providing the many Products and Services in one place we can offer you the convenience of obtaining all your ventilation, air conditioning and control requirements from one manufacturer.

EU Explained

Unidirectional Ventilation

Unidirectional ventilation unit (UVU) means a ventilation unit producing an air flow in one direction only, either from indoors to outdoors (exhaust) or from outdoors to indoors (supply), where the mechanically produced air flow is balanced by natural air supply or exhaust.

Extract air handling units are incorporated into many different areas of industry such as Retail, Health, Industrial, Distribution Centres, Warehousing, Pharmaceutical and Data Centres.

The extract unit can be configured to exhaust air from several different environments:

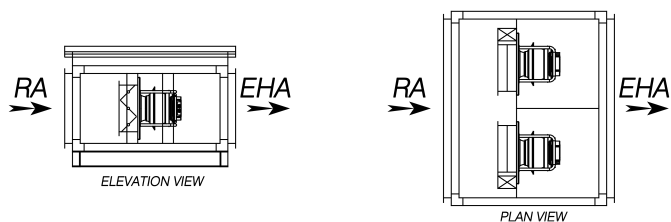
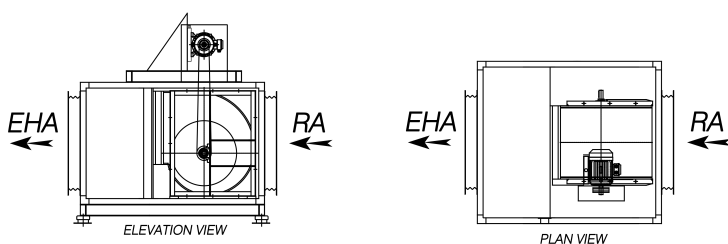
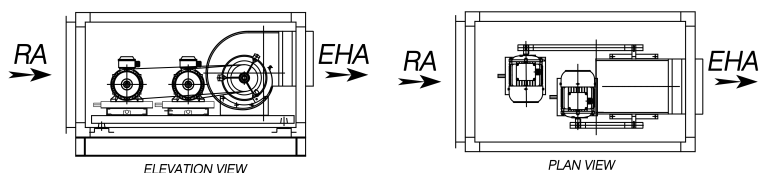
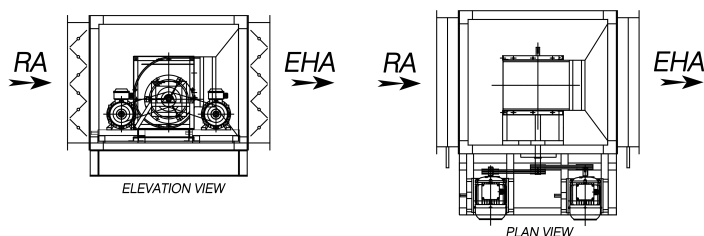
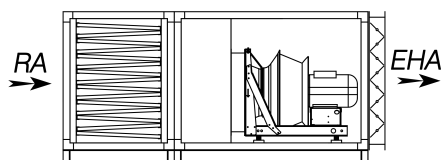
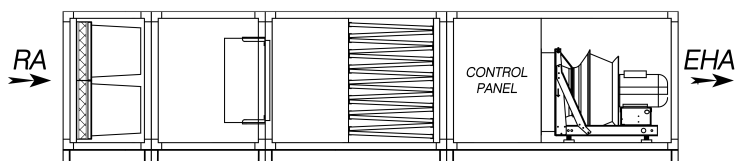
- Stale
- Clean
- Dirty
- Smoke

Operation

ECE extract units can include a number of different fans depending on application. Whether the exhaust air is stale, clean, dirty or smoke extract either axial fans, plug fans or single inlet single width and double inlet double width centrifugal fans with either forward, backward or airfoil blades can be used. The fans are driven by AC induction electric motors mounted internal or external to air-stream. The fans can operate at a single speed, offer a variety of set speeds (belt and pulley change), or be driven by inverter to allow a wide range of air flow rates.

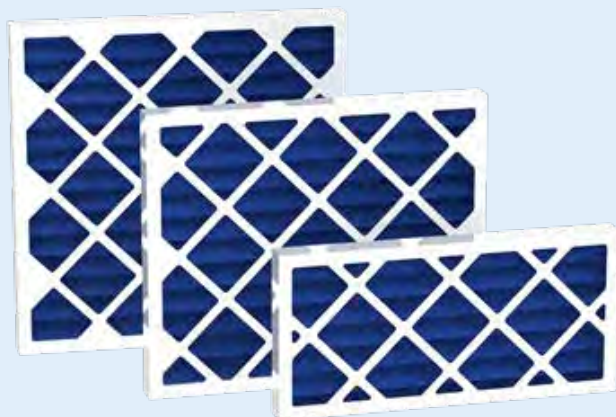


Popular EU Configurations



Selection Information

- Dimensions on page 4 are for roughing in only
- Contact technical sales for specials if unit sizes are difficult to accommodate.
- Fan total pressures from 100Pa to 1500Pa (including AHU internal losses)
- Maximum external pressure available i.e. AHU inlet negative pressures plus AHU discharge positive pressure = fan static pressure less AHU internal component resistances for extract AHU's.
- Height and width dimensions in tables are the AHU frame outside dimensions. Add base dimension, also add roof dimension (RH) if unit is external.
- Component length dimensions are space that each internal component occupies.
- Maximum overall AHU length unlimited. (Maximum single piece size subject to transport restrictions).
- Frame inlet connections generally 30mm up to size 5 and 50mm size 6 and above, around frame perimeter, undrilled.
- Inlet connections can be mezz flanges 30mm and 40mm as required.
- Outlet fan connections from unit – see dimension tables.
- Individual section lengths including components like attenuators or filters can range from 300mm to 2400mm. Each individual component does not have to sit within its own section.
- It is possible to have up to 4 stages of filtration on the extract air stream.
- "X" dimension will only be required if the extract fan is downstream of a full face component.
- Due to ERP 2016, Level of filtration to always be M5 grade on extract.
- Due to height restrictions, floor grid available from unit sizes 6 to 15 only. No need for floor grid if walk in access is not possible.



Velocity Chart

(Vc)m/s	VOLUME m³/s AT COIL FACE VELOCITIES (Vc) m/s	Unit Size																
		1	2	3	4S	4	5	6	7	8	9	10S	10	11	12	13	14	15
1.75		0.36	0.52	0.75	1.09	1.09	1.52	2.16	2.55	3.14	3.99	4.85	5.33	6.47	7.99	9.47	10.98	12.10
2.0		0.42	0.61	0.87	1.2	1.2	1.85	2.54	2.98	3.65	4.64	5.6	6.18	7.51	9.5	10.82	12.53	13.8
2.25		0.47	0.68	0.97	1.35	1.35	2.09	2.86	3.35	4.12	5.22	6.3	6.95	8.44	10.69	12.17	14.09	15.53
2.5		0.52	0.76	1.08	1.5	1.5	2.32	3.17	3.73	4.56	5.81	7.1	7.73	9.39	11.88	13.53	15.66	17.26
2.75		0.58	0.83	1.19	1.65	1.65	2.55	3.48	4.1	5.02	6.39	7.7	8.5	10.32	13.07	14.88	17.23	18.99
3.0		0.63	0.91	1.3	1.8	1.8	2.78	3.8	4.47	5.48	6.97	8.4	9.28	11.27	14.25	16.23	18.79	20.71
3.25		0.67	0.99	1.41	1.95	1.95	3.01	4.12	4.85	5.94	7.56	9.1	10.05	12.2	15.44	17.58	20.36	22.44

*Please select unit size from the above table using the velocity first, then to the nearest m³/s value to your required air volume.
 **Reduce Velocity, Increase unit size is the preferred final selection.

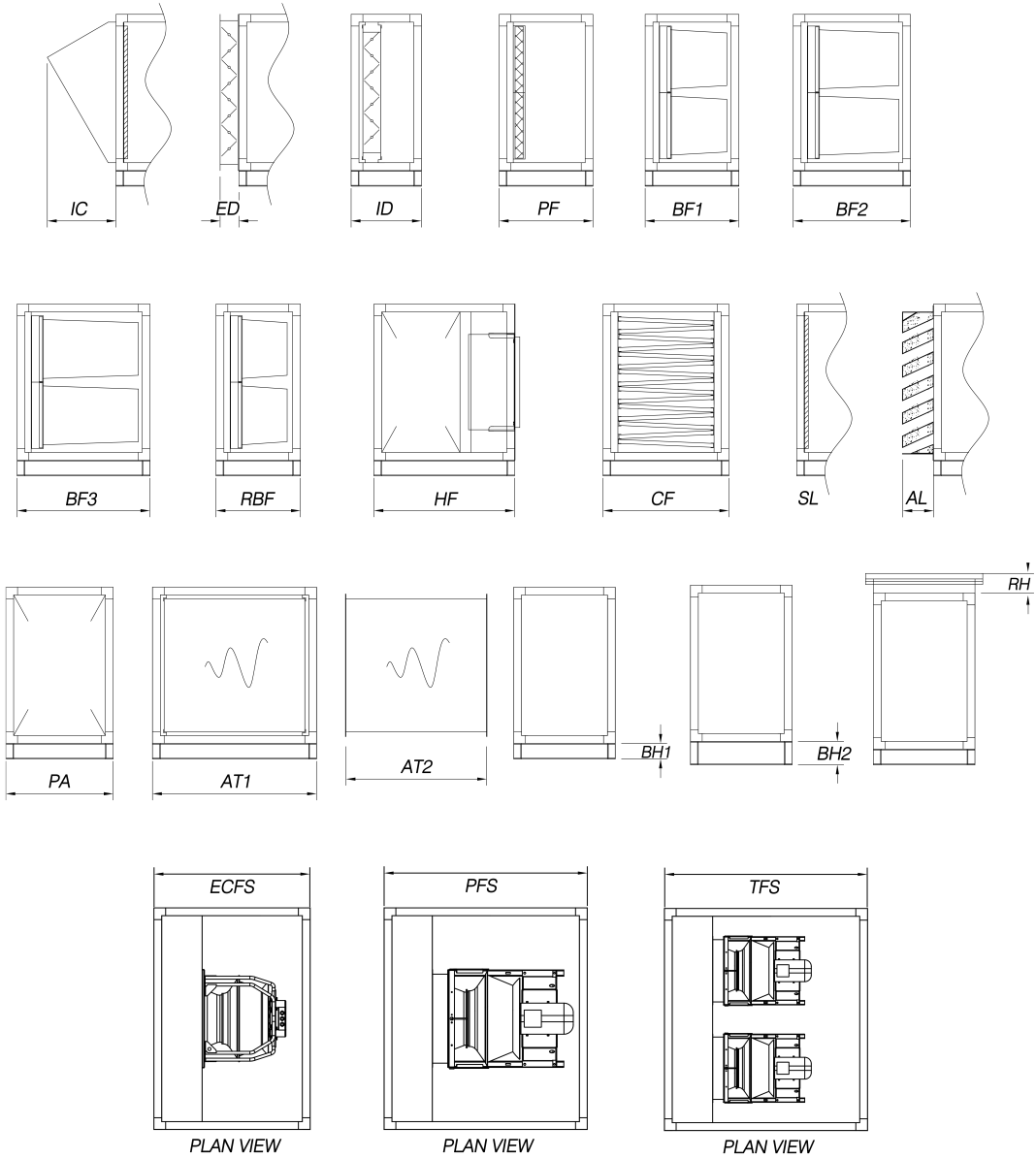
Dimension Tables

Dim	Size	1	2	3	4S	4	5	6	7	8	9	10S	10	11	12	13	14	15
Additional Component Height & Width																		
H	Height 25mm Panels	610	730	730	1020	730	1020	1360	1360	1360	1670	1970	1670	1970	2400	2400	2400	2400
W	Width 25mm Panels	690	780	1010	1010	1310	1310	1360	1560	1860	1860	1860	2400	2400	2400	2800	3200	3500
H	Height 50mm Panels	650	770	770	1060	770	1060	1360	1360	1360	1670	1970	1670	1970	2400	2400	2400	2400
W	Width 50mm Panels	730	820	1050	1050	1350	1350	1410	1610	1910	1910	1910	2450	2450	2450	2850	3250	3550
Additional Component Lengths																		
IC	Inlet Cowl	200	250	250	250	250	400	550	550	550	700	700	700	700	700	700	700	700
ED	External Damper	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120
ID	Internal Damper	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450	450
PF	Panel Filter	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
BF1	Bag 380 - BS EN 16980	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
BF2	Bag 535 - BS EN 16890	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750
BF3	Bag 635 - BS EN 16890	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850
RBF	Rigid Bag Filter	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550	550
HF	HEPA Filter	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900
CF	Carbon Filter	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900
SL	Standard Louvre	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AL	Acoustic Louvre	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
PA	Plenum / Access	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600
AT1	Attenuator	1050	1050	1050	1350	1350	1350	1350	1350	1350	1350	1650	1650	1650	1650	1650	1650	1650
AT2	Duct Mounted Attenuator	900	900	900	1200	1200	1200	1200	1200	1200	1200	1500	1500	1500	1500	1500	1500	1500
BH1	Base Height	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
BH2	Base Height	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
RH	Roof Height	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125

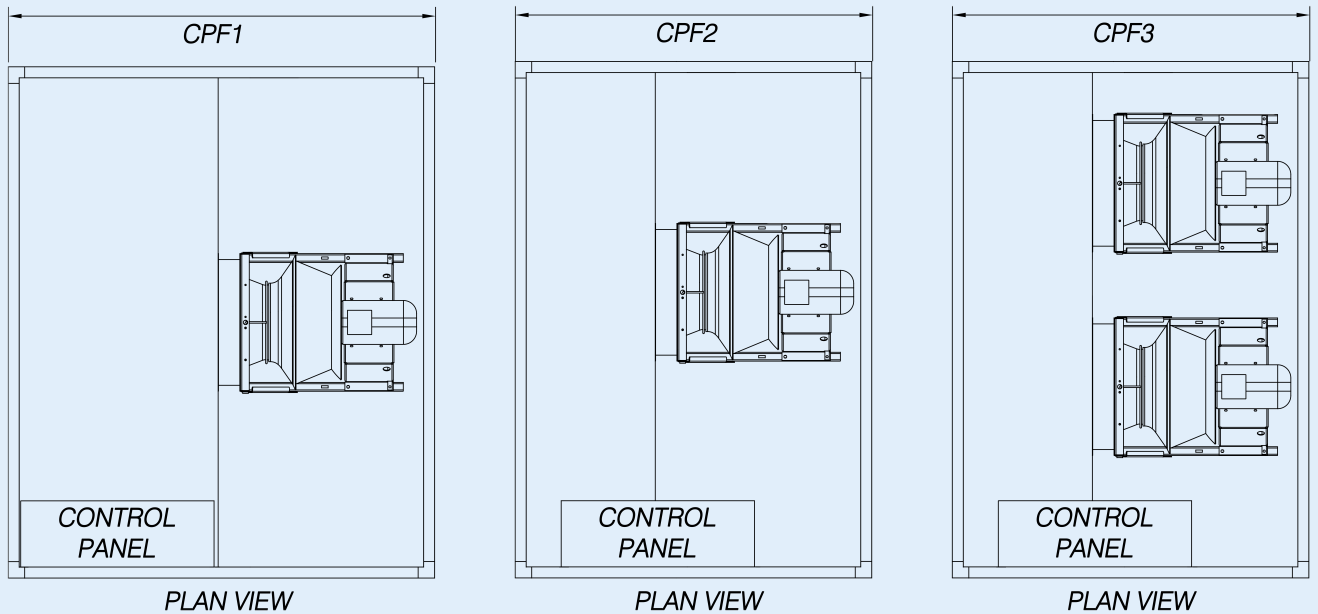
Dim	Size	1	2	3	4S	4	5	6	7	8	9	10S	10	11	12	13	14	15
Fan & Control Configurations																		
ECFS	EC Fan Sect	900	900	900	1200	900	1400	-	-	-	-	-	-	-	-	-	-	-
PFS	Plug Fan Sect	900	900	900	1200	900	1300	1500	1500	1500	1900	1900	1600	1600	1600	1800	2100	2100
TFS	Twin Fan Section	-	-	-	-	-	-	-	1200	1400	1400	1400	1600	1600	1600	1800	2100	2100
CPF1	Controls Panel Fan Sect	1700	1800	1800	1800	-	-	-	-	-	-	-	-	-	-	-	-	-
CPF2	Controls Panel Fan Sect	-	-	-	-	1200	1300	1300	1500	1700	1700	1700	1700	1700	1700	1700	1700	1700
CPF3	Controls Panel Fan Sect	-	-	-	-	-	-	-	-	-	1900	1600	1900	1600	1600	1800	2100	2100

Dimensions are for roughing in only

AHU Components



Fan & Control Configurations



AHU Component Dry Weights kg

Dim	Size	1	2	3	4S	4	5	6	7	8	9	10S	10	11	12	13	14	15	
Additional Components																			
IC	Inlet Cowl	4	6	7	9	9	13	17	20	24	29	37	37	44	54	63	72	79	
ED	External Damper	16	20	23	29	29	37	45	51	62	76	104	104	120	172	196	220	240	
ID	Internal Damper	50	58	66	78	78	92	105	116	134	153	193	193	215	276	308	341	368	
PF	Panel Filter	32	38	46	51	51	57	63	77	84	91	111	111	126	142	189	211	227	
BF1	Bag 380 - BS EN 16980	80	90	106	131	131	142	158	175	191	220	252	252	277	310	351	387	416	
BF2	Bag 535 - BS EN 16890	98	110	130	160	160	173	193	214	233	268	307	307	338	378	428	472	507	
BF3	Bag 635 - BS EN 16890	108	120	142	176	176	190	211	235	256	294	338	338	371	416	470	518	557	
RBF	Rigid Bag Filter	81	91	107	132	132	143	159	176	192	221	253	253	278	311	352	388	417	
HF	HEPA Filter	88	102	126	155	155	182	206	223	253	297	364	364	409	466	551	607	660	
CF	Carbon Filter	119	164	219	279	279	368	454	471	563	669	891	891	1060	1210	1512	1692	1838	
SL	Standard Louvre	4	6	7	9	9	13	17	20	24	29	37	37	44	54	63	72	79	
AL	Acoustic Louvre	24	26	27	29	29	33	37	40	44	49	57	57	64	74	83	92	99	
PA	Plenum / Access	75	84	96	110	110	122	135	146	160	172	198	198	213	232	251	270	285	
AT1	Attenuator	107	123	147	174	174	212	252	287	324	375	460	460	523	612	715	819	876	
AT2	Duct Mounted Attenuator	140	161	193	229	229	279	332	378	427	495	606	606	691	808	945	1083	1158	
BH1	Base 100mm High 1000L	6	6	6	6	6	6	10	10	10	10	15	15	15	15	15	20	20	
BH2	Base 150mm High 1000L	7	7	7	7	7	7	11	11	11	11	16	16	16	16	16	22	22	
RH	Roof Section 1000L	10	11	14	17	17	17	18	19	23	23	28	28	28	28	32	36	40	
	Floor Grid 1000W	-	-	-	-	-	-	24	24	24	34	43	43	43	43	51	58	63	
	25mm Acoustic Treatment	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
	50mm Acoustic Treatment	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	

Fan & Control Configuration Weights kg

Dim	Size	1	2	3	4S	4	5	6	7	8	9	10S	10	11	12	13	14	15	
Fan & Control Configurations																			
ECFS	EC Fan Sect	133	147	165	241	187	314	-	-	-	-	-	-	-	-	-	-	-	
PFS	Plug Fan Sect	140	173	191	290	212	359	483	510	545	812	1015	797	993	1042	1177	1370	1412	
TFS	Twin Fan Section	-	-	-	-	-	-	432	563	590	652	820	860	910	1193	1483	1743	-	
CPF1	Controls Panel Fan Sect	249	309	345	414	-	-	-	-	-	-	-	-	-	-	-	-	-	
CPF2	Controls Panel Fan Sect	-	-	-	-	281	378	458	535	623	780	979	860	1063	1116	1175	1230	1264	
CPF3	Controls Panel Fan Sect	-	-	-	-	-	-	-	-	-	763	753	954	900	949	1237	1523	1783	

Weight of fan sections shown are with the largest fan possible for each size section. Weight will reduce when using a smaller fan or fans.

Air Handling Unit Construction

At ECE UK we have improved the design of our equipment over the last forty years offering a cost-effective solution including L2 Leakage Class, D1 Deflection Class, TB1 Thermal Bridging and T2 thermal Transmittance. This is complimented by achieving standards set out in ERP 2016/18 and L2 Specific Fan Power.

To further ensure structural stability, rigidity and thermal qualities BS EN 1886:2007 standard provides the means for classifying the performance of all our air handling units.

The Air Handling Unit framework is constructed from a closed aluminium box section with heavy duty injection moulded ABS black nylon knock in corner pieces. This high density and lightweight structure ensures a strong and rigid framework for the Air Handling Unit.

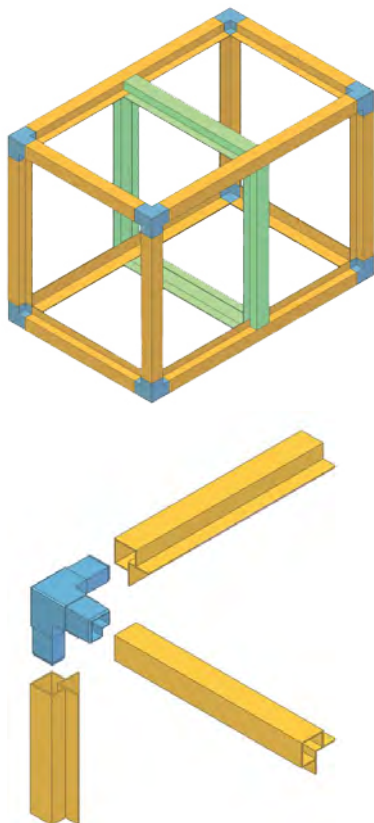
Depending upon the project requirements panels can be either 25mm or 50mm thick. Panels are constructed from a galvanised sheet steel inner skin with a plastisol coated or galvanised sheet steel outer skin with mineral wool insulation sandwiched between the sheets. Our standard plastisol colour is Goosewing Grey RAL10A05, other colours are available on request.

Our standard mineral wool insulation has a density of 100kg/m³.

As standard each complete unit or modular section would be factory assembled on a full perimeter base to ensure full structural stability.

All externally mounted units would be fully sealed and completed with an overhanging pitched roof to prevent water ingress.

Depending upon site access all of our Air Handling Units can be supplied as modular sections, component form or fully assembled on a single piece base frame and still conform to the standards set out above.



Asset Information

This AHU mounted web based portal augments our customer experience by providing you with all your BIM Level 2 files for your job specific, bespoke, Air Handling Unit as defined at the design stage.



Asset Information

Either show the QR code to your code reader app of choice, or visit <https://asset.eceuk.com/> and enter the reference number below

682 528 185 640 707 446



Pharaoh House, Arncliffe Close, Medway City Estate,
Rochester, Kent ME2 4QW
www.eceuk.com e mail : altersales@eceuk.com

This allows building maintenance teams, consultants and contractors unique access to one of the most productive portals available.

Here is just some of the great features that our portal offers:

- 3D models to go into your Building Management System, such as Revit (.step, .sat, .ifc, .dwg (3D), etc.)
- 3D models that can be interacted with in real-time using augmented reality devices (such as a Microsoft HoloLens)
- 2D Certified Drawings (.dwg for loading into AutoCAD / DraftSight and .pdf for opening on any device, anywhere)
- Consumables Information (such as Filters, Motors, Sensors and Actuators)
- Single click Basket for consumables with Anything Air Handling, our Spares & Parts shop www.aahuk.com
- Controls Documents (if your AHU has one of our controls package)
- Refrigeration Unit Information
- Installation, Operation and Maintenance Manual
- Recycling Manual

All you need to access this information is a unique reference number and an email address. To make it really easy each of our units now come with an Asset Information plate allowing you on-premises access to all the information from your mobile device.

TRY IT! Scan the QR and enter the code



Did you know...?

- if you're concerned about the equipment access route, ECE can offer a free site survey?
- ECE can offer a long reach HIAB vehicle with a reach of 27 meters holding one tonne?
- ECE offer a 5 year warranty on its iQ range of controllers?
- Location, Internal or External
- Delivery in modules or packaged in one piece (dimensions limits apply)
- Units also available "Dry Built" for site off load, dismantle, carry through, re-assemble, join and seal
- Units also available in component form for site offload, carry through, re-assemble, join and seal
- AHU's can include EC Fans (IE4 Motors) to give the highest possible efficiency and the lowest life cycle cost.

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