PuroAire
by Quartz



285 series of Ducted Fan Coils

Engineered for pure performance

HERONHILL
Conditioned environments since 1997

The next generation Fan Coils, Engineered for Pure Performance

UK Manufactured by Quartz



Who We Are

Quartz, a division of TEV, has a long pedigree in the HVAC sector supplying product to the UK and European markets for over 50 years. Our new manufacturing plant is ideally located for national distribution, in West Yorkshire. Boasting excellent facilities, customers are welcome to visit the production facility, as well as Quartz's thermal and acoustic testing facilities.

Achieved through close attention to market needs, design detail and material specification, Quartz relies on its strong positioning, industry experience and high volume production to deliver quality products to the market.

Quartz is a brand built by engineers and now this team brings you their next generation of fan coils, PuroAire units not only offer energy efficiency and performance, everyone is fitted with Quartz Shield, our own Bi-Polar Ionisation unit, so the focus is on indoor air quality too.

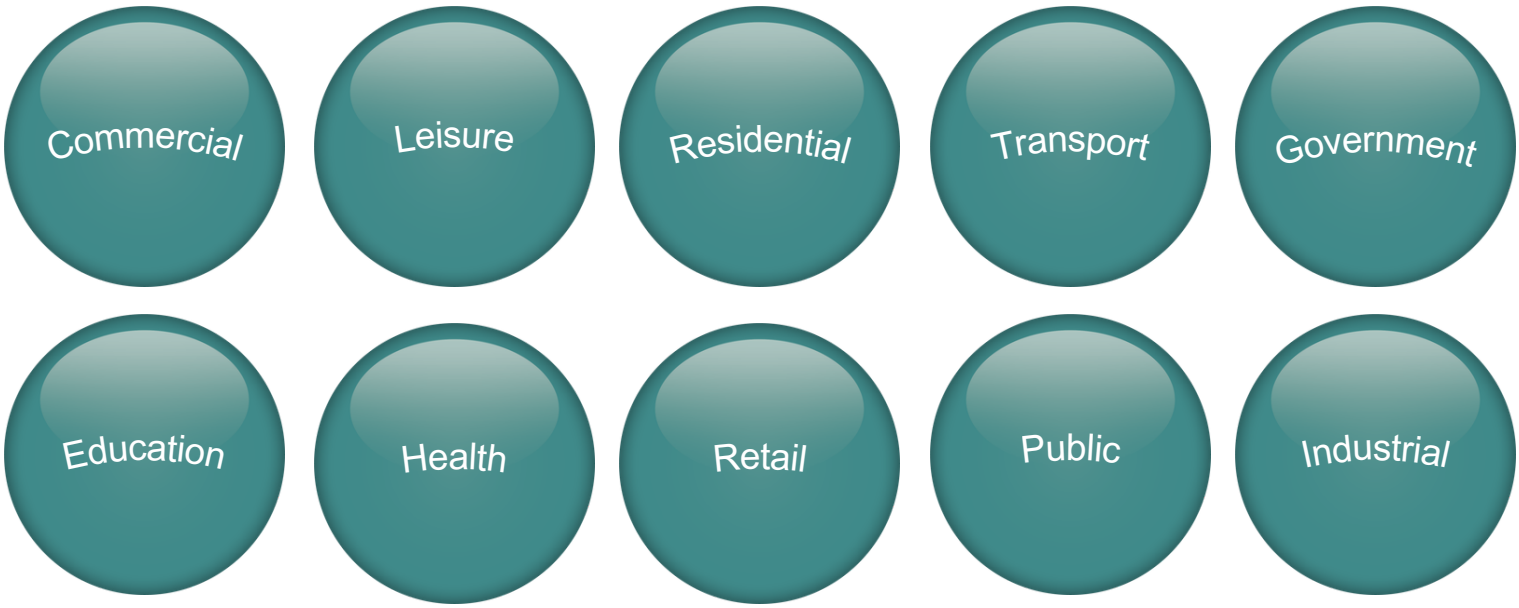
Our flagship unit the, PuroAire$_{285}$, is a unit intended for the modern world we live in, low energy, architectural and designed to work with heat pumps. Our product can offer a packaged solution to include controls and valves, but can also offer the flexibility to be factory fitted with components that are in line with the rest of the project.

Innovative designs and outstanding build quality mean that your project is in safe hands. Quartz continues to be specified for many prestigious projects, where clients, architects and M&E consultants have chosen Quartz for the quality, performance and features that the products offers.

A MARKET LEADER IN CHILLED WATER PRODUCTS DESIGNED TO MEET ALL APPLICATIONS

Who We Work With

Quartz PuroAire$_{285}$ represent the next generation of HVAC solutions, engineered for efficiency, built for reliability, and designed with comfort in mind. Whether for commercial buildings, hospitality, healthcare, or residential environments our Fancoils deliver exceptional indoor climate control with whisper-quiet operation and outstanding energy performance.



Department for Education

Newcastle University

Sainsbury's

LLOYDS BANKING GROUP

The PuroAire$_{285}$ range of ducted fan coil units offer quiet, efficient climate control tailored to each installation. Discreetly installed within ceilings, or exposed architecturally they preserve design aesthetics while delivering comfort.



PuroAire$_{285}$

The Quartz PuroAire$_{285}$ ducted chilled water fan coil unit is part of a versatile product range designed for exposed and concealed ceiling installation in a wide variety of environments, including commercial buildings, hotels, hospitals, and high-end residential properties. All products offer both cooling and heating capabilities using water and are engineered for quiet operation, energy efficiency, ease of installation and easy integration with building management systems (BMS).

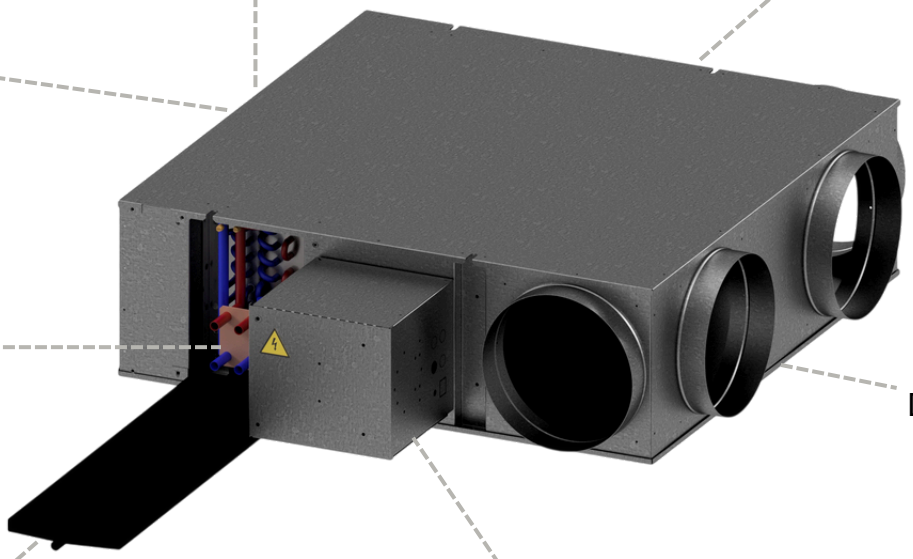
9 models with cooling up to 8.0kW

Heat pump optimised heating outputs up to 12.3kW

Range of Inlet Plenum and Acoustic Attenuators

Optimised heat exchanger(s) compatible with heat pumps

Stainless steel washable filter



4 Pipe as Standard

Rectangular Discharge Spigot Option(s)

Stainless steel PICV compatible Drain Tray

Quartz Shield Virus Suppressant Technology

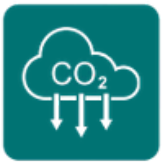
DESIGNED AND BUILT IN THE UK

Stainless Steel Filter and Drain Tray simplify maintenance cleaning and disinfection, ideal for medical applications

QUARTZ 1 Year PARTS WARRANTY AS STANDARD

QUARTZ SHIELD

Key Features



Mid Level TM65
Embodied Carbon



UK Manufactured to BS
EN ISO 9001:2015



Standard Quartz Shield Virus
Suppressant Technology



Heat pump compatible



Standard Lead Time 4
Weeks



Compact design



Washable “Lifetime”
Stainless Steel filter



Flexible Inlet & Discharge
spigot options



BG29 PICV
Commissioning Sets



High Performance, Low
SFP EC/DC Fan’s



Extended PICV compatible
Stainless Steel drain trays



Exempt from F-Gas
regulations

Performance Output PuroAire$_{285}$

Standard UK conditions

PuroAire$_{285}$ Model	Speed	Airflow (l/s)	Cooling (kW)		Heating (kW)	Absorbed Power (W)	SFP (W/l/s)	NR	FLC (A)
			Sensible	Total	Total				
285 0-0+	Whisper	37	0.6	0.7	1.2	4	0.12	22	0.7
	Low	100	1.4	1.5	2.2	13	0.13	25	
	Low-Med	150	1.8	1.9	2.7	30	0.2	30	
	Med	170	2.0	1.0	2.8	44	0.26	33	
	Med-High	190	2.1	2.1	2.9	59	0.31	35	
	High	200	2.2	2.3	3.0	68	0.34	37	
285 1-1+	Whisper	50	0.8	0.9	1.6	6	0.11	22	0.7
	Low	110	1.6	1.7	2.8	14	0.13	25	
	Low-Med	155	2.1	2.3	3.3	31	0.2	30	
	Med	170	2.3	2.4	3.4	39	0.23	33	
	Med-High	190	2.4	2.6	3.6	53	0.28	35	
	High	200	2.5	2.7	3.7	62	0.31	37	
285 2-2+	Whisper	105	1.6	1.8	3.1	14	0.13	22	0.7
	Low	140	2.0	2.3	3.7	22	0.16	25	
	Low-Med	180	2.5	2.7	4.2	43	0.24	30	
	Med	205	2.8	3.1	4.5	66	0.32	33	
	Med-High	217	3.0	3.3	4.6	78	0.36	35	
	High	230	3.1	3.4	4.8	92	0.4	37	
285 3-2	Whisper	105	1.6	1.8	3.1	13	0.12	22	1.4
	Low	175	2.4	2.6	4.1	23	0.13	25	
	Low-Med	260	3.4	3.7	5.0	49	0.19	30	
	Med	315	3.9	4.2	5.5	76	0.24	33	
	Med-High	340	4.2	4.5	5.7	92	0.27	35	
	High	385	4.5	4.8	6.0	123	0.32	37	

Cooling

Entering air temperature = 23°C db / 50%
Entering water temperature = 6°C
Leaving water temperature = 12°C

Heating

Entering air temperature = 21°C
Entering water temperature = 80°C
Leaving water temperature = 60°C

Performance Output PuroAire$_{285}$

Standard UK conditions

PuroAire$_{285}$ Model	Speed	Airflow (l/s)	Cooling (kW)		Heating (kW)	Absorbed Power (W)	SFP (W/l/s)	NR	FLC (A)
			Sensible	Total	Total				
285 4-3	Whisper	120	2.1	2.6	3.8	17	0.14	22	1.4
	Low	185	2.9	3.3	5.3	28	0.15	25	
	Low-Med	275	4.1	4.6	6.6	55	0.2	30	
	Med	315	4.8	5.4	7.0	76	0.24	33	
	Med-High	360	5.0	5.6	7.5	101	0.28	35	
	High	430	5.6	6.3	8.2	163	0.38	37	
285 5-4	Whisper	125	2.0	2.4	4.0	18	0.14	22	1.4
	Low	230	3.4	4.0	6.3	35	0.15	25	
	Low-Med	320	4.6	5.3	7.5	67	0.21	30	
	Med	395	5.5	6.2	8.4	119	0.3	33	
	Med-High	445	6.0	6.7	8.9	156	0.35	35	
	High	470	6.2	7.0	9.1	169	0.36	37	
285 6-4	Whisper	155	2.4	2.8	4.6	19	0.12	22	1.7
	Low	250	3.6	4.2	6.6	30	0.12	25	
	Low-Med	375	5.3	6.0	8.1	64	0.17	30	
	Med	460	6.2	7.0	9.0	106	0.23	33	
	Med-High	515	6.8	7.6	9.5	144	0.28	35	
	High	575	7.3	8.1	9.9	201	0.35	37	
285 8-5	Whisper	148	2.3	2.8	5.0	19	0.13	22	1.7
	Low	275	4.3	4.9	7.9	41	0.15	25	
	Low-Med	380	5.6	6.5	9.4	76	0.2	30	
	Med	450	6.5	7.4	10.3	108	0.24	33	
	Med-High	515	7.3	8.2	11.0	155	0.3	35	
	High	560	7.7	8.6	11.5	196	0.35	37	
285 9-5	Whisper	150	2.3	2.7	5.0	30	0.2	22	2.8
	Low	275	4.3	5.0	7.9	47	0.17	25	
	Low-Med	390	5.8	6.6	9.6	74	0.19	30	
	Med	500	7.0	7.9	10.9	115	0.23	33	
	Med-High	600	8.1	9.2	11.9	162	0.27	35	
	High	650	8.7	9.8	12.3	189	0.29	37	

Cooling

Entering air temperature = 23°C db / 50%
Entering water temperature = 6°C
Leaving water temperature = 12°C

Heating

Entering air temperature = 21°C
Entering water temperature = 80°C
Leaving water temperature = 60°C

Performance Output PuroAire$_{285}$

Standard EUROVENT conditions

PuroAire$_{285}$ Model	Speed	Airflow (l/s)	Cooling (kW)		Heating (kW)	Absorbed Power (W)	SFP (W/l/s)	NR	FLC (A)
			Sensible	Total	Total				
285 0-0+	Whisper	37	0.7	1.0	1.0	4	0.12	22	0.7
	Low	100	1.7	2.1	1.9	13	0.13	25	
	Low-Med	150	2.3	2.8	2.3	30	0.2	30	
	Med	170	2.6	3.0	2.4	44	0.26	33	
	Med-High	190	2.8	3.2	2.5	59	0.31	35	
	High	200	2.9	3.3	2.6	68	0.34	37	
285 1-1+	Whisper	50	1.0	1.3	1.4	6	0.11	22	0.7
	Low	110	2.0	2.6	2.4	14	0.13	25	
	Low-Med	155	2.6	3.3	2.8	31	0.2	30	
	Med	170	2.8	3.5	2.9	39	0.23	33	
	Med-High	190	3.1	3.8	3.1	53	0.28	35	
	High	200	3.2	4.0	3.2	62	0.31	37	
285 2-2+	Whisper	105	2.1	2.8	2.7	14	0.13	22	0.7
	Low	140	2.7	3.5	3.2	22	0.16	25	
	Low-Med	180	3.3	4.3	3.6	43	0.24	30	
	Med	205	3.7	4.7	3.9	66	0.32	33	
	Med-High	217	3.8	4.9	4.0	78	0.36	35	
	High	230	4.0	5.1	4.1	92	0.4	37	
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	Low	175	3.2	4.2	3.6	23	0.13	25	
	Low-Med	260	4.4	5.6	4.4	49	0.19	30	
	Med	315	5.1	6.4	4.8	76	0.24	33	
	Med-High	340	5.4	6.7	4.9	92	0.27	35	
	High	385	5.9	7.2	5.2	123	0.32	37	

Cooling

Entering air temperature = 27°C db / 19°C wb
Entering water temperature = 7°C
Leaving water temperature = 12°C

Heating

Entering air temperature = 20°C
Entering water temperature = 45°C
Leaving water temperature = 40°C

Performance Output PuroAire$_{285}$

Standard EUROVENT conditions

PuroAire$_{285}$ Model	Speed	Airflow (l/s)	Cooling (kW)		Heating (kW)	Absorbed Power (W)	SFP (W/l/s)	NR	FLC (A)
			Sensible	Total	Total				
285 4-3	Whisper	120	2.5	3.5	3.2	17	0.14	22	1.4
	Low	185	3.7	5.1	4.5	28	0.15	25	
	Low-Med	275	5.2	6.9	5.6	55	0.2	30	
	Med	315	5.8	7.7	6.0	76	0.24	33	
	Med-High	360	6.4	8.4	6.4	101	0.28	35	
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	Low	230	4.5	6.3	5.4	35	0.15	25	
	Low-Med	320	6.0	8.1	6.4	67	0.21	30	
	Med	395	7.2	9.5	7.2	119	0.3	33	
	Med-High	445	7.9	10.4	7.6	156	0.35	35	
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	Low	275	5.6	7.8	6.7	47	0.17	25	
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	Med-High	600	10.7	14.0	10.1	162	0.27	35	
	High	650	11.3	14.7	10.5	189	0.29	37	

Cooling

Entering air temperature = 27°C db / 19°C wb
Entering water temperature = 7°C
Leaving water temperature = 12°C

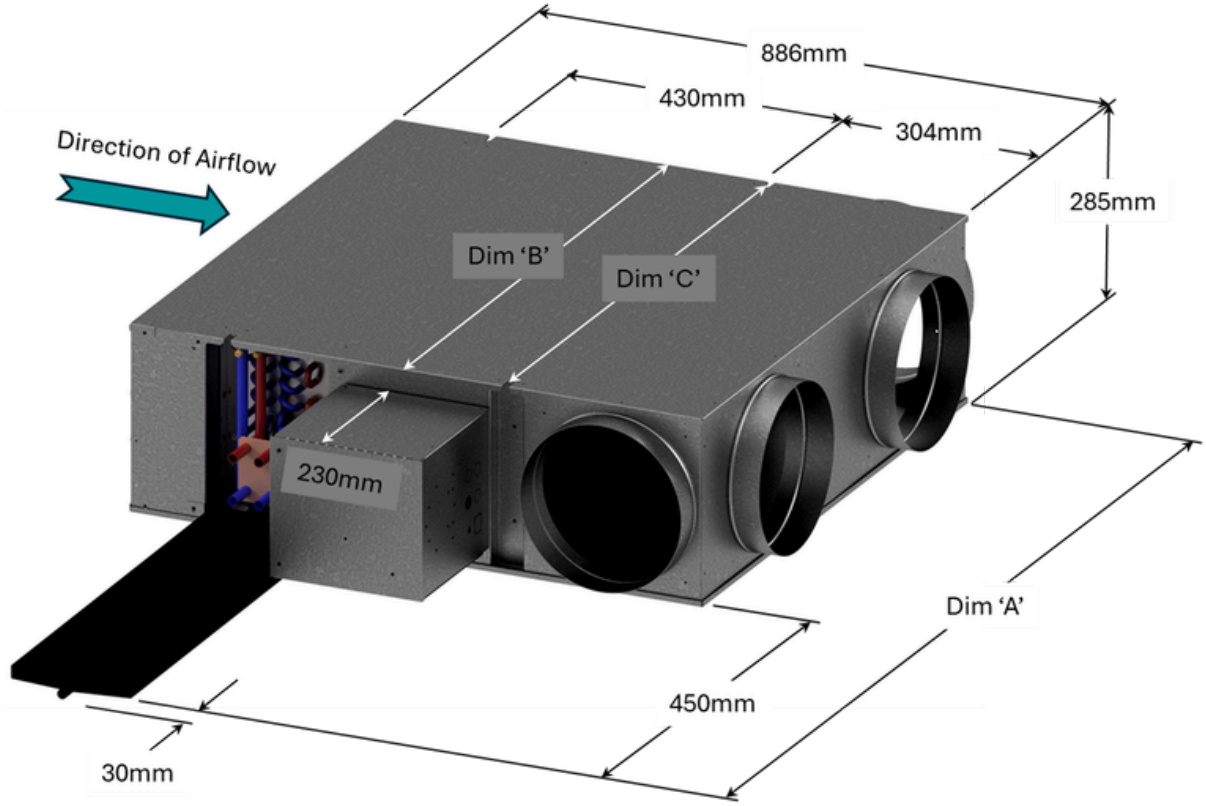
Heating

Entering air temperature = 20°C
Entering water temperature = 45°C
Leaving water temperature = 40°C

Teleport yourself into the digital era with the smart range of PuroAire$_{285}$ fancoils



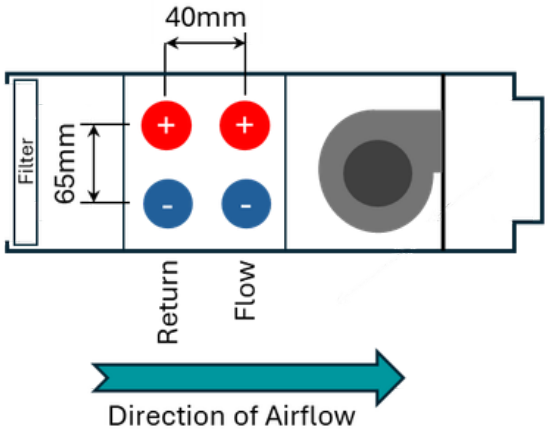
Model Dimensions



Standard unit including Stainless Steel Extended tray for PIC Valves
A shortened drain tray is available as an option

PuroAire 285 Model	Dim 'A' Overall Width	Dim 'B' Unit Width	Dim 'C' Fixing Centres	Max No. Of Spigots / Size	Cooling Coil* Volume (L)	Heating Coil* Volume (L)	Max Dry Net Weight (Kg)
285 - 0	950	500	465	3 (250/200)	1.2	0.2	42
285 - 1	1080	630	595	4 (250/200)	1.5	0.25	45
285 - 2	1330	880	845	4 (250/200)	2.2	0.35	57
285 - 3	1680	1230	1195	5 (250/200)	3	0.5	75
285 - 4	1880	1430	1395	5 (250/200)	3.5	0.6	90
285 - 5	2230	1780	1745	6 (250/200)	4.5	0.7	110

Hydraulic Connections



All pipe sizes 15mm

Qualification of NR predictions

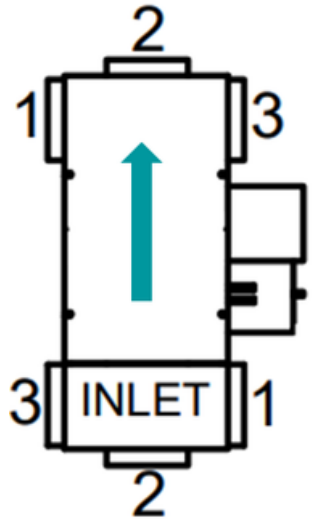
The N.R. guide figures quoted in the schedule are intended to show the levels which may be expected in a typical office environment. The room effect is calculated using the Schultz method and the resultant NR calculation requires that the following conditions be met.

- Room sizes are based on a cooling load of 120W/m2 with a chilled water flow temperature of 6°C and a return of 12°C
- Units must be correctly mounted onto a solid structure, using drop rods attached to the mounting points provided, in a false ceiling not less than 300mm deep, with standardT-Bar grid and 10mm fibreboard tiles.
- Rooms should be carpeted, with no more than 20% glazed or highly reflective surfaces
- In open plan areas units should be mounted not less than 6m apart and return air grilles should not be mounted directly below, or adjacent to unit inlets
- 1m of non noise regenerative flexible duct should be fitted to each outlet spigot, which should be sized to maintain the required N.R. level, i.e. 1.5m/s at NR25, 2.0m/s at NR30, 3.0m/s at NR35 and 4.0m/s at NR40
- Height from the floor to the discharge grilles is not less than 2.5m
- The attenuation due to the ceiling tiles is not less than the following

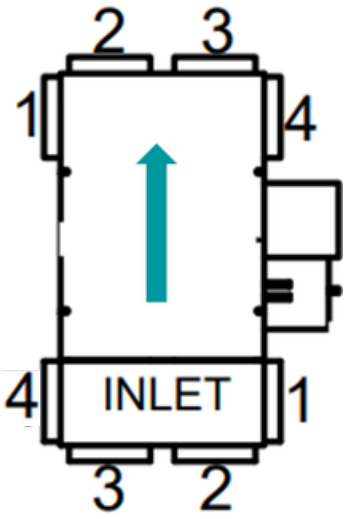
Hz	125	250	400	1K	2K	4K
dB	4	7	9	11	14	16

Providing that the grille plenums are correctly sized and insulated the foregoing should ensure that the ‘guide’ NR Levels are met when measured at 1.5m from the nearest grille.

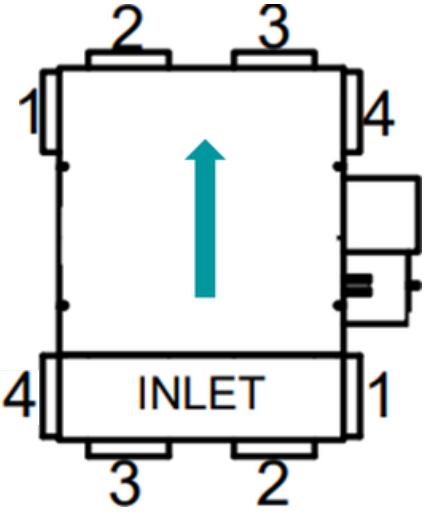
Handing's / Spigot Position



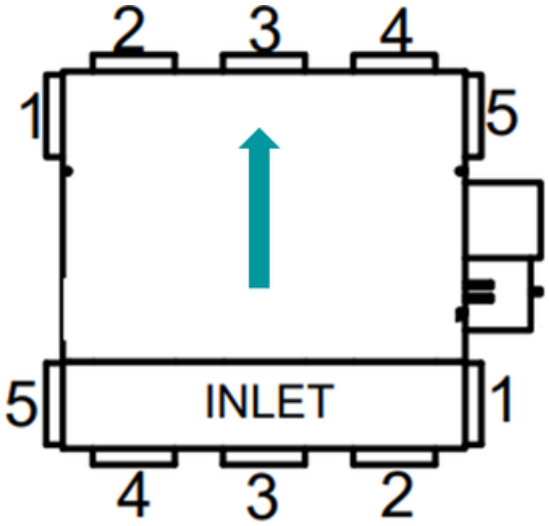
285 0-0+



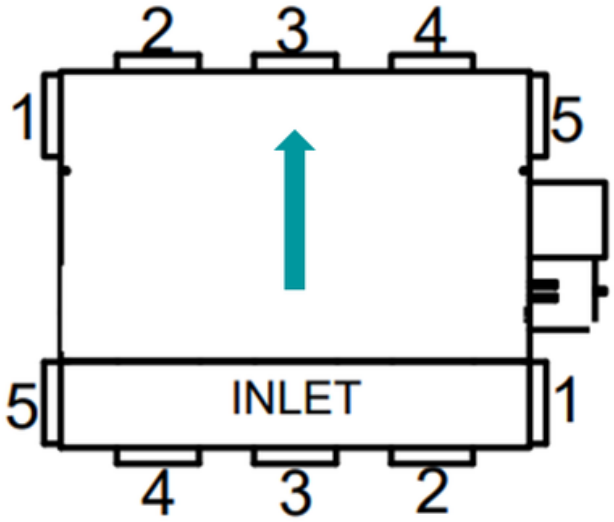
285 1-1+



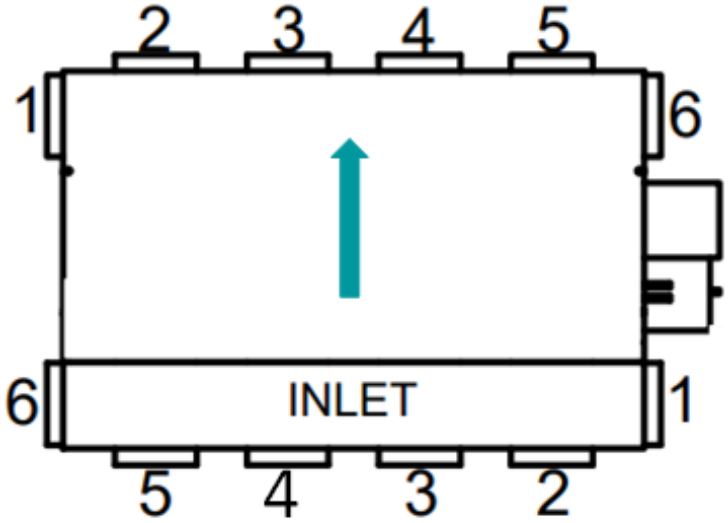
285 2-2+ & 3-2



285 4-3



285 5-4 & 6-4



285 8-5 & 9-5



100 Embankment - Manchester



New Bailey - Manchester



33 Old Broad Street - London



33 Canada Square - London

Configurator

Example configuration code - New PuroAire$_{285}$ range

PuroAire$_{285}$ 0-0+ A C FSS

MODELS

9 Compact Models

COIL

A
NZEB

FILTER

F3 = Course <50% (G3)
SS = Stainless Steel

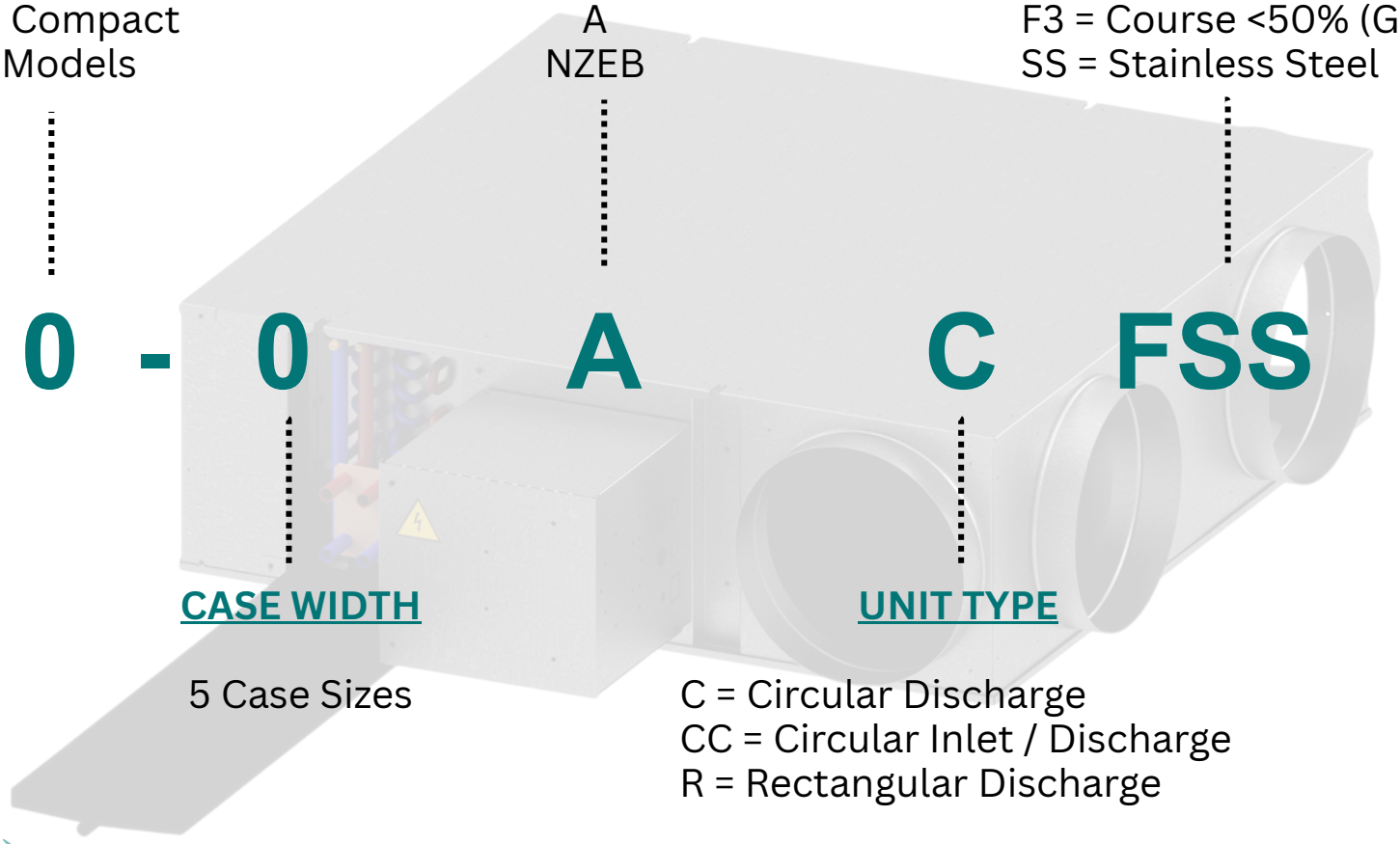
0 - 0 A C FSS

CASE WIDTH

5 Case Sizes

UNIT TYPE

C = Circular Discharge
CC = Circular Inlet / Discharge
R = Rectangular Discharge



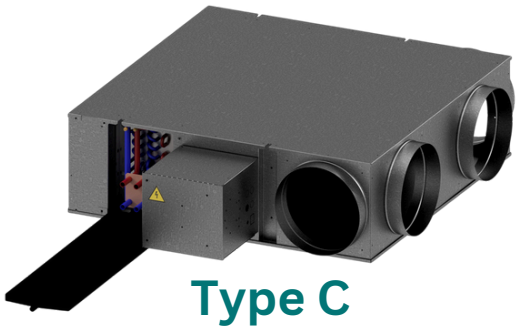
+ denotes higher specification fan offered as standard on 0-0, 1-1 and 2-2 products

Configurator

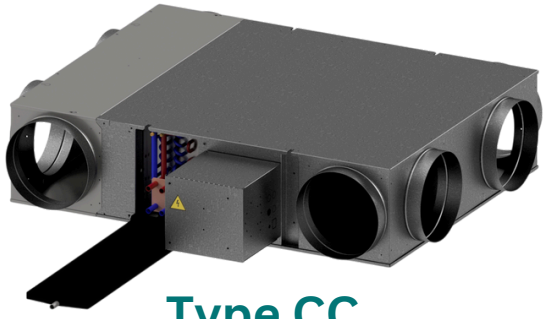
MODELS

PuroAire$_{285}$ Model Configurations
285 0-0+
285 1-1+
285 2-2+
285 3-2
285 4-3
285 5-4
285 6-4
285 8-5
285 9-5

UNIT TYPES



Type C



Type CC



Type R

For other unit types, please send us your enquiry



Terminal 2 Manchester Airport - Manchester



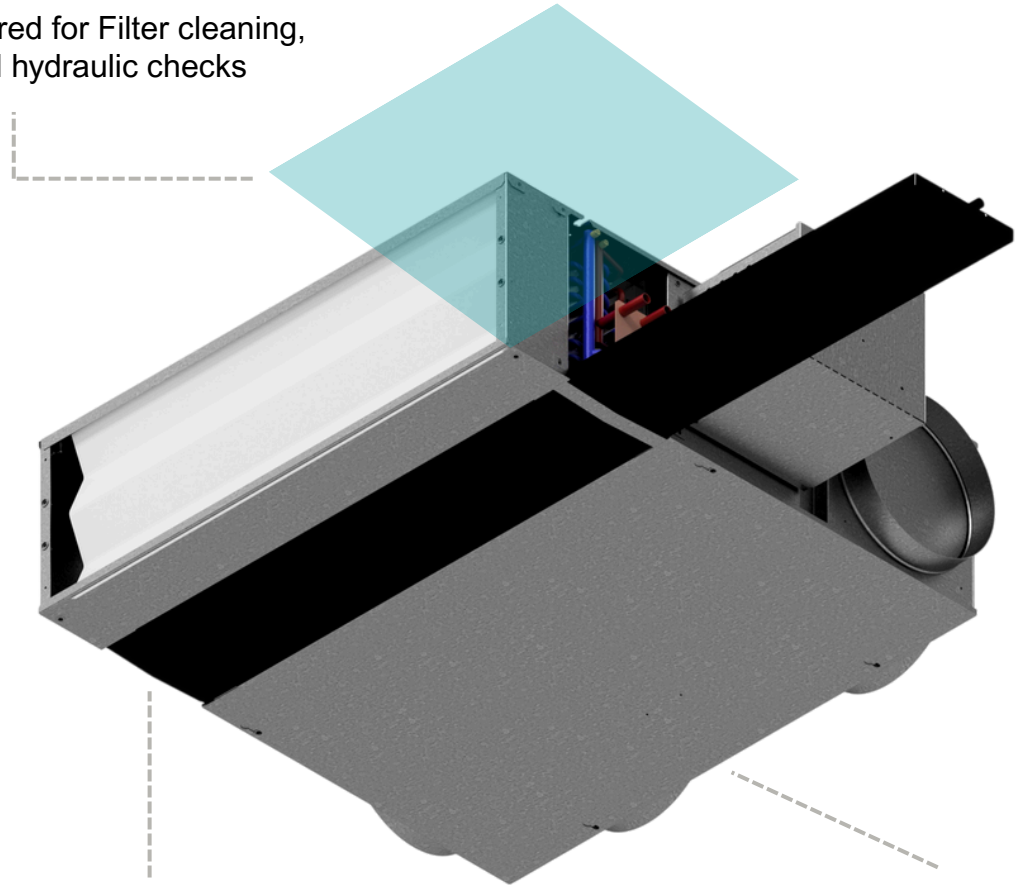
4 St Pancras Way - London

Access Requirements

Recommended access for PuroAire$_{285}$ Ducted

600mm x 600mm minimum access on all size units.

Access required for Filter cleaning, electrical and hydraulic checks



For deep cleaning the drain tray is removeable from the underside

For maintenance to the fan(s) the fan access panel is removeable

Maintenance

All maintenance checks should be carried out in accordance with SFG20

Maintenance Checks

All maintenance checks should be carried out in accordance with SFG20

Inspection	3 Months	6 Months	12 Months
Visually inspect unit for damage, corrosion, and firmness of fixings		X	
Ensure condensate pump is operational and able to discharge condensate to the drainage pipework. If gravity fed must also check correct fall to allow full drainage		X	
Permanent filters to be cleaned and retrofitted. In a very dirty atmosphere, the filters will need cleaning more regularly	X	X	
Disposable filters to be withdraw and clean (or replace if necessary) filter media from dirty side with vacuum cleaner	X	X	
Check airflow is normal at correct speed setting, Check unit operates without undue noise or vibration and check operation of controller		X	
CHW/HW control valves. Check operation and check that any connections including flexible hoses are in good condition (if fitted)		X	
Ductwork to unit connections should be checked to ensure they are still secure and there is no air			X
Cooling/Heating heat exchanger should be checked for leaks and cleaned by applying a jet of air to the leaving face. All connections headers, air vents and drains should be checked			X
If strainers are fitted to control valves of FCU these should be checked, cleaned, seals checked and replaced if necessary			X
Check the fan blades/housings and clean if necessary, with a soft brush or vacuum- check for shaft lift and clean interior of unit in fan section and discharge section			X
Electrical connections in enclosure are to be checked for tightness, visually inspect cable insulation. Check operation of thermostats if necessary. Earth Continuity and Insulation resistance should also be checked			X
Wall thermostats should be checked to ensure they operate when moved			X

X – Should be 3-month interval if in a dirty atmosphere



76 Buckingham Palace Road - London



Hammersmith Road - London

Quartz Shield
Built in Virus Protection



Quartz SHIELD now provides the solution by significantly improving indoor air quality (IAQ) in buildings through a wide range of product innovations.

- Inhibits the transmission of viruses
- Inhibits the growth of bacteria, mould and allergens
- Kills pollutants within the room
- Oxidises odorous gasses
- Balances static electricity
- Superior performance over air filtration systems
- Reduction of cleaning chemical use
- Safeguarding employees in the workplace
- Promoting well-being to employees
- Reduced sick pay and loss of resource
- Reduced cleaning costs
- Can be retro-fitted to existing installer fan coils

Employer confidence in protecting the workforce in the workplace has never been more important.

The capability to destroy viruses, bacteria and mould, can now be realised through the widespread deployment of ‘Bipolar ionisation’ technology.

QUARTZ SHIELD
BUILT-IN VIRUS PROTECTION

Total peace of mind, built in Britain, built to last.



Notes

Notes

Continued Professional Development

Fan Coils

- Air Conditioning and Fan Coil Units
- Types of Fan Coil Units
- F Gas Regulations
- Design Parameters

Acoustics

- Sound Pressure vs Sound Power
- NR Qualifications
- Acoustic Measurements
- Absorption

Quartz Shield

- What is Quartz Shield
- How does it work
- Testing and Results
- Case Studies

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Phone: +44 (0) 1484 405600

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PuroAire
by Quartz

TEV Limited
Commondale Way
Euroway Trading Estate
Bradford BD4 6SF

01484 405630

sales@quartz.co.uk

www.puroaire.co.uk
www.quartz.co.uk





