



Aegean Range

A new upgraded range of fan coils for heating and cooling commercial applications

Why Choose Smith's?

Smith's providing comfort for the built environment



Formed in 1991 Smith's Environmental Products has grown to become the leading supplier of domestic and light commercial fan-assisted hydronic heat emitters. The complete product range is manufactured in-house in its specialist facilities in the UK. The company is the UK's market leader and has significant shares of both the North American and European markets. Smith's Environmental Products is a member of The Swan Group.

In the early years we developed the Smith's Space Saver, the UK's number one plinth heater and the business quickly became established in heating and plumbing. Other fan convectors followed and the very first Caspian commercial fan convector was launched in 2007.

The business has grown from strength to strength and today we offer versatile heating and cooling solutions based on fan convector technology to all commercial specifiers from architects and consultants, to major building engineering services companies.

Manufacturing Facilities

Operating from 40,000 square feet of factory and office space near Chelmsford in Essex we manufacture our product range from raw materials through to finished product utilising computerised design and automated production techniques.

Quality and the environment

At Smith's we recognise that quality is about more than just the product, it's an approach that runs throughout the business and is centred on meeting and exceeding customers' expectations. Processes are constantly monitored and evaluated with a focus on continuous improvement. Manufacturing facilities are regularly appraised and meet the exacting standards of national approval boards such as UL, CSA and Kema.

In 2017 Smith's was assessed for the highly regarded ISO 9001 (2015) accreditation and passed the audit with no non-conformities and was accredited the new standard certification. It brings Smith's up to the latest standard and assuring our customers receive the best experience possible.

In 2018 Smith's was awarded the prestigious ISO 14001 accreditation. ISO 14001 is concerned with setting an environmental framework for the company to work within. This means that Smith's has management processes and systems to ensure that they manufacture products that meet the customer and regulatory requirements and are working within designated environmental parameters.

Both ISO 9001 (2015) and ISO 14001 accreditations are internationally recognised and demonstrate that Smith's is a responsible and forward-thinking organisation committed to achieving and maintaining the highest organisational standards.

Product performance testing

To ensure that our products meet the strictest requirements of our demanding customers we work closely with recognised test houses. We work with BSRIA to verify our products to demonstrate that they perform as they are designed to do. We also work with acoustic experts SRL Technical Services to ensure that the noise performance of our products achieve our customers' requirements. This gives our customers the reassurance that customers' can specify Smith's products with confidence.



Achilles Building Confidence Scheme

Smith's is a member of the Achilles Building Confidence Scheme. The scheme is designed to give confidence to suppliers in the construction industry that members have achieved the required standard in terms of production quality, health and safety standards, training and development, environmental procedures and processes as well as Corporate Social Responsibility. Membership of this scheme is a requirement of many of the major Main Contractors and suppliers in Construction Industry Supply Chain.

Expertise

The team at Smith's have many years' experience in managing and delivering major projects including high profile airport terminals, major national stadia, ground-up hospital trust projects, major BSF projects and MOD projects. We also have significant expertise and experience in trench heating and have a team who have over 25-years' experience in the development and delivery of trench projects.

Working with Renewables

Renewable technology grows apace, with ground source and air source heat pumps offering a viable alternative to boilers as the principal heat generator in both domestic and commercial applications.

Inherent in the heat pump's design is that the smaller the temperature between the heat-source pump (air or ground) and the heat sink/emitter (under-floor heating, fan convector, radiator), the higher the energy efficiency of that heat pump. This higher efficiency means lower fuel bills and greater carbon savings.

Fan convectors can work very effectively at system temperatures as low as 40°C. This allows your chosen heat pump to work close to its maximum levels of efficiency, which means it will reduce the user's energy costs and energy consumption in the way it was intended. By contrast a standard radiator is designed to be efficient at higher temperatures, 45°C and above, which automatically reduces the heat pump's efficiency by more than 10%. In addition, the size of the radiator has to be increased significantly to cope with the lower system temperatures.

- Our products are manufactured in the UK, including the heating/cooling coils, ensuring we can respond quickly to customer demands
- ISO 9001 and 14001 accredited
- Products are independently tested and verified by BSRIA and SRL Technical services
- Compatible with renewable energy sources
- Free 5-year parts and labour guarantee

Aegean Range

A range of fan coil units suitable for all kinds of commercial applications, from restaurants and hotels to office developments, with the ability to rapidly heat and cool large areas with much greater efficiency than other similar heating and cooling systems.



Fan Coils provide heating and cooling solutions for a wide range of applications. Fan coils can use either chilled water, or refrigerant to provide cooling but are generally associated with chilled water. Using just chilled water as the cooling medium means that maintenance and checking associated with the FGas regulations are not necessary.

Fan coils can use a slightly lower grade chilled water than that traditionally employed and are hence, in cooling mode, capable of providing cooling in conjunction with a reverse cycle heat pump or making use of free cooling from either a dry cooler or free cooling chiller.

Similar to the cooling medium, although fan coil units are capable of providing heating using either hot water or refrigerant, they are usually supplied with low temperature hot water.

Incorporating the latest EC motor technology, which can result in running-cost savings as high as 80%, and with variable speed control as standard, the Aegean delivers heat quickly and quietly.

Aegean with its EC fans is very efficient and fully comply with the Part L of the Building Regulations (2010). By using the variable fan speed, unoccupied setbacks etc using the precise control provided by the BMS interfaces further energy consumption can be achieved.

The Aegean range of fan coils units are compatible with most types of renewable heat sources.

The Smith's technical sales team are available to offer free, no-obligation advice on the best combined heating and cooling solution for a wide range of commercial applications.

Features

- EC motor (BMS compatible for easy integration)
- Low sound levels
- Fully attenuated discharge plenum
- Positive fall drain tray
- Designed and made in the UK
- For bespoke specifications please contact us to discuss your requirements

Applications

Suitable for the following commercial application areas:

- Office buildings
- Hotels
- Restaurants
- Department stores
- Shopping malls

Finish

Chassis manufactured from 1.2mm hot dipped galvanised steel
All flanges formed inward facing to prevent exposure to bare metal edge

Installation

Flow and return connections 15mm
Designed for system pressures up to 10 bar
Fan coils are 4-pipe coils (heating and cooling circuit)

Customised requirements

All leading manufacturers controls factory fitted
Acoustically lined inlet plenum
Rectangular spigot connection (vertical only)
Concealed/hidden applications (underfloor, behind false walls and ceilings)
Bespoke options

Construction

Chassis manufactured from 1.2mm hot dipped galvanised steel. All flanges formed inward facing to prevent exposure to bare metal edges.

Access is provided for maintenance of the fan/motor assembly and also to the coil and condensate tray.

Chassis incorporates an integral discharge plenum chamber. Spigots provided as standard and fixed in the required position.

Fans

Fans are direct drive double inlet (SFC235 and SFC260), forward curved centrifugal type. Both the fan scroll and impeller are galvanised steel. Fan and motor assemblies mounted separately to the fan deck and allows individual removal for non-routine maintenance or replacement. Each fan and motor assembly is statically and dynamically balanced and fitted with neoprene rubber and vibration mounts.

Fan motors

Motors are external rotor EC commutated. The power factor is a minimum of 0.9. Motors have maintenance free and sealed-for-life bearings.

Motors are internally electronically overload protected and insulation conforms with EN 60335-1 class B.

Speed controls

Variable speed control and illuminated on/off switch as standard (additional optional range available including water side/air side controls).

Condensate drip tray

The condensate drip tray is manufactured from 1.2mm hot dipped galvanised steel. The tray is fully insulated against external condensation and have a positive fall to a 15mm plain copper drain point, ensuring effective draining when the unit is installed correctly. The tray covers the entire coil and valve assembly. The connection point is located within the profile of the unit to avoid transit/site damage.

Filters

Filters are easily removable for routine maintenance, cleaning or replacement. Filter media is to EU2 to Eurovent 4/5 (EN779 Rating – G2). If specified filters with EU3 Eurovent (EN779 Rating – G3) can be supplied.

Controls enclosure

Where possible all controls are fitted to a control back plate, which in turn, is mounted within the electrical enclosure. The enclosure has easy access from both sides and below. The whole electrical enclosure, including switches is located within the profile of the unit to prevent transit/site damage.

Heat exchangers

Coils are manufactured from seamless 3/8" copper tube mechanically expanded into accurately pre-formed collars in aluminium fins giving maximum heat transfer capability.

All coils are circuited counter flow and bottom to top to optimise output and provide free venting/draining. Each coil has been fitted with a manual air vent and drain plug. Coil connection handling is dictated against direction of air flow. Coil termination is 15mm o/d plain copper tails at 40mm centres for fitting to industry standard water control valves. Tails pass through a support plate to provide extra rigidity and terminate within the profile of the unit to prevent transit/site damage. Every coil is leak tested to 21 bar gauge at point of manufacture and additionally to 7 bar gauge c/w valve assembly.

Accessories

The standard base unit does not include any temperature controls or modulating valves.

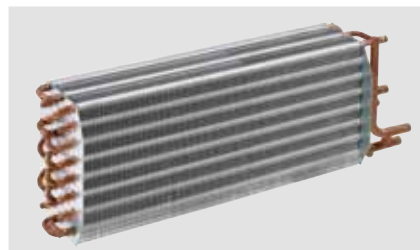
These parts are all fitted as requested and specified by the contractor.



Fan



Controls enclosure



Heat exchanger



Fan mounted inside



Condensate drip tray

Aegean SFC 235H

A horizontal fan coil with a depth of only 235mm



Features

- EC motor (BMS compatible for easy integration)
- Low sound levels
- Fully attenuated discharge plenum
- Positive fall drain tray
- Designed and made in the UK

Finish

Chassis manufactured from 1.2mm hot dipped galvanised steel
All flanges formed inward facing to prevent exposure to bare metal edges

Installation

Flow and return connections 15mm
Designed for system pressures up to 10 bar
Fan coils are 4-pipe coils (heating and cooling circuit)

Customised requirements

All leading manufacturers controls factory fitted
Acoustically lined inlet plenum
Concealed/hidden applications (underfloor, behind false walls and ceilings)
Bespoke options

Specification

To specify state:
Horizontal Fan Coil Unit 235mm high with EC motor. As Smith's Aegean SFC23510 (or SFC23520, SFC23525, SFC23530, SFC23540, SFC23550, SFC23555, SFC23560)

Ordering information

Aegean is a highly configurable bespoke product. Please contact us to discuss your requirements.





Performance data

SIZE	Nominal fan speed	ESP	Airflow	SFP	Total cooling	Sensible cooling	Total cooling	Sensible cooling	LPHW heating	LPHW heating
	(%)	Pa	l/s	W/l/s	5.5/11°C	5.5/11°C	6/12°C	6/12°C	82/71°C	60/50°C
10	50	30	55	0.30	1.22	0.90	1.42	1.15	0.86	0.80
20	50	30	88	0.28	1.93	1.43	2.05	1.72	1.32	1.19
25	50	30	121	0.26	2.77	2.02	2.73	2.53	1.90	1.60
30	50	30	154	0.24	3.04	2.33	3.41	2.54	2.06	2.01
40	50	30	187	0.22	3.95	2.96	4.20	3.50	2.73	2.51
50	50	30	199	0.24	4.61	3.36	4.55	4.20	3.16	2.66
55	50	30	224	0.26	5.64	4.01	5.42	5.23	3.80	3.19
60	50	30	236	0.28	6.03	4.27	5.73	5.60	4.06	3.38

Summer Condition: 23°C EAT, 50% RH (5.5/11°C, 6/12°C)

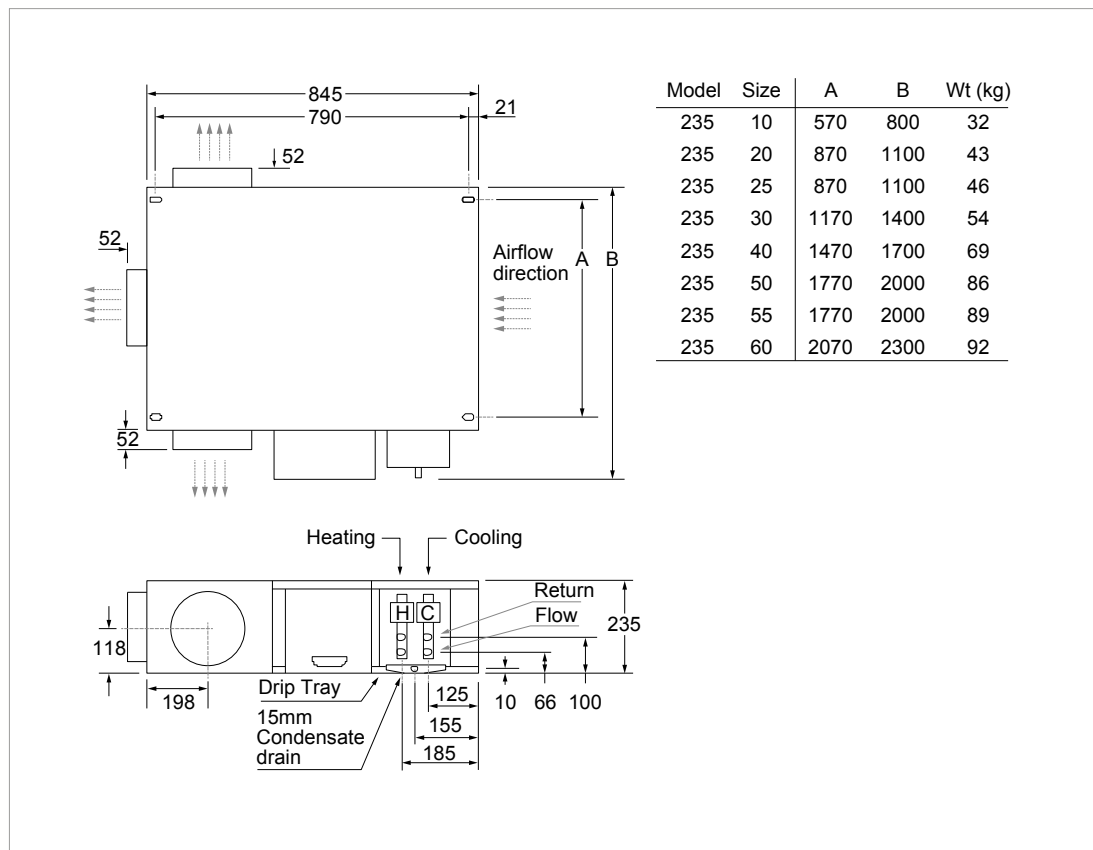
Winter Condition: 21°C EAT (82/71°C, 60/50°C)

Performance data verification

Heating and cooling performance has been tested and independently verified by BSRIA to BS EN 1397: 2015. Full set up and details available on request.

Acoustic data has been measured and independently verified by SRL Technical Services to BS EN 16583:2015. Please ask us for our acoustic information pack for more details, including laboratory measured sound power data.

Dimensions



Aegean SFC 260H

A horizontal fan coil with a depth of only 260mm



Features

- EC motor (BMS compatible for easy integration)
- Low sound levels
- Fully attenuated discharge plenum
- Positive fall drain tray
- Designed and made in the UK

Finish

Chassis manufactured from 1.2mm hot dipped galvanised steel
All flanges formed inward facing to prevent exposure to bare metal edges

Installation

Flow and return connections 15mm
Designed for system pressures up to 10 bar
Fan coils are 4-pipe coils (heating and cooling circuit)

Customised requirements

All leading manufacturers controls factory fitted
Acoustically lined inlet plenum
Concealed/hidden applications (underfloor, behind false walls and ceilings)
Bespoke options

Specification

To specify state:
Horizontal Fan Coil Unit 260mm high with EC motor. As Smith's Aegean SFC26010 (or SFC26020, SFC26025, SFC26030, SFC26040, SFC26050, SFC26055, SFC26060)

Ordering information

Aegean is a highly configurable bespoke product. Please contact us to discuss your requirements.





Performance data

SIZE	Nominal fan speed	ESP	Airflow	SFP	Total cooling	Sensible cooling	Total cooling	Sensible cooling	LPHW heating	LPHW heating
	(%)	Pa	l/s	W/l/s	5.5/11°C	5.5/11°C	6/12°C	6/12°C	82/71°C	60/50°C
10	50	30	87	0.22	1.64	1.27	1.47	1.19	1.75	1.00
20	50	30	128	0.22	2.66	2.00	2.44	1.89	2.41	1.40
25	50	30	168	0.22	3.66	2.71	3.39	2.59	3.07	1.78
30	50	30	209	0.22	4.12	3.15	3.62	2.90	3.73	2.19
40	50	30	250	0.22	5.16	3.89	4.65	3.64	4.56	2.70
50	50	30	273	0.22	5.47	4.16	4.86	3.86	5.08	2.95
55	50	30	318	0.23	6.54	4.94	5.91	4.62	6.52	3.82
60	50	30	341	0.23	7.19	5.38	6.54	5.07	7.18	4.23

Summer Condition: 23°C EAT, 50% RH (5.5/11°C, 6/12°C)

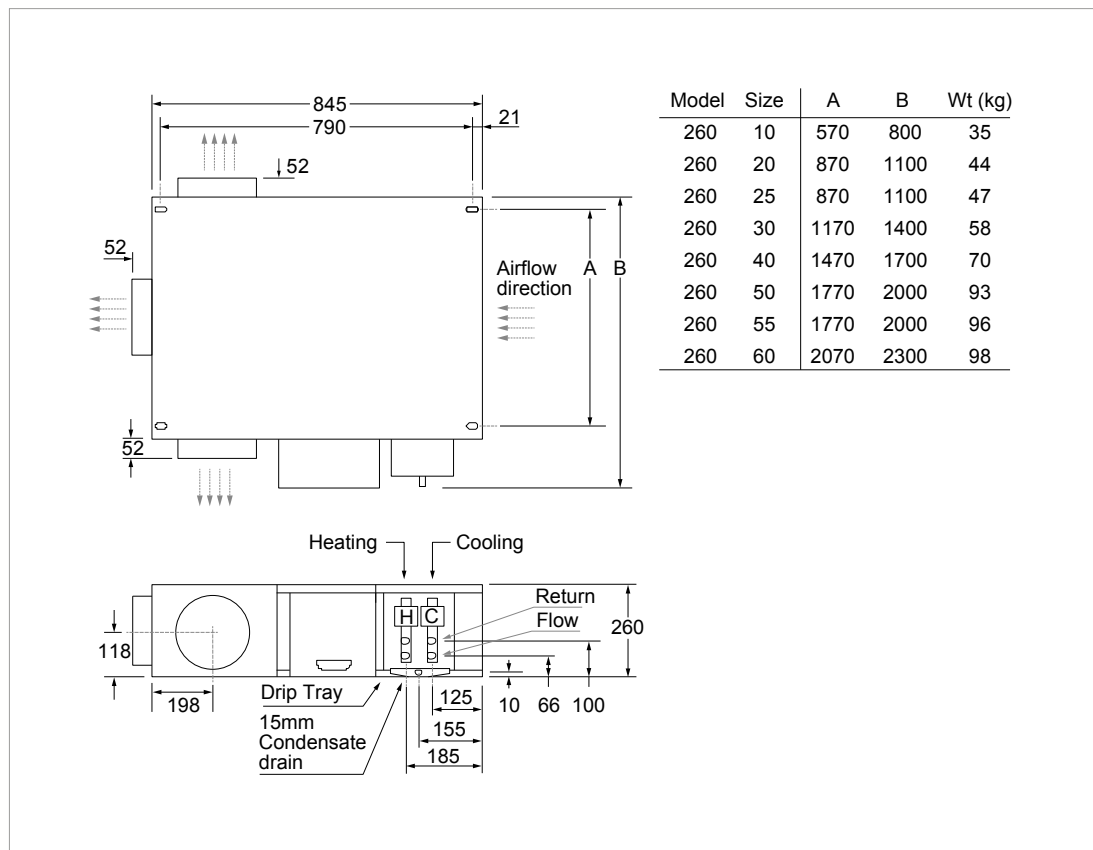
Winter Condition: 21°C EAT (82/71°C, 60/50°C)

Performance data verification

Heating and cooling performance has been tested and independently verified by BSRIA to BS EN 1397: 2015. Full set up and details available on request.

Acoustic data has been measured and independently verified by SRL Technical Services to BS EN 16583:2015. Please ask us for our acoustic information pack for more details, including laboratory measured sound power data.

Dimensions



How Fan Coils work

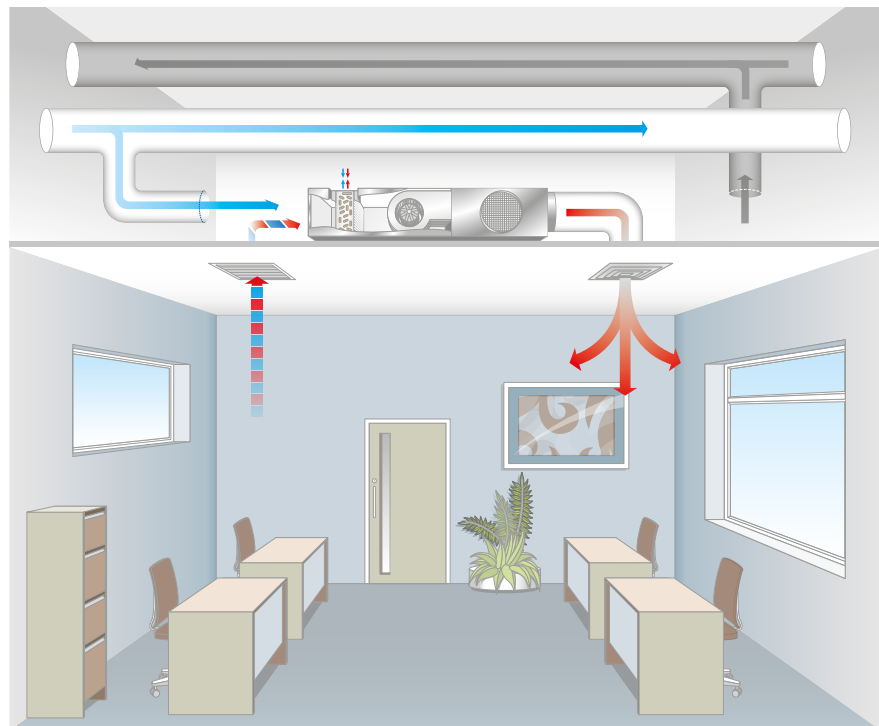
Fan Coils provide heating and cooling solutions for a wide range of applications.



A Fan Coil Unit (FCU) is a device consisting of a heating and/or cooling heat exchanger or coil and fan. It forms part of a HVAC system and is used to heat or cool mainly mixed development, commercial and Industrial buildings.

It can be installed to supply one space, or several spaces, with either warm or cool air using ductwork depending on the required demand. Control range is facilitated starting with simple switches (either rocker or rotary), going to advanced intelligent thermostats with fan speed and temperature control.

Because of their simplicity and flexibility FCU's can be more economical to install than fully fresh air ducted systems, VAV, Central Heating Systems with Air Handling Units or Chilled Beams. Various units' configurations are available – Horizontal and vertical units for concealed/hidden applications (underfloor, behind false walls and ceilings).



FCU's can provide warm/chilled air to several different outlets simultaneously providing flexibility and efficiency. They are particularly suitable for office applications because they can easily be modified to accommodate design elements such as meeting rooms and breakout spaces. Ceiling supply and extract grilles can be relocated by extending duct connections to suit design layouts.



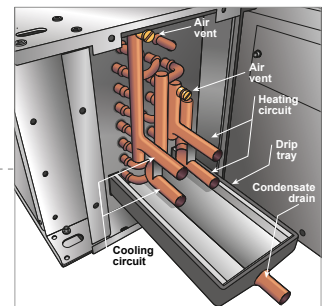
1.

The FCU draws in fresh air, supplied by the Air Handling Unit (AHU), through a replaceable filter. The filter is designed to prevent dust and larger particles being drawn into the fans and then pushed into the space to be heated.

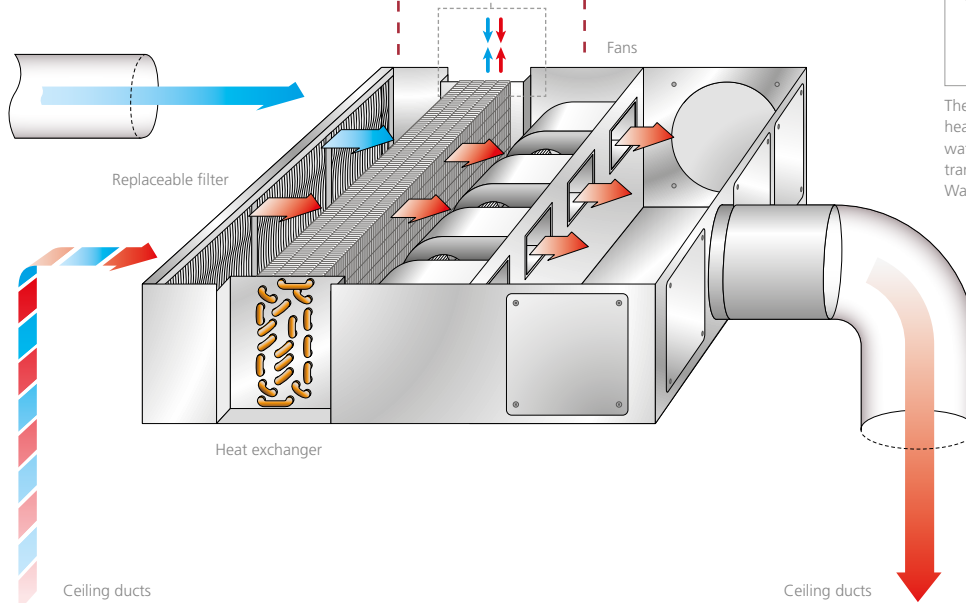
2.

The fans pull in the fresh air and draw it through the heat exchanger, which is either hot, being supplied by hot water from a heat source, or cold being supplied by a chiller. This illustration is showing the FCU in heating mode.

When the FCU is used to chill the air provided to the room the warm air that is passed through the heat exchanger will cause condensation to be produced on the outside of the heat exchanger. This will then need to be managed and removed usually via a condensate tray and then transported away through pipework usually through a gravity system.



The FCU is supplied both hot water from a heat source, typically a boiler, and chilled water from a chiller. The medium to transport the hot/cold water is Low Grade Water through pipework.



4.

Air is drawn out of the room through other ducts positioned away from the heating/cooling supply ducts. The cooler/warmer air is drawn back into the ceiling void is then mixed with the fresh air from the AHU and is drawn back into the FCU to continue the heating, or chilling process.

3.

The conditioned air then is pushed into the room via ducts in the ceiling.

Happy to help

Smith's Environmental Products Ltd is one of the leading manufacturers of heating and cooling products in the UK. We are committed to achieving the highest standards and our faith is supported by a free five year parts and labour guarantee with every product. Our customer service is second to none and we are happy to offer any help and guidance that you might need.

Stockists

All products are available nationally from Builders' Merchants, Plumbers' Merchants, Heating Equipment Distributors and Kitchen Equipment Distributors. In the event of difficulty, please contact us or visit our website SmithsEP.co.uk for details of your nearest stockist.

Information and advice

Full technical specifications and list prices is available to download from our website or in hard copy from our office. Also available on our website are price lists, individual product data sheets, installation & user guides, where to buy, who to contact and a media centre.

Alternatively contact our office 9.00am to 5.00pm Monday to Friday.

As part our commitment to continuous improvement Smith's Environmental Products may change the specifications of its products without prior notification or public announcement. All descriptions, illustrations, drawings and specifications in this publication present only general particulars and shall not form part of any contract. All dimensions are in mm unless otherwise stated.

To view the full product information
download the datasheet at:
www.SmithsEP.co.uk

For product information, customer services or sales support call us on **+44 (0) 1245 324900**

For the Republic of Ireland, contact
MT Agencies on **01 864 3363**

Sales: sales@smithsep.co.uk
General information: info@smithsep.co.uk

Smith's Environmental Products Ltd
Blackall Industrial Estate,
South Woodham Ferrers,
Chelmsford, Essex CM3 5UW

SmithsEP.co.uk

@SmithsEP_UK

#ThinkSmiths

September 2019 | Version 3