



STP and STR

AHUs and HRUs

Versatile Standard or Custom Units

Air volumes up to 25 m³/sec

ErP Compliant

Low Energy and High Efficiency Fans

High Efficiency Heat Recovery Options

25mm and 50 mm Panel Construction

Flexible Control Options

Designed in house to exact requirements



Features and benefits

STP and STR - AHUs and HRUs

- Design Flexibility
- ErP compliant
- STP denotes internally mounted unit
- STR denotes externally mounted unit
- Side-by-side and stacked models



Flexible design to suit your application

11 modular sizes up to 14m³/sec air volume.
Custom made sizes up to 20m³/sec air volume
Enhanced specification to HTM or coastal environments
Robust extruded aluminium tubular frame 30mm x 30mm (for 25mm construction) or 30mm x 50mm for 50mm construction.

Unit panels from double skinned galvanised steel.
Steel channel base running full length of unit with cross members at suitable locations.

Filter and access panels fitted with easy access fasteners – other removable panels retained via roofing bolts.
with plastic coated finish (Grey to BS10A05) as standard.

Weatherproof pitched lid fitted.

Air inlet/exhaust air discharge via weather cowl as standard. Weather louvres available. All fitted with birdmesh guard

Acoustic lining to reduce noise breakout

25mm and 50mm thick panels with 45 kg/m³ density mineral wool insulation as standard.

(Alternative options available for lower sound level requirements)

This significantly reduces noise breakout

Energy Saving Controls

Variable control packages - loose or factory fitted
Can be customised to offer:
- temperature and humidity control to ensure space conditions are maintained.
- demand ventilation control to maximise energy performance.
- user interfacing to suit individual applications.
- extensive connectivity - building integration via various protocols including BACnet®, Modbus® and TREND®.

Accessories

Sensors
Silencers
Filter boxes

STP and STR - AHUs and HRUs - SOLUTIONS FOR VENTILATION

Air Vent Technology Ltd produce air handling solutions which provide the best in quality, design, comfort and energy efficiency for every segment of the market.

As a successful manufacturer of AHUs with over twenty-five years of experience, we can work closely with our customers to ensure we give them solutions which combine cost effectiveness whilst meeting energy efficiency and legislative guidelines.

- **AVT is committed to manufacturing,** utilizing all the benefits this gives.
- **Design flexibility** offering project specific solutions.
- **Competitive prices and delivery periods** direct from the UK.
- **UK based product support and service** direct from AVT.
- **UK based Research and Design.**
- Produced in our **Andover manufacturing facility.**



HOW CAN WE HELP?

Every project is different.

We can give help and advice on product selection, applications and current regulations pertinent to your project.

- This ensures the best solution possible.

How do we do this?

- Technical sales engineers to offer help and advice.
- Design packages to provide full technical quotations.
- Our own design office with in-depth product knowledge.
- Regional Sales Engineers who can visit your office or site.

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HOW WE SELECT

Unit selections are undertaken from our AHU design software which incorporates the latest technology from our component suppliers.

Technical data outputs provide you with all selection content including SFP values and ErP compliancy.

Fan curves and psychrometric charts form part of our technical data submissions.

Units are referenced as:-

- STP for internally located or plantroom units
- STR for externally located or weatherproof units
- Size I-II indicates standardized H X W
- STXX - Fully bespoke sizes and solutions available



Versatile configuration can be:

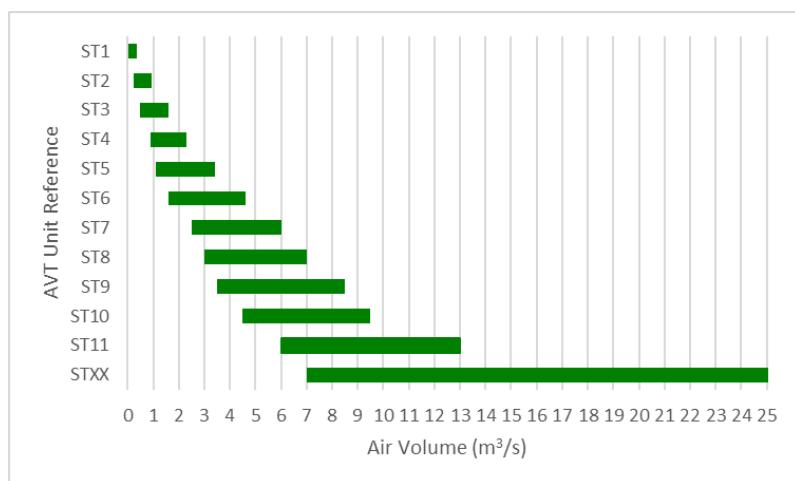
- Single deck - in line
- Single deck - side by side with heat recovery
- Stacked decks with heat recovery
- Vertical air flow
- L-shaped or totally customised



The chart below provides information on the modular range, giving indications of air volume available for cooling coil and F7 filter air velocities.

Customised models up to 20 m³/s are available to suit plant location and application.

Please note this are for guidance only - please speak to our technical sales teams for final selection details.



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The STP/STR range of air handling and heat recovery units provide true versatility. In addition to the eleven standard sizes, AVT can design and build a ventilation system which will do EXACTLY the job that is required using the very best of materials and technology. Energy efficient units, manufactured in the UK to ISO 9001, ensure that pollutants are EXTRACTED from buildings as diverse as hospital isolation units to off-shore platforms. Additionally, AVT can assemble and maintain your system so that you get the best from it for years to come.

STP RANGE

Internal Unit Casework Specification

- Robust 30 x 30 (25mm construction) or 50 x 50 (50mm construction) extruded aluminium tubular frame
- Black plastic corner joints.
- Unit panels constructed from double skinned galvanised steel. 25mm and 50mm thick panels have mineral wool insulation of 45 kg/m³ density as standard. Alternative infill options available for lower sound level requirements.
- Steel channel base running full length of unit with cross members at suitable locations.
- Filter and Access panels fitted with easy access fasteners – other removable panels retained via roofing bolts.
- The unit will be supplied to site in multiple sections for ease of transporting and site installation.
- The unit sections shall be pre-drilled for sectional re-assembly on site by others.



STR RANGE

External Unit Casework Specification

Case construction as internal units except:

- Outer skin with plastic coated finish (Grey to BS10A05) as standard.
- Weatherproof pitched lid fitted.
- Air inlet/exhaust air discharge via weather cowl as standard. Weather louvres available. All fitted with birdmesh guard.

Model No	Section Width	Section Height	Baseframe Height	Roof Height	Air Volume Based on Velocity of -				
					2.0 m/sec through coil	2.5 m/sec through coil	5.0 m/sec through coil	3.5 m/sec through coil	3.5 m/sec through F7 filter
Internal = STP External = STR	mm	mm	mm	mm	2.0 m/sec through coil	2.5 m/sec through coil	5.0 m/sec through coil	3.5 m/sec through coil	3.5 m/sec through F7 filter
STP/STR1	800	500	100	100	0.34	0.42	0.50	0.59	0.526
STP/STR2	800	800	100	100	0.67	0.83	1.02	0.16	1.062
STP/STR3	1075	800	100	100	1.01	1.25	1.51	1.76	1.589
STP/STR4	1350	800	100	100	1.34	1.66	2.00	2.33	2.124
STP/STR5	1350	1100	100	100	2.01	2.50	3.00	3.51	3.177
STP/STR6	1400	1450	100	100	2.68	3.33	4.00	4.67	4.248
STP/STR7	1675	1450	100	100	3.34	4.17	5.00	5.84	5.301
STP/STR8	1950	1450	100	100	4.00	5.00	6.00	7.00	6.372
STP/STR9	1950	1750	100	100	5.00	6.25	7.50	8.75	7.952
STP/STR10	1950	2100	100	100	6.00	7.50	9.00	10.50	9.559
STP/STR11	2550	2100	100	100	8.00	10.00	12.00	14.00	12.745

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Air Vent Technology Ltd use components in the construction of the STP/STR ranges which have been sourced from market and technology leading suppliers. Standard components can be used, or a customised design to suit special applications or particular sector specifications. This allows versatility of manufacture producing straight through supply units, side by side units for those applications where height is at a premium and stacked version for installations where the footprint is limited.

Models are available for internal or external installations and are available with Electric (for single or three phase operation) or LPHW heater batteries, cooling options, humidity control, etc Internal models have a high degree of acoustic insulation. Panel filters and bag filters are easily available.

They are manufactured in the UK to ISO9001.



HIGH EFFICIENCY FANS

Include the latest fan technology

- EC fans and Plug Fans
- Direct Drive Fans
- Fan arrays used where appropriate
- Selections to meet low power consumption



SPECIAL FEATURES

To meet sector specific requirements

- Bulkhead Lights
- View Ports
- Black plastic corner joints
- Variable Fixtures/Fittings
- Lockable access sections



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CONTROLS PACKAGES

Air Vent Technology can provide loose or factory fitted controls for all units. This gives:

- **Reduced site costs** as most of the wiring can be carried out at the factory.
- **Peace of mind** - unit and controls are supplied by AVT for seamless integration

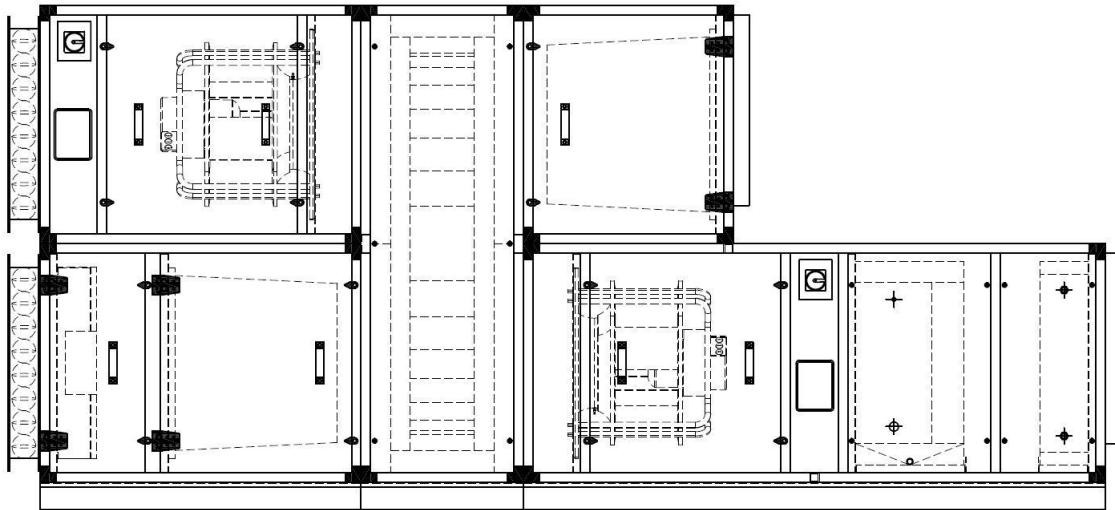
Customised Solutions

AVT offers complete flexibility on controls packages to ensure integration with client specific requirements

- Temperature and humidity control to ensure space conditions are maintained
- Demand ventilation control to maximise energy performance
- User interfacing to suit individual applications
- Extensive connectivity - building integration via various protocols including BACnet®, Modbus® and TREND®.
- Pre and after sales support to ensure a smooth project installation.



I. SENSORS	2. ACTUATORS	3. SPEEDCONTROL	4 HEATING/COOLING	5. HEAT RECOVERY
<ul style="list-style-type: none"> • Temperature • Air Quality • Pressure • Humidity • Velocity 	<ul style="list-style-type: none"> • Air intake and exhaust dampers • Plate heat exchanger face and bypass damper • Pressure • Humidity • Velocity 	<ul style="list-style-type: none"> • 1ph or 3ph • inverters • EC drives • Transformer • Thyristor 	<ul style="list-style-type: none"> • Electric thyristor • Water heating • Gas heating • Steam heating • Water cooling • DX cooling • DX heat pump coil 	<ul style="list-style-type: none"> • Plate heat exchanger • Heat wheel • Run around coil mixing box



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FLAT PACK SERVICE

For projects with restrictions on site and plant space access, Air Vent Technology can provide Air Handling Units in a flat-pack form and our highly skilled Service team attends site to re-assemble the equipment in its final location.

This can offer substantial benefits and avoid site disruption, saving costs in:

- Site works and build programme time.
- Crane hire.
- Road closure planning and cost
- Outside or normal business hours working costs.

We work closely with you to:

- Identify size and access limitations.
- Co-ordinate to ensure a smooth delivery, site positioning and assembly of the unit.
- Offer installation flexibility to meet site operating times.



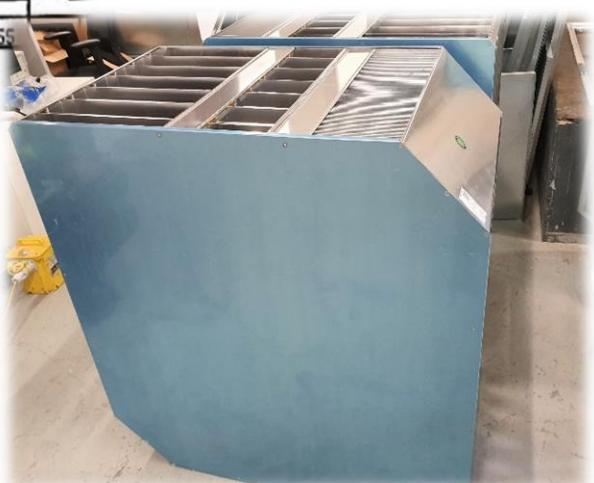
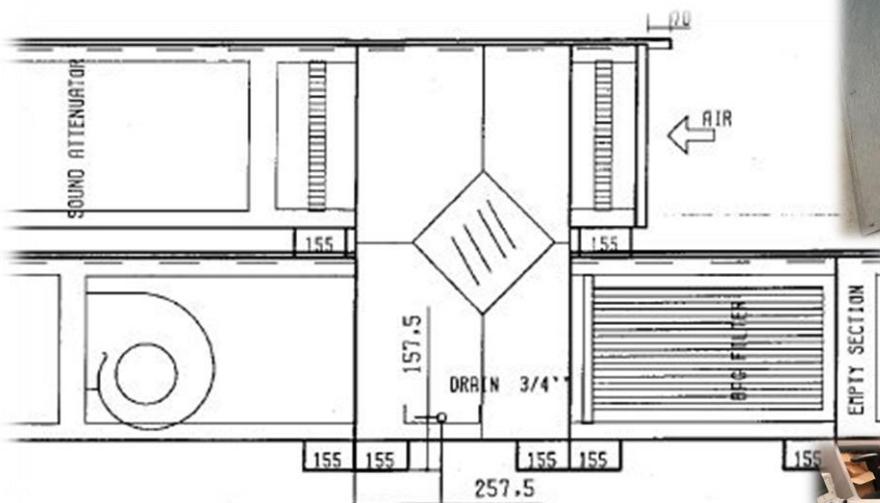
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Air Vent Technology doesn't only supply new AHU's, we can also help you refurbish existing equipment on site.

We have extensive experience in the industry in this field, with our own dedicated Site Engineering Services team to carry out the works on site, fully supported by our experienced Sales Managers and Technical Sales department.

We can help with:

- Upgrading from belt driven fan arrangements - to new EC plug fans or fan arrays
- Replacement of old / damaged coils
- Upgrade of heat recovery devices for more efficient modern equivalents – Wheels, PHXE, Run around coil systems
- Filter upgrades or additions to higher grade
- Rework of existing AHU when required to be re-purposed
- Strip out and disposal of old equipment
- General servicing and maintenance
- Site surveys to ensure your project meets its goals
- Integration of new control systems to suit



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Air Vent Technology has extensive knowledge and experience of modular and custom-built AHU's, and caters for many business sectors and building applications.

Our versatility to design and manufacturing AHUs enable a totally flexible approach to creating a solution for even the most challenging of applications.

Commercial and Offices



Education, Schools, Colleges and Universities



Healthcare, Hospitals and Care Homes



Hotels and Hospitality



Leisure and Sports Facilities



Retail and Shopping



Catering and Kitchen - Supply and Extract



Industrial, Offshore and Oil Platforms



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Market Sectors and Case Studies

Royal Hospital, Bath

We were asked to design an AHU solution to fit in a very crowded plant area. The unit had to comply to HTM03-01 due to the nature of the area being served. This unit was also built on site, in-situ, by our team of engineers



Compact AHU

Sometimes we get asked for the unusual too. In this case, the customer had very limited space but needed an AHU which contained set components. The solution was a tall vertical unit, with the airflow in a "U" shape, travelling through all components with duct connections on the top. Special request was also a particular shade of blue to match other equipment in the building. No problem.

Biersdorf

Design, manufacture and flatpack installation of a customised Air Handling Unit. Working closely with our customer, Air Vent Technology (AVT) were asked to review the existing air handling unit serving the building. Beiersdorf in Birmingham are proud of their WELL building status and had concerns on the effectiveness of the existing unit to continue providing adequate indoor air quality for their employees and occupants, especially when re-occupying the building post coronavirus.



Other AVT Products

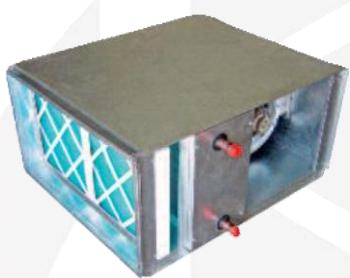
Heat Recovery Units - *infinity*® - HRPSL/HRRSL

- Bespoke or modular. Supply, extract or combined.
- Plantroom or weatherproof; stacked, side by side and vertical models up to 20m³/sec air volume.
- Adhere to specialist sector specifications.
- Versatile fitted control options.
- Sectionalised units and flat pack available



Compact Supply Air Unit - *infinity*® - IME/IMW/EME/EM W and *infinity*® SPE/SRE/SPW/SRW

- Pre designed units to 1.2m³/sec air volume
- Plantroom and weatherproof models
- Electric or water heating options
- Matched control panel options



Cabinet Single and Twin Extract Fans - *infinity*® - QSS/EM/QST/EMT

- Pre designed units to 2.5m³/sec air volume
- Plantroom and weatherproof models
- Matched control panels. Twin fans with autochangeover facility



High Temperature Fans - Kitchen Extract Fans

- Plantroom and weatherproof models
- Up to 8m³/sec air volume
- Fire rated options available
- Matched control panels options including gas interlock



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