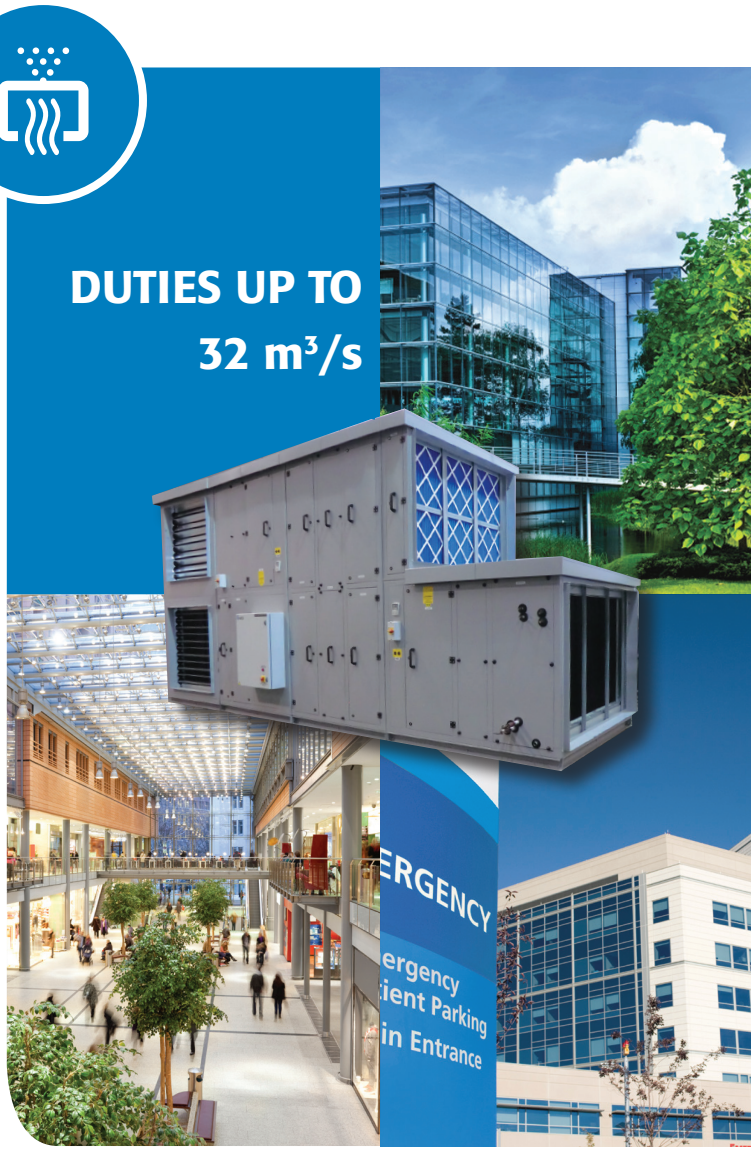
max® bespoke

- Premium Bespoke Air Handling Units
- ErP 1253/2014 2018 compliant
- Heat recovery efficiency up to 90%
- Plantroom and weatherpoof options
- Fully optimised low energy EC fans
- Low SFP to exceed L2 building regulations
- High quality case construction to BS EN 1886
- Low noise to help meet acoustic requirements
- Variety of control options to suit all applications
- BIM files available



max® *air handling units*
part of a complete range of innovative, flexible products from the HVAC experts

VES

max® bespoke

max® bespoke

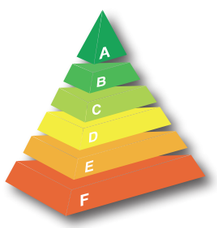
For over 20 years, our brand has been a trusted leader in the HVAC industry, consistently innovating with the **max** range of versatile, custom air handling units. Designed with flexibility in mind, these units come in 50 standard sizes and offer 25mm or 50mm construction options, along with a variety of supply, extract, and heat recovery configurations to suit diverse applications and needs.
Expertly manufactured in controlled environments at VES facilities, **max** units are built using cutting-edge components from top industry suppliers, ensuring unmatched quality and performance.

Energy efficiency rating

With the selection of the most efficient components available, **max** units can be rated to the European Energy Efficiency classification.

Using the specialist **max** design software which is configured with the appropriate formulae to account for air velocity, pressure losses, fan electrical power, and recovery efficiency, Max units can be issued with a rating based on the European standard BS EN 13053.

It must be noted that the most practical component selection, in varied climatical conditions may not result in the perceived best energy efficient rating. VES quotes can be supplied with an energy rating for the selected unit.



max® bespoke
Features and benefits

Energy saving
Meet regulations, minimise noise and maximise performance.

Energy saving packages combine intelligent controls technology, products and services.

Energy efficient
Energy efficient units with low SFPs to help achieve Building Regulations and other technical guides. Units are fully tested to BS EN ISO 5801:2017 (airside performance) and DIN 45635-38 (acoustic performance).

Integrated controls
BlueSense energy saving packages combine intelligent technologies with energy saving products, services and engineering expertise.

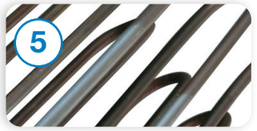
High performance fans
Max units incorporate the latest fan technology solutions.
- Plug fans
- Belt drive fans
- Direct drive fans
- EC fans

Complete ventilation package
VES offer the expertise, products and services to provide a complete ventilation package including heat recovery unit, integrated controls and site assistance, providing peace of mind through reliable products and expert knowledge.

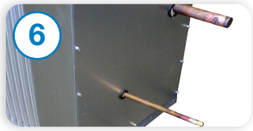
Various components
Heat recovery solutions can provide great energy savings for customers. As well as high efficiency filtration, all forms of heating and cooling are supplied as standard with a Max unit.

Filtration
A wide range of high efficiency filtration allows precise environmental control.
- Panel filter
- Bag filter
- Rigid filter
- Specialist application filters i.e. carbon, grease, HEPA.

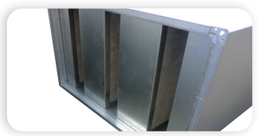
Heat recovery
Energy savings can be achieved with a heat recovery solution.
- Crossflow plate heat exchanger
- Counterflow plate heat exchanger
- Heatwheel, constant and variable speed
- Runaround system including pumpset



Heating
All typical forms of heating can be supplied as standard with a Max unit.
- Electric heater batteries, with modulating thyristor control
- Hot water coils
- Steam
- Gas
- Reverse cycle heatpump



Cooling
Close control of supply air condition is achievable with cooling options.
- Chilled water
- Direct expansion
- Reverse cycle heatpump



Attenuation
- Various silencer options designed and manufactured to suit noise levels required by application
- Duct mounted, bolt on or bolt in
- Removable splitter option to enable cleaning
- Various infill and material types to suite site requirements

Inlet/outlet sections
Designed to order, connections to suit demanding site requirements.
- Various size spigots
- Various flange options
- Louvers and cowls
- Insect mesh and bird guards
- Dampers, inlet/outlet

Robust construction
Excellent build quality ensures minimal noise breakout, low SFPs and airtight performance.

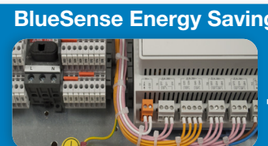
Construction
Double skinned cases available in plantroom or weatherproof. All units constructed to BS EN 1886, with 50mm aluminium tubular frame and galvanised sheet steel panels, with high density resin bonded mineral wool slab infill.

Powdercoat options
External units supplied with sloping roof, channel base, inlet and exhaust cowls. Max units are polyester powder coated to signal grey RAL7004, at the VES factory. Alternative colours and powder coated internal units are also available.

Energy Saving

Intelligent controls enhance performance whilst saving energy and money.

BlueSense Energy Saving Package



max unit with integral controls

+

Advnaced multi application inverter

+

Sensor options

=

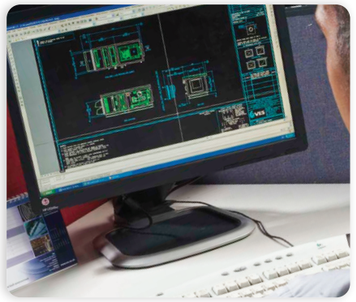
BlueSense

The sign of energy saving products, services and expertise

max AHU attributes

Design

VES draws from a wide range of sources to achieve the most practical and best designs for bespoke HVAC applications. Over 50 years experience, blended with professional staff, qualified in modern methods, successfully combines established “know how” with access to current technology, materials and processes. Using the very latest selection and quoting software, which interfaces directly with design packages and automated manufacturing, will provide a quick turnaround from enquiry through to approved design, to delivered equipment.



Technology

In a constant changing industry, VES is quick to incorporate the latest technology in components and manufacturing methods, ensuring that the quality, efficiency and value of all VES products are maintained. Reporting methods from industry leading manufactures such as Siemens Building Technology closed-loop control systems, ensures peak efficiency and reduced running costs. Speed control and demand sensor packages allow duty to match occupancy and zone conditioning. Using a range of open communication protocols with BMS interfaces enables VES products to fit into new and existing HVAC systems.

Testing

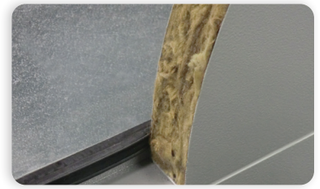
VES has both internal state of the art facilities for testing and calibrating its products, and access to external prestigious specialist services such as the BSRIA and Ziehl-Abegg InVent technology centre. Air movement, acoustic and electrical safety and performance are assessed to the latest industry standards to ensure compliance with appropriate standards. Data published by VES is therefore accurate and authenticated.

Bespoke applications

A comprehensive list of sensitive and challenging applications such as hospitals, old or listed buildings, controlled manufacturing environments and leisure centres with swimming pools can be accommodated. VES can supply solutions for HTM specification, low acoustic or thermal breakout, high corrosion protection, high external pressure and extreme ambient temperature. Together with specialist controls, also designed and manufactured at VES, very little is beyond the range of a Max unit.

Construction

- VES **max** units are available in 50 standard case sizes. 25mm construction on sizes 1 to 39 to BS EN 1886. 50mm construction on sizes 1 to 50 to BS EN 1886. Bespoke sizes are also available.
- Extruded aluminium framework with aluminium or composite corners.
- Flush fitting galvanised steel double skinned panels.
- Optional illuminated chambers with viewing ports.
- Mineral wool infill offered as standard, with the option of other specialist infill for thermal and acoustic sensitive applications.
- Plantroom and weatherproof types.
- Multiple airflow and unit configurations.
- Units can be supplied in sections with joining brackets fitted to ease on-site assembly.
- External units are powdercoated finished to signal grey, RAL7004 (other colours available), at the VES factory.
- Internal and other alternative powdercoating options available.
- Sizes 1 to 8 mounting brackets fitted as standard.
- Sizes 9 to 50 channel base fitted as standard.
- Flat, mono pitched or dual roofs available.



Manufacturing standards

Case construction

VES **max** unit manufacturing processes are carried out in accordance with Ventilation for Buildings BS EN 1886 Mechanical performance and BS EN 13053 rating and performance together with other appropriate industry standards and when required, specialist standards for dedicated applications.

The Max tubular frame and double skinned panel construction has been formally tested to BS EN 1886 standard for mechanical performance which includes strength, leakage, filter bypass and thermal properties. The table below shows the achieved grades for a section of the test.

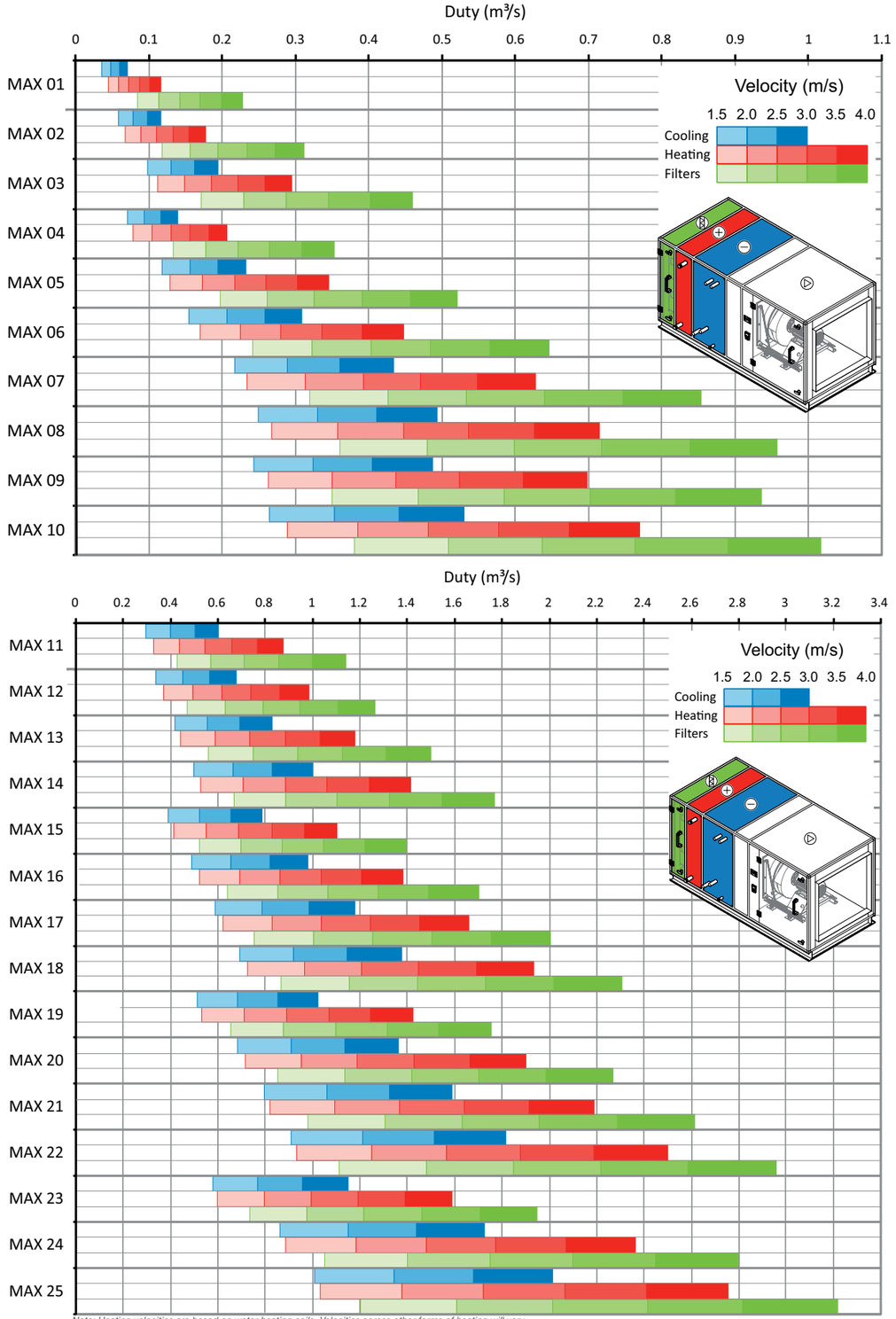
	25mm construction	50mm construction
Panel and frame deflection	D1	D1
Case air leakage	L2	L2
Filters bypass leakage	F9	F9
Thermal bridging*	TB5	TB5
Thermal transmittance	T5	T5

*Note: Units can be manufactured to achieve TB3 on request.

max coding structure

Product: MAX / Size: 01 to 50 / Construction: A 25mm, B 50mm, C 25mm customised, D 50mm customised / Configuration: P Plantroom, W Weatherproof, SW Stacked weatherproof, FW Flat weatherproof, SP Stacked plantroom, FP Flat plantroom / S

Product selection



Note: Heating velocities are based on water heating coils. Velocities across other forms of heating will vary.

The charts opposite, listing each **max** unit size against air volume, illustrates the relationship between air velocity, and the potential use of heating (water) cooling and filters.

A unit size can be selected depending on the intended components, where a combination of components is required then the lowest figure, i.e. cooling before heating, heating before filter, should be used.

Please note, these are for guidance only, final unit size will depend on the parameters and selection of components.

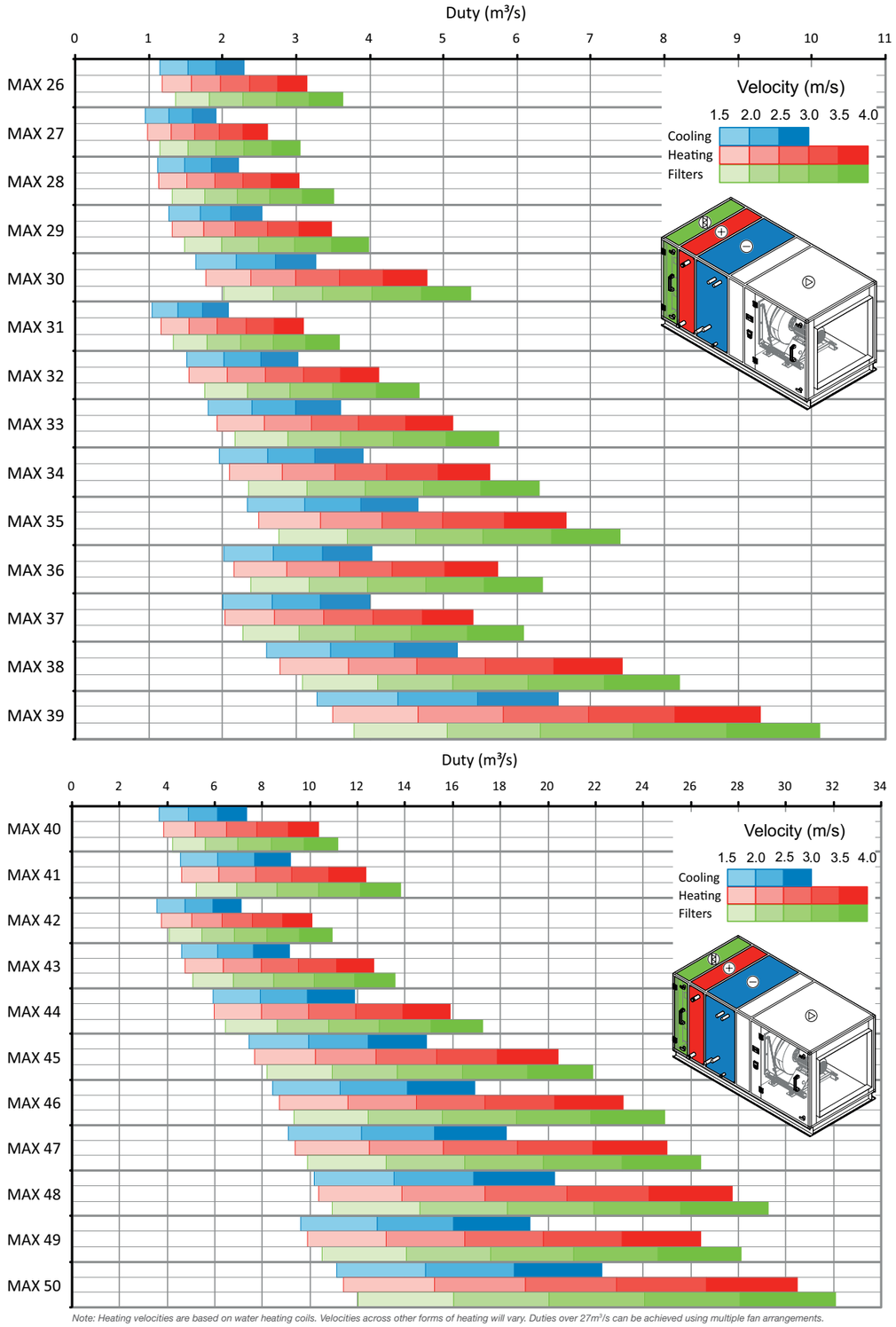
Product **MAX** Size **01** to **25**

Sizes	25mm		50mm		Airflow (m³/s) based on velocity of					
Max-model	Width	Height	Width	Height	1.5m/s through heating coil	2.0m/s through heating coil	2.5m/s through heating coil	3.0m/s through heating coil	3.0m/s through cooling coil	1.5m/s through filter
01	400	350	450	400	0.04	0.06	0.07	0.09	0.07	0.17
02	500	350	550	400	0.07	0.09	0.11	0.13	0.12	0.23
03	500	450	550	500	0.11	0.15	0.18	0.22	0.19	0.34
04	550	350	600	400	0.08	0.10	0.13	0.16	0.14	0.26
05	550	450	600	500	0.13	0.17	0.22	0.26	0.23	0.39
06	650	450	700	500	0.17	0.22	0.28	0.34	0.31	0.48
07	650	550	700	600	0.23	0.31	0.39	0.47	0.42	0.64
08	650	600	700	650	0.27	0.36	0.45	0.54	0.49	0.72
09	700	550	750	600	0.26	0.35	0.44	0.52	0.48	0.70
10	750	550	800	600	0.29	0.38	0.48	0.58	0.52	0.76
11	750	600	800	650	0.33	0.44	0.55	0.66	0.60	0.86
12	750	650	800	700	0.37	0.49	0.62	0.74	0.66	0.95
13	800	700	850	750	0.44	0.59	0.74	0.88	0.83	1.13
14	800	800	850	850	0.53	0.71	0.88	1.06	0.91	1.33
15	900	600	950	650	0.41	0.55	0.69	0.83	0.69	1.05
16	900	700	950	750	0.52	0.69	0.86	1.04	0.88	1.28
17	900	800	950	850	0.62	0.83	1.04	1.24	1.08	1.50
18	900	900	950	950	0.73	0.97	1.21	1.45	1.28	1.73
19	1000	650	1050	700	0.53	0.71	0.89	1.07	0.91	1.32
20	1000	800	1050	850	0.71	0.95	1.19	1.43	1.25	1.70
21	1000	900	1050	950	0.82	1.09	1.37	1.64	1.48	1.96
22	1000	1000	1050	1050	0.94	1.25	1.57	1.88	1.70	2.22
23	1200	600	1250	850	0.60	0.80	0.99	1.19	1.01	1.46
24	1200	800	1250	850	0.89	1.18	1.48	1.78	1.58	2.10
25	1200	900	1250	950	1.03	1.38	1.72	2.07	1.87	2.42

max sizes 1-8 are fitted with drop rod mounting brackets as standard, **max** sizes 9-50 are fitted with 100mm channel base as standard. Alternative sizes and mounting options available on request.

Weather lids are 75-150mm high dependent on unit size and configuration, alternative sizes available on request.

Product selection



Note: Heating velocities are based on water heating coils. Velocities across other forms of heating will vary. Duties over 27m³/s can be achieved using multiple fan arrangements.

The charts opposite, listing each **max** unit size against air volume, illustrates the relationship between air velocity, and the potential use of heating (water) cooling and filters.

A unit size can be selected depending on the intended components, where a combination of components is required then the lowest figure, i.e. cooling before heating, heating before filter, should be used.

Please note, these are for guidance only, final unit size will depend on the parameters and selection of components.

Product: **MAX** Size: **26** to **50**

Sizes	25mm		50mm	
Max-model	Width	Height	Width	Height
26	1200	1000	1250	1050
27	1300	800	1350	850
28	1300	900	1350	950
29	1300	1000	1350	1050
30	1300	1300	1350	1350
31	1500	800	1550	850
32	1500	1000	1550	1050
33	1500	1200	1550	1250
34	1500	1300	1550	1350
35	1500	1500	1550	1550
36	1650	1200	1700	1250
37	1900	1000	1950	1350
38	1900	1300	1950	1350
39	2000	1500	2050	1550

Airflow (m³/s) based on velocity of					
1.5m/s through heating coil	2.0m/s through heating coil	2.5m/s through heating coil	3.0m/s through heating coil	3.0m/s through cooling coil	1.5m/s through filter
1.18	1.58	1.97	2.37	2.16	2.73
0.98	1.31	1.63	1.96	1.75	2.30
1.14	1.52	1.90	2.28	2.07	2.64
1.30	1.74	2.17	2.61	2.39	2.99
1.79	2.39	2.99	3.59	3.28	4.04
1.16	1.55	1.94	2.32	2.09	2.69
1.55	2.07	2.58	3.10	2.85	3.51
1.92	2.56	3.20	3.84	3.56	4.32
2.11	2.82	3.52	4.23	3.92	4.73
2.50	3.33	4.16	5.00	4.67	5.55
2.15	2.87	3.58	4.30	3.99	4.77
2.03	2.70	3.38	4.05	3.76	4.57
2.79	3.71	4.64	5.57	5.20	6.61
3.49	4.65	5.82	6.98	6.57	7.59

Sizes	50mm	
Max-model	Width	Height
1140	2050	1700
41	2050	2050
42	2550	1350
43	2550	1650
44	2550	2050
45	2550	2550
46	2850	2550
47	3050	2550
48	3350	2550
49	3650	2550
50	3650	2550

Airflow (m³/s) based on velocity of					
1.5m/s through heating coil	2.0m/s through heating coil	2.5m/s through heating coil	3.0m/s through heating coil	3.0m/s through cooling coil	1.5m/s through filter
3.89	5.19	6.48	7.78	7.36	8.37
4.63	6.17	7.71	9.25	9.20	10.38
3.79	5.06	6.32	7.58	7.12	8.21
4.77	6.36	7.95	9.53	9.11	10.20
5.96	7.95	9.93	11.92	11.87	12.95
7.66	10.22	12.77	15.33	14.92	16.43
8.69	11.59	14.49	17.89	16.93	18.69
9.38	12.50	15.63	18.76	18.27	19.82
10.41	13.88	17.35	20.81	20.28	21.95
9.91	12.21	16.52	19.82	19.25	21.11
11.44	15.25	19.06	22.87	22.29	24.07

max sizes 1-8 are fitted with drop rod mounting brackets as standard, **max** sizes 9-50 are fitted with 100mm channel base as standard. Alternative sizes and mounting options available on request.

Weather lids are 75-150mm high dependent on unit size and configuration, alternative sizes available on request.

Silencers

- Silencers designed and manufactured by VES to suit noise levels required by application
- Duct mounted, bolt on or built in
- Removable splitter option to enable cleaning
- Various infill and material types to suit site requirements
- Mitre bend options available
- Cross talk attenuators
- Cylindrical pod silencers and cleanable silencers also available
- Internal and external powder coat finish available. (Galvanised finish supplied as standard)
- On site acoustic surveys available on request

Silencer specification

- VES silencers are manufactured with galvanised sheet steel case with correct airway/splitter ratio to produce the required NR level within the conditioned space
- Splitters have a resin-bonded mineral wool slab infill of density 65kg/m^3 =, and faced with glass tissue, with is non-hygroscopic, rot proof and non-combustible
- Polythene lining with perforated galvanised sheet steel facing can be supplied to splitter facings
- VES silencers can be supplied suitable for fitting direct to **max** air handlers, or supplied for duct mounting

Silencer selection guide

For normal systems where the room noise level required is not lower than NR35, the following rapid selection method can be used.

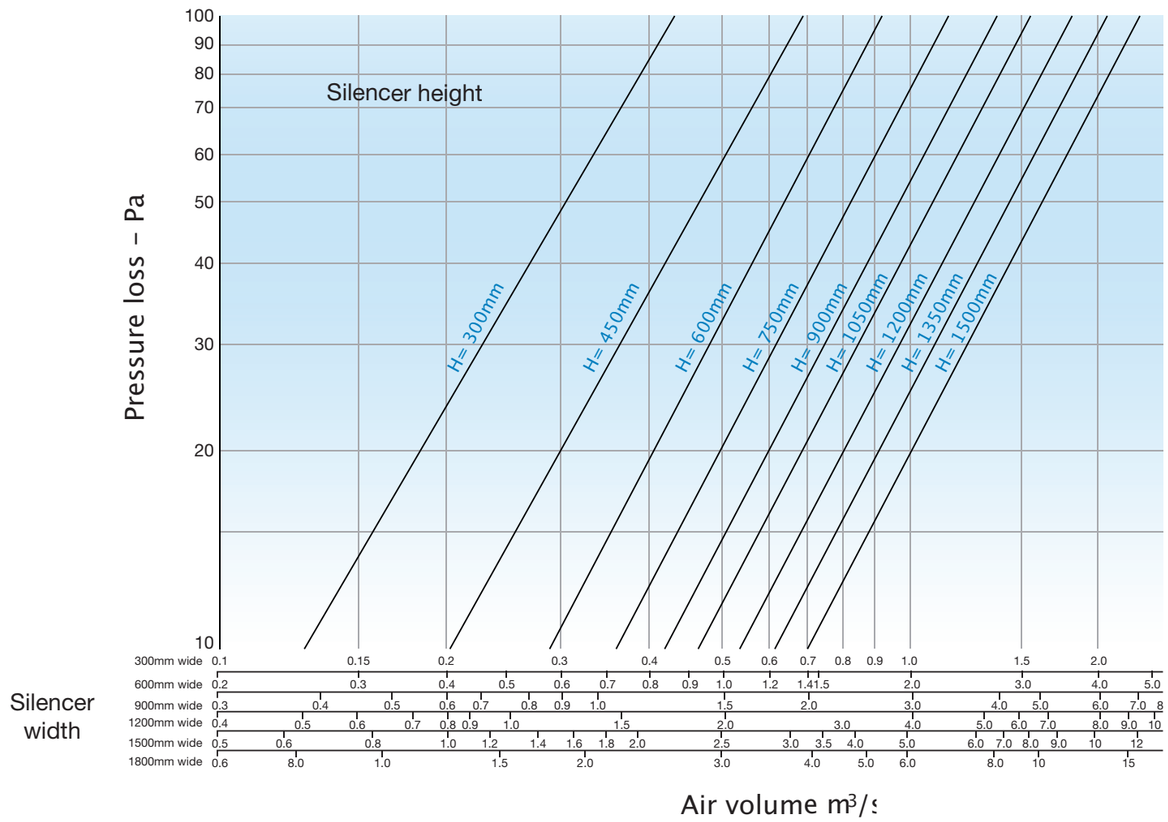
Difference factor	Silencer length
30-45	900 mm
46-50	1200 mm
51-55	1500 mm
56-60	1800 mm
61-65	2100 mm
66+	2400 mm

Select the silencer from the chart. It may be necessary to increase length of silencer to allow for set back splitters. Where the silencers are to fit directly onto supply fan units, the above lengths are to be increased to allow for the plenum section of this silencer.

To calculate the length of silencer required subtract the required NR level from the dBW this resultant figure will falll into one of the difference factor bands above.

The following worked example is for a size 30 **max** with the direct drive plug fan with a requirement for NR35. 83 - 35 (required NR level) = 48. Difference factor of 48 falls into the 46-50 band = 1200mm long silencer. For special quiet rooms i.e., recording studios, bedrooms etc. A full design calculation procedure must be used.

Silencer selection guide



Silencer pressure drop example

For a 900mm wide silencer x 600mm high with an airflow 1.75.m^3

- Air volume of 1.75m^3/s
- Duct width 90cm
- Duct height 60cm
- Air pressure drop = 42 Pa

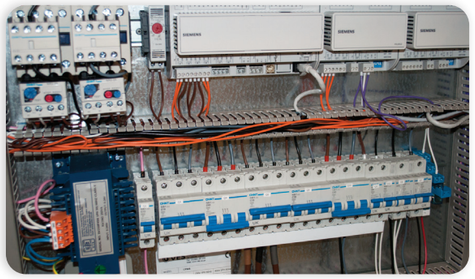
Where possible do not select a silencer above 50 Pa resistance to avoid noise regeneration within silencer.

Silencer coding

Airway size		Duct width (cm)		Duct height (cm)		Duct length (cm)	Splitter arrangements		Construction
VA4	4 inch	90	-	60	-	150	P	/	STD
VA5	5 inch						F		PP
							S		

max controls

VES designs and manufactures all controls systems entirely in-house, this advantage ensures that the most efficient, lowest cost and highest quality packages are available.



Offering a unique combination of controls features and flexibility, tailored to an infinite variety of HVAC applications, VES software engineers are some of the best in the industry utilising the latest methods for energy management, sensor response, together with a range of building automation interfaces, all are standard features from VES controls.

Panels can be fitted and pre-wired directly to the AHU, or supplied with a local isolator for easy site connection.

A variety of intelligent speed control options are available, responding to internal or external sensors, offering energy efficiency demand ventilation and equipment longevity.

Energy

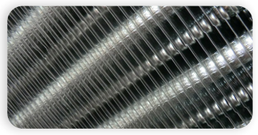
BlueSense intelligent control
Energy saving packages combine intelligent technologies with energy saving products, services and engineering expertise.

Energy control
Optional integrated energy meter for actual energy consumption and saving calculations, this information is displayed real time on the user interface. The user can simply adjust between economy and comfort levels, with real energy saving feedback.

Control

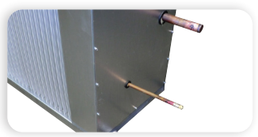
Temperature
Accurate temperature control can be achieved through either supply or room/extract sensors and can incorporate supply air limitation to reduce the deviation in supply air temperature entering the space. The controlling sensor can be configured on site via the user interface.

User interfaces
A variety of remote and panel mounted user interface are available to suit individual application requirements, from simple on/off and temperature display to full parameter adjustment and commissioning.



Heating options
Modulating thyristor, LPHW, gas and steam options to accurately and efficiently control temperature. When incorporated with a VES control panel we will calculate the precise amount of heating demand required to effectively maintain setpoint.

Demand ventilation
Significant energy savings can be made by effective demand ventilation control. Reducing fan speed, heating and cooling demands to suit current occupancy and ambient conditions.

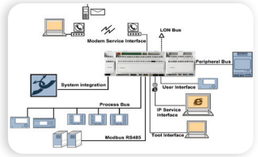


Cooling control
Effective cooling control is achievable with direct expansion, reverse cycle heatpump and chilled water cooling options. Cooling control options are easily integrated into VES control panels.

Special features
Along with a wide range of standard option VES also offer special control features to suit application requirements, including close control, humidification, de-humidification, enthalpy and energy monitoring.

Post installation
The post-installation commissioning by a VES controls specialist provides an essential service to ensure efficient operation of the equipment. This results in significant value to all parties by delivering a system that performs as specified, intended and paid for.

Pre-wired
On request, control panels can be pre-wired to the unit and factory commissioned. Quick change plug connectors between unit sections and electrical components can also be ordered. This service reduces onsite installation, giving the installer peace of mind from a complete ventilation package.

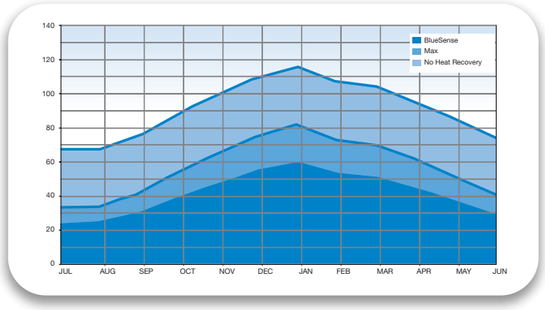


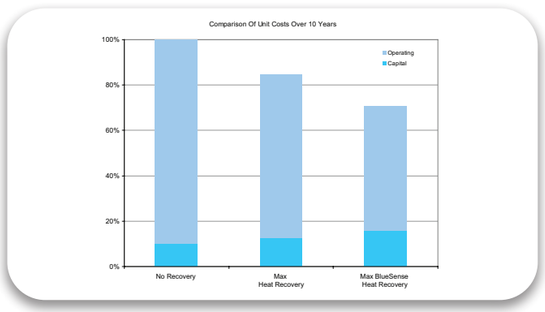
Building integration
VES provides a number of communicating protocols including BACnet®, Modbus®, and TREND®, allowing fast and simple integration of the HVAC controls onsite, no matter what the building automation and control system is. Information supplied by the VES packages can form an integral part of the intelligent building and automation system and can help reduce energy consumption of buildings.

BlueSense energy savings

Energy comparisons for our products illustrate how they reduce energy demands whilst improving the environment and saving money.

The example below is for our Max ventilation units, it shows a typical office building, with an occupancy variation that results in an average 40% reduction in airflow requirement for 40% of the working day. The ventilation system operates from 8am till 6pm, Monday to Friday, with a ventilation rate of 1.2m³/s at 150 Pa.





The heating requirement has been based upon the UK heating profile for an air temperature setpoint of 18.5°C; the same heater size has been used for all comparisons.

Combining VES products with BlueSense technology will reduce the impact to the environment, minimise overall life cycle costs and payback period.

VES is experienced at discussing energy requirements with clients, our knowledge and technology can help to identify areas where savings can be made. VES can provide assistance for both new and existing buildings.

Energy Saving

Intelligent controls enhance performance whilst saving energy and money.

BlueSense Energy Saving Package

max unit with integral controls

+

+

Sensor options

=

BlueSense

The sign of energy saving products, services and expertise

Product specification

max® Bespoke 25mm

1.1. General

A. Provide an extract fan unit to meet the performance and configuration as indicated in the schedule and detail drawings. The air handling unit shall be tested to BS848 Part 1 and shall be of the Max A and Max C type as manufactured by VES Andover Ltd a company accredited with BS EN ISO 9001:2008.

B. The unit shall conform to the schedule regarding case construction, component layout and finish. The detail drawings shall be supplied for approval where indicated in the schedule.

1.2. Unit Construction

A. The unit shall be provided pre-assembled comprising of a rigidly constructed 25mm tubular aluminium case and double skinned galvanised sheet steel panels.

B. The unit shall be constructed to BS EN1886 standard and fully BSRIA tested for compliance to deflection rating class D1, leakage class L2 and thermal transmittance classes of T5 and TB5. Testing certificates shall be available on request.

C. The unit shall be supplied in multiple sections for transporting and site installation as indicated in the schedule and detail drawings. The unit shall be pre-drilled and gusseted for sectional re-assembly on-site by others as indicated in the detail drawings and O&M documentation.

D. The unit shall be available in a partially disassembled 'flat pack' form for ease of installation with awkward on-site access. Flat pack units shall be reassembled on-site by VES technical personnel as indicated in the schedule.

E. The unit shall be available in platform or weatherproof construction as indicated in the schedule and detail drawings. Weatherproof units shall have an extended pitched lid supplied fitted as standard.

F. The unit shall have component arrangement as indicated in the schedule and detail drawings.

G. The unit shall have plain rectangular duct spigots as standard. Flanges shall be fitted as indicated in the schedule and detail drawings.

H. The unit casework shall incorporate high quality leak resistant EPDM memory retaining clip-on gaskets on service and access panels.

I. The unit casework shall be available with optional double-glazed inspection portholes supplied fitted as indicated in the schedule and detail drawings.

J. The case panels shall be fitted with inert mineral wool infill as standard. The panels shall be available with optional heavyweight plasterboard infill as indicated in the schedule and detail drawings.

K. The case tubes shall be unfilled as standard. The tubes shall be available with optional heavy weight lead bead infill as indicated in the schedule and detail drawings.

L. Units shall have access as indicated in the schedule and detail drawings. Where unit access details are not supplied, the unit shall be handed LHS looking in direction of supply airflow as standard, to be confirmed by drawing approval.

M. Platform unit casework and spigots shall be supplied naturally finished in high quality galvanised steel as standard. Optional powdercoated colour as indicated in the schedule.

N. Weatherproof units shall be supplied powdercoated signal grey RAL7004 as standard. Alternative colour according to schedule.

O. The casework shall be available with internal epoxy powder coating suitable for coastal or corrosive environments as indicated in the schedule and detail drawings.

P. The unit shall be designed to be secured to a suitable base or support frame, ensuring the use of correct fixings for application and taking into account individual section and overall unit weight as indicated in the schedule and detail drawings.

1.3. Unit base frame

A. The unit shall be supplied as standard on a galvanised sheet steel channel base. The unit shall be available with optional drop rod mounting feet as indicated in the schedule and detail drawings.

B. The frame shall be 100mm high as standard, height as indicated in the schedule and detail drawings.

C. The frame shall be available with optional lifting slots, suitable for use with strops or fork lifts. The frame with slots shall be a minimum of 125mm high.

D. The frame shall be finished to match the unit casework.

E. The frame shall be available with optional drop rod mounting holes.

1.4. Inlet/outlet cowls

A. Weatherproof unit casework shall be supplied with fresh air inlet and exhaust discharge cowls/louvers where indicated in the schedule and detail drawings.

B. Cowls shall be single skinned galvanised sheet steel, finished to match the unit casework.

C. Cowls shall be available with optional flame retardant acoustic internal lining to ensure maximum thermal insulation and reduced noise transmission.

max® Bespoke 50mm

1.1. General

A. Provide an extract fan unit to meet the performance and configuration as indicated in the schedule and detail drawings. The air handling unit shall be tested to BS848 Part 1 and shall be of the Max B or Max D type as manufactured by VES Andover Ltd a company accredited with BS EN ISO 9001:2008.

B. The unit shall conform to the schedule regarding case construction, component layout and finish. The detail drawings shall be supplied for approval where indicated in the schedule.

1.2. Unit Construction

A. The unit shall be provided pre-assembled comprising of a rigidly constructed 50mm tubular aluminium case and double skinned galvanised sheet steel panels.

B. The unit shall be constructed to BS EN1886 standard and fully BSRIA tested for compliance to deflection rating class D1, leakage class L2 and thermal transmittance classes of T5 and TB5. Testing certificates shall be available on request.

C. The unit shall be supplied in multiple sections for transporting and site installation as indicated in the schedule and detail drawings. The unit shall be pre-drilled and gusseted for sectional re-assembly on-site by others as indicated in the detail drawings and O&M documentation.

D. The unit shall be available in a partially disassembled 'flat pack' form for ease of installation with awkward on-site access. Flat pack units shall be reassembled on-site by VES technical personnel as indicated in the schedule.

E. The unit shall be available in plantroom or weatherproof construction as indicated in the schedule and detail drawings. Weatherproof units shall have an extended pitched lid supplied fitted as standard.

F. The unit shall have component arrangement as indicated in the schedule and detail drawings.

G. The unit shall have plain rectangular duct spigots as standard. Flanges shall be fitted as indicated in the schedule and detail drawings.

H. The unit casework shall incorporate high quality leak resistant EPDM memory retaining clip-on gaskets on service and access panels.

I. The unit casework shall be available with optional double-glazed inspection portholes supplied fitted as indicated in the schedule and detail drawings.

J. The case panels shall be fitted with inert mineral wool infill as standard. The panels shall be available with optional heavyweight plasterboard infill as indicated in the schedule and detail drawings.

K. The case tubes shall be unfilled as standard. The tubes shall be available with optional heavy weight lead bead infill as indicated in the schedule and detail drawings.

L. Units shall have access as indicated in the schedule and detail drawings. Where unit access details are not supplied, the unit shall be handed LHS looking in direction of supply airflow as standard, to be confirmed by drawing approval.

M. Plantroom unit casework and spigots shall be supplied naturally finished in high quality galvanised steel as standard. Optional powdercoated colour as indicated in the schedule.

N. Weatherproof units shall be supplied powdercoated signal grey RAL7004 as standard. Alternative colour according to schedule.

O. The casework shall be available with internal epoxy powder coating suitable for coastal or corrosive environments as indicated in the schedule and detail drawings.

P. The unit shall be designed to be secured to a suitable base or support frame, ensuring the use of correct fixings for application and taking into account individual section and overall unit weight as indicated in the schedule and detail drawings.

1.3. Unit base frame

A. The unit shall be supplied as standard on a galvanised sheet steel channel base. The unit shall be available with optional drop rod mounting feet as indicated in the schedule and detail drawings.

B. The frame shall be 100mm high as standard, height as indicated in the schedule and detail drawings.

C. The frame shall be available with optional lifting slots, suitable for use with strops or fork lifts. The frame with slots shall be a minimum of 125mm high.

D. The frame shall be finished to match the unit casework.

E. The frame shall be available with optional drop rod mounting holes on units up to Max 5.

1.4. Inlet/outlet cowls

A. Weatherproof unit casework shall be supplied with fresh air inlet and exhaust discharge cowls/louvers where indicated in the schedule and detail drawings.

B. Cowls shall be single skinned galvanised sheet steel, finished to match the unit casework.

C. Cowls shall be available with optional flame retardant acoustic internal lining to ensure maximum thermal insulation and reduced noise transmission.

Download specification from www.ves.co.uk

Product Code Guide

Max model

Product	Unit size	Construction	Type	Special
MAX	01	/A	/P	/S
	UP TO	/B	/W	
	50	/C	/FP	
		/D	/FW	
			/SP	
			/SW	

Product	Unit size	Case	Unit config
MAX	01 to 50	A=25mm B=50mm C=25mm customised D=50mm customised	/P=Plantroom /W=Weatherproof /FP=Flat plantroom /FW=Flat weatherproof /SP=Stacked plantroom /SW=Stacked weatherproof

Example codes
Plantroom MAX 12/B/P/S
Weatherproof MAX 24/A/SP/S

Products and Services from VES HVAC Solutions

Air Handling Units

- **max bespoke ventilation**
  Customer driven solution, designed to fit any application with duties up to 32.0 m³/s
- **ecovent counterflow**
  Premium efficiency heat recovery with duties up to 0.70 m³/s
- **ecovent mini**
  Compact heat recovery with duties up to 0.18 m³/s

Supply and Extract Fans

- **Colourfan Supply Acoustic**
  Premium efficiency, low noise supply units
- **Colourfan Extract Acoustic**
  Premium efficiency, low noise extract units
- **Colourfan Twin Extract Acoustic**
  Premium efficiency, low noise twin extract units

Classroom Ventilation Units

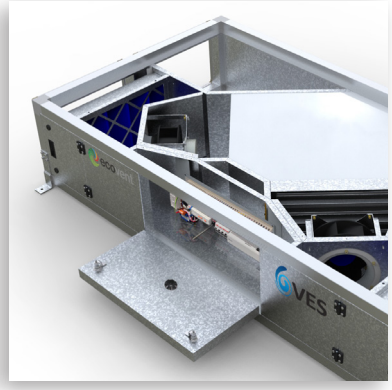
- **ecovent hybrid**
  Natural classroom ventilation enhanced by low powered fans
- **ecovent education solutions**
  Net zero classroom solution, optimised for cross ventilation strategies

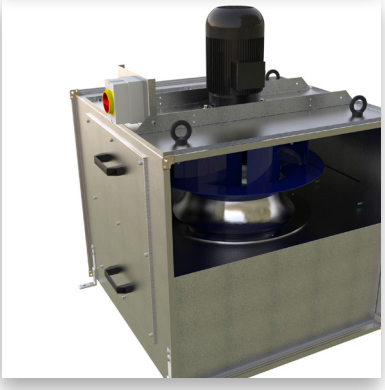
Kitchen Extract & Roof Extract

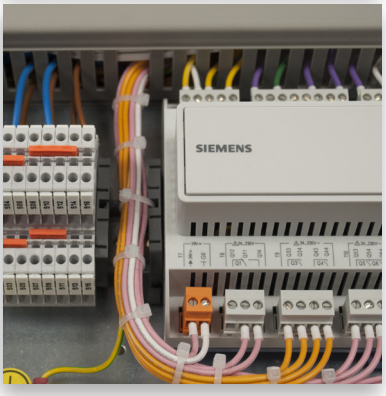
- **T-Line**
  High temperature extract units with duties up to 11.0 m³/s and operating temperatures up to 120°C
- **Dome**
  Premium efficiency, lightweight, roof extract unit

Controls & Services

- **Controls**
  Design, manufacturing, assembling and testing in house
  Bespoke solutions for any project or application
- **Specialist Site Service Projects**
  Plant refurbishment, energy saving upgrades
  AHU flat pack installation where access is restricted
  Maintenance and spares services



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