

DUOVENT MODULAR XL

A range of customisable Air Handling Units with air volumes up to 14 m³/s.

Modular frameless construction, non-pentapost design for a smooth and clean internal surface giving the DUOVENT MODULAR XL series reduced pressure drop & less air turbulence.



UK CASE STUDIES

School, Salisbury Project

A necessary expansion called for a bi-directional mechanical ventilation unit within an education setting to provide air volumes up to 2.5 m³/s of supply & extract air.

Modular assembly within a plant room of a double decked Rotary Thermal Wheel Exchanger Air Handling Unit complete with refrigerant coil for comfort cooling & packaged controls.

“ S&P were very helpful through the design stage where we had next to no space to locate ventilation plant. Their team worked with us to provide bespoke units to meet the design criteria to a high quality. Their aftersales team who came and commissioned the unit were second to none.

They ran through the large AHU that we installed and went through all the functions working with other trades to ensure all ran as intended. ”



Offices, Brentwood Project

Refurbishment requiring a new bi-directional mechanical ventilation system serving a shared office space, providing air volumes up to 14 m³/s of supply & extract air.

Rotary Thermal Wheel Exchanger site build & unit assembly onto roof plant area of a double deck Air Handling Unit complete with water coils for comfort heating, cooling and packaged controls.

“ Logistically this project had the potential to go very wrong! Crane lifting a modular unit once built, over 5m tall with a thermal wheel to match, supplied in sections for site assembly onto a roof 4 stories up... The team at S&P handled this task with ease. ”



THE SERVICE YOU WANT, FROM THE BRAND YOU CAN TRUST.

When I've purchased from other suppliers, I've experienced disappointment with the support provided after the sale.

We prioritise continuous support post-purchase, ensuring that our commitment extends beyond the sale, addressing any concerns or issues promptly.

We have a challenging space to work with. Can your company effectively handle technical challenges?

Our dedicated technical team is available to provide comprehensive support, ensuring seamless operation and addressing technical queries.

The most recent manufacturer I purchased from refused to attend site to conduct an air leakage test.

We offer rigorous leakage & airflow proving tests. Either on-site as an optional service with bolt & seal, or a factory witness test at one of our facilities, ensuring quality & compliance.

We want to avoid any delays related to controls. Will this be a potential issue with your company?

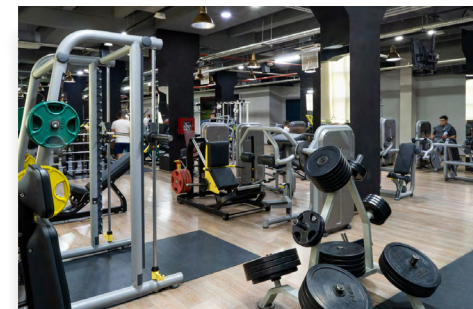
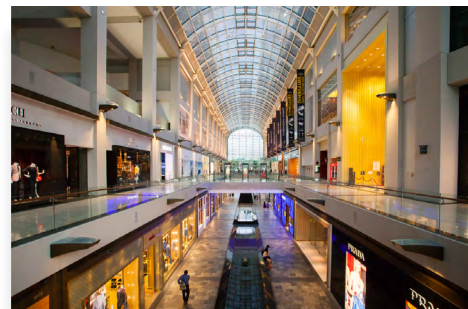
Our units are designed with user-friendly controls, and our team ensures compatibility with various BMS elements, minimising complexity for end-users.

I don't want to source separate controls, is this an issue?

We can supply packaged controls to provide a streamlined and efficient solution. Don't need controls? No worries, the DUOVENT MODULAR XL is available without controls.

APPLICATIONS

Common applications for the DUOVENT MODULAR XL include:



• Offices • Retail • Education • Leisure Facilities • Public Buildings
• Research Laboratories • Food Service • Warehouses • Hotels • Factories

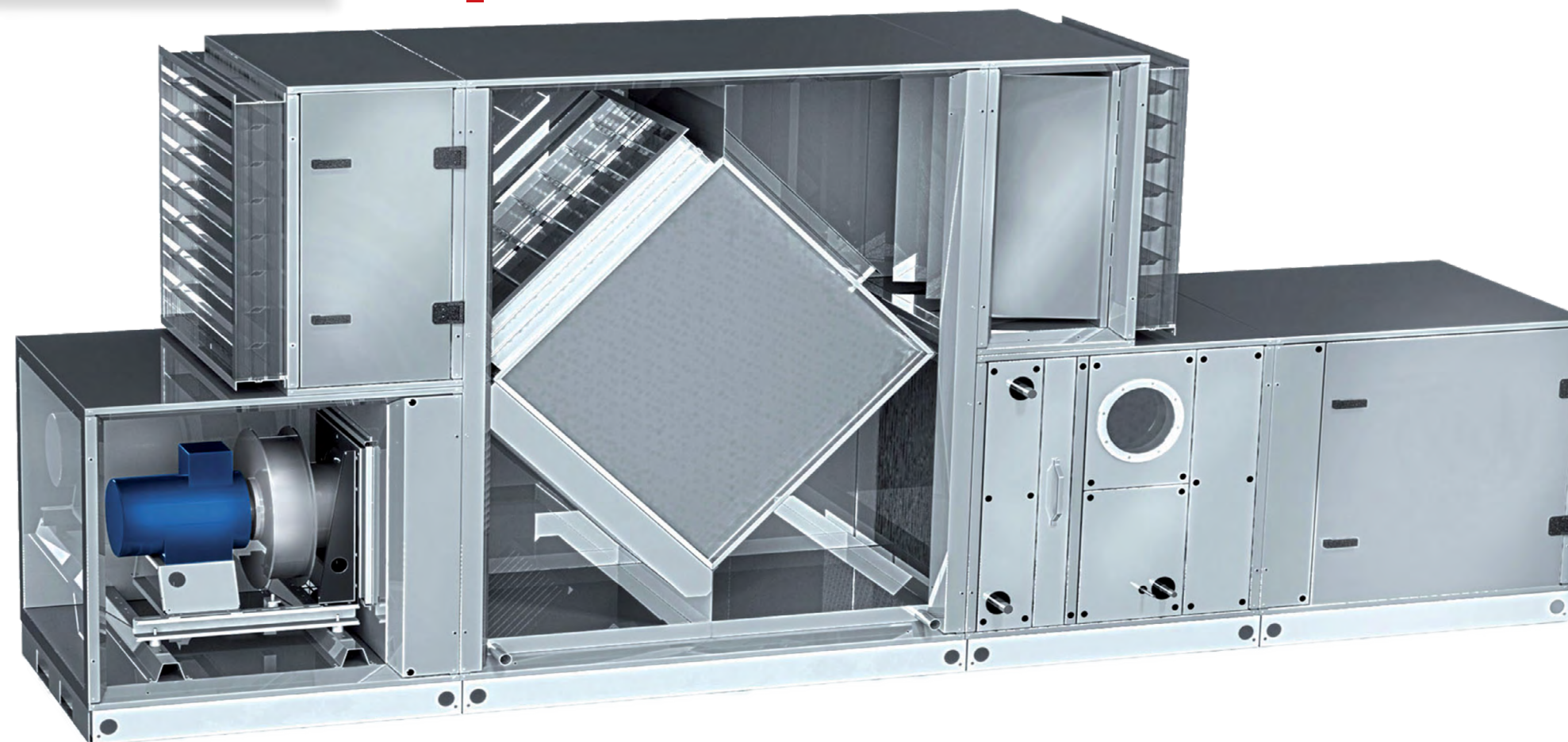
UNIT TYPES

DUOVENT MODULAR XL is available in the following unit types:

- Single Flow Units (Horizontal In-Line)
- Supply & Extract
- Dual Flow Units (Horizontal, Stacked or Vertical Units)
- Heat Recovery Exchangers:
 - Air-to-Air Plate
 - Rotary Thermal Wheel
 - Run-Around Coils

FEATURES

**AN S&P PRODUCT IS INSTALLED
SOMEWHERE IN THE WORLD
EVERY 6 SECONDS**



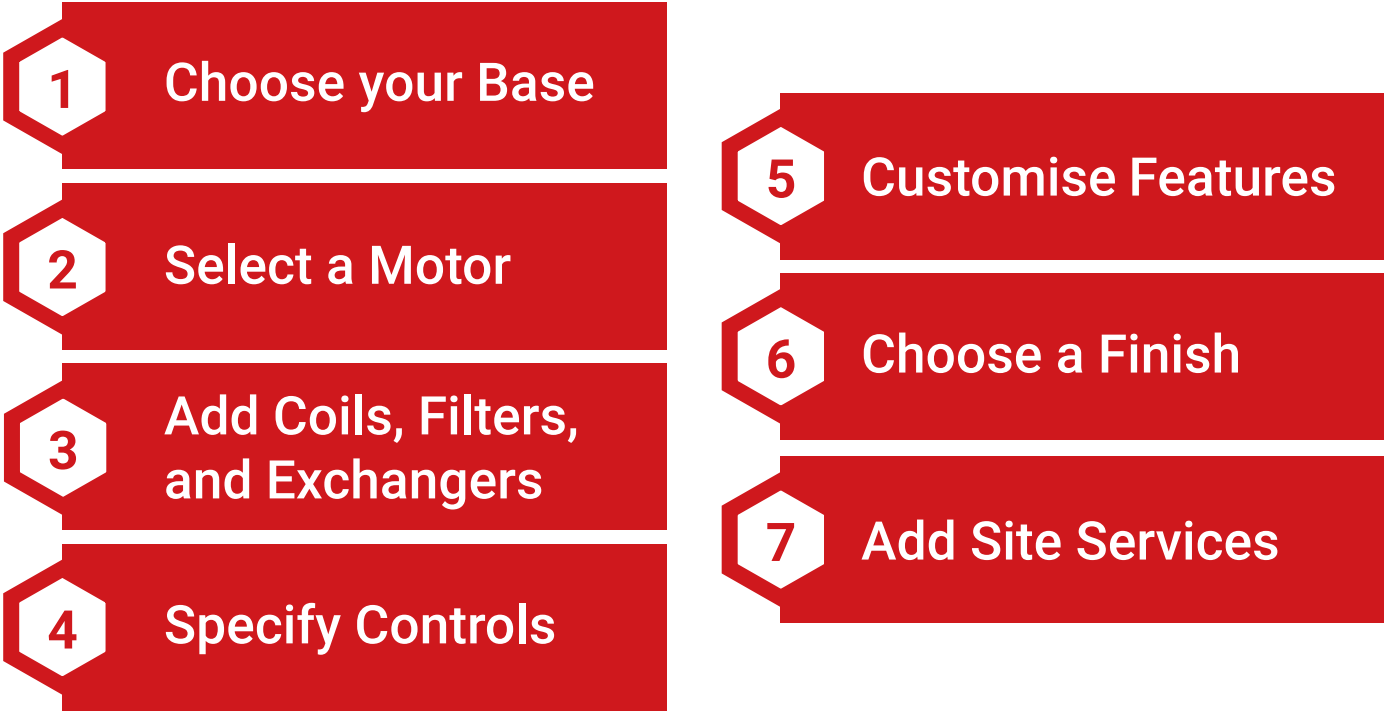
Unit Classification

- Casing Air Leakage L1 (M)
- Casing Strength D1
- Thermal Transmittance T3
- Thermal Bridging TB2

Unit Features

- 50m Acoustic Panels
- Frameless Construction
- Modular Sections
- With or Without Packaged Controls
- Internal or External Versions
- Coastal Protection (C4) On Request
- Other Anti-Corrosion Finishes On Request

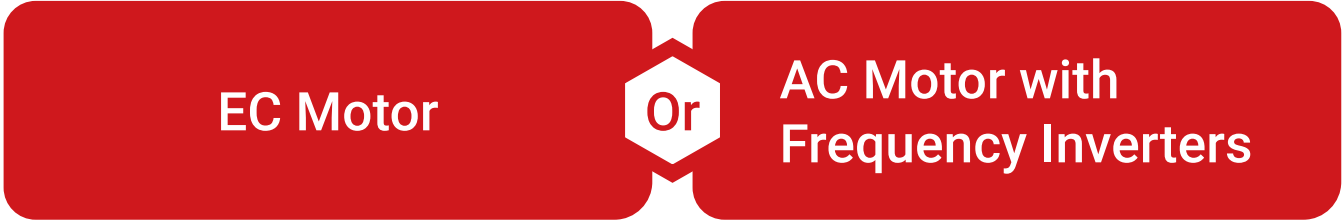
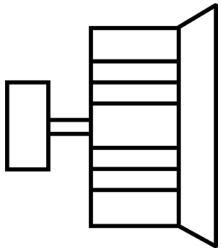
BESPOKE PRODUCT DESIGN



STEP 1: Choose your Base

Frames sizes 2-16 are supplied with a 100mm channel base as standard, alternatively adjustable legs can be selected.
Units sizes 20-63 have 130mm channel bases.
All bases come with lifting eyes as standard.

STEP 2: Select a Motor

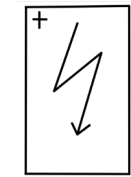


STEP 3: Add Coils, Filters, and Exchangers

Comfort Coils

For all unit types, you have the option to include single or a combination of the following comfort coils:

- Electric Heater
- Hot and/or Chilled Water
- DX (Direct Expansion) Coil with Condenser and Linking Controls



Electrical Heater



Hot and/or Chilled Water



DX Coil

Filters

Choose your filter requirement in accordance to EN ISO 16890 standard:

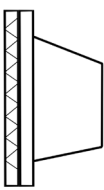
- Pre-filter (Panel)
- Main / Fine filter (Pocket / Bag / Rigid)
- Carbon filter (Cartridges)



Individual pre-filter



Individual bag filter

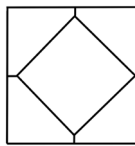


Pre-filter and bag filter together

Exchangers

Benefit from a high-efficiency heat recovery device:

- Air-to-Air Plate (Crossflow or Counterflow)
- Rotary Thermal Wheel (Condensation or Sorption)
- Run-Around Coil



Air-to-Air Plate



Rotary Thermal Wheel



Run-Around Coil

STEP 4: Specify Controls

Available with or without packaged controls:

H-Control Functions	
Main Elements	
General Isolator	•
Pre-wired Control Panel	•
User Interface	LCD with roller
Functionality	
Variable Air Volume (VAV)	•
Constant Air Volume (CAV)	◦
Constant Operation Pressure (COP)	◦
Boost	VAV (VFC)
Remote Enable	• (VFC)
7-Day Time Clock	•
RH Duct Monitoring Speed Modulation	◦ (VFC & 0-10V)
CO2 Duct Monitoring Speed Modulation	◦ (VFC & 0-10V)
VOC Duct Monitoring Speed Modulation	◦ (VFC & 0-10V)
Temperature Duct Monitoring Speed Modulation	◦ (VFC & 0-10V)
RH Room Monitoring Speed Modulation	◦ (VFC & 0-10V)
CO2 Room Monitoring Speed Modulation	◦ (VFC & 0-10V)
VOC Room Monitoring Speed Modulation	◦ (VFC & 0-10V)
Temperature Room Monitoring Speed Modulation	◦ (VFC & 0-10V)

H-Control Functions	
Temperature Regulation	
Integrated Temperature Sensors	•
Anti-Frost Protection	•
Anti-Frost Water Probe	•
Hot Water Coil Regulation (0-10V)	◦
Reversible Hot/Cold Coil Regulation (0-10V)	◦
4-Pipe Hot & Cold Coil Regulation (0-10V)	◦
DX Coil Regulation (0-10V)	◦
Electrical Heater Battery Regulation	•
Electrical Pre-Heater Battery Regulation	•
Security Functions	
Internal Shutoff Damper Actuation	◦
External Shutoff Damper Actuation	◦
Filter Monitoring	•
Alarm Display on user interface	•
Detailed Information about alarms	◦
Fan Fault Monitoring	•

H-Control Functions	
Communication	
External Control Wiring	•
External 0-10V Control	•
Run Relay	• (VFC)
Alarm/Fault Relay	• (VFC)
Emergency Fire Shutdown	• (VFC)
Modbus RTU (RS-R85)	•
BACnet TCP/IP	-
BACnet IP	◦
Mounting Location	
Internal	•
External	◦
Bypass Adjustment	
Manual Bypass Configuration	•
Automatic Bypass Configuration with free heating/cooling	•
Night Free Cooling	•

- = Supplied as standard
- = Accessory required
- = Not available



STEP 5: Customise Features

Select from the following options:

- Weatherproofing (Roofs / Cowls / Louvres / Dampers)
- Dedicated Lifting Brackets for Modular Sections
- Run and Standby Fans
- Attenuators
- Lighting
- Portholes
- Lockable Handles
- Access Sections


STEP 6: Choose a Finish

- Standard Finish (Galvanised Steel, painted in RAL9002)
- Galvanised Steel
- Stainless Steel
- C4 (Coastal Protection & Anti-Corrosion, painted in RAL9002)
- Other RAL Colours



STEP 7: Add Site Services

Select from the following packages:



- Pre-Inspection
- Thermal Wheel Assembly
- Plate Exchanger Assembly
- Flatpack
- Bolt and Seal
- Casing Leakage Test
- Airflow Proving
- Wiring and Initial Start Up
- Lift and Shift



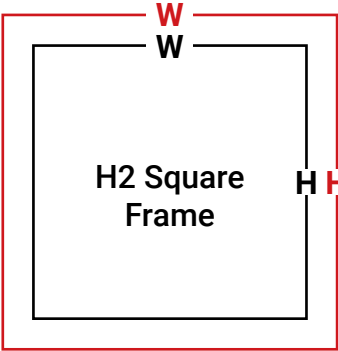
FRAME SIZE GUIDE

Model	W (mm)	H (mm)	+Base (mm)	Opening Size W x H (mm)	Airflow* (m³/s)	Airflow* (m³/h)
XLH2	550	550	100	450 x 450	0.404	1455
XLH2.5	600	600	100	500 x 500	0.500	1800
XLH3.15	650	650	100	550 x 550	0.604	2175
XLH4	700	700	100	600 x 600	0.720	2590
XLH5	800	800	100	700 x 700	0.980	3530
XLH6.3	850	850	100	750 x 750	1.120	4030
XLH8	950	950	100	850 x 850	1.440	5180
XLH10	1050	1050	100	950 x 950	1.800	6480
XLH12.5	1200	1200	100	1100 x 1100	2.420	8710

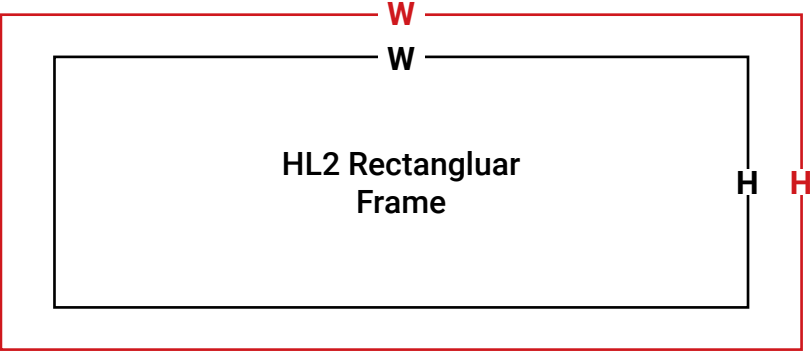
Model	W (mm)	H (mm)	+Base (mm)	Opening Size W x H (mm)	Airflow* (m³/s)	Airflow* (m³/h)
XLH16	1350	1350	100	1250 x 1250	3.130	11270
XLH20	1500	1500	130	1400 x 1400	3.900	14040
XLH25	1650	1650	130	1550 x 1550	4.790	17260
XLH31.5	1850	1850	130	1750 x 1750	6.100	21960
XLH40	2000	2000	130	1900 x 1900	7.200	25930
XLH50	2300	2300	130	2200 x 2200	3.700	34920
XLH63	2600	2600	130	2500 x 2500	12.500	45000

Model	W (mm)	H (mm)	+Base (mm)	Opening Size W x H (mm)	Airflow* (m³/s)	Airflow* (m³/h)
XLHL2	750	400	100	650 x 300	0.390	1405
XLHL2.5	800	450	100	700 x 350	0.490	1765
XLHL3.15	850	500	100	750 x 400	0.600	2160
XLHL4	900	550	100	800 x 450	0.720	2590
XLHL5	950	650	100	850 x 550	0.930	3350
XLHL6.3	1050	700	100	950 x 600	1.140	4105
XLHL8	1200	800	100	1100 x 700	1.540	5545
XLHL10	1350	850	100	1250 x 750	1.872	6740
XLHL12.5	1500	950	100	1400 x 850	2.390	8605

Model	W (mm)	H (mm)	+Base (mm)	Opening Size W x H (mm)	Airflow* (m³/s)	Airflow* (m³/h)
XLHL16	1650	1050	100	1550 x 950	2.950	10620
XLHL20	1850	1200	130	1750 x 1100	3.850	13860
XLHL25	2000	1350	130	1900 x 1250	4.780	17200
XLHL31.5	2300	1500	130	2200 x 1400	6.160	22175
XLHL40	2600	1650	130	2500 x 1550	7.720	27790
XLHL50	2600	2000	130	2500 x 1900	9.500	34200
XLHL63	2900	2300	130	2800 x 2200	12.300	44280



To allow for duct openings, please minus 100mm from the measurements.
* Internal velocity at 2.0 m/s



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Questions? We're Here to Help.

With our dedicated AHU selection software, and full-in house technical design support, we are here to help with any queries you may have. Contact our UK office to speak to customer services, sales, or engineering support. We provide the same level of service that we would want to receive.

Air Handling
by 