

for fresher air
Air
Handling
Units



DIRECT DRIVE - BELT DRIVE - CUSTOM BUILT



Certificate No: GB9455

direct drive - belt drive - custom built Air Handling Units



Introduction

AVT's comprehensive and extensive range of air handling units from "IME" plant room models to custom built belt driven models able to deliver up to 20m³/sec ensures that any installation requirement can be met.

Design brief

To provide a comfortable, healthy environment, often without loss of heat and a multiplicity of parameters -

The occupants want a non-intrusive system.

The designers want to ensure that air exchange is optimised whilst bringing fresh air into the building.

The builders need a reliable product that can be easily installed and set up.

The answer lies in well thought out, efficient ventilation.

The correct ventilation method is an air handling system which encompasses all of the above.



What product to choose?

Stricter rules governing air tightness of buildings means more emphasis on controlled fresh air supply. Air handling units, which are easy to install and which have a wide variety of options, will effectively ventilate the required area providing a healthy atmosphere for people to work and play. AVT's range of units, together with comprehensive, computerised design facilities, gives the specifier the ability to choose a fan capacity which ensures a proper level of ventilation, together with **heating, heat recovery, sound attenuation and control options.**



Flexibility

AVT's air handling units are available in an extensive range with a variety of options which contribute to their versatility of use and ensure that exactly the correct unit can be specified. There are direct drive versions either electrically or hot water heated together with belt driven units for bigger airflow requirements. Combine this with the facility for custom built systems, and the flexibility of design and use is infinite.



Technical Support

With its firm commitment to quality and customer care, AVT's technical support staff can help with your requirements.

Installation

AVT can advise on installing and commissioning your air handling unit system and can give full technical back-up.

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Quality Control

AVT air handling units are manufactured to the highest quality and inspected at every stage of the manufacturing process. All products are built to BS EN ISO 9001. We operate a continuous evaluation of products and services to ensure customer requirements are met in full.

Materials

AVT air handling units are generally finished in galvanised, double skinned steel with 25mm thick mineral wool slab insulation and have a triple layer of steel at the corners with pre-drilled 8mm dia holes providing an ideal location for fixing points.

All panel filters are manufactured from bonded and coated continuous spun glass fibre filaments with arrestance of 84% to G3 grade.



Heating Control Panels

Designed for quick and easy installation with external wiring kept to a minimum. A mains supply is taken to the panel door interlocked isolator and outputs then taken to the fan, heater and safety circuits. Sensors are supplied pre-wired to the panel. Switches on the front of the panel allow control of the fan and heater. All outputs to the fan are protected. All control panels are stand alone, but can be BMS compatible as an option.



Options

A full range of accessories and controls are also available - these include

- **intake damper/mixing box**
- **electric or hot water frost heaters**
- **bag filters**
- **cooling coils**
- **heat recovery systems**
 - cross flow heat exchangers
 - thermal wheel
 - run around coils
- **alternative heating source**
 - gas fired
- **casings**
 - 50mm panels can be supplied with high density mineral wool and barrier matt
 - can be constructed in a vertical or horizontal layout
 - can be supplied as "flatpack" for on site assembly



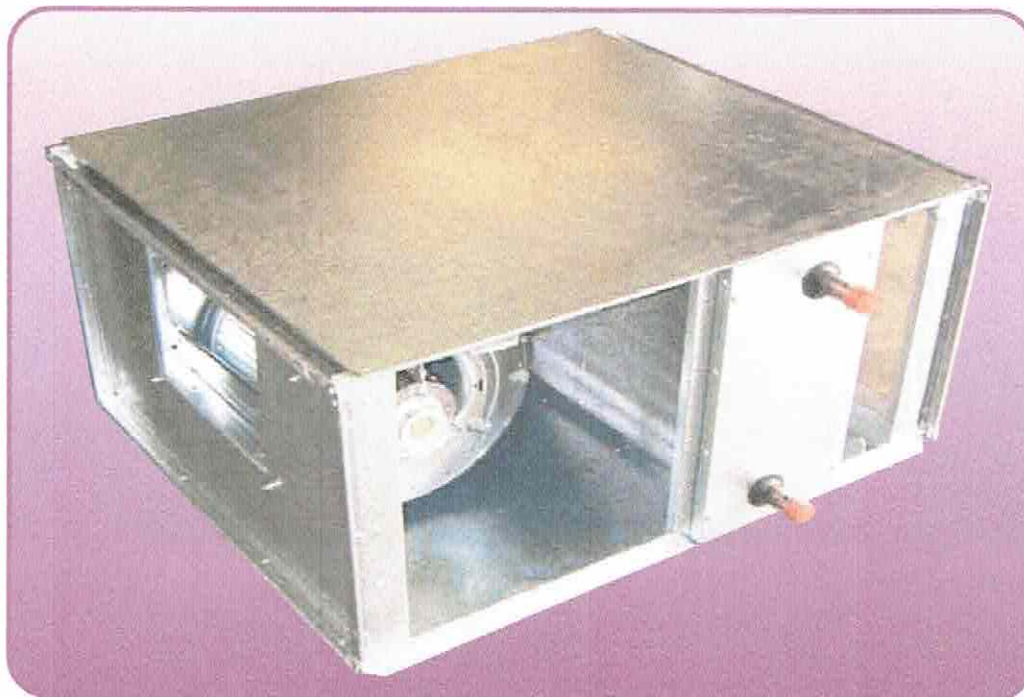
Manufactured in UK to ISO 9001

Direct Drive - Air Handling Units

LPHW



"SPW/SRW" - LPHW heater



Features - PLANT Models

- 14 models (7 sizes) for duct or roof installation
- airflow to 1.59 m³/sec
- pressure to 350 Pa
- speed controllable
- inlets and outlets fitted with "Mez" type duct connecting flanges
- rigid casing construction with triple layer of steel at corners - 8mm dia integral fixing point at each corner for either floor or ceiling mounting
- optional casing materials include stainless steel or aluminium - can be powder coated to any BS or RAL colour
- bag and panel filter fit into slide-in channels
- top access on duct mounted models (bottom access can be provided if required)

Additional Features - WEATHERPROOF Models

- top access on roof mounted models (via a single, removable weather lid)
- air inlets on external units protected by weather proof cowl and bird guard
- roof mounted units constructed in galvanised steel, single skin with plastisol exterior in light grey to BS10A05

Specification

- internally mounted units are finished in galvanised, double skinned steel with 25mm thick mineral wool slab insulation of 45 kg/m³ density (providing high

degree of acoustic insulation) (50mm panels with high density mineral wool and barrier matt also available for reduced noise breakout)

- fans are direct drive double inlet, double width, forward curved centrifugal type
- motors - with thermal overload protection
- LPHW batteries are constructed from copper tubes mechanically bonded onto aluminium fins supplied with standard BSP male connectors
- maximum air temperature 40°C
- panel filters manufactured from bonded and coated spun glass fibre to G3 grade, fitted as standard in easily removable housings. Higher degree of filtration can be provided on request
- **manufactured in UK to ISO 9001**



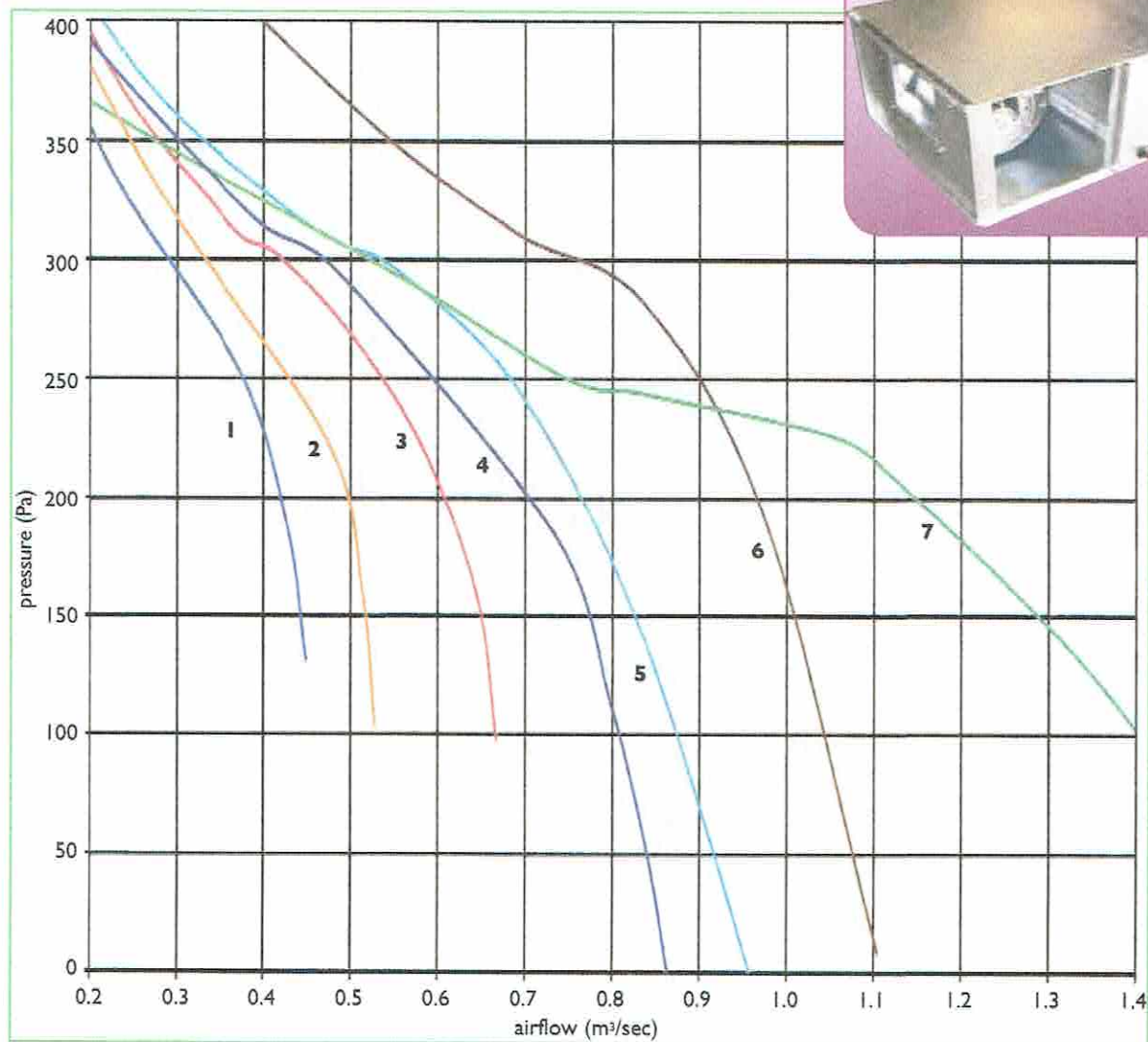
LPHW COIL

Direct Drive - Air Handling Units

SPW/SRW-Performance Curves



Fan, Filter and LPHW Heater Battery



Performance based on filters with a pressure drop 20% above clean

	Range	
	Plant	Roof
1	SPW1	SRW1
2	SPW2	SRW2
3	SPW3	SRW3
4	SPW4	SRW4
5	SPW5	SRW5
6	SPW6	SRW6
7	SPW7	SRW7

Direct Drive - Air Handling Units

SPW/SRW - Performance & Sound



Fan, Filter and LPHW Heater Battery

Model	m³/sec at Pa								Max m³/hr	Max Coil kW	Fan				Speed Control- ler
	50	100	150	200	250	300	350	400			Supply	Power W	FLC A	SC A	
SPW/ SRW1	-	-	0.443	0.420	0.377	0.290	0.207	0.147	1616	21	230v1ph	373	2.00	5.00	n/a
SFP	-	-	1.40	1.20	1.12	1.17	1.47	2.10							
SPW/ SRW2	-	-	0.517	0.493	0.429	0.332	0.246	0.172	1897	21	230v1ph	373	2.85	7.13	n/a
SFP	-	-	1.36	1.22	1.03	1.07	1.30	1.81							
SPW/ SRW3	-	0.666	0.649	0.607	0.536	0.423	0.280	0.192	2398	21	230v1ph	373	3.85	9.63	QE6
SFP	-	1.23	1.24	1.26	1.33	1.58	2.21	-							
SPW/ SRW4	0.839	0.808	0.771	0.682	0.594	0.470	0.300	0.179	3107	29	230v1ph	550	3.80	9.50	n/a
SFP	1.16	1.08	1.01	0.97	0.92	1.03	1.39	2.23							
SPW/ SRW5	0.917	0.874	0.825	0.764	0.747	0.537	0.330	0.213	3445	29	230v1ph	550	5.10	12.00	QE6
SFP	1.24	1.20	1.17	1.19	1.20	1.39	2.05	-							
SPW/ SRW6	1.076	1.043	1.008	0.965	0.900	0.764	0.546	0.397	3974	36	230v1ph	550	6.80	17.00	QE8
SFP	1.38	1.36	1.33	1.31	1.29	1.32	1.61	2.05							
SPW/ SRW7	1.493	1.403	1.299	1.146	0.747	0.521	0.274	-	5663	51	230v1ph	736	7.40	18.50	QE8
SFP	0.87	0.84	0.84	0.87	1.07	1.42	2.50	-							

Sizes 1, 2 and 4 are not speed controllable - select larger unit

Performance based on filters with a pressure drop 20% above clean

SFP - Specific Fan Power

Fan Outlet Sound Levels

Model	Sound Pressure Level dBA at 3m	Sound Power Levels dB							
		Mid Octave Bands (Hz)							
		63	125	250	500	1000	2000	4000	8000
SPW/SRW1	33	68	70	71	71	71	68	64	56
SPW/SRW2	34	69	71	72	72	72	69	65	57
SPW/SRW3	38	73	75	76	76	76	73	69	61
SPW/SRW4	40	76	76	77	75	77	74	72	65
SPW/SRW5	41	77	77	78	76	78	75	73	66
SPW/SRW6	41	77	77	78	76	78	75	73	67
SPW/SRW7	39	76	78	76	78	76	74	72	67

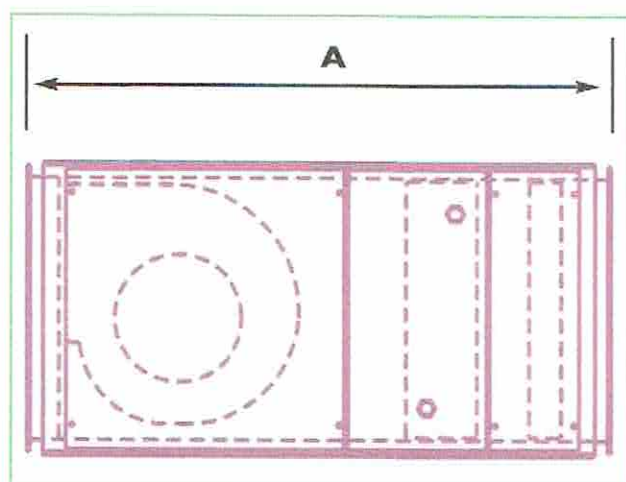
Direct Drive - Air Handling Units

SPW - Dimensions



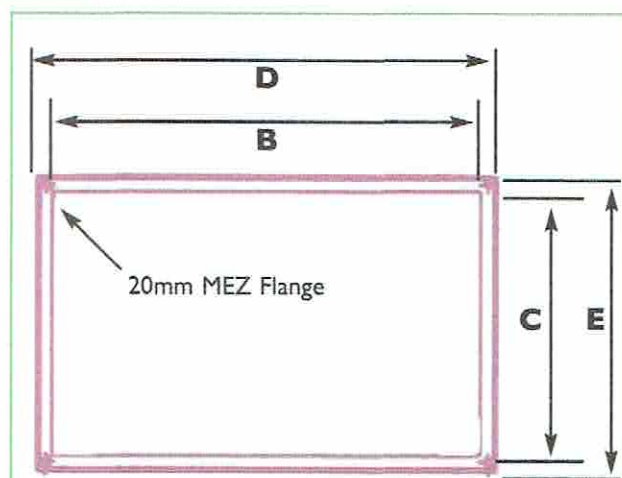
Fan, Filter and LPHW Heater Battery - Plant Models

Model-Duct	A mm	B mm	C mm	D mm	E mm	kg
SPW1	950	600	450	650	500	79
SPW2	950	600	450	650	500	79
SPW3	950	600	450	650	500	79
SPW4	950	750	450	800	500	93
SPW5	950	750	450	800	500	93
SPW6	1050	825	500	875	550	112
SPW7	1200	900	600	950	650	131



Side

Ends



Direct Drive - Air Handling Units

SRW - Dimensions



Fan, Filter and LPHW Heater Battery - Weatherproof Models

Model-Roof	A mm	B mm	C mm	D mm	E mm	kg
SRW1	1200	600	450	650	580	74
SRW2	1200	600	450	650	580	74
SRW3	1200	600	450	650	580	74
SRW4	1225	750	450	800	580	87
SRW5	1225	750	450	800	580	87
SRW6	1350	825	500	875	580	104
SRW7	1600	900	600	950	680	125

