


SM SeriesTM

Fan Coil Unit Series
Up to 1,900 Litres / Sec



New EC Range
also available
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information



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• Second Edition •

Description

The MYCROtherm series of fan coil units are ideal for in ceiling installations due to their low profile design. This flexible and high quality product range includes an AC or EC single phase motor and an internally lined galvanised metal casing. The range is available in 5 sizes that can produce airflows up to 1900 l/s.

Features

- Low profile galvanised casings.
- AC or EC fan motors.
- Chilled water cooling coils available with 4, 5 or 6 rows and 315, 394, 433 or 472 fins per metre.
- Hot water heating coils available with 1 or 2 rows and 315, 394, 433 or 472 fins/metre.
- Combined maximum of 6 cooling and heating rows per unit.

Construction

Units are manufactured from long lasting 1.2mm galvanised sheet metal and are internally lined with 20mm Polyethylene insulation foam. Insulation is covered with a tough aluminium foil to provide a clean and neat finish.

Each side of the unit includes a sealed access panel that enables the necessary inspection and cleaning required. The condensate tray is manufactured from 1.0mm thick aluminium sheet.

Fans are direct drive forward curved centrifugal type with AC or EC motors. Fans are single or dual arrangement depending on the model.



Office Buildings



Schools & Universities

Typical Applications

Commercial and industrial application including shopping centres, office buildings, hotels, health facilities, schools and universities.

Key Projects



QLD Children's Hospital



University of QLD Advanced Engineering Building

Motors

AC Configuration (SMA)

- 4-pole, 240v single-phase, three speed motors (one speed selectable).

EC Configuration (SME)

- EC motors are single phase 240V, high efficiency (IE4).
- Integrated EC controller for infinite speed control.
- Variable speed control by a 0-10V signal.



Suggested Specification

The fan coil units shall be of the "MYCROtherm" Series as designed by Air Design and be of the model numbers shown on the schedule/drawings.

- Units shall be manufactured from 1.2mm thick metallic coated steel, internally lined with 20mm closed cell polyethylene insulation foam. Foam shall be covered with a heavy duty, bonded non-perforated aluminium foil.
- Condensate Tray shall be aluminium 1.0mm thick.
- Water coils shall be 1/2" diameter copper tubes having 0.4mm wall thickness with sine wave pattern aluminium fins 0.12mm thick.
- Coil Frames shall be aluminium.
- Direct Drive Fans - shall be AC or optional EC Motor configuration. Double width, double inlet, forward curved centrifugal type statically and dynamically balanced.
- Fan motors shall be prewired to an external junction box.

Technical Data

Model Number	Airflow	External Static Pressure	Total Capacity	Sensible Capacity	Motor Power	Motor Full Load Current	Motor Speeds
	L/s				Pa	kW	kW
SMA 040	400	240	9	6.5	0.35	3.3	22/19/17
SME 040					1.074	4.62	33 *
SMA 070	720	240	16.9	12	0.75	5.8	23/22/21
SME 070					1.074	4.62	33 *
SMA 090	900	240	21.5	15.1	1.1	9	24/22/21
SME 090					1.04	4.62	27 *
SMA 140	1400	240	34.6	24.1	0.75	5.8	24/22/21
SME 140					1.074 x 2	4.62 x 2	33 *
SMA 190	1900	240	43.3	31.1	2 x 0.75	2 x 6.5	22/21/20
SME 190					1.04 x 2	4.62 x 2	22 *

* EC Fans are showing maximum RPS. These airflow measurements are based on a maximum of 2.5 m/s coil face velocity. Motor power and current load above is listed per fan

Acoustic Data

Model Number	Airflow litres / sec	External Static Press. Pa	Sound Power at Octave Frequency (in-duct @ 3 meter)							
			63 hz	125 hz	250 hz	500 hz	1000 hz	2000 hz	4000 hz	8000 hz
SMA 040	400	240	73	76	79	71	74	72	68	59
SME 040			61	61	61	50	51	43	35	26
SMA 070	720	240	67	72	78	71	72	71	69	62
SME 070			68	74	84	79	78	77	73	70
SMA 090	900	240	69	77	79	74	74	71	68	55
SME 090			68	78	81	72	73	73	67	62
SMA 140	1400	240	72	74	77	72	74	71	66	61
SME 140			70	77	87	81	81	79	75	72
SMA 190	1900	240	75	80	82	75	77	75	73	66
SME 190			84	87	73	73	71	67	61	



Performance Data Cooling Coil



Model Number	Air Flow	Cooling Coil	Air On DB/WB	Air Off DB/WB	Total Capacity	Sensible Capacity	Water Flow	Entering/Leaving Water (Temp)	Water Pressure Drop kPa	Air Pressure Drop
	l/s		Rows/(Fins/m)	°C				°C		°C
SMA 040 / SME 040	400	4/472	35 / 24	16.7 / 15.6	13.6	9.2	0.54	6.0 / 12.0	18	110
			26 / 19	14.6 / 13.7	7.4	5.7	0.3	6.0 / 12.0	6	110
			23 / 17	14.0 / 13.1	5.2	4.5	0.21	6.0 / 12.0	3	110
		5/472	35 / 24	14.4 / 13.8	16.0	10.3	0.64	6.0 / 12.0	30	137
			26 / 19	12.9 / 12.5	9.0	6.5	0.36	6.0 / 12.0	11	137
			23 / 17	12.4 / 11.9	6.7	5.3	0.26	6.0 / 12.0	6	137
SMA 070 / SME 070	720	4/472	35 / 24	16.2 / 15.2	25.5	16.9	0.81	6.0 / 12.0	26	110
			26 / 19	14.2 / 13.4	14.1	10.6	0.56	6.0 / 12.0	9	110
			23 / 17	13.5 / 12.7	10.4	8.5	0.41	6.0 / 12.0	5	110
		5/472	35 / 24	14.0 / 13.4	29.6	18.9	1.18	6.0 / 12.0	42	137
			26 / 19	12.6 / 12.1	16.9	12.0	0.67	6.0 / 12.0	16	137
			23 / 17	12.1 / 11.6	12.6	9.7	0.5	6.0 / 12.0	9	137
SMA 090 / SME 090	900	4/472	35 / 24	16.8 / 15.7	32.3	21.3	1.29	6.0 / 12.0	33	110
			26 / 19	14.1 / 13.3	18.0	13.4	0.72	6.0 / 12.0	12	110
			23 / 17	13.4 / 12.6	13.2	10.8	0.53	6.0 / 12.0	7	110
		5/472	35 / 24	14.5 / 13.9	35.6	23.0	1.21	6.0 / 13.0	32	137
			26 / 19	12.5 / 12.0	21.5	15.1	0.86	6.0 / 12.0	20	137
			23 / 17	12.0 / 11.5	16.0	12.3	0.64	6.0 / 12.0	12	137
SMA 140 / SME 140	1400	4/472	35 / 24	16.4 / 15.3	48.9	32.5	1.67	6.0 / 13.0	38	111
			26 / 19	13.7 / 13.0	29.3	21.3	1.17	6.0 / 12.0	20	111
			23 / 17	13.1 / 12.3	21.6	17.2	0.86	6.0 / 12.0	12	111
		5/472	35 / 24	14.8 / 14.2	54.0	35.3	1.61	6.0 / 14.0	43	138
			26 / 19	12.2 / 11.8	34.6	24.1	1.38	6.0 / 12.0	33	138
			23 / 17	11.7 / 11.3	25.9	19.6	1.03	6.0 / 12.0	20	138
SMA 190 / SME 190	1900	4/472	35 / 24	16.3 / 15.3	66.7	44.3	2.28	6.0 / 13.0	39	110
			26 / 19	13.7 / 13.0	40.0	29.0	1.59	6.0 / 12.0	21	110
			23 / 17	13.0 / 12.3	29.6	23.5	1.18	6.0 / 12.0	12	110
		5/472	35 / 24	14.3 / 13.7	76.6	49.2	3.05	6.0 / 12.0	32	138
			26 / 19	12.8 / 12.4	43.3	31.1	1.72	6.0 / 12.0	11	138
			23 / 17	12.3 / 11.9	32.1	25.2	1.28	6.0 / 12.0	7	138

Performance Data

Heating Coil

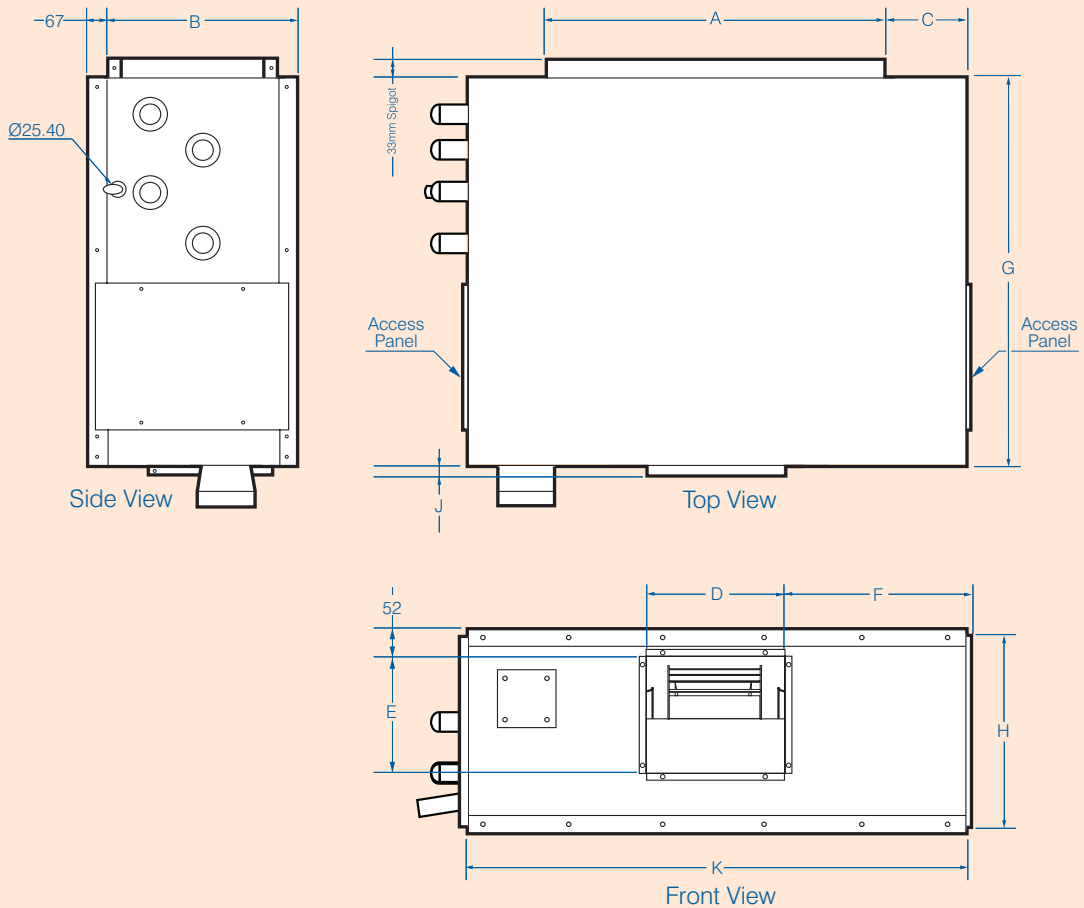


Model Number	Heating Coil	Air Flow	Air On DB	Air Off DB	Total Capacity	Water Flow	Entering/Leaving Water (Temp)	Water Pressure Drop	Air Pressure Drop
	Rows/ (Fins/m)	l/s	°C	°C	kW	l/s	°C	kPa	Pa
SMA 040 / SME 040	1/394	400	12	23.0	5.4	0.09	80/65	1	10
	2/394		12	33.4	10.5	0.17	80/65	6	20
SMA 070 / SME 070	1/394	720	12	23.8	10.5	0.17	80/65	4	10
	2/394		12	34.4	19.8	0.32	80/65	26	20
SMA 090 / SME 090	1/394	900	12	24.1	13.3	0.22	80/65	8	10
	2/394		12	33.2	23.4	0.38	80/65	4	20
SMA 140 / SME 140	1/394	1400	12	24.1	20.7	0.34	80/65	9	10
	2/394		12	33.7	37.2	0.61	80/65	7	21
SMA 190 / SME 190	1/394	1900	12	24.3	28.8	0.47	80/65	19	10
	2/394		12	34.2	51.8	0.84	80/65	16	20



Dimensional Drawing

Horizontal Configuration



Cooling and heating coil connection pipe - "I" diameter

Model Number	Fan	A	B	C	D	E	F	G	H	I	J	K	Kg.
SMA 040	KDD9-7T-350W	641	264	154	232	263	359	750	398	38.1	20	950	65
SME 040	DDMP7/7-STD				232	209							71
SMA 070	KD29-7T-750W	1152	264	149	690	262	380	750	398	38.1	20	1450	77
SME 070	DDMP7/7-STD				232	209							85
SMA 090	KD29-7-750W	1152	314	149	694	262	380	750	448	38.1	20	1450	97
SME 090	DDMP9/9-STD				298	262							106
SMA 140	KD29-9-1100W	1481	364	134	953	259	398	580	498	38.1	20	1750	132
SME 140	DDMP7/7-STD x 2				951	209							145
SMA 190	KDD10-10-750W x 2	2014	364	143	1216	292	542	850	498	38.1	20	2300	143
SME 190	DDMP10/10-STD x 2				1216	289							157

All dimensions in mm



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