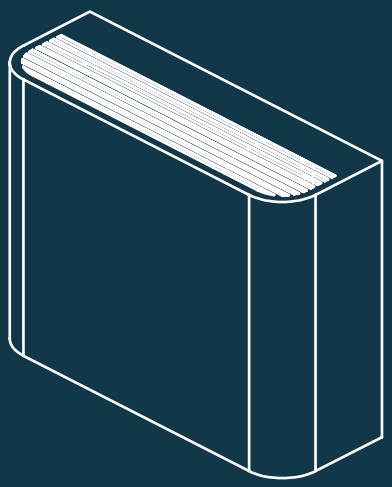
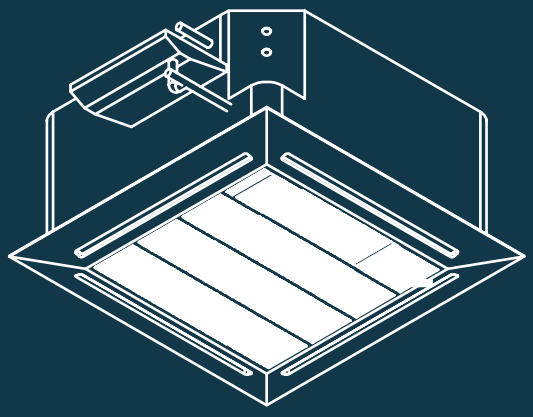
QUARTZ

FAN COILS AND HVAC

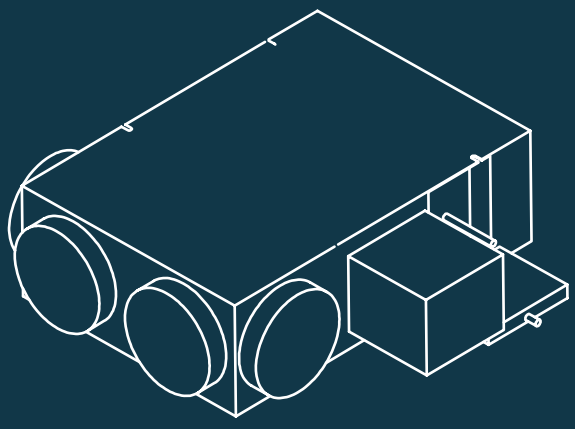






fan coils & hvac

Technical Brochure



QUARTZ 5 Year PARTS WARRANTY AS STANDARD

DESIGNED & MADE IN THE UK

In partnership with

MARSTAIR

REFRIGERATION AND SPECIALIST AIR CONDITIONING



Performance Output

*ALL DATA AT 30Pa EXTERNAL RESISTANCE

Model	Speed	Airflow l/s	Cooling						Heating						Electrical (EC/DC)		Acoustic
			UK (23db/16.1wb)			Eurovent (27db/19wb)			UK (20db)		Eurovent (20˚C)						
			6/12			7/12			82/71		65/55 4 pipe		45/40 2 pipe				
			Sensible	Total	Air off db	Sensible	Total	Air off db	Total	Air off db	Total	Air off db	Total	Air off db	FLC	Anticipated SFP	NR
			kW	kW	˚C	kW	kW	˚C	kW	˚C	kW	˚C	kW	˚C	Amps	w/l/s	See Qualification
SPR1-1	Whisper	55	0.92	1.20	9.2	1.11	1.58	10.3	1.50	42.5	1.01	35.2	1.52	35.2	0.7	0.15	22
	Low	100	1.51	1.82	10.5	1.85	2.49	11.7	1.94	36.0	1.38	31.4	2.65	31.4	0.7	0.18	30
	Low-med	135	1.96	2.30	11.0	2.38	3.12	12.4	2.34	34.3	1.64	30.0	3.41	30.0	0.7	0.21	34
	Med	160	2.25	2.58	11.4	2.72	3.49	12.9	2.57	33.3	1.80	29.3	3.92	29.3	0.7	0.25	35
	Med-high	170	2.36	2.69	11.5	2.86	3.64	13.1	2.67	33.0	1.85	29.0	4.11	29.0	0.7	0.27	35
	High	180	2.48	2.81	11.6	2.99	3.79	13.3	2.76	32.7	1.91	28.8	4.30	28.8	0.7	0.29	36
SPR1-1+	Whisper	70	1.10	1.37	10.0	1.40	2.02	10.5	1.57	38.5	1.07	32.6	1.92	32.6	0.7	0.15	23
	Low	115	1.71	2.03	10.7	2.15	2.98	11.5	2.12	35.2	1.45	30.4	2.97	30.4	0.7	0.18	27
	Low-med	145	2.08	2.41	11.1	2.61	3.50	12.1	2.44	33.9	1.67	29.5	3.60	29.5	0.7	0.21	31
	Med	170	2.36	2.69	11.5	2.96	3.88	12.6	2.67	33.0	1.82	28.8	4.09	28.8	0.7	0.25	34
	Med-high	180	2.48	2.81	11.6	2.99	3.79	13.3	2.76	32.7	1.91	28.8	4.31	28.8	0.7	0.27	35
	High	190	2.59	2.92	11.7	3.24	4.17	12.9	2.85	32.4	1.94	28.4	4.47	28.4	0.7	0.29	36
SPR 2-2	Whisper	70	1.10	1.37	10.0	1.40	2.02	10.5	1.57	38.5	1.07	32.6	1.92	32.6	0.7	0.15	24
	Low	115	1.71	2.03	10.7	2.15	2.98	11.5	2.12	35.2	1.45	30.4	2.97	30.4	0.7	0.18	26
	Low-med	145	2.08	2.41	11.1	2.61	3.50	12.1	2.44	33.9	1.67	29.5	3.60	29.5	0.7	0.21	27
	Med	170	2.36	2.69	11.5	2.96	3.88	12.6	2.67	33.0	1.82	28.8	4.09	28.8	0.7	0.25	31
	Med-high	180	2.48	2.81	11.6	2.99	3.79	13.3	2.76	32.7	1.91	28.8	4.31	28.8	0.7	0.27	33
	High	190	2.59	2.92	11.7	3.24	4.17	12.9	2.85	32.4	1.94	28.4	4.47	28.4	0.7	0.29	34
SPR 2-2+	Whisper	70	1.21	1.60	8.7	1.46	2.11	9.8	2.38	48.1	1.47	37.4	1.97	37.4	0.7	0.15	19
	Low	100	1.58	1.96	9.9	2.03	2.95	10.2	2.42	40.0	1.68	33.9	2.77	33.9	0.7	0.17	22
	Low-med	130	2.00	2.44	10.3	2.54	3.62	10.9	2.83	38.0	1.96	32.5	3.49	32.5	0.7	0.2	26
	Med	170	2.54	3.03	10.7	3.22	4.48	11.3	3.36	36.3	2.32	31.3	4.40	31.3	0.7	0.24	30
	Med-high	180	2.67	3.18	10.7	3.31	4.41	11.8	3.48	36.0	2.63	32.1	4.84	32.1	0.7	0.26	31
	High	190	2.81	3.32	10.8	3.54	4.87	11.6	3.61	35.7	2.50	30.9	5.25	30.9	0.7	0.29	33
SPR 3-2	Whisper	84	1.38	1.77	9.4	1.69	2.41	10.4	2.35	43.1	1.54	35.2	2.32	35.2	1.4	0.17	22
	Low	115	1.78	2.18	10.2	2.26	3.09	10.8	2.58	38.5	2.05	34.7	3.15	34.7	1.4	0.17	23
	Low-med	154	2.32	2.78	10.5	2.85	3.85	11.7	3.09	36.6	2.14	31.5	4.07	31.5	1.4	0.18	25
	Med	208	3.01	3.51	11.0	3.67	4.81	12.4	3.72	34.8	2.54	30.1	5.24	30.1	1.4	0.18	29
	Med-high	245	3.44	3.94	11.4	4.26	5.54	12.6	4.08	33.8	3.06	30.3	5.98	30.3	1.4	0.2	31
	High	300	4.07	4.57	11.8	4.91	6.15	13.5	4.61	32.7	3.08	28.5	7.02	28.5	1.4	0.22	34
SPR 4-3	Whisper	100	1.69	2.22	9.0	2.10	3.06	9.6	3.50	48.9	2.18	38.0	2.83	38.0	1.4	0.15	22
	Low	205	3.06	3.65	10.7	3.87	5.31	11.4	4.36	37.6	3.13	32.6	5.50	32.6	1.4	0.16	27
	Low-med	245	3.59	4.23	10.9	4.51	6.11	11.8	4.88	36.5	3.49	31.8	6.41	31.8	1.4	0.18	29
	Med	310	4.40	5.07	11.3	5.49	7.26	12.4	5.64	35.0	4.00	30.7	7.81	30.7	1.4	0.21	33
	Med-high	360	4.97	5.64	11.6	6.18	8.02	12.8	6.14	34.1	4.33	29.9	8.82	29.9	1.4	0.26	36
	High	435	5.80	6.47	12.0	7.27	9.43	13.2	6.87	33.1	5.10	29.7	10.24	29.7	1.4	0.3	38
SPR 5-4	Whisper	105	1.81	2.41	8.8	2.21	3.22	9.6	4.05	51.9	2.41	39.0	2.99	39.0	1.4	0.14	23
	Low	210	3.11	3.69	10.8	4.00	5.50	11.3	4.71	38.5	3.31	33.0	5.73	33.0	1.4	0.16	25
	Low-med	255	3.73	4.39	10.9	4.73	6.41	11.7	5.32	37.2	3.72	32.1	6.79	32.1	1.4	0.18	28
	Med	325	4.66	5.40	11.1	5.82	7.75	12.2	6.23	35.8	4.31	31.0	8.34	31.0	1.4	0.2	31
	Med-high	367	5.16	5.91	11.4	6.43	8.44	12.5	6.67	35.0	4.61	30.4	9.23	30.4	1.4	0.26	34
	High	445	6.04	6.81	11.8	7.64	10.03	12.8	7.44	33.8	5.52	30.3	10.79	30.3	1.4	0.29	36
SPR 6-4	Whisper	130	2.11	2.67	9.6	2.65	3.81	10.2	4.15	46.4	2.67	37.0	3.64	37.0	1.7	0.17	22
	Low	215	3.22	3.86	10.6	4.08	5.60	11.3	4.78	38.4	3.36	32.9	5.85	32.9	1.7	0.18	25
	Low-med	285	4.18	4.93	10.9	5.20	6.99	11.9	5.71	36.6	3.98	31.5	7.47	31.5	1.7	0.18	28
	Med	335	4.83	5.64	11.1	5.97	7.92	12.3	6.34	35.6	4.38	30.8	8.56	30.8	1.7	0.19	30
	Med-high	382	5.39	6.19	11.3	6.64	8.67	12.6	6.82	34.8	4.70	30.2	9.54	30.2	1.7	0.22	32
	High	462	6.31	7.13	11.7	7.73	9.87	13.2	7.61	33.6	5.20	29.3	11.11	29.3	1.7	0.24	34



Performance Output

sapphire 285mm

*ALL DATA AT 30Pa EXTERNAL RESISTANCE

Model	Speed	Airflow l/s	Cooling						Heating						Electrical (EC/DC)		Acoustic
			UK (23db/16.1wb)			Eurovent (27db/19wb)			UK (20db)		Eurovent (20˚C)						
			6/12			7/12			82/71		65/55 4 pipe		45/40 2 pipe				
			Sensible	Total	Air off db	Sensible	Total	Air off db	Total	Air off db	Total	Air off db	Total	Air off db	FLC	Anticipated SFP	NR
			kW	kW	˚C	kW	kW	˚C	kW	˚C	kW	˚C	kW	˚C	Amps	w/l/s	See Qualification
SPR 8-5	Whisper	150	2.50	3.23	9.2	3.15	4.58	9.6	5.41	49.8	3.26	37.96	4.24	43.4	1.7	0.15	23
	Low	250	3.82	4.65	10.4	4.88	6.79	10.9	5.98	39.8	4.13	33.65	6.88	42.7	1.7	0.16	26
	Low-med	355	5.28	6.29	10.7	6.64	8.96	11.5	7.44	37.3	5.11	31.90	9.34	41.7	1.7	0.18	30
	Med	425	6.21	7.31	10.9	7.73	10.29	12.0	8.37	36.3	5.69	31.07	10.88	41.2	1.7	0.21	33
	Med-high	477	6.84	7.93	11.1	8.49	11.16	12.3	8.92	35.5	6.06	30.50	11.96	40.7	1.7	0.28	35
	High	560	7.81	8.91	11.5	9.64	12.42	12.8	9.78	34.4	6.60	29.74	13.62	40.1	1.7	0.3	38
SPR9-5	Whisper	250	3.85	4.70	10.3	4.91	6.87	10.8	5.98	39.8	4.13	33.65	6.88	42.7	3.4	0.19	27
	Low	355	5.32	6.36	10.6	6.69	9.10	11.4	7.44	37.3	5.11	31.90	9.34	41.7	3.4	0.2	30
	Low-med	425	6.25	7.38	10.8	7.79	10.43	11.8	8.37	36.3	5.69	31.07	10.88	41.2	3.4	0.2	32
	Med	477	6.88	8.01	11.1	8.55	11.31	12.2	8.92	35.5	6.06	30.50	11.96	40.7	3.4	0.2	34
	Med-high	560	7.86	8.99	11.4	9.71	12.60	12.7	9.78	34.4	6.60	29.74	13.62	40.1	3.4	0.28	36
	High	600	8.31	9.46	11.6	10.42	13.56	12.6	10.19	34.0	7.42	30.22	14.39	39.8	3.4	0.32	37

Qualification of NR Predictions Fan Coils:

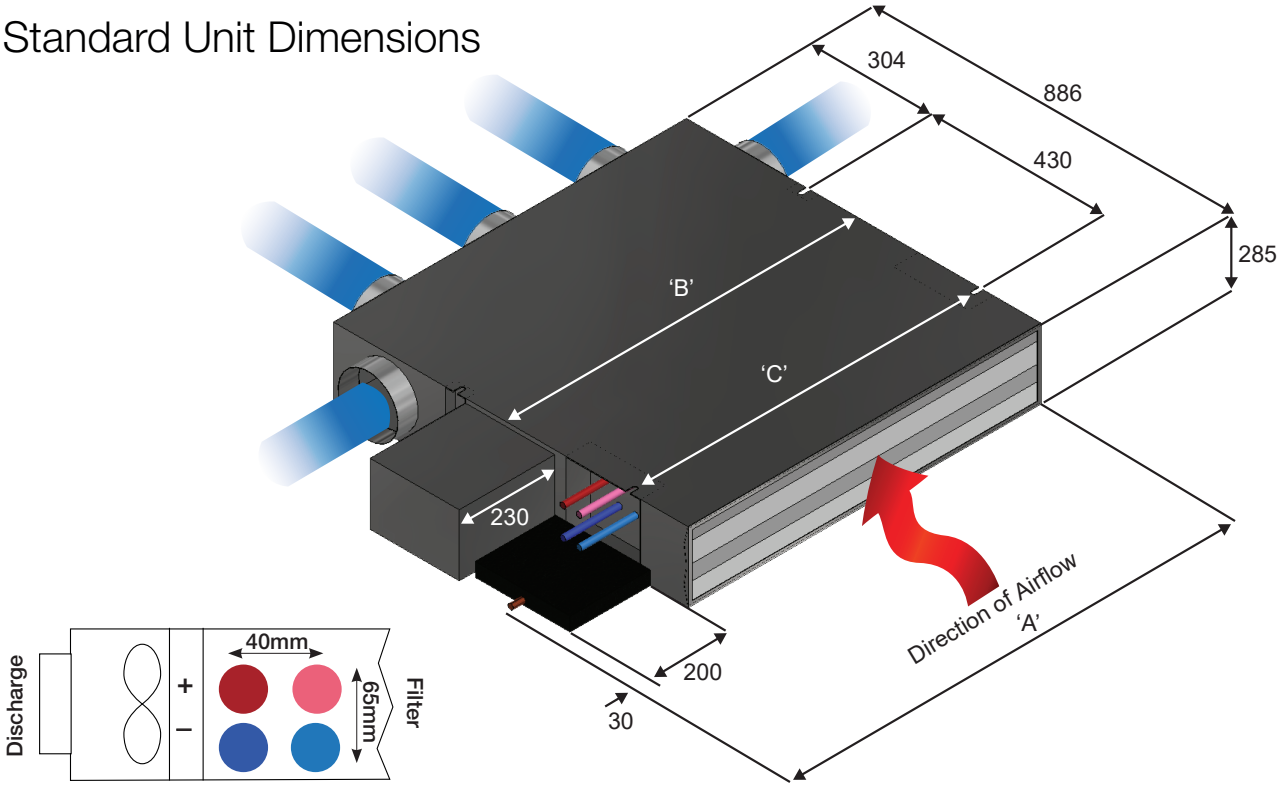
The N.R. guide figures quoted in the schedule are intended to show the levels which may be expected in a typical office environment. The room effect is calculated using the Schultz method and the resultant NR calculation requires that the following conditions be met.

- Room sizes are based on a cooling load of 120W/m2 with a chilled water flow temperature of 6°C and a return of 12°C
- Units must be correctly mounted onto a solid structure, using drop rods attached to the mounting points provided, in a false ceiling not less than 300mm deep, with standard T-Bar grid and 10mm fibreboard tiles.
- Rooms should be carpeted, with no more than 20% glazed or highly reflective surfaces
- In open plan areas units should be mounted not less than 6m apart and return air grilles should not be mounted directly below, or adjacent to unit inlets
- 1m of non noise regenerative flexible duct should be fitted to each outlet spigot, which should be sized to maintain the required N.R. level, i.e. 1.5m/s at NR25, 2.0m/s at NR30, 3.0m/s at NR35 and 4.0m/s at NR40
- Height from the floor to the discharge grilles is not less than 2.5m
- The attenuation due to the ceiling tiles is not less than the following

c	125	250	500	1K	2K	4K
dB	4	7	9	11	14	16

Providing that the grille plenums are correctly sized and insulated the foregoing should ensure that the ‘guide’ NR Levels are met when measured at 1.5m from the nearest grille.

Standard Unit Dimensions



*Note: Flow into coil Depicted on a LH- Unit.
All Coil Connections 15mm Plain Copper

Unit Model	Dim 'A' Overall Width	Dim 'B' Unit Width	Dim 'C' Fixing Centres	Maximum No. of Spigots/ Size	Cooling Coil Volume (L)	Heating Coil Volume (L)	DRY Weight (approx Kg)	WET Weight (approx Kg)
SPR 1 - 1	860	630	595	4 (250/200)	1.5	0.25	45	47
SPR 2 - 2	1110	880	845	4 (250/200)	2.2	0.35	55	58
SPR 3 - 2	1110	880	845	4 (250/200)	2.2	0.35	57	68
SPR 4 - 3	1460	1230	1195	5 (250/200)	3.0	0.5	75	79
SPR 5 - 4	1660	1430	1395	5 (250/200)	3.5	0.6	85	90
SPR 6 - 4	1660	1430	1395	5 (250/200)	3.5	0.6	90	95
SPR 8 - 5	2010	1780	1745	6 (250/200)	4.5	0.7	105	110
SPR 9 - 5	2010	1780	1745	6 (250/200)	4.5	0.7	109	115

* All dimensions quoted in mm

