marstair

TECHNICAL MANUAL

DX CASSETTE 600E/M, 600E & 600L

55208033-11

INDEX

GENERAL

1. TEV Ltd recommend that personnel working on this equipment be skilled and fully conversant with the appropriate Air Conditioning, Refrigeration and Electrical practices and have sound knowledge of current Industrial Safe Working practices.

2. These units consist of 600E/M cassettes using remote wired controllers, 600 L cassettes using infrared controllers and 600 E cassettes using infrared controllers.

3. These units contain live electrical components, moving parts and refrigerant under pressure. Always site out of reach of children and protect from vandalism.

4. The data plate only gives information for the 600 unit.

5. Refer to the outdoor unit manual / installation instructions for evacuating and adding refrigerant.

PART NUMBERS

Fascia	55222000 (all models)

	Fitted with 0.5m lift pump			Fitted with 5m condensate pump		
600E/M model	**20**	**40**	**60**	**20**	**40**	**60**
Part number	55222001	55222002	55222003	55222004	55222005	55222006

600L model	**20L**	**40L**	**60L**	**20L**	**40L**	**60L**
part number	55222007	55222008	55222009	55222022	55222023	55222024

600E model	**20E**	**40E**	**60E**	**20E**	**40E**	**60E**
Part number	55222013	55222014	55222015	55222016	55222017	55222018

NOTE: The fascia is shipped separate from the chassis and they are ordered on separate part numbers.

DIMENSIONS AND WEIGHTS

UNPACKED (with fascia fiitted).

Model	**600**		
	20	**40**	**60**
Height mm	335	335	335
Width mm	675	675	675
Depth mm	675	675	675
Weight kg	21	23	25

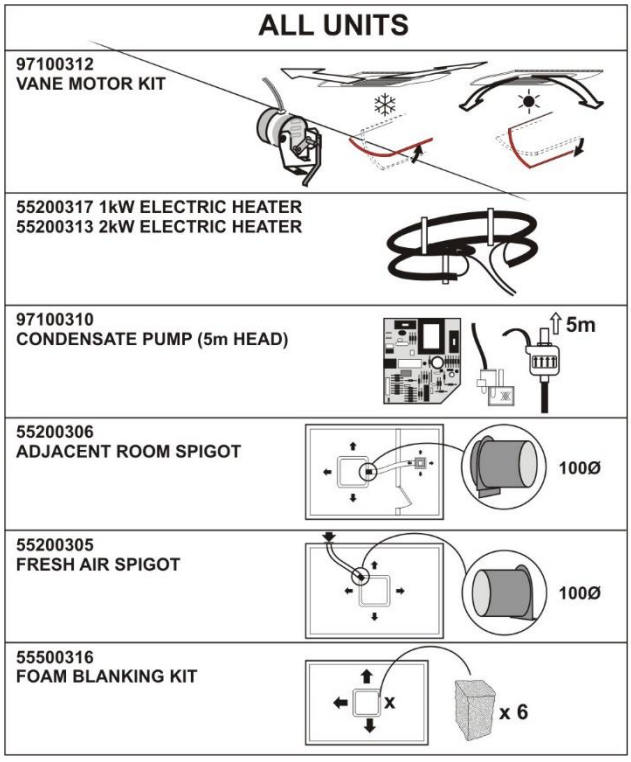
PACKED

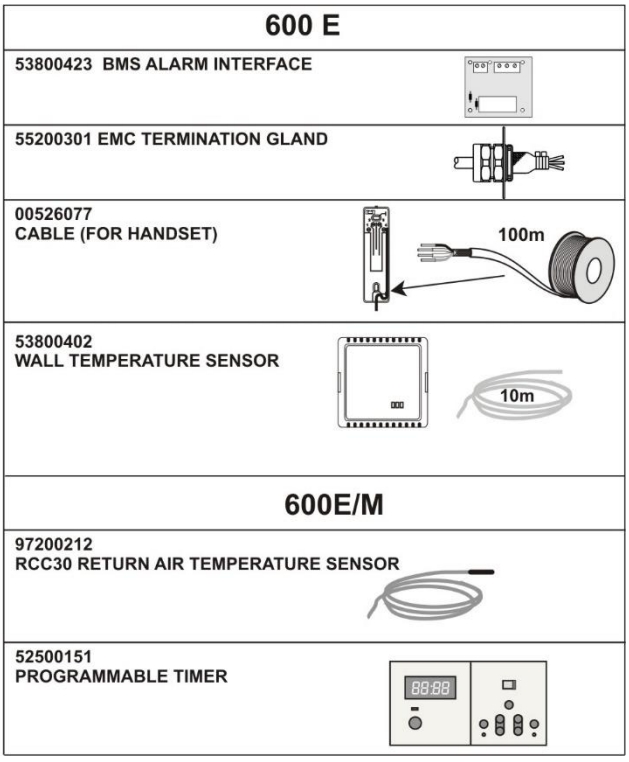
Model	**600 Chassis**			**600 Fascia**
	20	**40**	**60**	**20 / 40 / 60**
Height mm	360	360	360	100
Width mm	810	810	810	760
Depth mm	610	610	610	760
Weight kg	22	24	26	4

FEATURES AND OPTIONAL ACCESSORIES

STANDARD

	600E/M	600L	600E
De-ice thermostat/sensor	STD	STD	STD
3 fan speed combinations	STD	STD	STD
Remote infrared control	---	STD	STD
Remote hard wired control	STD	---	STD
0.5m lift pump	STD	STD	STD
5m condensate pump	STD	STD	STD
Programmable timer	---	STD	STD
Long life cleanable filter	STD	STD	STD
Remote temperature sensor	STD	---	---





OPTIONS

NOTE: These kits are easier to fit before installation, some may also be factory fitted.

	MODEL	AIR ON °C	HUMIDITY % RH	EVAPORATING TEMPERATURE °C											
				-2.5		0		2.5		5		7.5		10	
				TOTAL	SENS	TOTAL	SENS	TOTAL	SENS	TOTAL	SENS	TOTAL	SENS	TOTAL	SENS
LOW FAN SPEED	20	10	70	1.04	0.77	0.79	0.63	0.54	0.50	0.35	0.35	0.18	0.18		
		12.7	70	1.34	0.90	1.10	0.77	0.84	0.65	0.57	0.51	0.37	0.37	0.19	0.19
		15	70	1.62	1.01	1.38	0.88	1.12	0.76	0.85	0.64	0.55	0.51	0.36	0.36
		18	60	1.83	1.20	1.58	1.08	1.33	0.96	1.06	0.84	0.76	0.71	0.57	0.57
		21	50	2.00	1.40	1.75	1.28	1.50	1.17	1.22	1.05	0.95	0.95	0.78	0.78
	40	10	70	1.53	1.10	1.17	0.89	0.79	0.68	0.48	0.48	0.24	0.24		
		12.7	70	1.98	1.30	1.61	1.10	1.24	0.90	0.84	0.70	0.50	0.50	0.26	0.26
		15	70	2.38	1.46	2.02	1.26	1.64	1.07	1.25	0.88	0.82	0.68	0.48	0.48
		18	60	2.68	1.72	2.32	1.53	1.94	1.34	1.54	1.14	1.12	0.95	0.76	0.76
		21	50	2.92	1.98	2.56	1.79	2.19	1.60	1.79	1.42	1.37	1.22	1.04	1.04
	60	10	70	1.83	1.29	1.40	1.03	0.95	0.78	0.54	0.54	0.27	0.27		
		12.7	70	2.36	1.54	1.92	1.29	1.48	1.05	0.80	0.64	0.57	0.57	0.30	0.30
		15	70	2.83	1.74	2.41	1.50	1.96	1.26	1.49	1.02	0.98	0.78	0.54	0.54
		18	60	3.18	2.05	2.76	1.80	2.32	1.57	1.85	1.33	1.34	1.09	0.86	0.86
		21	50	3.47	2.34	3.05	2.10	2.61	1.86	2.14	1.63	1.64	1.39	1.18	1.18
MEDIUM FAN SPEED	20	10	70	1.18	0.90	0.90	0.74	0.62	0.62	0.42	0.42	0.21	0.21		
		12.7	70	1.54	1.04	1.25	0.90	0.96	0.76	0.65	0.62	0.44	0.44	0.23	0.23
		15	70	1.95	1.20	1.66	1.06	1.38	0.93	1.06	0.79	0.73	0.66	0.49	0.49
		18	60	2.09	1.39	1.81	1.26	1.51	1.14	1.20	1.00	0.88	0.88	0.68	0.68
		21	50	2.29	1.64	2.00	1.51	1.70	1.38	1.39	1.26	1.13	1.13	0.93	0.93
	40	10	70	1.89	1.38	1.44	1.12	0.98	0.87	0.62	0.62	0.31	0.31		
		12.7	70	2.44	1.62	1.98	1.38	1.53	1.14	1.03	0.90	0.64	0.64	0.34	0.34
		15	70	3.10	1.88	2.65	1.64	2.18	1.42	1.70	1.18	1.17	0.94	0.70	0.70
		18	60	3.47	2.21	3.02	1.98	2.56	1.75	2.06	1.53	1.54	1.30	1.07	1.07
		21	50	3.62	2.49	3.17	2.26	2.71	2.04	2.22	1.82	1.69	1.58	1.35	1.35
	60	10	70	2.36	1.69	1.80	1.37	1.22	1.05	0.73	0.73	0.37	0.37		
		12.7	70	3.04	2.01	2.48	1.69	1.90	1.38	1.30	1.07	0.76	0.76	0.40	0.40
		15	70	3.66	2.26	3.10	1.95	2.53	1.65	1.91	1.34	1.26	1.04	0.73	0.73
		18	60	4.11	2.66	3.56	2.35	2.99	2.06	2.38	1.75	1.73	1.46	1.16	1.16
		21	50	4.49	3.06	3.94	2.75	3.37	2.46	2.76	2.17	2.10	1.86	1.58	1.58
HIGH FAN SPEED	20	10	70	1.33	1.03	1.01	0.86	0.72	0.72	0.49	0.49	0.25	0.25		
		12.7	70	1.72	1.19	1.40	1.04	1.07	0.89	0.74	0.74	0.51	0.51	0.27	0.27
		15	70	2.08	1.33	1.76	1.18	1.42	1.04	1.07	0.88	0.74	0.74	0.50	0.50
		18	60	2.34	1.61	2.02	1.46	1.70	1.33	1.34	1.18	1.03	1.03	0.80	0.80
		21	50	2.57	1.90	2.25	1.77	1.91	1.63	1.54	1.54	1.32	1.32	1.10	1.10
	40	10	70	2.29	1.70	1.74	1.40	1.18	1.11	0.78	0.78	0.39	0.39		
		12.7	70	2.96	1.99	2.41	1.71	1.85	1.43	1.25	1.14	0.82	0.82	0.43	0.43
		15	70	3.57	2.23	3.02	1.96	2.46	1.69	1.86	1.41	1.22	1.13	0.79	0.79
		18	60	4.02	2.66	3.47	2.39	2.91	2.13	2.31	1.86	1.66	1.58	1.26	1.26
		21	50	4.40	3.10	3.86	2.85	3.29	2.59	2.69	2.33	2.10	2.10	1.74	1.74
	60	10	70	2.98	2.18	2.26	1.77	1.54	1.38	0.97	0.97	0.49	0.49		
		12.7	70	3.84	2.56	3.13	2.18	2.40	1.79	1.63	1.41	1.02	1.02	0.53	0.53
		15	70	4.62	2.88	3.92	2.50	3.19	2.14	2.42	1.76	1.58	1.38	0.98	0.98
		18	60	5.22	3.40	4.50	3.03	3.78	2.67	3.00	2.30	2.17	1.94	1.56	1.56
		21	50	5.70	3.94	4.98	3.58	4.26	3.22	3.48	2.86	2.66	2.50	2.13	2.13

	MODEL	AIR ON °C	HUMIDITY % RH	EVAPORATING TEMPERATURE °C											
				-2.5		0		2.5		5		7.5		10	
				TOTAL	SENS	TOTAL	SENS	TOTAL	SENS	TOTAL	SENS	TOTAL	SENS	TOTAL	SENS
LOW FAN SPEED	20	10	70	1.06	0.78	0.80	0.64	0.54	0.50	0.35	0.35	0.18	0.18		
		12.7	70	1.36	0.91	1.11	0.78	0.85	0.65	0.58	0.52	0.37	0.37	0.19	0.19
		15	70	1.65	1.02	1.39	0.89	1.13	0.77	0.85	0.64	0.55	0.51	0.36	0.36
		18	60	1.86	1.21	1.60	1.09	1.34	0.97	1.06	0.84	0.76	0.71	0.57	0.57
		21	50	2.03	1.42	1.78	1.30	1.51	1.18	1.23	1.05	0.95	0.95	0.78	0.78
	40	10	70	1.54	1.10	1.18	0.90	0.80	0.69	0.48	0.48	0.24	0.24		
		12.7	70	1.99	1.31	1.62	1.10	1.25	0.90	0.85	0.70	0.50	0.50	0.26	0.26
		15	70	2.40	1.48	2.03	1.27	1.66	1.08	1.25	0.88	0.82	0.68	0.48	0.48
		18	60	2.70	1.74	2.34	1.54	1.96	1.34	1.55	1.14	1.12	0.95	0.76	0.76
		21	50	2.94	1.99	2.58	1.80	2.21	1.61	1.80	1.42	1.38	1.22	1.04	1.04
	60	10	70	1.84	1.29	1.40	1.03	0.96	0.79	0.54	0.54	0.27	0.27		
		12.7	70	2.37	1.54	1.94	1.29	1.49	1.05	1.01	0.80	0.57	0.57	0.30	0.30
		15	70	2.85	1.76	2.42	1.50	1.97	1.26	1.50	1.02	0.98	0.78	0.54	0.54
		18	60	3.21	2.06	2.77	1.81	2.33	1.57	1.86	1.33	1.34	1.09	0.86	0.86
		21	50	3.49	2.36	3.06	2.11	2.62	1.87	2.14	1.63	1.64	1.39	1.18	1.18
MEDIUM FAN SPEED	20	10	70	1.21	0.90	0.91	0.75	0.62	0.62	0.42	0.42	0.21	0.21		
		12.7	70	1.56	1.06	1.26	0.91	0.97	0.77	0.66	0.62	0.44	0.44	0.23	0.23
		15	70	1.88	1.18	1.58	1.04	1.29	0.90	0.97	0.75	0.63	0.63	0.42	0.42
		18	60	2.12	1.41	1.82	1.27	1.53	1.14	1.21	1.00	0.88	0.88	0.68	0.68
		21	50	2.32	1.66	2.02	1.53	1.73	1.39	1.40	1.26	1.13	1.13	0.93	0.93
	40	10	70	1.91	1.38	1.46	1.13	0.98	0.88	0.62	0.62	0.31	0.31		
		12.7	70	2.46	1.63	2.01	1.38	1.54	1.14	1.04	0.90	0.64	0.64	0.34	0.34
		15	70	2.97	1.83	2.51	1.59	2.04	1.36	1.54	1.12	1.01	0.88	0.62	0.62
		18	60	3.35	2.17	2.89	1.93	2.42	1.70	1.92	1.46	1.38	1.23	0.98	0.98
		21	50	3.66	2.50	3.20	2.28	2.73	2.05	2.22	1.82	1.69	1.59	1.34	1.34
	60	10	70	2.38	1.70	1.81	1.37	1.23	1.05	0.74	0.74	0.37	0.37		
		12.7	70	3.06	2.02	2.50	1.70	1.92	1.38	1.30	1.07	0.76	0.76	0.40	0.40
		15	70	3.69	2.29	3.12	1.97	2.54	1.66	1.92	1.35	1.26	1.04	0.73	0.73
		18	60	4.15	2.68	3.58	2.36	3.01	2.06	2.38	1.76	1.73	1.46	1.16	1.16
		21	50	4.53	3.07	3.96	2.77	3.38	2.47	2.77	2.17	2.11	1.87	1.58	1.58
HIGH FAN SPEED	20	10	70	1.35	1.04	1.02	0.87	0.72	0.72	0.49	0.49	0.25	0.25		
		12.7	70	1.75	1.21	1.42	1.05	1.09	0.90	0.75	0.75	0.51	0.51	0.27	0.27
		15	70	2.11	1.34	1.78	1.19	1.44	1.04	1.08	0.89	0.74	0.74	0.50	0.50
		18	60	2.39	1.62	2.06	1.48	1.71	1.34	1.35	1.18	1.03	1.03	0.80	0.80
		21	50	2.62	1.93	2.28	1.78	1.94	1.64	1.55	1.55	1.33	1.33	1.10	1.10
	40	10	70	2.32	1.72	1.76	1.42	1.20	1.12	0.78	0.78	0.40	0.40		
		12.7	70	3.00	2.02	2.44	1.72	1.86	1.44	1.26	1.14	0.82	0.82	0.43	0.43
		15	70	3.62	2.26	3.06	1.98	2.48	1.70	1.86	1.42	1.22	1.13	0.79	0.79
		18	60	4.08	2.68	3.52	2.41	2.94	2.14	2.32	1.86	1.67	1.58	1.26	1.26
		21	50	4.46	3.14	3.90	2.86	3.32	2.60	2.70	2.34	2.10	2.10	1.73	1.73
	60	10	70	3.01	2.19	2.29	1.78	1.55	1.38	0.98	0.98	0.49	0.49		
		12.7	70	3.88	2.58	3.16	2.19	2.42	1.80	1.64	1.42	1.02	1.02	0.53	0.53
		15	70	4.68	2.91	3.95	2.52	3.22	2.14	2.42	1.77	1.58	1.38	0.98	0.98
		18	60	5.27	3.43	4.54	3.06	3.81	2.69	3.02	2.31	2.18	1.94	1.55	1.55
		21	50	5.76	3.97	5.03	3.60	4.30	3.24	3.50	2.87	2.66	2.50	2.13	2.13

	MODEL	AIR ON °C	HUMIDITY % RH	EVAPORATING TEMPERATURE °C											
				-2.5		0		2.5		5		7.5		10	
				TOTAL	SENS	TOTAL	SENS	TOTAL	SENS	TOTAL	SENS	TOTAL	SENS	TOTAL	SENS
LOW FAN SPEED	20	10	70	1.02	0.76	0.78	0.62	0.53	0.50	0.35	0.35	0.18	0.18		
		12.7	70	1.32	0.89	1.07	0.76	0.82	0.64	0.56	0.51	0.37	0.37	0.19	0.19
		15	70	1.59	0.99	1.34	0.87	1.10	0.75	0.83	0.63	0.54	0.50	0.35	0.35
		18	60	1.80	1.18	1.55	1.06	1.30	0.95	1.03	0.83	0.74	0.70	0.57	0.57
		21	50	1.97	1.38	1.72	1.26	1.46	1.15	1.20	1.04	0.94	0.94	0.78	0.78
	40	10	70	1.51	1.09	1.15	0.88	0.78	0.68	0.47	0.47	0.24	0.24		
		12.7	70	1.95	1.29	1.59	1.09	1.22	0.89	0.83	0.70	0.50	0.50	0.26	0.26
		15	70	2.33	1.45	1.99	1.26	1.62	1.06	1.23	0.87	0.81	0.68	0.47	0.47
		18	60	2.65	1.70	2.29	1.51	1.92	1.32	1.53	1.14	1.10	0.94	0.75	0.75
		21	50	2.89	1.96	2.53	1.78	2.17	1.59	1.78	1.41	1.35	1.22	1.03	1.03
	60	10	70	1.82	1.27	1.38	1.02	0.94	0.78	0.54	0.54	0.27	0.27		
		12.7	70	2.34	1.53	1.90	1.27	1.47	1.04	1.00	0.79	0.56	0.56	0.30	0.30
		15	70	2.81	1.74	2.38	1.49	1.94	1.25	1.48	1.01	0.98	0.77	0.54	0.54
		18	60	3.16	2.03	1.94	1.79	2.30	1.55	1.83	1.32	1.33	1.08	0.86	0.86
		21	50	3.44	2.33	3.02	2.09	2.58	1.86	2.12	1.65	1.62	1.38	1.17	3.57
MEDIUM FAN SPEED	20	10	70	1.16	0.88	0.88	0.74	0.61	0.61	0.41	0.41	0.21	0.21		
		12.7	70	1.50	1.02	1.22	0.89	0.94	0.75	0.63	0.63	0.43	0.43	0.22	0.22
		15	70	1.81	1.14	1.53	1.01	1.24	0.88	0.94	0.74	0.62	0.62	0.42	0.42
		18	60	2.04	1.37	1.76	1.25	1.47	1.12	1.17	0.98	0.87	0.87	0.67	0.67
		21	50	2.24	1.62	1.96	1.50	1.67	1.37	1.36	1.24	1.11	1.11	0.92	0.92
	40	10	70	1.86	1.35	1.42	1.10	0.96	0.86	0.61	0.61	0.30	0.30		
		12.7	70	2.40	1.59	1.95	1.36	1.50	1.12	0.99	0.89	0.64	0.64	0.34	0.34
		15	70	2.89	1.79	2.45	1.56	1.99	1.34	1.51	1.10	0.99	0.87	0.62	0.62
		18	60	3.26	2.12	2.82	1.90	2.36	1.67	1.87	1.45	1.36	1.22	0.98	0.98
		21	50	3.56	2.46	3.12	2.24	2.66	2.02	2.18	1.80	1.66	1.58	1.34	1.34
	60	10	70	2.33	1.66	1.78	1.35	1.21	1.04	0.73	0.73	0.37	0.37		
		12.7	70	3.00	1.98	2.45	1.67	1.88	1.37	1.28	1.06	0.76	0.76	0.39	0.39
		15	70	3.61	2.24	3.06	1.94	2.50	1.63	1.89	1.34	1.24	1.03	0.73	0.73
		18	60	4.06	2.63	3.51	2.33	2.95	2.03	2.35	1.74	1.70	1.44	1.16	1.16
		21	50	4.43	3.02	3.89	2.73	3.33	2.44	2.72	2.15	2.08	1.86	1.58	1.58
HIGH FAN SPEED	20	10	70	1.30	1.01	0.98	0.86	0.70	0.70	0.48	0.48	0.24	0.24		
		12.7	70	1.68	1.18	1.36	1.02	1.05	0.87	0.74	0.74	0.50	0.50	0.26	0.26
		15	70	2.02	1.30	1.71	1.16	1.39	1.02	1.05	0.87	0.73	0.73	0.50	0.50
		18	60	2.29	1.58	1.98	1.44	1.65	1.30	1.30	1.16	1.02	1.02	0.78	0.78
		21	50	2.50	1.88	2.19	1.74	1.86	1.62	1.52	1.52	1.30	1.30	1.08	1.08
	40	10	70	2.24	1.67	1.70	1.38	1.16	1.10	0.78	0.78	0.39	0.39		
		12.7	70	2.90	1.96	2.36	1.68	1.81	1.41	1.22	1.13	0.81	0.81	0.42	0.42
		15	70	3.50	2.19	2.96	1.93	2.41	1.66	1.82	1.39	1.19	1.12	0.78	0.78
		18	60	3.94	2.62	3.41	2.36	2.85	2.10	2.26	1.84	1.62	1.62	1.26	1.26
		21	50	4.31	3.06	3.78	2.81	3.22	2.56	2.63	2.30	2.08	2.08	1.71	1.71
	60	10	70	2.93	2.14	2.22	1.74	1.52	1.37	0.96	0.96	0.49	0.49		
		12.7	70	3.78	2.53	3.07	2.14	2.36	1.78	1.60	1.39	1.01	1.01	0.53	0.53
		15	70	4.55	2.84	3.85	2.47	3.14	2.10	2.38	1.74	1.56	1.37	0.97	0.97
		18	60	5.13	3.35	4.43	2.99	3.71	2.64	2.95	2.28	2.14	1.92	1.54	1.54
		21	50	5.60	3.89	4.90	3.54	4.19	3.19	3.42	2.84	2.57	2.57	2.11	2.11

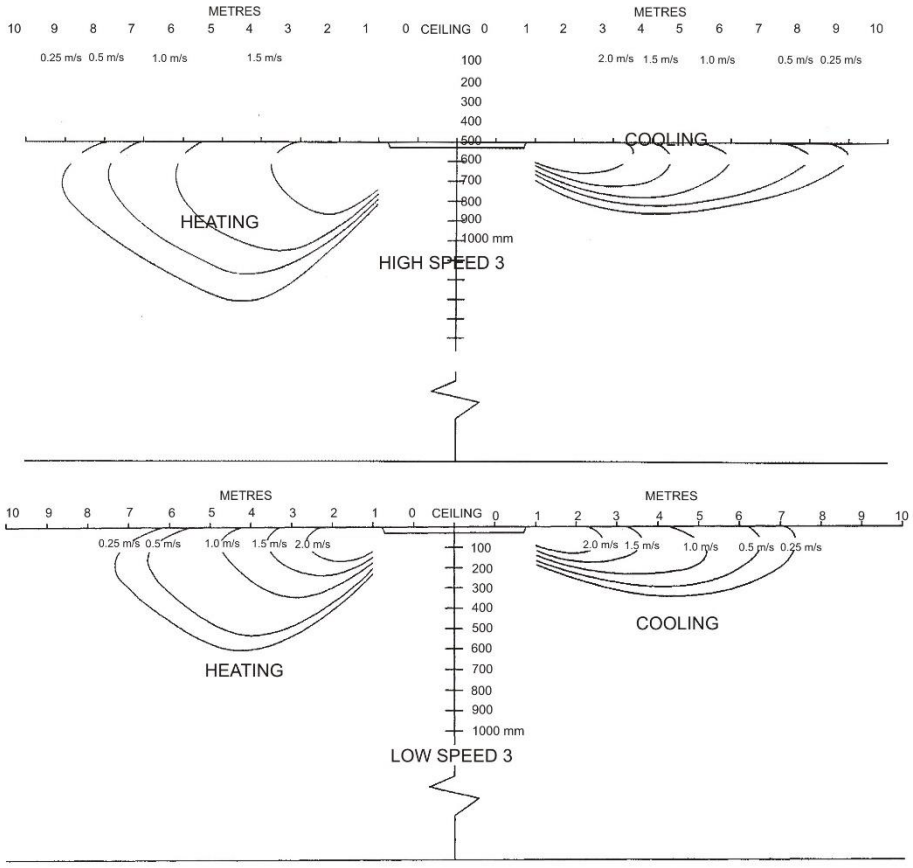
	MODEL	AIR ON °C	HUMIDITY % RH	EVAPORATING TEMPERATURE °C											
				-2.5		0		2.5		5		7.5		10	
				TOTAL	SENS	TOTAL	SENS	TOTAL	SENS	TOTAL	SENS	TOTAL	SENS	TOTAL	SENS
LOW FAN SPEED	20	10	70	1.18	0.85	0.90	0.69	0.62	0.54	0.38	0.38	0.19	0.19		
		12.7	70	1.53	1.00	1.25	0.85	0.96	0.70	0.65	0.55	0.39	0.39	0.21	0.21
		15	70	1.84	1.12	1.56	0.98	1.27	0.83	0.97	0.69	0.63	0.54	0.38	0.38
		18	60	2.08	1.32	1.80	1.18	1.51	1.04	1.20	0.90	0.87	0.76	0.61	0.61
		21	50	2.27	1.53	1.99	1.39	1.70	1.26	1.39	1.12	1.06	0.98	0.83	0.83
	40	10	70	1.66	1.18	1.26	0.94	0.86	0.72	0.50	0.50	0.25	0.25		
		12.7	70	2.14	1.39	1.74	1.17	1.34	0.95	0.91	0.74	0.51	0.51	0.27	0.27
		15	70	2.57	1.58	2.18	1.35	1.78	1.14	1.35	0.93	0.89	0.71	0.50	0.50
		18	60	2.89	1.84	2.50	1.62	2.10	1.42	1.68	1.21	1.22	0.99	0.78	0.78
		21	50	3.15	2.11	2.77	1.90	2.37	1.70	1.94	1.49	1.49	1.28	1.07	1.07
	60	10	70	1.93	1.34	1.47	1.07	1.01	0.82	0.56	0.56	0.28	0.28		
		12.7	70	2.48	1.61	2.02	1.34	1.56	1.09	1.06	0.82	0.58	0.58	0.30	0.30
		15	70	2.98	1.83	2.53	1.28	2.07	1.32	1.58	1.06	1.04	0.80	0.55	0.55
		18	60	3.35	2.14	2.90	1.88	2.44	1.63	1.95	1.38	1.42	1.12	0.88	0.88
		21	50	3.65	2.44	3.20	2.19	2.74	1.94	2.26	1.69	1.73	1.43	1.20	1.20
MEDIUM FAN SPEED	20	10	70	1.38	1.00	1.05	0.82	0.71	0.65	0.46	0.46	0.23	0.23		
		12.7	70	1.78	1.17	1.45	1.00	1.11	0.83	0.76	0.66	0.48	0.48	0.25	0.25
		15	70	2.14	1.30	1.82	1.14	1.48	0.98	1.12	0.82	0.74	0.66	0.46	0.46
		18	60	2.42	1.55	2.10	1.39	1.76	1.24	1.40	1.08	1.01	0.92	0.74	0.74
		21	50	2.65	1.81	2.32	1.66	1.94	1.50	1.62	1.35	1.23	1.23	1.01	1.01
	40	10	70	2.10	1.50	1.60	1.21	1.09	0.94	0.65	0.65	0.33	0.33		
		12.7	70	2.70	1.77	2.21	1.49	1.70	1.22	1.15	0.95	0.40	0.68	0.35	0.35
		15	70	3.26	1.99	2.76	1.72	2.26	1.46	1.71	1.20	1.13	0.93	0.65	0.65
		18	60	3.67	2.34	3.18	2.07	2.67	1.82	2.13	1.56	1.54	1.30	1.03	1.03
		21	50	4.08	2.69	3.51	2.43	3.01	2.18	2.46	1.93	1.88	1.67	1.42	1.42
	60	10	70	2.54	1.78	1.94	1.45	1.33	1.10	0.76	0.76	0.38	0.38		
		12.7	70	3.22	2.12	2.62	1.78	2.01	1.43	1.34	1.10	0.76	0.76	0.38	0.38
		15	70	3.94	2.43	3.34	2.09	2.74	1.76	2.07	1.42	1.37	1.09	0.75	0.75
		18	60	4.43	2.84	3.84	2.50	3.23	2.18	2.58	1.85	1.87	1.52	1.20	1.20
		21	50	4.83	3.26	4.24	2.92	3.63	2.59	2.98	2.27	2.28	1.94	1.64	1.64
HIGH FAN SPEED	20	10	70	1.58	1.16	1.20	0.96	0.82	0.77	0.54	0.54	0.27	0.27		
		12.7	70	2.04	1.35	1.66	1.17	1.28	0.98	0.86	0.79	0.57	0.57	0.30	0.30
		15	70	2.46	1.50	2.09	1.33	1.70	1.16	1.28	0.98	0.84	0.78	0.55	0.55
		18	60	2.78	1.80	2.40	1.63	2.02	1.46	1.60	1.29	1.14	1.14	0.88	0.88
		21	50	3.05	2.11	2.66	1.95	2.28	1.78	1.86	1.62	1.46	1.46	1.21	1.21
	40	10	70	2.62	1.88	1.99	1.54	1.36	1.20	0.84	0.84	0.42	0.42		
		12.7	70	3.38	2.22	2.75	1.89	2.12	1.56	1.44	1.23	0.88	0.88	0.46	0.46
		15	70	4.07	2.49	3.45	2.17	2.81	1.86	2.13	1.54	1.40	1.21	0.85	0.85
		18	60	4.58	2.94	3.97	0.22	3.33	2.32	2.65	2.01	1.92	1.69	1.35	1.35
		21	50	5.02	3.41	4.39	3.10	3.76	2.80	3.08	2.50	2.34	2.18	1.86	1.86
	60	10	70	3.31	2.37	2.53	1.91	1.72	1.47	1.02	1.02	0.52	0.52		
		12.7	70	4.26	2.81	3.48	2.37	2.68	1.94	1.82	1.50	1.07	1.07	0.56	0.56
		15	70	5.15	3.17	4.36	2.74	3.56	2.32	2.70	1.90	1.78	1.46	1.03	1.03
		18	60	5.78	3.71	5.01	3.29	4.21	2.88	3.35	2.46	2.43	2.05	1.63	1.63
		21	50	6.31	4.27	5.54	3.86	4.74	3.46	3.89	3.05	2.97	2.63	2.23	2.23

AIRFLOWS

RANGE 3			LOW SPEED	MEDIUM SPEED	HIGH SPEED
RANGE 2		LOW SPEED	MEDIUM SPEED	HIGH SPEED	
RANGE 1	LOW SPEED	MEDIUM SPEED	HIGH SPEED		

600 (ALL)	**m³/s**	**m³/s**	**m³/s**	**m³/s**	**m³/s**
20	0.12	0.146	0.173	0.209	0.256
40	0.12	0.146	0.173	0.209	0.256
60	0.12	0.146	0.173	0.209	0.256

DISCHARGE VELOCITIES



SOUND POWER and SOUND PRESSURE

speed 1 = lowest, speed 5 = highest

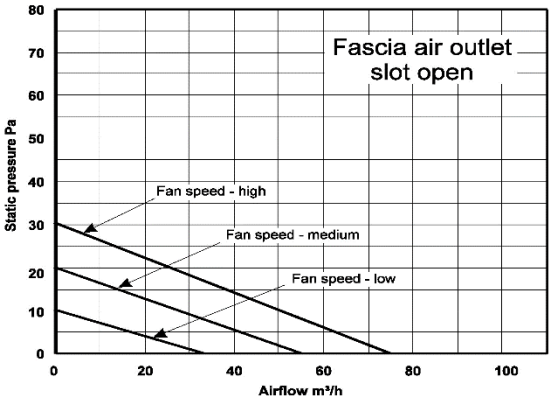
		SOUND POWER LEVELS Frequency Hz							SOUND PRESSURE LEVELS	
600 (ALL)	**SPEED**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**dBA**	**dBA**	**NC**
20	**1**	56.3	48.3	45.5	39.0	36.6	35.8	47	26	18
	2	58.8	51.9	50.2	44.9	41.4	37.5	52	31	23
	3	61.6	57.8	55.6	53.8	48.5	44.4	58	37	31
	4	62.9	60.1	57.6	56.3	51.3	46.8	61	40	34
	5	67.0	65.6	62.9	61.3	57.6	53.0	66	45	39
40	**1**	55.7	49.7	46.4	39.2	37.2	35.7	48	27	19
	2	57.5	53.6	50.9	45.1	42.3	39.8	52	31	24
	3	61.9	59.0	56.2	54.2	48.9	44.2	59	38	32
	4	63.1	62.0	58.3	56.6	51.6	46.7	61	40	34
	5	68.0	67.3	63.5	61.9	57.5	52.8	67	46	40
60	**1**	55.5	51.1	47.8	41.8	41.1	40.0	50	29	22
	2	58.8	54.8	52.0	47.5	46.2	42.3	54	33	26
	3	62.1	59.2	56.4	53.6	49.9	43.2	59	38	31
	4	64.1	61.2	58.5	55.6	51.7	45.4	60	39	33
	5	69.4	66.5	63.1	60.6	56.5	51.6	66	45	39

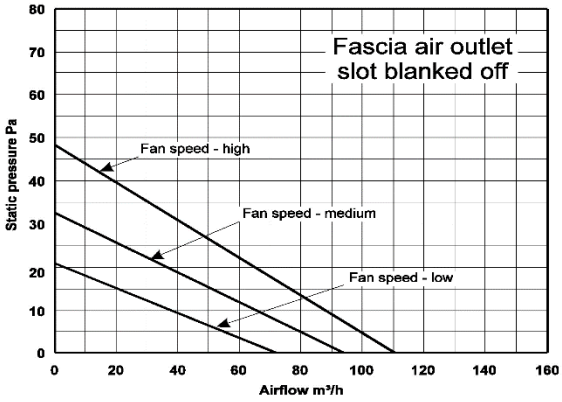
Sound Power Levels were obtained in conformance with BS 4196: Part 5: 1981. Values are shown in dB with a standard reference of 1 pW. Sound Pressure Levels are dB relative to 2 x 10^{-5}N/m² and are calculated from results measured in anechoic conditions. Values relate to a position of 3m away from the centre line of the unit, 1m down.

BRANCH DUCT

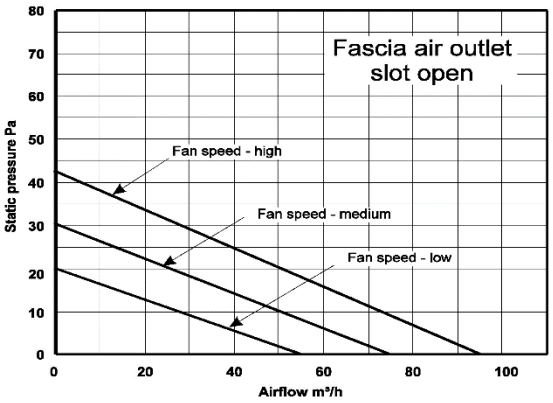
The graphs below show the amount of conditioned air passed by a single branch duct.

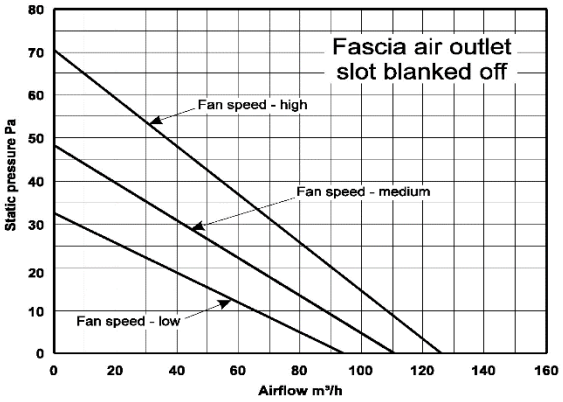
FAN SPEED RANGE 1 FOR MINIMUM NOISE LEVELS



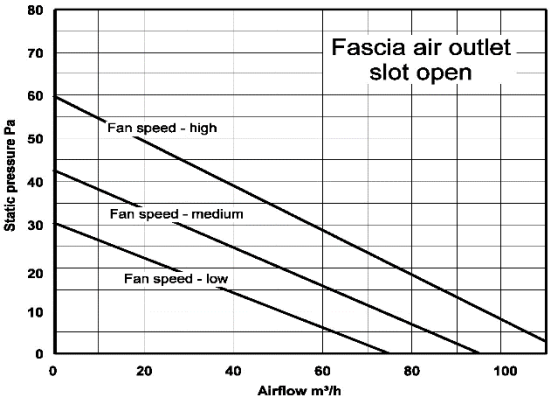


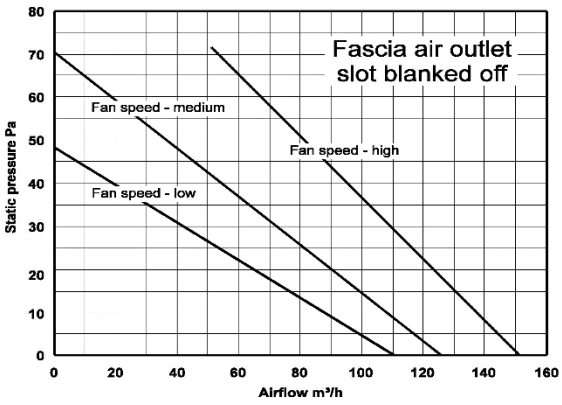
FAN SPEED RANGE 2 FOR NORMAL NOISE LEVELS





FAN SPEED RANGE 3 FOR MAXIMUM NOISE LEVELS





As shown on the graphs above, branch duct airflow can be be increased by blanking off the fascia side to which the branch duct has been connected.

ELECTRICAL DATA

ELECTRICAL LOADS [230V 50Hz 1Ph (A) OR 400V 50Hz 3PhN (A/Ph)]

600 (ALL)	**20**	**40**	**60**
FAN MOTOR	0.5	0.5	0.5
LIFT PUMP (10 watts)	9mA	9mA	9mA
CONDENSATE PUMP (27.6 watts)	12.5mA	12.5mA	12.5mA
ELECTRIC HEATER (1kW)	4.2	4.2	4.2
ELECTRIC HEATER (2Kw)	8.3	8.3	8.3

FUSES (if matched with Marstair outdoor units)

The system and its supply/interconnecting wiring must be protected by fuses, preferably High Rupture Current (HRC) motor rated types (to BS EN60269) or miniature circuit breakers to (BS EN60898) or local codes having similar time lag characteristics, that allow starting of the compressor yet still afford close overcurrent protection under running conditions. The ratings below are for HRC motor rated fuses.

FUSES FOR SYSTEMS WITH 1 PH 230V OUTDOOR UNITS (A)

MCU+	600								
	20			40			60		
	S	H1	H2	S	H1	H2	S	H1	H2
15	16	16	16						
20	16	16	16						
30	16	16	16	16	16	16			
40				20	20	20	20	20	20
50				16	16	16	16	16	16
60							20	20	20
DCU+	**S**	**H1**	**H2**	**S**	**H1**	**H2**	**S**	**H1**	**H2**
15	16	16	16						
20	16	16	16						
30	16	16	16	16	16	16			
40				20	20	20	20	20	20
50				25	25	25	25	25	25
60							25	25	25
MHPUE (L)	**S**	**H1**	**H2**	**S**	**H1**	**H2**	**S**	**H1**	**H2**
15	16	16	16						
30				16	20	20			
50							16	25	25
DHPUE	**S**	**H1**	**H2**	**S**	**H1**	**H2**	**S**	**H1**	**H2**
15	16	16	16						
30				16	25	25			
50							20	32	32

FUSES FOR SYSTEMS WITH 3PH 400V OUTDOOR UNITS (A/Ph)

MCU+	600								
	20			40			60		
	S	H1	H2	S	H1	H2	S	H1	H2
30	10	10	10	10	10	10			
40				10	10	10	10	10	10
50				10	10	10	10	10	10
60							10	10	10
DCU+	**S**	**H1**	**H2**	**S**	**H1**	**H2**	**S**	**H1**	**H2**
30	10	10	10	10	10	10			
40				10	10	10	10	10	10
50				10	10	10	10	10	10
60							16	16	16
MHPUE	**S**	**H1**	**H2**	**S**	**H1**	**H2**	**S**	**H1**	**H2**
30				10	16	16			
50							10	16	16
DHPUE	**S**	**H1**	**H2**	**S**	**H1**	**H2**	**S**	**H1**	**H2**
30				10	16	16			
50							10	20	20
MHPUL	**S**	**H1**	**H2**	**S**	**H1**	**H2**	**S**	**H1**	**H2**
30				10	16	16			
50							10	16	16

S= Standard units (no heaters) H= Electric heaters fitted

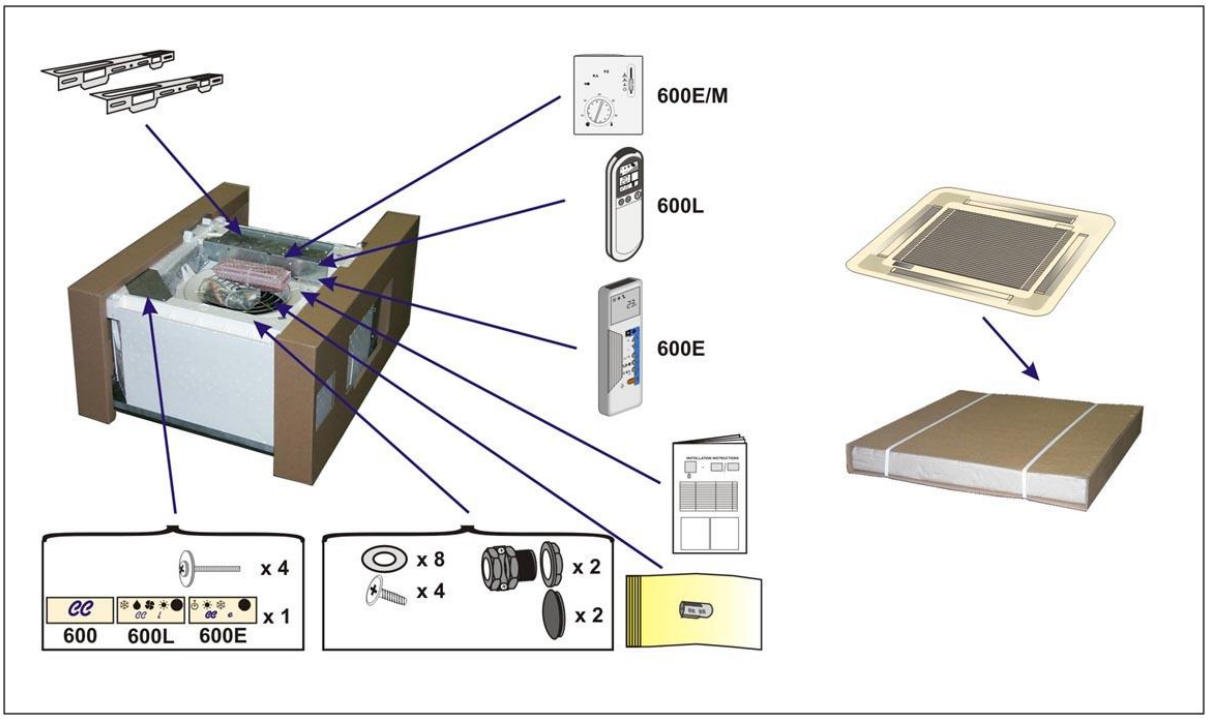
FUSES FOR ALL-ELECTRONIC SYSTEMS HAVING SEPARATE SUPPLIES

Provided that both indoor and outdoor units are electronic (ie. 600E matched with MHPUE or DHPUE) and control cables between them are data cables, the units may be independently supplied and fused .

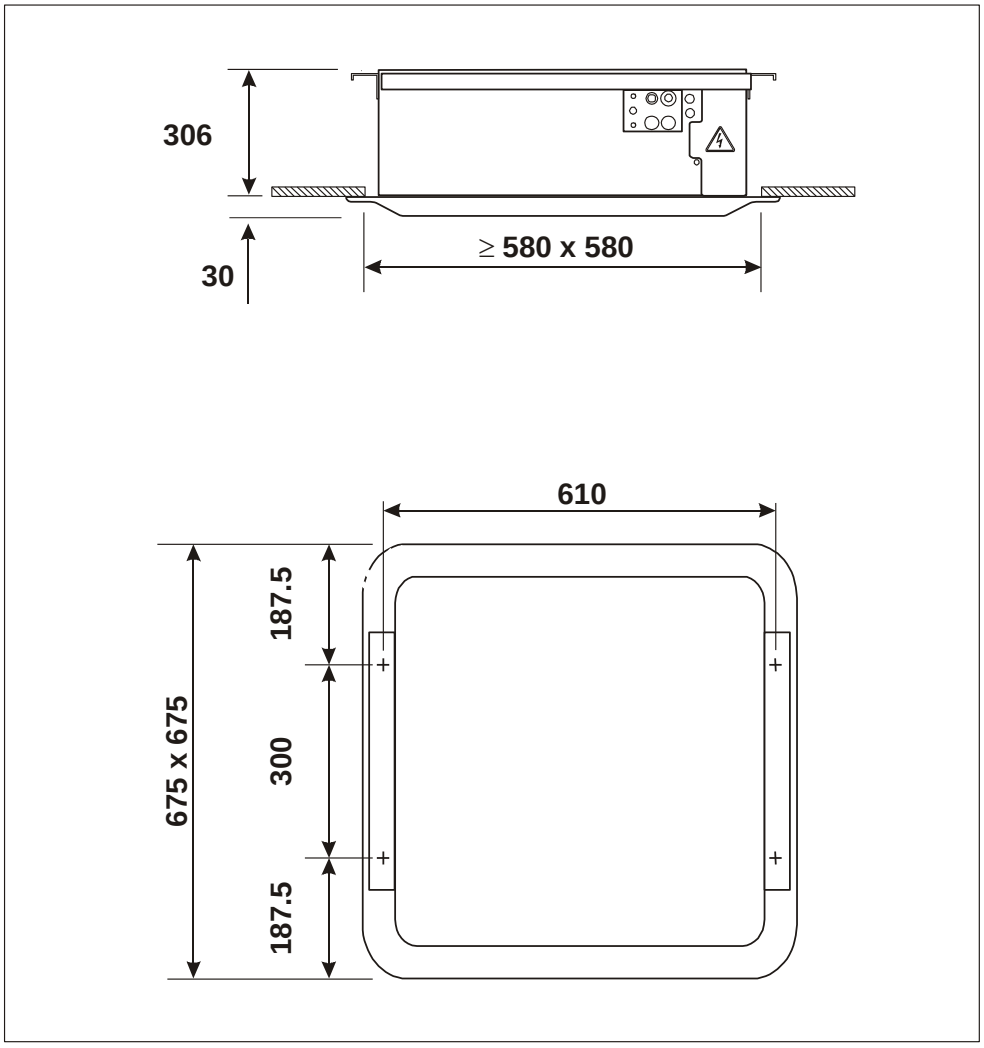
	600		
	20E	**40E**	**60E**
1Ph Cool Only	5	5	5
1Ph with Electric Heating	10	10	10

INSTALLATION

CONTENTS

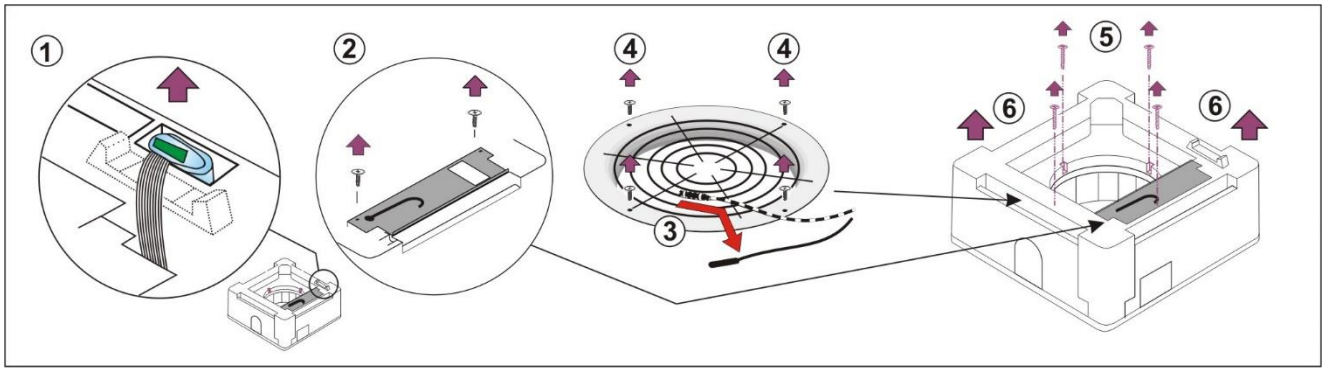


DIMENSIONS

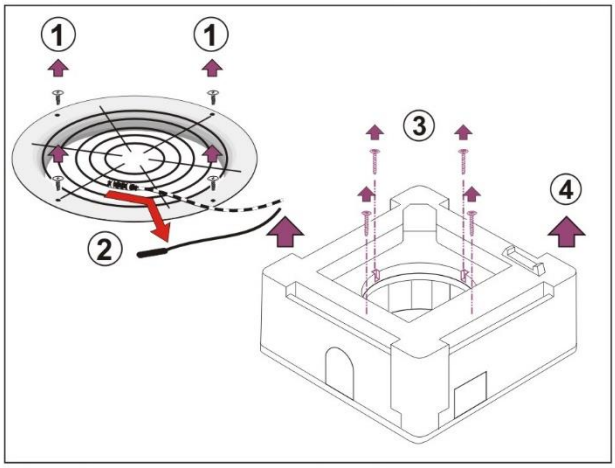


REMOVAL OF CHASSIS

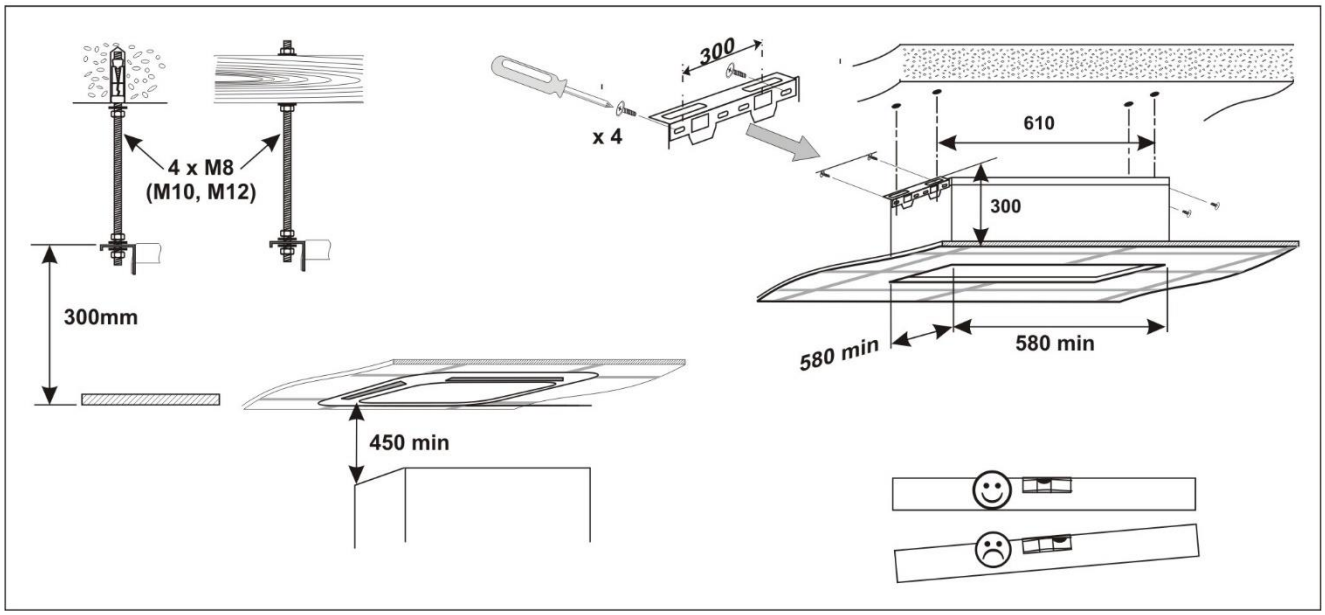
600L & 600E



600E/M



MOUNTING

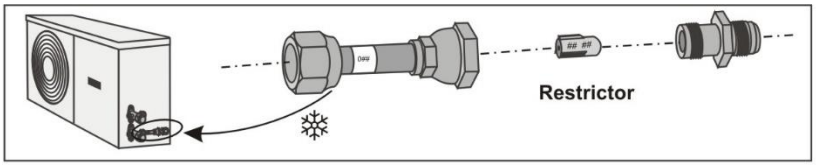


PIPEWORK

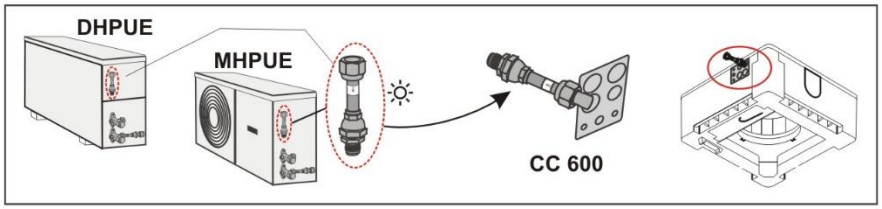
CONNECTIONS

600 (ALL)		20	40	60
A	**SUCTION**	3/8”	½”	5/8”
B	**EXPANSION**	3/8”	3/8”	3/8”

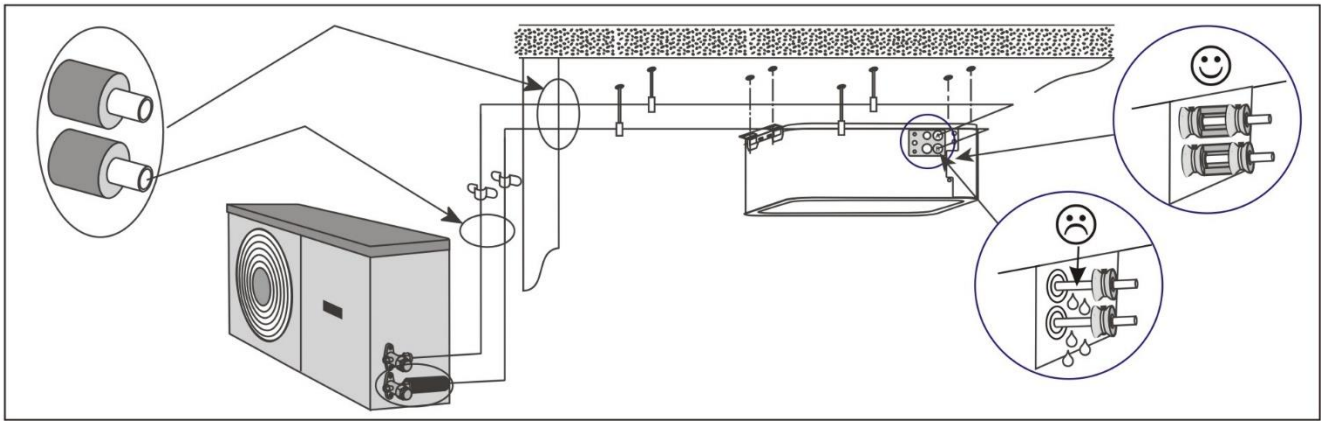
RESTRICTOR ASSEMBLY (cool only)



RESTRICTOR ASSEMBLY DHPUE & MHPUE (heatpump)



PIPEWORK CONNECTION



RESTRICTORS

Marstair outdoor units (cool only) are supplied with expansion assemblies and cooling restrictors fitted.

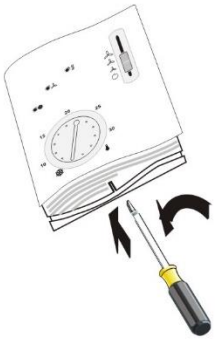
MCU+	15	20	30	40	45	50	60	80	90	100	130	150	165	180	200
Restrictor	0.033	0.033	0.040	0.044	0.046	0.050	0.052	0.057	0.063	0.068	0.071	0.080	0.082	N/A	

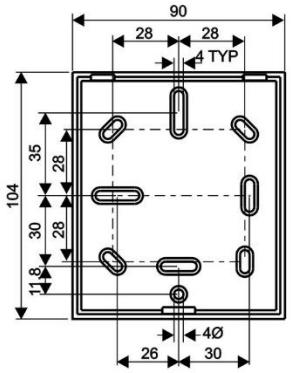
HEAT PUMP HEATING

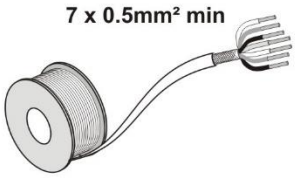
All heat pump units have an additional expansion assembly supplied loose inside the unit. This is to be fitted to some indoor units for heating. Fit the assembly within 10m of the indoor unit in the expansion line.
Note: the refrigerant flow is from indoor to outdoor, opposite to cooling assembly. Placing it directly at the indoor coil may cause increased noise during the heating cycle. No separate check valve is needed. The expansion assembly and line must be fully insulated.

REMOTE CONTROLLER

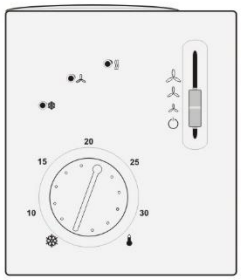
600E/M (RCC30 THERMOSTAT)





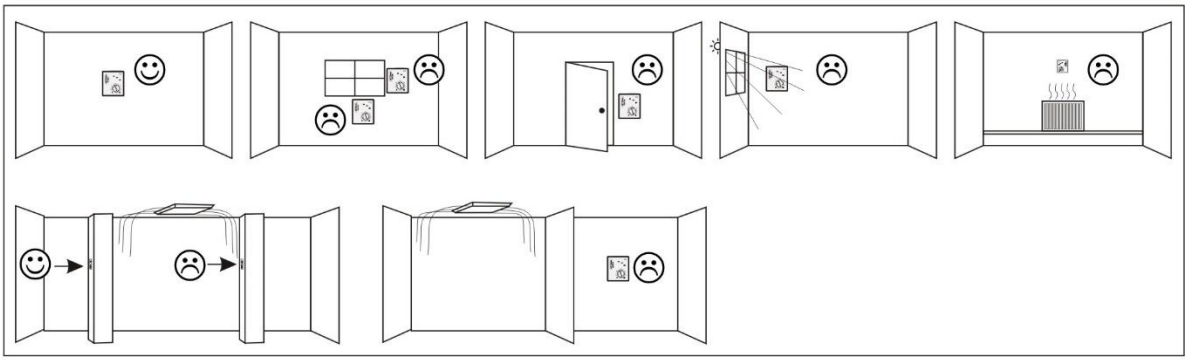


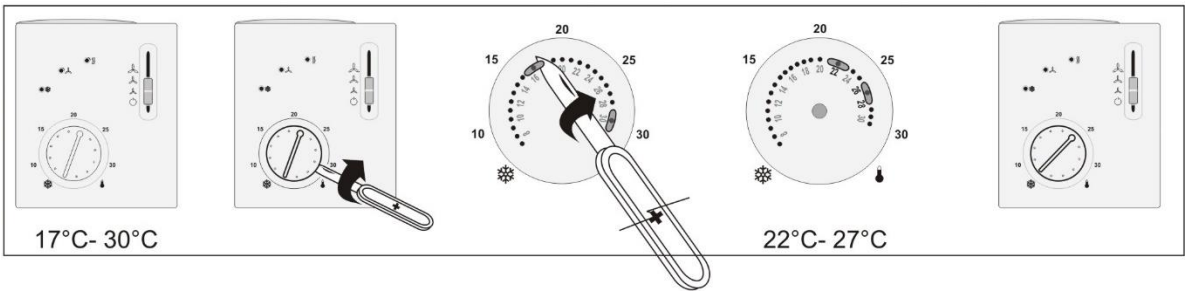
Neon lit in heating
Neon lit when fan runs
Neon lit in cooling

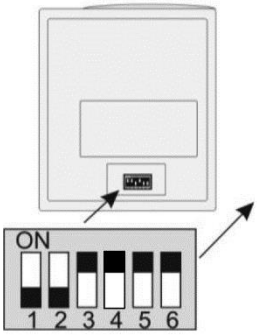


Max fan speed
Med fan speed
Min fan speed
Off (standby)

Adjustable thermostat (normally 17°C- 30°C)

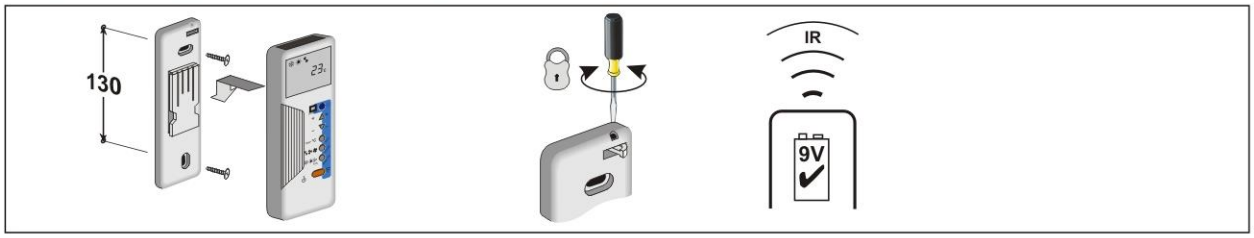




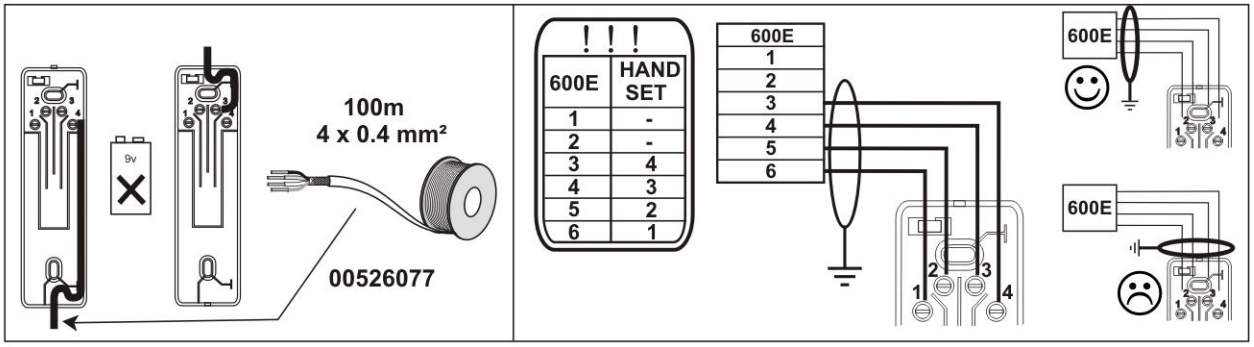


ON	Fan control is temperature dependent in all operating modes	Changeover between normal operation and energy saving mode	**Changeover activated when contact of switch is closed (NO)**	**Frost protection disabled**	**1K in heating mode, 0.5K in cooling mode**	**2K**
OFF	**Fan control in normal operation is temperature independent**	**Changeover between normal operation and standby**	Changeover activated when contact of switch is opened (NC)	Frost protection enabled	4K in heating mode, 2K in cooling mode	5K
Function	Fan control	Operating mode changeover via external switch	Action of switch for externally operated mode changeover	Standby	Switching differential	Dead zone in normal operation
Switch	**1**	**2**	**3**	**4**	**5**	**6**
■=Factory setting						

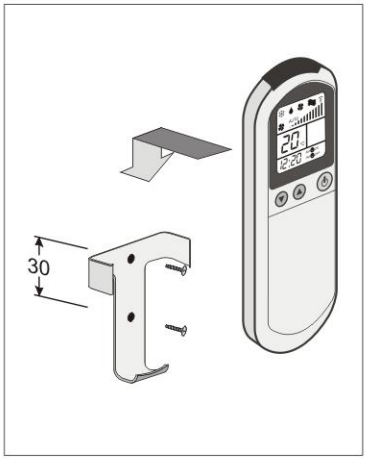
600E INFRARED REMOTE CONTROL



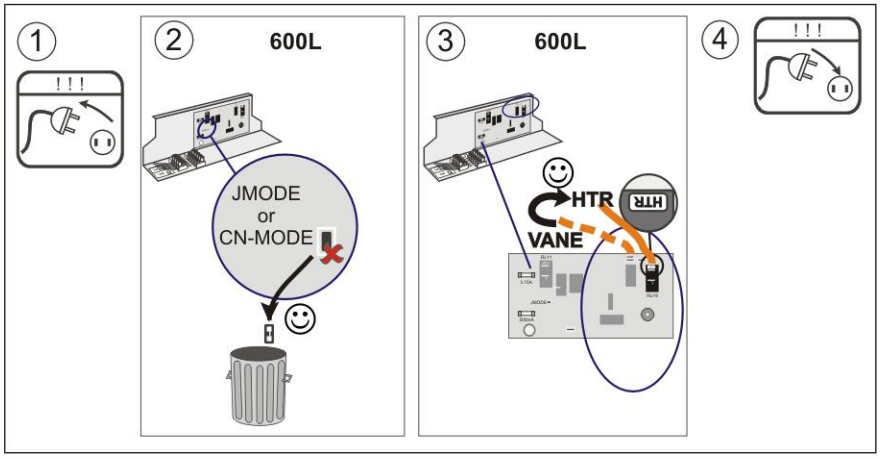
600E HARD WIRED CONTROL



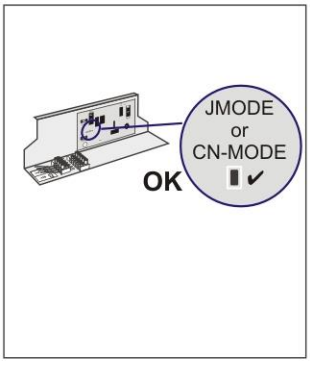
600 L INFRARED REMOTE CONTROL

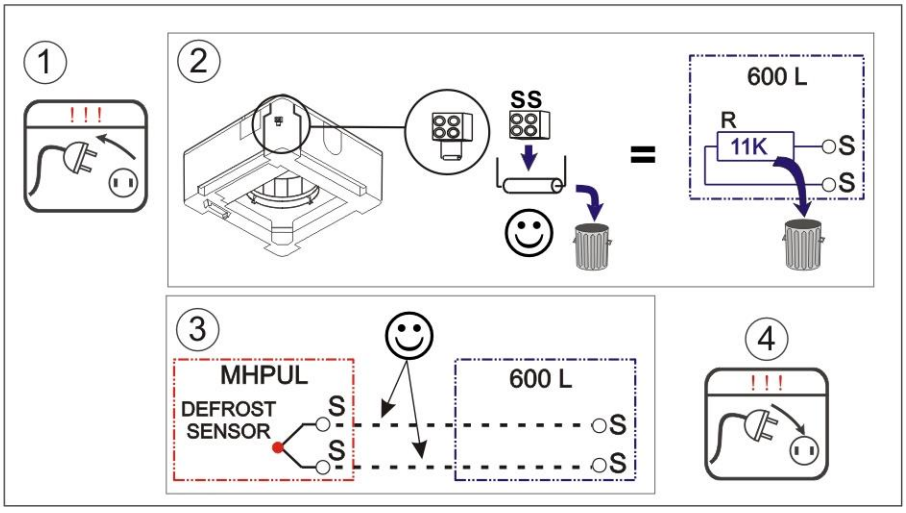


600L + MCU+ / DCU+



600L + MHPUL





FAN SPEED SELECTION

m³/s					
20 / 40 / 60	0.256	0.209	0.173	0.146	0.12
600	20 20 20	40 40 40	60 60 60		
MCU +	15 20 30	30 40 50	40 50 60		
✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓		
✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓		
✓	✓ ✗ ✓	✓ ✗ ✓	✓ ✗ ✓		

CC600EM

EX-FACTORY

A	B	C	D	E	F	G	H	J	K	
V	V	V	V	V	V	B	B	B	W	TERMINAL 5 = MIN
B	B	B	W	W	GRY	W	W	GRY	GRY	TERMINAL 4 = MED
W	GRY	P	GRY	P	P	GRY	P	P	P	TERMINAL 3 = MAX

V	VIOLET	VIOLET	VIOLET	
B	BROWN	MARRON	BRAUN	
W	WHITE	BLANC	WEISS	
GRY	GREY	GRIS	GRAU	
P	PINK	ROSE	ROSA	

CC600/L

55201201_01

HIGH / MEDIUM / LOW

IMAGE 600 MCU (+) DCU (+) 20 40 60 / 30 50 60 → O = ULTRA LOW

FACTORY SETTINGS

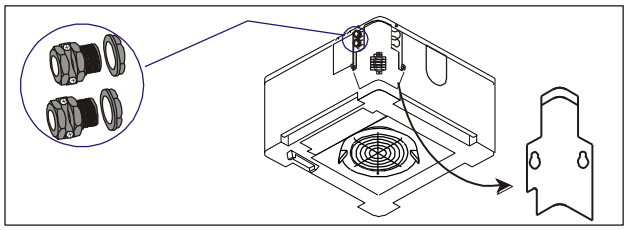
Y = LOW
W = MEDIUM
GRY = HIGH
P = BOOST

CC600/E

Factory Settings

55201202_01

INTERCONNECTING WIRING (for Marstair systems)

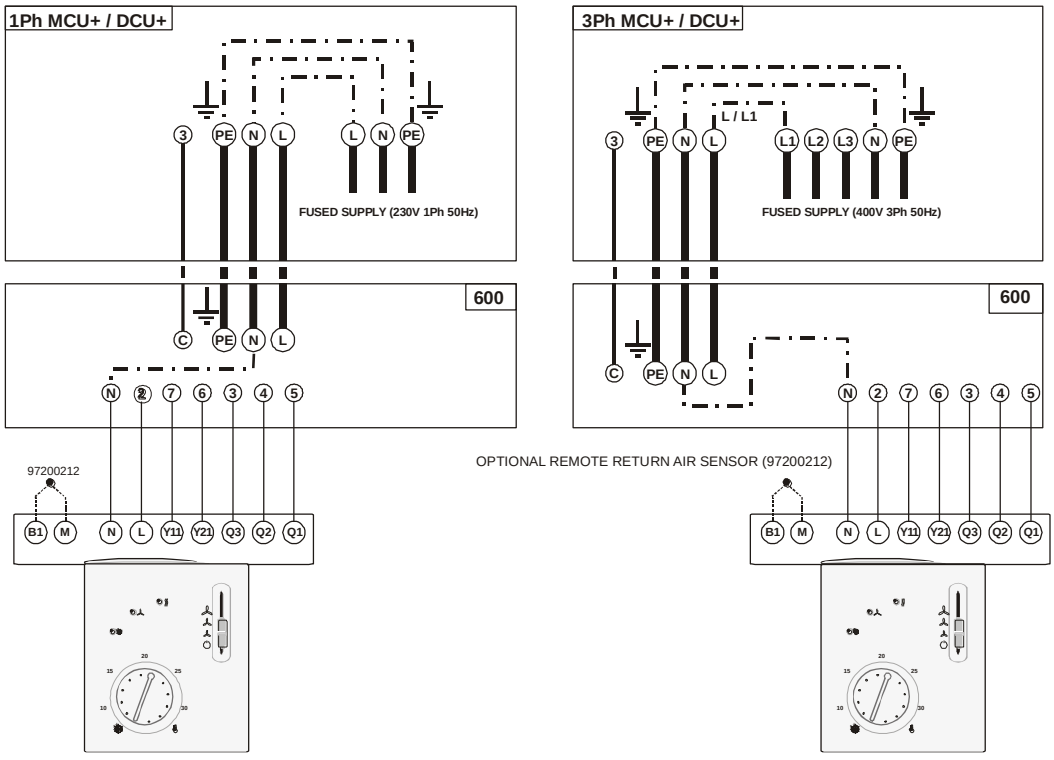


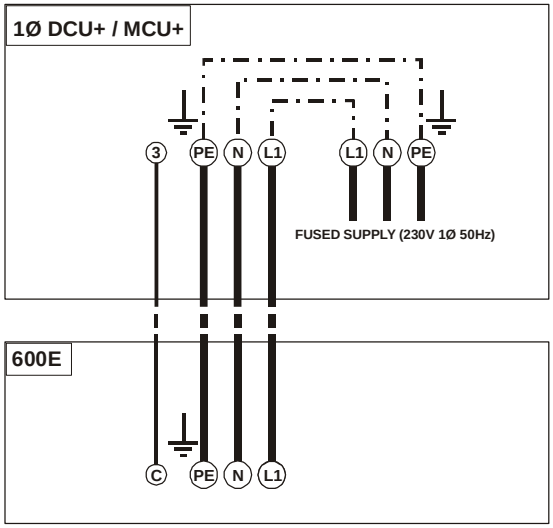
POWER - TO SUIT SUPPLY FUSE

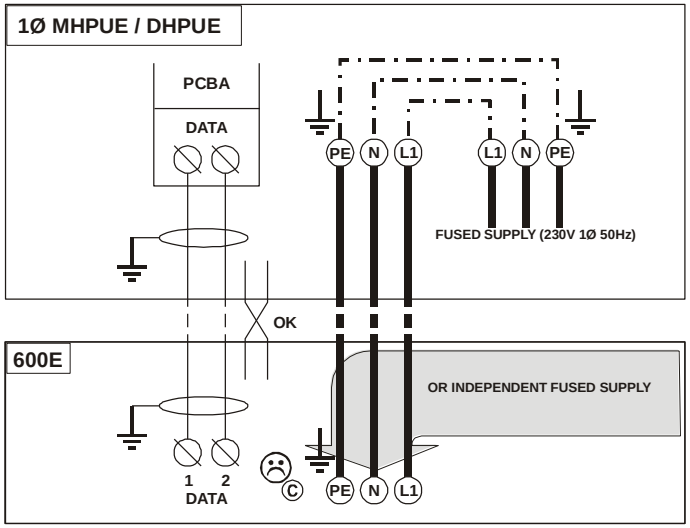
SIGNAL - 230 V (0.75 - 2.5 mm²)

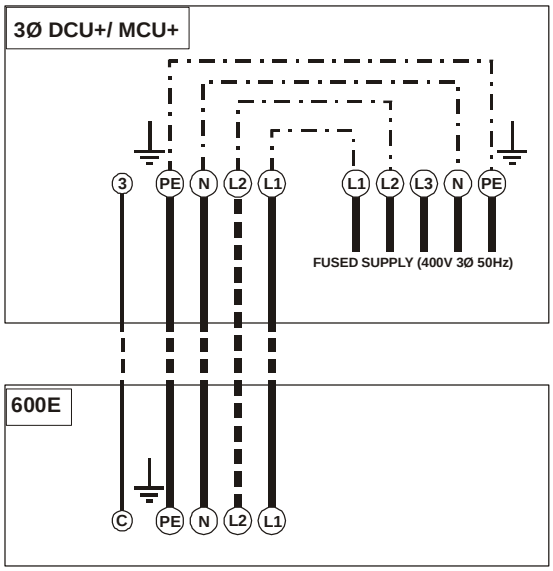
SIGNAL - 230 V (**0.5** - 2.5 mm²)

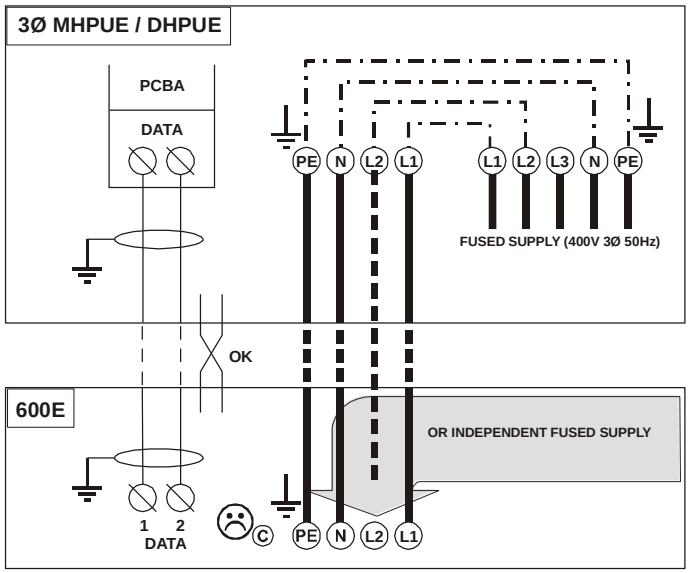
INTERNAL



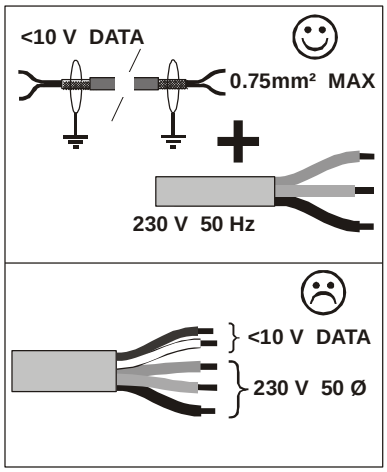




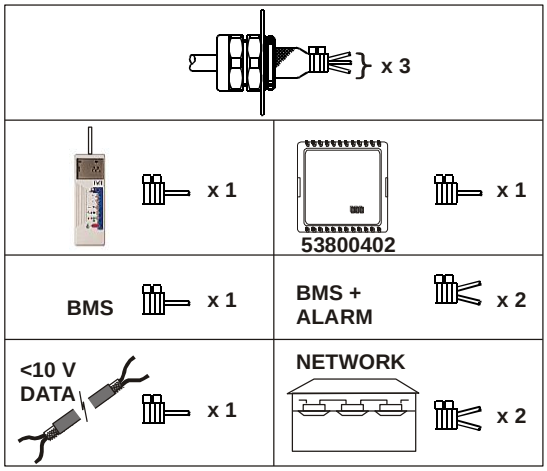


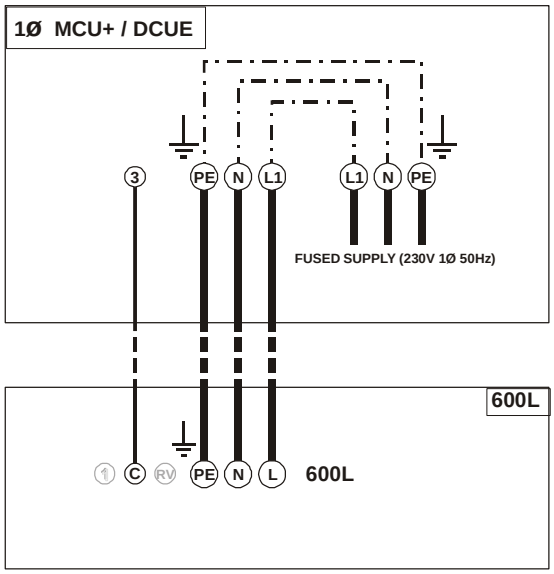


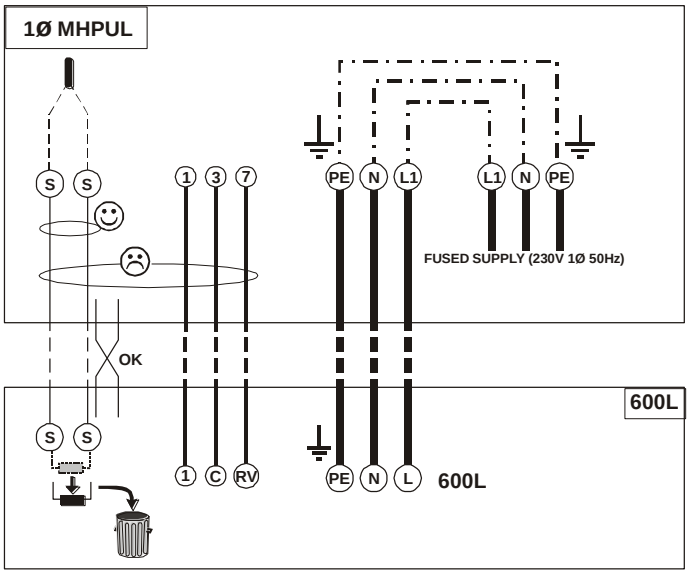
MHPUE / DHPUE

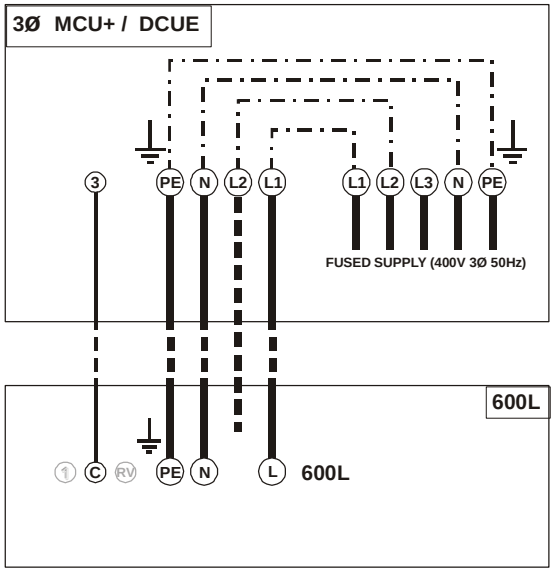


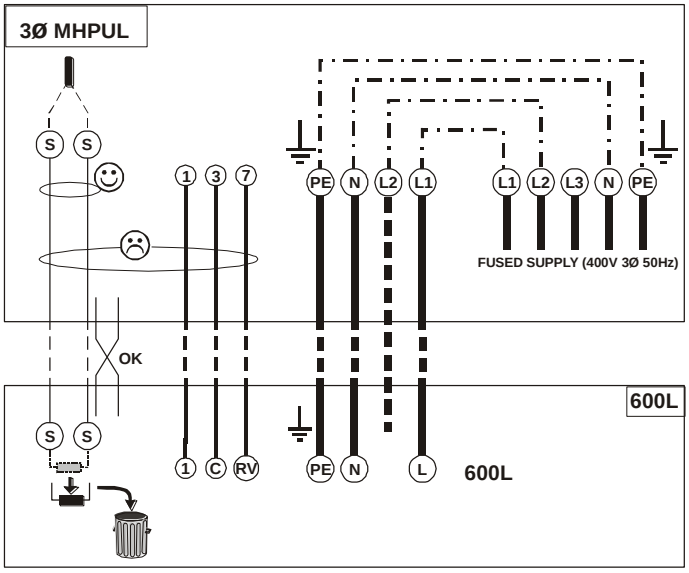
55200301 EMC TERMINATION GLAND



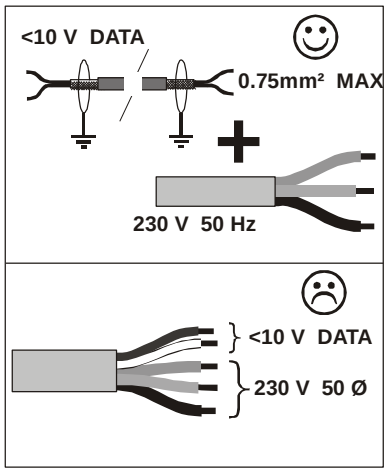








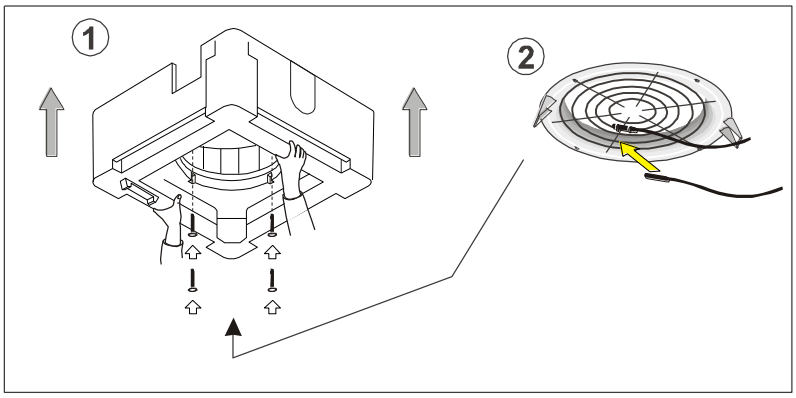
MHPUE / DCUE / DHPUE



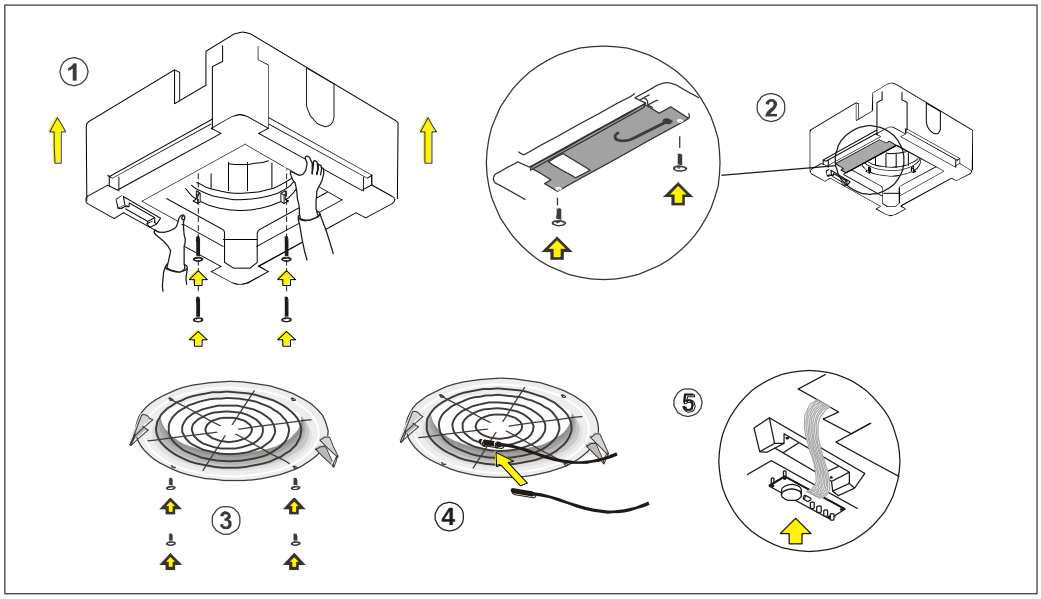
NOTE: Refer to page 9 for fuse ratings.

REINSTALLING THE CHASSIS

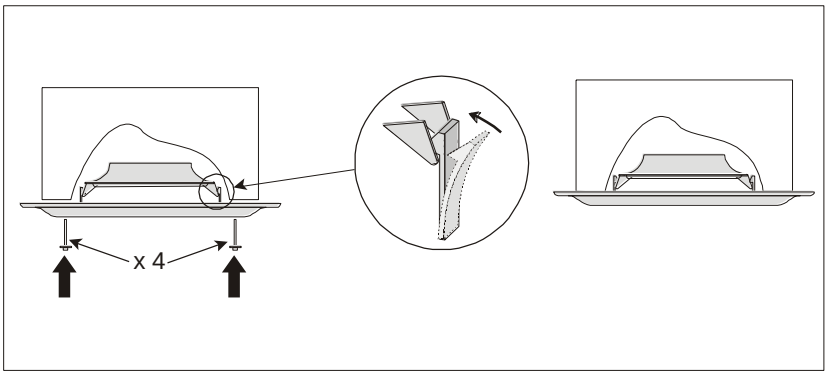
600E/M

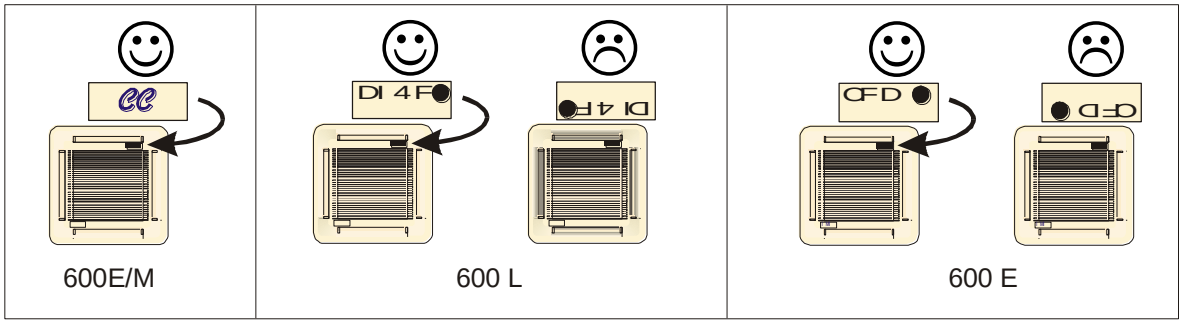


600 L & 600 E

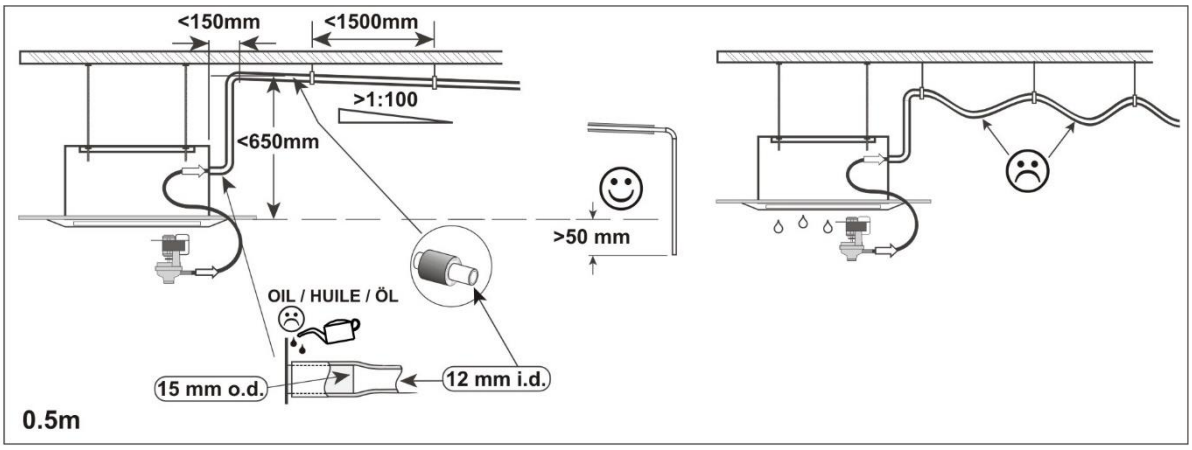


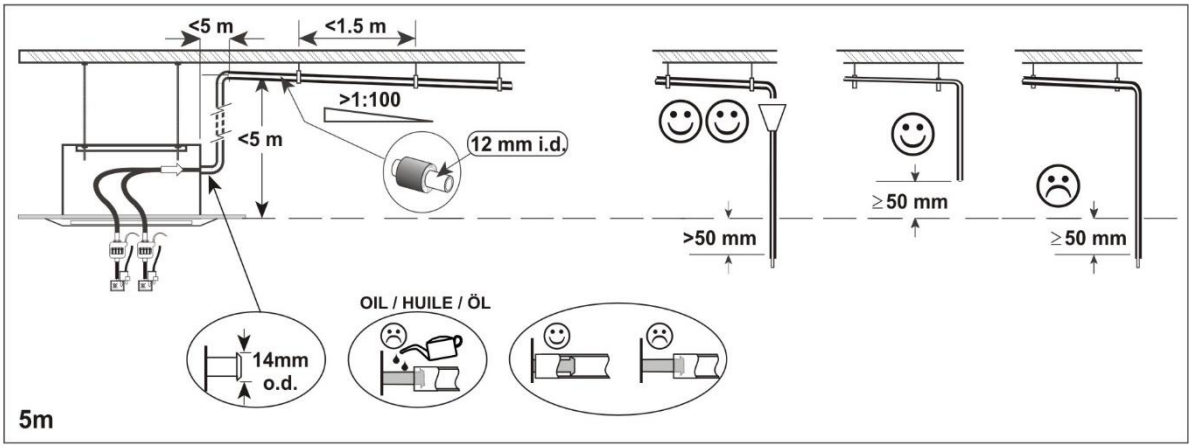
FITTING THE FASCIA

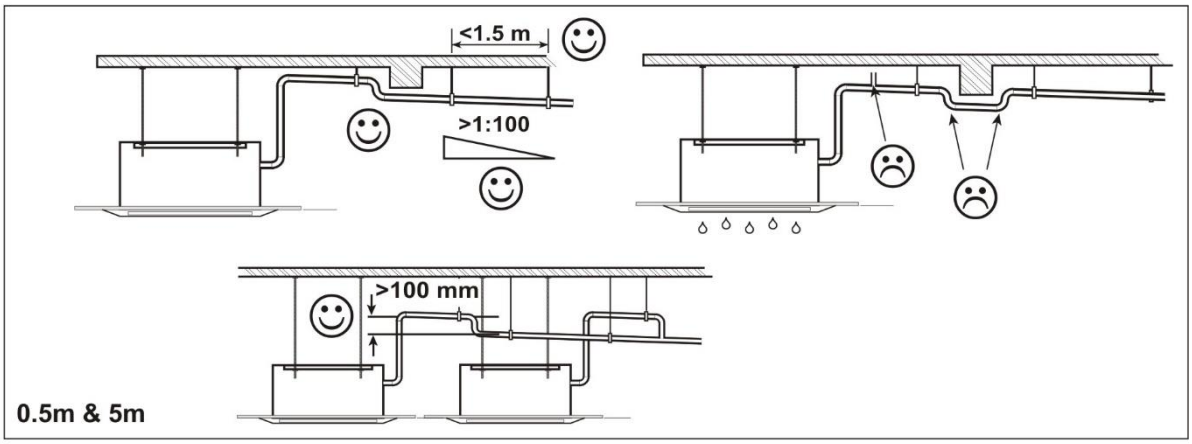




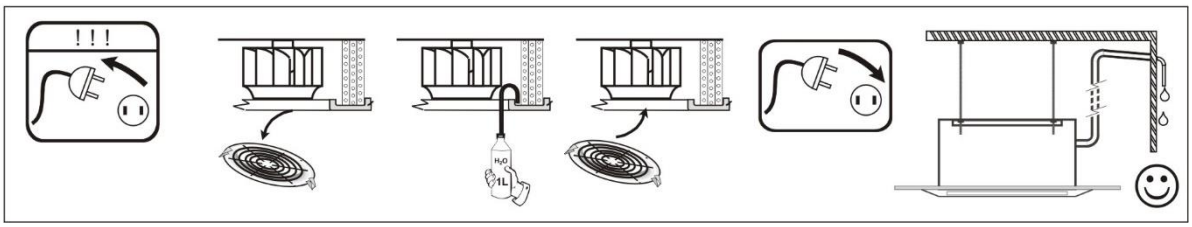
CONDENSATE DRAIN PIPING







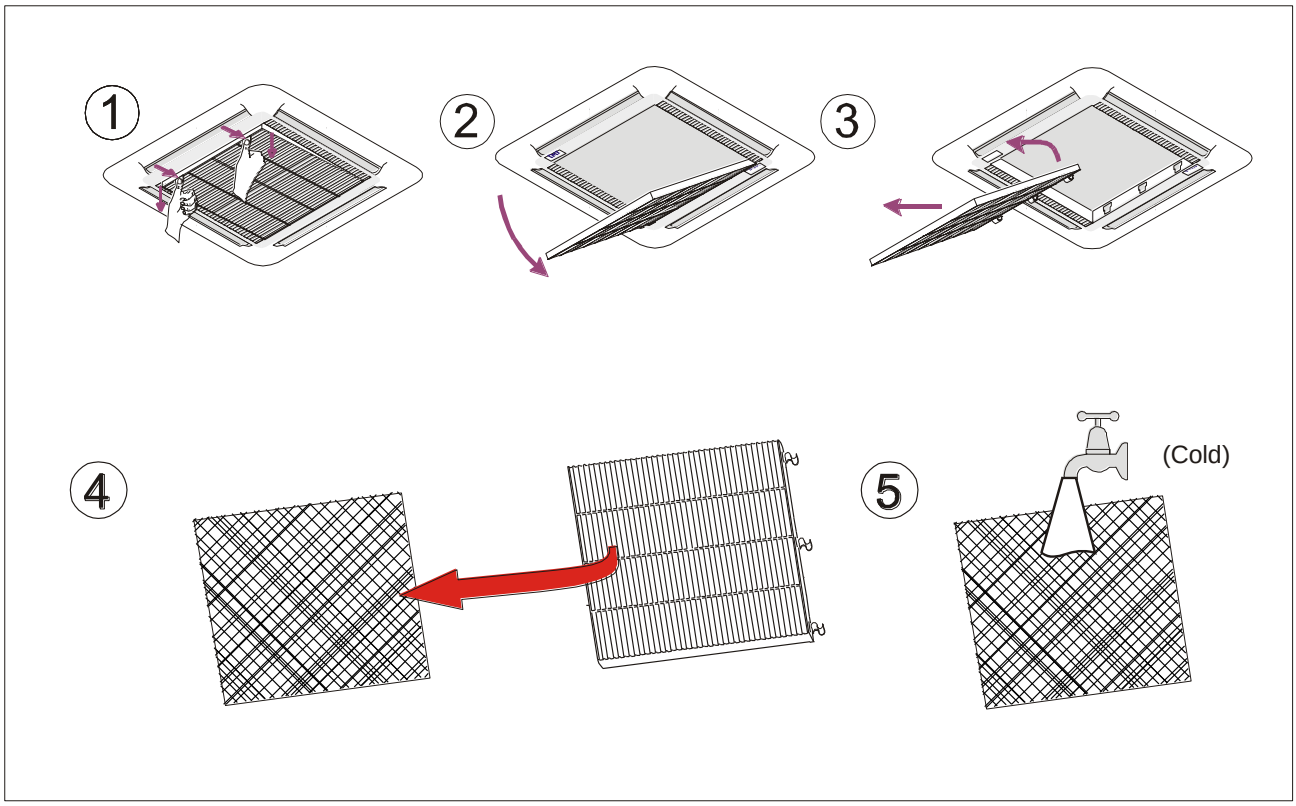
TESTING



USER MAINTENANCE

ISOLATE THE UNIT ELECTRICALLY BEFORE COMMENCING ANY WORK

We recommend that in order to maintain maximum efficiency of this unit, it's important that the filter behind the return air grille is cleaned regularly.



THE UNIT SHOULD ALWAYS BE USED WITH A FILTER. FAILURE TO DO SO WILL CAUSE A DECLINE IN UNIT PERFORMANCE AND MAY RESULT IN MALFUNCTION.

It is recommended that in order to prolong life and maintain performance of the unit, it is regulary serviced by a TEV installer / dealer.

FAULT FINDING

	CONDITION	POSSIBLE CAUSE	ACTION
A	**Indoor fan motor will not run**	No electric supply at socket or switched fuse box	Check fuse rating and replace if necessary. Check for loose electrical connections
		Unit wiring fault	Check wiring and connections
		Fan motor capacitor defective	Replace if faulty
		Fan motor defective	Replace if faulty
		Internal fuse blown	Clear fault and replace fuse
B	**Inadequate cooling or heating**	Dirty evaporator fins/filter	Clean if blocked
		Evaporator motor not running	As in section A
		Refrigerant shortage or excess	Check for leaks. Repair, evacuate and recharge or check for high head pressure and recover refrigerant if necessary
		Faulty or incorrectly set thermostat	Replace if faulty
		Dirty condenser	Clean if necessary
		Faulty compressor	Replace
		LP cutout circuit open (if LP fitted)	Check as refrigerant shortage or excess
C	**Compressor and outdoor fan motor will not run**	LP cutout circuit open (if LP fitted)	Check as above
		No electric supply at socket or switch fuse box	Check fuse rating and replace if necessary. Check for loose electrical connection.
		Unit wiring fault	Check wiring and connections
		Capacitor, thermostat, relay or overload defective	Replace if faulty
		Compressor failure	Replace if faulty
		Controls not set properly	Check and rectify
		Off cycle delay operating	If applicable, wait 3 minutes
		High condensate level detected	See G
	Compressor runs, outdoor fan doesn't	Pressure at sensor <200psig	Normal: or short of gas
D	**System runs for long periods and will not cycle**	Unit underrated for conditioned area	Check heat load against capacity
		Thermostat not operating correctly	Check wiring, position of phial and operation
		Refrigerant shortage	Check for leaks. Recover, repair, evacuate and recharge
	Indoor coil dry or partly sweating	Dirty condenser	Clean fins if necessary
E	**Indoor coil frosting**	Refrigerant shortage	Check for leaks. Recover, repair, evacuate and recharge
		Dirty evaporator fins/filter	Clean if blocked
		Running in cool ambient without a head pressure controller	Fit head pressure controller
	If room temperature is also low	Thermostat set too low or cooling permanently	Reset or replace
F	**Noisy unit**	Fan fouling cowl (outdoor unit)	Realign fan
		Worn motor bearing	Replace motor
		Casing or piping vibration	Check cause and rectify
		Loose parts or mounting	Find and tighten
		Bent fan blade	Replace fan
G	**Water leaking from unit**	Blocked drain or filter	Clear obstruction
	Units with lift pump or condensate pump	No supply to pump or loose connection	Secure the supply
		Pumping slowly	Check drain pipes; if clear, replace pump
		Pump windings shorted	Replace pump
		Fouled sensor (5m condensate pump only)	Clean sensor
H	**Pump always runs**	Faulty sensor or pcb	Replace sensor or pcb
I	**No heating**	Controls not set for heating	Reset
		Unit wiring fault	Check wiring and connections
		Dirty evaporator fins/filter	Clean
		Faulty thermostat	Check for signal; replace if faulty
		Faulty heater element	Replace
		Faulty heater cutout	Replace, (check for short circuiting)
		Reversing valve jammed	A light tap may free it; preferably replace
J	**Overload tripped on three phase units**	High voltage supply	Max rated voltage 254v -- check supply
		Compressor failure	Replace
		Fuses blown	Replace fuses and investigate reason for fuses blowing
K	**Outdoor unit does not operate**	No mains supply	Check fuse rating and replace. Check for loose electrical connections
		Supply below 187V	Check supply
		Isolator switched off	Turn isolator on
		Internal fuse blown	Check fuse and replace
		Data wires disconnected	Reconnect data wires
		No command signal	Check indoor unit
		Off cycle delay operating	Wait in cooling for 3 minutes

SPECIFIC FAULT DIAGNOSIS FOR L UNITS

	CONDITION	POSSIBLE CAUSE	ACTION
Check for alarms			
i	LEDs flashing - see table below		
ii	If NO external connections are made to alarm terminal 5, the presence of an alarm condition can be tested for by checking for mains voltage at terminal 5; full mains voltage = Alarm; less than mains voltage = Clear.		
The outdoor unit can be caused to operate for test purposes by temporarily linking live directly to terminal 3 (up to 20 seconds delay)			
L	Outdoor unit runs continually at high speed	Charge link still fitted	Remove charge link
		MHPUL in heating	Normal
		Minimum speed adjustment set too high	Reset minimum speed
If all external devices test O.K. the outdoor unit pcb must be replaced			
M	No LED's lit or flashing	Unit commanded to be OFF	Transmit 'ON'
		No mains supply or internal fuse blown. (Fuse F2 on internal control board blown during configuring)	Check electrical supply and fuses
		Fan motor plug disconnected	Reconnect fan motor plug
		Motor internal thermal protector operated	Check motor and rectify
		Cables to fascia not connected	Reconnect
		Circuit board fault	Check circuit board and replace
		High water level	Check pump circuit (if fitted)
N	All LED's lit, one flashing	Temperature sensor problem	See table below
		Resistor problem (non MHPUL)	Check resistor connected
		Outdoor sensor problem (MHPUL)	Replace outdoor unit sensor/check interconnecting wiring
P	Indoor unit continues after stop/off	Overrun of 30 seconds in heating	Normal
Q	Unit will not respond to infrared commands.	Battery discharged	Replace battery
		Handset corrupted	Reset
R	Unit does not switch on/off at intended times	Power cut has occurred	Send any command from the handset to synchronise the timer
S	Unit not running in intended mode/temperature	Power has been shut off for three or more days, unit is exercising default programme	Use handset retransmit button
T	Fan does not run at the intended speed	Heat Pumps Only	Fan runs at low speed until indoor coil is warm, then changes to intended speed
U	Short cycles between cool and heat	System oversized for room	Use cool or heat programmes NOT 'Auto'
V	First operation, room is overcooled or overheated by 2°C	Set point temperature reverts to normal after deadband is reached or 20 minutes of operation	Normal
W	Handset will not transmit	Heating commands	Incorrectly configured - see page 23
		Any commands	Battery flat
X	Compressor runs on	Automatic minimum run time of 1.5 minutes	Normal

HANDSET
If the handset fails to respond to button operations, disconnect and then reconnect the battery.
The previous programme state is retained in the memory for a few seconds provided none of the user buttons are pressed.

LED STATUS AND ALARM INDICATIONS

Cool ❄ Green	Dry 💧 Red	Fan Red	Heat ☀ Amber	DIAGNOSTICS
OFF	OFF	OFF	OFF	No power, manual OFF, timed OFF, condensate high level, fault in condensate control
ON	OFF	ON	OFF	Cooling mode selected
ON	OFF	ON	**BLINKS**	AUTO - predominantly cooling
OFF	OFF	ON	**ON**	Heating mode selected
BLINKS	OFF	ON	**ON**	AUTO - predominantly heating
OFF	OFF	**ON**	OFF	Fan mode selected
OFF	**ON**	ON	OFF	Dry mode selected
OFF	OFF	OFF	**BLINKS**	Outdoor unit defrosting
Diagnostics				
OFF	OFF	**BLINKS x 4**	OFF	Room sensor missing
OFF	OFF	**BLINKS x 4**	OFF	Indoor coil sensor missing
OFF	**BLINKS**	**BLINKS x 4**	OFF	Heat pump only, outdoor coil sensor missing
BLINKS	OFF	**BLINKS x 1**	OFF	Compressor overload

SPECIFIC FAULT DIAGNOSIS FOR E UNITS

A fully electronic system comprising 600 E with MHPUE or DCUE communicates between the units by digital codes. Signals are transmitted every 10 seconds, therefore a delay of up to 10 seconds could occur before the system responds to a command. Similarly if the communication link is broken, the outdoor unit will shut down within 15 seconds. To reset: Switch the mains off to both indoor and outdoor units to reset the microprocessor; the current programme is retained in the indoor pcb memory.

Check for alarms i.e.	
i	Audible alarm or LEDs flashing - see table below
ii	If NO external connections are made to alarm terminal 5, the presence of an alarm condition can be checked for by testing continuity between L and 5; Alarm = 220ohms, Clear = open circuit. WARNING: All parts of the circuit are at high voltage, if any external connections are made to terminal 5, the continuity meter will be damaged
The outdoor unit can be forced to operate for test purposes by temporarily linking live directly to terminal 3 (up to 20 seconds delay)	

L	**Outdoor unit runs continually at high speed**	Charge link JP6 still fitted	Remove JP6 charge link
		MHPUE in heating	Normal
		Minimum speed adjustment set too high	Reset minimum speed
If all external devices appear O.K. the pcb may need to be replaced			

M	**No LED's lit or flashing**	No mains supply or internal fuse blown	Check electrical supply and fuses
		Fan motor plug disconnected	Reconnect fan motor plug
		Motor internal thermal protector operated	Check motor and rectify
		Ribbon cable to fascia not connected	Reconnect
		Receiver pcb fault	Check circuit board and replace

N	**Regular audible pulsed signal - all LED's lit**	Indoor temperature sensor problem	Disconnect data link to identify which unit, if fault clears it is outdoor unit
		Outdoor sensor problem	Replace outdoor unit sensor

O	**Indoor unit continues after stop/off command**	Overrun of 30 seconds in heating	NORMAL

P	**Unit will not respond to infrared commands. No audible answer signal**	Handset not plugged into wall bracket (if appropriate). Fault in connections between wall bracket and indoor unit	Plug in correctly and check connections
		Battery discharged	Replace battery
		Operating in charge mode	Remove charge link from outdoor unit

Q	**Unit answers infrared commands with double audible signal**	Communications not yet established. Wait 2 minutes from power up	If electric heater is known to be fitted, double signal indicates open circuit element or thermal protector
		Demanded mode not available	Double signal in response to on/off command indicates under time control

R	**Sounder beeps and LED(s) flash 0.5s ON, 0.5s OFF**	Warning of alarm status	See table below

S	**All LED's lit and continuous audible signal**	Microprocessor fault	Replace indoor unit pcb assembly

T	**Short cycles between cool and heat**	System oversized for room	Use cool or heat programmes NOT 'Auto' and set to lower speed
HANDSET If the handset fails to respond to button operations, disconnect and then reconnect the battery. The previous programme state is retained in the memory.			

LED STATUS AND ALARM INDICATIONS

Status display

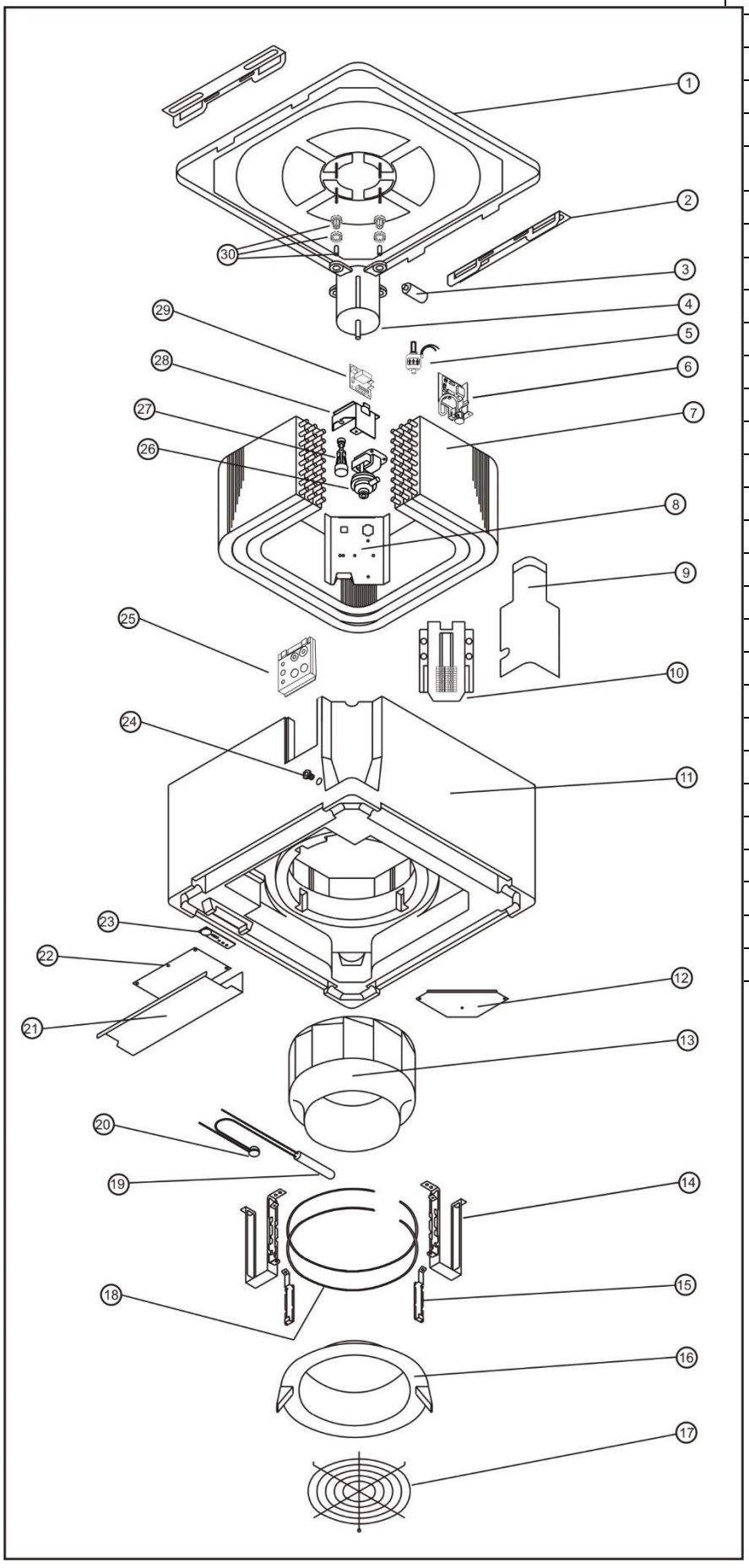
LED			Flash Rate ON/OFF (seconds)	Sounder	Condition	Status
Red	Amber	Green				
⏻			ON	OFF	In Operation	Normal
⏻	☀		ON	OFF	Heating Demand	Normal
⏻		❄	ON	OFF	Cooling Demand	Normal
⏻			0.5 / 5.0	OFF	Standby	Normal
⏻			0.5 / 15	OFF	Clock Controlled Standby	Normal
⏻			2 x 0.5 / 15	OFF	Setback	Normal
⏻			0.5 / 0.5	OFF	Filter Clean Advisable	Normal

Alarm indications

	☀		0.5 / 0.5	BEEPS	Network Warning	Call Engineer
		❄	0.5 / 0.5	BEEPS	High Condensate Level	Call Engineer
⏻	☀		0.5 / 0.5	BEEPS	Low Pressure Warning	Call Engineer
⏻		❄	0.5 / 0.5	BEEPS	High Pressure Warning	Call Engineer
⏻	☀	❄	0.5 / 0.5	BEEPS	Contactor Overload Operated	Call Engineer
	☀	❄	0.5 / 0.5	BEEPS	Outdoor Fan Fail	Call Engineer
⏻	☀	❄	ON	BEEPS	Sensor Fault	Call Engineer

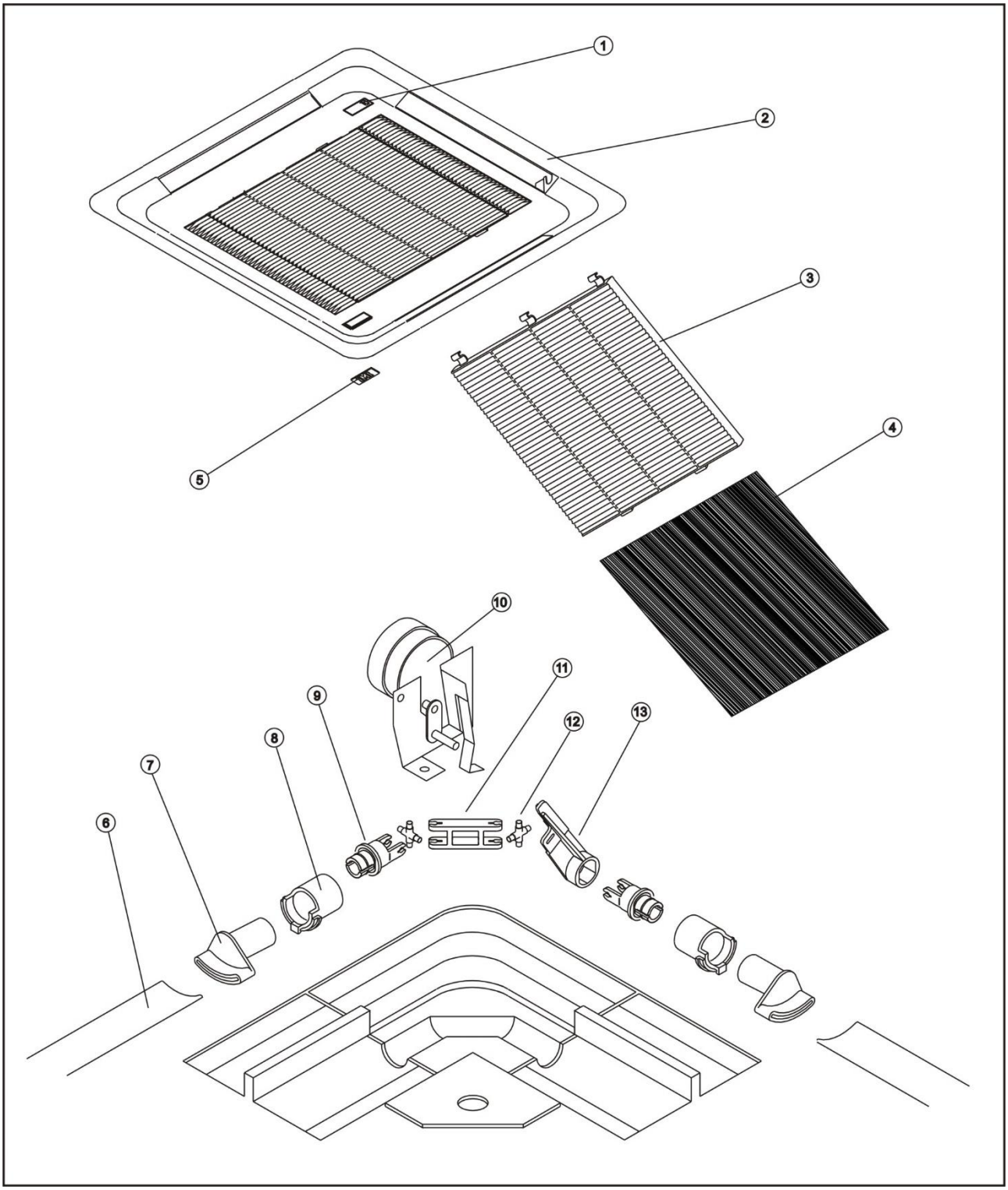
COMPONENT IDENTIFICATION

CHASSIS ASSEMBLY



1	Top panel
2	Suspension bracket
3	Capacitor
4	Fan motor
5	5m condensate pump
6	5m condensate pump PCB and filter
7	Heat exchanger
8	Coil blanking panel
9	Electric box cover
10	External electrics box
11	Chassis
12	Fresh air cover
13	Fan
14	Coil bracket
15	Heater bracket/clip
16	Fan cowl
17	Fan guard
18	Heater element
19	Heater cut out
20	Thermal fuse
21	Internal electrics cover
22	PCBA
23	Receiver board
24	Threaded bung
25	Pipe panel
26	Lift pump
27	Float switch
28	Lift pump PCB bracket
29	Lift pump condensate PCBA
30	Motor mounts

FASCIA ASSEMBLY



1	LED lens/cover
2	Fascia
3	Grille
4	Filter
5	Badge
6	Air deflector vane
7	Vane end cap

8	Vane bearing
9	Vane connector
10	Vane motor
11	Double yoke
12	Spider
13	Actuator arm

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