marstair

INSTALLATION & TECHNICAL MANUAL

GREEN HEAT

MARSTAIR REFRIGERATION CONDENSING UNITS (MRC+)

55008363-06

INDEX

NOTE

IF MECHANICAL PUMP DOWN OPERATION IS REQUIRED CONNECT A LINK WIRE BETWEEN TERMINALS L1 & 3.

IF THIS LINK IS USED THEN TERMINAL 5 CAN NOT BE USED AS AN ALARM FACILITY

GENERAL

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

2. These units are supplied with a holding charge of oxygen free nitrogen and polyolester oil. Do not mix oils or refrigerants.

3. These units when installed 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 outdoor unit. For system details add input power and current of indoor and outdoor unit, including any heater load.

5. FUSES - for recommended fuse size see page 9.

6. The refrigerant used should be identified by locating the R404A label on the unit case

DIMENSIONS AND WEIGHTS

UNPACKED

MRC+ CONDENSING UNITS

MODEL	45	50	60	80	90	100
HEIGHT	720	720	720	720	820	820
WIDTH	1000	1000	1000	1000	1000	1000
DEPTH	350	350	350	350	350	350
1 Ph kg	61	64	65	66	76	-
3 Ph kg	61	64	65	66	76	81

PACKED

MRC+ CONDENSING UNITS

MODEL	45	50	60	80	90	100
HEIGHT	720	720	720	720	820	820
WIDTH	1090	1090	1090	1090	1090	1090
DEPTH	390	390	390	390	390	390
1 Ph kg	63	66	67	68	78	-
3 Ph kg	63	66	67	68	78	85

SPECIFICATION DETAILS

MRC+		45	50	60	80	90	100
Nominal cooling capacity (0°C evaporating temp & 32°C ambient temp)	kW 1Ph 3Ph	3.80	5.16 5.16	6.06 6.06	7.21 7.21	8.42 8.42	- 9.65
Operating weight kg	1Ph	61	64	65	66	76	-
	3Ph	61	64	65	66	76	81
1 Ph (230V 50Hz) compressor load only (at nominal cooling capacity)							
Power (nominal)	kW	1.43	2.03	2.26	2.61	3.03	3.92
Starting current LRA	A	35	58	61	76	110	114
Nominal current FLA	A	10.0	8.9	9.8	11.5	16.9	-
3 Ph (400V 50Hz) compressor load only (at nominal cooling capacity)							
Power (nominal)	kW	-	2.03	2.26	2.61	3.03	3.92
Starting current LRA	A	-	26	32	40	48	51
Nominal current FLA	A	-	4.2	4.2	4.9	7.1	7.2
Sound Pressure Levels (SPL) at 10m disctance in free field conditions @ max fan speed							
Fan speed max	dBA	33	33	33	34	37	38
	NR	27	27	27	27	30	31
Condenser fan (1Ph 230V 50Hz)							
Airflow (max speed)	m³/s	0.97	0.97	0.97	0.97	0.97	0.97
Fan motor rating	kW	0.13	0.13	0.13	0.13	0.13	0.13
Nominal current FLA	A	0.6	0.6	0.6	0.6	0.6	0.6
Fans: No. x diameter	#x mm	1x457	1x457	1x457	1x457	1x457	1x457
Fans max speed	r.p.m	940	940	940	940	940	940

PERFORMANCE DATA

MRC+ 30 – 100 CAPACITIES - 1Phase

MODEL	Ambient Temp °C	EVAPORATING TEMPERATURE °C													
		-15		-10		-5		0		5		7		10	
		COOLING CAPACITY AND POWER INPUT kW													
		CAP.	POWER	CAP.	POWER	CAP.	POWER	CAP.	POWER	CAP.	POWER	CAP.	POWER	CAP.	POWER
MRC+ 45	20	2.87	1.04	3.48	1.05	3.95	1.08	4.54	1.13	5.17	1.22	5.42	1.28	5.81	1.38
	27	2.61	1.19	3.07	1.21	3.58	1.24	4.12	1.29	4.66	1.39	4.87	1.47	5.22	1.56
	30	2.51	1.27	2.93	1.28	3.43	1.32	3.93	1.37	4.44	1.48	4.64	1.55	4.96	1.66
	32	2.43	1.32	2.91	1.33	3.31	1.37	3.80	1.43	4.29	1.53	4.48	1.62	4.94	1.73
	35	2.32	1.41	2.71	1.43	3.15	1.46	3.60	1.52	4.06	1.63	4.24	1.72	4.53	1.84
	40	2.11	1.60	2.47	1.62	2.87	1.65	3.27	1.71	3.68	1.83	3.84	1.93	4.09	2.05
MRC+ 50	20	3.83	1.54	4.68	1.56	5.34	1.58	6.17	1.62	7.04	1.69	7.41	1.72	7.97	1.78
	27	3.49	1.76	4.13	1.78	4.85	1.80	5.59	1.85	6.35	1.93	6.66	1.96	7.16	2.00
	30	3.35	1.87	3.95	1.89	4.63	1.91	5.34	1.96	6.05	2.04	6.35	2.07	6.81	2.13
	32	3.24	1.94	3.91	1.96	4.48	1.98	5.16	2.03	5.85	2.11	6.13	2.15	6.78	2.21
	35	3.09	2.07	3.64	2.09	4.26	2.11	4.90	2.16	5.53	2.25	5.80	2.28	6.21	2.35
	40	2.82	2.35	3.33	2.37	3.88	2.38	4.45	2.43	5.01	2.52	5.24	2.56	5.61	2.62
MRC+ 60	20	4.49	1.70	5.49	1.72	6.26	1.75	7.25	1.79	8.26	1.87	8.70	1.90	9.35	1.97
	27	4.10	1.95	4.85	1.97	5.69	2.00	6.56	2.05	7.45	2.14	7.82	2.18	8.41	2.22
	30	3.93	2.08	4.64	2.10	5.44	2.12	6.26	2.18	7.10	2.27	7.45	2.31	7.99	2.37
	32	3.81	2.16	4.59	2.18	5.26	2.21	6.06	2.26	6.86	2.35	7.20	2.40	7.95	2.47
	35	3.63	2.31	4.28	2.33	4.99	2.36	5.75	2.41	6.49	2.51	6.80	2.55	7.29	2.63
	40	3.31	2.63	3.90	2.65	4.55	2.66	5.22	2.72	5.88	2.82	6.16	2.87	6.59	2.93
MRC+ 80	20	5.35	1.94	6.54	1.97	7.46	1.99	8.63	2.05	9.84	2.14	10.35	2.18	11.13	2.26
	27	4.88	2.24	5.77	2.27	6.77	2.29	7.81	2.36	8.87	2.47	9.31	2.51	10.01	2.56
	30	4.68	2.39	5.52	2.42	6.47	2.45	7.46	2.51	8.45	2.62	8.87	2.66	9.51	2.74
	32	4.53	2.49	5.46	2.52	6.26	2.55	7.21	2.61	8.17	2.72	8.57	2.77	9.47	2.85
	35	4.32	2.67	5.09	2.70	5.95	2.72	6.84	2.79	7.73	2.91	8.10	2.95	8.68	3.04
	40	3.93	3.05	4.65	3.08	5.42	3.09	6.22	3.16	7.00	3.27	7.33	3.33	7.84	3.41
MRC+ 90	20	6.24	2.23	7.63	2.26	8.71	2.29	10.07	2.35	11.49	2.46	12.08	2.51	13.00	2.60
	27	5.69	2.59	6.74	2.62	7.91	2.65	9.12	2.73	10.35	2.86	10.87	2.90	11.68	2.96
	30	5.46	2.77	6.44	2.80	7.56	2.84	8.71	2.91	9.87	3.04	10.35	3.09	11.10	3.18
	32	5.29	2.89	6.38	2.92	7.31	2.96	8.42	3.03	9.54	3.16	10.00	3.22	11.05	3.32
	35	5.04	3.11	5.94	3.14	6.94	3.17	7.99	3.25	9.02	3.39	9.45	3.44	10.14	3.54
	40	4.59	3.56	5.43	3.59	6.33	3.60	7.26	3.68	8.17	3.82	8.56	3.88	9.15	3.98
MRC+ 100	20	7.15	3.02	8.72	3.12	9.97	3.10	11.54	3.17	13.16	3.30	13.84	3.36	14.89	3.47
	27	6.52	3.43	7.88	3.46	9.06	3.50	10.45	3.60	11.86	3.75	12.45	3.81	13.39	3.88
	30	6.25	3.63	7.38	3.67	8.66	3.70	9.97	3.80	11.31	3.95	11.86	4.01	12.72	4.12
	32	6.06	3.75	7.06	3.73	8.37	3.83	9.65	3.92	10.93	4.08	11.46	4.15	12.66	4.26
	35	5.78	3.99	6.81	4.03	7.95	4.07	9.15	4.16	10.33	4.33	10.83	4.39	11.61	4.52
	40	5.26	4.52	6.22	4.55	7.25	4.57	8.31	4.67	9.36	4.84	9.80	4.91	10.49	5.03

MRC+ 30 – 180 CAPACITIES - 3Phase

MODEL	Ambient Temp °C	EVAPORATING TEMPERATURE °C													
		-15		-10		-5		0		5		7		10	
		COOLING CAPACITY AND POWER INPUT kW													
		CAP.	POWER	CAP.	POWER	CAP.	POWER	CAP.	POWER	CAP.	POWER	CAP.	POWER	CAP.	POWER
MRC+ 50	20	3.83	1.54	4.68	1.56	5.34	1.58	6.17	1.62	7.04	1.69	7.41	1.72	7.97	1.78
	27	3.49	1.76	4.13	1.78	4.85	1.80	5.59	1.85	6.35	1.93	6.66	1.96	7.16	2.00
	30	3.35	1.87	3.95	1.89	4.63	1.91	5.34	1.96	6.05	2.04	6.35	2.07	6.81	2.13
	32	3.24	1.94	3.91	1.96	4.48	1.98	5.16	2.03	5.85	2.11	6.13	2.15	6.78	2.21
	35	3.09	2.07	3.64	2.09	4.26	2.11	4.90	2.16	5.53	2.25	5.80	2.28	6.21	2.35
	40	2.82	2.35	3.33	2.37	3.88	2.38	4.45	2.43	5.01	2.52	5.24	2.56	5.61	2.62
MRC+ 60	20	4.49	1.70	5.49	1.72	6.26	1.75	7.25	1.79	8.26	1.87	8.70	1.90	9.35	1.97
	27	4.10	1.95	4.85	1.97	5.69	2.00	6.56	2.05	7.45	2.14	7.82	2.18	8.41	2.22
	30	3.93	2.08	4.64	2.10	5.44	2.12	6.26	2.18	7.10	2.27	7.45	2.31	7.99	2.37
	32	3.81	2.16	4.59	2.18	5.26	2.21	6.06	2.26	6.86	2.35	7.20	2.40	7.95	2.47
	35	3.63	2.31	4.28	2.33	4.99	2.36	5.75	2.41	6.49	2.51	6.80	2.55	7.29	2.63
	40	3.31	2.63	3.90	2.65	4.55	2.66	5.22	2.72	5.88	2.82	6.16	2.87	6.59	2.93
MRC+ 80	20	5.35	1.94	6.54	1.97	7.46	1.99	8.63	2.05	9.84	2.14	10.35	2.18	11.13	2.26
	27	4.88	2.24	5.77	2.27	6.77	2.29	7.81	2.36	8.87	2.47	9.31	2.51	10.01	2.56
	30	4.68	2.39	5.52	2.42	6.47	2.45	7.46	2.51	8.45	2.62	8.87	2.66	9.51	2.74
	32	4.53	2.49	5.46	2.52	6.26	2.55	7.21	2.61	8.17	2.72	8.57	2.77	9.47	2.85
	35	4.32	2.67	5.09	2.70	5.95	2.72	6.84	2.79	7.73	2.91	8.10	2.95	8.68	3.04
	40	3.93	3.05	4.65	3.08	5.42	3.09	6.22	3.16	7.00	3.27	7.33	3.33	7.84	3.41
MRC+ 90	20	6.24	2.23	7.63	2.26	8.71	2.29	10.07	2.35	11.49	2.46	12.08	2.51	13.00	2.60
	27	5.69	2.59	6.74	2.62	7.91	2.65	9.12	2.73	10.35	2.86	10.87	2.90	11.68	2.96
	30	5.46	2.77	6.44	2.80	7.56	2.84	8.71	2.91	9.87	3.04	10.35	3.09	11.10	3.18
	32	5.29	2.89	6.38	2.92	7.31	2.96	8.42	3.03	9.54	3.16	10.00	3.22	11.05	3.32
	35	5.04	3.11	5.94	3.14	6.94	3.17	7.99	3.25	9.02	3.39	9.45	3.44	10.14	3.54
	40	4.59	3.56	5.43	3.59	6.33	3.60	7.26	3.68	8.17	3.82	8.56	3.88	9.15	3.98
MRC+ 100	20	7.15	3.02	8.72	3.12	9.97	3.10	11.54	3.17	13.16	3.30	13.84	3.36	14.89	3.47
	27	6.52	3.43	7.88	3.46	9.06	3.50	10.45	3.60	11.86	3.75	12.45	3.81	13.39	3.88
	30	6.25	3.63	7.38	3.67	8.66	3.70	9.97	3.80	11.31	3.95	11.86	4.01	12.72	4.12
	32	6.06	3.75	7.06	3.73	8.37	3.83	9.65	3.92	10.93	4.08	11.46	4.15	12.66	4.26
	35	5.78	3.99	6.81	4.03	7.95	4.07	9.15	4.16	10.33	4.33	10.83	4.39	11.61	4.52
	40	5.26	4.52	6.22	4.55	7.25	4.57	8.31	4.67	9.36	4.84	9.80	4.91	10.49	5.03

CASSETTE (GREEN HEAT) PERFORMANCE DATA

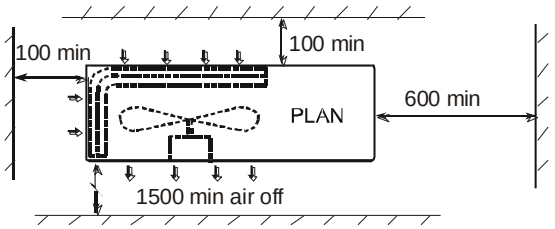
DIMENSIONS			
SPEED	AIRFLOW M3/S	MAX DUTY kW	MINIMUM REFRIGERATION DUTY TO ACHIEVE MAXIMUM DUTY kW
1	0.12	3.88	2.7
2	0.146	4.60	3.2
3	0.175	5.34	3.7
4	0.209	6.16	4.3
5	0.256	7.16	5.0

MOUNTING MRC+

These units are designed to stand on a flat surface. If the unit is to be wall mounted the following kits are available.

KIT	MRC+ 45-80	MRC+ 90-100
Mounting Bracket	55023218	55023219

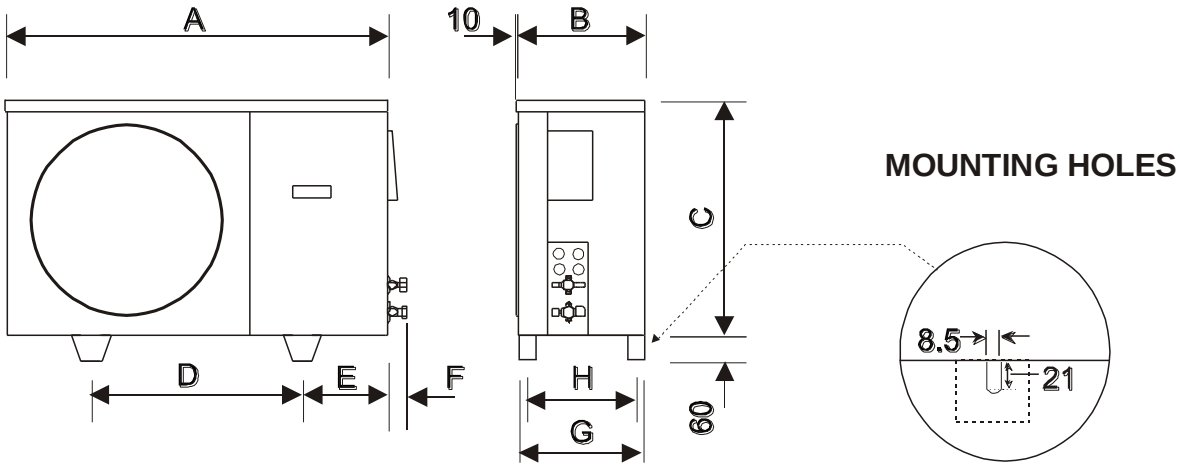
Whether floor or wall mounted, it is essential that the mounting surface is capable of supporting the unit weight**.** Leave space around the unit for air circulation and access for installation and maintenance.



Dimensions in mm.

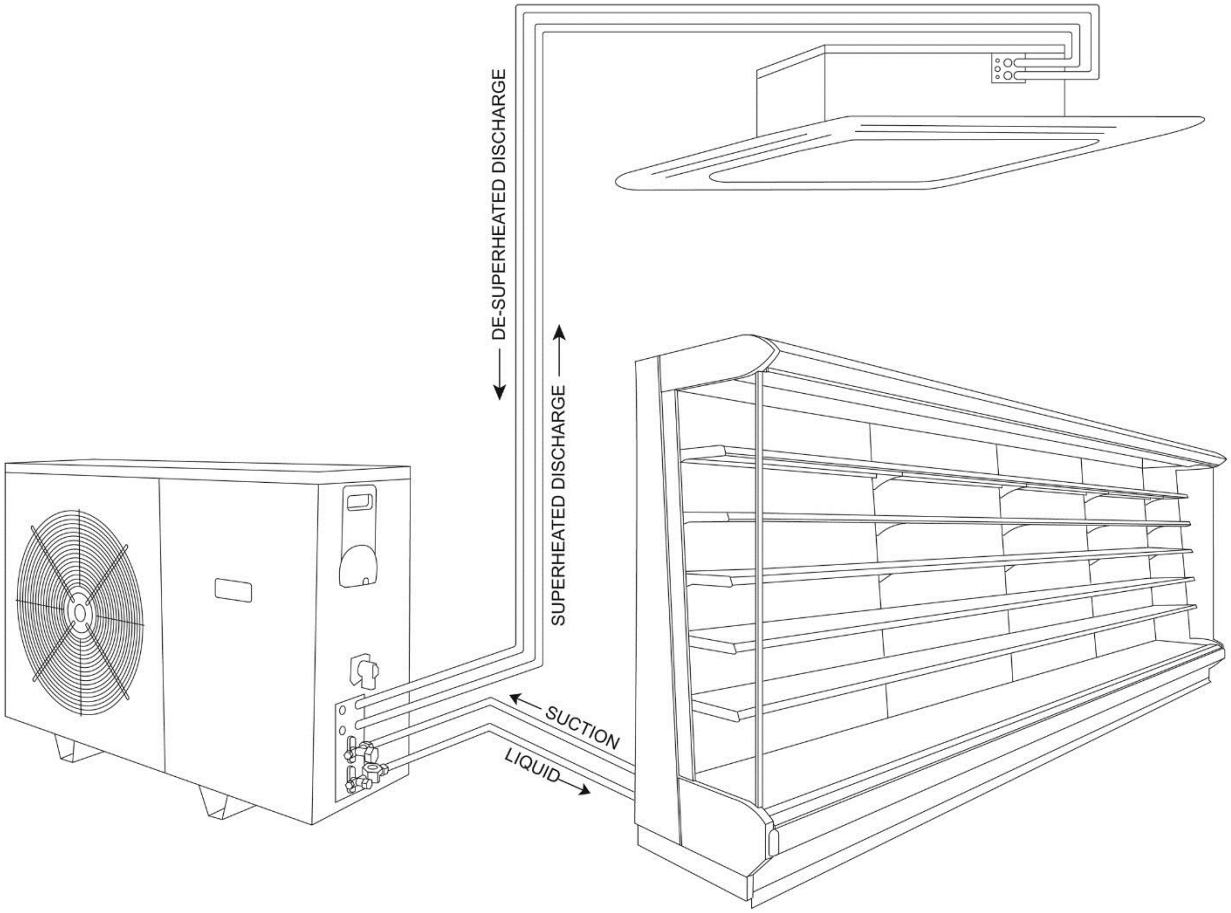
DIMENSIONS & WEIGHTS MRC+

MRC+ 45-100 (Dimensions in mm.)



MODEL	A	B	C	D	E	F	G	H	Weight (kg)	
									1 Ph	3 Ph
MRC+ 45	1000	350	660	495	250	60	345	325	61	61
MRC+ 50	1000	350	660	495	250	60	345	325	64	64
MRC+ 60	1000	350	660	495	250	60	345	325	65	65
MRC+ 80	1000	350	660	495	250	60	345	325	66	66
MRC+ 90	1000	350	760	495	250	70	345	325	76	76
MRC+ 100	1000	350	760	495	250	70	345	325	--	81

PIPEWORK



Supplied male flare connections (sizes in inches)

Model	**MRC+ 45-100**					
Size	**45**	**50**	**60**	**80**	**90**	**100**
Liquid	3/8	3/8	3/8	1/2	1/2	1/2
Suction	1/2	1/2	5/8	5/8	5/8	3/4
Superheated Discharge	5/8	5/8	5/8	5/8	5/8	5/8
De-superheated Discharged	5/8	5/8	5/8	5/8	5/8	5/8

* Brazed connections

MAXIMUM PIPE RUNS

45m maximum including 6m lift. There will be no significant loss of capacity for extended pipe runs provided pipes are correctly sized.

CALCULATING EQUIVALENT LENGTHS

The effects of bends and fittings must be taken into account.

Pipe sizes are based on:
Minimum of 2.5 m/s (500 fpm) suction gas velocity for horizontal or downflow.
Minimum of 5.0 m/s (1000 fpm) suction gas velocity for upflow.
Maximum of 20.0 m/s (4000 fpm) suction gas.
Where vertical risers exceed 3m, oil traps must be formed in the pipe. This will help ensure that oil returns to the compressor. Typically fit an oil trap every 3m with a trap at the bottom of the riser.

GOOD PRACTICE

- Keep pipe runs as short as possible.
- Avoid sharp bends
- Fully insulate both suction and liquid including mechanical connections
- Try to avoid running pipes through hot areas.

PIPE SIZES

UNIT SIZE	MAXIMUM LENGTH OF EQUIVALENT SUCTION LINE PIPE SIZES (m)							LIQUID LINE			
	⅜	½	⅝	¾	⅞	1⅛	1⅜	⅜	½	⅝	¾
45		10	36	45				7.5	45		
50		7.5	18	45				7.5	45		
60			14	36	45			7.5	45		
80			11	30	45				45		
90			10	25	45				20	45	
100			7.5	22	45				15	45	

CONNECTING THE UNITS

1. Connecting the pipework:
   a. Remove the flare nuts from the service valves and release the nitrogen holding charge by slowly opening the valves using a 5mm or 8mm allen key.
   b. Ensure the suction line is fully insulated.
   c. Place the flare nuts over the incoming pipework and flare the pipe ends.
   d. Connect the pipework between the units. Do not leave pipes ends, valves etc open to the atmosphere. Always use 2 spanners when tightening the flare nuts to avoid twisting the pipes. Use a small amount of refrigerant oil on the mating surfaces.

EVACUATING

With the valves open, connect a vacuum pump to the service ports on the outdoor unit valves. Evacuate the interconnecting pipework and indoor unit to 1000 microns (1 Torr) or better. Allow this to be held for a minimum of 15 minutes.

ELECTRICAL

The installer supplies mains, control and interconnecting cables: equipment must be earthed.
Wiring must be carried out in accordance with local and national codes.
Mains supply cables must be size compatible with the recommended fuse.
Cable clamps for use with stranded cables are supplied in units 30 - 90 and should be used to secure incoming/outgoing cables. Installers must supply a method of securing solid sheathed cables.

THREE PHASE UNITS WITH SCROLL COMPRESSORS:
On 3 Ph units sizes 50 - 100 it is possible for the scroll compressor to run backwards.
This becomes obvious on start up - the compressor will not develop a normal running pressure differential and the top will not become warm: it may be excessively noisy. If this happens, switch off the mains power and exchange the two supply phases **not** connected to the indoor unit. This will correct the rotation.

FUSES: 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.

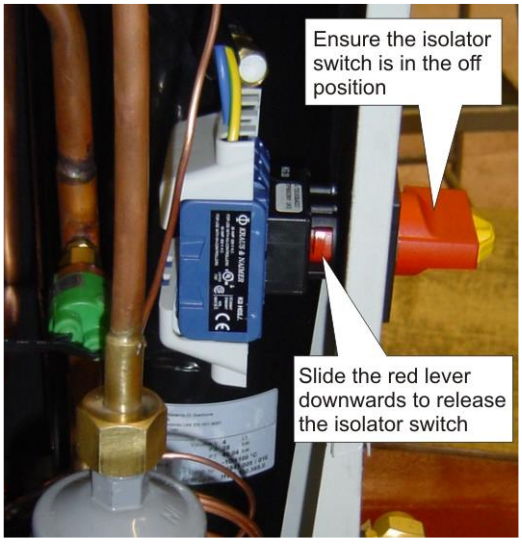
1PH FUSE SIZE						
MRC+	45	50	60	80	90	100
FUSE	20	16	20	25	32	-

3PH FUSE SIZE						
MRC+	45	50	60	80	90	100
FUSE	-	10	10	10	16	16

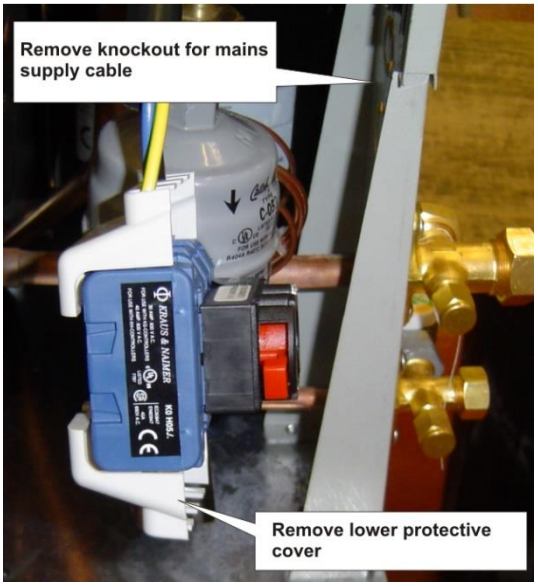
The ratings are for the outdoor unit only. Currents for the indoor units including heaters if applicable should be noted and the fuse size increased pro-rata.

CONNECTION OF MAINS SUPPLY:

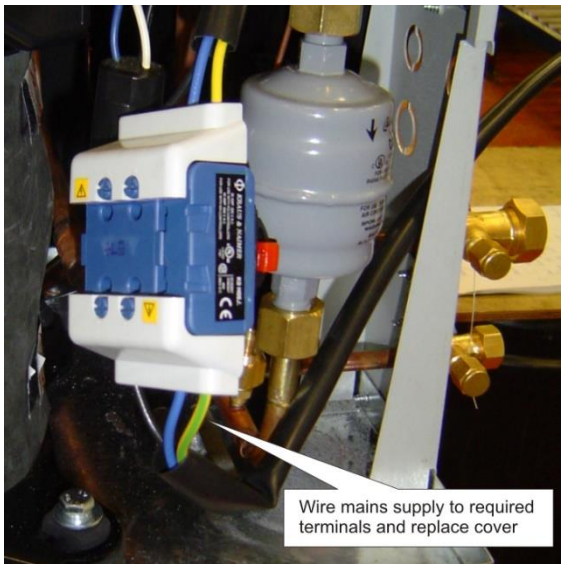
1. Ensure the isolator switch is in the **OFF** position.
2. Remove front panel. (3screws)
3. Isolator body is located on the inside of the right hand panel.
4. To remove the isolator body from the external switch slide the red lever downwards.



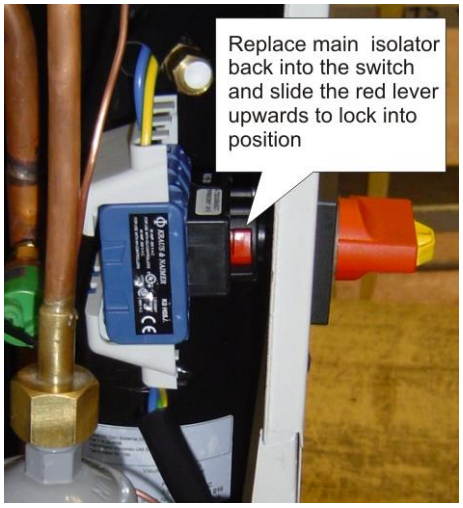
5. Release the main body and lower to the bottom of the unit near the valve panel. Remove lower white plastic cover from the isolator body.
6. Remove knockout hole on the valve panel for your incoming mains supply cable.



7. Route incoming mains cable through the knockout hole and wire to the required terminals and replace lower protective cover.



8. Replace main isolator back into the switch and lock into place by sliding the red lever upwards.



9. Replace covers.

R404A REFRIGERANT

Charging the System:

1. Evacuate the system and interconnecting pipework as page 8 ensuring the service valves are fully open.

2. Allow the evacuated system to draw in the majority of the refrigerant charge.

3. The final charge should be adjusted with the system running.

4. All units are fitted with head pressure control. The link wire across the orange terminals allows the fan to operate at full speed. **THIS SHOULD BE REMOVED AFTER CHARGING**

5. A random start delay of up to 1 minute occurs when mains is first applied. A 3 minute delay occurs between successive compressor operations on all systems.

6. Refrigerant and polyolester oil should be introduced through the Schrader valve the service port on the suction service valve on the outdoor unit. **Ensure the refrigerant is the correct type, as shown on the rating plate**. R404A must always be added in the liquid state.

7. Run the system for a few minutes to allow it to stabilize. Where possible, charge to a sweat line on the evaporator. Typical suction pressures on short lines at UK conditions, with high speed evaporator fan, high speed condenser fan, should be; low temperature system approx 4.4 bar (65 psig).

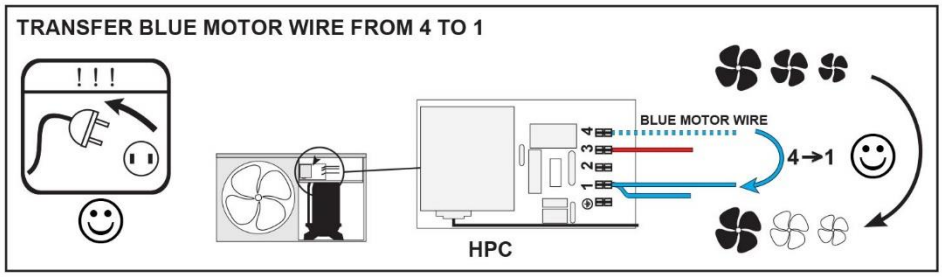
8. **Systems should not be overcharged, to avoid liquid return to the compressor**.

9. **HEAD PRESSURE CONTROL SAGINOMIYA (RGE – ZIN4 – SH)**

The head pressure controller is factory set to suit the refrigerant. It may be necessary to adjust this to suit site conditions, to raise or lower the nominal head pressure.

a. With the system switched off, connect a high pressure gauge to the liquid line service valve.

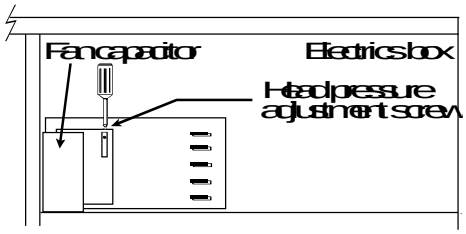
b. Switch on the system, and run for a few minutes to stabilise.



c. The head pressure should be approximately:

R404A: 210-220 psig (14.5-15.2barg) to achieve this adjust the screw clockwise to increase pressure or anticlockwise to decrease. Each ½ turn will alter the pressure by approx 5 psig (0.5 barg)

Min fan speed (0 rpm) and fan cut in pressure 200 psig (13.8 barg) are factory set and not adjustable.



NOTE: The condenser fan may stop if the operating pressure drops below 200 psig (13.8 barg)

10. HEAD PRESSURE CONTROL ALCO (FSY-42S) & SAGINOMIYA (XGE-4C)

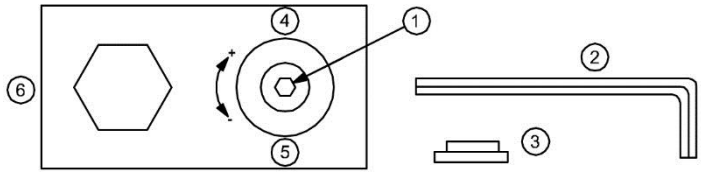
The head pressure controller is factory set to suit the refrigerant. It may be necessary to adjust this to suit site conditions, to raise or lower the nominal head pressure.

ALCO (FSY-42S)

a. With the system switched off, connect a high pressure gauge to the liquid line service valve.

b. Switch on the system, and run for a few minutes to stabilise.

c. The head pressure should be approximately:



Min fan speed (0 rpm) and fan cut in pressure 200 psig (13.8 barg) are factory set and not adjustable.

NOTE: The condenser fan may stop if the operating pressure drops below 200 psig (13.8 barg)

R404A: 210-220 psig (14.5-15.2barg) to achieve this remove sealing plug and insert 2mm or 5/64" allen key into setting screw. Turn allen key clockwise (+) or counter clockwise (-) to readjust the setting.
Do not turn setting screw **more than 3 turns clockwise** (+3). Use following table as a quick guideline for setting:

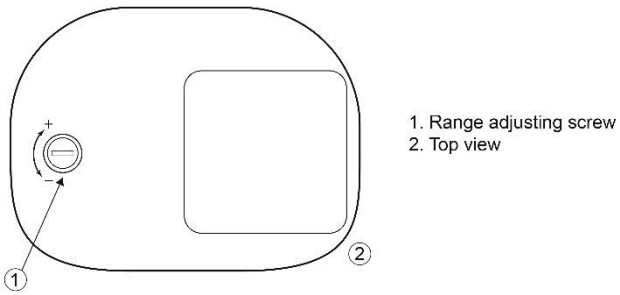
Pressure changes per turn of adjusting screw:

Pressure change: 9.2 … 21.2 bar:
Clockwise ~ +2,5 bar, counter clockwise ~ -2,5 bar

After adjustment, re-insert sealing plug and make sure that it is properly fitted. IP65 protection requires firmly sealed plug

NOTES:
Tolerances for condensing temperatures setpoint: ±2K

SAGINOMIYA (XGE-4C)

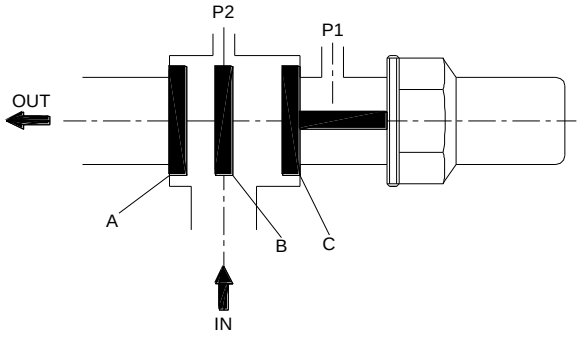


R404A: 210-220 psig (14.5-15.2barg) to achieve this turn the range adjusting screw clockwise (+) for increasing the setting value or counter clockwise (-) for decreasing the setting value.

Pressure changes per 1 turn of adjusting screw:

Pressure change: 10 … 25bar:
Clockwise ~ +1.5 bar, counter clockwise ~ -1.5 bar

ROTA-LOCKED VALVES FITTED TO RECIEVER

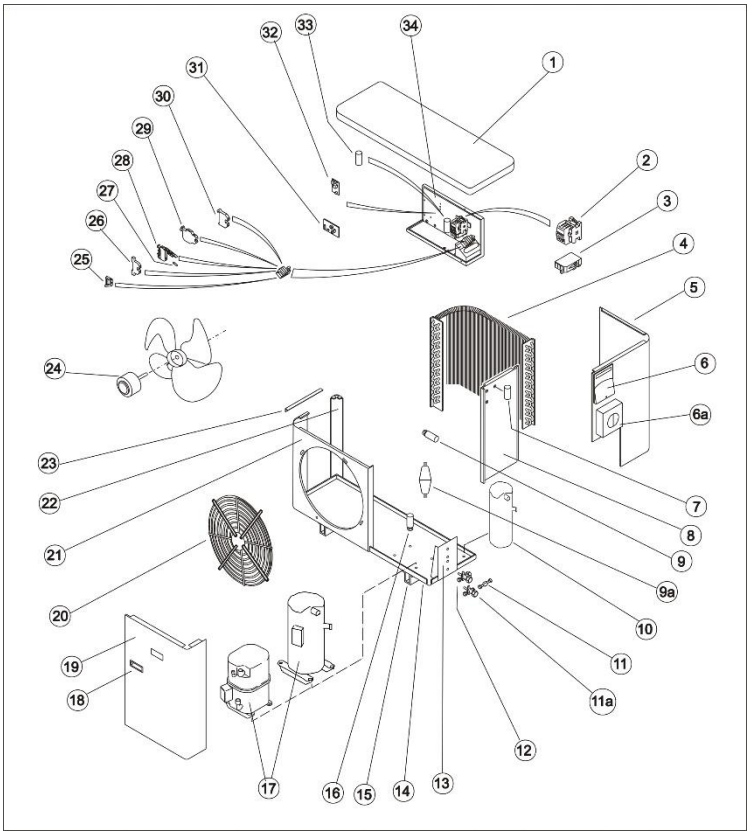


POSITION SPINDLE	FUNCTION
A	OUT CLOSED
B	ALL OPEN
C	P1 CLOSED

Pay attention
- P1, P2: optional gages ports.
- The positions IN - OUT could be inverted according to the employment of client.
- The spindle must be positioned in the position B when the valve will be connected to the unit.

IDENTIFICATION

MRC+ 45 - 100



1	LID	**17**	COMPRESSOR
2	CONTACTOR	**18**	HANDLE
3	OVERLOAD	**19**	FRONT ACCESS
4	HEAT EXCHANGER COIL	**20**	FAN GUARD
5	REAR ACCESS PANEL	**21**	FASCIA PANEL
6	MAINS TERMINAL COVER	**22**	CORNER PANEL
6a	ISOLATOR	**23**	SUPPORT BRACKET
7	FAN CAPACITOR	**24**	FAN / MOTOR ASSEMBLY
8	BULKHEAD PANEL	**25**	END CLAMP
9	HP SWITCH (MANUAL, OPTION)	**26**	TERMINAL
9a	DRIER	**27**	FUSE
10	RECEIVER	**28**	FUSE TERMINAL
11	SIGHT GLASS	**29**	TERMINAL (4 WAY)
11a	SERVICE VALVE (LIQUID)	**30**	EARTH TERMINAL
12	SERVICE VALVE (SUCTION)	**31**	HEAD PRESSURE CONTROL pcb
13	VALVE PANEL	**32**	3 MINUTE TIMER pcb
14	BASE	**33**	COMPRESSOR CAPACITOR
15	MOUNTING FOOT	**34**	ELECTRICS BOX
16	LP SWITCH		

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