

New 17 Series Refrigeration Condensing Units

- THE MRC RANGE INCORPORATES 5MM TUBES WITHIN THE HEAT EXCHANGERS GIVING A LARGE REDUCTION IN THE AMOUNT OF REFRIGERANT REQUIRED.
- APPROVED FOR USE WITH NEW LOW GWP REFRIGERANTS R448A & R449A
- LARGE RANGE OF SINGLE PHASE MODELS
- ECA LISTED MRC+
- ECO DESIGN READY

MRC Range

The Marstair range of refrigeration condensing units are an effective cooling solution for food display cabinets and many other refrigeration applications designed specifically for outdoor use.

Standard equipment for all models includes; HP/LP switch for system protection, 3 minute start delay timer and fan speed head pressure control for operation in low-ambient temperatures.

This quiet, efficient and wide range of units will operate free standing or wall mounted.



Additional MRC+ Features

- 5 Year Warranty (parts only)
- A-grade quality components, with one size fits all spares
- Compact Units
- Incorporates 5mm tubes within the heat exchanger
- Green Heat Ready
- Tier II ECO-Design
- Large range of single phase models
- Also available in a large Low Temp range (MRC+LT)
- Bespoke packages
- 3 minute start delay timer
- Fan speed head pressure control
- Compressor jacket and noise attenuation insulation
- BS EN 60947-3-1 isolator
- Sight glass
- Refrigeration filter/drier and HP/LP switch
- New low GWP refrigerants approved
- Also available in Ducted range (DRC+)

The MRC+ range is also now ECA Listed.

The low temperature range, MRC+ LT, is also available with all the benefits of the MRC+ range.



MRC+Technical Information

Specification MRC

- Suction and liquid valves
- Emerson or Saginomiya (Danfoss) Fan speed controllers
- Emerson or Saginomiya (Danfoss) HP protection switches with auto reset & alarm
- Emerson or Saginomiya (Danfoss) LP protection switches with auto reset
- Low ambient start
- 3 minutes start delay timer
- Random start
- Contactor (overload on 3Ph units)
- Crankcase heater (reciprocating only)
- Liquid receiver
- European manufactured Heat Exchangers
- European manufactured Copeland Compressors MRC 45-180
- Tecumseh Compressors MRC 15-40
- European manufactured fans
- UK manufactured plate work
- UK manufactured timer protection PCBA

Additional Specification MRC+

- Capacitor start relay (15-40 1Ph only)
- Sight glass
- Refrigeration drier
- UK Solenoid (Kraus & Naimer) Detachable Isolator
- Compressor jacket
- Noise attenuation insulation

1Ph & 3Ph Data

MRC 1PH	COIL VOL	RECEIVER VOL	TOTAL
15	0.4	2	2.4
20	0.4	2	2.4
30	0.4	2	2.4
40	0.7	2	2.7
45	0.9	2	2.9
50	0.9	4	4.9
60	0.9	4	4.9
80	0.9	4	4.9
90	1.0	4	5
100	1.0	4	5
150	1.6	4	5.6

MRC 3PH	COIL VOL	RECEIVER VOL	TOTAL
30	0.4	2	2.4
40	0.7	2	2.7
50	0.9	4	4.9
60	0.9	4	4.9
80	0.9	4	4.9
90	1.0	4	5
100	1.0	4	5
130	1.6	7.5	9.1
150	1.6	7.5	9.1
165	1.6	7.5	9.1
180	2.2	7.5	9.7

Dimensions and Weights Unpacked Units

	MODEL													
	15	20	30	40	45	50	60	80	90	100	130	150	165	180
HEIGHT mm	620	620	620	620	720	720	720	720	820	820	1080	1050	1080	1275
WIDTH mm	900	900	900	900	1000	1000	1000	1000	1000	1000	1000	1000	1000	1100
DEPTH mm	300	300	300	300	350	350	350	350	350	350	425	425	425	425
1 Ph kg	46	47	48	53	60	64	65	66	76	84	-	107	-	-
3 Ph kg	-	-	48	53	-	62	63	64	73	81	101	103	103	118

MRC+ Sound Levels

Sound pressure levels (SPL) at 10m distance in free field conditions @ 27°C External Ambient

dBA	34	34	34	34	33	33	33	34	37	38	37	37	37	39
NR	28	28	28	28	27	27	27	27	30	31	30	30	30	32

MRC+ Technical Information

Based on R407A

MODEL	Ambient Temp	ELECTRICAL SUPPLY		HP	EVAPORATING TEMPERATURE °C													
					-15		-10		-5		0		5		7		10	
		1Ph	3Ph		R407A COOLING CAPACITY AND POWER INPUT kW													
					Cap.	Power	Cap.	Power	Cap.	Power	Cap.	Power	Cap.	Power	Cap.	Power	Cap.	Power
MRC+ 15	27	★		1/2	0.90	0.58	1.20	0.64	1.55	0.71	1.90	0.77	2.37	0.83	2.39	0.86	2.45	0.88
	30				0.84	0.58	1.14	0.64	1.47	0.71	1.81	0.78	2.25	0.85	2.28	0.87	2.32	0.91
	32				0.81	0.58	1.09	0.64	1.42	0.72	1.74	0.83	2.19	0.86	2.19	0.89	2.24	0.92
	35				0.74	0.59	1.03	0.64	1.34	0.73	1.65	0.81	2.05	0.89	2.07	0.91	2.10	0.95
MRC+ 20	27	★		5/8	1.17	0.74	1.56	0.82	2.01	0.91	2.47	1.00	3.07	1.08	3.11	1.11	3.18	1.15
	30				1.10	0.74	1.47	0.83	1.91	0.92	2.35	1.01	2.92	1.10	2.96	1.13	3.01	1.18
	32				1.05	0.74	1.42	0.83	1.84	0.92	2.26	1.07	2.84	1.12	2.85	1.15	2.91	1.20
	35				0.96	0.74	1.34	0.84	1.73	0.94	2.14	1.05	2.66	1.15	2.68	1.19	2.72	1.24
MRC+ 30	27	★	★	1 3/8	1.74	0.94	2.23	1.04	2.78	1.15	3.32	1.26	4.03	1.36	4.07	1.43	4.40	1.50
	30				1.64	0.94	2.11	1.05	2.64	1.16	3.16	1.28	3.83	1.39	3.87	1.46	4.16	1.55
	32				1.57	0.95	2.03	1.06	2.53	1.17	3.03	1.35	3.74	1.41	3.72	1.49	4.02	1.58
	35				1.44	0.95	1.91	1.07	2.39	1.20	2.87	1.33	3.50	1.45	3.50	1.54	3.75	1.64
MRC+ 40	27	★	★	1 1/2	2.52	1.40	3.18	1.50	3.93	1.64	4.67	1.80	5.46	1.99	5.75	2.08	6.25	2.21
	30				2.39	1.42	3.03	1.53	3.74	1.68	4.64	1.85	5.18	2.05	5.46	2.14	5.90	2.29
	32				2.31	1.43	2.92	1.56	3.60	1.70	4.28	1.97	5.04	2.10	5.25	2.19	5.68	2.34
	35				2.12	1.44	2.76	1.58	3.41	1.75	4.04	1.94	4.69	2.16	4.91	2.26	5.28	2.42
MRC+ 45	27	★		1 1/2	2.48	1.02	3.01	1.05	3.62	1.10	4.22	1.18	4.87	1.29	5.11	1.37	5.52	1.47
	30				2.39	1.09	2.90	1.13	3.49	1.18	4.08	1.25	4.69	1.37	4.92	1.45	5.29	1.57
	32				2.33	1.14	2.89	1.17	3.39	1.22	3.95	1.36	4.61	1.42	4.78	1.52	5.31	1.64
	35				2.19	1.22	2.72	1.26	3.25	1.31	3.79	1.39	4.36	1.53	4.55	1.62	4.89	1.75
MRC+ 50 	27	★	★	2	3.31	1.50	4.05	1.54	4.89	1.59	5.73	1.67	6.64	1.78	6.98	1.83	7.57	1.88
	30				3.20	1.60	3.90	1.65	4.72	1.70	5.54	1.78	6.39	1.89	6.73	1.93	7.26	2.02
	32				3.12	1.67	3.89	1.72	4.58	1.76	5.37	1.93	6.29	1.96	6.54	2.02	7.29	2.10
	35				2.92	1.79	3.66	1.84	4.39	1.89	5.15	1.98	5.94	2.10	6.23	2.14	6.71	2.24
MRC+ 60 	27	★	★	2 1/2	3.89	1.66	4.75	1.71	5.74	1.77	6.72	1.86	7.80	1.98	8.19	2.03	8.89	2.09
	30				3.75	1.78	4.58	1.83	5.55	1.89	6.51	1.98	7.50	2.10	7.90	2.15	8.52	2.25
	32				3.66	1.86	4.56	1.91	5.38	1.96	6.30	2.15	7.38	2.18	7.68	2.25	8.56	2.34
	35				3.43	1.99	4.29	2.05	5.16	2.11	6.05	2.21	6.97	2.34	7.31	2.40	7.88	2.50
MRC+ 80 	27	★	★	3	4.63	1.90	5.65	1.96	6.84	2.02	8.00	2.13	9.28	2.27	9.75	2.33	10.58	2.41
	30				4.47	2.04	5.45	2.10	6.60	2.17	7.75	2.28	8.93	2.42	9.41	2.48	10.14	2.59
	32				4.35	2.14	5.43	2.20	6.40	2.26	7.50	2.48	8.78	2.52	9.14	2.60	10.18	2.70
	35				4.08	2.30	5.11	2.37	6.14	2.44	7.20	2.55	8.30	2.71	8.70	2.77	9.37	2.90
MRC+ 90 	27	★	★	3 1/2	5.40	2.19	6.60	2.26	7.98	2.34	9.35	2.46	10.84	2.63	11.39	2.70	12.35	2.79
	30				5.21	2.37	6.37	2.43	7.71	2.51	9.04	2.64	10.43	2.80	10.98	2.88	11.84	3.00
	32				5.08	2.48	6.34	2.55	7.47	2.62	8.76	2.88	10.25	2.93	10.67	3.02	11.89	3.14
	35				4.77	2.67	5.96	2.75	7.17	2.83	8.40	2.96	9.69	3.15	10.16	3.23	10.94	3.37
MRC+ 100 	27	★	★	4	6.19	2.89	7.71	2.97	9.14	3.08	10.71	3.24	12.41	3.45	13.05	3.54	14.15	3.65
	30				5.97	3.09	7.29	3.17	8.83	3.27	10.36	3.43	11.95	3.64	12.58	3.73	13.57	3.89
	32				5.82	3.21	7.02	3.25	8.56	3.39	10.03	3.72	11.75	3.78	12.22	3.88	13.62	4.04
	35				5.46	3.43	6.83	3.53	8.21	3.63	9.63	3.80	11.10	4.03	11.63	4.12	12.54	4.30
MRC+ 130 	27	★	★	4 2/5	7.09	3.30	8.84	3.39	10.47	3.51	12.27	3.69	14.22	3.92	14.95	4.03	16.21	4.15
	30				6.84	3.53	8.36	3.62	10.11	3.74	11.87	3.91	13.69	4.15	14.42	4.25	15.54	4.43
	32				6.67	3.67	8.05	3.71	9.81	3.87	11.50	4.24	13.46	4.31	14.00	4.43	15.61	4.60
	35				6.25	3.92	7.83	4.04	9.41	4.15	11.03	4.33	12.72	4.60	13.33	4.70	14.36	4.91
MRC+ 150 	27	★	★	5	7.74	3.34	9.64	3.44	11.43	3.56	13.38	3.74	15.51	3.97	16.30	4.08	17.68	4.20
	30				7.46	3.57	9.11	3.67	11.03	3.78	12.95	3.96	14.93	4.20	15.72	4.30	16.95	4.49
	32				7.28	3.71	8.78	3.76	10.70	3.92	12.54	4.29	14.68	4.36	15.28	4.48	17.02	4.66
	35				6.82	3.97	8.54	4.09	10.26	4.20	12.03	4.39	13.87	4.66	14.54	4.76	15.67	4.97
MRC+ 165 	27	★		6	9.23	3.89	11.50	4.00	13.63	4.14	15.96	4.35	18.51	4.63	19.45	4.76	21.09	4.90
	30				8.90	4.16	10.87	4.28	13.16	4.41	15.44	4.62	17.81	4.91	18.76	5.03	20.22	5.25
	32				8.68	4.33	10.47	4.38	12.76	4.58	14.96	5.02	17.51	5.10	18.22	5.24	20.31	5.45
	35				8.14	4.64	10.19	4.78	12.24	4.91	14.35	5.13	16.55	5.45	17.34	5.57	18.69	5.82
MRC+ 180 	27	★		7 1/2	10.20	4.27	12.71	4.39	15.06	4.55	17.64	4.78	20.45	5.09	21.50	5.23	23.31	5.39
	30				9.84	4.57	12.02	4.70	14.55	4.85	17.07	5.08	19.68	5.39	20.73	5.53	22.35	5.77
	32				9.60	4.76	11.57	4.82	14.10	5.04	16.53	5.52	19.35	5.61	20.14	5.77	22.44	6.00
	35				8.99	5.11	11.26	5.26	13.53	5.40	15.86	5.65	18.29	6.00	19.17	6.14	20.66	6.41

MRC+ Technical Information

Based on R407F

MODEL	Ambient Temp	ELECTRICAL SUPPLY		HP	EVAPORATING TEMPERATURE °C													
					-15		-10		-5		0		5		7		10	
		1Ph	3Ph		R407F COOLING CAPACITY AND POWER INPUT kW													
					Cap.	Power	Cap.	Power	Cap.	Power	Cap.	Power	Cap.	Power	Cap.	Power	Cap.	Power
MRC+ 15	27	★		1/2	0.88	0.64	1.19	0.70	1.54	0.77	1.93	0.82	2.37	0.90	2.42	0.92	2.49	0.95
	30				0.83	0.65	1.12	0.70	1.46	0.78	1.81	0.85	2.26	0.92	2.30	0.94	2.37	0.98
	32				0.79	0.65	1.07	0.70	1.40	0.78	1.74	0.86	2.21	0.93	2.22	0.96	2.29	1.00
	35				0.74	0.64	1.01	0.70	1.32	0.80	1.64	0.88	2.05	0.96	2.08	0.98	2.14	1.03
MRC+ 20	27	★		5/8	1.15	0.82	1.54	0.90	2.00	0.99	2.50	1.06	3.08	1.17	3.14	1.20	3.23	1.24
	30				1.07	0.82	1.45	0.91	1.89	1.00	2.34	1.10	2.93	1.19	2.99	1.22	3.07	1.27
	32				1.03	0.83	1.39	0.92	1.81	1.01	2.26	1.12	2.87	1.21	2.88	1.25	2.97	1.30
	35				0.96	0.82	1.31	0.92	1.71	1.03	2.13	1.14	2.66	1.25	2.70	1.29	2.77	1.35
MRC+ 30	27	★	★	1 3/8	1.72	1.05	2.20	1.15	2.75	1.26	3.36	1.34	4.05	1.47	4.11	1.54	4.47	1.62
	30				1.61	1.06	2.08	1.16	2.61	1.28	3.15	1.40	3.84	1.51	3.91	1.58	4.24	1.67
	32				1.54	1.06	1.99	1.17	2.50	1.29	3.03	1.42	3.76	1.53	3.76	1.62	4.09	1.71
	35				1.44	1.06	1.87	1.18	2.36	1.31	2.85	1.45	3.50	1.57	3.53	1.67	3.82	1.79
MRC+ 40	27	★	★	1 1/2	2.49	1.58	3.14	1.68	3.89	1.80	4.72	1.92	5.48	2.16	5.81	2.25	6.34	2.39
	30				2.34	1.60	2.98	1.71	3.71	1.85	4.62	2.03	5.20	2.24	5.52	2.33	6.01	2.49
	32				2.25	1.61	2.87	1.73	3.56	1.88	4.28	2.06	5.08	2.29	5.30	2.39	5.79	2.55
	35				2.12	1.61	2.70	1.75	3.35	1.92	4.02	2.12	4.69	2.36	4.96	2.46	5.38	2.64
MRC+ 45	27	★		1 1/2	2.44	1.15	2.97	1.17	3.58	1.21	4.27	1.25	4.89	1.39	5.16	1.48	5.60	1.58
	30				2.35	1.23	2.86	1.25	3.46	1.29	4.06	1.37	4.71	1.49	4.97	1.57	5.39	1.70
	32				2.28	1.28	2.84	1.30	3.35	1.35	3.95	1.42	4.65	1.55	4.83	1.65	5.42	1.78
	35				2.19	1.37	2.66	1.39	3.20	1.44	3.77	1.52	4.36	1.66	4.59	1.76	4.97	1.91
ECA LISTED	27	★	★	2	3.26	1.69	4.00	1.72	4.85	1.76	5.80	1.79	6.67	1.93	7.05	1.98	7.69	2.04
	30				3.13	1.81	3.84	1.84	4.68	1.87	5.52	1.95	6.42	2.06	6.80	2.10	7.40	2.19
	32				3.04	1.89	3.82	1.91	4.53	1.95	5.37	2.02	6.33	2.13	6.61	2.19	7.43	2.28
	35				2.92	2.01	3.58	2.03	4.32	2.08	5.13	2.16	5.94	2.29	6.28	2.33	6.83	2.45
ECA LISTED	27	★	★	2 1/2	3.83	1.88	4.70	1.90	5.69	1.95	6.81	1.99	7.82	2.14	8.27	2.20	9.02	2.26
	30				3.68	2.02	4.51	2.04	5.49	2.08	6.48	2.17	7.53	2.29	7.98	2.34	8.68	2.44
	32				3.57	2.10	4.48	2.13	5.31	2.17	6.30	2.25	7.43	2.38	7.76	2.44	8.72	2.55
	35				3.43	2.24	4.20	2.27	5.08	2.32	6.02	2.41	6.98	2.55	7.37	2.61	8.01	2.73
ECA LISTED	27	★	★	3	4.56	2.15	5.59	2.19	6.77	2.24	8.10	2.28	9.31	2.47	9.85	2.53	10.74	2.61
	30				4.38	2.32	5.37	2.35	6.54	2.40	7.71	2.50	8.96	2.64	9.50	2.70	10.33	2.81
	32				4.25	2.42	5.33	2.45	6.32	2.50	7.50	2.60	8.85	2.75	9.23	2.82	10.38	2.94
	35				4.08	2.59	5.00	2.62	6.04	2.69	7.16	2.79	8.30	2.96	8.77	3.02	9.54	3.17
ECA LISTED	27	★	★	3 1/2	5.32	2.49	6.53	2.53	7.91	2.58	9.46	2.64	10.87	2.86	11.50	2.93	12.54	3.02
	30				5.11	2.69	6.27	2.72	7.63	2.78	9.01	2.90	10.47	3.06	11.10	3.13	12.06	3.27
	32				4.96	2.81	6.23	2.85	7.38	2.91	8.76	3.02	10.33	3.20	10.78	3.28	12.12	3.43
	35				4.76	3.01	5.84	3.05	7.05	3.13	8.36	3.25	9.69	3.44	10.24	3.52	11.13	3.69
ECA LISTED	27	★	★	4	6.10	3.29	7.63	3.33	9.06	3.41	10.83	3.47	12.46	3.75	13.17	3.84	14.36	3.95
	30				5.85	3.52	7.18	3.56	8.74	3.63	10.32	3.77	11.99	3.98	12.71	4.06	13.82	4.23
	32				5.69	3.64	6.90	3.63	8.46	3.76	10.03	3.91	11.83	4.12	12.35	4.23	13.89	4.41
	35				5.46	3.87	6.69	3.92	8.08	4.01	9.58	4.16	11.11	4.40	11.73	4.50	12.75	4.71
ECA LISTED	27		★	4 2/5	6.99	3.73	8.74	3.78	10.38	3.87	12.41	3.95	14.27	4.26	15.09	4.36	16.45	4.49
	30				6.70	4.00	8.23	4.04	10.02	4.13	11.82	4.29	13.74	4.53	14.56	4.62	15.83	4.81
	32				6.51	4.15	7.90	4.13	9.69	4.28	11.50	4.45	13.56	4.69	14.15	4.81	15.91	5.01
	35				6.25	4.40	7.66	4.46	9.26	4.57	10.98	4.74	12.72	5.01	13.44	5.12	14.61	5.36
ECA LISTED	27	★	★	5	7.62	3.78	9.53	3.83	11.32	3.92	13.54	4.00	15.57	4.31	16.46	4.41	17.95	4.55
	30				7.31	4.05	8.98	4.09	10.93	4.18	12.89	4.34	14.98	4.58	15.88	4.68	17.27	4.87
	32				7.10	4.20	8.62	4.18	10.57	4.34	12.54	4.50	14.79	4.75	15.43	4.88	17.35	5.08
	35				6.82	4.46	8.35	4.52	10.10	4.63	11.97	4.80	13.88	5.08	14.66	5.19	15.94	5.43
ECA LISTED	27		★	6	9.09	4.41	11.37	4.47	13.50	4.57	16.15	4.66	18.57	5.03	19.64	5.15	21.41	5.31
	30				8.72	4.73	10.71	4.78	13.03	4.88	15.38	5.07	17.87	5.36	18.95	5.47	20.60	5.70
	32				8.48	4.91	10.28	4.89	12.61	5.07	14.96	5.26	17.64	5.56	18.41	5.70	20.70	5.94
	35				8.13	5.22	9.97	5.29	12.05	5.41	14.28	5.62	16.55	5.95	17.49	6.08	19.01	6.37
ECA LISTED	27		★	7 1/2	10.05	4.84	12.57	4.91	14.92	5.03	17.85	5.12	20.53	5.53	21.71	5.66	23.66	5.84
	30				9.64	5.20	11.83	5.26	14.41	5.37	17.00	5.58	19.75	5.89	20.94	6.01	22.77	6.27
	32				9.37	5.40	11.36	5.37	13.93	5.58	16.53	5.79	19.50	6.12	20.35	6.28	22.88	6.54
	35				8.99	5.74	11.02	5.82	13.31	5.96	15.79	6.19	18.30	6.55	19.33	6.69	21.01	7.01

MRC+ Technical Information

Based on R404A/R452A

MODEL	Ambient Temp	ELECTRICAL SUPPLY		HP	EVAPORATING TEMPERATURE °C													
					-15		-10		-5		0		5		7		10	
		1Ph	3Ph		R404A COOLING CAPACITY AND POWER INPUT kW													
					Cap.	Power	Cap.	Power	Cap.	Power	Cap.	Power	Cap.	Power	Cap.	Power	Cap.	Power
MRC+ 15	27	★		1/2	0.95	0.66	1.23	0.73	1.54	0.79	1.86	0.84	2.26	0.90	2.28	0.91	2.32	0.93
	30				0.88	0.66	1.15	0.73	1.45	0.79	1.75	0.86	2.13	0.91	2.15	0.93	2.18	0.95
	32				0.84	0.66	1.10	0.73	1.38	0.80	1.67	0.86	2.04	0.92	2.06	0.94	2.08	0.97
	35				0.79	0.66	1.03	0.73	1.30	0.81	1.57	0.88	1.91	0.94	1.92	0.96	1.94	1.00
MRC+ 20	27	★		5/8	1.23	0.85	1.59	0.93	2.00	1.01	2.41	1.10	2.93	1.17	2.96	1.19	3.01	1.22
	30				1.15	0.85	1.49	0.94	1.88	1.02	2.27	1.11	2.76	1.19	2.79	1.21	2.82	1.24
	32				1.09	0.85	1.43	0.94	1.80	1.03	2.17	1.12	2.65	1.20	2.67	1.23	2.70	1.26
	35				1.02	0.85	1.33	0.94	1.68	1.04	2.03	1.14	2.48	1.23	2.50	1.26	2.52	1.30
MRC+ 30	27	★	★	1 3/8	1.84	1.09	2.28	1.19	2.75	1.29	3.24	1.39	3.85	1.47	3.89	1.53	4.16	1.59
	30				1.72	1.09	2.13	1.20	2.59	1.30	3.04	1.41	3.63	1.50	3.65	1.56	3.90	1.63
	32				1.64	1.09	2.04	1.20	2.48	1.31	2.91	1.42	3.48	1.52	3.49	1.59	3.73	1.66
	35				1.53	1.09	1.91	1.21	2.32	1.33	2.73	1.45	3.25	1.55	3.26	1.63	3.48	1.72
MRC+ 40	27	★	★	1 1/2	2.66	1.64	3.24	1.74	3.89	1.85	4.56	1.99	5.22	2.16	5.49	2.23	5.91	2.35
	30				2.51	1.65	3.06	1.76	3.67	1.89	4.47	2.04	4.90	2.22	5.15	2.30	5.53	2.42
	32				2.40	1.66	2.94	1.77	3.52	1.91	4.11	2.07	4.69	2.26	4.92	2.34	5.28	2.47
	35				2.25	1.66	2.75	1.80	3.30	1.95	3.84	2.12	4.36	2.32	4.58	2.41	4.89	2.54
MRC+ 45	27	★		1 1/2	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
MRC+ 50 	27	★	★	2	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
MRC+ 60 	27	★	★	2 1/2	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
MRC+ 80 	27	★	★	3	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
MRC+ 90 	27	★	★	3 1/2	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
MRC+ 100 	27	★	★	4	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
MRC+ 130 	27		★	4 2/5	7.47	3.89	9.03	3.92	10.38	3.97	11.97	4.08	13.59	4.26	14.26	4.32	15.34	4.41
	30				7.17	4.12	8.45	4.16	9.92	4.21	11.42	4.32	12.95	4.49	13.59	4.55	14.57	4.68
	32				6.95	4.27	8.09	4.24	9.59	4.35	11.05	4.46	12.52	4.64	13.13	4.72	14.50	4.85
	35				6.62	4.55	7.80	4.59	9.11	4.63	10.49	4.74	11.84	4.94	12.41	5.00	13.30	5.15
MRC+ 150 	27	★	★	5	8.15	3.94	9.84	3.97	11.32	4.02	13.06	4.13	14.82	4.31	15.56	4.38	16.73	4.46
	30				7.82	4.17	9.22	4.22	10.82	4.26	12.46	4.37	14.13	4.55	14.82	4.61	15.89	4.75
	32				7.58	4.32	8.83	4.29	10.46	4.41	12.06	4.52	13.65	4.70	14.32	4.78	15.82	4.92
	35				7.22	4.60	8.51	4.65	9.94	4.69	11.44	4.80	12.91	5.00	13.53	5.07	14.51	5.22
MRC+ 165 	27		★	6	9.72	4.59	11.74	4.63	13.50	4.69	15.58	4.82	17.68	5.03	18.56	5.11	19.95	5.21
	30				9.32	4.87	11.00	4.93	12.90	4.98	14.87	5.11	16.86	5.31	17.68	5.39	18.96	5.55
	32				9.04	5.05	10.53	5.02	12.48	5.16	14.38	5.29	16.29	5.49	17.08	5.60	18.87	5.75
	35				8.61	5.39	10.15	5.44	11.85	5.49	13.64	5.62	15.41	5.85	16.15	5.93	17.31	6.11
MRC+ 180 	27		★	7 1/2	10.74	5.04	12.98	5.09	14.92	5.16	17.22	5.30	19.54	5.53	20.52	5.62	22.05	5.73
	30				10.30	5.36	12.16	5.42	14.26	5.47	16.43	5.62	18.63	5.85	19.54	5.93	20.95	6.10
	32				9.99	5.56	11.64	5.52	13.79	5.67	15.90	5.82	18.00	6.05	18.88	6.16	20.86	6.33
	35				9.52	5.93	11.22	5.99	13.10	6.05	15.08	6.19	17.03	6.45	17.84	6.53	19.13	6.73

MRC+ Technical Information

Based on R448A - R449A

NOW APPROVED!
for use with
NEW LOW GWP
Refrigerants

MODEL	Ambient Temp	ELECTRICAL SUPPLY		HP	EVAPORATING TEMPERATURE °C														
					-15		-10		-5		0		5		7		10		
		1Ph	3Ph		R448A - R449A COOLING CAPACITY AND POWER INPUT kW														
					Cap.	Power	Cap.	Power	Cap.	Power	Cap.	Power	Cap.	Power	Cap.	Power	Cap.	Power	
MRC+ 15	27	★		1/2	0.83	0.59	1.10	0.67	1.41	0.73	1.74	0.79	2.17	0.86	2.21	0.87	2.28	0.91	
	30				0.77	0.60	1.04	0.67	1.35	0.73	1.66	0.81	2.08	0.87	2.12	0.89	2.18	0.92	
	32				0.74	0.60	1.00	0.67	1.29	0.74	1.60	0.80	2.01	0.87	2.05	0.90	2.10	0.94	
	35				0.71	0.60	0.95	0.67	1.24	0.75	1.54	0.82	1.92	0.89	1.95	0.92	2.00	0.96	
MRC+ 20	27	★		5/8	1.08	0.77	1.42	0.85	1.83	0.93	2.26	1.03	2.81	1.12	2.87	1.14	2.95	1.19	
	30				1.01	0.77	1.34	0.86	1.75	0.94	2.16	1.04	2.69	1.13	2.74	1.16	2.81	1.20	
	32				0.97	0.77	1.30	0.86	1.68	0.95	2.08	1.05	2.61	1.14	2.66	1.17	2.73	1.22	
	35				0.92	0.78	1.23	0.86	1.60	0.96	1.99	1.07	2.49	1.17	2.54	1.20	2.60	1.25	
MRC+ 30	27	★	★	1 3/8	1.61	0.98	2.04	1.09	2.52	1.19	3.04	1.30	3.69	1.40	3.77	1.47	4.08	1.55	
	30				1.51	0.99	1.92	1.10	2.40	1.20	2.89	1.32	3.54	1.43	3.59	1.49	3.89	1.58	
	32				1.45	0.99	1.86	1.09	2.32	1.20	2.80	1.33	3.43	1.44	3.48	1.52	3.77	1.61	
	35				1.38	1.00	1.76	1.10	2.20	1.23	2.67	1.36	3.27	1.47	3.31	1.56	3.59	1.66	
MRC+ 40	27	★	★	1 1/2	2.33	1.48	2.90	1.59	3.56	1.70	4.27	1.87	5.00	2.06	5.33	2.14	5.80	2.29	
	30				2.21	1.50	2.76	1.61	3.41	1.74	4.25	1.91	4.78	2.11	5.07	2.20	5.52	2.34	
	32				2.13	1.51	2.68	1.61	3.29	1.76	3.95	1.94	4.62	2.15	4.90	2.23	5.34	2.39	
	35				2.02	1.52	2.54	1.64	3.14	1.80	3.76	1.98	4.38	2.20	4.66	2.30	5.05	2.44	
MRC+ 45	27	★		1 1/2	2.28	1.07	2.74	1.10	3.27	1.14	3.86	1.21	4.47	1.33	4.72	1.41	5.12	1.52	
	30				2.21	1.16	2.64	1.17	3.18	1.22	3.73	1.28	4.33	1.41	4.56	1.48	4.95	1.60	
	32				2.15	1.20	2.65	1.21	3.10	1.26	3.65	1.34	4.23	1.45	4.47	1.55	4.99	1.67	
	35				2.09	1.29	2.50	1.31	2.99	1.35	3.52	1.42	4.08	1.55	4.31	1.64	4.67	1.77	
ECA LISTED	27	★	★	2	3.05	1.58	3.69	1.62	4.44	1.66	5.24	1.73	6.09	1.84	6.46	1.88	7.02	1.95	
	30				2.95	1.70	3.56	1.72	4.30	1.76	5.07	1.84	5.90	1.94	6.25	1.98	6.80	2.06	
	32				2.87	1.77	3.56	1.79	4.19	1.82	4.96	1.90	5.76	2.00	6.11	2.05	6.85	2.14	
	35				2.78	1.90	3.36	1.91	4.05	1.95	4.79	2.02	5.56	2.14	5.90	2.18	6.41	2.26	
ECA LISTED	27	★	★	2 1/2	3.59	1.76	4.33	1.80	5.20	1.84	6.15	1.92	7.14	2.04	7.59	2.09	8.25	2.16	
	30				3.46	1.89	4.19	1.92	5.05	1.95	5.95	2.04	6.92	2.16	7.33	2.21	7.97	2.29	
	32				3.37	1.97	4.18	1.99	4.92	2.03	5.82	2.11	6.76	2.23	7.18	2.29	8.04	2.39	
	35				3.27	2.12	3.95	2.13	4.74	2.18	5.62	2.25	6.53	2.38	6.91	2.43	7.52	2.53	
ECA LISTED	27	★	★	3	4.27	2.02	5.16	2.07	6.19	2.11	7.32	2.21	8.50	2.36	9.03	2.41	9.82	2.49	
	30				4.12	2.18	4.98	2.21	6.01	2.26	7.09	2.35	8.24	2.49	8.73	2.55	9.49	2.65	
	32				4.01	2.27	4.97	2.30	5.86	2.35	6.93	2.44	8.05	2.58	8.54	2.65	9.57	2.76	
	35				3.89	2.45	4.70	2.47	5.65	2.51	6.69	2.61	7.77	2.76	8.24	2.81	8.96	2.93	
ECA LISTED	27	★	★	3 1/2	5.07	2.36	6.16	2.41	7.42	2.46	8.79	2.55	10.19	2.70	10.79	2.75	11.77	2.83	
	30				4.90	2.53	5.95	2.58	7.18	2.65	8.50	2.73	9.86	2.87	10.44	2.93	11.36	3.03	
	32				4.79	2.65	5.94	2.69	7.01	2.76	8.30	2.84	9.63	2.99	10.23	3.06	11.43	3.17	
	35				4.63	2.86	5.62	2.91	6.76	2.96	8.01	3.06	9.27	3.21	9.82	3.27	10.65	3.37	
ECA LISTED	27	★	★	4	5.78	3.12	7.14	3.16	8.43	3.23	10.03	3.37	11.66	3.54	12.38	3.62	13.55	3.71	
	30				5.60	3.31	6.76	3.37	8.16	3.42	9.68	3.55	11.28	3.72	11.97	3.80	13.06	3.93	
	32				5.46	3.43	6.53	3.42	7.96	3.54	9.45	3.66	11.02	3.84	11.68	3.93	13.13	4.06	
	35				5.29	3.66	6.38	3.72	7.68	3.77	9.11	3.89	10.60	4.08	11.29	4.15	12.29	4.30	
ECA LISTED	27		★	4 2/5	6.98	3.54	8.63	3.58	10.10	3.65	11.88	3.79	13.82	4.01	14.67	4.10	15.98	4.23	
	30				6.74	3.79	8.15	3.82	9.78	3.89	11.47	4.02	13.32	4.24	14.14	4.32	15.39	4.49	
	32				6.57	3.94	7.84	3.92	9.54	4.03	11.19	4.17	13.03	4.38	13.82	4.49	15.49	4.65	
	35				6.30	4.23	7.64	4.26	9.17	4.32	10.77	4.45	12.54	4.68	13.29	4.76	14.49	4.95	
ECA LISTED	27	★	★	5	7.61	3.59	9.40	3.62	11.02	3.69	12.96	3.84	15.07	4.05	16.01	4.15	17.42	4.27	
	30				7.35	3.83	8.89	3.87	10.67	3.93	12.51	4.07	14.53	4.30	15.42	4.38	16.78	4.55	
	32				7.16	3.98	8.56	3.96	10.41	4.09	12.21	4.23	14.20	4.44	15.08	4.55	16.90	4.71	
	35				6.87	4.27	8.34	4.32	10.00	4.38	11.75	4.51	13.67	4.74	14.49	4.83	15.81	5.02	
ECA LISTED	27		★	6	9.02	4.13	11.12	4.19	13.09	4.28	15.43	4.46	17.93	4.73	19.02	4.83	20.81	4.99	
	30				8.70	4.42	10.54	4.49	12.64	4.57	14.92	4.74	17.32	5.00	18.40	5.08	20.08	5.32	
	32				8.49	4.60	10.18	4.58	12.33	4.74	14.54	4.93	16.96	5.18	17.95	5.32	20.23	5.52	
	35				8.13	4.94	9.90	5.00	11.90	5.08	14.06	5.25	16.29	5.54	17.34	5.64	18.89	5.88	
ECA LISTED	27		★	7 1/2	9.96	4.63	12.28	4.69	14.38	4.78	16.93	4.94	19.64	5.25	20.91	5.37	22.92	5.55	
	30				9.57	4.93	11.57	5.01	13.87	5.08	16.38	5.27	19.02	5.57	20.27	5.67	22.02	5.90	
	32				9.33	5.13	11.16	5.10	13.54	5.27	16.00	5.46	18.64	5.74	19.77	5.89	22.16	6.12	
	35				8.93	5.48	10.88	5.55	13.05	5.63	15.43	5.81	17.97	6.12	19.13	6.23	21.44	6.50	

MRC+ LT Technical Information Specification

- Suction and Liquid Valves
- Emerson or Saginomiya (Danfoss) Fan Speed Controllers
- Emerson or Saginomiya (Danfoss) HP Protection Switches with Auto Reset & Alarm
- Emerson or Saginomiya (Danfoss) LP Protection Switches with Auto Reset
- Low Ambient Start
- 3 Minutes Start Delay Timer
- Random Start
- Contactor (overload on 3Ph units)
- Crankcase Heater
- Liquid receiver
- European manufactured Heat Exchangers
- European manufactured fans
- UK manufactured plate work
- UK manufactured timer protection PCBA
- Sight glass
- Refrigeration drier
- UK Solenoid (Kraus & Naimer) Detachable Isolator
- Compressor jacket
- Noise attenuation insulation
- MRC+ LT 40-60 Tecumseh Compressors with capacitor start relay
- MRC + LT 80-100 Emerson Scroll ZF Compressors

Based on R407A

MODEL	Ambient Temp	ELECTRICAL SUPPLY		HP	EVAPORATING TEMPERATURE °C									
					-40		-35		-30		-25		-20	
		1Ph	3Ph		Cap.	Power	Cap.	Power	Cap.	Power	Cap.	Power	Cap.	Power
MRC+ 40	27	*		1 1/2	0.56	0.78	0.81	0.82	1.13	0.93	1.51	1.00	1.96	1.16
	32				0.49	0.76	0.74	0.84	1.00	0.96	1.42	1.05	1.87	1.16
MRC+ 50	27	*	*	2	0.77	1.03	1.13	1.20	1.54	1.38	2.08	1.52	2.64	1.78
	32				0.61	1.02	1.05	1.23	1.41	1.43	1.98	1.61	2.58	1.80
MRC+ 60	27	*	*	2 1/2	1.04	1.18	1.54	1.48	2.11	1.71	2.83	1.90	3.65	2.24
	32				0.85	1.27	1.37	1.52	1.94	1.76	2.69	2.00	3.47	2.27
MRC+ 80	27		*	4	1.75	1.70	2.20	1.75	2.76	1.80	3.40	1.90	4.10	2.00
	32				1.60	1.95	2.10	2.00	2.55	2.05	3.20	2.10	3.90	2.20
MRC+ 90	27		*	5	2.36	2.32	2.97	2.45	3.64	2.71	4.44	2.83	5.29	3.19
	32				2.16	2.60	2.83	2.75	3.44	2.98	4.25	3.18	5.09	3.47
MRC+ 100	27		*	6	2.70	2.77	3.41	3.00	4.21	3.20	4.80	3.30	6.06	3.69
	32				2.39	3.24	3.26	3.40	4.04	3.53	4.96	3.80	5.94	4.05

Based on R407F

MODEL	Ambient Temp	ELECTRICAL SUPPLY		HP	EVAPORATING TEMPERATURE °C									
					-40		-35		-30		-25		-20	
		1Ph	3Ph		Cap.	Power	Cap.	Power	Cap.	Power	Cap.	Power	Cap.	Power
MRC+ 40	27	*		1 1/2	0.58	0.82	0.84	0.86	1.17	1.01	1.57	1.05	2.08	1.22
	32				0.51	0.78	0.76	0.87	1.05	1.00	1.46	1.10	1.96	1.22
MRC+ 50	27	*	*	2	0.80	1.09	1.18	1.27	1.60	1.49	2.17	1.59	2.81	1.86
	32				0.64	1.05	1.08	1.26	1.48	1.50	2.04	1.69	2.70	1.88
MRC+ 60	27	*	*	2 1/2	1.07	1.25	1.61	1.56	2.20	1.85	2.95	2.00	3.88	2.35
	32				0.89	1.31	1.40	1.56	2.04	1.85	2.77	2.09	3.63	2.37
MRC+ 80	27		*	4	1.81	1.80	2.30	1.85	2.87	1.95	3.55	2.00	4.36	2.10
	32				1.68	2.00	2.14	2.05	2.68	2.15	3.30	2.20	4.08	2.30
MRC+ 90	27		*	5	2.39	2.40	3.05	2.60	3.78	3.00	4.71	3.20	5.74	3.45
	32				2.22	2.75	2.90	2.90	3.60	3.30	4.43	3.60	5.39	3.90
MRC+ 100	27		*	6	2.83	3.00	3.60	3.15	4.49	3.75	5.52	4.05	6.80	4.25
	32				2.64	3.60	3.44	3.70	4.22	4.20	5.18	4.55	6.28	4.85

Based on R404A

MODEL	Ambient Temp	ELECTRICAL SUPPLY		HP	EVAPORATING TEMPERATURE °C									
					-40		-35		-30		-25		-20	
		1Ph	3Ph		Cap.	Power	Cap.	Power	Cap.	Power	Cap.	Power	Cap.	Power
MRC+ 40	27	*		1 1/2	0.69	0.93	0.97	0.99	1.34	1.13	1.76	1.25	2.27	1.39
	32				0.61	0.88	0.87	0.98	1.18	1.12	1.60	1.25	2.07	1.40
MRC+ 50	27	*	*	2	0.94	1.23	1.36	1.45	1.83	1.67	2.43	1.89	3.07	2.13
	32				0.76	1.18	1.23	1.43	1.66	1.67	2.23	1.92	2.85	2.17
MRC+ 60	27	*	*	2 1/2	1.27	1.42	1.85	1.79	2.51	2.07	3.30	2.37	4.24	2.69
	32				1.06	1.47	1.61	1.76	2.28	2.06	3.03	2.38	3.83	2.73
MRC+ 80	27		*	4	2.14	2.04	2.65	2.12	3.28	2.18	3.97	2.37	4.76	2.40
	32				2.00	2.25	2.46	2.32	3.00	2.40	3.61	2.50	4.31	2.65
MRC+ 90	27		*	5	2.89	2.80	3.58	2.90	4.33	3.30	5.19	3.55	6.14	3.85
	32				2.70	3.00	3.32	3.10	4.05	3.50	4.79	3.80	5.63	4.20
MRC+ 100	27		*	6	3.30	3.35	4.11	3.55	5.00	3.90	5.60	4.15	7.04	4.45
	32				2.99	3.75	3.95	3.85	4.75	4.15	5.60	4.55	6.56	4.90

NOW APPROVED!
for use with
NEW LOW GWP
Refrigerants

Based on R448A & 449A

MODEL	Ambient Temp	ELECTRICAL SUPPLY		HP	EVAPORATING TEMPERATURE °C									
		1Ph	3Ph		-40		-35		-30		-25		-20	
					Cap.	Power	Cap.	Power	Cap.	Power	Cap.	Power	Cap.	Power
MRC+ 50	27	*	*	2	-	-	1.12	1.15	1.57	1.35	2.10	1.56	2.71	1.77
	32				-	-	0.96	1.12	1.39	1.34	1.89	1.56	2.46	1.79
MRC+ 60	27	*	*	2 1/2	-	-	1.39	1.38	1.99	1.63	2.69	1.96	3.54	2.39
	32				-	-	1.20	1.36	1.75	1.62	2.42	1.90	3.23	2.21
MRC+ 80	27		*	4	1.87	2.08	2.38	2.11	3.03	2.13	3.75	2.29	4.59	2.30
	32				1.76	2.34	2.23	2.36	2.79	2.38	3.46	2.48	4.22	2.62
MRC+ 90	27		*	5	2.53	2.85	3.22	2.87	3.99	3.21	4.90	3.42	5.93	3.70
	32				2.38	3.13	3.01	3.14	3.77	3.48	4.58	3.77	5.51	4.15
MRC+ 100	27		*	6	2.89	3.44	3.70	3.53	4.61	3.80	5.29	4.01	5.49	4.26
	32				2.64	3.94	3.58	3.92	4.42	4.14	5.36	4.52	5.18	4.87

Marstair has been awarded Enhanced Capital Allowance (ECA)



Marstair units have been added to the Energy Technology List and as such are eligible for the Government's Enhanced Capital Allowance (ECA) scheme. It is managed by the Carbon Trust on behalf of the Department Energy & Climate Change and is seen by the Government as a key part of their programme to manage climate change. It provides businesses with enhanced tax relief for investments in equipment that meets published energy-saving criteria.

Key Features:-

- Open to all businesses that pay UK corporation or income tax, regardless of size, sector or location.
- Provides 100% first-year capital allowances on investments in energy-saving equipment against taxable profits of the period of investment.
- All the products listed on the ETPL must meet the energy-saving criteria, published in the ETCL.
- Only spending on new and unused energy-saving equipment can qualify for ECAs.
- Capital allowances are available for spending "on the provision of" plant and machinery.

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TEV has earned management system accreditations – BSI 14001: 2015 Environmental Management and BSI 9001: 2015 Quality Management.



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