



Minimum Evaporating Temp. With:

- 20 °C Suction Gas Return
- 0 °C Suction Gas Return
- Maximum Evaporating Temperature

Suction Return Temperature 20.0°C

Liquid Subcooling 0.0K

Evaporating Temperature, °C

Additional restrictions, please see application guidelines

50 Hz

4MF-13X

R513A

Cond °C	Cooling Capacity, kW								
	-25.0	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0
10.0	16.55	20.60	25.70	31.70					
15.0	15.65	19.65	24.50	30.30	37.10				
20.0	14.75	18.60	23.30	28.80	35.40	43.00			
25.0	13.85	17.55	22.00	27.30	33.60	40.80	49.10		
30.0	12.90	16.45	20.70	25.80	31.70	38.50	46.40	49.80	55.30
35.0	11.95	15.30	19.35	24.20	29.80	36.20	43.60	46.90	52.10
40.0	11.00	14.20	18.00	22.50	27.80	33.90	40.80	43.90	48.70
45.0	10.05	13.05	16.65	20.80	25.80	31.40	37.90	40.80	45.30
50.0	9.14	11.95	15.25	19.15	23.70	29.00	35.00	37.60	41.80
55.0		10.80	13.85	17.45	21.60	26.50	32.00	34.40	38.30
60.0		9.67	12.45	15.70	19.55	23.90	29.00	31.20	34.70
65.0			11.05	14.00	17.40	21.40	25.90	27.90	31.00
70.0			9.68	12.25	15.30	18.80	22.80	24.60	27.40
75.0				10.55	13.15	16.20	19.70	21.20	23.70
80.0				8.83	11.05	13.60	16.55	17.85	19.90
85.0					8.92	11.00	13.40	14.50	16.20

Cond °C	Power, kW								
	-25.0	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0
10.0	4.44	4.62	4.68	4.60					
15.0	4.72	5.01	5.20	5.26	5.18				
20.0	4.97	5.36	5.67	5.87	5.94	5.86			
25.0	5.18	5.67	6.09	6.43	6.65	6.73	6.65		
30.0	5.36	5.94	6.47	6.93	7.29	7.54	7.64	7.64	7.58
35.0	5.51	6.18	6.81	7.39	7.89	8.28	8.56	8.63	8.69
40.0	5.63	6.37	7.10	7.79	8.42	8.97	9.41	9.55	9.72
45.0	5.72	6.53	7.35	8.15	8.91	9.59	10.20	10.40	10.70
50.0	5.77	6.66	7.56	8.46	9.34	10.15	10.90	11.20	11.55
55.0		6.75	7.73	8.72	9.71	10.65	11.55	11.90	12.40
60.0		6.80	7.86	8.94	10.05	11.10	12.15	12.55	13.15
65.0			7.95	9.11	10.30	11.50	12.70	13.15	13.80
70.0			8.00	9.24	10.55	11.85	13.15	13.65	14.45
75.0				9.33	10.70	12.10	13.55	14.10	15.00
80.0				9.37	10.85	12.35	13.90	14.50	15.45
85.0					10.90	12.50	14.20	14.85	15.85

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50 Hz

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Cond °C	Current at 400 V, A								
	-25.0	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0
10.0	9.87	10.02	10.04	9.88					
15.0	10.14	10.44	10.64	10.68	10.53				
20.0	10.40	10.83	11.20	11.45	11.52	11.38			
25.0	10.62	11.20	11.72	12.16	12.45	12.56	12.42		
30.0	10.82	11.52	12.20	12.82	13.32	13.67	13.80	13.78	13.67
35.0	11.00	11.81	12.64	13.43	14.14	14.71	15.10	15.19	15.26
40.0	11.14	12.07	13.03	13.98	14.88	15.68	16.32	16.52	16.76
45.0	11.26	12.28	13.37	14.48	15.57	16.57	17.46	17.76	18.17
50.0	11.34	12.45	13.66	14.92	16.18	17.40	18.51	18.92	19.48
55.0		12.58	13.90	15.30	16.73	18.14	19.48	19.99	20.71
60.0		12.66	14.09	15.62	17.21	18.81	20.36	20.97	21.83
65.0			14.22	15.87	17.61	19.39	21.16	21.85	22.86
70.0			14.29	16.06	17.94	19.89	21.86	22.64	23.79
75.0				16.18	18.20	20.31	22.47	23.33	24.62
80.0				16.23	18.37	20.64	22.98	23.93	25.35
85.0					18.47	20.88	23.40	24.42	25.97

Cond °C	Suction Mass Flow, g/s								
	-25.0	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0
10.0	87.90	110.00	137.00	170.00					
15.0	86.40	108.50	136.00	168.50	207.00				
20.0	84.70	107.00	134.00	167.00	205.00	251.00			
25.0	82.80	105.00	132.50	165.00	203.00	248.00	300.00		
30.0	80.70	103.00	130.00	162.50	201.00	245.00	297.00	320.00	356.00
35.0	78.40	100.50	127.50	160.00	197.50	242.00	293.00	316.00	352.00
40.0	76.00	98.20	125.00	157.00	194.50	238.00	289.00	311.00	347.00
45.0	73.40	95.50	122.00	153.50	190.50	234.00	284.00	306.00	342.00
50.0	70.70	92.60	118.50	150.00	186.50	229.00	279.00	301.00	336.00
55.0		89.50	115.50	146.00	182.00	224.00	273.00	294.00	329.00
60.0		86.30	111.50	141.50	177.00	218.00	266.00	287.00	322.00
65.0			107.50	137.00	171.50	212.00	259.00	280.00	314.00
70.0			103.50	132.00	165.50	205.00	251.00	272.00	305.00
75.0				126.50	159.00	197.50	243.00	263.00	295.00
80.0				121.00	152.50	190.00	234.00	254.00	286.00
85.0					147.00	183.50	227.00	247.00	279.00

Additional restrictions, please see application guidelines

### **COMPRESSOR MECHANICAL AND PHYSICAL DATA**

Number of cylinders	4
Displacement @ 50 Hz, m³/h	61.7
Bore/Stroke, mm	63.5/56.0
Length/Width, mm	638/501
Height, mm	452
Net Weight, kg	177
Suction, inch	1 5/8
Discharge, inch	1 1/8
Oil Quantity, l	3.3
Oil type (original charge)	POE RL32-3MAF
Oil type (approved oils)	POE RL32-3MAF, POE MOBIL EAL Arctic 22 CC
Base mounting (hole dia), mm	381 x 305 (18)
Sound Pressure @ 1m (MT), dBA	67
Sound Power (MT), dBA	78
Sound Power with Sound Shell (MT), dBA	64
Sound Conditions (MT, Temperatures: Evap./Cond./Suction at freq./speed)	-10 / 45 / 20 °C at 50 Hz
High Side PS gauge, bar	32.5
Low Side PS gauge, bar	22.5
Refrigerant's GWP	631
Refrigerant's classification	A1

### **COMPRESSOR ELECTRICAL DATA (380-420 V / 3~ / 50 Hz)**

Maximum Operating Current, A	30.8
Locked Rotor Current, A	105
Default Enclosure Class	IP 54 (IEC 34)

### **ACCESSORIES INCLUDED**

Mounting Parts	Spring
CoreSense Protection (-P)	Motor protection
Oil Pressure Switch (-P)	OPS2 Sensor
Copeland Compressor Electronic (-N)	Oil pressure, motor and discharge line temperature protection; advanced diagnostics features and power measurement

Additional restrictions, please see application guidelines

### ACCESSORIES OPTIONAL

Check Valve	For unloaded start operation
Adapter Kit	For Parallel Operation
Additional Cooling	70 W Vertical Air Flow Fan
Crankcase Heater	100 W Internal
Oil Pressure Switch	OPS2 Electronic Switch
Sound Attenuation	Sound Shell
Capacity Control	Capacity Steps 50%
Mounting Parts	Rubber
Copeland Compressor Electronic module	Modbus extension module

### MOTOR OPTIONS

<b>Motor Code</b>	<b>Power Supply</b>	<b>Nominal Voltage, V</b>	<b>Start Connection</b>	<b>DOL Connection</b>	<b>Amps Factor</b>
AWM	380-420 V / 3~ / 50 Hz	400	YY/Y	Y	1.00
EWL	220-240 V / 3~ / 50 Hz	230	Y/DELTA	DELTA	1.73
EWL	380-420 V / 3~ / 50 Hz	400		Y	1.00
EWM	380-420 V / 3~ / 50 Hz	400	Y/DELTA	DELTA	1.00
AWR	220-240 V / 3~ / 50 Hz	230	YY/Y	Y	1.73
AWY	500-550 V / 3~ / 50 Hz	525	YY/Y	Y	0.76
EWK	220-240 V / 3~ / 60 Hz	230	Y/DELTA	DELTA	2.10
EWK	380-420 V / 3~ / 60 Hz	380		Y	1.20
EWD	440-480 V / 3~ / 60 Hz	460	Y/DELTA	DELTA	1.00
AWC	208-230 V / 3~ / 60 Hz	230	YY/Y	Y	2.19
AWX	380 V / 3~ / 60 Hz	380	YY/Y	Y	1.20
AWD	440-480 V / 3~ / 60 Hz	460	YY/Y	Y	1.00

Additional restrictions, please see application guidelines