



Minimum Evaporating Temp. With:

- 20 K Suction Superheat
- 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

Cond °C	Cooling Capacity, kW									
	-50.0	-45.0	-40.0	-35.0	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0
5.0	8.09	11.00	14.65	19.10	24.50	30.90	38.40			
10.0	7.41	10.20	13.65	17.90	23.10	29.10	36.20	44.50	53.90	
15.0	6.73	9.37	12.65	16.70	21.60	27.30	34.00	41.80	50.80	60.90
20.0	6.05	8.57	11.70	15.50	20.10	25.50	31.80	39.20	47.60	57.20
25.0		7.77	10.70	14.25	18.55	23.60	29.60	36.50	44.40	53.50
30.0			9.73	13.05	17.05	21.80	27.30	33.80	41.20	49.80
35.0			8.77	11.85	15.55	19.95	25.10	31.10	38.00	46.00
40.0				10.65	14.05	18.05	22.80	28.40	34.80	42.20
45.0				9.48	12.55	16.25	20.60	25.70	31.60	38.40
50.0					11.10	14.40	18.35	22.90	28.30	34.60
55.0					9.65	12.60	16.10	20.20	25.10	30.80
60.0						10.80	13.90	17.55	21.90	
62.0						10.10	13.00	16.50	20.60	

50 Hz

4MF-13X

R404A Dew Point

Cond °C	Power, kW									
	-50.0	-45.0	-40.0	-35.0	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0
5.0	3.96	4.60	5.17	5.66	6.05	6.31	6.41			
10.0	4.06	4.78	5.45	6.06	6.58	6.98	7.24	7.34	7.26	
15.0	4.11	4.92	5.69	6.41	7.05	7.59	8.01	8.28	8.38	8.29
20.0	4.13	5.01	5.88	6.70	7.47	8.15	8.72	9.16	9.44	9.54
25.0		5.06	6.02	6.95	7.84	8.65	9.37	9.97	10.45	10.70
30.0			6.12	7.15	8.16	9.10	9.97	10.75	11.35	11.85
35.0			6.18	7.31	8.43	9.50	10.50	11.40	12.25	12.90
40.0				7.43	8.65	9.85	11.00	12.05	13.05	13.90
45.0				7.50	8.83	10.15	11.45	12.65	13.80	14.80
50.0					8.97	10.40	11.80	13.20	14.50	15.70
55.0					9.06	10.60	12.15	13.65	15.10	16.50
60.0						10.80	12.45	14.10	15.70	
62.0						10.85	12.55	14.25	15.95	

Cond °C	Current at 400 V, A									
	-50.0	-45.0	-40.0	-35.0	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0
5.0	9.07	9.83	10.58	11.27	11.83	12.23	12.40			
10.0	9.28	10.12	10.98	11.80	12.54	13.13	13.54	13.69	13.55	
15.0	9.41	10.33	11.30	12.26	13.16	13.96	14.59	15.01	15.16	14.99
20.0	9.46	10.46	11.54	12.64	13.72	14.71	15.57	16.25	16.69	16.85
25.0		10.52	11.71	12.95	14.20	15.40	16.49	17.43	18.16	18.64
30.0			11.81	13.20	14.62	16.02	17.34	18.55	19.57	20.37
35.0			11.86	13.39	14.98	16.58	18.14	19.61	20.93	22.05
40.0				13.52	15.29	17.10	18.89	20.62	22.23	23.68
45.0				13.61	15.55	17.56	19.59	21.59	23.50	25.27
50.0					15.78	17.99	20.26	22.52	24.72	26.82
55.0					15.97	18.39	20.89	23.42	25.92	28.34
60.0						18.76	21.50	24.29	27.09	
62.0						18.90	21.73	24.64	27.55	

50 Hz

4MF-13X

R404A Dew Point

Cond °C	Suction Mass Flow, g/s									
	-50.0	-45.0	-40.0	-35.0	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0
5.0	43.10	58.70	78.30	102.50	132.00	167.50	209.00			
10.0	41.10	56.50	76.00	100.00	129.00	164.00	205.00	253.00	309.00	
15.0	38.80	54.20	73.50	97.20	126.00	160.00	201.00	248.00	303.00	367.00
20.0	36.50	51.80	70.80	94.20	122.50	156.00	196.00	243.00	298.00	361.00
25.0		49.20	68.00	91.00	118.50	152.00	191.00	237.00	291.00	354.00
30.0			65.00	87.50	114.50	147.50	186.00	232.00	285.00	347.00
35.0			61.80	83.90	110.50	142.50	180.50	225.00	278.00	340.00
40.0				80.10	106.00	137.00	174.50	219.00	271.00	332.00
45.0				76.10	101.50	131.50	168.00	212.00	263.00	324.00
50.0					96.40	126.00	161.50	204.00	255.00	315.00
55.0					91.30	120.00	154.50	196.50	247.00	307.00
60.0						114.00	148.00	189.50	239.00	
62.0						112.00	145.50	186.50	237.00	

**COMPRESSOR MECHANICAL AND PHYSICAL DATA**

Number of cylinders	4
Displacement @ 50 Hz, m <sup>3</sup> /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 (LT), dBA	70
Sound Power (LT), dBA	81
Sound Power with Sound Shell (LT), dBA	69
Sound Conditions (LT, Temperatures: Evap./Cond./Suction at freq./speed)	-35 / 40 / 20 °C at 50 Hz
Sound Pressure @ 1m (MT), dBA	68
Sound Power (MT), dBA	79
Sound Power with Sound Shell (MT), dBA	67
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	3922
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

### 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

<i>Motor Code</i>	<i>Power Supply</i>	<i>Nominal Voltage, V</i>	<i>Start Connection</i>	<i>DOL Connection</i>	<i>Amps Factor</i>
AWM	380-420 V / 3~ / 50 Hz	400	YYY	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	YYY	Y	1.73
AWY	500-550 V / 3~ / 50 Hz	525	YYY	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	YYY	Y	2.19
AWX	380 V / 3~ / 60 Hz	380	YYY	Y	1.20
AWD	440-480 V / 3~ / 60 Hz	460	YYY	Y	1.00