



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

50 Hz

4MF-13X

R450A Dew Point

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	12.30	15.60	19.80	24.90					
15.0	11.70	14.90	18.95	23.90	29.70				
20.0	11.05	14.20	18.10	22.80	28.40	34.90			
25.0	10.40	13.40	17.15	21.70	27.00	33.30	40.50		
30.0	9.75	12.65	16.20	20.50	25.60	31.50	38.40	41.40	46.20
35.0	9.05	11.80	15.20	19.30	24.10	29.80	36.20	39.10	43.60
40.0	8.35	11.00	14.20	18.05	22.60	27.90	34.10	36.80	41.10
45.0	7.64	10.15	13.15	16.80	21.10	26.10	31.90	34.40	38.50
50.0	6.93	9.28	12.15	15.55	19.55	24.20	29.60	32.00	35.80
55.0		8.43	11.10	14.25	18.00	22.30	27.40	29.60	33.10
60.0		7.59	10.05	13.00	16.40	20.40	25.10	27.10	30.40
65.0			9.01	11.70	14.85	18.55	22.80	24.70	27.70
70.0			7.99	10.40	13.30	16.60	20.50	22.20	25.00
75.0				9.16	11.70	14.70	18.20	19.75	22.20
80.0				7.92	10.15	12.80	15.90	17.25	19.45
85.0					8.63	10.90	13.60	14.80	16.70

Cond °C	Power, kW								
	-25.0	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0
10.0	3.55	3.72	3.79	3.75					
15.0	3.77	4.03	4.20	4.29	4.25				
20.0	3.96	4.31	4.59	4.78	4.88	4.86			
25.0	4.14	4.57	4.94	5.25	5.46	5.58	5.57		
30.0	4.29	4.79	5.26	5.67	6.01	6.25	6.39	6.41	6.40
35.0	4.41	4.99	5.55	6.06	6.51	6.88	7.16	7.24	7.32
40.0	4.51	5.17	5.80	6.41	6.97	7.46	7.87	8.01	8.18
45.0	4.59	5.31	6.02	6.72	7.38	7.99	8.53	8.73	8.99
50.0	4.64	5.42	6.20	6.99	7.75	8.47	9.14	9.39	9.73
55.0		5.49	6.35	7.21	8.07	8.90	9.69	9.99	10.40
60.0		5.53	6.45	7.40	8.34	9.28	10.20	10.55	11.05
65.0			6.52	7.54	8.57	9.60	10.60	11.00	11.60
70.0			6.55	7.63	8.74	9.87	11.00	11.45	12.10
75.0				7.68	8.87	10.10	11.30	11.80	12.50
80.0				7.68	8.94	10.25	11.55	12.10	12.90
85.0					8.96	10.35	11.75	12.35	13.20

50 Hz

4MF-13X

R450A Dew Point

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	8.89	9.05	9.11	9.02					
15.0	9.08	9.35	9.54	9.61	9.53				
20.0	9.26	9.64	9.96	10.18	10.27	10.20			
25.0	9.43	9.91	10.35	10.72	10.98	11.11	11.05		
30.0	9.59	10.16	10.72	11.23	11.66	11.97	12.13	12.15	12.11
35.0	9.73	10.39	11.06	11.71	12.29	12.79	13.16	13.26	13.36
40.0	9.85	10.59	11.37	12.14	12.89	13.56	14.13	14.32	14.56
45.0	9.95	10.76	11.64	12.54	13.43	14.28	15.04	15.32	15.69
50.0	10.02	10.90	11.87	12.89	13.92	14.93	15.89	16.25	16.76
55.0		11.00	12.06	13.19	14.36	15.53	16.67	17.11	17.75
60.0		11.07	12.21	13.44	14.74	16.07	17.39	17.90	18.66
65.0			12.30	13.64	15.06	16.53	18.03	18.62	19.50
70.0			12.34	13.77	15.31	16.93	18.59	19.26	20.25
75.0				13.84	15.50	17.25	19.07	19.81	20.92
80.0				13.84	15.61	17.49	19.47	20.27	21.50
85.0					15.64	17.65	19.78	20.65	21.98

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	62.30	79.40	101.00	127.50					
15.0	61.40	78.60	100.00	126.50	158.00				
20.0	60.30	77.50	99.10	125.50	157.00	194.00			
25.0	59.00	76.30	97.80	124.00	155.00	192.00	235.00		
30.0	57.50	74.80	96.20	122.00	153.50	190.00	232.00	251.00	282.00
35.0	55.80	73.00	94.30	120.00	151.00	187.50	230.00	248.00	279.00
40.0	53.90	71.10	92.20	118.00	148.50	184.50	226.00	245.00	275.00
45.0	51.80	68.90	89.90	115.00	145.50	181.00	223.00	241.00	271.00
50.0	49.50	66.50	87.30	112.50	142.00	177.00	218.00	237.00	266.00
55.0		63.90	84.40	109.00	138.50	173.00	214.00	232.00	261.00
60.0		61.10	81.30	105.50	134.50	168.50	209.00	227.00	256.00
65.0			78.00	101.50	130.00	163.50	203.00	221.00	249.00
70.0			74.40	97.50	125.00	158.00	196.50	214.00	243.00
75.0				93.00	120.00	152.00	190.00	207.00	235.00
80.0				88.20	114.00	145.50	182.50	199.50	227.00
85.0					108.50	138.50	175.00	191.50	219.00

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	605
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	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