



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

4MMD-20X

R513A

Cond °C	Cooling Capacity, kW								
	-25.0	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0
16.0	18.95								
20.0	18.15	22.90							
25.0	17.05	21.70	27.30	34.00					
30.0	15.95	20.40	25.80	32.20	39.70	48.40			
35.0	14.80	19.05	24.20	30.30	37.40	45.70	55.20	59.40	66.10
40.0	13.65	17.70	22.50	28.30	35.10	42.90	51.80	55.80	62.10
45.0	12.45	16.25	20.90	26.30	32.60	39.90	48.40	52.00	57.90
50.0	11.25	14.85	19.15	24.20	30.10	36.90	44.70	48.20	53.60
55.0		13.40	17.40	22.10	27.50	33.80	41.00	44.20	49.30
60.0		11.95	15.60	19.90	24.90	30.70	37.30	40.20	44.80
65.0			13.80	17.70	22.20	27.40	33.40	36.00	40.20
70.0			12.00	15.50	19.50	24.10	29.50	31.80	35.50
75.0				13.25	16.75	20.80	25.50	27.60	30.80
80.0				11.00	14.00	17.50	21.50	23.20	26.10
85.0					11.25	14.10	17.45	18.90	21.20

Cond °C	Power, kW								
	-25.0	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0
16.0	6.05								
20.0	6.34	6.79							
25.0	6.65	7.24	7.72	8.08					
30.0	6.93	7.64	8.26	8.78	9.16	9.38			
35.0	7.16	7.98	8.75	9.42	9.97	10.40	10.60	10.65	10.65
40.0	7.34	8.28	9.17	9.99	10.70	11.30	11.75	11.90	12.00
45.0	7.47	8.52	9.54	10.50	11.40	12.15	12.80	13.05	13.30
50.0	7.54	8.69	9.84	10.95	12.00	12.95	13.80	14.10	14.50
55.0		8.81	10.05	11.30	12.50	13.65	14.70	15.05	15.60
60.0		8.86	10.25	11.60	12.95	14.25	15.45	15.95	16.60
65.0			10.30	11.85	13.30	14.80	16.20	16.70	17.50
70.0			10.35	11.95	13.60	15.20	16.80	17.40	18.30
75.0				12.00	13.80	15.55	17.30	18.00	19.00
80.0				11.95	13.85	15.80	17.70	18.45	19.60
85.0					13.85	15.95	18.00	18.85	20.10

Additional restrictions, please see application guidelines

50 Hz

4MMD-20X

R513A

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
16.0	16.03								
20.0	16.28	16.74							
25.0	16.57	17.17	17.70	18.09					
30.0	16.84	17.57	18.26	18.85	19.30	19.54			
35.0	17.08	17.94	18.79	19.57	20.25	20.75	21.03	21.08	21.05
40.0	17.28	18.27	19.27	20.24	21.14	21.90	22.47	22.64	22.81
45.0	17.44	18.54	19.69	20.85	21.96	22.98	23.83	24.12	24.49
50.0	17.53	18.75	20.05	21.40	22.72	23.98	25.12	25.53	26.08
55.0		18.89	20.34	21.86	23.39	24.90	26.31	26.84	27.59
60.0		18.95	20.54	22.24	23.98	25.72	27.41	28.06	28.99
65.0			20.65	22.52	24.46	26.44	28.40	29.16	30.28
70.0			20.66	22.69	24.84	27.05	29.27	30.15	31.46
75.0				22.76	25.10	27.54	30.02	31.02	32.50
80.0				22.70	25.23	27.90	30.64	31.75	33.41
85.0					25.23	28.11	31.11	32.33	34.17

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
16.0	105.50								
20.0	104.00	131.50							
25.0	102.00	130.00	164.00	205.00					
30.0	99.70	128.00	162.00	203.00	251.00	308.00			
35.0	97.00	125.00	159.50	200.00	249.00	305.00	371.00	400.00	447.00
40.0	94.00	122.50	156.50	197.00	245.00	302.00	367.00	396.00	442.00
45.0	90.60	119.00	153.00	193.50	241.00	297.00	362.00	391.00	437.00
50.0	87.00	115.00	149.00	189.50	237.00	292.00	356.00	385.00	431.00
55.0		111.00	144.50	184.50	231.00	286.00	350.00	378.00	424.00
60.0		106.50	140.00	179.00	225.00	279.00	342.00	370.00	415.00
65.0			134.50	173.00	219.00	272.00	334.00	362.00	406.00
70.0			128.50	166.50	211.00	263.00	325.00	352.00	396.00
75.0				159.00	203.00	254.00	314.00	341.00	385.00
80.0				150.50	193.50	244.00	304.00	330.00	374.00
85.0					185.00	235.00	295.00	322.00	366.00

Additional restrictions, please see application guidelines

COMPRESSOR MECHANICAL AND PHYSICAL DATA

Number of cylinders	4
Displacement @ 50 Hz, m ³ /h	78.2
Bore/Stroke, mm	71.5/56.0
Length/Width, mm	657/501
Height, mm	452
Net Weight, kg	188
Suction, inch	2 1/8
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	69
Sound Power (MT), dBA	80
Sound Power with Sound Shell (MT), dBA	66
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
Digital Modulation	50-100%
Refrigerant's GWP	631
Refrigerant's classification	A1

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

Maximum Operating Current, A	39
Locked Rotor Current, A	175
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
Mounting Parts	Rubber
Adapter Kit	For Parallel Operation
Digital Driver	EC3-D23
Oil Pressure Switch	OPS2 Electronic Switch
Digital Modulation	50-100 %
Additional Cooling	70 W Vertical Air Flow Fan
Crankcase Heater	100 W Internal
Sound Attenuation	Sound Shell
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

Additional restrictions, please see application guidelines