



Minimum Evaporating Temp. With:

— 20 °C Suction Gas Return

— Maximum Evaporating Temperature

Suction Superheat 10.0K

Liquid Subcooling 0.0K

Evaporating Temperature, °C

50 Hz

4MMD-20X 100% Loaded

R134a

Cond °C	Cooling Capacity, kW							
	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0
10.0	22.40	28.50	36.00					
15.0	21.20	27.10	34.30	42.90				
20.0	19.95	25.70	32.60	40.80	50.50			
25.0	18.70	24.20	30.80	38.70	48.00	58.80	63.60	
30.0	17.40	22.70	29.00	36.50	45.40	55.70	60.30	67.60
35.0	16.15	21.20	27.20	34.30	42.70	52.60	56.90	63.90
40.0	14.90	19.65	25.30	32.10	40.10	49.40	53.50	60.20
45.0	13.65	18.15	23.50	29.80	37.40	46.20	50.10	56.40
50.0	12.40	16.60	21.60	27.60	34.60	42.90	46.60	52.60
55.0	11.20	15.15	19.80	25.30	31.90	39.60	43.10	48.70
60.0		13.65	17.95	23.00	29.10	36.30	39.50	44.80
65.0			16.10	20.80	26.30	33.00	36.00	40.90
70.0			14.30	18.50	23.60	29.60	32.40	36.90
75.0				16.25	20.80	26.30	28.80	32.90
80.0				14.00	18.00	22.90	25.10	28.90

Cond °C	Power, kW							
	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0
10.0	5.48	5.79	5.94					
15.0	5.89	6.30	6.58	6.69				
20.0	6.28	6.80	7.20	7.45	7.51			
25.0	6.66	7.28	7.80	8.19	8.40	8.40	8.33	
30.0	7.02	7.73	8.37	8.90	9.27	9.44	9.44	9.37
35.0	7.35	8.16	8.92	9.58	10.10	10.45	10.50	10.55
40.0	7.66	8.57	9.44	10.25	10.90	11.40	11.55	11.70
45.0	7.94	8.94	9.92	10.85	11.65	12.35	12.55	12.85
50.0	8.19	9.28	10.40	11.45	12.40	13.25	13.55	13.90
55.0	8.40	9.59	10.80	11.95	13.10	14.10	14.45	14.95
60.0		9.85	11.15	12.45	13.70	14.90	15.35	15.95
65.0			11.50	12.90	14.30	15.65	16.15	16.85
70.0			11.75	13.30	14.85	16.35	16.95	17.75
75.0				13.70	15.35	17.00	17.65	18.60
80.0				14.00	15.80	17.60	18.30	19.35

50 Hz

4MMD-20X 100% Loaded

R134a

Cond °C	Current at 400 V, A							
	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0
10.0	15.57	15.84	15.97					
15.0	15.88	16.25	16.52	16.60				
20.0	16.22	16.69	17.09	17.34	17.37			
25.0	16.56	17.15	17.68	18.10	18.32	18.29	18.19	
30.0	16.91	17.61	18.28	18.87	19.29	19.48	19.48	19.38
35.0	17.25	18.06	18.89	19.64	20.27	20.69	20.79	20.84
40.0	17.57	18.51	19.48	20.41	21.24	21.90	22.10	22.31
45.0	17.86	18.93	20.05	21.17	22.21	23.10	23.40	23.78
50.0	18.13	19.32	20.60	21.90	23.15	24.29	24.69	25.23
55.0	18.34	19.67	21.11	22.60	24.07	25.45	25.96	26.67
60.0		19.97	21.57	23.25	24.94	26.57	27.19	28.07
65.0			21.98	23.86	25.77	27.66	28.38	29.43
70.0			22.33	24.41	26.55	28.69	29.52	30.75
75.0				24.88	27.26	29.66	30.60	32.01
80.0				25.28	27.89	30.55	31.62	33.20

Cond °C	Suction Mass Flow, g/s							
	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0
10.0	124.00	155.00	192.00					
15.0	122.00	153.00	190.00	234.00				
20.0	119.50	151.00	188.00	231.00	281.00			
25.0	117.00	148.50	185.50	228.00	278.00	335.00	359.00	
30.0	114.50	146.00	182.50	225.00	275.00	331.00	355.00	394.00
35.0	111.50	143.00	179.50	222.00	271.00	326.00	351.00	389.00
40.0	108.50	139.50	176.00	218.00	266.00	322.00	346.00	384.00
45.0	105.00	136.00	172.00	214.00	262.00	316.00	340.00	378.00
50.0	101.50	132.50	168.00	209.00	256.00	310.00	334.00	372.00
55.0	98.10	129.00	164.00	204.00	251.00	304.00	327.00	365.00
60.0		124.50	159.00	198.50	244.00	297.00	320.00	357.00
65.0			154.00	193.00	238.00	289.00	312.00	349.00
70.0			149.00	186.50	230.00	281.00	303.00	340.00
75.0				180.00	223.00	272.00	294.00	330.00
80.0				173.50	214.00	263.00	284.00	320.00

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	1430
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

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