



Minimum Evaporating Temp. With:

- 20 °C Suction Gas Return
- 0 °C Suction Gas Return
- 0 °C Suction Gas Return with add cooling
- Maximum Evaporating Temperature

Suction Superheat 10.0K

Liquid Subcooling 0.0K

Evaporating Temperature, °C

Cond °C	Cooling Capacity, kW											
	-45.0	-40.0	-35.0	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0
10.0	9.76	13.30	17.60	22.70	28.80	36.00	44.40	54.20				
15.0	8.44	11.90	16.00	20.90	26.70	33.50	41.40	50.70	61.30			
20.0	7.11	10.45	14.40	19.05	24.50	30.90	38.40	47.10	57.20	68.70	81.70	
25.0	5.78	9.04	12.80	17.20	22.30	28.40	35.40	43.60	53.10	64.00	76.30	81.70
30.0		7.61	11.20	15.35	20.20	25.80	32.40	40.10	49.10	59.30	71.00	76.10
35.0		6.21	9.62	13.50	18.05	23.30	29.50	36.70	45.00	54.70	65.70	70.50
40.0			8.06	11.70	15.90	20.80	26.50	33.20	41.00	50.00	60.40	65.00
45.0			6.54	9.93	13.80	18.35	23.60	29.80	37.00	45.50	55.20	59.50
50.0				8.20	11.75	15.90	20.70	26.40	33.10	40.90	50.00	54.10
55.0				6.53	9.76	13.50	17.90	23.10	29.20	36.40	44.90	48.70
60.0					7.80	11.15	15.10	19.75	25.30	31.90	39.80	
62.0					7.04	10.20	13.95	18.40	23.80	30.10		

50 Hz

4MAD-22X 100% Loaded

R404A Dew Point

Cond °C	Power, kW											
	-45.0	-40.0	-35.0	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0
10.0	4.88	5.59	6.20	6.71	7.10	7.34	7.43	7.35				
15.0	4.99	5.80	6.53	7.16	7.68	8.06	8.30	8.37	8.25			
20.0	5.03	5.96	6.81	7.57	8.22	8.74	9.13	9.35	9.41	9.26	8.92	
25.0	5.00	6.05	7.02	7.92	8.71	9.38	9.92	10.30	10.55	10.55	10.40	10.30
30.0		6.06	7.17	8.21	9.14	9.97	10.65	11.25	11.65	11.85	11.85	11.80
35.0		6.01	7.26	8.43	9.52	10.50	11.35	12.10	12.70	13.10	13.30	13.35
40.0			7.27	8.59	9.84	11.00	12.05	12.95	13.70	14.30	14.70	14.85
45.0			7.20	8.68	10.10	11.40	12.65	13.70	14.65	15.45	16.10	16.30
50.0				8.70	10.25	11.75	13.15	14.45	15.60	16.60	17.45	17.75
55.0				8.63	10.40	12.05	13.65	15.10	16.45	17.70	18.75	19.10
60.0					10.40	12.25	14.05	15.75	17.30	18.70	20.00	
62.0					10.40	12.35	14.20	15.95	17.60	19.10		

Cond °C	Current at 400 V, A											
	-45.0	-40.0	-35.0	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0
10.0	15.02	15.58	16.13	16.64	17.07	17.36	17.49	17.40				
15.0	15.13	15.79	16.46	17.09	17.66	18.11	18.40	18.49	18.35			
20.0	15.18	15.95	16.75	17.53	18.24	18.86	19.33	19.62	19.69	19.48	18.96	
25.0	15.16	16.06	16.99	17.92	18.81	19.61	20.28	20.78	21.06	21.09	20.82	20.63
30.0		16.08	17.17	18.27	19.34	20.33	21.21	21.93	22.46	22.74	22.74	22.65
35.0		16.02	17.28	18.56	19.82	21.03	22.13	23.09	23.86	24.41	24.69	24.71
40.0			17.29	18.77	20.24	21.67	23.01	24.22	25.26	26.09	26.66	26.80
45.0			17.20	18.89	20.58	22.25	23.84	25.32	26.64	27.76	28.64	28.91
50.0				18.90	20.84	22.76	24.61	26.37	27.98	29.41	30.61	31.01
55.0				18.80	20.99	23.17	25.31	27.36	29.28	31.02	32.56	33.10
60.0					21.02	23.48	25.91	28.27	30.51	32.59	34.48	
62.0					21.00	23.58	26.13	28.61	30.98	33.20		

50 Hz

4MAD-22X 100% Loaded

R404A Dew Point

Cond °C	Suction Mass Flow, g/s											
	-45.0	-40.0	-35.0	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0
10.0	72.60	96.70	125.00	158.00	196.00	240.00	290.00	347.00				
15.0	66.30	91.20	119.50	152.50	190.50	234.00	284.00	340.00	404.00			
20.0	59.30	85.10	114.00	147.00	185.00	228.00	277.00	333.00	396.00	467.00	545.00	
25.0	51.40	78.20	108.00	141.00	179.00	222.00	271.00	326.00	388.00	458.00	536.00	570.00
30.0		70.60	101.00	134.50	172.00	215.00	263.00	318.00	380.00	450.00	527.00	561.00
35.0		62.20	93.40	127.50	165.00	208.00	256.00	310.00	372.00	441.00	519.00	552.00
40.0			85.00	119.50	157.50	200.00	248.00	302.00	363.00	432.00	510.00	544.00
45.0			75.80	111.00	149.50	192.00	240.00	294.00	355.00	424.00	502.00	536.00
50.0				102.00	140.50	183.50	231.00	285.00	346.00	416.00	495.00	529.00
55.0				91.80	131.50	175.00	223.00	277.00	339.00	409.00	490.00	525.00
60.0					122.00	166.50	215.00	271.00	334.00	406.00	489.00	
62.0					118.00	163.00	213.00	269.00	333.00	406.00		

COMPRESSOR MECHANICAL AND PHYSICAL DATA

Number of cylinders	4
Displacement @ 50 Hz, m ³ /h	61.7
Bore/Stroke, mm	63.5/56.0
Length/Width, mm	638/501
Height, mm	452
Net Weight, kg	183
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	75
Sound Power (LT), dBA	86
Sound Power with Sound Shell (LT), dBA	73
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	68
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	3922
Refrigerant's classification	A1

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

Maximum Operating Current, A	36.3
Locked Rotor Current, A	175
Default Enclosure Class	IP 54 (IEC 34)

ACCESSORIES INCLUDED

Oil Pressure Switch (-P)	OPS2 Sensor
CoreSense Protection (-P)	Motor protection
Mounting Parts	Spring
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
Additional Cooling	70 W Vertical Air Flow Fan
Crankcase Heater	100 W Internal
Sound Attenuation	Sound Shell
Oil Pressure Switch	OPS2 Electronic Switch
Digital Modulation	50-100 %
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