



Minimum Evaporating Temp. With:

- 20 K Suction Superheat    
 ■ 20 °C Suction Gas Return    
 ■ 0 °C Suction Gas Return
- Maximum Evaporating Temperature

Suction Superheat 10.0K

Liquid Subcooling 0.0K

Evaporating Temperature, °C

50 Hz

4MHD-25X

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	12.5	15.0	20.0	25.0
16.0	12.10												
20.0	11.45	15.00											
25.0	10.55	14.00	18.30	23.50									
30.0	9.64	12.95	17.10	22.10	28.10	35.20							
35.0	8.70	11.90	15.85	20.60	26.40	33.20	41.10	44.60	50.20	55.20			
40.0	7.74	10.80	14.55	19.10	24.60	31.00	38.60	41.90	47.30	52.10	57.20	68.60	
45.0	6.78	9.67	13.25	17.55	22.70	28.80	36.00	39.10	44.20	48.80	53.80	64.60	76.80
50.0	5.83	8.56	11.90	15.95	20.80	26.60	33.30	36.30	41.20	45.50	50.20	60.50	72.10
55.0	4.89	7.45	10.55	14.35	18.90	24.30	30.60	33.50	38.00	42.10	46.50	56.30	67.40
60.0	4.00	6.36	9.25	12.75	17.00	22.00	27.90	30.60	34.80	38.70	42.90	52.00	62.50
65.0	3.14	5.31	7.95	11.15	15.05	19.70	25.20	27.60	31.60	35.20	39.10	47.70	57.60
70.0	2.35	4.31	6.69	9.61	13.15	17.40	22.40	24.70	28.40	31.70	35.30	43.40	52.60
75.0		3.36	5.48	8.08	11.25	15.10	19.70	21.80	25.10	28.20	31.60	39.00	47.60
80.0			4.32	6.60	9.40	12.80	16.95	18.85	21.90	24.70	27.80	34.60	42.50
85.0			3.24	5.18	7.60	10.60	14.25	15.95	18.70	21.20	24.00	30.20	37.50

Cond °C	Power, kW												
	-25.0	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0	12.5	15.0	20.0	25.0
16.0	4.70												
20.0	4.92	5.32											
25.0	5.15	5.65	6.06	6.38									
30.0	5.33	5.92	6.43	6.87	7.19	7.41							
35.0	5.45	6.14	6.76	7.30	7.75	8.10	8.32	8.37	8.41	8.40			
40.0	5.53	6.30	7.03	7.68	8.26	8.73	9.10	9.21	9.34	9.41	9.45	9.40	
45.0	5.55	6.42	7.25	8.01	8.71	9.32	9.83	10.00	10.20	10.35	10.50	10.60	10.55
50.0	5.53	6.49	7.42	8.30	9.12	9.86	10.50	10.75	11.05	11.30	11.50	11.80	11.90
55.0	5.45	6.50	7.53	8.53	9.47	10.35	11.15	11.45	11.85	12.15	12.45	12.90	13.20
60.0	5.31	6.46	7.60	8.71	9.78	10.80	11.75	12.10	12.60	12.95	13.35	13.95	14.50
65.0	5.13	6.37	7.62	8.84	10.05	11.20	12.25	12.65	13.25	13.75	14.20	15.00	15.70
70.0	4.89	6.23	7.58	8.92	10.25	11.50	12.75	13.20	13.90	14.45	15.00	15.95	16.85
75.0		6.04	7.49	8.95	10.40	11.80	13.20	13.70	14.50	15.15	15.75	16.90	17.95
80.0			7.35	8.93	10.50	12.05	13.55	14.15	15.05	15.75	16.45	17.80	19.05
85.0			7.16	8.85	10.55	12.25	13.90	14.55	15.55	16.30	17.10	18.60	20.00

50 Hz

4MHD-25X

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	12.5	15.0	20.0	25.0
16.0	17.20												
20.0	17.34	17.61											
25.0	17.50	17.82	18.13	18.40									
30.0	17.63	18.01	18.40	18.77	19.08	19.29							
35.0	17.73	18.17	18.64	19.12	19.56	19.91	20.15	20.20	20.22	20.19			
40.0	17.80	18.30	18.86	19.44	20.01	20.51	20.92	21.05	21.19	21.26	21.28	21.15	
45.0	17.84	18.40	19.05	19.74	20.43	21.09	21.67	21.87	22.13	22.31	22.44	22.56	22.43
50.0	17.83	18.46	19.20	20.00	20.83	21.64	22.39	22.67	23.06	23.34	23.58	23.94	24.08
55.0	17.79	18.49	19.32	20.23	21.19	22.16	23.09	23.45	23.95	24.34	24.70	25.30	25.71
60.0	17.70	18.48	19.40	20.42	21.52	22.64	23.76	24.19	24.82	25.32	25.80	26.64	27.31
65.0	17.57	18.42	19.43	20.58	21.81	23.10	24.39	24.90	25.66	26.27	26.86	27.95	28.89
70.0	17.39	18.31	19.42	20.68	22.06	23.51	24.99	25.58	26.46	27.18	27.89	29.23	30.44
75.0		18.15	19.36	20.75	22.27	23.88	25.55	26.22	27.23	28.06	28.89	30.48	31.96
80.0			19.26	20.76	22.43	24.21	26.06	26.82	27.95	28.90	29.84	31.69	33.45
85.0			19.09	20.73	22.54	24.49	26.53	27.37	28.64	29.70	30.76	32.86	34.90

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	12.5	15.0	20.0	25.0
16.0	75.80												
20.0	74.20	95.10											
25.0	71.70	93.00	118.50	149.50									
30.0	68.80	90.30	116.50	147.00	183.00	224.00							
35.0	65.40	87.20	113.50	144.00	180.00	221.00	268.00	288.00	320.00	349.00			
40.0	61.60	83.60	110.00	140.50	176.50	217.00	264.00	284.00	316.00	345.00	375.00	440.00	
45.0	57.30	79.50	105.50	136.50	172.00	213.00	259.00	280.00	312.00	340.00	370.00	435.00	507.00
50.0	52.60	74.90	101.00	132.00	167.50	208.00	254.00	274.00	306.00	335.00	365.00	429.00	501.00
55.0	47.50	69.90	96.10	126.50	162.00	202.00	248.00	268.00	300.00	328.00	358.00	423.00	494.00
60.0	41.90	64.40	90.50	121.00	155.50	196.00	241.00	261.00	293.00	321.00	351.00	415.00	486.00
65.0	36.00	58.50	84.40	114.50	149.00	188.50	234.00	253.00	285.00	313.00	342.00	406.00	477.00
70.0	29.70	52.10	77.70	107.50	141.50	180.50	225.00	245.00	276.00	304.00	333.00	397.00	468.00
75.0		45.20	70.50	99.60	133.00	171.50	216.00	235.00	266.00	294.00	323.00	386.00	457.00
80.0			62.70	91.20	124.00	162.00	206.00	225.00	256.00	283.00	312.00	375.00	446.00
85.0			54.30	82.10	114.50	151.50	195.00	214.00	244.00	272.00	301.00	364.00	435.00

### **COMPRESSOR MECHANICAL AND PHYSICAL DATA**

Number of cylinders	4
Displacement @ 50 Hz, m <sup>3</sup> /h	71.4
Bore/Stroke, mm	68.3/56.0
Length/Width, mm	657/501
Height, mm	452
Net Weight, kg	193
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	605
Refrigerant's classification	A1

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

Maximum Operating Current, A	41.6
Locked Rotor Current, A	199
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
Adapter Kit	For Parallel Operation
Digital Driver	EC3-D23
Crankcase Heater	100 W Internal
Sound Attenuation	Sound Shell
Mounting Parts	Rubber
Additional Cooling	70 W Vertical Air Flow Fan
Oil Pressure Switch	OPS2 Electronic Switch
Digital Modulation	50-100 %
Copeland Compressor Electronic module	Modbus extension module

## MOTOR OPTIONS

<b>Motor Code</b>	<b>Power Supply</b>	<b>Nominal Voltage, V</b>	<b>Start Connection</b>	<b>DOL Connection</b>	<b>Amps Factor</b>
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