



Minimum Evaporating Temp. With:

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

Suction Superheat 10.0K

Liquid Subcooling 0.0K

Evaporating Temperature, °C

Cond °C	Cooling Capacity, kW											
	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0	12.5	15.0	20.0	25.0
10.0	5.17	6.49	8.08	9.98								
15.0	4.93	6.22	7.76	9.60	11.80							
20.0	4.69	5.93	7.42	9.20	11.30	13.75						
25.0	4.43	5.63	7.07	8.78	10.80	13.20	14.25	15.95				
30.0	4.16	5.32	6.70	8.35	10.30	12.60	13.60	15.25	16.75	18.30		
35.0	3.89	5.00	6.33	7.90	9.77	11.95	12.95	14.50	15.95	17.45		
40.0	3.61	4.67	5.94	7.45	9.23	11.30	12.25	13.75	15.15	16.60	19.85	
45.0	3.32	4.34	5.55	6.98	8.67	10.65	11.55	13.00	14.30	15.70	18.85	22.40
50.0		4.00	5.14	6.50	8.10	9.99	10.85	12.20	13.45	14.80	17.80	21.20
55.0			4.73	6.01	7.52	9.31	10.10	11.40	12.60	13.90	16.75	20.00
60.0			4.32	5.51	6.93	8.62	9.37	10.60	11.70	12.95	15.65	18.75
65.0				5.01	6.33	7.91	8.62	9.78	10.85	11.95	14.55	17.50
70.0					5.73	7.19	7.86	8.94	9.93	11.00	13.40	
75.0					5.12	6.47	7.08	8.09	9.01	10.00		

50 Hz

ZR81KRE-TFD

R450A Dew Point

Cond °C	Power, kW											
	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0	12.5	15.0	20.0	25.0
10.0	1.36	1.36	1.36	1.39								
15.0	1.51	1.50	1.51	1.52	1.56							
20.0	1.67	1.66	1.66	1.68	1.70	1.74						
25.0	1.86	1.84	1.84	1.84	1.86	1.90	1.92	1.95				
30.0	2.07	2.05	2.04	2.04	2.05	2.08	2.09	2.12	2.14	2.18		
35.0	2.31	2.29	2.27	2.26	2.27	2.28	2.30	2.32	2.34	2.36		
40.0	2.59	2.56	2.54	2.52	2.52	2.53	2.53	2.55	2.56	2.58	2.64	
45.0	2.91	2.87	2.84	2.82	2.81	2.81	2.81	2.82	2.83	2.84	2.89	2.95
50.0		3.23	3.20	3.17	3.15	3.14	3.13	3.14	3.14	3.15	3.18	3.23
55.0			3.60	3.57	3.53	3.51	3.51	3.50	3.50	3.50	3.52	3.55
60.0			4.06	4.02	3.98	3.94	3.93	3.92	3.92	3.91	3.91	3.93
65.0				4.53	4.48	4.44	4.42	4.40	4.39	4.38	4.37	4.37
70.0					5.05	5.00	4.98	4.95	4.93	4.91	4.89	
75.0					5.69	5.63	5.60	5.57	5.54	5.52		

Cond °C	Current at 400 V, A											
	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0	12.5	15.0	20.0	25.0
10.0	4.78	4.76	4.75	4.77								
15.0	5.19	5.17	5.16	5.18	5.22							
20.0	5.55	5.53	5.52	5.54	5.58	5.64						
25.0	5.89	5.86	5.85	5.87	5.90	5.95	5.98	6.02				
30.0	6.22	6.18	6.17	6.18	6.20	6.25	6.27	6.31	6.35	6.39		
35.0	6.55	6.51	6.49	6.49	6.50	6.54	6.56	6.59	6.63	6.66		
40.0	6.91	6.86	6.82	6.81	6.82	6.84	6.86	6.88	6.91	6.94	7.02	
45.0	7.31	7.24	7.20	7.17	7.16	7.17	7.18	7.20	7.22	7.24	7.30	7.38
50.0		7.69	7.62	7.58	7.56	7.55	7.55	7.56	7.57	7.59	7.63	7.68
55.0			8.12	8.06	8.02	7.99	7.98	7.98	7.98	7.99	8.01	8.05
60.0			8.71	8.63	8.56	8.51	8.50	8.48	8.47	8.46	8.46	8.48
65.0				9.30	9.20	9.13	9.11	9.07	9.05	9.03	9.01	8.99
70.0					9.97	9.87	9.83	9.78	9.74	9.71	9.66	
75.0					10.86	10.73	10.68	10.62	10.57	10.52		

Cond °C	Suction Mass Flow, g/s											
	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0	12.5	15.0	20.0	25.0
10.0	30.20	37.10	45.30	55.00								
15.0	30.00	37.00	45.30	54.90	66.10							
20.0	29.70	36.80	45.10	54.80	66.00	78.90						
25.0	29.40	36.50	44.90	54.60	65.80	78.70	84.30	93.40				
30.0	29.00	36.20	44.60	54.30	65.50	78.40	84.00	93.10	101.00	109.50		
35.0	28.50	35.80	44.20	53.90	65.10	78.00	83.60	92.70	100.50	109.50		
40.0	27.90	35.30	43.70	53.40	64.60	77.50	83.20	92.20	100.50	109.00	127.50	
45.0	27.30	34.70	43.10	52.90	64.10	76.90	82.60	91.60	99.70	108.00	127.00	148.00
50.0		34.00	42.50	52.20	63.40	76.20	81.90	90.90	98.90	107.50	126.50	147.50
55.0			41.70	51.40	62.60	75.40	81.00	90.00	98.10	106.50	125.50	146.50
60.0			40.90	50.60	61.70	74.50	80.10	89.10	97.20	106.00	124.50	146.00
65.0				49.60	60.60	73.40	79.00	88.00	96.10	104.50	123.50	145.00
70.0					59.50	72.20	77.80	86.90	95.00	103.50	122.50	
75.0					58.20	70.90	76.60	85.60	93.70	102.50		

### COMPRESSOR MECHANICAL AND PHYSICAL DATA

Displacement @ 50 Hz, m³/h	18.8
Length/Width, mm	246/257
Height, mm	443
Net Weight, kg	39.2
Stub Suction, inch	7/8
Stub Discharge, inch	3/4
Oil Quantity, l	1.77
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	190 x 190 (19)
Sound Pressure @ 1m (MT), dBA	62
Sound Power (MT), dBA	73
Sound Power with Sound Shell (MT), dBA	63
Sound Conditions (MT, Temperatures: Evap./Cond./Suction at freq./speed)	-10 / 45 / 20 °C at 50 Hz
PED Category	1
Max. Internal Free Volume, l	5.40
High Side PS gauge, bar	29
Low Side PS gauge, bar	21
Low Side TS Max., °C	50
Low Side TS Min., °C	-35
Refrigerant's GWP	605
Refrigerant's classification	A1

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

Maximum Operating Current, A	14
Locked Rotor Current, A	101
Winding Resistance, ohm	1.79
Default Enclosure Class	IP 21 (IEC 34)

### **ACCESSORIES INCLUDED**

Discharge Temperature Protection	Internal Thermodisk
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### **ACCESSORIES OPTIONAL**

Crankcase Heater	70 W External
Oil Control System	ALCO Trax-Oil OM3
Mounting Grommets	Standard
Sound Attenuation	Sound Shell (10dBA)
Rotalock valves	suction and discharge

### **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>
TFD	380-420 V / 3~ / 50 Hz	400		Y	1.00
TFD	460 V / 3~ / 60 Hz	460		Y	1.04