



Minimum Evaporating Temp. With:	
<span style="color: magenta;">—</span> 20 K Suction Superheat	<span style="color: yellow;">—</span> 20 K Suction Superheat Liquid injection
<span style="color: brown;">—</span> 20 °C Suction Gas Return Liquid injection	
<span style="color: blue;">—</span> Maximum Evaporating Temperature	

Suction Return Temperature 18.3°C

Liquid Subcooling 0.0K

Evaporating Temperature, °C

Cond °C	Cooling Capacity, kW										
	-40.0	-35.0	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0
10.0	2.87	3.61	4.49	5.52	6.72	8.09					
15.0	2.83	3.59	4.49	5.53	6.73	8.10	9.66				
20.0	2.78	3.55	4.45	5.50	6.70	8.07	9.62	11.35			
25.0	2.71	3.49	4.39	5.44	6.63	7.99	9.53	11.25	13.20		
30.0	2.62	3.40	4.31	5.34	6.53	7.87	9.39	11.10	13.00	15.10	16.00
35.0	2.52	3.30	4.19	5.22	6.39	7.71	9.21	10.90	12.75	14.85	15.70
40.0	2.41	3.18	4.06	5.07	6.21	7.51	8.98	10.60	12.45	14.50	15.35
45.0		3.04	3.90	4.89	6.01	7.27	8.70	10.30	12.10	14.10	14.95
50.0							8.38	9.94	11.70	13.60	14.45
55.0									11.20	13.10	13.90

50 Hz

ZF13KVE-TFD EVI

R449A Dew Point

Cond °C	Power, kW										
	-40.0	-35.0	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0
10.0	1.18	1.27	1.34	1.43	1.52	1.64					
15.0	1.32	1.40	1.49	1.57	1.66	1.76	1.87				
20.0	1.46	1.57	1.66	1.74	1.82	1.90	2.00	2.12			
25.0	1.64	1.76	1.85	1.93	2.00	2.08	2.16	2.26	2.38		
30.0	1.84	1.97	2.07	2.15	2.23	2.29	2.36	2.44	2.54	2.66	2.71
35.0	2.07	2.21	2.33	2.41	2.49	2.55	2.61	2.67	2.74	2.83	2.87
40.0	2.34	2.50	2.62	2.72	2.79	2.84	2.89	2.94	2.99	3.06	3.09
45.0		2.82	2.96	3.06	3.14	3.19	3.23	3.26	3.30	3.34	3.35
50.0							3.62	3.64	3.66	3.67	3.68
55.0									4.08	4.08	4.07

Cond °C	Current at 400 V, A										
	-40.0	-35.0	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0
10.0	3.79	3.84	3.89	3.95	4.03	4.13					
15.0	3.87	3.94	4.01	4.07	4.15	4.24	4.36				
20.0	3.98	4.08	4.15	4.23	4.30	4.39	4.49	4.62			
25.0	4.13	4.24	4.34	4.42	4.50	4.57	4.66	4.77	4.91		
30.0	4.32	4.46	4.57	4.66	4.74	4.81	4.89	4.98	5.09	5.23	5.30
35.0	4.56	4.72	4.85	4.95	5.03	5.11	5.18	5.25	5.34	5.44	5.50
40.0	4.86	5.05	5.19	5.31	5.40	5.47	5.53	5.59	5.65	5.73	5.77
45.0		5.44	5.61	5.74	5.83	5.90	5.95	6.00	6.04	6.09	6.12
50.0							6.46	6.50	6.52	6.55	6.56
55.0									7.09	7.09	7.09

Cond °C	Suction Mass Flow, g/s										
	-40.0	-35.0	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0
10.0	10.85	14.10	18.00	22.70	28.30	35.20					
15.0	10.75	14.10	18.05	22.80	28.50	35.40	43.60				
20.0	10.65	14.00	18.00	22.80	28.60	35.40	43.70	53.40			
25.0	10.45	13.90	17.90	22.70	28.50	35.40	43.60	53.30	64.70		
30.0	10.25	13.70	17.75	22.50	28.30	35.20	43.40	53.10	64.50	77.70	83.50
35.0	9.95	13.40	17.45	22.30	28.00	34.90	43.10	52.70	64.00	77.20	83.00
40.0	9.62	13.05	17.10	21.90	27.60	34.50	42.60	52.20	63.40	76.50	82.30
45.0		12.65	16.65	21.40	27.10	33.90	42.00	51.50	62.70	75.70	81.40
50.0							41.20	50.60	61.70	74.60	80.30
55.0									60.60	73.40	79.00

**COMPRESSOR MECHANICAL AND PHYSICAL DATA**

Displacement @ 50 Hz, m <sup>3</sup> /h	11.7
Length/Width, mm	246/251
Height, mm	442
Net Weight, kg	38
Gross Weight, kg	41
Rotalock Suction, inch	1 1/4
Rotalock Discharge, inch	1
Oil Quantity, l	1.89
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 (8.5)
Sound Pressure @ 1m (LT), dBA	65
Sound Power (LT), dBA	76
Sound Conditions (LT, Temperatures: Evap./Cond./Suction at freq./speed)	-35 / 40 / 20 °C at 50 Hz
PED Category	1
Max. Internal Free Volume, l	6.10
High Side PS gauge, bar	28.8
Low Side PS gauge, bar	21
Low Side TS Max., °C	50
Refrigerant's GWP	1397
Refrigerant's classification	A1

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

Maximum Operating Current, A	9
Locked Rotor Current, A	64
Winding Resistance, ohm	2.75
Default Enclosure Class	IP 21 (IEC 34)

**ACCESSORIES INCLUDED**

Discharge Temperature Protection	Discharge line thermostat
Mounting Grommets	Standard

**ACCESSORIES OPTIONAL**

Crankcase Heater	70 W External
Current Sensing Relay	External
Oil Control System	ALCO Trax-Oil OM3

**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
TF5	200-220 V / 3~ / 50 Hz	200		Y	2.09
TFE	500 V / 3~ / 50 Hz	500		Y	0.80
TFD	460 V / 3~ / 60 Hz	460		Y	1.04
TF5	200-230 V / 3~ / 60 Hz	230		Y	2.09
TFE	575 V / 3~ / 60 Hz	575		Y	0.80
TF7	380 V / 3~ / 60 Hz	380		Y	1.26