



Minimum Evaporating Temp. With:

- 10 K Suction Superheat     — 5 K Suction Superheat
- Maximum Evaporating Temperature

Suction Superheat 10.0K

Liquid Subcooling 0.0K

Evaporating Temperature, °C

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	
17.0	5.04	6.36	7.95										
20.0	4.88	6.18	7.75	9.62									
25.0	4.61	5.87	7.39	9.21	11.35	13.85							
30.0	4.34	5.56	7.03	8.77	10.85	13.25	16.05	17.30					
35.0	4.07	5.24	6.65	8.32	10.30	12.60	15.30	16.50	18.40	20.10	22.00		
40.0	3.79	4.91	6.26	7.86	9.75	11.95	14.55	15.70	17.50	19.15	20.90	24.80	
45.0	3.51	4.58	5.86	7.38	9.17	11.30	13.75	14.85	16.60	18.15	19.85	23.60	
50.0		4.24	5.45	6.88	8.58	10.60	12.90	13.95	15.60	17.10	18.75	22.30	
55.0			5.02	6.37	7.96	9.84	12.05	13.05	14.60	16.05	17.55	21.00	
60.0				5.84	7.32	9.08	11.15	12.10	13.55	14.90	16.35	19.55	
65.0					6.67	8.30	10.25	11.10	12.50	13.75	15.10		
67.0						7.98	9.85	10.70	12.05	13.30	14.60		

50 Hz

ZH38K4E-TFD

R407C Dew Point

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
17.0	1.72	1.80	1.86									
20.0	1.84	1.92	1.98	2.07								
25.0	2.04	2.13	2.20	2.28	2.38	2.50						
30.0	2.25	2.35	2.44	2.52	2.61	2.72	2.86	2.93				
35.0	2.46	2.59	2.70	2.79	2.87	2.97	3.10	3.16	3.26	3.36	3.47	
40.0	2.69	2.85	2.97	3.08	3.17	3.27	3.38	3.43	3.52	3.61	3.71	3.95
45.0	2.92	3.12	3.27	3.39	3.50	3.60	3.71	3.76	3.84	3.92	4.00	4.21
50.0		3.40	3.59	3.74	3.86	3.97	4.08	4.13	4.20	4.27	4.35	4.54
55.0			3.92	4.10	4.25	4.38	4.49	4.54	4.62	4.68	4.76	4.92
60.0				4.49	4.67	4.82	4.95	5.00	5.08	5.14	5.21	5.37
65.0					5.12	5.29	5.45	5.50	5.59	5.65	5.72	
67.0						5.49	5.66	5.72	5.80	5.87	5.94	

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
17.0	5.57	5.61	5.66									
20.0	5.66	5.70	5.75	5.81								
25.0	5.82	5.86	5.91	5.96	6.04	6.15						
30.0	5.99	6.04	6.09	6.15	6.22	6.32	6.45	6.51				
35.0	6.19	6.25	6.31	6.37	6.44	6.53	6.65	6.71	6.81	6.90	7.01	
40.0	6.41	6.49	6.56	6.63	6.71	6.80	6.91	6.97	7.06	7.15	7.25	7.49
45.0	6.67	6.77	6.86	6.95	7.03	7.13	7.24	7.30	7.39	7.47	7.57	7.80
50.0		7.10	7.22	7.32	7.42	7.52	7.65	7.70	7.79	7.87	7.97	8.19
55.0			7.63	7.76	7.88	8.00	8.13	8.19	8.28	8.37	8.46	8.67
60.0				8.27	8.42	8.56	8.70	8.77	8.86	8.95	9.05	9.27
65.0					9.04	9.21	9.37	9.44	9.55	9.65	9.75	
67.0						9.50	9.67	9.74	9.86	9.95	10.06	

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
17.0	26.80	33.30	41.00									
20.0	26.60	33.10	40.90	50.10								
25.0	26.20	32.90	40.70	49.90	60.60	73.00						
30.0	25.80	32.50	40.40	49.70	60.40	72.80	86.90	93.10				
35.0	25.40	32.10	40.10	49.30	60.10	72.50	86.60	92.80	102.50	111.50	121.00	
40.0	24.90	31.70	39.70	48.90	59.70	72.10	86.20	92.40	102.50	111.00	120.50	141.00
45.0	24.50	31.30	39.20	48.50	59.20	71.60	85.70	91.90	102.00	110.50	120.00	140.50
50.0		30.80	38.70	47.90	58.60	70.90	85.10	91.30	101.50	110.00	119.50	140.00
55.0			38.10	47.30	57.90	70.20	84.40	90.60	100.50	109.50	119.00	139.50
60.0				46.60	57.20	69.40	83.60	89.80	99.80	108.50	118.00	139.00
65.0					56.40	68.60	82.70	89.00	99.00	108.00	117.50	
67.0						68.20	82.40	88.70	98.70	107.50	117.50	

### COMPRESSOR MECHANICAL AND PHYSICAL DATA

Displacement @ 50 Hz, m <sup>3</sup> /h	14.4
Length/Width, mm	247/241
Height, mm	438
Net Weight, kg	37.3
Gross Weight, kg	40.3
Stub Suction, inch	7/8
Stub Discharge, inch	1/2
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 (HT), dBA	66
Sound Power (HT), dBA	77
Sound Power with Sound Shell (HT), dBA	69
Sound Conditions (HT, Temperatures: Evap./Cond./Suction at freq./speed)	-7 / 50 / 3 °C at 50 Hz
PED Category	1
Max. Low Side Internal Free Volume, l	0,6
Max. High Side Internal Free Volume, l	6,0
Max. Internal Free Volume, l	6.60
High Side PS gauge, bar	32
Low Side PS gauge, bar	22.6
Low Side TS Max., °C	50
Refrigerant's GWP	1774
Refrigerant's classification	A1

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

Maximum Operating Current, A	10.1
Locked Rotor Current, A	64
Winding Resistance, ohm	2.74
Default Enclosure Class	IP 21 (IEC 34)

**ACCESSORIES INCLUDED**

Mounting Grommets	Standard
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**ACCESSORIES OPTIONAL**

Crankcase Heater	70 W External
Discharge Temperature Protection	Discharge line thermostat

**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
TFR	220-240 V / 3~ / 50 Hz	230		Y	1.73
TFD	460 V / 3~ / 60 Hz	460		Y	1.04