



Minimum Evaporating Temp. With:  
— 10 K Suction Superheat  
— Maximum Evaporating Temperature

Suction Superheat 11.1K

Liquid Subcooling 8.3K

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	25.0	
17.0	3.29	4.02	4.86											
20.0	3.28	4.01	4.86	5.82										
25.0	3.24	3.98	4.83	5.80	6.91	8.16								
30.0	3.19	3.94	4.79	5.75	6.85	8.09	9.49	10.10	11.05					
35.0	3.13	3.88	4.72	5.68	6.77	7.99	9.37	9.97	10.90	11.75	12.65			
40.0	3.07	3.80	4.64	5.58	6.65	7.86	9.22	9.80	10.75	11.55	12.45	14.30	16.40	
45.0	2.99	3.72	4.54	5.46	6.51	7.69	9.02	9.59	10.50	11.30	12.15	14.00	16.05	
50.0	2.92	3.63	4.43	5.33	6.34	7.49	8.79	9.35	10.25	11.05	11.85	13.65	15.65	
55.0	2.85	3.53	4.30	5.17	6.16	7.27	8.52	9.06	9.93	10.70	11.50	13.25	15.20	
60.0		3.43	4.16	5.00	5.94	7.01	8.22	8.75	9.58	10.30	11.10	12.80		
65.0			4.02	4.81	5.72	6.74	7.90	8.40	9.20	9.91	10.65			
67.0			3.96	4.74	5.62	6.62	7.76	8.25	9.04	9.74	10.50			

50 Hz

ZH09KVE-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	25.0
17.0	1.08	1.12	1.14										
20.0	1.16	1.20	1.23	1.24									
25.0	1.29	1.34	1.38	1.40	1.42	1.41							
30.0	1.44	1.48	1.54	1.57	1.60	1.60	1.60	1.58	1.56				
35.0	1.59	1.65	1.70	1.75	1.79	1.81	1.82	1.82	1.80	1.78	1.76		
40.0	1.76	1.83	1.89	1.95	2.00	2.03	2.05	2.05	2.05	2.04	2.03	1.98	1.91
45.0	1.96	2.03	2.10	2.16	2.22	2.27	2.30	2.31	2.32	2.32	2.31	2.29	2.23
50.0	2.17	2.25	2.33	2.40	2.47	2.53	2.58	2.59	2.61	2.62	2.62	2.61	2.57
55.0	2.42	2.50	2.59	2.67	2.75	2.82	2.88	2.90	2.92	2.94	2.95	2.95	2.94
60.0		2.78	2.87	2.96	3.05	3.13	3.20	3.23	3.26	3.29	3.30	3.33	
65.0			3.19	3.29	3.39	3.48	3.56	3.59	3.63	3.66	3.69		
67.0			3.33	3.43	3.53	3.63	3.72	3.75	3.79	3.83	3.86		

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
17.0	3.18	3.20	3.22										
20.0	3.23	3.25	3.28	3.29									
25.0	3.32	3.36	3.39	3.41	3.42	3.42							
30.0	3.44	3.48	3.52	3.55	3.57	3.58	3.58	3.58	3.57				
35.0	3.57	3.63	3.68	3.72	3.75	3.78	3.79	3.79	3.79	3.78	3.77		
40.0	3.74	3.80	3.86	3.92	3.97	4.00	4.03	4.04	4.05	4.05	4.05	4.04	4.01
45.0	3.93	4.01	4.08	4.15	4.21	4.27	4.31	4.33	4.34	4.36	4.37	4.37	4.36
50.0	4.17	4.25	4.34	4.42	4.50	4.57	4.63	4.65	4.68	4.70	4.72	4.75	4.76
55.0	4.44	4.54	4.64	4.74	4.83	4.92	5.00	5.03	5.07	5.10	5.13	5.18	5.21
60.0		4.86	4.98	5.10	5.21	5.31	5.41	5.45	5.50	5.54	5.58	5.65	
65.0			5.37	5.50	5.63	5.76	5.88	5.92	5.99	6.04	6.09		
67.0			5.54	5.68	5.82	5.95	6.08	6.13	6.20	6.26	6.31		

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
17.0	14.55	18.20	22.50										
20.0	14.55	18.20	22.50	27.50									
25.0	14.45	18.15	22.50	27.60	33.40	40.20							
30.0	14.30	18.05	22.40	27.50	33.40	40.10	47.90	51.30	56.70				
35.0	14.15	17.95	22.30	27.40	33.20	40.00	47.70	51.10	56.50	61.30	66.40		
40.0	14.00	17.75	22.10	27.10	32.90	39.60	47.30	50.70	56.00	60.80	65.90	77.00	89.50
45.0	13.85	17.55	21.90	26.80	32.60	39.20	46.80	50.10	55.40	60.20	65.20	76.20	88.50
50.0	13.65	17.30	21.60	26.50	32.20	38.70	46.20	49.40	54.70	59.40	64.30	75.20	87.40
55.0	13.50	17.10	21.20	26.10	31.60	38.10	45.40	48.60	53.80	58.40	63.30	74.00	86.10
60.0		16.85	20.90	25.60	31.10	37.30	44.50	47.70	52.80	57.30	62.10	72.70	
65.0			20.50	25.10	30.40	36.50	43.60	46.70	51.60	56.10	60.80		
67.0			20.40	24.90	30.10	36.20	43.20	46.20	51.20	55.60	60.20		

### COMPRESSOR MECHANICAL AND PHYSICAL DATA

Displacement @ 50 Hz, m <sup>3</sup> /h	8.00
Length/Width, mm	243/243
Height, mm	386
Net Weight, kg	29.9
Stub Suction, inch	3/4
Stub Discharge, inch	1/2
Oil Quantity, l	1.45
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	62
Sound Power (HT), dBA	73
Sound Power with Sound Shell (HT), dBA	63
Sound Conditions (HT, Temperatures:	-7 / 50 / 3 °C at 50 Hz
Evap./Cond./Suction at freq./speed)	
PED Category	1
Max. Internal Free Volume, l	3.90
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	6.5
Locked Rotor Current, A	40
Winding Resistance, ohm	4.68
Default Enclosure Class	IP 21 (IEC 34)

**ACCESSORIES INCLUDED****ACCESSORIES OPTIONAL****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
TFM	380-420 V / 3~ / 50 Hz	400		Y	1.00
TFD	460 V / 3~ / 60 Hz	460		Y	1.04