



Minimum Evaporating Temp. With:

- 10 K Suction Superheat
- 20 K Suction Superheat
- Maximum Evaporating Temperature

Suction Superheat 10.0K

Liquid Subcooling 0.0K

Evaporating Temperature, °C

Cond °C	Cooling Capacity, kW									
	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0
10.0	3.46	4.33	5.37	6.60	8.04					
15.0	3.28	4.13	5.14	6.33	7.73					
20.0	3.11	3.93	4.91	6.06	7.40	8.96				
25.0	2.94	3.73	4.67	5.78	7.07	8.57	10.30			
30.0	2.76	3.53	4.43	5.49	6.73	8.16	9.81	11.70	12.50	
35.0	2.59	3.32	4.18	5.20	6.38	7.75	9.32	11.10	11.90	13.15
40.0	2.42	3.11	3.93	4.89	6.02	7.32	8.82	10.55	11.30	12.50
45.0	2.25	2.91	3.68	4.59	5.65	6.88	8.31	9.94	10.65	11.80
50.0		2.70	3.43	4.28	5.28	6.44	7.78	9.33	10.00	11.10
55.0			3.17	3.97	4.90	5.99	7.25	8.71	9.35	10.35
60.0				3.65	4.52	5.53	6.71	8.07	8.67	9.64
65.0					4.13	5.06	6.15	7.42	7.98	8.89
70.0					3.73	4.59	5.59	6.76	7.29	8.13

50 Hz

ZH09KCU-TFMN

R290

Cond °C	Power, kW									
	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0
10.0	1.28	1.29	1.30	1.31	1.32					
15.0	1.40	1.42	1.43	1.44	1.46					
20.0	1.52	1.54	1.56	1.58	1.60	1.62				
25.0	1.65	1.68	1.70	1.72	1.76	1.78	1.80			
30.0	1.78	1.82	1.84	1.88	1.90	1.94	1.97	2.00	2.01	
35.0	1.92	1.96	2.00	2.03	2.07	2.11	2.14	2.18	2.20	2.22
40.0	2.07	2.11	2.15	2.20	2.24	2.28	2.33	2.37	2.39	2.41
45.0	2.23	2.28	2.33	2.37	2.42	2.47	2.52	2.57	2.59	2.62
50.0		2.45	2.51	2.56	2.62	2.67	2.73	2.79	2.81	2.84
55.0			2.71	2.77	2.83	2.89	2.95	3.01	3.04	3.08
60.0				2.99	3.05	3.12	3.19	3.26	3.29	3.33
65.0					3.30	3.37	3.45	3.52	3.55	3.60
70.0					3.56	3.64	3.72	3.80	3.84	3.88

Cond °C	Current at 400 V, A									
	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0
10.0	3.97	3.98	3.99	4.00	4.00					
15.0	4.07	4.08	4.09	4.11	4.12					
20.0	4.17	4.19	4.20	4.22	4.24	4.26				
25.0	4.28	4.30	4.33	4.35	4.37	4.40	4.42			
30.0	4.40	4.43	4.46	4.49	4.52	4.55	4.58	4.61	4.62	
35.0	4.53	4.57	4.60	4.64	4.68	4.71	4.75	4.79	4.81	4.83
40.0	4.68	4.72	4.76	4.81	4.85	4.90	4.95	4.99	5.01	5.04
45.0	4.84	4.89	4.94	5.00	5.05	5.10	5.16	5.22	5.24	5.27
50.0		5.08	5.14	5.21	5.27	5.33	5.40	5.46	5.49	5.53
55.0			5.37	5.44	5.51	5.59	5.66	5.73	5.76	5.81
60.0				5.70	5.78	5.87	5.95	6.04	6.07	6.12
65.0					6.08	6.18	6.27	6.37	6.41	6.46
70.0					6.41	6.52	6.63	6.73	6.78	6.84

Cond °C	Suction Mass Flow, g/s									
	-30.0	-25.0	-20.0	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0
10.0	10.50	12.90	15.75	19.00	22.80					
15.0	10.40	12.80	15.65	18.95	22.70					
20.0	10.25	12.70	15.55	18.85	22.60	26.90				
25.0	10.15	12.60	15.45	18.75	22.50	26.80	31.60			
30.0	10.00	12.50	15.35	18.65	22.40	26.60	31.40	36.70	39.00	
35.0	9.87	12.35	15.25	18.50	22.20	26.50	31.20	36.50	38.80	42.40
40.0	9.74	12.25	15.10	18.35	22.10	26.30	31.00	36.30	38.60	42.20
45.0	9.61	12.10	14.95	18.20	21.90	26.10	30.80	36.00	38.30	41.90
50.0		12.00	14.80	18.05	21.70	25.80	30.50	35.70	38.00	41.60
55.0			14.70	17.85	21.50	25.60	30.20	35.40	37.70	41.20
60.0				17.70	21.30	25.30	29.90	35.10	37.30	40.90
65.0					21.10	25.10	29.60	34.70	37.00	40.50
70.0					20.90	24.80	29.30	34.40	36.60	40.20

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

Displacement @ 50 Hz, m³/h	11.7
Length/Width, mm	254/266
Height, mm	442
Net Weight, kg	37.9
Gross Weight, kg	39.8
Stub Suction, inch	7/8
Stub Discharge, inch	1/2
Oil Quantity, l	1.89
Oil type (original charge)	POE Hatcol 4467
Oil type (approved oils)	POE Hatcol 4467
Base mounting (hole dia), mm	190 x 190 (19)
Sound Pressure @ 1m (HT), dBA	65
Sound Power (HT), dBA	76
Sound Conditions (HT, Temperatures:	-7 / 50 / 3 °C at 50 Hz
Evap./Cond./Suction at freq./speed)	
PED Category	2
Max. Low Side Internal Free Volume, l	6.4
Max. High Side Internal Free Volume, l	0.6
Max. Internal Free Volume, l	7.00
High Side PS gauge, bar	28
Low Side PS gauge, bar	17
Low Side TS Max., °C	50
Low Side TS Min., °C	-35
High Side TS Max., °C	150
High Side TS Min., °C	-35
Refrigerant's GWP	3
Refrigerant's classification	A3

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

Maximum Operating Current, A	8.2
Locked Rotor Current, A	64
Winding Resistance, ohm	2.95
Default Enclosure Class	IP 54/65

### **ACCESSORIES INCLUDED**

Mounting Grommets	Standard
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### **ACCESSORIES OPTIONAL**

Crankcase Heater	55 W External
Discharge Temperature Protection	Discharge line thermostat

50 Hz

ZH09KCU-TFMN

R290

## **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>
TFM	380-420 V / 3~ / 50 Hz	400		Y	1.00