



Minimum Evaporating Temp. With:

- 25 °C Suction Gas Return
- 10 K Suction Superheat
- 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
10.0	9.99	12.65	15.85	19.60						
15.0	9.37	11.95	15.05	18.65	22.90					
20.0	8.76	11.25	14.20	17.70	21.70	26.40				
25.0	8.17	10.55	13.40	16.75	20.60	25.10	27.10	30.30		
30.0	7.60	9.90	12.60	15.80	19.55	23.90	25.80	28.80	31.60	34.50
35.0	7.04	9.24	11.85	14.90	18.45	22.60	24.40	27.30	29.90	32.80
40.0	6.51	8.60	11.05	13.95	17.35	21.30	23.00	25.80	28.30	31.00
45.0		7.97	10.30	13.05	16.25	20.00	21.60	24.30	26.70	29.30
50.0			9.56	12.15	15.15	18.70	20.30	22.80	25.10	27.50
55.0				11.25	14.10	17.45	18.90	21.30	23.40	25.80
60.0					13.05	16.15	17.55	19.80	21.80	24.00
65.0						14.90	16.20	18.30	20.20	22.30
68.0						14.15	15.40	17.40	19.25	21.20

50 Hz

ZR90K3E-TWD

R407C 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
10.0	2.80	2.81	2.92	3.17						
15.0	3.02	2.99	3.03	3.17	3.45					
20.0	3.29	3.24	3.22	3.28	3.45	3.77				
25.0	3.60	3.55	3.50	3.50	3.58	3.79	3.91	4.15		
30.0	3.94	3.92	3.86	3.83	3.84	3.95	4.03	4.19	4.37	4.60
35.0	4.31	4.33	4.30	4.25	4.22	4.26	4.30	4.39	4.51	4.67
40.0	4.71	4.80	4.80	4.76	4.71	4.70	4.71	4.75	4.82	4.92
45.0		5.30	5.37	5.36	5.31	5.27	5.26	5.26	5.29	5.34
50.0			5.98	6.03	6.01	5.96	5.94	5.92	5.92	5.94
55.0				6.77	6.80	6.77	6.75	6.72	6.70	6.69
60.0					7.67	7.68	7.67	7.64	7.62	7.60
65.0						8.70	8.71	8.70	8.68	8.65
68.0						9.36	9.38	9.38	9.37	9.35

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
10.0	8.67	8.63	8.59	8.54						
15.0	9.03	9.01	8.98	8.95	8.91					
20.0	9.34	9.34	9.33	9.31	9.28	9.26				
25.0	9.65	9.66	9.66	9.65	9.63	9.62	9.62	9.61		
30.0	9.97	10.00	10.01	10.01	10.00	9.99	9.99	9.99	9.99	10.00
35.0	10.34	10.38	10.40	10.41	10.40	10.40	10.40	10.40	10.40	10.41
40.0	10.80	10.85	10.87	10.88	10.88	10.88	10.88	10.88	10.89	10.89
45.0		11.42	11.45	11.46	11.46	11.46	11.46	11.46	11.46	11.47
50.0			12.16	12.18	12.18	12.18	12.18	12.17	12.17	12.18
55.0				13.06	13.06	13.06	13.05	13.05	13.04	13.04
60.0					14.14	14.13	14.12	14.11	14.11	14.10
65.0						15.42	15.41	15.40	15.39	15.38
68.0						16.32	16.31	16.29	16.28	16.26

50 Hz

ZR90K3E-TWD

R407C Dew Point

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
10.0	49.60	62.10	76.60	93.50						
15.0	48.30	60.80	75.30	92.10	111.50					
20.0	47.00	59.50	74.00	90.80	110.00	132.00				
25.0	45.70	58.20	72.70	89.40	108.50	130.50	140.00	155.50		
30.0	44.40	56.90	71.40	88.10	107.00	129.00	138.50	154.00	167.50	182.00
35.0	43.20	55.70	70.10	86.70	106.00	127.50	137.00	152.50	166.00	180.00
40.0	42.00	54.50	68.90	85.40	104.50	126.00	135.50	150.50	164.50	178.50
45.0		53.30	67.70	84.10	103.00	124.50	134.00	149.00	162.50	177.00
50.0			66.60	83.00	102.00	123.50	132.50	148.00	161.50	175.50
55.0				81.90	100.50	122.00	131.50	146.50	160.00	174.50
60.0					99.70	121.00	130.50	145.50	159.00	173.50
65.0						120.50	130.00	145.00	158.50	173.00
68.0						120.50	130.00	145.00	158.50	173.00

COMPRESSOR MECHANICAL AND PHYSICAL DATA

Displacement @ 50 Hz, m³/h	20.9
Length/Width, mm	319/357
Height, mm	525
Net Weight, kg	87
Gross Weight, kg	93
Rotalock Suction, inch	1 3/4
Rotalock Discharge, inch	1 1/4
Stub Suction, inch	1 3/8
Stub Discharge, inch	7/8
Oil Quantity, l	4.1
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	220 x 220 (8.5)
Sound Pressure @ 1m (HT), dBA	66
Sound Power (HT), dBA	77
Sound Power with Sound Shell (HT), dBA	66
Sound Conditions (HT, Temperatures: Evap./Cond./Suction at freq./speed)	7 / 54 / 18 °C at 50 Hz
PED Category	2
Max. Internal Free Volume, l	19.8
High Side PS gauge, bar	32
Low Side PS gauge, bar	20
Low Side TS Max., °C	52
Low Side TS Min., °C	-35
Refrigerant's GWP	1774
Refrigerant's classification	A1

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

Maximum Operating Current, A	17
Locked Rotor Current, A	99
Winding Resistance, ohm	1.45
Default Enclosure Class	IP 54 (IEC 34)

ACCESSORIES INCLUDED

Discharge Temperature Protection	Internal Thermistor
Mounting Grommets	Standard

50 Hz

ZR90K3E-TWD

R407C Dew Point

ACCESSORIES OPTIONAL

Crankcase Heater	49 W External
Oil Control System	ALCO Trax-Oil OM3
Sound Attenuation	Sound Shell (10dBA)
Mounting Grommets	Hard Mounts for Paralleling

MOTOR OPTIONS

Motor Code	Power Supply	Nominal Voltage, V	Start Connection	DOL Connection	Amps Factor
TWD	380-420 V / 3~ / 50 Hz	400		Y	1.00
TWD	460 V / 3~ / 60 Hz	460		Y	1.04