

Minimum Evaporating Temp. With:

- 25 °C Suction Gas Return     — 10 K Suction Superheat
- Maximum Evaporating Temperature

Suction Superheat 11.1K

Liquid Subcooling 8.3K

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	12.5	15.0	20.0
25.0	10.85	14.60	18.90	23.90	29.80	36.60	44.50	53.70	57.70	64.20			
30.0	9.60	13.45	17.85	22.90	28.70	35.40	43.20	52.20	56.10	62.50	68.10	74.20	
35.0		12.10	16.55	21.60	27.30	33.90	41.60	50.30	54.20	60.30	65.90	71.80	
40.0			15.00	20.00	25.70	32.20	39.60	48.10	51.90	57.90	63.20	69.00	81.50
45.0				18.25	23.80	30.10	37.40	45.70	49.30	55.10	60.30	65.80	78.00
50.0					21.70	27.90	34.90	42.90	46.40	52.00	57.00	62.30	74.10
55.0						25.40	32.20	39.80	43.20	48.60	53.40	58.50	69.80
60.0							29.20	36.50	39.80	44.90	49.50	54.40	65.30
65.0								33.00	36.10	41.00	45.40	50.10	60.40

50 Hz

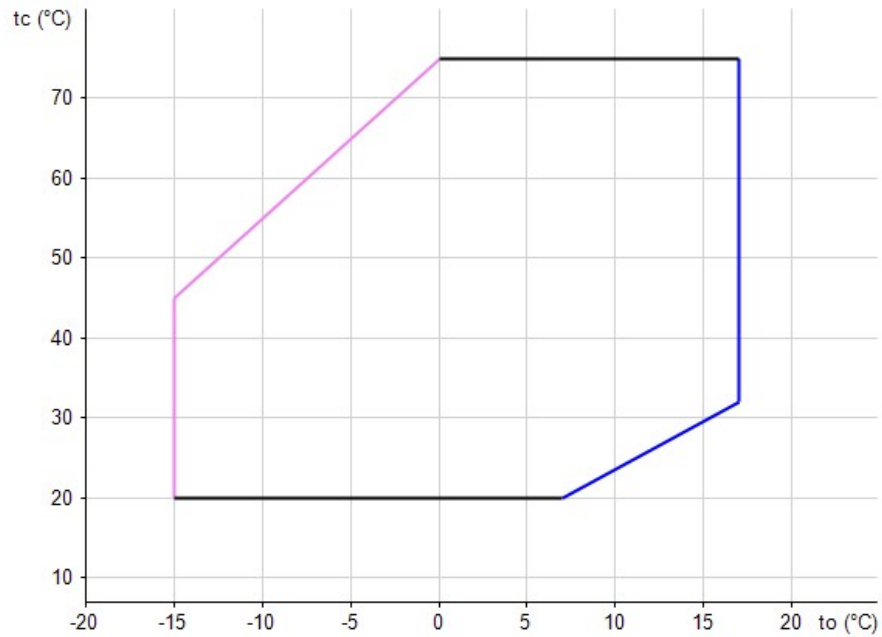
ZR190KCE-TFD

R407C Dew Point

Cond °C	Power, kW												
	-30.0	-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	6.64	6.77	6.86	6.93	7.02	7.16	7.37	7.68	7.84	8.13			
30.0	7.41	7.57	7.67	7.74	7.80	7.89	8.03	8.26	8.38	8.60	8.82	9.08	
35.0		8.44	8.57	8.65	8.70	8.76	8.85	9.00	9.09	9.25	9.42	9.62	
40.0			9.57	9.67	9.73	9.77	9.83	9.92	9.98	10.10	10.20	10.35	10.80
45.0				10.80	10.90	10.95	10.95	11.05	11.05	11.15	11.20	11.35	11.65
50.0					12.20	12.25	12.30	12.30	12.35	12.40	12.45	12.50	12.75
55.0						13.75	13.75	13.80	13.80	13.85	13.85	13.90	14.05
60.0							15.45	15.50	15.50	15.50	15.50	15.55	15.65
65.0								17.35	17.35	17.40	17.40	17.40	17.45

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	12.5	15.0	20.0
25.0	19.47	19.54	19.58	19.62	19.68	19.80	19.99	20.29	20.45	20.72			
30.0	20.03	20.14	20.20	20.24	20.28	20.34	20.47	20.67	20.78	20.98	21.19	21.43	
35.0		20.87	20.98	21.03	21.07	21.11	21.18	21.31	21.38	21.53	21.67	21.85	
40.0			21.91	22.01	22.07	22.10	22.14	22.22	22.27	22.36	22.46	22.59	22.93
45.0				23.18	23.27	23.33	23.36	23.41	23.44	23.50	23.56	23.65	23.89
50.0					24.70	24.79	24.84	24.88	24.90	24.94	24.98	25.03	25.20
55.0						26.51	26.59	26.65	26.66	26.69	26.72	26.75	26.86
60.0							28.62	28.71	28.73	28.76	28.79	28.81	28.88
65.0								31.08	31.12	31.16	31.19	31.22	31.28

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	12.5	15.0	20.0
25.0	58.40	77.30	98.60	123.00	150.50	182.50	219.00	261.00	279.00	308.00			
30.0	53.80	74.20	96.70	122.00	151.00	183.50	221.00	263.00	282.00	311.00	337.00	365.00	
35.0		69.70	93.60	120.00	149.50	183.00	221.00	264.00	283.00	312.00	339.00	367.00	
40.0			88.90	116.50	147.00	181.50	220.00	263.00	282.00	312.00	339.00	367.00	429.00
45.0				111.50	143.00	178.00	217.00	261.00	280.00	311.00	338.00	366.00	428.00
50.0					137.50	173.00	213.00	258.00	277.00	308.00	335.00	364.00	426.00
55.0						166.50	207.00	252.00	272.00	303.00	330.00	359.00	423.00
60.0							199.50	245.00	265.00	296.00	324.00	353.00	417.00
65.0								236.00	256.00	288.00	316.00	346.00	410.00



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								
	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0	12.5	15.0
20.0	16.80	20.90	25.80	31.50	38.30	41.40			
25.0	16.15	20.30	25.10	30.70	37.30	40.20	45.00		
30.0	15.40	19.45	24.20	29.70	36.10	38.90	43.50	47.70	52.20
35.0	14.50	18.50	23.10	28.50	34.70	37.50	41.90	46.00	50.30
40.0	13.45	17.45	21.90	27.10	33.20	35.80	40.20	44.00	48.20
45.0	12.30	16.25	20.60	25.70	31.50	34.10	38.20	42.00	46.00
50.0		14.90	19.20	24.10	29.70	32.20	36.20	39.80	43.70
55.0		13.50	17.70	22.40	27.80	30.20	34.00	37.50	41.20
60.0			16.05	20.60	25.80	28.10	31.70	35.10	38.60
65.0			14.35	18.70	23.70	25.90	29.40	32.50	35.90
70.0				16.75	21.50	23.60	26.90	29.90	33.10
75.0				14.70	19.20	21.20	24.30	27.20	30.20

50 Hz

ZR190KCE-TFD

R134a

Cond °C	Power, kW								
	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0	12.5	15.0
20.0	4.73	4.83	4.94	5.08	5.26	5.35			
25.0	5.12	5.21	5.31	5.42	5.56	5.64	5.76		
30.0	5.60	5.68	5.76	5.84	5.96	6.02	6.12	6.23	6.35
35.0	6.17	6.24	6.30	6.37	6.46	6.50	6.59	6.67	6.78
40.0	6.82	6.89	6.94	6.99	7.06	7.09	7.16	7.23	7.31
45.0	7.57	7.64	7.68	7.72	7.77	7.79	7.84	7.90	7.96
50.0		8.49	8.53	8.56	8.59	8.61	8.64	8.68	8.73
55.0		9.45	9.49	9.52	9.53	9.54	9.57	9.59	9.63
60.0			10.55	10.60	10.60	10.60	10.60	10.65	10.65
65.0			11.75	11.80	11.80	11.80	11.80	11.80	11.80
70.0				13.10	13.10	13.10	13.10	13.10	13.10
75.0				14.60	14.60	14.60	14.55	14.55	14.55

Cond °C	Current at 400 V, A								
	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0	12.5	15.0
20.0	16.46	16.51	16.52	16.52	16.56	16.59			
25.0	17.54	17.61	17.62	17.60	17.60	17.62	17.66		
30.0	18.42	18.52	18.53	18.51	18.49	18.50	18.51	18.55	18.61
35.0	19.15	19.28	19.32	19.30	19.27	19.26	19.27	19.28	19.32
40.0	19.78	19.95	20.02	20.02	19.98	19.97	19.96	19.96	19.98
45.0	20.34	20.57	20.68	20.70	20.68	20.66	20.65	20.64	20.65
50.0		21.18	21.34	21.39	21.39	21.38	21.37	21.36	21.35
55.0		21.83	22.04	22.15	22.18	22.17	22.16	22.16	22.15
60.0			22.85	23.01	23.07	23.08	23.09	23.09	23.08
65.0			23.79	24.02	24.13	24.16	24.18	24.19	24.20
70.0				25.22	25.40	25.44	25.49	25.52	25.54
75.0				26.66	26.91	26.98	27.06	27.11	27.15

50 Hz

ZR190KCE-TFD

R134a

Cond °C	Suction Mass Flow, g/s								
	-15.0	-10.0	-5.0	0.0	5.0	7.0	10.0	12.5	15.0
20.0	91.90	112.50	136.50	164.00	196.00	210.00			
25.0	92.10	113.50	137.50	165.50	197.50	212.00	235.00		
30.0	91.40	113.50	138.00	166.50	198.50	213.00	236.00	256.00	278.00
35.0	89.80	112.50	138.00	166.50	199.00	213.00	236.00	257.00	279.00
40.0	87.40	111.00	136.50	165.50	198.50	213.00	236.00	257.00	278.00
45.0	83.90	108.00	134.50	164.00	197.50	212.00	235.00	256.00	278.00
50.0		104.50	132.00	162.00	195.50	210.00	233.00	254.00	276.00
55.0		100.00	128.00	158.50	192.50	207.00	231.00	251.00	273.00
60.0			123.00	154.50	189.00	204.00	227.00	248.00	270.00
65.0			117.00	149.00	184.00	199.00	223.00	244.00	266.00
70.0				142.50	178.00	193.50	217.00	238.00	261.00
75.0				135.00	171.00	186.50	211.00	232.00	255.00

### COMPRESSOR MECHANICAL AND PHYSICAL DATA

Displacement @ 50 Hz, m <sup>3</sup> /h	43.3
Length/Width, mm	281/285
Height, mm	552
Net Weight, kg	66.2
Stub Suction, inch	1 3/8
Stub Discharge, inch	7/8
Oil Quantity, l	3.38
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 (0)
Sound Pressure @ 1m (HT), dBA	71
Sound Power (HT), dBA	82
Sound Conditions (HT, Temperatures:	7 / 54 / 18 °C at 50 Hz
Evap./Cond./Suction at freq./speed)	
PED Category	2
Max. Internal Free Volume, l	14.0
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	1430
Refrigerant's classification	A1

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

Maximum Operating Current, A	35
Locked Rotor Current, A	174
Winding Resistance, ohm	0.83
Default Enclosure Class	IP 21 (IEC 34)

### **ACCESSORIES INCLUDED**

Discharge Temperature Protection	ASTP Therm-O-Disc In Scroll
Enclosure Class	IP21
Oil Charge	
Oil Service Valve	Schraeder Valve
Check Valve	Discharge Low Leak Check Valve

### **ACCESSORIES OPTIONAL**

Crankcase Heater	90 W External
Enclosure Class	IP66 With Molded Plug
Mounting Grommets	Hard Mounts for Paralleling
Mounting Grommets	Rubber Grommet For Single
Adapter Kit	R1"1/4 -B 1"1/8 For TPTL for
Oil Control System	Parallel Operation
Sound Attenuation	ALCO Trax-Oil OM3 Sound Shell (12dBA)

### **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
TW5	200-220 V / 3~ / 50 Hz	200		Y	2.30
TFD	460 V / 3~ / 60 Hz	460		Y	1.04
TF5	200-230 V / 3~ / 60 Hz	230		Y	2.09
TW7	380 V / 3~ / 60 Hz	380		Y	1.26
TF7	380 V / 3~ / 60 Hz	380		Y	1.26
TW5	200-230 V / 3~ / 60 Hz	230		Y	2.30

ZR160, 190 KCE  
ZP154, 182 KCE  
ZH 64, 75 KCE

