

Model: ZR48K3E-PFJ

Data

Type: Scroll compressor
Producer: Copeland
Series: ZR

Technical data

Nominal motor power [HP]:	4
Displacement [m ³ /h]:	11,5
Sound pressure level :	57
Gross/Net weight [kg]:	33/31
Oil charge [dm ³]:	1,4

Electrical data

Power supply [V/~/Hz]:	220-240/1/50Hz
Locked rotor current [A]:	114
Max. operating current [A]:	23,5
Winding resistance [Ω]:	1,70/0,60

Connections

	<u>milimeters</u>	<u>inches</u>
Suction Rotolock valve connection:		-
Discharge Rotolock valve connection:		-
Suction connection with supplied sleeve:		7/8"
Discharge connection with supplied sleeve:		1/2"

Model: ZR48K3E-PFJ

Capacity

R22

Cooling capacity [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	4.84	6.05	7.47	9.10	10.97	13.08	15.45
35	4.55	5.74	7.11	8.69	10.49	12.53	14.81
40	4.25	5.40	6.73	8.25	9.99	11.96	14.17
45	-	5.03	6.32	7.79	9.47	11.37	13.50
50	-	-	5.87	7.30	8.92	10.75	12.80
55	-	-	-	6.76	8.32	10.09	12.06
60	-	-	-	-	7.68	9.38	11.28
65	-	-	-	-	6.97	8.61	10.44

Power input [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	2.21	2.20	2.19	2.18	2.16	2.14	2.11
35	2.47	2.45	2.44	2.42	2.40	2.38	2.35
40	2.76	2.74	2.72	2.70	2.68	2.65	2.62
45	-	3.07	3.04	3.01	2.99	2.96	2.92
50	-	-	3.42	3.39	3.35	3.31	3.27
55	-	-	-	3.82	3.77	3.72	3.67
60	-	-	-	-	4.26	4.20	4.14
65	-	-	-	-	4.84	4.76	4.69

Model: ZR48K3E-PFJ

Capacity

Current [A]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	11.51	11.48	11.44	11.40	11.34	11.26	11.15
35	12.53	12.48	12.43	12.38	12.31	12.22	12.11
40	13.75	13.67	13.60	13.52	13.43	13.32	13.19
45	-	15.08	14.98	14.87	14.75	14.62	14.47
50	-	-	16.62	16.47	16.32	16.15	15.96
55	-	-	-	18.37	18.17	17.96	17.73
60	-	-	-	-	20.36	20.10	19.82
65	-	-	-	-	22.92	22.60	22.26

Mass flow [kg/s]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	103.82	128.28	156.30	188.12	223.98	264.11	308.75
35	101.77	126.41	154.56	186.44	222.30	262.38	306.90
40	98.96	123.90	152.28	184.35	220.33	260.47	304.99
45	-	120.46	149.20	181.56	217.79	258.10	302.74
50	-	-	145.03	177.81	214.38	254.99	299.87
55	-	-	-	172.80	209.85	250.87	296.11
60	-	-	-	-	203.90	245.46	291.16
65	-	-	-	-	196.27	238.47	284.77

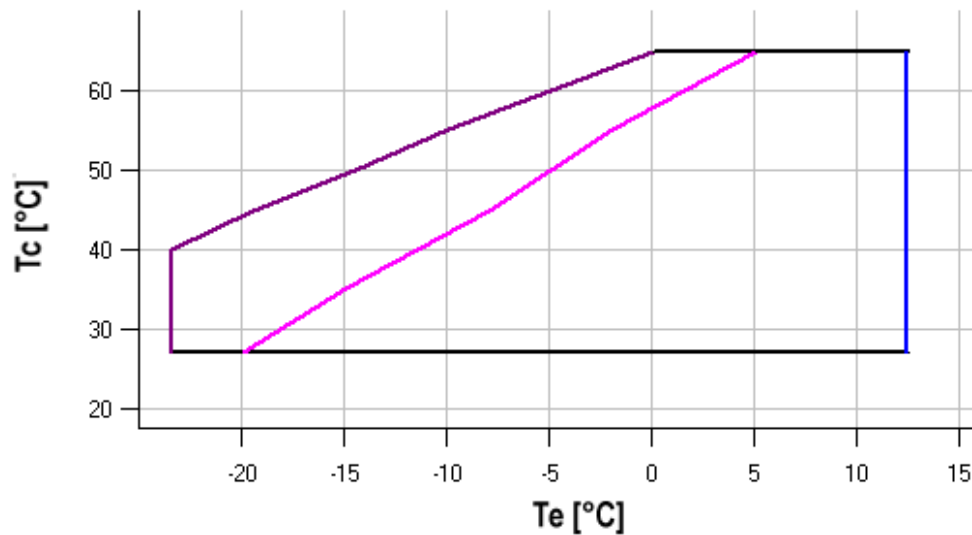
Model: ZR48K3E-PFJ

Capacity

C.O.P. [W/W]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	2.19	2.75	3.41	4.18	5.07	6.11	7.31
35	1.85	2.34	2.92	3.59	4.36	5.26	6.29
40	1.54	1.97	2.48	3.06	3.74	4.51	5.41
45	-	1.64	2.08	2.59	3.17	3.85	4.62
50	-	-	1.72	2.16	2.66	3.25	3.92
55	-	-	-	1.77	2.21	2.71	3.28
60	-	-	-	-	1.80	2.23	2.72
65	-	-	-	-	1.44	1.81	2.23

Application range



- Maximum evaporating temperature
- 25°C suction gas temperature
- 10K gas overheat

Operating conditions: 10K suction superheat, 0K subcooling

t_c - Condensing temperature [°C]

t_e - Evaporating temperature [°C]

Model: ZR48K3E-PFJ

Capacity

R134a

Cooling capacity [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	2.74	3.85	4.83	5.84	7.05	8.63	10.76	-
35	2.56	3.74	4.75	5.77	6.98	8.54	10.62	-
40	2.28	3.49	4.53	5.55	6.73	8.24	10.26	12.95
45	-	3.16	4.20	5.20	6.35	7.80	9.74	12.33
50	-	2.79	3.82	4.79	5.87	7.25	9.09	11.56
55	-	-	3.43	4.34	5.36	6.64	8.37	10.70
60	-	-	-	3.92	4.85	6.02	7.62	9.80
65	-	-	-	3.57	4.39	5.43	6.88	8.89
70	-	-	-	-	4.02	4.92	6.21	8.03
75	-	-	-	-	3.80	4.54	5.64	7.27

Power input [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	1.66	1.69	1.70	1.71	1.72	1.73	1.75	-
35	1.83	1.85	1.86	1.87	1.88	1.89	1.90	-
40	2.01	2.03	2.04	2.04	2.05	2.06	2.07	2.09
45	-	2.22	2.23	2.23	2.24	2.25	2.26	2.28
50	-	2.44	2.44	2.45	2.45	2.46	2.47	2.49
55	-	-	2.69	2.69	2.69	2.70	2.71	2.73
60	-	-	-	2.96	2.96	2.97	2.98	3.00
65	-	-	-	3.27	3.28	3.28	3.29	3.31
70	-	-	-	-	3.63	3.64	3.65	3.67
75	-	-	-	-	4.03	4.04	4.05	4.08

Model: ZR48K3E-PFJ

Capacity

Current [A]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	12.86	12.74	12.73	12.78	12.85	12.89	12.87	-
35	13.21	13.06	13.03	13.07	13.13	13.18	13.18	-
40	13.63	13.45	13.39	13.41	13.47	13.53	13.54	13.46
45	-	13.92	13.84	13.84	13.90	13.96	13.98	13.92
50	-	14.50	14.39	14.38	14.42	14.48	14.52	14.49
55	-	-	15.07	15.04	15.07	15.14	15.18	15.17
60	-	-	-	15.85	15.87	15.94	15.99	15.99
65	-	-	-	16.84	16.85	16.90	16.96	16.99
70	-	-	-	-	18.01	18.07	18.13	18.17
75	-	-	-	-	19.40	19.44	19.51	19.56

Mass flow [kg/s]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	63.50	89.36	110.49	130.71	153.87	183.80	224.33	-
35	63.21	90.72	113.42	135.14	159.74	191.03	232.86	-
40	60.50	89.17	112.97	135.73	161.28	193.47	236.12	293.08
45	-	85.83	110.26	133.57	159.61	192.22	235.22	292.46
50	-	81.80	106.38	129.78	155.83	188.39	231.27	288.32
55	-	-	102.44	125.45	151.05	183.08	225.37	281.76
60	-	-	-	121.71	146.38	177.41	218.63	273.88
65	-	-	-	119.65	142.92	172.47	212.15	265.79
70	-	-	-	-	141.77	169.38	207.05	258.61
75	-	-	-	-	144.05	169.25	204.43	253.43

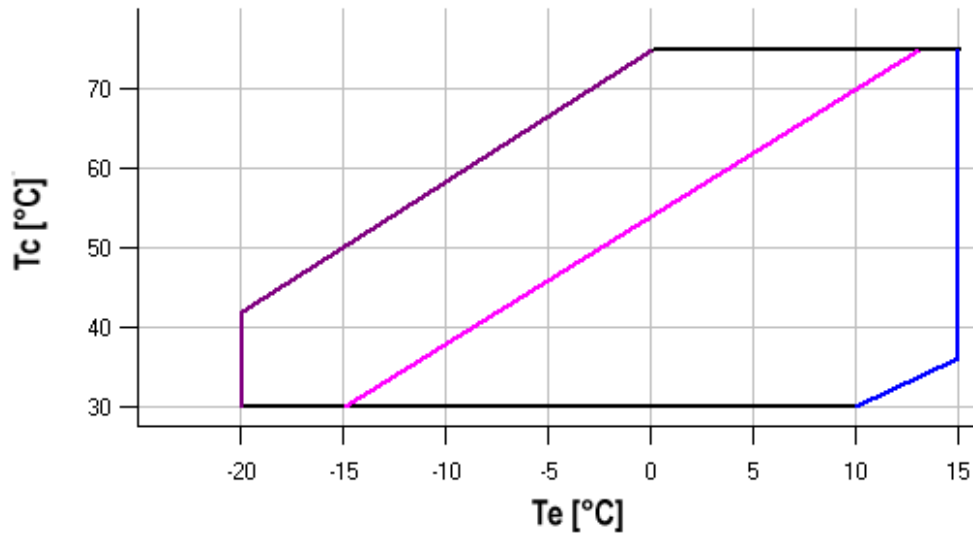
Model: ZR48K3E-PFJ

Capacity

C.O.P. [W/W]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	1.65	2.29	2.84	3.41	4.09	4.98	6.16	-
35	1.40	2.02	2.55	3.08	3.71	4.52	5.58	-
40	1.13	1.72	2.22	2.71	3.28	4.01	4.96	6.20
45	-	1.42	1.88	2.33	2.83	3.47	4.31	5.41
50	-	1.15	1.56	1.95	2.40	2.95	3.68	4.65
55	-	-	1.28	1.62	1.99	2.46	3.09	3.92
60	-	-	-	1.32	1.64	2.03	2.55	3.26
65	-	-	-	1.09	1.34	1.66	2.09	2.68
70	-	-	-	-	1.11	1.35	1.70	2.19
75	-	-	-	-	0.94	1.12	1.39	1.78

Application range



- Maximum evaporating temperature
- 25°C suction gas temperature
- 10K gas overheat

Operating conditions: 10K suction superheat, 0K subcooling

t_c - Condensing temperature [°C]

t_e - Evaporating temperature [°C]

Model: ZR48K3E-PFJ

Capacity

R407C

Cooling capacity [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	4.46	5.62	7.01	8.65	10.56	12.76	15.26	18.09
35	4.18	5.30	6.64	8.22	10.07	12.18	14.60	-
40	3.87	4.95	6.24	7.76	9.53	11.56	13.88	-
45	-	4.56	5.80	7.26	8.95	10.90	13.12	-
50	-	-	5.33	6.72	8.33	10.19	12.31	-
55	-	-	-	6.13	7.67	9.43	11.45	-
60	-	-	-	-	6.96	8.63	10.54	-
65	-	-	-	-	-	7.78	9.58	-

Power input [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	2.18	2.17	2.15	2.14	2.12	2.10	2.07	2.04
35	2.44	2.43	2.41	2.40	2.38	2.35	2.32	-
40	2.74	2.72	2.71	2.69	2.67	2.64	2.60	-
45	-	3.06	3.04	3.02	3.00	2.96	2.92	-
50	-	-	3.42	3.40	3.38	3.34	3.30	-
55	-	-	-	3.85	3.82	3.78	3.74	-
60	-	-	-	-	4.34	4.30	4.25	-
65	-	-	-	-	-	4.90	4.84	-

Model: ZR48K3E-PFJ

Capacity

Current [A]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	11.35	11.29	11.24	11.18	11.11	11.02	10.89	10.73
35	12.49	12.43	12.37	12.30	12.22	12.11	11.96	-
40	13.75	13.69	13.62	13.55	13.45	13.33	13.16	-
45	-	15.11	15.04	14.96	14.86	14.72	14.54	-
50	-	-	16.68	16.60	16.49	16.34	16.14	-
55	-	-	-	18.50	18.38	18.22	18.01	-
60	-	-	-	-	20.59	20.42	20.20	-
65	-	-	-	-	-	22.99	22.76	-

Mass flow [kg/s]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	93.69	116.30	142.83	173.55	208.70	248.54	293.34	343.33
35	92.29	115.09	141.80	172.68	207.99	247.98	292.91	-
40	90.00	113.03	139.96	171.06	206.57	246.75	291.87	-
45	-	110.01	137.21	168.56	204.32	244.75	290.09	-
50	-	-	133.42	165.07	201.13	241.84	287.47	-
55	-	-	-	160.49	196.88	237.93	283.87	-
60	-	-	-	-	191.46	232.88	279.20	-
65	-	-	-	-	-	226.59	273.32	-

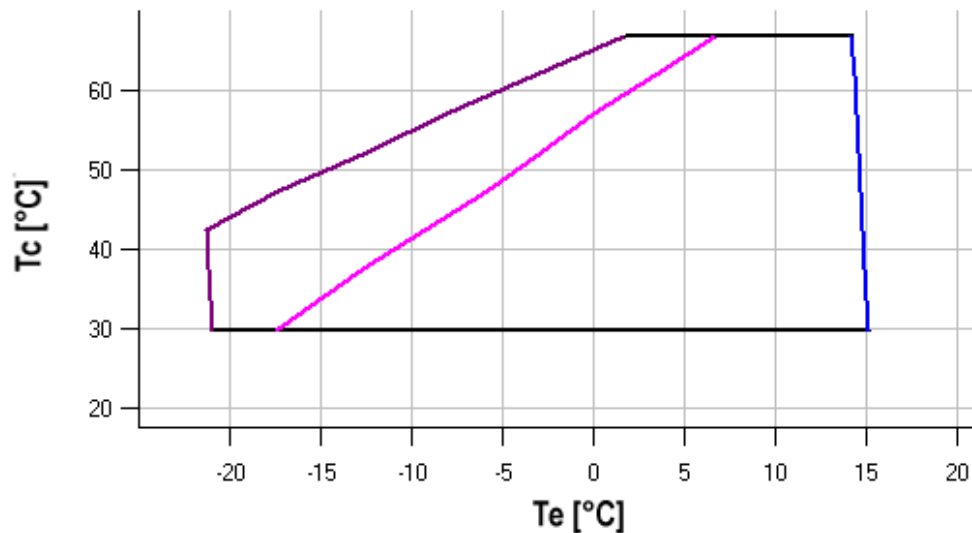
Model: ZR48K3E-PFJ

Capacity

C.O.P. [W/W]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	2.05	2.59	3.26	4.04	4.97	6.07	7.36	8.89
35	1.71	2.18	2.75	3.43	4.23	5.17	6.29	-
40	1.41	1.82	2.31	2.89	3.57	4.38	5.34	-
45	-	1.49	1.91	2.40	2.99	3.68	4.49	-
50	-	-	1.56	1.97	2.47	3.05	3.73	-
55	-	-	-	1.59	2.01	2.49	3.07	-
60	-	-	-	-	1.60	2.01	2.48	-
65	-	-	-	-	-	1.59	1.98	-

Application range

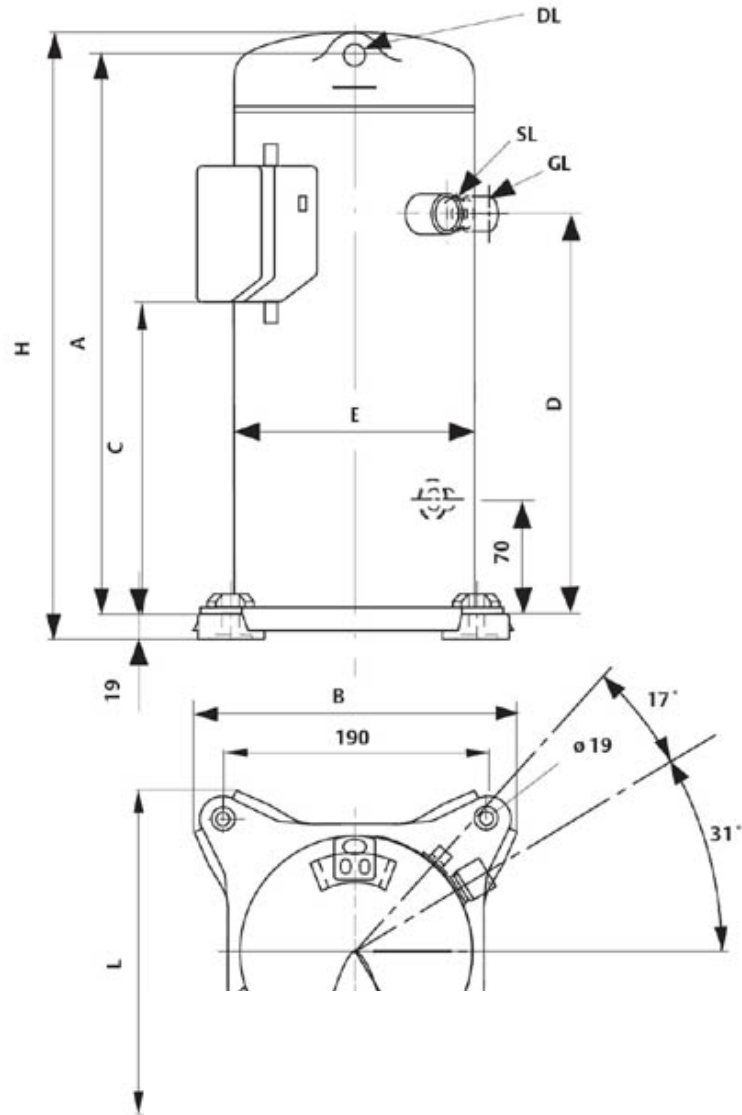


- Maximum evaporating temperature
- 25°C suction gas temperature
- 10K gas overheat

Operating conditions: 10K suction superheat, 0K subcooling
 t_c - Condensing temperature [°C]
 t_e - Evaporating temperature [°C]

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Dimensions



A	392 mm
B	240 mm
C	252 mm
D	294 mm
E	165 mm
H	436 mm
L	231 mm

Model: ZR48K3E-PFJ

Image

