

R.E.S.L

Richmonds Earl Shilton Limited

Specialist Distributors of Compressors and Refrigeration Spares

Model: ZR22K3E-PFJ

Data

Type: Scroll compressors
Producer: Copeland
Series: ZR

Technical data

Nominal motor power [HP]:	2
Displacement [m ³ /h]:	5,3
Sound pressure level :	54
Gross/Net weight [kg]:	26/22
Oil charge [dm ³]:	1

Electrical data

Power supply [V/~ /Hz]:	220-240/1/50Hz
Locked rotor current [A]:	47
Max. operating current [A]:	11,4
Winding resistance [Ω]:	2,85/1,62

Connections

	<u>milimeters</u>	<u>inches</u>
Suction Rotolock valve connection:		-
Discharge Rotolock valve connection:		-
Suction connection with supplied sleeve:		3/4"
Discharge connection with supplied sleeve:		1/2"

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Capacity

R22

Cooling capacity [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	2.06	2.62	3.28	4.04	4.90	5.88	6.96
35	1.93	2.47	3.11	3.84	4.68	5.63	6.68
40	1.79	2.31	2.93	3.64	4.45	5.37	6.39
45	-	2.15	2.74	3.43	4.22	5.10	6.08
50	-	-	2.54	3.21	3.96	4.81	5.77
55	-	-	-	2.97	3.69	4.51	5.43
60	-	-	-	-	3.40	4.19	5.08
65	-	-	-	-	3.09	3.85	4.70

Power input [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	1.05	1.04	1.04	1.03	1.02	1.01	0.99
35	1.17	1.16	1.16	1.15	1.14	1.13	1.11
40	1.32	1.30	1.29	1.28	1.27	1.26	1.25
45	-	1.47	1.45	1.43	1.42	1.41	1.39
50	-	-	1.63	1.61	1.59	1.57	1.55
55	-	-	-	1.81	1.79	1.76	1.74
60	-	-	-	-	2.02	1.99	1.95
65	-	-	-	-	2.29	2.24	2.20

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Capacity

Current [A]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	5.04	5.04	5.04	5.02	4.98	4.91	4.79
35	5.58	5.56	5.54	5.52	5.49	5.43	5.34
40	6.21	6.15	6.11	6.08	6.04	5.99	5.91
45	-	6.85	6.77	6.72	6.67	6.61	6.53
50	-	-	7.56	7.47	7.39	7.31	7.23
55	-	-	-	8.35	8.24	8.13	8.03
60	-	-	-	-	9.24	9.10	8.96
65	-	-	-	-	10.43	10.23	10.06

Mass flow [kg/s]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	44.19	55.52	68.59	83.45	100.14	118.69	139.15
35	43.06	54.45	67.57	82.49	99.23	117.84	138.36
40	41.68	53.15	66.36	81.36	98.19	116.89	137.50
45	-	51.50	64.83	79.96	96.91	115.73	136.46
50	-	-	62.88	78.15	95.26	114.23	135.12
55	-	-	-	75.84	93.13	112.29	133.36
60	-	-	-	-	90.40	109.78	131.07
65	-	-	-	-	86.96	106.59	128.13

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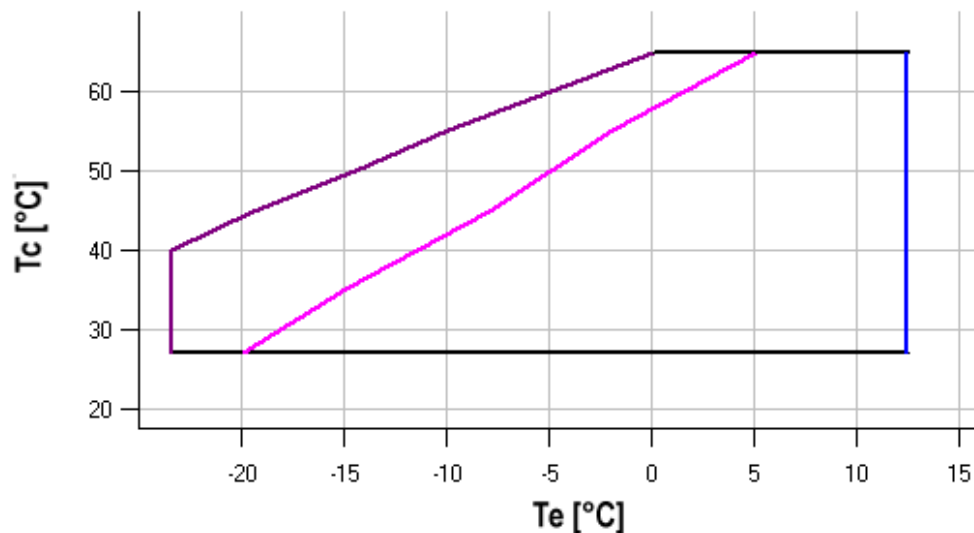
Model: ZR22K3E-PFJ

Capacity

C.O.P. [W/W]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	1.96	2.51	3.15	3.90	4.78	5.82	7.07
35	1.64	2.12	2.68	3.34	4.09	4.97	6.00
40	1.36	1.78	2.27	2.84	3.50	4.25	5.13
45	-	1.47	1.90	2.39	2.97	3.62	4.37
50	-	-	1.56	1.99	2.49	3.06	3.71
55	-	-	-	1.64	2.07	2.56	3.12
60	-	-	-	-	1.69	2.11	2.60
65	-	-	-	-	1.35	1.72	2.13

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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Model: ZR22K3E-PFJ

Capacity

R134a

Cooling capacity [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	1.17	1.56	2.02	2.56	3.19	3.92	4.76	-
35	1.09	1.47	1.91	2.43	3.03	3.74	4.55	-
40	1.01	1.37	1.79	2.29	2.87	3.54	4.32	5.22
45	-	1.27	1.67	2.14	2.69	3.34	4.08	4.95
50	-	1.15	1.53	1.98	2.51	3.12	3.83	4.66
55	-	-	1.39	1.81	2.31	2.89	3.57	4.35
60	-	-	-	1.64	2.10	2.65	3.29	4.03
65	-	-	-	1.46	1.89	2.40	3.00	3.70
70	-	-	-	-	1.67	2.14	2.70	3.36
75	-	-	-	-	1.44	1.87	2.39	3.01

Power input [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	0.72	0.72	0.72	0.72	0.71	0.71	0.69	-
35	0.81	0.80	0.80	0.80	0.79	0.79	0.78	-
40	0.91	0.90	0.89	0.89	0.88	0.87	0.87	0.85
45	-	1.01	1.00	0.99	0.98	0.97	0.97	0.96
50	-	1.14	1.12	1.11	1.10	1.09	1.08	1.07
55	-	-	1.26	1.24	1.23	1.21	1.20	1.19
60	-	-	-	1.39	1.37	1.36	1.34	1.33
65	-	-	-	1.56	1.54	1.52	1.50	1.49
70	-	-	-	-	1.73	1.70	1.68	1.67
75	-	-	-	-	1.94	1.91	1.88	1.86

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Capacity

Current [A]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	3.42	3.45	3.46	3.46	3.43	3.40	3.36	-
35	3.80	3.81	3.81	3.79	3.76	3.73	3.69	-
40	4.25	4.24	4.21	4.18	4.15	4.11	4.07	4.04
45	-	4.73	4.69	4.64	4.59	4.55	4.51	4.48
50	-	5.30	5.23	5.17	5.11	5.05	5.01	4.98
55	-	-	5.86	5.77	5.70	5.63	5.58	5.54
60	-	-	-	6.46	6.37	6.29	6.22	6.18
65	-	-	-	7.25	7.13	7.03	6.95	6.90
70	-	-	-	-	7.99	7.87	7.77	7.71
75	-	-	-	-	8.95	8.80	8.69	8.61

Mass flow [kg/s]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	27.48	36.10	45.86	56.93	69.50	83.76	99.90	-
35	27.13	35.74	45.50	56.59	69.20	83.52	99.72	-
40	26.57	35.16	44.92	56.03	68.67	83.04	99.30	117.65
45	-	34.34	44.09	55.21	67.88	82.29	98.61	117.04
50	-	33.24	42.98	54.10	66.79	81.23	97.61	116.10
55	-	-	41.54	52.66	65.36	79.83	96.25	114.81
60	-	-	-	50.84	63.55	78.05	94.51	113.12
65	-	-	-	48.62	61.33	75.84	92.34	111.00
70	-	-	-	-	58.66	73.18	89.70	108.40
75	-	-	-	-	55.49	70.02	86.56	105.30

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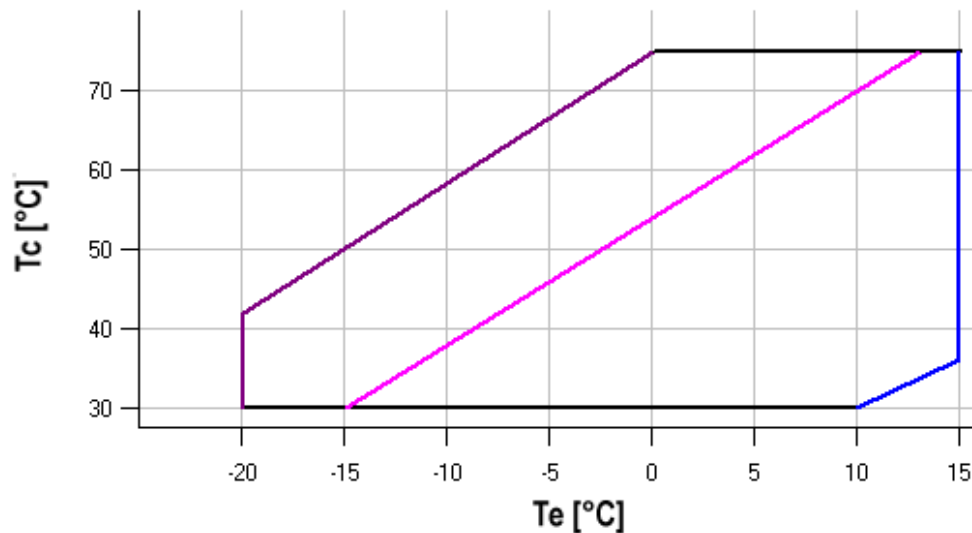
Model: ZR22K3E-PFJ

Capacity

C.O.P. [W/W]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	1.63	2.17	2.81	3.57	4.47	5.56	6.86	-
35	1.36	1.83	2.39	3.05	3.83	4.76	5.86	-
40	1.11	1.53	2.01	2.58	3.26	4.05	5.00	6.11
45	-	1.25	1.67	2.16	2.74	3.43	4.23	5.17
50	-	1.02	1.37	1.79	2.29	2.87	3.56	4.36
55	-	-	1.11	1.46	1.88	2.38	2.97	3.65
60	-	-	-	1.18	1.53	1.95	2.45	3.03
65	-	-	-	0.93	1.23	1.58	2.00	2.49
70	-	-	-	-	0.97	1.26	1.61	2.02
75	-	-	-	-	0.74	0.98	1.27	1.62

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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Capacity

R407C

Cooling capacity [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	1.92	2.47	3.13	3.89	4.78	5.81	7.01
35	1.78	2.32	2.95	3.68	4.54	5.53	6.68
40	1.65	2.16	2.76	3.46	4.27	5.23	6.32
45	-	1.99	2.56	3.22	4.00	4.90	5.95
50	-	-	2.35	2.97	3.70	4.56	5.55
55	-	-	-	2.71	3.39	4.20	5.13
60	-	-	-	-	3.07	3.82	4.69
65	-	-	-	-	2.72	3.41	4.23

Power input [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	1.02	1.01	1.00	0.99	0.98	0.96	0.93
35	1.14	1.13	1.13	1.12	1.11	1.09	1.06
40	1.27	1.27	1.26	1.26	1.25	1.23	1.20
45	-	1.43	1.42	1.42	1.41	1.38	1.35
50	-	-	1.61	1.60	1.59	1.56	1.53
55	-	-	-	1.82	1.80	1.77	1.73
60	-	-	-	-	2.06	2.03	1.98
65	-	-	-	-	2.37	2.33	2.27

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Capacity

Current [A]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	4.93	4.89	4.86	4.82	4.77	4.68	4.54
35	5.44	5.41	5.40	5.37	5.32	5.24	5.11
40	6.02	6.00	5.99	5.97	5.92	5.84	5.70
45	-	6.68	6.67	6.65	6.60	6.51	6.36
50	-	-	7.48	7.45	7.39	7.29	7.13
55	-	-	-	8.42	8.35	8.23	8.05
60	-	-	-	-	9.50	9.36	9.15
65	-	-	-	-	10.90	10.72	10.49

Mass flow [kg/s]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	40.25	51.21	63.74	78.09	94.52	113.29	134.67
35	39.35	50.31	62.85	77.23	93.71	112.54	133.99
40	38.34	49.26	61.78	76.15	92.63	111.48	132.97
45	-	48.00	60.45	74.77	91.22	110.06	131.54
50	-	-	58.82	73.05	89.43	108.21	129.65
55	-	-	-	70.91	87.18	105.87	127.23
60	-	-	-	-	84.42	102.97	124.22
65	-	-	-	-	81.09	99.47	120.56

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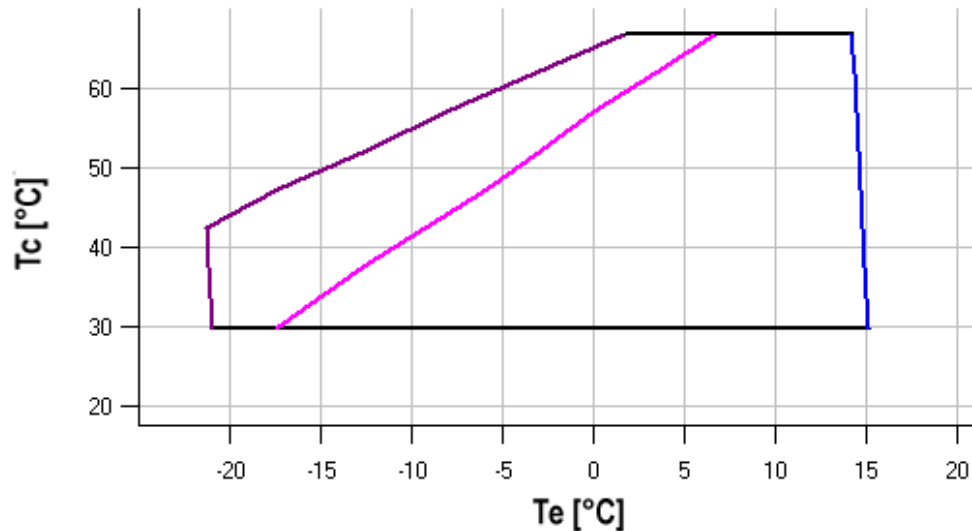
Model: ZR22K3E-PFJ




Capacity

C.O.P. [W/W]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	1.89	2.46	3.13	3.93	4.89	6.07	7.57
35	1.57	2.05	2.62	3.28	4.09	5.07	6.30
40	1.29	1.70	2.18	2.74	3.42	4.25	5.27
45	-	1.39	1.80	2.27	2.84	3.54	4.40
50	-	-	1.46	1.86	2.33	2.92	3.63
55	-	-	-	1.49	1.88	2.37	2.96
60	-	-	-	-	1.49	1.88	2.37
65	-	-	-	-	1.15	1.47	1.86

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]

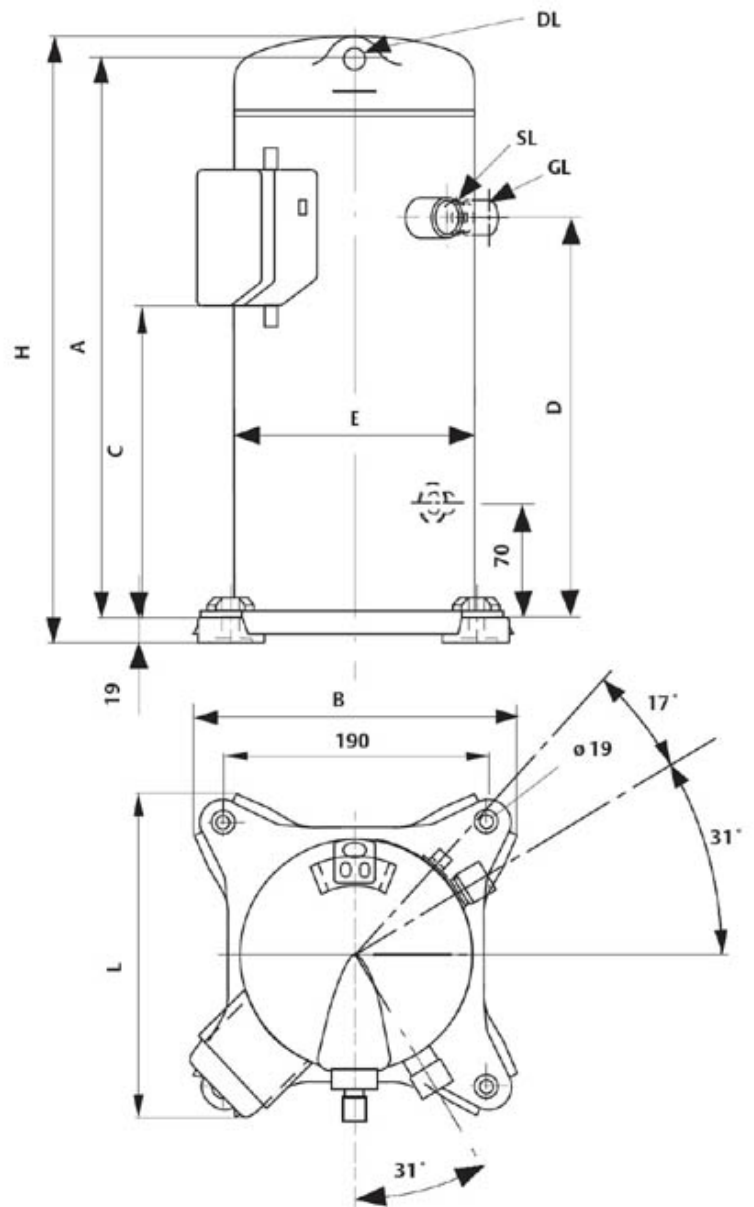
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Dimensions Image



A	338 mm
B	240 mm
C	202 mm
D	245 mm
E	165 mm
H	383 mm
L	231 mm