



Type: Hermetic scroll compressors

Producer: Copeland

Series: ZB

Model: ZB21KCE-PFJ

Technical data

Displacement [m ³ /h]:	8,6
Sound power [dBA]:	69
Sound pressure level [dB]:	58
Net Weight [kg]:	29
Oil charge [dm ³]:	1,2
Maximum high pressure [bar]:	28,8
Maximum standstill pressure [bar]:	21
Minimal lowside temperature [°C]:	-35
Maximum lowside temperature [°C]:	50
PED category:	1

Electrical data

Power supply [V/~/Hz]:	220-240V/1/50Hz
Locked rotor current [A]:	82
Max. operating current [A]:	16,4
Winding resistance [Ω]:	0,9
Start winding resistance [Ω]:	1,8

Connections

	<u>inches</u>
Suction Rotolock valve connection:	3/4"
Discharge Rotolock valve connection:	1/2"

**ELEKTRONIKA S.A.**
TECHNIKA CHŁODNICZA I KLIMATYZACJA**Model: ZB21KCE-PFJ****Capacity**

R134a

Cooling capacity [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	2.03	2.68	3.39	4.18	5.10	6.17	7.43	-
35	1.88	2.53	3.22	3.99	4.87	5.89	7.09	-
40	1.72	2.37	3.04	3.79	4.63	5.60	6.74	8.07
45	-	2.20	2.86	3.58	4.38	5.31	6.38	7.64
50	-	2.03	2.67	3.36	4.12	5.00	6.01	7.19
55	-	-	2.48	3.14	3.86	4.68	5.63	6.74
60	-	-	-	2.91	3.58	4.35	5.23	6.27
65	-	-	-	2.67	3.30	4.01	4.83	5.79
70	-	-	-	-	3.01	3.67	4.42	5.30
75	-	-	-	-	2.72	3.32	4.00	4.80

Power input [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	1.06	1.09	1.10	1.09	1.08	1.06	1.04	-
35	1.16	1.19	1.20	1.20	1.19	1.18	1.17	-
40	1.29	1.32	1.33	1.33	1.32	1.31	1.30	1.30
45	-	1.47	1.48	1.48	1.47	1.46	1.45	1.45
50	-	1.64	1.65	1.64	1.63	1.62	1.62	1.62
55	-	-	1.84	1.83	1.82	1.81	1.80	1.80
60	-	-	-	2.06	2.04	2.02	2.01	2.01
65	-	-	-	2.31	2.28	2.26	2.24	2.24
70	-	-	-	-	2.56	2.53	2.51	2.50
75	-	-	-	-	2.87	2.83	2.80	2.78



ELEKTRONIKA S.A.
TECHNIKA CHŁODNICZA I KLIMATYZACJA

Model: ZB21KCE-PFJ

Capacity

Current [A]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	5.74	5.83	5.87	5.87	5.84	5.79	5.74	-
35	6.18	6.26	6.30	6.30	6.28	6.25	6.21	-
40	6.71	6.79	6.82	6.82	6.80	6.77	6.74	6.73
45	-	7.42	7.44	7.43	7.41	7.38	7.36	7.35
50	-	8.17	8.17	8.15	8.12	8.08	8.05	8.05
55	-	-	9.03	8.99	8.94	8.89	8.85	8.84
60	-	-	-	9.96	9.88	9.81	9.77	9.74
65	-	-	-	11.07	10.97	10.87	10.80	10.77
70	-	-	-	-	12.20	12.08	11.98	11.92
75	-	-	-	-	13.60	13.44	13.31	13.22

Mass flow [kg/h]

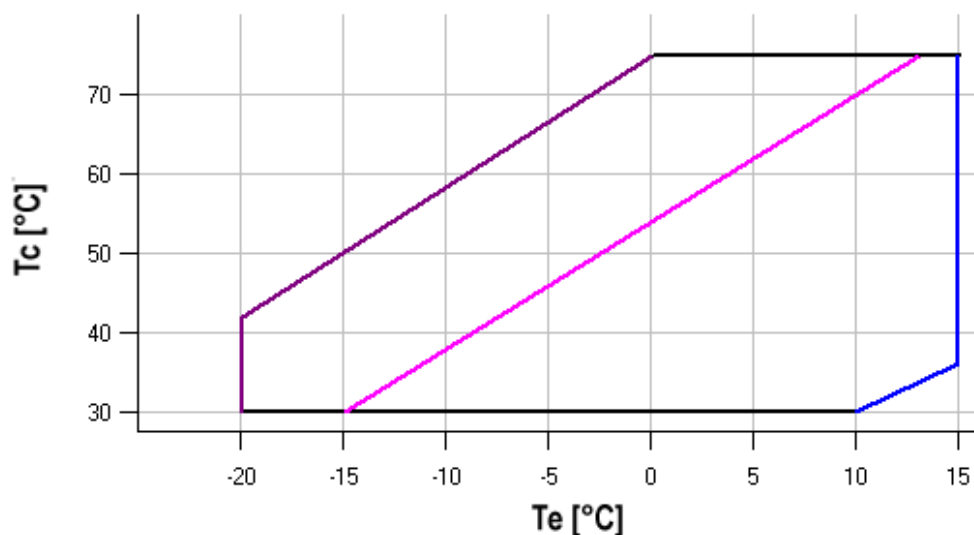
$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	40.58	54.39	69.21	85.92	105.36	128.39	155.87	-
35	39.98	53.91	68.83	85.59	105.06	128.07	155.50	-
40	39.19	53.25	68.26	85.08	104.55	127.55	154.91	187.51
45	-	52.41	67.50	84.36	103.85	126.81	154.11	186.61
50	-	51.36	66.54	83.44	102.93	125.86	153.09	185.48
55	-	-	65.37	82.31	101.80	124.70	151.85	184.13
60	-	-	-	80.98	100.46	123.31	150.39	182.54
65	-	-	-	79.42	98.89	121.70	148.69	180.72
70	-	-	-	-	97.11	119.86	146.76	178.66
75	-	-	-	-	95.09	117.78	144.59	176.36



C.O.P. [W/W]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
30	1.92	2.47	3.09	3.84	4.73	5.82	7.12	-
35	1.62	2.12	2.67	3.32	4.08	5.00	6.07	-
40	1.34	1.79	2.29	2.85	3.50	4.28	5.17	6.20
45	-	1.50	1.94	2.43	2.99	3.64	4.40	5.26
50	-	1.24	1.62	2.05	2.53	3.08	3.72	4.45
55	-	-	1.35	1.71	2.12	2.59	3.12	3.74
60	-	-	-	1.41	1.76	2.15	2.61	3.12
65	-	-	-	1.16	1.45	1.78	2.15	2.59
70	-	-	-	-	1.18	1.45	1.76	2.12
75	-	-	-	-	0.95	1.17	1.43	1.72

Application range



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

Operating conditions: suction gas temperature 20°C, 0K subcooling

t_c - Condensing temperature [°C]

t_e - Evaporating temperature [°C]

R404A/R507

Cooling capacity [kW]

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5	10
10	3.48	4.32	5.33	6.53	-	-	-	-	-
15	3.34	4.15	5.12	6.26	7.60	-	-	-	-
20	3.18	3.96	4.89	5.98	7.24	8.71	-	-	-
25	3.01	3.76	4.64	5.67	6.87	8.26	9.84	-	-
30	2.83	3.54	4.38	5.35	6.48	7.78	9.27	10.97	12.89
35	2.64	3.31	4.09	5.00	6.06	7.27	8.67	10.26	12.06
40	2.43	3.06	3.79	4.64	5.62	6.75	8.04	9.52	11.21
45	2.21	2.80	3.48	4.26	5.16	6.20	7.39	8.76	10.31
50	-	2.52	3.14	3.85	4.67	5.62	6.71	7.96	9.39
55	-	-	2.79	3.43	4.17	5.02	6.00	7.14	8.44
60	-	-	-	2.98	3.64	4.39	5.27	6.28	7.45

Power input [kW]

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5	10
10	1.14	1.15	1.15	1.15	-	-	-	-	-
15	1.28	1.29	1.29	1.29	1.29	-	-	-	-
20	1.44	1.44	1.45	1.45	1.45	1.45	-	-	-
25	1.62	1.62	1.62	1.63	1.62	1.62	1.62	-	-
30	1.81	1.82	1.82	1.83	1.82	1.82	1.81	1.80	1.79
35	2.04	2.05	2.05	2.05	2.05	2.04	2.03	2.02	2.00
40	2.29	2.30	2.31	2.31	2.30	2.29	2.28	2.26	2.24
45	2.58	2.59	2.60	2.59	2.59	2.58	2.56	2.54	2.51
50	-	2.92	2.92	2.92	2.91	2.90	2.88	2.85	2.82
55	-	-	3.29	3.28	3.28	3.26	3.24	3.21	3.17
60	-	-	-	3.69	3.68	3.66	3.64	3.61	3.57

Current [A]

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5	10
10	8.61	8.61	8.60	8.60	-	-	-	-	-
15	8.92	8.93	8.93	8.93	8.93	-	-	-	-
20	9.28	9.30	9.31	9.32	9.32	9.32	-	-	-
25	9.72	9.75	9.77	9.77	9.77	9.77	9.77	-	-
30	10.25	10.29	10.31	10.32	10.32	10.31	10.30	10.28	10.26
35	10.88	10.93	10.96	10.97	10.97	10.95	10.93	10.90	10.86
40	11.65	11.71	11.74	11.75	11.75	11.72	11.69	11.64	11.59
45	12.56	12.62	12.66	12.67	12.66	12.63	12.59	12.53	12.45
50	-	13.70	13.75	13.76	13.74	13.70	13.65	13.57	13.47
55	-	-	15.01	15.02	15.00	14.95	14.88	14.79	14.67
60	-	-	-	16.48	16.45	16.40	16.31	16.20	16.06

Mass flow [kg/h]

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5	10
10	69.16	87.98	109.45	134.43	-	-	-	-	-
15	69.68	88.37	109.72	134.62	163.93	-	-	-	-
20	69.82	88.36	109.57	134.35	163.57	198.11	-	-	-
25	69.59	87.94	108.99	133.63	162.73	197.18	237.84	-	-
30	68.98	87.12	108.00	132.47	161.43	195.76	236.32	284.01	339.69
35	67.99	85.91	106.58	130.87	159.67	193.85	234.29	281.87	337.48
40	66.64	84.31	104.75	128.83	157.44	191.45	231.75	279.21	334.71
45	64.92	82.31	102.50	126.35	154.75	188.57	228.70	276.02	331.39
50	-	79.93	99.84	123.44	151.61	185.22	225.16	272.30	327.52
55	-	-	96.78	120.10	148.01	181.38	221.11	268.06	323.11
60	-	-	-	116.33	143.96	177.08	216.56	263.30	318.15



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TECHNIKA CHŁODNICZA I KLIMATYZACJA

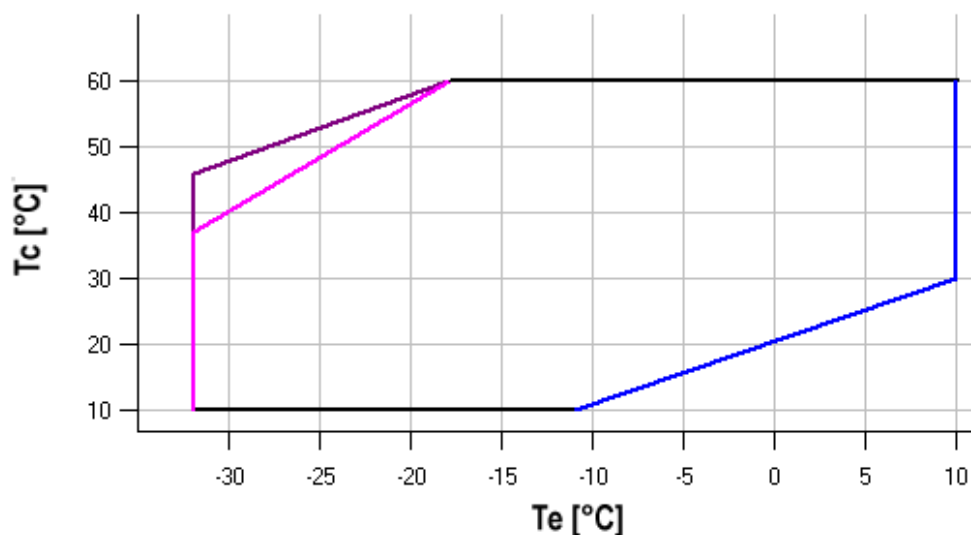
Model: ZB21KCE-PFJ

Capacity

C.O.P. [W/W]

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5	10
10	3.05	3.78	4.65	5.68	-	-	-	-	-
15	2.60	3.23	3.97	4.85	5.88	-	-	-	-
20	2.21	2.74	3.38	4.13	5.00	6.02	-	-	-
25	1.86	2.32	2.86	3.49	4.23	5.09	6.09	-	-
30	1.56	1.95	2.40	2.93	3.55	4.28	5.12	6.09	7.21
35	1.29	1.62	2.00	2.44	2.96	3.57	4.27	5.09	6.04
40	1.06	1.33	1.64	2.01	2.44	2.94	3.53	4.21	5.00
45	0.86	1.08	1.34	1.64	1.99	2.40	2.89	3.45	4.10
50	-	0.86	1.07	1.32	1.60	1.94	2.33	2.79	3.33
55	-	-	0.85	1.04	1.27	1.54	1.85	2.22	2.66
60	-	-	-	0.81	0.99	1.20	1.45	1.74	2.09

Application range



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

Operating conditions: suction gas temperature 20°C, 0K subcooling

t_c - Condensing temperature [°C]

t_e - Evaporating temperature [°C]

R407C

Cooling capacity [kW]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10
15	2.83	3.57	4.47	5.54	6.82	8.33	-	-
20	2.67	3.40	4.28	5.33	6.58	8.04	9.75	-
25	2.50	3.22	4.09	5.11	6.32	7.73	9.38	-
30	2.32	3.04	3.88	4.87	6.03	7.39	8.98	10.82
35	2.15	2.85	3.66	4.62	5.73	7.03	8.55	10.30
40	1.97	2.65	3.44	4.35	5.41	6.65	8.09	9.76
45	-	2.45	3.20	4.06	5.06	6.23	7.60	9.18
50	-	-	2.95	3.76	4.70	5.80	7.08	8.56
55	-	-	-	3.44	4.31	5.34	6.53	7.92
60	-	-	-	-	3.91	4.85	5.95	7.23
65	-	-	-	-	-	4.34	5.34	6.52

Power input [kW]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10
15	1.04	0.99	0.94	0.91	0.87	0.82	-	-
20	1.22	1.18	1.15	1.12	1.10	1.06	1.02	-
25	1.38	1.36	1.34	1.32	1.30	1.27	1.24	-
30	1.55	1.53	1.52	1.51	1.49	1.47	1.44	1.39
35	1.73	1.72	1.71	1.70	1.69	1.67	1.64	1.60
40	1.94	1.93	1.92	1.91	1.90	1.89	1.86	1.81
45	-	2.17	2.16	2.15	2.14	2.12	2.09	2.04
50	-	-	2.45	2.44	2.42	2.40	2.37	2.31
55	-	-	-	2.78	2.76	2.73	2.69	2.63
60	-	-	-	-	3.16	3.12	3.07	3.00
65	-	-	-	-	-	3.60	3.53	3.45



ELEKTRONIKA S.A.
TECHNIKA CHŁODNICZA I KLIMATYZACJA

Model: ZB21KCE-PFJ

Capacity

Current [A]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10
15	5.29	5.07	4.90	4.75	4.61	4.44	-	-
20	6.08	5.91	5.79	5.68	5.58	5.45	5.27	-
25	6.80	6.68	6.59	6.52	6.44	6.34	6.19	-
30	7.52	7.42	7.36	7.32	7.27	7.18	7.05	6.84
35	8.28	8.21	8.17	8.14	8.10	8.03	7.90	7.69
40	9.15	9.09	9.07	9.05	9.01	8.94	8.81	8.60
45	-	10.14	10.11	10.09	10.05	9.98	9.83	9.61
50	-	-	11.37	11.34	11.29	11.19	11.03	10.79
55	-	-	-	12.85	12.77	12.66	12.47	12.19
60	-	-	-	-	14.57	14.42	14.20	13.88
65	-	-	-	-	-	16.54	16.28	15.91

Mass flow [kg/h]

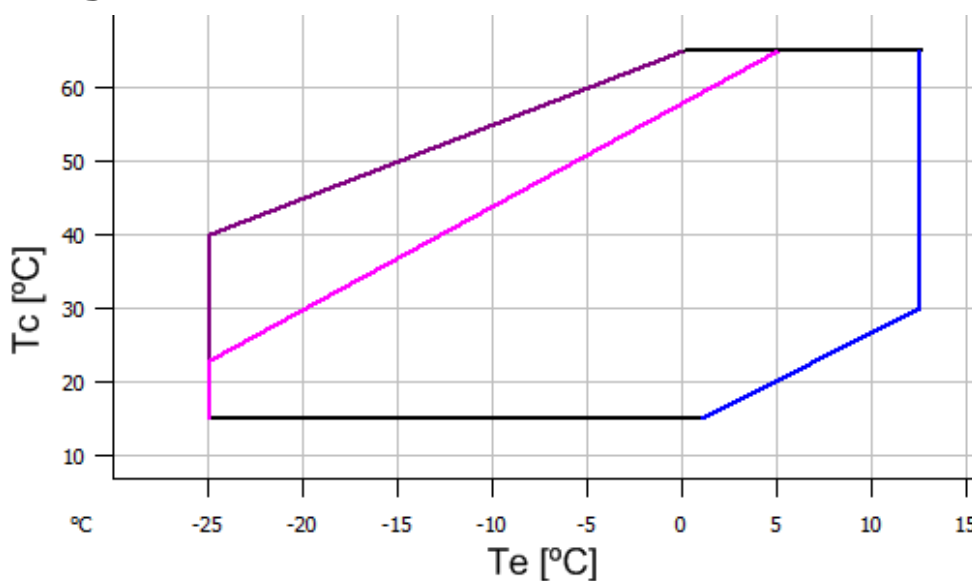
$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10
15	45.14	58.44	73.86	92.12	113.96	140.12	-	-
20	44.20	57.66	73.24	91.66	113.67	140.00	171.39	-
25	43.30	56.87	72.56	91.09	113.21	139.65	171.15	-
30	42.37	56.00	71.73	90.32	112.50	139.00	170.55	207.90
35	41.34	54.96	70.70	89.28	111.46	137.96	169.52	206.87
40	40.13	53.69	69.37	87.90	110.02	136.46	167.96	205.27
45	-	52.11	67.67	86.09	108.09	134.43	165.82	203.01
50	-	-	65.53	83.78	105.62	131.78	163.01	200.04
55	-	-	-	80.90	102.51	128.45	159.46	196.27
60	-	-	-	-	98.70	124.36	155.09	191.62
65	-	-	-	-	-	119.43	149.83	186.03



C.O.P. [W/W]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10
15	2.74	3.62	4.73	6.10	7.85	10.10	-	-
20	2.19	2.89	3.73	4.75	6.00	7.57	9.58	-
25	1.80	2.38	3.06	3.87	4.86	6.07	7.58	-
30	1.50	1.99	2.56	3.23	4.04	5.02	6.23	7.76
35	1.24	1.66	2.15	2.72	3.39	4.20	5.20	6.45
40	1.02	1.38	1.79	2.27	2.84	3.52	4.36	5.39
45	-	1.13	1.48	1.89	2.36	2.94	3.63	4.49
50	-	-	1.20	1.54	1.94	2.41	2.99	3.70
55	-	-	-	1.24	1.56	1.95	2.43	3.01
60	-	-	-	-	1.24	1.55	1.94	2.41
65	-	-	-	-	-	1.21	1.51	1.89

Application range



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

Operating conditions: suction gas temperature 20°C, 0K subcooling

t_c - Condensing temperature [°C]

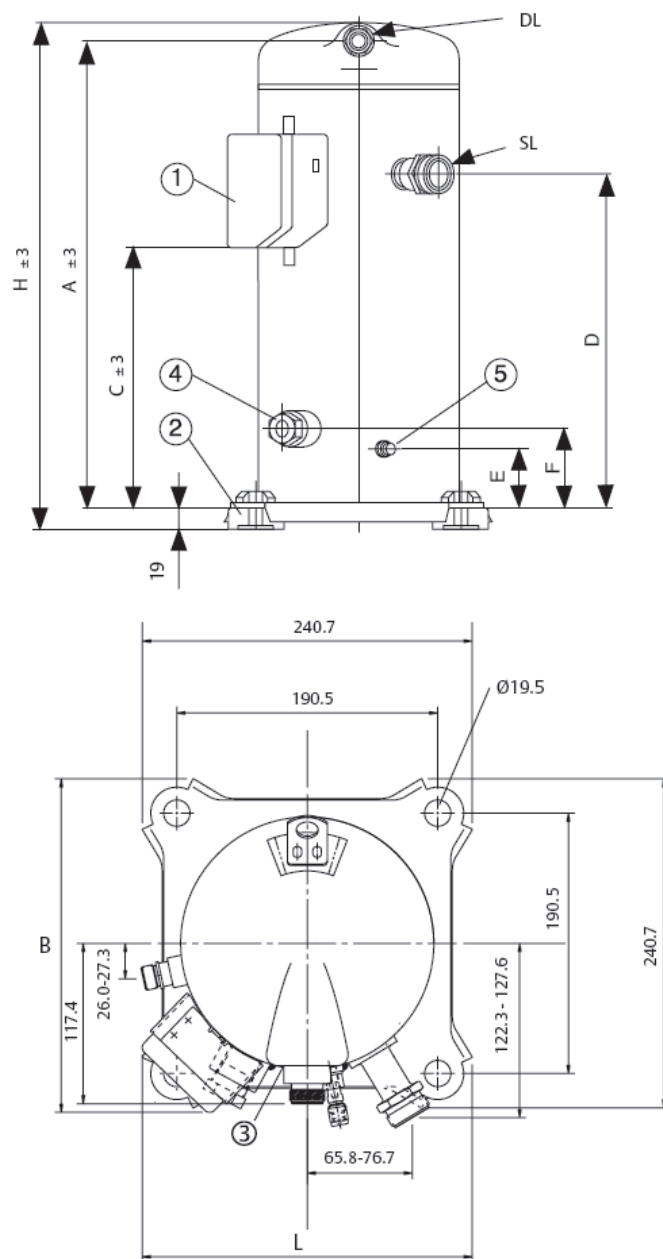
t_e - Evaporating temperature [°C]



ELEKTRONIKA S.A.
TECHNIKA CHŁODNICZA I KLIMATYZACJA

Model: ZB21KCE-PFJ

Dimensions



A	367 mm
B	244 mm
C	222 mm
D	265 mm
E	50 mm
F	75 mm
H	392 mm
L	243 mm



ELEKTRONIKA S.A.
TECHNIKA CHŁODNICZA I KLIMATYZACJA

Model: ZB21KCE-PFJ

Image

