

Type: Hermetic scroll compressors

Producer: Copeland

Series: ZB

Model: ZB114KCE-TFD

Technical data

Displacement [m ³ /h]:	43,3
Sound power [dBA]:	83
Sound power with sound shell [dBA]:	73
Sound pressure level [dB]:	72
Net Weight [kg]:	66
Oil charge [dm ³]:	3,3
Maximum high pressure [bar]:	32
Maximum standstill pressure [bar]:	22,6
Minimal lowside temperature [°C]:	-35
Maximum lowside temperature [°C]:	50
PED category:	2

Electrical data

Power supply [V/~/Hz]:	380-420V/3/50Hz
Locked rotor current [A]:	174
Max. operating current [A]:	33,3

Connections

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

R134a

Cooling capacity [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
25	11.75	15.16	19.12	23.72	29.03	35.15	-	-
30	11.00	14.36	18.23	22.69	27.83	33.73	40.46	-
35	10.20	13.50	17.28	21.60	26.56	32.23	38.69	46.04
40	9.36	12.60	16.26	20.44	25.20	30.64	36.83	43.86
45	-	11.63	15.18	19.20	23.77	28.96	34.87	41.57
50	-	10.59	14.02	17.88	22.24	27.19	32.81	39.17
55	-	-	12.78	16.47	20.62	25.31	30.63	36.66
60	-	-	-	14.97	18.90	23.33	28.34	34.02
65	-	-	-	13.37	17.07	21.23	25.93	31.25
70	-	-	-	-	15.13	19.01	23.39	28.34
75	-	-	-	-	-	16.66	20.71	25.30

Power input [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
25	4.79	4.85	4.93	5.03	5.15	5.31	-	-
30	5.31	5.37	5.44	5.53	5.65	5.79	5.97	-
35	5.90	5.95	6.01	6.10	6.20	6.34	6.51	6.71
40	6.58	6.62	6.67	6.74	6.84	6.96	7.12	7.31
45	-	7.39	7.43	7.49	7.57	7.67	7.81	7.99
50	-	8.26	8.29	8.33	8.40	8.49	8.61	8.77
55	-	-	9.28	9.30	9.35	9.43	9.53	9.67
60	-	-	-	10.41	10.44	10.49	10.58	10.69
65	-	-	-	11.66	11.67	11.70	11.77	11.86
70	-	-	-	-	13.07	13.08	13.11	13.19
75	-	-	-	-	-	14.62	14.64	14.68

Current [A]

t_c \ t_e	-20	-15	-10	-5	0	5	10	15
25	16.14	15.96	15.91	15.97	16.11	16.28	-	-
30	16.51	16.34	16.30	16.36	16.50	16.66	16.83	-
35	16.99	16.82	16.79	16.85	16.99	17.15	17.31	17.43
40	17.58	17.42	17.40	17.47	17.60	17.76	17.91	18.02
45	-	18.16	18.15	18.22	18.35	18.50	18.65	18.75
50	-	19.07	19.06	19.14	19.27	19.42	19.55	19.64
55	-	-	20.15	20.24	20.37	20.51	20.64	20.72
60	-	-	-	21.54	21.67	21.82	21.94	22.01
65	-	-	-	23.07	23.20	23.35	23.46	23.52
70	-	-	-	-	24.98	25.12	25.23	25.28
75	-	-	-	-	-	27.17	27.27	27.31

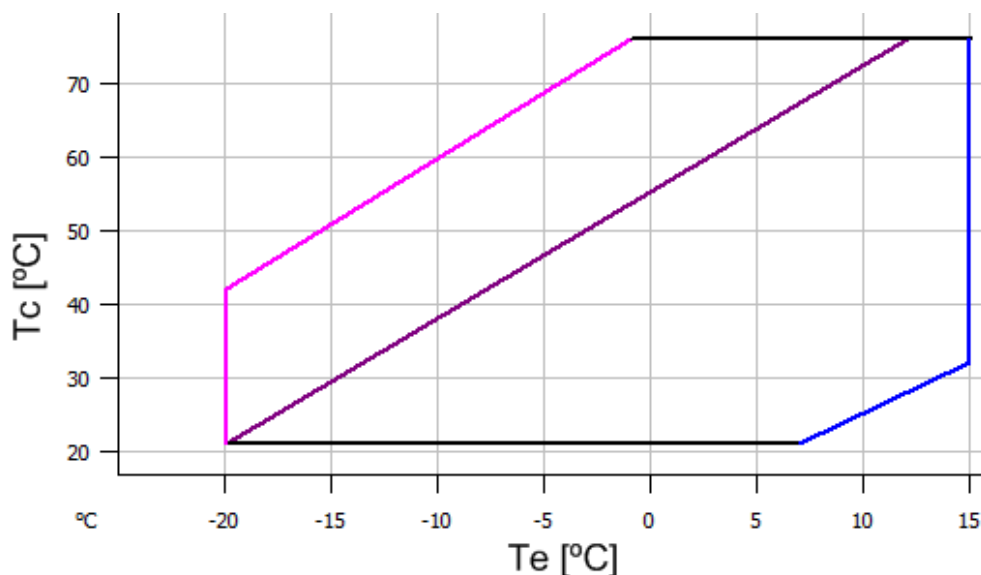
Mass flow [kg/h]

t_c \ t_e	-20	-15	-10	-5	0	5	10	15
25	229.57	296.86	375.29	467.28	575.23	701.56	-	-
30	225.91	293.91	373.02	465.68	574.27	701.22	848.94	-
35	220.92	289.70	369.58	462.97	572.29	699.94	848.33	1 019.87
40	214.08	283.72	364.44	458.65	568.76	697.18	846.32	1 018.59
45	-	275.43	357.07	452.17	563.16	692.43	842.39	1 015.47
50	-	264.33	346.96	443.03	554.96	685.16	836.03	1 009.99
55	-	-	333.57	430.69	543.65	674.84	826.70	1 001.61
60	-	-	-	414.64	528.69	660.97	813.88	989.83
65	-	-	-	394.35	509.58	643.01	797.05	974.11
70	-	-	-	-	485.77	620.43	775.68	953.93
75	-	-	-	-	-	592.72	749.26	928.77

C.O.P. [W/W]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
25	2.45	3.13	3.88	4.72	5.63	6.62	-	-
30	2.07	2.68	3.35	4.10	4.93	5.82	6.78	-
35	1.73	2.27	2.87	3.54	4.28	5.08	5.95	6.86
40	1.42	1.90	2.44	3.03	3.69	4.40	5.18	6.00
45	-	1.57	2.04	2.57	3.14	3.77	4.46	5.20
50	-	1.28	1.69	2.15	2.65	3.20	3.81	4.47
55	-	-	1.38	1.77	2.21	2.69	3.21	3.79
60	-	-	-	1.44	1.81	2.22	2.68	3.18
65	-	-	-	1.15	1.46	1.81	2.20	2.63
70	-	-	-	-	1.16	1.45	1.78	2.15
75	-	-	-	-	-	1.14	1.42	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	18.16	22.39	27.39	33.24	40.02	-	-	-	-
15	17.12	21.34	26.26	31.98	38.57	46.11	-	-	-
20	15.96	20.14	24.97	30.53	36.91	44.19	52.45	-	-
25	14.67	18.79	23.50	28.89	35.04	42.04	49.96	58.89	-
30	13.28	17.32	21.89	27.09	32.99	39.67	47.23	55.74	65.29
35	11.78	15.72	20.14	25.12	30.75	37.11	44.28	52.35	61.40
40	10.20	14.01	18.25	23.00	28.34	34.35	41.12	48.73	57.26
45	-	12.21	16.25	20.74	25.77	31.41	37.75	44.88	52.88
50	-	-	14.13	18.35	23.04	28.30	34.19	40.82	48.26
55	-	-	11.91	15.83	20.17	25.02	30.45	36.56	43.42
60	-	-	-	13.21	17.18	21.59	26.54	32.10	38.36

Power input [kW]

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5	10
10	5.61	5.78	5.95	6.10	6.22	-	-	-	-
15	6.21	6.38	6.56	6.73	6.89	7.01	-	-	-
20	6.93	7.07	7.23	7.41	7.59	7.75	7.87	-	-
25	7.80	7.87	8.00	8.16	8.34	8.51	8.67	8.80	-
30	8.84	8.84	8.91	9.03	9.18	9.35	9.52	9.68	9.80
35	10.09	10.00	9.98	10.04	10.15	10.29	10.46	10.62	10.76
40	11.60	11.38	11.27	11.24	11.28	11.38	11.51	11.65	11.81
45	-	13.03	12.79	12.65	12.61	12.63	12.71	12.82	12.95
50	-	-	14.58	14.32	14.16	14.10	14.10	14.15	14.25
55	-	-	16.69	16.28	15.99	15.80	15.71	15.69	15.72
60	-	-	-	18.56	18.11	17.79	17.58	17.45	17.40

Current [A]

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5	10
10	16.71	16.92	17.10	17.24	17.37	-	-	-	-
15	17.16	17.39	17.59	17.76	17.91	18.05	-	-	-
20	17.74	17.99	18.20	18.38	18.54	18.70	18.86	-	-
25	18.50	18.75	18.96	19.14	19.31	19.47	19.64	19.82	-
30	19.48	19.72	19.92	20.09	20.25	20.40	20.56	20.74	20.94
35	20.72	20.93	21.11	21.26	21.40	21.53	21.67	21.83	22.02
40	22.25	22.44	22.58	22.70	22.81	22.91	23.02	23.15	23.31
45	-	24.27	24.37	24.45	24.51	24.57	24.64	24.73	24.86
50	-	-	26.52	26.54	26.55	26.56	26.58	26.62	26.69
55	-	-	29.07	29.02	28.97	28.92	28.87	28.85	28.86
60	-	-	-	31.94	31.81	31.68	31.56	31.46	31.40

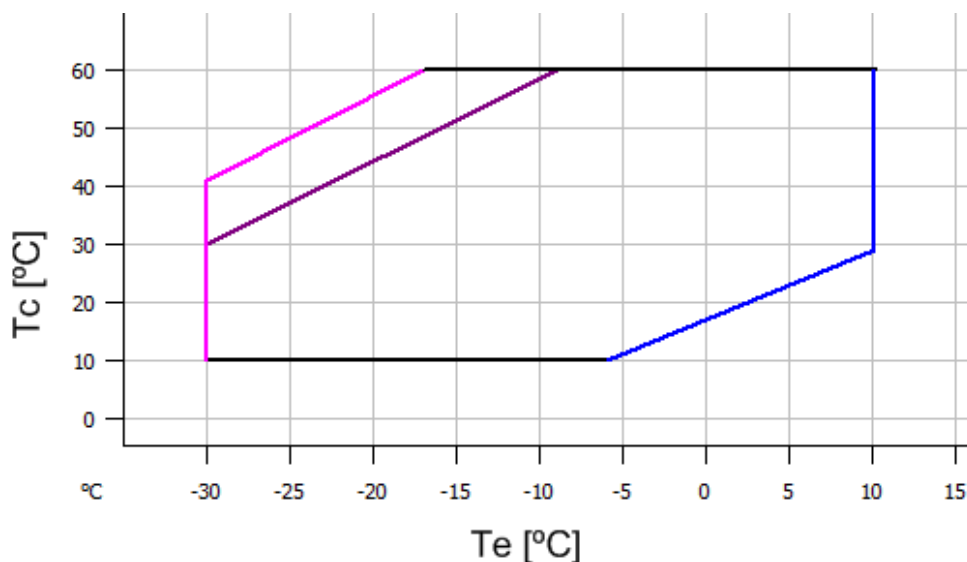
Mass flow [kg/h]

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5	10
10	360.00	454.80	561.72	685.06	829.12	-	-	-	-
15	357.60	453.95	562.44	687.37	833.01	1 003.68	-	-	-
20	351.07	449.10	559.29	685.93	833.30	1 005.71	1 207.43	-	-
25	340.17	440.02	552.05	680.53	829.77	1 004.05	1 207.66	1 444.89	-
30	324.69	426.50	540.49	670.95	822.18	998.47	1 204.10	1 443.37	1 720.56
35	304.42	408.31	524.40	656.98	810.34	988.76	1 196.55	1 437.99	1 717.37
40	279.13	385.24	503.56	638.38	794.00	974.70	1 184.78	1 428.52	1 710.21
45	-	357.06	477.75	614.96	772.97	956.08	1 168.57	1 414.75	1 698.89
50	-	-	446.76	586.47	747.01	932.66	1 147.71	1 396.46	1 683.18
55	-	-	410.35	552.72	715.91	904.24	1 121.98	1 373.42	1 662.86
60	-	-	-	513.47	679.46	870.59	1 091.15	1 345.43	1 637.72

C.O.P. [W/W]

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5	10
10	3.24	3.87	4.60	5.45	6.43	-	-	-	-
15	2.76	3.35	4.01	4.75	5.60	6.58	-	-	-
20	2.30	2.85	3.45	4.12	4.86	5.70	6.66	-	-
25	1.88	2.39	2.94	3.54	4.20	4.94	5.76	6.69	-
30	1.50	1.96	2.46	3.00	3.59	4.24	4.96	5.76	6.66
35	1.17	1.57	2.02	2.50	3.03	3.60	4.24	4.93	5.70
40	0.88	1.23	1.62	2.05	2.51	3.02	3.57	4.18	4.85
45	-	0.94	1.27	1.64	2.04	2.49	2.97	3.50	4.08
50	-	-	0.97	1.28	1.63	2.01	2.43	2.88	3.39
55	-	-	0.71	0.97	1.26	1.58	1.94	2.33	2.76
60	-	-	-	0.71	0.95	1.21	1.51	1.84	2.20

Application range

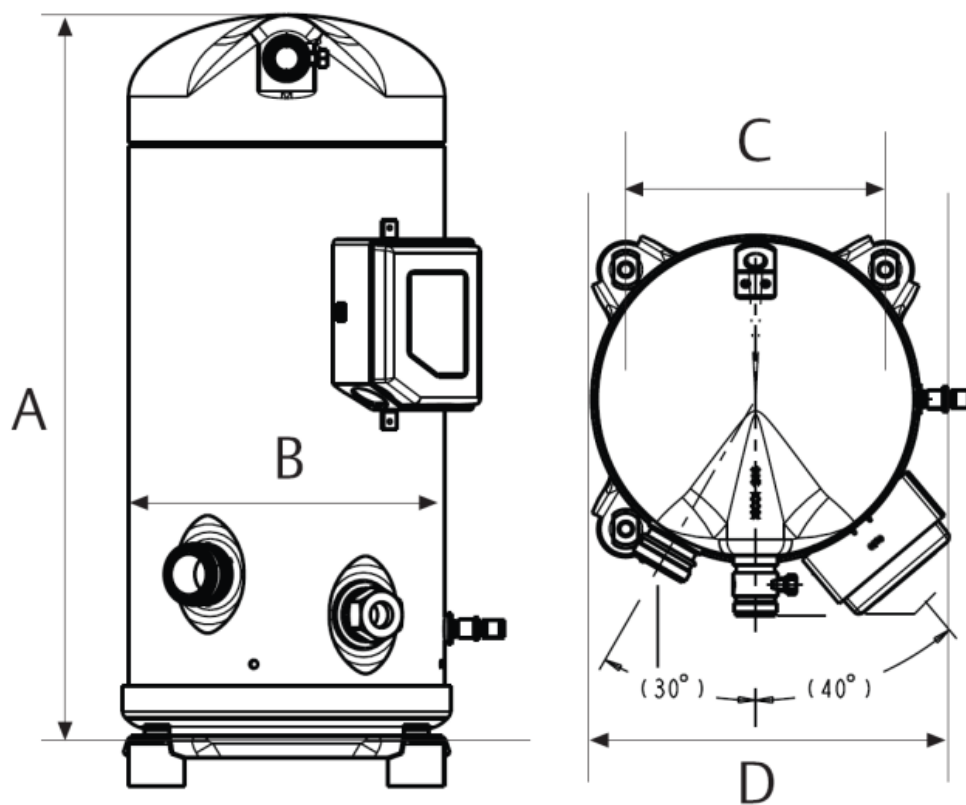


- Maximum evaporating temperature
- 20°C suction gas temperature
- 10K gas overheat

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

t_c - Condensing temperature [°C]

t_e - Evaporating temperature [°C]



A	552 mm
B	234 mm
C	190 mm
D	264 mm

