

**Type: Hermetic scroll compressors**

**Producer: Copeland**

**Series: ZB**

## Model: ZB95KCE-TFD

### Technical data

Displacement [m <sup>3</sup> /h]:	36,4
Sound power [dBA]:	79
Sound power with sound shell [dBA]:	69
Sound pressure level [dB]:	68
Net Weight [kg]:	65
Oil charge [dm <sup>3</sup> ]:	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]:	140
Max. operating current [A]:	28,2
Winding resistance [Ω]:	1,1

### 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	10.11	12.85	16.04	19.78	24.18	29.34	-	-
30	9.48	12.21	15.32	18.94	23.15	28.06	33.78	-
35	8.79	11.51	14.56	18.05	22.08	26.76	32.18	38.46
40	8.01	10.73	13.72	17.10	20.96	25.42	30.56	36.50
45	-	9.86	12.81	16.08	19.78	24.02	28.89	34.50
50	-	8.88	11.79	14.97	18.52	22.55	27.16	32.45
55	-	-	10.66	13.76	17.17	21.00	25.36	30.34
60	-	-	-	12.42	15.70	19.35	23.46	28.14
65	-	-	-	10.95	14.11	17.58	21.45	25.84
70	-	-	-	-	12.38	15.68	19.32	23.43
75	-	-	-	-	-	13.63	17.06	20.89

**Power input [kW]**

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
25	3.91	3.99	4.07	4.16	4.28	4.41	-	-
30	4.36	4.43	4.50	4.58	4.68	4.81	4.95	-
35	4.87	4.93	4.99	5.06	5.15	5.27	5.40	5.57
40	5.44	5.49	5.55	5.61	5.70	5.80	5.93	6.08
45	-	6.13	6.18	6.24	6.32	6.41	6.53	6.68
50	-	6.86	6.90	6.96	7.03	7.12	7.23	7.37
55	-	-	7.72	7.77	7.84	7.92	8.02	8.16
60	-	-	-	8.69	8.75	8.83	8.93	9.06
65	-	-	-	9.72	9.78	9.86	9.95	10.08
70	-	-	-	-	10.94	11.01	11.11	11.23
75	-	-	-	-	-	12.30	12.39	12.51

### **Current [A]**

<b>t<sub>c</sub> \ t<sub>e</sub></b>	<b>-20</b>	<b>-15</b>	<b>-10</b>	<b>-5</b>	<b>0</b>	<b>5</b>	<b>10</b>	<b>15</b>
<b>25</b>	11.34	11.37	11.43	11.51	11.62	11.75	-	-
<b>30</b>	11.71	11.75	11.81	11.89	12.00	12.14	12.30	-
<b>35</b>	12.17	12.21	12.27	12.35	12.46	12.59	12.75	12.94
<b>40</b>	12.72	12.76	12.82	12.91	13.02	13.15	13.30	13.49
<b>45</b>	-	13.44	13.50	13.59	13.69	13.82	13.98	14.16
<b>50</b>	-	14.27	14.33	14.41	14.52	14.65	14.80	14.98
<b>55</b>	-	-	15.33	15.41	15.52	15.64	15.79	15.96
<b>60</b>	-	-	-	16.61	16.71	16.83	16.98	17.15
<b>65</b>	-	-	-	18.03	18.13	18.25	18.39	18.55
<b>70</b>	-	-	-	-	19.79	19.90	20.04	20.20
<b>75</b>	-	-	-	-	-	21.83	21.96	22.11

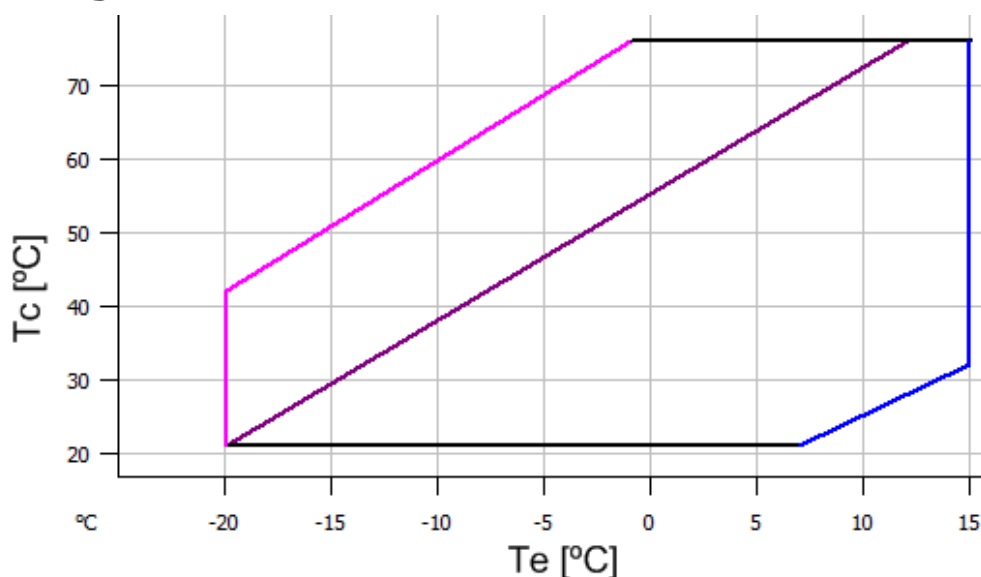
### **Mass flow [kg/h]**

<b>t<sub>c</sub> \ t<sub>e</sub></b>	<b>-20</b>	<b>-15</b>	<b>-10</b>	<b>-5</b>	<b>0</b>	<b>5</b>	<b>10</b>	<b>15</b>
<b>25</b>	197.22	251.67	314.88	389.69	478.95	585.51	-	-
<b>30</b>	194.39	249.92	313.73	388.65	477.55	583.27	708.64	-
<b>35</b>	189.68	246.68	311.48	386.91	475.83	581.09	705.53	851.99
<b>40</b>	182.45	241.30	307.47	383.80	473.13	578.32	702.20	847.64
<b>45</b>	-	233.11	301.04	378.65	468.78	574.29	698.01	842.80
<b>50</b>	-	221.46	291.54	370.81	462.13	568.34	692.28	836.81
<b>55</b>	-	-	278.29	359.62	452.51	559.81	684.37	829.03
<b>60</b>	-	-	-	344.41	439.26	548.04	673.60	818.77
<b>65</b>	-	-	-	324.53	421.73	532.38	659.32	805.40
<b>70</b>	-	-	-	-	399.25	512.15	640.86	788.23
<b>75</b>	-	-	-	-	-	486.69	617.57	766.62

**C.O.P. [W/W]**

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
<b>25</b>	2.58	3.22	3.94	4.75	5.65	6.65	-	-
<b>30</b>	2.18	2.76	3.41	4.13	4.94	5.84	6.82	-
<b>35</b>	1.81	2.34	2.92	3.56	4.28	5.08	5.96	6.90
<b>40</b>	1.47	1.95	2.47	3.05	3.68	4.38	5.16	6.00
<b>45</b>	-	1.61	2.07	2.58	3.13	3.75	4.42	5.17
<b>50</b>	-	1.29	1.71	2.15	2.64	3.17	3.76	4.40
<b>55</b>	-	-	1.38	1.77	2.19	2.65	3.16	3.72
<b>60</b>	-	-	-	1.43	1.79	2.19	2.63	3.11
<b>65</b>	-	-	-	1.13	1.44	1.78	2.16	2.56
<b>70</b>	-	-	-	-	1.13	1.42	1.74	2.09
<b>75</b>	-	-	-	-	-	1.11	1.38	1.67

**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
<b>10</b>	14.89	18.46	22.75	27.82	33.76	-	-	-	-
<b>15</b>	14.19	17.67	21.81	26.67	32.31	38.82	-	-	-
<b>20</b>	13.40	16.80	20.79	25.44	30.81	36.97	44.00	-	-
<b>25</b>	12.50	15.83	19.68	24.12	29.22	35.05	41.68	49.18	-
<b>30</b>	11.47	14.74	18.45	22.69	27.53	33.03	39.26	46.30	54.22
<b>35</b>	10.30	13.51	17.10	21.15	25.73	30.91	36.75	43.34	50.74
<b>40</b>	8.97	12.12	15.60	19.47	23.80	28.66	34.13	40.27	47.16
<b>45</b>	-	10.57	13.94	17.63	21.72	26.28	31.37	37.08	43.46
<b>50</b>	-	-	12.11	15.63	19.49	23.74	28.47	33.74	39.63
<b>55</b>	-	-	10.08	13.44	17.07	21.04	25.41	30.26	35.65
<b>60</b>	-	-	-	11.05	14.46	18.14	22.17	26.60	31.51

**Power input [kW]**

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5	10
<b>10</b>	4.54	4.66	4.80	4.95	5.09	-	-	-	-
<b>15</b>	5.10	5.21	5.34	5.49	5.64	5.78	-	-	-
<b>20</b>	5.75	5.82	5.93	6.07	6.23	6.38	6.52	-	-
<b>25</b>	6.49	6.52	6.60	6.72	6.87	7.02	7.17	7.30	-
<b>30</b>	7.37	7.34	7.38	7.47	7.59	7.74	7.89	8.03	8.14
<b>35</b>	8.39	8.30	8.29	8.33	8.42	8.55	8.69	8.83	8.95
<b>40</b>	9.59	9.43	9.35	9.34	9.38	9.47	9.59	9.72	9.85
<b>45</b>	-	10.74	10.58	10.51	10.50	10.54	10.63	10.73	10.85
<b>50</b>	-	-	12.02	11.86	11.79	11.78	11.82	11.89	11.98
<b>55</b>	-	-	13.68	13.44	13.28	13.20	13.18	13.21	13.26
<b>60</b>	-	-	-	15.24	15.00	14.84	14.75	14.72	14.73

**Current [A]**

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5	10
<b>10</b>	11.72	11.84	11.99	12.13	12.26	-	-	-	-
<b>15</b>	12.27	12.38	12.53	12.69	12.86	13.00	-	-	-
<b>20</b>	12.95	13.03	13.17	13.34	13.52	13.69	13.85	-	-
<b>25</b>	13.82	13.85	13.95	14.10	14.28	14.48	14.66	14.81	-
<b>30</b>	14.91	14.87	14.92	15.03	15.20	15.38	15.58	15.76	15.91
<b>35</b>	16.26	16.13	16.11	16.17	16.29	16.46	16.64	16.84	17.01
<b>40</b>	17.91	17.68	17.56	17.55	17.61	17.73	17.90	18.08	18.26
<b>45</b>	-	19.54	19.32	19.21	19.20	19.26	19.37	19.53	19.70
<b>50</b>	-	-	21.42	21.20	21.09	21.07	21.12	21.22	21.36
<b>55</b>	-	-	23.90	23.55	23.32	23.20	23.17	23.21	23.29
<b>60</b>	-	-	-	26.30	25.94	25.70	25.57	25.52	25.53

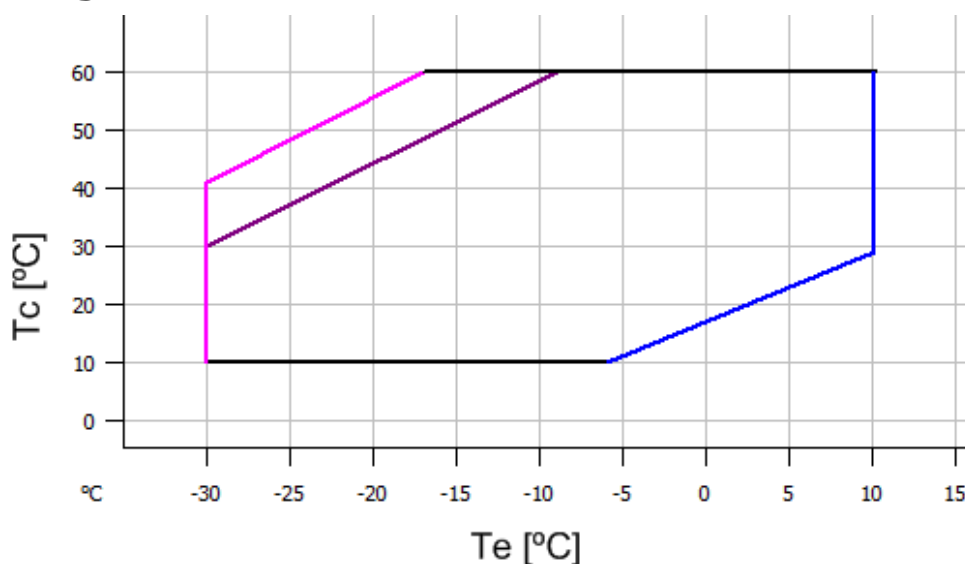
**Mass flow [kg/h]**

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5	10
<b>10</b>	295.60	374.57	465.87	573.11	699.93	-	-	-	-
<b>15</b>	296.94	375.90	466.62	572.74	697.87	845.65	-	-	-
<b>20</b>	295.23	374.83	465.64	571.29	695.40	841.59	1 013.51	-	-
<b>25</b>	289.76	370.66	462.22	568.05	691.79	837.07	1 007.50	1 206.72	-
<b>30</b>	279.82	362.68	455.64	562.32	686.35	831.35	1 000.96	1 198.80	1 428.50
<b>35</b>	264.69	350.17	445.18	553.37	678.34	823.74	993.18	1 190.30	1 418.72
<b>40</b>	243.65	332.41	430.14	540.49	667.07	813.51	983.45	1 180.50	1 408.30
<b>45</b>	-	308.69	409.81	522.97	651.81	799.96	971.05	1 168.69	1 396.53
<b>50</b>	-	-	383.46	500.10	631.86	782.37	955.26	1 154.16	1 382.69
<b>55</b>	-	-	350.38	471.15	606.49	760.03	935.38	1 136.19	1 366.07
<b>60</b>	-	-	-	435.43	575.01	732.22	910.70	1 114.06	1 345.95

**C.O.P. [W/W]**

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5	10
<b>10</b>	3.28	3.96	4.74	5.62	6.63	-	-	-	-
<b>15</b>	2.78	3.40	4.09	4.86	5.73	6.72	-	-	-
<b>20</b>	2.33	2.89	3.51	4.19	4.95	5.80	6.75	-	-
<b>25</b>	1.93	2.43	2.98	3.59	4.25	4.99	5.81	6.74	-
<b>30</b>	1.56	2.01	2.50	3.04	3.63	4.27	4.98	5.77	6.66
<b>35</b>	1.23	1.63	2.06	2.54	3.05	3.62	4.23	4.91	5.67
<b>40</b>	0.93	1.29	1.67	2.08	2.54	3.03	3.56	4.14	4.79
<b>45</b>	-	0.98	1.32	1.68	2.07	2.49	2.95	3.45	4.01
<b>50</b>	-	-	1.01	1.32	1.65	2.02	2.41	2.84	3.31
<b>55</b>	-	-	0.74	1.00	1.29	1.59	1.93	2.29	2.69
<b>60</b>	-	-	-	0.73	0.96	1.22	1.50	1.81	2.14

**Application range**

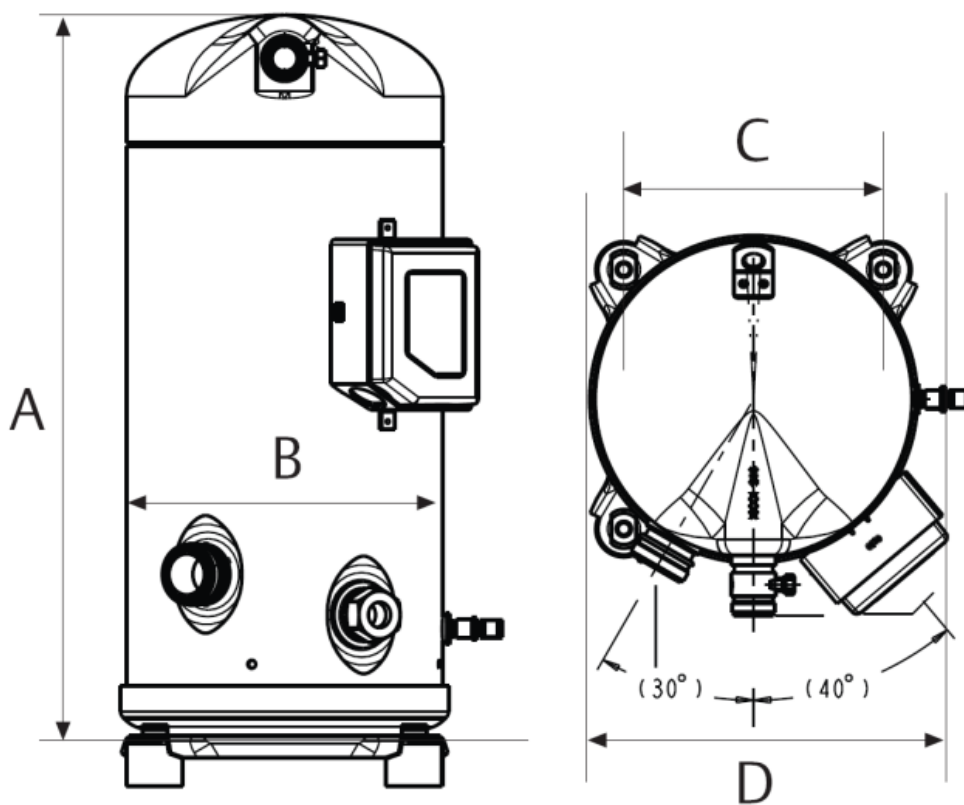


- Maximum evaporating temperature
- 20°C suction gas temperature
- 10K gas overheat

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



