

Model: ZS30K4E-TFD

Data

Type: Hermetic scroll compressors

Producer: Copeland

Series: ZS

Model: ZS30K4E-TFD

Technical data

Displacement [m ³ /h]:	11,7
Sound power [dBA]:	76
Sound pressure level [dB]:	65
Net Weight [kg]:	37
Oil charge [dm ³]:	1,9
Maximum high pressure [bar]:	28,8
Maximum standstill pressure [bar]:	21
Maximum lowside temperature [°C]:	50
PED category:	1

Electrical data

Power supply [V/~/Hz]:	380-420V/3/50Hz
Locked rotor current [A]:	51,5
Max. operating current [A]:	8,2
Winding resistance [Ω]:	3,6

Connections

	<u>inches</u>
Suction Rotolock valve connection:	1 1/4"
Discharge Rotolock valve connection:	1"
Suction connection with supplied sleeve:	7/8"
Discharge connection with supplied sleeve:	1/2"

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Capacity

R134a

Cooling capacity [kW]

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5
20	2.16	2.74	3.45	4.31	5.32	6.52	7.90	-
25	2.06	2.62	3.31	4.13	5.12	6.27	7.60	-
30	1.96	2.50	3.16	3.96	4.90	6.01	7.29	8.77
35	-	2.38	3.02	3.78	4.68	5.74	6.97	8.39
40	-	2.26	2.87	3.59	4.45	5.47	6.65	8.00
45	-	-	2.72	3.40	4.22	5.18	6.31	7.60
50	-	-	2.56	3.21	3.98	4.89	5.96	7.19
55	-	-	-	3.01	3.74	4.59	5.59	6.76
60	-	-	-	2.81	3.48	4.28	5.22	6.32

Power input [kW]

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5
20	0.95	1.01	1.07	1.15	1.23	1.34	1.48	-
25	1.03	1.09	1.16	1.23	1.32	1.42	1.55	-
30	1.10	1.18	1.25	1.32	1.41	1.50	1.62	1.77
35	-	1.27	1.34	1.42	1.50	1.60	1.71	1.85
40	-	1.36	1.45	1.53	1.61	1.71	1.82	1.95
45	-	-	1.56	1.65	1.74	1.83	1.94	2.06
50	-	-	1.69	1.78	1.88	1.98	2.08	2.20
55	-	-	-	1.94	2.04	2.14	2.25	2.37
60	-	-	-	2.12	2.23	2.33	2.45	2.57

Model: ZS30K4E-TFD

Capacity

Current [A]

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5
20	2.92	2.97	3.03	3.10	3.19	3.30	3.45	-
25	2.99	3.05	3.12	3.19	3.28	3.39	3.53	-
30	3.07	3.14	3.21	3.28	3.37	3.48	3.62	3.79
35	-	3.22	3.30	3.39	3.48	3.59	3.72	3.89
40	-	3.32	3.41	3.50	3.60	3.71	3.85	4.01
45	-	-	3.54	3.64	3.75	3.86	4.00	4.16
50	-	-	3.69	3.80	3.92	4.05	4.19	4.35
55	-	-	-	4.00	4.13	4.26	4.41	4.58
60	-	-	-	4.23	4.37	4.52	4.68	4.85

Mass flow [kg/h]

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5
20	39.94	51.22	64.80	81.11	100.57	123.61	150.65	-
25	39.69	50.90	64.46	80.80	100.34	123.50	150.71	-
30	39.52	50.62	64.13	80.46	100.04	123.29	150.64	182.52
35	-	50.37	63.79	80.09	99.68	122.99	150.44	182.47
40	-	50.14	63.44	79.66	99.23	122.56	150.09	182.24
45	-	-	63.06	79.17	98.69	122.01	149.58	181.82
50	-	-	62.63	78.61	98.03	121.32	148.90	181.19
55	-	-	-	77.96	97.26	120.48	148.03	180.34
60	-	-	-	77.21	96.36	119.46	146.96	179.26

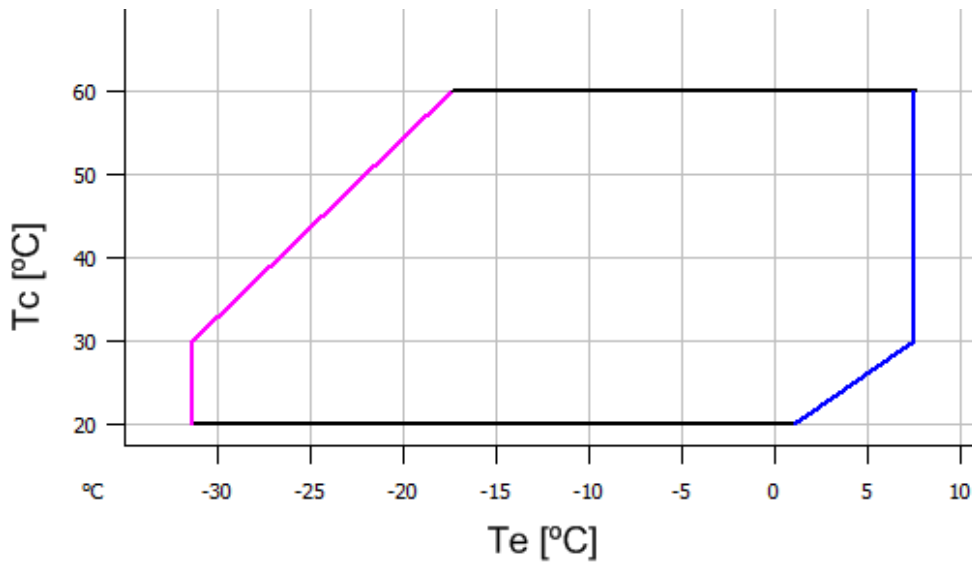
Model: ZS30K4E-TFD



Capacity

C.O.P. [W/W]

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5
20	2.28	2.71	3.21	3.76	4.31	4.85	5.35	-
25	2.00	2.40	2.85	3.35	3.88	4.41	4.92	-
30	1.77	2.12	2.53	2.99	3.48	3.99	4.49	4.96
35	-	1.88	2.25	2.66	3.11	3.59	4.07	4.54
40	-	1.66	1.98	2.35	2.76	3.20	3.66	4.11
45	-	-	1.74	2.07	2.43	2.83	3.25	3.68
50	-	-	1.52	1.80	2.12	2.48	2.86	3.26
55	-	-	-	1.55	1.83	2.14	2.49	2.85
60	-	-	-	1.33	1.56	1.83	2.14	2.46

Application range



 Maximum evaporating temperature
 25°C suction gas temperature

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

t_c - Condensing temperature [°C]

t_e - Evaporating temperature [°C]

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Capacity

R404A/R507

Cooling capacity [kW]

$t_c \setminus t_e$	-40	-35	-30	-25	-20	-15	-10	-5	0	5
10	3.04	3.88	4.87	6.01	7.32	8.81	-	-	-	-
15	2.88	3.70	4.66	5.76	7.03	8.47	10.10	-	-	-
20	2.73	3.52	4.44	5.50	6.72	8.11	9.68	11.45	-	-
25	2.59	3.34	4.21	5.22	6.39	7.72	9.23	10.93	12.84	-
30	2.45	3.15	3.98	4.93	6.03	7.30	8.74	10.36	12.19	14.24
35	2.32	2.97	3.73	4.63	5.66	6.85	8.21	9.76	11.50	13.45
40	2.19	2.78	3.48	4.31	5.27	6.38	7.66	9.11	10.76	12.61
45	-	2.59	3.22	3.97	4.85	5.88	7.07	8.43	9.97	11.72
50	-	-	2.95	3.62	4.42	5.35	6.44	7.70	9.13	10.77
55	-	-	-	-	3.96	4.79	5.78	6.93	8.25	9.77
60	-	-	-	-	-	4.21	5.08	6.11	7.32	8.71

Power input [kW]

$t_c \setminus t_e$	-40	-35	-30	-25	-20	-15	-10	-5	0	5
10	1.32	1.37	1.44	1.54	1.65	1.78	-	-	-	-
15	1.44	1.49	1.56	1.65	1.75	1.88	2.03	-	-	-
20	1.56	1.62	1.69	1.77	1.88	2.00	2.15	2.31	-	-
25	1.71	1.76	1.83	1.92	2.02	2.14	2.28	2.44	2.62	-
30	1.87	1.93	2.00	2.08	2.19	2.30	2.44	2.59	2.76	2.95
35	2.06	2.12	2.19	2.28	2.37	2.49	2.62	2.76	2.93	3.11
40	2.27	2.33	2.41	2.49	2.59	2.70	2.83	2.97	3.13	3.30
45	-	2.58	2.65	2.74	2.84	2.95	3.07	3.21	3.36	3.52
50	-	-	2.93	3.02	3.12	3.23	3.35	3.48	3.62	3.78
55	-	-	-	-	3.43	3.54	3.66	3.79	3.93	4.08
60	-	-	-	-	-	3.90	4.01	4.14	4.28	4.42

Model: ZS30K4E-TFD

Capacity

Current [A]

t_c \ t_e	-40	-35	-30	-25	-20	-15	-10	-5	0	5
10	4.15	4.19	4.24	4.32	4.41	4.52	-	-	-	-
15	4.22	4.27	4.33	4.40	4.50	4.62	4.75	-	-	-
20	4.32	4.37	4.43	4.51	4.61	4.73	4.87	5.03	-	-
25	4.44	4.49	4.56	4.64	4.75	4.87	5.01	5.17	5.35	-
30	4.58	4.64	4.72	4.81	4.91	5.04	5.18	5.34	5.53	5.73
35	4.76	4.83	4.91	5.00	5.11	5.24	5.38	5.55	5.73	5.94
40	4.98	5.05	5.14	5.24	5.35	5.48	5.63	5.79	5.98	6.19
45	-	5.32	5.41	5.51	5.63	5.76	5.91	6.08	6.27	6.48
50	-	-	5.73	5.84	5.96	6.10	6.25	6.42	6.61	6.82
55	-	-	-	-	6.35	6.49	6.64	6.81	7.00	7.21
60	-	-	-	-	-	6.93	7.09	7.27	7.46	7.67

Mass flow [kg/h]

t_c \ t_e	-40	-35	-30	-25	-20	-15	-10	-5	0	5
10	58.51	77.89	99.20	123.10	150.23	181.22	-	-	-	-
15	59.13	78.01	99.05	122.90	150.20	181.59	217.72	-	-	-
20	59.74	78.04	98.73	122.44	149.83	181.53	218.19	260.44	-	-
25	60.33	77.97	98.21	121.71	149.10	181.03	218.13	261.06	310.44	-
30	60.89	77.78	97.50	120.69	148.00	180.07	217.54	261.05	311.25	368.78
35	61.40	77.46	96.57	119.38	146.53	178.66	216.41	260.42	311.34	369.82
40	61.87	77.01	95.43	117.77	144.67	176.77	214.72	259.15	310.72	370.05
45	-	76.42	94.06	115.84	142.41	174.40	212.46	257.23	309.35	369.47
50	-	-	92.44	113.59	139.74	171.54	209.63	254.65	307.25	368.06
55	-	-	-	-	136.66	168.18	206.21	251.40	304.38	365.81
60	-	-	-	-	-	164.30	202.20	247.47	300.76	362.71

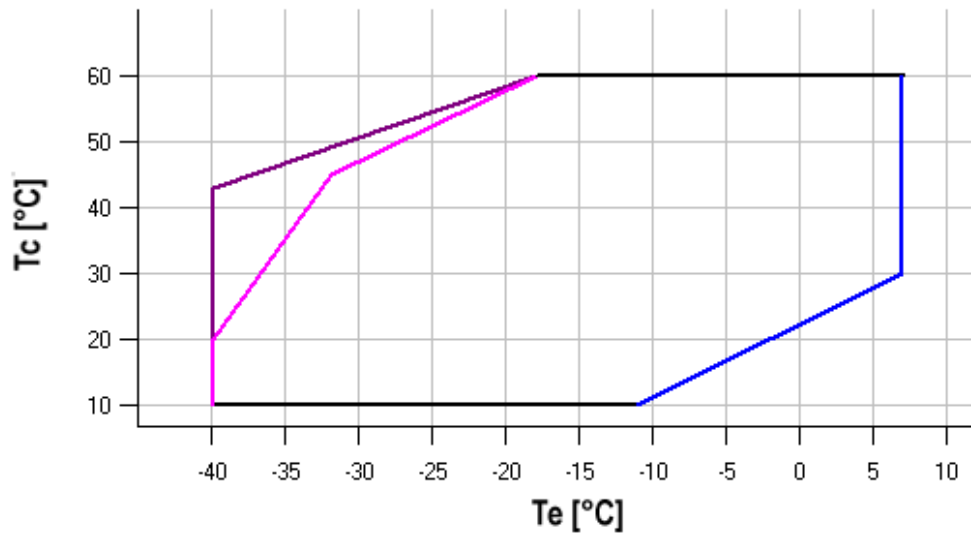
Model: ZS30K4E-TFD

Capacity

C.O.P. [W/W]

$t_c \setminus t_e$	-40	-35	-30	-25	-20	-15	-10	-5	0	5
10	2.30	2.83	3.37	3.91	4.44	4.94	-	-	-	-
15	2.01	2.49	2.99	3.50	4.00	4.50	4.97	-	-	-
20	1.75	2.18	2.63	3.10	3.58	4.05	4.51	4.95	-	-
25	1.52	1.89	2.30	2.72	3.16	3.60	4.05	4.48	4.91	-
30	1.31	1.64	1.99	2.37	2.76	3.17	3.59	4.01	4.42	4.83
35	1.13	1.40	1.70	2.03	2.38	2.75	3.14	3.53	3.93	4.33
40	0.97	1.19	1.45	1.73	2.03	2.36	2.71	3.07	3.44	3.82
45	-	1.01	1.22	1.45	1.71	2.00	2.30	2.63	2.97	3.32
50	-	-	1.01	1.20	1.42	1.66	1.92	2.21	2.52	2.85
55	-	-	-	-	1.15	1.35	1.58	1.83	2.10	2.39
60	-	-	-	-	-	1.08	1.27	1.48	1.71	1.97

Application range



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

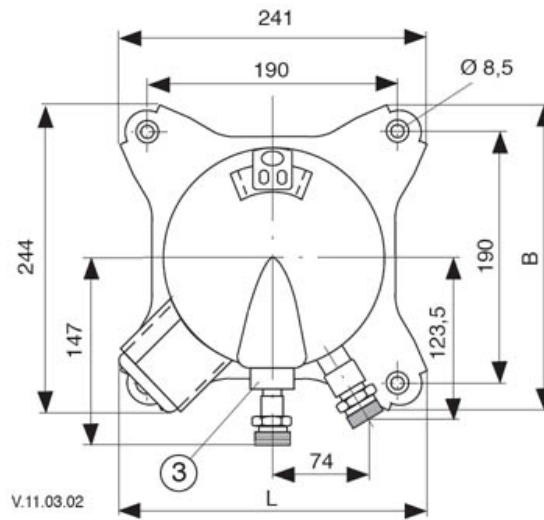
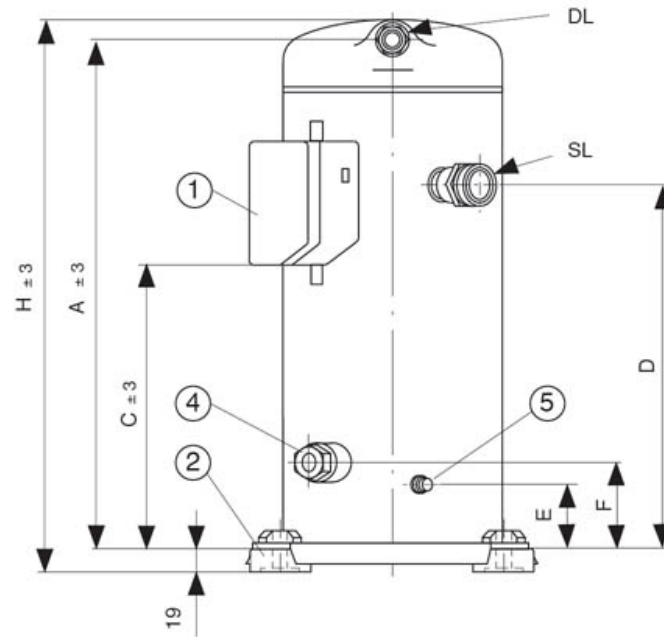
Operating conditions: suction gas temperature 20°C, 0K subcooling

t_c - Condensing temperature [°C]

t_e - Evaporating temperature [°C]

Model: ZS30K4E-TFD

Dimensions



A	409,8 mm
C	233,4 mm
C1	- mm
D	296,9 mm
E	47,5 mm
F	81,3 mm
G	- mm

Model: ZS30K4E-TFD

Image

