

Model: ZS38K4E-TFD

Data

Type: Hermetic scroll compressors

Producer: Copeland

Series: ZS

Model: ZS38K4E-TFD

Technical data

Displacement [m ³ /h]:	14,4
Sound power [dBA]:	76
Sound pressure level [dB]:	65
Net Weight [kg]:	38
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]:	64
Max. operating current [A]:	10
Winding resistance [Ω]:	2,8

Connections

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

Model: ZS38K4E-TFD

Capacity

R134a

Cooling capacity [kW]

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5
20	2.63	3.36	4.24	5.31	6.58	8.08	9.83	-
25	2.53	3.23	4.08	5.10	6.32	7.76	9.43	-
30	2.42	3.09	3.91	4.89	6.05	7.43	9.03	10.88
35	-	2.95	3.73	4.67	5.78	7.09	8.62	10.39
40	-	2.81	3.55	4.44	5.50	6.74	8.20	9.89
45	-	-	3.37	4.21	5.21	6.39	7.77	9.37
50	-	-	3.18	3.98	4.92	6.04	7.34	8.86
55	-	-	-	3.74	4.63	5.67	6.90	8.33
60	-	-	-	3.50	4.33	5.30	6.45	7.80

Power input [kW]

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5
20	1.17	1.24	1.32	1.42	1.54	1.69	1.87	-
25	1.27	1.34	1.43	1.52	1.64	1.78	1.95	-
30	1.37	1.45	1.54	1.64	1.75	1.88	2.04	2.22
35	-	1.55	1.65	1.75	1.87	2.00	2.14	2.31
40	-	1.66	1.77	1.88	2.00	2.13	2.27	2.43
45	-	-	1.90	2.02	2.14	2.27	2.41	2.57
50	-	-	2.03	2.17	2.30	2.44	2.58	2.73
55	-	-	-	2.33	2.48	2.63	2.77	2.92
60	-	-	-	2.51	2.68	2.84	2.99	3.14

Model: ZS38K4E-TFD

Capacity

Current [A]

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5
20	3.95	4.02	4.10	4.19	4.30	4.43	4.59	-
25	4.05	4.12	4.20	4.29	4.39	4.51	4.66	-
30	4.15	4.22	4.30	4.38	4.48	4.60	4.73	4.90
35	-	4.31	4.40	4.48	4.58	4.69	4.83	4.98
40	-	4.40	4.50	4.59	4.70	4.81	4.94	5.09
45	-	-	4.61	4.72	4.83	4.95	5.08	5.23
50	-	-	4.73	4.85	4.98	5.11	5.25	5.41
55	-	-	-	5.01	5.15	5.29	5.45	5.61
60	-	-	-	5.18	5.35	5.51	5.68	5.86

Mass flow [kg/h]

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5
20	48.76	62.82	79.70	100.01	124.33	153.27	187.42	-
25	48.79	62.74	79.52	99.74	124.00	152.89	187.02	-
30	48.77	62.60	79.27	99.40	123.59	152.42	186.51	226.45
35	-	62.41	78.97	99.00	123.09	151.86	185.90	225.80
40	-	62.19	78.61	98.53	122.53	151.22	185.19	225.05
45	-	-	78.21	98.00	121.90	150.50	184.40	224.20
50	-	-	77.78	97.43	121.21	149.71	183.53	223.26
55	-	-	-	96.82	120.47	148.86	182.58	222.25
60	-	-	-	96.18	119.69	147.96	181.58	221.15

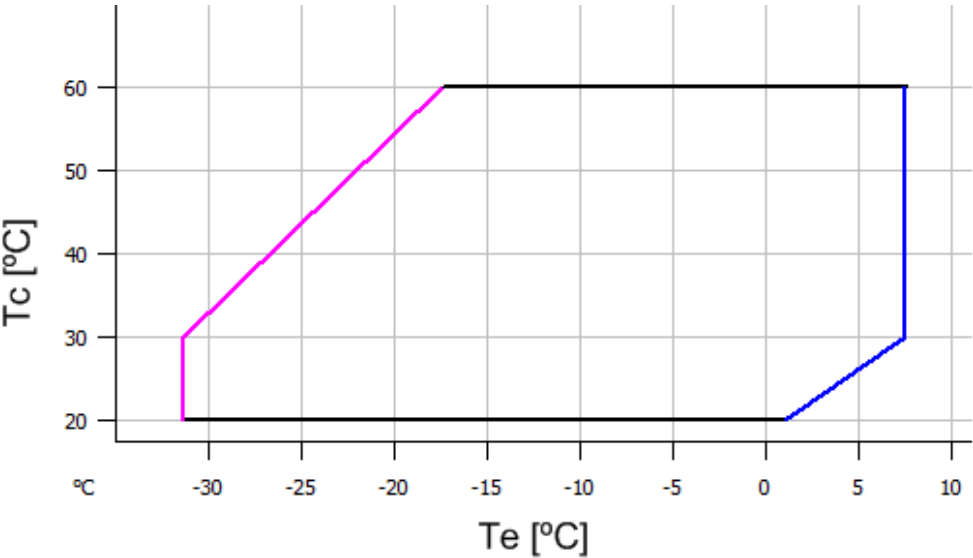
Model: ZS38K4E-TFD

Capacity

C.O.P. [W/W]

t _c \ t _e	-30	-25	-20	-15	-10	-5	0	5
20	2.25	2.71	3.22	3.74	4.27	4.77	5.24	-
25	1.99	2.40	2.86	3.35	3.85	4.36	4.84	-
30	1.77	2.14	2.54	2.99	3.46	3.95	4.43	4.90
35	-	1.90	2.26	2.66	3.10	3.55	4.02	4.49
40	-	1.69	2.01	2.36	2.75	3.17	3.62	4.07
45	-	-	1.78	2.09	2.43	2.81	3.22	3.65
50	-	-	1.57	1.83	2.14	2.47	2.84	3.24
55	-	-	-	1.60	1.86	2.16	2.49	2.85
60	-	-	-	1.39	1.62	1.87	2.16	2.48

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]

Model: ZS38K4E-TFD**Capacity**

R404A/R507

Cooling capacity [kW]

t_c \ t_e	-40	-35	-30	-25	-20	-15	-10	-5	0	5
10	3.77	4.79	5.99	7.38	9.00	10.87	-	-	-	-
15	3.58	4.58	5.74	7.09	8.66	10.47	12.54	-	-	-
20	3.39	4.36	5.48	6.78	8.29	10.02	12.02	14.30	-	-
25	3.20	4.13	5.20	6.44	7.88	9.54	11.45	13.63	16.10	-
30	3.02	3.89	4.91	6.08	7.44	9.01	10.82	12.89	15.26	17.93
35	2.84	3.66	4.60	5.70	6.97	8.44	10.15	12.11	14.34	16.89
40	2.67	3.42	4.29	5.30	6.47	7.84	9.43	11.26	13.36	15.76
45	-	3.18	3.96	4.88	5.95	7.20	8.66	10.36	12.32	14.57
50	-	-	3.64	4.44	5.40	6.53	7.86	9.41	11.22	13.31
55	-	-	-	-	4.83	5.83	7.01	8.42	10.06	11.97
60	-	-	-	-	-	5.09	6.13	7.37	8.84	10.58

Power input [kW]

t_c \ t_e	-40	-35	-30	-25	-20	-15	-10	-5	0	5
10	1.55	1.64	1.75	1.89	2.05	2.24	-	-	-	-
15	1.68	1.78	1.89	2.02	2.18	2.36	2.58	-	-	-
20	1.84	1.94	2.05	2.18	2.33	2.51	2.72	2.96	-	-
25	2.02	2.12	2.23	2.37	2.52	2.69	2.89	3.12	3.38	-
30	2.21	2.33	2.45	2.58	2.73	2.90	3.09	3.31	3.56	3.85
35	2.44	2.56	2.68	2.82	2.97	3.14	3.32	3.54	3.78	4.05
40	2.68	2.82	2.95	3.09	3.24	3.41	3.60	3.80	4.04	4.30
45	-	3.10	3.25	3.40	3.55	3.72	3.91	4.11	4.33	4.59
50	-	-	3.58	3.73	3.90	4.07	4.25	4.45	4.67	4.92
55	-	-	-	-	4.28	4.45	4.64	4.84	5.06	5.30
60	-	-	-	-	-	4.88	5.07	5.27	5.49	5.72

Model: ZS38K4E-TFD

Capacity

Current [A]

$t_c \setminus t_e$	-40	-35	-30	-25	-20	-15	-10	-5	0	5
10	5.49	5.55	5.63	5.73	5.85	6.01	-	-	-	-
15	5.56	5.63	5.71	5.82	5.95	6.11	6.31	-	-	-
20	5.65	5.73	5.82	5.93	6.07	6.23	6.43	6.67	-	-
25	5.76	5.86	5.96	6.08	6.22	6.39	6.59	6.83	7.11	-
30	5.90	6.01	6.13	6.26	6.41	6.59	6.79	7.03	7.30	7.63
35	6.08	6.21	6.34	6.49	6.65	6.83	7.03	7.27	7.55	7.87
40	6.30	6.45	6.60	6.75	6.93	7.11	7.33	7.57	7.85	8.17
45	-	6.73	6.90	7.07	7.26	7.46	7.68	7.93	8.21	8.54
50	-	-	7.26	7.45	7.65	7.86	8.09	8.35	8.64	8.96
55	-	-	-	-	8.10	8.33	8.57	8.84	9.13	9.46
60	-	-	-	-	-	8.86	9.12	9.40	9.70	10.04

Mass flow [kg/h]

$t_c \setminus t_e$	-40	-35	-30	-25	-20	-15	-10	-5	0	5
10	72.93	96.49	122.28	151.32	184.65	223.28	-	-	-	-
15	73.25	96.50	122.20	151.37	185.05	224.27	270.06	-	-	-
20	73.63	96.38	121.81	150.94	184.81	224.44	270.86	325.10	-	-
25	74.07	96.16	121.14	150.05	183.93	223.79	270.67	325.59	389.59	-
30	74.61	95.85	120.21	148.73	182.44	222.36	269.52	324.95	389.69	464.75
35	75.26	95.48	119.05	147.00	180.36	220.16	267.43	323.20	388.49	464.34
40	76.04	95.07	117.67	144.88	177.72	217.23	264.43	320.35	386.03	462.49
45	-	94.64	116.10	142.39	174.54	213.57	260.53	316.44	382.32	459.21
50	-	-	114.35	139.55	170.83	209.22	255.76	311.48	377.39	454.54
55	-	-	-	-	166.62	204.20	250.14	305.49	371.26	448.49
60	-	-	-	-	-	198.52	243.69	298.49	363.95	441.08

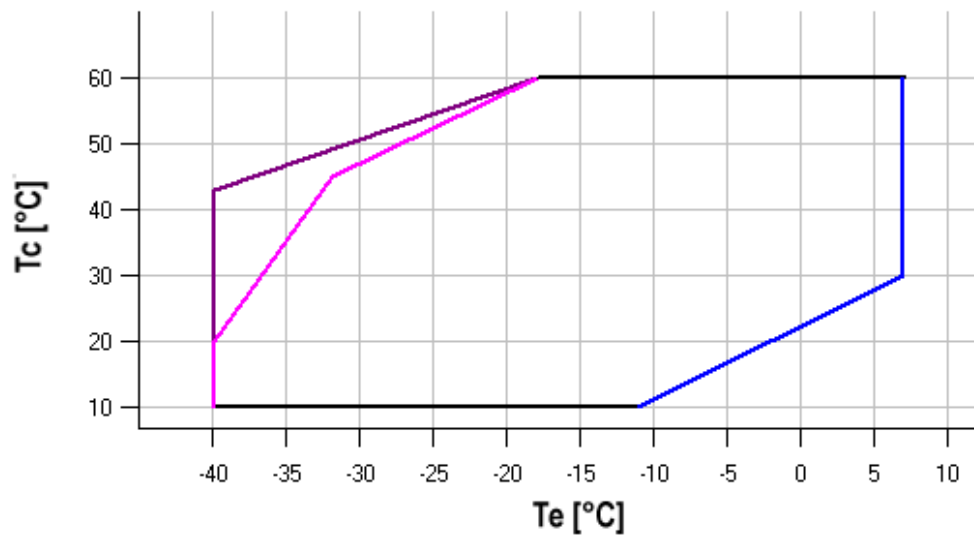
Model: ZS38K4E-TFD

Capacity

C.O.P. [W/W]

$t_c \setminus t_e$	-40	-35	-30	-25	-20	-15	-10	-5	0	5
10	2.44	2.93	3.42	3.91	4.39	4.84	-	-	-	-
15	2.13	2.58	3.04	3.51	3.98	4.43	4.86	-	-	-
20	1.84	2.25	2.67	3.11	3.55	3.99	4.42	4.83	-	-
25	1.59	1.95	2.33	2.72	3.13	3.55	3.96	4.37	4.77	-
30	1.36	1.67	2.01	2.36	2.73	3.11	3.50	3.90	4.29	4.66
35	1.17	1.43	1.71	2.02	2.35	2.69	3.05	3.42	3.80	4.17
40	0.99	1.21	1.45	1.71	1.99	2.30	2.62	2.96	3.31	3.67
45	-	1.03	1.22	1.44	1.67	1.93	2.22	2.52	2.84	3.18
50	-	-	1.02	1.19	1.39	1.60	1.85	2.11	2.40	2.71
55	-	-	-	-	1.13	1.31	1.51	1.74	1.99	2.26
60	-	-	-	-	-	1.04	1.21	1.40	1.61	1.85

Application range



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

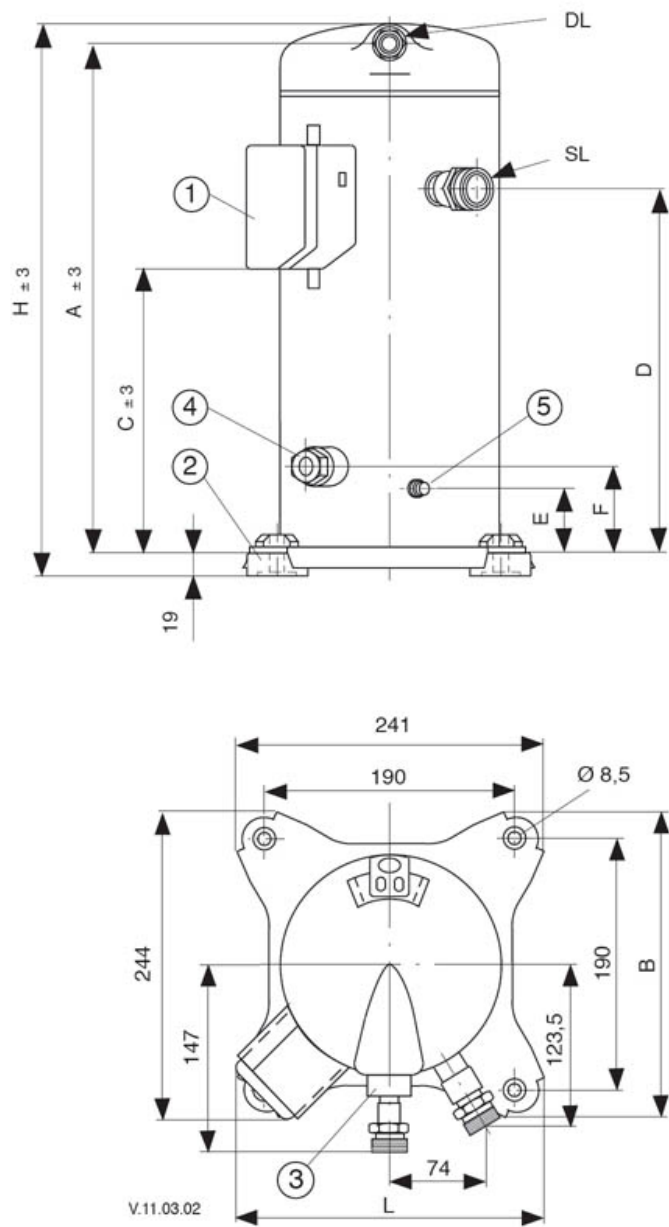
Operating conditions: suction gas temperature 20°C, 0K subcooling

t_c - Condensing temperature [°C]

t_e - Evaporating temperature [°C]

Model: ZS38K4E-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: ZS38K4E-TFD

Image

