Type: Hermetic piston compressors
Producer: Copeland
Series: ZR

Model: ZR310KCE-TWD

Technical data

Nominal motor power [HP]:	25
Displacement [m³/h]:	71,4
Sound pressure level :	74
Gross/Net weight [kg]:	188/160
Oil charge [dm³]:	6,3

Electrical data

Power supply [V/~/Hz]:	380-420/3/50Hz
Locked rotor current [A]:	272
Max. operating current [A]:	52
Winding resistance [Ω]:	0,51

Connections

	milimeters	inches
Suction Rotolock valve connection:		2 1/4"
Discharge Rotolock valve connection:		1 3/4"
Suction connection with supplied sleeve:		1 5/8"
Discharge connection with supplied sleeve:		1 3/8"

Cooling capacity [kW

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t_c \ t_e	-15	-10	-5	0	5	10	15
30	23.16	29.10	36.16	44.49	54.24	65.56	78.60
35	21.83	27.55	34.33	42.33	51.71	62.60	75.18
40	20.50	25.97	32.47	40.14	49.13	59.59	71.68
45	19.16	24.38	30.58	37.90	46.50	56.52	68.12
50	-	22.78	28.67	35.63	43.83	53.39	64.49
55	-	-	26.73	33.33	41.11	50.21	60.79
60	-	-	24.77	30.99	38.34	46.97	57.03
65	-	-	-	28.62	35.53	43.67	53.20
70	-	-	-	-	32.67	40.32	49.30

Power input [kW]

t_c \ t_e	-15	-10	-5	0	5	10	15
30	8.91	8.98	9.06	9.16	9.29	9.47	9.70
35	9.88	9.94	10.02	10.11	10.23	10.39	10.59
40	10.95	11.02	11.10	11.19	11.30	11.44	11.64
45	12.15	12.23	12.31	12.40	12.51	12.65	12.83
50	-	13.59	13.68	13.78	13.89	14.03	14.20
55	-	-	15.21	15.32	15.44	15.58	15.76
60	-	-	16.91	17.04	17.18	17.33	17.51
65	-	-	-	18.96	19.12	19.29	19.48
70	-	-	-	-	21.27	21.46	21.67

Current [A]

t_c \ t_e	-15	-10	-5	0	5	10	15
30	21.40	21.46	21.52	21.61	21.74	21.94	22.23
35	22.29	22.37	22.44	22.53	22.64	22.82	23.07
40	23.35	23.46	23.55	23.64	23.74	23.89	24.11
45	24.59	24.74	24.86	24.95	25.06	25.19	25.37
50	-	26.25	26.39	26.50	26.61	26.73	26.89
55	-	-	28.18	28.31	28.42	28.54	28.68
60	-	-	30.24	30.40	30.52	30.64	30.77
65	-	-	-	32.79	32.94	33.06	33.18
70	-	-	-	-	35.68	35.81	35.93

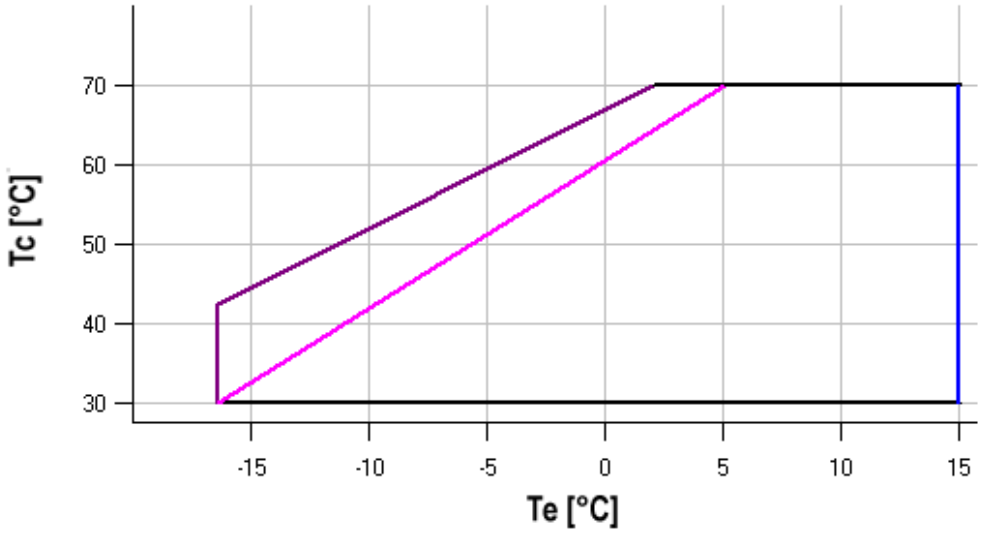
Mass flow [kg/s]

t_c \ t_e	-15	-10	-5	0	5	10	15
30	534.95	659.68	803.78	969.59	1 159.44	1 375.68	1 620.63
35	530.61	655.32	799.55	965.64	1 155.92	1 372.72	1 618.38
40	525.42	650.14	794.52	960.90	1 151.62	1 369.00	1 615.40
45	519.49	644.24	788.79	955.48	1 146.66	1 364.65	1 611.80
50	-	637.74	782.48	949.51	1 141.17	1 359.79	1 607.70
55	-	-	775.72	943.11	1 135.26	1 354.52	1 603.23
60	-	-	768.63	936.38	1 129.06	1 348.98	1 598.50
65	-	-	-	929.46	1 122.68	1 343.28	1 593.63
70	-	-	-	-	1 116.23	1 337.55	1 588.74

C.O.P. [W/W]

t_c \ t_e	-15	-10	-5	0	5	10	15
30	2.60	3.24	3.99	4.86	5.84	6.93	8.11
35	2.21	2.77	3.43	4.19	5.06	6.03	7.10
40	1.87	2.36	2.93	3.59	4.35	5.21	6.16
45	1.58	1.99	2.48	3.06	3.72	4.47	5.31
50	-	1.68	2.10	2.59	3.16	3.81	4.54
55	-	-	1.76	2.18	2.66	3.22	3.86
60	-	-	1.46	1.82	2.23	2.71	3.26
65	-	-	-	1.51	1.86	2.26	2.73
70	-	-	-	-	1.54	1.88	2.27

Application range



Maximum evaporating temperature
25ºC suction gas temperature
10K gas overheat

Operating conditions: 10K suction superheat, 0K subcooling
t_c - Condensing temperature [ºC]
t_e - Evaporating temperature [ºC]

Cooling capacity [kW

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t_c \ t_e	-20	-15	-10	-5	0	5	10	15
25	30.77	39.02	48.78	60.27	73.68	89.22	107.10	-
30	28.54	36.47	45.83	56.83	69.68	84.58	101.74	121.35
35	26.29	33.87	42.81	53.32	65.60	79.84	96.26	115.06
40	24.01	31.24	39.75	49.74	61.42	75.00	90.67	108.63
45	-	28.56	36.62	46.09	57.16	70.05	84.96	102.08
50	-	-	33.45	42.37	52.83	65.01	79.13	95.40
55	-	-	-	38.59	48.41	59.88	73.20	88.59
60	-	-	-	-	43.91	54.65	67.16	81.66
65	-	-	-	-	-	49.33	61.02	74.61

Power input [kW]

t_c \ t_e	-20	-15	-10	-5	0	5	10	15
25	11.06	11.27	11.51	11.79	12.11	12.46	12.85	-
30	12.30	12.46	12.66	12.91	13.20	13.53	13.90	14.32
35	13.79	13.89	14.04	14.24	14.49	14.79	15.14	15.54
40	15.56	15.60	15.69	15.84	16.04	16.29	16.60	16.97
45	-	17.62	17.64	17.73	17.87	18.07	18.33	18.66
50	-	-	19.94	19.95	20.02	20.16	20.36	20.64
55	-	-	-	22.55	22.54	22.60	22.74	22.95
60	-	-	-	-	25.46	25.44	25.49	25.63
65	-	-	-	-	-	28.70	28.67	28.72

Current [A]

t_c \ t_e	-20	-15	-10	-5	0	5	10	15
25	24.37	24.64	24.86	25.10	25.38	25.77	26.30	-
30	25.73	26.00	26.22	26.42	26.67	27.00	27.45	28.08
35	27.32	27.59	27.80	27.98	28.19	28.46	28.84	29.38
40	29.21	29.49	29.69	29.85	30.01	30.23	30.55	31.00
45	-	31.78	31.97	32.11	32.23	32.40	32.64	33.02
50	-	-	34.72	34.84	34.93	35.04	35.22	35.51
55	-	-	-	38.12	38.18	38.24	38.35	38.56
60	-	-	-	-	42.06	42.07	42.12	42.24
65	-	-	-	-	-	46.62	46.60	46.65

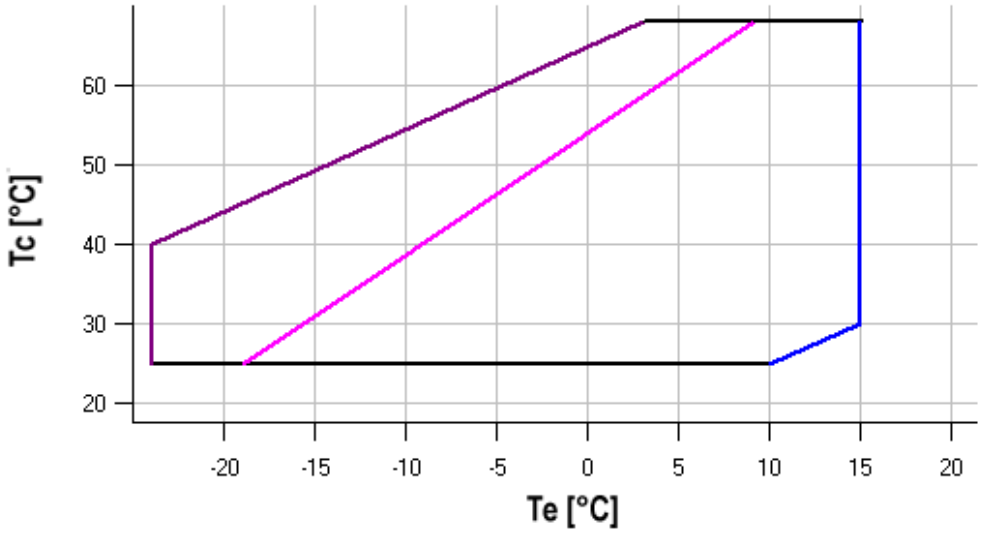
Mass flow [kg/s]

t_c \ t_e	-20	-15	-10	-5	0	5	10	15
25	616.30	772.65	952.59	1 159.53	1 396.88	1 668.06	1 976.49	-
30	600.42	755.93	935.00	1 141.04	1 377.46	1 647.69	1 955.12	2 303.18
35	581.50	736.32	914.65	1 119.94	1 355.57	1 624.98	1 931.57	2 278.76
40	559.50	713.75	891.51	1 096.18	1 331.17	1 599.91	1 905.80	2 252.26
45	-	688.21	865.53	1 069.73	1 304.22	1 572.43	1 877.77	2 223.65
50	-	-	836.66	1 040.54	1 274.68	1 542.51	1 847.43	2 192.87
55	-	-	-	1 008.57	1 242.51	1 510.09	1 814.75	2 159.89
60	-	-	-	-	1 207.66	1 475.15	1 779.68	2 124.67
65	-	-	-	-	-	1 437.64	1 742.19	2 087.16

C.O.P. [W/W]

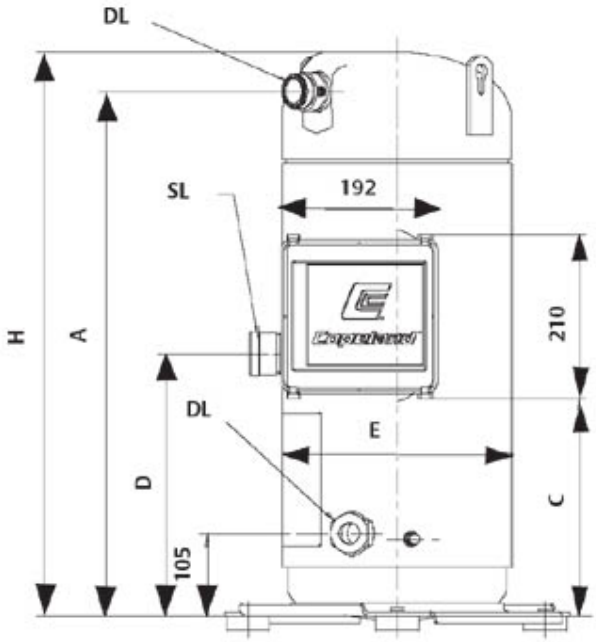
t_c \ t_e	-20	-15	-10	-5	0	5	10	15
25	2.78	3.46	4.24	5.11	6.09	7.16	8.33	-
30	2.32	2.93	3.62	4.40	5.28	6.25	7.32	8.47
35	1.91	2.44	3.05	3.74	4.53	5.40	6.36	7.40
40	1.54	2.00	2.53	3.14	3.83	4.60	5.46	6.40
45	-	1.62	2.08	2.60	3.20	3.88	4.63	5.47
50	-	-	1.68	2.12	2.64	3.23	3.89	4.62
55	-	-	-	1.71	2.15	2.65	3.22	3.86
60	-	-	-	-	1.72	2.15	2.63	3.19
65	-	-	-	-	-	1.72	2.13	2.60

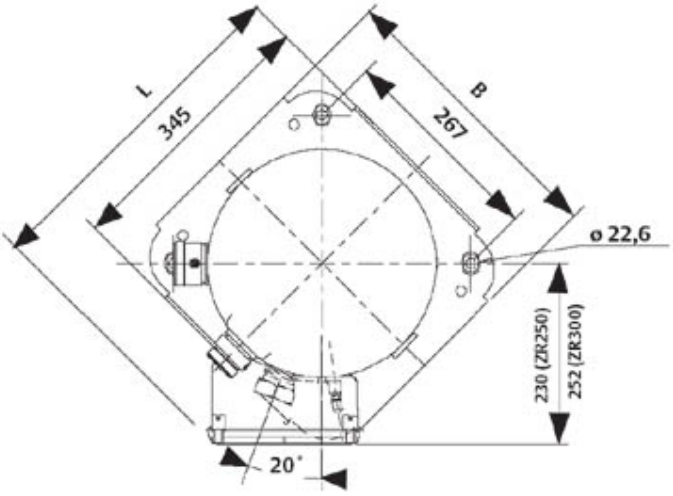
Application range



Maximum evaporating temperature
25ºC suction gas temperature
10K gas overheat

Operating conditions: 10K suction superheat, 0K subcooling
t_c - Condensing temperature [ºC]
t_e - Evaporating temperature [ºC]





A	660 mm
B	368 mm
C	275 mm
D	375 mm
E	334 mm
H	716 mm
L	449 mm

Model: ZR310KCE-TWD

Image