
GACO SARL

28, Rue Bencharif Madani

25000 BELLEVUE/CONSTANTINE - ALGERIE

Tel. : 031 92 54 56 / 031 93 22 23 - Fax : 031 92 13 45

Email : gacosarl@gmail.com / benkobbi_fares@yahoo.fr

**Type: Hermetic scroll compressors****Producer: Copeland****Series: ZR****Model: ZR160KCE-TFD****Technical data**

Displacement [m ³ /h]:	36,4
Sound power [dBA]:	79
Sound pressure level [dB]:	68
Net Weight [kg]:	64,9
Gross Weight [kg]:	75
Oil charge [dm ³]:	3,3
Maximum high pressure [bar]:	32
Maximum standstill pressure [bar]:	20
Minimal lowside temperature [°C]:	-35
Maximum lowside temperature [°C]:	52
PED category:	2

Electrical data

Power supply [V/~ /Hz]:	380-420/3/50Hz
Locked rotor current [A]:	140
Max. operating current [A]:	28,0
Winding resistance [Ω]:	1,1

Connections

	<u>inches</u>
Suction connection with supplied sleeve:	1 3/8"
Discharge connection with supplied sleeve:	7/8"

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R134a

Cooling capacity [kW]

$t_c \setminus t_e$	-15	-10	-5	0	5	10	15
25	13.91	17.00	20.48	24.46	29.00	34.22	-
30	13.11	16.21	19.65	23.51	27.89	32.86	38.53
35	12.14	15.30	18.72	22.51	26.74	31.51	36.90
40	10.98	14.23	17.67	21.41	25.53	30.13	35.28
45	9.60	12.95	16.45	20.18	24.22	28.68	33.62
50	-	11.45	15.03	18.78	22.78	27.12	31.89
55	-	9.66	13.36	17.16	21.15	25.42	30.05
60	-	-	11.42	15.30	19.31	23.53	28.05
65	-	-	9.16	13.16	17.22	21.43	25.88
70	-	-	-	10.69	14.84	19.07	23.47
75	-	-	-	7.87	12.13	16.41	20.80

Power input [kW]

$t_c \setminus t_e$	-15	-10	-5	0	5	10	15
25	3.95	4.02	4.05	4.00	3.85	3.57	-
30	4.35	4.45	4.52	4.56	4.51	4.35	4.06
35	4.81	4.89	4.99	5.07	5.10	5.04	4.88
40	5.35	5.40	5.49	5.59	5.67	5.68	5.61
45	6.03	6.02	6.07	6.16	6.25	6.31	6.31
50	-	6.78	6.77	6.82	6.90	6.97	7.02
55	-	7.74	7.64	7.62	7.66	7.72	7.77
60	-	-	8.71	8.60	8.56	8.58	8.62
65	-	-	10.04	9.80	9.67	9.61	9.60
70	-	-	-	11.27	11.01	10.85	10.77
75	-	-	-	13.05	12.63	12.35	12.16

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**Current [A]**

$t_c \setminus t_e$	-15	-10	-5	0	5	10	15
25	9.90	10.00	10.15	10.41	10.81	11.42	-
30	10.51	10.58	10.68	10.86	11.16	11.64	12.33
35	11.25	11.30	11.36	11.48	11.70	12.07	12.63
40	12.13	12.17	12.21	12.28	12.43	12.71	13.15
45	13.15	13.21	13.23	13.27	13.37	13.56	13.90
50	-	14.40	14.43	14.45	14.50	14.63	14.88
55	-	15.77	15.82	15.83	15.85	15.93	16.10
60	-	-	17.39	17.41	17.42	17.46	17.57
65	-	-	19.16	19.20	19.21	19.22	19.29
70	-	-	-	21.21	21.23	21.23	21.27
75	-	-	-	23.43	23.48	23.49	23.51

Mass flow [kg/h]

$t_c \setminus t_e$	-15	-10	-5	0	5	10	15
25	307.52	368.16	434.57	509.03	593.81	691.17	-
30	304.29	368.35	436.53	511.11	594.37	688.56	795.97
35	296.27	365.33	436.86	513.16	596.47	689.08	793.25
40	281.68	357.32	433.80	513.38	598.33	690.94	793.45
45	258.75	342.56	425.55	510.00	598.18	692.36	794.81
50	-	319.25	410.34	501.24	594.23	691.57	795.53
55	-	285.62	386.39	485.33	584.71	686.78	793.84
60	-	-	351.93	460.49	567.83	676.23	787.96
65	-	-	305.18	424.93	541.83	658.13	776.11
70	-	-	-	376.89	504.91	630.70	756.52
75	-	-	-	314.57	455.31	592.17	727.41

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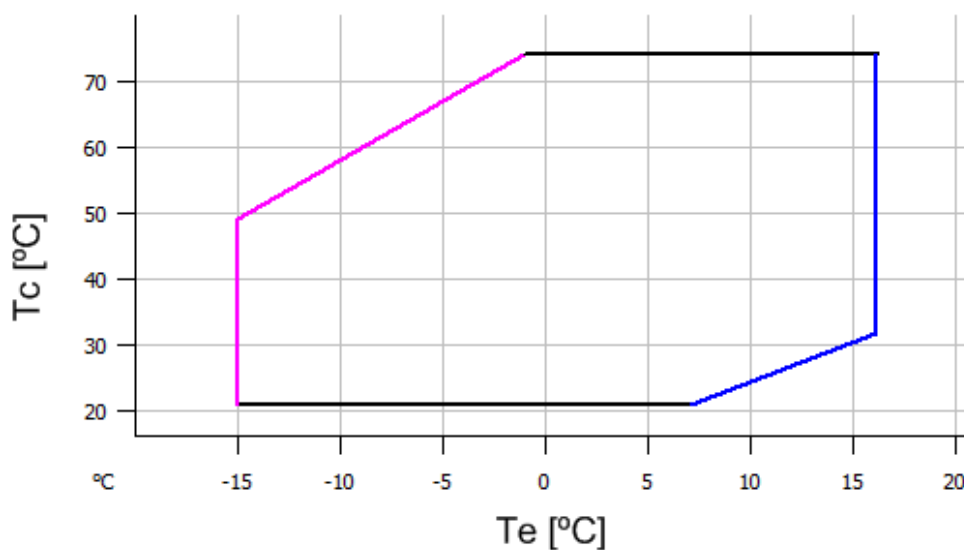
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**C.O.P. [W/W]**

$t_c \setminus t_e$	-15	-10	-5	0	5	10	15
25	3.53	4.23	5.06	6.11	7.53	9.60	-
30	3.01	3.65	4.34	5.16	6.18	7.55	9.50
35	2.53	3.13	3.75	4.44	5.24	6.25	7.57
40	2.05	2.63	3.22	3.83	4.51	5.30	6.29
45	1.59	2.15	2.71	3.28	3.88	4.54	5.33
50	-	1.69	2.22	2.75	3.30	3.89	4.55
55	-	1.25	1.75	2.25	2.76	3.29	3.87
60	-	-	1.31	1.78	2.26	2.74	3.26
65	-	-	0.91	1.34	1.78	2.23	2.69
70	-	-	-	0.95	1.35	1.76	2.18
75	-	-	-	0.60	0.96	1.33	1.71

Application range

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

Operating conditions: 10K suction superheat, 0K subcooling

 t_c - Condensing temperature [°C] t_e - Evaporating temperature [°C]

R407C**Cooling capacity [kW]**

t_c \ t_e	-25	-20	-15	-10	-5	0	5	10	15	20
25	11.24	14.85	19.18	24.31	30.37	37.46	45.70	55.19	-	-
30	10.06	13.60	17.81	22.79	28.67	35.54	43.52	52.72	63.24	-
35	8.85	12.29	16.37	21.19	26.86	33.49	41.20	50.08	60.27	71.85
40	-	10.93	14.86	19.49	24.94	31.32	38.74	47.30	57.12	68.30
45	-	-	13.30	17.73	22.94	29.05	36.15	44.37	53.81	64.58
50	-	-	-	15.90	20.86	26.67	33.45	41.30	50.34	60.68
55	-	-	-	-	18.70	24.21	30.64	38.12	46.74	56.63
60	-	-	-	-	-	21.66	27.74	34.81	43.00	52.42
65	-	-	-	-	-	-	24.74	31.40	39.14	48.07

Power input [kW]

t_c \ t_e	-25	-20	-15	-10	-5	0	5	10	15	20
25	5.54	5.61	5.68	5.76	5.84	5.94	6.07	6.23	-	-
30	6.22	6.30	6.37	6.45	6.53	6.62	6.73	6.87	7.04	-
35	6.98	7.07	7.15	7.22	7.29	7.37	7.46	7.58	7.72	7.91
40	-	7.95	8.03	8.09	8.15	8.21	8.29	8.38	8.49	8.64
45	-	-	9.04	9.09	9.14	9.18	9.23	9.29	9.38	9.48
50	-	-	-	10.25	10.28	10.30	10.32	10.35	10.40	10.47
55	-	-	-	-	11.59	11.59	11.59	11.58	11.59	11.61
60	-	-	-	-	-	13.08	13.04	13.00	12.97	12.94
65	-	-	-	-	-	-	14.72	14.64	14.56	14.49

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**Current [A]**

t_c \ t_e	-25	-20	-15	-10	-5	0	5	10	15	20
25	13.56	13.58	13.61	13.66	13.74	13.86	14.04	14.28	-	-
30	14.29	14.35	14.40	14.46	14.53	14.62	14.74	14.92	15.15	-
35	15.06	15.17	15.26	15.33	15.40	15.47	15.55	15.66	15.81	16.02
40	-	16.09	16.22	16.32	16.39	16.45	16.50	16.57	16.65	16.77
45	-	-	17.33	17.46	17.55	17.61	17.65	17.67	17.70	17.74
50	-	-	-	18.81	18.93	18.99	19.02	19.02	19.00	18.97
55	-	-	-	-	20.56	20.64	20.67	20.65	20.59	20.51
60	-	-	-	-	-	22.60	22.63	22.61	22.52	22.39
65	-	-	-	-	-	-	24.96	24.93	24.83	24.67

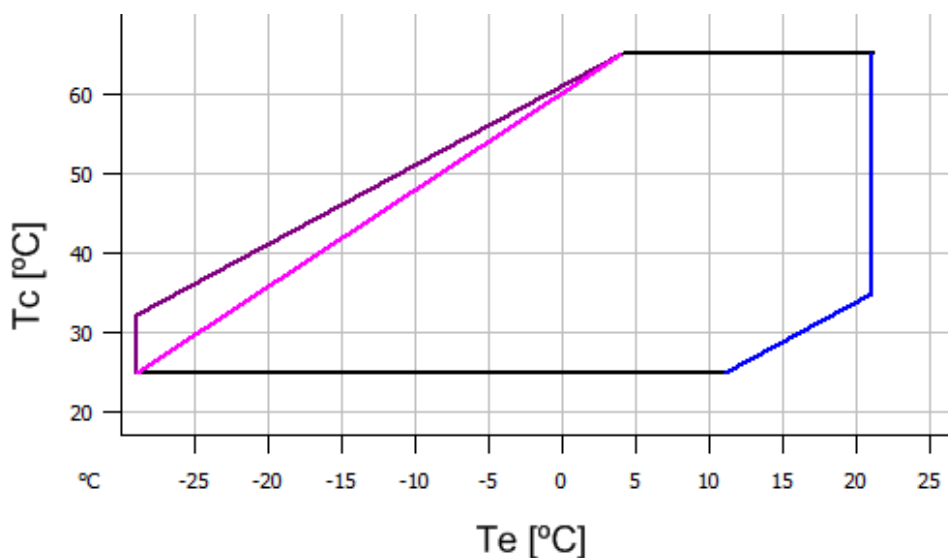
Mass flow [kg/h]

t_c \ t_e	-25	-20	-15	-10	-5	0	5	10	15	20
25	25 224 891.19	25 224 962.20	25 225 044.26	25 225 139.15	25 225 248.64	25 225 374.52	25 225 518.54	25 225 682.50	-	-
30	43 588 434.44	43 588 506.00	43 588 588.73	43 588 684.41	43 588 794.81	43 588 921.70	43 589 066.86	43 589 232.06	43 589 419.07	-
35	69 216 678.10	69 216 750.28	69 216 833.75	69 216 930.28	69 217 041.64	69 217 169.61	69 217 315.96	69 217 482.47	69 217 670.90	69 217 883.04
40	-	103 320 478.74	103 320 563.01	103 320 660.45	103 320 772.84	103 320 901.95	103 321 049.55	103 321 217.43	103 321 407.35	103 321 621.08
45	-	-	147 110 560.19	147 110 658.60	147 110 772.08	147 110 902.40	147 111 051.32	147 111 220.63	147 111 412.09	147 111 627.48
50	-	-	-	201 797 708.44	201 797 823.07	201 797 954.65	201 798 104.95	201 798 275.75	201 798 468.83	201 798 685.94
55	-	-	-	-	268 592 709.49	268 592 842.40	268 592 994.15	268 593 166.50	268 593 361.25	268 593 580.15
60	-	-	-	-	-	348 706 349.34	348 706 502.59	348 706 676.57	348 706 873.05	348 707 093.79
65	-	-	-	-	-	-	443 349 413.99	443 349 589.64	443 349 787.91	443 350 010.57

C.O.P. [W/W]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10	15	20
25	2.03	2.65	3.37	4.22	5.20	6.31	7.53	8.86	-	-
30	1.62	2.16	2.79	3.54	4.39	5.37	6.47	7.67	8.98	-
35	1.27	1.74	2.29	2.94	3.69	4.55	5.52	6.61	7.80	9.09
40	-	1.38	1.85	2.41	3.06	3.81	4.67	5.65	6.73	7.91
45	-	-	1.47	1.95	2.51	3.16	3.92	4.77	5.74	6.81
50	-	-	-	1.55	2.03	2.59	3.24	3.99	4.84	5.80
55	-	-	-	-	1.61	2.09	2.64	3.29	4.03	4.88
60	-	-	-	-	-	1.66	2.13	2.68	3.32	4.05
65	-	-	-	-	-	-	1.68	2.15	2.69	3.32

Application range



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

Operating conditions: 10K suction superheat, 0K subcooling

t_c - Condensing temperature [°C]

t_e - Evaporating temperature [°C]

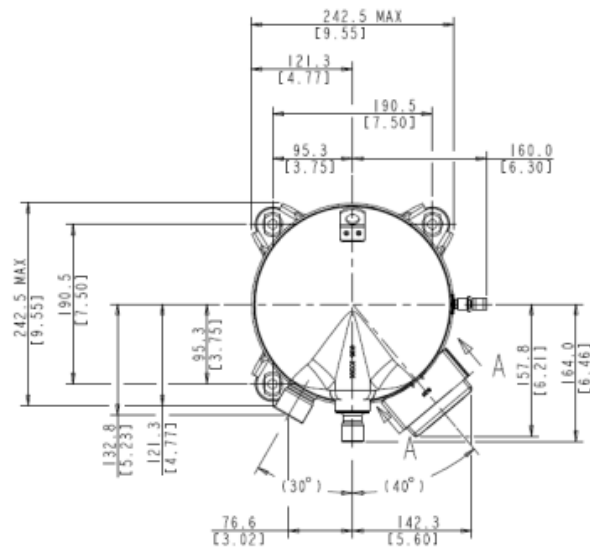
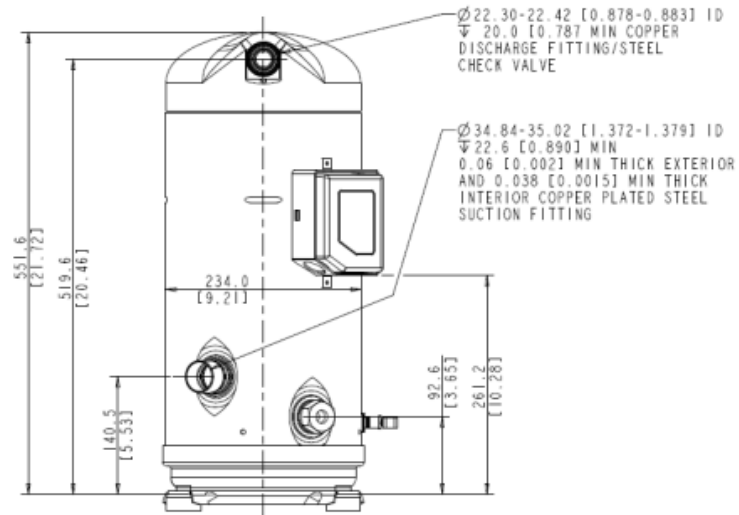
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