

Type: Semi-hermetic piston compressors

Producer: Copeland

Series: S

Model: D2SA-450 Air

Technical data

Cylinder count:	2
Displacement [m ³ /h]:	22,4
Weight [kg]:	95
Oil charge [dm ³]:	2,4
Max. operating current [A]:	10,4
Locked rotor current [A]:	68,5
Power supply [V/~/Hz]:	400V/3/50Hz

Connections

	<u>milimeters</u>	<u>inches</u>
Suction line:		
Discharge line:		

R22

Cooling capacity [kW]

t_c \ t_e	-45	-40	-35	-30	-25	-20	-15	-10	-5
10	2.80	3.89	5.20	6.76	8.59	10.74	13.22	16.07	19.31
15	2.50	3.55	4.80	6.30	8.07	10.13	12.52	15.27	18.39
20	2.21	3.21	4.41	5.85	7.54	9.52	11.82	14.46	17.48
25	1.92	2.88	4.03	5.40	7.02	8.92	11.13	13.66	16.56
30	1.63	2.55	3.65	4.96	6.51	8.33	10.44	12.87	15.65
35	1.37	2.24	3.29	4.53	6.01	7.74	9.76	12.08	14.75
40	1.11	1.94	2.93	4.12	5.52	7.16	9.09	11.31	13.87
45	0.87	1.66	2.60	3.72	5.04	6.60	8.43	-	-
50	-	1.39	2.28	3.33	4.58	6.06	-	-	-
55	-	1.14	1.97	2.96	4.14	5.53	-	-	-

Power input [kW]

t_c \ t_e	-45	-40	-35	-30	-25	-20	-15	-10	-5
10	1.66	1.89	2.11	2.31	2.47	2.60	2.69	2.73	2.73
15	1.71	1.97	2.23	2.46	2.67	2.84	2.99	3.09	3.15
20	1.73	2.03	2.32	2.59	2.84	3.07	3.26	3.42	3.54
25	1.74	2.07	2.39	2.70	3.00	3.27	3.52	3.73	3.91
30	1.73	2.09	2.45	2.80	3.14	3.46	3.76	4.03	4.27
35	1.71	2.10	2.49	2.88	3.26	3.63	3.98	4.31	4.61
40	1.67	2.09	2.52	2.95	3.37	3.79	4.19	4.58	4.94
45	1.63	2.08	2.54	3.00	3.47	3.94	4.39	-	-
50	-	2.05	2.54	3.05	3.56	4.07	-	-	-
55	-	2.01	2.54	3.09	3.64	4.20	-	-	-

Current [A]

t_c \ t_e	-45	-40	-35	-30	-25	-20	-15	-10	-5
10	4.46	4.68	4.92	5.14	5.35	5.53	5.66	5.72	5.71
15	4.47	4.71	4.98	5.24	5.50	5.73	5.92	6.06	6.13
20	4.48	4.75	5.05	5.35	5.66	5.95	6.20	6.41	6.57
25	4.49	4.79	5.12	5.46	5.82	6.17	6.49	6.78	7.01
30	4.50	4.82	5.18	5.58	5.98	6.39	6.78	7.14	7.47
35	4.49	4.84	5.24	5.68	6.14	6.61	7.07	7.51	7.92
40	4.47	4.85	5.29	5.77	6.29	6.82	7.35	7.87	8.37
45	4.43	4.84	5.31	5.85	6.42	7.01	7.62	-	-
50	-	4.80	5.32	5.90	6.53	7.19	-	-	-
55	-	4.73	5.29	5.92	6.61	7.34	-	-	-

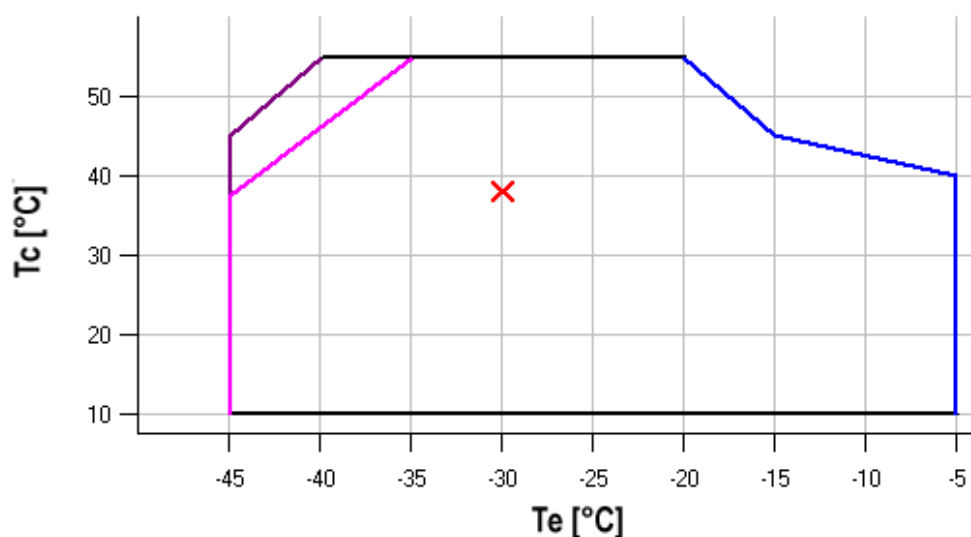
Mass flow [kg/s]

t_c \ t_e	-45	-40	-35	-30	-25	-20	-15	-10	-5
10	55.82	76.64	101.12	129.70	162.83	200.95	244.51	293.95	349.71
15	51.55	72.25	96.58	124.97	157.88	195.75	239.02	288.14	343.56
20	47.09	67.66	91.82	120.02	152.70	190.31	233.28	282.08	337.13
25	42.48	62.91	86.90	114.89	147.33	184.66	227.33	275.78	330.46
30	37.76	58.04	81.84	109.61	141.80	178.84	221.19	269.29	323.59
35	32.96	53.07	76.68	104.22	136.14	172.89	214.91	262.65	316.54
40	28.12	48.06	71.45	98.75	130.40	166.84	208.52	255.88	309.37
45	23.27	43.02	66.20	93.25	124.61	160.73	202.05	-	-
50	-	38.01	60.95	87.73	118.80	154.59	-	-	-
55	-	33.04	55.75	82.25	113.01	148.45	-	-	-

C.O.P. [W/W]

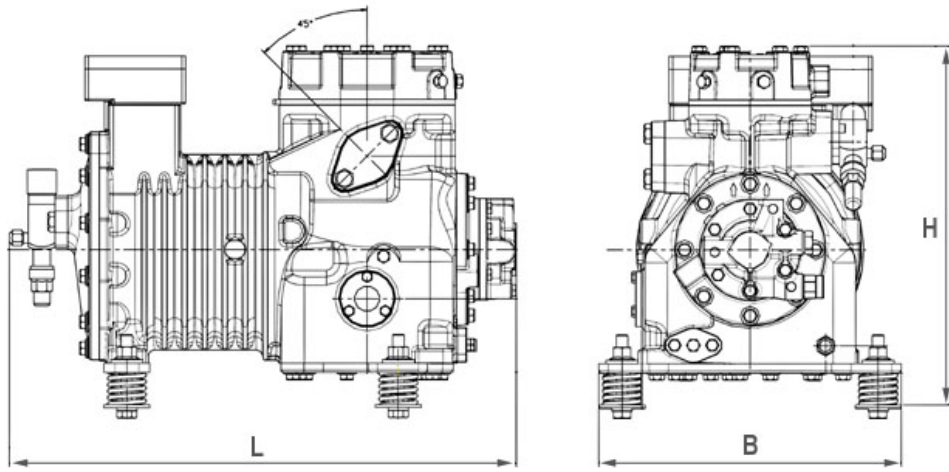
$t_c \setminus t_e$	-45	-40	-35	-30	-25	-20	-15	-10	-5
10	1.69	2.05	2.46	2.93	3.48	4.13	4.92	5.88	7.07
15	1.47	1.80	2.16	2.56	3.03	3.56	4.19	4.94	5.85
20	1.27	1.58	1.90	2.26	2.65	3.11	3.62	4.23	4.94
25	1.10	1.39	1.68	2.00	2.34	2.73	3.16	3.66	4.23
30	0.94	1.22	1.49	1.77	2.07	2.41	2.78	3.19	3.67
35	0.80	1.07	1.32	1.57	1.84	2.13	2.45	2.80	3.20
40	0.66	0.93	1.16	1.40	1.64	1.89	2.17	2.47	2.81
45	0.53	0.80	1.02	1.24	1.45	1.68	1.92	-	-
50	-	0.68	0.89	1.09	1.29	1.49	-	-	-
55	-	0.57	0.78	0.96	1.14	1.32	-	-	-

Application range



- Maximum evaporating temperature
- 25°C suction gas return + additional cooling
- 20K suction gas return + additional cooling

Operating conditions: ISO; subcooling: 0 K, suction superheat: 10 K, return gas temperature: -
 t_c - Condensing temperature [°C]
 t_e - Evaporating temperature [°C]



L	560 mm
B	330 mm
H	395 mm

