

Model: D2DL-40 X

Data

Type: Semi-hermetic piston compressors

Producer: Copeland

Series: DISCUS

Model: D2DL-40 X

Technical data

Cylinder count:	2
Displacement [m ³ /h]:	23,7
Weight [kg]:	140
Oil charge [dm ³]:	2,3
Max. operating current [A]:	10
Locked rotor current [A]:	55
Power supply [V/~/Hz]:	380-420V/3/50Hz

Connections

	<u>milimeters</u>	<u>inches</u>
Suction line:		1 3/8"
Discharge line:		7/8"

Model: D2DL-40 X

Capacity

R134a

Cooling capacity [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	4.54	6.18	8.13	10.45	13.17	16.34	20.02
35	4.04	5.61	7.47	9.68	12.27	15.29	18.79
40	3.57	5.06	6.83	8.92	11.37	14.23	17.54
45	3.14	4.55	6.20	8.16	10.46	13.15	16.27
50	2.75	4.05	5.59	7.41	9.54	12.05	14.97
55	2.39	3.59	5.00	6.66	8.63	10.94	13.65
60	2.07	3.15	4.42	5.92	7.70	9.82	12.30

Power input [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	2.15	2.35	2.53	2.66	2.74	2.75	2.68
35	2.20	2.46	2.69	2.88	3.02	3.09	3.10
40	2.26	2.55	2.83	3.07	3.27	3.41	3.49
45	2.31	2.64	2.96	3.25	3.50	3.70	3.85
50	2.35	2.71	3.07	3.40	3.70	3.96	4.17
55	2.38	2.77	3.16	3.53	3.88	4.19	4.45
60	2.40	2.82	3.23	3.64	4.02	4.38	4.69

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Capacity

Current [A]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	5.30	5.53	5.74	5.91	6.00	6.01	5.92
35	5.37	5.66	5.93	6.17	6.36	6.46	6.47
40	5.43	5.77	6.11	6.42	6.69	6.89	7.00
45	5.49	5.88	6.27	6.65	6.99	7.28	7.50
50	5.53	5.96	6.41	6.85	7.27	7.65	7.96
55	5.57	6.04	6.53	7.03	7.52	7.98	8.39
60	5.59	6.09	6.63	7.19	7.75	8.29	8.78

Mass flow [kg/s]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	107.30	143.30	184.68	232.25	286.79	349.09	419.95
35	100.03	136.28	177.79	225.34	279.73	341.75	412.20
40	93.33	129.54	170.86	218.10	272.05	333.49	403.22
45	87.11	122.97	163.82	210.44	263.64	324.20	392.91
50	81.26	116.48	156.55	202.26	254.41	313.79	381.19
55	75.71	109.97	148.96	193.46	244.26	302.16	367.94
60	70.34	103.36	140.96	183.95	233.10	289.21	353.08

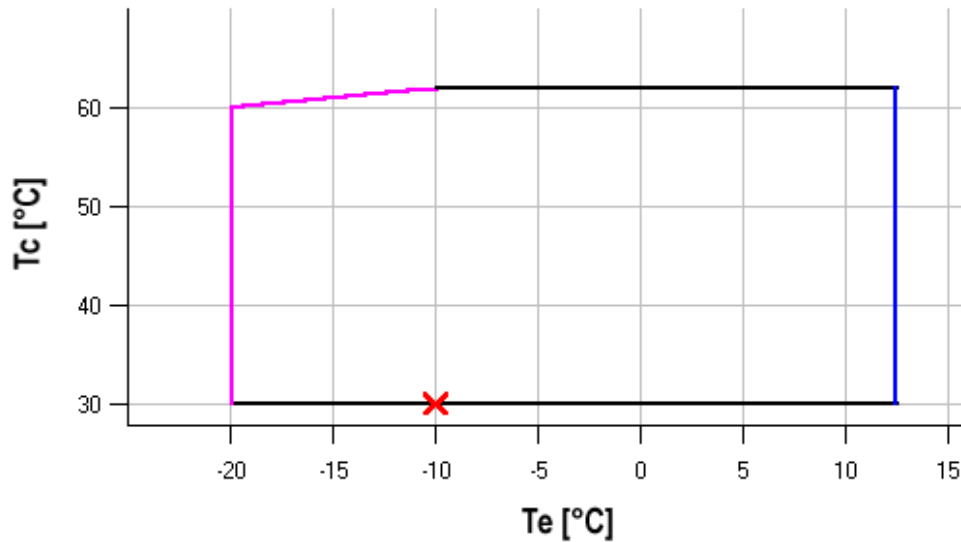
Model: D2DL-40 X

Capacity

C.O.P. [W/W]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	2.11	2.62	3.21	3.93	4.81	5.95	7.47
35	1.83	2.28	2.78	3.37	4.07	4.94	6.06
40	1.58	1.98	2.42	2.90	3.48	4.17	5.02
45	1.36	1.72	2.10	2.51	2.99	3.55	4.23
50	1.17	1.49	1.82	2.18	2.58	3.04	3.59
55	1.00	1.29	1.58	1.89	2.22	2.61	3.07
60	0.86	1.12	1.37	1.63	1.92	2.24	2.62

Application range



- █ Maximum evaporating temperature
- █ 25°C suction gas temperature

Operating conditions: ISO; subcooling: 0 K, suction superheat: 10 K, return gas temperature: -

t_c - Condensing temperature [°C]

t_e - Evaporating temperature [°C]

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Capacity

R404A/R507

Cooling capacity [kW]

t_c \ t_e	-50	-45	-40	-35	-30	-25	-20	-15	-10
20	2.19	3.15	4.35	5.79	7.52	9.57	11.95	14.71	17.86
25	1.90	2.81	3.93	5.28	6.90	8.81	11.04	13.62	16.57
30	1.61	2.47	3.52	4.78	6.29	8.06	10.14	12.54	15.30
35	1.33	2.14	3.12	4.29	5.68	7.33	9.25	11.48	14.05
40	-	1.82	2.73	3.81	5.09	6.61	8.38	10.44	12.82
45	-	1.51	2.35	3.34	4.52	5.90	7.53	9.42	11.60
50	-	-	1.99	2.90	3.96	5.22	6.69	8.41	10.40
55	-	-	1.65	2.46	3.42	4.55	5.88	7.43	9.23

Power input [kW]

t_c \ t_e	-50	-45	-40	-35	-30	-25	-20	-15	-10
20	1.71	2.03	2.34	2.63	2.88	3.11	3.28	3.41	3.47
25	1.70	2.04	2.38	2.71	3.01	3.29	3.52	3.71	3.85
30	1.67	2.04	2.41	2.78	3.12	3.45	3.74	4.00	4.20
35	1.62	2.02	2.42	2.83	3.22	3.59	3.94	4.26	4.53
40	-	1.99	2.42	2.86	3.30	3.72	4.12	4.50	4.84
45	-	1.95	2.41	2.88	3.36	3.83	4.29	4.72	5.13
50	-	-	2.39	2.89	3.40	3.92	4.43	4.92	5.39
55	-	-	2.35	2.89	3.44	4.00	4.56	5.11	5.64

Model: D2DL-40 X

Capacity

Current [A]

$t_c \setminus t_e$	-50	-45	-40	-35	-30	-25	-20	-15	-10
20	4.83	5.17	5.51	5.84	6.14	6.41	6.63	6.78	6.85
25	4.84	5.21	5.60	5.98	6.34	6.68	6.98	7.22	7.39
30	4.82	5.22	5.65	6.08	6.50	6.91	7.28	7.61	7.88
35	4.77	5.21	5.67	6.15	6.63	7.10	7.55	7.96	8.32
40	-	5.17	5.67	6.19	6.73	7.26	7.79	8.28	8.73
45	-	5.11	5.65	6.21	6.80	7.40	7.99	8.57	9.11
50	-	-	5.61	6.22	6.86	7.52	8.18	8.83	9.46
55	-	-	5.57	6.22	6.91	7.62	8.35	9.08	9.80

Mass flow [kg/s]

$t_c \setminus t_e$	-50	-45	-40	-35	-30	-25	-20	-15	-10
20	43.67	67.23	94.79	127.42	166.17	212.09	266.25	329.70	403.49
25	40.43	63.27	90.07	121.87	159.75	204.75	257.93	320.35	393.06
30	36.83	58.96	85.00	116.00	153.02	197.11	249.33	310.73	382.38
35	32.92	54.37	79.66	109.87	146.04	189.24	240.51	300.92	371.51
40	-	49.57	74.14	103.56	138.91	181.22	231.56	290.98	360.53
45	-	44.64	68.50	97.16	131.68	173.12	222.54	280.99	349.52
50	-	-	62.82	90.73	124.45	165.03	213.54	271.03	338.56
55	-	-	57.17	84.35	117.28	157.02	204.64	261.18	327.71

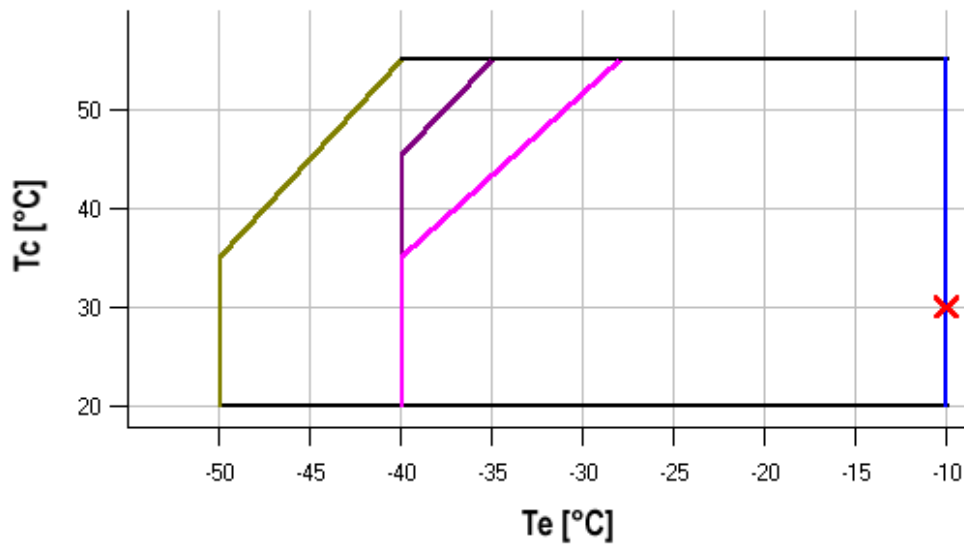
Model: D2DL-40 X





Capacity

C.O.P. [W/W]

$t_c \setminus t_e$	-50	-45	-40	-35	-30	-25	-20	-15	-10
20	1.28	1.55	1.86	2.21	2.61	3.08	3.64	4.32	5.15
25	1.12	1.38	1.65	1.95	2.29	2.68	3.13	3.67	4.31
30	0.97	1.21	1.46	1.72	2.01	2.34	2.71	3.14	3.64
35	0.82	1.06	1.29	1.52	1.77	2.04	2.35	2.70	3.10
40	-	0.91	1.13	1.33	1.55	1.78	2.03	2.32	2.65
45	-	0.78	0.98	1.16	1.35	1.54	1.76	1.99	2.26
50	-	-	0.83	1.00	1.16	1.33	1.51	1.71	1.93
55	-	-	0.70	0.85	1.00	1.14	1.29	1.45	1.64

Application range



-  Maximum evaporating temperature
-  25°C suction gas temperature
-  0°C suction gas return + additional cooling
-  0°C suction gas return

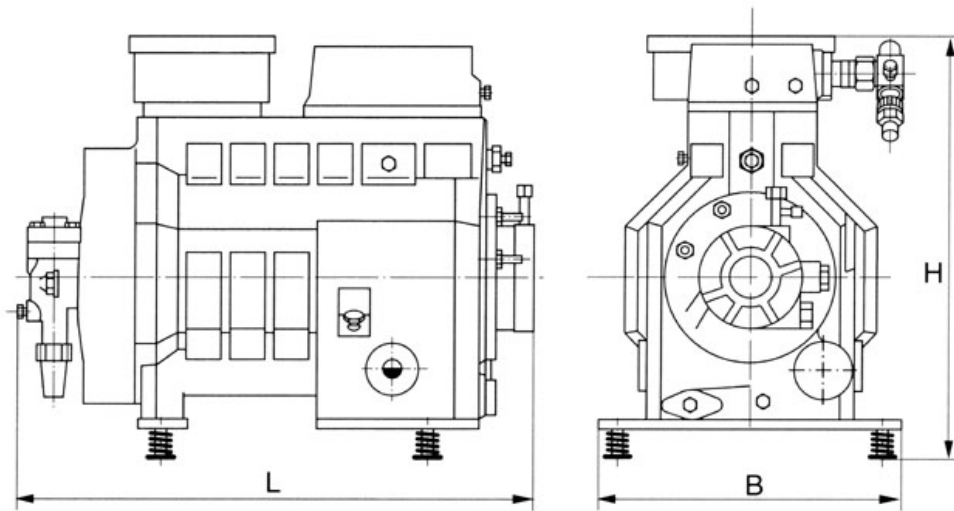
Operating conditions: ISO; subcooling: 0 K, suction superheat: - K, return gas temperature: 20

t_c - Condensing temperature [°C]

t_e - Evaporating temperature [°C]

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Dimensions



L	590 mm
B	330 mm
H	470 mm

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Image

