



# Model: DLL-40 X

## Data

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Type: Semi-hermetic piston compressors

Producer: Copeland

Series: DL

## Model: DLL-40 X

### Technical data

Cylinder count:	2
Displacement [m <sup>3</sup> /h]:	18,2
Weight [kg]:	93
Oil charge [dm <sup>3</sup> ]:	2,3
Max. operating current [A]:	9,5
Locked rotor current [A]:	68,5
Power supply [V/~/Hz]:	380-420V/3/50Hz

### Connections

	<u>milimeters</u>	<u>inches</u>
Suction line:		1 1/8"
Discharge line:		5/8"

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**Cooling capacity [kW]**

<b>t<sub>c</sub> \ t<sub>e</sub></b>	<b>-40</b>	<b>-35</b>	<b>-30</b>	<b>-25</b>	<b>-20</b>	<b>-15</b>	<b>-10</b>	<b>-5</b>	<b>0</b>	<b>5</b>	<b>10</b>
<b>30</b>	1.95	2.87	4.05	5.47	7.16	9.11	11.32	13.79	16.54	19.57	22.87
<b>35</b>	1.65	2.51	3.62	4.97	6.56	8.41	10.51	12.87	15.49	18.38	21.53
<b>40</b>	1.38	2.18	3.21	4.48	5.99	7.74	9.73	11.97	14.46	17.21	20.21
<b>45</b>	-	1.87	2.84	4.03	5.44	7.09	8.98	11.10	13.46	16.07	18.93
<b>50</b>	-	-	2.48	3.60	4.93	6.48	8.25	10.26	12.49	14.96	17.67
<b>55</b>	-	-	2.16	3.19	4.44	5.89	7.56	9.44	11.55	13.88	-
<b>60</b>	-	-	1.86	2.82	3.97	5.33	6.89	8.66	10.64	-	-

**Power input [kW]**

<b>t<sub>c</sub> \ t<sub>e</sub></b>	<b>-40</b>	<b>-35</b>	<b>-30</b>	<b>-25</b>	<b>-20</b>	<b>-15</b>	<b>-10</b>	<b>-5</b>	<b>0</b>	<b>5</b>	<b>10</b>
<b>30</b>	1.71	1.98	2.26	2.54	2.80	3.04	3.24	3.39	3.49	3.51	3.44
<b>35</b>	1.71	2.00	2.31	2.62	2.92	3.20	3.45	3.66	3.81	3.90	3.90
<b>40</b>	1.71	2.02	2.35	2.69	3.03	3.35	3.65	3.91	4.12	4.27	4.34
<b>45</b>	-	2.03	2.39	2.76	3.13	3.49	3.84	4.14	4.41	4.62	4.76
<b>50</b>	-	-	2.42	2.82	3.22	3.62	4.01	4.37	4.69	4.96	5.16
<b>55</b>	-	-	2.45	2.87	3.31	3.74	4.17	4.58	4.95	5.28	-
<b>60</b>	-	-	2.48	2.92	3.39	3.86	4.33	4.78	5.21	-	-

**Current [A]**

$t_c \setminus t_e$	-40	-35	-30	-25	-20	-15	-10	-5	0	5	10
<b>30</b>	4.34	4.59	4.87	5.18	5.49	5.77	6.02	6.22	6.33	6.36	6.26
<b>35</b>	4.34	4.61	4.93	5.27	5.63	5.97	6.28	6.55	6.75	6.86	6.86
<b>40</b>	4.34	4.63	4.98	5.36	5.76	6.16	6.53	6.87	7.15	7.35	7.45
<b>45</b>	-	4.65	5.02	5.44	5.88	6.33	6.77	7.18	7.53	7.82	8.02
<b>50</b>	-	-	5.05	5.51	6.00	6.50	7.00	7.48	7.91	8.29	8.58
<b>55</b>	-	-	5.09	5.57	6.10	6.66	7.22	7.77	8.28	8.74	-
<b>60</b>	-	-	5.11	5.63	6.21	6.81	7.43	8.05	8.64	-	-

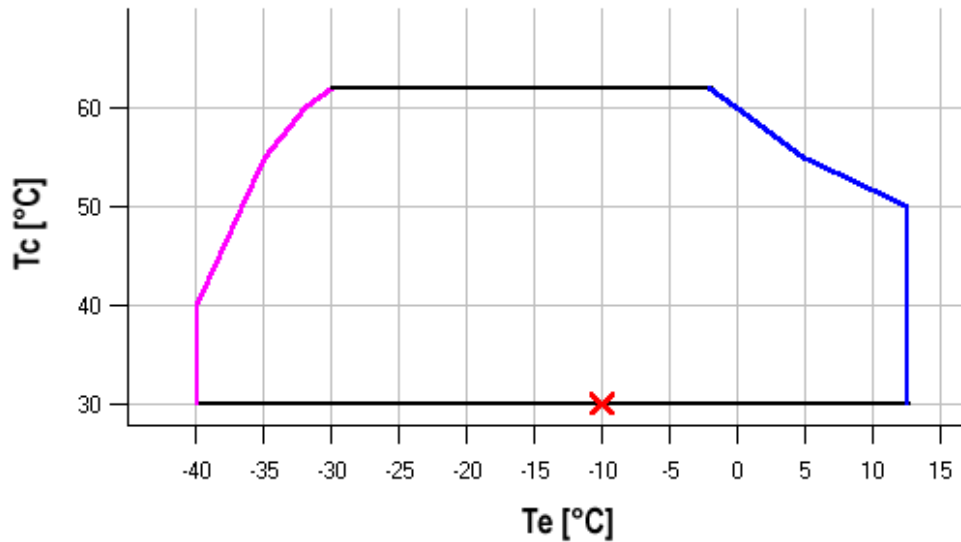
**Mass flow [kg/s]**

$t_c \setminus t_e$	-40	-35	-30	-25	-20	-15	-10	-5	0	5	10
<b>30</b>	44.28	64.42	89.41	119.20	153.72	192.93	236.75	285.13	338.02	395.36	457.09
<b>35</b>	39.10	58.77	83.27	112.54	146.52	185.16	228.39	276.16	328.42	385.09	446.13
<b>40</b>	34.00	53.20	77.21	105.96	139.40	177.47	220.11	267.27	318.89	374.90	435.26
<b>45</b>	-	47.77	71.28	99.52	132.41	169.92	211.97	258.52	309.49	364.85	424.52
<b>50</b>	-	-	65.54	93.26	125.62	162.56	204.02	249.95	300.29	354.98	413.97
<b>55</b>	-	-	60.05	87.26	119.07	155.45	196.32	241.64	291.34	345.37	-
<b>60</b>	-	-	54.87	81.55	112.83	148.64	188.92	233.63	282.69	-	-

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

$t_c \setminus t_e$	-40	-35	-30	-25	-20	-15	-10	-5	0	5	10
<b>30</b>	1.14	1.45	1.79	2.16	2.56	2.99	3.49	4.06	4.74	5.58	6.64
<b>35</b>	0.96	1.25	1.57	1.90	2.25	2.62	3.04	3.52	4.06	4.72	5.52
<b>40</b>	0.80	1.08	1.37	1.66	1.98	2.31	2.66	3.06	3.51	4.03	4.66
<b>45</b>	-	0.92	1.19	1.46	1.74	2.03	2.34	2.68	3.05	3.48	3.98
<b>50</b>	-	-	1.03	1.28	1.53	1.79	2.06	2.35	2.67	3.02	3.42
<b>55</b>	-	-	0.88	1.11	1.34	1.57	1.81	2.06	2.33	2.63	-
<b>60</b>	-	-	0.75	0.96	1.17	1.38	1.59	1.81	2.04	-	-

### Application range



- Maximum evaporating temperature
- 25°C 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]

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**Cooling capacity [kW]**

<b>t<sub>c</sub> \ t<sub>e</sub></b>	<b>-45</b>	<b>-40</b>	<b>-35</b>	<b>-30</b>	<b>-25</b>	<b>-20</b>	<b>-15</b>	<b>-10</b>	<b>-5</b>	<b>0</b>	<b>5</b>
<b>20</b>	2.26	3.15	4.26	5.61	7.23	9.15	11.39	13.99	16.97	20.37	24.20
<b>25</b>	1.97	2.82	3.86	5.13	6.66	8.47	10.59	13.06	15.89	19.11	22.76
<b>30</b>	1.69	2.48	3.46	4.66	6.09	7.79	9.79	12.11	14.79	17.84	21.31
<b>35</b>	1.41	2.15	3.07	4.18	5.52	7.11	8.98	11.16	13.68	16.56	19.84
<b>40</b>	1.13	1.82	2.67	3.70	4.94	6.42	8.16	10.20	12.56	15.27	18.36
<b>45</b>	0.86	1.50	2.27	3.22	4.36	5.72	7.34	9.23	11.43	13.97	16.86
<b>50</b>	-	1.17	1.88	2.74	3.78	5.03	6.51	8.25	10.29	12.65	15.36
<b>55</b>	-	0.86	1.49	2.26	3.20	4.33	5.67	7.27	9.15	-	-

**Power input [kW]**

<b>t<sub>c</sub> \ t<sub>e</sub></b>	<b>-45</b>	<b>-40</b>	<b>-35</b>	<b>-30</b>	<b>-25</b>	<b>-20</b>	<b>-15</b>	<b>-10</b>	<b>-5</b>	<b>0</b>	<b>5</b>
<b>20</b>	1.64	1.88	2.14	2.39	2.63	2.87	3.08	3.27	3.43	3.56	3.64
<b>25</b>	1.60	1.86	2.13	2.41	2.67	2.93	3.17	3.38	3.57	3.72	3.83
<b>30</b>	1.56	1.85	2.15	2.45	2.75	3.04	3.31	3.56	3.77	3.96	4.10
<b>35</b>	1.50	1.83	2.17	2.51	2.84	3.17	3.48	3.77	4.03	4.26	4.45
<b>40</b>	1.40	1.77	2.16	2.55	2.93	3.31	3.67	4.01	4.32	4.60	4.84
<b>45</b>	1.24	1.67	2.11	2.55	2.99	3.42	3.84	4.24	4.61	4.95	5.25
<b>50</b>	-	1.49	1.99	2.49	3.00	3.50	3.98	4.45	4.89	5.30	5.67
<b>55</b>	-	1.21	1.78	2.36	2.94	3.51	4.07	4.62	5.13	-	-

**Current [A]**

$t_c \setminus t_e$	<b>-45</b>	<b>-40</b>	<b>-35</b>	<b>-30</b>	<b>-25</b>	<b>-20</b>	<b>-15</b>	<b>-10</b>	<b>-5</b>	<b>0</b>	<b>5</b>
<b>20</b>	4.37	4.59	4.85	5.12	5.39	5.63	5.84	5.99	6.06	6.04	5.92
<b>25</b>	4.36	4.60	4.89	5.20	5.51	5.82	6.09	6.31	6.47	6.54	6.52
<b>30</b>	4.34	4.61	4.92	5.27	5.63	5.99	6.32	6.62	6.86	7.03	7.10
<b>35</b>	4.31	4.59	4.94	5.32	5.73	6.14	6.54	6.91	7.24	7.49	7.67
<b>40</b>	4.26	4.56	4.93	5.35	5.80	6.27	6.73	7.18	7.58	7.93	8.21
<b>45</b>	4.18	4.50	4.89	5.35	5.85	6.37	6.90	7.41	7.90	8.34	8.71
<b>50</b>	-	4.40	4.83	5.32	5.86	6.44	7.03	7.62	8.19	8.71	9.19
<b>55</b>	-	4.28	4.73	5.25	5.84	6.47	7.12	7.78	8.43	-	-

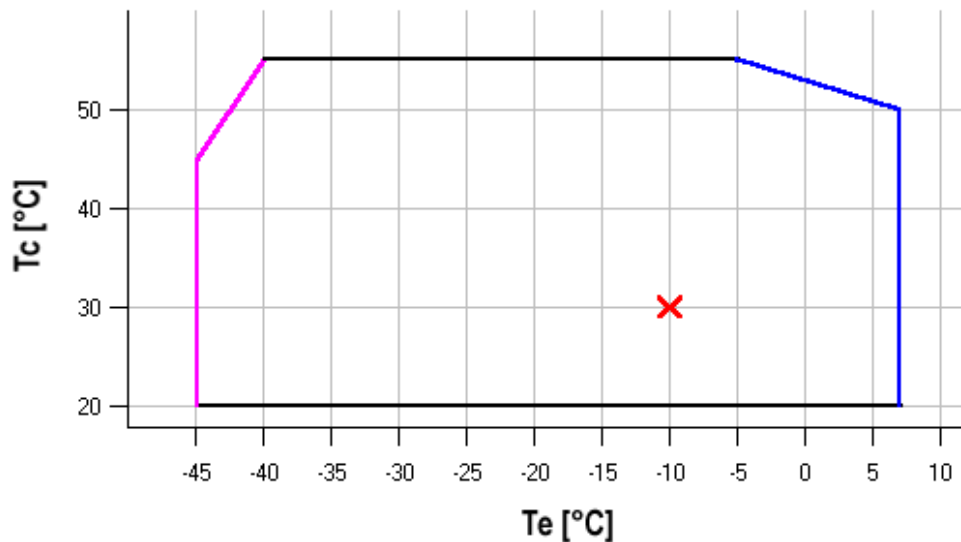
**Mass flow [kg/s]**

$t_c \setminus t_e$	<b>-45</b>	<b>-40</b>	<b>-35</b>	<b>-30</b>	<b>-25</b>	<b>-20</b>	<b>-15</b>	<b>-10</b>	<b>-5</b>	<b>0</b>	<b>5</b>
<b>20</b>	47.04	69.43	95.10	125.27	161.17	204.00	254.99	315.37	386.35	469.16	565.01
<b>25</b>	43.56	65.13	90.11	119.70	155.14	197.65	248.43	308.72	379.73	462.69	558.82
<b>30</b>	39.75	60.52	84.81	113.84	148.84	191.01	241.60	301.80	372.86	455.98	552.38
<b>35</b>	35.53	55.50	79.11	107.58	142.14	184.00	234.39	294.53	365.63	448.91	545.61
<b>40</b>	30.80	49.97	72.91	100.84	134.96	176.52	226.72	286.79	357.94	441.40	538.39
<b>45</b>	25.45	43.84	66.12	93.50	127.20	168.46	218.48	278.49	349.70	433.35	530.64
<b>50</b>	-	37.01	58.63	85.47	118.76	159.72	209.57	269.53	340.82	424.65	522.26
<b>55</b>	-	29.37	50.34	76.66	109.55	150.22	199.90	259.82	331.18	-	-

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

$t_c \setminus t_e$	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5
<b>20</b>	1.38	1.67	1.99	2.35	2.75	3.19	3.70	4.28	4.94	5.72	6.65
<b>25</b>	1.24	1.51	1.81	2.13	2.49	2.89	3.35	3.86	4.45	5.14	5.95
<b>30</b>	1.08	1.34	1.61	1.90	2.21	2.57	2.96	3.41	3.92	4.51	5.19
<b>35</b>	0.94	1.18	1.42	1.67	1.94	2.24	2.58	2.96	3.39	3.89	4.46
<b>40</b>	0.81	1.03	1.24	1.45	1.69	1.94	2.23	2.55	2.91	3.32	3.79
<b>45</b>	0.69	0.90	1.08	1.26	1.46	1.67	1.91	2.18	2.48	2.82	3.21
<b>50</b>	-	0.79	0.95	1.10	1.26	1.44	1.63	1.85	2.10	2.39	2.71
<b>55</b>	-	0.71	0.84	0.96	1.09	1.23	1.39	1.58	1.78	-	-

### Application range



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

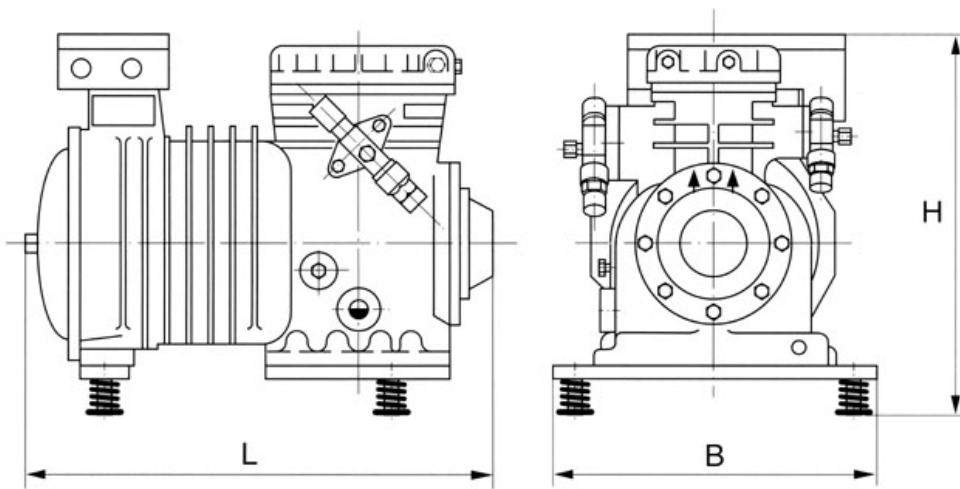
Operating conditions: ISO; subcooling: 0 K, suction superheat: - K, return gas temperature: 20

$t_c$  - Condensing temperature [°C]

$t_e$  - Evaporating temperature [°C]

# Model: DLL-40 X

## Dimensions



L	470 mm
B	330 mm
H	385 mm



