

# Model: DLL-30 X

## Data

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Type: Semi-hermetic piston compressors

Producer: Copeland

Series: DL

## Model: DLL-30 X

### Technical data

Cylinder count:	2
Displacement [m <sup>3</sup> /h]:	18,2
Weight [kg]:	91
Oil charge [dm <sup>3</sup> ]:	2,3
Max. operating current [A]:	7,3
Locked rotor current [A]:	53
Power supply [V/~/Hz]:	380-420V/3/50Hz

### Connections

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

# Model: DLL-30 X

## Capacity

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R22

### Cooling capacity [kW]

<b>t<sub>c</sub> \ t<sub>e</sub></b>	<b>-50</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>25</b>	0.74	1.37	2.18	3.19	4.43	5.90	7.63	9.63	11.93	14.54
<b>30</b>	0.55	1.13	1.89	2.84	4.01	5.42	7.07	8.99	11.19	13.70
<b>35</b>	-	0.90	1.61	2.51	3.61	4.94	6.52	8.35	10.47	12.87
<b>40</b>	-	-	1.34	2.18	3.22	4.48	5.98	7.73	-	-
<b>45</b>	-	-	-	1.87	2.85	4.04	5.45	-	-	-
<b>50</b>	-	-	-	-	2.49	3.60	-	-	-	-
<b>55</b>	-	-	-	-	2.14	3.19	-	-	-	-

### Power input [kW]

<b>t<sub>c</sub> \ t<sub>e</sub></b>	<b>-50</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>25</b>	1.20	1.42	1.67	1.92	2.17	2.42	2.64	2.84	3.01	3.12
<b>30</b>	1.18	1.42	1.68	1.96	2.24	2.52	2.80	3.05	3.26	3.44
<b>35</b>	-	1.41	1.69	1.99	2.30	2.62	2.94	3.23	3.51	3.75
<b>40</b>	-	-	1.68	2.01	2.35	2.71	3.07	3.41	-	-
<b>45</b>	-	-	-	2.02	2.40	2.79	3.18	-	-	-
<b>50</b>	-	-	-	-	2.43	2.86	-	-	-	-
<b>55</b>	-	-	-	-	2.46	2.91	-	-	-	-

# Model: DLL-30 X

## Capacity

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### Current [A]

<b>t<sub>c</sub> \ t<sub>e</sub></b>	<b>-50</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>25</b>	3.93	4.09	4.30	4.54	4.80	5.06	5.31	5.54	5.72	5.86
<b>30</b>	3.92	4.09	4.32	4.58	4.87	5.18	5.48	5.77	6.03	6.25
<b>35</b>	-	4.08	4.32	4.61	4.94	5.28	5.64	5.99	6.32	6.63
<b>40</b>	-	-	4.32	4.63	4.99	5.38	5.79	6.20	-	-
<b>45</b>	-	-	-	4.65	5.04	5.47	5.93	-	-	-
<b>50</b>	-	-	-	-	5.08	5.55	-	-	-	-
<b>55</b>	-	-	-	-	5.10	5.62	-	-	-	-

### Mass flow [kg/s]

<b>t<sub>c</sub> \ t<sub>e</sub></b>	<b>-50</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>25</b>	16.68	30.33	47.63	68.83	94.13	123.75	157.93	196.87	240.80	289.94
<b>30</b>	12.91	26.07	42.93	63.71	88.64	117.94	151.82	190.51	234.23	283.19
<b>35</b>	-	21.72	38.12	58.49	83.04	111.99	145.57	183.99	227.49	276.27
<b>40</b>	-	-	33.23	53.16	77.32	105.92	139.18	177.34	-	-
<b>45</b>	-	-	-	47.76	71.51	99.74	132.68	-	-	-
<b>50</b>	-	-	-	-	65.61	93.47	-	-	-	-
<b>55</b>	-	-	-	-	59.64	87.12	-	-	-	-

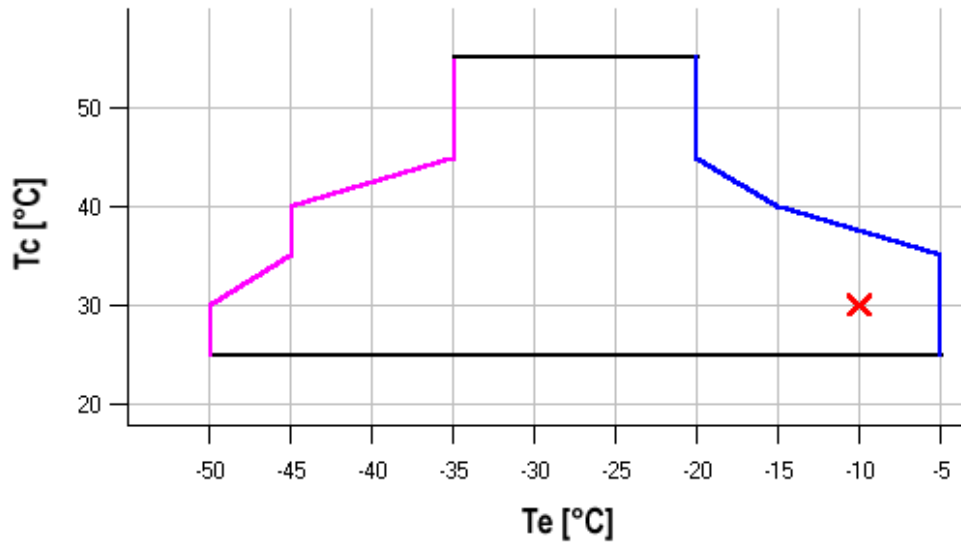
# Model: DLL-30 X

Capacity

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

$t_c \setminus t_e$	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5
25	0.62	0.96	1.31	1.66	2.04	2.44	2.89	3.39	3.97	4.65
30	0.46	0.79	1.12	1.45	1.79	2.15	2.53	2.95	3.43	3.98
35	-	0.64	0.95	1.26	1.57	1.89	2.22	2.58	2.98	3.44
40	-	-	0.80	1.09	1.37	1.65	1.95	2.27	-	-
45	-	-	-	0.93	1.19	1.45	1.71	-	-	-
50	-	-	-	-	1.02	1.26	-	-	-	-
55	-	-	-	-	0.87	1.09	-	-	-	-

## 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]

# Model: DLL-30 X

## Capacity

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R134a

### Cooling capacity [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	3.57	4.80	6.26	7.98	10.01	12.37	15.10
35	3.18	4.35	5.73	7.38	9.30	11.55	14.16
40	2.80	3.91	5.22	6.78	8.60	10.74	13.22
45	2.43	3.48	4.72	6.19	7.91	9.93	12.28
50	2.09	3.07	4.23	5.60	7.22	9.12	11.34
55	1.76	2.68	3.76	5.03	6.54	8.32	10.40
60	1.45	2.30	3.29	4.48	5.88	7.53	9.47

### Power input [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	1.77	1.96	2.13	2.28	2.40	2.48	2.52
35	1.82	2.03	2.24	2.43	2.60	2.74	2.84
40	1.85	2.10	2.35	2.58	2.79	2.98	3.14
45	1.88	2.16	2.44	2.71	2.98	3.22	3.44
50	1.91	2.21	2.53	2.84	3.15	3.44	3.72
55	1.92	2.25	2.60	2.95	3.31	3.65	3.98
60	1.93	2.29	2.66	3.06	3.45	3.85	4.24

# Model: DLL-30 X

## Capacity

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### Current [A]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	4.15	4.33	4.51	4.67	4.80	4.88	4.92
35	4.20	4.41	4.63	4.83	5.02	5.18	5.29
40	4.24	4.48	4.74	4.99	5.24	5.46	5.65
45	4.27	4.54	4.84	5.14	5.45	5.74	6.00
50	4.29	4.60	4.93	5.29	5.65	6.00	6.35
55	4.30	4.64	5.02	5.42	5.84	6.26	6.68
60	4.30	4.67	5.09	5.54	6.02	6.51	7.01

### Mass flow [kg/s]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	84.47	111.24	142.01	177.37	217.90	264.21	316.88
35	78.90	105.70	136.44	171.70	212.07	258.15	310.53
40	73.24	100.03	130.67	165.78	205.93	251.72	303.75
45	67.49	94.19	124.69	159.58	199.45	244.90	296.51
50	61.61	88.17	118.46	153.07	192.61	237.65	288.80
55	55.58	81.94	111.96	146.25	185.38	229.97	280.59
60	49.38	75.48	105.18	139.07	177.76	221.82	271.85

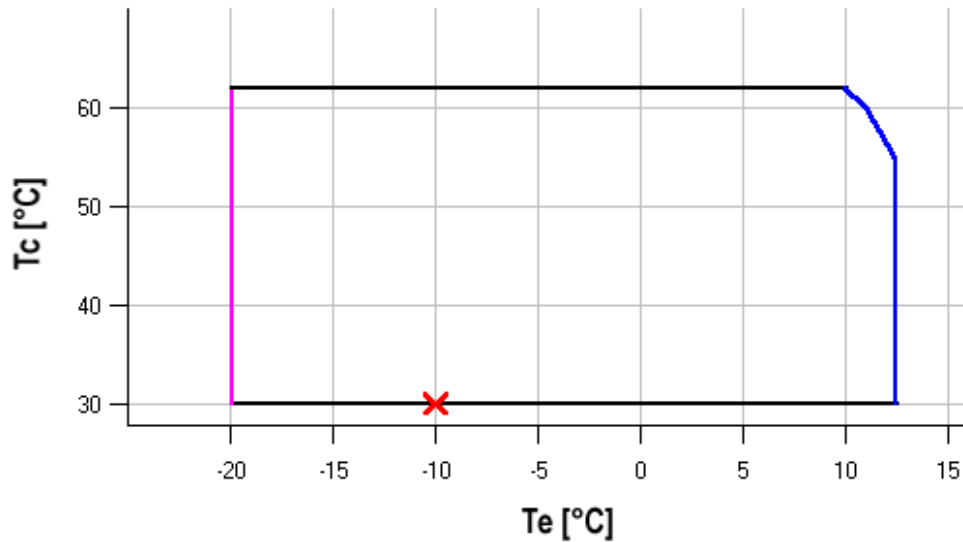
# Model: DLL-30 X

Capacity

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

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	2.02	2.45	2.94	3.50	4.17	4.99	5.99
35	1.75	2.14	2.56	3.03	3.58	4.22	4.99
40	1.51	1.86	2.23	2.63	3.08	3.60	4.21
45	1.29	1.61	1.93	2.28	2.66	3.08	3.57
50	1.09	1.39	1.67	1.97	2.29	2.65	3.05
55	0.92	1.19	1.44	1.70	1.98	2.28	2.61
60	0.75	1.01	1.24	1.46	1.70	1.96	2.24

## 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]

# Model: DLL-30 X

## Capacity

R404A/R507

### Cooling capacity [kW]

$t_c \setminus t_e$	-50	-45	-40	-35	-30	-25	-20
20	1.41	2.20	3.18	4.35	5.76	7.41	9.33
25	1.12	1.88	2.81	3.93	5.26	6.83	8.65
30	0.83	1.56	2.44	3.50	4.75	6.23	7.95
35	-	1.24	2.07	3.06	4.24	5.63	7.25
40	-	0.93	1.70	2.63	3.73	5.02	6.53
45	-	-	1.34	2.20	3.21	4.41	5.81
50	-	-	1.00	1.78	2.70	3.80	5.09
55	-	-	-	1.37	2.21	3.20	4.37

### Power input [kW]

$t_c \setminus t_e$	-50	-45	-40	-35	-30	-25	-20
20	1.21	1.48	1.75	2.03	2.29	2.54	2.77
25	1.13	1.43	1.74	2.05	2.35	2.65	2.93
30	1.03	1.36	1.70	2.05	2.39	2.74	3.07
35	-	1.26	1.64	2.03	2.42	2.81	3.19
40	-	1.15	1.56	1.98	2.42	2.85	3.29
45	-	-	1.45	1.91	2.39	2.88	3.37
50	-	-	1.31	1.82	2.34	2.88	3.42
55	-	-	-	1.70	2.26	2.85	3.45



# Model: DLL-30 X

## Capacity

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### Current [A]

$t_c \setminus t_e$	-50	-45	-40	-35	-30	-25	-20
20	3.39	3.73	4.07	4.42	4.75	5.08	5.38
25	3.33	3.67	4.04	4.42	4.82	5.21	5.61
30	3.27	3.61	3.99	4.41	4.86	5.33	5.82
35	-	3.53	3.93	4.38	4.88	5.43	6.01
40	-	3.43	3.84	4.33	4.88	5.50	6.16
45	-	-	3.73	4.25	4.85	5.54	6.29
50	-	-	3.59	4.14	4.79	5.54	6.37
55	-	-	-	3.99	4.69	5.50	6.42

### Mass flow [kg/s]

$t_c \setminus t_e$	-50	-45	-40	-35	-30	-25	-20
20	30.53	48.23	69.74	95.74	126.95	164.06	207.78
25	25.49	43.15	64.59	90.50	121.58	158.55	202.10
30	20.06	37.62	58.93	84.69	115.59	152.36	195.67
35	-	31.63	52.75	78.29	108.96	145.46	188.49
40	-	25.16	46.04	71.30	101.67	137.85	180.52
45	-	-	38.77	63.70	93.71	129.50	171.76
50	-	-	30.93	55.47	85.06	120.40	162.20
55	-	-	-	46.60	75.71	110.54	151.81

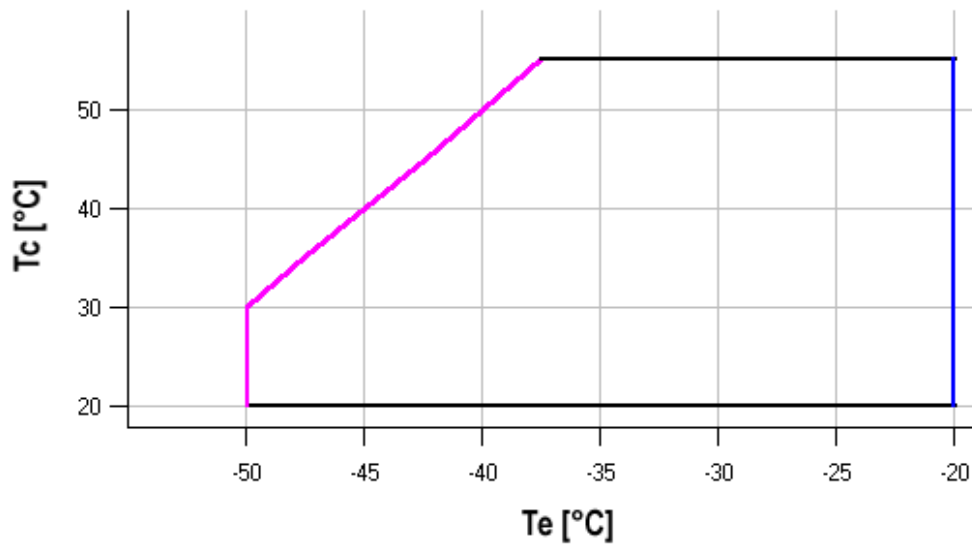
# Model: DLL-30 X

## Capacity

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

$t_c \setminus t_e$	-50	-45	-40	-35	-30	-25	-20
20	1.17	1.49	1.81	2.15	2.51	2.91	3.36
25	0.99	1.32	1.62	1.92	2.24	2.58	2.95
30	0.81	1.15	1.44	1.71	1.98	2.28	2.59
35	-	0.98	1.26	1.51	1.75	2.01	2.27
40	-	0.81	1.09	1.33	1.54	1.76	1.99
45	-	-	0.93	1.15	1.34	1.53	1.73
50	-	-	0.76	0.98	1.15	1.32	1.49
55	-	-	-	0.81	0.97	1.12	1.27

### Application range



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

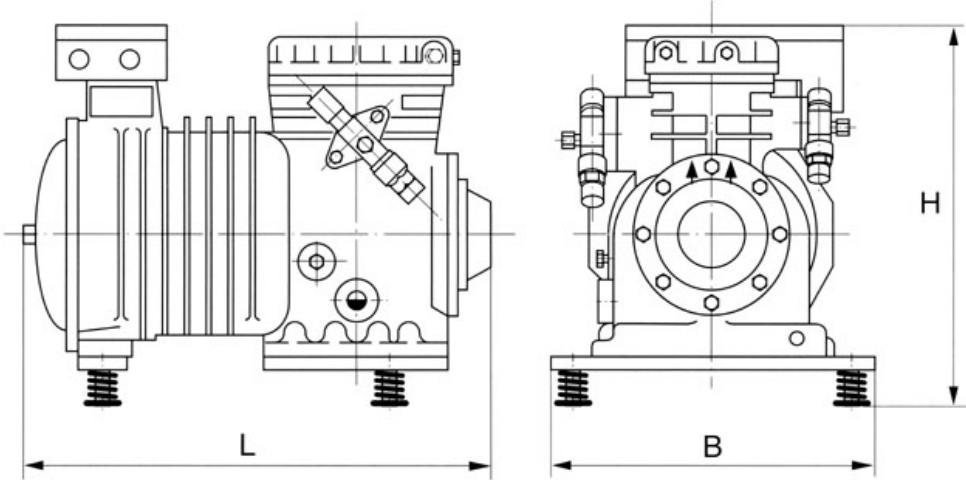
Operating conditions: ISO; subcooling: 0 K, suction superheat: - K, return gas temperature: 20

$t_c$  - Condensing temperature [°C]

$t_e$  - Evaporating temperature [°C]

**Model: DLL-30 X**  
**Dimensions**

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L	470 mm
B	330 mm
H	385 mm