

**Type: Semi-hermetic piston compressors**

**Producer: Copeland**

**Series: DISCUS**

## **Model: D3DC-1000**

### **Technical data**

Cylinder count:	3
Displacement [m <sup>3</sup> /h]:	38
Weight [kg]:	175
Oil charge [dm <sup>3</sup> ]:	3,4
Max. operating current [A]:	21,3
Locked rotor current [A]:	121
Power supply [V/~/Hz]:	380-420V/3/50Hz

### **Connections**

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

R22

**Cooling capacity [kW]**

<b>t<sub>c</sub> \ t<sub>e</sub></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>	11.32	14.78	18.79	23.43	28.78	34.91	41.90	49.83
<b>35</b>	10.29	13.63	17.47	21.91	27.02	32.88	39.56	47.15
<b>40</b>	9.30	12.50	16.18	20.41	25.28	30.86	37.22	44.45
<b>45</b>	-	11.41	14.92	18.94	23.56	28.85	34.89	41.77
<b>50</b>	-	10.38	13.70	17.51	21.87	26.87	32.59	39.10
<b>55</b>	-	-	12.55	16.13	20.23	24.94	30.32	36.46
<b>60</b>	-	-	11.47	14.82	18.66	23.06	28.10	33.87

**Power input [kW]**

<b>t<sub>c</sub> \ t<sub>e</sub></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>	4.86	5.32	5.72	6.02	6.21	6.27	6.17	5.89
<b>35</b>	5.05	5.59	6.08	6.49	6.80	6.98	7.03	6.90
<b>40</b>	5.24	5.85	6.42	6.93	7.35	7.66	7.84	7.87
<b>45</b>	-	6.09	6.74	7.34	7.87	8.30	8.61	8.79
<b>50</b>	-	6.33	7.06	7.74	8.37	8.92	9.36	9.67
<b>55</b>	-	-	7.37	8.13	8.86	9.51	10.08	10.53
<b>60</b>	-	-	7.67	8.52	9.33	10.09	10.77	11.35

**Current [A]**

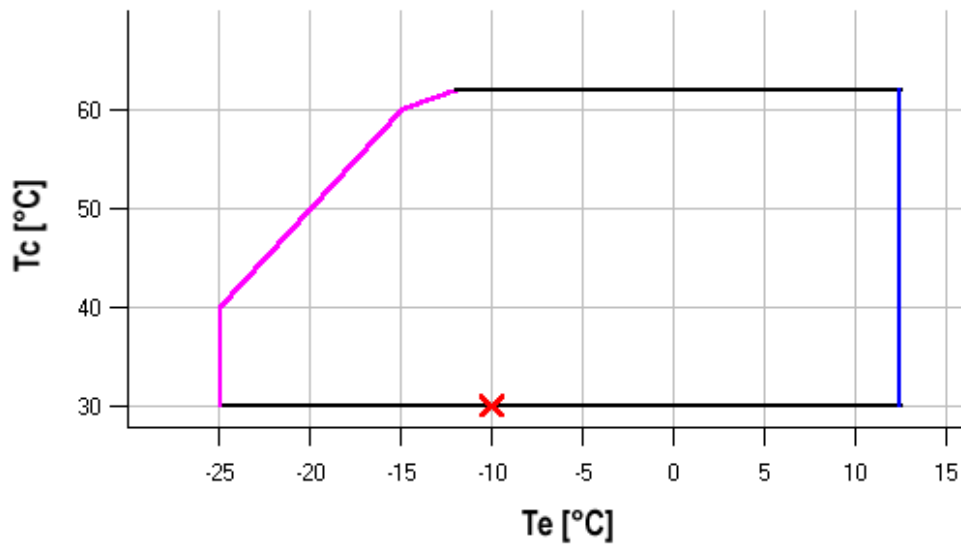
<b>t<sub>c</sub> \ t<sub>e</sub></b>	<b>-25</b>	<b>-20</b>	<b>-15</b>	<b>-10</b>	<b>-5</b>	<b>0</b>	<b>5</b>	<b>10</b>
<b>30</b>	10.39	11.06	11.64	12.09	12.38	12.47	12.31	11.89
<b>35</b>	10.67	11.46	12.18	12.79	13.25	13.53	13.60	13.41
<b>40</b>	10.94	11.84	12.68	13.44	14.08	14.56	14.83	14.88
<b>45</b>	-	12.20	13.17	14.08	14.88	15.54	16.02	16.29
<b>50</b>	-	12.56	13.65	14.69	15.65	16.49	17.17	17.66
<b>55</b>	-	-	14.11	15.29	16.40	17.41	18.28	18.99
<b>60</b>	-	-	14.58	15.88	17.14	18.31	19.37	20.28

**Mass flow [kg/s]**

<b>t<sub>c</sub> \ t<sub>e</sub></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>	246.06	317.53	398.58	490.60	594.96	713.03	846.19	995.81
<b>35</b>	232.97	304.30	385.00	476.44	580.00	697.04	828.94	977.07
<b>40</b>	219.89	290.94	371.14	461.84	564.44	680.29	810.78	957.28
<b>45</b>	-	277.80	357.33	447.16	548.64	663.15	792.08	936.78
<b>50</b>	-	265.22	343.94	432.73	532.94	645.97	773.17	915.94
<b>55</b>	-	-	331.32	418.90	517.70	629.08	754.42	895.09
<b>60</b>	-	-	319.80	406.04	503.27	612.86	736.17	874.59

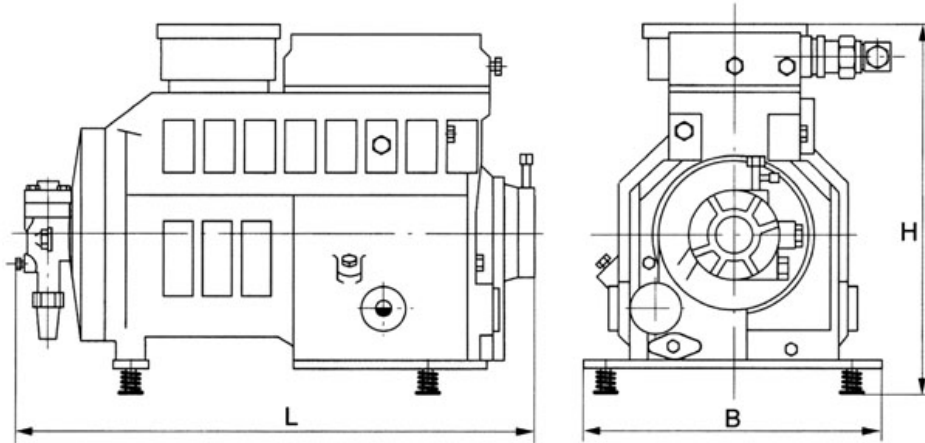
**C.O.P. [W/W]**

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10
<b>30</b>	2.33	2.78	3.29	3.89	4.63	5.57	6.79	8.47
<b>35</b>	2.04	2.44	2.87	3.38	3.98	4.71	5.63	6.83
<b>40</b>	1.78	2.14	2.52	2.95	3.44	4.03	4.75	5.65
<b>45</b>	-	1.87	2.21	2.58	2.99	3.48	4.05	4.75
<b>50</b>	-	1.64	1.94	2.26	2.61	3.01	3.48	4.04
<b>55</b>	-	-	1.70	1.98	2.28	2.62	3.01	3.46
<b>60</b>	-	-	1.49	1.74	2.00	2.28	2.61	2.98

**Application range**


- Maximum evaporating temperature
- 25°C suction gas return

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



L	680 mm
B	370 mm
H	480 mm

