

Model: DLF-20 X

Data

Type: Semi-hermetic piston compressors

Producer: Copeland

Series: DL

Model: DLF-20 X

Technical data

Cylinder count:	2
Displacement [m ³ /h]:	12,9
Weight [kg]:	86
Oil charge [dm ³]:	2,3
Max. operating current [A]:	4,5
Locked rotor current [A]:	37,6
Power supply [V/~/Hz]:	380-420V/3/50Hz

Connections

	<u>milimeters</u>	<u>inches</u>
Suction line:		7/8"
Discharge line:		5/8"

Model: DLF-20 X

Capacity

R22

Cooling capacity [kW]

t_c \ t_e	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5
25	0.37	0.75	1.28	1.98	2.85	3.90	5.15	6.59	8.23	10.09
30	0.26	0.60	1.09	1.74	2.55	3.55	4.73	6.11	7.69	9.48
35	-	0.46	0.90	1.50	2.27	3.21	4.33	5.64	7.16	8.88
40	-	-	0.73	1.28	1.99	2.88	3.94	5.19	6.63	8.28
45	-	-	0.58	1.07	1.73	2.55	3.56	4.74	6.12	-
50	-	-	-	0.88	1.48	2.25	3.19	4.30	-	-
55	-	-	-	0.70	1.25	1.95	2.83	-	-	-

Power input [kW]

t_c \ t_e	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5
25	0.88	1.05	1.23	1.42	1.62	1.80	1.97	2.10	2.21	2.27
30	0.85	1.03	1.23	1.44	1.65	1.87	2.06	2.24	2.38	2.48
35	-	1.00	1.21	1.44	1.68	1.92	2.15	2.36	2.54	2.68
40	-	-	1.19	1.44	1.70	1.96	2.22	2.46	2.68	2.87
45	-	-	1.17	1.43	1.71	2.00	2.28	2.56	2.81	-
50	-	-	-	1.41	1.71	2.02	2.33	2.64	-	-
55	-	-	-	1.39	1.70	2.03	2.37	-	-	-

Model: DLF-20 X

Capacity

Current [A]

t_c \ t_e	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5
25	3.35	3.45	3.59	3.74	3.90	4.06	4.21	4.35	4.45	4.51
30	3.34	3.44	3.58	3.75	3.93	4.12	4.30	4.48	4.63	4.76
35	-	3.43	3.57	3.75	3.95	4.17	4.39	4.61	4.81	4.99
40	-	-	3.56	3.75	3.97	4.21	4.47	4.72	4.98	5.21
45	-	-	3.54	3.74	3.98	4.24	4.53	4.83	5.13	-
50	-	-	-	3.73	3.98	4.27	4.59	4.92	-	-
55	-	-	-	3.70	3.97	4.28	4.63	-	-	-

Mass flow [kg/s]

t_c \ t_e	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5
25	8.31	16.59	28.04	42.72	60.66	81.93	106.56	134.62	166.14	201.18
30	6.23	13.84	24.70	38.87	56.39	77.30	101.67	129.53	160.94	195.95
35	-	11.17	21.41	35.03	52.09	72.62	96.68	124.33	155.59	190.54
40	-	-	18.16	31.21	47.77	67.89	91.62	119.01	150.10	184.95
45	-	-	14.96	27.41	43.44	63.11	86.47	113.57	144.46	-
50	-	-	-	23.62	39.09	58.28	81.25	108.02	-	-
55	-	-	-	19.85	34.73	53.41	75.94	-	-	-

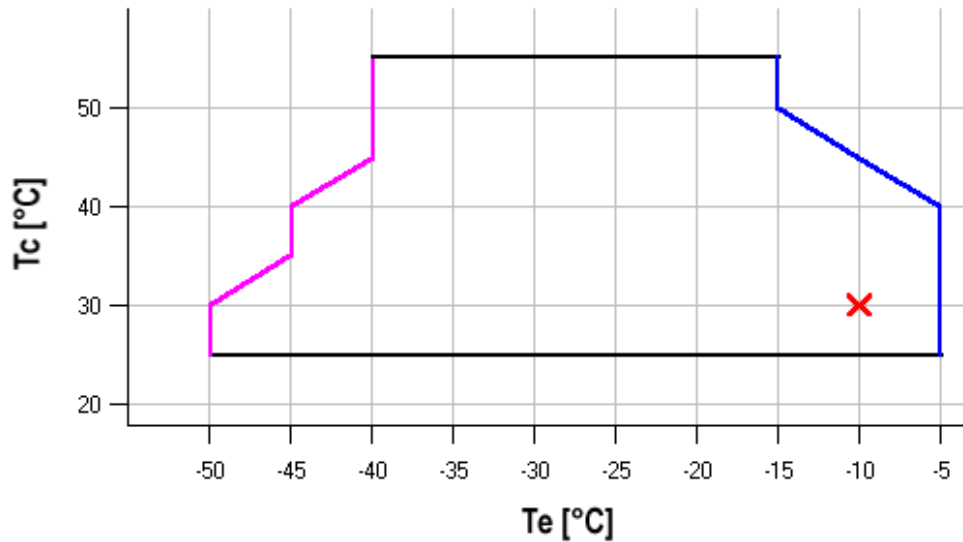
Model: DLF-20 X

Capacity

C.O.P. [W/W]

$t_c \setminus t_e$	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5
25	0.42	0.72	1.04	1.39	1.76	2.17	2.62	3.13	3.73	4.45
30	0.31	0.58	0.89	1.21	1.54	1.90	2.30	2.73	3.23	3.82
35	-	0.46	0.74	1.04	1.35	1.67	2.02	2.40	2.82	3.31
40	-	-	0.61	0.89	1.17	1.46	1.77	2.11	2.47	2.89
45	-	-	0.49	0.75	1.01	1.28	1.56	1.85	2.18	-
50	-	-	-	0.62	0.87	1.11	1.37	1.63	-	-
55	-	-	-	0.51	0.73	0.96	1.19	-	-	-

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: DLF-20 X

Capacity

R134a

Cooling capacity [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	2.48	3.33	4.34	5.54	6.95	8.59	10.49
35	2.19	3.00	3.97	5.10	6.44	8.00	9.82
40	1.92	2.69	3.60	4.67	5.94	7.42	9.14
45	1.67	2.39	3.24	4.25	5.44	6.84	8.46
50	1.42	2.09	2.89	3.84	4.95	6.26	7.79
55	1.19	1.82	2.55	3.43	4.47	5.69	7.12
60	0.98	1.55	2.23	3.03	3.99	5.12	6.45

Power input [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	1.16	1.30	1.41	1.51	1.57	1.60	1.59
35	1.20	1.35	1.49	1.61	1.70	1.77	1.79
40	1.23	1.40	1.56	1.70	1.82	1.92	1.97
45	1.26	1.44	1.62	1.79	1.93	2.05	2.14
50	1.27	1.48	1.67	1.86	2.03	2.17	2.29
55	1.28	1.50	1.71	1.92	2.11	2.28	2.43
60	1.28	1.51	1.74	1.96	2.17	2.37	2.54

Model: DLF-20 X

Capacity

Current [A]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	2.73	2.86	2.98	3.09	3.16	3.19	3.18
35	2.77	2.92	3.07	3.20	3.31	3.38	3.41
40	2.80	2.98	3.15	3.31	3.45	3.55	3.62
45	2.83	3.02	3.21	3.40	3.57	3.72	3.82
50	2.84	3.05	3.27	3.48	3.68	3.86	4.01
55	2.85	3.08	3.31	3.55	3.78	3.99	4.17
60	2.85	3.09	3.34	3.60	3.86	4.10	4.32

Mass flow [kg/s]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	58.49	77.09	98.49	123.08	151.28	183.50	220.14
35	54.43	73.02	94.34	118.82	146.86	178.86	215.24
40	50.34	68.85	90.06	114.37	142.19	173.93	210.00
45	46.18	64.57	85.61	109.71	137.26	168.68	204.38
50	41.95	60.17	80.99	104.81	132.04	163.10	198.38
55	37.62	55.62	76.16	99.66	126.53	157.16	191.97
60	33.18	50.90	71.12	94.25	120.69	150.85	185.14

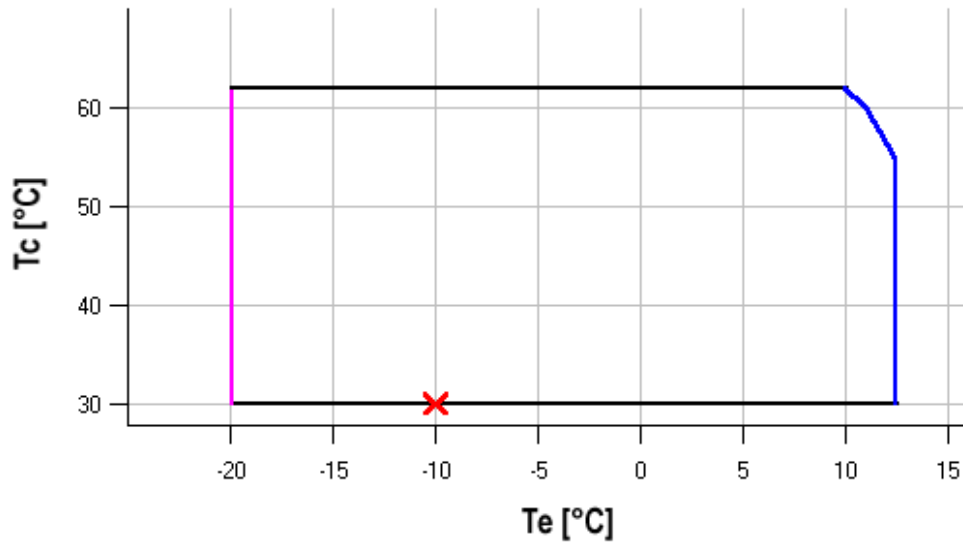
Model: DLF-20 X

Capacity

C.O.P. [W/W]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
30	2.13	2.57	3.07	3.68	4.42	5.36	6.58
35	1.83	2.22	2.66	3.17	3.78	4.53	5.48
40	1.56	1.92	2.30	2.74	3.26	3.87	4.63
45	1.32	1.65	2.00	2.38	2.82	3.33	3.95
50	1.11	1.42	1.73	2.06	2.44	2.88	3.40
55	0.93	1.21	1.49	1.79	2.12	2.50	2.93
60	0.76	1.03	1.28	1.55	1.84	2.16	2.54

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: DLF-20 X

Capacity

R404A/R507

Cooling capacity [kW]

$t_c \setminus t_e$	-50	-45	-40	-35	-30	-25	-20
20	0.82	1.36	2.01	2.79	3.72	4.81	6.09
25	0.61	1.13	1.75	2.48	3.35	4.37	5.58
30	-	0.91	1.48	2.17	2.98	3.94	5.06
35	-	-	1.23	1.87	2.62	3.51	4.55
40	-	-	0.99	1.57	2.27	3.08	4.04
45	-	-	-	1.29	1.92	2.67	3.55
50	-	-	-	1.03	1.60	2.27	3.07
55	-	-	-	-	1.30	1.89	2.60

Power input [kW]

$t_c \setminus t_e$	-50	-45	-40	-35	-30	-25	-20
20	0.73	0.93	1.14	1.34	1.54	1.74	1.93
25	0.70	0.92	1.15	1.37	1.59	1.81	2.03
30	-	0.90	1.14	1.38	1.63	1.87	2.11
35	-	-	1.13	1.39	1.65	1.91	2.17
40	-	-	1.11	1.38	1.66	1.94	2.22
45	-	-	-	1.37	1.66	1.96	2.26
50	-	-	-	1.34	1.65	1.97	2.29
55	-	-	-	-	1.64	1.97	2.31

Model: DLF-20 X

Capacity

Current [A]

$t_c \setminus t_e$	-50	-45	-40	-35	-30	-25	-20
20	2.22	2.56	2.84	3.07	3.28	3.49	3.72
25	2.16	2.51	2.80	3.06	3.31	3.57	3.86
30	-	2.47	2.77	3.05	3.33	3.63	3.98
35	-	-	2.75	3.04	3.35	3.68	4.08
40	-	-	2.73	3.03	3.35	3.72	4.16
45	-	-	-	3.02	3.36	3.75	4.22
50	-	-	-	3.01	3.35	3.76	4.26
55	-	-	-	-	3.34	3.76	4.28

Mass flow [kg/s]

$t_c \setminus t_e$	-50	-45	-40	-35	-30	-25	-20
20	17.80	29.84	44.19	61.40	82.02	106.58	135.64
25	13.99	25.94	40.13	57.12	77.45	101.66	130.31
30	-	21.84	35.83	52.54	72.53	96.33	124.51
35	-	-	31.33	47.71	67.30	90.64	118.29
40	-	-	26.69	42.68	61.82	84.65	111.71
45	-	-	-	37.52	56.15	78.41	104.84
50	-	-	-	32.29	50.35	71.98	97.71
55	-	-	-	-	44.48	65.42	90.40

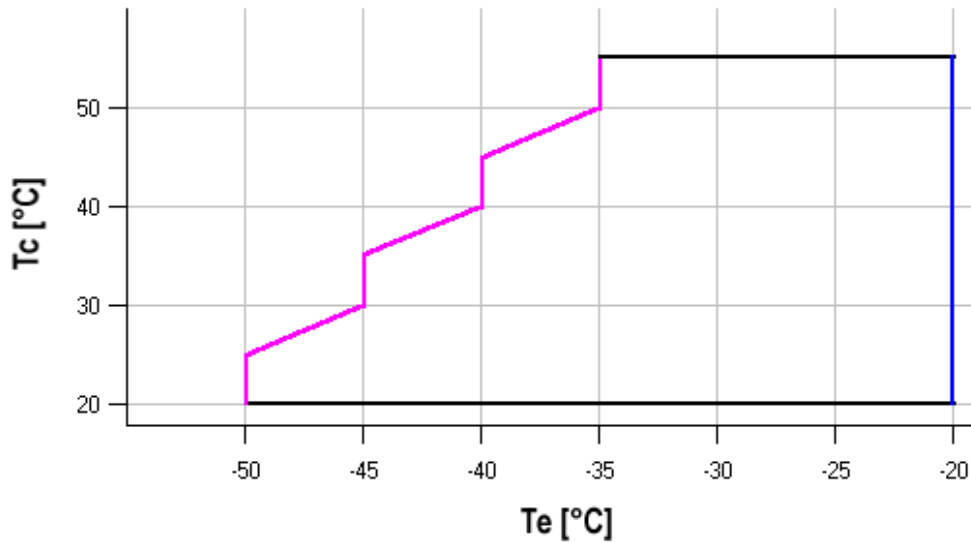
Model: DLF-20 X

Capacity

C.O.P. [W/W]

$t_c \setminus t_e$	-50	-45	-40	-35	-30	-25	-20
20	1.13	1.46	1.77	2.08	2.41	2.77	3.16
25	0.88	1.23	1.53	1.81	2.10	2.42	2.75
30	-	1.00	1.30	1.57	1.83	2.11	2.40
35	-	-	1.09	1.35	1.59	1.83	2.09
40	-	-	0.89	1.14	1.36	1.59	1.82
45	-	-	-	0.95	1.16	1.36	1.57
50	-	-	-	0.77	0.97	1.15	1.34
55	-	-	-	-	0.79	0.96	1.13

Application range



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

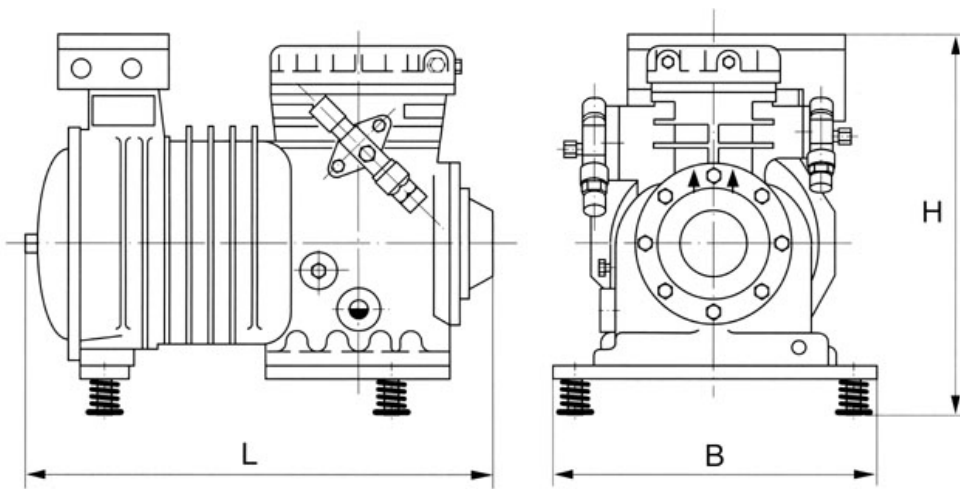
Operating conditions: ISO; subcooling: 0 K, suction superheat: - K, return gas temperature: 20

t_c - Condensing temperature [°C]

t_e - Evaporating temperature [°C]

Model: DLF-20 X

Dimensions



L	470 mm
B	330 mm
H	385 mm

Model: DLF-20 X

Image

