

Type: Semi-hermetic piston compressors

Producer: Copeland

Series: DISCUS

Model: D6DJ-400 X

Technical data

Cylinder count:	6
Displacement [m ³ /h]:	127
Weight [kg]:	277
Oil charge [dm ³]:	7,4
Max. operating current [A]:	83
Locked rotor current [A]:	347
Power supply [V/~/Hz]:	380-420V/3/50Hz

Connections

	<u>milimeters</u>	<u>inches</u>
Suction line:		2 1/8"
Discharge line:		1 3/8"

R22
Cooling capacity [kW]

t_c \ t_e	-25	-20	-15	-10	-5	0	5	10
30	40.60	51.16	63.53	77.99	94.81	114.27	136.65	162.21
35	37.70	47.89	59.76	73.56	89.58	108.10	129.38	153.70
40	34.74	44.57	55.91	69.06	84.26	101.82	121.99	145.06
45	-	41.20	52.02	64.48	78.87	95.45	114.50	136.30
50	-	37.81	48.08	59.85	73.40	89.00	106.92	127.44
55	-	-	44.12	55.19	67.89	82.50	99.28	118.51
60	-	-	40.15	50.51	62.35	75.95	91.58	109.51

Power input [kW]

t_c \ t_e	-25	-20	-15	-10	-5	0	5	10
30	16.66	18.42	20.05	21.48	22.65	23.48	23.91	23.88
35	17.60	19.58	21.47	23.20	24.69	25.89	26.72	27.13
40	18.49	20.68	22.81	24.81	26.63	28.18	29.40	30.23
45	-	21.71	24.07	26.34	28.45	30.34	31.93	33.17
50	-	22.66	25.24	27.76	30.16	32.37	34.32	35.96
55	-	-	26.32	29.08	31.75	34.27	36.57	38.58
60	-	-	27.31	30.29	33.22	36.03	38.66	41.04

Current [A]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10
30	37.47	39.84	42.12	44.18	45.90	47.15	47.79	47.70
35	38.72	41.45	44.14	46.69	48.95	50.81	52.12	52.77
40	39.94	43.01	46.12	49.14	51.94	54.39	56.37	57.74
45	-	44.51	48.02	51.50	54.83	57.88	60.51	62.60
50	-	45.91	49.82	53.76	57.61	61.24	64.52	67.32
55	-	-	51.48	55.87	60.24	64.44	68.36	71.87
60	-	-	52.99	57.83	62.70	67.47	72.02	76.23

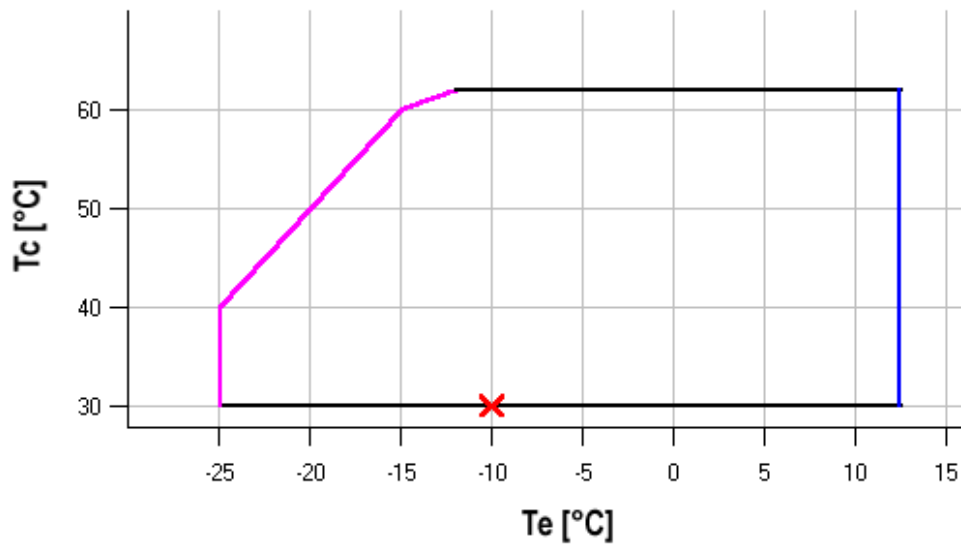
Mass flow [kg/s]



$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10
30	773.87	983.53	1 226.47	1 511.32	1 846.71	2 241.25	2 703.58	3 242.30
35	743.87	952.75	1 193.93	1 476.04	1 807.71	2 197.55	2 654.18	3 186.24
40	712.05	919.66	1 158.60	1 437.49	1 764.95	2 149.60	2 600.07	3 124.97
45	-	884.34	1 120.56	1 395.74	1 718.51	2 097.50	2 541.31	3 058.58
50	-	846.86	1 079.88	1 350.87	1 668.48	2 041.31	2 477.99	2 987.15
55	-	-	1 036.63	1 302.96	1 614.91	1 981.11	2 410.18	2 910.74
60	-	-	990.89	1 252.07	1 557.89	1 916.98	2 337.96	2 829.44

C.O.P. [W/W]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10
30	2.44	2.78	3.17	3.63	4.19	4.87	5.72	6.79
35	2.14	2.45	2.78	3.17	3.63	4.18	4.84	5.67
40	1.88	2.16	2.45	2.78	3.16	3.61	4.15	4.80
45	-	1.90	2.16	2.45	2.77	3.15	3.59	4.11
50	-	1.67	1.91	2.16	2.43	2.75	3.12	3.54
55	-	-	1.68	1.90	2.14	2.41	2.71	3.07
60	-	-	1.47	1.67	1.88	2.11	2.37	2.67

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]

R134a

Cooling capacity [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15	20	25
40	24.89	32.12	40.72	50.94	63.04	77.27	93.89	113.14	-	-
45	22.80	29.69	37.84	47.50	58.94	72.41	88.15	106.43	127.48	151.58
50	20.72	27.25	34.94	44.04	54.81	67.50	82.36	99.64	119.60	142.49
55	18.65	24.82	32.04	40.57	50.66	62.56	76.52	92.80	111.65	133.33
60	-	22.42	29.16	37.10	46.49	57.59	70.65	85.91	103.65	124.10
65	-	20.04	26.29	33.63	42.32	52.61	64.75	78.99	95.60	-
70	-	-	23.45	30.19	38.16	47.63	58.84	72.05	-	-
75	-	-	-	26.77	34.02	42.66	52.93	-	-	-
80	-	-	-	23.40	29.91	37.71	47.03	-	-	-

Power input [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15	20	25
40	12.19	13.71	15.23	16.70	18.07	19.30	20.32	21.11	-	-
45	12.65	14.31	15.99	17.66	19.27	20.75	22.08	23.19	24.04	24.58
50	13.11	14.89	16.73	18.59	20.41	22.15	23.75	25.17	26.37	27.28
55	13.56	15.46	17.45	19.48	21.50	23.47	25.34	27.06	28.59	29.86
60	-	16.01	18.12	20.31	22.53	24.73	26.85	28.85	30.69	32.31
65	-	16.52	18.76	21.09	23.49	25.89	28.25	30.53	32.67	-
70	-	-	19.34	21.81	24.37	26.97	29.56	32.09	-	-
75	-	-	-	22.46	25.17	27.94	30.75	-	-	-
80	-	-	-	23.02	25.87	28.82	31.82	-	-	-

Current [A]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15	20	25
40	32.99	34.50	36.09	37.68	39.21	40.60	41.77	42.65	-	-
45	33.47	35.12	36.89	38.74	40.57	42.32	43.92	45.28	46.34	47.02
50	33.97	35.73	37.69	39.77	41.91	44.01	46.02	47.86	49.45	50.72
55	34.46	36.34	38.47	40.78	43.20	45.66	48.07	50.37	52.48	54.33
60	-	36.92	39.21	41.75	44.45	47.24	50.05	52.81	55.43	57.85
65	-	37.47	39.92	42.67	45.64	48.76	51.96	55.16	58.29	-
70	-	-	40.58	43.53	46.77	50.21	53.79	57.43	-	-
75	-	-	-	44.33	47.82	51.58	55.52	-	-	-
80	-	-	-	45.06	48.79	52.85	57.16	-	-	-

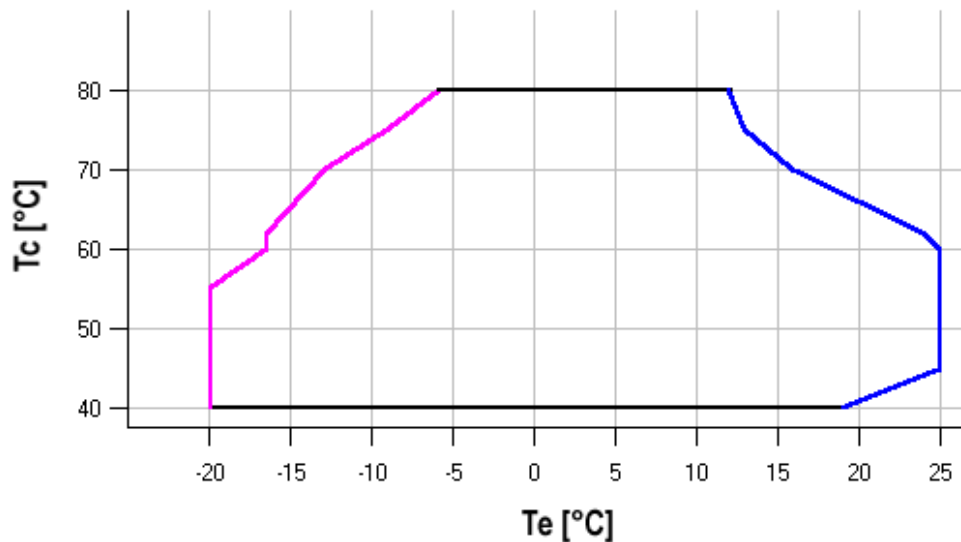
Mass flow [kg/s]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15	20	25
40	650.45	822.50	1 020.25	1 248.06	1 510.30	1 811.34	2 155.56	2 547.33	-	-
45	631.62	803.20	1 000.09	1 226.68	1 487.33	1 786.41	2 128.29	2 517.35	2 957.96	3 454.48
50	611.56	782.31	978.00	1 203.02	1 461.73	1 758.50	2 097.70	2 483.71	2 920.90	3 413.63
55	590.80	760.37	954.52	1 177.62	1 434.05	1 728.16	2 064.34	2 446.95	2 880.37	3 368.96
60	-	737.94	930.20	1 151.04	1 404.83	1 695.94	2 028.74	2 407.61	2 836.91	3 321.02
65	-	715.55	905.57	1 123.80	1 374.61	1 662.38	1 991.46	2 366.24	2 791.08	-
70	-	-	881.18	1 096.46	1 343.95	1 628.02	1 953.04	2 323.38	-	-
75	-	-	-	1 069.56	1 313.38	1 593.41	1 914.02	-	-	-
80	-	-	-	1 043.65	1 283.45	1 559.09	1 874.94	-	-	-


C.O.P. [W/W]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15	20	25
40	2.04	2.34	2.67	3.05	3.49	4.00	4.62	5.36	-	-
45	1.80	2.08	2.37	2.69	3.06	3.49	3.99	4.59	5.30	6.17
50	1.58	1.83	2.09	2.37	2.69	3.05	3.47	3.96	4.54	5.22
55	1.38	1.61	1.84	2.08	2.36	2.66	3.02	3.43	3.91	4.47
60	-	1.40	1.61	1.83	2.06	2.33	2.63	2.98	3.38	3.84
65	-	1.21	1.40	1.59	1.80	2.03	2.29	2.59	2.93	-
70	-	-	1.21	1.38	1.57	1.77	1.99	2.25	-	-
75	-	-	-	1.19	1.35	1.53	1.72	-	-	-
80	-	-	-	1.02	1.16	1.31	1.48	-	-	-

Application range



 Maximum evaporating temperature

 20K suction superheat

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

R404A/R507

Cooling capacity [kW]

$t_c \setminus t_e$	-35	-30	-25	-20	-15	-10	-5	0	5
20	33.88	42.72	53.28	65.79	80.49	97.58	117.29	139.85	165.48
25	31.29	39.68	49.64	61.39	75.16	91.17	109.64	130.80	154.86
30	28.66	36.61	45.96	56.96	69.80	84.73	101.96	121.71	144.21
35	25.99	33.50	42.26	52.49	64.41	78.26	94.24	112.60	133.54
40	-	30.35	38.51	47.98	58.98	71.75	86.50	103.45	122.83
45	-	27.17	34.72	43.43	53.52	65.21	78.71	94.26	112.08
50	-	23.94	30.90	38.85	48.02	58.62	70.89	85.04	101.30
55	-	20.67	27.03	34.23	42.48	52.00	63.03	75.79	90.49

Power input [kW]

$t_c \setminus t_e$	-35	-30	-25	-20	-15	-10	-5	0	5
20	14.06	15.82	17.56	19.23	20.75	22.07	23.13	23.88	24.24
25	14.72	16.64	18.58	20.48	22.28	23.91	25.32	26.44	27.22
30	15.36	17.43	19.56	21.68	23.74	25.67	27.41	28.91	30.10
35	15.97	18.18	20.49	22.83	25.14	27.35	29.42	31.28	32.87
40	-	18.90	21.37	23.91	26.46	28.96	31.34	33.55	35.53
45	-	19.56	22.20	24.93	27.71	30.47	33.16	35.71	38.07
50	-	20.19	22.97	25.89	28.89	31.91	34.89	37.77	40.50
55	-	20.76	23.68	26.77	29.98	33.25	36.52	39.72	42.80

Current [A]

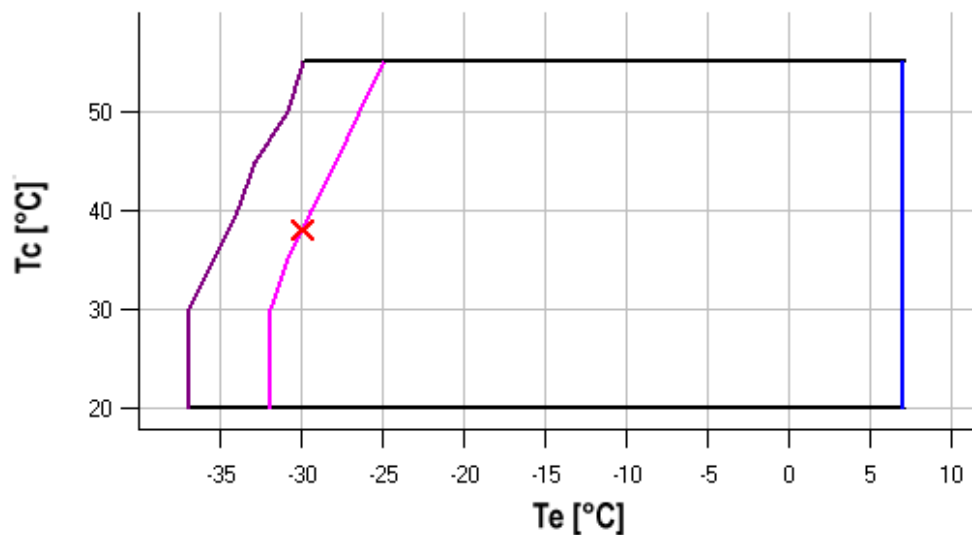
$t_c \setminus t_e$	-35	-30	-25	-20	-15	-10	-5	0	5
20	33.79	36.35	38.86	41.23	43.35	45.13	46.46	47.24	47.36
25	34.73	37.54	40.39	43.17	45.78	48.12	50.10	51.60	52.52
30	35.63	38.68	41.84	45.01	48.09	50.98	53.57	55.77	57.48
35	36.48	39.74	43.19	46.73	50.26	53.68	56.87	59.76	62.22
40	-	40.73	44.45	48.34	52.29	56.21	60.00	63.54	66.74
45	-	41.62	45.60	49.82	54.18	58.58	62.93	67.11	71.03
50	-	42.42	46.62	51.15	55.90	60.77	65.65	70.46	75.08
55	-	43.10	47.52	52.34	57.45	62.76	68.17	73.58	78.88

Mass flow [kg/s]

$t_c \setminus t_e$	-35	-30	-25	-20	-15	-10	-5	0	5
20	734.65	944.52	1 186.16	1 469.57	1 804.76	2 201.74	2 670.52	3 221.10	3 863.50
25	715.35	921.63	1 159.15	1 437.90	1 767.92	2 159.19	2 621.73	3 165.55	3 800.65
30	692.03	894.93	1 128.55	1 402.87	1 727.93	2 113.71	2 570.24	3 107.52	3 735.55
35	664.93	864.68	1 094.61	1 364.73	1 685.05	2 065.57	2 516.31	3 047.26	3 668.44
40	-	831.12	1 057.59	1 323.73	1 639.53	2 015.01	2 460.18	2 985.03	3 599.59
45	-	794.50	1 017.74	1 280.11	1 591.62	1 962.28	2 402.10	2 921.08	3 529.23
50	-	755.07	975.30	1 234.13	1 541.57	1 907.63	2 342.32	2 855.65	3 457.62
55	-	713.09	930.52	1 186.03	1 489.63	1 851.31	2 281.10	2 789.00	3 385.01

C.O.P. [W/W]

$t_c \setminus t_e$	-35	-30	-25	-20	-15	-10	-5	0	5
20	2.41	2.70	3.03	3.42	3.88	4.42	5.07	5.86	6.83
25	2.13	2.38	2.67	3.00	3.37	3.81	4.33	4.95	5.69
30	1.87	2.10	2.35	2.63	2.94	3.30	3.72	4.21	4.79
35	1.63	1.84	2.06	2.30	2.56	2.86	3.20	3.60	4.06
40	-	1.61	1.80	2.01	2.23	2.48	2.76	3.08	3.46
45	-	1.39	1.56	1.74	1.93	2.14	2.37	2.64	2.94
50	-	1.19	1.35	1.50	1.66	1.84	2.03	2.25	2.50
55	-	1.00	1.14	1.28	1.42	1.56	1.73	1.91	2.11

Application range


- Maximum evaporating temperature
- 25°C suction gas return
- 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]

R407C

Cooling capacity [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
35	42.00	52.96	66.57	82.86	101.85	123.56	148.01	-
40	38.86	49.05	61.75	77.01	94.84	115.25	138.29	-
45	35.58	45.00	56.81	71.04	87.71	106.84	128.46	-
50	-	40.74	51.66	64.87	80.39	98.24	118.46	-
55	-	36.21	46.24	58.43	72.81	89.39	108.20	-
60	-	-	40.47	51.66	64.89	80.21	97.62	-

Power input [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
35	17.37	19.30	21.22	22.99	24.46	25.52	26.01	-
40	18.52	20.64	22.79	24.85	26.68	28.13	29.08	-
45	19.48	21.77	24.15	26.49	28.65	30.49	31.89	-
50	-	22.65	25.25	27.86	30.34	32.56	34.38	-
55	-	23.23	26.03	28.90	31.69	34.28	36.52	-
60	-	-	26.46	29.57	32.67	35.61	38.26	-



Current [A]

t_c \ t_e	-20	-15	-10	-5	0	5	10	15
35	38.63	41.25	43.94	46.48	48.64	50.20	50.94	-
40	40.19	43.10	46.18	49.19	51.91	54.12	55.59	-
45	41.53	44.72	48.16	51.64	54.91	57.76	59.96	-
50	-	46.00	49.80	53.72	57.53	61.01	63.92	-
55	-	46.83	50.98	55.34	59.67	63.76	67.38	-
60	-	-	51.60	56.38	61.23	65.92	70.24	-

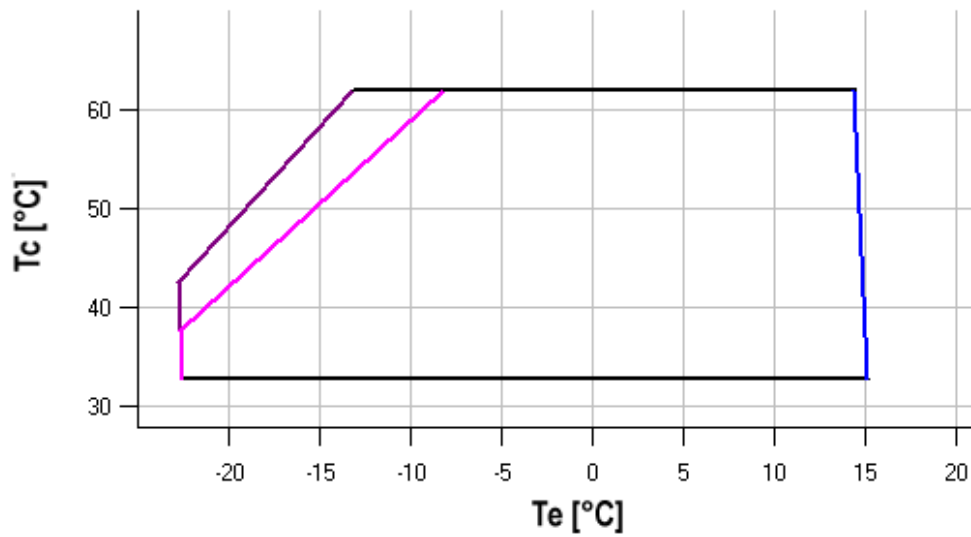
Mass flow [kg/s]

t_c \ t_e	-20	-15	-10	-5	0	5	10	15
35	801.73	1 018.75	1 287.50	1 612.57	1 998.51	2 449.90	2 971.31	-
40	776.30	986.51	1 248.67	1 567.34	1 947.10	2 392.50	2 908.13	-
45	745.99	949.49	1 205.14	1 517.51	1 891.17	2 330.68	2 840.61	-
50	-	904.99	1 154.22	1 460.37	1 828.01	2 261.71	2 766.04	-
55	-	850.30	1 093.19	1 393.21	1 754.93	2 182.90	2 681.72	-
60	-	-	1 019.36	1 313.33	1 669.21	2 091.55	2 584.94	-

C.O.P. [W/W]

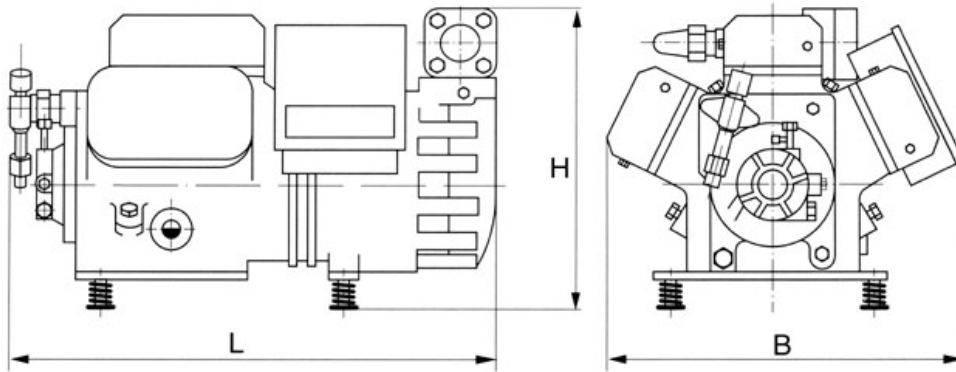
$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
35	2.42	2.74	3.14	3.60	4.16	4.84	5.69	-
40	2.10	2.38	2.71	3.10	3.56	4.10	4.76	-
45	1.83	2.07	2.35	2.68	3.06	3.50	4.03	-
50	-	1.80	2.05	2.33	2.65	3.02	3.45	-
55	-	1.56	1.78	2.02	2.30	2.61	2.96	-
60	-	-	1.53	1.75	1.99	2.25	2.55	-

Application range



- Maximum evaporating temperature
- 25°C suction gas return
- 20K suction superheat

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



L	760 mm
B	580 mm
H	545 mm

