

Model: D4DA-200 X

Data

Type: Semi-hermetic piston compressors

Producer: Copeland

Series: DISCUS

Model: D4DA-200 X

Technical data

Cylinder count:	4
Displacement [m ³ /h]:	56
Weight [kg]:	212
Oil charge [dm ³]:	3,6
Max. operating current [A]:	32,5
Locked rotor current [A]:	160
Power supply [V/~/Hz]:	380-420V/3/50Hz

Connections

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

Model: D4DA-200 X

Capacity

R22

Cooling capacity [kW]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10
30	18.01	22.94	28.68	35.33	43.01	51.84	61.91	73.35
35	16.58	21.34	26.86	33.25	40.63	49.09	58.75	69.73
40	15.12	19.71	25.01	31.14	38.19	46.29	55.54	66.05
45	-	18.06	23.14	28.99	35.72	43.44	52.27	62.31
50	-	16.40	21.24	26.81	33.21	40.55	48.95	58.51
55	-	-	19.33	24.61	30.67	37.63	45.59	54.67
60	-	-	17.40	22.39	28.11	34.67	42.19	50.78

Power input [kW]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10
30	6.97	7.68	8.31	8.83	9.21	9.42	9.43	9.20
35	7.38	8.19	8.94	9.60	10.13	10.51	10.70	10.67
40	7.75	8.66	9.53	10.32	11.00	11.55	11.91	12.08
45	-	9.11	10.09	11.00	11.83	12.53	13.07	13.42
50	-	9.52	10.60	11.64	12.60	13.46	14.17	14.70
55	-	-	11.08	12.24	13.33	14.33	15.21	15.92
60	-	-	11.51	12.78	14.00	15.15	16.18	17.08

Model: D4DA-200 X

Capacity

Current [A]

t_c \ t_e	-25	-20	-15	-10	-5	0	5	10
30	15.84	16.79	17.65	18.38	18.91	19.21	19.22	18.89
35	16.38	17.48	18.52	19.45	20.21	20.76	21.03	20.99
40	16.89	18.14	19.36	20.48	21.46	22.25	22.79	23.03
45	-	18.77	20.15	21.47	22.66	23.69	24.49	25.01
50	-	19.34	20.90	22.40	23.81	25.06	26.12	26.92
55	-	-	21.58	23.27	24.88	26.36	27.67	28.75
60	-	-	22.20	24.07	25.88	27.59	29.14	30.49

Mass flow [kg/s]

t_c \ t_e	-25	-20	-15	-10	-5	0	5	10
30	391.57	492.83	608.22	739.70	889.24	1 058.80	1 250.36	1 465.87
35	375.28	476.65	591.88	722.96	871.85	1 040.51	1 230.91	1 445.02
40	357.51	458.92	573.94	704.56	852.73	1 020.43	1 209.61	1 422.26
45	-	439.61	554.36	684.46	831.86	998.53	1 186.43	1 397.54
50	-	418.69	533.11	662.62	809.18	974.76	1 161.33	1 370.85
55	-	-	510.15	639.01	784.67	949.11	1 134.27	1 342.14
60	-	-	485.44	613.60	758.30	921.52	1 105.23	1 311.38

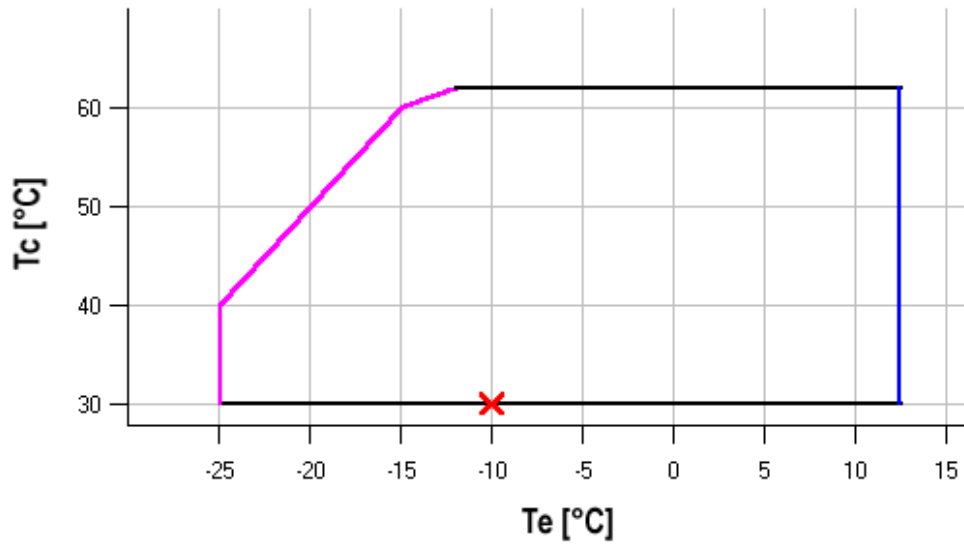
Model: D4DA-200 X



Capacity

C.O.P. [W/W]

$t_c \setminus t_e$	-25	-20	-15	-10	-5	0	5	10
30	2.58	2.99	3.45	4.00	4.67	5.50	6.56	7.97
35	2.25	2.61	3.01	3.46	4.01	4.67	5.49	6.54
40	1.95	2.27	2.62	3.02	3.47	4.01	4.66	5.47
45	-	1.98	2.29	2.63	3.02	3.47	4.00	4.64
50	-	1.72	2.00	2.30	2.63	3.01	3.45	3.98
55	-	-	1.74	2.01	2.30	2.63	3.00	3.43
60	-	-	1.51	1.75	2.01	2.29	2.61	2.97

Application range



 Maximum evaporating temperature
 25°C suction gas temperature

Operating conditions: ISO; subcooling: 0 K, suction superheat: 10 K, return gas temperature: -

t_c - Condensing temperature [°C]

t_e - Evaporating temperature [°C]

Model: D4DA-200 X

Capacity

R134a

Cooling capacity [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15	20	25
40	11.19	14.65	18.77	23.67	29.46	36.26	44.20	53.39	-	-
45	10.04	13.37	17.30	21.95	27.45	33.92	41.47	50.23	60.30	71.82
50	8.90	12.08	15.82	20.23	25.44	31.56	38.72	47.03	56.62	67.59
55	7.77	10.80	14.33	18.50	23.41	29.18	35.94	43.80	52.89	63.32
60	-	9.52	12.85	16.76	21.36	26.78	33.13	40.54	49.12	59.00
65	-	8.25	11.37	15.01	19.31	24.36	30.30	37.25	45.32	54.64
70	-	-	9.89	13.27	17.24	21.93	27.45	33.93	41.49	50.23
75	-	-	-	11.52	15.17	19.48	24.58	30.59	37.62	45.79
80	-	-	-	9.78	13.09	17.03	21.70	27.22	33.72	-

Power input [kW]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15	20	25
40	5.07	5.73	6.37	6.97	7.50	7.93	8.24	8.40	-	-
45	5.24	5.98	6.71	7.41	8.05	8.61	9.06	9.37	9.53	9.50
50	5.40	6.20	7.02	7.81	8.56	9.25	9.83	10.30	10.62	10.77
55	5.52	6.39	7.29	8.18	9.04	9.84	10.57	11.18	11.67	11.99
60	-	6.55	7.52	8.50	9.47	10.39	11.25	12.01	12.66	13.16
65	-	6.67	7.71	8.78	9.85	10.89	11.88	12.79	13.59	14.26
70	-	-	7.86	9.02	10.18	11.34	12.45	13.50	14.46	15.30
75	-	-	-	9.20	10.46	11.73	12.97	14.16	15.27	16.27
80	-	-	-	9.32	10.68	12.05	13.42	14.74	16.00	-

Model: D4DA-200 X

Capacity

Current [A]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15	20	25
40	13.42	14.09	14.77	15.43	16.03	16.51	16.85	17.00	-	-
45	13.64	14.37	15.14	15.91	16.65	17.30	17.84	18.21	18.38	18.31
50	13.83	14.62	15.47	16.36	17.24	18.06	18.79	19.39	19.81	20.02
55	13.97	14.82	15.77	16.77	17.79	18.79	19.72	20.54	21.22	21.71
60	-	14.98	16.02	17.14	18.31	19.48	20.61	21.67	22.60	23.38
65	-	15.09	16.22	17.47	18.78	20.13	21.47	22.75	23.95	25.02
70	-	-	16.37	17.74	19.21	20.74	22.28	23.80	25.26	26.62
75	-	-	-	17.96	19.58	21.29	23.05	24.81	26.53	28.18
80	-	-	-	18.12	19.90	21.80	23.76	25.76	27.76	-

Mass flow [kg/s]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15	20	25
40	290.75	374.73	470.52	580.29	706.20	850.39	1 015.03	1 202.27	-	-
45	277.72	361.88	457.71	567.38	693.05	836.87	1 000.99	1 187.57	1 398.78	1 636.76
50	263.06	347.45	443.38	553.01	678.49	821.99	985.65	1 171.64	1 382.11	1 619.21
55	246.77	331.45	427.53	537.17	662.53	805.76	969.03	1 154.47	1 364.26	1 600.54
60	-	313.88	410.17	519.89	645.18	788.20	951.11	1 136.07	1 345.23	1 580.75
65	-	294.76	391.32	501.15	626.43	769.30	931.92	1 116.45	1 325.05	1 559.86
70	-	-	370.96	480.98	606.30	749.07	911.46	1 095.62	1 303.70	1 537.86
75	-	-	-	459.38	584.79	727.53	889.74	1 073.57	1 281.20	1 514.76
80	-	-	-	436.35	561.92	704.67	866.75	1 050.33	1 257.55	-

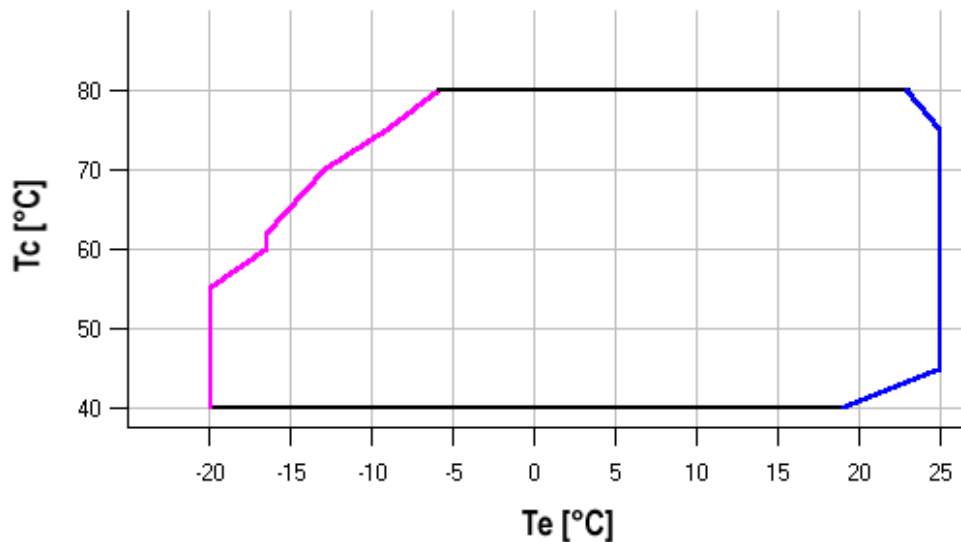
Model: D4DA-200 X

Capacity


C.O.P. [W/W]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15	20	25
40	2.21	2.56	2.95	3.39	3.93	4.57	5.36	6.35	-	-
45	1.91	2.24	2.58	2.96	3.41	3.94	4.58	5.36	6.33	7.56
50	1.65	1.95	2.25	2.59	2.97	3.41	3.94	4.57	5.33	6.27
55	1.41	1.69	1.97	2.26	2.59	2.96	3.40	3.92	4.53	5.28
60	-	1.45	1.71	1.97	2.26	2.58	2.95	3.37	3.88	4.48
65	-	1.24	1.47	1.71	1.96	2.24	2.55	2.91	3.33	3.83
70	-	-	1.26	1.47	1.69	1.93	2.20	2.51	2.87	3.28
75	-	-	-	1.25	1.45	1.66	1.90	2.16	2.46	2.81
80	-	-	-	1.05	1.23	1.41	1.62	1.85	2.11	-

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]

Model: D4DA-200 X

Capacity

R404A/R507

Cooling capacity [kW]

$t_c \setminus t_e$	-35	-30	-25	-20	-15	-10	-5	0	5
20	14.15	18.32	23.33	29.27	36.24	44.33	53.65	64.29	76.35
25	12.90	16.89	21.64	27.26	33.85	41.49	50.30	60.36	71.78
30	11.64	15.43	19.93	25.23	31.42	38.61	46.89	56.37	67.13
35	10.38	13.97	18.20	23.17	28.96	35.69	43.44	52.32	62.42
40	-	12.51	16.46	21.08	26.47	32.72	39.94	48.22	57.65
45	-	11.03	14.71	18.98	23.95	29.73	36.40	44.06	52.82
50	-	9.56	12.94	16.86	21.41	26.70	32.81	39.86	47.93
55	-	8.10	11.18	14.73	18.85	23.64	29.19	35.61	42.99

Power input [kW]

$t_c \setminus t_e$	-35	-30	-25	-20	-15	-10	-5	0	5
20	6.07	6.74	7.41	8.03	8.51	8.80	8.81	8.49	7.76
25	6.21	6.98	7.78	8.55	9.22	9.71	9.97	9.91	9.47
30	6.30	7.14	8.06	8.96	9.80	10.49	10.97	11.16	11.01
35	6.34	7.25	8.26	9.30	10.29	11.16	11.85	12.28	12.39
40	-	7.33	8.43	9.57	10.69	11.73	12.62	13.27	13.63
45	-	7.40	8.56	9.80	11.05	12.24	13.30	14.17	14.77
50	-	7.48	8.69	10.01	11.37	12.70	13.93	14.99	15.81
55	-	7.59	8.84	10.23	11.68	13.13	14.51	15.75	16.78

Model: D4DA-200 X

Capacity

Current [A]

$t_c \setminus t_e$	-35	-30	-25	-20	-15	-10	-5	0	5
20	15.05	15.70	16.34	16.95	17.48	17.91	18.20	18.33	18.25
25	15.24	16.05	16.85	17.60	18.28	18.85	19.28	19.54	19.58
30	15.36	16.36	17.33	18.27	19.11	19.85	20.44	20.85	21.04
35	15.38	16.58	17.77	18.90	19.94	20.87	21.64	22.23	22.60
40	-	16.71	18.12	19.48	20.74	21.88	22.87	23.66	24.23
45	-	16.70	18.37	19.97	21.49	22.87	24.09	25.11	25.91
50	-	16.53	18.48	20.36	22.14	23.79	25.27	26.55	27.59
55	-	16.17	18.43	20.61	22.69	24.62	26.39	27.95	29.27

Mass flow [kg/s]

$t_c \setminus t_e$	-35	-30	-25	-20	-15	-10	-5	0	5
20	305.43	405.03	519.79	654.28	813.05	1 000.68	1 221.74	1 480.80	1 782.41
25	294.41	392.40	505.65	638.74	796.23	982.68	1 202.67	1 460.76	1 761.52
30	281.30	377.74	489.55	621.31	777.57	962.90	1 181.88	1 439.07	1 739.04
35	266.25	361.20	471.63	602.11	757.21	941.49	1 159.52	1 415.86	1 715.10
40	-	342.92	452.03	581.30	735.29	918.57	1 135.71	1 391.28	1 689.84
45	-	323.03	430.88	559.00	711.95	894.30	1 110.61	1 365.46	1 663.41
50	-	301.68	408.33	535.36	687.33	868.80	1 084.35	1 338.54	1 635.95
55	-	279.00	384.52	510.52	661.57	842.23	1 057.07	1 310.67	1 607.58

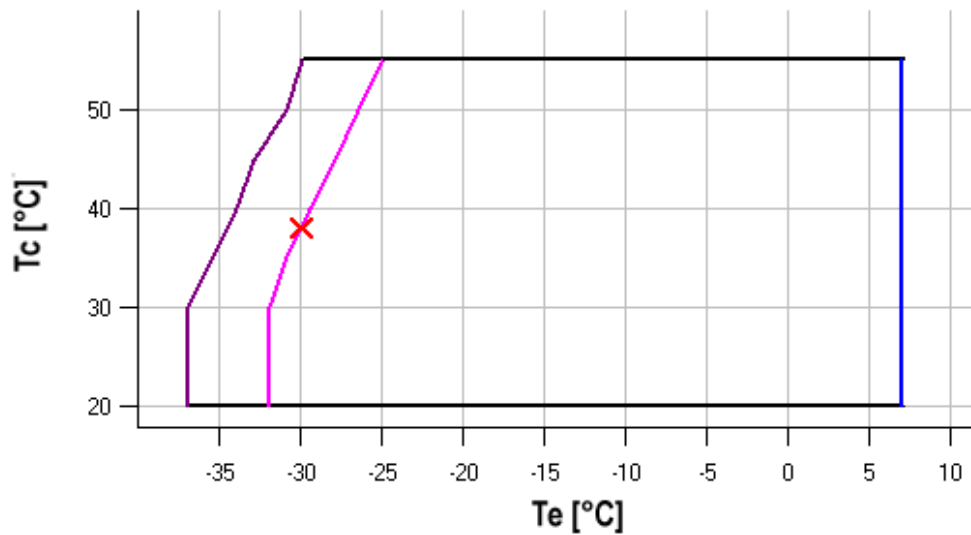
Model: D4DA-200 X

Capacity

C.O.P. [W/W]

$t_c \setminus t_e$	-35	-30	-25	-20	-15	-10	-5	0	5
20	2.33	2.72	3.15	3.65	4.26	5.04	6.09	7.57	9.85
25	2.08	2.42	2.78	3.19	3.67	4.27	5.05	6.09	7.58
30	1.85	2.16	2.47	2.81	3.21	3.68	4.28	5.05	6.10
35	1.64	1.93	2.20	2.49	2.82	3.20	3.67	4.26	5.04
40	-	1.71	1.95	2.20	2.48	2.79	3.17	3.63	4.23
45	-	1.49	1.72	1.94	2.17	2.43	2.74	3.11	3.58
50	-	1.28	1.49	1.68	1.88	2.10	2.36	2.66	3.03
55	-	1.07	1.26	1.44	1.61	1.80	2.01	2.26	2.56

Application range



- Maximum evaporating temperature
- 25°C suction gas 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: D4DA-200 X

Capacity

R407C

Cooling capacity [kW]

t_c \ t_e	-20	-15	-10	-5	0	5	10	15
35	17.98	23.32	29.62	37.03	45.70	55.79	67.46	-
40	16.21	21.31	27.29	34.31	42.52	52.08	63.14	-
45	14.42	19.26	24.92	31.54	39.28	48.30	58.75	-
50	-	17.20	22.52	28.74	36.00	44.47	54.30	-
55	-	15.11	20.09	25.89	32.68	40.59	49.79	-
60	-	-	17.63	23.02	29.31	36.66	45.22	-

Power input [kW]

t_c \ t_e	-20	-15	-10	-5	0	5	10	15
35	7.26	8.06	8.79	9.43	9.93	10.24	10.31	-
40	7.65	8.57	9.44	10.23	10.90	11.38	11.65	-
45	8.01	9.04	10.04	10.98	11.80	12.47	12.93	-
50	-	9.45	10.58	11.65	12.63	13.46	14.10	-
55	-	9.78	11.02	12.22	13.34	14.34	15.16	-
60	-	-	11.34	12.67	13.93	15.08	16.07	-

Model: D4DA-200 X

Capacity

Current [A]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
35	16.17	17.27	18.41	19.46	20.27	20.69	20.58	-
40	16.80	18.02	19.32	20.57	21.61	22.31	22.51	-
45	17.30	18.64	20.10	21.55	22.83	23.80	24.31	-
50	-	19.15	20.78	22.42	23.94	25.18	26.00	-
55	-	19.58	21.37	23.21	24.96	26.48	27.62	-
60	-	-	21.91	23.95	25.94	27.73	29.18	-

Mass flow [kg/s]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
35	396.53	506.20	632.33	777.55	944.45	1 135.67	1 353.82	-
40	376.73	486.21	611.78	756.08	921.72	1 111.31	1 327.47	-
45	354.88	464.11	589.09	732.44	896.76	1 084.69	1 298.82	-
50	-	439.73	564.08	706.43	869.41	1 055.62	1 267.70	-
55	-	412.88	536.55	677.87	839.46	1 023.93	1 233.90	-
60	-	-	506.32	646.58	806.74	989.42	1 197.25	-

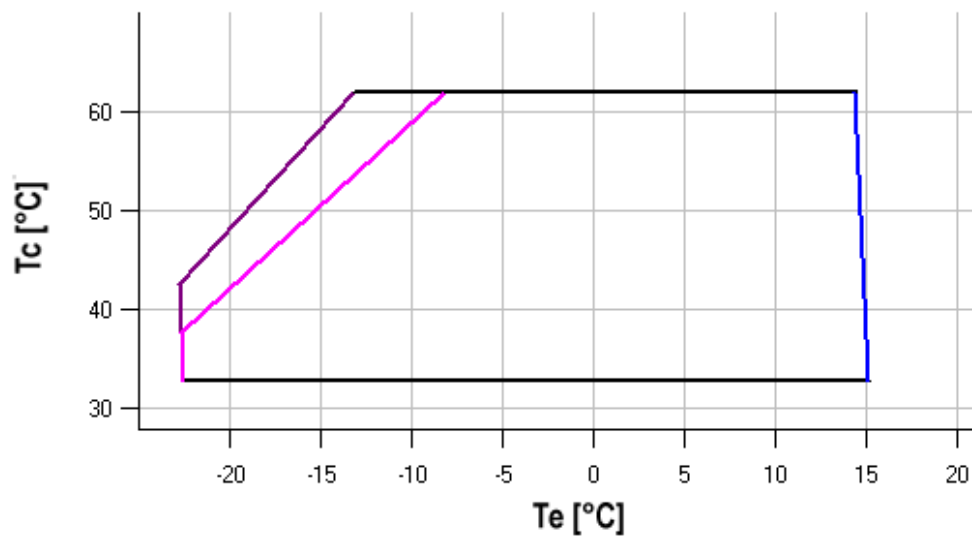
Model: D4DA-200 X

Capacity

C.O.P. [W/W]

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10	15
35	2.47	2.90	3.37	3.93	4.60	5.45	6.54	-
40	2.12	2.49	2.89	3.35	3.90	4.57	5.42	-
45	1.80	2.13	2.48	2.87	3.33	3.87	4.54	-
50	-	1.82	2.13	2.47	2.85	3.30	3.85	-
55	-	1.55	1.82	2.12	2.45	2.83	3.28	-
60	-	-	1.55	1.82	2.10	2.43	2.81	-

Application range



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

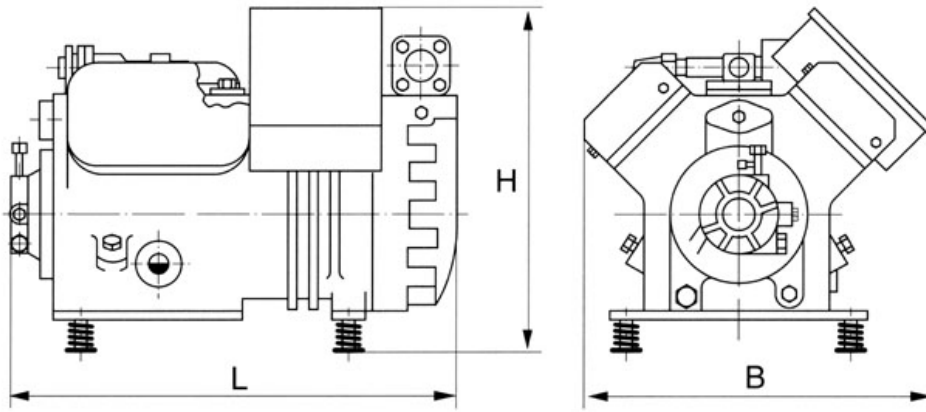
Operating conditions: ISO; subcooling: 0 K, suction superheat: 10 K, return gas temperature: -

t_c - Condensing temperature [°C]

t_e - Evaporating temperature [°C]

Model: D4DA-200 X

Dimensions



L	650 mm
B	535 mm
H	495 mm

Model: D4DA-200 X

Image

