Type: Semi-hermetic piston compressors
Producer: Copeland
Series: DK

Model: DKSL-20 X

Technical data

Cylinder count:	2
Displacement [m³/h]:	9,1
Weight [kg]:	42
Oil charge [dm³]:	0,6
Max. operating current [A]:	4,7
Locked rotor current [A]:	20,4
Power supply [V/~/Hz]:	380-420V/3/50Hz

Connections

	milimeters	inches
Suction line:		5/8''
Discharge line:		1/2''

R22

Cooling capacity [kW]

t_c \ t_e	-40	-35	-30	-25	-20	-15	-10	-5
20	1.30	1.80	2.39	3.09	3.91	4.85	5.94	7.19
25	1.16	1.64	2.21	2.88	3.66	4.57	5.61	6.81
30	1.03	1.48	2.02	2.66	3.41	4.28	5.28	6.43
35	0.89	1.33	1.84	2.45	3.16	3.99	4.95	6.05
40	0.77	1.18	1.66	2.24	2.91	3.70	4.61	5.66
45	0.65	1.03	1.49	2.03	2.67	3.42	4.28	5.28
50	0.54	0.90	1.33	1.84	2.43	3.14	3.95	-
55	0.44	0.78	1.18	1.65	2.21	2.86	-	-

Power input [kW]

t_c \ t_e	-40	-35	-30	-25	-20	-15	-10	-5
20	0.90	1.02	1.13	1.23	1.30	1.35	1.36	1.34
25	0.91	1.05	1.18	1.30	1.40	1.48	1.52	1.54
30	0.92	1.07	1.22	1.36	1.49	1.59	1.67	1.72
35	0.92	1.09	1.25	1.42	1.57	1.70	1.81	1.89
40	0.92	1.10	1.28	1.46	1.64	1.79	1.93	2.05
45	0.91	1.10	1.30	1.50	1.70	1.88	2.05	2.20
50	0.90	1.10	1.31	1.53	1.75	1.96	2.15	-
55	0.88	1.09	1.32	1.56	1.79	2.03	-	-

Current [A]

t_c \ t_e	-40	-35	-30	-25	-20	-15	-10	-5
20	2.23	2.35	2.48	2.58	2.67	2.73	2.76	2.74
25	2.24	2.39	2.53	2.67	2.79	2.89	2.96	2.99
30	2.25	2.41	2.58	2.74	2.90	3.04	3.15	3.23
35	2.25	2.43	2.62	2.81	3.00	3.17	3.33	3.46
40	2.25	2.44	2.65	2.87	3.09	3.30	3.50	3.67
45	2.24	2.45	2.67	2.92	3.17	3.42	3.65	3.88
50	2.23	2.45	2.69	2.96	3.24	3.52	3.80	-
55	2.21	2.44	2.70	2.99	3.30	3.61	-	-

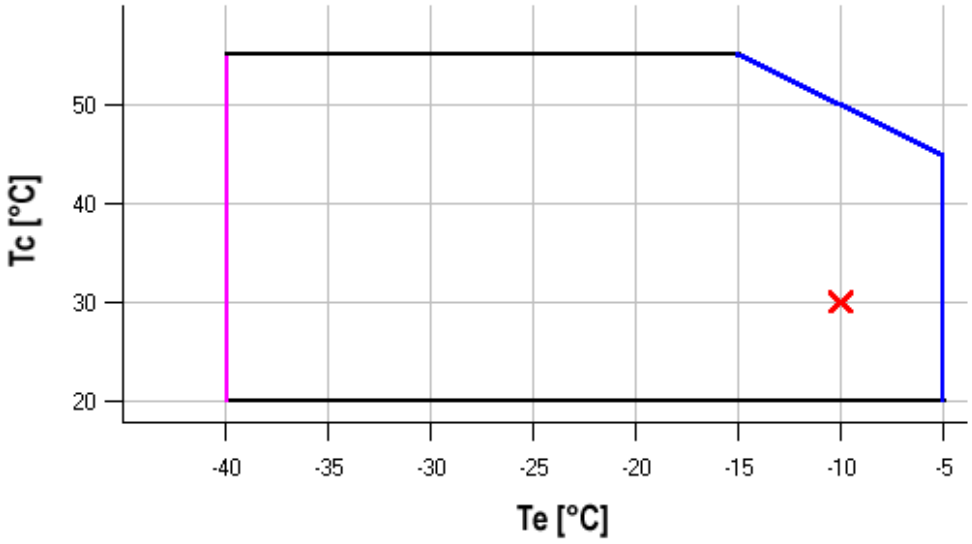
Mass flow [kg/s]

t_c \ t_e	-40	-35	-30	-25	-20	-15	-10	-5
20	27.46	37.48	49.12	62.58	78.06	95.77	115.90	138.65
25	25.42	35.38	46.95	60.33	75.72	93.31	113.32	135.93
30	23.31	33.19	44.67	57.94	73.20	90.66	110.52	132.97
35	21.16	30.94	42.30	55.44	70.55	87.85	107.53	129.79
40	19.00	28.65	39.87	52.85	67.80	84.92	104.39	126.44
45	16.88	26.38	37.43	50.23	64.98	81.88	101.14	122.94
50	14.82	24.14	34.99	47.59	62.12	78.79	97.79	-
55	12.85	21.97	32.61	44.97	59.25	75.66	-	-

C.O.P. [W/W]

t_c \ t_e	-40	-35	-30	-25	-20	-15	-10	-5
20	1.45	1.77	2.11	2.51	3.00	3.59	4.35	5.37
25	1.28	1.56	1.87	2.21	2.61	3.09	3.68	4.44
30	1.12	1.38	1.65	1.95	2.29	2.68	3.16	3.74
35	0.97	1.22	1.47	1.73	2.02	2.35	2.74	3.20
40	0.84	1.07	1.30	1.53	1.78	2.06	2.39	2.77
45	0.71	0.94	1.15	1.36	1.58	1.82	2.09	2.40
50	0.60	0.82	1.01	1.20	1.39	1.60	1.84	-
55	0.51	0.71	0.89	1.06	1.23	1.41	-	-

Application range



Maximum evaporating temperature
25ºC suction gas return + additional cooling

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

R134a

Cooling capacity [kW]

t_c \ t_e	-20	-15	-10	-5	0	5	10
20	2.22	2.87	3.64	4.56	5.64	-	-
25	2.07	2.69	3.44	4.32	5.36	6.58	-
30	1.92	2.51	3.22	4.07	5.07	6.23	7.58
35	1.76	2.32	3.00	3.81	4.77	5.88	7.17
40	1.59	2.13	2.78	3.54	4.45	5.51	6.74
45	1.43	1.94	2.54	3.27	4.13	5.14	6.31
50	1.26	1.74	2.31	2.99	3.80	4.75	5.86
55	1.10	1.54	2.07	2.71	3.47	4.36	5.41
60	0.94	1.35	1.84	2.43	3.13	3.96	4.95

Power input [kW]

t_c \ t_e	-20	-15	-10	-5	0	5	10
20	0.89	0.96	1.01	1.04	1.06	-	-
25	0.93	1.01	1.08	1.14	1.18	1.19	-
30	0.96	1.06	1.15	1.23	1.29	1.32	1.33
35	0.98	1.09	1.20	1.30	1.38	1.45	1.48
40	0.99	1.12	1.24	1.36	1.47	1.56	1.62
45	1.01	1.14	1.28	1.41	1.54	1.66	1.75
50	1.01	1.16	1.31	1.46	1.61	1.74	1.86
55	1.02	1.17	1.33	1.50	1.67	1.83	1.97
60	1.02	1.18	1.36	1.54	1.72	1.90	2.07

Current [A]

t_c \ t_e	-20	-15	-10	-5	0	5	10
20	2.22	2.27	2.30	2.29	2.24	-	-
25	2.28	2.36	2.42	2.45	2.45	2.41	-
30	2.31	2.42	2.51	2.58	2.62	2.63	2.61
35	2.32	2.46	2.58	2.68	2.76	2.81	2.84
40	2.32	2.48	2.63	2.76	2.87	2.97	3.04
45	2.32	2.49	2.66	2.82	2.97	3.10	3.22
50	2.31	2.50	2.69	2.87	3.05	3.22	3.38
55	2.31	2.51	2.72	2.92	3.13	3.33	3.52
60	2.33	2.54	2.76	2.98	3.21	3.44	3.66

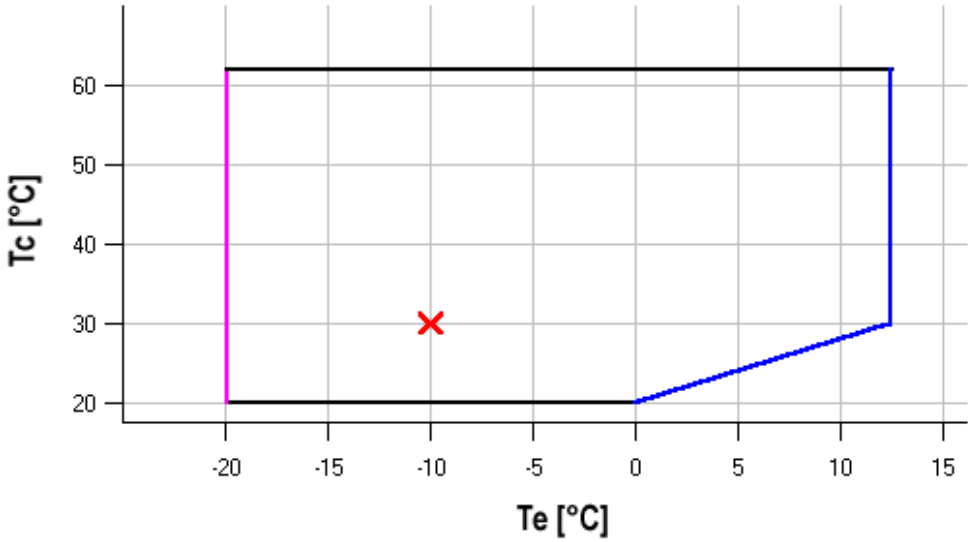
Mass flow [kg/s]

t_c \ t_e	-20	-15	-10	-5	0	5	10
20	47.97	60.82	75.78	93.09	113.00	-	-
25	46.74	59.61	74.60	91.95	111.88	134.65	-
30	45.30	58.17	73.16	90.50	110.43	133.20	159.04
35	43.65	56.49	71.44	88.75	108.65	131.38	157.19
40	41.78	54.55	69.45	86.69	106.53	129.20	154.95
45	39.69	52.38	67.18	84.33	104.08	126.66	152.31
50	37.38	49.95	64.63	81.66	101.29	123.74	149.28
55	34.85	47.27	61.80	78.68	98.15	120.46	145.84
60	32.10	44.33	58.68	75.38	94.68	116.81	142.01

C.O.P. [W/W]

t_c \ t_e	-20	-15	-10	-5	0	5	10
20	2.50	3.00	3.61	4.37	5.35	-	-
25	2.23	2.66	3.17	3.79	4.55	5.54	-
30	2.00	2.38	2.81	3.32	3.94	4.71	5.70
35	1.79	2.13	2.50	2.94	3.45	4.07	4.84
40	1.60	1.91	2.23	2.60	3.03	3.54	4.16
45	1.42	1.70	1.99	2.31	2.68	3.10	3.61
50	1.25	1.50	1.76	2.05	2.36	2.72	3.15
55	1.08	1.32	1.55	1.80	2.08	2.39	2.74
60	0.92	1.14	1.35	1.58	1.82	2.09	2.39

Application range



Maximum evaporating temperature
25ºC suction gas return + additional cooling

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

R404A/R507

Cooling capacity [kW]

t_c \ t_e	-45	-40	-35	-30	-25	-20	-15	-10	-5
20	1.26	1.70	2.25	2.90	3.68	4.59	5.65	6.86	8.24
25	1.13	1.55	2.06	2.68	3.41	4.27	5.26	6.41	7.71
30	0.99	1.40	1.88	2.46	3.14	3.95	4.88	5.95	7.18
35	0.87	1.25	1.70	2.24	2.88	3.63	4.50	5.50	6.65
40	0.75	1.10	1.52	2.02	2.62	3.31	4.12	5.05	6.13
45	0.63	0.96	1.35	1.81	2.36	3.00	3.74	4.61	5.60
50	0.51	0.82	1.18	1.60	2.10	2.68	3.37	4.16	-
55	-	0.68	1.01	1.39	1.84	2.37	2.99	-	-

Power input [kW]

t_c \ t_e	-45	-40	-35	-30	-25	-20	-15	-10	-5
20	0.88	1.02	1.16	1.29	1.42	1.54	1.64	1.72	1.79
25	0.88	1.04	1.19	1.35	1.49	1.64	1.76	1.88	1.98
30	0.88	1.04	1.21	1.39	1.56	1.72	1.88	2.02	2.15
35	0.86	1.04	1.23	1.42	1.61	1.79	1.98	2.15	2.31
40	0.84	1.03	1.23	1.44	1.65	1.86	2.06	2.27	2.46
45	0.81	1.01	1.23	1.45	1.68	1.91	2.15	2.37	2.60
50	0.78	1.00	1.22	1.46	1.71	1.96	2.22	2.48	-
55	-	0.98	1.22	1.47	1.74	2.01	2.29	-	-

Current [A]

t_c \ t_e	-45	-40	-35	-30	-25	-20	-15	-10	-5
20	2.18	2.34	2.51	2.67	2.81	2.91	2.98	3.00	2.96
25	2.21	2.38	2.57	2.76	2.93	3.09	3.22	3.30	3.33
30	2.21	2.40	2.60	2.81	3.03	3.23	3.41	3.55	3.66
35	2.20	2.39	2.61	2.84	3.09	3.33	3.56	3.77	3.94
40	2.17	2.37	2.60	2.86	3.13	3.41	3.69	3.96	4.20
45	2.15	2.34	2.58	2.86	3.16	3.48	3.80	4.12	4.42
50	2.12	2.32	2.56	2.85	3.18	3.53	3.90	4.27	-
55	-	2.30	2.55	2.86	3.21	3.59	4.00	-	-

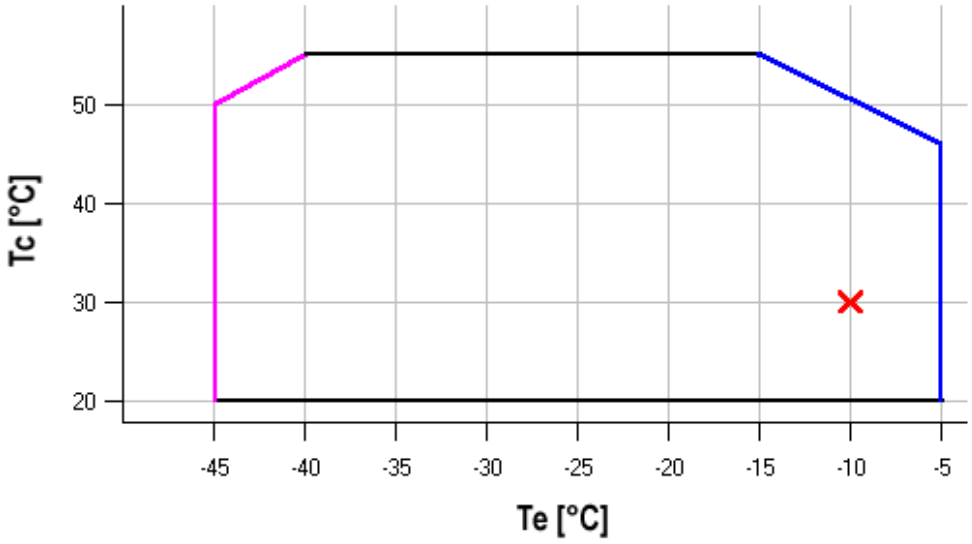
Mass flow [kg/s]

t_c \ t_e	-45	-40	-35	-30	-25	-20	-15	-10	-5
20	27.33	37.48	49.60	64.11	81.46	102.10	126.44	154.95	188.04
25	25.62	35.66	47.64	61.99	79.16	99.57	123.67	151.90	184.69
30	23.84	33.78	45.62	59.81	76.78	96.97	120.82	148.78	181.27
35	22.00	31.83	43.53	57.55	74.32	94.29	117.89	145.56	177.75
40	20.08	29.79	41.35	55.20	71.78	91.52	114.87	142.25	174.13
45	18.07	27.67	39.08	52.76	69.13	88.64	111.73	138.84	170.40
50	15.97	25.44	36.71	50.21	66.38	85.66	108.49	135.30	-
55	-	23.10	34.22	47.54	63.50	82.55	105.12	-	-

C.O.P. [W/W]

t_c \ t_e	-45	-40	-35	-30	-25	-20	-15	-10	-5
20	1.43	1.67	1.94	2.24	2.59	2.99	3.45	3.98	4.61
25	1.27	1.49	1.73	1.99	2.28	2.61	2.98	3.41	3.90
30	1.13	1.34	1.55	1.77	2.02	2.29	2.60	2.94	3.34
35	1.01	1.20	1.39	1.58	1.79	2.02	2.28	2.56	2.88
40	0.89	1.07	1.24	1.41	1.59	1.78	1.99	2.23	2.49
45	0.77	0.94	1.10	1.25	1.40	1.57	1.74	1.94	2.16
50	0.65	0.82	0.96	1.09	1.23	1.37	1.52	1.68	-
55	-	0.70	0.83	0.95	1.06	1.18	1.31	-	-

Application range

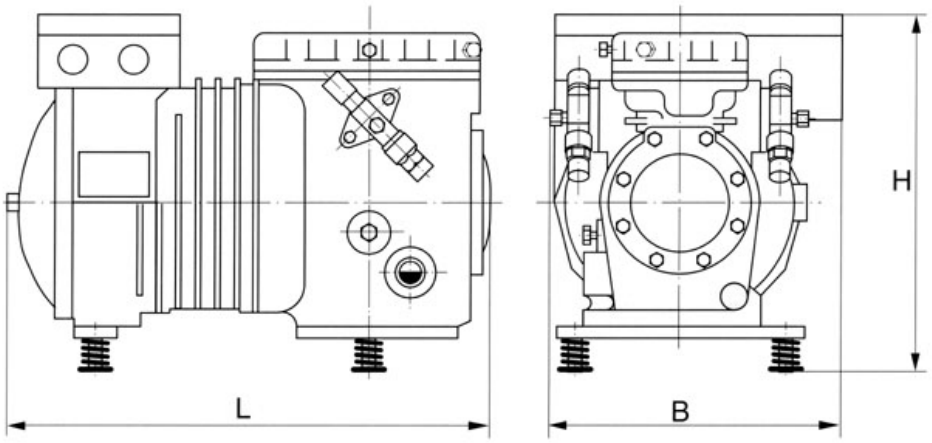


Maximum evaporating temperature
25ºC suction gas return + additional cooling

Operating conditions: ISO; subcooling: 0 K, suction superheat: - K, return gas temperature: 20
t_c - Condensing temperature [ºC]
t_e - Evaporating temperature [ºC]

Model: DKSL-20 X

Dimensions



L	365 mm
B	235 mm
H	280 mm

Model: DKSL-20 X

Image