

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

## **Model: DKJ-7 X**

### **Technical data**

Cylinder count:	2
Displacement [m <sup>3</sup> /h]:	5,1
Weight [kg]:	41
Oil charge [dm <sup>3</sup> ]:	0,6
Max. operating current [A]:	2,3
Locked rotor current [A]:	12,2
Power supply [V/~/Hz]:	380-420V/3/50Hz

### **Connections**

	<u>milimeters</u>	<u>inches</u>
Suction line:		5/8"
Discharge line:		1/2"

R22

**Cooling capacity [kW]**

<b>t<sub>c</sub> \ t<sub>e</sub></b>	<b>-50</b>	<b>-45</b>	<b>-40</b>	<b>-35</b>	<b>-30</b>	<b>-25</b>	<b>-20</b>	<b>-15</b>	<b>-10</b>	<b>-5</b>
<b>25</b>	0.20	0.37	0.58	0.84	1.15	1.52	1.96	2.49	3.10	3.82
<b>30</b>	0.14	0.30	0.50	0.74	1.03	1.38	1.80	2.30	2.89	3.57
<b>35</b>	-	0.23	0.42	0.64	0.92	1.25	1.65	2.12	2.68	3.33
<b>40</b>	-	0.17	0.34	0.55	0.81	1.12	1.49	1.94	2.48	3.10
<b>45</b>	-	-	0.27	0.46	0.70	0.99	1.35	1.77	2.28	2.87
<b>50</b>	-	-	0.21	0.39	0.61	0.88	1.21	1.61	2.09	2.65
<b>55</b>	-	-	-	0.32	0.52	0.77	1.08	1.46	1.91	2.44

**Power input [kW]**

<b>t<sub>c</sub> \ t<sub>e</sub></b>	<b>-50</b>	<b>-45</b>	<b>-40</b>	<b>-35</b>	<b>-30</b>	<b>-25</b>	<b>-20</b>	<b>-15</b>	<b>-10</b>	<b>-5</b>
<b>25</b>	0.36	0.43	0.50	0.57	0.64	0.69	0.75	0.79	0.83	0.86
<b>30</b>	0.34	0.42	0.50	0.58	0.65	0.72	0.79	0.85	0.90	0.95
<b>35</b>	-	0.41	0.49	0.58	0.66	0.75	0.83	0.90	0.97	1.03
<b>40</b>	-	0.39	0.49	0.58	0.67	0.77	0.86	0.95	1.03	1.11
<b>45</b>	-	-	0.47	0.57	0.68	0.78	0.89	0.99	1.09	1.19
<b>50</b>	-	-	0.46	0.57	0.68	0.80	0.92	1.03	1.15	1.27
<b>55</b>	-	-	-	0.56	0.69	0.81	0.94	1.08	1.21	1.34

**Current [A]**

<b>t<sub>c</sub> \ t<sub>e</sub></b>	<b>-50</b>	<b>-45</b>	<b>-40</b>	<b>-35</b>	<b>-30</b>	<b>-25</b>	<b>-20</b>	<b>-15</b>	<b>-10</b>	<b>-5</b>
<b>25</b>	1.25	1.30	1.36	1.43	1.50	1.56	1.62	1.67	1.72	1.75
<b>30</b>	1.23	1.29	1.36	1.44	1.51	1.59	1.67	1.74	1.80	1.86
<b>35</b>	-	1.28	1.36	1.44	1.53	1.62	1.71	1.80	1.89	1.96
<b>40</b>	-	1.27	1.35	1.44	1.54	1.64	1.75	1.86	1.96	2.06
<b>45</b>	-	-	1.34	1.44	1.55	1.66	1.79	1.91	2.03	2.15
<b>50</b>	-	-	1.33	1.43	1.55	1.68	1.82	1.96	2.10	2.24
<b>55</b>	-	-	-	1.43	1.56	1.70	1.85	2.00	2.16	2.32

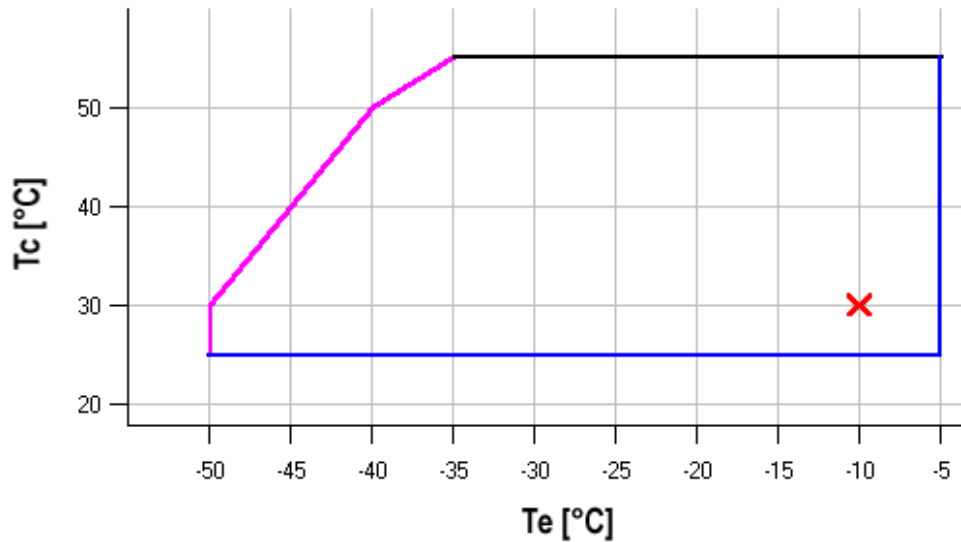
**Mass flow [kg/s]**

<b>t<sub>c</sub> \ t<sub>e</sub></b>	<b>-50</b>	<b>-45</b>	<b>-40</b>	<b>-35</b>	<b>-30</b>	<b>-25</b>	<b>-20</b>	<b>-15</b>	<b>-10</b>	<b>-5</b>
<b>25</b>	4.45	8.30	12.82	18.17	24.48	31.93	40.66	50.83	62.60	76.11
<b>30</b>	3.24	6.96	11.35	16.57	22.77	30.10	38.73	48.79	60.46	73.88
<b>35</b>	-	5.62	9.88	14.96	21.03	28.24	36.75	46.70	58.26	71.58
<b>40</b>	-	4.32	8.43	13.37	19.30	26.38	34.76	44.59	56.03	69.24
<b>45</b>	-	-	7.04	11.83	17.62	24.55	32.80	42.50	53.81	66.90
<b>50</b>	-	-	5.74	10.38	16.01	22.80	30.89	40.46	51.64	64.59
<b>55</b>	-	-	-	9.05	14.52	21.14	29.09	38.50	49.54	62.36

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

$t_c \setminus t_e$	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5
<b>25</b>	0.56	0.87	1.17	1.47	1.81	2.19	2.63	3.14	3.74	4.45
<b>30</b>	0.40	0.71	1.00	1.28	1.58	1.91	2.29	2.71	3.20	3.78
<b>35</b>	-	0.57	0.84	1.11	1.38	1.67	2.00	2.36	2.77	3.23
<b>40</b>	-	0.43	0.70	0.95	1.20	1.46	1.74	2.05	2.40	2.79
<b>45</b>	-	-	0.57	0.81	1.04	1.27	1.52	1.79	2.08	2.41
<b>50</b>	-	-	0.45	0.68	0.89	1.10	1.32	1.56	1.81	2.09
<b>55</b>	-	-	-	0.57	0.76	0.95	1.15	1.35	1.58	1.82

**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]

R134a

**Cooling capacity [kW]**

<b>t<sub>c</sub> \ t<sub>e</sub></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>	1.06	1.40	1.80	2.28	2.84	3.50	4.25
<b>35</b>	0.94	1.26	1.64	2.10	2.63	3.25	3.97
<b>40</b>	0.83	1.13	1.49	1.91	2.41	3.00	3.68
<b>45</b>	0.72	1.00	1.34	1.74	2.20	2.75	3.39
<b>50</b>	0.62	0.88	1.19	1.56	1.99	2.50	3.10
<b>55</b>	0.52	0.76	1.05	1.38	1.79	2.26	2.81
<b>60</b>	0.42	0.65	0.90	1.21	1.58	2.01	2.52

**Power input [kW]**

<b>t<sub>c</sub> \ t<sub>e</sub></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>	0.53	0.57	0.61	0.64	0.66	0.66	0.65
<b>35</b>	0.55	0.60	0.65	0.69	0.73	0.75	0.76
<b>40</b>	0.57	0.63	0.69	0.75	0.80	0.84	0.87
<b>45</b>	0.59	0.66	0.73	0.80	0.86	0.92	0.97
<b>50</b>	0.60	0.68	0.76	0.85	0.93	1.00	1.08
<b>55</b>	0.62	0.70	0.80	0.89	0.99	1.08	1.17
<b>60</b>	0.63	0.72	0.83	0.94	1.05	1.16	1.27

**Current [A]**

<b>t<sub>c</sub> \ t<sub>e</sub></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>	1.19	1.24	1.28	1.31	1.33	1.34	1.33
<b>35</b>	1.22	1.27	1.33	1.38	1.42	1.45	1.46
<b>40</b>	1.24	1.31	1.37	1.44	1.50	1.56	1.60
<b>45</b>	1.26	1.34	1.42	1.50	1.59	1.67	1.74
<b>50</b>	1.27	1.36	1.46	1.57	1.67	1.77	1.87
<b>55</b>	1.29	1.39	1.50	1.63	1.75	1.88	2.01
<b>60</b>	1.30	1.41	1.54	1.68	1.84	1.99	2.15

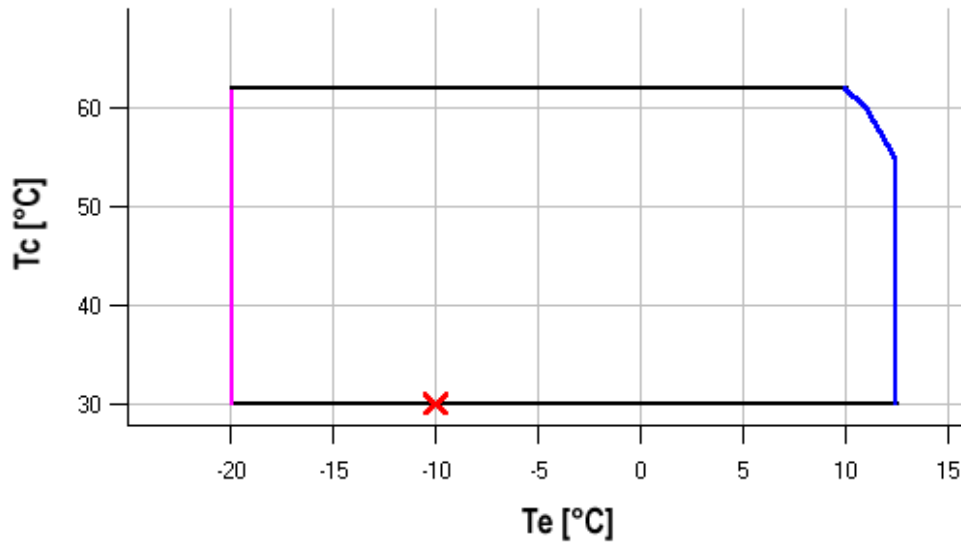
**Mass flow [kg/s]**

<b>t<sub>c</sub> \ t<sub>e</sub></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>	24.98	32.34	40.83	50.60	61.82	74.66	89.27
<b>35</b>	23.36	30.69	39.10	48.78	59.88	72.56	87.00
<b>40</b>	21.71	28.97	37.30	46.85	57.80	70.30	84.53
<b>45</b>	20.01	27.18	35.39	44.79	55.56	67.86	81.86
<b>50</b>	18.25	25.30	33.36	42.59	53.16	65.23	78.96
<b>55</b>	16.41	23.31	31.20	40.23	50.57	62.38	75.83
<b>60</b>	14.46	21.20	28.88	37.69	47.77	59.29	72.43

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

$t_c \setminus t_e$	-20	-15	-10	-5	0	5	10
<b>30</b>	1.98	2.43	2.94	3.56	4.32	5.27	6.50
<b>35</b>	1.70	2.09	2.52	3.02	3.61	4.32	5.20
<b>40</b>	1.45	1.79	2.15	2.56	3.03	3.58	4.23
<b>45</b>	1.23	1.52	1.84	2.18	2.55	2.98	3.48
<b>50</b>	1.02	1.29	1.56	1.84	2.15	2.49	2.88
<b>55</b>	0.84	1.08	1.31	1.55	1.81	2.09	2.39
<b>60</b>	0.68	0.89	1.09	1.30	1.51	1.74	1.99

**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]

R404A/R507

**Cooling capacity [kW]**

<b>t<sub>c</sub> \ t<sub>e</sub></b>	<b>-50</b>	<b>-45</b>	<b>-40</b>	<b>-35</b>	<b>-30</b>	<b>-25</b>	<b>-20</b>
<b>20</b>	0.44	0.65	0.91	1.22	1.58	2.01	2.51
<b>25</b>	0.38	0.58	0.82	1.11	1.45	1.86	2.33
<b>30</b>	0.31	0.50	0.73	1.00	1.32	1.70	2.14
<b>35</b>	-	0.43	0.64	0.89	1.19	1.54	1.95
<b>40</b>	-	0.35	0.55	0.78	1.06	1.38	1.77
<b>45</b>	-	0.29	0.46	0.67	0.93	1.23	1.58
<b>50</b>	-	-	0.38	0.57	0.80	1.07	1.39
<b>55</b>	-	-	0.30	0.47	0.68	0.92	1.21

**Power input [kW]**

<b>t<sub>c</sub> \ t<sub>e</sub></b>	<b>-50</b>	<b>-45</b>	<b>-40</b>	<b>-35</b>	<b>-30</b>	<b>-25</b>	<b>-20</b>
<b>20</b>	0.62	0.65	0.69	0.72	0.75	0.78	0.79
<b>25</b>	0.57	0.62	0.67	0.72	0.77	0.81	0.85
<b>30</b>	0.51	0.58	0.65	0.72	0.78	0.85	0.90
<b>35</b>	-	0.54	0.62	0.71	0.79	0.87	0.95
<b>40</b>	-	0.49	0.59	0.69	0.79	0.89	0.99
<b>45</b>	-	0.44	0.56	0.67	0.79	0.91	1.02
<b>50</b>	-	-	0.52	0.65	0.79	0.92	1.05
<b>55</b>	-	-	0.47	0.62	0.77	0.93	1.07



**Current [A]**

$t_c \setminus t_e$	<b>-50</b>	<b>-45</b>	<b>-40</b>	<b>-35</b>	<b>-30</b>	<b>-25</b>	<b>-20</b>
<b>20</b>	1.36	1.37	1.39	1.43	1.47	1.51	1.56
<b>25</b>	1.29	1.33	1.38	1.44	1.50	1.57	1.63
<b>30</b>	1.20	1.28	1.36	1.45	1.53	1.61	1.69
<b>35</b>	-	1.21	1.32	1.44	1.55	1.65	1.75
<b>40</b>	-	1.12	1.28	1.42	1.56	1.69	1.81
<b>45</b>	-	1.02	1.21	1.39	1.56	1.72	1.86
<b>50</b>	-	-	1.13	1.34	1.55	1.74	1.90
<b>55</b>	-	-	1.02	1.28	1.52	1.74	1.94

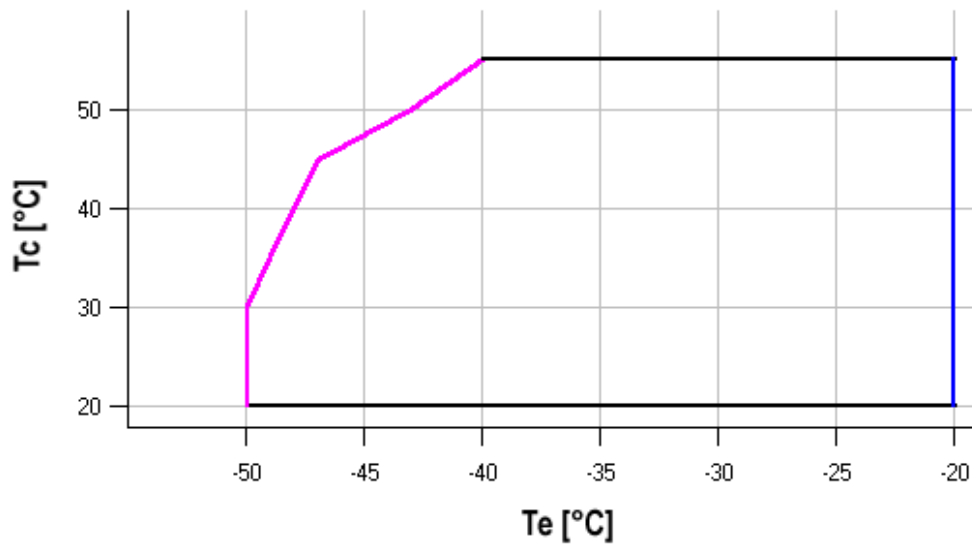
**Mass flow [kg/s]**

$t_c \setminus t_e$	<b>-50</b>	<b>-45</b>	<b>-40</b>	<b>-35</b>	<b>-30</b>	<b>-25</b>	<b>-20</b>
<b>20</b>	9.66	14.30	19.93	26.73	34.87	44.55	55.93
<b>25</b>	8.64	13.22	18.78	25.50	33.55	43.13	54.40
<b>30</b>	7.57	12.07	17.54	24.16	32.10	41.56	52.69
<b>35</b>	-	10.85	16.21	22.72	30.53	39.85	50.84
<b>40</b>	-	9.58	14.82	21.18	28.85	38.01	48.83
<b>45</b>	-	8.26	13.35	19.56	27.07	36.05	46.69
<b>50</b>	-	-	11.83	17.86	25.19	33.98	44.41
<b>55</b>	-	-	10.25	16.10	23.22	31.79	42.00

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

$t_c \setminus t_e$	-50	-45	-40	-35	-30	-25	-20
<b>20</b>	0.72	1.00	1.32	1.68	2.10	2.59	3.17
<b>25</b>	0.67	0.93	1.22	1.53	1.88	2.28	2.74
<b>30</b>	0.62	0.86	1.12	1.39	1.68	2.01	2.38
<b>35</b>	-	0.79	1.02	1.25	1.50	1.77	2.07
<b>40</b>	-	0.72	0.93	1.13	1.33	1.55	1.79
<b>45</b>	-	0.65	0.83	1.00	1.17	1.35	1.55
<b>50</b>	-	-	0.74	0.88	1.02	1.17	1.33
<b>55</b>	-	-	0.64	0.76	0.87	0.99	1.13

**Application range**

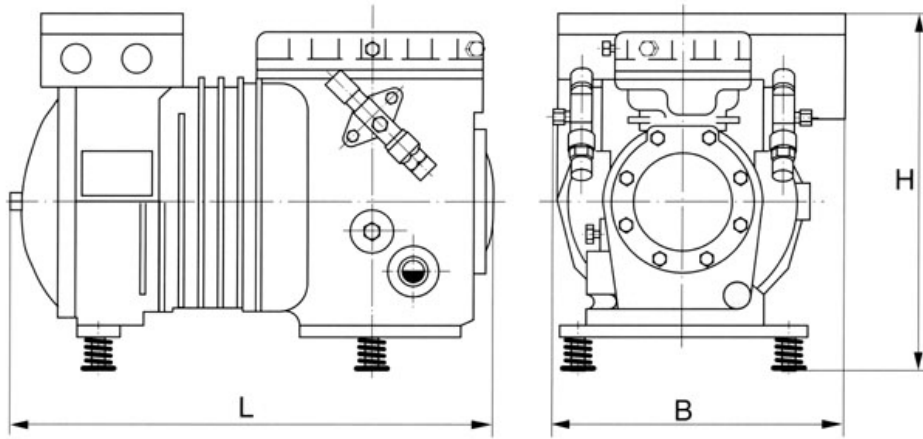


- Maximum evaporating temperature
- 25°C suction gas return + additional cooling

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

$t_c$  - Condensing temperature [°C]

$t_e$  - Evaporating temperature [°C]



L	365 mm
B	235 mm
H	280 mm

