

**Type:** Semi-hermetic piston compressors

**Producer:** Copeland

**Series:** DISCUS

## **Model: D2DL-75 X**

### **Technical data**

Nominal motor power [kW]:

Cylinder count:

2

Displacement [m<sup>3</sup>/h]:

23,7

Cylinder capacity [cm<sup>3</sup>]:

RPM [min<sup>-1</sup>]:

1450

Weight [kg]:

145

Oil charge [dm<sup>3</sup>]:

2,3

Power supply [V/~/Hz]:

### **Connections**

Suction line:

milimeters

35

inches

1 3/8"

Discharge line:

28

1 1/8"

R134a

### **Cooling capacity [W]**

| <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>7</b> | <b>10</b> | <b>12.5</b> | <b>15</b> | <b>20</b> | <b>25</b> |
|--------------------------------------|------------|------------|------------|-----------|----------|----------|----------|-----------|-------------|-----------|-----------|-----------|
| <b>40</b>                            | 3 730      | 5 210      | 6 970      | 9 060     | 11 530   | 14 420   | 15 710   | 17 780    | 19 650      | 21 660    | -         | -         |
| <b>45</b>                            | 3 280      | 4 710      | 6 390      | 8 380     | 10 720   | 13 480   | 14 710   | 16 690    | 18 490      | 20 410    | 24 650    | 29 460    |
| <b>50</b>                            | 2 830      | 4 210      | 5 820      | 7 710     | 9 930    | 12 550   | 13 720   | 15 610    | 17 320      | 19 160    | 23 230    | 27 850    |
| <b>55</b>                            | 2 390      | 3 720      | 5 260      | 7 050     | 9 160    | 11 640   | 12 740   | 14 540    | 16 160      | 17 910    | 21 800    | 26 230    |
| <b>60</b>                            | -          | 3 240      | 4 710      | 6 410     | 8 390    | 10 730   | 11 780   | 13 470    | 15 010      | 16 670    | 20 360    | 24 600    |
| <b>65</b>                            | -          | 2 770      | 4 180      | 5 780     | 7 650    | 9 840    | 10 820   | 12 420    | 13 860      | 15 420    | 18 920    | 22 940    |
| <b>70</b>                            | -          | -          | 3 660      | 5 170     | 6 920    | 8 970    | 9 880    | 11 370    | 12 720      | 14 180    | 17 470    | 21 270    |
| <b>75</b>                            | -          | -          | -          | 4 580     | 6 210    | 8 110    | 8 950    | 10 330    | 11 590      | 12 940    | 16 010    | 19 570    |
| <b>80</b>                            | -          | -          | -          | 4 020     | 5 520    | 7 270    | 8 040    | 9 310     | 10 460      | 11 710    | 14 540    | 17 860    |

### **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>7</b> | <b>10</b> | <b>12.5</b> | <b>15</b> | <b>20</b> | <b>25</b> |
|--------------------------------------|------------|------------|------------|-----------|----------|----------|----------|-----------|-------------|-----------|-----------|-----------|
| <b>40</b>                            | 2.14       | 2.45       | 2.73       | 2.98      | 3.19     | 3.34     | 3.38     | 3.42      | 3.43        | 3.42      | -         | -         |
| <b>45</b>                            | 2.13       | 2.47       | 2.80       | 3.10      | 3.37     | 3.58     | 3.65     | 3.73      | 3.78        | 3.80      | 3.80      | 3.70      |
| <b>50</b>                            | 2.11       | 2.49       | 2.86       | 3.22      | 3.54     | 3.81     | 3.90     | 4.02      | 4.10        | 4.17      | 4.23      | 4.21      |
| <b>55</b>                            | 2.10       | 2.51       | 2.92       | 3.32      | 3.69     | 4.02     | 4.14     | 4.30      | 4.41        | 4.51      | 4.65      | 4.70      |
| <b>60</b>                            | -          | 2.52       | 2.97       | 3.41      | 3.83     | 4.22     | 4.36     | 4.56      | 4.70        | 4.83      | 5.04      | 5.17      |
| <b>65</b>                            | -          | 2.52       | 3.00       | 3.49      | 3.95     | 4.39     | 4.56     | 4.79      | 4.97        | 5.14      | 5.42      | 5.62      |
| <b>70</b>                            | -          | -          | 3.03       | 3.55      | 4.06     | 4.55     | 4.74     | 5.01      | 5.22        | 5.42      | 5.77      | 6.04      |
| <b>75</b>                            | -          | -          | -          | 3.60      | 4.15     | 4.69     | 4.90     | 5.20      | 5.45        | 5.68      | 6.09      | 6.44      |
| <b>80</b>                            | -          | -          | -          | 3.63      | 4.22     | 4.81     | 5.04     | 5.37      | 5.65        | 5.91      | 6.39      | 6.82      |

Operating conditions: suction gas temperature 25°C + additional cooling

t<sub>c</sub> - Condensing temperature [°C]

t<sub>e</sub> - Evaporating temperature [°C]

R404A/R507

### **Cooling capacity [W]**

| <b>t<sub>c</sub> \ t<sub>e</sub></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>0</b> | <b>5</b> | <b>7</b> |
|--------------------------------------|------------|------------|------------|------------|------------|------------|------------|-----------|----------|----------|----------|
| <b>20</b>                            | 4 260      | 5 690      | 7 440      | 9 560      | 12 080     | 15 070     | 18 550     | 22 560    | 27 160   | 32 390   | 34 660   |
| <b>25</b>                            | 3 750      | 5 140      | 6 820      | 8 840      | 11 240     | 14 060     | 17 350     | 21 140    | 25 490   | 30 430   | 32 580   |
| <b>30</b>                            | 3 260      | 4 610      | 6 220      | 8 140      | 10 400     | 13 060     | 16 150     | 19 710    | 23 800   | 28 450   | 30 470   |
| <b>35</b>                            | 2 810      | 4 110      | 5 640      | 7 450      | 9 570      | 12 060     | 14 940     | 18 270    | 22 100   | 26 450   | 28 350   |
| <b>40</b>                            | 2 380      | 3 630      | 5 080      | 6 770      | 8 750      | 11 050     | 13 730     | 16 820    | 20 370   | 24 420   | 26 190   |
| <b>45</b>                            | -          | 3 170      | 4 530      | 6 100      | 7 920      | 10 050     | 12 510     | 15 360    | 18 630   | 22 380   | 24 010   |
| <b>50</b>                            | -          | 2 720      | 3 990      | 5 430      | 7 100      | 9 040      | 11 280     | 13 880    | 16 870   | 20 300   | 21 810   |
| <b>55</b>                            | -          | -          | 3 450      | 4 770      | 6 270      | 8 020      | 10 040     | 12 380    | 15 080   | 18 200   | 19 560   |

### **Power input [kW]**

| <b>t<sub>c</sub> \ t<sub>e</sub></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>0</b> | <b>5</b> | <b>7</b> |
|--------------------------------------|------------|------------|------------|------------|------------|------------|------------|-----------|----------|----------|----------|
| <b>20</b>                            | 2.03       | 2.36       | 2.66       | 2.94       | 3.17       | 3.35       | 3.45       | 3.47      | 3.40     | 3.22     | 3.12     |
| <b>25</b>                            | 2.05       | 2.42       | 2.77       | 3.10       | 3.39       | 3.63       | 3.81       | 3.92      | 3.94     | 3.85     | 3.79     |
| <b>30</b>                            | 2.06       | 2.46       | 2.86       | 3.24       | 3.59       | 3.90       | 4.15       | 4.34      | 4.44     | 4.45     | 4.43     |
| <b>35</b>                            | 2.05       | 2.48       | 2.92       | 3.36       | 3.76       | 4.14       | 4.46       | 4.72      | 4.91     | 5.02     | 5.03     |
| <b>40</b>                            | 2.03       | 2.50       | 2.98       | 3.46       | 3.92       | 4.36       | 4.75       | 5.09      | 5.36     | 5.56     | 5.61     |
| <b>45</b>                            | -          | 2.50       | 3.02       | 3.55       | 4.06       | 4.56       | 5.02       | 5.43      | 5.79     | 6.07     | 6.16     |
| <b>50</b>                            | -          | 2.50       | 3.06       | 3.63       | 4.20       | 4.75       | 5.27       | 5.76      | 6.19     | 6.56     | 6.69     |
| <b>55</b>                            | -          | -          | 3.10       | 3.71       | 4.32       | 4.93       | 5.52       | 6.07      | 6.59     | 7.04     | 7.20     |

Operating conditions: suction gas temperature 25°C + additional cooling

t<sub>c</sub> - Condensing temperature [°C]

t<sub>e</sub> - Evaporating temperature [°C]

R407C

### **Cooling capacity [W]**

| <b>t<sub>c</sub> \ t<sub>e</sub></b> | <b>-25</b> | <b>-20</b> | <b>-15</b> | <b>-10</b> | <b>-5</b> | <b>0</b> | <b>5</b> | <b>7</b> | <b>10</b> | <b>12.5</b> |
|--------------------------------------|------------|------------|------------|------------|-----------|----------|----------|----------|-----------|-------------|
| <b>30</b>                            | 5 820      | 7 920      | 10 500     | 13 610     | 17 260    | 21 510   | 26 380   | 28 510   | 31 890    | 34 900      |
| <b>35</b>                            | 5 170      | 7 140      | 9 570      | 12 500     | 15 950    | 19 970   | 24 600   | 26 620   | 29 850    | 32 730      |
| <b>40</b>                            | 4 570      | 6 410      | 8 680      | 11 430     | 14 680    | 18 490   | 22 870   | 24 800   | 27 870    | 30 620      |
| <b>45</b>                            | -          | 5 720      | 7 840      | 10 410     | 13 470    | 17 050   | 21 200   | 23 020   | 25 950    | 28 560      |
| <b>50</b>                            | -          | 5 080      | 7 050      | 9 440      | 12 300    | 15 670   | 19 580   | 21 310   | 24 080    | 26 560      |
| <b>55</b>                            | -          | -          | 6 300      | 8 520      | 11 190    | 14 340   | 18 010   | 19 640   | 22 260    | 24 620      |
| <b>60</b>                            | -          | -          | 5 600      | 7 650      | 10 120    | 13 060   | 16 500   | 18 030   | 20 500    | 22 730      |

### **Power input [kW]**

| <b>t<sub>c</sub> \ t<sub>e</sub></b> | <b>-25</b> | <b>-20</b> | <b>-15</b> | <b>-10</b> | <b>-5</b> | <b>0</b> | <b>5</b> | <b>7</b> | <b>10</b> | <b>12.5</b> |
|--------------------------------------|------------|------------|------------|------------|-----------|----------|----------|----------|-----------|-------------|
| <b>30</b>                            | 2.69       | 3.03       | 3.37       | 3.66       | 3.90      | 4.06     | 4.11     | 4.09     | 4.03      | 3.93        |
| <b>35</b>                            | 2.78       | 3.17       | 3.55       | 3.91       | 4.22      | 4.46     | 4.61     | 4.63     | 4.64      | 4.60        |
| <b>40</b>                            | 2.87       | 3.29       | 3.71       | 4.13       | 4.51      | 4.83     | 5.07     | 5.14     | 5.21      | 5.23        |
| <b>45</b>                            | -          | 3.40       | 3.86       | 4.33       | 4.77      | 5.17     | 5.50     | 5.61     | 5.74      | 5.82        |
| <b>50</b>                            | -          | 3.50       | 4.00       | 4.52       | 5.02      | 5.49     | 5.90     | 6.04     | 6.23      | 6.36        |
| <b>55</b>                            | -          | -          | 4.13       | 4.69       | 5.25      | 5.78     | 6.27     | 6.45     | 6.70      | 6.88        |
| <b>60</b>                            | -          | -          | 4.26       | 4.85       | 5.46      | 6.06     | 6.62     | 6.83     | 7.13      | 7.36        |

Operating conditions: suction gas temperature 25°C + additional cooling

t<sub>c</sub> - Condensing temperature [°C]

t<sub>e</sub> - Evaporating temperature [°C]



