

# Model: D4DL-150 X

## Data

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Type: Semi-hermetic piston compressors

Producer: Copeland

Series: DISCUS

## Model: D4DL-150 X

### Technical data

|                                   |                 |
|-----------------------------------|-----------------|
| Cylinder count:                   | 4               |
| Displacement [m <sup>3</sup> /h]: | 70,8            |
| Weight [kg]:                      | 221             |
| Oil charge [dm <sup>3</sup> ]:    | 3,6             |
| Max. operating current [A]:       | 28,5            |
| Locked rotor current [A]:         | 140             |
| 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"        |

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## Capacity

R404A/R507

### Cooling capacity [kW]

| $t_c \setminus t_e$ | -50  | -45   | -40   | -35   | -30   | -25   | -20   | -15   | -10   |
|---------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| 20                  | 8.13 | 11.06 | 14.66 | 19.01 | 24.21 | 30.35 | 37.53 | 45.82 | 55.33 |
| 25                  | 7.30 | 10.07 | 13.45 | 17.53 | 22.41 | 28.16 | 34.89 | 42.69 | 51.64 |
| 30                  | 6.46 | 9.08  | 12.25 | 16.06 | 20.61 | 25.98 | 32.27 | 39.57 | 47.97 |
| 35                  | 5.61 | 8.08  | 11.05 | 14.60 | 18.82 | 23.82 | 29.67 | 36.47 | 44.32 |
| 40                  | -    | 7.10  | 9.85  | 13.14 | 17.05 | 21.66 | 27.08 | 33.39 | -     |
| 45                  | -    | 6.11  | 8.67  | 11.70 | 15.29 | 19.53 | 24.51 | 30.33 | -     |
| 50                  | -    | -     | 7.50  | 10.27 | 13.54 | 17.41 | 21.97 | -     | -     |
| 55                  | -    | -     | 6.34  | 8.86  | 11.82 | 15.32 | 19.45 | -     | -     |

### Power input [kW]

| $t_c \setminus t_e$ | -50  | -45  | -40  | -35  | -30   | -25   | -20   | -15   | -10   |
|---------------------|------|------|------|------|-------|-------|-------|-------|-------|
| 20                  | 5.01 | 5.97 | 6.95 | 7.94 | 8.91  | 9.84  | 10.72 | 11.52 | 12.22 |
| 25                  | 5.05 | 6.07 | 7.14 | 8.23 | 9.33  | 10.40 | 11.43 | 12.39 | 13.28 |
| 30                  | 5.05 | 6.14 | 7.29 | 8.48 | 9.69  | 10.89 | 12.06 | 13.19 | 14.25 |
| 35                  | 5.02 | 6.18 | 7.41 | 8.69 | 10.00 | 11.32 | 12.64 | 13.92 | 15.15 |
| 40                  | -    | 6.18 | 7.48 | 8.85 | 10.26 | 11.70 | 13.15 | 14.58 | -     |
| 45                  | -    | 6.17 | 7.53 | 8.98 | 10.49 | 12.04 | 13.61 | 15.19 | -     |
| 50                  | -    | -    | 7.55 | 9.07 | 10.67 | 12.33 | 14.03 | -     | -     |
| 55                  | -    | -    | 7.56 | 9.15 | 10.83 | 12.59 | 14.40 | -     | -     |

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## Capacity

### Current [A]

| $t_c \setminus t_e$ | -50   | -45   | -40   | -35   | -30   | -25   | -20   | -15   | -10   |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>20</b>           | 13.19 | 14.37 | 15.62 | 16.92 | 18.22 | 19.50 | 20.72 | 21.85 | 22.85 |
| <b>25</b>           | 13.24 | 14.50 | 15.86 | 17.30 | 18.79 | 20.28 | 21.74 | 23.15 | 24.46 |
| <b>30</b>           | 13.26 | 14.59 | 16.07 | 17.64 | 19.30 | 20.99 | 22.69 | 24.37 | 25.99 |
| <b>35</b>           | 13.26 | 14.65 | 16.22 | 17.93 | 19.75 | 21.64 | 23.57 | 25.50 | 27.42 |
| <b>40</b>           | -     | 14.67 | 16.33 | 18.16 | 20.13 | 22.21 | 24.36 | 26.55 | -     |
| <b>45</b>           | -     | 14.64 | 16.38 | 18.33 | 20.45 | 22.71 | 25.07 | 27.51 | -     |
| <b>50</b>           | -     | -     | 16.38 | 18.43 | 20.69 | 23.12 | 25.70 | -     | -     |
| <b>55</b>           | -     | -     | 16.32 | 18.47 | 20.86 | 23.46 | 26.23 | -     | -     |

### Mass flow [kg/s]

| $t_c \setminus t_e$ | -50    | -45    | -40    | -35    | -30    | -25    | -20    | -15      | -10      |
|---------------------|--------|--------|--------|--------|--------|--------|--------|----------|----------|
| <b>20</b>           | 169.54 | 238.84 | 320.63 | 418.06 | 534.29 | 672.47 | 835.76 | 1 027.32 | 1 250.30 |
| <b>25</b>           | 161.14 | 228.75 | 308.73 | 404.21 | 518.37 | 654.35 | 815.31 | 1 004.41 | 1 224.81 |
| <b>30</b>           | 151.67 | 217.62 | 295.80 | 389.36 | 501.47 | 635.27 | 793.92 | 980.58   | 1 198.41 |
| <b>35</b>           | 141.22 | 205.53 | 281.94 | 373.60 | 483.67 | 615.31 | 771.68 | 955.93   | 1 171.21 |
| <b>40</b>           | -      | 192.57 | 267.23 | 357.01 | 465.08 | 594.58 | 748.68 | 930.53   | -        |
| <b>45</b>           | -      | 178.84 | 251.77 | 339.69 | 445.77 | 573.16 | 725.01 | 904.49   | -        |
| <b>50</b>           | -      | -      | 235.65 | 321.73 | 425.84 | 551.13 | 700.76 | -        | -        |
| <b>55</b>           | -      | -      | 218.95 | 303.22 | 405.39 | 528.60 | 676.03 | -        | -        |

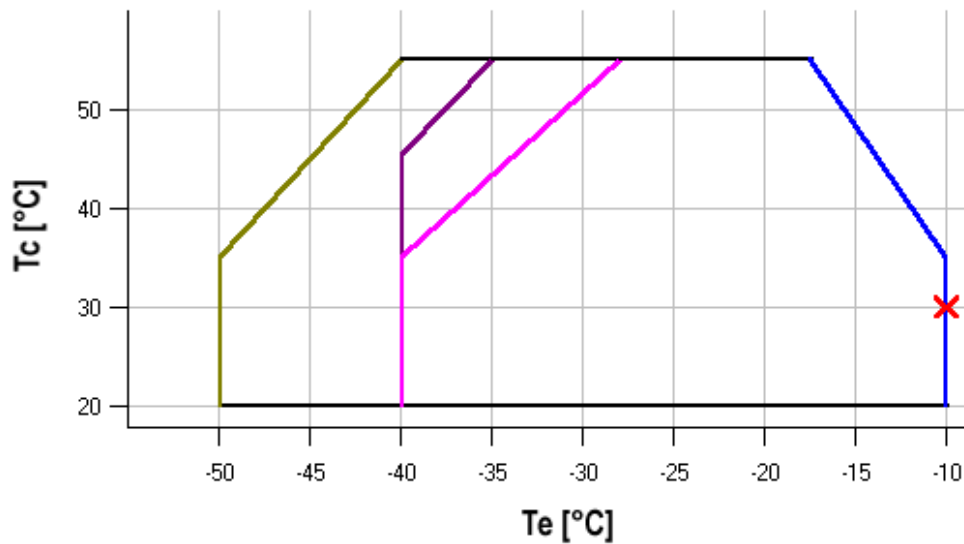
# Model: D4DL-150 X





## Capacity

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

| $t_c \setminus t_e$ | -50  | -45  | -40  | -35  | -30  | -25  | -20  | -15  | -10  |
|---------------------|------|------|------|------|------|------|------|------|------|
| 20                  | 1.62 | 1.85 | 2.11 | 2.40 | 2.72 | 3.08 | 3.50 | 3.98 | 4.53 |
| 25                  | 1.45 | 1.66 | 1.88 | 2.13 | 2.40 | 2.71 | 3.05 | 3.44 | 3.89 |
| 30                  | 1.28 | 1.48 | 1.68 | 1.89 | 2.13 | 2.39 | 2.68 | 3.00 | 3.37 |
| 35                  | 1.12 | 1.31 | 1.49 | 1.68 | 1.88 | 2.10 | 2.35 | 2.62 | 2.93 |
| 40                  | -    | 1.15 | 1.32 | 1.48 | 1.66 | 1.85 | 2.06 | 2.29 | -    |
| 45                  | -    | 0.99 | 1.15 | 1.30 | 1.46 | 1.62 | 1.80 | 2.00 | -    |
| 50                  | -    | -    | 0.99 | 1.13 | 1.27 | 1.41 | 1.57 | -    | -    |
| 55                  | -    | -    | 0.84 | 0.97 | 1.09 | 1.22 | 1.35 | -    | -    |

### Application range



-  Maximum evaporating temperature
-  25°C suction gas return
-  0°C suction gas return + additional cooling
-  0°C suction gas return

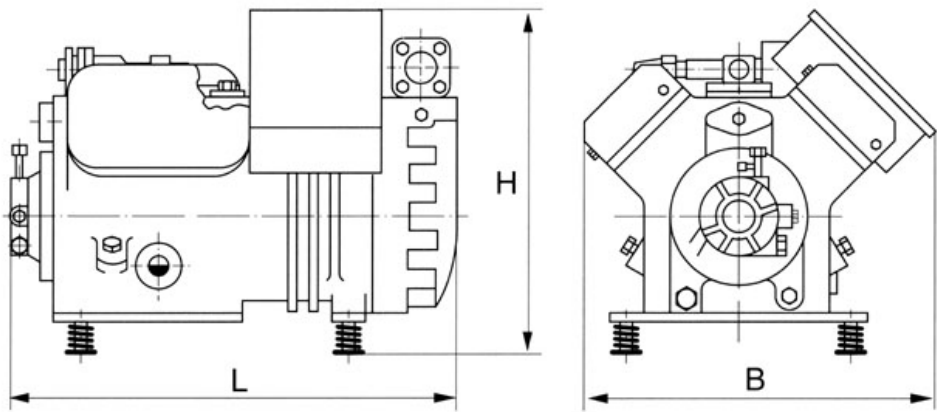
Operating conditions: ISO; subcooling: 0 K, suction superheat: - K, return gas temperature: 20

$t_c$  - Condensing temperature [°C]

$t_e$  - Evaporating temperature [°C]

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## Dimensions



|   |        |
|---|--------|
| L | 680 mm |
| B | 535 mm |
| H | 605 mm |

# Model: D4DL-150 X

Image

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