

# Model: DLSG-40 X

## Data

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Type: Semi-hermetic piston compressors

Producer: Copeland

Series: DL

## Model: DLSG-40 X

### Technical data

|                                   |                 |
|-----------------------------------|-----------------|
| Cylinder count:                   | 2               |
| Displacement [m <sup>3</sup> /h]: | 22,5            |
| Weight [kg]:                      | 88              |
| Oil charge [dm <sup>3</sup> ]:    | 2,3             |
| Max. operating current [A]:       | 8,9             |
| Locked rotor current [A]:         | 68,5            |
| Power supply [V/~/Hz]:            | 380-420V/3/50Hz |

### Connections

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

# Model: DLSG-40 X

## Capacity

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R22

### Cooling capacity [kW]

| $t_c \setminus t_e$ | -50  | -45  | -40  | -35  | -30  | -25  | -20  |
|---------------------|------|------|------|------|------|------|------|
| 25                  | 1.14 | 1.94 | 3.02 | 4.36 | 5.92 | 7.67 | 9.59 |
| 30                  | 0.94 | 1.68 | 2.69 | 3.96 | 5.44 | 7.12 | 8.96 |
| 35                  | 0.77 | 1.43 | 2.37 | 3.56 | 4.97 | 6.57 | 8.33 |
| 40                  | 0.61 | 1.20 | 2.07 | 3.18 | 4.51 | 6.03 | 7.71 |
| 45                  | -    | -    | 1.78 | 2.81 | 4.06 | 5.50 | 7.09 |
| 50                  | -    | -    | -    | 2.46 | 3.63 | 4.98 | 6.48 |
| 55                  | -    | -    | -    | 2.12 | 3.20 | 4.47 | 5.88 |

### Power input [kW]

| $t_c \setminus t_e$ | -50  | -45  | -40  | -35  | -30  | -25  | -20  |
|---------------------|------|------|------|------|------|------|------|
| 25                  | 1.55 | 1.87 | 2.22 | 2.58 | 2.91 | 3.21 | 3.44 |
| 30                  | 1.53 | 1.87 | 2.25 | 2.64 | 3.02 | 3.36 | 3.65 |
| 35                  | 1.49 | 1.86 | 2.27 | 2.69 | 3.11 | 3.50 | 3.84 |
| 40                  | 1.44 | 1.83 | 2.27 | 2.73 | 3.19 | 3.62 | 4.01 |
| 45                  | -    | -    | 2.26 | 2.75 | 3.25 | 3.72 | 4.16 |
| 50                  | -    | -    | -    | 2.77 | 3.29 | 3.81 | 4.29 |
| 55                  | -    | -    | -    | 2.76 | 3.33 | 3.88 | 4.41 |

# Model: DLSG-40 X

## Capacity

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### Current [A]

| $t_c \setminus t_e$ | -50  | -45  | -40  | -35  | -30  | -25  | -20  |
|---------------------|------|------|------|------|------|------|------|
| 25                  | 4.29 | 4.58 | 4.92 | 5.29 | 5.67 | 6.01 | 6.30 |
| 30                  | 4.27 | 4.57 | 4.95 | 5.36 | 5.79 | 6.20 | 6.57 |
| 35                  | 4.24 | 4.56 | 4.96 | 5.42 | 5.89 | 6.37 | 6.82 |
| 40                  | 4.20 | 4.54 | 4.97 | 5.46 | 5.99 | 6.53 | 7.05 |
| 45                  | -    | -    | 4.96 | 5.49 | 6.06 | 6.66 | 7.26 |
| 50                  | -    | -    | -    | 5.50 | 6.12 | 6.78 | 7.45 |
| 55                  | -    | -    | -    | 5.50 | 6.17 | 6.88 | 7.61 |

### Mass flow [kg/s]

| $t_c \setminus t_e$ | -50   | -45   | -40   | -35   | -30    | -25    | -20    |
|---------------------|-------|-------|-------|-------|--------|--------|--------|
| 25                  | 25.65 | 42.98 | 66.04 | 93.99 | 125.94 | 161.05 | 198.44 |
| 30                  | 22.22 | 38.76 | 61.18 | 88.61 | 120.19 | 155.05 | 192.33 |
| 35                  | 18.85 | 34.56 | 56.28 | 83.14 | 114.29 | 148.86 | 185.98 |
| 40                  | 15.53 | 30.35 | 51.31 | 77.57 | 108.24 | 142.46 | 179.37 |
| 45                  | -     | -     | 46.28 | 71.87 | 102.01 | 135.84 | 172.49 |
| 50                  | -     | -     | -     | 66.04 | 95.60  | 128.98 | 165.32 |
| 55                  | -     | -     | -     | 60.06 | 88.99  | 121.87 | 157.85 |

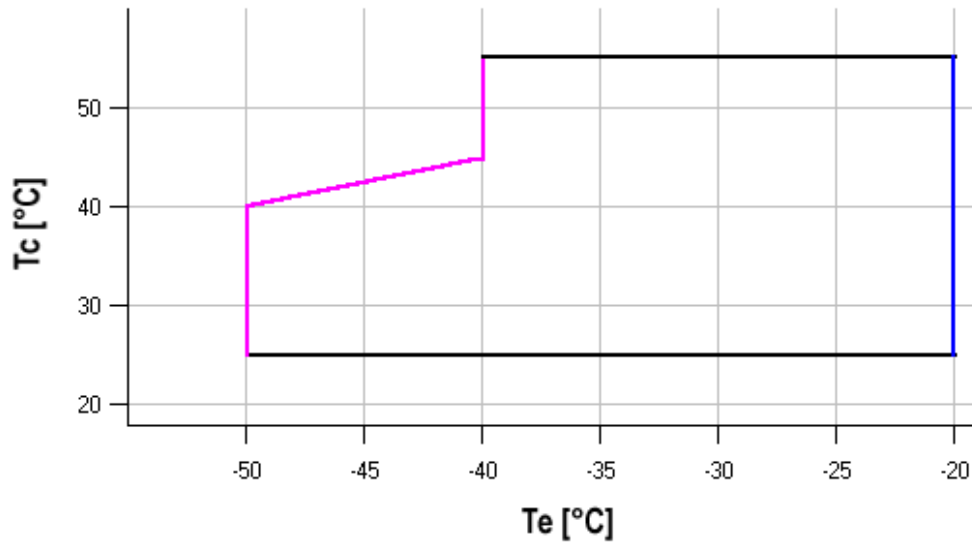
# Model: DLSG-40 X

Capacity

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

| $t_c \setminus t_e$ | -50  | -45  | -40  | -35  | -30  | -25  | -20  |
|---------------------|------|------|------|------|------|------|------|
| 25                  | 0.73 | 1.03 | 1.36 | 1.69 | 2.03 | 2.39 | 2.79 |
| 30                  | 0.62 | 0.90 | 1.20 | 1.50 | 1.80 | 2.12 | 2.46 |
| 35                  | 0.52 | 0.77 | 1.05 | 1.32 | 1.60 | 1.88 | 2.17 |
| 40                  | 0.42 | 0.65 | 0.91 | 1.17 | 1.42 | 1.67 | 1.92 |
| 45                  | -    | -    | 0.79 | 1.02 | 1.25 | 1.48 | 1.70 |
| 50                  | -    | -    | -    | 0.89 | 1.10 | 1.31 | 1.51 |
| 55                  | -    | -    | -    | 0.77 | 0.96 | 1.15 | 1.33 |

## 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]

# Model: DLSG-40 X

## Capacity

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R134a

### Cooling capacity [kW]

| $t_c \setminus t_e$ | -20  | -15  | -10  | -5    | 0     | 5     | 10    |
|---------------------|------|------|------|-------|-------|-------|-------|
| 30                  | 4.75 | 6.24 | 8.02 | 10.12 | 12.60 | 15.49 | 18.84 |
| 35                  | 4.30 | 5.73 | 7.42 | 9.42  | 11.78 | 14.53 | 17.73 |
| 40                  | 3.87 | 5.23 | 6.83 | 8.72  | 10.96 | 13.57 | 16.61 |
| 45                  | 3.46 | 4.74 | 6.25 | 8.03  | 10.14 | 12.61 | 15.49 |
| 50                  | 3.06 | 4.26 | 5.68 | 7.35  | 9.33  | 11.66 | 14.37 |
| 55                  | 2.68 | 3.80 | 5.12 | 6.68  | 8.53  | 10.70 | 13.25 |
| 60                  | 2.32 | 3.36 | 4.58 | 6.02  | 7.73  | 9.75  | 12.13 |

### Power input [kW]

| $t_c \setminus t_e$ | -20  | -15  | -10  | -5   | 0    | 5    | 10   |
|---------------------|------|------|------|------|------|------|------|
| 30                  | 2.14 | 2.37 | 2.60 | 2.80 | 2.97 | 3.10 | 3.18 |
| 35                  | 2.21 | 2.48 | 2.74 | 2.98 | 3.20 | 3.38 | 3.53 |
| 40                  | 2.28 | 2.57 | 2.87 | 3.15 | 3.42 | 3.65 | 3.85 |
| 45                  | 2.34 | 2.66 | 2.99 | 3.31 | 3.62 | 3.90 | 4.16 |
| 50                  | 2.39 | 2.74 | 3.10 | 3.46 | 3.81 | 4.14 | 4.44 |
| 55                  | 2.44 | 2.81 | 3.20 | 3.59 | 3.98 | 4.35 | 4.71 |
| 60                  | 2.48 | 2.87 | 3.28 | 3.70 | 4.13 | 4.55 | 4.95 |

# Model: DLSG-40 X

## Capacity

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### Current [A]

| $t_c \setminus t_e$ | -20  | -15  | -10  | -5   | 0    | 5    | 10   |
|---------------------|------|------|------|------|------|------|------|
| 30                  | 4.92 | 5.19 | 5.45 | 5.69 | 5.90 | 6.06 | 6.16 |
| 35                  | 5.00 | 5.31 | 5.62 | 5.92 | 6.19 | 6.42 | 6.60 |
| 40                  | 5.08 | 5.42 | 5.78 | 6.13 | 6.46 | 6.76 | 7.02 |
| 45                  | 5.15 | 5.53 | 5.92 | 6.33 | 6.72 | 7.09 | 7.42 |
| 50                  | 5.21 | 5.62 | 6.06 | 6.51 | 6.96 | 7.39 | 7.80 |
| 55                  | 5.27 | 5.71 | 6.18 | 6.68 | 7.18 | 7.68 | 8.15 |
| 60                  | 5.31 | 5.78 | 6.29 | 6.83 | 7.38 | 7.94 | 8.48 |

### Mass flow [kg/s]

| $t_c \setminus t_e$ | -20    | -15    | -10    | -5     | 0      | 5      | 10     |
|---------------------|--------|--------|--------|--------|--------|--------|--------|
| 30                  | 112.25 | 144.66 | 181.99 | 224.98 | 274.38 | 330.96 | 395.45 |
| 35                  | 106.86 | 139.27 | 176.51 | 219.33 | 268.48 | 324.70 | 388.76 |
| 40                  | 101.43 | 133.78 | 170.87 | 213.45 | 262.26 | 318.07 | 381.61 |
| 45                  | 95.95  | 128.17 | 165.04 | 207.30 | 255.72 | 311.03 | 374.00 |
| 50                  | 90.41  | 122.42 | 159.00 | 200.89 | 248.83 | 303.58 | 365.89 |
| 55                  | 84.78  | 116.52 | 152.74 | 194.17 | 241.57 | 295.70 | 357.29 |
| 60                  | 79.05  | 110.45 | 146.24 | 187.15 | 233.94 | 287.36 | 348.17 |

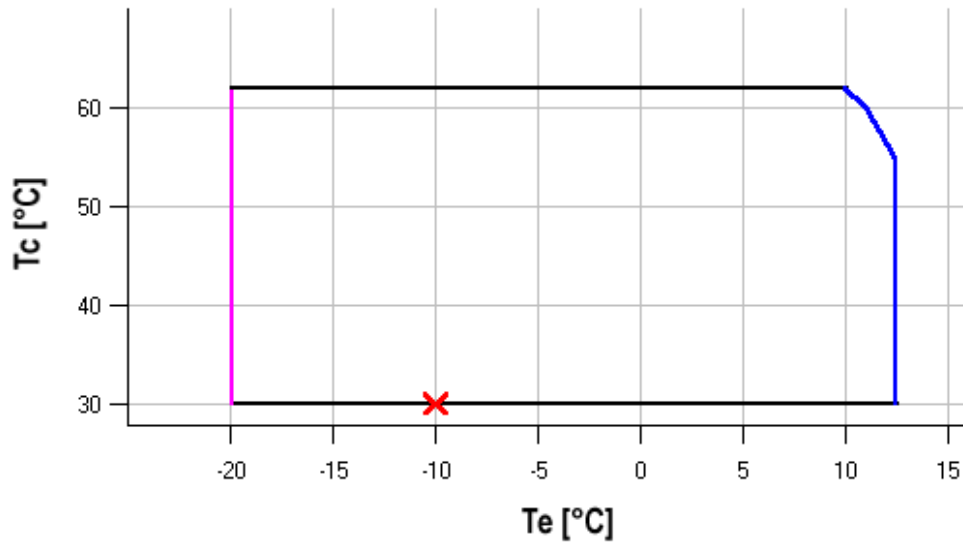
# Model: DLSG-40 X

Capacity

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

| $t_c \setminus t_e$ | -20  | -15  | -10  | -5   | 0    | 5    | 10   |
|---------------------|------|------|------|------|------|------|------|
| 30                  | 2.22 | 2.63 | 3.09 | 3.62 | 4.25 | 5.00 | 5.92 |
| 35                  | 1.95 | 2.31 | 2.71 | 3.16 | 3.68 | 4.30 | 5.03 |
| 40                  | 1.70 | 2.03 | 2.38 | 2.77 | 3.21 | 3.72 | 4.31 |
| 45                  | 1.48 | 1.78 | 2.09 | 2.43 | 2.80 | 3.23 | 3.73 |
| 50                  | 1.28 | 1.55 | 1.83 | 2.13 | 2.45 | 2.82 | 3.23 |
| 55                  | 1.10 | 1.35 | 1.60 | 1.86 | 2.14 | 2.46 | 2.81 |
| 60                  | 0.94 | 1.17 | 1.40 | 1.63 | 1.87 | 2.15 | 2.45 |

## 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]

# Model: DLSG-40 X

## Capacity

R404A/R507

### Cooling capacity [kW]

| $t_c \setminus t_e$ | -50  | -45  | -40  | -35  | -30  | -25  | -20   |
|---------------------|------|------|------|------|------|------|-------|
| 25                  | 1.62 | 2.55 | 3.68 | 5.05 | 6.67 | 8.58 | 10.80 |
| 30                  | 1.28 | 2.17 | 3.24 | 4.52 | 6.05 | 7.85 | 9.94  |
| 35                  | 0.96 | 1.79 | 2.80 | 4.00 | 5.43 | 7.11 | 9.07  |
| 40                  | -    | 1.42 | 2.36 | 3.48 | 4.80 | 6.36 | 8.19  |
| 45                  | -    | -    | 1.93 | 2.96 | 4.18 | 5.62 | 7.30  |
| 50                  | -    | -    | 1.52 | 2.46 | 3.57 | 4.88 | 6.42  |
| 55                  | -    | -    | -    | 1.97 | 2.97 | 4.15 | 5.54  |

### Power input [kW]

| $t_c \setminus t_e$ | -50  | -45  | -40  | -35  | -30  | -25  | -20  |
|---------------------|------|------|------|------|------|------|------|
| 25                  | 1.48 | 1.84 | 2.21 | 2.57 | 2.94 | 3.29 | 3.62 |
| 30                  | 1.40 | 1.78 | 2.19 | 2.60 | 3.01 | 3.41 | 3.80 |
| 35                  | 1.28 | 1.71 | 2.14 | 2.60 | 3.06 | 3.52 | 3.97 |
| 40                  | -    | 1.60 | 2.08 | 2.57 | 3.08 | 3.60 | 4.11 |
| 45                  | -    | -    | 1.99 | 2.53 | 3.08 | 3.65 | 4.22 |
| 50                  | -    | -    | 1.87 | 2.45 | 3.06 | 3.68 | 4.31 |
| 55                  | -    | -    | -    | 2.35 | 3.01 | 3.68 | 4.37 |



# Model: DLSG-40 X

## Capacity

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### Current [A]

| $t_c \setminus t_e$ | -50  | -45  | -40  | -35  | -30  | -25  | -20  |
|---------------------|------|------|------|------|------|------|------|
| 25                  | 4.08 | 4.53 | 5.01 | 5.51 | 6.01 | 6.51 | 6.99 |
| 30                  | 3.97 | 4.46 | 4.98 | 5.53 | 6.10 | 6.68 | 7.27 |
| 35                  | 3.84 | 4.36 | 4.92 | 5.53 | 6.17 | 6.83 | 7.51 |
| 40                  | -    | 4.23 | 4.84 | 5.50 | 6.21 | 6.95 | 7.73 |
| 45                  | -    | -    | 4.72 | 5.43 | 6.21 | 7.04 | 7.91 |
| 50                  | -    | -    | 4.56 | 5.33 | 6.18 | 7.08 | 8.05 |
| 55                  | -    | -    | -    | 5.19 | 6.10 | 7.09 | 8.14 |

### Mass flow [kg/s]

| $t_c \setminus t_e$ | -50   | -45   | -40   | -35    | -30    | -25    | -20    |
|---------------------|-------|-------|-------|--------|--------|--------|--------|
| 25                  | 36.79 | 58.44 | 84.64 | 116.26 | 154.17 | 199.24 | 252.35 |
| 30                  | 30.75 | 52.25 | 78.23 | 109.57 | 147.15 | 191.84 | 244.50 |
| 35                  | 24.34 | 45.60 | 71.29 | 102.29 | 139.46 | 183.67 | 235.81 |
| 40                  | -     | 38.50 | 63.82 | 94.39  | 131.08 | 174.75 | 226.28 |
| 45                  | -     | -     | 55.83 | 85.89  | 122.01 | 165.06 | 215.91 |
| 50                  | -     | -     | 47.30 | 76.77  | 112.25 | 154.60 | 204.69 |
| 55                  | -     | -     | -     | 67.05  | 101.80 | 143.37 | 192.62 |

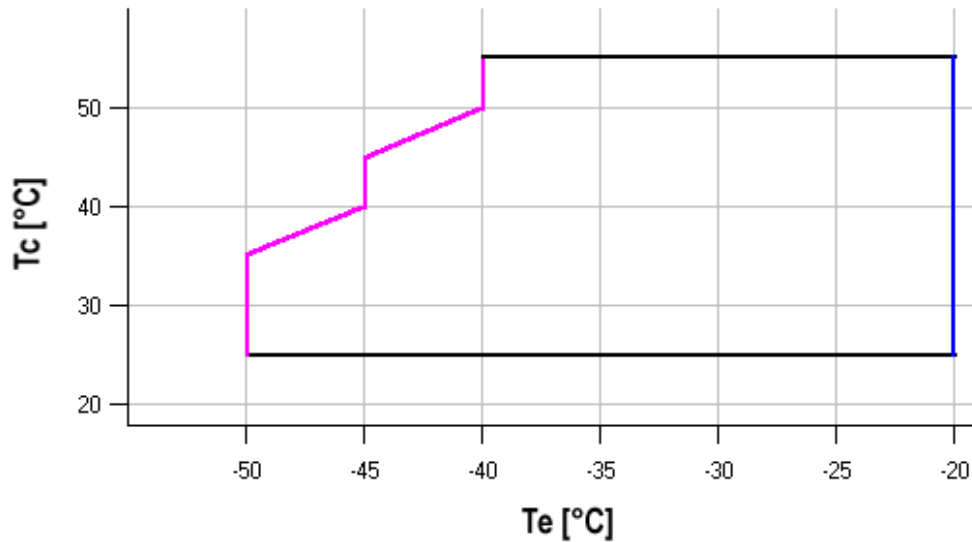
# Model: DLSG-40 X

Capacity

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

| $t_c \setminus t_e$ | -50  | -45  | -40  | -35  | -30  | -25  | -20  |
|---------------------|------|------|------|------|------|------|------|
| 25                  | 1.09 | 1.38 | 1.67 | 1.96 | 2.27 | 2.61 | 2.98 |
| 30                  | 0.92 | 1.21 | 1.48 | 1.74 | 2.01 | 2.30 | 2.61 |
| 35                  | 0.74 | 1.05 | 1.30 | 1.54 | 1.78 | 2.02 | 2.29 |
| 40                  | -    | 0.89 | 1.14 | 1.35 | 1.56 | 1.77 | 1.99 |
| 45                  | -    | -    | 0.97 | 1.17 | 1.36 | 1.54 | 1.73 |
| 50                  | -    | -    | 0.81 | 1.00 | 1.17 | 1.33 | 1.49 |
| 55                  | -    | -    | -    | 0.84 | 0.99 | 1.13 | 1.27 |

## Application range



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

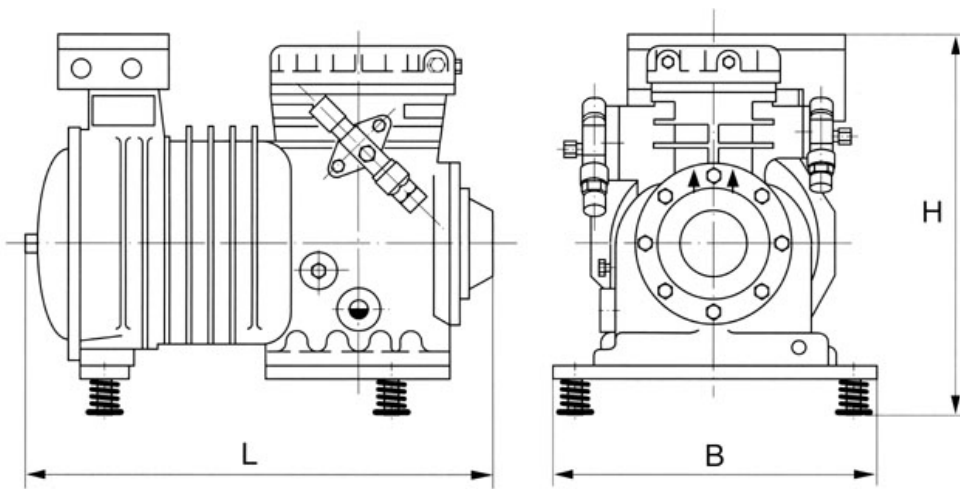
Operating conditions: ISO; subcooling: 0 K, suction superheat: - K, return gas temperature: 20

$t_c$  - Condensing temperature [°C]

$t_e$  - Evaporating temperature [°C]

# Model: DLSG-40 X

## Dimensions



|   |        |
|---|--------|
| L | 470 mm |
| B | 330 mm |
| H | 385 mm |

# Model: DLSG-40 X

Image

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