

Model: ZP90KCE-TFD

Data

Type: Hermetic scroll compressors

Producer: Copeland

Series: ZP

Model: ZP90KCE-TFD

Technical data

| | |
|------------------------------------|------|
| Displacement [m ³ /h]: | 14,6 |
| Sound power [dBA]: | 72 |
| Sound pressure level [dB]: | 61 |
| Net Weight [kg]: | 56,7 |
| Gross Weight [kg]: | 67 |
| Oil charge [dm ³]: | 2,5 |
| Maximum high pressure [bar]: | 45 |
| Maximum standstill pressure [bar]: | 29,5 |
| Minimal lowside temperature [°C]: | -35 |
| Maximum lowside temperature [°C]: | 50 |
| PED category: | 2 |

Electrical data

| | |
|-----------------------------|-----------------|
| Power supply [V/~/Hz]: | 380-420V/3/50Hz |
| Locked rotor current [A]: | 95,0 |
| Max. operating current [A]: | 16,0 |
| Winding resistance [Ω]: | 1,6 |

Connections

| | |
|--|---------------|
| | <u>inches</u> |
| Suction connection with supplied sleeve: | 1 1/8" |
| Discharge connection with supplied sleeve: | 7/8" |

Model: ZP90KCE-TFD**Capacity**

R410A

Cooling capacity [kW]

| t_c \ t_e | -25 | -20 | -15 | -10 | -5 | 0 | 5 | 10 | 15 | 20 |
|--------------------------------------|------------|------------|------------|------------|-----------|----------|----------|-----------|-----------|-----------|
| 25 | 8.31 | 10.24 | 12.56 | 15.31 | 18.52 | 22.22 | 26.42 | 31.17 | 36.49 | 42.41 |
| 30 | 7.74 | 9.59 | 11.82 | 14.46 | 17.52 | 21.05 | 25.07 | 29.60 | 34.67 | 40.33 |
| 35 | 7.20 | 8.98 | 11.12 | 13.63 | 16.56 | 19.91 | 23.73 | 28.05 | 32.88 | 38.26 |
| 40 | - | 8.36 | 10.40 | 12.80 | 15.57 | 18.76 | 22.38 | 26.48 | 31.06 | 36.18 |
| 45 | - | - | 9.63 | 11.90 | 14.52 | 17.54 | 20.97 | 24.83 | 29.18 | 34.01 |
| 50 | - | - | - | 10.88 | 13.36 | 16.20 | 19.43 | 23.07 | 27.16 | 31.73 |
| 55 | - | - | - | - | 12.04 | 14.70 | 17.73 | 21.14 | 24.98 | 29.27 |
| 60 | - | - | - | - | - | 12.98 | 15.81 | 19.00 | 22.59 | 26.60 |
| 65 | - | - | - | - | - | - | 13.63 | 16.59 | 19.92 | 23.65 |

Power input [kW]

| t_c \ t_e | -25 | -20 | -15 | -10 | -5 | 0 | 5 | 10 | 15 | 20 |
|--------------------------------------|------------|------------|------------|------------|-----------|----------|----------|-----------|-----------|-----------|
| 25 | 3.71 | 3.69 | 3.66 | 3.65 | 3.64 | 3.64 | 3.66 | 3.71 | 3.78 | 3.88 |
| 30 | 4.08 | 4.06 | 4.05 | 4.05 | 4.06 | 4.09 | 4.13 | 4.20 | 4.30 | 4.43 |
| 35 | 4.52 | 4.50 | 4.49 | 4.49 | 4.50 | 4.53 | 4.59 | 4.67 | 4.79 | 4.94 |
| 40 | - | 5.02 | 5.00 | 4.99 | 4.99 | 5.02 | 5.07 | 5.15 | 5.27 | 5.43 |
| 45 | - | - | 5.62 | 5.59 | 5.57 | 5.58 | 5.61 | 5.69 | 5.79 | 5.94 |
| 50 | - | - | - | 6.32 | 6.27 | 6.25 | 6.25 | 6.30 | 6.38 | 6.51 |
| 55 | - | - | - | - | 7.12 | 7.06 | 7.02 | 7.03 | 7.08 | 7.18 |
| 60 | - | - | - | - | - | 8.05 | 7.96 | 7.92 | 7.92 | 7.97 |
| 65 | - | - | - | - | - | - | 9.10 | 8.99 | 8.93 | 8.92 |

Model: ZP90KCE-TFD

Capacity

Current [A]

| t_c \ t_e | -25 | -20 | -15 | -10 | -5 | 0 | 5 | 10 | 15 | 20 |
|--------------------------------------|------------|------------|------------|------------|-----------|----------|----------|-----------|-----------|-----------|
| 25 | 8.17 | 8.13 | 8.09 | 8.07 | 8.06 | 8.06 | 8.07 | 8.10 | 8.14 | 8.20 |
| 30 | 8.58 | 8.54 | 8.52 | 8.52 | 8.54 | 8.58 | 8.63 | 8.71 | 8.80 | 8.92 |
| 35 | 9.10 | 9.05 | 9.03 | 9.03 | 9.05 | 9.10 | 9.18 | 9.28 | 9.41 | 9.57 |
| 40 | - | 9.71 | 9.66 | 9.64 | 9.65 | 9.70 | 9.78 | 9.89 | 10.03 | 10.21 |
| 45 | - | - | 10.48 | 10.42 | 10.40 | 10.42 | 10.47 | 10.57 | 10.71 | 10.89 |
| 50 | - | - | - | 11.41 | 11.34 | 11.31 | 11.33 | 11.39 | 11.50 | 11.66 |
| 55 | - | - | - | - | 12.53 | 12.44 | 12.39 | 12.41 | 12.47 | 12.59 |
| 60 | - | - | - | - | - | 13.85 | 13.73 | 13.67 | 13.66 | 13.72 |
| 65 | - | - | - | - | - | - | 15.38 | 15.23 | 15.14 | 15.12 |

Mass flow [kg/h]

| t_c \ t_e | -25 | -20 | -15 | -10 | -5 | 0 | 5 | 10 | 15 | 20 |
|--------------------------------------|------------|------------|------------|------------|-----------|----------|----------|-----------|-----------|-----------|
| 25 | 163.17 | 200.16 | 243.46 | 293.67 | 351.34 | 417.08 | 491.45 | 575.03 | 668.41 | 772.17 |
| 30 | 161.46 | 198.23 | 241.23 | 291.05 | 348.27 | 413.47 | 487.22 | 570.11 | 662.72 | 765.62 |
| 35 | 159.09 | 195.91 | 238.89 | 288.61 | 345.65 | 410.58 | 483.99 | 566.46 | 658.57 | 760.89 |
| 40 | - | 192.37 | 235.60 | 285.49 | 342.62 | 407.56 | 480.91 | 563.23 | 655.12 | 757.14 |
| 45 | - | - | 230.51 | 280.84 | 338.34 | 403.57 | 477.13 | 559.58 | 651.52 | 753.51 |
| 50 | - | - | - | 273.83 | 331.97 | 397.77 | 471.81 | 554.67 | 646.93 | 749.16 |
| 55 | - | - | - | - | 322.67 | 389.31 | 464.10 | 547.64 | 640.50 | 743.26 |
| 60 | - | - | - | - | - | 377.34 | 453.17 | 537.66 | 631.39 | 734.95 |
| 65 | - | - | - | - | - | - | 438.16 | 523.88 | 618.76 | 723.39 |

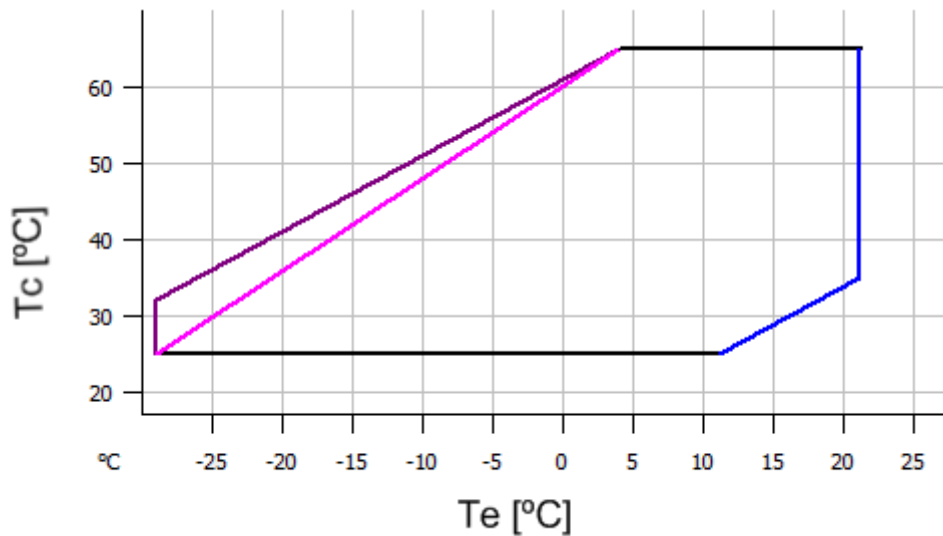
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Capacity

C.O.P. [W/W]

| $t_c \setminus t_e$ | -25 | -20 | -15 | -10 | -5 | 0 | 5 | 10 | 15 | 20 |
|---------------------|------|------|------|------|------|------|------|------|------|-------|
| 25 | 2.24 | 2.78 | 3.43 | 4.20 | 5.09 | 6.10 | 7.21 | 8.41 | 9.66 | 10.93 |
| 30 | 1.90 | 2.36 | 2.92 | 3.57 | 4.32 | 5.15 | 6.07 | 7.04 | 8.06 | 9.10 |
| 35 | 1.59 | 2.00 | 2.48 | 3.04 | 3.68 | 4.39 | 5.17 | 6.00 | 6.87 | 7.75 |
| 40 | - | 1.66 | 2.08 | 2.57 | 3.12 | 3.74 | 4.41 | 5.14 | 5.89 | 6.66 |
| 45 | - | - | 1.71 | 2.13 | 2.61 | 3.14 | 3.73 | 4.37 | 5.04 | 5.72 |
| 50 | - | - | - | 1.72 | 2.13 | 2.59 | 3.11 | 3.66 | 4.26 | 4.87 |
| 55 | - | - | - | - | 1.69 | 2.08 | 2.52 | 3.01 | 3.53 | 4.08 |
| 60 | - | - | - | - | - | 1.61 | 1.99 | 2.40 | 2.85 | 3.34 |
| 65 | - | - | - | - | - | - | 1.50 | 1.85 | 2.23 | 2.65 |

Application range



- Maximum evaporating temperature
- 25°C suction gas temperature
- 10K gas overheat

Operating conditions: 10K suction superheat, 0K subcooling

t_c - Condensing temperature [°C]

t_e - Evaporating temperature [°C]

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Dimensions

