

Model: ZS21K4E-TFD

Data

Type: Hermetic scroll compressors

Producer: Copeland

Series: ZS

Model: ZS21K4E-TFD

Technical data

| | |
|------------------------------------|------|
| Displacement [m ³ /h]: | 8,0 |
| Sound power [dBA]: | 73 |
| Sound pressure level [dB]: | 62 |
| Net Weight [kg]: | 30 |
| Oil charge [dm ³]: | 1,5 |
| Maximum high pressure [bar]: | 28,8 |
| Maximum standstill pressure [bar]: | 21 |
| Maximum lowside temperature [°C]: | 50 |
| PED category: | 1 |

Electrical data

| | |
|-----------------------------|-----------------|
| Power supply [V/~/Hz]: | 380-420V/3/50Hz |
| Locked rotor current [A]: | 40 |
| Max. operating current [A]: | 6 |
| Winding resistance [Ω]: | 4,8 |

Connections

| | |
|--------------------------------------|---------------|
| | <u>inches</u> |
| Suction Rotolock valve connection: | 1 1/4" |
| Discharge Rotolock valve connection: | 1" |

Model: ZS21K4E-TFD

Capacity

R404A/R507

Cooling capacity [kW]

| $t_c \setminus t_e$ | -40 | -35 | -30 | -25 | -20 | -15 | -10 | -5 | 0 | 5 |
|---------------------|------|------|------|------|------|------|------|------|------|-------|
| 10 | 2.07 | 2.63 | 3.30 | 4.09 | 5.03 | 6.13 | - | - | - | - |
| 15 | 1.98 | 2.52 | 3.16 | 3.92 | 4.81 | 5.85 | 7.05 | - | - | - |
| 20 | 1.90 | 2.41 | 3.02 | 3.74 | 4.59 | 5.57 | 6.71 | 8.02 | - | - |
| 25 | 1.81 | 2.30 | 2.88 | 3.56 | 4.36 | 5.28 | 6.36 | 7.60 | 9.01 | - |
| 30 | 1.72 | 2.19 | 2.73 | 3.37 | 4.12 | 4.99 | 6.00 | 7.16 | 8.49 | 10.00 |
| 35 | 1.63 | 2.07 | 2.58 | 3.18 | 3.87 | 4.69 | 5.63 | 6.71 | 7.96 | 9.37 |
| 40 | 1.54 | 1.95 | 2.42 | 2.97 | 3.62 | 4.37 | 5.24 | 6.25 | 7.41 | 8.74 |
| 45 | - | 1.82 | 2.25 | 2.76 | 3.35 | 4.04 | 4.84 | 5.77 | 6.85 | 8.08 |
| 50 | - | - | 2.07 | 2.53 | 3.07 | 3.69 | 4.43 | 5.28 | 6.26 | 7.40 |
| 55 | - | - | - | - | 2.77 | 3.33 | 3.99 | 4.76 | 5.66 | 6.69 |
| 60 | - | - | - | - | - | 2.95 | 3.53 | 4.22 | 5.03 | 5.97 |

Power input [kW]

| $t_c \setminus t_e$ | -40 | -35 | -30 | -25 | -20 | -15 | -10 | -5 | 0 | 5 |
|---------------------|------|------|------|------|------|------|------|------|------|------|
| 10 | 1.03 | 1.07 | 1.13 | 1.21 | 1.30 | 1.40 | - | - | - | - |
| 15 | 1.12 | 1.16 | 1.21 | 1.28 | 1.37 | 1.47 | 1.58 | - | - | - |
| 20 | 1.22 | 1.25 | 1.30 | 1.37 | 1.45 | 1.55 | 1.66 | 1.78 | - | - |
| 25 | 1.33 | 1.36 | 1.40 | 1.47 | 1.54 | 1.64 | 1.75 | 1.87 | 2.00 | - |
| 30 | 1.46 | 1.48 | 1.52 | 1.58 | 1.66 | 1.74 | 1.85 | 1.97 | 2.10 | 2.24 |
| 35 | 1.61 | 1.62 | 1.66 | 1.71 | 1.78 | 1.87 | 1.97 | 2.08 | 2.21 | 2.35 |
| 40 | 1.78 | 1.79 | 1.81 | 1.86 | 1.93 | 2.01 | 2.11 | 2.22 | 2.34 | 2.48 |
| 45 | - | 1.97 | 1.99 | 2.03 | 2.09 | 2.17 | 2.26 | 2.37 | 2.49 | 2.62 |
| 50 | - | - | 2.19 | 2.22 | 2.28 | 2.35 | 2.44 | 2.54 | 2.66 | 2.79 |
| 55 | - | - | - | - | 2.49 | 2.56 | 2.64 | 2.74 | 2.85 | 2.98 |
| 60 | - | - | - | - | - | 2.78 | 2.86 | 2.96 | 3.07 | 3.19 |

Model: ZS21K4E-TFD

Capacity

Current [A]

| t_c \ t_e | -40 | -35 | -30 | -25 | -20 | -15 | -10 | -5 | 0 | 5 |
|--------------------------------------|------------|------------|------------|------------|------------|------------|------------|-----------|----------|----------|
| 10 | 4.18 | 4.21 | 4.24 | 4.28 | 4.34 | 4.40 | - | - | - | - |
| 15 | 4.21 | 4.23 | 4.27 | 4.31 | 4.36 | 4.43 | 4.51 | - | - | - |
| 20 | 4.25 | 4.27 | 4.31 | 4.35 | 4.40 | 4.47 | 4.55 | 4.65 | - | - |
| 25 | 4.31 | 4.33 | 4.36 | 4.40 | 4.46 | 4.53 | 4.61 | 4.70 | 4.82 | - |
| 30 | 4.38 | 4.40 | 4.43 | 4.47 | 4.53 | 4.60 | 4.68 | 4.78 | 4.89 | 5.03 |
| 35 | 4.48 | 4.49 | 4.52 | 4.56 | 4.62 | 4.69 | 4.77 | 4.87 | 4.99 | 5.13 |
| 40 | 4.60 | 4.61 | 4.64 | 4.68 | 4.73 | 4.80 | 4.89 | 4.99 | 5.11 | 5.25 |
| 45 | - | 4.76 | 4.78 | 4.82 | 4.87 | 4.94 | 5.03 | 5.13 | 5.26 | 5.40 |
| 50 | - | - | 4.95 | 4.99 | 5.04 | 5.11 | 5.19 | 5.30 | 5.43 | 5.58 |
| 55 | - | - | - | - | 5.24 | 5.31 | 5.40 | 5.50 | 5.63 | 5.78 |
| 60 | - | - | - | - | - | 5.54 | 5.63 | 5.74 | 5.87 | 6.02 |

Mass flow [kg/h]

| t_c \ t_e | -40 | -35 | -30 | -25 | -20 | -15 | -10 | -5 | 0 | 5 |
|--------------------------------------|------------|------------|------------|------------|------------|------------|------------|-----------|----------|----------|
| 10 | 40.01 | 52.76 | 67.14 | 83.75 | 103.16 | 125.97 | - | - | - | - |
| 15 | 40.71 | 53.11 | 67.20 | 83.55 | 102.76 | 125.40 | 152.07 | - | - | - |
| 20 | 41.35 | 53.41 | 67.19 | 83.29 | 102.28 | 124.75 | 151.29 | 182.49 | - | - |
| 25 | 41.93 | 53.63 | 67.11 | 82.94 | 101.71 | 124.00 | 150.41 | 181.51 | 217.90 | - |
| 30 | 42.43 | 53.78 | 66.93 | 82.49 | 101.03 | 123.14 | 149.41 | 180.42 | 216.75 | 258.99 |
| 35 | 42.85 | 53.83 | 66.66 | 81.94 | 100.25 | 122.17 | 148.28 | 179.19 | 215.46 | 257.69 |
| 40 | 43.18 | 53.78 | 66.28 | 81.27 | 99.34 | 121.06 | 147.02 | 177.82 | 214.02 | 256.23 |
| 45 | - | 53.62 | 65.79 | 80.48 | 98.30 | 119.81 | 145.62 | 176.29 | 212.43 | 254.60 |
| 50 | - | - | 65.16 | 79.56 | 97.11 | 118.42 | 144.05 | 174.61 | 210.66 | 252.80 |
| 55 | - | - | - | - | 95.78 | 116.86 | 142.32 | 172.75 | 208.71 | 250.81 |
| 60 | - | - | - | - | - | 115.14 | 140.42 | 170.70 | 206.57 | 248.62 |

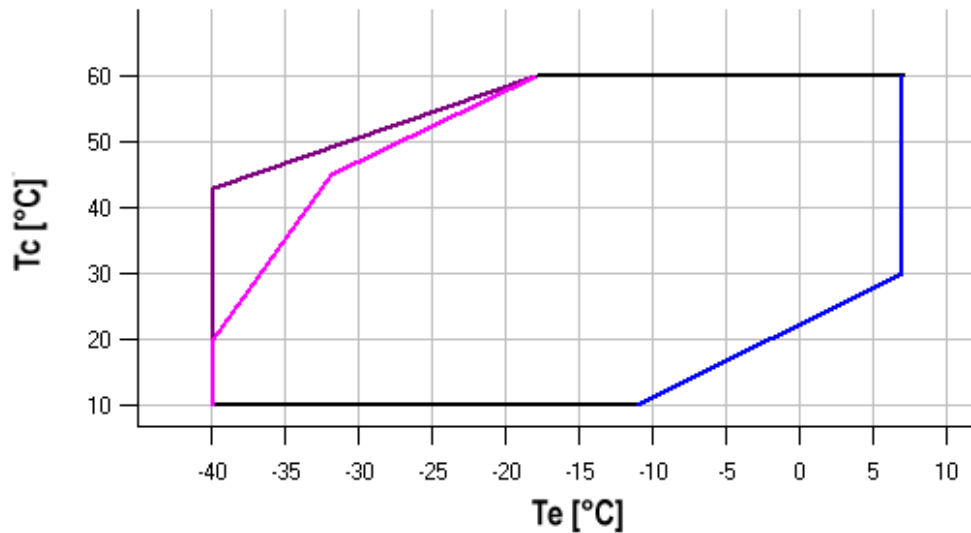
Model: ZS21K4E-TFD

Capacity

C.O.P. [W/W]

| $t_c \setminus t_e$ | -40 | -35 | -30 | -25 | -20 | -15 | -10 | -5 | 0 | 5 |
|---------------------|------|------|------|------|------|------|------|------|------|------|
| 10 | 2.01 | 2.45 | 2.91 | 3.39 | 3.88 | 4.37 | - | - | - | - |
| 15 | 1.77 | 2.18 | 2.61 | 3.06 | 3.52 | 3.99 | 4.46 | - | - | - |
| 20 | 1.56 | 1.93 | 2.32 | 2.74 | 3.16 | 3.60 | 4.05 | 4.50 | - | - |
| 25 | 1.36 | 1.69 | 2.05 | 2.43 | 2.82 | 3.23 | 3.64 | 4.07 | 4.50 | - |
| 30 | 1.18 | 1.47 | 1.79 | 2.13 | 2.49 | 2.86 | 3.24 | 3.64 | 4.05 | 4.47 |
| 35 | 1.02 | 1.27 | 1.55 | 1.85 | 2.17 | 2.51 | 2.86 | 3.22 | 3.60 | 3.99 |
| 40 | 0.87 | 1.09 | 1.33 | 1.60 | 1.88 | 2.17 | 2.49 | 2.82 | 3.17 | 3.53 |
| 45 | - | 0.92 | 1.13 | 1.36 | 1.60 | 1.86 | 2.14 | 2.44 | 2.75 | 3.08 |
| 50 | - | - | 0.95 | 1.14 | 1.35 | 1.57 | 1.81 | 2.07 | 2.35 | 2.65 |
| 55 | - | - | - | - | 1.11 | 1.30 | 1.51 | 1.74 | 1.98 | 2.25 |
| 60 | - | - | - | - | - | 1.06 | 1.23 | 1.43 | 1.64 | 1.87 |

Application range



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

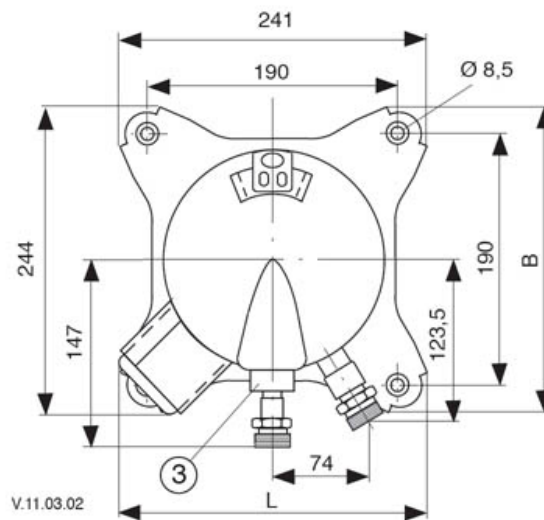
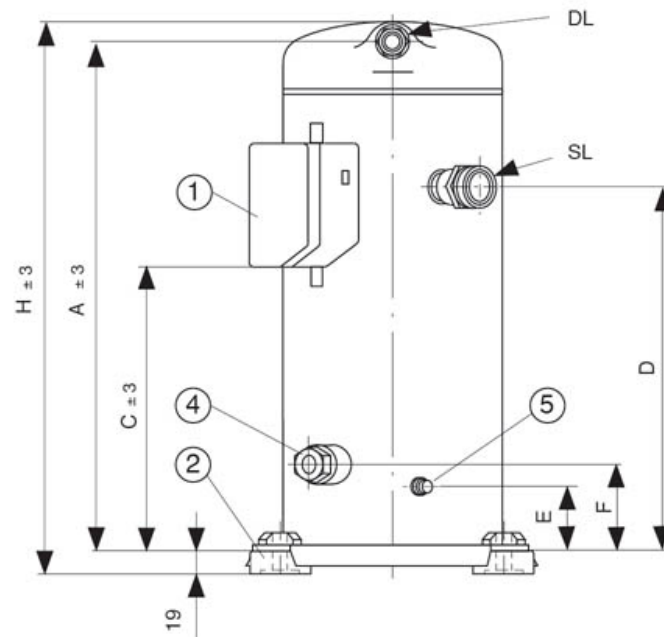
Operating conditions: suction gas temperature 20°C, 0K subcooling

t_c - Condensing temperature [°C]

t_e - Evaporating temperature [°C]

Model: ZS21K4E-TFD

Dimensions



| | |
|----|------------------|
| A | 366,5 mm |
| C | 219,3 - 225,3 mm |
| C1 | - mm |
| D | 264,5 mm |
| E | 49,6 mm |
| F | 75,1 mm |
| G | - mm |