

Model: Q4-21.1Y

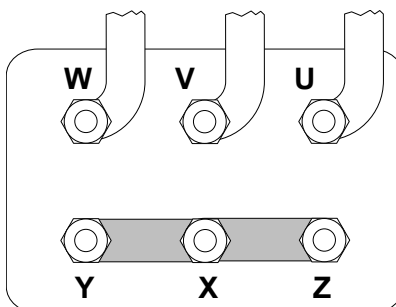
Refrigerant: R404A

Power supply: 400/3/50 DOL-STAR

Technical data:

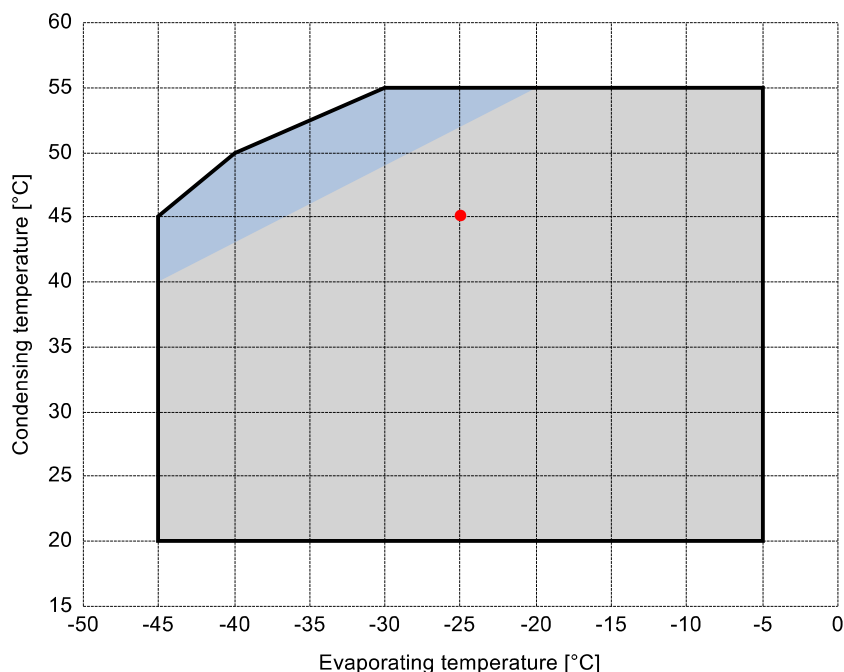
| | |
|---|----------------|
| Displacement | 21.18 m³/h |
| Nominal compressor speed | 1450 rpm |
| Motor voltage | 400 V |
| Nominal operating frequency | 50 Hz |
| maximum allowed operating current (MRA) | 10 A |
| locked rotor current (LRA) | 53.2 A |
| Number of pistons | 4 |
| Net weight | 79 kg |
| Lubricant | FRASCOLD POE32 |
| Oil charge | 1.6 l |

Motor connections:



Application range:

Additional cooling required



Reference conditions according to EN12900

- Suction gas temperature = 20 °C
- Liquid subcooling = 0 K
- 100% of the capacity

Certified by:

- ASERCOM (ref. EN12900, 50 Hz, 100% cap.)

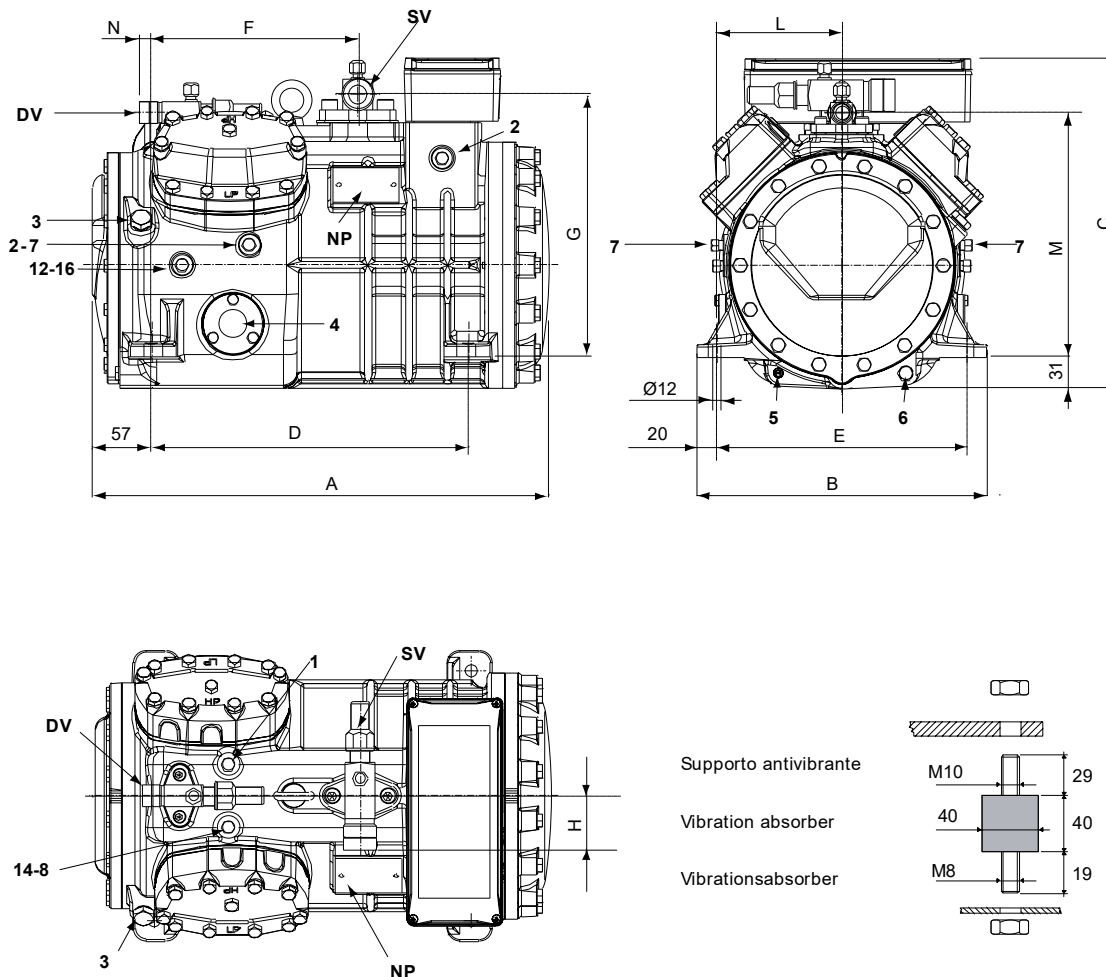
All data subject to change without notice

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Dimensions:



Legend:

| | | | |
|---------------------|-----------------------|---|----------|
| SV: Suction Valve | 1 1/8" in - 28.575 mm | 1: High pressure connection | 1/8" NPT |
| DV: Discharge valve | 3/4" in - 19 mm | 2: Low pressure connection | 1/8" NPT |
| A: Length | 449 mm | 3: Oil charge plug | 1/4" GAS |
| B: Width | 286 mm | 4: Oil level sight glass | - |
| C: Height | 325 mm | 5: Crankcase heater seat | - |
| D: Base mounting | 312 mm | 6: Oil drain plug | M8 x 22 |
| E: Base mounting | 246 mm | 7: Liquid injection plug | 1/8" NPT |
| F: Suction Valve | 203 mm | 8: Liquid injection sensor plug | 1/8" NPT |
| G: Suction Valve | 258 mm | 12: Oil return plug | 1/8" NPT |
| H: Suction Valve | 53 mm | 14: Max discharge temperature sensor connection | 1/8" NPT |
| L: Discharge valve | 123 mm | 16: Crankcase pressure plug | 1/8" NPT |
| M: Discharge valve | 239 mm | NP: Nameplate | |
| N: Discharge valve | 12 mm | | |

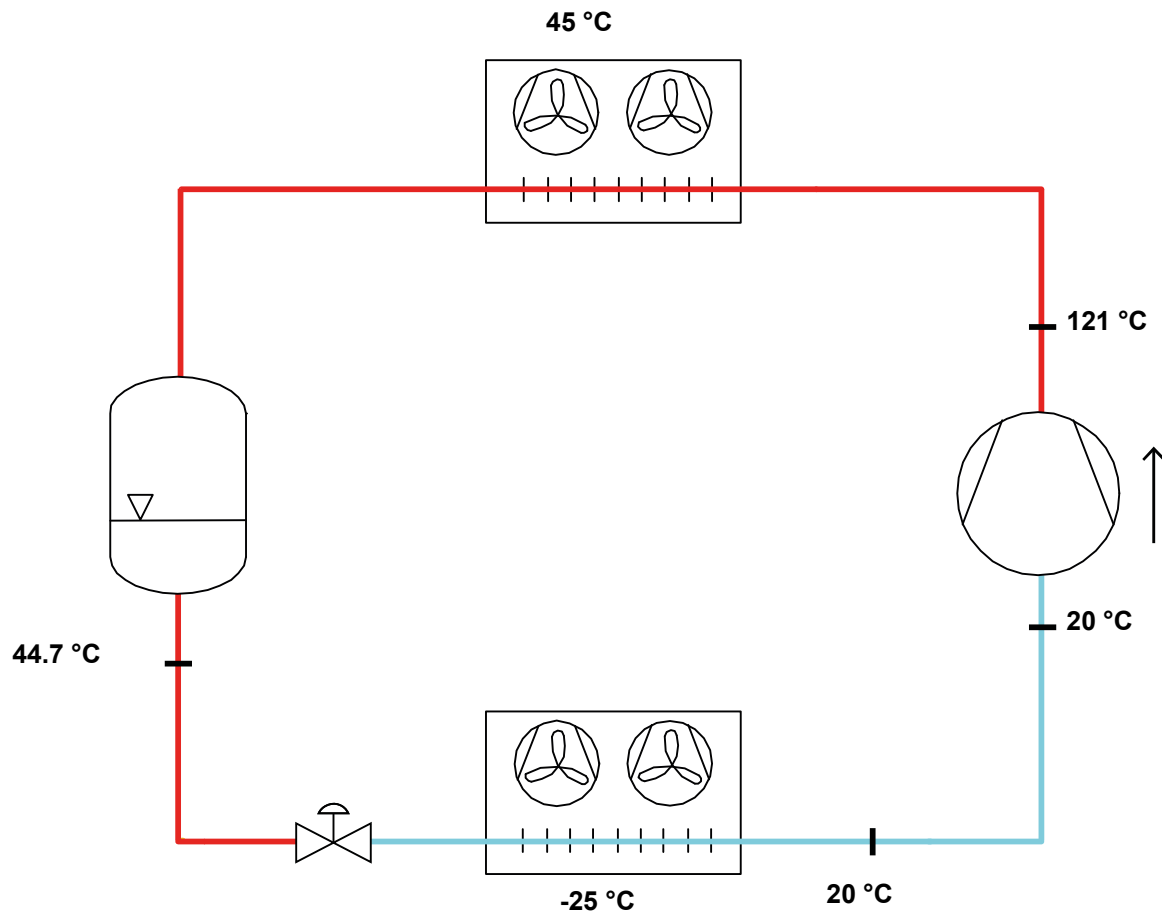
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P&I Diagram:



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Performance data:

| | |
|---------------------------------|------------------------------------|
| Operating mode | Subcritical, 100 % of the capacity |
| Liquid subcooling | 0 K |
| Suction gas temperature | 20 °C |
| Useful fraction of superheating | 100 % |
| Frequency | 50 Hz |
| Additional cooling required | |

Refrigerating capacity [kW]

| T.Evap | -45 °C | -40 °C | -35 °C | -30 °C | -25 °C | -20 °C | -15 °C | -10 °C | -5 °C |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| T.Cond | | | | | | | | | |
| 55 °C | - | - | - | 2.544 | 3.514 | 4.703 | 6.141 | 7.859 | 9.888 |
| 50 °C | - | 1.42 | 2.145 | 3.043 | 4.146 | 5.485 | 7.092 | 8.996 | 11.23 |
| 45 °C | 1.075 | 1.73 | 2.545 | 3.552 | 4.782 | 6.266 | 8.035 | 10.122 | 12.555 |
| 40 °C | 1.329 | 2.051 | 2.952 | 4.062 | 5.414 | 7.038 | 8.965 | 11.228 | 13.856 |
| 35 °C | 1.595 | 2.378 | 3.359 | 4.568 | 6.036 | 7.794 | 9.874 | 12.307 | 15.124 |
| 30 °C | 1.864 | 2.704 | 3.759 | 5.061 | 6.64 | 8.528 | 10.755 | 13.354 | 16.354 |
| 25 °C | 2.129 | 3.021 | 4.146 | 5.535 | 7.22 | 9.231 | 11.601 | 14.36 | 17.539 |
| 20 °C | 2.384 | 3.322 | 4.511 | 5.982 | 7.768 | 9.898 | 12.404 | 15.318 | 18.67 |

Power input [W]

| T.Evap | -45 °C | -40 °C | -35 °C | -30 °C | -25 °C | -20 °C | -15 °C | -10 °C | -5 °C |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| T.Cond | | | | | | | | | |
| 55 °C | - | - | - | 2695 | 3213 | 3768 | 4347 | 4934 | 5514 |
| 50 °C | - | 1890 | 2289 | 2744 | 3240 | 3763 | 4298 | 4830 | 5344 |
| 45 °C | 1601 | 1935 | 2329 | 2767 | 3237 | 3721 | 4206 | 4678 | 5120 |
| 40 °C | 1630 | 1965 | 2347 | 2764 | 3200 | 3640 | 4070 | 4475 | 4839 |
| 35 °C | 1650 | 1978 | 2344 | 2733 | 3130 | 3520 | 3888 | 4220 | 4501 |
| 30 °C | 1657 | 1974 | 2317 | 2672 | 3024 | 3357 | 3659 | 3913 | 4104 |
| 25 °C | 1652 | 1951 | 2265 | 2580 | 2881 | 3153 | 3381 | 3550 | 3647 |
| 20 °C | 1632 | 1907 | 2187 | 2456 | 2700 | 2904 | 3053 | 3133 | 3128 |

COP/EER [W/W]

| T.Evap | -45 °C | -40 °C | -35 °C | -30 °C | -25 °C | -20 °C | -15 °C | -10 °C | -5 °C |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| T.Cond | | | | | | | | | |
| 55 °C | - | - | - | 0.94 | 1.09 | 1.25 | 1.41 | 1.59 | 1.79 |
| 50 °C | - | 0.75 | 0.94 | 1.11 | 1.28 | 1.46 | 1.65 | 1.86 | 2.1 |
| 45 °C | 0.67 | 0.89 | 1.09 | 1.28 | 1.48 | 1.68 | 1.91 | 2.16 | 2.45 |
| 40 °C | 0.82 | 1.04 | 1.26 | 1.47 | 1.69 | 1.93 | 2.2 | 2.51 | 2.86 |
| 35 °C | 0.97 | 1.2 | 1.43 | 1.67 | 1.93 | 2.21 | 2.54 | 2.92 | 3.36 |
| 30 °C | 1.12 | 1.37 | 1.62 | 1.89 | 2.2 | 2.54 | 2.94 | 3.41 | 3.98 |
| 25 °C | 1.29 | 1.55 | 1.83 | 2.15 | 2.51 | 2.93 | 3.43 | 4.04 | 4.81 |
| 20 °C | 1.46 | 1.74 | 2.06 | 2.44 | 2.88 | 3.41 | 4.06 | 4.89 | 5.97 |

Current [A]

| T.Evap | -45 °C | -40 °C | -35 °C | -30 °C | -25 °C | -20 °C | -15 °C | -10 °C | -5 °C |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| T.Cond | | | | | | | | | |
| 55 °C | - | - | - | 5.91 | 6.52 | 7.22 | 7.98 | 8.77 | 9.55 |
| 50 °C | - | 5.12 | 5.48 | 5.97 | 6.55 | 7.22 | 7.92 | 8.63 | 9.32 |
| 45 °C | 4.89 | 5.16 | 5.52 | 5.99 | 6.55 | 7.16 | 7.8 | 8.42 | 9.02 |
| 40 °C | 4.91 | 5.18 | 5.54 | 5.99 | 6.5 | 7.06 | 7.62 | 8.15 | 8.64 |
| 35 °C | 4.93 | 5.19 | 5.54 | 5.95 | 6.42 | 6.9 | 7.38 | 7.81 | 8.19 |
| 30 °C | 4.93 | 5.19 | 5.51 | 5.89 | 6.29 | 6.7 | 7.08 | 7.41 | 7.66 |
| 25 °C | 4.93 | 5.17 | 5.46 | 5.79 | 6.12 | 6.45 | 6.73 | 6.94 | 7.06 |
| 20 °C | 4.91 | 5.13 | 5.39 | 5.65 | 5.92 | 6.15 | 6.33 | 6.42 | 6.42 |

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Performance data:

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| Operating mode | Subcritical, 100 % of the capacity |
| Liquid subcooling | 0 K |
| Suction gas temperature | 20 °C |
| Useful fraction of superheating | 100 % |
| Frequency | 50 Hz |
| Additional cooling required | |

| Mass flow [kg/h] | T.Evap | -45 °C | -40 °C | -35 °C | -30 °C | -25 °C | -20 °C | -15 °C | -10 °C | -5 °C |
|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| T.Cond | | | | | | | | | | |
| 55 °C | - | - | - | 87 | 121 | 163 | 215 | 278 | 355 | |
| 50 °C | - | 44 | 67 | 95 | 131 | 174 | 227 | 291 | 368 | |
| 45 °C | 31 | 50 | 74 | 103 | 140 | 184 | 238 | 303 | 381 | |
| 40 °C | 36 | 55 | 80 | 110 | 148 | 194 | 249 | 314 | 392 | |
| 35 °C | 40 | 60 | 86 | 117 | 155 | 202 | 258 | 324 | 402 | |
| 30 °C | 45 | 65 | 91 | 123 | 162 | 209 | 265 | 332 | 411 | |
| 25 °C | 49 | 69 | 95 | 127 | 167 | 215 | 272 | 339 | 418 | |
| 20 °C | 52 | 72 | 99 | 131 | 171 | 220 | 277 | 345 | 424 | |