

Model

| | | | | |
|-------------|-------------------|------------------|-------------|-----------------|
| Designation | KLF4.0CNDS | 220-240V/50Hz 1~ | Sales code: | 106H2403 |
|-------------|-------------------|------------------|-------------|-----------------|

Compressor design

| | | | |
|----------------------------|---|-----------------------|------------------------------|
| Oil type | Polyolester | Refrigerant(s) | R290 |
| Oil viscosity | 9,7cST | Displacement | 4cm ³ / 0,24cu.in |
| Oil quantity | 170cm ³ / 5,7fl.oz | Compressors on pallet | 100 |
| Refr. charge - tech. limit | 200g / 7,1oz | | |
| Free gas volume comp. | 1630cm ³ / 55,1fl.oz | | |
| Weight | 8,95kg / 19,7lbs | | |
| Motor protection | external | | |
| Winding resistance main | 13,1Ω (at 25°C) | | |
| Winding resistance aux | 25,3Ω (at 25°C) | | |
| Max. winding temp. | 125°C / 257°F | | |
| Max. discharge temp. | 130°C / 266°F | | |
| Additional note | Very good robustness against liquid intake. Ice-cube maker optimization - indirect suction intake. | | |



General - Configurations with KLF4.0CNDS

| | |
|------------------------|----------------|
| | Conf. 1 |
| Motorconfiguration | CSIR |
| Power supply (nominal) | 220-240V/50Hz |
| Number of phases | 1 |
| Voltage range | 198-254V |
| Approvals | VDE, CCC |
| Starting torque | HST |
| Note | - / - |

Applications with KLF4.0CNDS

| | |
|-------------------------|----------------|
| | Conf. 1 |
| Refrigerant | R290 |
| Application | LBP+MBP |
| System cooling | fan 3m/s |
| Hot gas defrost | OK |
| Long interval pull down | OK |

Electrical data - Configurations with KLF4.0CNDS

| | |
|------------------------------|----------------|
| | Conf. 1 |
| Starting device type | relay |
| Run capacitor | -/- |
| Start capacitor | 80μF |
| LRA (locked rotor amps / 4s) | 10,2A |
| RLA (rated load amps / 1s) | 1,4A |
| Cut in current | 10,2A |

Model

Designation

KLF4.0CNDS

220-240V/50Hz 1~

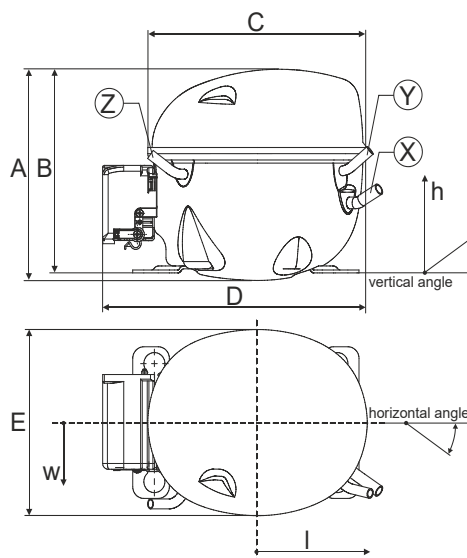
Sales code:

106H2403

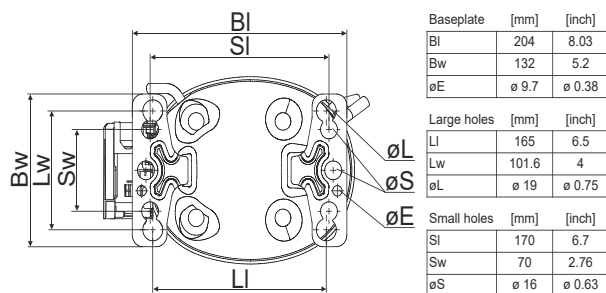
Compressor dimensions

| Housing | A Height | 182mm / 7,17in |
|---------|-------------------|----------------|
| | B Height | 175mm / 6,89in |
| | C Length shell | 198mm / 7,8in |
| | D Length w. cover | 238mm / 9,37in |
| | E Width | 160mm / 6,3in |

| Connectors | | Suction | Discharge | Process |
|------------------|----------------------------|--------------|--------------|--------------|
| | | X | Y | Z |
| Diameter | [mm] | øi 8,11-8,29 | øi 6,11-6,29 | øi 6,11-6,29 |
| | (i:inside, o:outside) [in] | øi 0,32-0,33 | øi 0,24-0,25 | øi 0,24-0,25 |
| Material | | copper | copper | copper |
| Horizontal angle | ±2° | 35° | 13° | 0° |
| Vertical angle | ±2° | 30° | 40° | 145° |
| Position l/h/w | [mm] | 120/72/62 | 112/106/62 | -97/102/70 |
| | [in] | 4,7/2,8/2,4 | 4,4/4,2/2,4 | -3,8/4/2,8 |
| Straight tube l. | [mm] | 14 | 14 | 14 |
| | [in] | 0,5 | 0,5 | 0,5 |



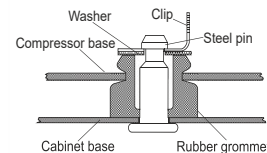
Compressor fixation



Bolt joint



Snap-on



Mounting accessories

| | one comp. | multi pack |
|----------------------------|-----------|------------|
| Bolt joint M6 ø16mm | 118-1917 | 118-1918 |
| Bolt joint ø1/4" ø16mm | 118-1946 | |
| Bolt joint ø1/4" ø19mm | 118-1949 | |
| Snap-on ø7,3 ø16mm | 118-1947 | 118-1919 |

Application notes

Provision for PE Grounding is located at the PE Stamp on the compressor

Model

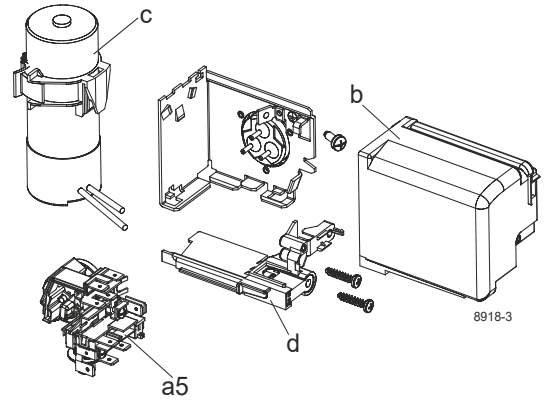
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Configuration

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|------------------------|------------------|
| Motorconfiguration | CSIR |
| Power supply (nominal) | 220-240V/50Hz 1~ |
| Refrigerant | R290 |
| Application | LBP+MBP |
| Voltage range | 198-254V |
| Starting torque | HST |
| Approvals | VDE CCC |

Electrical accessories / wiring diagram

CSIR

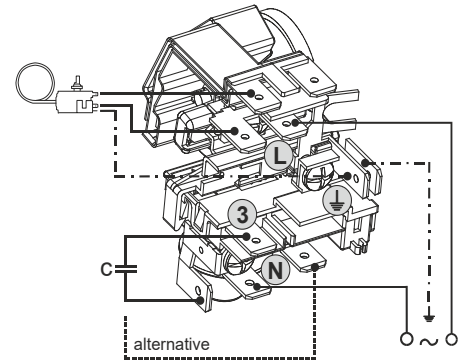
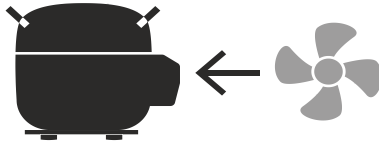


Ambient/ machine room temperatures minimum /maximum

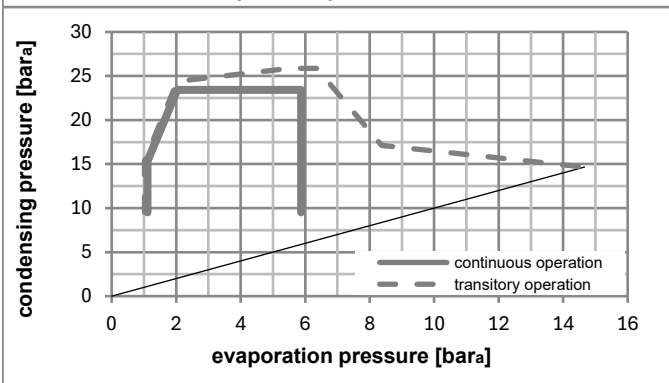
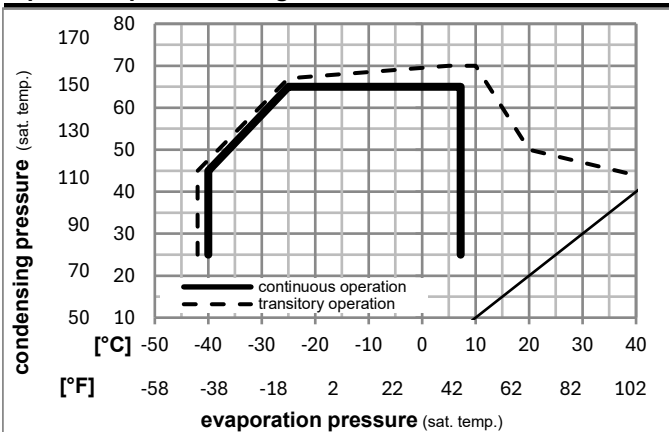
| | |
|---------------------------------|------------------------|
| Ambient temperature range: | 10 - 43°C / 50 - 110°F |
| Machine room temperature range: | 10 - 48°C / 50 - 119°F |

Compressor cooling: fan 3m/s

Compressor with external protector. For max. operation envelope cooling on protector.



Operation pressure range



Components

| | | |
|------|------------------------------------|----------|
| a5 | current relay TY (T1189/L6-S3) | 117U7073 |
| c | start capacitor (80µF, 6.3mm) | 117U5001 |
| b, d | cover + clamp + screws(5VA) in bag | 103N1060 |

Alternative components

| | | |
|------|------------------------------------|----------|
| b, d | cover + clamp + screws(5VA-compl.) | 103N0600 |
|------|------------------------------------|----------|

Model

Designation **KLF4.0CNDS** **220-240V/50Hz** Conf. 1 Sales code: **106H2403**

Optimization + standard conditions

R290, 220V/50Hz, CSIR, fan 3m/s, VDE, CCC

| | | Evaporating pressure (saturation temperature) | | | | Condensing pressure (saturation temperature) | | | Return gas temp. | | Liquid temp. | | Cooling capacity | | | COP | EER | Power consumption | | |
|------|------|---|------|------|------|--|---------|----------|------------------|----------|--------------|-------|------------------|---------------------|-----|----------------|-------------|-------------------|--|--|
| | | pe | pc | RGT | Tliq | [W] | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [kcal/Wh] | P1 | I | Current consumption | | Ref. mass flow | | | | |
| [°C] | [°F] | [°C] | [°F] | [°C] | [°F] | | | | | | | [W] | [A] | [A] | [A] | [kg/h] | ASHRAE LBP | | | |
| -23 | -10 | 54 | 130 | 32 | 90 | 176,4 | 602 | 151,8 | 1,44 | 4,92 | 1,24 | 122,5 | 0,98 | 1,79 | | | | | | |
| -25 | -13 | 55 | 131 | 32 | 90 | 131,0 | 447 | 112,8 | 1,10 | 3,75 | 0,95 | 119,3 | 0,98 | 1,63 | | | cecomaf LBP | | | |
| -35 | -31 | 40 | 104 | 20 | 68 | 96,7 | 330 | 83,2 | 1,11 | 3,79 | 0,95 | 87,1 | 0,90 | 1,10 | | | EN12900 LBP | | | |
| -7 | 20 | 54 | 130 | 35 | 95 | 323,8 | 1106 | 278,7 | 2,03 | 6,92 | 1,74 | 159,7 | 1,09 | 3,69 | | | ASHRAE MBP | | | |
| -10 | 14 | 55 | 131 | 32 | 90 | 255,8 | 874 | 220,1 | 1,67 | 5,71 | 1,44 | 153,0 | 1,07 | 3,24 | | | cecomaf MBP | | | |
| -10 | 14 | 45 | 113 | 20 | 68 | 288,5 | 985 | 248,3 | 2,09 | 7,13 | 1,80 | 138,2 | 1,02 | 3,54 | | | EN12900 MBP | | | |

Performance tables

R290, 220V/50Hz, CSIR, fan 3m/s, VDE, CCC

| | pe | | Cooling capacity | | | COP | EER | P1 | I | m | |
|------------------|------|------|------------------|---------|----------|-------|----------|-----------|-------|------|--------|
| | [°C] | [°F] | [W] | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [kcal/Wh] | [W] | [A] | [kg/h] |
| [°C / °F] | -40 | -40 | 64,8 | 221 | 55,8 | 0,78 | 2,66 | 0,67 | 83,3 | 0,90 | 0,72 |
| cond. pressure | -35 | -31 | 92,0 | 314 | 79,2 | 1,01 | 3,44 | 0,87 | 91,4 | 0,91 | 1,03 |
| pc= 45/113 | -25 | -13 | 158,0 | 539 | 135,9 | 1,44 | 4,92 | 1,24 | 109,7 | 0,95 | 1,78 |
| return gas temp. | -15 | 5 | 245,8 | 840 | 211,6 | 1,91 | 6,51 | 1,64 | 129,0 | 1,00 | 2,80 |
| RGT= 32/90 | -5 | 23 | 363,2 | 1240 | 312,6 | 2,48 | 8,46 | 2,13 | 146,7 | 1,05 | 4,18 |
| liquid temp | 0 | 32 | 435,4 | 1487 | 374,7 | 2,82 | 9,64 | 2,43 | 154,2 | 1,07 | 5,05 |
| Tliq= 45/113 | 7,2 | 45 | 557,7 | 1905 | 479,9 | 3,42 | 11,70 | 2,95 | 162,8 | 1,10 | 6,55 |
| [°C / °F] | -40 | -40 | 46,4 | 159 | 39,9 | 0,51 | 1,74 | 0,44 | 91,3 | 0,91 | 0,57 |
| cond. pressure | -35 | -31 | 71,8 | 245 | 61,8 | 0,72 | 2,46 | 0,62 | 99,5 | 0,93 | 0,89 |
| pc= 55/131 | -25 | -13 | 131,0 | 447 | 112,8 | 1,10 | 3,75 | 0,95 | 119,3 | 0,98 | 1,63 |
| return gas temp | -15 | 5 | 208,1 | 711 | 179,1 | 1,47 | 5,02 | 1,27 | 141,6 | 1,03 | 2,62 |
| RGT= 32/90 | -5 | 23 | 310,8 | 1061 | 267,5 | 1,89 | 6,47 | 1,63 | 164,2 | 1,10 | 3,96 |
| liquid temp | 0 | 32 | 374,1 | 1278 | 322,0 | 2,14 | 7,31 | 1,84 | 174,8 | 1,14 | 4,81 |
| Tliq= 55/131 | 7,2 | 45 | 481,9 | 1646 | 414,7 | 2,56 | 8,73 | 2,20 | 188,5 | 1,18 | 6,28 |