

Single Pack KLF7.7CND 220-240V 50Hz CSIR

Single pack code number: **195B4597**

| Position | Title | Code | Amount |
|----------|---|----------|--------|
| 1 | Compressor KLF7.7CND | 106H2800 | 1 |
| 2 | KL accessories | 103N1060 | 1 |
| 3 | Starting capacitor (80 μ F 220V, 6.3mm) | 117U5001 | 1 |
| 4 | Starting relay (QLZ-5.5A, overload protector T0377/L6) | 117U7071 | 1 |
| 5 | Bolt joint for one compressor M6 \varnothing 16mm | 118-1917 | 1 |

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Model

| | | | | |
|-------------|------------------|------------------|-------------|-----------------|
| Designation | KLF7.7CND | 220-240V/50Hz 1~ | Sales code: | 106H2800 |
|-------------|------------------|------------------|-------------|-----------------|

Compressor design

| | | | |
|----------------------------|---------------------------------|-----------------------|--------------------------------|
| Oil type | Polyolester | Refrigerant(s) | R290 |
| Oil viscosity | 10,4cSt | Displacement | 7,7cm ³ / 0,47cu.in |
| Oil quantity | 174cm ³ / 5,9fl.oz | Compressors on pallet | 100 |
| Refr. charge - tech. limit | 200g / 7,1oz | | |
| Free gas volume comp. | 1575cm ³ / 53,3fl.oz | | |
| Weight | 9,6kg / 21,2lbs | | |
| Motor protection | external | | |
| Winding resistance main | 8,4Ω (at 25°C) | | |
| Winding resistance aux | 11,9Ω (at 25°C) | | |
| Max. winding temp. | 125°C / 257°F | | |
| Max. discharge temp. | 130°C / 266°F | | |



General - Configurations with KLF7.7CND

| | Conf. 1 | Conf. 2 |
|------------------------|----------------|----------------|
| Motorconfiguration | CSIR | RSCR |
| Power supply (nominal) | 220-240V/50Hz | 220-240V/50Hz |
| Number of phases | 1 | 1 |
| Voltage range | 198-254V | 198-254V |
| Approvals | VDE, CCC | VDE, CCC |
| Starting torque | HST | LST |
| Note | - / - | |

Applications with KLF7.7CND

| | Conf. 1 | Conf. 2 |
|-------------------------|----------------|----------------|
| Refrigerant | R290 | R290 |
| Application | LBP+MBP | LBP+MBP |
| System cooling | fan 3m/s | fan 3m/s |
| Hot gas defrost | OK | OK |
| Long interval pull down | OK | OK |

Electrical data - Configurations with KLF7.7CND

| | Conf. 1 | Conf. 2 |
|------------------------------------|----------------|----------------|
| Starting device type | relay | PTC |
| Run capacitor | - / - | 5μF |
| Start capacitor | 80μF | - / - |
| LRA (locked rotor amps / 4s/ U(N)) | 13,2A | 13,2A |
| RLA (rated load amps / 1s/ U(N)) | 2,1A | 2,1A |
| Cut in current (U(N)) | 12,3A | 18,1A |

Model

Designation

KLF7.7CND

220-240V/50Hz 1~

Sales code:

106H2800

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] | 119/73/59 | 117/107/66 | -88/101/71 |
| | [in] | 4,7/2,9/2,3 | 4,6/4,2/2,6 | -3,5/4/2,8 |
| Straight tube l. | [mm] | 14 | 14 | 14 |
| | [in] | 0,5 | 0,5 | 0,5 |



Compressor fixation



Bolt joint



Snap-on



Mounting accessories

| 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

| | | | | | |
|-------------|------------------|----------------------|----------------|-------------|-----------------|
| Designation | KLF7.7CND | 220-240V/50Hz | Conf. 1 | Sales code: | 106H2800 |
|-------------|------------------|----------------------|----------------|-------------|-----------------|

Configuration

| | |
|------------------------|------------------|
| 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

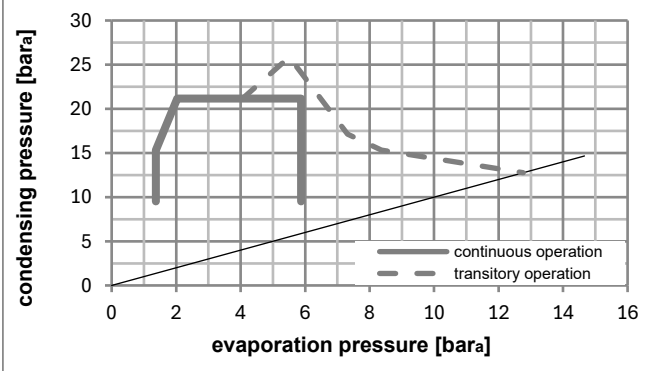
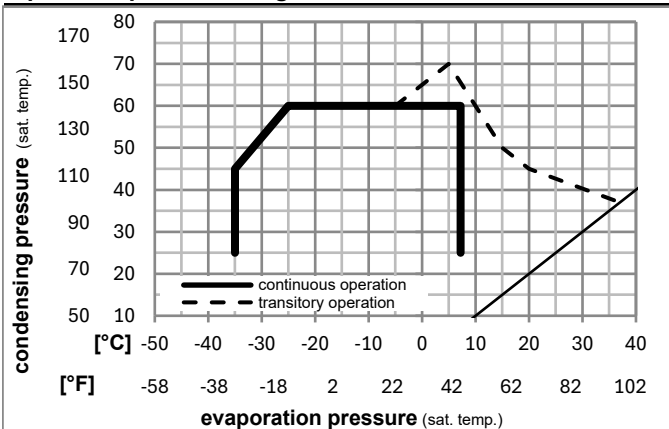


Ambient/ machine room temperatures minimum /maximum

| | |
|---------------------------------|------------------------|
| Ambient temperature range: | 10 - 43°C / 50 - 110°F |
| Machine room temperature range: | 10 - 48°C / 50 - 119°F |
| Compressor cooling: | fan 3m/s |



Operation pressure range



Components

| | | |
|------|------------------------------------|----------|
| a5 | current relay (T0377/L6-S1) | 117U7071 |
| c | start capacitor (80μF, 6.3mm) | 117U5001 |
| b, d | cover + clamp + screws(5VA) in bag | 103N1060 |

Alternative components

| | | |
|------|------------------------------------|----------|
| b, d | 100x cover + clamp + screws(5VA) | 103N2060 |
| b, d | cover + clamp + screws(5VA-compl.) | 103N0600 |

Model

Designation **KLF7.7CND** **220-240V/50Hz** Conf. 1 Sales code: **106H2800**

Optimization + standard conditions

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

| | Evaporating pressure (saturation temperature) | | | | Cooling capacity | | | COP | EER | Power consumption | | | ASHRAE LBP | |
|------|---|-----|-----|------|------------------|---------|----------|------|------|-------------------|-------|------|------------|-------------|
| | pe | pc | RGT | Tliq | [W] | [Btu/h] | [kcal/h] | | | P1 | I | m | | |
| [°C] | -23 | 54 | 32 | 32 | 384,5 | 1313 | 330,9 | 1,52 | 5,18 | 1,30 | 253,7 | 1,68 | 3,89 | |
| [°F] | -10 | 130 | 90 | 90 | | | | | | | | | | |
| [°C] | -25 | 55 | 32 | 55 | 287,6 | 982 | 247,5 | 1,18 | 4,02 | 1,01 | 244,6 | 1,65 | 3,58 | cecomaf LBP |
| [°F] | -13 | 131 | 90 | 131 | | | | | | | | | | |
| [°C] | -35 | 40 | 20 | 40 | 222,6 | 760 | 191,6 | 1,20 | 4,12 | 1,04 | 184,8 | 1,49 | 2,54 | EN12900 LBP |
| [°F] | -31 | 104 | 68 | 104 | | | | | | | | | | |
| [°C] | -7 | 54 | 35 | 46 | 687,7 | 2349 | 591,9 | 2,00 | 6,84 | 1,72 | 343,3 | 1,99 | 7,85 | ASHRAE MBP |
| [°F] | 20 | 130 | 95 | 115 | | | | | | | | | | |
| [°C] | -10 | 55 | 32 | 55 | 547,3 | 1869 | 471,0 | 1,67 | 5,71 | 1,44 | 327,5 | 1,93 | 6,92 | cecomaf MBP |
| [°F] | 14 | 131 | 90 | 131 | | | | | | | | | | |
| [°C] | -10 | 45 | 20 | 45 | 608,6 | 2079 | 523,8 | 2,03 | 6,93 | 1,75 | 299,9 | 1,83 | 7,47 | EN12900 MBP |
| [°F] | 14 | 113 | 68 | 113 | | | | | | | | | | |

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] | | | | | | |
| [°C / °F] | -35 | -31 | 210,1 | 717 | 180,8 | 1,11 | 3,79 | 0,96 | 189,1 | 1,50 | 2,35 |
| cond. pressure | -25 | -13 | 342,0 | 1168 | 294,3 | 1,46 | 4,98 | 1,26 | 234,3 | 1,62 | 3,86 |
| pc= 45/113 | -15 | 5 | 523,0 | 1786 | 450,1 | 1,88 | 6,42 | 1,62 | 278,4 | 1,76 | 5,95 |
| return gas temp. | -10 | 14 | 633,6 | 2164 | 545,3 | 2,11 | 7,22 | 1,82 | 299,9 | 1,83 | 7,25 |
| RGT= 32/90 | -5 | 23 | 758,6 | 2591 | 652,8 | 2,36 | 8,07 | 2,03 | 321,1 | 1,91 | 8,73 |
| liquid temp | 0 | 32 | 898,6 | 3069 | 773,3 | 2,63 | 8,97 | 2,26 | 342,0 | 1,99 | 10,42 |
| Tliq= 45/113 | 7,2 | 45 | 1127,9 | 3852 | 970,7 | 3,04 | 10,37 | 2,61 | 371,3 | 2,10 | 13,25 |
| [°C / °F] | -35 | -31 | 170,7 | 583 | 146,9 | 0,92 | 3,13 | 0,79 | 186,0 | 1,49 | 2,11 |
| cond. pressure | -25 | -13 | 287,6 | 982 | 247,5 | 1,18 | 4,02 | 1,01 | 244,6 | 1,65 | 3,58 |
| pc= 55/131 | -15 | 5 | 448,6 | 1532 | 386,0 | 1,49 | 5,10 | 1,28 | 300,5 | 1,84 | 5,64 |
| return gas temp | -10 | 14 | 547,3 | 1869 | 471,0 | 1,67 | 5,71 | 1,44 | 327,5 | 1,93 | 6,92 |
| RGT= 32/90 | -5 | 23 | 659,1 | 2251 | 567,2 | 1,86 | 6,36 | 1,60 | 353,6 | 2,03 | 8,40 |
| liquid temp | 0 | 32 | 784,6 | 2680 | 675,3 | 2,07 | 7,07 | 1,78 | 379,1 | 2,13 | 10,08 |
| Tliq= 55/131 | 7,2 | 45 | 991,0 | 3385 | 852,9 | 2,39 | 8,17 | 2,06 | 414,5 | 2,27 | 12,91 |

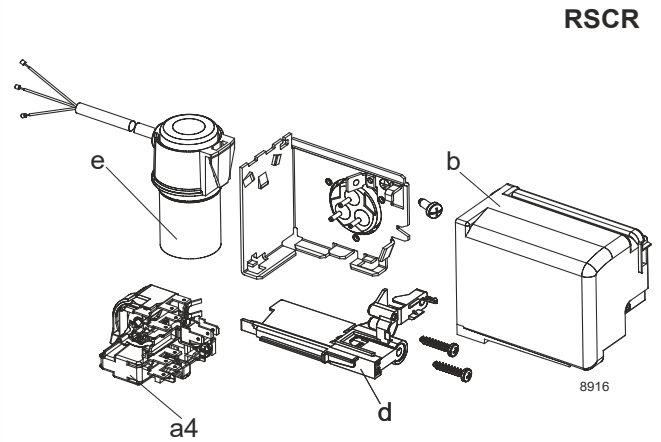
Model

| | | | | | |
|-------------|------------------|----------------------|----------------|-------------|-----------------|
| Designation | KLF7.7CND | 220-240V/50Hz | Conf. 2 | Sales code: | 106H2800 |
|-------------|------------------|----------------------|----------------|-------------|-----------------|

Configuration

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

Electrical accessories / wiring diagram



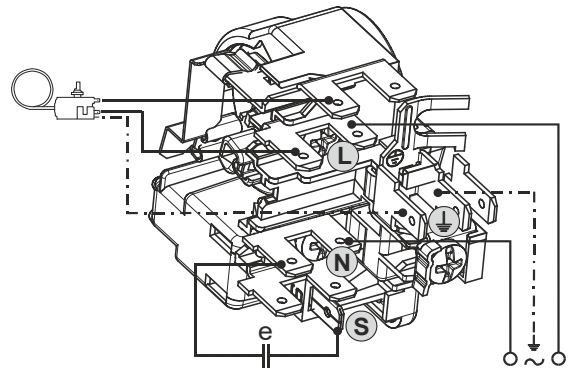
RSCR

Ambient/ machine room temperatures minimum /maximum

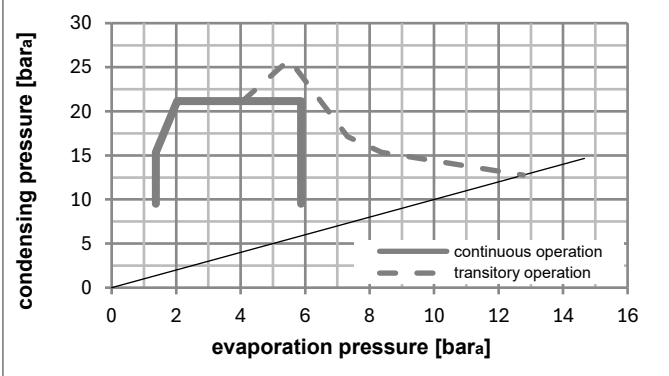
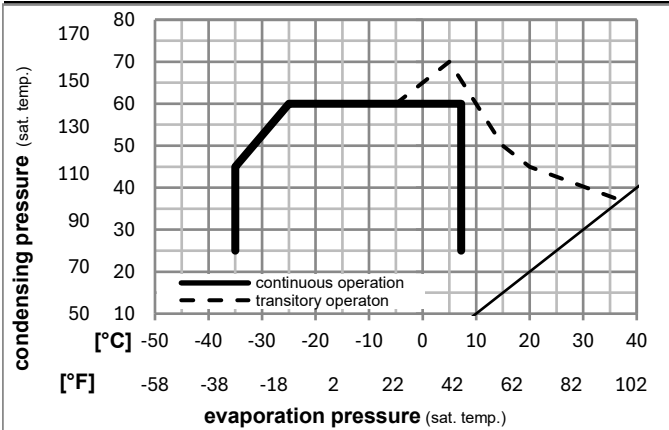
Ambient temperature range: 10 - 43°C / 50 - 110°F

Machine room temperature range: 10 - 48°C / 50 - 119°F

Compressor cooling: fan 3m/s



Operation pressure range



Components

| | | |
|------|------------------------------------|----------|
| a4 | DAS1 (PTC,6.3mm, T0377/L6 - S1) | 103N0250 |
| e | run capacitor (5μF, 6.3mm) | 117-7191 |
| b, d | cover + clamp + screws(5VA) in bag | 103N1060 |

Alternative components

| | | |
|----|---------------------------------|----------|
| a4 | ZAS1 (PTC,4.8mm, T0377/L6 - S1) | 103N0252 |
| e | run capacitor (5μF, 4.8mm) | 117-7190 |

| | | |
|------|------------------------------------|----------|
| b, d | 100x cover + clamp + screws(5VA) | 103N2060 |
| b, d | cover + clamp + screws(5VA-compl.) | 103N0600 |

Model

Designation **KLF7.7CND** **220-240V/50Hz** Conf. 2 Sales code: **106H2800**

Optimization + standard conditions

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

| | Evaporating pressure (saturation temperature) | | | | Condensing pressure (saturation temperature) | | | Return gas temp. | Liquid temp. | Cooling capacity | COP | Power consumption | | | Ref. mass flow |
|------|---|-----|-----|------|--|---------|----------|------------------|--------------|------------------|-------|-------------------|----------|-------------|----------------|
| | pe | pc | RGT | Tliq | [W] | [Btu/h] | [kcal/h] | | | | | [W/W] | [Btu/Wh] | [kcal/Wh] | |
| [°C] | -23 | 54 | 32 | 32 | 387,4 | 1323 | 333,4 | 1,60 | 5,46 | 1,38 | 242,2 | 1,36 | 3,92 | ASHRAE LBP | |
| [°F] | -10 | 130 | 90 | 90 | | | | | | | | | | | |
| [°C] | -25 | 55 | 32 | 55 | 289,8 | 990 | 249,4 | 1,24 | 4,24 | 1,07 | 233,6 | 1,33 | 3,61 | cecomaf LBP | |
| [°F] | -13 | 131 | 90 | 131 | | | | | | | | | | | |
| [°C] | -35 | 40 | 20 | 40 | 224,1 | 765 | 192,9 | 1,27 | 4,32 | 1,09 | 177,0 | 1,13 | 2,56 | EN12900 LBP | |
| [°F] | -31 | 104 | 68 | 104 | | | | | | | | | | | |
| [°C] | -7 | 54 | 35 | 46 | 693,9 | 2370 | 597,2 | 2,12 | 7,26 | 1,83 | 326,6 | 1,69 | 7,92 | ASHRAE MBP | |
| [°F] | 20 | 130 | 95 | 115 | | | | | | | | | | | |
| [°C] | -10 | 55 | 32 | 55 | 552,0 | 1885 | 475,1 | 1,77 | 6,05 | 1,52 | 311,7 | 1,63 | 6,98 | cecomaf MBP | |
| [°F] | 14 | 131 | 90 | 131 | | | | | | | | | | | |
| [°C] | -10 | 45 | 20 | 45 | 613,6 | 2096 | 528,1 | 2,15 | 7,33 | 1,85 | 285,9 | 1,53 | 7,53 | EN12900 MBP | |
| [°F] | 14 | 113 | 68 | 113 | | | | | | | | | | | |

Performance tables

R290, 220V/50Hz, RSCR, 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] | -35 | -31 | 211,5 | 722 | 182,0 | 1,17 | 3,99 | 1,00 | 181,2 | 1,14 | 2,37 |
| cond. pressure | -25 | -13 | 344,5 | 1177 | 296,5 | 1,54 | 5,25 | 1,32 | 223,9 | 1,29 | 3,89 |
| pc= 45/113 | -15 | 5 | 527,1 | 1800 | 453,7 | 1,98 | 6,78 | 1,71 | 265,6 | 1,44 | 6,00 |
| return gas temp. | -10 | 14 | 638,8 | 2182 | 549,8 | 2,23 | 7,63 | 1,92 | 285,9 | 1,53 | 7,31 |
| RGT= 32/90 | -5 | 23 | 765,1 | 2613 | 658,4 | 2,50 | 8,54 | 2,15 | 305,9 | 1,61 | 8,81 |
| liquid temp | 0 | 32 | 906,6 | 3096 | 780,2 | 2,79 | 9,51 | 2,40 | 325,4 | 1,69 | 10,52 |
| Tliq= 45/113 | 7,2 | 45 | 1138,6 | 3888 | 979,9 | 3,23 | 11,02 | 2,78 | 352,8 | 1,80 | 13,38 |
| [°C / °F] | -35 | -31 | 171,9 | 587 | 147,9 | 0,96 | 3,30 | 0,83 | 178,1 | 1,14 | 2,13 |
| cond. pressure | -25 | -13 | 289,8 | 990 | 249,4 | 1,24 | 4,24 | 1,07 | 233,6 | 1,33 | 3,61 |
| pc= 55/131 | -15 | 5 | 452,3 | 1545 | 389,2 | 1,58 | 5,39 | 1,36 | 286,4 | 1,53 | 5,69 |
| return gas temp | -10 | 14 | 552,0 | 1885 | 475,1 | 1,77 | 6,05 | 1,52 | 311,7 | 1,63 | 6,98 |
| RGT= 32/90 | -5 | 23 | 665,1 | 2271 | 572,4 | 1,98 | 6,75 | 1,70 | 336,3 | 1,73 | 8,47 |
| liquid temp | 0 | 32 | 792,2 | 2706 | 681,8 | 2,20 | 7,51 | 1,89 | 360,0 | 1,83 | 10,18 |
| Tliq= 55/131 | 7,2 | 45 | 1001,3 | 3419 | 861,7 | 2,55 | 8,71 | 2,19 | 392,8 | 1,97 | 13,04 |



KL Compressors





KL Compressors



Service/Repair – R290



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