

Model

| | | | | |
|-------------|------------------|------------------|-------------|-----------------|
| Designation | KLF4.0CND | 220-240V/50Hz 1~ | Sales code: | 106H2405 |
|-------------|------------------|------------------|-------------|-----------------|

Compressor design

| | | | |
|----------------------------|---------------------------------|-----------------------|------------------------------|
| Oil type | Polyolester | Refrigerant(s) | R290 |
| Oil viscosity | 10,4cSt | Displacement | 4cm ³ / 0,24cu.in |
| Oil quantity | 174cm ³ / 5,9fl.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 | | |



General - Configurations with KLF4.0CND

| | 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 | Housing with dip-tray fixture (omega bracket). | |

Applications with KLF4.0CND

| | 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 KLF4.0CND

| | Conf. 1 | Conf. 2 |
|------------------------------------|----------------|----------------|
| Starting device type | relay | PTC |
| Run capacitor | -/- | 5μF |
| Start capacitor | 80μF | -/- |
| LRA (locked rotor amps / 4s/ U(N)) | 10,2A | 10,2A |
| RLA (rated load amps / 1s/ U(N)) | 1,4A | 1,4A |
| Cut in current (U(N)) | 10,2A | 12,65A |

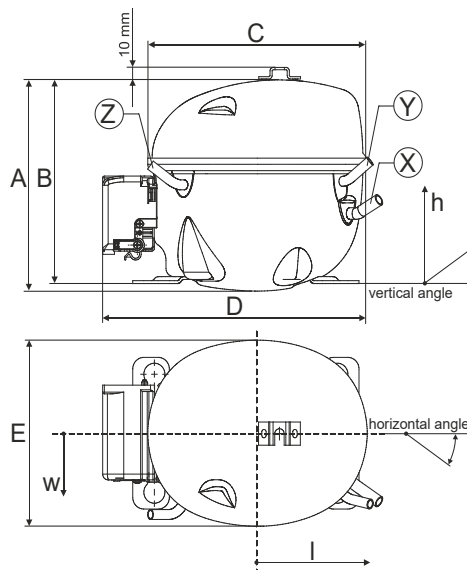
Model

| | | | | |
|-------------|------------------|------------------|-------------|-----------------|
| Designation | KLF4.0CND | 220-240V/50Hz 1~ | Sales code: | 106H2405 |
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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 |



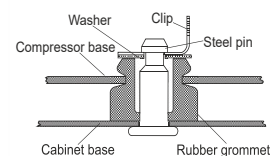
Compressor fixation



Bolt joint



Snap-on



| Mounting accessories | 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

Housing with dip-tray fixture (omega bracket).

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

Model

| | | | | | |
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| Designation | KLF4.0CND | 220-240V/50Hz | Conf. 1 | Sales code: | 106H2405 |
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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 |

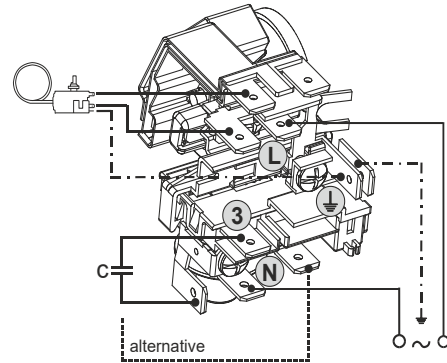
Electrical accessories / wiring diagram

CSIR

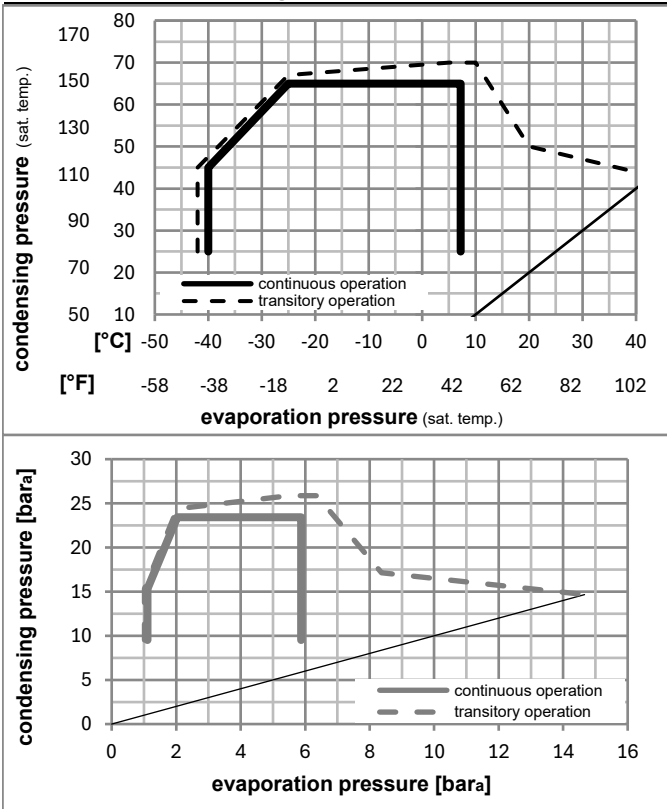


Ambient/ machine room temperatures minimum /maximum

| | |
|---------------------------------|------------------------|
| 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 (T1189/L6-S3) | 117U7073 |
| 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 **KLF4.0CND** **220-240V/50Hz** Conf. 1 Sales code: **106H2405**

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 | | | ASHRAE LBP |
|--|---|------|------|------|--|---------|----------|------------------|--------------|------------------|-------|------|-------------------|-------------|---|------------|
| | pe | pc | RGT | Tliq | [W] | [Btu/h] | [kcal/h] | | | | | | P1 | I | m | |
| | [°C] | [°F] | [°C] | [°F] | [W] | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [kcal/Wh] | [W] | [A] | [kg/h] | | | |
| | -23 | 54 | 32 | 32 | 182,9 | 625 | 157,4 | 1,48 | 5,04 | 1,27 | 123,9 | 0,99 | 1,85 | ASHRAE LBP | | |
| | -10 | 130 | 90 | 90 | | | | | | | | | | | | |
| | -25 | 55 | 32 | 55 | 135,8 | 464 | 116,9 | 1,13 | 3,85 | 0,97 | 120,6 | 0,99 | 1,69 | cecomaf LBP | | |
| | -13 | 131 | 90 | 131 | | | | | | | | | | | | |
| | -35 | 40 | 20 | 40 | 100,2 | 342 | 86,2 | 1,14 | 3,88 | 0,98 | 88,1 | 0,91 | 1,14 | EN12900 LBP | | |
| | -31 | 104 | 68 | 104 | | | | | | | | | | | | |
| | -7 | 54 | 35 | 46 | 335,7 | 1146 | 288,9 | 2,08 | 7,10 | 1,79 | 161,5 | 1,10 | 3,83 | ASHRAE MBP | | |
| | 20 | 130 | 95 | 115 | | | | | | | | | | | | |
| | -10 | 55 | 32 | 55 | 265,2 | 906 | 228,2 | 1,71 | 5,85 | 1,47 | 154,7 | 1,08 | 3,35 | cecomaf MBP | | |
| | 14 | 131 | 90 | 131 | | | | | | | | | | | | |
| | -10 | 45 | 20 | 45 | 299,1 | 1021 | 257,4 | 2,14 | 7,31 | 1,84 | 139,7 | 1,03 | 3,67 | EN12900 MBP | | |
| | 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] | [W/W] | [Btu/Wh] | [kcal/Wh] | [W] | [A] | [kg/h] |
| [°C / °F] | -40 | -40 | 67,2 | 229 | 57,8 | 0,80 | 2,72 | 0,69 | 84,2 | 0,91 | 0,75 |
| cond. pressure | -35 | -31 | 95,4 | 326 | 82,1 | 1,03 | 3,52 | 0,89 | 92,4 | 0,92 | 1,07 |
| pc= 45/113 | -25 | -13 | 163,7 | 559 | 140,9 | 1,48 | 5,04 | 1,27 | 111,0 | 0,96 | 1,85 |
| return gas temp. | -15 | 5 | 254,8 | 870 | 219,3 | 1,95 | 6,67 | 1,68 | 130,4 | 1,01 | 2,90 |
| RGT= 32/90 | -5 | 23 | 376,5 | 1286 | 324,0 | 2,54 | 8,67 | 2,18 | 148,4 | 1,06 | 4,33 |
| liquid temp | 0 | 32 | 451,3 | 1541 | 388,4 | 2,89 | 9,88 | 2,49 | 156,0 | 1,08 | 5,24 |
| Tliq= 45/113 | 7,2 | 45 | 578,1 | 1974 | 497,5 | 3,51 | 11,99 | 3,02 | 164,7 | 1,11 | 6,79 |
| [°C / °F] | -40 | -40 | 48,1 | 164 | 41,4 | 0,52 | 1,78 | 0,45 | 92,3 | 0,92 | 0,59 |
| cond. pressure | -35 | -31 | 74,4 | 254 | 64,0 | 0,74 | 2,52 | 0,64 | 100,6 | 0,94 | 0,92 |
| pc= 55/131 | -25 | -13 | 135,8 | 464 | 116,9 | 1,13 | 3,85 | 0,97 | 120,6 | 0,99 | 1,69 |
| return gas temp | -15 | 5 | 215,8 | 737 | 185,7 | 1,51 | 5,15 | 1,30 | 143,2 | 1,05 | 2,71 |
| RGT= 32/90 | -5 | 23 | 322,2 | 1100 | 277,3 | 1,94 | 6,63 | 1,67 | 166,0 | 1,11 | 4,10 |
| liquid temp | 0 | 32 | 387,8 | 1324 | 333,8 | 2,19 | 7,49 | 1,89 | 176,8 | 1,15 | 4,98 |
| Tliq= 55/131 | 7,2 | 45 | 499,5 | 1706 | 429,9 | 2,62 | 8,95 | 2,25 | 190,7 | 1,20 | 6,51 |

Model

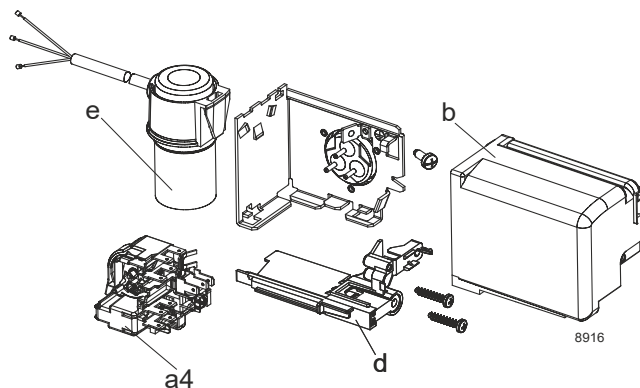
| | | | | | |
|-------------|------------------|----------------------|----------------|-------------|-----------------|
| Designation | KLF4.0CND | 220-240V/50Hz | Conf. 2 | Sales code: | 106H2405 |
|-------------|------------------|----------------------|----------------|-------------|-----------------|

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

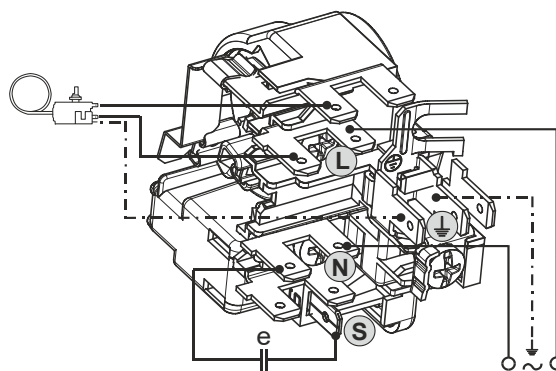


Ambient/ machine room temperatures minimum /maximum

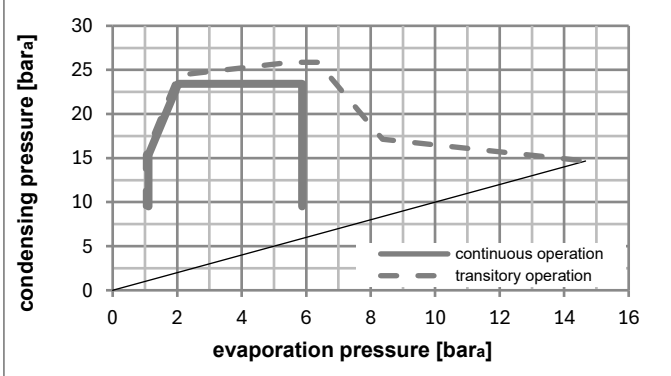
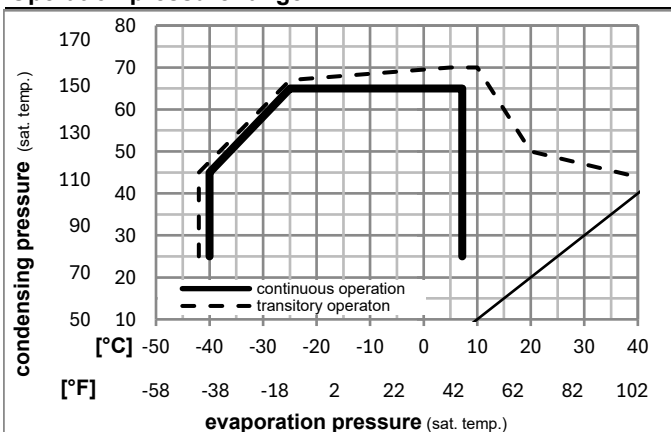
Ambient temperature range: 10 - 43°C / 50 - 110°F

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

Compressor cooling: fan 3m/s



Operation pressure range



Components

| | | |
|------|------------------------------------|----------|
| a4 | DAS3 (PTC,6.3mm, T1189/L6 - S3) | 103N0254 |
| e | run capacitor (5μF, 6.3mm) | 117-7191 |
| b, d | cover + clamp + screws(5VA) in bag | 103N1060 |

Alternative components

| | | |
|----|---------------------------------|----------|
| a4 | ZAS3 (PTC,4.8mm, T1189/L6 - S3) | 103N0255 |
| 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 **KLF4.0CND** **220-240V/50Hz** Conf. 2 Sales code: **106H2405**

Optimization + standard conditions

R290, 220V/50Hz, RSCR, 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] | | [W/W] | [Btu/Wh] | [kcal/Wh] | P1 | I | m | |
| | [°C] | [°C] | [°C] | [°C] | | | | | | | [W] | [A] | [kg/h] | | |
| | -23 | 54 | 32 | 32 | 183,2 | 626 | 157,7 | 1,50 | 5,13 | 1,29 | 122,1 | 0,68 | 1,86 | | |
| | [°F] | | | | | | | | | | | | | | |
| | -10 | 130 | 90 | 90 | | | | | | | | | | | |
| | [°C] | | | | | | | | | | | | | | |
| | -25 | 55 | 32 | 55 | 136,1 | 465 | 117,1 | 1,14 | 3,90 | 0,98 | 119,0 | 0,67 | 1,69 | cecomaf LBP | |
| | [°F] | | | | | | | | | | | | | | |
| | -13 | 131 | 90 | 131 | | | | | | | | | | | |
| | [°C] | | | | | | | | | | | | | | |
| | -35 | 40 | 20 | 40 | 100,4 | 343 | 86,4 | 1,13 | 3,85 | 0,97 | 89,0 | 0,57 | 1,15 | EN12900 LBP | |
| | [°F] | | | | | | | | | | | | | | |
| | -31 | 104 | 68 | 104 | | | | | | | | | | | |
| | [°C] | | | | | | | | | | | | | | |
| | -7 | 54 | 35 | 46 | 336,6 | 1149 | 289,7 | 2,14 | 7,31 | 1,84 | 157,1 | 0,82 | 3,84 | ASHRAE MBP | |
| | [°F] | | | | | | | | | | | | | | |
| | 20 | 130 | 95 | 115 | | | | | | | | | | | |
| | [°C] | | | | | | | | | | | | | | |
| | -10 | 55 | 32 | 55 | 265,8 | 908 | 228,8 | 1,76 | 6,02 | 1,52 | 150,8 | 0,79 | 3,36 | cecomaf MBP | |
| | [°F] | | | | | | | | | | | | | | |
| | 14 | 131 | 90 | 131 | | | | | | | | | | | |
| | [°C] | | | | | | | | | | | | | | |
| | -10 | 45 | 20 | 45 | 299,7 | 1024 | 258,0 | 2,19 | 7,48 | 1,89 | 136,8 | 0,74 | 3,68 | EN12900 MBP | |
| | [°F] | | | | | | | | | | | | | | |
| | 14 | 113 | 68 | 113 | | | | | | | | | | | |
| | [°C] | | | | | | | | | | | | | | |

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] | | | |
| [°C / °F] | -40 | -40 | 67,3 | 230 | 57,9 | 0,79 | 2,68 | 0,68 | 85,5 | 0,56 | 0,75 |
| cond. pressure | -35 | -31 | 95,5 | 326 | 82,2 | 1,03 | 3,51 | 0,88 | 93,0 | 0,58 | 1,07 |
| pc= 45/113 | -25 | -13 | 164,1 | 560 | 141,2 | 1,49 | 5,09 | 1,28 | 110,1 | 0,64 | 1,85 |
| return gas temp. | -15 | 5 | 255,4 | 872 | 219,8 | 1,99 | 6,80 | 1,71 | 128,2 | 0,71 | 2,91 |
| RGT= 32/90 | -5 | 23 | 377,4 | 1289 | 324,8 | 2,61 | 8,90 | 2,24 | 144,9 | 0,77 | 4,35 |
| liquid temp | 0 | 32 | 452,5 | 1545 | 389,4 | 2,98 | 10,17 | 2,56 | 152,0 | 0,80 | 5,25 |
| Tliq= 45/113 | 7,2 | 45 | 579,6 | 1979 | 498,8 | 3,62 | 12,37 | 3,12 | 160,0 | 0,83 | 6,81 |
| [°C / °F] | -40 | -40 | 48,2 | 165 | 41,5 | 0,52 | 1,77 | 0,45 | 92,9 | 0,58 | 0,59 |
| cond. pressure | -35 | -31 | 74,5 | 254 | 64,1 | 0,74 | 2,53 | 0,64 | 100,5 | 0,61 | 0,92 |
| pc= 55/131 | -25 | -13 | 136,1 | 465 | 117,1 | 1,14 | 3,90 | 0,98 | 119,0 | 0,67 | 1,69 |
| return gas temp | -15 | 5 | 216,3 | 739 | 186,1 | 1,54 | 5,27 | 1,33 | 140,1 | 0,75 | 2,72 |
| RGT= 32/90 | -5 | 23 | 323,1 | 1103 | 278,0 | 2,00 | 6,84 | 1,72 | 161,3 | 0,84 | 4,12 |
| liquid temp | 0 | 32 | 388,9 | 1328 | 334,7 | 2,27 | 7,75 | 1,95 | 171,3 | 0,88 | 5,00 |
| Tliq= 55/131 | 7,2 | 45 | 501,0 | 1711 | 431,2 | 2,72 | 9,29 | 2,34 | 184,1 | 0,93 | 6,53 |