

Single Pack NL6.1MF 220-240V 50Hz / 208-230V 60Hz CSIR

Single pack code number: **195B4068**

| Position | Title | Code | Amount |
|----------|---|----------|--------|
| 1 | Compressor NL6.1MF | 105G6660 | 1 |
| 2 | Starting relay | 117U6015 | 1 |
| 3 | Starting capacitor (80 μ F 220V, 6.3mm) | 117U5015 | 1 |
| 4 | Cord relief | 103N1010 | 1 |
| 5 | Cover | 103N2011 | 1 |
| 6 | Bolt joint for one compressor M6 \varnothing 16mm | 118-1917 | 1 |

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Model

| | | | | |
|-------------|----------------|-----------------------------------|-------------|-----------------|
| Designation | NL6.1MF | 220-240V/50Hz 1~ 208-230V/60Hz 1~ | Sales code: | 105G6660 |
|-------------|----------------|-----------------------------------|-------------|-----------------|

Compressor design

| | | | |
|----------------------------|---------------------------------|-----------------------|---------------------------------|
| Oil type | Polyolester | Refrigerant(s) | R134a, R513A |
| Oil viscosity | 19,2cST | Displacement | 6,13cm ³ / 0,37cu.in |
| Oil quantity | 270cm ³ / 9,1fl.oz | Compressors on pallet | 80 |
| Refr. charge - tech. limit | 600g / 21,2oz | | |
| Free gas volume comp. | 2360cm ³ / 79,8fl.oz | | |
| Weight | 10kg / 22lbs | | |
| Motor protection | 1# internal | | |
| Winding resistance main | 10,2Ω (at 25°C) | | |
| Winding resistance aux | 16,4Ω (at 25°C) | | |
| Max. winding temp. | 125°C / 257°F | | |
| Max. discharge temp. | 130°C / 266°F | | |



General - Configurations with NL6.1MF

| | Conf. 1 | Conf. 2 | Conf. 3 | Conf. 4 | Conf. 5 |
|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Motorconfiguration | RSIR | CSIR | CSIR | CSIR | CSIR |
| Power supply (nominal) | 220-240V/50Hz | 220-240V/50Hz | 208-230V/60Hz | 220-240V/50Hz | 208-230V/60Hz |
| Number of phases | 1 | 1 | 1 | 1 | 1 |
| Voltage range | 187-254V | 187-254V | 187-254V | 187-254V | 187-253V |
| Approvals | VDE, UL, CCC, EAC, KC | VDE, UL, CCC, EAC, KC | VDE, UL, CCC, EAC, KC | VDE, UL, CCC, EAC, KC | VDE, UL, CCC, EAC, KC |
| Starting torque | LST | HST | HST | HST | HST |
| Note | - / - | | | | |

Applications with NL6.1MF

| | Conf. 1 | Conf. 2 | Conf. 3 | Conf. 4 | Conf. 5 |
|-------------------------|----------------|----------------|----------------|----------------|----------------|
| Refrigerant | R134a | R134a | R134a | R513A | R513A |
| Application | MBP | MBP | LBP+MBP | MBP | LBP+MBP |
| System cooling | fan 1,5m/s | fan 1,5m/s | fan 1,5m/s | fan 1,5m/s | fan 1,5m/s |
| Hot gas defrost | - / - | - / - | - / - | - / - | - / - |
| Long interval pull down | OK | OK | OK | OK | OK |

Electrical data - Configurations with NL6.1MF

| | Conf. 1 | Conf. 2 | Conf. 3 | Conf. 4 | Conf. 5 |
|------------------------------|----------------|----------------|----------------|----------------|----------------|
| Starting device type | PTC | relay | relay | relay | relay |
| Run capacitor | - / - | - / - | - / - | - / - | - / - |
| Start capacitor | - / - | 80μF | 80μF | 80μF | 80μF |
| LRA (locked rotor amps / 4s) | 8A | 9,2A | 9,2A | 9,2A | 9,2A |
| RLA (rated load amps / 1s) | 1,7A | 1,7A | 1,7A | 1,7A | 1,7A |
| Cut in current | 12,2A | 12,2A | 12,2A | 12,2A | 12,2A |

Model

Designation

NL6.1MF

220-240V/50Hz 1~ 208-230V/60Hz 1~

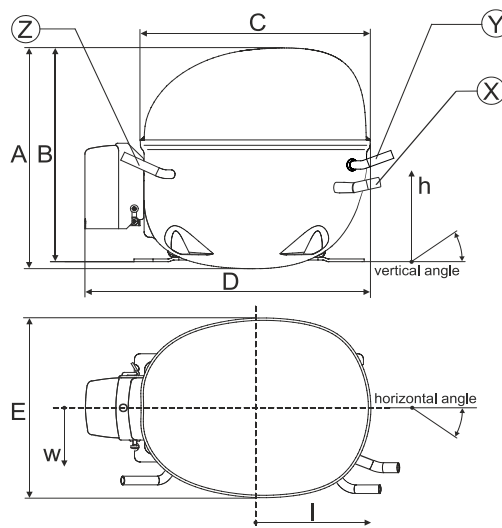
Sales code:

105G6660

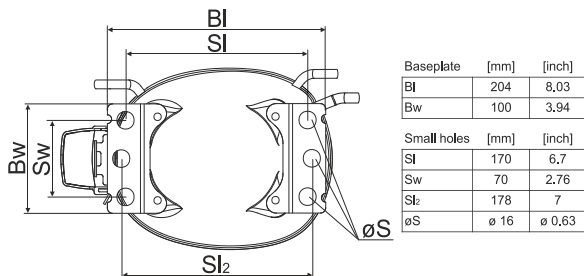
Compressor dimensions

| Housing | A Height | 190,5mm / 7,5in |
|---------|-------------------|------------------|
| | B Height | 184,5mm / 7,26in |
| | C Length shell | 205mm / 8,07in |
| | D Length w. cover | 254mm / 10in |
| | E Width | 166mm / 6,54in |

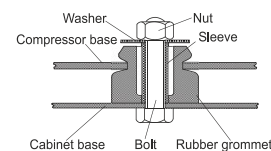
| Connectors | Suction X | Discharge Y | Process Z |
|----------------------------|--------------|----------------|--------------|
| Diameter [mm] | øi 8,11-8,29 | øi 6,11-6,29 | øi 6,11-6,29 |
| (i:inside, o:outside) [in] | øi 0,32-0,33 | øi 0,24-0,25 | øi 0,24-0,25 |
| Material | copper | copper | copper |
| Horizontal angle ±2° | 0° | 0° | 0° |
| Vertical angle ±2° | 15° | 35° | 155° |
| Position l/h/w [mm] | 126/76/78 | 133/103/54 | -107/94/72 |
| [in] | 4,9/3/3,1 | 5,2/4/2,1 | -4,2/3,7/2,8 |
| Straight tube l. [mm] | 12 | 12 | 12 |
| [in] | 0,5 | 0,5 | 0,5 |



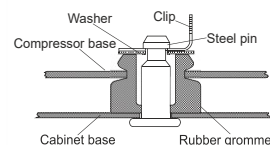
Compressor fixation



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

LRA value on compressor label and datasheet may differ due to different test conditions for UL approval.

Model

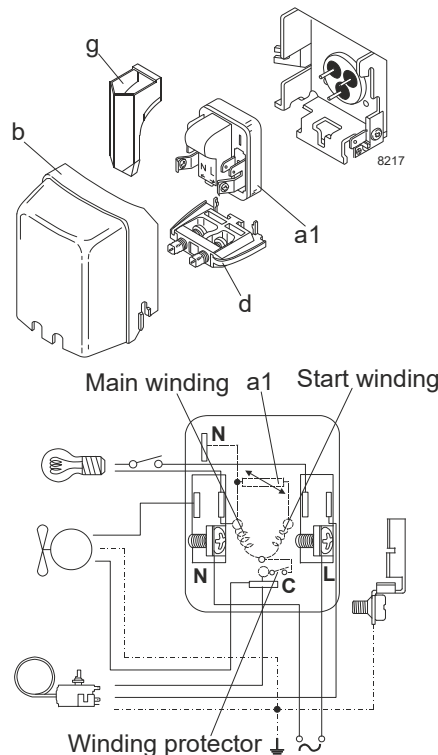
| | | | | | |
|-------------|----------------|----------------------|----------------|-------------|-----------------|
| Designation | NL6.1MF | 220-240V/50Hz | Conf. 1 | Sales code: | 105G6660 |
|-------------|----------------|----------------------|----------------|-------------|-----------------|

Configuration

| | |
|------------------------|------------------|
| Motorconfiguration | RSIR |
| Power supply (nominal) | 220-240V/50Hz 1~ |
| Refrigerant | R134a |
| Application | MBP |
| Voltage range | 187-254V |
| Starting torque | LST |
| Approvals | VDE (2) |
| (1): Made in China | UL (1),(2) |
| (2): Made in Slovakia | CCC (1),(2) |
| | EAC (1),(2) |
| | KC (1) |

Electrical accessories / wiring diagram

RSIR



Ambient/ machine room temperatures minimum /maximum

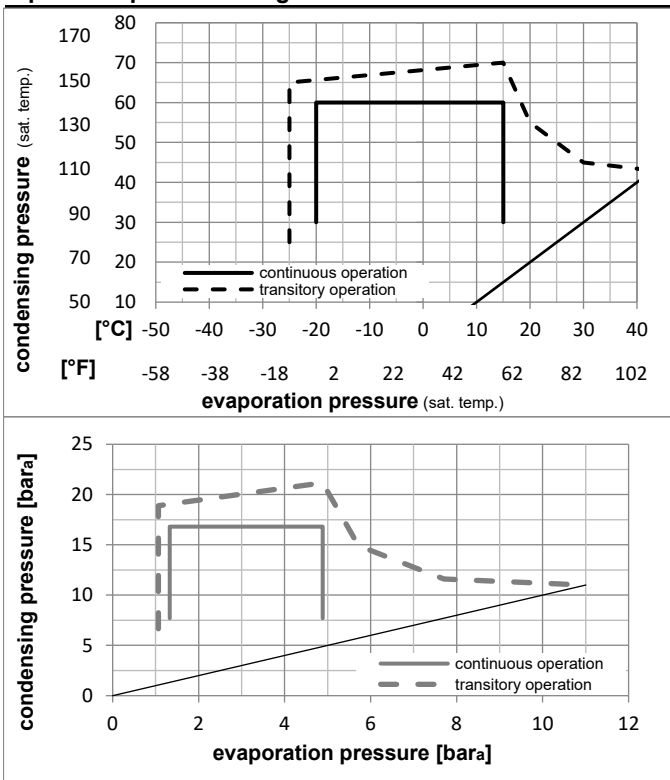
Ambient temperature range: 10 - 43°C / 50 - 110°F

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

Compressor cooling: static

Operation Limits

Operation pressure range



Components

| | | |
|----|----------------------------------|----------|
| a1 | PTC starter (220V, 250hm, 4.8mm) | 103N0018 |
| b | plastic cover | 103N2011 |
| d | cord relief | 103N1010 |
| g | protection screen for PTC | 103N0476 |

Alternative components

| | | |
|----|----------------------------------|----------|
| a1 | PTC starter (220V, 250hm, 6.3mm) | 103N0011 |
| b | plastic cover | 103N2010 |
| d | cord relief | 103N1010 |
| g | protection screen for PTC | 103N0476 |

Model

Designation **NL6.1MF** **220-240V/50Hz** Conf. 1 Sales code: **105G6660**

Optimization + standard conditions

R134a, 220V/50Hz, RSIR, static, VDE, UL, CCC, EAC, KC

| | | 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 | m | [W] | [A] | [kg/h] | | | | | | |
| [°C] | [°F] | | | | | | | | | | | | | | | | | | | | | | |
| -7 | 20 | 54 | 35 | 46 | 320,1 | 1093 | 275,5 | 1,61 | 5,49 | 1,38 | 199,2 | 1,46 | 6,98 | | | | | | | | ASHRAE MBP | | |
| 14 | 55 | 32 | 55 | 245,1 | 837 | 211,0 | 1,31 | 4,47 | 1,13 | 187,5 | 1,43 | 5,93 | | | | | | | | | cecomaf MBP | | |
| 14 | 45 | 20 | 45 | 283,3 | 968 | 243,8 | 1,59 | 5,44 | 1,37 | 177,8 | 1,40 | 6,63 | | | | | | | | | EN12900 MBP | | |
| 14 | 49 | 18 | 49 | 308,4 | 1053 | 265,4 | 1,60 | 5,46 | 1,38 | 192,9 | 1,44 | 7,62 | | | | | | | | | ARI540 MBP | | |
| 14 | 45 | 32 | 45 | 293,9 | 1004 | 253,0 | 1,65 | 5,65 | 1,42 | 177,8 | 1,40 | 6,43 | | | | | | | | | opt | | |
| -13 | 45 | 32 | 45 | 127,3 | 435 | 109,5 | 0,99 | 3,37 | 0,85 | 129,0 | 1,32 | 2,76 | | | | | | | | | opt | | |

Performance tables

R134a, 220V/50Hz, RSIR, static, VDE, UL, CCC, EAC, KC

| | 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] | -20 | -4 | 173,3 | 592 | 149,1 | 1,19 | 4,06 | 1,02 | 145,8 | 1,34 | 3,76 |
| cond. pressure | -15 | 5 | 228,4 | 780 | 196,5 | 1,41 | 4,82 | 1,21 | 162,0 | 1,37 | 4,98 |
| pc= 45/113 | -10 | 14 | 293,9 | 1004 | 253,0 | 1,65 | 5,65 | 1,42 | 177,8 | 1,40 | 6,43 |
| return gas temp. | -5 | 23 | 371,3 | 1268 | 319,5 | 1,92 | 6,56 | 1,65 | 193,4 | 1,44 | 8,16 |
| RGT= 32/90 | 0 | 32 | 461,8 | 1577 | 397,4 | 2,21 | 7,54 | 1,90 | 209,1 | 1,49 | 10,21 |
| liquid temp | 5 | 41 | 566,7 | 1935 | 487,7 | 2,52 | 8,60 | 2,17 | 225,2 | 1,54 | 12,62 |
| Tliq= 45/113 | 15 | 59 | 825,4 | 2819 | 710,4 | 3,19 | 10,88 | 2,74 | 259,1 | 1,66 | 18,70 |
| [°C / °F] | -20 | -4 | 140,8 | 481 | 121,2 | 0,94 | 3,21 | 0,81 | 149,8 | 1,35 | 3,38 |
| cond. pressure | -15 | 5 | 188,5 | 644 | 162,2 | 1,12 | 3,81 | 0,96 | 168,8 | 1,39 | 4,54 |
| pc= 55/131 | -10 | 14 | 245,1 | 837 | 211,0 | 1,31 | 4,47 | 1,13 | 187,5 | 1,43 | 5,93 |
| return gas temp | -5 | 23 | 312,0 | 1066 | 268,5 | 1,51 | 5,17 | 1,30 | 206,0 | 1,48 | 7,58 |
| RGT= 32/90 | 0 | 32 | 390,5 | 1334 | 336,1 | 1,74 | 5,94 | 1,50 | 224,5 | 1,54 | 9,55 |
| liquid temp | 5 | 41 | 481,9 | 1646 | 414,7 | 1,98 | 6,76 | 1,70 | 243,3 | 1,60 | 11,87 |
| Tliq= 55/131 | 15 | 59 | 708,9 | 2421 | 610,1 | 2,51 | 8,56 | 2,16 | 282,9 | 1,75 | 17,81 |

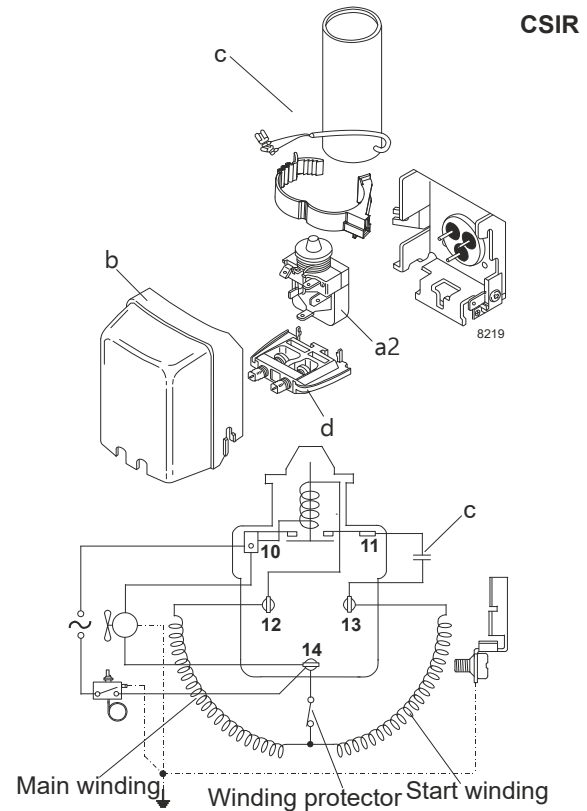
Model

| | | | | | |
|-------------|----------------|----------------------|----------------|-------------|-----------------|
| Designation | NL6.1MF | 220-240V/50Hz | Conf. 2 | Sales code: | 105G6660 |
|-------------|----------------|----------------------|----------------|-------------|-----------------|

Configuration

| | |
|------------------------|------------------|
| Motorconfiguration | CSIR |
| Power supply (nominal) | 220-240V/50Hz 1~ |
| Refrigerant | R134a |
| Application | MBP |
| Voltage range | 187-254V |
| Starting torque | HST |
| Approvals | VDE (2) |
| (1): Made in China | UL (1),(2) |
| (2): Made in Slovakia | CCC (1),(2) |
| | EAC (1),(2) |
| | KC (1) |

Electrical accessories / wiring diagram

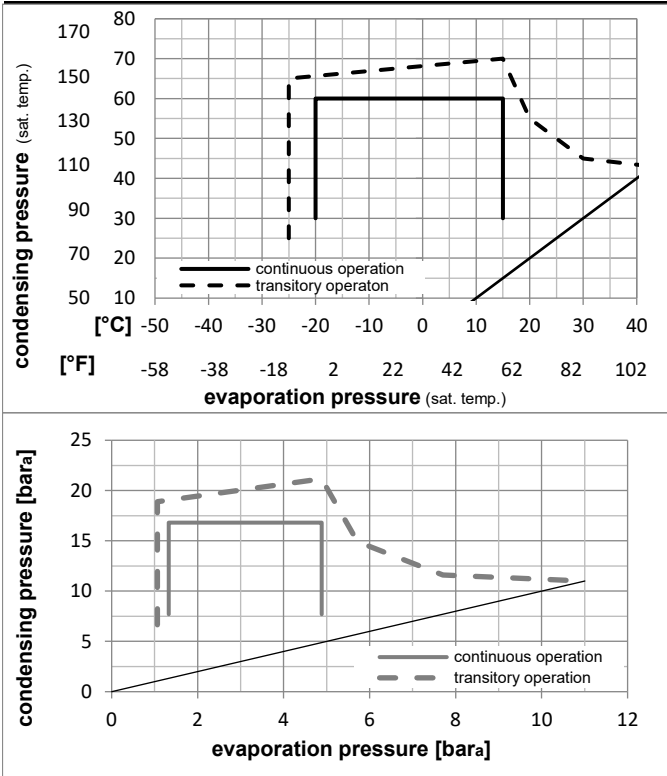


Ambient/ machine room temperatures minimum /maximum

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

Operation Limits

Operation pressure range



Components

| | | |
|----|------------------------|----------|
| a2 | relay | 117U6015 |
| c | start capacitor (80µF) | 117U5015 |
| b | plastic cover | 103N2010 |
| d | cord relief | 103N1010 |

Alternative components

| | | |
|---|---------------|----------|
| b | plastic cover | 103N2011 |
|---|---------------|----------|

Model

Designation **NL6.1MF** **220-240V/50Hz** Conf. 2 Sales code: **105G6660**

Optimization + standard conditions

R134a, 220V/50Hz, CSIR, static, VDE, UL, CCC, EAC, KC

| | | Evaporating pressure (saturation temperature) | | | | Condensing pressure (saturation temperature) | | | | | | Power consumption | | | |
|------|-----|---|----|-----|-------|--|---------|----------|-------|----------|-----------|---------------------|------|-------------|----------------|
| | | Return gas temp. | | | | Liquid temp. | | | | | | Current consumption | | | Ref. mass flow |
| | | Cooling capacity | | | | COP | EER | P1 | | | I | m | | | |
| | | pe | pc | RGT | Tliq | [W] | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [kcal/Wh] | [W] | [A] | [kg/h] | |
| [°C] | -7 | 54 | 35 | 46 | 320,1 | 1093 | 275,5 | 1,61 | 5,49 | 1,38 | 199,2 | 1,46 | 6,98 | ASHRAE MBP | |
| [°F] | 20 | 130 | 95 | 115 | | | | | | | | | | | |
| [°C] | -10 | 55 | 32 | 55 | 245,1 | 837 | 211,0 | 1,31 | 4,47 | 1,13 | 187,5 | 1,43 | 5,93 | cecomaf MBP | |
| [°F] | 14 | 131 | 90 | 131 | | | | | | | | | | | |
| [°C] | -10 | 45 | 20 | 45 | 283,3 | 968 | 243,8 | 1,59 | 5,44 | 1,37 | 177,8 | 1,40 | 6,63 | EN12900 MBP | |
| [°F] | 14 | 113 | 68 | 113 | | | | | | | | | | | |
| [°C] | -7 | 49 | 18 | 49 | 308,4 | 1053 | 265,4 | 1,60 | 5,46 | 1,38 | 192,9 | 1,44 | 7,62 | ARI540 MBP | |
| [°F] | 20 | 120 | 65 | 120 | | | | | | | | | | | |
| [°C] | -10 | 45 | 32 | 45 | 293,9 | 1004 | 253,0 | 1,65 | 5,65 | 1,42 | 177,8 | 1,40 | 6,43 | opt | |
| [°F] | 14 | 113 | 90 | 113 | | | | | | | | | | | |
| [°C] | -25 | 45 | 32 | 45 | 127,3 | 435 | 109,5 | 0,99 | 3,37 | 0,85 | 129,0 | 1,32 | 2,76 | opt | |
| [°F] | -13 | 113 | 90 | 113 | | | | | | | | | | | |

Performance tables

R134a, 220V/50Hz, CSIR, static, VDE, UL, CCC, EAC, KC

| | 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] | -20 | -4 | 173,3 | 592 | 149,1 | 1,19 | 4,06 | 1,02 | 145,8 | 1,34 | 3,76 |
| cond. pressure | -15 | 5 | 228,4 | 780 | 196,5 | 1,41 | 4,82 | 1,21 | 162,0 | 1,37 | 4,98 |
| pc= 45/113 | -10 | 14 | 293,9 | 1004 | 253,0 | 1,65 | 5,65 | 1,42 | 177,8 | 1,40 | 6,43 |
| return gas temp. | -5 | 23 | 371,3 | 1268 | 319,5 | 1,92 | 6,56 | 1,65 | 193,4 | 1,44 | 8,16 |
| RGT= 32/90 | 0 | 32 | 461,8 | 1577 | 397,4 | 2,21 | 7,54 | 1,90 | 209,1 | 1,49 | 10,21 |
| liquid temp | 5 | 41 | 566,7 | 1935 | 487,7 | 2,52 | 8,60 | 2,17 | 225,2 | 1,54 | 12,62 |
| Tliq= 45/113 | 15 | 59 | 825,4 | 2819 | 710,4 | 3,19 | 10,88 | 2,74 | 259,1 | 1,66 | 18,70 |
| [°C / °F] | -20 | -4 | 140,8 | 481 | 121,2 | 0,94 | 3,21 | 0,81 | 149,8 | 1,35 | 3,38 |
| cond. pressure | -15 | 5 | 188,5 | 644 | 162,2 | 1,12 | 3,81 | 0,96 | 168,8 | 1,39 | 4,54 |
| pc= 55/131 | -10 | 14 | 245,1 | 837 | 211,0 | 1,31 | 4,47 | 1,13 | 187,5 | 1,43 | 5,93 |
| return gas temp | -5 | 23 | 312,0 | 1066 | 268,5 | 1,51 | 5,17 | 1,30 | 206,0 | 1,48 | 7,58 |
| RGT= 32/90 | 0 | 32 | 390,5 | 1334 | 336,1 | 1,74 | 5,94 | 1,50 | 224,5 | 1,54 | 9,55 |
| liquid temp | 5 | 41 | 481,9 | 1646 | 414,7 | 1,98 | 6,76 | 1,70 | 243,3 | 1,60 | 11,87 |
| Tliq= 55/131 | 15 | 59 | 708,9 | 2421 | 610,1 | 2,51 | 8,56 | 2,16 | 282,9 | 1,75 | 17,81 |

Model

| | | | | | |
|-------------|----------------|----------------------|----------------|-------------|-----------------|
| Designation | NL6.1MF | 208-230V/60Hz | Conf. 3 | Sales code: | 105G6660 |
|-------------|----------------|----------------------|----------------|-------------|-----------------|

Configuration

| | |
|------------------------|------------------|
| Motorconfiguration | CSIR |
| Power supply (nominal) | 208-230V/60Hz 1~ |
| Refrigerant | R134a |
| Application | LBP+MBP |
| Voltage range | 187-254V |
| Starting torque | HST |
| Approvals | VDE (2) |
| (1): Made in China | UL (1),(2) |
| | CCC (1),(2) |
| | EAC (1),(2) |
| | KC (1) |

Electrical accessories / wiring diagram

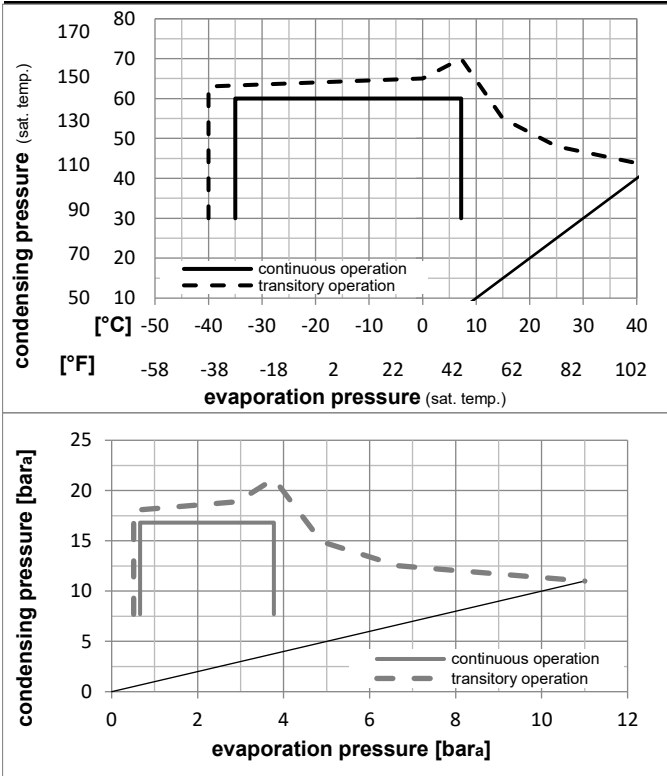


Ambient/ machine room temperatures minimum /maximum

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

Operation Limits

Operation pressure range



Components

| | | |
|----|------------------------|----------|
| a2 | relay | 117U6015 |
| c | start capacitor (80μF) | 117U5015 |
| b | plastic cover | 103N2010 |
| d | cord relief | 103N1010 |

Alternative components

| | | |
|---|---------------|----------|
| b | plastic cover | 103N2011 |
|---|---------------|----------|

Model

Designation **NL6.1MF** **208-230V/60Hz** Conf. 3 Sales code: **105G6660**

Optimization + standard conditions

R134a, 220V/60Hz, CSIR, static, VDE, UL, CCC, EAC, KC

| | | Evaporating pressure (saturation temperature) | | | | Condensing pressure (saturation temperature) | | | | | | Power consumption | | | |
|------|------|---|---------|----------|-------|--|-----------|------|------|--------|-------|---------------------|------|-------------|----------------|
| | | Return gas temp. | | | | Liquid temp. | | | | | | Current consumption | | | Ref. mass flow |
| | | Cooling capacity | | | | COP | EER | P1 | | | I | m | | | |
| | | [W] | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [kcal/Wh] | [W] | [A] | [kg/h] | | | | | |
| [°C] | [°F] | pe | pc | RGT | Tliq | | | | | | | | | | |
| -7 | 20 | 54 | 35 | 46 | 383,3 | 1309 | 329,8 | 1,62 | 5,54 | 1,40 | 236,2 | 1,44 | 8,36 | ASHRAE MBP | |
| 54 | 130 | 95 | 115 | | | | | | | | | | | | |
| -10 | 14 | 55 | 32 | 55 | 292,1 | 998 | 251,4 | 1,34 | 4,58 | 1,16 | 217,6 | 1,37 | 7,06 | cecomaf MBP | |
| 55 | 131 | 90 | 131 | | | | | | | | | | | | |
| -10 | 14 | 45 | 20 | 45 | 339,2 | 1159 | 291,9 | 1,65 | 5,64 | 1,42 | 205,4 | 1,33 | 7,94 | EN12900 MBP | |
| 45 | 113 | 68 | 113 | | | | | | | | | | | | |
| -7 | 20 | 49 | 18 | 49 | 370,8 | 1266 | 319,1 | 1,63 | 5,57 | 1,40 | 227,2 | 1,41 | 9,16 | ARI540 MBP | |
| 49 | 120 | 65 | 120 | | | | | | | | | | | | |
| -10 | 14 | 45 | 32 | 45 | 351,9 | 1202 | 302,9 | 1,71 | 5,85 | 1,47 | 205,4 | 1,33 | 7,70 | opt | |
| 45 | 113 | 90 | 113 | | | | | | | | | | | | |
| -25 | -13 | 45 | 32 | 45 | 152,2 | 520 | 130,9 | 1,13 | 3,87 | 0,98 | 134,3 | 1,09 | 3,30 | opt | |
| 45 | 113 | 90 | 113 | | | | | | | | | | | | |

Performance tables

R134a, 220V/60Hz, CSIR, static, VDE, UL, CCC, EAC, KC

| | 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 | 70,6 | 241 | 60,7 | 0,79 | 2,71 | 0,68 | 89,0 | 0,96 | 1,52 |
| cond. pressure | -25 | -13 | 152,2 | 520 | 130,9 | 1,13 | 3,87 | 0,98 | 134,3 | 1,09 | 3,30 |
| pc= 45/113 | -15 | 5 | 272,9 | 932 | 234,9 | 1,50 | 5,14 | 1,29 | 181,4 | 1,24 | 5,95 |
| return gas temp. | -10 | 14 | 351,9 | 1202 | 302,9 | 1,71 | 5,85 | 1,47 | 205,4 | 1,33 | 7,70 |
| RGT= 32/90 | -5 | 23 | 445,5 | 1521 | 383,4 | 1,94 | 6,63 | 1,67 | 229,6 | 1,42 | 9,80 |
| liquid temp | 0 | 32 | 555,0 | 1896 | 477,7 | 2,19 | 7,47 | 1,88 | 253,7 | 1,52 | 12,27 |
| Tliq= 45/113 | 7,2 | 45 | 744,2 | 2542 | 640,5 | 2,58 | 8,82 | 2,22 | 288,1 | 1,68 | 16,62 |
| [°C / °F] | -35 | -31 | 42,9 | 146 | 36,9 | 0,55 | 1,88 | 0,47 | 77,9 | 0,91 | 1,02 |
| cond. pressure | -25 | -13 | 117,0 | 400 | 100,7 | 0,89 | 3,03 | 0,76 | 132,0 | 1,08 | 2,80 |
| pc= 55/131 | -15 | 5 | 223,1 | 762 | 192,0 | 1,18 | 4,04 | 1,02 | 188,7 | 1,26 | 5,37 |
| return gas temp | -10 | 14 | 292,1 | 998 | 251,4 | 1,34 | 4,58 | 1,16 | 217,6 | 1,37 | 7,06 |
| RGT= 32/90 | -5 | 23 | 373,8 | 1276 | 321,7 | 1,51 | 5,17 | 1,30 | 246,9 | 1,48 | 9,09 |
| liquid temp | 0 | 32 | 469,7 | 1604 | 404,2 | 1,70 | 5,81 | 1,46 | 276,3 | 1,60 | 11,49 |
| Tliq= 55/131 | 7,2 | 45 | 636,0 | 2172 | 547,4 | 2,00 | 6,82 | 1,72 | 318,6 | 1,78 | 15,73 |

Model

| | | | | | |
|-------------|----------------|----------------------|----------------|-------------|-----------------|
| Designation | NL6.1MF | 220-240V/50Hz | Conf. 4 | Sales code: | 105G6660 |
|-------------|----------------|----------------------|----------------|-------------|-----------------|

Configuration

| | |
|------------------------|------------------|
| Motorconfiguration | CSIR |
| Power supply (nominal) | 220-240V/50Hz 1~ |
| Refrigerant | R513A |
| Application | MBP |
| Voltage range | 187-254V |
| Starting torque | HST |
| Approvals | VDE (2) |
| (1): Made in China | UL (1),(2) |
| (2): Made in Slovakia | CCC (1),(2) |
| | EAC (1),(2) |
| | KC (1) |

Electrical accessories / wiring diagram

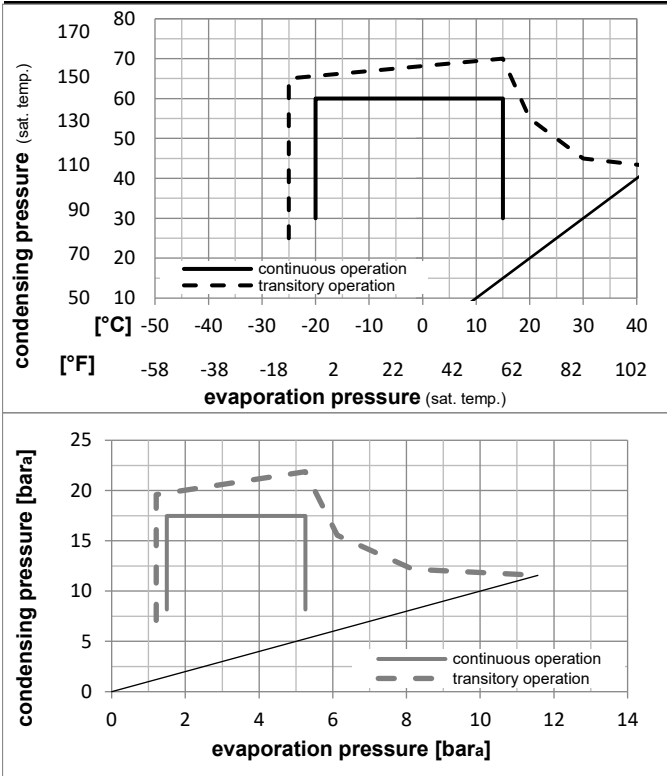


Ambient/ machine room temperatures minimum /maximum

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

Operation Limits

Operation pressure range



Components

| | | |
|----|------------------------|----------|
| a2 | relay | 117U6015 |
| c | start capacitor (80μF) | 117U5015 |
| b | plastic cover | 103N2010 |
| d | cord relief | 103N1010 |

Alternative components

| | | |
|---|---------------|----------|
| b | plastic cover | 103N2011 |
|---|---------------|----------|

Model

Designation **NL6.1MF** **220-240V/50Hz** Conf. 4 Sales code: **105G6660**

Optimization + standard conditions

R513A, 220V/50Hz, CSIR, static, VDE, UL, CCC, EAC, KC

| | | Evaporating pressure (saturation temperature) | | | | Condensing pressure (saturation temperature) | | | | | | Power consumption | | | |
|------|------|---|------|--------------|-------|--|---------|----------|-------|----------|---------------------|-------------------|----------------|-------------|--|
| | | Return gas temp. | | Liquid temp. | | Cooling capacity | | COP | EER | | Current consumption | | Ref. mass flow | | |
| | | pe | pc | RGT | Tliq | [W] | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [kcal/Wh] | P1 | I | m | |
| [°C] | [°F] | [°C] | [°F] | [°C] | [°F] | | | | | | | [W] | [A] | [kg/h] | |
| [°C] | -7 | 54 | 35 | 46 | 336,7 | 1150 | 289,8 | 1,59 | 5,45 | 1,37 | 211,1 | 1,50 | 8,25 | ASHRAE MBP | |
| [°F] | 20 | 130 | 95 | 115 | | | | | | | | | | | |
| [°C] | -10 | 55 | 32 | 55 | 254,9 | 871 | 219,4 | 1,28 | 4,36 | 1,10 | 199,5 | 1,47 | 7,05 | cecomaf MBP | |
| [°F] | 14 | 131 | 90 | 131 | | | | | | | | | | | |
| [°C] | -10 | 45 | 20 | 45 | 296,6 | 1013 | 255,3 | 1,57 | 5,37 | 1,35 | 188,6 | 1,45 | 7,86 | EN12900 MBP | |
| [°F] | 14 | 113 | 68 | 113 | | | | | | | | | | | |
| [°C] | -7 | 49 | 18 | 49 | 318,7 | 1089 | 274,3 | 1,56 | 5,33 | 1,34 | 204,1 | 1,49 | 8,98 | ARI540 MBP | |
| [°F] | 20 | 120 | 65 | 120 | | | | | | | | | | | |
| [°C] | -10 | 45 | 32 | 45 | 310,2 | 1059 | 266,9 | 1,64 | 5,62 | 1,42 | 188,6 | 1,45 | 7,63 | opt | |
| [°F] | 14 | 113 | 90 | 113 | | | | | | | | | | | |
| [°C] | -25 | 45 | 32 | 45 | 139,2 | 476 | 119,8 | 1,00 | 3,41 | 0,86 | 139,5 | 1,32 | 3,39 | opt | |
| [°F] | -13 | 113 | 90 | 113 | | | | | | | | | | | |

Performance tables

R513A, 220V/50Hz, CSIR, static, VDE, UL, CCC, EAC, KC

| | 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] | -20 | -4 | 186,9 | 638 | 160,8 | 1,19 | 4,08 | 1,03 | 156,5 | 1,37 | 4,57 |
| cond. pressure | -15 | 5 | 243,4 | 831 | 209,5 | 1,41 | 4,81 | 1,21 | 172,7 | 1,41 | 5,96 |
| pc= 45/113 | -10 | 14 | 310,2 | 1059 | 266,9 | 1,64 | 5,62 | 1,42 | 188,6 | 1,45 | 7,63 |
| return gas temp. | -5 | 23 | 388,4 | 1326 | 334,3 | 1,90 | 6,50 | 1,64 | 204,2 | 1,49 | 9,59 |
| RGT= 32/90 | 0 | 32 | 479,3 | 1637 | 412,5 | 2,18 | 7,45 | 1,88 | 219,8 | 1,52 | 11,89 |
| liquid temp | 5 | 41 | 584,3 | 1995 | 502,9 | 2,48 | 8,47 | 2,13 | 235,6 | 1,56 | 14,57 |
| Tliq= 45/113 | 15 | 59 | 841,2 | 2873 | 724,0 | 3,13 | 10,69 | 2,69 | 268,7 | 1,65 | 21,28 |
| [°C / °F] | -20 | -4 | 150,2 | 513 | 129,3 | 0,93 | 3,17 | 0,80 | 161,7 | 1,38 | 4,12 |
| cond. pressure | -15 | 5 | 198,3 | 677 | 170,7 | 1,10 | 3,74 | 0,94 | 180,9 | 1,43 | 5,46 |
| pc= 55/131 | -10 | 14 | 254,9 | 871 | 219,4 | 1,28 | 4,36 | 1,10 | 199,5 | 1,47 | 7,05 |
| return gas temp | -5 | 23 | 321,4 | 1098 | 276,6 | 1,47 | 5,04 | 1,27 | 217,9 | 1,52 | 8,93 |
| RGT= 32/90 | 0 | 32 | 398,9 | 1362 | 343,3 | 1,69 | 5,77 | 1,45 | 236,3 | 1,57 | 11,14 |
| liquid temp | 5 | 41 | 488,7 | 1669 | 420,6 | 1,92 | 6,55 | 1,65 | 254,8 | 1,61 | 13,73 |
| Tliq= 55/131 | 15 | 59 | 710,3 | 2426 | 611,3 | 2,42 | 8,27 | 2,08 | 293,3 | 1,71 | 20,29 |

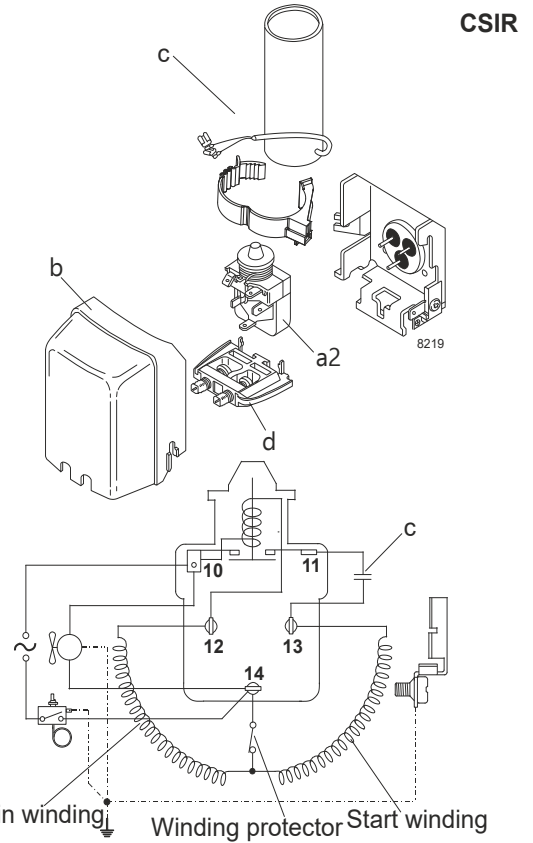
Model

| | | | | | |
|-------------|----------------|----------------------|----------------|-------------|-----------------|
| Designation | NL6.1MF | 208-230V/60Hz | Conf. 5 | Sales code: | 105G6660 |
|-------------|----------------|----------------------|----------------|-------------|-----------------|

Configuration

| | |
|------------------------|------------------|
| Motorconfiguration | CSIR |
| Power supply (nominal) | 208-230V/60Hz 1~ |
| Refrigerant | R513A |
| Application | LBP+MBP |
| Voltage range | 187-253V |
| Starting torque | HST |
| Approvals | VDE (2) |
| (1): Made in China | UL (1),(2) |
| (2): Made in Slovakia | CCC (1),(2) |
| | EAC (1),(2) |
| | KC (1) |

Electrical accessories / wiring diagram

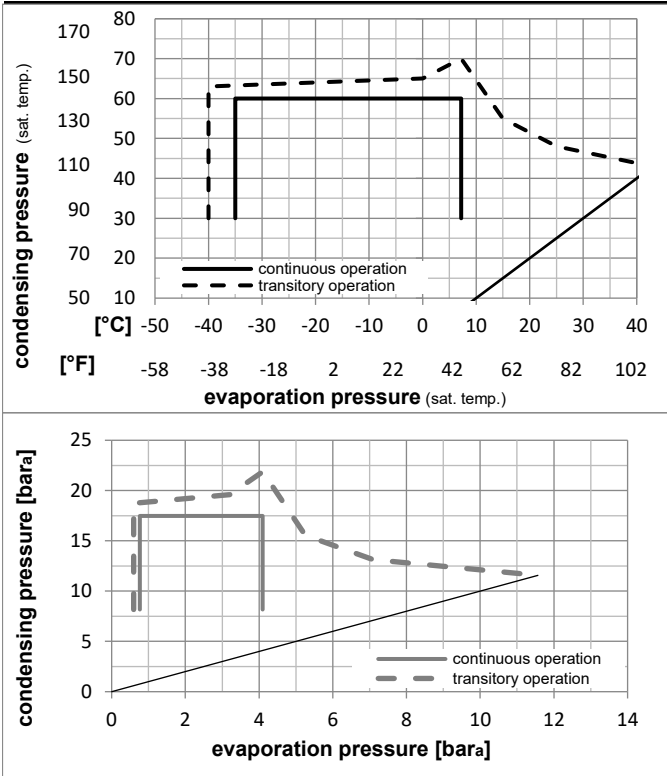


Ambient/ machine room temperatures minimum /maximum

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

Operation Limits

Operation pressure range



Components

| | | |
|----|------------------------|----------|
| a2 | relay | 117U6015 |
| c | start capacitor (80μF) | 117U5015 |
| b | plastic cover | 103N2010 |
| d | cord relief | 103N1010 |

Alternative components

| | | |
|---|---------------|----------|
| b | plastic cover | 103N2011 |
|---|---------------|----------|

Model

Designation **NL6.1MF** **208-230V/60Hz** Conf. 5 Sales code: **105G6660**

Optimization + standard conditions

R513A, 220V/60Hz, CSIR, static, VDE, UL, CCC, EAC, KC

| | | Evaporating pressure (saturation temperature) | | | | Condensing pressure (saturation temperature) | | | | | Power consumption | | | | |
|------|------|---|----|-----|--------------|--|------------------|----------|-------|----------|-------------------|---------------------|-------|----------------|--|
| | | Return gas temp. | | | Liquid temp. | | Cooling capacity | | | COP | EER | Current consumption | | Ref. mass flow | |
| | | pe | pc | RGT | Tliq | [W] | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [kcal/Wh] | P1 | I | m | |
| [°C] | [°F] | | | | | | | | | | | [W] | [A] | [kg/h] | |
| [°C] | -7 | 54 | 35 | 46 | 403,1 | 1377 | 346,9 | 1,61 | 5,49 | 1,38 | 250,7 | 1,51 | 9,87 | ASHRAE MBP | |
| [°F] | 20 | 130 | 95 | 115 | | | | | | | | | | | |
| [°C] | -10 | 55 | 32 | 55 | 303,8 | 1038 | 261,5 | 1,31 | 4,47 | 1,13 | 231,9 | 1,44 | 8,40 | cecomaf MBP | |
| [°F] | 14 | 131 | 90 | 131 | | | | | | | | | | | |
| [°C] | -10 | 45 | 20 | 45 | 355,2 | 1213 | 305,7 | 1,63 | 5,56 | 1,40 | 218,3 | 1,39 | 9,41 | EN12900 MBP | |
| [°F] | 14 | 113 | 68 | 113 | | | | | | | | | | | |
| [°C] | -7 | 49 | 18 | 49 | 383,3 | 1309 | 329,9 | 1,59 | 5,44 | 1,37 | 240,7 | 1,47 | 10,80 | ARI540 MBP | |
| [°F] | 20 | 120 | 65 | 120 | | | | | | | | | | | |
| [°C] | -10 | 45 | 32 | 45 | 371,4 | 1269 | 319,7 | 1,70 | 5,81 | 1,46 | 218,3 | 1,39 | 9,13 | opt | |
| [°F] | 14 | 113 | 90 | 113 | | | | | | | | | | | |
| [°C] | -25 | 45 | 32 | 45 | 166,5 | 569 | 143,3 | 1,15 | 3,92 | 0,99 | 145,0 | 1,11 | 4,06 | opt | |
| [°F] | -13 | 113 | 90 | 113 | | | | | | | | | | | |

Performance tables

R513A, 220V/60Hz, CSIR, static, VDE, UL, CCC, EAC, KC

| | 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 | 81,0 | 277 | 69,7 | 0,84 | 2,85 | 0,72 | 96,9 | 0,93 | 1,97 |
| cond. pressure | -25 | -13 | 166,5 | 569 | 143,3 | 1,15 | 3,92 | 0,99 | 145,0 | 1,11 | 4,06 |
| pc= 45/113 | -15 | 5 | 291,0 | 994 | 250,4 | 1,50 | 5,13 | 1,29 | 193,8 | 1,29 | 7,13 |
| return gas temp. | -10 | 14 | 371,4 | 1269 | 319,7 | 1,70 | 5,81 | 1,46 | 218,3 | 1,39 | 9,13 |
| RGT= 32/90 | -5 | 23 | 466,0 | 1592 | 401,1 | 1,92 | 6,56 | 1,65 | 242,6 | 1,48 | 11,50 |
| liquid temp | 0 | 32 | 576,2 | 1968 | 495,9 | 2,16 | 7,38 | 1,86 | 266,8 | 1,57 | 14,29 |
| Tliq= 45/113 | 7,2 | 45 | 765,2 | 2613 | 658,5 | 2,54 | 8,68 | 2,19 | 301,1 | 1,70 | 19,14 |
| [°C / °F] | -35 | -31 | 50,3 | 172 | 43,3 | 0,58 | 1,99 | 0,50 | 86,2 | 0,88 | 1,37 |
| cond. pressure | -25 | -13 | 127,1 | 434 | 109,4 | 0,88 | 3,02 | 0,76 | 143,6 | 1,10 | 3,48 |
| pc= 55/131 | -15 | 5 | 234,8 | 802 | 202,0 | 1,16 | 3,96 | 1,00 | 202,3 | 1,33 | 6,47 |
| return gas temp | -10 | 14 | 303,8 | 1038 | 261,5 | 1,31 | 4,47 | 1,13 | 231,9 | 1,44 | 8,40 |
| RGT= 32/90 | -5 | 23 | 385,0 | 1315 | 331,3 | 1,47 | 5,03 | 1,27 | 261,6 | 1,55 | 10,69 |
| liquid temp | 0 | 32 | 479,8 | 1639 | 412,9 | 1,65 | 5,63 | 1,42 | 291,1 | 1,66 | 13,40 |
| Tliq= 55/131 | 7,2 | 45 | 643,1 | 2196 | 553,4 | 1,93 | 6,59 | 1,66 | 333,4 | 1,82 | 18,13 |

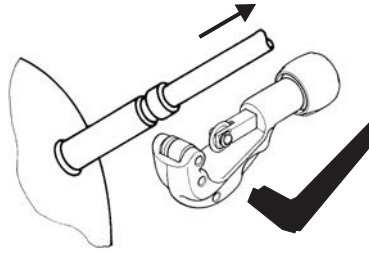
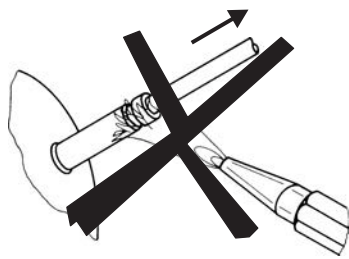


NL Compressors





Service/Repair – R600a, R290



8545

Brazing on Suction Connectors (Direct Intake)

representative image



**! max. 150°C/302°F !
at socket**
brazing solder: phosphor (LP7) or silver

Refer to Product Bulletin:
**Brazing on Suction Connectors
(Compressors with Direct Suction Intake)**

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