

Model

NL11F

Sales code:

105G6900

Compressor Data

|                            |                       |
|----------------------------|-----------------------|
| Refrigerant(s)             | R134a                 |
| Refr. charge - tech. limit | 400g / 14.11oz        |
| Weight                     | 10.70 kg / 23.59lbs   |
| Displacement               | 11.15 cm3 / 0.68cu.in |
| Compressors on pallet      | 80                    |



General – Configurations With NL11F

| -                      | Conf. 1         | Conf. 2         |
|------------------------|-----------------|-----------------|
| Motor configuration    | CSIR            | RSIR            |
| Power supply (nominal) | 220-240 V/50 Hz | 220-240 V/50 Hz |
| Number of phases       | 1               | 1               |
| Voltage range          | 198-254 V       | 198-254 V       |
| Approvals              | VDE, EAC        | VDE, EAC        |
| Starting torque        | HST             | LST             |
| Refrigerant            | R134a           | R134a           |
| Application            | LBP             | LBP             |

Application Notes

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

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### Compressor Design

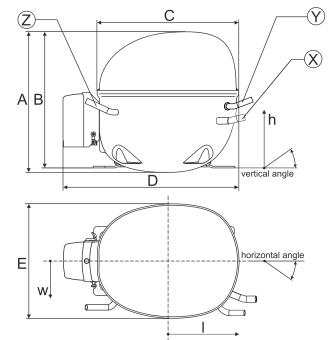
|                       |                                    |                         |               |
|-----------------------|------------------------------------|-------------------------|---------------|
| Oil type              | POE                                | Winding resistance main | 8.6 Ohm       |
| Oil viscosity         | 32cSt                              | Winding resistance aux  | 14.7 Ohm      |
| Oil quantity          | 298 / 10.08fl.oz                   | Max. winding temp.      | 125 °C        |
| Free gas volume comp. | 2,360 cm <sup>3</sup> / 79.80fl.oz | Max. discharge temp.    | 130°C / 266°F |
| Motor protection      | internal                           |                         |               |

### Compressor Dimensions

#### Housing

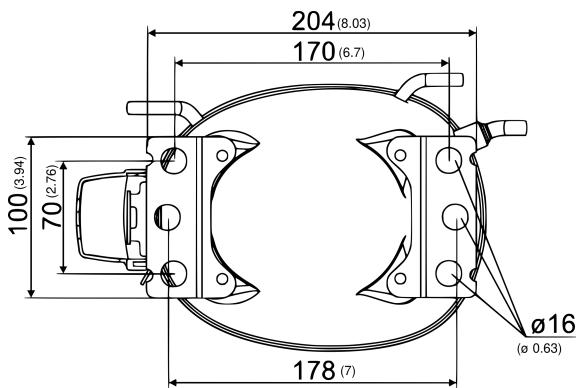
|                   |                 |
|-------------------|-----------------|
| A Height          | 203mm / 7.99in  |
| B Height          | 197mm / 7.76in  |
| C Length shell    | 205mm / 8.07in  |
| D Length w. cover | 254mm / 10.00in |
| E Width           | 166mm / 6.54in  |

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| Connectors            | Suction X                        | Discharge Y                     | Process Z                        |
|-----------------------|----------------------------------|---------------------------------|----------------------------------|
| Diameter [mm]         | øi 8.11–8.29 / 0.32–0.33in       | øi 6.11–6.29 / 0.24–0.25in      | øi 6.11–6.29 / 0.24–0.25in       |
| Material              | CU                               | CU                              | CU                               |
| Horizontal angle ±2°  | 0°                               | 0°                              | 0°                               |
| Vertical angle ±2°    | 15°                              | 35°                             | 155°                             |
| Position l/h/w [mm]   | 125.5/75.5/78 / 4.94/2.97/3.07in | 133/102.5/54 / 5.24/4.04/2.13in | -107/93.5/72 / -4.21/3.68/2.83in |
| Straight tube l. [mm] | 12 / 0.47in                      | 12 / 0.47in                     | 12 / 0.47in                      |

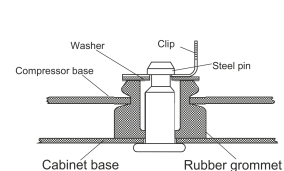
### Mounting Accessories



#### Bolt joint



#### Snap-on



Dimensions in mm [in]

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

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Configuration 1

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### Configuration

|                                  |                           |
|----------------------------------|---------------------------|
| Motor configuration              | <b>CSIR</b>               |
| Power supply (nominal)           | <b>220-240 V/50 Hz 1~</b> |
| Refrigerant                      | <b>R134a</b>              |
| Application                      | <b>LBP</b>                |
| Voltage range                    | <b>198-254 V</b>          |
| Starting torque                  | <b>HST</b>                |
| Approvals                        | <b>VDE, EAC</b>           |
| Starting device type             | <b>relay</b>              |
| Run capacitor                    | <b>-/-</b>                |
| Start capacitor                  | <b>80 µF</b>              |
| RLA (rated load amps / 1s/ U(N)) | <b>-/-A</b>               |

### Ambient/ machine room temperatures minimum /maximum

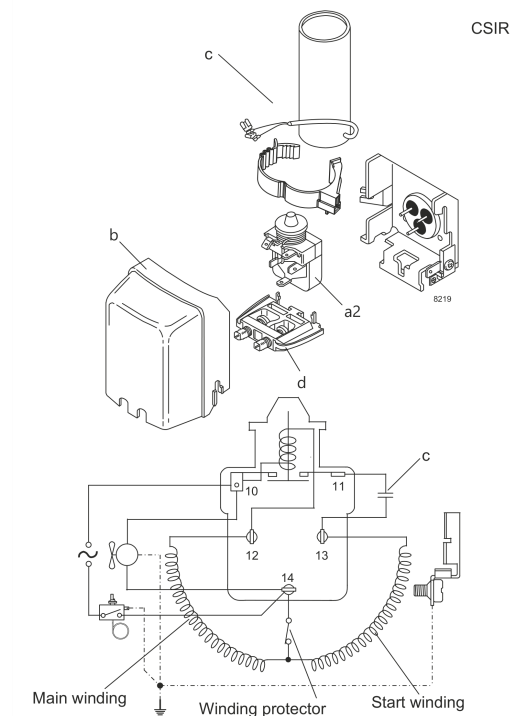
Ambient temperature range: 10 - 38°C / 50 - 100°F

Machine room temp. compressor: 10 - 43°C / 50 - 109°F

### System Cooling

fan 1,5m/s

### Electrical Accessories / Wiring Diagram



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### Components

**a2** assy. relay 117U6002

**c** start capacitor (80µF) 117U5015

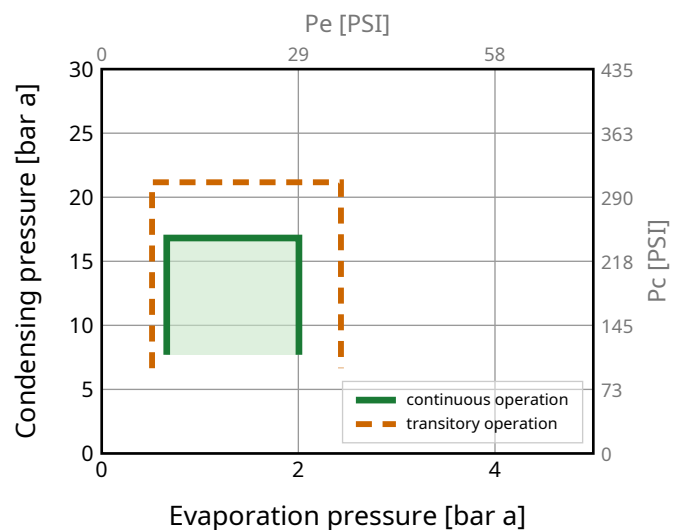
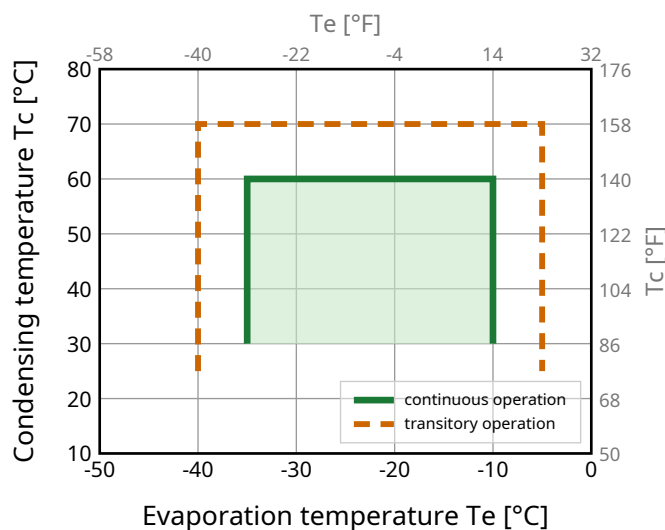
**b** plastic cover 103N2010

**d** cord relief 103N1010

### Alternative components

**b** plastic cover 103N2011

### Operation Pressure Range



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Configuration 1

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Standard Conditions

R134a, 220 V/50 Hz, CSIR, fan 1,5m/s

| pe           | pc            | RGT          | Tliq          | Cooling capacity |         |          | COP   | EER      | P   | I    | m      |             |
|--------------|---------------|--------------|---------------|------------------|---------|----------|-------|----------|-----|------|--------|-------------|
| [°C]<br>[°F] | [°C]<br>[°F]  | [°C]<br>[°F] | [°C]<br>[°F]  | [W]              | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [W] | [A]  | [kg/h] |             |
| -23.3<br>-10 | 54.4<br>129.9 | 32.2<br>90   | 32.2<br>90    | 274              | 934     | 235      | 1.22  | 4.17     | 224 | 1.57 | 5.31   | ASHRAE LBP  |
| -25<br>-13   | 55<br>131     | 32<br>89.6   | 55<br>131     | 200              | 683     | 172      | 0.94  | 3.22     | 212 | 1.54 | 4.77   | CECOMAF LBP |
| -35<br>-31   | 40<br>104     | 20<br>68     | 40<br>104     | 135              | 460     | 116      | 0.86  | 2.94     | 156 | 1.51 | 2.95   | EN12900 LBP |
| -23.3<br>-10 | 48.8<br>119.8 | 4.4<br>39.9  | 48.8<br>119.8 | 227              | 774     | 195      | 1.03  | 3.52     | 220 | 1.56 | 5.95   | ARI540 LBP  |
| -23.3<br>-10 | 40.6<br>105.1 | 32.2<br>90   | 32.2<br>90    | 306              | 1044    | 263      | 1.42  | 4.85     | 216 | 1.55 | 5.94   | AHAM LBP    |
| -35<br>-31   | 45<br>113     | 32<br>89.6   | 45<br>113     | 124              | 424     | 107      | 0.83  | 2.83     | 150 | 1.47 | 2.67   | opt LBP     |

Performance Tables

R134a, 220 V/50 Hz, CSIR, fan 1,5m/s

pc= 45/113 | RGT= 32/89.6 | Tliq= 45/113 | °C/°F

| pe   |      | Cooling capacity |         |          | COP   | EER      | P   | I    | m      |
|------|------|------------------|---------|----------|-------|----------|-----|------|--------|
| [°C] | [°F] | [W]              | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [W] | [A]  | [kg/h] |
| -35  | -31  | 124              | 424     | 107      | 0.83  | 2.83     | 150 | 1.47 | 2.67   |
| -30  | -22  | 176              | 599     | 151      | 0.98  | 3.35     | 179 | 1.48 | 3.79   |
| -25  | -13  | 239              | 816     | 206      | 1.15  | 3.93     | 208 | 1.53 | 5.17   |
| -20  | -4   | 318              | 1084    | 273      | 1.34  | 4.57     | 237 | 1.61 | 6.89   |
| -15  | 5    | 413              | 1409    | 355      | 1.53  | 5.24     | 269 | 1.74 | 8.98   |
| -10  | 14   | 527              | 1798    | 453      | 1.73  | 5.91     | 304 | 1.90 | 11.51  |

pc= 55/131 | RGT= 32/89.6 | Tliq= 55/131 | °C/°F

|     |     |     |      |     |      |      |     |      |       |
|-----|-----|-----|------|-----|------|------|-----|------|-------|
| -35 | -31 | 102 | 350  | 88  | 0.75 | 2.55 | 137 | 1.41 | 2.43  |
| -30 | -22 | 146 | 497  | 125 | 0.83 | 2.84 | 175 | 1.46 | 3.46  |
| -25 | -13 | 200 | 683  | 172 | 0.94 | 3.22 | 212 | 1.54 | 4.77  |
| -20 | -4  | 268 | 914  | 230 | 1.07 | 3.66 | 250 | 1.66 | 6.41  |
| -15 | 5   | 352 | 1199 | 302 | 1.22 | 4.16 | 289 | 1.82 | 8.44  |
| -10 | 14  | 453 | 1544 | 389 | 1.37 | 4.67 | 330 | 2.01 | 10.91 |

Model

NL11F

Configuration 2

Sales code:

105G6900

## Configuration

|                                  |                    |
|----------------------------------|--------------------|
| Motor configuration              | RSIR               |
| Power supply (nominal)           | 220-240 V/50 Hz 1~ |
| Refrigerant                      | R134a              |
| Application                      | LBP                |
| Voltage range                    | 198-254 V          |
| Starting torque                  | LST                |
| Approvals                        | VDE, EAC           |
| Starting device type             | PTC                |
| Run capacitor                    | -/-                |
| Start capacitor                  | -/-                |
| RLA (rated load amps / 1s/ U(N)) | -/-A               |

## Ambient/ machine room temperatures minimum /maximum

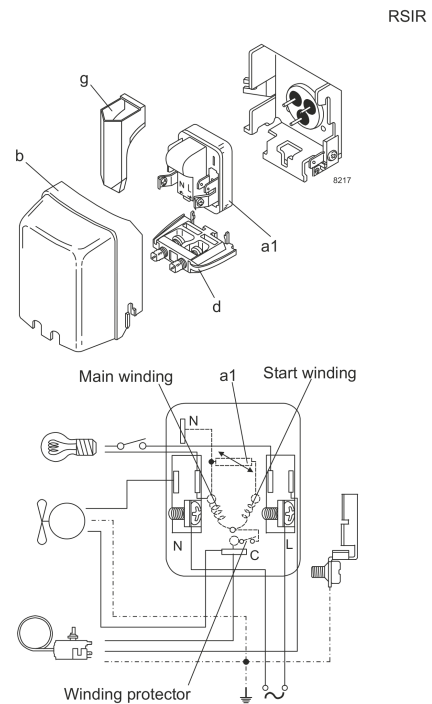
Ambient temperature range: 10 - 38°C / 50 - 100°F

Machine room temp. compressor: 10 - 43°C / 50 - 109°F

## System Cooling

fan 1,5m/s

## Electrical Accessories / Wiring Diagram


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## Components

a1 PTC starter (220V, 250ohm, 6.3mm) 103N0011

b plastic cover 103N2011

d cord relief 103N1010

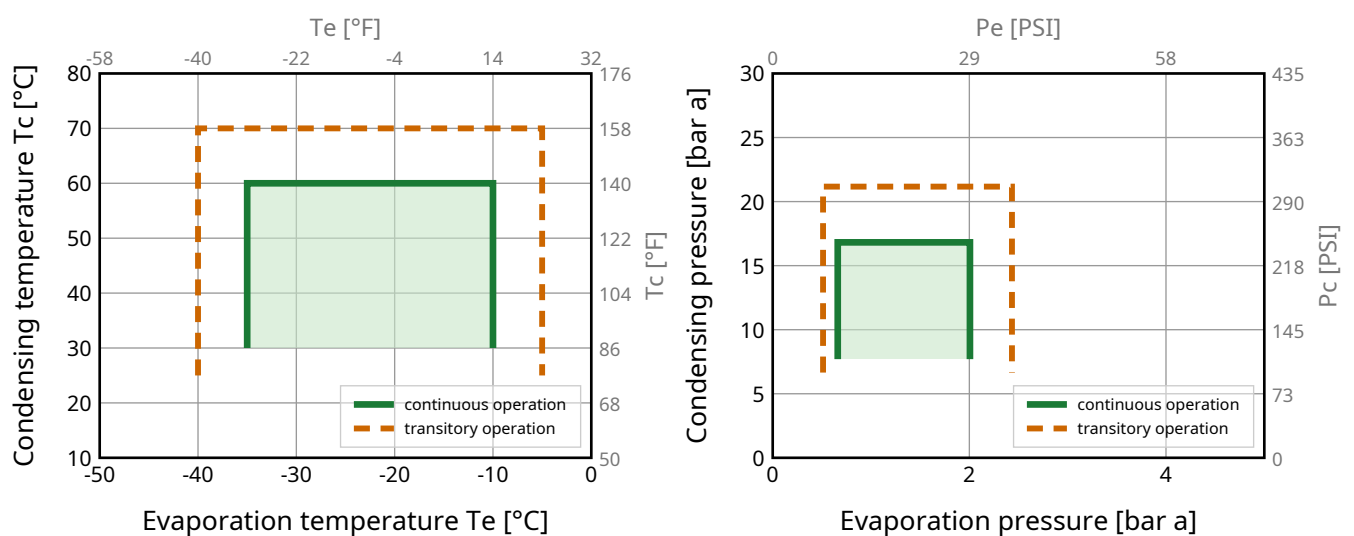
g protection screen for PTC 103N0476

## Alternative components

a1 PTC starter (220V, 250ohm, 4.8mm) 103N0018

a1 PTC starter (220V, 250ohm, 6.3mm) 103N0016

## Operation Pressure Range



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Configuration 2

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Standard Conditions

R134a, 220 V/50 Hz, RSIR, fan 1,5m/s

| pe           | pc            | RGT          | Tliq          | Cooling capacity |         |          | COP   | EER      | P   | I    | m      |             |
|--------------|---------------|--------------|---------------|------------------|---------|----------|-------|----------|-----|------|--------|-------------|
| [°C]<br>[°F] | [°C]<br>[°F]  | [°C]<br>[°F] | [°C]<br>[°F]  | [W]              | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [W] | [A]  | [kg/h] |             |
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| -25<br>-13   | 55<br>131     | 32<br>89.6   | 55<br>131     | 200              | 683     | 172      | 0.94  | 3.22     | 212 | 1.54 | 4.77   | CECOMAF LBP |
| -35<br>-31   | 40<br>104     | 20<br>68     | 40<br>104     | 135              | 460     | 116      | 0.86  | 2.94     | 156 | 1.51 | 2.95   | EN12900 LBP |
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Performance Tables

R134a, 220 V/50 Hz, RSIR, fan 1,5m/s

pc= 45/113 | RGT= 32/89.6 | Tliq= 45/113 | °C/°F

| pe   |      | Cooling capacity |         |          | COP   | EER      | P   | I    | m      |
|------|------|------------------|---------|----------|-------|----------|-----|------|--------|
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