Single
Packs

# Single Pack NLE8.0CN 115-127V 60Hz CSIR

Single pack code number: **195B4355**

| Position | Title | Code | Amount |
|---|---|---|---|
| 1 | Compressor NLE8.0CN | 105H6093 | 1 |
| 2 | Starting relay | 117U7013 | 1 |
| 3 | Starting capacitor (240µF 125V, 6.3mm) | 117U5073 | 1 |
| 4 | Cord relief | 103N1010 | 1 |
| 5 | Cover | 103N2011 | 1 |
| 6 | Bolt joint for one compressor \| M6 \| ø16mm | 118-1917 | 1 |

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**Model**
**NLE8.0CN**

Sales code:
**105H6093**

## Compressor Data

| | |
|---|---|
| Refrigerant(s) | **R290** |
| Refr. charge - tech. limit | **400g / 14.11oz** |
| Weight | **10.95 kg / 24.14lbs** |
| Displacement | **7.96 cm3 / 0.49cu.in** |
| Compressors on pallet | **80** |

## General – Configurations With NLE8.0CN

| – | Conf. 1 | Conf. 2 | Conf. 3 |
|---|---|---|---|
| Motor configuration | CSIR | RSIR | RSCR |
| Power supply (nominal) | 115 V/60 Hz | 115 V/60 Hz | 115 V/60 Hz |
| Number of phases | 1 | 1 | 1 |
| Voltage range | 95-135 V | 95-135 V | 95-135 V |
| Approvals | UL, CCC | UL, CCC | UL, CCC |
| Starting torque | HST | LST | LST |
| Refrigerant | R290 | R290 | R290 |
| Application | LBP+MBP | LBP+MBP | LBP+MBP |
| Hot gas defrost | OK | OK | OK |
| Long interval pull down | OK | OK | OK |

## Application Notes

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

**Model**
**NLE8.0CN**

Sales code:
**105H6093**

## Compressor Design

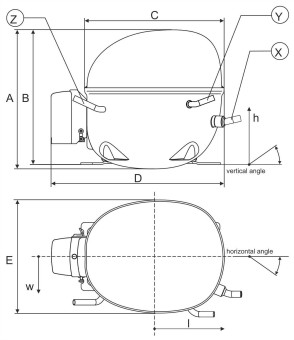
| | | | |
|---|---|---|---|
| Oil type | **32 cSt POE RL32DR** | Winding resistance main | **1.99 Ohm** |
| Oil viscosity | **32cSt** | Winding resistance aux | **6.22 Ohm** |
| Oil quantity | **268 / 9.06fl.oz** | Max. winding temp. | **125 °C** |
| Free gas volume comp. | **2,360 cm3 / 79.80fl.oz** | Max. discharge temp. | **120°C / 248°F** |
| Motor protection | **internal** | | |

## Compressor Dimensions

**Housing**

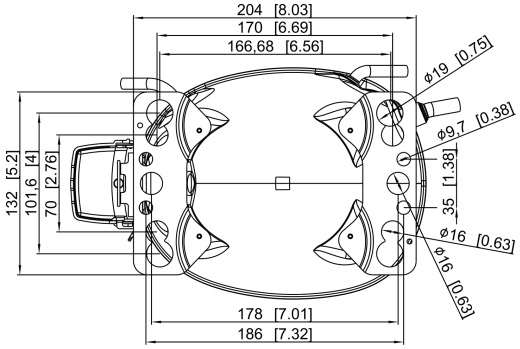
| | |
|---|---|
| A Height | **203mm / 7.99in** |
| B Height | **197mm / 7.76in** |
| C Length shell | **205mm / 8.07in** |
| D Length w. cover | **254mm / 10.00in** |
| E Width | **166mm / 6.54in** |

Find 3D Model here



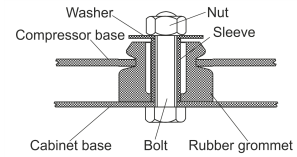

| Connectors | Suction X | Discharge Y | Process Z |
|---|---|---|---|
| Diameter [mm] | øi 8.11–8.29 / 0.32–0.33in | øi 6.41–6.59 / 0.25–0.26in | øi 6.41–6.59 / 0.25–0.26in |
| Material | CU | CU | CU |
| Horizontal angle ±2° | 0° | 0° | 0° |
| Vertical angle ±2° | 15° | 21° | 155° |
| Position l/h/w [mm] | 132/68.5/56.7 / 5.20/2.70/2.23in | 94/101.7/81 / 3.70/4.00/3.19in | -109.3/94.3/72 / -4.30/3.71/2.83in |
| Straight tube l. [mm] | 12 / 0.47in | 12 / 0.47in | 12 / 0.47in |

## Mounting Accessories

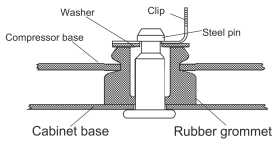



Dimensions in mm [in]

Bolt joint




Snap-on




| | 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 |

**Model**
**NLE8.0CN** Configuration 1

Sales code:
**105H6093**

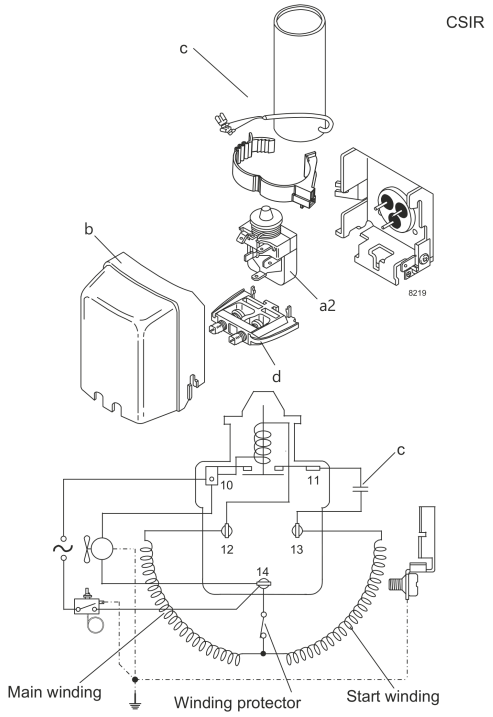
## Configuration

| | |
|---|---|
| Motor configuration | **CSIR** |
| Power supply (nominal) | **115 V/60 Hz 1~** |
| Refrigerant | **R290** |
| Application | **LBP+MBP** |
| Voltage range | **95-135 V** |
| Starting torque | **HST** |
| Approvals | **UL, CCC** |
| Starting device type | **relay** |
| Run capacitor | **-/-** |
| Start capacitor | **240 µF** |
| LRA (locked rotor amps / 4s/ U(N)) | **23.1 A** |
| RLA (rated load amps / 1s/ U(N)) | **4.3 A** |
| Cut in current (U(N)) | **23.1 A** |

**Ambient/ machine room temperatures minimum /maximum**
Ambient temperature range: 10 - 43°C / 50 - 109°F
Machine room temp. compressor: 10 - 48°C / 50 - 118°F

**System Cooling**
fan 3m/s

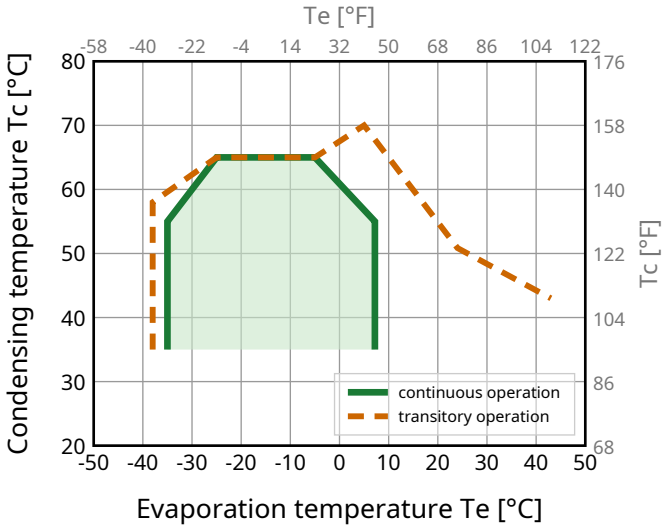
## Electrical Accessories / Wiring Diagram

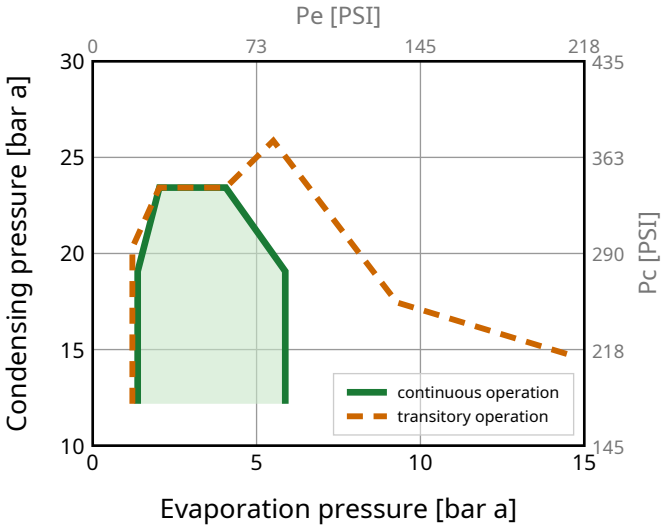



View full size

**Components**
**a2** relay 117U7013
**c** start capacitor (240µF, 6,3mm) 117U5073
**b** plastic cover 103N2011
**d** cord relief 103N1010

## Operation Pressure Range



**Model**
**NLE8.0CN** Configuration 1

Sales code:
**105H6093**

## Standard Conditions

**R290**, 115 V/60 Hz, CSIR, fan 3m/s

| pe | pc | RGT | Tliq | Cooling capacity | | | COP | EER | P | I | ṁ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| [°C] [°F] | [°C] [°F] | [°C] [°F] | [°C] [°F] | [W] | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [W] | [A] | [kg/h] | |
| -23.3 -10 | 54.4 129.9 | 32.2 90 | 32.2 90 | **455** | 1553 | 392 | **1.58** | 5.38 | 289 | 3.52 | 4.62 | **ASHRAE LBP** |
| -25 -13 | 55 131 | 32 89.6 | 55 131 | **339** | 1157 | 292 | **1.22** | 4.16 | 278 | 3.45 | 4.25 | **CECOMAF LBP** |
| -35 -31 | 40 104 | 20 68 | 40 104 | **268** | 914 | 230 | **1.24** | 4.24 | 216 | 3.12 | 3.08 | **EN12900 LBP** |
| -6.7 20 | 54.4 129.9 | 35 95 | 46.1 115 | **807** | 2754 | 694 | **2.07** | 7.08 | 389 | 4.26 | 9.24 | **ASHRAE MBP** |
| -10 14 | 55 131 | 32 89.6 | 55 131 | **640** | 2183 | 550 | **1.72** | 5.87 | 372 | 4.12 | 8.14 | **CECOMAF MBP** |
| -10 14 | 45 113 | 20 68 | 45 113 | **719** | 2454 | 619 | **2.10** | 7.17 | 342 | 3.92 | 8.85 | **EN12900 MBP** |

## Performance Tables

**R290**, 115 V/60 Hz, CSIR, fan 3m/s

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

| pe | | Cooling capacity | | | COP | EER | P | I | ṁ |
|---|---|---|---|---|---|---|---|---|---|
| [°C] | [°F] | [W] | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [W] | [A] | [kg/h] |
| -35 | -31 | **252** | 861 | 217 | **1.16** | 3.97 | 217 | 3.12 | 2.84 |
| -30 | -22 | **324** | 1107 | 279 | **1.33** | 4.54 | 244 | 3.26 | 3.67 |
| -20 | -4 | **503** | 1717 | 433 | **1.71** | 5.82 | 295 | 3.58 | 5.72 |
| -10 | 14 | **748** | 2551 | 643 | **2.19** | 7.46 | 342 | 3.92 | 8.59 |
| 0 | 32 | **1081** | 3689 | 930 | **2.82** | 9.63 | 383 | 4.23 | 12.57 |
| 7.2 | 45 | **1390** | 4743 | 1195 | **3.41** | 11.63 | 408 | 4.41 | 16.35 |

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

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| -35 | -31 | **196** | 669 | 169 | **0.92** | 3.14 | 213 | 3.07 | 2.44 |
| -30 | -22 | **264** | 900 | 227 | **1.07** | 3.66 | 246 | 3.25 | 3.29 |
| -20 | -4 | **425** | 1449 | 365 | **1.37** | 4.67 | 310 | 3.67 | 5.35 |
| -10 | 14 | **640** | 2183 | 550 | **1.72** | 5.87 | 372 | 4.12 | 8.14 |
| 0 | 32 | **933** | 3182 | 802 | **2.17** | 7.42 | 429 | 4.57 | 12.03 |
| 7.2 | 45 | **1205** | 4110 | 1036 | **2.58** | 8.82 | 466 | 4.87 | 15.74 |

**Model**
**NLE8.0CN** Configuration 2

Sales code:
**105H6093**

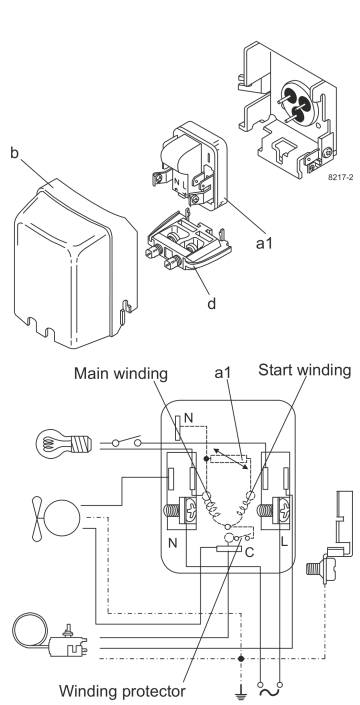
## Configuration

| | |
|---|---|
| Motor configuration | **RSIR** |
| Power supply (nominal) | **115 V/60 Hz 1~** |
| Refrigerant | **R290** |
| Application | **LBP+MBP** |
| Voltage range | **95-135 V** |
| Starting torque | **LST** |
| Approvals | **UL, CCC** |
| Starting device type | **PTC** |
| Run capacitor | **-/-** |
| Start capacitor | **-/-** |
| LRA (locked rotor amps / 4s/ U(N)) | **23.1 A** |
| RLA (rated load amps / 1s/ U(N)) | **4.3 A** |
| Cut in current (U(N)) | **23.1 A** |

**Ambient/ machine room temperatures minimum /maximum**
Ambient temperature range: 10 - 43°C / 50 - 109°F
Machine room temp. compressor: 10 - 48°C / 50 - 118°F

**System Cooling**
fan 3m/s

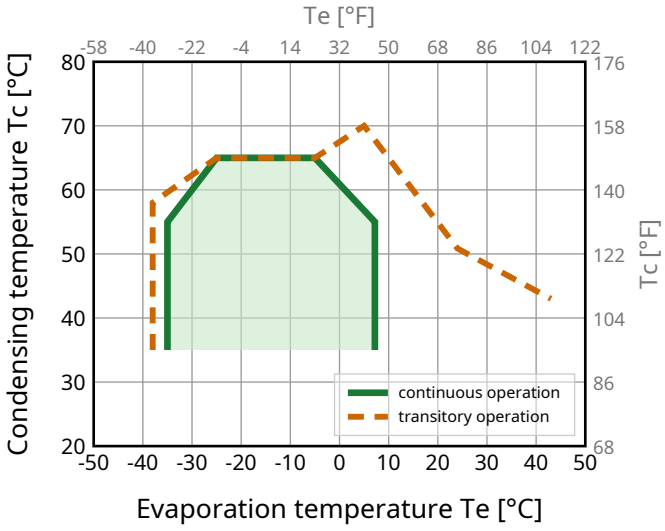
## Electrical Accessories / Wiring Diagram

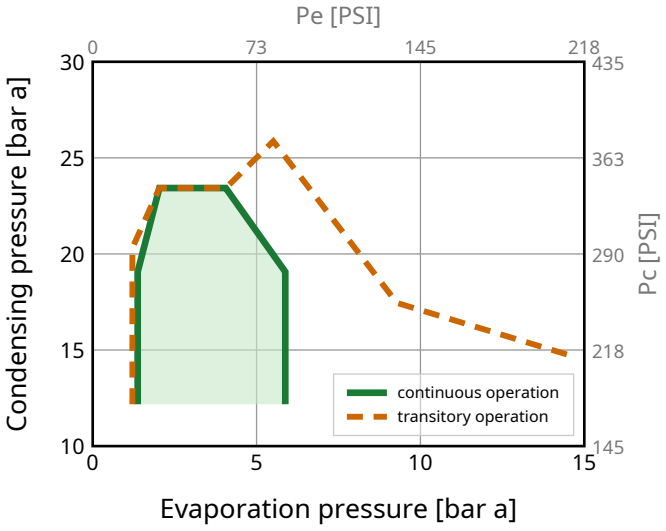



**Components**
**a1** e-PTC starter (115V, 5Ohm, 6.3mm, 4.8-cap) 103N0057
**b** plastic cover 103N2011
**d** cord relief 103N1010

**Alternative components**
**a1** e-PTC starter 103N0058

## Operation Pressure Range



**Model**

**NLE8.0CN** Configuration 2

Sales code:

**105H6093**

## Standard Conditions

**R290**, 115 V/60 Hz, RSIR, fan 3m/s

| pe | pc | RGT | Tliq | Cooling capacity | | | COP | EER | P | I | ṁ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| [°C] [°F] | [°C] [°F] | [°C] [°F] | [°C] [°F] | [W] | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [W] | [A] | [kg/h] | |
| -23.3 -10 | 54.4 129.9 | 32.2 90 | 32.2 90 | **455** | 1553 | 392 | **1.58** | 5.38 | 289 | 3.52 | 4.62 | **ASHRAE LBP** |
| -25 -13 | 55 131 | 32 89.6 | 55 131 | **339** | 1157 | 292 | **1.22** | 4.16 | 278 | 3.45 | 4.25 | **CECOMAF LBP** |
| -35 -31 | 40 104 | 20 68 | 40 104 | **268** | 914 | 230 | **1.24** | 4.24 | 216 | 3.12 | 3.08 | **EN12900 LBP** |
| -6.7 20 | 54.4 129.9 | 35 95 | 46.1 115 | **807** | 2754 | 694 | **2.07** | 7.08 | 389 | 4.26 | 9.24 | **ASHRAE MBP** |
| -10 14 | 55 131 | 32 89.6 | 55 131 | **640** | 2183 | 550 | **1.72** | 5.87 | 372 | 4.12 | 8.14 | **CECOMAF MBP** |
| -10 14 | 45 113 | 20 68 | 45 113 | **719** | 2454 | 619 | **2.10** | 7.17 | 342 | 3.92 | 8.85 | **EN12900 MBP** |

## Performance Tables

**R290**, 115 V/60 Hz, RSIR, fan 3m/s

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

| pe | | Cooling capacity | | | COP | EER | P | I | ṁ |
|---|---|---|---|---|---|---|---|---|---|
| [°C] | [°F] | [W] | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [W] | [A] | [kg/h] |
| -35 | -31 | **252** | 861 | 217 | **1.16** | 3.97 | 217 | 3.12 | 2.84 |
| -30 | -22 | **324** | 1107 | 279 | **1.33** | 4.54 | 244 | 3.26 | 3.67 |
| -20 | -4 | **503** | 1717 | 433 | **1.71** | 5.82 | 295 | 3.58 | 5.72 |
| -10 | 14 | **748** | 2551 | 643 | **2.19** | 7.46 | 342 | 3.92 | 8.59 |
| 0 | 32 | **1081** | 3689 | 930 | **2.82** | 9.63 | 383 | 4.23 | 12.57 |
| 7.2 | 45 | **1390** | 4743 | 1195 | **3.41** | 11.63 | 408 | 4.41 | 16.35 |

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

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| -35 | -31 | **196** | 669 | 169 | **0.92** | 3.14 | 213 | 3.07 | 2.44 |
| -30 | -22 | **264** | 900 | 227 | **1.07** | 3.66 | 246 | 3.25 | 3.29 |
| -20 | -4 | **425** | 1449 | 365 | **1.37** | 4.67 | 310 | 3.67 | 5.35 |
| -10 | 14 | **640** | 2183 | 550 | **1.72** | 5.87 | 372 | 4.12 | 8.14 |
| 0 | 32 | **933** | 3182 | 802 | **2.17** | 7.42 | 429 | 4.57 | 12.03 |
| 7.2 | 45 | **1205** | 4110 | 1036 | **2.58** | 8.82 | 466 | 4.87 | 15.74 |

**Model**
**NLE8.0CN** Configuration 3

Sales code:
**105H6093**

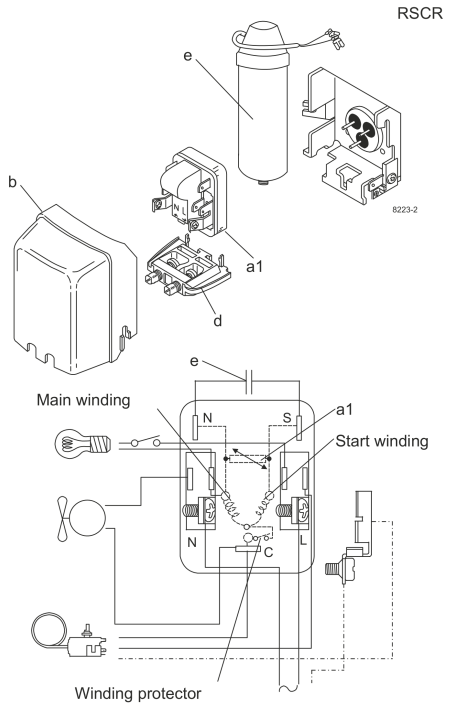
## Configuration

| | |
|---|---|
| Motor configuration | **RSCR** |
| Power supply (nominal) | **115 V/60 Hz 1~** |
| Refrigerant | **R290** |
| Application | **LBP+MBP** |
| Voltage range | **95-135 V** |
| Starting torque | **LST** |
| Approvals | **UL, CCC** |
| Starting device type | **PTC** |
| Run capacitor | **20 µF** |
| Start capacitor | **-/-** |
| LRA (locked rotor amps / 4s/ U(N)) | **23.1 A** |
| RLA (rated load amps / 1s/ U(N)) | **4.3 A** |
| Cut in current (U(N)) | **23.1 A** |

**Ambient/ machine room temperatures minimum /maximum**
Ambient temperature range: 10 - 43°C / 50 - 109°F
Machine room temp. compressor: 10 - 48°C / 50 - 118°F

**System Cooling**
fan 3m/s

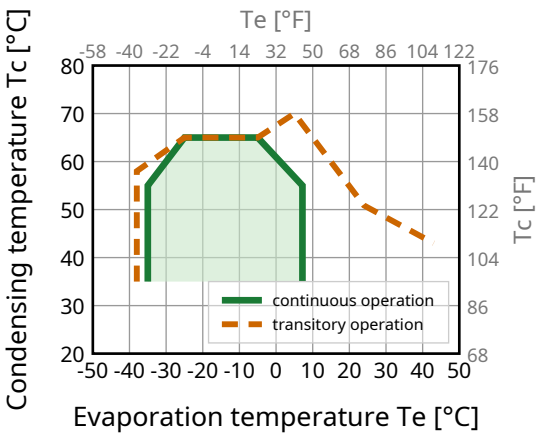
## Electrical Accessories / Wiring Diagram

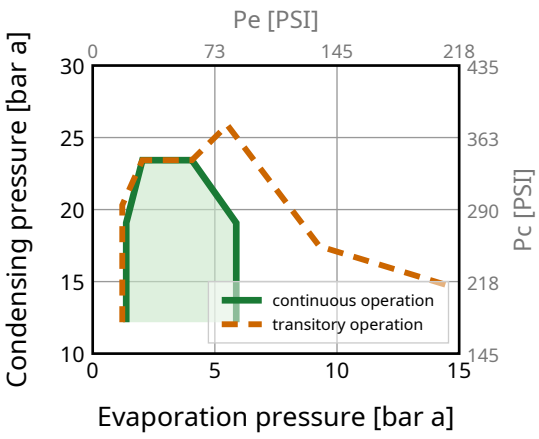



**Components**
**a1** e-PTC starter 103N0058
**e** run capacitor (20µF, 6.3mm) 117-7147
**b** plastic cover 103N2011
**d** cord relief 103N1010
bracket for run capacitor 117-0300
screw M4x8mm 117-0301

**Alternative components**
**a1** e-PTC starter (115V, 5Ohm, 6.3mm, 4.8-cap) 103N0057
**e** run capacitor (20µF, 4.8mm) 117-7146
**b** plastic cover 103N2011
**d** cord relief 103N1010
bracket for run capacitor 117-0300
screw M4x8mm 117-0301

## Operation Pressure Range



**Model**

**NLE8.0CN** Configuration 3

Sales code:

**105H6093**

## Standard Conditions

**R290**, 115 V/60 Hz, RSCR, fan 3m/s

| pe | pc | RGT | Tliq | Cooling capacity | | | COP | EER | P | I | ṁ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| [°C] [°F] | [°C] [°F] | [°C] [°F] | [°C] [°F] | [W] | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [W] | [A] | [kg/h] | |
| -23.3 -10 | 54.4 129.9 | 32.2 90 | 32.2 90 | **466** | 1590 | 401 | **1.71** | 5.83 | 273 | 3.33 | 4.73 | **ASHRAE LBP** |
| -25 -13 | 55 131 | 32 89.6 | 55 131 | **347** | 1183 | 298 | **1.32** | 4.50 | 263 | 3.26 | 4.35 | **CECOMAF LBP** |
| -35 -31 | 40 104 | 20 68 | 40 104 | **272** | 929 | 234 | **1.32** | 4.52 | 206 | 2.97 | 3.12 | **EN12900 LBP** |
| -6.7 20 | 54.4 129.9 | 35 95 | 46.1 115 | **823** | 2809 | 708 | **2.27** | 7.74 | 363 | 3.97 | 9.43 | **ASHRAE MBP** |
| -10 14 | 55 131 | 32 89.6 | 55 131 | **654** | 2231 | 562 | **1.88** | 6.41 | 348 | 3.86 | 8.31 | **CECOMAF MBP** |
| -10 14 | 45 113 | 20 68 | 45 113 | **735** | 2507 | 632 | **2.29** | 7.83 | 320 | 3.67 | 9.04 | **EN12900 MBP** |

## Performance Tables

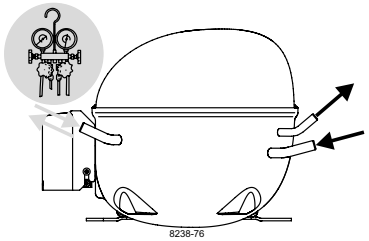
**R290**, 115 V/60 Hz, RSCR, fan 3m/s

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

| pe | | Cooling capacity | | | COP | EER | P | I | ṁ |
|---|---|---|---|---|---|---|---|---|---|
| [°C] | [°F] | [W] | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [W] | [A] | [kg/h] |
| -35 | -31 | **256** | 875 | 221 | **1.24** | 4.23 | 207 | 2.97 | 2.89 |
| -30 | -22 | **331** | 1130 | 285 | **1.43** | 4.89 | 231 | 3.09 | 3.74 |
| -20 | -4 | **515** | 1758 | 443 | **1.85** | 6.32 | 278 | 3.37 | 5.86 |
| -10 | 14 | **764** | 2606 | 657 | **2.39** | 8.14 | 320 | 3.67 | 8.77 |
| 0 | 32 | **1099** | 3749 | 945 | **3.10** | 10.57 | 355 | 3.92 | 12.78 |
| 7.2 | 45 | **1405** | 4795 | 1209 | **3.76** | 12.83 | 374 | 4.04 | 16.53 |

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

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| -35 | -31 | **199** | 680 | 171 | **0.98** | 3.35 | 203 | 2.93 | 2.48 |
| -30 | -22 | **269** | 919 | 232 | **1.15** | 3.94 | 233 | 3.09 | 3.36 |
| -20 | -4 | **435** | 1484 | 374 | **1.49** | 5.08 | 292 | 3.46 | 5.47 |
| -10 | 14 | **654** | 2231 | 562 | **1.88** | 6.41 | 348 | 3.86 | 8.31 |
| 0 | 32 | **948** | 3233 | 815 | **2.39** | 8.14 | 397 | 4.24 | 12.22 |
| 7.2 | 45 | **1218** | 4155 | 1047 | **2.85** | 9.71 | 428 | 4.46 | 15.91 |



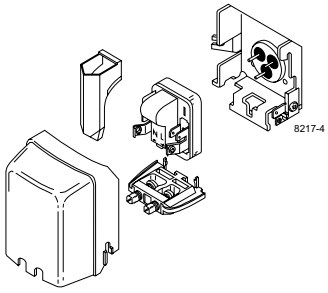

# NL Compressors

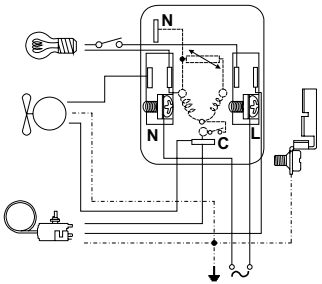
SECOP

Keep electrical equipment clear from oil, chemicals, and water

When operated with a flammable refrigerant, only spark-proof starting equipment is allowed.

## RSIR

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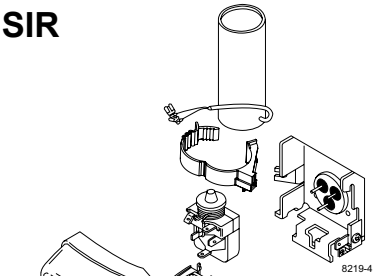
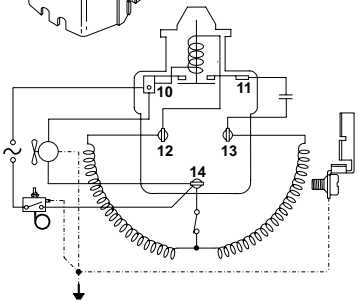
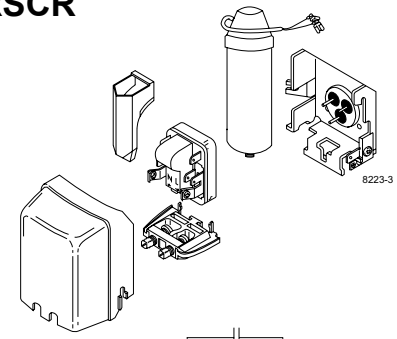
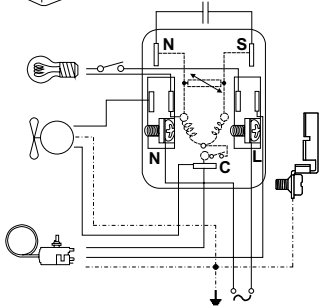
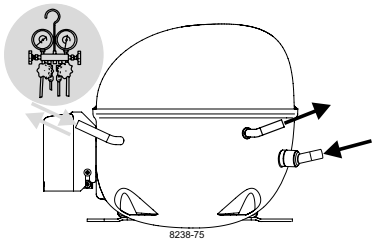



## RSCR






# NL Compressors

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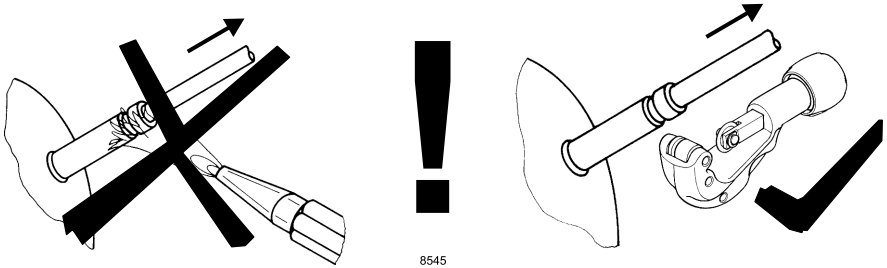
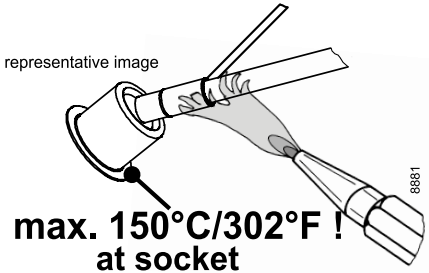
## Service/Repair – R290, R600a, R170, R1270, R1234yf

(applies to all flammable refrigerants)




## 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)**

**Dismantling, recycling, disposal:** At the end of a compressor's lifecycle, proceed by separating and storing components according to their environmental impact. Parts that may cause pollution must be clearly identified and handled separately, ensuring appropriate disposal. Refrigerant gas must not be released into the environment and should be recovered by qualified operators. Compressor oil must also be collected separately. The compressor should be disposed of at specialized disposal centers in accordance with the applicable regulations. **Subject to modifications/alterations. www.secop.com**