

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

Single pack code number: **195B4536**

| Position | Title | Code | Amount |
|----------|---|----------|--------|
| 1 | Compressor NLE8.0CN | 105H6093 | 1 |
| 2 | Starting relay | 117U7013 | 1 |
| 3 | Starting capacitor (240 μ F 125V, 6.3mm) | 117U5023 | 1 |
| 4 | Cord relief | 103N1010 | 1 |
| 5 | Cover | 103N0492 | 1 |
| 6 | Bolt joint for one compressor M6 \varnothing 16mm | 118-1917 | 1 |

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Model

| | | | | |
|-------------|-----------------|------------------|-------------|-----------------|
| Designation | NLE8.0CN | 115-127V/60Hz 1~ | Sales code: | 105H6093 |
|-------------|-----------------|------------------|-------------|-----------------|

Compressor design

| | | | |
|----------------------------|---------------------------------|-----------------------|---------------------------------|
| Oil type | Polyolester | Refrigerant(s) | R290 |
| Oil viscosity | 32cST | Displacement | 7,96cm ³ / 0,49cu.in |
| Oil quantity | 268cm ³ / 9,1fl.oz | Compressors on pallet | 80 |
| Refr. charge - tech. limit | 400g / 14,1oz | | |
| Free gas volume comp. | 2360cm ³ / 79,8fl.oz | | |
| Weight | 10,95kg / 24,1lbs | | |
| Motor protection | 1# internal | | |
| Winding resistance main | 1,99Ω (at 25°C) | | |
| Winding resistance aux | 6,22Ω (at 25°C) | | |
| Max. winding temp. | 125°C / 257°F | | |
| Max. discharge temp. | 120°C / 248°F | | |



General - Configurations with NLE8.0CN

| | Conf. 1 | Conf. 2 | Conf. 3 |
|------------------------|----------------|----------------|----------------|
| Motorconfiguration | CSIR | RSIR | RSCR |
| Power supply (nominal) | 115V/60Hz | 115V/60Hz | 115V/60Hz |
| Number of phases | 1 | 1 | 1 |
| Voltage range | 95-135V | 95-135V | 95-135V |
| Approvals | UL, CCC | UL, CCC | UL, CCC |
| Starting torque | HST | LST | LST |
| Note | - / - | | |

Applications with NLE8.0CN

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

Electrical data - Configurations with NLE8.0CN

| | Conf. 1 | Conf. 2 | Conf. 3 |
|------------------------------|----------------|----------------|----------------|
| Starting device type | relay | PTC | PTC |
| Run capacitor | -/- | -/- | 20μF |
| Start capacitor | 240μF | -/- | -/- |
| LRA (locked rotor amps / 4s) | 23,1A | 22,7A | 22,7A |
| RLA (rated load amps / 1s) | 4,3A | 4,3A | 3,88A |
| Cut in current | 23,1A | 23,2A | 23,2A |

Model

Designation

NLE8.0CN

115-127V/60Hz 1~

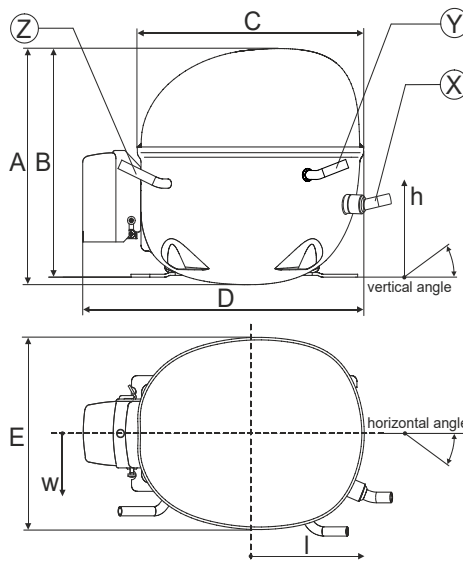
Sales code:

105H6093

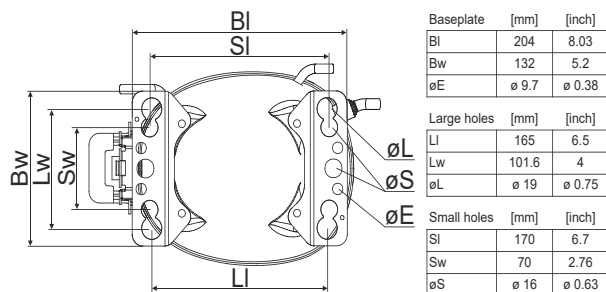
Compressor dimensions

| Housing | A Height | 203mm / 7,99in |
|---------|-------------------|----------------|
| | B Height | 197mm / 7,76in |
| | C Length shell | 205mm / 8,07in |
| | D Length w. cover | 254mm / 10in |
| | E Width | 166mm / 6,54in |

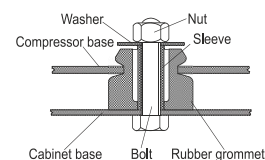
| Connectors | | Suction | Discharge | Process |
|------------------|----------------------------|--------------|--------------|--------------|
| | | X | Y | Z |
| Diameter | [mm] | øi 8,11-8,29 | øi 6,41-6,59 | øi 6,41-6,59 |
| | (i:inside, o:outside) [in] | øi 0,32-0,33 | øi 0,25-0,26 | øi 0,25-0,26 |
| Material | | copper | copper | copper |
| Horizontal angle | ±2° | 0° | 0° | 0° |
| Vertical angle | ±2° | 15° | 21° | 155° |
| Position l/h/w | [mm] | 132/69/57 | 94/102/81 | -109/94/72 |
| | [in] | 5,2/2,7/2,2 | 3,7/4/3,2 | -4,3/3,7/2,8 |
| Straight tube l. | [mm] | 12 | 12 | 12 |
| | [in] | 0,5 | 0,5 | 0,5 |



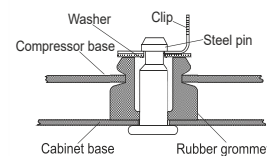
Compressor fixation



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.

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

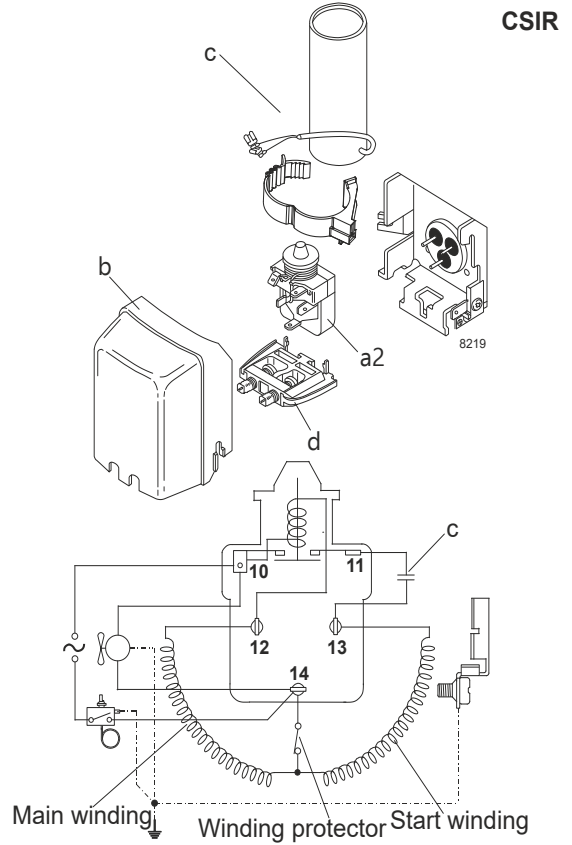
Model

| | | | | | |
|-------------|-----------------|------------------|----------------|-------------|-----------------|
| Designation | NLE8.0CN | 115V/60Hz | Conf. 1 | Sales code: | 105H6093 |
|-------------|-----------------|------------------|----------------|-------------|-----------------|

Configuration

| | | |
|------------------------|--------------|--------|
| Motorconfiguration | CSIR | |
| Power supply (nominal) | 115V/60Hz 1~ | |
| Refrigerant | R290 | |
| Application | LBP+MBP | |
| Voltage range | 95-135V | |
| Starting torque | HST | |
| Approvals | UL | SA3693 |
| | CCC | |

Electrical accessories / wiring diagram



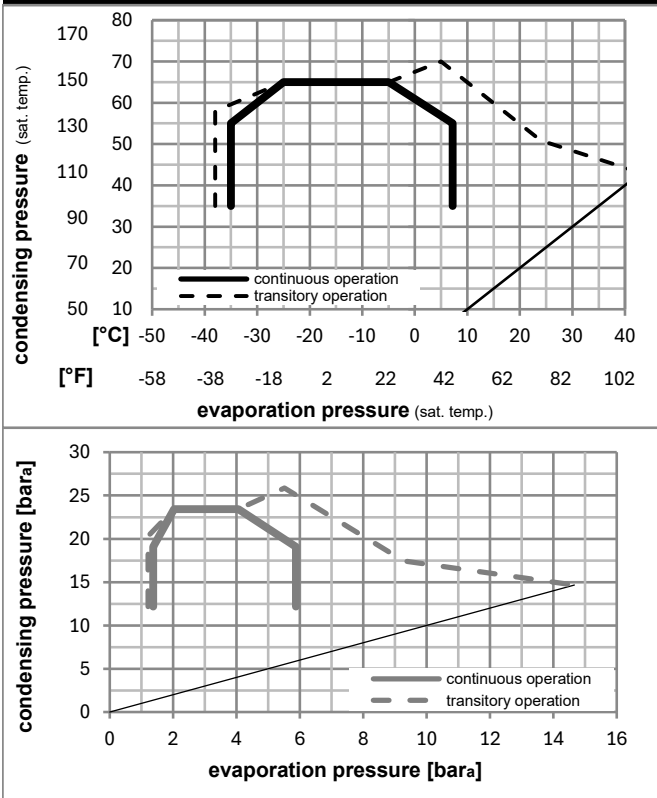
Ambient/ machine room temperatures minimum /maximum

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

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

Compressor cooling: fan 3m/s

Operation pressure range



Components

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

Model

| | | | | | |
|-------------|-----------------|------------------|----------------|-------------|-----------------|
| Designation | NLE8.0CN | 115V/60Hz | Conf. 1 | Sales code: | 105H6093 |
|-------------|-----------------|------------------|----------------|-------------|-----------------|

Optimization + standard conditions

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

| | Evaporating pressure (saturation temperature) | | | | Cooling capacity | | | COP | EER | P1 | Power consumption | | ASHRAE LBP | |
|--|---|------|------|------|------------------|---------|----------|-------|----------|-----------|-------------------|------|------------|-------------|
| | pe | pc | RGT | Tliq | [W] | [Btu/h] | [kcal/h] | | | | 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 | 452,8 | 1546 | 389,7 | 1,57 | 5,36 | 1,35 | 288,4 | 3,52 | 4,59 | ASHRAE LBP |
| | -10 | 130 | 90 | 90 | | | | | | | | | | |
| | -25 | 55 | 32 | 55 | 339,0 | 1158 | 291,7 | 1,22 | 4,16 | 1,05 | 278,3 | 3,45 | 4,22 | cecomaf LBP |
| | -13 | 131 | 90 | 131 | | | | | | | | | | |
| | -35 | 40 | 20 | 40 | 267,8 | 915 | 230,5 | 1,24 | 4,25 | 1,07 | 215,5 | 3,11 | 3,06 | EN12900 LBP |
| | -31 | 104 | 68 | 104 | | | | | | | | | | |
| | -7 | 54 | 35 | 46 | 807,2 | 2757 | 694,7 | 2,07 | 7,08 | 1,78 | 389,5 | 4,26 | 9,21 | ASHRAE MBP |
| | 20 | 130 | 95 | 115 | | | | | | | | | | |
| | -10 | 55 | 32 | 55 | 639,9 | 2185 | 550,7 | 1,72 | 5,88 | 1,48 | 371,7 | 4,12 | 8,09 | cecomaf MBP |
| | 14 | 131 | 90 | 131 | | | | | | | | | | |
| | -10 | 45 | 20 | 45 | 718,2 | 2453 | 618,1 | 2,10 | 7,17 | 1,81 | 342,2 | 3,92 | 8,82 | EN12900 MBP |
| | 14 | 113 | 68 | 113 | | | | | | | | | | |

Performance tables

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

| | pe | | Cooling capacity | | | COP | EER | | P1 | I | m |
|------------------|------|------|------------------|---------|----------|------|----------|-----------|-------|------|-------|
| | [°C] | [°F] | [W] | [Btu/h] | [kcal/h] | | [Btu/Wh] | [kcal/Wh] | | | |
| [°C / °F] | -35 | -31 | 252,3 | 861 | 217,1 | 1,16 | 3,97 | 1,00 | 216,7 | 3,12 | 2,83 |
| cond. pressure | -23 | -10 | 437,5 | 1494 | 376,5 | 1,57 | 5,37 | 1,35 | 278,4 | 3,47 | 4,94 |
| pc= 45/113 | -15 | 5 | 615,8 | 2103 | 529,9 | 1,93 | 6,59 | 1,66 | 319,3 | 3,75 | 7,01 |
| return gas temp. | -9 | 15 | 763,6 | 2608 | 657,2 | 2,22 | 7,57 | 1,91 | 344,6 | 3,94 | 8,74 |
| RGT= 32/90 | -4 | 25 | 939,5 | 3208 | 808,5 | 2,55 | 8,72 | 2,20 | 368,0 | 4,12 | 10,83 |
| liquid temp | 0 | 32 | 1081,3 | 3693 | 930,6 | 2,82 | 9,64 | 2,43 | 383,1 | 4,23 | 12,54 |
| Tliq= 45/113 | 7,2 | 45 | 1391,2 | 4751 | 1197,3 | 3,41 | 11,65 | 2,94 | 407,8 | 4,41 | 16,35 |
| [°C / °F] | -35 | -31 | 196,1 | 670 | 168,7 | 0,92 | 3,14 | 0,79 | 213,2 | 3,07 | 2,42 |
| cond. pressure | -23 | -10 | 366,3 | 1251 | 315,2 | 1,27 | 4,33 | 1,09 | 289,0 | 3,52 | 4,57 |
| pc= 55/131 | -15 | 5 | 524,1 | 1790 | 451,0 | 1,54 | 5,24 | 1,32 | 341,4 | 3,89 | 6,59 |
| return gas temp | -9 | 15 | 653,9 | 2233 | 562,7 | 1,74 | 5,95 | 1,50 | 375,0 | 4,15 | 8,28 |
| RGT= 32/90 | -4 | 25 | 808,0 | 2760 | 695,4 | 1,98 | 6,78 | 1,71 | 407,3 | 4,40 | 10,31 |
| liquid temp | 0 | 32 | 932,6 | 3185 | 802,6 | 2,17 | 7,43 | 1,87 | 428,8 | 4,57 | 11,98 |
| Tliq= 55/131 | 7,2 | 45 | 1205,7 | 4118 | 1037,6 | 2,59 | 8,83 | 2,22 | 466,4 | 4,87 | 15,71 |

Model

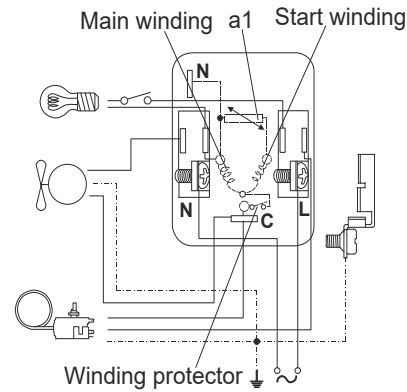
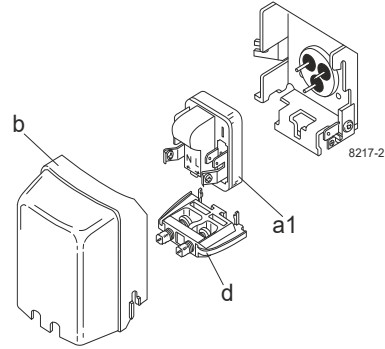
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|-------------|-----------------|------------------|----------------|-------------|-----------------|
| Designation | NLE8.0CN | 115V/60Hz | Conf. 2 | Sales code: | 105H6093 |
|-------------|-----------------|------------------|----------------|-------------|-----------------|

Configuration

| | | |
|------------------------|--------------|--------|
| Motorconfiguration | RSIR | |
| Power supply (nominal) | 115V/60Hz 1~ | |
| Refrigerant | R290 | |
| Application | LBP+MBP | |
| Voltage range | 95-135V | |
| Starting torque | LST | |
| Approvals | UL | SA3693 |
| | CCC | |

Electrical accessories / wiring diagram

RSIR



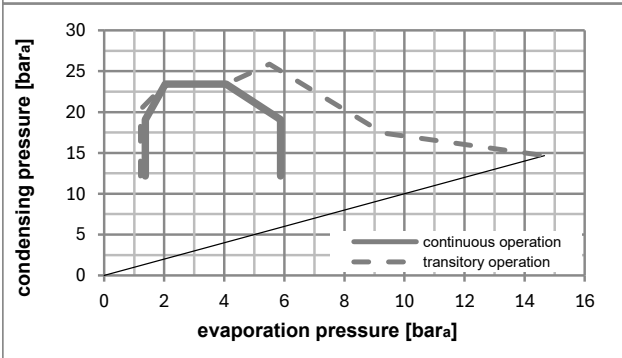
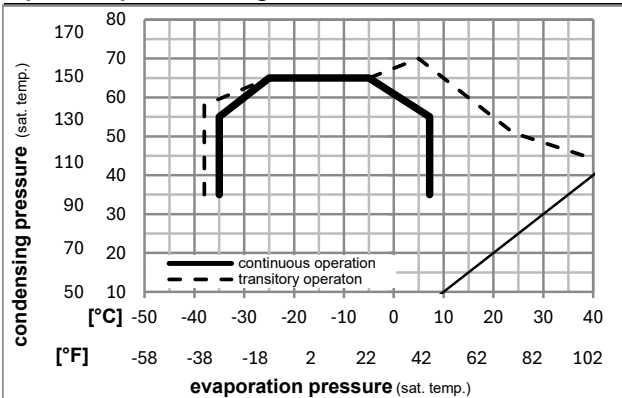
Ambient/ machine room temperatures minimum /maximum

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

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

Compressor cooling: fan 3m/s

Operation pressure range



Components

| | | |
|----|--|----------|
| a1 | e-PTC starter (115V, 50hm, 6.3mm, 4.8-cap) | 103N0057 |
| b | plastic cover | 103N2011 |
| d | cord relief | 103N1010 |

Alternative components

| | | |
|----|---------------|----------|
| a1 | e-PTC starter | 103N0058 |
| b | plastic cover | 103N2011 |
| d | cord relief | 103N1010 |

Model

| | | | | | |
|-------------|-----------------|------------------|----------------|-------------|-----------------|
| Designation | NLE8.0CN | 115V/60Hz | Conf. 2 | Sales code: | 105H6093 |
|-------------|-----------------|------------------|----------------|-------------|-----------------|

Optimization + standard conditions

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

| | Evaporating pressure (saturation temperature) | | | | Cooling capacity | | | COP | EER | P1 | Power consumption | | Ref. mass flow | |
|------|---|-----|-----|------|------------------|---------|----------|------|------|------|-------------------|------|----------------|-------------|
| | pe | pc | RGT | Tliq | [W] | [Btu/h] | [kcal/h] | | | | [W] | [A] | | |
| [°C] | -23 | 54 | 32 | 32 | 452,8 | 1546 | 389,7 | 1,57 | 5,36 | 1,35 | 288,4 | 3,52 | 4,59 | ASHRAE LBP |
| [°F] | -10 | 130 | 90 | 90 | | | | | | | | | | |
| [°C] | -25 | 55 | 32 | 55 | 339,0 | 1158 | 291,7 | 1,22 | 4,16 | 1,05 | 278,3 | 3,45 | 4,22 | cecomaf LBP |
| [°F] | -13 | 131 | 90 | 131 | | | | | | | | | | |
| [°C] | -35 | 40 | 20 | 40 | 267,8 | 915 | 230,5 | 1,24 | 4,25 | 1,07 | 215,5 | 3,11 | 3,06 | EN12900 LBP |
| [°F] | -31 | 104 | 68 | 104 | | | | | | | | | | |
| [°C] | -7 | 54 | 35 | 46 | 807,2 | 2757 | 694,7 | 2,07 | 7,08 | 1,78 | 389,5 | 4,26 | 9,21 | ASHRAE MBP |
| [°F] | 20 | 130 | 95 | 115 | | | | | | | | | | |
| [°C] | -10 | 55 | 32 | 55 | 639,9 | 2185 | 550,7 | 1,72 | 5,88 | 1,48 | 371,7 | 4,12 | 8,09 | cecomaf MBP |
| [°F] | 14 | 131 | 90 | 131 | | | | | | | | | | |
| [°C] | -10 | 45 | 20 | 45 | 718,2 | 2453 | 618,1 | 2,10 | 7,17 | 1,81 | 342,2 | 3,92 | 8,82 | EN12900 MBP |
| [°F] | 14 | 113 | 68 | 113 | | | | | | | | | | |

Performance tables

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

| | pe | | Cooling capacity | | | COP | EER | P1 | I | m | |
|------------------|------|------|------------------|---------|----------|------|-------|------|-------|------|-------|
| | [°C] | [°F] | [W] | [Btu/h] | [kcal/h] | | | | | | [W/W] |
| [°C / °F] | -35 | -31 | 252,3 | 861 | 217,1 | 1,16 | 3,97 | 1,00 | 216,7 | 3,12 | 2,83 |
| cond. pressure | -23 | -10 | 437,5 | 1494 | 376,5 | 1,57 | 5,37 | 1,35 | 278,4 | 3,47 | 4,94 |
| pc= 45/113 | -15 | 5 | 615,8 | 2103 | 529,9 | 1,93 | 6,59 | 1,66 | 319,3 | 3,75 | 7,01 |
| return gas temp. | -9 | 15 | 763,6 | 2608 | 657,2 | 2,22 | 7,57 | 1,91 | 344,6 | 3,94 | 8,74 |
| RGT= 32/90 | -4 | 25 | 939,5 | 3208 | 808,5 | 2,55 | 8,72 | 2,20 | 368,0 | 4,12 | 10,83 |
| liquid temp | 0 | 32 | 1081,3 | 3693 | 930,6 | 2,82 | 9,64 | 2,43 | 383,1 | 4,23 | 12,54 |
| Tliq= 45/113 | 7,2 | 45 | 1391,2 | 4751 | 1197,3 | 3,41 | 11,65 | 2,94 | 407,8 | 4,41 | 16,35 |
| [°C / °F] | -35 | -31 | 196,1 | 670 | 168,7 | 0,92 | 3,14 | 0,79 | 213,2 | 3,07 | 2,42 |
| cond. pressure | -23 | -10 | 366,3 | 1251 | 315,2 | 1,27 | 4,33 | 1,09 | 289,0 | 3,52 | 4,57 |
| pc= 55/131 | -15 | 5 | 524,1 | 1790 | 451,0 | 1,54 | 5,24 | 1,32 | 341,4 | 3,89 | 6,59 |
| return gas temp | -9 | 15 | 653,9 | 2233 | 562,7 | 1,74 | 5,95 | 1,50 | 375,0 | 4,15 | 8,28 |
| RGT= 32/90 | -4 | 25 | 808,0 | 2760 | 695,4 | 1,98 | 6,78 | 1,71 | 407,3 | 4,40 | 10,31 |
| liquid temp | 0 | 32 | 932,6 | 3185 | 802,6 | 2,17 | 7,43 | 1,87 | 428,8 | 4,57 | 11,98 |
| Tliq= 55/131 | 7,2 | 45 | 1205,7 | 4118 | 1037,6 | 2,59 | 8,83 | 2,22 | 466,4 | 4,87 | 15,71 |

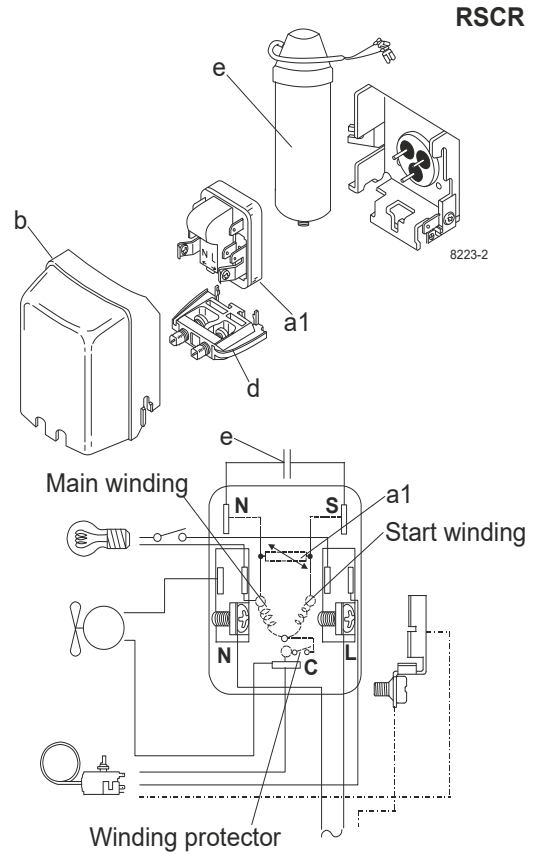
Model

| | | | | | |
|-------------|-----------------|------------------|----------------|-------------|-----------------|
| Designation | NLE8.0CN | 115V/60Hz | Conf. 3 | Sales code: | 105H6093 |
|-------------|-----------------|------------------|----------------|-------------|-----------------|

Configuration

| | | |
|------------------------|--------------|--------|
| Motorconfiguration | RSCR | |
| Power supply (nominal) | 115V/60Hz 1~ | |
| Refrigerant | R290 | |
| Application | LBP+MBP | |
| Voltage range | 95-135V | |
| Starting torque | LST | |
| Approvals | UL | SA3693 |
| | CCC | |

Electrical accessories / wiring diagram



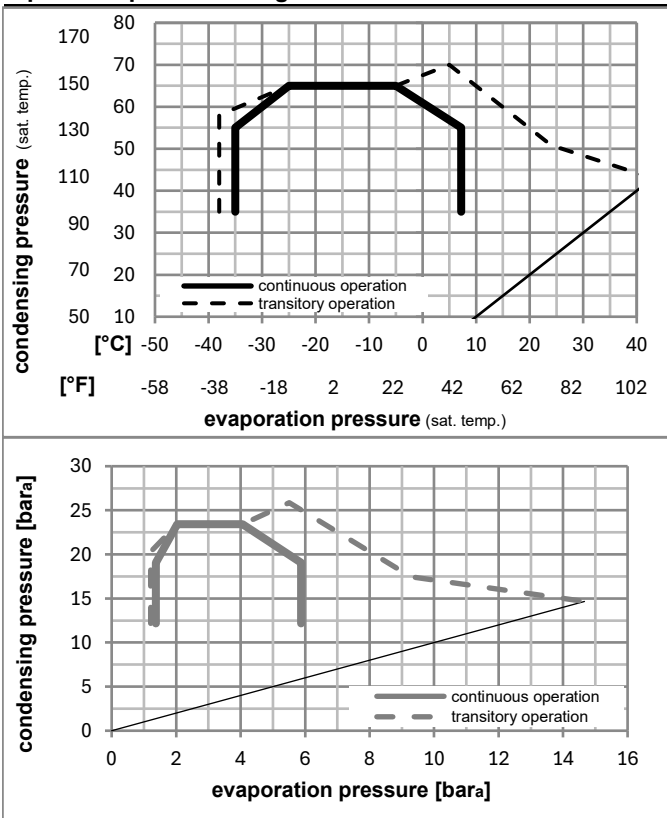
Ambient/ machine room temperatures minimum /maximum

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

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

Compressor cooling: fan 3m/s

Operation pressure range

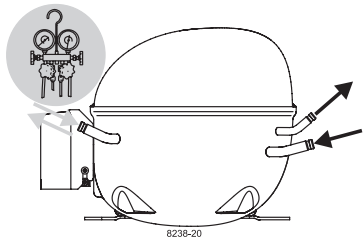


Components

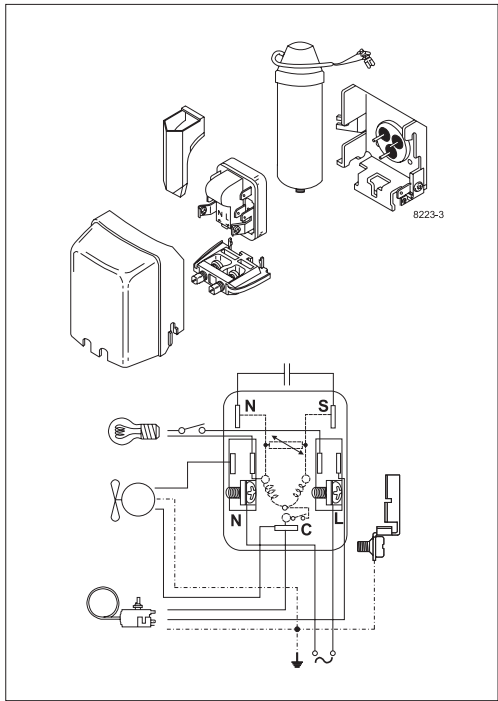
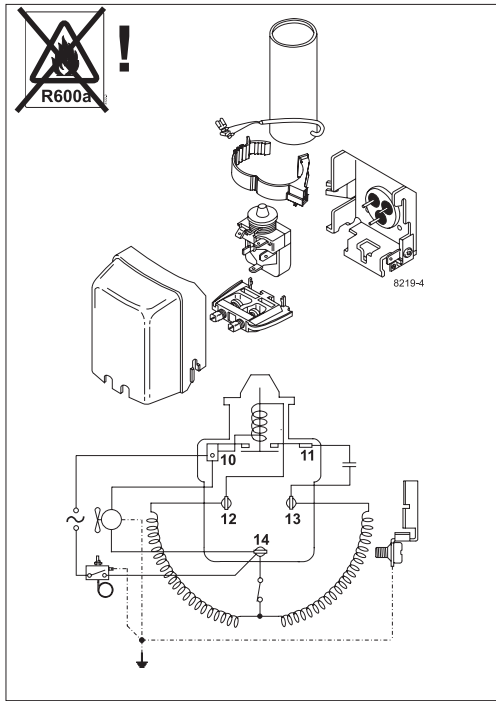
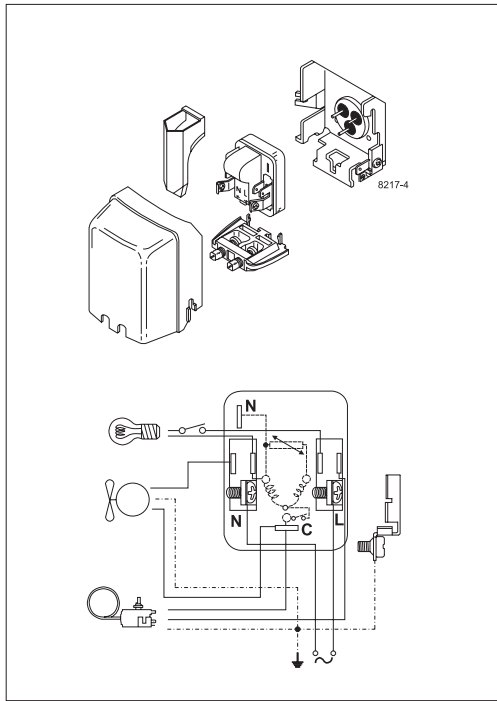
| | | |
|----|-----------------------------|----------|
| a1 | e-PTC starter | 103N0058 |
| e | run capacitor (20μF, 6.3mm) | 117-7147 |
| b | plastic cover | 103N2011 |
| d | cord relief | 103N1010 |
| | bracket for run capacitor | 117-0300 |
| | screw M4x8mm | 117-0301 |

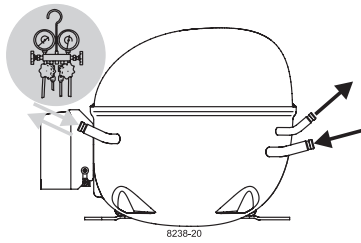
Alternative components

| | | |
|----|---|----------|
| a1 | e-PTC starter (115V, 50Ohm, 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 |

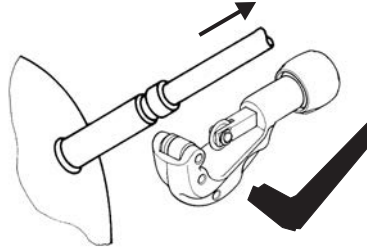
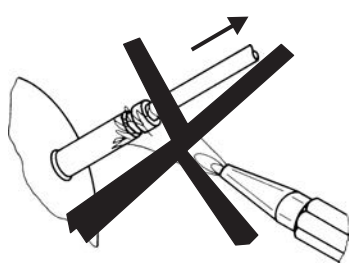


NL Compressors





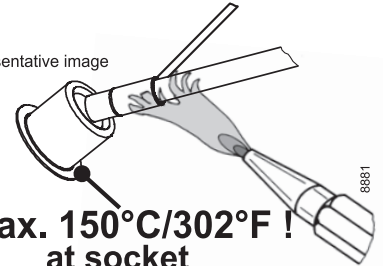
Service/Repair – R600a, R290



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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