

## Single Pack NL8.4FT 220-240V 50Hz CSIR

Single pack code number: **195B4371**

| Position | Title   | Code     | Amount |
|----------|---|----------|--------|
| 1        | Compressor NL8.4FT                                      | 105G6055 | 1      |
| 2        | Starting relay  | 117U6001 | 1      |
| 3        | Starting capacitor (80 $\mu$ F 220V, 6.3mm)             | 117U5015 | 1      |
| 4        | Cord relief   | 103N1010 | 1      |
| 5        | Cover   | 103N2010 | 1      |
| 6        | Bolt joint for one compressor   M6   $\varnothing$ 16mm | 118-1917 | 1      |

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## Model

|             |                |                  |             |                 |
|-------------|----------------|------------------|-------------|-----------------|
| Designation | <b>NL8.4FT</b> | 220-240V/50Hz 1~ | Sales code: | <b>105G6055</b> |
|-------------|----------------|------------------|-------------|-----------------|

## Compressor design

|                            |                                 |                       |                                 |
|----------------------------|---------------------------------|-----------------------|---------------------------------|
| Oil type                   | Polyolester                     | Refrigerant(s)        | <b>R134a</b>                    |
| Oil viscosity              | 32cST                           | Displacement          | 8,35cm <sup>3</sup> / 0,51cu.in |
| Oil quantity               | 268cm <sup>3</sup> / 9,1fl.oz   | Compressors on pallet | 80                              |
| Refr. charge - tech. limit | 400g / 14,1oz                   |                       |                                 |
| Free gas volume comp.      | 2360cm <sup>3</sup> / 79,8fl.oz |                       |                                 |
| Weight                     | 9,6kg / 21,2lbs                 |                       |                                 |
| Motor protection           | 1# internal                     |                       |                                 |
| Winding resistance main    | 10,6Ω (at 25°C)                 |                       |                                 |
| Winding resistance aux     | 18,1Ω (at 25°C)                 |                       |                                 |
| Max. winding temp.         | 125°C / 257°F                   |                       |                                 |
| Max. discharge temp.       | 130°C / 266°F                   |                       |                                 |



## General - Configurations with NL8.4FT

|                        | <b>Conf. 1</b> | <b>Conf. 2</b> |
|------------------------|----------------|----------------|
| Motorconfiguration     | CSIR           | RSIR           |
| Power supply (nominal) | 220-240V/50Hz  | 220-240V/50Hz  |
| Number of phases       | 1              | 1              |
| Voltage range          | 187-254V       | 187-254V       |
| Approvals              | VDE, CCC, EAC  | VDE, CCC, EAC  |
| Starting torque        | HST            | LST            |
| Note                   | - / -          |                |

## Applications with NL8.4FT

|                         | <b>Conf. 1</b> | <b>Conf. 2</b> |
|-------------------------|----------------|----------------|
| Refrigerant             | R134a          | R134a          |
| Application             | LBP            | LBP            |
| System cooling          | static         | static         |
| Hot gas defrost         | - / -          | - / -          |
| Long interval pull down | - / -          | - / -          |

## Electrical data - Configurations with NL8.4FT

|                              | <b>Conf. 1</b> | <b>Conf. 2</b> |
|------------------------------|----------------|----------------|
| Starting device type         | relay          | PTC            |
| Run capacitor                | - / -          | - / -          |
| Start capacitor              | 80μF           | - / -          |
| LRA (locked rotor amps / 4s) | 9,4A           | 7,5A           |
| RLA (rated load amps / 1s)   | 1,4A           | 1,4A           |
| Cut in current               | 11,6A          | 11,6A          |

## Model

Designation

**NL8.4FT**

220-240V/50Hz 1~

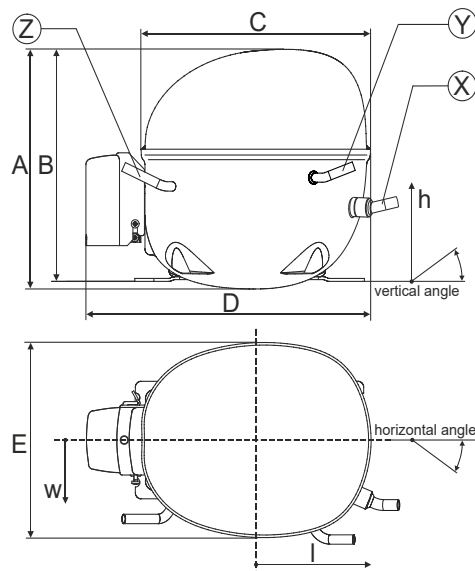
Sales code:

**105G6055**

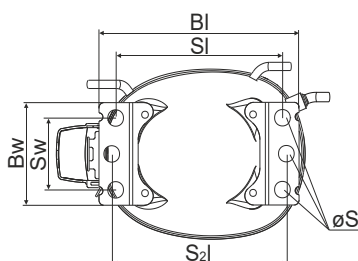
## Compressor dimensions

| Housing | A Height          | 189,5mm / 7,46in |
|---------|-------------------|------------------|
|         | B Height          | 183,5mm / 7,22in |
|         | 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 6,11-6,29 | øi 5,12-5,22 | øi 6,11-6,29 |
|                  | (i:inside, o:outside) [in] | øi 0,24-0,25 | øi 0,2-0,21  | 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          |



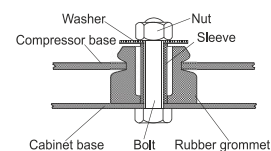
## Compressor fixation



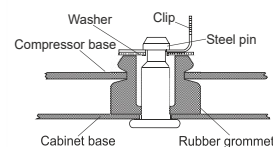
| Baseplate | [mm] | [inch] |
|-----------|------|--------|
| BI        | 204  | 8.03   |
| BW        | 100  | 3.94   |

| Small holes | [mm] | [inch] |
|-------------|------|--------|
| SI          | 170  | 6.7    |
| SW          | 70   | 2.76   |
| S1          | 178  | 7      |
| øS          | ø 16 | ø 0.63 |

### 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   |

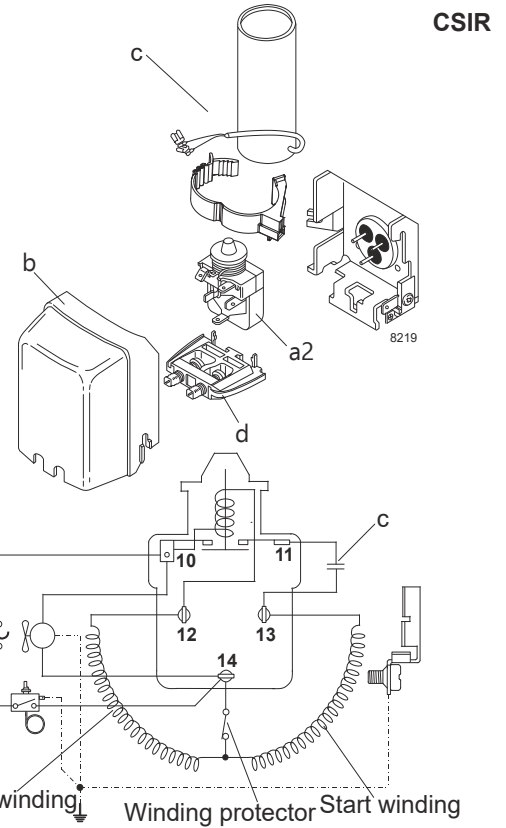
## Model

|             |                |                      |                |             |                 |
|-------------|----------------|----------------------|----------------|-------------|-----------------|
| Designation | <b>NL8.4FT</b> | <b>220-240V/50Hz</b> | <b>Conf. 1</b> | Sales code: | <b>105G6055</b> |
|-------------|----------------|----------------------|----------------|-------------|-----------------|

## Configuration

|                        |                  |
|------------------------|------------------|
| Motorconfiguration     | CSIR             |
| Power supply (nominal) | 220-240V/50Hz 1~ |
| Refrigerant            | R134a            |
| Application            | LBP              |
| Voltage range          | 187-254V         |
| Starting torque        | HST              |
| Approvals              | VDE              |
|                        | CCC              |
|                        | EAC              |

## Electrical accessories / wiring diagram

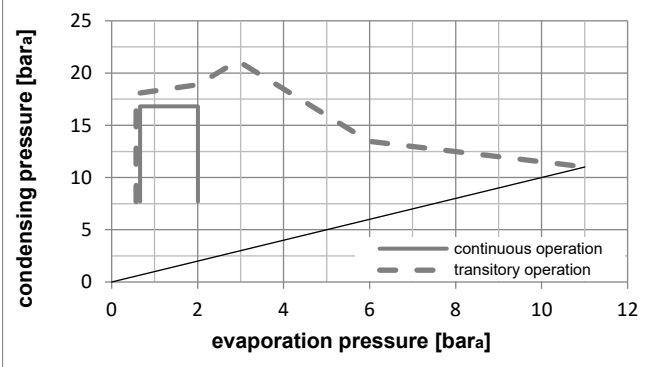
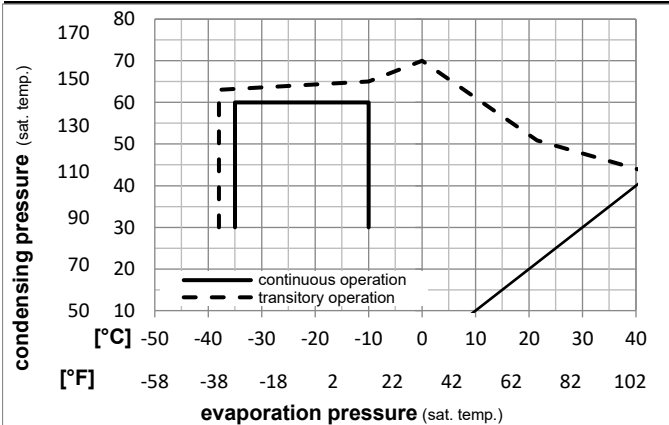


## Ambient temperatures / system cooling

|                           |              |
|---------------------------|--------------|
| Ambient temperature min.: | 10°C / 50°F  |
| Ambient temperature max.: | 43°C / 110°F |

| System cooling (n/a: outside limits) |            |     |     |
|--------------------------------------|------------|-----|-----|
| T ambient                            | LBP        | MBP | HBP |
| 32°C / 90°F                          | static     | n/a | n/a |
| 38°C / 100°F                         | fan 1,5m/s | n/a | n/a |
| 43°C / 110°F                         | fan 1,5m/s | n/a | n/a |

## Operation pressure range



## Components

|    |                        |          |
|----|------------------------|----------|
| a2 | current relay          | 117U6001 |
| c  | start capacitor (80µF) | 117U5015 |
| b  | plastic cover          | 103N2010 |
| d  | cord relief            | 103N1010 |

## Alternative components

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

## Model

Designation **NL8.4FT** **220-240V/50Hz** Conf. 1 Sales code: **105G6055**

## Optimization + standard conditions

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

|             | pe   | pc   | RGT  | Tliq | Cooling capacity | COP      | EER       | P1    | I    | Ref. mass flow |  |
|-------------|------|------|------|------|------------------|----------|-----------|-------|------|----------------|--|
|             | [°C] | [°C] | [°C] | [°C] | [W]              | [W/W]    | [Btu/Wh]  | [W]   | [A]  | [kg/h]         |  |
|             | [°F] | [°F] | [°F] | [°F] | [Btu/h]          | [kcal/h] | [kcal/Wh] | [W]   | [A]  | [kg/h]         |  |
| ASHRAE LBP  | -23  | 54   | 32   | 32   | 219,1            | 1,23     | 1,06      | 177,9 | 1,30 | 4,25           |  |
|             | -10  | 130  | 90   | 90   |                  |          |           |       |      |                |  |
| cecomaf LBP | -25  | 55   | 32   | 55   | 161,6            | 0,95     | 0,82      | 169,5 | 1,28 | 3,86           |  |
|             | -13  | 131  | 90   | 131  |                  |          |           |       |      |                |  |
| EN12900 LBP | -35  | 40   | 20   | 40   | 114,5            | 0,91     | 0,78      | 126,1 | 1,18 | 2,51           |  |
|             | -31  | 104  | 68   | 104  |                  |          |           |       |      |                |  |
| ARI540 LBP  | -23  | 49   | 4,4  | 49   | 180,3            | 1,02     | 0,88      | 176,9 | 1,30 | 4,76           |  |
|             | -10  | 120  | 40   | 120  |                  |          |           |       |      |                |  |
| AHAM LBP    | -23  | 41   | 32   | 32   | 245,5            | 1,43     | 1,23      | 171,7 | 1,29 | 4,77           |  |
|             | -10  | 105  | 90   | 90   |                  |          |           |       |      |                |  |
| opt         | -35  | 45   | 32   | 45   | 107,4            | 0,84     | 0,73      | 127,4 | 1,19 | 2,32           |  |
|             | -31  | 113  | 90   | 113  |                  |          |           |       |      |                |  |

## Performance tables

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

|                  | 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              | 107,4 | 367     | 92,5     | 0,84  | 2,88     | 0,73      | 127,4 | 1,19 | 2,32   |
| cond. pressure   | -30  | -22              | 145,8 | 498     | 125,4    | 1,00  | 3,41     | 0,86      | 146,0 | 1,23 | 3,15   |
| pc= 45/113       | -25  | -13              | 193,8 | 662     | 166,8    | 1,16  | 3,96     | 1,00      | 167,2 | 1,28 | 4,20   |
| return gas temp. | -23  | -10              | 212,6 | 726     | 183,0    | 1,22  | 4,15     | 1,05      | 174,8 | 1,30 | 4,61   |
| RGT= 32/90       | -20  | -4               | 252,9 | 864     | 217,6    | 1,33  | 4,54     | 1,14      | 190,2 | 1,35 | 5,49   |
| liquid temp      | -15  | 5                | 324,2 | 1107    | 279,0    | 1,51  | 5,17     | 1,30      | 214,3 | 1,42 | 7,07   |
| Tliq= 45/113     | -10  | 14               | 409,1 | 1397    | 352,1    | 1,71  | 5,85     | 1,47      | 238,8 | 1,51 | 8,95   |
| [°C / °F]        | -35  | -31              | 86,9  | 297     | 74,8     | 0,69  | 2,34     | 0,59      | 126,8 | 1,18 | 2,07   |
| cond. pressure   | -30  | -22              | 120,0 | 410     | 103,3    | 0,82  | 2,80     | 0,71      | 146,4 | 1,22 | 2,86   |
| pc= 55/131       | -25  | -13              | 161,6 | 552     | 139,0    | 0,95  | 3,26     | 0,82      | 169,5 | 1,28 | 3,86   |
| return gas temp  | -23  | -10              | 177,9 | 607     | 153,1    | 1,00  | 3,41     | 0,86      | 177,9 | 1,30 | 4,26   |
| RGT= 32/90       | -20  | -4               | 212,9 | 727     | 183,2    | 1,09  | 3,73     | 0,94      | 195,2 | 1,36 | 5,11   |
| liquid temp      | -15  | 5                | 275,3 | 940     | 236,9    | 1,24  | 4,22     | 1,06      | 222,8 | 1,45 | 6,63   |
| Tliq= 55/131     | -10  | 14               | 349,9 | 1195    | 301,1    | 1,39  | 4,75     | 1,20      | 251,6 | 1,55 | 8,46   |

## Model

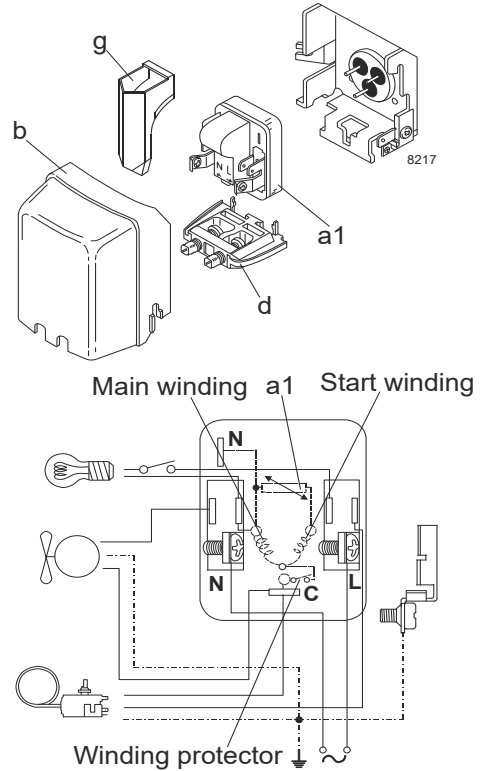
|             |                |                      |                |             |                 |
|-------------|----------------|----------------------|----------------|-------------|-----------------|
| Designation | <b>NL8.4FT</b> | <b>220-240V/50Hz</b> | <b>Conf. 2</b> | Sales code: | <b>105G6055</b> |
|-------------|----------------|----------------------|----------------|-------------|-----------------|

## Configuration

|                        |                  |
|------------------------|------------------|
| Motorconfiguration     | RSIR             |
| Power supply (nominal) | 220-240V/50Hz 1~ |
| Refrigerant            | R134a            |
| Application            | LBP              |
| Voltage range          | 187-254V         |
| Starting torque        | LST              |
| Approvals              | VDE              |
|                        | CCC              |
|                        | EAC              |

## Electrical accessories / wiring diagram

RSIR

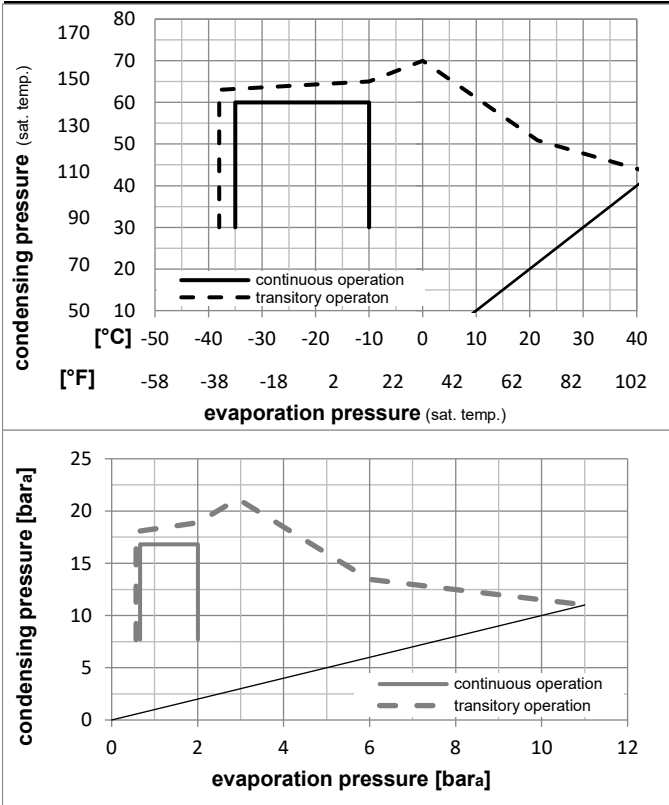


## Ambient temperatures / system cooling

|                           |              |
|---------------------------|--------------|
| Ambient temperature min.: | 10°C / 50°F  |
| Ambient temperature max.: | 43°C / 110°F |

| System cooling (n/a: outside limits) |            |     |     |
|--------------------------------------|------------|-----|-----|
| T ambient                            | LBP        | MBP | HBP |
| 32°C / 90°F                          | static     | n/a | n/a |
| 38°C / 100°F                         | fan 1,5m/s | n/a | n/a |
| 43°C / 110°F                         | fan 1,5m/s | n/a | n/a |

## Operation pressure range



## Components

|    |                                  |          |
|----|----------------------------------|----------|
| a1 | PTC starter (220V, 250hm, 4.8mm) | 103N0018 |
| b  | plastic cover                    | 103N2010 |
| d  | cord relief                      | 103N1010 |
| g  | protection screen for PTC        | 103N0476 |

## Alternative components

|    |                                  |          |
|----|----------------------------------|----------|
| a1 | PTC starter (220V, 250hm, 6.3mm) | 103N0011 |
| b  | plastic cover                    | 103N2011 |
| d  | cord relief                      | 103N1010 |
| g  | protection screen for PTC        | 103N0476 |

### Model

Designation **NL8.4FT** **220-240V/50Hz** Conf. 2 Sales code: **105G6055**

### Optimization + standard conditions

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

|      | Evaporating pressure (saturation temperature) |      |      |       | Condensing pressure (saturation temperature) |         |          | COP   | EER      | Power consumption |      |      | ASHRAE LBP  |  |
|------|---|------|------|-------|--|---------|----------|-------|----------|-------------------|------|------|-------------|--|
|      | pe  | pc   | RGT  | Tliq  | W  | [Btu/h] | [kcal/h] |       |          | P1                | I    | m    |             |  |
| [°C] | [°F]  | [°C] | [°F] | [°C]  | [°F]   | [°C]    | [°F]     | [W/W] | [Btu/Wh] | [kcal/Wh]         | [W]  | [A]  | [kg/h]      |  |
| -23  | 54  | 32   | 32   | 219,1 | 748  | 188,6   | 1,23     | 4,21  | 1,06     | 177,9             | 1,30 | 4,25 | ASHRAE LBP  |  |
| -10  | 130   | 90   | 90   |       |  |         |          |       |          |                   |      |      |             |  |
| -25  | 55  | 32   | 55   | 161,6 | 552  | 139,0   | 0,95     | 3,26  | 0,82     | 169,5             | 1,28 | 3,86 | cecomaf LBP |  |
| -13  | 131   | 90   | 131  |       |  |         |          |       |          |                   |      |      |             |  |
| -35  | 40  | 20   | 40   | 114,5 | 391  | 98,6    | 0,91     | 3,10  | 0,78     | 126,1             | 1,18 | 2,51 | EN12900 LBP |  |
| -31  | 104   | 68   | 104  |       |  |         |          |       |          |                   |      |      |             |  |
| -23  | 49  | 4,4  | 49   | 180,3 | 616  | 155,1   | 1,02     | 3,48  | 0,88     | 176,9             | 1,30 | 4,76 | ARI540 LBP  |  |
| -10  | 120   | 40   | 120  |       |  |         |          |       |          |                   |      |      |             |  |
| -23  | 41  | 32   | 32   | 245,5 | 839  | 211,3   | 1,43     | 4,88  | 1,23     | 171,7             | 1,29 | 4,77 | AHAM LBP    |  |
| -10  | 105   | 90   | 90   |       |  |         |          |       |          |                   |      |      |             |  |
| -35  | 45  | 32   | 45   | 107,4 | 367  | 92,5    | 0,84     | 2,88  | 0,73     | 127,4             | 1,19 | 2,32 | opt         |  |
| -31  | 113   | 90   | 113  |       |  |         |          |       |          |                   |      |      |             |  |

### Performance tables

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

|                  | pe   |      | Cooling capacity |         |          | COP  | EER   |          | P1    | I    | m    |
|------------------|------|------|------------------|---------|----------|------|-------|----------|-------|------|------|
|                  | [°C] | [°F] | [W]              | [Btu/h] | [kcal/h] |      | [W/W] | [Btu/Wh] |       |      |      |
| [°C / °F]        | -35  | -31  | 107,4            | 367     | 92,5     | 0,84 | 2,88  | 0,73     | 127,4 | 1,19 | 2,32 |
| cond. pressure   | -30  | -22  | 145,8            | 498     | 125,4    | 1,00 | 3,41  | 0,86     | 146,0 | 1,23 | 3,15 |
| pc= 45/113       | -25  | -13  | 193,8            | 662     | 166,8    | 1,16 | 3,96  | 1,00     | 167,2 | 1,28 | 4,20 |
| return gas temp. | -23  | -10  | 212,6            | 726     | 183,0    | 1,22 | 4,15  | 1,05     | 174,8 | 1,30 | 4,61 |
| RGT= 32/90       | -20  | -4   | 252,9            | 864     | 217,6    | 1,33 | 4,54  | 1,14     | 190,2 | 1,35 | 5,49 |
| liquid temp      | -15  | 5    | 324,2            | 1107    | 279,0    | 1,51 | 5,17  | 1,30     | 214,3 | 1,42 | 7,07 |
| Tliq= 45/113     | -10  | 14   | 409,1            | 1397    | 352,1    | 1,71 | 5,85  | 1,47     | 238,8 | 1,51 | 8,95 |
| [°C / °F]        | -35  | -31  | 86,9             | 297     | 74,8     | 0,69 | 2,34  | 0,59     | 126,8 | 1,18 | 2,07 |
| cond. pressure   | -30  | -22  | 120,0            | 410     | 103,3    | 0,82 | 2,80  | 0,71     | 146,4 | 1,22 | 2,86 |
| pc= 55/131       | -25  | -13  | 161,6            | 552     | 139,0    | 0,95 | 3,26  | 0,82     | 169,5 | 1,28 | 3,86 |
| return gas temp  | -23  | -10  | 177,9            | 607     | 153,1    | 1,00 | 3,41  | 0,86     | 177,9 | 1,30 | 4,26 |
| RGT= 32/90       | -20  | -4   | 212,9            | 727     | 183,2    | 1,09 | 3,73  | 0,94     | 195,2 | 1,36 | 5,11 |
| liquid temp      | -15  | 5    | 275,3            | 940     | 236,9    | 1,24 | 4,22  | 1,06     | 222,8 | 1,45 | 6,63 |
| Tliq= 55/131     | -10  | 14   | 349,9            | 1195    | 301,1    | 1,39 | 4,75  | 1,20     | 251,6 | 1,55 | 8,46 |



# NL Compressors

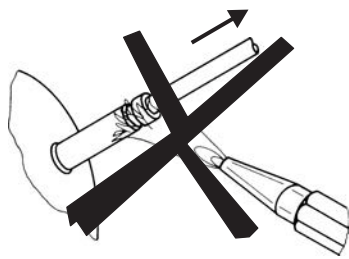
**SECOP**







## 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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