

## Model

|             |                |                         |             |                 |
|-------------|----------------|-------------------------|-------------|-----------------|
| Designation | <b>NL6.1FT</b> | <b>220-240V/50Hz 1~</b> | Sales code: | <b>105G6621</b> |
|-------------|----------------|-------------------------|-------------|-----------------|

## Compressor design

|                            |                                 |                       |                                 |
|----------------------------|---------------------------------|-----------------------|---------------------------------|
| Oil type                   | Polyolester                     | Refrigerant(s)        | <b>R134a</b>                    |
| Oil viscosity              | 22cSt                           | Displacement          | 6,13cm <sup>3</sup> / 0,37cu.in |
| Oil quantity               | 276cm <sup>3</sup> / 9,3fl.oz   | Compressors on pallet | 80                              |
| Refr. charge - tech. limit | 400g / 14,1oz                   |                       |                                 |
| Free gas volume comp.      | 2270cm <sup>3</sup> / 76,8fl.oz |                       |                                 |
| Weight                     | 9,3kg / 20,5lbs                 |                       |                                 |
| Motor protection           | 1# internal                     |                       |                                 |
| Winding resistance main    | 15,2Ω (at 25°C)                 |                       |                                 |
| Winding resistance aux     | 12,7Ω (at 25°C)                 |                       |                                 |
| Max. winding temp.         | 125°C / 257°F                   |                       |                                 |
| Max. discharge temp.       | 130°C / 266°F                   |                       |                                 |



## General - Configurations with NL6.1FT

|                        | <b>Conf. 1</b> | <b>Conf. 2</b> |
|------------------------|----------------|----------------|
| Motor configuration    | RSIR           | CSIR           |
| 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        | LST            | HST            |
| Note                   | - / -          |                |

## Applications with NL6.1FT

|                         | <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 NL6.1FT

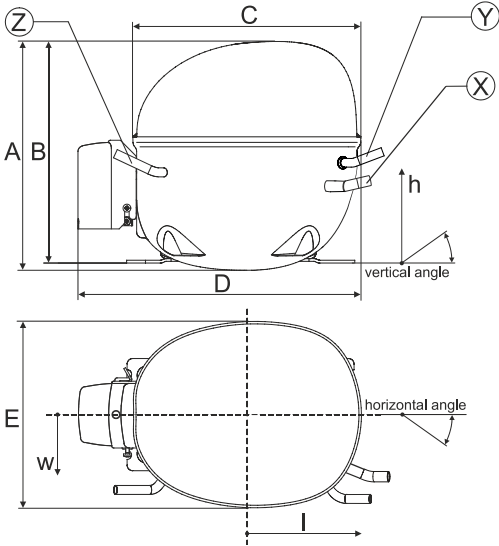
|                                    | <b>Conf. 1</b> | <b>Conf. 2</b> |
|------------------------------------|----------------|----------------|
| Starting device type               | PTC            | relay          |
| Run capacitor                      | -/-            | -/-            |
| Start capacitor                    | -/-            | 80μF           |
| LRA (locked rotor amps / 4s/ U(N)) | 5,7A           | 7,7A           |
| RLA (rated load amps / 1s/ U(N))   | 1,1A           | 1,1A           |
| Cut in current (U(N))              | 10,1A          | 10,1A          |

|             |         |                  |                      |
|-------------|---------|------------------|----------------------|
| Model       |         |                  |                      |
| Designation | NL6.1FT | 220-240V/50Hz 1~ | Sales code: 105G6621 |

Compressor dimensions

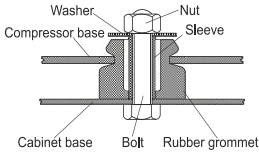
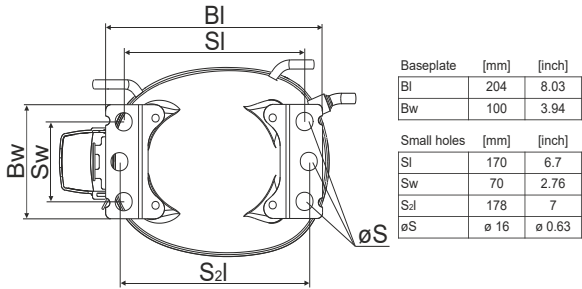
|         |                   |                  |
|---------|-------------------|------------------|
| Housing | A Height          | 187,5mm / 7,38in |
|         | B Height          | 181,5mm / 7,15in |
|         | C Length shell    | 205mm / 8,07in   |
|         | D Length w. cover | 254mm / 10in     |
|         | E Width           | 166mm / 6,54in   |

| Connectors       |                            | Suction<br>X | Discharge<br>Y | Process<br>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          |

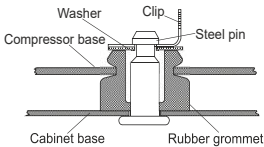


Compressor fixation

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

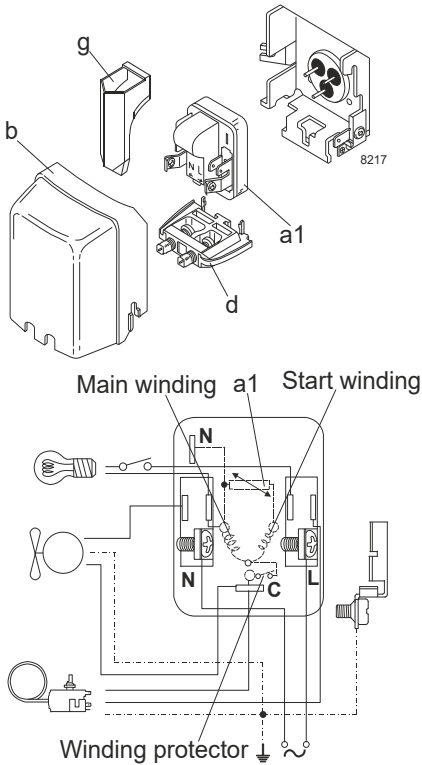
Provision for PE Grounding is located at the PE Stamp on the compressor

|             |         |               |         |             |          |
|-------------|---------|---------------|---------|-------------|----------|
| Model       |         |               |         |             |          |
| Designation | NL6.1FT | 220-240V/50Hz | Conf. 1 | Sales code: | 105G6621 |

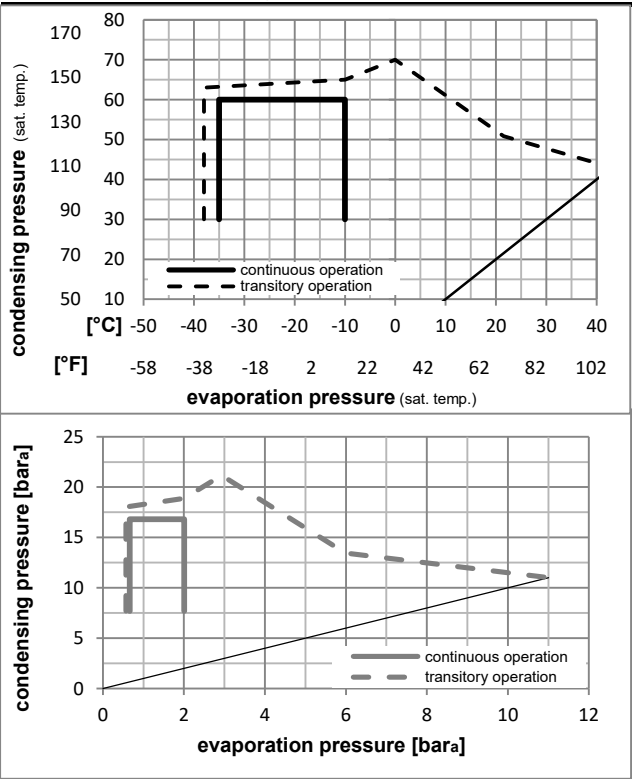
| Configuration          | Electrical accessories / wiring diagram |      |  |  |  |
|------------------------|-----------------------------------------|------|--|--|--|
| Motor configuration    | RSIR                                    | RSIR |  |  |  |
| Power supply (nominal) | 220-240V/50Hz 1~                        |      |  |  |  |
| Refrigerant            | R134a                                   |      |  |  |  |
| Application            | LBP                                     |      |  |  |  |
| Voltage range          | 187-254V                                |      |  |  |  |
| Starting torque        | LST                                     |      |  |  |  |
| Approvals              | VDE                                     |      |  |  |  |
|                        | CCC                                     |      |  |  |  |
|                        | EAC                                     |      |  |  |  |

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 pressure range



| Components |                                  |          |
|------------|----------------------------------|----------|
| a1         | PTC starter (220V, 25Ohm, 4.8mm) | 103N0018 |
| b          | plastic cover                    | 103N2010 |
| d          | cord relief                      | 103N1010 |
| g          | protection screen for PTC        | 103N0476 |

| Alternative components |                                  |          |
|------------------------|----------------------------------|----------|
| a1                     | PTC starter (220V, 25Ohm, 6.3mm) | 103N0011 |
| b                      | plastic cover                    | 103N2011 |
| d                      | cord relief                      | 103N1010 |
| g                      | protection screen for PTC        | 103N0476 |

## Model

Designation **NL6.1FT** **220-240V/50Hz** Conf. 1 Sales code: **105G6621**

## Optimization + standard conditions

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

| Evaporating pressure (saturation temperature) |     |     |      |     | Condensing pressure (saturation temperature) |          |       |          |           |      | Power consumption   |      |                |             |
|-----------------------------------------------|-----|-----|------|-----|----------------------------------------------|----------|-------|----------|-----------|------|---------------------|------|----------------|-------------|
| Return gas temp.                              |     |     |      |     | Liquid temp.                                 |          |       |          |           |      | Current consumption |      |                |             |
| Cooling capacity                              |     |     |      |     | COP                                          |          | EER   |          | P1        |      | I                   |      | Ref. mass flow |             |
| pe                                            | pc  | RGT | Tliq | [W] | [Btu/h]                                      | [kcal/h] | [W/W] | [Btu/Wh] | [kcal/Wh] | [W]  | [A]                 | ṁ    |                |             |
| [°C]                                          | -23 | 54  | 32   | 32  | 156,3                                        | 534      | 134,5 | 1,21     | 4,12      | 1,04 | 129,5               | 0,86 | 3,03           | ASHRAE LBP  |
| [°F]                                          | -10 | 130 | 90   | 90  |                                              |          |       |          |           |      |                     |      |                |             |
|                                               |     |     |      |     |                                              |          |       |          |           |      |                     |      |                |             |
| [°C]                                          | -25 | 55  | 32   | 55  | 114,9                                        | 392      | 98,9  | 0,93     | 3,18      | 0,80 | 123,3               | 0,84 | 2,75           | cecomaf LBP |
| [°F]                                          | -13 | 131 | 90   | 131 |                                              |          |       |          |           |      |                     |      |                |             |
|                                               |     |     |      |     |                                              |          |       |          |           |      |                     |      |                |             |
| [°C]                                          | -35 | 40  | 20   | 40  | 80,0                                         | 273      | 68,9  | 0,87     | 2,98      | 0,75 | 91,7                | 0,77 | 1,76           | EN12900 LBP |
| [°F]                                          | -31 | 104 | 68   | 104 |                                              |          |       |          |           |      |                     |      |                |             |
|                                               |     |     |      |     |                                              |          |       |          |           |      |                     |      |                |             |
| [°C]                                          | -23 | 49  | 4,4  | 49  | 128,8                                        | 440      | 110,8 | 1,00     | 3,41      | 0,86 | 128,8               | 0,87 | 3,40           | ARI540 LBP  |
| [°F]                                          | -10 | 120 | 40   | 120 |                                              |          |       |          |           |      |                     |      |                |             |
|                                               |     |     |      |     |                                              |          |       |          |           |      |                     |      |                |             |
| [°C]                                          | -23 | 41  | 32   | 32  | 175,8                                        | 601      | 151,3 | 1,41     | 4,82      | 1,22 | 124,5               | 0,86 | 3,41           | AHAM LBP    |
| [°F]                                          | -10 | 105 | 90   | 90  |                                              |          |       |          |           |      |                     |      |                |             |
|                                               |     |     |      |     |                                              |          |       |          |           |      |                     |      |                |             |
| [°C]                                          | -35 | 45  | 32   | 45  | 74,8                                         | 256      | 64,4  | 0,81     | 2,75      | 0,69 | 92,9                | 0,78 | 1,61           | opt         |
| [°F]                                          | -31 | 113 | 90   | 113 |                                              |          |       |          |           |      |                     |      |                |             |

## Performance tables

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

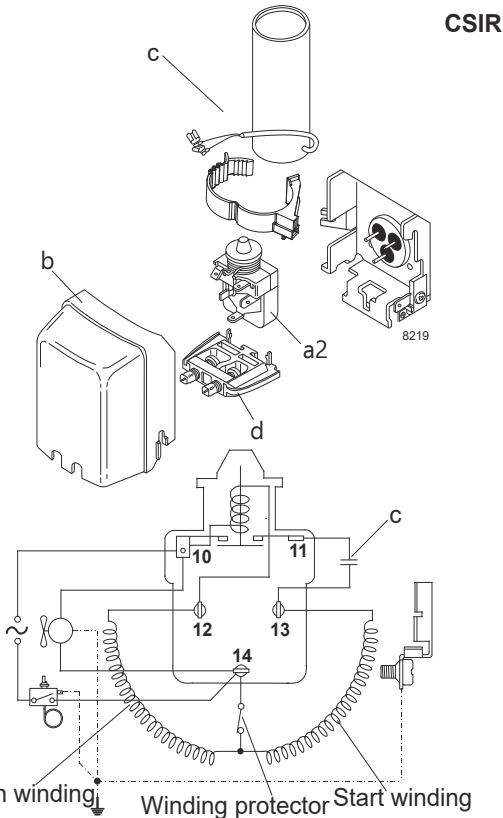
|                  | pe   |      | Cooling capacity |         |          | COP   | EER      |           | P1    | I    | m      |
|------------------|------|------|------------------|---------|----------|-------|----------|-----------|-------|------|--------|
|                  | [°C] | [°F] | [W]              | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [kcal/Wh] | [W]   | [A]  | [kg/h] |
| [°C / °F]        | -35  | -31  | 74,8             | 256     | 64,4     | 0,81  | 2,75     | 0,69      | 92,9  | 0,78 | 1,61   |
| cond. pressure   | -30  | -22  | 103,1            | 352     | 88,7     | 0,97  | 3,32     | 0,84      | 106,0 | 0,81 | 2,23   |
| pc= 45/113       | -25  | -13  | 138,3            | 472     | 119,1    | 1,14  | 3,89     | 0,98      | 121,4 | 0,85 | 3,00   |
| return gas temp. | -23  | -10  | 152,1            | 519     | 130,9    | 1,20  | 4,09     | 1,03      | 127,1 | 0,87 | 3,30   |
| RGT= 32/90       | -20  | -4   | 181,6            | 620     | 156,3    | 1,31  | 4,48     | 1,13      | 138,5 | 0,90 | 3,95   |
| liquid temp      | -15  | 5    | 233,8            | 799     | 201,2    | 1,49  | 5,10     | 1,29      | 156,5 | 0,96 | 5,10   |
| Tliq= 45/113     | -10  | 14   | 296,0            | 1011    | 254,7    | 1,69  | 5,78     | 1,46      | 174,9 | 1,03 | 6,48   |
| [°C / °F]        | -35  | -31  | 60,1             | 205     | 51,7     | 0,65  | 2,21     | 0,56      | 92,7  | 0,77 | 1,43   |
| cond. pressure   | -30  | -22  | 84,4             | 288     | 72,7     | 0,79  | 2,71     | 0,68      | 106,6 | 0,80 | 2,01   |
| pc= 55/131       | -25  | -13  | 114,9            | 392     | 98,9     | 0,93  | 3,18     | 0,80      | 123,3 | 0,84 | 2,75   |
| return gas temp  | -23  | -10  | 126,8            | 433     | 109,2    | 0,98  | 3,34     | 0,84      | 129,5 | 0,85 | 3,04   |
| RGT= 32/90       | -20  | -4   | 152,4            | 521     | 131,2    | 1,07  | 3,66     | 0,92      | 142,2 | 0,89 | 3,66   |
| liquid temp      | -15  | 5    | 198,0            | 676     | 170,4    | 1,22  | 4,16     | 1,05      | 162,7 | 0,96 | 4,77   |
| Tliq= 55/131     | -10  | 14   | 252,5            | 862     | 217,3    | 1,37  | 4,69     | 1,18      | 184,1 | 1,04 | 6,11   |

|             |         |               |         |             |          |
|-------------|---------|---------------|---------|-------------|----------|
| Model       |         |               |         |             |          |
| Designation | NL6.1FT | 220-240V/50Hz | Conf. 2 | Sales code: | 105G6621 |

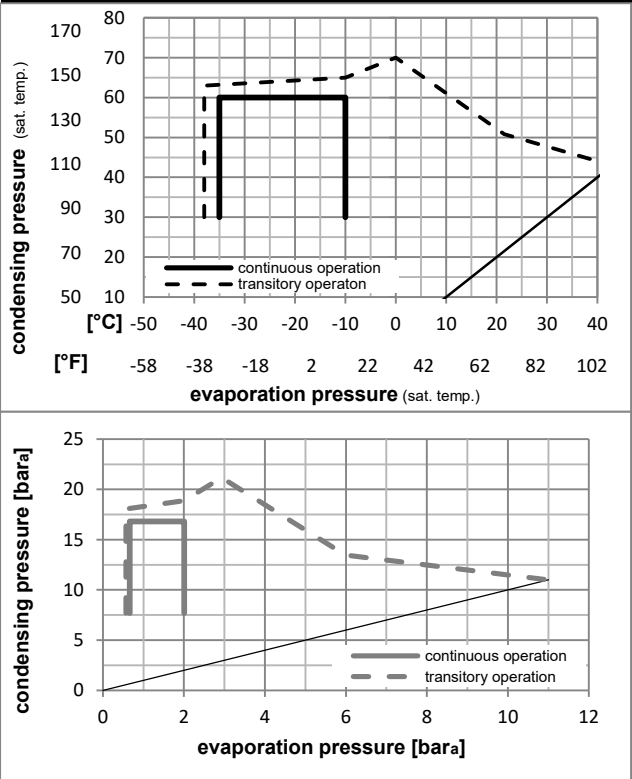
| Configuration          | Electrical accessories / wiring diagram |  |  |  |  |
|------------------------|-----------------------------------------|--|--|--|--|
| Motor configuration    | CSIR                                    |  |  |  |  |
| Power supply (nominal) | 220-240V/50Hz 1~                        |  |  |  |  |
| Refrigerant            | R134a                                   |  |  |  |  |
| Application            | LBP                                     |  |  |  |  |
| Voltage range          | 187-254V                                |  |  |  |  |
| Starting torque        | HST                                     |  |  |  |  |
| Approvals              | VDE                                     |  |  |  |  |
|                        | CCC                                     |  |  |  |  |
|                        | EAC                                     |  |  |  |  |

### 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 pressure range



### Components

|    |                        |          |
|----|------------------------|----------|
| a2 | relay                  | 117U6000 |
| c  | start capacitor (80µF) | 117U5015 |
| b  | plastic cover          | 103N2010 |
| d  | cord relief            | 103N1010 |

### Alternative components

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

## Model

Designation **NL6.1FT** **220-240V/50Hz** Conf. 2 Sales code: **105G6621**

## Optimization + standard conditions

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

| Evaporating pressure (saturation temperature) |     |     |      | Condensing pressure (saturation temperature) |         |          | Return gas temp. |          |           | Liquid temp. |       |        | Cooling capacity |             |   | COP |     |        | EER |   |   | Power consumption |     |        | Current consumption |   |   | Ref. mass flow |     |        |
|-----------------------------------------------|-----|-----|------|----------------------------------------------|---------|----------|------------------|----------|-----------|--------------|-------|--------|------------------|-------------|---|-----|-----|--------|-----|---|---|-------------------|-----|--------|---------------------|---|---|----------------|-----|--------|
| pe                                            | pc  | RGT | Tliq | [W]                                          | [Btu/h] | [kcal/h] | [W/W]            | [Btu/Wh] | [kcal/Wh] | [W]          | [A]   | [kg/h] | P1               | I           | m | [W] | [A] | [kg/h] | P1  | I | m | [W]               | [A] | [kg/h] | P1                  | I | m | [W]            | [A] | [kg/h] |
| [°C]                                          | -23 | 54  | 32   | 32                                           | 156,3   | 534      | 134,5            | 1,21     | 4,12      | 1,04         | 129,5 | 0,86   | 3,03             | ASHRAE LBP  |   |     |     |        |     |   |   |                   |     |        |                     |   |   |                |     |        |
| [°F]                                          | -10 | 130 | 90   | 90                                           |         |          |                  |          |           |              |       |        |                  |             |   |     |     |        |     |   |   |                   |     |        |                     |   |   |                |     |        |
| [°C]                                          | -25 | 55  | 32   | 55                                           | 114,9   | 392      | 98,9             | 0,93     | 3,18      | 0,80         | 123,3 | 0,84   | 2,75             | cecomaf LBP |   |     |     |        |     |   |   |                   |     |        |                     |   |   |                |     |        |
| [°F]                                          | -13 | 131 | 90   | 131                                          |         |          |                  |          |           |              |       |        |                  |             |   |     |     |        |     |   |   |                   |     |        |                     |   |   |                |     |        |
| [°C]                                          | -35 | 40  | 20   | 40                                           | 80,0    | 273      | 68,9             | 0,87     | 2,98      | 0,75         | 91,7  | 0,77   | 1,76             | EN12900 LBP |   |     |     |        |     |   |   |                   |     |        |                     |   |   |                |     |        |
| [°F]                                          | -31 | 104 | 68   | 104                                          |         |          |                  |          |           |              |       |        |                  |             |   |     |     |        |     |   |   |                   |     |        |                     |   |   |                |     |        |
| [°C]                                          | -23 | 49  | 4,4  | 49                                           | 128,8   | 440      | 110,8            | 1,00     | 3,41      | 0,86         | 128,8 | 0,87   | 3,40             | ARI540 LBP  |   |     |     |        |     |   |   |                   |     |        |                     |   |   |                |     |        |
| [°F]                                          | -10 | 120 | 40   | 120                                          |         |          |                  |          |           |              |       |        |                  |             |   |     |     |        |     |   |   |                   |     |        |                     |   |   |                |     |        |
| [°C]                                          | -23 | 41  | 32   | 32                                           | 175,8   | 601      | 151,3            | 1,41     | 4,82      | 1,22         | 124,5 | 0,86   | 3,41             | AHAM LBP    |   |     |     |        |     |   |   |                   |     |        |                     |   |   |                |     |        |
| [°F]                                          | -10 | 105 | 90   | 90                                           |         |          |                  |          |           |              |       |        |                  |             |   |     |     |        |     |   |   |                   |     |        |                     |   |   |                |     |        |
| [°C]                                          | -35 | 45  | 32   | 45                                           | 74,8    | 256      | 64,4             | 0,81     | 2,75      | 0,69         | 92,9  | 0,78   | 1,61             | opt         |   |     |     |        |     |   |   |                   |     |        |                     |   |   |                |     |        |
| [°F]                                          | -31 | 113 | 90   | 113                                          |         |          |                  |          |           |              |       |        |                  |             |   |     |     |        |     |   |   |                   |     |        |                     |   |   |                |     |        |

## Performance tables

R134a, 220V/50Hz, CSIR, static, 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] | [W] | [A] | [kg/h] | [W] | [A] |
| [°C / °F]        | -35  | -31  | 74,8             | 256     | 64,4     | 0,81  | 2,75     | 0,69      | 92,9  | 0,78 | 1,61   |     |     |        |     |     |
| cond. pressure   | -30  | -22  | 103,1            | 352     | 88,7     | 0,97  | 3,32     | 0,84      | 106,0 | 0,81 | 2,23   |     |     |        |     |     |
| pc= 45/113       | -25  | -13  | 138,3            | 472     | 119,1    | 1,14  | 3,89     | 0,98      | 121,4 | 0,85 | 3,00   |     |     |        |     |     |
| return gas temp. | -23  | -10  | 152,1            | 519     | 130,9    | 1,20  | 4,09     | 1,03      | 127,1 | 0,87 | 3,30   |     |     |        |     |     |
| RGT= 32/90       | -20  | -4   | 181,6            | 620     | 156,3    | 1,31  | 4,48     | 1,13      | 138,5 | 0,90 | 3,95   |     |     |        |     |     |
| liquid temp      | -15  | 5    | 233,8            | 799     | 201,2    | 1,49  | 5,10     | 1,29      | 156,5 | 0,96 | 5,10   |     |     |        |     |     |
| Tliq= 45/113     | -10  | 14   | 296,0            | 1011    | 254,7    | 1,69  | 5,78     | 1,46      | 174,9 | 1,03 | 6,48   |     |     |        |     |     |
| [°C / °F]        | -35  | -31  | 60,1             | 205     | 51,7     | 0,65  | 2,21     | 0,56      | 92,7  | 0,77 | 1,43   |     |     |        |     |     |
| cond. pressure   | -30  | -22  | 84,4             | 288     | 72,7     | 0,79  | 2,71     | 0,68      | 106,6 | 0,80 | 2,01   |     |     |        |     |     |
| pc= 55/131       | -25  | -13  | 114,9            | 392     | 98,9     | 0,93  | 3,18     | 0,80      | 123,3 | 0,84 | 2,75   |     |     |        |     |     |
| return gas temp  | -23  | -10  | 126,8            | 433     | 109,2    | 0,98  | 3,34     | 0,84      | 129,5 | 0,85 | 3,04   |     |     |        |     |     |
| RGT= 32/90       | -20  | -4   | 152,4            | 521     | 131,2    | 1,07  | 3,66     | 0,92      | 142,2 | 0,89 | 3,66   |     |     |        |     |     |
| liquid temp      | -15  | 5    | 198,0            | 676     | 170,4    | 1,22  | 4,16     | 1,05      | 162,7 | 0,96 | 4,77   |     |     |        |     |     |
| Tliq= 55/131     | -10  | 14   | 252,5            | 862     | 217,3    | 1,37  | 4,69     | 1,18      | 184,1 | 1,04 | 6,11   |     |     |        |     |     |