

## Single Pack NF10FX 220-240V 50Hz / 208-230V 60Hz CSIR

Single pack code number: **195B4479**

| Position | Title                                                   | Code     | Amount |
|----------|---------------------------------------------------------|----------|--------|
| 1        | Compressor NF10FX                                       | 105G6846 | 1      |
| 2        | Starting relay (overload protector MRP56EN-6)           | 117U4139 | 1      |
| 3        | Starting capacitor (125 $\mu$ F 220V, 6.3mm)            | 117U5018 | 1      |
| 4        | Cord relief                                             | 117U0317 | 1      |
| 5        | Cord relief                                             | 117U0349 | 1      |
| 6        | Cover                                                   | 117U1021 | 1      |
| 7        | Bolt joint for one compressor   M6   $\varnothing$ 16mm | 118-1917 | 1      |

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## Model

|             |               |                                          |             |                 |
|-------------|---------------|------------------------------------------|-------------|-----------------|
| Designation | <b>NF10FX</b> | <b>220-240V/50Hz 1~ 208-230V/60Hz 1~</b> | Sales code: | <b>105G6846</b> |
|-------------|---------------|------------------------------------------|-------------|-----------------|

## Compressor design

|                            |                                 |                       |                                  |
|----------------------------|---------------------------------|-----------------------|----------------------------------|
| Oil type                   | Polyolester                     | Refrigerant(s)        | <b>R134a, R513A, 0</b>           |
| Oil viscosity              | 32cST                           | Displacement          | 10,09cm <sup>3</sup> / 0,62cu.in |
| Oil quantity               | 298cm <sup>3</sup> / 10,1fl.oz  | Compressors on pallet | 80                               |
| Refr. charge - tech. limit | 460g / 16,2oz                   |                       |                                  |
| Free gas volume comp.      | 2360cm <sup>3</sup> / 79,8fl.oz |                       |                                  |
| Weight                     | 10,5kg / 23,1lbs                |                       |                                  |
| Motor protection           | external                        |                       |                                  |
| Winding resistance main    | 4,5Ω (at 25°C)                  |                       |                                  |
| Winding resistance aux     | 12,8Ω (at 25°C)                 |                       |                                  |
| Max. winding temp.         | 125°C / 257°F                   |                       |                                  |
| Max. discharge temp.       | 110°C / 230°F                   |                       |                                  |



## General - Configurations with NF10FX

|                        | <b>Conf. 1</b>    | <b>Conf. 2</b>    | <b>Conf. 3</b>    | <b>Conf. 4</b>    |
|------------------------|-------------------|-------------------|-------------------|-------------------|
| Motorconfiguration     | CSIR              | CSIR              | CSIR              | CSIR              |
| Power supply (nominal) | 220-240V/50Hz     | 220-240V/50Hz     | 208-230V/60Hz     | 208-230V/60Hz     |
| Number of phases       | 1                 | 1                 | 1                 | 1                 |
| Voltage range          | 198-242V          | 198-242V          | 198-242V          | 198-242V          |
| Approvals              | UL, VDE, CCC, EAC | UL, VDE, CCC, EAC | UL, VDE, CCC, EAC | UL, VDE, CCC, EAC |
| Starting torque        | HST               | HST               | HST               | HST               |
| Note                   | - / -             |                   |                   |                   |

## Applications with NF10FX

|                         | <b>Conf. 1</b> | <b>Conf. 2</b> | <b>Conf. 3</b> | <b>Conf. 4</b> |
|-------------------------|----------------|----------------|----------------|----------------|
| Refrigerant             | R134a          | R513A          | R134a          | R513A          |
| Application             | LBP+MBP        | LBP+MBP        | LBP+MBP        | LBP+MBP        |
| System cooling          | fan 1,5m/s     | fan 1,5m/s     | fan 3m/s       | fan 3m/s       |
| Hot gas defrost         | OK             | OK             | OK             | OK             |
| Long interval pull down | OK             | OK             | OK             | OK             |

## Electrical data - Configurations with NF10FX

|                                    | <b>Conf. 1</b> | <b>Conf. 2</b> | <b>Conf. 3</b> | <b>Conf. 4</b> |
|------------------------------------|----------------|----------------|----------------|----------------|
| Starting device type               | relay          | relay          | relay          | relay          |
| Run capacitor                      | - / -          | - / -          | - / -          | - / -          |
| Start capacitor                    | 125μF          | 125μF          | 125μF          | 125μF          |
| LRA (locked rotor amps / 4s/ U(N)) | 20A            | 20A            | 19,4A          | 19,4A          |
| RLA (rated load amps / 1s/ U(N))   | 3,7A           | 3,7A           | 3,24A          | 3,24A          |
| Cut in current (U(N))              | 20A            | 20A            | 19,4A          | 19,4A          |

## Model

Designation

**NF10FX**

220-240V/50Hz 1~ 208-230V/60Hz 1~

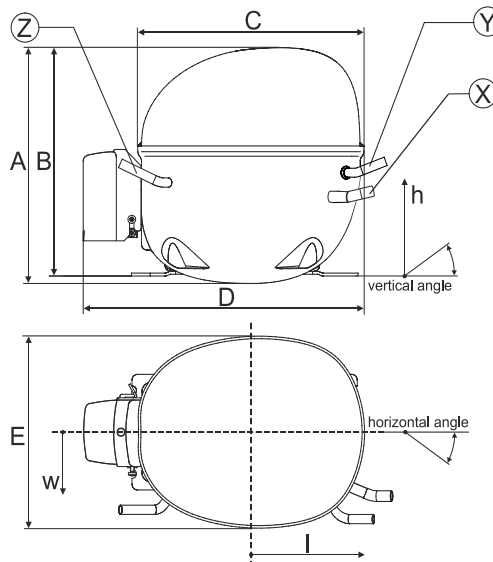
Sales code:

**105G6846**

## 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°          | 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

| 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 | <b>NF10FX</b> | <b>220-240V/50Hz</b> | <b>Conf. 1</b> | Sales code: | <b>105G6846</b> |
|-------------|---------------|----------------------|----------------|-------------|-----------------|

## Configuration

|                        |                  |        |
|------------------------|------------------|--------|
| Motor configuration    | CSIR             |        |
| Power supply (nominal) | 220-240V/50Hz 1~ |        |
| Refrigerant            | R134a            |        |
| Application            | LBP+MBP          |        |
| Voltage range          | 198-242V         |        |
| Starting torque        | HST              |        |
| Approvals              | UL               | SA3693 |
|                        | VDE              |        |
|                        | CCC              |        |
|                        | EAC              |        |

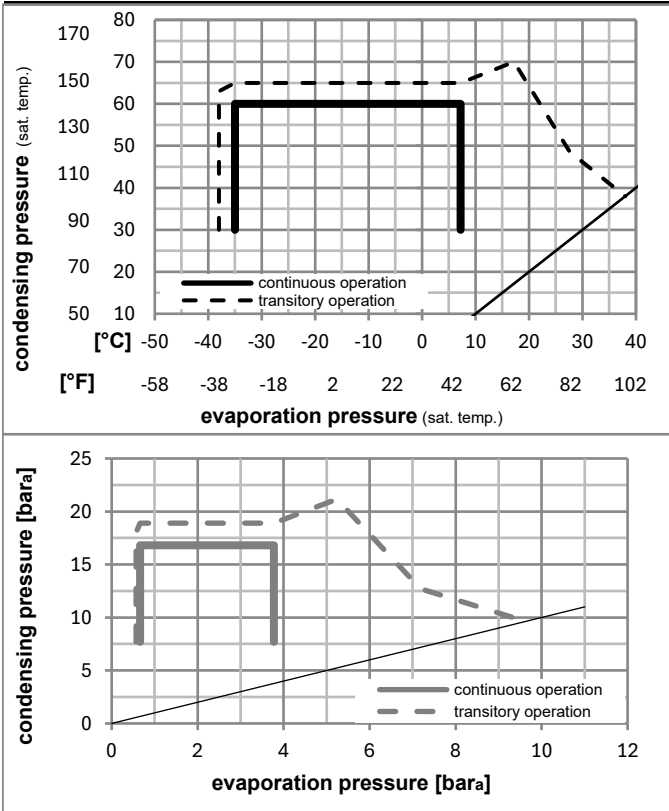
## Electrical accessories / wiring diagram



## Ambient/ machine room temperatures minimum /maximum

|                                 |                        |
|---------------------------------|------------------------|
| Ambient temperature range:      | 10 - 38°C / 50 - 101°F |
| Machine room temperature range: | 10 - 43°C / 50 - 110°F |
| Compressor cooling:             | fan 1,5m/s             |

## Operation pressure range



## Components

|      |                                 |          |
|------|---------------------------------|----------|
| a2   | relay (protector: TI MRP56EN-6) | 117U4139 |
| c    | start capacitor                 | 117U5018 |
| b    | plastic cover                   | 117U1021 |
| d/dc | cord relief                     | 117U0349 |
| d/dc | cord relief                     | 117U0349 |

## Alternative components

|      |                                 |          |
|------|---------------------------------|----------|
| a2   | relay (protector: TI MRP56EN-6) | 117U4139 |
| c    | start capacitor                 | 117U5018 |
| b    | plastic cover                   | 117U1021 |
| d/dc | cord relief                     | 117U0349 |
| d    | cord relief                     | 117U0317 |

## Model

Designation **NF10FX** **220-240V/50Hz** Conf. 1 Sales code: **105G6846**

## Optimization + standard conditions

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

|      | 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] |                                               |     |     |      |                  |         |          | [W/W] | [Btu/Wh] | [kcal/Wh] | [W]               | [A]  | [kg/h]     |             |
| [°F] | -23                                           | 54  | 32  | 32   | 266,5            | 910     | 229,4    | 0,94  | 3,22     | 0,81      | 282,7             | 2,75 | 5,18       | ASHRAE LBP  |
|      | -10                                           | 130 | 90  | 90   |                  |         |          |       |          |           |                   |      |            |             |
| [°C] | -25                                           | 55  | 32  | 55   | 196,4            | 671     | 169,0    | 0,72  | 2,47     | 0,62      | 271,1             | 2,73 | 4,70       | cecomaf LBP |
| [°F] | -13                                           | 131 | 90  | 131  |                  |         |          |       |          |           |                   |      |            |             |
| [°C] | -35                                           | 40  | 20  | 40   | 137,8            | 471     | 118,6    | 0,65  | 2,24     | 0,56      | 210,6             | 2,67 | 3,02       | EN12900 LBP |
| [°F] | -31                                           | 104 | 68  | 104  |                  |         |          |       |          |           |                   |      |            |             |
| [°C] | -7                                            | 54  | 35  | 46   | 556,9            | 1902    | 479,3    | 1,42  | 4,86     | 1,23      | 391,1             | 2,96 | 12,15      | ASHRAE MBP  |
| [°F] | 20                                            | 130 | 95  | 115  |                  |         |          |       |          |           |                   |      |            |             |
| [°C] | -10                                           | 55  | 32  | 55   | 432,5            | 1477    | 372,2    | 1,17  | 4,01     | 1,01      | 368,4             | 2,91 | 10,46      | cecomaf MBP |
| [°F] | 14                                            | 131 | 90  | 131  |                  |         |          |       |          |           |                   |      |            |             |
| [°C] | -10                                           | 45  | 20  | 45   | 479,1            | 1636    | 412,3    | 1,34  | 4,58     | 1,15      | 357,3             | 2,85 | 11,21      | EN12900 MBP |
| [°F] | 14                                            | 113 | 68  | 113  |                  |         |          |       |          |           |                   |      |            |             |

## Performance tables

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

|                  | pe   |      | Cooling capacity |         |          | COP  | EER  | P1   | I     | m    |       |
|------------------|------|------|------------------|---------|----------|------|------|------|-------|------|-------|
|                  | [°C] | [°F] | [W]              | [Btu/h] | [kcal/h] |      |      |      |       |      |       |
| [°C / °F]        | -35  | -31  | 128,4            | 439     | 110,5    | 0,60 | 2,05 | 0,52 | 213,8 | 2,67 | 2,77  |
| cond. pressure   | -23  | -10  | 254,9            | 870     | 219,3    | 0,91 | 3,11 | 0,78 | 279,6 | 2,74 | 5,53  |
| pc= 45/113       | -15  | 5    | 392,2            | 1340    | 337,6    | 1,20 | 4,08 | 1,03 | 328,2 | 2,81 | 8,55  |
| return gas temp. | -9   | 15   | 509,8            | 1741    | 438,7    | 1,41 | 4,83 | 1,22 | 360,5 | 2,86 | 11,16 |
| RGT= 32/90       | -4   | 25   | 650,6            | 2222    | 559,9    | 1,66 | 5,67 | 1,43 | 392,2 | 2,92 | 14,32 |
| liquid temp      | 0    | 32   | 764,2            | 2610    | 657,7    | 1,85 | 6,31 | 1,59 | 413,8 | 2,96 | 16,90 |
| Tliq= 45/113     | 7,2  | 45   | 1010,7           | 3452    | 869,9    | 2,24 | 7,63 | 1,92 | 452,2 | 3,05 | 22,58 |
| [°C / °F]        | -35  | -31  | 103,5            | 353     | 89,0     | 0,49 | 1,67 | 0,42 | 211,0 | 2,65 | 2,46  |
| cond. pressure   | -23  | -10  | 216,4            | 739     | 186,2    | 0,77 | 2,62 | 0,66 | 281,6 | 2,74 | 5,18  |
| pc= 55/131       | -15  | 5    | 338,8            | 1157    | 291,6    | 1,01 | 3,45 | 0,87 | 335,4 | 2,84 | 8,16  |
| return gas temp  | -9   | 15   | 443,9            | 1516    | 382,1    | 1,19 | 4,08 | 1,03 | 372,1 | 2,92 | 10,74 |
| RGT= 32/90       | -4   | 25   | 570,4            | 1948    | 490,9    | 1,40 | 4,77 | 1,20 | 408,8 | 3,01 | 13,88 |
| liquid temp      | 0    | 32   | 672,8            | 2298    | 579,0    | 1,55 | 5,29 | 1,33 | 434,3 | 3,07 | 16,46 |
| Tliq= 55/131     | 7,2  | 45   | 896,1            | 3060    | 771,2    | 1,86 | 6,36 | 1,60 | 480,8 | 3,21 | 22,16 |

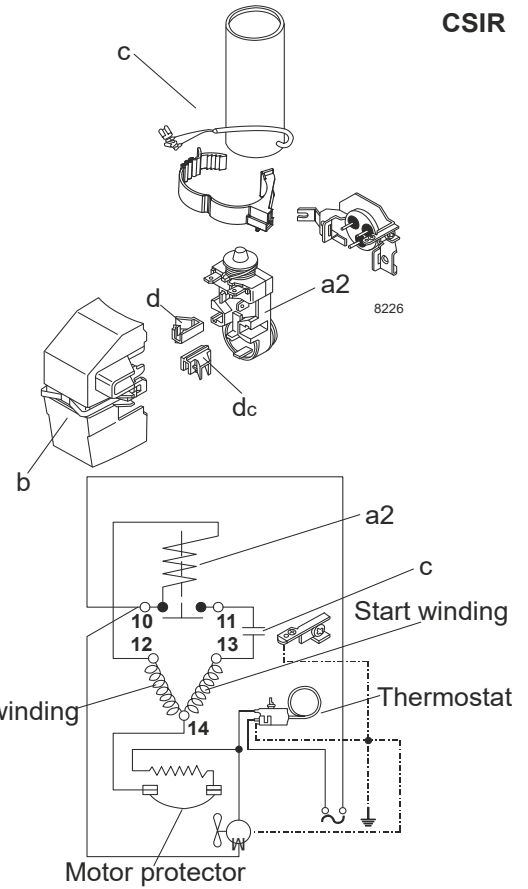
## Model

|             |               |                      |                |             |                 |
|-------------|---------------|----------------------|----------------|-------------|-----------------|
| Designation | <b>NF10FX</b> | <b>220-240V/50Hz</b> | <b>Conf. 2</b> | Sales code: | <b>105G6846</b> |
|-------------|---------------|----------------------|----------------|-------------|-----------------|

## Configuration

|                        |                  |        |
|------------------------|------------------|--------|
| Motor configuration    | CSIR             |        |
| Power supply (nominal) | 220-240V/50Hz 1~ |        |
| Refrigerant            | R513A            |        |
| Application            | LBP+MBP          |        |
| Voltage range          | 198-242V         |        |
| Starting torque        | HST              |        |
| Approvals              | UL               | SA3693 |
|                        | VDE              |        |
|                        | CCC              |        |
|                        | EAC              |        |

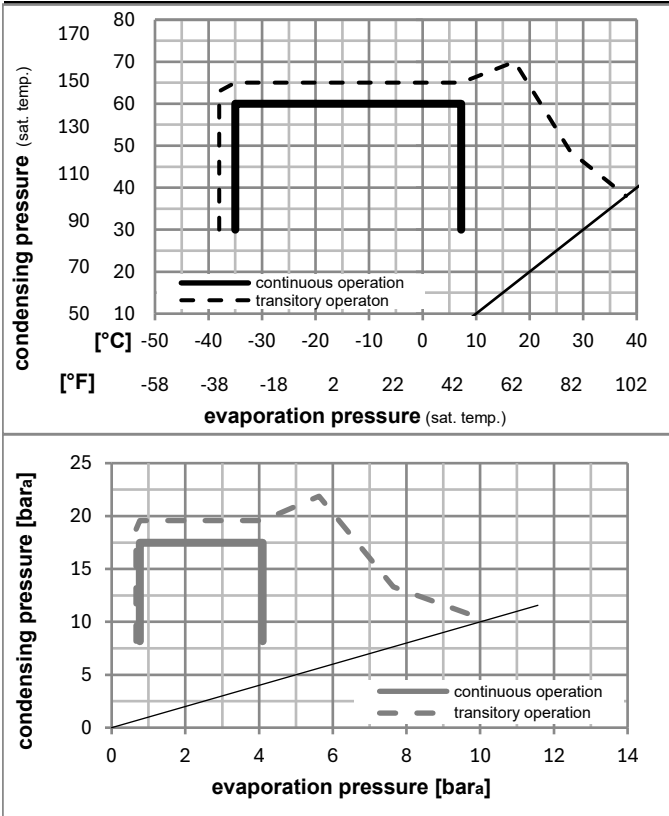
## Electrical accessories / wiring diagram



## Ambient/ machine room temperatures minimum /maximum

|                                 |                        |
|---------------------------------|------------------------|
| Ambient temperature range:      | 10 - 38°C / 50 - 101°F |
| Machine room temperature range: | 10 - 43°C / 50 - 110°F |
| Compressor cooling:             | fan 1,5m/s             |

## Operation pressure range



## Components

|      |                                 |          |
|------|---------------------------------|----------|
| a2   | relay (protector: TI MRP56EN-6) | 117U4139 |
| c    | start capacitor                 | 117U5018 |
| b    | plastic cover                   | 117U1021 |
| d/dc | cord relief                     | 117U0349 |
| d/dc | cord relief                     | 117U0349 |

## Alternative components

|      |                                 |          |
|------|---------------------------------|----------|
| a2   | relay (protector: TI MRP56EN-6) | 117U4139 |
| c    | start capacitor                 | 117U5018 |
| b    | plastic cover                   | 117U1021 |
| d/dc | cord relief                     | 117U0349 |
| d    | cord relief                     | 117U0317 |

### Model

Designation **NF10FX** **220-240V/50Hz** Conf. **2** Sales code: **105G6846**

### Optimization + standard conditions

R513A, 220V/50Hz, CSIR, fan 1,5m/s, UL, 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]         |  |
| ASHRAE LBP  | -23  | 54   | 32   | 32   | 294,2            | 0,95     | 3,25      | 309,2 | 2,77 | 6,33           |  |
|             | [°F] | [°F] | [°F] | [°F] | [Btu/h]          | [kcal/h] | [kcal/Wh] | [W]   | [A]  | [kg/h]         |  |
|             | -10  | 130  | 90   | 90   |                  |          |           |       |      |                |  |
| cecomaf LBP | -25  | 55   | 32   | 55   | 211,0            | 0,71     | 2,42      | 297,7 | 2,75 | 5,78           |  |
|             | [°F] | [°F] | [°F] | [°F] | [W]              | [W/W]    | [Btu/Wh]  | [W]   | [A]  | [kg/h]         |  |
|             | -13  | 131  | 90   | 131  |                  |          |           |       |      |                |  |
| EN12900 LBP | -35  | 40   | 20   | 40   | 153,1            | 0,65     | 2,23      | 234,3 | 2,62 | 3,79           |  |
|             | [°F] | [°F] | [°F] | [°F] | [W]              | [W/W]    | [Btu/Wh]  | [W]   | [A]  | [kg/h]         |  |
|             | -31  | 104  | 68   | 104  |                  |          |           |       |      |                |  |
| ASHRAE MBP  | -7   | 54   | 35   | 46   | 583,4            | 1,40     | 4,78      | 416,4 | 2,98 | 14,29          |  |
|             | [°F] | [°F] | [°F] | [°F] | [W]              | [W/W]    | [Btu/Wh]  | [W]   | [A]  | [kg/h]         |  |
|             | 20   | 130  | 95   | 115  |                  |          |           |       |      |                |  |
| cecomaf MBP | -10  | 55   | 32   | 55   | 447,7            | 1,14     | 3,88      | 393,9 | 2,94 | 12,38          |  |
|             | [°F] | [°F] | [°F] | [°F] | [W]              | [W/W]    | [Btu/Wh]  | [W]   | [A]  | [kg/h]         |  |
|             | 14   | 131  | 90   | 131  |                  |          |           |       |      |                |  |
| EN12900 MBP | -10  | 45   | 20   | 45   | 499,9            | 1,31     | 4,48      | 381,3 | 2,91 | 13,25          |  |
|             | [°F] | [°F] | [°F] | [°F] | [W]              | [W/W]    | [Btu/Wh]  | [W]   | [A]  | [kg/h]         |  |
|             | 14   | 113  | 68   | 113  |                  |          |           |       |      |                |  |

### Performance tables

R513A, 220V/50Hz, CSIR, fan 1,5m/s, UL, 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              | 143,8  | 491     | 123,8    | 0,60  | 2,05     | 0,52      | 239,0 | 2,63 | 3,49   |
| cond. pressure   | -23  | -10              | 275,5  | 941     | 237,1    | 0,91  | 3,09     | 0,78      | 304,3 | 2,76 | 6,72   |
| pc= 45/113       | -15  | 5                | 416,3  | 1422    | 358,3    | 1,18  | 4,03     | 1,02      | 352,5 | 2,86 | 10,20  |
| return gas temp. | -9   | 15               | 535,6  | 1829    | 461,0    | 1,39  | 4,76     | 1,20      | 384,5 | 2,92 | 13,17  |
| RGT= 32/90       | -4   | 25               | 677,5  | 2314    | 583,1    | 1,63  | 5,57     | 1,40      | 415,7 | 2,98 | 16,74  |
| liquid temp      | 0    | 32               | 791,3  | 2703    | 681,0    | 1,81  | 6,19     | 1,56      | 436,9 | 3,02 | 19,63  |
| Tliq= 45/113     | 7,2  | 45               | 1037,0 | 3542    | 892,5    | 2,19  | 7,47     | 1,88      | 474,2 | 3,10 | 25,94  |
| [°C / °F]        | -35  | -31              | 116,0  | 396     | 99,8     | 0,49  | 1,66     | 0,42      | 238,4 | 2,63 | 3,16   |
| cond. pressure   | -23  | -10              | 231,2  | 790     | 199,0    | 0,75  | 2,56     | 0,65      | 308,1 | 2,77 | 6,34   |
| pc= 55/131       | -15  | 5                | 354,3  | 1210    | 305,0    | 0,98  | 3,35     | 0,84      | 361,4 | 2,87 | 9,76   |
| return gas temp  | -9   | 15               | 459,1  | 1568    | 395,1    | 1,15  | 3,94     | 0,99      | 397,6 | 2,95 | 12,70  |
| RGT= 32/90       | -4   | 25               | 584,3  | 1995    | 502,8    | 1,35  | 4,60     | 1,16      | 433,8 | 3,02 | 16,25  |
| liquid temp      | 0    | 32               | 685,1  | 2340    | 589,6    | 1,49  | 5,10     | 1,28      | 458,9 | 3,07 | 19,13  |
| Tliq= 55/131     | 7,2  | 45               | 903,8  | 3087    | 777,8    | 1,79  | 6,12     | 1,54      | 504,3 | 3,16 | 25,48  |

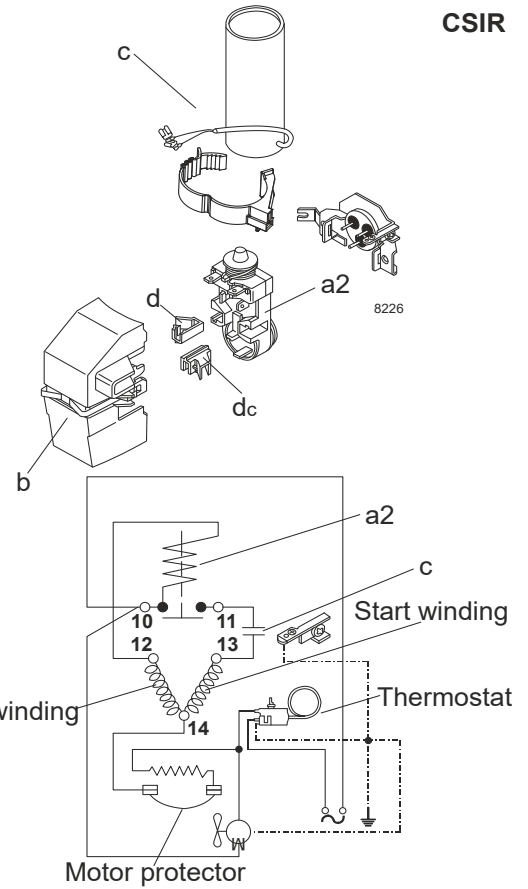
## Model

|             |               |                      |                |             |                 |
|-------------|---------------|----------------------|----------------|-------------|-----------------|
| Designation | <b>NF10FX</b> | <b>208-230V/60Hz</b> | <b>Conf. 3</b> | Sales code: | <b>105G6846</b> |
|-------------|---------------|----------------------|----------------|-------------|-----------------|

## Configuration

|                        |                  |        |
|------------------------|------------------|--------|
| Motor configuration    | CSIR             |        |
| Power supply (nominal) | 208-230V/60Hz 1~ |        |
| Refrigerant            | R134a            |        |
| Application            | LBP+MBP          |        |
| Voltage range          | 198-242V         |        |
| Starting torque        | HST              |        |
| Approvals              | UL               | SA3693 |
|                        | VDE              |        |
|                        | CCC              |        |
|                        | EAC              |        |

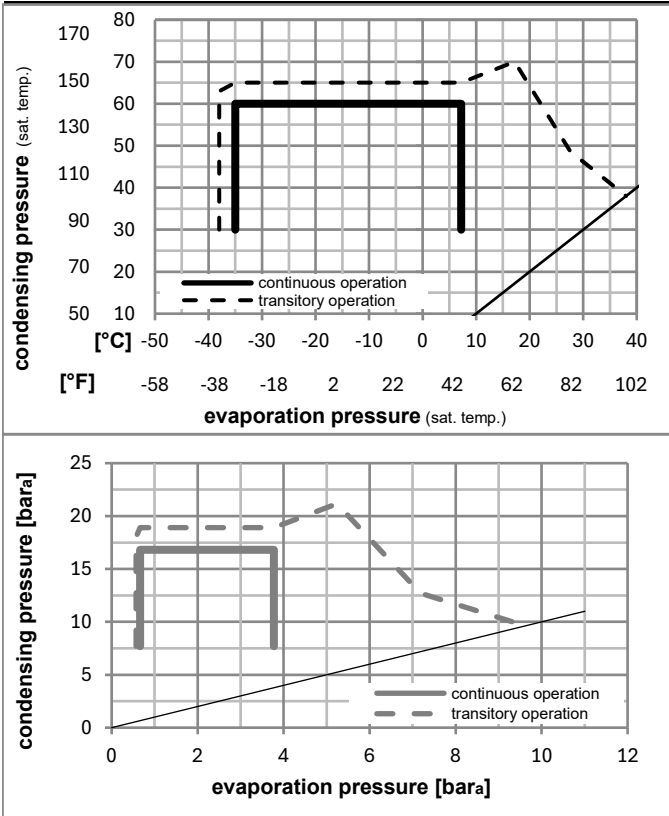
## Electrical accessories / wiring diagram



## Ambient/ machine room temperatures minimum /maximum

|                                 |                        |
|---------------------------------|------------------------|
| Ambient temperature range:      | 10 - 38°C / 50 - 101°F |
| Machine room temperature range: | 10 - 43°C / 50 - 110°F |
| Compressor cooling:             | fan 3m/s               |

## Operation pressure range



## Components

|      |                                 |          |
|------|---------------------------------|----------|
| a2   | relay (protector: TI MRP56EN-6) | 117U4139 |
| c    | start capacitor                 | 117U5018 |
| b    | plastic cover                   | 117U1021 |
| d/dc | cord relief                     | 117U0349 |
| d/dc | cord relief                     | 117U0349 |

## Alternative components

|      |                                 |          |
|------|---------------------------------|----------|
| a2   | relay (protector: TI MRP56EN-6) | 117U4139 |
| c    | start capacitor                 | 117U5018 |
| b    | plastic cover                   | 117U1021 |
| d/dc | cord relief                     | 117U0349 |
| d    | cord relief                     | 117U0317 |



### Model

Designation **NF10FX** **208-230V/60Hz** Conf. **3** Sales code: **105G6846**

### Optimization + standard conditions

R134a, 230V/60Hz, CSIR, fan 3m/s, UL, VDE, CCC, EAC

|  | Evaporating pressure (saturation temperature) |      |      |      | Cooling capacity |         |          | COP  | EER   |          |           | Power consumption |        |                | ASHRAE LBP |
|--|-----------------------------------------------|------|------|------|------------------|---------|----------|------|-------|----------|-----------|-------------------|--------|----------------|------------|
|  | pe                                            | pc   | RGT  | Tliq | [W]              | [Btu/h] | [kcal/h] |      | [W/W] | [Btu/Wh] | [kcal/Wh] | P1                | I      | Ref. mass flow |            |
|  | [°C]                                          | [°C] | [°C] | [°C] |                  |         |          |      |       |          | [W]       | [A]               | [kg/h] |                |            |
|  | -23                                           | 54   | 32   | 32   | 299,0            | 1021    | 257,4    | 1,14 | 3,90  | 0,98     | 262,0     | 1,86              | 5,81   |                |            |
|  | [°F]                                          |      |      |      |                  |         |          |      |       |          |           |                   |        |                |            |
|  | -10                                           | 130  | 90   | 90   |                  |         |          |      |       |          |           |                   |        |                |            |
|  | [°C]                                          |      |      |      |                  |         |          |      |       |          |           |                   |        |                |            |
|  | -25                                           | 55   | 32   | 55   | 223,1            | 762     | 192,0    | 0,89 | 3,03  | 0,76     | 251,1     | 1,82              | 5,33   | cecomaf LBP    |            |
|  | [°F]                                          |      |      |      |                  |         |          |      |       |          |           |                   |        |                |            |
|  | -13                                           | 131  | 90   | 131  |                  |         |          |      |       |          |           |                   |        |                |            |
|  | [°C]                                          |      |      |      |                  |         |          |      |       |          |           |                   |        |                |            |
|  | -35                                           | 40   | 20   | 40   | 157,5            | 538     | 135,5    | 0,92 | 3,14  | 0,79     | 171,0     | 1,67              | 3,46   | EN12900 LBP    |            |
|  | [°F]                                          |      |      |      |                  |         |          |      |       |          |           |                   |        |                |            |
|  | -31                                           | 104  | 68   | 104  |                  |         |          |      |       |          |           |                   |        |                |            |
|  | [°C]                                          |      |      |      |                  |         |          |      |       |          |           |                   |        |                |            |
|  | -7                                            | 54   | 35   | 46   | 584,8            | 1997    | 503,3    | 1,53 | 5,23  | 1,32     | 381,6     | 2,27              | 12,76  | ASHRAE MBP     |            |
|  | [°F]                                          |      |      |      |                  |         |          |      |       |          |           |                   |        |                |            |
|  | 20                                            | 130  | 95   | 115  |                  |         |          |      |       |          |           |                   |        |                |            |
|  | [°C]                                          |      |      |      |                  |         |          |      |       |          |           |                   |        |                |            |
|  | -10                                           | 55   | 32   | 55   | 455,7            | 1556    | 392,2    | 1,28 | 4,37  | 1,10     | 356,6     | 2,18              | 11,02  | cecomaf MBP    |            |
|  | [°F]                                          |      |      |      |                  |         |          |      |       |          |           |                   |        |                |            |
|  | 14                                            | 131  | 90   | 131  |                  |         |          |      |       |          |           |                   |        |                |            |
|  | [°C]                                          |      |      |      |                  |         |          |      |       |          |           |                   |        |                |            |
|  | -10                                           | 45   | 20   | 45   | 505,0            | 1725    | 434,6    | 1,48 | 5,07  | 1,28     | 340,3     | 2,12              | 11,82  | EN12900 MBP    |            |
|  | [°F]                                          |      |      |      |                  |         |          |      |       |          |           |                   |        |                |            |
|  | 14                                            | 113  | 68   | 113  |                  |         |          |      |       |          |           |                   |        |                |            |
|  | [°C]                                          |      |      |      |                  |         |          |      |       |          |           |                   |        |                |            |

### Performance tables

R134a, 230V/60Hz, CSIR, fan 3m/s, UL, 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  | 144,8            | 495     | 124,6    | 0,83  | 2,83     | 0,71      | 174,7 | 1,66 | 3,12   |
| cond. pressure   | -23  | -10  | 276,5            | 944     | 238,0    | 1,08  | 3,70     | 0,93      | 255,5 | 1,84 | 6,00   |
| pc= 45/113       | -15  | 5    | 415,1            | 1418    | 357,3    | 1,35  | 4,60     | 1,16      | 308,5 | 2,01 | 9,05   |
| return gas temp. | -9   | 15   | 537,4            | 1835    | 462,5    | 1,56  | 5,34     | 1,34      | 343,9 | 2,13 | 11,77  |
| RGT= 32/90       | -4   | 25   | 689,2            | 2354    | 593,2    | 1,81  | 6,18     | 1,56      | 381,0 | 2,26 | 15,17  |
| liquid temp      | 0    | 32   | 815,7            | 2786    | 702,0    | 2,00  | 6,82     | 1,72      | 408,5 | 2,36 | 18,04  |
| Tliq= 45/113     | 7,2  | 45   | 1100,9           | 3760    | 947,4    | 2,37  | 8,09     | 2,04      | 465,0 | 2,56 | 24,59  |
| [°C / °F]        | -35  | -31  | 121,9            | 416     | 104,9    | 0,67  | 2,28     | 0,57      | 182,6 | 1,62 | 2,90   |
| cond. pressure   | -23  | -10  | 242,9            | 830     | 209,1    | 0,93  | 3,16     | 0,80      | 262,3 | 1,86 | 5,81   |
| pc= 55/131       | -15  | 5    | 362,7            | 1239    | 312,1    | 1,13  | 3,87     | 0,98      | 319,8 | 2,05 | 8,73   |
| return gas temp  | -9   | 15   | 467,3            | 1596    | 402,1    | 1,30  | 4,42     | 1,11      | 360,8 | 2,20 | 11,30  |
| RGT= 32/90       | -4   | 25   | 597,2            | 2040    | 514,0    | 1,47  | 5,03     | 1,27      | 405,3 | 2,35 | 14,54  |
| liquid temp      | 0    | 32   | 705,9            | 2411    | 607,5    | 1,61  | 5,49     | 1,38      | 439,3 | 2,47 | 17,27  |
| Tliq= 55/131     | 7,2  | 45   | 952,7            | 3254    | 819,9    | 1,87  | 6,38     | 1,61      | 510,2 | 2,70 | 23,56  |

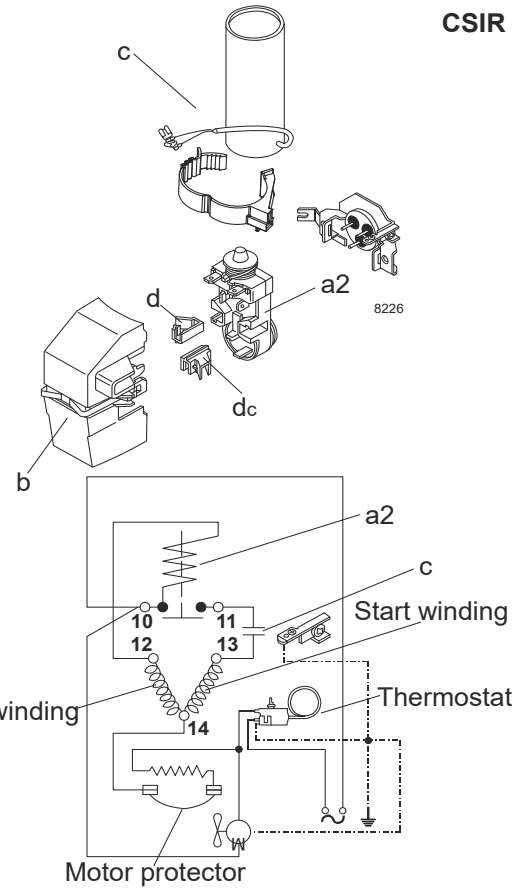
## Model

|             |               |                      |                |             |                 |
|-------------|---------------|----------------------|----------------|-------------|-----------------|
| Designation | <b>NF10FX</b> | <b>208-230V/60Hz</b> | <b>Conf. 4</b> | Sales code: | <b>105G6846</b> |
|-------------|---------------|----------------------|----------------|-------------|-----------------|

## Configuration

|                        |                  |        |
|------------------------|------------------|--------|
| Motor configuration    | CSIR             |        |
| Power supply (nominal) | 208-230V/60Hz 1~ |        |
| Refrigerant            | R513A            |        |
| Application            | LBP+MBP          |        |
| Voltage range          | 198-242V         |        |
| Starting torque        | HST              |        |
| Approvals              | UL               | SA3693 |
|                        | VDE              |        |
|                        | CCC              |        |
|                        | EAC              |        |

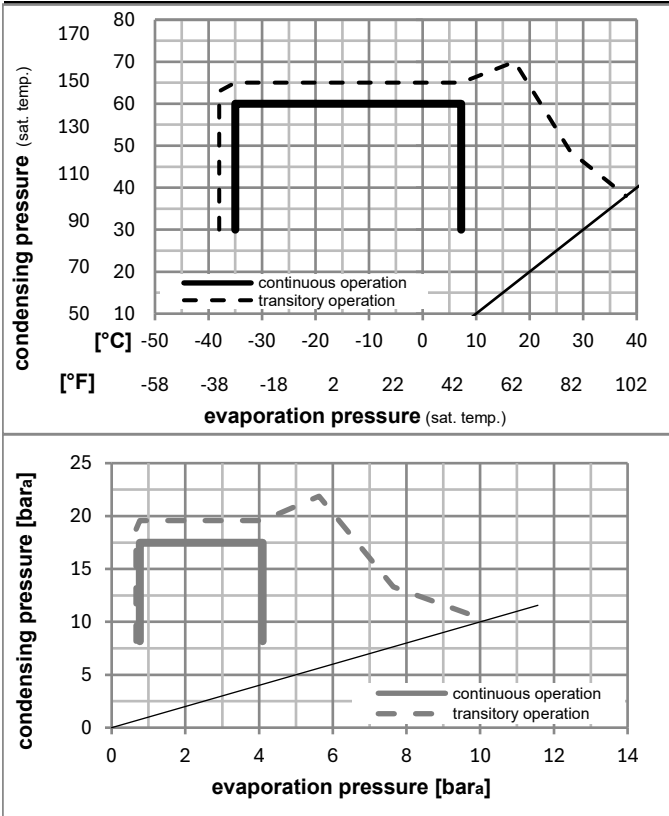
## Electrical accessories / wiring diagram



## Ambient/ machine room temperatures minimum /maximum

|                                 |                        |
|---------------------------------|------------------------|
| Ambient temperature range:      | 10 - 38°C / 50 - 101°F |
| Machine room temperature range: | 10 - 43°C / 50 - 110°F |
| Compressor cooling:             | fan 3m/s               |

## Operation pressure range



## Components

|      |                                 |          |
|------|---------------------------------|----------|
| a2   | relay (protector: TI MRP56EN-6) | 117U4139 |
| c    | start capacitor                 | 117U5018 |
| b    | plastic cover                   | 117U1021 |
| d/dc | cord relief                     | 117U0349 |
| d/dc | cord relief                     | 117U0349 |

## Alternative components

|      |                                 |          |
|------|---------------------------------|----------|
| a2   | relay (protector: TI MRP56EN-6) | 117U4139 |
| c    | start capacitor                 | 117U5018 |
| b    | plastic cover                   | 117U1021 |
| d/dc | cord relief                     | 117U0349 |
| d    | cord relief                     | 117U0317 |

## Model

Designation **NF10FX** **208-230V/60Hz** Conf. 4 Sales code: **105G6846**

## Optimization + standard conditions

R513A, 230V/60Hz, CSIR, fan 3m/s, UL, VDE, CCC, EAC

|      | Evaporating pressure (saturation temperature) |     |     |      | Condensing pressure (saturation temperature) |         |          | Return gas temp. | Liquid temp. | Cooling capacity | COP   | EER  | Power consumption |             |   | Ref. mass flow |
|------|-----------------------------------------------|-----|-----|------|----------------------------------------------|---------|----------|------------------|--------------|------------------|-------|------|-------------------|-------------|---|----------------|
|      | pe                                            | pc  | RGT | Tliq | [W]                                          | [Btu/h] | [kcal/h] |                  |              |                  |       |      | P1                | I           | m |                |
| [°C] |                                               |     |     |      |                                              |         |          |                  |              |                  |       |      |                   |             |   |                |
| [°F] |                                               |     |     |      |                                              |         |          |                  |              |                  |       |      |                   |             |   |                |
|      | -23                                           | 54  | 32  | 32   | 330,1                                        | 1127    | 284,1    | 1,15             | 3,94         | 0,99             | 286,4 | 1,95 | 7,10              | ASHRAE LBP  |   |                |
|      | -10                                           | 130 | 90  | 90   |                                              |         |          |                  |              |                  |       |      |                   |             |   |                |
|      | -25                                           | 55  | 32  | 55   | 239,6                                        | 818     | 206,2    | 0,87             | 2,97         | 0,75             | 275,6 | 1,91 | 6,56              | cecomaf LBP |   |                |
|      | -13                                           | 131 | 90  | 131  |                                              |         |          |                  |              |                  |       |      |                   |             |   |                |
|      | -35                                           | 40  | 20  | 40   | 176,3                                        | 602     | 151,7    | 0,93             | 3,18         | 0,80             | 189,6 | 1,63 | 4,36              | EN12900 LBP |   |                |
|      | -31                                           | 104 | 68  | 104  |                                              |         |          |                  |              |                  |       |      |                   |             |   |                |
|      | -7                                            | 54  | 35  | 46   | 613,1                                        | 2094    | 527,7    | 1,51             | 5,15         | 1,30             | 406,4 | 2,34 | 15,02             | ASHRAE MBP  |   |                |
|      | 20                                            | 130 | 95  | 115  |                                              |         |          |                  |              |                  |       |      |                   |             |   |                |
|      | -10                                           | 55  | 32  | 55   | 472,3                                        | 1613    | 406,4    | 1,24             | 4,23         | 1,07             | 381,4 | 2,26 | 13,06             | cecomaf MBP |   |                |
|      | 14                                            | 131 | 90  | 131  |                                              |         |          |                  |              |                  |       |      |                   |             |   |                |
|      | -10                                           | 45  | 20  | 45   | 527,3                                        | 1801    | 453,8    | 1,45             | 4,96         | 1,25             | 363,2 | 2,20 | 13,98             | EN12900 MBP |   |                |
|      | 14                                            | 113 | 68  | 113  |                                              |         |          |                  |              |                  |       |      |                   |             |   |                |

## Performance tables

R513A, 230V/60Hz, CSIR, fan 3m/s, UL, 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  | 163,6            | 559     | 140,8    | 0,84  | 2,87     | 0,72      | 194,6 | 1,64 | 3,97   |
| cond. pressure   | -23  | -10  | 299,1            | 1021    | 257,4    | 1,08  | 3,68     | 0,93      | 277,7 | 1,92 | 7,30   |
| pc= 45/113       | -15  | 5    | 440,9            | 1506    | 379,4    | 1,33  | 4,55     | 1,15      | 331,3 | 2,10 | 10,80  |
| return gas temp. | -9   | 15   | 565,1            | 1930    | 486,3    | 1,54  | 5,26     | 1,33      | 366,8 | 2,21 | 13,90  |
| RGT= 32/90       | -4   | 25   | 718,2            | 2453    | 618,1    | 1,78  | 6,07     | 1,53      | 403,9 | 2,33 | 17,75  |
| liquid temp      | 0    | 32   | 845,2            | 2886    | 727,4    | 1,96  | 6,69     | 1,69      | 431,5 | 2,43 | 20,96  |
| Tliq= 45/113     | 7,2  | 45   | 1130,0           | 3859    | 972,5    | 2,32  | 7,91     | 1,99      | 488,0 | 2,61 | 28,26  |
| [°C / °F]        | -35  | -31  | 137,5            | 469     | 118,3    | 0,67  | 2,28     | 0,57      | 206,0 | 1,68 | 3,75   |
| cond. pressure   | -23  | -10  | 259,6            | 887     | 223,4    | 0,90  | 3,09     | 0,78      | 286,9 | 1,95 | 7,12   |
| pc= 55/131       | -15  | 5    | 379,7            | 1297    | 326,8    | 1,10  | 3,76     | 0,95      | 344,6 | 2,14 | 10,46  |
| return gas temp  | -9   | 15   | 483,7            | 1652    | 416,3    | 1,25  | 4,28     | 1,08      | 385,7 | 2,27 | 13,38  |
| RGT= 32/90       | -4   | 25   | 612,2            | 2091    | 526,9    | 1,42  | 4,86     | 1,22      | 430,4 | 2,42 | 17,02  |
| liquid temp      | 0    | 32   | 719,2            | 2456    | 619,0    | 1,55  | 5,29     | 1,33      | 464,6 | 2,54 | 20,09  |
| Tliq= 55/131     | 7,2  | 45   | 961,2            | 3283    | 827,2    | 1,79  | 6,12     | 1,54      | 536,1 | 2,77 | 27,10  |



# NF Compressors





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