

## Model

|             |              |                                   |             |                 |
|-------------|--------------|-----------------------------------|-------------|-----------------|
| Designation | <b>SC18G</b> | 220-240V/50Hz 1~ 220-240V/60Hz 1~ | Sales code: | <b>104G8824</b> |
|-------------|--------------|-----------------------------------|-------------|-----------------|

## Compressor design

|                            |                                 |                       |                                  |
|----------------------------|---------------------------------|-----------------------|----------------------------------|
| Oil type                   | Polyolester                     | Refrigerant(s)        | <b>R134a</b>                     |
| Oil viscosity              | 22cST                           | Displacement          | 17,69cm <sup>3</sup> / 1,08cu.in |
| Oil quantity               | 550cm <sup>3</sup> / 18,6fl.oz  | Compressors on pallet | 80                               |
| Refr. charge - tech. limit | 1300g / 45,9oz                  |                       |                                  |
| Free gas volume comp.      | 1460cm <sup>3</sup> / 49,4fl.oz |                       |                                  |
| Weight                     | 13,5kg / 29,8lbs                |                       |                                  |
| Motor protection           | 1# internal                     |                       |                                  |
| Winding resistance main    | 3,7Ω (at 25°C)                  |                       |                                  |
| Winding resistance aux     | 14Ω (at 25°C)                   |                       |                                  |
| Max. winding temp.         | 125°C / 257°F                   |                       |                                  |
| Max. discharge temp.       | 130°C / 266°F                   |                       |                                  |



## General - Configurations with SC18G

|                        | <b>Conf. 1</b> | <b>Conf. 2</b> |
|------------------------|----------------|----------------|
| Motorconfiguration     | CSIR           | CSIR           |
| Power supply (nominal) | 220-240V/50Hz  | 208-230V/60Hz  |
| Number of phases       | 1              | 1              |
| Voltage range          | 187-254V       | 198-254V       |
| Approvals              | VDE, UL, CCC   | VDE, UL, CCC   |
| Starting torque        | HST            | HST            |
| Note                   | - / -          |                |

## Applications with SC18G

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

## Electrical data - Configurations with SC18G

|                              | <b>Conf. 1</b> | <b>Conf. 2</b> |
|------------------------------|----------------|----------------|
| Starting device type         | relay          | relay          |
| Run capacitor                | - / -          | - / -          |
| Start capacitor              | 80μF           | 80μF           |
| LRA (locked rotor amps / 4s) | 20,43A         | 19A            |
| RLA (rated load amps / 1s)   | 3,9A           | 3,5A           |
| Cut in current               | 20,43A         | 19A            |

## Model

Designation

**SC18G**

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

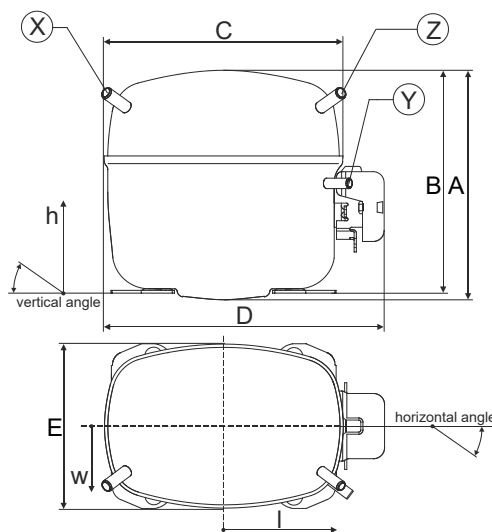
Sales code:

**104G8824**

## Compressor dimensions

| Housing | A Height          | 219mm / 8,62in  |
|---------|-------------------|-----------------|
|         | B Height          | 213mm / 8,39in  |
|         | C Length shell    | 218mm / 8,58in  |
|         | D Length w. cover | 255mm / 10,04in |
|         | E Width           | 151mm / 5,94in  |

| Connectors                 | Suction        | Discharge    | Process      |
|----------------------------|----------------|--------------|--------------|
|                            | X              | Y            | Z            |
| Diameter [mm]              | øi 10,11-10,29 | øi 6,41-6,59 | øi 6,41-6,59 |
| (i:inside, o:outside) [in] | øi 0,4-0,41    | øi 0,25-0,26 | øi 0,25-0,26 |
| Material                   | copper         | copper       | copper       |
| Horizontal angle ±2°       | 37°            | 37°          | 143°         |
| Vertical angle ±2°         | 30°            | 0°           | 150°         |
| Position l/h/w [mm]        | 107/193/55     | 115/110/63   | -107/193/55  |
| [in]                       | 4,2/7,6/2,2    | 4,5/4,3/2,5  | -4,2/7,6/2,2 |
| Straight tube l. [mm]      | 12             | 12           | 12           |
| [in]                       | 0,5            | 0,5          | 0,5          |



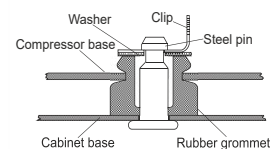
## Compressor fixation



### Bolt joint



### Snap-on



## Mounting accessories

|                            | one comp. | multi pack |
|----------------------------|-----------|------------|
| Bolt joint   M6   ø16mm    | 118-1917  | 118-1918   |
| Bolt joint   ø1/4"   ø16mm | 118-1946  |            |
| Bolt joint   ø1/4"   ø19mm | 118-1949  |            |
| Snap-on   ø7,3   ø16mm     | 118-1947  | 118-1919   |

## Application notes

LRA value on compressor label and datasheet may differ due to different test conditions for UL approval.

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

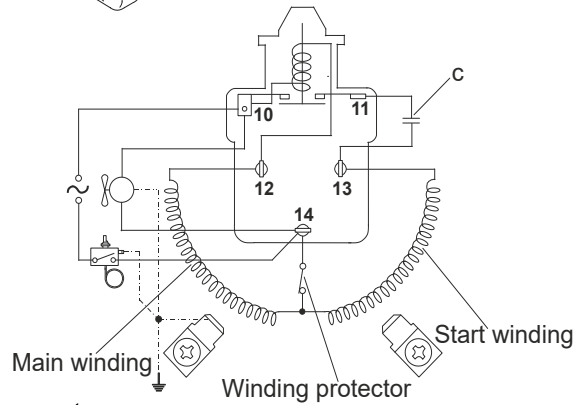
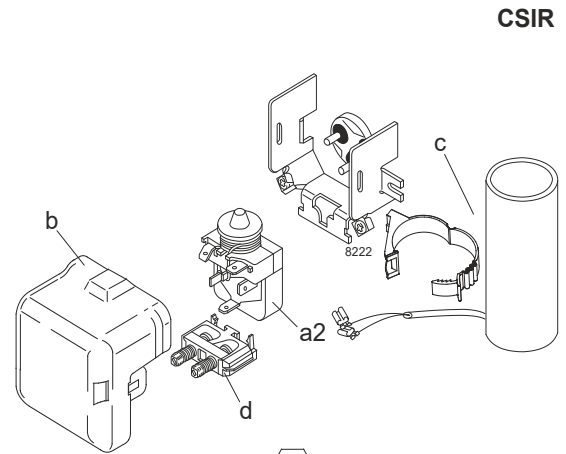
## Model

|             |              |                      |                |             |                 |
|-------------|--------------|----------------------|----------------|-------------|-----------------|
| Designation | <b>SC18G</b> | <b>220-240V/50Hz</b> | <b>Conf. 1</b> | Sales code: | <b>104G8824</b> |
|-------------|--------------|----------------------|----------------|-------------|-----------------|

## Configuration

|                        |                  |
|------------------------|------------------|
| Motorconfiguration     | CSIR             |
| Power supply (nominal) | 220-240V/50Hz 1~ |
| Refrigerant            | R134a            |
| Application            | LBP+MBP+HBP      |
| Voltage range          | 187-254V         |
| Starting torque        | HST              |
| Approvals              | VDE<br>UL<br>CCC |

## Electrical accessories / wiring diagram

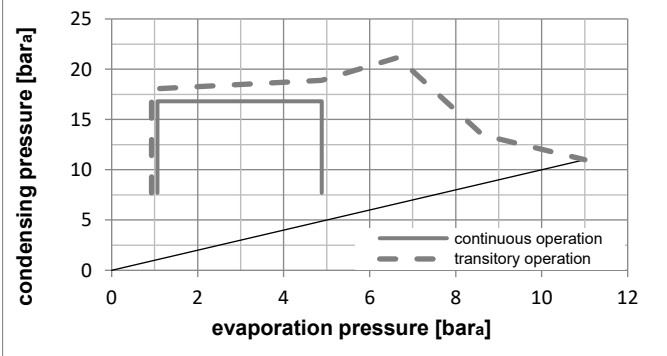
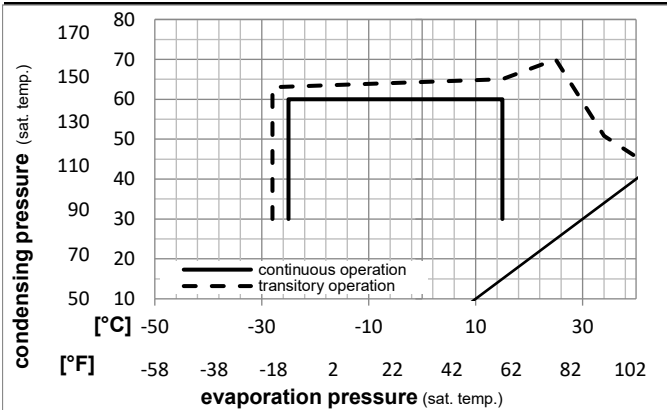


## Ambient/ machine room temperatures minimum /maximum

|                                 |                        |
|---------------------------------|------------------------|
| Ambient temperature range:      | 10 - 43°C / 50 - 110°F |
| Machine room temperature range: | 10 - 48°C / 50 - 119°F |
| Compressor cooling:             | fan 3m/s               |

## Operation Limits

## Operation pressure range



## Components

|    |                        |          |
|----|------------------------|----------|
| a2 | relay                  | 117U6019 |
| c  | start capacitor (80µF) | 117U5017 |
| d  | cord relief            | 103N1004 |
| b  | plastic cover          | 103N2009 |

### Model

Designation **SC18G** **220-240V/50Hz** Conf. 1 Sales code: **104G8824**

### Optimization + standard conditions

R134a, 220V/50Hz, CSIR, fan 3m/s, VDE, UL, CCC

|  | Evaporating pressure (saturation temperature) |      |      |      | Condensing pressure (saturation temperature) |         |          | Return gas temp. | Liquid temp. | Cooling capacity | COP   | EER  | Power consumption |             |                | ASHRAE LBP |
|--|---|------|------|------|--|---------|----------|------------------|--------------|------------------|-------|------|-------------------|-------------|----------------|------------|
|  | pe  | pc   | RGT  | Tliq | [W]  | [Btu/h] | [kcal/h] |                  |              |                  |       |      | P1                | I           | Ref. mass flow |            |
|  | [°C]  | [°F] | [°C] | [°F] | [W]  | [Btu/h] | [kcal/h] | [W/W]            | [Btu/Wh]     | [kcal/Wh]        | [W]   | [A]  | [kg/h]            |             |                |            |
|  | -23   | 54   | 32   | 32   | 396,4  | 1354    | 341,2    | 1,13             | 3,87         | 0,97             | 350,1 | 2,61 | 7,70              | ASHRAE LBP  |                |            |
|  | -10   | 130  | 90   | 90   |  |         |          |                  |              |                  |       |      |                   |             |                |            |
|  | -25   | 55   | 32   | 55   | 285,6  | 975     | 245,8    | 0,88             | 2,99         | 0,75             | 325,8 | 2,56 | 6,83              | cecomaf LBP |                |            |
|  | -13   | 131  | 90   | 131  |  |         |          |                  |              |                  |       |      |                   |             |                |            |
|  | -35   | 40   | 20   | 40   | 146,0  | 499     | 125,7    | 0,67             | 2,30         | 0,58             | 217,1 | 2,26 | 3,20              | EN12900 LBP |                |            |
|  | -31   | 104  | 68   | 104  |  |         |          |                  |              |                  |       |      |                   |             |                |            |
|  | -7  | 54   | 35   | 46   | 894,7  | 3055    | 770,0    | 1,58             | 5,41         | 1,36             | 565,2 | 3,17 | 19,52             | ASHRAE MBP  |                |            |
|  | 20  | 130  | 95   | 115  |  |         |          |                  |              |                  |       |      |                   |             |                |            |
|  | -10   | 55   | 32   | 55   | 689,1  | 2353    | 593,1    | 1,31             | 4,47         | 1,13             | 526,8 | 3,05 | 16,66             | cecomaf MBP |                |            |
|  | 14  | 131  | 90   | 131  |  |         |          |                  |              |                  |       |      |                   |             |                |            |
|  | -10   | 45   | 20   | 45   | 763,6  | 2608    | 657,2    | 1,54             | 5,27         | 1,33             | 495,2 | 2,91 | 17,87             | EN12900 MBP |                |            |
|  | 14  | 113  | 68   | 113  |  |         |          |                  |              |                  |       |      |                   |             |                |            |

### Performance tables

R134a, 220V/50Hz, CSIR, fan 3m/s, VDE, UL, CCC

|                  | 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]        | -25  | -13  | 332,6            | 1136    | 286,2    | 1,00  | 3,42     | 0,86      | 332,4 | 2,51 | 7,21   |
| cond. pressure   | -20  | -4   | 462,8            | 1581    | 398,3    | 1,18  | 4,04     | 1,02      | 390,9 | 2,64 | 10,05  |
| pc= 45/113       | -10  | 14   | 792,2            | 2706    | 681,8    | 1,60  | 5,46     | 1,38      | 495,2 | 2,91 | 17,34  |
| return gas temp. | -5   | 23   | 997,8            | 3408    | 858,7    | 1,84  | 6,27     | 1,58      | 543,4 | 3,07 | 21,94  |
| RGT= 32/90       | 0    | 32   | 1235,0           | 4218    | 1062,8   | 2,09  | 7,14     | 1,80      | 590,3 | 3,25 | 27,31  |
| liquid temp      | 5    | 41   | 1506,8           | 5146    | 1296,8   | 2,36  | 8,08     | 2,03      | 637,3 | 3,46 | 33,55  |
| Tliq= 45/113     | 15   | 59   | 2167,5           | 7402    | 1865,3   | 2,95  | 10,06    | 2,54      | 735,6 | 4,00 | 49,09  |
| [°C / °F]        | -25  | -13  | 285,6            | 975     | 245,8    | 0,88  | 2,99     | 0,75      | 325,8 | 2,56 | 6,83   |
| cond. pressure   | -20  | -4   | 398,5            | 1361    | 343,0    | 1,00  | 3,43     | 0,86      | 397,0 | 2,72 | 9,56   |
| pc= 55/131       | -10  | 14   | 689,1            | 2353    | 593,1    | 1,31  | 4,47     | 1,13      | 526,8 | 3,05 | 16,66  |
| return gas temp  | -5   | 23   | 873,2            | 2982    | 751,5    | 1,49  | 5,07     | 1,28      | 587,8 | 3,24 | 21,23  |
| RGT= 32/90       | 0    | 32   | 1087,4           | 3714    | 935,8    | 1,68  | 5,73     | 1,44      | 647,7 | 3,46 | 26,60  |
| liquid temp      | 5    | 41   | 1334,8           | 4559    | 1148,8   | 1,89  | 6,44     | 1,62      | 707,6 | 3,71 | 32,89  |
| Tliq= 55/131     | 15   | 59   | 1942,4           | 6634    | 1671,7   | 2,33  | 7,97     | 2,01      | 832,0 | 4,34 | 48,79  |

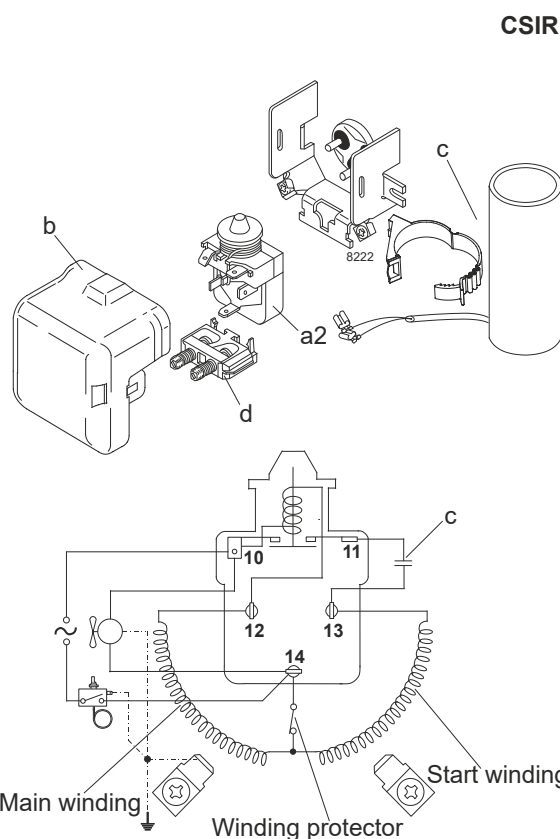
## Model

|             |              |                      |                |             |                 |
|-------------|--------------|----------------------|----------------|-------------|-----------------|
| Designation | <b>SC18G</b> | <b>208-230V/60Hz</b> | <b>Conf. 2</b> | Sales code: | <b>104G8824</b> |
|-------------|--------------|----------------------|----------------|-------------|-----------------|

## Configuration

|                        |                  |
|------------------------|------------------|
| Motorconfiguration     | CSIR             |
| Power supply (nominal) | 208-230V/60Hz 1~ |
| Refrigerant            | R134a            |
| Application            | LBP              |
| Voltage range          | 198-254V         |
| Starting torque        | HST              |
| Approvals              | VDE<br>UL<br>CCC |

## Electrical accessories / wiring diagram



## Ambient/ machine room temperatures minimum /maximum

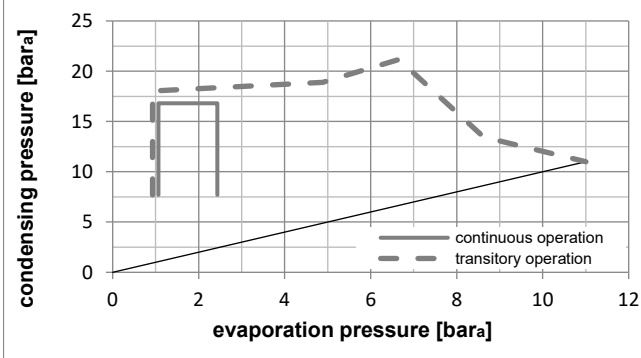
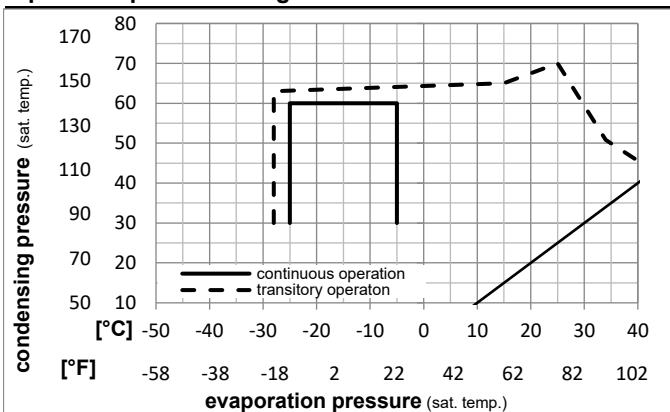
Ambient temperature range: 10 - 43°C / 50 - 110°F

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

Compressor cooling: fan 3m/s

## Operation Limits

## Operation pressure range



## Components

|    |                        |          |
|----|------------------------|----------|
| a2 | relay                  | 117U6019 |
| c  | start capacitor (80μF) | 117U5017 |
| d  | cord relief            | 103N1004 |
| b  | plastic cover          | 103N2009 |

### Model

|             |              |                      |                |             |                 |
|-------------|--------------|----------------------|----------------|-------------|-----------------|
| Designation | <b>SC18G</b> | <b>208-230V/60Hz</b> | <b>Conf. 2</b> | Sales code: | <b>104G8824</b> |
|-------------|--------------|----------------------|----------------|-------------|-----------------|

### Optimization + standard conditions

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

|  | Evaporating pressure (saturation temperature) |      |      |      | Cooling capacity |         |          | COP   | EER      | P1        | Power consumption |                     |                | ASHRAE LBP  |
|--|---|------|------|------|------------------|---------|----------|-------|----------|-----------|-------------------|---------------------|----------------|-------------|
|  | pe  | pc   | RGT  | Tliq | [W]              | [Btu/h] | [kcal/h] |       |          |           | l                 | Current consumption | Ref. mass flow |             |
|  | [°C]  | [°F] | [°C] | [°F] | [W]              | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [kcal/Wh] | [W]               | [A]                 | [kg/h]         |             |
|  | -23   | 54   | 32   | 32   | 467,3            | 1596    | 402,2    | 1,13  | 3,86     | 0,97      | 413,1             | 3,09                | 9,07           | ASHRAE LBP  |
|  | -10   | 130  | 90   | 90   |                  |         |          |       |          |           |                   |                     |                |             |
|  | -25   | 55   | 32   | 55   | 337,6            | 1153    | 290,6    | 0,88  | 2,99     | 0,75      | 385,7             | 3,05                | 8,07           | cecomaf LBP |
|  | -13   | 131  | 90   | 131  |                  |         |          |       |          |           |                   |                     |                |             |
|  | -35   | 40   | 20   | 40   | 185,4            | 633     | 159,5    | 0,68  | 2,31     | 0,58      | 274,4             | 2,85                | 4,07           | EN12900 LBP |
|  | -31   | 104  | 68   | 104  |                  |         |          |       |          |           |                   |                     |                |             |
|  | -7  | 54   | 35   | 46   | 1046,2           | 3573    | 900,4    | 1,58  | 5,41     | 1,36      | 660,6             | 3,69                | 22,83          | ASHRAE MBP  |
|  | 20  | 130  | 95   | 115  |                  |         |          |       |          |           |                   |                     |                |             |
|  | -10   | 55   | 32   | 55   | 806,5            | 2754    | 694,1    | 1,31  | 4,47     | 1,13      | 616,0             | 3,56                | 19,50          | cecomaf MBP |
|  | 14  | 131  | 90   | 131  |                  |         |          |       |          |           |                   |                     |                |             |
|  | -10   | 45   | 20   | 45   | 893,1            | 3050    | 768,6    | 1,54  | 5,27     | 1,33      | 578,6             | 3,40                | 20,91          | EN12900 MBP |
|  | 14  | 113  | 68   | 113  |                  |         |          |       |          |           |                   |                     |                |             |

### Performance tables

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

|                  | pe   |      | Cooling capacity |         |          | COP  | EER  | P1   | l     | m    |       |
|------------------|------|------|------------------|---------|----------|------|------|------|-------|------|-------|
|                  | [°C] | [°F] | [W]              | [Btu/h] | [kcal/h] |      |      |      |       |      |       |
| [°C / °F]        | -25  | -13  | 393,7            | 1344    | 338,8    | 1,00 | 3,41 | 0,86 | 394,6 | 2,99 | 8,53  |
| cond. pressure   | -23  | -10  | 442,0            | 1509    | 380,4    | 1,06 | 3,62 | 0,91 | 417,1 | 3,03 | 9,58  |
| pc= 45/113       | -20  | -4   | 543,8            | 1857    | 468,0    | 1,18 | 4,04 | 1,02 | 459,5 | 3,10 | 11,81 |
| return gas temp. | -18  | 0    | 618,0            | 2111    | 531,9    | 1,27 | 4,34 | 1,09 | 486,8 | 3,16 | 13,45 |
| RGT= 32/90       | -15  | 5    | 720,3            | 2460    | 619,9    | 1,38 | 4,73 | 1,19 | 520,6 | 3,24 | 15,70 |
| liquid temp      | -10  | 14   | 926,5            | 3164    | 797,4    | 1,60 | 5,47 | 1,38 | 578,6 | 3,40 | 20,28 |
| Tliq= 45/113     | -5   | 23   | 1165,7           | 3981    | 1003,2   | 1,84 | 6,27 | 1,58 | 634,5 | 3,58 | 25,63 |
| [°C / °F]        | -25  | -13  | 337,6            | 1153    | 290,6    | 0,88 | 2,99 | 0,75 | 385,7 | 3,05 | 8,07  |
| cond. pressure   | -23  | -10  | 379,5            | 1296    | 326,6    | 0,92 | 3,13 | 0,79 | 413,6 | 3,10 | 9,08  |
| pc= 55/131       | -20  | -4   | 468,2            | 1599    | 402,9    | 1,00 | 3,43 | 0,86 | 466,2 | 3,19 | 11,23 |
| return gas temp  | -18  | 0    | 533,3            | 1821    | 458,9    | 1,07 | 3,64 | 0,92 | 500,3 | 3,26 | 12,81 |
| RGT= 32/90       | -15  | 5    | 623,4            | 2129    | 536,5    | 1,15 | 3,92 | 0,99 | 542,7 | 3,36 | 15,01 |
| liquid temp      | -10  | 14   | 806,5            | 2754    | 694,1    | 1,31 | 4,47 | 1,13 | 616,0 | 3,56 | 19,50 |
| Tliq= 55/131     | -5   | 23   | 1020,8           | 3486    | 878,6    | 1,49 | 5,07 | 1,28 | 687,0 | 3,79 | 24,81 |