

## Single Pack SC12GH 220-240V 50Hz / 208-230V 60Hz CSIR

Single pack code number: **195B4222**

| Position | Title   | Code     | Amount |
|----------|---|----------|--------|
| 1        | Compressor SC12GH                                       | 104G8261 | 1      |
| 2        | Starting relay  | 117U6011 | 1      |
| 3        | Starting capacitor (80 $\mu$ F 220V, 6.3mm)             | 117U5017 | 1      |
| 4        | Cord relief   | 103N1004 | 1      |
| 5        | Cover   | 103N2008 | 1      |
| 6        | Bolt joint for one compressor   M6   $\varnothing$ 16mm | 118-1917 | 1      |

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## Model

|             |               |  |             |                 |
|-------------|---------------|--|-------------|-----------------|
| Designation | <b>SC12GH</b> | <b>220-240V/50Hz 1~ 208-230V/60Hz 1~</b> | Sales code: | <b>104G8261</b> |
|-------------|---------------|--|-------------|-----------------|

## Compressor design

|                            |                                 |                       |                                  |
|----------------------------|---------------------------------|-----------------------|----------------------------------|
| Oil type                   | Polyolester                     | Refrigerant(s)        | <b>R134a, R513A</b>              |
| Oil viscosity              | 22cST                           | Displacement          | 12,87cm <sup>3</sup> / 0,79cu.in |
| Oil quantity               | 504cm <sup>3</sup> / 17fl.oz    | Compressors on pallet | 80                               |
| Refr. charge - tech. limit | 1300g / 45,9oz                  |                       |                                  |
| Free gas volume comp.      | 1510cm <sup>3</sup> / 51,1fl.oz |                       |                                  |
| Weight                     | 12,5kg / 27,6lbs                |                       |                                  |
| Motor protection           | 1# internal                     |                       |                                  |
| Winding resistance main    | 4,4Ω (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 SC12GH

|                        | <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          | 198-254V       | 198-254V       | 198-254V       | 198-254V       |
| Approvals              | VDE, UL, KC    | VDE, UL        | VDE, UL, KC    | VDE, UL        |
| Starting torque        | HST            | HST            | HST            | HST            |
| Note                   | - / -          |                |                |                |

## Applications with SC12GH

|                         | <b>Conf. 1</b> | <b>Conf. 2</b> | <b>Conf. 3</b> | <b>Conf. 4</b> |
|-------------------------|----------------|----------------|----------------|----------------|
| Refrigerant             | R134a          | R513A          | R134a          | R513A          |
| Application             | HBP            | HBP            | HBP            | HBP            |
| System cooling          | fan 3m/s       | fan 3m/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 SC12GH

|                              | <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              | 80μF           | 80μF           | 80μF           | 80μF           |
| LRA (locked rotor amps / 4s) | 19A            | 19A            | 18,3A          | 18,3A          |
| RLA (rated load amps / 1s)   | 3,9A           | 3,9A           | 3,52A          | 3,52A          |
| Cut in current               | 19A            | 19A            | 18,3A          | 18,3A          |

## Model

Designation **SC12GH** 220-240V/50Hz 1~ 208-230V/60Hz 1~ Sales code: **104G8261**

## Compressor dimensions

|                |                   |                 |
|----------------|-------------------|-----------------|
| <b>Housing</b> | A Height          | 209mm / 8,23in  |
|                | B Height          | 203mm / 7,99in  |
|                | C Length shell    | 218mm / 8,58in  |
|                | D Length w. cover | 255mm / 10,04in |
|                | E Width           | 151mm / 5,94in  |

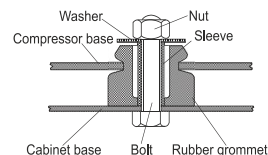


| Connectors                 | Suction        |  | Discharge    |  | Process      |  |
|----------------------------|----------------|--|--------------|--|--------------|--|
|                            | X              |  | Y            |  | Z            |  |
| Diameter [mm]              | øi 10,11-10,29 |  | øi 8,11-8,29 |  | øi 6,11-6,29 |  |
| (i:inside, o:outside) [in] | øi 0,4-0,41    |  | øi 0,32-0,33 |  | øi 0,24-0,25 |  |
| Material                   | copper         |  | copper       |  | copper       |  |
| Horizontal angle ±2°       | 37°            |  | 37°          |  | 143°         |  |
| Vertical angle ±2°         | 30°            |  | 0°           |  | 150°         |  |
| Position l/h/w [mm]        | 107/183/55     |  | 115/100/63   |  | -107/183/55  |  |
| [in]                       | 4,2/7,2/2,2    |  | 4,5/3,9/2,5  |  | -4,2/7,2/2,2 |  |
| 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

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

## Model

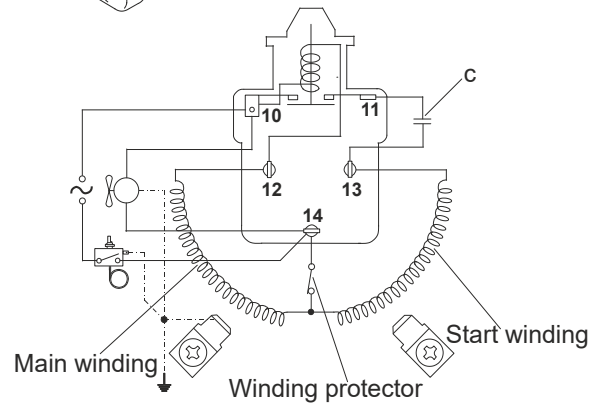
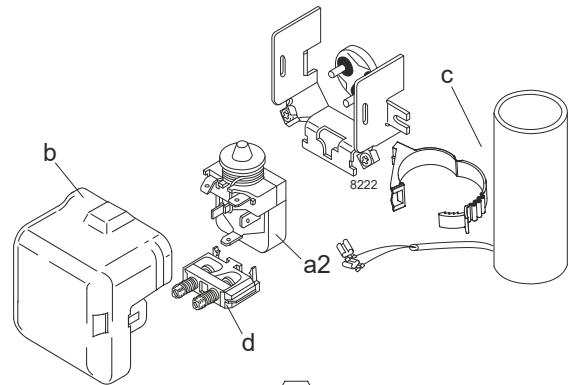
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|-------------|---------------|----------------------|---------|-------------|-----------------|
| Designation | <b>SC12GH</b> | <b>220-240V/50Hz</b> | Conf. 1 | Sales code: | <b>104G8261</b> |
|-------------|---------------|----------------------|---------|-------------|-----------------|

## Configuration

|                        |                  |
|------------------------|------------------|
| Motorconfiguration     | CSIR             |
| Power supply (nominal) | 220-240V/50Hz 1~ |
| Refrigerant            | R134a            |
| Application            | HBP              |
| Voltage range          | 198-254V         |
| Starting torque        | HST              |
| Approvals              | VDE              |
|                        | UL               |
|                        | KC               |

## Electrical accessories / wiring diagram

CSIR



## Ambient/ machine room temperatures minimum /maximum

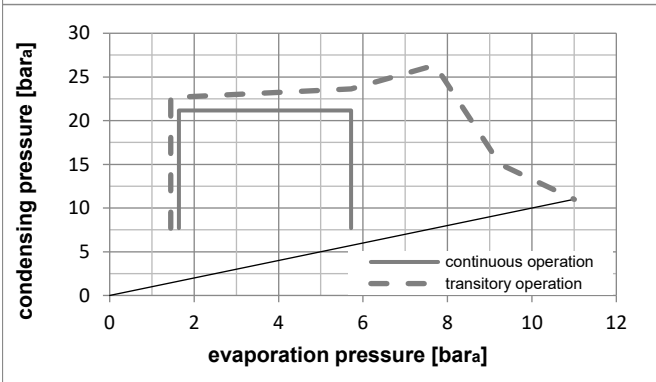
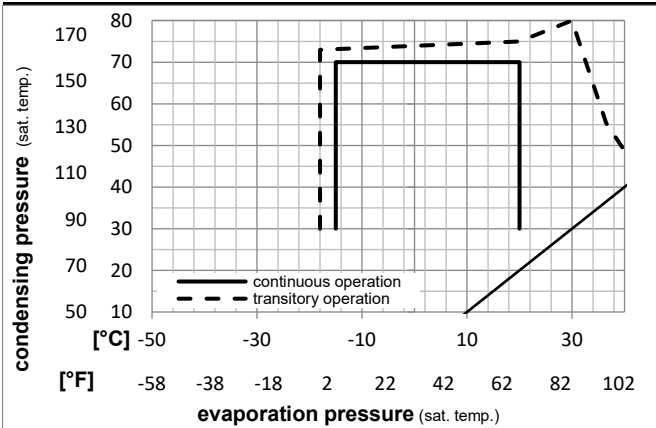
Ambient temperature range: 10 - 43°C / 50 - 110°F

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

Compressor cooling: fan 3m/s

## Operation Limits

### Operation pressure range



### Components

|    |                        |          |
|----|------------------------|----------|
| a2 | relay                  | 117U6011 |
| c  | start capacitor (80μF) | 117U5017 |
| d  | cord relief            | 103N1004 |
| b  | plastic cover          | 103N2008 |

## Model

Designation **SC12GH** **220-240V/50Hz** Conf. 1 Sales code: **104G8261**

## Optimization + standard conditions

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

| Evaporating pressure (saturation temperature) |      |      |      | Condensing pressure (saturation temperature) |         |          | Return gas temp. |          |           | Liquid temp. |      |                | Cooling capacity |  |  | COP | EER | Power consumption |  |  |
|---|------|------|------|--|---------|----------|------------------|----------|-----------|--------------|------|----------------|------------------|--|--|-----|-----|-------------------|--|--|
| 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]  | [Btu/h] | [kcal/h] | [W/W]            | [Btu/Wh] | [kcal/Wh] | [W]          | [A]  | [kg/h]         |                  |  |  |     |     |                   |  |  |
| 7,2   | 54   | 35   | 46   | 1175,9                                       | 4016    | 1012,0   | 2,34             | 8,00     | 2,02      | 501,9        | 3,52 | 26,09          | ASHRAE HBP       |  |  |     |     |                   |  |  |
| [°F]  | [°F] | [°F] | [°F] |  |         |          |                  |          |           |              |      |                |                  |  |  |     |     |                   |  |  |
| 45  | 130  | 95   | 115  |  |         |          |                  |          |           |              |      |                |                  |  |  |     |     |                   |  |  |
| 5   | 55   | 32   | 55   | 957,3  | 3269    | 823,9    | 1,97             | 6,71     | 1,69      | 487,1        | 3,47 | 23,59          | cecomaf HBP      |  |  |     |     |                   |  |  |
| [°C]  | [°C] | [°C] | [°C] |  |         |          |                  |          |           |              |      |                |                  |  |  |     |     |                   |  |  |
| [°F]  | [°F] | [°F] | [°F] |  |         |          |                  |          |           |              |      |                |                  |  |  |     |     |                   |  |  |
| 41  | 131  | 90   | 131  |  |         |          |                  |          |           |              |      |                |                  |  |  |     |     |                   |  |  |
| 5   | 50   | 20   | 50   | 998,2  | 3409    | 859,0    | 2,15             | 7,34     | 1,85      | 464,7        | 3,39 | 25,15          | EN12900 HBP      |  |  |     |     |                   |  |  |
| [°C]  | [°C] | [°C] | [°C] |  |         |          |                  |          |           |              |      |                |                  |  |  |     |     |                   |  |  |
| [°F]  | [°F] | [°F] | [°F] |  |         |          |                  |          |           |              |      |                |                  |  |  |     |     |                   |  |  |
| 41  | 122  | 68   | 122  |  |         |          |                  |          |           |              |      |                |                  |  |  |     |     |                   |  |  |
| -7  | 54   | 35   | 46   | 583,7  | 1994    | 502,4    | 1,52             | 5,18     | 1,30      | 385,2        | 3,16 | 12,74          | ASHRAE MBP       |  |  |     |     |                   |  |  |
| [°C]  | [°C] | [°C] | [°C] |  |         |          |                  |          |           |              |      |                |                  |  |  |     |     |                   |  |  |
| [°F]  | [°F] | [°F] | [°F] |  |         |          |                  |          |           |              |      |                |                  |  |  |     |     |                   |  |  |
| 20  | 130  | 95   | 115  |  |         |          |                  |          |           |              |      |                |                  |  |  |     |     |                   |  |  |
| -10   | 55   | 32   | 55   | 428,7  | 1464    | 368,9    | 1,20             | 4,11     | 1,04      | 356,3        | 3,08 | 10,37          | cecomaf MBP      |  |  |     |     |                   |  |  |
| [°C]  | [°C] | [°C] | [°C] |  |         |          |                  |          |           |              |      |                |                  |  |  |     |     |                   |  |  |
| [°F]  | [°F] | [°F] | [°F] |  |         |          |                  |          |           |              |      |                |                  |  |  |     |     |                   |  |  |
| 14  | 131  | 90   | 131  |  |         |          |                  |          |           |              |      |                |                  |  |  |     |     |                   |  |  |
| -10   | 45   | 20   | 45   | 517,8  | 1768    | 445,7    | 1,49             | 5,08     | 1,28      | 348,4        | 3,06 | 12,12          | EN12900 MBP      |  |  |     |     |                   |  |  |
| [°C]  | [°C] | [°C] | [°C] |  |         |          |                  |          |           |              |      |                |                  |  |  |     |     |                   |  |  |
| [°F]  | [°F] | [°F] | [°F] |  |         |          |                  |          |           |              |      |                |                  |  |  |     |     |                   |  |  |
| 14  | 113  | 68   | 113  |  |         |          |                  |          |           |              |      |                |                  |  |  |     |     |                   |  |  |

## Performance tables

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

|                  | 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]        | -15  | 5    | 395,5            | 1351    | 340,3    | 1,27  | 4,33     | 1,09      | 312,2 | 2,98 | 8,62   |
| cond. pressure   | -10  | 14   | 537,2            | 1835    | 462,4    | 1,54  | 5,27     | 1,33      | 348,4 | 3,06 | 11,76  |
| pc= 45/113       | -5   | 23   | 704,5            | 2406    | 606,3    | 1,84  | 6,28     | 1,58      | 383,3 | 3,14 | 15,49  |
| return gas temp. | 0    | 32   | 901,0            | 3077    | 775,4    | 2,17  | 7,40     | 1,87      | 415,7 | 3,23 | 19,92  |
| RGT= 32/90       | 5    | 41   | 1130,2           | 3860    | 972,7    | 2,54  | 8,69     | 2,19      | 444,3 | 3,31 | 25,16  |
| liquid temp      | 15   | 59   | 1701,6           | 5811    | 1464,4   | 3,51  | 11,98    | 3,02      | 485,3 | 3,47 | 38,54  |
| Tliq= 45/113     | 20   | 68   | 2051,1           | 7005    | 1765,2   | 4,14  | 14,14    | 3,56      | 495,3 | 3,55 | 46,98  |
| [°C / °F]        | -15  | 5    | 302,4            | 1033    | 260,3    | 0,97  | 3,31     | 0,83      | 312,0 | 2,94 | 7,28   |
| cond. pressure   | -10  | 14   | 428,7            | 1464    | 368,9    | 1,20  | 4,11     | 1,04      | 356,3 | 3,08 | 10,37  |
| pc= 55/131       | -5   | 23   | 577,5            | 1972    | 497,0    | 1,44  | 4,92     | 1,24      | 401,0 | 3,21 | 14,04  |
| return gas temp  | 0    | 32   | 752,5            | 2570    | 647,6    | 1,69  | 5,77     | 1,46      | 445,0 | 3,34 | 18,41  |
| RGT= 32/90       | 5    | 41   | 957,3            | 3269    | 823,9    | 1,97  | 6,71     | 1,69      | 487,1 | 3,47 | 23,59  |
| liquid temp      | 15   | 59   | 1471,0           | 5024    | 1265,9   | 2,62  | 8,96     | 2,26      | 560,6 | 3,73 | 36,95  |
| Tliq= 55/131     | 20   | 68   | 1787,1           | 6103    | 1538,0   | 3,03  | 10,35    | 2,61      | 589,6 | 3,86 | 45,44  |

## Model

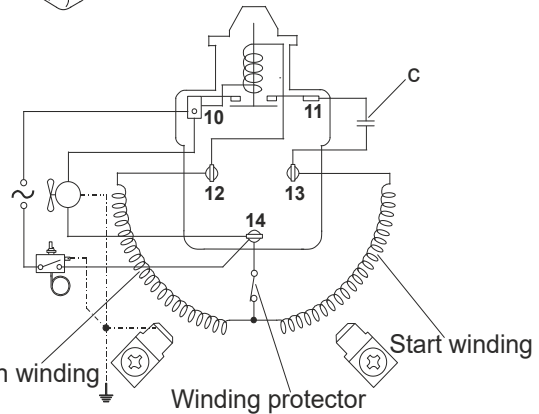
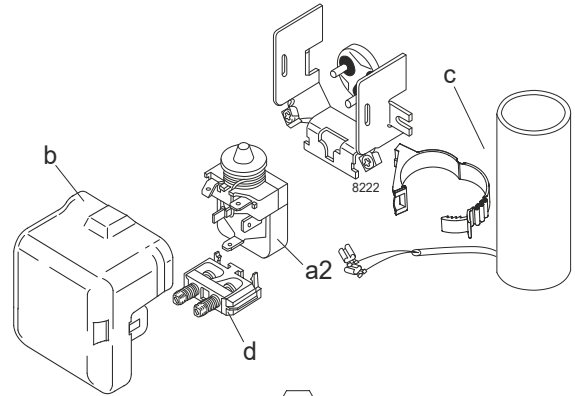
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|-------------|---------------|----------------------|---------|-------------|-----------------|
| Designation | <b>SC12GH</b> | <b>220-240V/50Hz</b> | Conf. 2 | Sales code: | <b>104G8261</b> |
|-------------|---------------|----------------------|---------|-------------|-----------------|

## Configuration

|                        |                  |
|------------------------|------------------|
| Motorconfiguration     | CSIR             |
| Power supply (nominal) | 220-240V/50Hz 1~ |
| Refrigerant            | R513A            |
| Application            | HBP              |
| Voltage range          | 198-254V         |
| Starting torque        | HST              |
| Approvals              | VDE<br>UL        |

## Electrical accessories / wiring diagram

CSIR



## Ambient/ machine room temperatures minimum /maximum

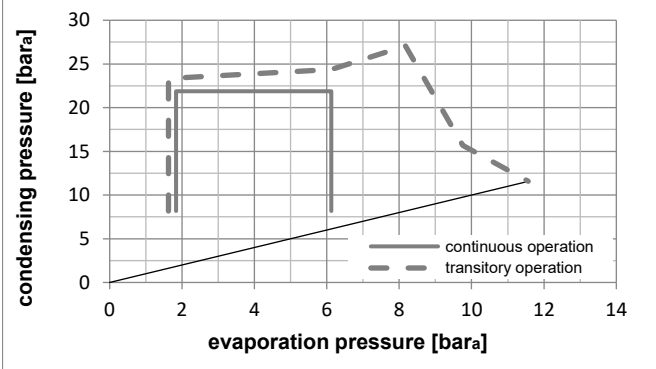
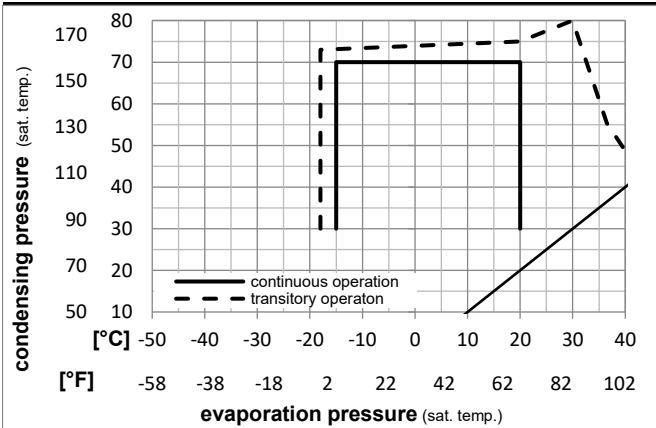
Ambient temperature range: 10 - 43°C / 50 - 110°F

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

Compressor cooling: fan 3m/s

## Operation Limits

### Operation pressure range



### Components

|    |                        |          |
|----|------------------------|----------|
| a2 | relay                  | 117U6011 |
| c  | start capacitor (80µF) | 117U5017 |
| d  | cord relief            | 103N1004 |
| b  | plastic cover          | 103N2008 |

## Model

|             |               |                      |                |             |                 |
|-------------|---------------|----------------------|----------------|-------------|-----------------|
| Designation | <b>SC12GH</b> | <b>220-240V/50Hz</b> | <b>Conf. 2</b> | Sales code: | <b>104G8261</b> |
|-------------|---------------|----------------------|----------------|-------------|-----------------|

## Optimization + standard conditions

R513A, 220V/50Hz, CSIR, fan 3m/s, VDE, UL

|      |     | Evaporating pressure (saturation temperature) |    |              |        | Condensing pressure (saturation temperature) |         |          |       |          |           | Power consumption |                |                    |  |
|------|-----|---|----|--------------|--------|--|---------|----------|-------|----------|-----------|-------------------|----------------|--------------------|--|
|      |     | Return gas temp.                              |    | Liquid temp. |        | 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]            | [kg/h]             |  |
| [°C] | 7,2 | 54  | 35 | 46           | 1210,2 | 4133   | 1041,5  | 2,31     | 7,90  | 1,99     | 522,9     | 3,59              | 30,06          | <b>ASHRAE HBP</b>  |  |
| [°F] | 45  | 130   | 95 | 115          |        |  |         |          |       |          |           |                   |                |                    |  |
| [°C] | 5   | 55  | 32 | 55           | 970,8  | 3316   | 835,5   | 1,91     | 6,52  | 1,64     | 508,5     | 3,54              | 27,28          | <b>cecomaf HBP</b> |  |
| [°F] | 41  | 131   | 90 | 131          |        |  |         |          |       |          |           |                   |                |                    |  |
| [°C] | 5   | 50  | 20 | 50           | 1013,9 | 3463   | 872,6   | 2,09     | 7,14  | 1,80     | 484,8     | 3,47              | 29,07          | <b>EN12900 HBP</b> |  |
| [°F] | 41  | 122   | 68 | 122          |        |  |         |          |       |          |           |                   |                |                    |  |
| [°C] | -7  | 54  | 35 | 46           | 613,9  | 2097   | 528,4   | 1,51     | 5,16  | 1,30     | 406,7     | 3,23              | 15,04          | <b>ASHRAE MBP</b>  |  |
| [°F] | 20  | 130   | 95 | 115          |        |  |         |          |       |          |           |                   |                |                    |  |
| [°C] | -10 | 55  | 32 | 55           | 445,8  | 1523   | 383,7   | 1,18     | 4,03  | 1,02     | 377,6     | 3,14              | 12,33          | <b>cecomaf MBP</b> |  |
| [°F] | 14  | 131   | 90 | 131          |        |  |         |          |       |          |           |                   |                |                    |  |
| [°C] | -10 | 45  | 20 | 45           | 542,1  | 1852   | 466,6   | 1,47     | 5,03  | 1,27     | 368,3     | 3,11              | 14,37          | <b>EN12900 MBP</b> |  |
| [°F] | 14  | 113   | 68 | 113          |        |  |         |          |       |          |           |                   |                |                    |  |

## Performance tables

R513A, 220V/50Hz, CSIR, fan 3m/s, VDE, UL

|                  | pe   |      | Cooling capacity |         |          | COP   | EER      | P1   | I     | m    |           |
|------------------|------|------|------------------|---------|----------|-------|----------|------|-------|------|-----------|
|                  | [°C] | [°F] | [W]              | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] |      |       |      | [kcal/Wh] |
| [°C / °F]        | -15  | 5    | 421,5            | 1440    | 362,8    | 1,27  | 4,34     | 1,09 | 331,5 | 2,99 | 10,33     |
| cond. pressure   | -10  | 14   | 566,9            | 1936    | 487,9    | 1,54  | 5,26     | 1,32 | 368,3 | 3,11 | 13,94     |
| pc= 45/113       | -5   | 23   | 737,1            | 2517    | 634,3    | 1,83  | 6,24     | 1,57 | 403,3 | 3,22 | 18,19     |
| return gas temp. | 0    | 32   | 935,4            | 3195    | 805,0    | 2,15  | 7,34     | 1,85 | 435,4 | 3,31 | 23,20     |
| RGT= 32/90       | 5    | 41   | 1165,5           | 3980    | 1003,0   | 2,52  | 8,59     | 2,16 | 463,3 | 3,40 | 29,07     |
| liquid temp      | 15   | 59   | 1734,6           | 5924    | 1492,8   | 3,45  | 11,80    | 2,97 | 502,2 | 3,52 | 43,89     |
| Tliq= 45/113     | 20   | 68   | 2080,5           | 7105    | 1790,5   | 4,07  | 13,91    | 3,50 | 510,9 | 3,55 | 53,12     |
| [°C / °F]        | -15  | 5    | 318,2            | 1087    | 273,8    | 0,96  | 3,27     | 0,82 | 332,4 | 3,00 | 8,76      |
| cond. pressure   | -10  | 14   | 445,8            | 1523    | 383,7    | 1,18  | 4,03     | 1,02 | 377,6 | 3,14 | 12,33     |
| pc= 55/131       | -5   | 23   | 594,8            | 2031    | 511,9    | 1,41  | 4,81     | 1,21 | 422,7 | 3,28 | 16,52     |
| return gas temp  | 0    | 32   | 768,7            | 2625    | 661,5    | 1,65  | 5,62     | 1,42 | 466,8 | 3,41 | 21,47     |
| RGT= 32/90       | 5    | 41   | 970,8            | 3316    | 835,5    | 1,91  | 6,52     | 1,64 | 508,5 | 3,54 | 27,28     |
| liquid temp      | 15   | 59   | 1473,9           | 5034    | 1268,5   | 2,54  | 8,67     | 2,19 | 580,5 | 3,76 | 42,09     |
| Tliq= 55/131     | 20   | 68   | 1781,8           | 6085    | 1533,4   | 2,93  | 10,00    | 2,52 | 608,5 | 3,85 | 51,41     |

## Model

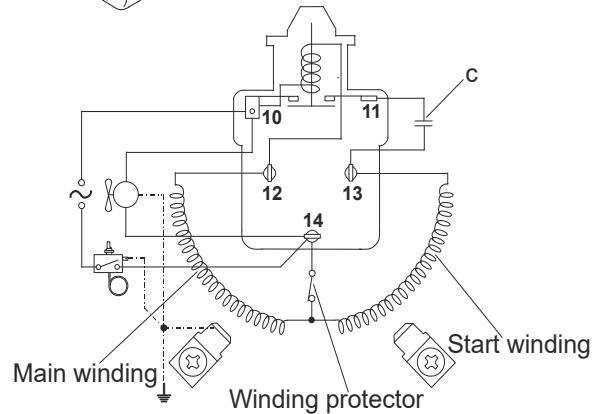
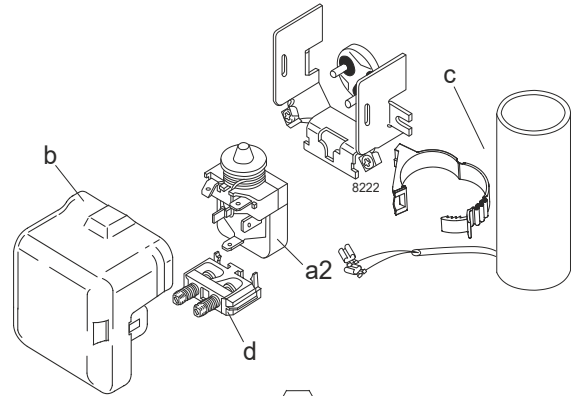
|             |               |                      |                |             |                 |
|-------------|---------------|----------------------|----------------|-------------|-----------------|
| Designation | <b>SC12GH</b> | <b>208-230V/60Hz</b> | <b>Conf. 3</b> | Sales code: | <b>104G8261</b> |
|-------------|---------------|----------------------|----------------|-------------|-----------------|

## Configuration

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

## Electrical accessories / wiring diagram

CSIR



## Ambient/ machine room temperatures minimum /maximum

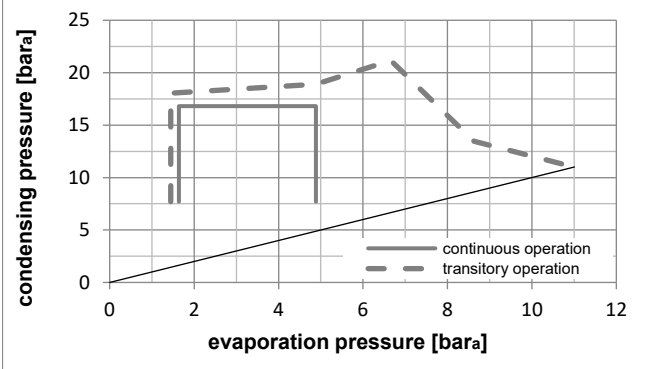
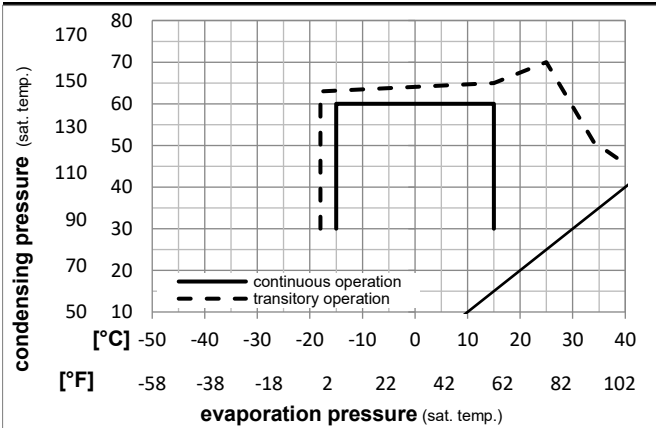
Ambient temperature range: 10 - 43°C / 50 - 110°F

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

Compressor cooling: fan 3m/s

## Operation Limits

### Operation pressure range



### Components

|    |                        |          |
|----|------------------------|----------|
| a2 | relay                  | 117U6011 |
| c  | start capacitor (80µF) | 117U5017 |
| d  | cord relief            | 103N1004 |
| b  | plastic cover          | 103N2008 |



## Model

Designation **SC12GH** **208-230V/60Hz** Conf. 3 Sales code: **104G8261**

## Optimization + standard conditions

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

|      |     | Evaporating pressure (saturation temperature) |    |              |        | Condensing pressure (saturation temperature) |         |          |       |          |           | Power consumption |                |             |  |
|------|-----|---|----|--------------|--------|--|---------|----------|-------|----------|-----------|-------------------|----------------|-------------|--|
|      |     | Return gas temp.                              |    | Liquid temp. |        | 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]            | [kg/h]      |  |
| [°C] | 7,2 | 54  | 35 | 46           | 1370,3 | 4680   | 1179,3  | 2,38     | 8,13  | 2,05     | 575,7     | 3,36              | 30,40          | ASHRAE HBP  |  |
| [°F] | 45  | 130   | 95 | 115          |        |  |         |          |       |          |           |                   |                |             |  |
| [°C] | 5   | 55  | 32 | 55           | 1116,4 | 3813   | 960,8   | 2,01     | 6,86  | 1,73     | 555,8     | 3,28              | 27,51          | cecomaf HBP |  |
| [°F] | 41  | 131   | 90 | 131          |        |  |         |          |       |          |           |                   |                |             |  |
| [°C] | 5   | 50  | 20 | 50           | 1163,6 | 3974   | 1001,4  | 2,20     | 7,53  | 1,90     | 528,0     | 3,16              | 29,32          | EN12900 HBP |  |
| [°F] | 41  | 122   | 68 | 122          |        |  |         |          |       |          |           |                   |                |             |  |
| [°C] | -7  | 54  | 35 | 46           | 688,4  | 2351   | 592,4   | 1,62     | 5,53  | 1,39     | 425,5     | 2,76              | 15,02          | ASHRAE MBP  |  |
| [°F] | 20  | 130   | 95 | 115          |        |  |         |          |       |          |           |                   |                |             |  |
| [°C] | -10 | 55  | 32 | 55           | 511,2  | 1746   | 440,0   | 1,31     | 4,49  | 1,13     | 388,9     | 2,61              | 12,36          | cecomaf MBP |  |
| [°F] | 14  | 131   | 90 | 131          |        |  |         |          |       |          |           |                   |                |             |  |
| [°C] | -10 | 45  | 20 | 45           | 608,8  | 2079   | 523,9   | 1,61     | 5,49  | 1,38     | 378,9     | 2,57              | 14,25          | EN12900 MBP |  |
| [°F] | 14  | 113   | 68 | 113          |        |  |         |          |       |          |           |                   |                |             |  |

## Performance tables

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

|                  | 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]        | -15  | 5    | 469,7            | 1604    | 404,2    | 1,41  | 4,80     | 1,21      | 334,0 | 2,39 | 10,24  |
| cond. pressure   | -10  | 14   | 631,6            | 2157    | 543,5    | 1,67  | 5,69     | 1,43      | 378,9 | 2,57 | 13,82  |
| pc= 45/113       | -5   | 23   | 824,5            | 2816    | 709,6    | 1,95  | 6,67     | 1,68      | 422,3 | 2,74 | 18,13  |
| return gas temp. | 0    | 32   | 1052,5           | 3594    | 905,8    | 2,27  | 7,75     | 1,95      | 463,8 | 2,90 | 23,28  |
| RGT= 32/90       | 5    | 41   | 1319,7           | 4507    | 1135,7   | 2,62  | 8,96     | 2,26      | 502,8 | 3,05 | 29,38  |
| liquid temp      | 10   | 50   | 1630,1           | 5567    | 1402,9   | 3,03  | 10,34    | 2,60      | 538,6 | 3,19 | 36,58  |
| Tliq= 45/113     | 15   | 59   | 1987,8           | 6789    | 1710,7   | 3,48  | 11,90    | 3,00      | 570,6 | 3,33 | 45,03  |
| [°C / °F]        | -15  | 5    | 371,0            | 1267    | 319,3    | 1,12  | 3,81     | 0,96      | 332,3 | 2,37 | 8,93   |
| cond. pressure   | -10  | 14   | 511,2            | 1746    | 440,0    | 1,31  | 4,49     | 1,13      | 388,9 | 2,61 | 12,36  |
| pc= 55/131       | -5   | 23   | 679,5            | 2321    | 584,8    | 1,53  | 5,21     | 1,31      | 445,5 | 2,84 | 16,52  |
| return gas temp  | 0    | 32   | 879,9            | 3005    | 757,2    | 1,76  | 5,99     | 1,51      | 501,3 | 3,06 | 21,52  |
| RGT= 32/90       | 5    | 41   | 1116,4           | 3813    | 960,8    | 2,01  | 6,86     | 1,73      | 555,8 | 3,28 | 27,51  |
| liquid temp      | 10   | 50   | 1393,1           | 4758    | 1199,0   | 2,29  | 7,82     | 1,97      | 608,3 | 3,49 | 34,63  |
| Tliq= 55/131     | 15   | 59   | 1714,2           | 5854    | 1475,3   | 2,60  | 8,89     | 2,24      | 658,4 | 3,68 | 43,06  |

### Model

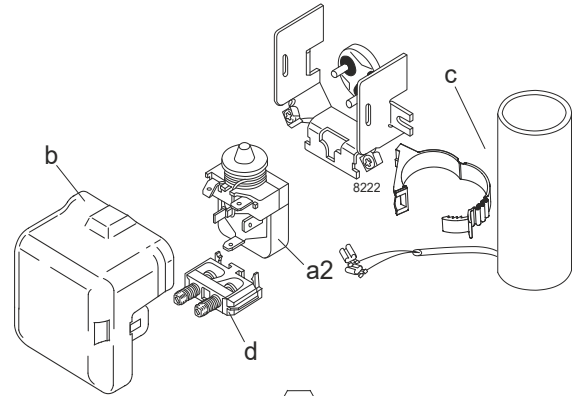
|             |               |                      |         |             |                 |
|-------------|---------------|----------------------|---------|-------------|-----------------|
| Designation | <b>SC12GH</b> | <b>208-230V/60Hz</b> | Conf. 4 | Sales code: | <b>104G8261</b> |
|-------------|---------------|----------------------|---------|-------------|-----------------|

### Configuration

|                        |                  |
|------------------------|------------------|
| Motorconfiguration     | CSIR             |
| Power supply (nominal) | 208-230V/60Hz 1~ |
| Refrigerant            | R513A            |
| Application            | HBP              |
| Voltage range          | 198-254V         |
| Starting torque        | HST              |
| Approvals              | VDE<br>UL        |

### Electrical accessories / wiring diagram

CSIR

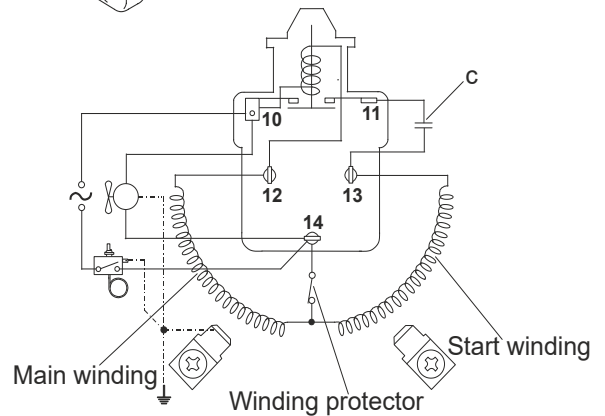


### Ambient/ machine room temperatures minimum /maximum

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

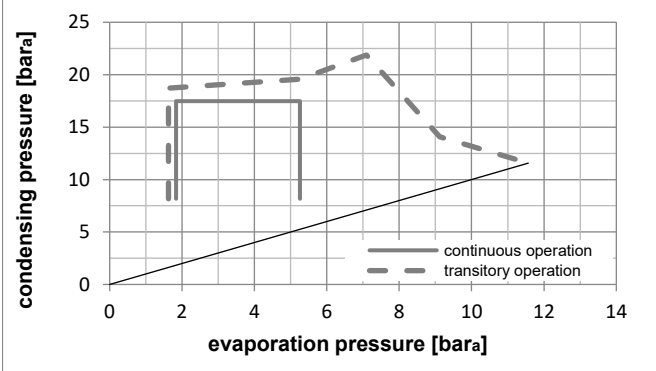
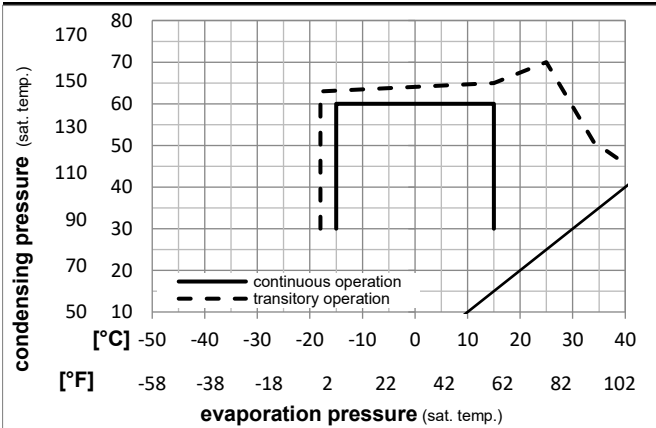
Machine room temperature range: 10 - 48°C / 50 - 119°F

Compressor cooling: fan 3m/s



### Operation Limits

### Operation pressure range



### Components

|    |                        |          |
|----|------------------------|----------|
| a2 | relay                  | 117U6011 |
| c  | start capacitor (80µF) | 117U5017 |
| d  | cord relief            | 103N1004 |
| b  | plastic cover          | 103N2008 |

## Model

Designation **SC12GH** **208-230V/60Hz** Conf. 4 Sales code: **104G8261**

## Optimization + standard conditions

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

|      |      | Evaporating pressure (saturation temperature) |      |      |      | Condensing pressure (saturation temperature) |         |          |       |          |           | Power consumption   |      |        |                |       |             |
|------|------|---|------|------|------|--|---------|----------|-------|----------|-----------|---------------------|------|--------|----------------|-------|-------------|
|      |      | Return gas temp.                              |      |      |      | Liquid temp.                                 |         |          |       |          |           | Current consumption |      |        | Ref. mass flow |       |             |
|      |      | Cooling capacity                              |      |      |      | COP  |         |          |       |          |           | EER                 |      |        | P1             | I     | m           |
|      |      | pe  | pc   | RGT  | Tliq | [W]  | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [kcal/Wh] | [W]                 | [A]  | [kg/h] |                |       |             |
| [°C] | [°F] | [°C]  | [°F] | [°C] | [°F] |  |         |          |       |          |           |                     |      |        |                |       |             |
| 7,2  | 45   | 54  | 130  | 35   | 95   | 46   | 115     | 1410,5   | 4817  | 1213,9   | 2,35      | 8,03                | 2,02 | 600,1  | 3,45           | 35,04 | ASHRAE HBP  |
| 5    | 41   | 55  | 131  | 32   | 90   | 55   | 131     | 1132,3   | 3867  | 974,4    | 1,95      | 6,66                | 1,68 | 580,5  | 3,37           | 31,82 | cecomaf HBP |
| 5    | 41   | 50  | 122  | 20   | 68   | 50   | 122     | 1182,1   | 4037  | 1017,4   | 2,14      | 7,32                | 1,85 | 551,3  | 3,25           | 33,90 | EN12900 HBP |
| -7   | 20   | 54  | 130  | 35   | 95   | 46   | 115     | 724,1    | 2473  | 623,2    | 1,61      | 5,50                | 1,39 | 449,8  | 2,85           | 17,74 | ASHRAE MBP  |
| -10  | 14   | 55  | 131  | 32   | 90   | 55   | 131     | 531,8    | 1816  | 457,7    | 1,29      | 4,40                | 1,11 | 412,8  | 2,70           | 14,70 | cecomaf MBP |
| -10  | 14   | 45  | 113  | 20   | 68   | 45   | 113     | 637,4    | 2177  | 548,6    | 1,59      | 5,43                | 1,37 | 401,1  | 2,65           | 16,89 | EN12900 MBP |

## Performance tables

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

|                  | 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]        | -15  | 5    | 500,7            | 1710    | 430,9    | 1,41  | 4,81     | 1,21      | 355,4 | 2,47 | 12,27  |   |
| cond. pressure   | -10  | 14   | 666,6            | 2276    | 573,6    | 1,66  | 5,68     | 1,43      | 401,1 | 2,65 | 16,39  |   |
| pc= 45/113       | -5   | 23   | 862,7            | 2946    | 742,4    | 1,94  | 6,62     | 1,67      | 444,9 | 2,83 | 21,30  |   |
| return gas temp. | 0    | 32   | 1092,8           | 3732    | 940,5    | 2,25  | 7,68     | 1,93      | 486,3 | 2,99 | 27,11  |   |
| RGT= 32/90       | 5    | 41   | 1361,0           | 4648    | 1171,3   | 2,59  | 8,86     | 2,23      | 524,7 | 3,15 | 33,95  |   |
| liquid temp      | 10   | 50   | 1670,9           | 5706    | 1438,0   | 2,98  | 10,19    | 2,57      | 559,8 | 3,29 | 41,95  |   |
| Tliq= 45/113     | 15   | 59   | 2026,4           | 6921    | 1744,0   | 3,43  | 11,71    | 2,95      | 591,0 | 3,41 | 51,27  |   |
| [°C / °F]        | -15  | 5    | 390,4            | 1333    | 335,9    | 1,10  | 3,76     | 0,95      | 354,8 | 2,47 | 10,75  |   |
| cond. pressure   | -10  | 14   | 531,8            | 1816    | 457,7    | 1,29  | 4,40     | 1,11      | 412,8 | 2,70 | 14,70  |   |
| pc= 55/131       | -5   | 23   | 700,0            | 2391    | 602,5    | 1,49  | 5,09     | 1,28      | 470,1 | 2,93 | 19,44  |   |
| return gas temp  | 0    | 32   | 898,9            | 3070    | 773,6    | 1,71  | 5,83     | 1,47      | 526,2 | 3,15 | 25,10  |   |
| RGT= 32/90       | 5    | 41   | 1132,3           | 3867    | 974,4    | 1,95  | 6,66     | 1,68      | 580,5 | 3,37 | 31,82  |   |
| liquid temp      | 10   | 50   | 1404,0           | 4795    | 1208,3   | 2,22  | 7,58     | 1,91      | 632,6 | 3,58 | 39,75  |   |
| Tliq= 55/131     | 15   | 59   | 1717,8           | 5867    | 1478,4   | 2,52  | 8,60     | 2,17      | 682,0 | 3,78 | 49,06  |   |



# SC Compressors





# SC Compressors

## Service/Repair – R290



8545



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