

Model  
SC12G

Sales code:  
104G7250

Compressor Data

|                            |                       |
|----------------------------|-----------------------|
| Refrigerant(s)             | R134a / R513A         |
| Refr. charge - tech. limit | 1300g / 45.86oz       |
| Weight                     | 13.10 kg / 28.88lbs   |
| Displacement               | 12.87 cm3 / 0.79cu.in |
| Compressors on pallet      | 80                    |



General - Configurations With SC12G

| -                       | Conf. 1     | Conf. 2     |
|-------------------------|-------------|-------------|
| Motor configuration     | CSIR        | CSIR        |
| Power supply (nominal)  | 115 V/60 Hz | 115 V/60 Hz |
| Number of phases        | 1           | 1           |
| Voltage range           | 103-127 V   | 103-127 V   |
| Approvals               | UL          | UL          |
| Starting torque         | HST         | HST         |
| Refrigerant             | R134a       | R513A       |
| Application             | LBP+MBP+HBP | LBP+MBP+HBP |
| Hot gas defrost         | OK          | OK          |
| Long interval pull down | OK          | OK          |

Application Notes

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

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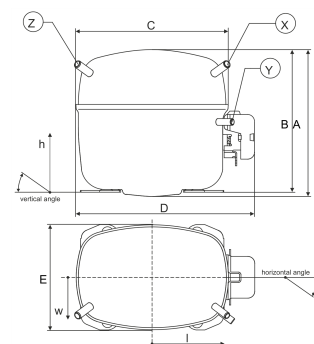
## Compressor Design

|                       |                                    |                         |               |
|-----------------------|------------------------------------|-------------------------|---------------|
| Oil type              | POE                                | Winding resistance main | 1 Ohm         |
| Oil viscosity         | 22cSt                              | Winding resistance aux  | 4.2 Ohm       |
| Oil quantity          | 500 / 16.91fl.oz                   | Max. winding temp.      | 125 °C        |
| Free gas volume comp. | 1,460 cm <sup>3</sup> / 49.37fl.oz | Max. discharge temp.    | 135°C / 275°F |
| Motor protection      | internal                           |                         |               |

## Compressor Dimensions

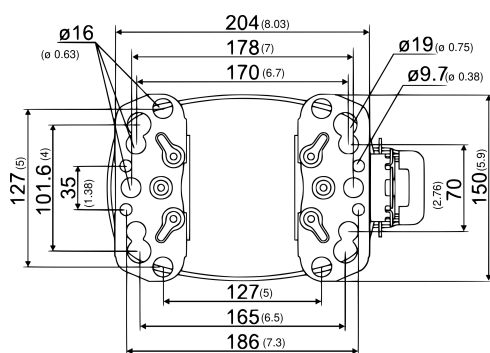
## Housing

|                   |                 |
|-------------------|-----------------|
| 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  |

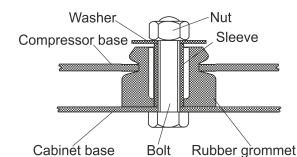
[Find 3D Model here](#)


| Connectors            | Suction X                     | Discharge Y                   | Process Z                       |
|-----------------------|-------------------------------|-------------------------------|---------------------------------|
| Diameter [mm]         | øi 8.11–8.29 / 0.32–0.33in    | øi 6.41–6.59 / 0.25–0.26in    | øi 6.41–6.59 / 0.25–0.26in      |
| Material              | CU                            | CU                            | CU                              |
| Horizontal angle ±2°  | 37°                           | 37°                           | 143°                            |
| Vertical angle ±2°    | 30°                           | 0°                            | 150°                            |
| Position l/h/w [mm]   | 107/183/55 / 4.21/7.20/2.17in | 115/100/63 / 4.53/3.94/2.48in | -107/183/55 / -4.21/7.20/2.17in |
| Straight tube l. [mm] | 12 / 0.47in                   | 12 / 0.47in                   | 12 / 0.47in                     |

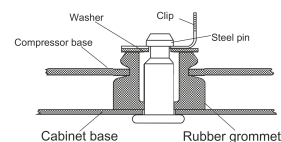
## Mounting Accessories



## Bolt joint



## Snap-on



Dimensions in mm [in]

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

Model

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Configuration 1

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### Configuration

|                                    |                       |
|------------------------------------|-----------------------|
| Motor configuration                | <b>CSIR</b>           |
| Power supply (nominal)             | <b>115 V/60 Hz 1~</b> |
| Refrigerant                        | <b>R134a</b>          |
| Application                        | <b>LBP+MBP+HBP</b>    |
| Voltage range                      | <b>103-127 V</b>      |
| Starting torque                    | <b>HST</b>            |
| Approvals                          | <b>UL</b>             |
| Starting device type               | <b>relay</b>          |
| Run capacitor                      | <b>-/-</b>            |
| Start capacitor                    | <b>240 µF</b>         |
| LRA (locked rotor amps / 4s/ U(N)) | <b>23.4 A</b>         |
| RLA (rated load amps / 1s/ U(N))   | <b>4.3 A</b>          |
| Cut in current (U(N))              | <b>23.4 A</b>         |

### Ambient/ machine room temperatures minimum /maximum

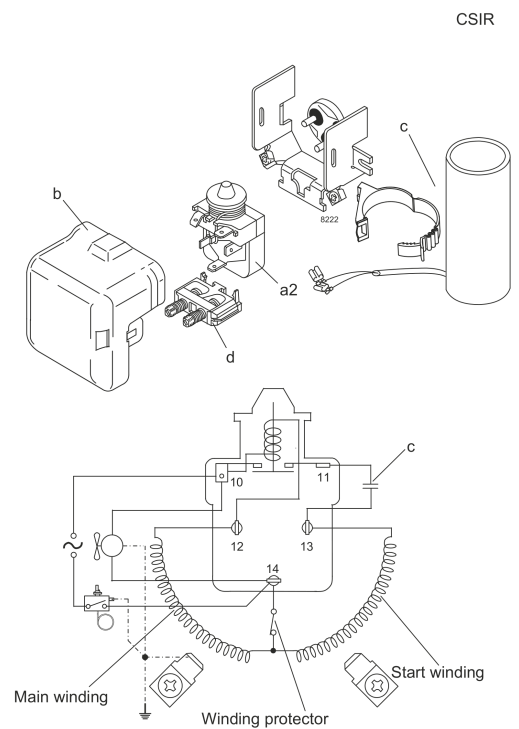
Ambient temperature range: 10 - 43°C / 50 - 109°F

Machine room temp. compressor: 10 - 48°C / 50 - 118°F

### System Cooling

fan 1,5m/s

### Electrical Accessories / Wiring Diagram



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### Components

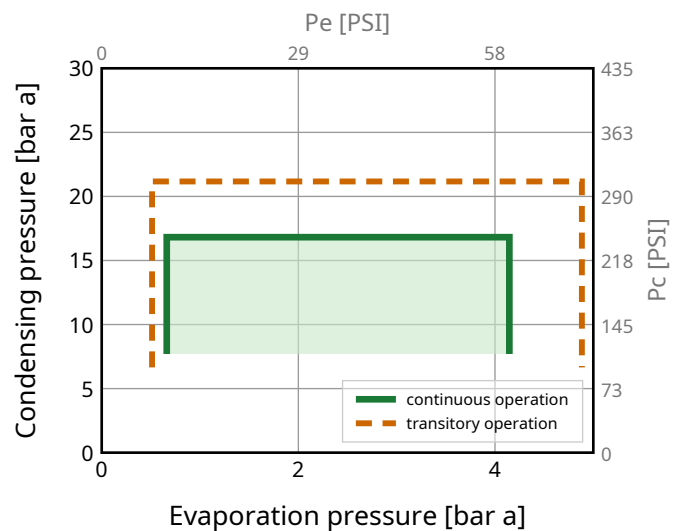
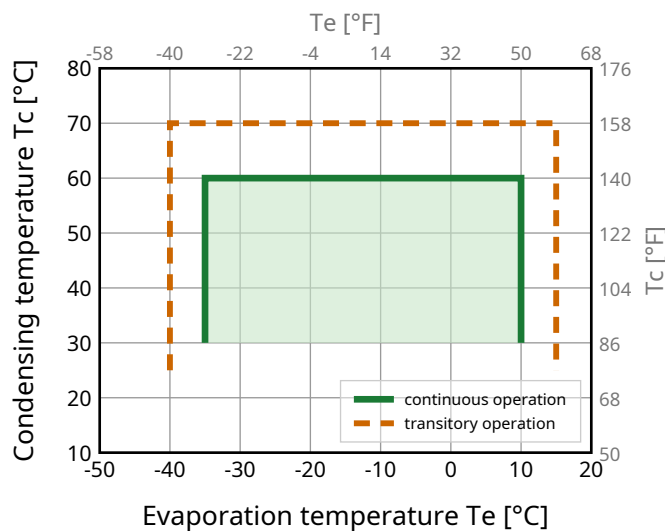
**a2** relay 117U6020

**c** start capacitor (240µF) 117U5023

**d** cord relief 103N1004

**b** plastic cover 103N2008

### Operation Pressure Range



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SC12G

Configuration 1

Sales code:  
104G7250

Standard Conditions

R134a, 115 V/60 Hz, CSIR, fan 1,5m/s

| pe           | pc            | RGT          | Tliq         | Cooling capacity |         |          | COP   | EER      | P   | I    | m      |             |
|--------------|---------------|--------------|--------------|------------------|---------|----------|-------|----------|-----|------|--------|-------------|
| [°C]<br>[°F] | [°C]<br>[°F]  | [°C]<br>[°F] | [°C]<br>[°F] | [W]              | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [W] | [A]  | [kg/h] |             |
| -23.3<br>-10 | 54.4<br>129.9 | 32.2<br>90   | 32.2<br>90   | 296              | 1009    | 254      | 0.99  | 3.38     | 298 | 5.07 | 5.74   | ASHRAE LBP  |
| -6.7<br>20   | 54.4<br>129.9 | 35<br>95     | 46.1<br>115  | 745              | 2541    | 640      | 1.56  | 5.32     | 478 | 6.04 | 16.21  | ASHRAE MBP  |
| 7.2<br>45    | 54.4<br>129.9 | 35<br>95     | 46.1<br>115  | 1402             | 4783    | 1206     | 2.24  | 7.63     | 627 | 7.18 | 31.03  | ASHRAE HBP  |
| -35<br>-31   | 40<br>104     | 20<br>68     | 40<br>104    | 131              | 448     | 113      | 0.64  | 2.20     | 204 | 4.92 | 2.87   | EN12900 LBP |
| -10<br>14    | 45<br>113     | 20<br>68     | 45<br>113    | 670              | 2288    | 577      | 1.59  | 5.44     | 420 | 5.71 | 15.64  | EN12900 MBP |
| 5<br>41      | 50<br>122     | 20<br>68     | 50<br>122    | 1206             | 4116    | 1038     | 2.09  | 7.14     | 577 | 6.85 | 30.26  | EN12900 HBP |

Performance Tables

R134a, 115 V/60 Hz, CSIR, fan 1,5m/s

pc= 45/113 | RGT= 32/89.6 | Tliq= 45/113 | °C/°F

| pe   |      | Cooling capacity |         |          | COP   | EER      | P   | I    | m      |
|------|------|------------------|---------|----------|-------|----------|-----|------|--------|
| [°C] | [°F] | [W]              | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [W] | [A]  | [kg/h] |
| -35  | -31  | 118              | 403     | 101      | 0.61  | 2.08     | 194 | 4.81 | 2.54   |
| -30  | -22  | 197              | 673     | 170      | 0.81  | 2.75     | 244 | 4.92 | 4.25   |
| -20  | -4   | 403              | 1374    | 346      | 1.20  | 4.09     | 336 | 5.24 | 8.73   |
| -10  | 14   | 694              | 2370    | 597      | 1.65  | 5.64     | 420 | 5.71 | 15.17  |
| 0    | 32   | 1100             | 3753    | 946      | 2.17  | 7.42     | 506 | 6.34 | 24.27  |
| 10   | 50   | 1646             | 5618    | 1416     | 2.74  | 9.36     | 600 | 7.11 | 36.85  |

pc= 55/131 | RGT= 32/89.6 | Tliq= 55/131 | °C/°F

|     |     |      |      |      |      |      |     |      |       |
|-----|-----|------|------|------|------|------|-----|------|-------|
| -35 | -31 | 43   | 145  | 37   | 0.28 | 0.97 | 150 | 4.61 | 1.01  |
| -30 | -22 | 117  | 398  | 100  | 0.54 | 1.85 | 216 | 4.78 | 2.77  |
| -20 | -4  | 303  | 1033 | 260  | 0.90 | 3.08 | 335 | 5.23 | 7.24  |
| -10 | 14  | 562  | 1919 | 484  | 1.27 | 4.32 | 444 | 5.82 | 13.56 |
| 0   | 32  | 924  | 3151 | 794  | 1.68 | 5.72 | 551 | 6.57 | 22.52 |
| 10  | 50  | 1414 | 4823 | 1216 | 2.13 | 7.27 | 663 | 7.47 | 35.02 |

Model

SC12G

Configuration 2

Sales code:

104G7250

### Configuration

|                                    |                       |
|------------------------------------|-----------------------|
| Motor configuration                | <b>CSIR</b>           |
| Power supply (nominal)             | <b>115 V/60 Hz 1~</b> |
| Refrigerant                        | <b>R513A</b>          |
| Application                        | <b>LBP+MBP+HBP</b>    |
| Voltage range                      | <b>103-127 V</b>      |
| Starting torque                    | <b>HST</b>            |
| Approvals                          | <b>UL</b>             |
| Starting device type               | <b>relay</b>          |
| Run capacitor                      | <b>-/-</b>            |
| Start capacitor                    | <b>240 µF</b>         |
| LRA (locked rotor amps / 4s/ U(N)) | <b>23.4 A</b>         |
| RLA (rated load amps / 1s/ U(N))   | <b>4.3 A</b>          |
| Cut in current (U(N))              | <b>23.4 A</b>         |

### Ambient/ machine room temperatures minimum /maximum

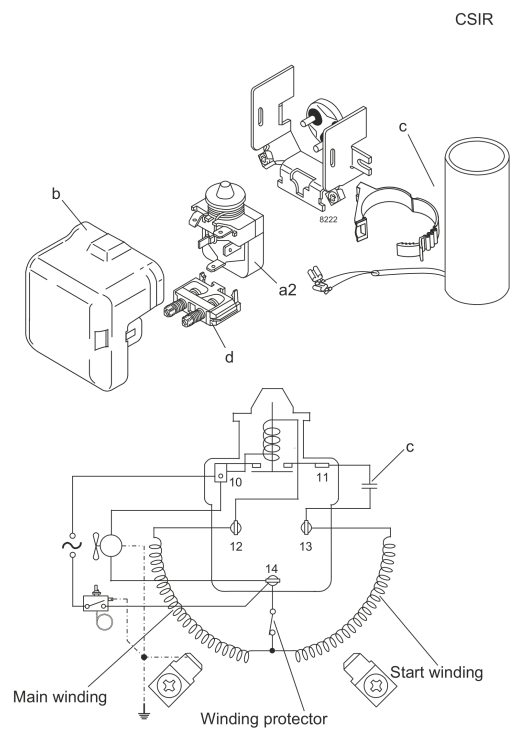
Ambient temperature range: 10 - 43°C / 50 - 109°F

Machine room temp. compressor: 10 - 48°C / 50 - 118°F

### System Cooling

fan 1,5m/s

### Electrical Accessories / Wiring Diagram



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### Components

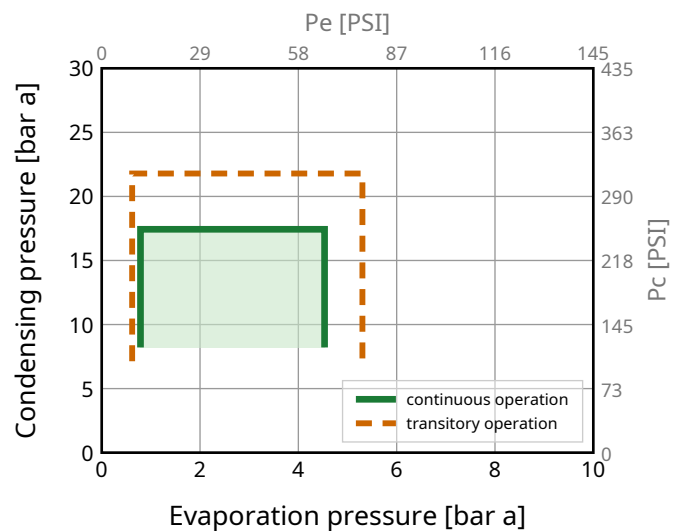
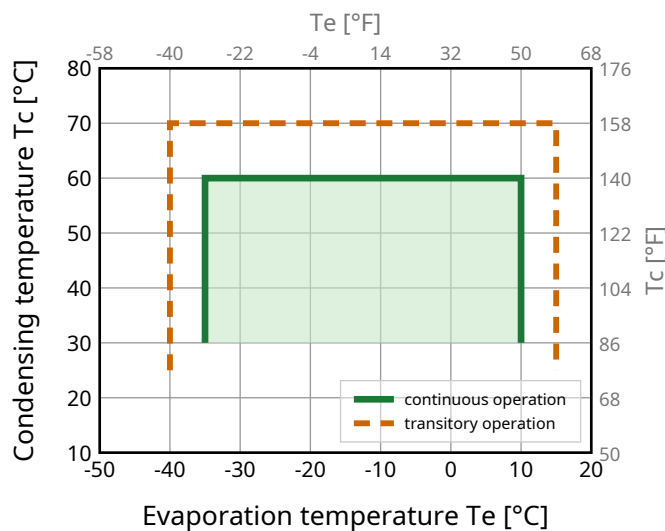
**a2** relay 117U6020

**c** start capacitor (240µF) 117U5023

**d** cord relief 103N1004

**b** plastic cover 103N2008

### Operation Pressure Range



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Configuration 2

Sales code:  
104G7250

Standard Conditions

R513A, 115 V/60 Hz, CSIR, fan 1,5m/s

| pe           | pc            | RGT          | Tliq         | Cooling capacity |         |          | COP   | EER      | P   | I    | m      |             |
|--------------|---------------|--------------|--------------|------------------|---------|----------|-------|----------|-----|------|--------|-------------|
| [°C]<br>[°F] | [°C]<br>[°F]  | [°C]<br>[°F] | [°C]<br>[°F] | [W]              | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [W] | [A]  | [kg/h] |             |
| -23.3<br>-10 | 54.4<br>129.9 | 32.2<br>90   | 32.2<br>90   | 320              | 1092    | 275      | 1.04  | 3.56     | 307 | 4.22 | 7.01   | ASHRAE LBP  |
| -6.7<br>20   | 54.4<br>129.9 | 35<br>95     | 46.1<br>115  | 752              | 2567    | 647      | 1.58  | 5.39     | 476 | 5.34 | 18.76  | ASHRAE MBP  |
| 7.2<br>45    | 54.4<br>129.9 | 35<br>95     | 46.1<br>115  | 1405             | 4795    | 1208     | 2.25  | 7.67     | 625 | 6.32 | 35.70  | ASHRAE HBP  |
| -35<br>-31   | 40<br>104     | 20<br>68     | 40<br>104    | 162              | 552     | 139      | 0.76  | 2.61     | 212 | 3.59 | 4.07   | EN12900 LBP |
| -10<br>14    | 45<br>113     | 20<br>68     | 45<br>113    | 666              | 2274    | 573      | 1.58  | 5.38     | 422 | 4.98 | 18.05  | EN12900 MBP |
| 5<br>41      | 50<br>122     | 20<br>68     | 50<br>122    | 1174             | 4004    | 1009     | 2.02  | 6.89     | 581 | 6.03 | 34.60  | EN12900 HBP |

Performance Tables

R513A, 115 V/60 Hz, CSIR, fan 1,5m/s

pc= 45/113 | RGT= 32/89.6 | Tliq= 45/113 | °C/°F

| pe   |      | Cooling capacity |         |          | COP   | EER      | P   | I    | m      |
|------|------|------------------|---------|----------|-------|----------|-----|------|--------|
| [°C] | [°F] | [W]              | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [W] | [A]  | [kg/h] |
| -35  | -31  | 136              | 464     | 117      | 0.67  | 2.27     | 204 | 3.55 | 3.35   |
| -30  | -22  | 209              | 712     | 180      | 0.85  | 2.89     | 247 | 3.83 | 5.15   |
| -20  | -4   | 409              | 1395    | 352      | 1.23  | 4.18     | 334 | 4.40 | 10.15  |
| -10  | 14   | 699              | 2386    | 601      | 1.66  | 5.65     | 422 | 4.98 | 17.50  |
| 0    | 32   | 1101             | 3756    | 947      | 2.15  | 7.33     | 513 | 5.58 | 27.89  |
| 10   | 50   | 1635             | 5578    | 1406     | 2.71  | 9.24     | 604 | 6.18 | 42.10  |

pc= 55/131 | RGT= 32/89.6 | Tliq= 55/131 | °C/°F

|     |     |      |      |      |      |      |     |      |       |
|-----|-----|------|------|------|------|------|-----|------|-------|
| -35 | -31 | 86   | 294  | 74   | 0.45 | 1.52 | 194 | 3.48 | 2.37  |
| -30 | -22 | 146  | 498  | 125  | 0.60 | 2.06 | 242 | 3.79 | 4.03  |
| -20 | -4  | 314  | 1070 | 270  | 0.92 | 3.14 | 341 | 4.44 | 8.71  |
| -10 | 14  | 563  | 1921 | 484  | 1.27 | 4.33 | 443 | 5.12 | 15.80 |
| 0   | 32  | 916  | 3124 | 787  | 1.67 | 5.68 | 550 | 5.82 | 26.04 |
| 10  | 50  | 1392 | 4750 | 1197 | 2.11 | 7.21 | 659 | 6.54 | 40.33 |