

## Single Pack SC12/12G 220-240V 50Hz CSIR

Single pack code number: **195B3255**

| Position | Title   | Code     | Amount |
|----------|---|----------|--------|
| 1        | Compressor SC12/12G                                     | 104G8280 | 1      |
| 2        | Starting relay  | 117U6003 | 2      |
| 3        | Starting capacitor (80 $\mu$ F 220V, 6.3mm)             | 117U5017 | 2      |
| 4        | Cord relief   | 103N1004 | 2      |
| 5        | Cover   | 103N2009 | 2      |
| 6        | Bolt joint for one compressor   M6   $\varnothing$ 16mm | 118-1917 | 2      |

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## Model

|             |                 |                  |             |                 |
|-------------|-----------------|------------------|-------------|-----------------|
| Designation | <b>SC12/12G</b> | 220-240V/50Hz 1~ | Sales code: | <b>104G8280</b> |
|-------------|-----------------|------------------|-------------|-----------------|

## Compressor design

|                            |                                  |                       |                                  |
|----------------------------|----------------------------------|-----------------------|----------------------------------|
| Oil type                   | Polyolester                      | Refrigerant(s)        | <b>R134a</b>                     |
| Oil viscosity              | 22cST                            | Displacement          | 25,74cm <sup>3</sup> / 1,57cu.in |
| Oil quantity               | 1238cm <sup>3</sup> / 41,9fl.oz  | Compressors on pallet | 18                               |
| Refr. charge - tech. limit | 2200g / 77,6oz                   |                       |                                  |
| Free gas volume comp.      | 3020cm <sup>3</sup> / 102,1fl.oz |                       |                                  |
| Weight                     | 28kg / 61,7lbs                   |                       |                                  |
| Motor protection           | 1# internal                      |                       |                                  |
| Winding resistance main    | 6,9Ω (at 25°C)                   |                       |                                  |
| Winding resistance aux     | 11Ω (at 25°C)                    |                       |                                  |
| Max. winding temp.         | 125°C / 257°F                    |                       |                                  |
| Max. discharge temp.       | 135°C / 275°F                    |                       |                                  |



## General - Configurations with SC12/12G

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

## Applications with SC12/12G

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

## Electrical data - Configurations with SC12/12G

|                              | <b>Conf. 1</b> |
|------------------------------|----------------|
| Starting device type         | relay          |
| Run capacitor                | - / -          |
| Start capacitor              | 80μF           |
| LRA (locked rotor amps / 4s) | 2x 23,4A       |
| RLA (rated load amps / 1s)   | 2x 4,3A        |
| Cut in current               | 2x 23,4A       |

## Model

Designation

**SC12/12G**

220-240V/50Hz 1~

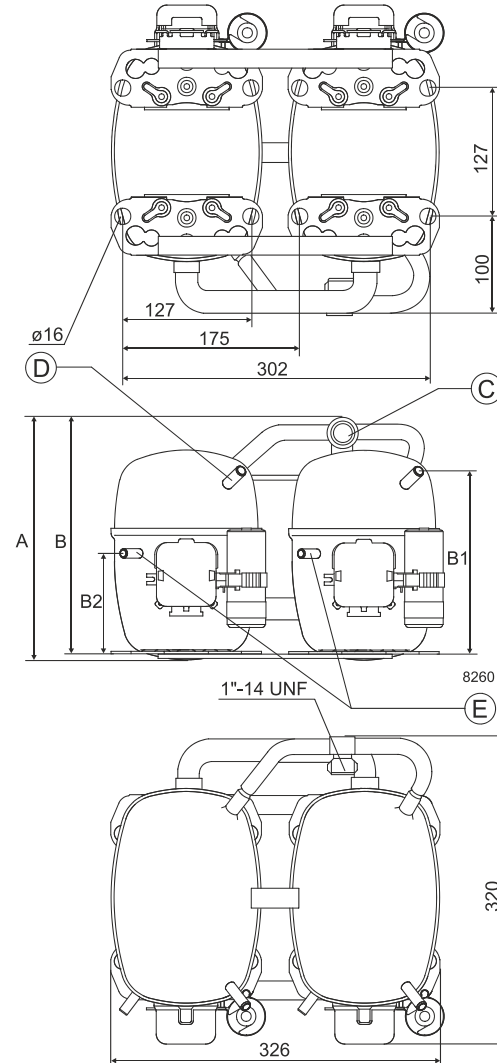
Sales code:

**104G8280**

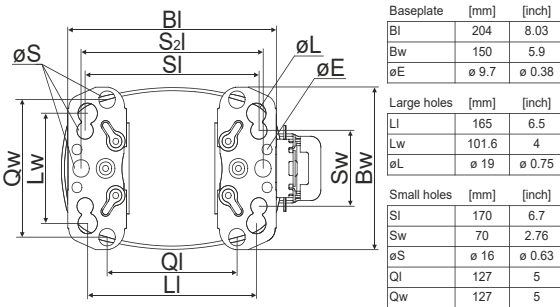
## Compressor dimensions

| Housing | A Height | 249mm / 9,8in  |
|---------|----------|----------------|
|         | B Height | 244mm / 9,61in |
|         | B1       | 183mm / 7,2in  |
|         | B2       | 100mm / 3,94in |

| Connectors            |      | Suction        | Discharge    | Process      |
|-----------------------|------|----------------|--------------|--------------|
|                       |      | C              | E            | D            |
| Diameter              | [mm] | øi 15,21-15,37 | øi 6,11-6,29 | øi 6,11-6,29 |
| (i:inside, o:outside) | [in] | øi 0,6-0,61    | øi 0,24-0,25 | øi 0,24-0,25 |
| Material              |      | steel          | copper       | copper       |
| Horizontal angle      | ±2°  | 0°             | 37°          | 37°          |
| Vertical angle        | ±2°  | 0°             | 0°           | 0°           |
| Position l/h/w        | [mm] | 0/0/0          | 0/0/0        | 0/0/0        |
|                       | [in] | 0/0/0          | 0/0/0        | 0/0/0        |
| Straight tube l.      | [mm] | 10             | 12           | 12           |
|                       | [in] | 0,4            | 0,5          | 0,5          |



## Compressor fixation

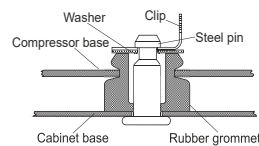
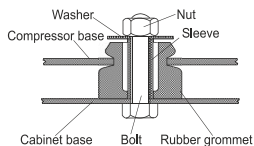


## Mounting accessories

|                            | 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   |

## Bolt joint

## Snap-on



## Application notes

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

Twin should be used with a time-delay relay

## Model

|             |                 |                      |                |             |                 |
|-------------|-----------------|----------------------|----------------|-------------|-----------------|
| Designation | <b>SC12/12G</b> | <b>220-240V/50Hz</b> | <b>Conf. 1</b> | Sales code: | <b>104G8280</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              | CCC, VDE,        |

## Ambient/ machine room temperatures minimum /maximum

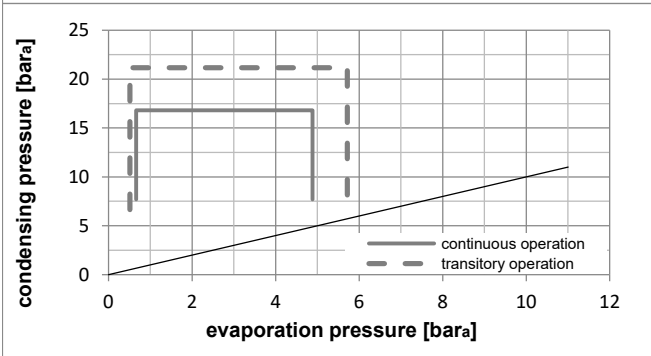
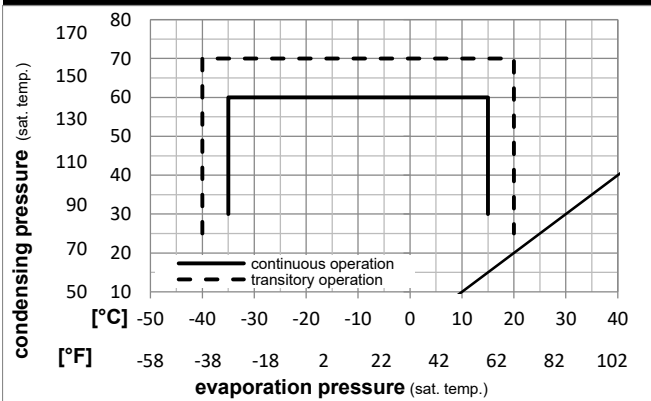
|                                 |                        |
|---------------------------------|------------------------|
| Ambient temperature range:      | 10 - 43°C / 50 - 110°F |
| Machine room temperature range: | 10 - 48°C / 50 - 119°F |
| Compressor cooling:             | fan 3m/s            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

## Operation Limits

## Electrical accessories / wiring diagram

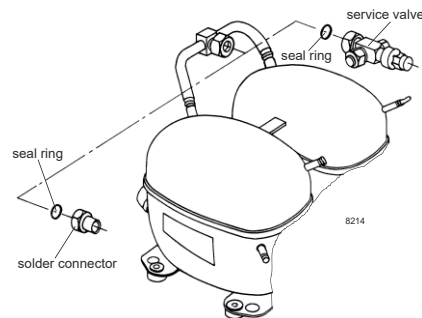


## Operation pressure range



## Components

|    |  |          |
|----|--|----------|
| a2 | assy. relay                                    | 117U6003 |
| c  | start capacitor (80μF)                         | 117U5017 |
| d  | cord relief                                    | 103N1004 |
| b  | plastic cover                                  | 103N2009 |
| .  | Check valve (to be used with time-delay relay) | 020-1014 |
| .  | Service valve 12mm                             | 118-7350 |
| .  | Solder connector (alternative) 12 mm           | 104B0584 |
| .  | Seal ring for service valve and solder conn.   | 118-3638 |



## Model

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

## Optimization + standard conditions

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

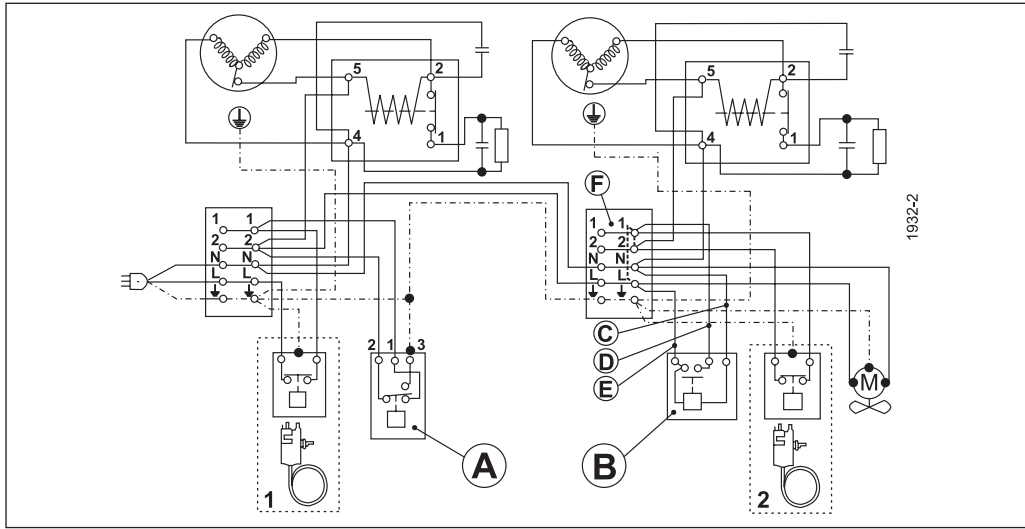
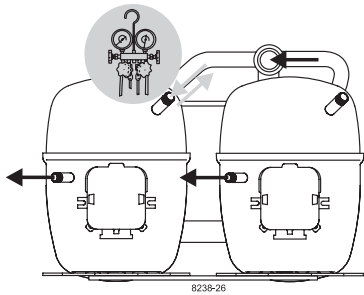
|  | Evaporating pressure (saturation temperature) |      |      |      | Cooling capacity |         |          | COP    | EER      | P1        | Power consumption   |                |        | ASHRAE     |             |
|--|---|------|------|------|------------------|---------|----------|--------|----------|-----------|---------------------|----------------|--------|------------|-------------|
|  | pe  | pc   | RGT  | Tliq | [W]              | [Btu/h] | [kcal/h] |        |          |           | Current consumption | Ref. mass flow |        |            |             |
|  | [°C]  | [°C] | [°C] | [°C] | [W]              | [Btu/h] | [kcal/h] | [W/W]  | [Btu/Wh] | [kcal/Wh] | [W]                 | [A]            | [kg/h] |            |             |
|  | -23   | 54   | 32   | 32   | 495,1            | 1691    | 426,1    | 1,03   | 3,52     | 0,89      | 480,7               | 3,74           | 9,61   | ASHRAE LBP |             |
|  | [°F]  |      |      |      |                  |         |          |        |          |           |                     |                |        |            |             |
|  | -10   | 130  | 90   | 90   |                  |         |          |        |          |           |                     |                |        |            |             |
|  | [°C]  | -7   | 54   | 35   | 46               | 1230,0  | 4201     | 1058,6 | 1,60     | 5,47      | 1,38                | 767,8          | 4,67   | 26,84      | ASHRAE MBP  |
|  | [°F]  | 20   | 130  | 95   | 115              |         |          |        |          |           |                     |                |        |            |             |
|  | [°C]  | 7,2  | 54   | 35   | 46               | 2340,8  | 7994     | 2014,5 | 2,29     | 7,81      | 1,97                | 1023,5         | 5,67   | 51,93      | ASHRAE HBP  |
|  | [°F]  | 45   | 130  | 95   | 115              |         |          |        |          |           |                     |                |        |            |             |
|  | [°C]  | -35  | 40   | 20   | 40               | 246,5   | 842      | 212,2  | 0,75     | 2,55      | 0,64                | 329,9          | 3,45   | 5,41       | EN12900 LBP |
|  | [°F]  | -31  | 104  | 68   | 104              |         |          |        |          |           |                     |                |        |            |             |
|  | [°C]  | -10  | 45   | 20   | 45               | 1094,3  | 3737     | 941,8  | 1,61     | 5,51      | 1,39                | 678,5          | 4,30   | 25,62      | EN12900 MBP |
|  | [°F]  | 14   | 113  | 68   | 113              |         |          |        |          |           |                     |                |        |            |             |
|  | [°C]  | 5    | 50   | 20   | 50               | 1989,5  | 6795     | 1712,2 | 2,10     | 7,16      | 1,80                | 949,4          | 5,34   | 50,13      | EN12900 HBP |
|  | [°F]  | 41   | 122  | 68   | 122              |         |          |        |          |           |                     |                |        |            |             |

## Performance tables

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

|                  | pe   |      | Cooling capacity |         |          | COP  | EER   | P1   | I      | m    |       |
|------------------|------|------|------------------|---------|----------|------|-------|------|--------|------|-------|
|                  | [°C] | [°F] | [W]              | [Btu/h] | [kcal/h] |      |       |      |        |      |       |
| [°C / °F]        | -35  | -31  | 205,2            | 701     | 176,6    | 0,65 | 2,21  | 0,56 | 317,0  | 3,38 | 4,43  |
| cond. pressure   | -25  | -13  | 469,5            | 1603    | 404,0    | 1,03 | 3,51  | 0,89 | 456,2  | 3,67 | 10,17 |
| pc= 45/113       | -15  | 5    | 871,0            | 2975    | 749,6    | 1,44 | 4,93  | 1,24 | 602,9  | 4,06 | 18,99 |
| return gas temp. | -10  | 14   | 1135,3           | 3877    | 977,1    | 1,67 | 5,71  | 1,44 | 678,5  | 4,30 | 24,85 |
| RGT= 32/90       | 0    | 32   | 1815,5           | 6200    | 1562,4   | 2,18 | 7,44  | 1,88 | 833,2  | 4,85 | 40,15 |
| liquid temp      | 5    | 41   | 2241,0           | 7653    | 1928,6   | 2,46 | 8,39  | 2,11 | 911,9  | 5,16 | 49,89 |
| Tliq= 45/113     | 15   | 59   | 3287,1           | 11226   | 2828,9   | 3,07 | 10,48 | 2,64 | 1071,0 | 5,87 | 74,46 |
| [°C / °F]        | -35  | -31  | 129,2            | 441     | 111,2    | 0,44 | 1,49  | 0,38 | 295,7  | 3,25 | 3,08  |
| cond. pressure   | -25  | -13  | 349,9            | 1195    | 301,1    | 0,77 | 2,63  | 0,66 | 453,5  | 3,66 | 8,37  |
| pc= 55/131       | -15  | 5    | 696,0            | 2377    | 599,0    | 1,12 | 3,82  | 0,96 | 622,3  | 4,17 | 16,76 |
| return gas temp  | -10  | 14   | 928,2            | 3170    | 798,8    | 1,31 | 4,46  | 1,12 | 710,2  | 4,47 | 22,44 |
| RGT= 32/90       | 0    | 32   | 1535,1           | 5243    | 1321,1   | 1,72 | 5,88  | 1,48 | 892,2  | 5,14 | 37,55 |
| liquid temp      | 5    | 41   | 1919,6           | 6556    | 1652,0   | 1,95 | 6,65  | 1,68 | 985,9  | 5,52 | 47,30 |
| Tliq= 55/131     | 15   | 59   | 2874,6           | 9817    | 2473,9   | 2,44 | 8,34  | 2,10 | 1177,5 | 6,35 | 72,20 |

# SC Twin Compressors



|            | A                               | B                       | C     | D       | E          | F   |   |
|------------|---------------------------------|-------------------------|-------|---------|------------|---|---|
| ENGLISH    | Safety pressure control         | Time delay relay        | Blue  | Black   | Brown      | Remove wire L-1 if time delay is used                                 | Remove wire 1-2 if thermostat 2 is used                 |
| 中文         | 安全压力控制                          | 延时继电器                   | 蓝     | 黑       | 棕          | 若延时继电器使用，线L-1不使用  | 若温控器2使用，线1-2不使用   |
| Русский    | Предохранительное реле давления | Реле задержки времени   | Синий | Чёрный  | Коричневый | Отсоедините провод L-1, если используется реле задержки времени       | Отсоедините провод 1-2, если используется термостат 2   |
| DEUTSCH    | Sicherheitsdruckschalter        | Zeitrelais (verzögernd) | Blau  | Schwarz | Braun      | Bei Benutzung der Anlaßverzögerung Brücke L-1 entfernen               | Bei Benutzung von Thermostat 2 Brücke 1-2 entfernen     |
| FRANÇAIS   | Pressostat                      | Relais de temporisation | Bleu  | Noir    | Marron     | Supprimer la connection L-1 si le relais de temporisation est utilisé | Supprimer la connection 1-2 si thermostat 2 est utilisé |
| ESPAÑOL    | Presostato de seguridad         | Relé de retardo         | Azul  | Negro   | Marrón     | Quitar cable L-1, si se utiliza un relé de retardo                    | Quitar cable 1-2, si se utiliza el termostato 2         |
| ITALIANO   | Pressostato                     | Relè di ritardo avviam. | Blu   | Nero    | Marrone    | Eliminare il cavo L-1 se è utilizzato il ritardatore                  | Eliminare il cavo 1-2 se è utilizzato il termostato 2   |
| NEDERLANDS | Pressostaat                     | Tijdvertraging-relais   | Blauw | Zwart   | Bruin      | Verwijder draad L-1 indien tijdvertraging wordt toegepast             | Verwijder draad 1-2 indien thermostaat wordt toegepast  |
| DANSK      | Sikkerhedspressostat            | Tidsforsinkelsesrelæ    | Blå   | Sort    | Brun       | Ved tidsforsinkelse fjernes ledning L-1                               | Ved termostat 2 fjernes ledning 1-2                     |
| SVENSKA    | Säkerhetspressostat             | Tidsfördröjningsrelä    | Blå   | Svart   | Brun       | Vid anslutning av tidsfördröjningsrelä avlägsnas bygling L-1          | Vid anslutning av termostat 2 avlägsnas bygling 1-2     |



# SC Twin Compressors



|            | A                               | B                       | C     | D       | E          | F   |   |
|------------|---------------------------------|-------------------------|-------|---------|------------|---|---|
| ENGLISH    | Safety pressure control         | Time delay relay        | Blue  | Black   | Brown      | Remove wire L-1 if time delay is used                                 | Remove wire 1-2 if thermostat 2 is used                 |
| 中文         | 安全压力控制                          | 延时继电器                   | 蓝     | 黑       | 棕          | 若延时继电器使用, 线L-1不使用   | 若温控器2使用, 线1-2不使用  |
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| DEUTSCH    | Sicherheitsdruckschalter        | Zeitrelais (verzögernd) | Blau  | Schwarz | Braun      | Bei Benutzung der Anlaufverzögerung Brücke L-1 entfernen              | Bei Benutzung von Thermostat 2 Brücke 1-2 entfernen     |
| FRANÇAIS   | Pressostat                      | Relais de temporisation | Bleu  | Noir    | Marron     | Supprimer la connection L-1 si le relais de temporisation est utilisé | Supprimer la connection 1-2 si thermostat 2 est utilisé |
| ESPAÑOL    | Presostato de seguridad         | Relé de retardo         | Azul  | Negro   | Marrón     | Quitar cable L-1, si se utiliza un relé de retardo                    | Quitar cable 1-2, si se utiliza el termostato 2         |
| ITALIANO   | Pressostato                     | Relè di ritardo avviam. | Blu   | Nero    | Marrone    | Eliminare il cavo L-1 se è utilizzato il ritardatore                  | Eliminare il cavo 1-2 se è utilizzato il termostato 2   |
| NEDERLANDS | Pressostaat                     | Tijdvertraging-relais   | Blauw | Zwart   | Bruin      | Verwijder draad L-1 indien tijdvertraging wordt toegepast             | Verwijder draad 1-2 indien thermostaat wordt toegepast  |
| DANSK      | Sikkerhedspressostat            | Tidsforsinkel-sesrelæ   | Blå   | Sort    | Brun       | Ved tidsforsinkelse fjernes ledning L-1                               | Ved termostat 2 fjernes ledning 1-2                     |
| SVENSKA    | Säkerhetspressostat             | Tidsfördröjningsrelä    | Blå   | Svart   | Brun       | Vid anslutning av tidsfördröjningsrelä avlägsnas bygling L-1          | Vid anslutning av termostat 2 avlägsnas bygling 1-2     |

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