

Single Pack SC18G 220-240V 50/60Hz CSIR

Single pack code number: **195B4502**

| Position | Title | Code | Amount |
|----------|---|----------|--------|
| 1 | Compressor SC18G | 104G8822 | 1 |
| 2 | Starting relay | 117U6019 | 1 |
| 3 | Starting capacitor (80 μ F 220V, 6.3mm) | 117U5017 | 1 |
| 4 | Cord relief | 103N1004 | 1 |
| 5 | Cover | 103N2009 | 1 |
| 6 | Bolt joint for one compressor M6 \varnothing 16mm | 118-1917 | 1 |

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Model

| | | | | |
|-------------|--------------|-----------------------------------|-------------|-----------------|
| Designation | SC18G | 220-240V/50Hz 1~ 220-240V/60Hz 1~ | Sales code: | 104G8822 |
|-------------|--------------|-----------------------------------|-------------|-----------------|

Compressor design

| | | | |
|----------------------------|---------------------------------|-----------------------|----------------------------------|
| Oil type | Polyolester | Refrigerant(s) | R134a |
| Oil viscosity | 22cST | Displacement | 17,69cm ³ / 1,08cu.in |
| Oil quantity | 550cm ³ / 18,6fl.oz | Compressors on pallet | 80 |
| Refr. charge - tech. limit | 1300g / 45,9oz | | |
| Free gas volume comp. | 1460cm ³ / 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. | 135°C / 275°F | | |



General - Configurations with SC18G

| | Conf. 1 | Conf. 2 |
|------------------------|----------------|----------------|
| 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, CCC | VDE, CCC |
| Starting torque | HST | HST |
| Note | - / - | |

Applications with SC18G

| | Conf. 1 | Conf. 2 |
|-------------------------|----------------|----------------|
| 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

| | Conf. 1 | Conf. 2 |
|------------------------------|----------------|----------------|
| 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:

104G8822

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 X | Discharge Y | Process 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

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

Application notes

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

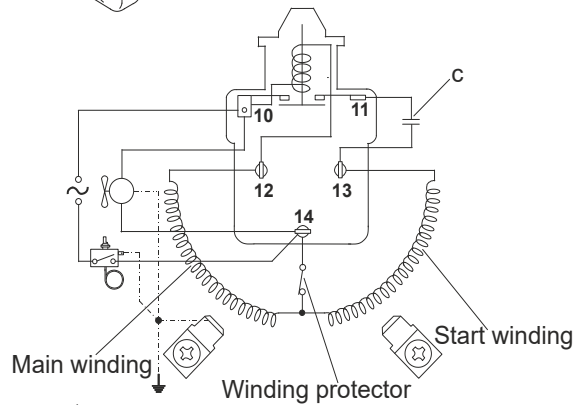
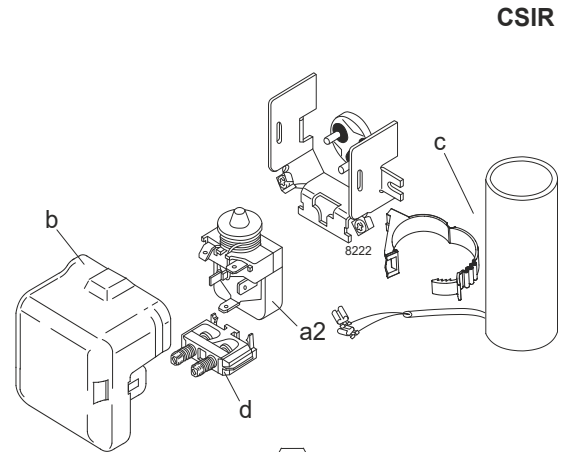
Model

| | | | | | |
|-------------|--------------|----------------------|----------------|-------------|-----------------|
| Designation | SC18G | 220-240V/50Hz | Conf. 1 | Sales code: | 104G8822 |
|-------------|--------------|----------------------|----------------|-------------|-----------------|

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 CCC |

Electrical accessories / wiring diagram

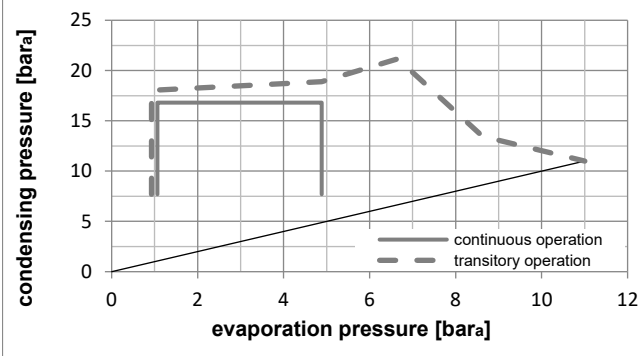
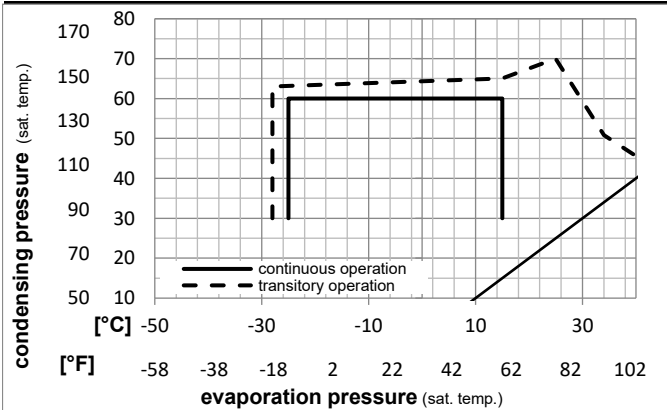


Ambient/ machine room temperatures minimum /maximum

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

Alternative components

| | | |
|----|-----------------------------------|----------|
| a2 | relay | 117U6019 |
| c | start capacitor i-pack 40# (80μF) | 117U5067 |
| d | cord relief | 103N1004 |
| b | plastic cover | 103N2008 |

Model

Designation **SC18G** **220-240V/50Hz** Conf. 1 Sales code: **104G8822**

Optimization + standard conditions

R134a, 220V/50Hz, CSIR, fan 3m/s, VDE, 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] | | | | | | | | | | | | | | | | |
| | -23 | 54 | 32 | 32 | 396,4 | 1354 | 341,2 | 1,13 | 3,87 | 0,97 | 350,1 | 2,61 | 7,70 | | | |
| | -10 | 130 | 90 | 90 | | | | | | | | | | | | |
| | -7 | 54 | 35 | 46 | 894,7 | 3055 | 770,0 | 1,58 | 5,41 | 1,36 | 565,2 | 3,17 | 19,52 | | | |
| | 20 | 130 | 95 | 115 | | | | | | | | | | | | |
| | 7,2 | 54 | 35 | 46 | 1613,1 | 5509 | 1388,3 | 2,21 | 7,55 | 1,90 | 729,8 | 3,82 | 35,79 | | | |
| | 45 | 130 | 95 | 115 | | | | | | | | | | | | |
| | -35 | 40 | 20 | 40 | 146,0 | 499 | 125,7 | 0,67 | 2,30 | 0,58 | 217,1 | 2,26 | 3,20 | | | |
| | -31 | 104 | 68 | 104 | | | | | | | | | | | | |
| | -10 | 45 | 20 | 45 | 763,6 | 2608 | 657,2 | 1,54 | 5,27 | 1,33 | 495,2 | 2,91 | 17,87 | | | |
| | 14 | 113 | 68 | 113 | | | | | | | | | | | | |
| | 5 | 50 | 20 | 50 | 1359,1 | 4642 | 1169,7 | 2,03 | 6,92 | 1,74 | 670,4 | 3,58 | 34,25 | | | |
| | 41 | 122 | 68 | 122 | | | | | | | | | | | | |

Performance tables

R134a, 220V/50Hz, CSIR, fan 3m/s, VDE, 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 | SC18G | 208-230V/60Hz | Conf. 2 | Sales code: | 104G8822 |
|-------------|--------------|----------------------|----------------|-------------|-----------------|

Configuration

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

Electrical accessories / wiring diagram

CSIR

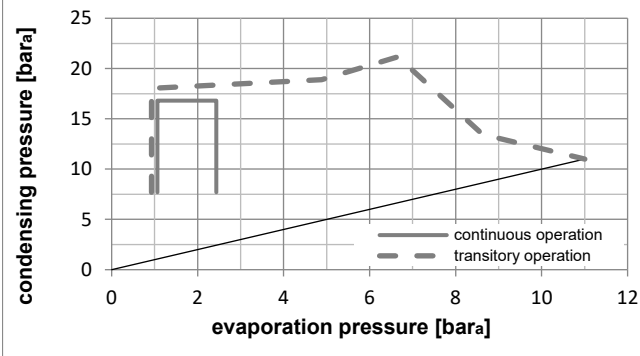
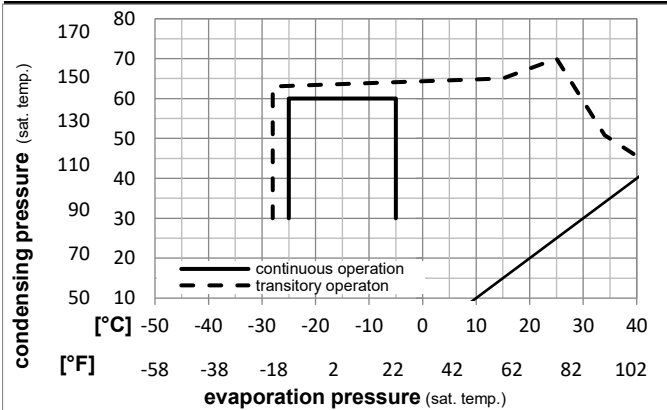


Ambient/ machine room temperatures minimum /maximum

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

Alternative components

| | | |
|----|-----------------------------------|----------|
| a2 | relay | 117U6019 |
| c | start capacitor i-pack 40# (80µF) | 117U5067 |
| d | cord relief | 103N1004 |
| b | plastic cover | 103N2008 |

Model

Designation **SC18G** **208-230V/60Hz** Conf. 2 Sales code: **104G8822**

Optimization + standard conditions

R134a, 230V/60Hz, CSIR, fan 3m/s, VDE, 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 | m | |
| [°C] | | | | | | | | | | | | | | | | |
| [°F] | | | | | | | | | | | | | | | | |
| -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 | | | | | | | | | | | | | |
| -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 | | | | | | | | | | | | | |
| 7,2 | 54 | 35 | 46 | 1879,2 | 6418 | 1617,2 | 2,21 | 7,54 | 1,90 | 851,1 | 4,46 | 41,69 | ASHRAE HBP | | | |
| 45 | 130 | 95 | 115 | | | | | | | | | | | | | |
| -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 | | | | | | | | | | | | | |
| -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 | | | | | | | | | | | | | |
| 5 | 50 | 20 | 50 | 1584,1 | 5410 | 1363,3 | 2,03 | 6,92 | 1,74 | 782,1 | 4,18 | 39,92 | EN12900 HBP | | | |
| 41 | 122 | 68 | 122 | | | | | | | | | | | | | |

Performance tables

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



SC Compressors





SC Compressors

Service/Repair – R290



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