

Single Pack SC21G 220-240V 50/60Hz CSCR

Single pack code number: **195B4524**

| Position | Title | Code | Amount |
|----------|--|----------|--------|
| 1 | Compressor SC21G | 104G8124 | 1 |
| 2 | SC starting device (650mm) | 117-7032 | 1 |
| 3 | Cord relief | 103N1004 | 1 |
| 4 | Cover | 103N2009 | 1 |
| 5 | Bolt joint for one compressor M6 ø16mm | 118-1917 | 1 |

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Model

| | | | | |
|-------------|--------------|-----------------------------------|-------------|-----------------|
| Designation | SC21G | 220-240V/50Hz 1~ 220-240V/60Hz 1~ | Sales code: | 104G8124 |
|-------------|--------------|-----------------------------------|-------------|-----------------|

Compressor design

| | | | |
|----------------------------|---------------------------------|-----------------------|----------------------------------|
| Oil type | Polyolester | Refrigerant(s) | R134a |
| Oil viscosity | 22cST | Displacement | 20,95cm ³ / 1,28cu.in |
| Oil quantity | 553cm ³ / 18,7fl.oz | Compressors on pallet | 80 |
| Refr. charge - tech. limit | 1300g / 45,9oz | | |
| Free gas volume comp. | 1460cm ³ / 49,4fl.oz | | |
| Weight | 13,6kg / 30lbs | | |
| Motor protection | 1# internal | | |
| Winding resistance main | 3,5Ω (at 25°C) | | |
| Winding resistance aux | 13Ω (at 25°C) | | |
| Max. winding temp. | 125°C / 257°F | | |
| Max. discharge temp. | 130°C / 266°F | | |



General - Configurations with SC21G

| | Conf. 1 | Conf. 2 |
|------------------------|----------------|----------------|
| Motorconfiguration | CSCR | CSCR |
| Power supply (nominal) | 220-240V/50Hz | 220-240V/60Hz |
| Number of phases | 1 | 1 |
| Voltage range | 187-254V | 198-254V |
| Approvals | VDE, CCC, EAC | VDE, CCC, EAC |
| Starting torque | HST | HST |
| Note | - / - | |

Applications with SC21G

| | 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 SC21G

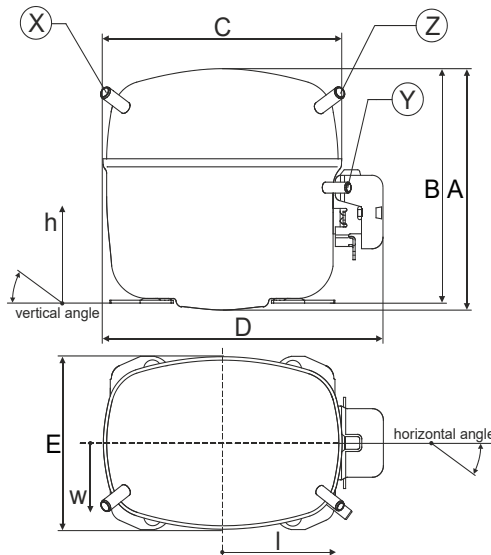
| | Conf. 1 | Conf. 2 |
|------------------------------------|----------------|----------------|
| Starting device type | relay | relay |
| Run capacitor | 10μF | 10μF |
| Start capacitor | 80μF | 80μF |
| LRA (locked rotor amps / 4s/ U(N)) | 22A | 22A |
| RLA (rated load amps / 1s/ U(N)) | 3,9A | 3,9A |
| Cut in current (U(N)) | 22A | 22A |

Model

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

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 | X | Y | Z |
| Diameter [mm] | øi 10,11-10,29 | øi 6,41-6,59 | øi 6,41-6,59 | 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 | øi 0,4-0,41 | øi 0,25-0,26 | øi 0,25-0,26 |
| Material | copper | copper | copper | copper | copper | copper |
| Horizontal angle ±2° | 37° | 37° | 143° | 37° | 37° | 143° |
| Vertical angle ±2° | 30° | 0° | 150° | 30° | 0° | 150° |
| Position l/h/w [mm] | 107/193/55 | 115/110/63 | -107/193/55 | 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 | 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 | 12 | 12 | 12 |
| [in] | 0,5 | 0,5 | 0,5 | 0,5 | 0,5 | 0,5 |

Compressor fixation

| Baseplate | [mm] | [inch] |
|-----------|-------|--------|
| BI | 204 | 8.03 |
| Bw | 150 | 5.9 |
| øE | ø 9.7 | ø 0.38 |

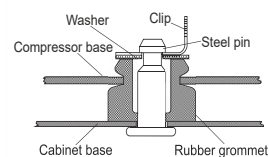
| Large holes | [mm] | [inch] |
|-------------|-------|--------|
| LI | 165 | 6.5 |
| Lw | 101.6 | 4 |
| øL | ø 19 | ø 0.75 |

| Small holes | [mm] | [inch] |
|-------------|------|--------|
| SI | 170 | 6.7 |
| Sw | 70 | 2.76 |
| øS | ø 16 | ø 0.63 |
| QI | 127 | 5 |
| Qw | 127 | 5 |

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

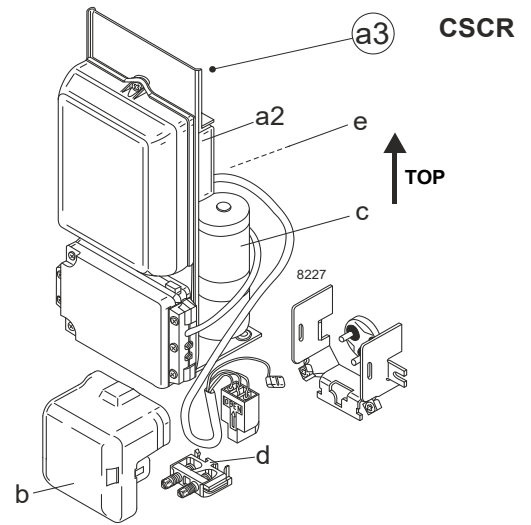
Model

| | | | | | |
|-------------|--------------|----------------------|----------------|-------------|-----------------|
| Designation | SC21G | 220-240V/50Hz | Conf. 1 | Sales code: | 104G8124 |
|-------------|--------------|----------------------|----------------|-------------|-----------------|

Configuration

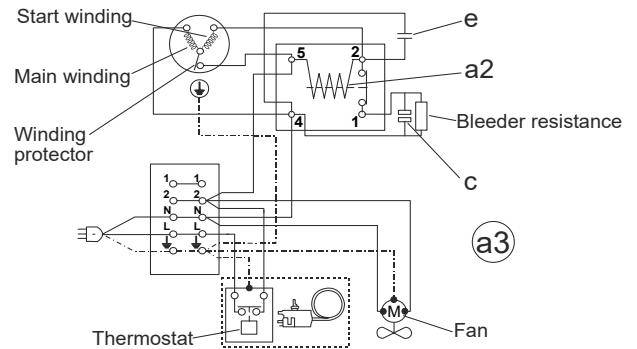
| | |
|------------------------|-------------------|
| Motorconfiguration | CSCR |
| Power supply (nominal) | 220-240V/50Hz 1~ |
| Refrigerant | R134a |
| Application | LBP+MBP+HBP |
| Voltage range | 187-254V |
| Starting torque | HST |
| Approvals | VDE CCC EAC |

Electrical accessories / wiring diagram

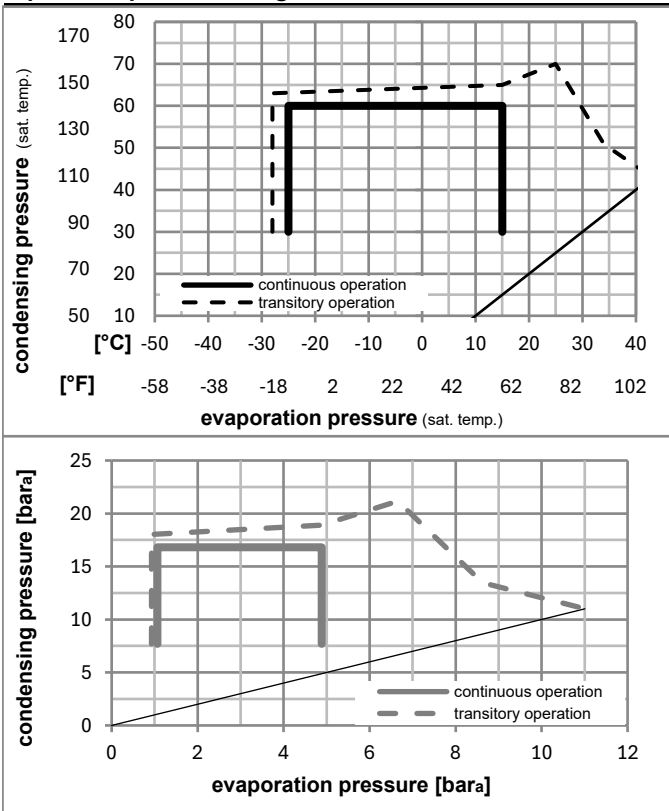


Ambient/ machine room temperatures minimum /maximum

| | |
|---------------------------------|------------------------|
| 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 pressure range



Components

| | | |
|----|------------------------|----------|
| a3 | SC starter kit (550mm) | 117-7029 |
| b | plastic cover | 103N2009 |
| d | cord relief | 103N1004 |

Alternative components

| | | |
|----|-------------------------------|----------|
| a3 | SC starter kit (650mm) | 117-7032 |
| a3 | SC starter kit (1000mm) | 117-7041 |
| a2 | potential relay (RVA 4H3R341) | 117-7427 |
| c | start capacitor (80µF) | 117U5373 |
| e | run capacitor (10µF, 6.3mm) | 117-7112 |

Model

Designation **SC21G** **220-240V/50Hz** Conf. 1 Sales code: **104G8124**

Optimization + standard conditions

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

| | 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 | 460,1 | 1571 | 396,0 | 1,22 | 4,18 | 1,05 | 375,7 | 2,34 | 8,93 | ASHRAE LBP | | |
| | -10 | 130 | 90 | 90 | | | | | | | | | | | | |
| | -25 | 55 | 32 | 55 | 332,7 | 1136 | 286,4 | 0,96 | 3,26 | 0,82 | 348,2 | 2,28 | 7,96 | cecomaf LBP | | |
| | -13 | 131 | 90 | 131 | | | | | | | | | | | | |
| | -35 | 40 | 20 | 40 | 222,2 | 759 | 191,2 | 0,88 | 2,99 | 0,75 | 253,6 | 1,96 | 4,87 | EN12900 LBP | | |
| | -31 | 104 | 68 | 104 | | | | | | | | | | | | |
| | -7 | 54 | 35 | 46 | 1040,5 | 3553 | 895,5 | 1,68 | 5,75 | 1,45 | 617,9 | 3,14 | 22,70 | ASHRAE MBP | | |
| | 20 | 130 | 95 | 115 | | | | | | | | | | | | |
| | -10 | 55 | 32 | 55 | 792,6 | 2707 | 682,1 | 1,39 | 4,75 | 1,20 | 569,4 | 2,96 | 19,16 | cecomaf MBP | | |
| | 14 | 131 | 90 | 131 | | | | | | | | | | | | |
| | -10 | 45 | 20 | 45 | 931,8 | 3182 | 801,9 | 1,63 | 5,58 | 1,41 | 570,2 | 2,87 | 21,81 | EN12900 MBP | | |
| | 14 | 113 | 68 | 113 | | | | | | | | | | | | |

Performance tables

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

| | 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 | 420,9 | 1438 | 362,3 | 1,11 | 3,80 | 0,96 | 378,0 | 2,26 | 9,12 |
| cond. pressure | -20 | -4 | 570,4 | 1948 | 490,9 | 1,29 | 4,40 | 1,11 | 442,9 | 2,44 | 12,39 |
| pc= 45/113 | -10 | 14 | 966,8 | 3302 | 832,0 | 1,70 | 5,79 | 1,46 | 570,2 | 2,87 | 21,16 |
| return gas temp. | -5 | 23 | 1215,3 | 4150 | 1045,9 | 1,93 | 6,60 | 1,66 | 629,0 | 3,12 | 26,72 |
| RGT= 32/90 | 0 | 32 | 1498,4 | 5117 | 1289,5 | 2,20 | 7,50 | 1,89 | 682,2 | 3,39 | 33,14 |
| liquid temp | 5 | 41 | 1816,9 | 6205 | 1563,6 | 2,50 | 8,52 | 2,15 | 727,9 | 3,68 | 40,45 |
| Tliq= 45/113 | 15 | 59 | 2563,1 | 8754 | 2205,8 | 3,25 | 11,08 | 2,79 | 789,8 | 4,34 | 58,06 |
| [°C / °F] | -25 | -13 | 332,7 | 1136 | 286,4 | 0,96 | 3,26 | 0,82 | 348,2 | 2,28 | 7,96 |
| cond. pressure | -20 | -4 | 453,1 | 1547 | 389,9 | 1,07 | 3,67 | 0,92 | 421,7 | 2,48 | 10,87 |
| pc= 55/131 | -10 | 14 | 792,6 | 2707 | 682,1 | 1,39 | 4,75 | 1,20 | 569,4 | 2,96 | 19,16 |
| return gas temp | -5 | 23 | 1013,3 | 3461 | 872,0 | 1,58 | 5,41 | 1,36 | 640,0 | 3,24 | 24,63 |
| RGT= 32/90 | 0 | 32 | 1269,0 | 4334 | 1092,1 | 1,80 | 6,14 | 1,55 | 705,9 | 3,54 | 31,04 |
| liquid temp | 5 | 41 | 1560,5 | 5329 | 1343,0 | 2,04 | 6,96 | 1,75 | 765,4 | 3,87 | 38,45 |
| Tliq= 55/131 | 15 | 59 | 2254,0 | 7698 | 1939,8 | 2,63 | 8,97 | 2,26 | 858,1 | 4,60 | 56,61 |

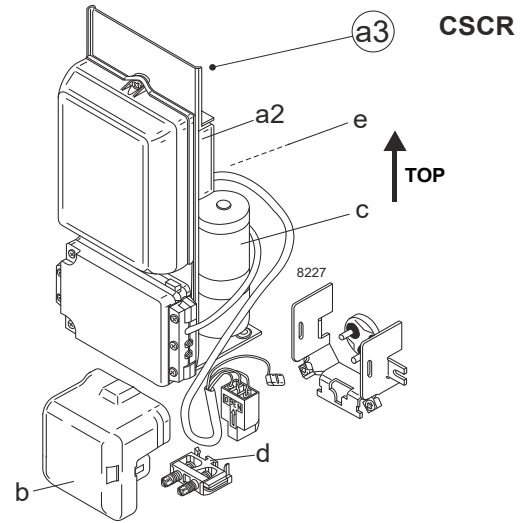
Model

| | | | | | |
|-------------|--------------|----------------------|----------------|-------------|-----------------|
| Designation | SC21G | 220-240V/60Hz | Conf. 2 | Sales code: | 104G8124 |
|-------------|--------------|----------------------|----------------|-------------|-----------------|

Configuration

| | |
|------------------------|------------------|
| Motorconfiguration | CSCR |
| Power supply (nominal) | 220-240V/60Hz 1~ |
| Refrigerant | R134a |
| Application | LBP |
| Voltage range | 198-254V |
| Starting torque | HST |
| Approvals | VDE |
| | CCC |
| | EAC |

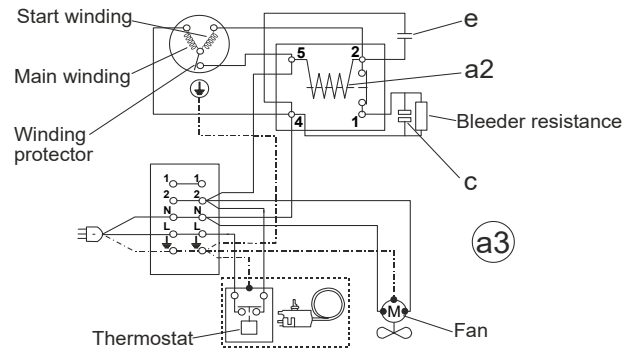
Electrical accessories / wiring diagram



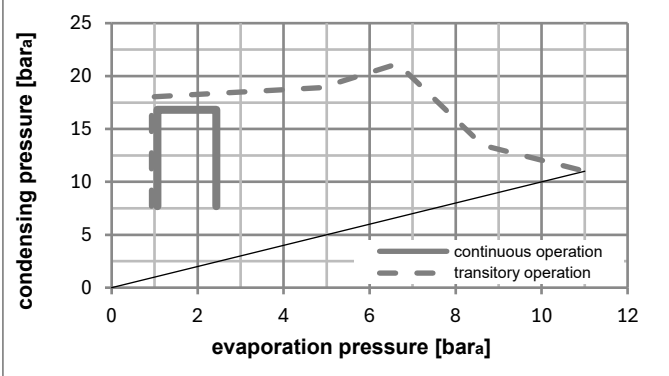
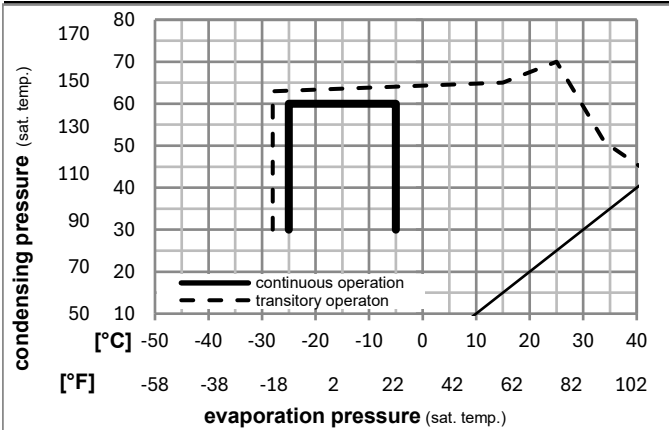
Ambient/ machine room temperatures minimum /maximum

| | |
|---------------------------------|------------------------|
| 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 pressure range



Components

| | | |
|----|------------------------|----------|
| a3 | SC starter kit (550mm) | 117-7029 |
| b | plastic cover | 103N2009 |
| d | cord relief | 103N1004 |

Alternative components

| | | |
|----|-------------------------------|----------|
| a3 | SC starter kit (650mm) | 117-7032 |
| a3 | SC starter kit (1000mm) | 117-7041 |
| a2 | potential relay (RVA 4H3R341) | 117-7427 |
| c | start capacitor (80µF) | 117U5373 |
| e | run capacitor (10µF, 6.3mm) | 117-7112 |

Model

Designation **SC21G** **220-240V/60Hz** Conf. 2 Sales code: **104G8124**

Optimization + standard conditions

R134a, 230V/60Hz, CSCR, fan 3m/s, VDE, CCC, EAC

| | Evaporating pressure (saturation temperature) | | | | Condensing pressure (saturation temperature) | | | COP | EER | | | Power consumption | | | ASHRAE LBP |
|--|---|------|------|------|--|---------|----------|--------|----------|-----------|-----------|-------------------|--------|------------|-------------|
| | pe | pc | RGT | Tliq | [W] | [Btu/h] | [kcal/h] | | [W/W] | [Btu/Wh] | [kcal/Wh] | P1 | I | m | |
| | [°C] | [°C] | [°C] | [°C] | [W] | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [kcal/Wh] | [W] | [A] | [kg/h] | | |
| | -23 | 54 | 32 | 32 | 443,9 | 1516 | 382,0 | 1,07 | 3,67 | 0,92 | 413,2 | 1,90 | 8,62 | ASHRAE LBP | |
| | [°F] | | | | | | | | | | | | | | |
| | -10 | 130 | 90 | 90 | | | | | | | | | | | |
| | [°C] | -25 | 55 | 32 | 55 | 303,4 | 1036 | 261,1 | 0,80 | 2,74 | 0,69 | 378,6 | 1,77 | 7,25 | cecomaf LBP |
| | [°F] | -13 | 131 | 90 | 131 | | | | | | | | | | |
| | [°C] | -35 | 40 | 20 | 40 | 231,4 | 790 | 199,1 | 0,82 | 2,79 | 0,70 | 283,4 | 1,29 | 5,08 | EN12900 LBP |
| | [°F] | -31 | 104 | 68 | 104 | | | | | | | | | | |
| | [°C] | -7 | 54 | 35 | 46 | 1165,8 | 3981 | 1003,3 | 1,67 | 5,69 | 1,43 | 700,0 | 3,09 | 25,43 | ASHRAE MBP |
| | [°F] | 20 | 130 | 95 | 115 | | | | | | | | | | |
| | [°C] | -10 | 55 | 32 | 55 | 880,1 | 3006 | 757,4 | 1,36 | 4,66 | 1,17 | 645,1 | 2,86 | 21,28 | cecomaf MBP |
| | [°F] | 14 | 131 | 90 | 131 | | | | | | | | | | |
| | [°C] | -10 | 45 | 20 | 45 | 1000,0 | 3415 | 860,6 | 1,61 | 5,49 | 1,38 | 622,6 | 2,73 | 23,41 | EN12900 MBP |
| | [°F] | 14 | 113 | 68 | 113 | | | | | | | | | | |

Performance tables

R134a, 230V/60Hz, CSCR, fan 3m/s, VDE, CCC, EAC

| | 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 | 439,8 | 1502 | 378,5 | 1,07 | 3,64 | 0,92 | 412,9 | 1,84 | 9,53 |
| cond. pressure | -23 | -10 | 493,1 | 1684 | 424,3 | 1,13 | 3,85 | 0,97 | 437,2 | 1,94 | 10,69 |
| pc= 45/113 | -20 | -4 | 606,1 | 2070 | 521,6 | 1,25 | 4,28 | 1,08 | 483,6 | 2,15 | 13,17 |
| return gas temp. | -18 | 0 | 688,9 | 2353 | 592,9 | 1,34 | 4,58 | 1,15 | 514,2 | 2,28 | 14,99 |
| RGT= 32/90 | -15 | 5 | 803,8 | 2745 | 691,7 | 1,45 | 4,96 | 1,25 | 553,0 | 2,44 | 17,52 |
| liquid temp | -10 | 14 | 1037,5 | 3543 | 892,9 | 1,67 | 5,69 | 1,43 | 622,6 | 2,73 | 22,71 |
| Tliq= 45/113 | -5 | 23 | 1311,7 | 4480 | 1128,9 | 1,89 | 6,46 | 1,63 | 693,8 | 3,01 | 28,84 |
| [°C / °F] | -25 | -13 | 303,4 | 1036 | 261,1 | 0,80 | 2,74 | 0,69 | 378,6 | 1,77 | 7,25 |
| cond. pressure | -23 | -10 | 354,9 | 1212 | 305,4 | 0,86 | 2,95 | 0,74 | 410,9 | 1,90 | 8,49 |
| pc= 55/131 | -20 | -4 | 464,0 | 1585 | 399,3 | 0,98 | 3,36 | 0,85 | 471,7 | 2,14 | 11,13 |
| return gas temp | -18 | 0 | 543,9 | 1858 | 468,1 | 1,06 | 3,63 | 0,92 | 511,1 | 2,30 | 13,07 |
| RGT= 32/90 | -15 | 5 | 654,7 | 2236 | 563,4 | 1,17 | 3,99 | 1,01 | 560,1 | 2,51 | 15,76 |
| liquid temp | -10 | 14 | 880,1 | 3006 | 757,4 | 1,36 | 4,66 | 1,17 | 645,1 | 2,86 | 21,28 |
| Tliq= 55/131 | -5 | 23 | 1144,6 | 3909 | 985,1 | 1,57 | 5,37 | 1,35 | 728,2 | 3,21 | 27,82 |



SC Compressors





SC Compressors

Service/Repair – R290



8545



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