

## Model

|             |               |                         |             |                 |
|-------------|---------------|-------------------------|-------------|-----------------|
| Designation | <b>SC21CL</b> | <b>220-240V/50Hz 1~</b> | Sales code: | <b>104L2331</b> |
|-------------|---------------|-------------------------|-------------|-----------------|

## Compressor design

|                            |                                 |                       |                                  |
|----------------------------|---------------------------------|-----------------------|----------------------------------|
| Oil type                   | Polyolester                     | Refrigerant(s)        | <b>R404A, R507</b>               |
| Oil viscosity              | 32,5cST                         | Displacement          | 20,95cm <sup>3</sup> / 1,28cu.in |
| Oil quantity               | 544cm <sup>3</sup> / 18,4fl.oz  | Compressors on pallet | 80                               |
| Refr. charge - tech. limit | 1300g / 45,9oz                  |                       |                                  |
| Free gas volume comp.      | 1410cm <sup>3</sup> / 47,7fl.oz |                       |                                  |
| Weight                     | 14,1kg / 31,1lbs                |                       |                                  |
| Motor protection           | 1# internal                     |                       |                                  |
| Winding resistance main    | 3,4Ω (at 25°C)                  |                       |                                  |
| Winding resistance aux     | 14,4Ω (at 25°C)                 |                       |                                  |
| Max. winding temp.         | 125°C / 257°F                   |                       |                                  |
| Max. discharge temp.       | 140°C / 284°F                   |                       |                                  |



## General - Configurations with SC21CL

### Conf. 1

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

## Applications with SC21CL

### Conf. 1

|                         |          |
|-------------------------|----------|
| Refrigerant             | R404A    |
| Application             | LBP      |
| System cooling          | fan 3m/s |
| Hot gas defrost         | OK       |
| Long interval pull down | OK       |

## Electrical data - Configurations with SC21CL

### Conf. 1

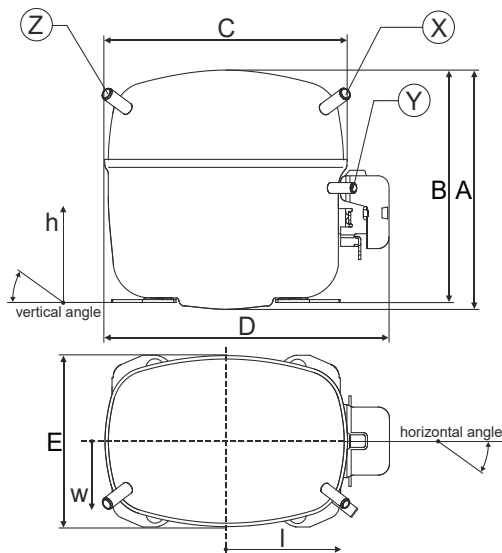
|                              |       |
|------------------------------|-------|
| Starting device type         | relay |
| Run capacitor                | 10μF  |
| Start capacitor              | 80μF  |
| LRA (locked rotor amps / 4s) | 23,4A |
| RLA (rated load amps / 1s)   | 4,3A  |
| Cut in current               | 23,4A |

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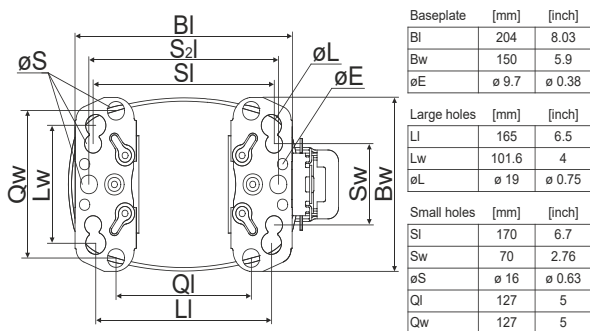
## Compressor dimensions

|                |                   |                 |
|----------------|-------------------|-----------------|
| <b>Housing</b> | 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  |

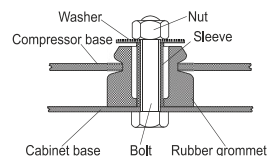


| Connectors            |      | Suction      | Discharge    | Process      |
|-----------------------|------|--------------|--------------|--------------|
|                       |      | X            | Y            | Z            |
| Diameter              | [mm] | øi 9,54-9,72 | øi 6,41-6,59 | øi 6,41-6,59 |
| (i:inside, o:outside) | [in] | øi 0,38-0,38 | 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          |

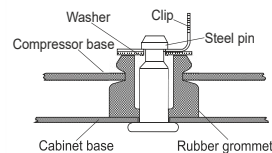
## Compressor fixation



## Bolt joint



## Snap-on



| Mounting accessories       | 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

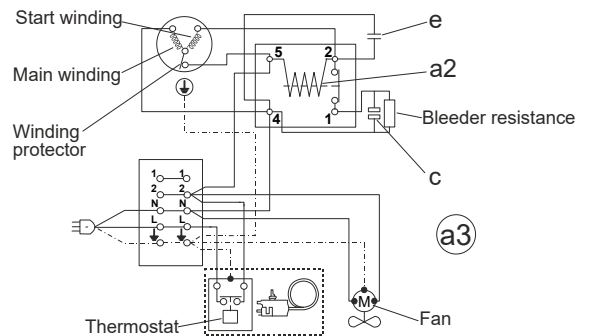
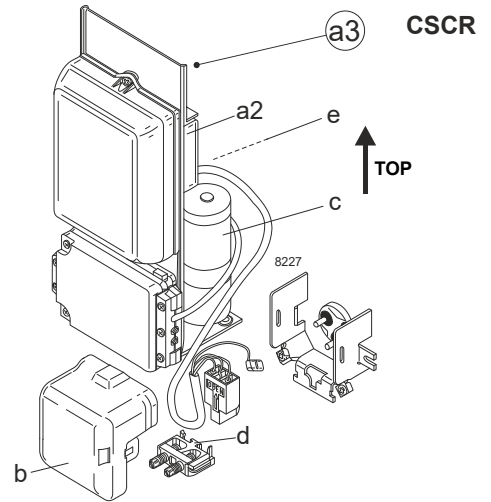
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## Configuration

|                        |                  |
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| Motorconfiguration     | CSCR             |
| Power supply (nominal) | 220-240V/50Hz 1~ |
| Refrigerant            | R404A            |
| Application            | LBP              |
| Voltage range          | 198-254V         |
| Starting torque        | HST              |
| Approvals              | CCC              |
|                        | EAC              |
|                        | VDE              |

## Electrical accessories / wiring diagram



## Ambient/ machine room temperatures minimum /maximum

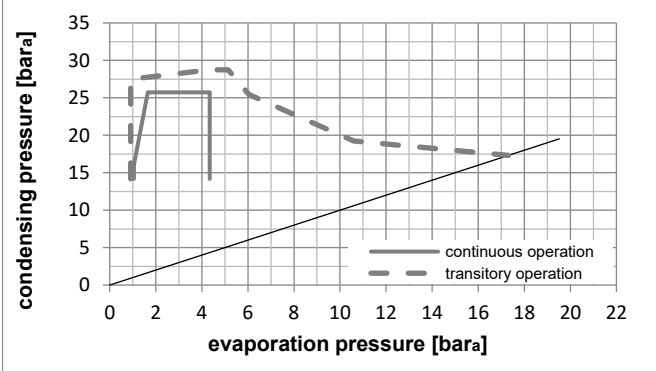
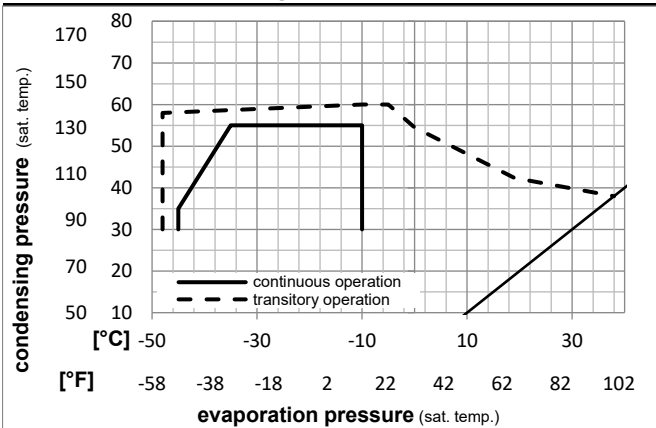
Ambient temperature range: 10 - 38°C / 50 - 101°F

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

Compressor cooling: fan 3m/s

## Operation Limits

### Operation pressure range



### Components

|    |                        |          |
|----|------------------------|----------|
| a3 | SC starter kit (550mm) | 117-7027 |
| b  | plastic cover          | 103N2009 |
| d  | cord relief            | 103N1004 |

### Alternative components

|    |                             |          |
|----|-----------------------------|----------|
| a3 | SC starter kit (1000mm)     | 117-7040 |
| a3 | SC starter kit (650mm)      | 117-7046 |
| c  | start capacitor (80µF)      | 117U5373 |
| e  | run capacitor (10µF, 6.3mm) | 117-7112 |

## Model

Designation **SC21CL** **220-240V/50Hz** Conf. 1 Sales code: **104L2331**

## Optimization + standard conditions

R404A, 220V/50Hz, CSCR, fan 3m/s, CCC, EAC, VDE

| Evaporating pressure (saturation temperature) |      |      |      | Condensing pressure (saturation temperature) |         |          | Power consumption |          |           |       | Current consumption |        | Ref. mass flow<br>m |  |
|---|------|------|------|--|---------|----------|-------------------|----------|-----------|-------|---------------------|--------|---------------------|--|
| pe  | pc   | RGT  | Tliq | Cooling capacity                             | COP     | EER      | P1                | I        |           |       |                     |        |                     |  |
| [°C]  | [°C] | [°C] | [°C] | [W]  | [Btu/h] | [kcal/h] | [W/W]             | [Btu/Wh] | [kcal/Wh] | [W]   | [A]                 | [kg/h] |                     |  |
| -23   | 54   | 32   | 32   | 902,9  | 3084    | 777,1    | 1,18              | 4,02     | 1,01      | 767,3 | 4,02                | 21,04  | ASHRAE LBP          |  |
| -10   | 130  | 90   | 90   |  |         |          |                   |          |           |       |                     |        |                     |  |
| -25   | 55   | 32   | 55   | 608,5  | 2078    | 523,6    | 0,83              | 2,82     | 0,71      | 735,9 | 3,86                | 19,02  | cecomaf LBP         |  |
| -13   | 131  | 90   | 131  |  |         |          |                   |          |           |       |                     |        |                     |  |
| -35   | 40   | 20   | 40   | 509,0  | 1738    | 438,1    | 0,98              | 3,34     | 0,84      | 521,1 | 2,95                | 13,83  | EN12900 LBP         |  |
| -31   | 104  | 68   | 104  |  |         |          |                   |          |           |       |                     |        |                     |  |
| -23   | 49   | 4,4  | 49   | 685,6  | 2341    | 590,0    | 0,91              | 3,12     | 0,79      | 749,7 | 3,91                | 24,27  | ARI540 LBP          |  |
| -10   | 120  | 40   | 120  |  |         |          |                   |          |           |       |                     |        |                     |  |
| -23   | 41   | 32   | 32   | 1091,0                                       | 3726    | 938,9    | 1,53              | 5,23     | 1,32      | 711,9 | 3,80                | 25,42  | AHAM LBP            |  |
| -10   | 105  | 90   | 90   |  |         |          |                   |          |           |       |                     |        |                     |  |
| -35   | 45   | 32   | 45   | 455,0  | 1554    | 391,6    | 0,85              | 2,91     | 0,73      | 534,2 | 2,94                | 12,16  | opt                 |  |
| -31   | 113  | 90   | 113  |  |         |          |                   |          |           |       |                     |        |                     |  |

## Performance tables

R404A, 220V/50Hz, CSCR, fan 3m/s, CCC, EAC, VDE

|                  | 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]        | -45  | -49  | 225,9            | 772     | 194,4    | 0,57  | 1,93     | 0,49      | 399,6  | 2,40 | 6,00   |
| cond. pressure   | -35  | -31  | 455,0            | 1554    | 391,6    | 0,85  | 2,91     | 0,73      | 534,2  | 2,94 | 12,16  |
| pc= 45/113       | -30  | -22  | 617,4            | 2108    | 531,3    | 1,00  | 3,43     | 0,86      | 614,8  | 3,31 | 16,57  |
| return gas temp. | -25  | -13  | 812,8            | 2776    | 699,5    | 1,16  | 3,95     | 1,00      | 702,1  | 3,71 | 21,92  |
| RGT= 32/90       | -20  | -4   | 1042,1           | 3559    | 896,9    | 1,31  | 4,48     | 1,13      | 794,7  | 4,14 | 28,27  |
| liquid temp      | -15  | 5    | 1306,3           | 4461    | 1124,2   | 1,47  | 5,01     | 1,26      | 890,8  | 4,58 | 35,68  |
| Tliq= 45/113     | -10  | 14   | 1606,3           | 5486    | 1382,4   | 1,62  | 5,55     | 1,40      | 989,0  | 5,00 | 44,23  |
| [°C / °F]        | -45  | -49  | 174,5            | 596     | 150,1    | 0,44  | 1,49     | 0,37      | 401,0  | 2,29 | 5,36   |
| cond. pressure   | -35  | -31  | 327,7            | 1119    | 282,0    | 0,59  | 2,02     | 0,51      | 553,1  | 2,94 | 10,14  |
| pc= 55/131       | -30  | -22  | 451,7            | 1543    | 388,7    | 0,70  | 2,40     | 0,61      | 641,4  | 3,38 | 14,04  |
| return gas temp  | -25  | -13  | 608,5            | 2078    | 523,6    | 0,83  | 2,82     | 0,71      | 735,9  | 3,86 | 19,02  |
| RGT= 32/90       | -20  | -4   | 798,9            | 2728    | 687,5    | 0,96  | 3,27     | 0,82      | 834,8  | 4,37 | 25,14  |
| liquid temp      | -15  | 5    | 1023,9           | 3497    | 881,2    | 1,09  | 3,73     | 0,94      | 936,7  | 4,89 | 32,47  |
| Tliq= 55/131     | -10  | 14   | 1284,4           | 4386    | 1105,4   | 1,23  | 4,22     | 1,06      | 1040,1 | 5,41 | 41,12  |