

Single Pack SC15MFX 220-240V 50Hz CSIR

Single pack code number: **195B4370**

| Position | Title | Code | Amount |
|----------|---|----------|--------|
| 1 | Compressor SC15MFX | 104G8501 | 1 |
| 2 | Starting relay | 117U6005 | 1 |
| 3 | Starting capacitor (80 μ F 220V, 6.3mm) | 117U5017 | 1 |
| 4 | Cord relief | 103N1004 | 1 |
| 5 | Cover | 103N2008 | 1 |
| 6 | Bolt joint for one compressor M6 \varnothing 16mm | 118-1917 | 1 |

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Model

| | | | | |
|-------------|----------------|------------------|-------------|-----------------|
| Designation | SC15MFX | 220-240V/50Hz 1~ | Sales code: | 104G8501 |
|-------------|----------------|------------------|-------------|-----------------|

Compressor design

| | | | |
|----------------------------|---------------------------------|-----------------------|----------------------------------|
| Oil type | Polyolester | Refrigerant(s) | R134a, R513A |
| Oil viscosity | 22cSt | Displacement | 15,28cm ³ / 0,93cu.in |
| Oil quantity | 449cm ³ / 15,2fl.oz | Compressors on pallet | 80 |
| Refr. charge - tech. limit | 1300g / 45,9oz | | |
| Free gas volume comp. | 1410cm ³ / 47,7fl.oz | | |
| Weight | 13,2kg / 29,1lbs | | |
| Motor protection | 1# internal | | |
| Winding resistance main | 5,13Ω (at 25°C) | | |
| Winding resistance aux | 13,51Ω (at 25°C) | | |
| Max. winding temp. | 125°C / 257°F | | |
| Max. discharge temp. | 130°C / 266°F | | |



General - Configurations with SC15MFX

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

Applications with SC15MFX

| | Conf. 1 | Conf. 2 |
|-------------------------|----------------|----------------|
| Refrigerant | R134a | R513A |
| Application | MBP | MBP |
| System cooling | fan 3m/s | fan 3m/s |
| Hot gas defrost | OK | OK |
| Long interval pull down | OK | OK |

Electrical data - Configurations with SC15MFX

| | Conf. 1 | Conf. 2 |
|------------------------------------|----------------|----------------|
| Starting device type | relay | relay |
| Run capacitor | - / - | - / - |
| Start capacitor | 80μF | 80μF |
| LRA (locked rotor amps / 4s/ U(N)) | 16,2A | 16,2A |
| RLA (rated load amps / 1s/ U(N)) | 3,1A | 3,1A |
| Cut in current (U(N)) | 16,2A | 16,2A |

Model

Designation

SC15MFX

220-240V/50Hz 1~

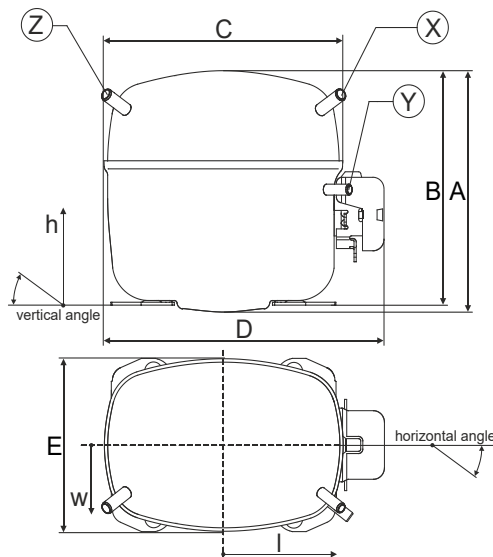
Sales code:

104G8501

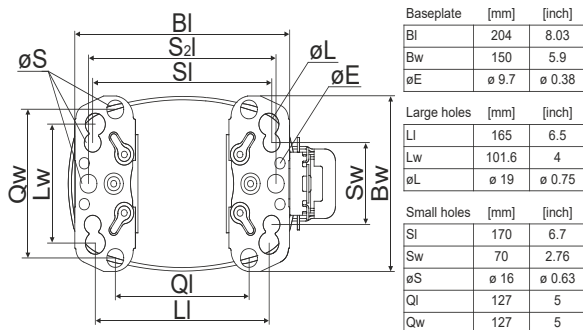
Compressor dimensions

| 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 |

| Connectors | | Suction | Discharge | Process |
|-----------------------|------|----------------|--------------|--------------|
| | | X | Y | Z |
| Diameter | [mm] | øi 10,11-10,29 | øi 6,11-6,29 | øi 6,11-6,29 |
| (i:inside, o:outside) | [in] | øi 0,4-0,41 | øi 0,24-0,25 | øi 0,24-0,25 |
| Material | | copper | copper | copper |
| Horizontal angle | ±2° | 37° | 37° | 143° |
| Vertical angle | ±2° | 30° | 0° | 150° |
| Position l/h/w | [mm] | 107/183/55 | 115/100/63 | -107/183/55 |
| | [in] | 4,2/7,2/2,2 | 4,5/3,9/2,5 | -4,2/7,2/2,2 |
| 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

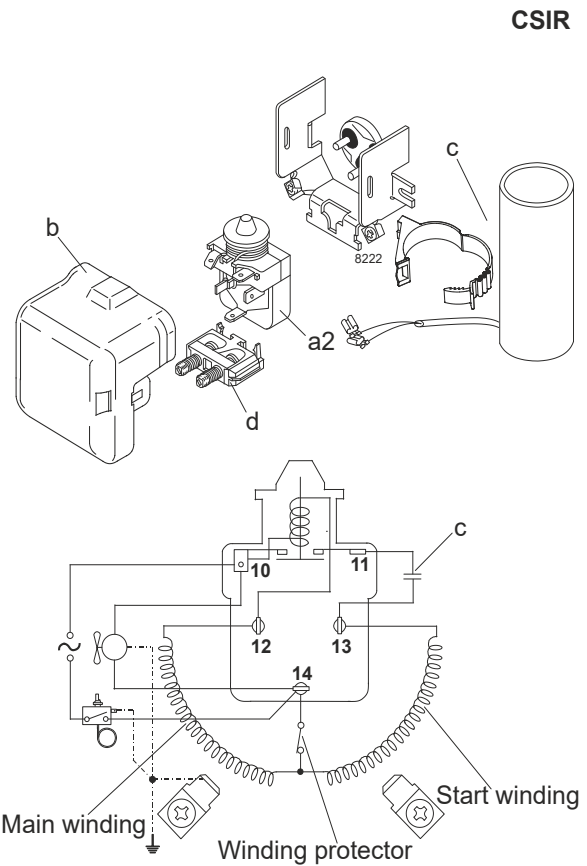
Model

| | | | | | |
|-------------|----------------|----------------------|----------------|-------------|-----------------|
| Designation | SC15MFX | 220-240V/50Hz | Conf. 1 | Sales code: | 104G8501 |
|-------------|----------------|----------------------|----------------|-------------|-----------------|

Configuration

| | |
|------------------------|------------------|
| Motorconfiguration | CSIR |
| Power supply (nominal) | 220-240V/50Hz 1~ |
| Refrigerant | R134a |
| Application | MBP |
| Voltage range | 198-254V |
| Starting torque | HST |
| Approvals | VDE |
| | CCC |
| | EAC |

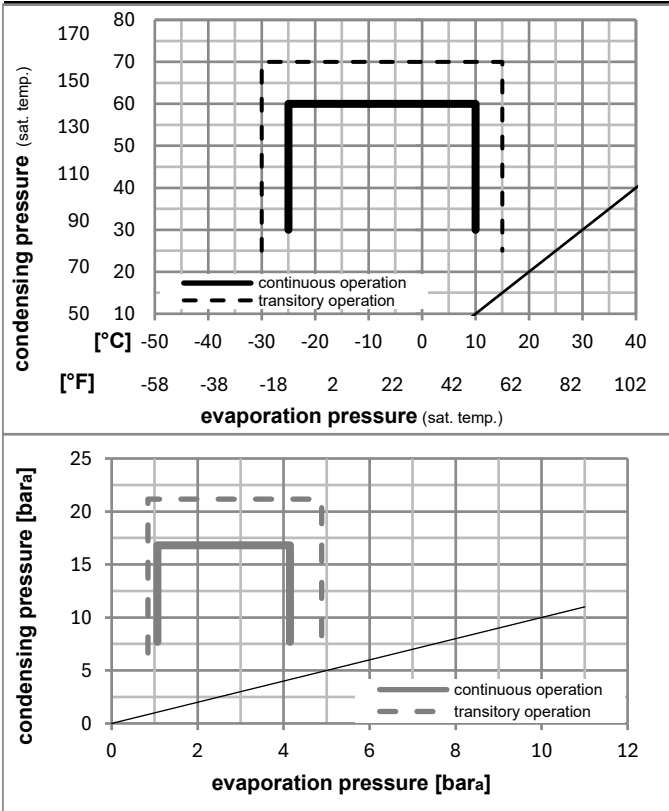
Electrical accessories / wiring diagram



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

| | | |
|----|------------------------|----------|
| a2 | relay | 117U6005 |
| c | start capacitor (80μF) | 117U5017 |
| d | cord relief | 103N1004 |
| b | plastic cover | 103N2008 |

Model

Designation **SC15MFX** **220-240V/50Hz** Conf. 1 Sales code: **104G8501**

Optimization + standard conditions

R134a, 220V/50Hz, CSIR, 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 | | |
|------|------|---|-----|-----|------|--|---------|----------|------------------|----------|--------------|------|------------------|---------------------|------|----------------|-------------|-------------------|--|--|
| | | pe | pc | RGT | Tliq | [W] | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh] | [kcal/Wh] | P1 | I | Current consumption | | Ref. mass flow | | | | |
| [°C] | [°F] | | | | | | | | | | | [W] | [A] | [kg/h] | | | | | | |
| -7 | 20 | 54 | 130 | 35 | 95 | 46 | 115 | 786,3 | 2685 | 676,7 | 1,66 | 5,68 | 1,43 | 472,7 | 2,90 | 17,16 | ASHRAE MBP | | | |
| -10 | 14 | 55 | 131 | 32 | 90 | 55 | 131 | 601,6 | 2054 | 517,7 | 1,38 | 4,70 | 1,18 | 437,4 | 2,78 | 14,55 | cecomaf MBP | | | |
| -10 | 14 | 45 | 113 | 20 | 68 | 45 | 113 | 676,2 | 2309 | 582,0 | 1,63 | 5,57 | 1,40 | 414,4 | 2,70 | 15,83 | EN12900 MBP | | | |
| -7 | 20 | 49 | 120 | 18 | 65 | 49 | 120 | 746,6 | 2550 | 642,6 | 1,63 | 5,57 | 1,40 | 458,1 | 2,85 | 18,44 | ARI540 MBP | | | |
| -10 | 14 | 45 | 113 | 32 | 90 | 45 | 113 | 701,6 | 2396 | 603,8 | 1,69 | 5,78 | 1,46 | 414,4 | 2,70 | 15,35 | opt | | | |
| -25 | -13 | 45 | 113 | 32 | 90 | 45 | 113 | 290,0 | 990 | 249,6 | 1,07 | 3,66 | 0,92 | 270,3 | 2,25 | 6,28 | opt | | | |

Performance tables

R134a, 220V/50Hz, CSIR, 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 | 290,0 | 990 | 249,6 | 1,07 | 3,66 | 0,92 | 270,3 | 2,25 | 6,28 |
| cond. pressure | -20 | -4 | 404,0 | 1380 | 347,7 | 1,27 | 4,33 | 1,09 | 318,8 | 2,40 | 8,78 |
| pc= 45/113 | -15 | 5 | 540,6 | 1846 | 465,2 | 1,47 | 5,03 | 1,27 | 367,3 | 2,55 | 11,78 |
| return gas temp. | -10 | 14 | 701,6 | 2396 | 603,8 | 1,69 | 5,78 | 1,46 | 414,4 | 2,70 | 15,35 |
| RGT= 32/90 | 0 | 32 | 1103,7 | 3769 | 949,9 | 2,21 | 7,55 | 1,90 | 499,5 | 2,99 | 24,41 |
| liquid temp | 5 | 41 | 1348,3 | 4605 | 1160,4 | 2,52 | 8,61 | 2,17 | 534,8 | 3,13 | 30,02 |
| Tliq= 45/113 | 10 | 50 | 1624,3 | 5547 | 1397,9 | 2,88 | 9,84 | 2,48 | 563,6 | 3,25 | 36,45 |
| [°C / °F] | -25 | -13 | 225,8 | 771 | 194,3 | 0,81 | 2,77 | 0,70 | 278,2 | 2,30 | 5,40 |
| cond. pressure | -20 | -4 | 332,9 | 1137 | 286,5 | 1,01 | 3,45 | 0,87 | 329,5 | 2,44 | 7,99 |
| pc= 55/131 | -15 | 5 | 457,6 | 1563 | 393,8 | 1,19 | 4,08 | 1,03 | 383,0 | 2,61 | 11,02 |
| return gas temp | -10 | 14 | 601,6 | 2054 | 517,7 | 1,38 | 4,70 | 1,18 | 437,4 | 2,78 | 14,55 |
| RGT= 32/90 | 0 | 32 | 954,2 | 3259 | 821,2 | 1,75 | 5,99 | 1,51 | 543,7 | 3,16 | 23,34 |
| liquid temp | 5 | 41 | 1166,3 | 3983 | 1003,8 | 1,97 | 6,72 | 1,69 | 592,9 | 3,35 | 28,74 |
| Tliq= 55/131 | 10 | 50 | 1404,7 | 4797 | 1208,9 | 2,20 | 7,52 | 1,90 | 637,8 | 3,55 | 34,92 |

Model

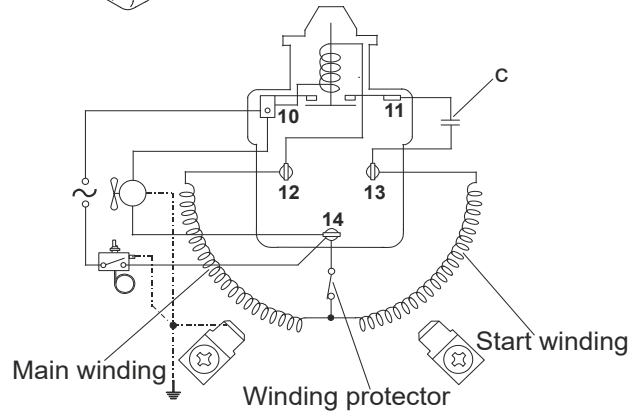
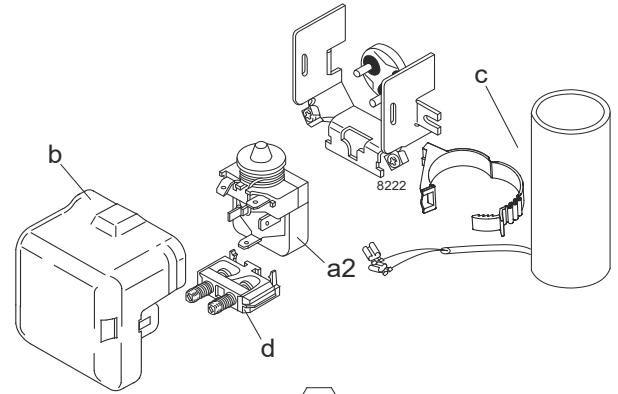
| | | | | | |
|-------------|----------------|----------------------|----------------|-------------|-----------------|
| Designation | SC15MFX | 220-240V/50Hz | Conf. 2 | Sales code: | 104G8501 |
|-------------|----------------|----------------------|----------------|-------------|-----------------|

Configuration

| | |
|------------------------|------------------|
| Motor configuration | CSIR |
| Power supply (nominal) | 220-240V/50Hz 1~ |
| Refrigerant | R513A |
| Application | MBP |
| Voltage range | 198-254V |
| Starting torque | HST |
| Approvals | VDE |
| | CCC |
| | EAC |

Electrical accessories / wiring diagram

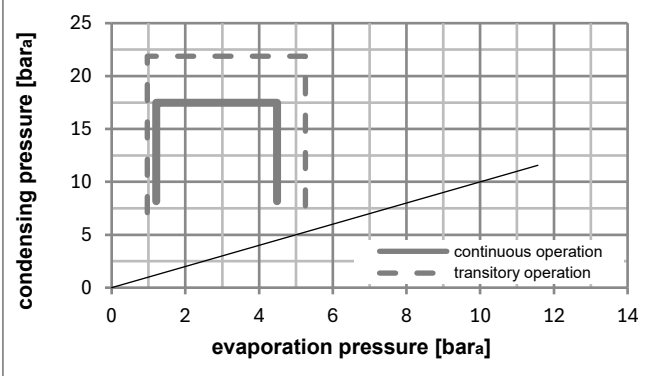
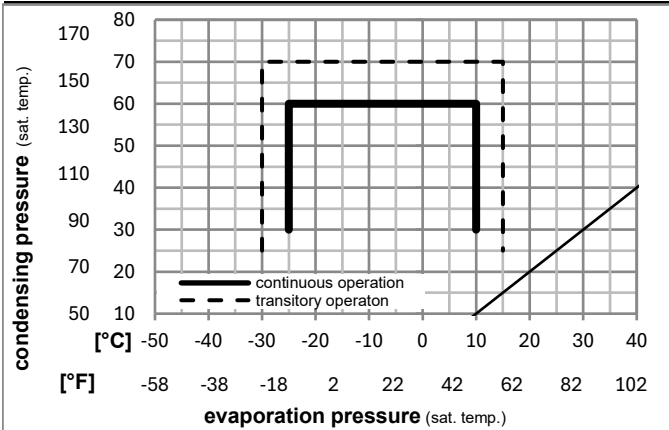
CSIR



Ambient/ machine room temperatures minimum /maximum

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

Operation pressure range



Components

| | | |
|----|------------------------|----------|
| a2 | relay | 117U6005 |
| c | start capacitor (80µF) | 117U5017 |
| d | cord relief | 103N1004 |
| b | plastic cover | 103N2008 |

Model

Designation **SC15MFX** **220-240V/50Hz** Conf. 2 Sales code: **104G8501**

Optimization + standard conditions

R513A, 220V/50Hz, CSIR, fan 3m/s, VDE, CCC, EAC

| | Evaporating pressure (saturation temperature) | | | | Cooling capacity | | | COP | EER | | | Power consumption | | | ASHRAE MBP |
|--|---|------|------|------|------------------|---------|----------|------|-------|----------|-----------|-------------------|--------|-------------|------------|
| | pe | pc | RGT | Tliq | [W] | [Btu/h] | [kcal/h] | | [W/W] | [Btu/Wh] | [kcal/Wh] | P1 | I | m | |
| | [°C] | [°C] | [°C] | [°C] | | | | | | | [W] | [A] | [kg/h] | | |
| | -7 | 54 | 35 | 46 | 826,7 | 2823 | 711,5 | 1,65 | 5,63 | 1,42 | 501,1 | 3,01 | 20,25 | ASHRAE MBP | |
| | [°F] | | | | | | | | | | | | | | |
| | 20 | 130 | 95 | 115 | | | | | | | | | | | |
| | -10 | 55 | 32 | 55 | 625,3 | 2136 | 538,2 | 1,34 | 4,59 | 1,16 | 465,2 | 2,89 | 17,29 | cecomaf MBP | |
| | [°F] | | | | | | | | | | | | | | |
| | 14 | 131 | 90 | 131 | | | | | | | | | | | |
| | -10 | 45 | 20 | 45 | 708,0 | 2418 | 609,3 | 1,61 | 5,51 | 1,39 | 438,7 | 2,80 | 18,76 | EN12900 MBP | |
| | [°F] | | | | | | | | | | | | | | |
| | 14 | 113 | 68 | 113 | | | | | | | | | | | |
| | -7 | 49 | 18 | 49 | 771,4 | 2634 | 663,9 | 1,59 | 5,43 | 1,37 | 484,8 | 2,96 | 21,74 | ARI540 MBP | |
| | [°F] | | | | | | | | | | | | | | |
| | 20 | 120 | 65 | 120 | | | | | | | | | | | |
| | -10 | 45 | 32 | 45 | 740,3 | 2528 | 637,1 | 1,69 | 5,76 | 1,45 | 438,7 | 2,80 | 18,20 | opt | |
| | [°F] | | | | | | | | | | | | | | |
| | 14 | 113 | 90 | 113 | | | | | | | | | | | |
| | -25 | 45 | 32 | 45 | 317,5 | 1084 | 273,2 | 1,11 | 3,79 | 0,95 | 286,1 | 2,30 | 7,74 | opt | |
| | [°F] | | | | | | | | | | | | | | |
| | -13 | 113 | 90 | 113 | | | | | | | | | | | |

Performance tables

R513A, 220V/50Hz, CSIR, fan 3m/s, VDE, CCC, EAC

| | pe | | Cooling capacity | | | COP | EER | | P1 | I | m |
|------------------|------|------|------------------|---------|----------|------|----------|-----------|-------|------|-------|
| | [°C] | [°F] | [W] | [Btu/h] | [kcal/h] | | [Btu/Wh] | [kcal/Wh] | | | |
| [°C / °F] | -25 | -13 | 317,5 | 1084 | 273,2 | 1,11 | 3,79 | 0,95 | 286,1 | 2,30 | 7,74 |
| cond. pressure | -20 | -4 | 435,9 | 1489 | 375,2 | 1,29 | 4,40 | 1,11 | 338,3 | 2,47 | 10,65 |
| pc= 45/113 | -15 | 5 | 576,3 | 1968 | 496,0 | 1,48 | 5,05 | 1,27 | 389,6 | 2,64 | 14,12 |
| return gas temp. | -10 | 14 | 740,3 | 2528 | 637,1 | 1,69 | 5,76 | 1,45 | 438,7 | 2,80 | 18,20 |
| RGT= 32/90 | 0 | 32 | 1145,4 | 3912 | 985,8 | 2,18 | 7,45 | 1,88 | 525,0 | 3,09 | 28,41 |
| liquid temp | 5 | 41 | 1389,8 | 4746 | 1196,0 | 2,48 | 8,48 | 2,14 | 559,5 | 3,20 | 34,66 |
| Tliq= 45/113 | 10 | 50 | 1664,1 | 5683 | 1432,1 | 2,84 | 9,69 | 2,44 | 586,6 | 3,29 | 41,78 |
| [°C / °F] | -25 | -13 | 245,0 | 837 | 210,9 | 0,82 | 2,81 | 0,71 | 297,3 | 2,34 | 6,71 |
| cond. pressure | -20 | -4 | 354,8 | 1212 | 305,4 | 1,01 | 3,44 | 0,87 | 352,5 | 2,52 | 9,74 |
| pc= 55/131 | -15 | 5 | 481,1 | 1643 | 414,0 | 1,18 | 4,02 | 1,01 | 408,9 | 2,71 | 13,25 |
| return gas temp | -10 | 14 | 625,3 | 2136 | 538,2 | 1,34 | 4,59 | 1,16 | 465,2 | 2,89 | 17,29 |
| RGT= 32/90 | 0 | 32 | 974,5 | 3328 | 838,7 | 1,70 | 5,81 | 1,47 | 572,3 | 3,24 | 27,21 |
| liquid temp | 5 | 41 | 1182,6 | 4039 | 1017,7 | 1,91 | 6,51 | 1,64 | 620,5 | 3,40 | 33,23 |
| Tliq= 55/131 | 10 | 50 | 1415,1 | 4833 | 1217,9 | 2,13 | 7,29 | 1,84 | 663,2 | 3,54 | 40,06 |



SC Compressors





SC Compressors

Service/Repair – R290



8545



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