

Single Pack TFS4.5FT 115-127V 60Hz CSIR

Codice Imballo Singolo: **195B4669**

| Posizione | Titolo | Codice | Quantità |
|-----------|--|----------|----------|
| 1 | Compressor TFS4.5FT | 102G3432 | 1 |
| 2 | Starting relay (overload protector MRP39AIL-6) | 117U4113 | 1 |
| 3 | Cord relief | 117U0349 | 1 |
| 4 | Cover | 117U1021 | 1 |
| 5 | Bolt joint for one compressor M6 ø16mm | 118-1917 | 1 |

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Model

| | | | | |
|-------------|-----------------|------------------|-------------|-----------------|
| Designation | TFS4.5FT | 115-127V/60Hz 1~ | Sales code: | 102G3432 |
|-------------|-----------------|------------------|-------------|-----------------|

Compressor design

| | | | |
|----------------------------|---------------------------------|-----------------------|---------------------------------|
| Oil type | Polyolester | Refrigerant(s) | R134a, R513A, 0 |
| Oil viscosity | 15cST | Displacement | 4,63cm ³ / 0,28cu.in |
| Oil quantity | 285cm ³ / 9,7fl.oz | Compressors on pallet | 125 |
| Refr. charge - tech. limit | 400g / 14,1oz | | |
| Free gas volume comp. | 1790cm ³ / 60,5fl.oz | | |
| Weight | 6,7kg / 14,8lbs | | |
| Motor protection | external | | |
| Winding resistance main | 3,33Ω (at 25°C) | | |
| Winding resistance aux | 8,76Ω (at 25°C) | | |
| Max. winding temp. | 125°C / 257°F | | |
| Max. discharge temp. | 130°C / 266°F | | |



General - Configurations with TFS4.5FT

| | Conf. 1 | Conf. 2 |
|------------------------|----------------|----------------|
| Motorconfiguration | CSIR | RSIR |
| Power supply (nominal) | 115-127V/60Hz | 115-127V/60Hz |
| Number of phases | 1 | 1 |
| Voltage range | 95-135V | 95-135V |
| Approvals | UL | UL |
| Starting torque | HST | LST |
| Note | - / - | |

Applications with TFS4.5FT

| | Conf. 1 | Conf. 2 |
|-------------------------|----------------|----------------|
| Refrigerant | R134a | R134a |
| Application | LBP+MBP | LBP+MBP |
| System cooling | fan 1,5m/s | fan 1,5m/s |
| Hot gas defrost | -/- | -/- |
| Long interval pull down | OK | OK |

Electrical data - Configurations with TFS4.5FT

| | Conf. 1 | Conf. 2 |
|------------------------------------|----------------|----------------|
| Starting device type | relay | PTC |
| Run capacitor | -/- | -/- |
| Start capacitor | 320μF | -/- |
| LRA (locked rotor amps / 4s/ U(N)) | 20,1A | |
| RLA (rated load amps / 1s/ U(N)) | 2,4A | -/-A |
| Cut in current (U(N)) | 20,1A | |

Model

Designation

TFS4.5FT

115-127V/60Hz 1~

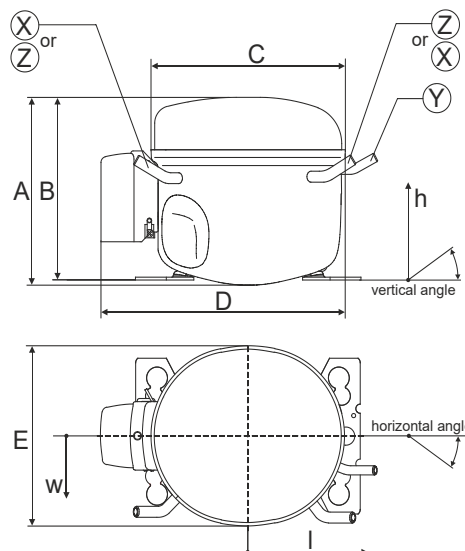
Sales code:

102G3432

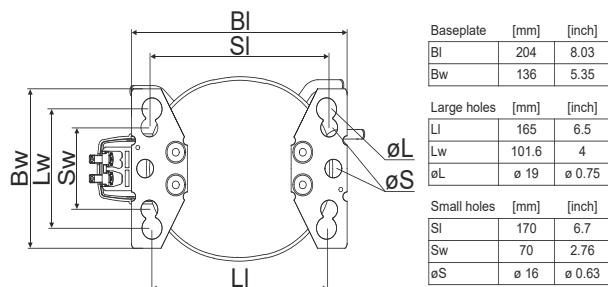
Compressor dimensions

| Housing | A Height | 173mm / 6,81in |
|---------|-------------------|----------------|
| | B Height | 169mm / 6,65in |
| | C Length shell | 176mm / 6,93in |
| | D Length w. cover | 222mm / 8,74in |
| | E Width | 157mm / 6,18in |

| Connectors | | Suction | Discharge | Process |
|------------------|----------------------------|--------------|--------------|--------------|
| | | X | Y | Z |
| Diameter | [mm] | øi 6,41-6,59 | øi 4,86-5,02 | øi 6,41-6,59 |
| | (i:inside, o:outside) [in] | øi 0,25-0,26 | øi 0,19-0,2 | øi 0,25-0,26 |
| Material | | steel/CU | steel/CU | steel/CU |
| Horizontal angle | ±2° | 0° | 0° | 0° |
| Vertical angle | ±2° | 150° | 28° | 31,5° |
| Position l/h/w | [mm] | -102/105/66 | 117/107/29 | 96/105/71 |
| | [in] | -4/4,1/2,6 | 4,6/4,2/1,1 | 3,8/4,1/2,8 |
| 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

Model

| | | | | | |
|-------------|-----------------|----------------------|---------|-------------|-----------------|
| Designation | TFS4.5FT | 115-127V/60Hz | Conf. 1 | Sales code: | 102G3432 |
|-------------|-----------------|----------------------|---------|-------------|-----------------|

Configuration

| | |
|------------------------|------------------|
| Motorconfiguration | CSIR |
| Power supply (nominal) | 115-127V/60Hz 1~ |
| Refrigerant | R134a |
| Application | LBP+MBP |
| Voltage range | 95-135V |
| Starting torque | HST |
| Approvals | UL |

Electrical accessories / wiring diagram



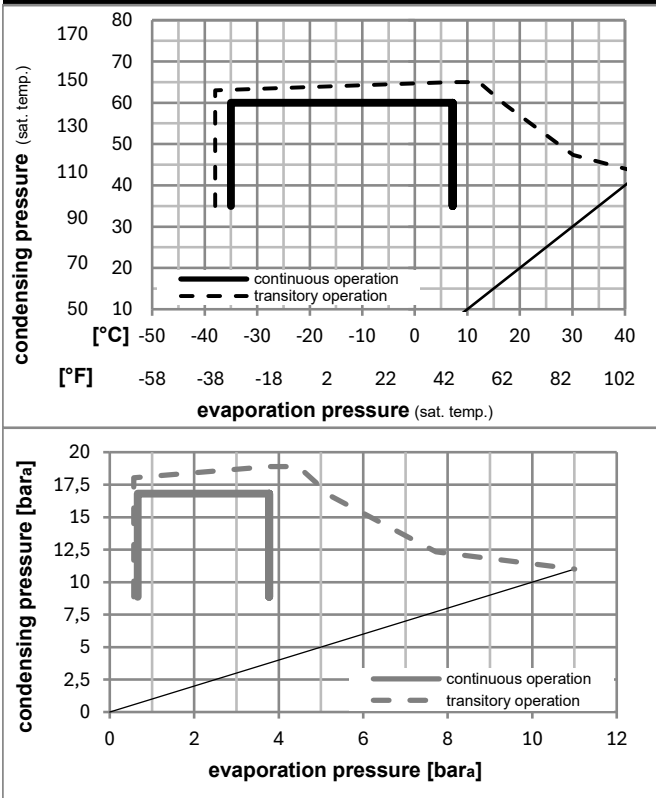
Ambient/ machine room temperatures minimum /maximum

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

Machine room temperature range: 10 - 48°C / 50 - 119°F

Compressor cooling: fan 1,5m/s

Operation pressure range



Components

| | | |
|------|---|----------|
| a2 | assy. relay + ext. protector (MRP39AIL-6) | 117U4126 |
| c | start capacitor (320µF) | 117U5022 |
| b | plastic cover | 117U1021 |
| d/dc | cord relief | 117U0349 |
| dc | cord relief | 117U0349 |

Alternative components

| | | |
|---|---------------|----------|
| b | plastic cover | 117U1027 |
|---|---------------|----------|

Model

Designation **TFS4.5FT** **115-127V/60Hz** Conf. 1 Sales code: **102G3432**

Optimization + standard conditions

R134a, 115V/60Hz, CSIR, fan 1,5m/s, UL

| | Evaporating pressure (saturation temperature) | | | | Cooling capacity | | | COP | EER | P1 | Power consumption | | ASHRAE LBP | |
|------|---|-----|-----|------|------------------|---------|----------|------|------|------|-------------------|------|------------|-------------|
| | pe | pc | RGT | Tliq | [W] | [Btu/h] | [kcal/h] | | | | I | m | | |
| [°C] | -23 | 54 | 32 | 32 | 139,8 | 477 | 120,3 | 1,10 | 3,76 | 0,95 | 127,1 | 2,02 | 2,71 | |
| [°F] | -10 | 130 | 90 | 90 | | | | | | | | | | |
| [°C] | -25 | 55 | 32 | 55 | 102,0 | 348 | 87,8 | 0,84 | 2,88 | 0,73 | 121,0 | 1,99 | 2,44 | cecomaf LBP |
| [°F] | -13 | 131 | 90 | 131 | | | | | | | | | | |
| [°C] | -35 | 40 | 20 | 40 | 82,3 | 281 | 70,8 | 0,88 | 3,01 | 0,76 | 93,5 | 1,87 | 1,81 | EN12900 LBP |
| [°F] | -31 | 104 | 68 | 104 | | | | | | | | | | |
| [°C] | -7 | 54 | 35 | 46 | 298,3 | 1019 | 256,7 | 1,51 | 5,17 | 1,30 | 197,2 | 2,41 | 6,51 | ASHRAE MBP |
| [°F] | 20 | 130 | 95 | 115 | | | | | | | | | | |
| [°C] | -10 | 55 | 32 | 55 | 231,1 | 789 | 198,9 | 1,27 | 4,34 | 1,09 | 181,9 | 2,31 | 5,59 | cecomaf MBP |
| [°F] | 14 | 131 | 90 | 131 | | | | | | | | | | |
| [°C] | -10 | 45 | 20 | 45 | 259,1 | 885 | 223,0 | 1,47 | 5,03 | 1,27 | 176,1 | 2,28 | 6,07 | EN12900 MBP |
| [°F] | 14 | 113 | 68 | 113 | | | | | | | | | | |

Performance tables

R134a, 115V/60Hz, CSIR, fan 1,5m/s, UL

| | pe | | Cooling capacity | | | COP | EER | | P1 | I | m |
|------------------|------|------|------------------|---------|----------|------|----------|-----------|-------|------|-------|
| | [°C] | [°F] | [W] | [Btu/h] | [kcal/h] | | [Btu/Wh] | [kcal/Wh] | | | |
| [°C / °F] | -35 | -31 | 75,0 | 256 | 64,5 | 0,81 | 2,78 | 0,70 | 92,1 | 1,87 | 1,62 |
| cond. pressure | -23 | -10 | 141,0 | 481 | 121,3 | 1,12 | 3,81 | 0,96 | 126,3 | 2,00 | 3,06 |
| pc= 45/113 | -15 | 5 | 214,2 | 732 | 184,4 | 1,37 | 4,69 | 1,18 | 156,0 | 2,16 | 4,67 |
| return gas temp. | -9 | 15 | 275,4 | 941 | 237,0 | 1,54 | 5,27 | 1,33 | 178,4 | 2,29 | 6,03 |
| RGT= 32/90 | -4 | 25 | 346,7 | 1184 | 298,4 | 1,71 | 5,83 | 1,47 | 202,9 | 2,47 | 7,63 |
| liquid temp | 0 | 32 | 402,6 | 1375 | 346,5 | 1,82 | 6,21 | 1,56 | 221,4 | 2,61 | 8,90 |
| Tliq= 45/113 | 7,2 | 45 | 519,9 | 1776 | 447,5 | 2,01 | 6,86 | 1,73 | 258,7 | 2,93 | 11,61 |
| [°C / °F] | -35 | -31 | 56,0 | 191 | 48,2 | 0,64 | 2,17 | 0,55 | 88,0 | 1,87 | 1,33 |
| cond. pressure | -23 | -10 | 112,8 | 385 | 97,0 | 0,89 | 3,03 | 0,76 | 127,1 | 2,02 | 2,70 |
| pc= 55/131 | -15 | 5 | 179,9 | 614 | 154,8 | 1,12 | 3,84 | 0,97 | 160,1 | 2,18 | 4,33 |
| return gas temp | -9 | 15 | 237,3 | 810 | 204,2 | 1,29 | 4,39 | 1,11 | 184,5 | 2,32 | 5,74 |
| RGT= 32/90 | -4 | 25 | 304,8 | 1041 | 262,3 | 1,45 | 4,94 | 1,24 | 210,9 | 2,50 | 7,42 |
| liquid temp | 0 | 32 | 358,3 | 1224 | 308,3 | 1,55 | 5,30 | 1,34 | 230,7 | 2,64 | 8,76 |
| Tliq= 55/131 | 7,2 | 45 | 471,2 | 1609 | 405,5 | 1,74 | 5,96 | 1,50 | 270,2 | 2,96 | 11,65 |

Model

| | | | | | |
|-------------|-----------------|----------------------|----------------|-------------|-----------------|
| Designation | TFS4.5FT | 115-127V/60Hz | Conf. 2 | Sales code: | 102G3432 |
|-------------|-----------------|----------------------|----------------|-------------|-----------------|

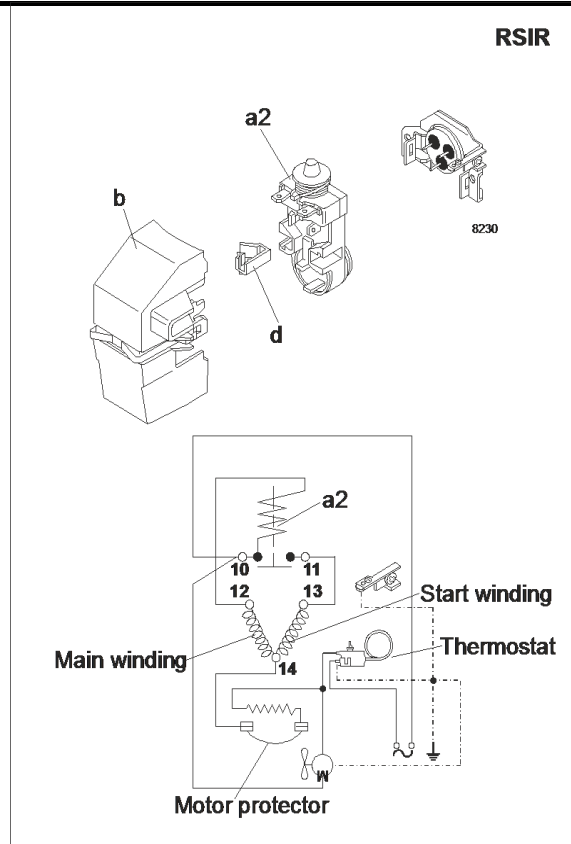
Configuration

| | |
|------------------------|------------------|
| Motorconfiguration | RSIR |
| Power supply (nominal) | 115-127V/60Hz 1~ |
| Refrigerant | R134a |
| Application | LBP+MBP |
| Voltage range | 95-135V |
| Starting torque | LST |
| Approvals | UL |

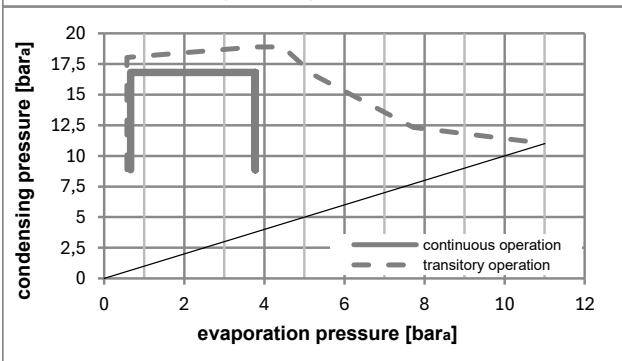
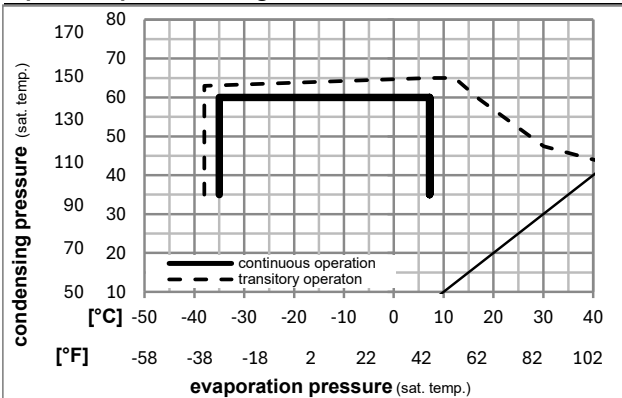
Electrical accessories / wiring diagram

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 1,5m/s |



Operation pressure range



Components

| | | |
|------|---|----------|
| a2 | assy. relay + ext. protector (MRP39AIL-6) | 117U4113 |
| b | plastic cover | 117U1021 |
| d/dc | cord relief | 117U0349 |

Model

Designation **TFS4.5FT** **115-127V/60Hz** Conf. 2 Sales code: **102G3432**

Optimization + standard conditions

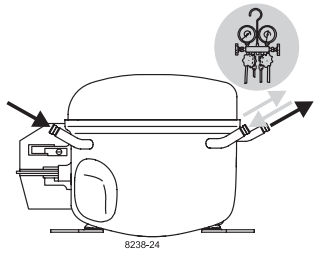
R134a, 115V/60Hz, RSIR, fan 1,5m/s, UL

| | 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 | m | [W] | [A] | [kg/h] | | | | | | |
| [°C] | | | | | | | | | | | | | | | | | | | | | | |
| [°F] | | | | | | | | | | | | | | | | | | | | | | |
| | -23 | 54 | 32 | 32 | 139,8 | 477 | 120,3 | 1,10 | 3,76 | 0,95 | 127,1 | 2,02 | 2,71 | | | | | | | ASHRAE LBP | | |
| | -10 | 130 | 90 | 90 | | | | | | | | | | | | | | | | | | |
| [°C] | -25 | 55 | 32 | 55 | 102,0 | 348 | 87,8 | 0,84 | 2,88 | 0,73 | 121,0 | 1,99 | 2,44 | | | | | | | cecomaf LBP | | |
| [°F] | -13 | 131 | 90 | 131 | | | | | | | | | | | | | | | | | | |
| [°C] | -35 | 40 | 20 | 40 | 82,3 | 281 | 70,8 | 0,88 | 3,01 | 0,76 | 93,5 | 1,87 | 1,81 | | | | | | | EN12900 LBP | | |
| [°F] | -31 | 104 | 68 | 104 | | | | | | | | | | | | | | | | | | |
| [°C] | -7 | 54 | 35 | 46 | 298,3 | 1019 | 256,7 | 1,51 | 5,17 | 1,30 | 197,2 | 2,41 | 6,51 | | | | | | | ASHRAE MBP | | |
| [°F] | 20 | 130 | 95 | 115 | | | | | | | | | | | | | | | | | | |
| [°C] | -10 | 55 | 32 | 55 | 231,1 | 789 | 198,9 | 1,27 | 4,34 | 1,09 | 181,9 | 2,31 | 5,59 | | | | | | | cecomaf MBP | | |
| [°F] | 14 | 131 | 90 | 131 | | | | | | | | | | | | | | | | | | |
| [°C] | -10 | 45 | 20 | 45 | 259,1 | 885 | 223,0 | 1,47 | 5,03 | 1,27 | 176,1 | 2,28 | 6,07 | | | | | | | EN12900 MBP | | |
| [°F] | 14 | 113 | 68 | 113 | | | | | | | | | | | | | | | | | | |

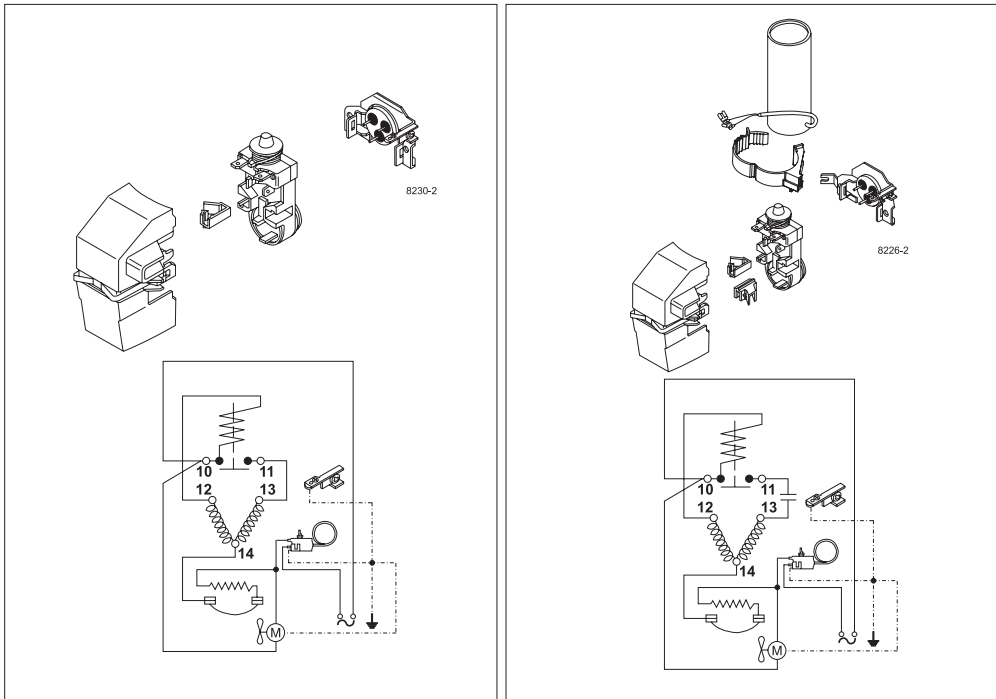
Performance tables

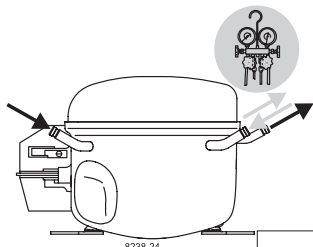
R134a, 115V/60Hz, RSIR, fan 1,5m/s, UL

| | 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] | -35 | -31 | 75,0 | 256 | 64,5 | 0,81 | 2,78 | 0,70 | 92,1 | 1,87 | 1,62 | |
| cond. pressure | -23 | -10 | 141,0 | 481 | 121,3 | 1,12 | 3,81 | 0,96 | 126,3 | 2,00 | 3,06 | |
| pc= 45/113 | -15 | 5 | 214,2 | 732 | 184,4 | 1,37 | 4,69 | 1,18 | 156,0 | 2,16 | 4,67 | |
| return gas temp. | -9 | 15 | 275,4 | 941 | 237,0 | 1,54 | 5,27 | 1,33 | 178,4 | 2,29 | 6,03 | |
| RGT= 32/90 | -4 | 25 | 346,7 | 1184 | 298,4 | 1,71 | 5,83 | 1,47 | 202,9 | 2,47 | 7,63 | |
| liquid temp | 0 | 32 | 402,6 | 1375 | 346,5 | 1,82 | 6,21 | 1,56 | 221,4 | 2,61 | 8,90 | |
| Tliq= 45/113 | 7,2 | 45 | 519,9 | 1776 | 447,5 | 2,01 | 6,86 | 1,73 | 258,7 | 2,93 | 11,61 | |
| [°C / °F] | -35 | -31 | 56,0 | 191 | 48,2 | 0,64 | 2,17 | 0,55 | 88,0 | 1,87 | 1,33 | |
| cond. pressure | -23 | -10 | 112,8 | 385 | 97,0 | 0,89 | 3,03 | 0,76 | 127,1 | 2,02 | 2,70 | |
| pc= 55/131 | -15 | 5 | 179,9 | 614 | 154,8 | 1,12 | 3,84 | 0,97 | 160,1 | 2,18 | 4,33 | |
| return gas temp | -9 | 15 | 237,3 | 810 | 204,2 | 1,29 | 4,39 | 1,11 | 184,5 | 2,32 | 5,74 | |
| RGT= 32/90 | -4 | 25 | 304,8 | 1041 | 262,3 | 1,45 | 4,94 | 1,24 | 210,9 | 2,50 | 7,42 | |
| liquid temp | 0 | 32 | 358,3 | 1224 | 308,3 | 1,55 | 5,30 | 1,34 | 230,7 | 2,64 | 8,76 | |
| Tliq= 55/131 | 7,2 | 45 | 471,2 | 1609 | 405,5 | 1,74 | 5,96 | 1,50 | 270,2 | 2,96 | 11,65 | |

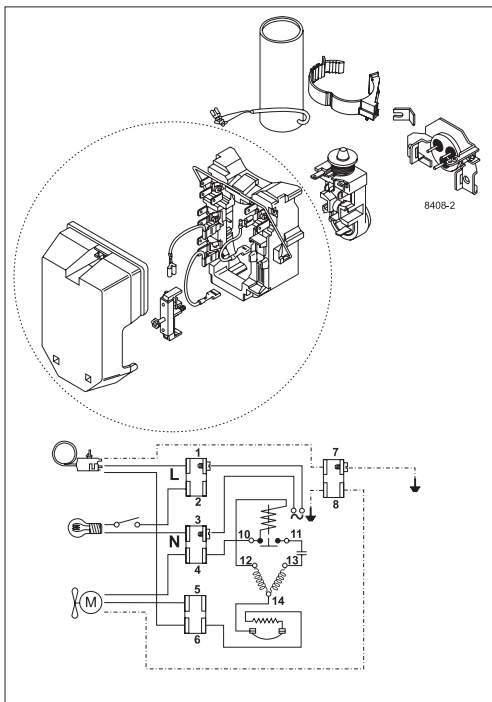
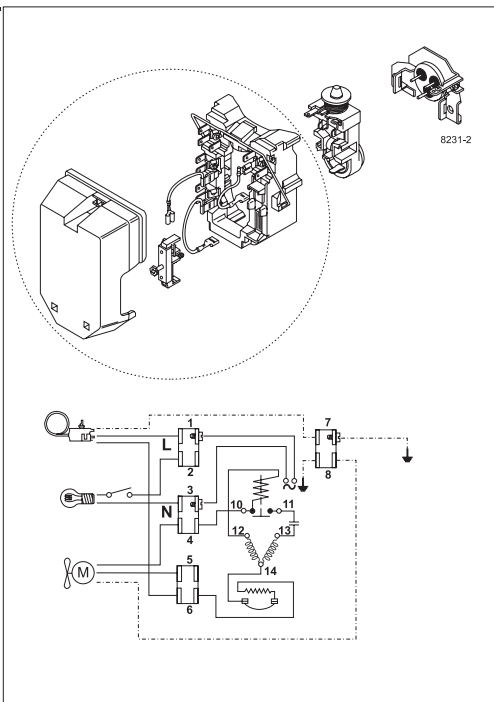


TF Compressors





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