

**Model**

|             |                 |                         |             |                 |
|-------------|-----------------|-------------------------|-------------|-----------------|
| Designation | <b>TFS4.5FT</b> | <b>115-127V/60Hz 1~</b> | Sales code: | <b>102G3424</b> |
|-------------|-----------------|-------------------------|-------------|-----------------|

**Compressor design**

|                            |                                 |                       |                                 |
|----------------------------|---------------------------------|-----------------------|---------------------------------|
| Oil type                   | Polyolester                     | Refrigerant(s)        | <b>R134a</b>                    |
| Oil viscosity              | 15cST                           | Displacement          | 4,63cm <sup>3</sup> / 0,28cu.in |
| Oil quantity               | 285cm <sup>3</sup> / 9,7fl.oz   | Compressors on pallet | 80                              |
| Refr. charge - tech. limit | 400g / 14,1oz                   |                       |                                 |
| Free gas volume comp.      | 1790cm <sup>3</sup> / 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.       | 120°C / 248°F                   |                       |                                 |



**General - Configurations with TFS4.5FT**

|                        |                                                                   |
|------------------------|-------------------------------------------------------------------|
|                        | <b>Conf. 1</b>                                                    |
| Motorconfiguration     | CSIR                                                              |
| Power supply (nominal) | 115-127V/60Hz                                                     |
| Number of phases       | 1                                                                 |
| Voltage range          | 95-135V                                                           |
| Approvals              | UL                                                                |
| Starting torque        | HST                                                               |
| Note                   | Electrical equipment is included and pre-assembled to compressor. |

**Applications with TFS4.5FT**

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

**Electrical data - Configurations with TFS4.5FT**

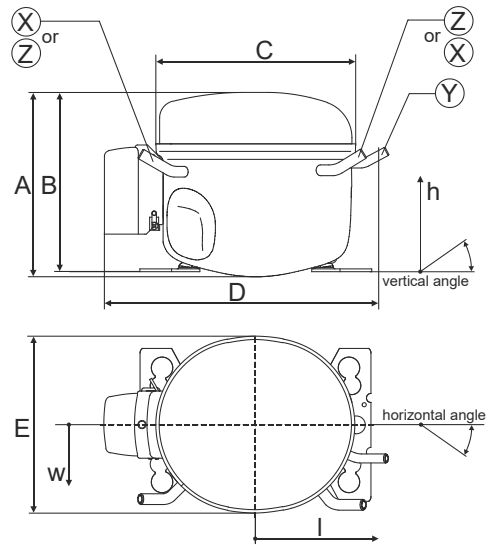
|                              |                |
|------------------------------|----------------|
|                              | <b>Conf. 1</b> |
| Starting device type         | relay          |
| Run capacitor                | -/-            |
| Start capacitor              | 320μF          |
| LRA (locked rotor amps / 4s) | 20,1A          |
| RLA (rated load amps / 1s)   | 2,4A           |
| Cut in current               | 20,1A          |
| IP class                     | 21             |

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**Compressor dimensions**

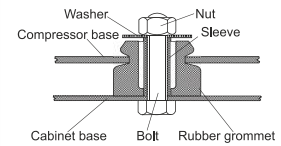
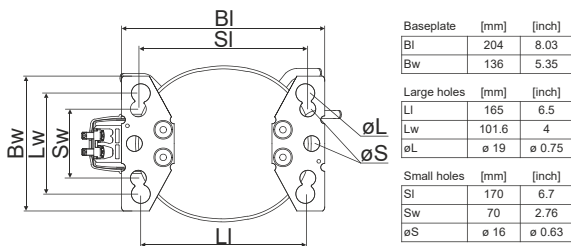
|                |                   |                  |
|----------------|-------------------|------------------|
| <b>Housing</b> | A Height          | 174mm / 6,85in   |
|                | B Height          | 168mm / 6,61in   |
|                | C Length shell    | 176,5mm / 6,95in |
|                | D Length w. cover | 226mm / 8,9in    |
|                | E Width           | 156mm / 6,14in   |



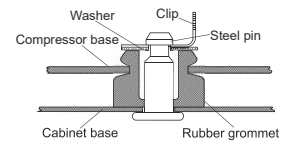
| <b>Connectors</b>     |      | <b>Suction</b> | <b>Discharge</b> | <b>Process</b> |
|-----------------------|------|----------------|------------------|----------------|
|                       |      | <b>X</b>       | <b>Y</b>         | <b>Z</b>       |
| Diameter              | [mm] | øi 6,41-6,59   | øi 5,12-5,22     | øi 6,41-6,59   |
| (i:inside, o:outside) | [in] | øi 0,25-0,26   | øi 0,2-0,21      | øi 0,25-0,26   |
| Material              |      | copper         | copper           | copper         |
| 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**



| <b>Mounting accessories</b> | 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**

LRA value on compressor label and datasheet may differ due to different test conditions for UL approval.

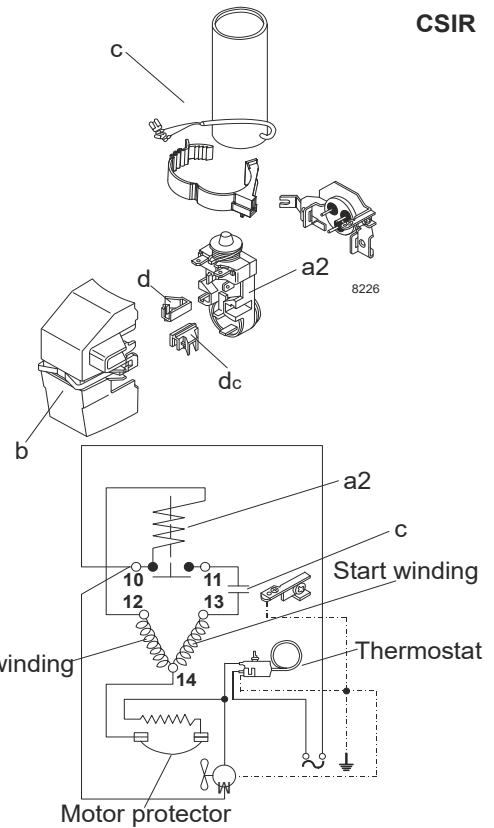
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|-------------|-----------------|----------------------|----------------|-------------|-----------------|

**Configuration**

|                        |                  |
|------------------------|------------------|
| Motorconfiguration     | CSIR             |
| Power supply (nominal) | 115-127V/60Hz 1~ |
| Refrigerant            | R134a            |
| Application            | LBP+MBP          |
| Voltage range          | 95-135V          |
| Starting torque        | HST              |
| Approvals              | UL SA3693        |

**Electrical accessories / wiring diagram**

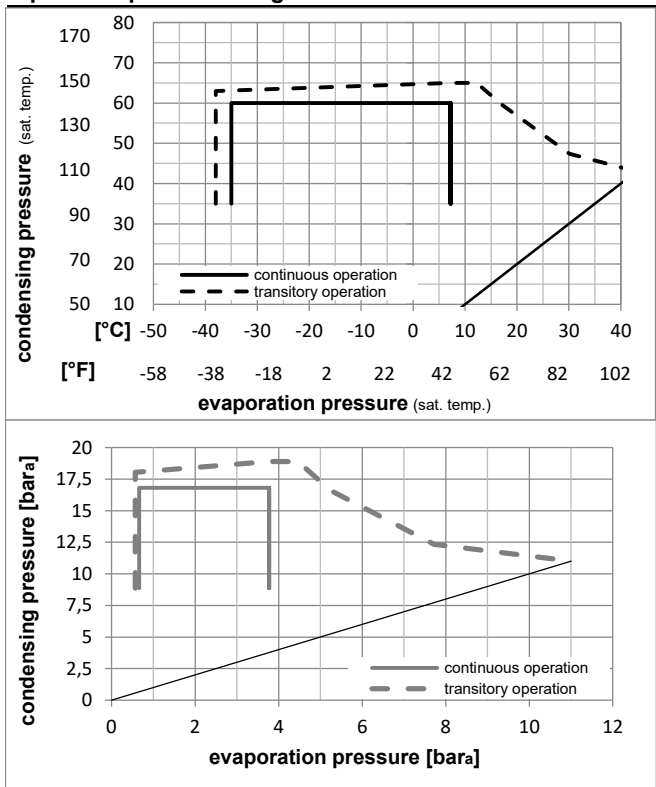


**Ambient temperatures / system cooling**

|                           |              |
|---------------------------|--------------|
| Ambient temperature min.: | 10°C / 50°F  |
| Ambient temperature max.: | 43°C / 110°F |

| System cooling (n/a: outside limits) |            |            |     |
|--------------------------------------|------------|------------|-----|
| T ambient                            | LBP        | MBP        | HBP |
| 32°C / 90°F                          | fan 1,5m/s | fan 1,5m/s | n/a |
| 38°C / 100°F                         | fan 1,5m/s | fan 1,5m/s | n/a |
| 43°C / 110°F                         | fan 1,5m/s | fan 1,5m/s | n/a |

**Operation pressure range**



**Components (already pre-assembled)**

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

**Model**

Designation **TFS4.5FT 115-127V/60Hz** Conf. 1 Sales code: **102G3424**

**Optimization + standard conditions**

115V/60Hz, CSIR, static, UL

| Evaporating pressure (saturation temperature) |       |      |      | Condensing pressure (saturation temperature) |         |          |       | Power consumption   |           |      |       | ASHRAE LBP |                |             |
|-----------------------------------------------|-------|------|------|----------------------------------------------|---------|----------|-------|---------------------|-----------|------|-------|------------|----------------|-------------|
| Return gas temp.                              |       |      |      | Liquid temp.                                 |         |          |       | Current consumption |           |      |       |            | Ref. mass flow |             |
| Cooling capacity                              |       |      |      | COP                                          | EER     |          | P1    | I                   | m         |      |       |            |                |             |
| pe                                            | pc    | RGT  | Tliq | [W]                                          | [Btu/h] | [kcal/h] | [W/W] | [Btu/Wh]            | [kcal/Wh] | [W]  | [A]   |            | [kg/h]         |             |
| [°C]                                          | -23,3 | 54,4 | 32,2 | 32,2                                         | 139,8   | 477      | 120,3 | 1,10                | 3,76      | 0,95 | 127,1 | 2,02       | 2,71           | ASHRAE LBP  |
| [°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  | 89,6 | 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]                                          | -23,3 | 48,9 | 4,44 | 48,9                                         | 118,4   | 404      | 101,9 | 0,93                | 3,19      | 0,80 | 126,9 | 2,01       | 3,13           | ARI540 LBP  |
| [°F]                                          | -10   | 120  | 40   | 120                                          |         |          |       |                     |           |      |       |            |                |             |
| [°C]                                          | -23,3 | 40,6 | 32,2 | 32,2                                         | 165,1   | 564      | 142,1 | 1,32                | 4,50      | 1,13 | 125,3 | 1,99       | 3,20           | AHAM LBP    |
| [°F]                                          | -10   | 105  | 90   | 90                                           |         |          |       |                     |           |      |       |            |                |             |
| [°C]                                          | -35   | 45   | 32   | 45                                           | 75,0    | 256      | 64,5  | 0,81                | 2,78      | 0,70 | 92,1  | 1,87       | 1,62           | opt         |
| [°F]                                          | -31   | 113  | 89,6 | 113                                          |         |          |       |                     |           |      |       |            |                |             |

**Performance tables**

115V/60Hz, CSIR, static, 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   | -23,3 | -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. | -9,4  | 15               | 275,4 | 941     | 237,0    | 1,54  | 5,27     | 1,33      | 178,4 | 2,29 | 6,03   |
| RGT= 32/90       | -3,9  | 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   | -23,3 | -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  | -9,4  | 15               | 237,3 | 810     | 204,2    | 1,29  | 4,39     | 1,11      | 184,5 | 2,32 | 5,74   |
| RGT= 32/90       | -3,9  | 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  |