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<th>Capacity without RC (W)</th>
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**Diagram:**
- **Diagram A:**
  - Outline of a system component.
  - Parts labeled with numbers.

- **Diagram B:**
  - Internal view of a component.
  - Parts labeled with numbers.
  - Annotations for parts.

- **Diagram C:**
  - Exploded view of a component.
  - Parts labeled with numbers.

- **Diagram D:**
  - Side view of a component.
  - Parts labeled with numbers.
  - Annotations for parts.
### Table: Electrical Equipment Compressor

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<th>Code</th>
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</table>

### Diagram: Mounting accessories

The mounting accessories for the compressor are used to fasten the units in place.

The mouting brackets are designed for the 16 mm tubes.
### Hermetic Compressors R600a - 220-240 V - 50 Hz & 60 Hz

#### Model designation

<table>
<thead>
<tr>
<th>Compressor capacity</th>
<th>Model number</th>
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<th>BB</th>
<th>M1</th>
<th>BB</th>
<th>MBP</th>
<th>LST</th>
<th>BB</th>
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#### Weight (kg)

<table>
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<tr>
<th>Compressor capacity</th>
<th>ML</th>
<th>BB</th>
<th>M1</th>
<th>BB</th>
<th>MBP</th>
<th>LST</th>
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<td>145</td>
<td>146</td>
<td>147</td>
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</tbody>
</table>

#### Compressor cooling

- **R** = Run capacitor
- **O** = Oil cooling
- **S** = Static cooling (normally sufficient)
- **S** = Static cooling (normally sufficient)
- **L** = Liquid temperature 55°C
- **T** = Suction gas temperature 32°C

#### Generations

- **K** = First generation
- **K** = First generation
- **K** = First generation
- **K** = First generation

#### Compressor compartment

- **T** = Test at the following conditions:
  - **LST** = Liquid temperature 55°C
  - **SST** = Suction gas temperature 32°C

#### Compressor end plates

- **LBP** = Low Back Pressure
- **MBP** = Medium Back Pressure
- **LST** = Low Starting Temperature
- **SST** = Suction Temperature

#### Compressor cooling

- **R** = Run capacitor
- **O** = Oil cooling
- **S** = Static cooling (normally sufficient)

#### Compressor specifications

- **R600a**: Synthetic motor insulation.
- **Hermetic Compressors R600a**: For use in refrigerators, freezers and similar applications.
- **R600a is flammable**: In concentrations of air between approximately 1.5% and 8.0% by volume.

### Warnings

- **R600a**: Flammable in concentrations of air between approximately 1.5% and 8.0% by volume.
- **Low Back Pressure**: Not recommended for use in air conditioning, ventilation or similar applications.
- **Low Starting Temperature**: Not recommended for use in air conditioning, ventilation or similar applications.

### Additional Information

- **Note**: All compressors are flammable. Avoid breathing air containing R600a.
- **R600a**: Safe to store in a cool, dry place.
- **R600a**: Use appropriate protective clothing and equipment when handling.
- **R600a**: Avoid contact with skin and eyes.
- **R600a**: Do not dispose of R600a as household waste.
- **R600a**: Ventilate the area where R600a is being used.

---

### Start-up Instructions

1. **Compressor start-up**: Use the correct starting device for the specific application.
2. **EVT 2000**: Use an electronic starting device.
3. **RSCR** and **RSCR**: Use a variable speed starting device.
4. **Resistant Start Induction Run Capacitor**: Use a run capacitor.
5. **Resistant Start Capacitor Run Capacitor**: Use a run capacitor.
6. **Low Back Pressure**: Not recommended for use in air conditioning, ventilation or similar applications.

---

### Application Notes

- **Start-up**: Compressor start-up is aided by the use of a starting device.
- **EVT 2000**: Use an electronic starting device.
- **RSCR** and **RSCR**: Use a variable speed starting device.
- **Resistant Start Induction Run Capacitor**: Use a run capacitor.
- **Resistant Start Capacitor Run Capacitor**: Use a run capacitor.

---

### Electrical Equipment

- **Compressor tests**: Use the correct starting device for the specific application.
- **Compressor test equipment**: Use an electronic starting device.
- **RSCR** and **RSCR**: Use a variable speed starting device.
- **Resistant Start Induction Run Capacitor**: Use a run capacitor.
- **Resistant Start Capacitor Run Capacitor**: Use a run capacitor.

---

### Notes

- **Note**: All compressors are flammable. Avoid breathing air containing R600a.
- **R600a**: Safe to store in a cool, dry place.
- **R600a**: Use appropriate protective clothing and equipment when handling.
- **R600a**: Avoid contact with skin and eyes.
- **R600a**: Do not dispose of R600a as household waste.
- **R600a**: Ventilate the area where R600a is being used.
**Note:** To fulfill the requirements of EN 60355-2-34 the protection screen 103N0476 must be applied to the PTC starting device.

A run capacitor holder is available for the "Energy-optimized" and "High-Energy-optimized" compressor range. This optional part enables to fix the run capacitor directly connected on the compressor, thus concentrating all electrical accessories on the compressor. This will save space in the machine compartment.

**Protection screen for PTC**

**Run capacitor holder**

**Run capacitor holder assembly sequence**

---

**Introduction**

The asynchronous motor of a single phase AC powered compressor has two windings, a main and an auxiliary winding. The auxiliary winding is connected in series to the run capacitor holder assembly sequence before the power is turned on, then the auxiliary winding is connected in series to the run capacitor holder assembly sequence after the power is turned off. This is generally referred to as a "Run capacitor holder assembly sequence".

The starting device of our standard PTC starters is a "Positive Temperature Coefficient" (PTC) resistor, which is used to heat up the auxiliary winding during the start phase. The PTC almost sets off the current to the auxiliary winding, leaving only enough current to keep the winding heated to its operating temperature. The heat loss for the auxiliary winding is approximately 2.5 W, which is enough to keep the auxiliary winding heated during operation.

**Advantages:**

- 2 watt power consumption reduction
- Short recovery time (start possible after few seconds if pressure is equalized)
- Can be used to reach a higher cabinet energy class
- Can be used to replace a run capacitor in connection with e.g. a TLES compressor
- Run capacitor acceptance

**Legend**

- a: PTC starting device
- b: Cover
- c: Starting capacitor
- d: Cord relief
- e: Run capacitor
- f: Protection screen for PTC

**Functional Description**

The main component of the ePTC is the same PTC pill like in other 220-240 V 103N…. Danfoss PTC starters. Thus the start of the compressor motor is performed in the same way. In standard PTC starters the >2 W energy loss to keep the PTC heated during compressor operation are not avoidable. In the ePTC a small electronic circuit cuts off the current through the PTC short time after start and thus reduces the energy loss down to approx. 0.4 W. The switch used is a Triac, an electronic AC switch, controlled by a timer circuit.

As the timer circuit has a short reset time and the main PTC cools down during compressor operation already, the full start torque will be available after approx. 6 s compressor off time. However, it is still a LST starting device, needing full pressure equalization before start.

**Diagram**

---

Danfoss
Applications

Our compressor range will perfectly fit various applications like:

• Refrigerators and freezers
• Laboratory and medical equipment
• Clip-on and condensing units
• Compressed air dryers
• Glass door merchandisers
• Bakery refrigeration equipment
• Low temperature display cabinets
• Vending machines
• Ice making machines
• Slush and frozen beverage makers
• Bottle coolers

Refrigeration Controls programme consists of:

- Thermostatic expansion valves
- Hermetic filter drier with solid core
- Direct or servo operated solenoid valve
- Sight glass with moisture indicator