

## Cooling and Deep Freeze Portable for laboratory use

**TC 702**



<b>External Dimension:</b>	<b>W = 390 mm</b> <b>D = 670 mm</b> <b>H = 480 mm</b>
<b>Inside Dimension:</b>	<b>W = 233 mm</b> <b>D = 337 mm</b> <b>H = 330 mm</b>
<b>Gross capacity:</b>	<b>32 l</b>
<b>Temperature range:</b>	<b>-24°C to 10°C</b>
<b><u>Optional:</u></b>	<b>-24°C to 40°C</b>

### Usage:

Transportable by hand, portable (car, Ambulance, air plane, ship, etc.) motor-operated by vehicle-battery, 12- or 24-Volt direct current. Used to transport and to keep a constant temperature (-24°C /+40°C or -24°C /+10°C) for fragile preparations and products in needed emergency rescues and accident - first care, but also for special transports by various vehicles, for instance air plane/car or car/car (for instance highly delicate organ parts, blood products, living vaccine, among other things.)

### Special features:

Reusable cooling and deep freeze operation, in order to reach a complete cooling chain over a fixed location to a changeable location to mobile. **The voltage can be changed from 12- or 24-Volt direct current - to 230 Volt mains connection (alternating current) standard fitting.**

### Housing

Completely in undeformable (UVA resistant), shock-proof, plastic material grey colour outside. All the internal corners are rounded to make easy any cleaning operation. Insulated lid hinged, made with the same material and insulation as the rest of the structure (plastic material grey colour). The lid is fitted up with a perimetric gasket to assure a perfect sealing and with 2 special locking hanging-levers. 2 pcs. External handles at the 2 sides of the structure, allowing an easy handling of the portable refrigerator

### Isolation

High density (40 Kg/m³) foamed-in-place polyurethane, with a thickness of 80 mm. CFC-free. Thanks to the high thickness value, the refrigerator maintains the internal temperature for long time (also when it is not connected to any electrical source)

### Storage room

Easily accessible due to the wide opening - insulated lid. Inner-shell made of one piece, with rounded corners, made of aluminium coated white colour. Wire netting basket (to insert) for easy and quick removal and transport of the cooled items.

### Optional:

**Cable port** with cover. For example, to create access for operator measurement lines, etc.

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Gesellschaft für Labortechnik  
und Umweltsimulation mbH  
Hüttenstraße 9  
D-30165 Hannover

Homepage

E-mail

Phone

Fax

technische Änderungen vorbehalten

[www.tritec-klima.com](http://www.tritec-klima.com)

[info@tritec-klima.de](mailto:info@tritec-klima.de)

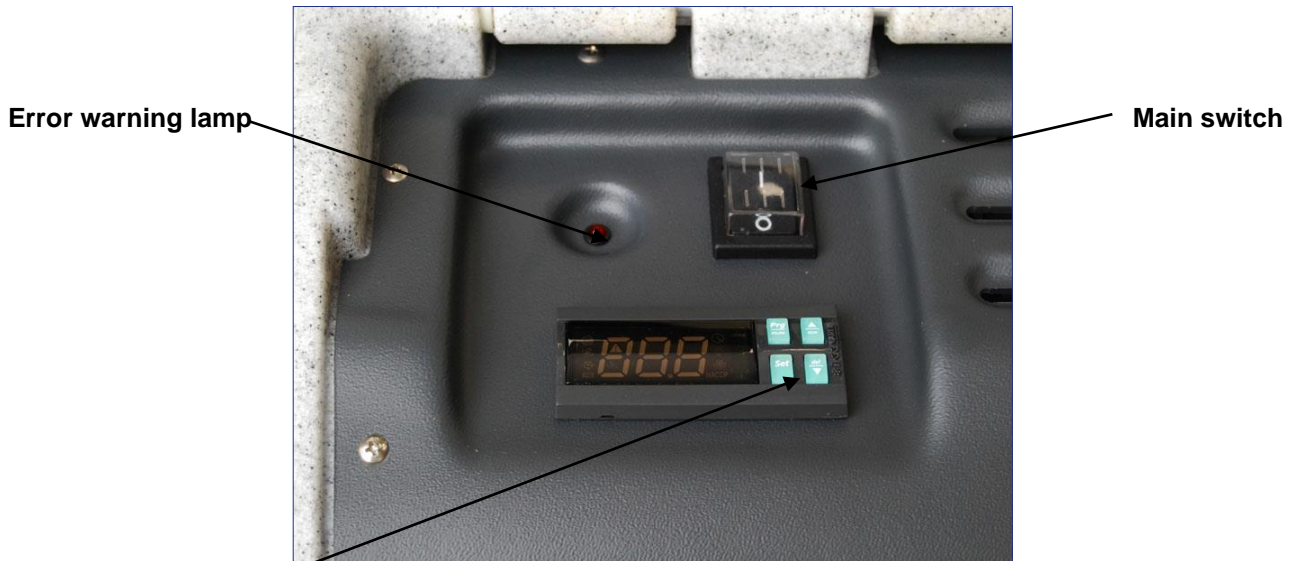
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### Digital, microprocessor-controlled temperature controller

Temperature range from -24°C to +10°C (or 40°C) selectable,  
Setpoint adjustable via push-button, readable, digital electronic.

### Actual value permanently displayed.

Temperature maintenance/stabilisation by fast-reacting precision sensor.

**Alarm signal** acoustically and optically when the setpoint is exceeded or not reached (variably adjustable).  
With alarm muting

### Alarm light

Signals abnormal operation e.g.

- Evaporator or compressor temperature too high
- Car battery discharged
- Incorrect electrical connection

### Cooling unit

Mounted in the right part of the box, with the condensing unit compounded by one hermetic compressor and one finned condenser, air cooled through a fan. Also, the internal walls of the storage chamber are the evaporator, for a direct cooling of the stored material and granting a better temperature uniformity and stability due to the fact that the cold comes from 4 sides. All the mounted components are industrial grade to grant the maximum reliability

Refrigerant: environment-friendly R290 or equivalent

### Defrost

manually

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### Plug

the portable refrigerator includes two electrical cords, one ending with the cigar lighter connector and the other one ending with a Schuko type plug

### AC-DC adapter

incorporated into the structure of the box, allow its use with all the possible different voltages, simply changing the electrical cords (supplied) to one of the 2 suitable connectors fitted in the external side of the box itself

### Technical Data:

Mains power supply                      12 / 24 Volt  
or 230 Volt/1ph/50 Hz **Optional:** 110 V and/or 60 Hz

Working-range:                              -24°C/ +40°C or -24°C/+10°C

Ambient Temperature:                      max. 32°C

### Packing details (in carton)

Dimensions:                                  approx. 49x77x58 cm

Net weight:                                   19 kg

Gross weight:                                25 kg

**Country of Origin:**                      **European Union**

Customs clearance code:                   8418 5019

### Advice for usage:

In practical use, it is often necessary to cool the cooling portable to a stable, required temperature before filling. Usually the filling takes place at the stationary out-patient department, at the central pharmacy or drug depot, mostly with constantly cooled preparations in the pre cooled portable, cooled to reach the same temperature level.

The cooling portable can be kept at a constant temperature at mains connection, 230Volt alternating current-safety socket.

After filling, the cooling portable gets carried to a mobile rescue or to some other possible use and, there, is cooled further.

Only in this way can a complete chain of cold storage be guaranteed according to the regulations of drug manufacturers (instruction leaflet, packaging imprint), given for many products while the maintaining the expiry date.

Such a chain of cold storage is especially required when handling and transporting blood products, organ parts and living vaccine.

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### Optional



#### **Wireless datalogger SPY T0**

(Measurement range: -35°C to +85°C)

measures and records temperature. Robust and waterproof, it is adapted to the cold chain monitoring during transport.

It complies with the EN 12 830 standard, sending data to the secure cloud via a micro gateway.

**In case of threshold excursions, real-time alerts are sent.**

Temperature measurements are managed by the temperature monitoring software.

### Qualifications



#### **DQ (Design Qualification)**

The user-requirement profiles (specifications) are documented and confirmed by us. On request, a specification can be created by us.

#### **IQ (Installation Qualification)**

The IQ documentation is worked out by us especially for the delivered machine and is made available to you. The IQ documentation has to be carried out by the customer itself.

#### **OQ (Operational Qualification)**

The OQ documentation is worked out by us especially for the delivered machine and is made available to you. The OQ documentation has to be carried out by the customer itself.

#### **CQ (Calibration Qualification)**

The temperature measures are carried out in our company, represented graphically and provided to you.