Laboratory Deep-Freezer, chest TC 903

(Ill. similar)

External Dimension: **W = 1305 mm**
D = 655 mm (plus handle and hinge)
H = 865 mm

Inside Dimension:	**Utility Space 1**	**Utility Space 2**
	W = 900 mm	**W = 200 mm**
	D = 450 mm	**D = 450 mm**
	H = 650 mm	**H = 400 mm**

Capacity: **300 l**

Temperature range: **-10°C to -45°C**
Optional: **-10°C to -60°C**

Housing
galvanized sheet steel with white coating.
Cover double-walled with door lock, adhesive band.

Interior space
special aluminium with round edges

Isolation
Polyurethane 100 mm, without space, free of CFCS

Interior fittings
Optional: Epoxy resin coated wire baskets

High quality electronic temperature controller.
Actual and set value display digital.
Actual value permanently readable
Set value digital adjustable by switch.
Working range from -10°C to -45°C **/ Optional: -10°C to -60°C**
Temperature irregularities are viewed acoustically

Optional: Potential-free connection socket for extern alarm indication.

Refrigerating unit
fully hermetically sealed fitted on vibration-absorbing mounts (ambient temperature 25°C), air cooled, low noise, energy saving compressor with high quality vaporisation system
Refrigerant: at -45°C = R290 / at -60°C = R290/R1150

Defrost
manually

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Electrical dates

Power supply	230 V/50 Hz / single-phase **Optional: 230 V/ 60 Hz**
Energy consumption	7,0 kW (24h)
Power cable	2,0 m with schuko plug

Packing details (palletized)

Dimensions:	approx. 140x80x110 cm
Net weight:	approx. 85 kg
Gross weight:	approx. 95 kg
Country of Origin:	**European Union**
Customs clearance code:	8418 3080

Special Equipment and Accessories:

Cable port with cover (approx. 40 mm ∅).
Cable port with PG-gland arranged in the cover or bottom
for example, to create access for operator measurement lines, etc.
Optional: *with* **separate sensor** *kind and version as desired by the customer*

Recirculating-air cooling
Radial circulating-air fan switches off automatically when the lid is opened in the stainless-steel housing on the right-hand side inside, arranged at the top in the usable space. This means that the useable space 2 can no longer be used as a storage area.

GSM Modul
Connecting to the potential-free output. In case of an alarm either a message or a call will be sent automatically. Archiving of 1000 phone numbers is possible. The GSM module is equipped with a rechargeable battery. Automatic alert via SMS when the credit has been used on the SIM card.
6 units can be connected per module. The SIM card is not included

Wireless data logger, complete
For independent temperature recording

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Qualifications

DQ (Design Qualification)

Definition: *Documented proof that the quality-related, GMP-related requirements has been adequately addressed in the design of equipment, including buildings, premises and auxiliary equipment*

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

IQ (Installation Qualification)

Definition: *Documented proof that critical equipment and systems have been delivered and installed in accordance with the set requirements and government regulations.*

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

OQ (Operational Qualification)

Definition: *Documented proof that critical equipment and systems in accordance with the set requirements in the whole operating range are working as intended in accordance with predetermined limits.*

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

CQ (Calibration Qualification) according to DIN 13277:2022-05

Definition: *Documented proof that critical measuring equipment in the intended range in accordance with predetermined tolerances operate reliably under current operating conditions*

Verifying the temperature in the unloaded cooling unit (after reaching the steady state)
1 temperature on 3 measuring levels with 5 measuring points each
(Measurement with calibrated PT 1000 sensors). Test time 4 hours, then open door for 60 seconds.
During this time, the limit values specified in DIN 13277:2022-05 must not be exceeded. Repeat the door opening after one hour.
The temperature measurements are carried out on our premises. The evaluation of the measurements, including graphical representation, is made in written form. The values must not exceed the limit values specified in DIN 13277:2022-05. **(Other measuring methods possible on request)**

PQ (Performance-Qualification) according to DIN 13277:2022-05

Definition: *Documented proof that critical equipment and systems in accordance with the set requirements in the whole workspace under current working conditions (with product) provide the requested services*

The calibration described above is carried out under real conditions on site. Optionally, the measurement can be can be carried out in a loaded or unloaded state. The measurement evaluation, including graphical representation, is made in written form. The values must not exceed the limits specified in DIN 13277:2022-05.
exceeded. **(Other measuring methods possible on request)**

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