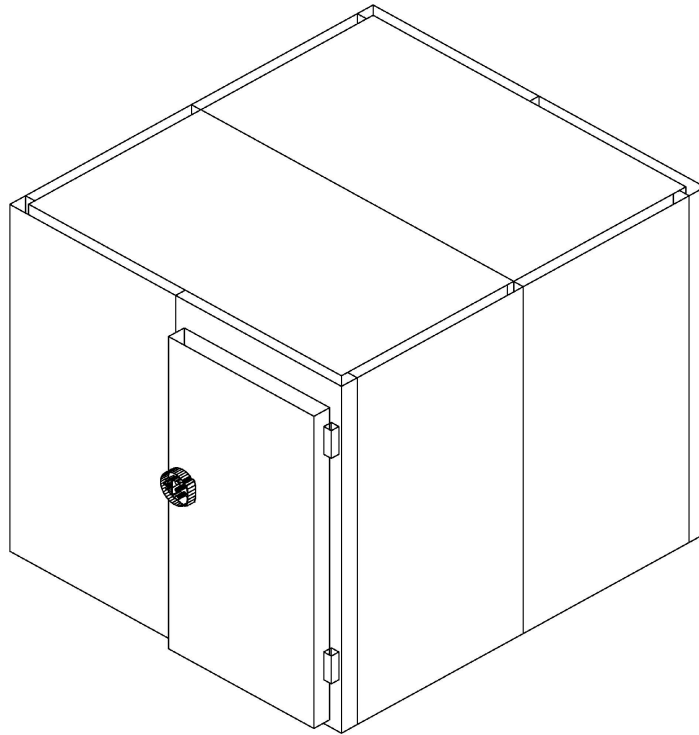


PRODUCTION OF DOORS AND CHAMBERS AT THE HIGHEST TECHNICAL
QUALITY LEVEL

TECHNICAL-MANUAL DOCUMENTATION

MODULAR CHAMBERS

Cooling and Freezing



TARCZYN, 2008-10-15



Table of contents

Conditions of storage.....3

Place of assembly and chamber assembly area.....3

Assembly.....3

Standard Attachments:.....4

Additional Attachments – Option:.....4

Heating cable – of Freezing doors.....5

Drawings, diagrams.....8

CONDITIONS OF STORAGE

Storage areas should be dry and airy and should protect the manufactures from rainfalls. Protective foil must be removed no later than within one month from the date of receipt from the factory. Product must be protected from direct sunlight, because of the possibility of vulcanization of protective foil for linings.

PLACE OF ASSEMBLY AND CHAMBER ASSEMBLY AREA

The chamber should be installed and operated **inside the building** and protected from the weather conditions.

In the case of the outside operation, the chamber must be protected against rainfalls and sunlight.

In the case of operation in environment where relative humidity is high, there may take place so called “retting” of external walls of the chamber – there is a dew point – a condition, in which the air can no longer absorb more water vapor and, consequently, the liquefaction occurs (e.g. at the temperature of 25 degrees and relative humidity of 80%, dew point will occur at the temperature of the wall – 21,01 degrees).

This is normal physical phenomenon and its occurrence is not the design flaw of the chamber and does not reduce functional values.

In areas of high relative humidity, it is recommended to install a dehumidifier to reduce the relative humidity or reduce ambient temperature, thanks of what, we move so called – dew point in the field, where there will be no occurrence of water condensation on the walls of the chamber.

Before installation, check the room dimensions, to make sure, that the ordered housing will fit it.

Area prepared for the assembly of the chamber should be paved, leveled and smooth. Warped floor will lead to faulty assembly of the housing – reducing of tightness and aesthetic values.

Before installation, make sure, whether the floor of the room, in which the chamber will be installed, has a proper thermal isolation. Improperly prepared floor can cause large losses of heat and even freezing of the floor. Floor of area, in which the freezing chamber will be installed, should be properly thermally isolated and additionally heated (e.g. by heating mat), in accordance with the canons of engineering art.

It is also recommended to use so called – dilatation lattice – which is placed between the floor of the room and the floor of the chamber. It provides a free flow of air, prevents floor freezing and simplify assembly of the grate and sludge reduction.

If the cooling chamber does not have its own floor, then the installation should begin from drawing of chamber walls contours on the mounting surface (e.g. concrete) and assembly in these places – the channel section – where the wall panels will be set.

Cooling chamber must have floor or properly prepared floor (parquetry) for its operation.

ASSEMBLY

Assembly of the chamber should be based on the assembly process shown below.

The surfaces of polyurethane isolated panels are protected with a colorless foil, which includes mounting numbers.

ASSEMBLY PROCESS:

- 1) remove the foil from the edges of the locks of plates, leaving marks;

- 2) assemble floor boards with index 'F' (English) or 'P', the key holes are placed on the inside (if the chamber has a floor);
- 3) determine where the refrigeration unit will be located and make the technology holes, needed at a later stage of its installation;
- 4) set a wall boards, no. 'W1' (English) or 'S' and assembly boards sequentially, according to the scheme;
- 5) install the ceiling tiles 'C' (English) or 'F' (sequentially), according to the scheme;
- 6) remove the protective foil from the boards;
- 7) assemble the partition plates – according to the scheme, if there are some; (With a large temperature differences you should break the thermal bridge between rooms, making the expansion gap in the wall, ceiling and floor plates, with a minimum width of 7 mm, which will be later hid by partition walls, assembled on the metal plating. The connection can be additionally sealed with mounting foam).;
- 8) blinding the holes on the key of cam locks;
- 9) any more breaks on the joints of plates must be sealed with silicone;
- 10) check the tightness and possibly adjust the door.

Linking boards together comes with the help of cam locks, which are closed by hex key. The general rule is that the locks close to each other in pairs, but by design, sometimes it can be different, especially in the case, when the wide board meets the narrow board.

In this situation, the best solution is to check before installing – the correct direction of key rotation, causes protrusion of the hook on the outside. In the first phase of key rotation, you have to use a force to cut the plastic bolt, which protects the hook from protrusion on the outside during transport.

NOTE:

In the chambers, there is recommended to assemble the decompression valve, in order to eliminate differential pressure – dangerous for the whole structure.

The manufacturer is not responsible for the defects, caused by improper installation and improperly prepared room, in which the chamber will be placed.

STANDARD ATTACHMENTS:

- 1) Allen Key – 1 pc.
- 2) Blank covers – 1 pc.
- 3) Scheme of chamber assembly – 1 set.

ADDITIONAL ATTACHMENTS – OPTION:

- 1) Grey silicone – FC 40 or FC 50: amount – pieces;
- 2) White silicone – FC 40 or FC 50: amount – pieces;
- 3) Mounting foam – amount – pieces;

4) External angle – steel 50x50x2500 – amount – pieces.

HEATING CABLE – of FREEZING DOOR

In the freezing doors, in doorpost and threshold, there is placed – parallel heating cable, which must be connected to 230V/50Hz and secured by 3A fuse.

Cables with parallel structures always require temperature control of heating elements.

Do not allow heating of the heating cable without the “thermal load” of the chamber. Such action can lead to burnout of heating cables, mounted in the frame, lobe or window. In the described case, we have to link up the power of heating cables with the control of cooling system.

Preparation of the heating cable in the case of exchange.

Technical parameters

Cable type FTSO 40

Efficiency 40 W/m

Voltage of power 230 V

Section of guides 0,75 mm²

Isolation Silicone

Heating element Stop Cu-Ni

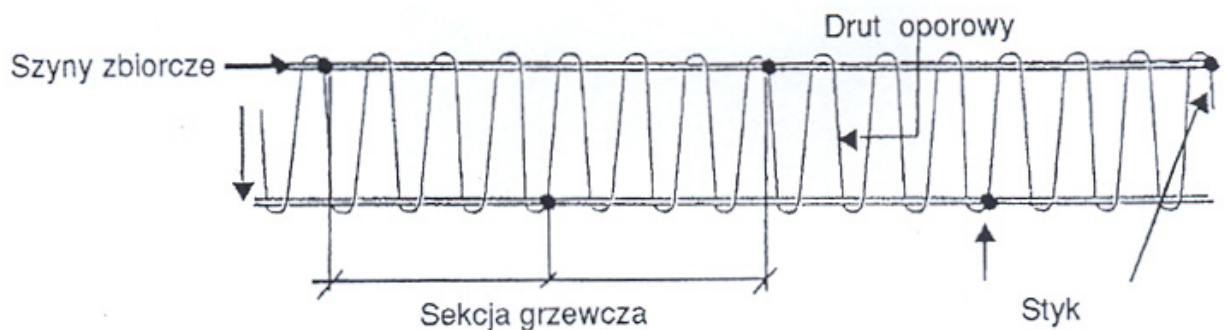
External isolation Silicone

Cable dimensions 5 mm x 7mm

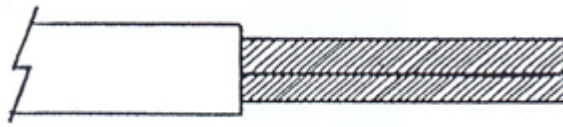
Operating temperature -70 degrees to +200 degrees

Distance between the contact points 0,5 m

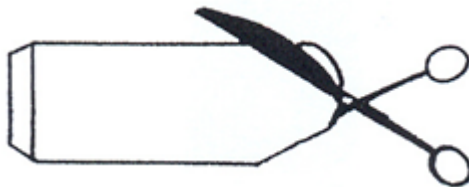
Construction of the cable



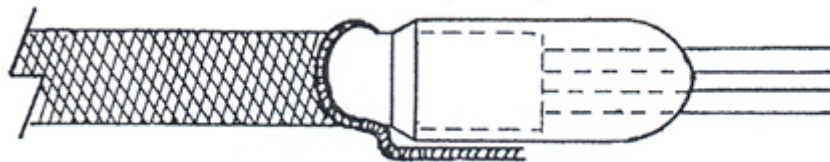
Preparation of the cable at the power side



- cut the cable before the nearest point of contact
- demultiplex the screen on the length of 5 cm (for the cable with the screen)
- remove 50 mm of the outer isolation
- untuck and remove the resistance wire
- separate the two conductors



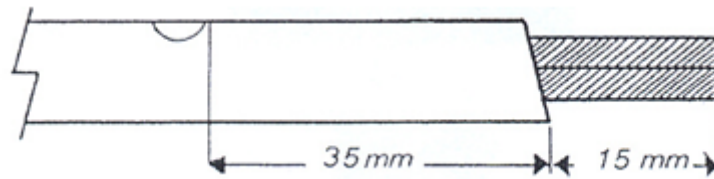
- cut the cap (END CAPS) in accordance with the drawing



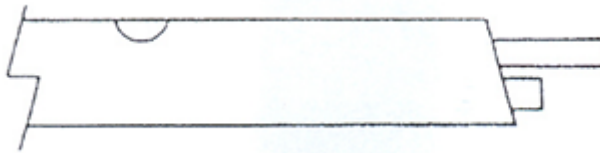
- fill the cap (END CAPS) inside, with the silicone glue, pass the wires through the cut holes and apply on the cable

So prepared beginning of the cable you can enter through the chokes to thermostats of FX/ST, FX/AT types or enter into the terminal box with the power supply.

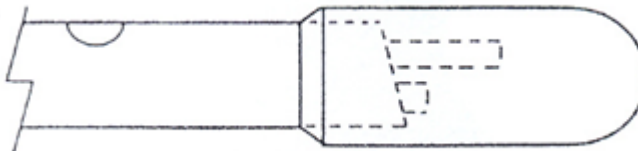
Preparation of the end of the cable



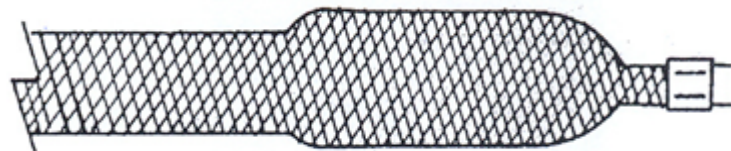
- find the contact point of the cable
- cut the cable 70 mm from this point
- additionally, shorten the cable by 20 mm (for cable with screen)
- pull off 15 mm of isolation
- untuck and remove the resistance wire



- separate the two conductors
- shorten one of the guides about 5 mm



- fill the cap (END CAPS) inside, with the silicone glue and apply on the cap



- slide the screen on such prepared end
- turn the screen and tighten the sleeve

