



Protective Canopy

# RTC-20

ASSEMBLY AND  
OPERATION MANUAL



CE



# **Protective Canopy**

## ***RTC-20***

### **Assembly and Operation Manual**

**CE**

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## ***Dear customers!***

*We thank You for choosing the turnstile manufactured by PERCo.  
You have purchased a high quality product, which will be long lasting  
in operation provided that installation and operation rules are observed.*

**The operation manual of the RTC-20 protective canopy for the RTD-20 full height rotor turnstile** (hereinafter – *the manual*) contains data on transportation, storage, installation, operation, maintenance and warranty of the product. The installation should be undertaken in strict accordance with this Manual.

Installation should be carried out by qualified personnel only.

## **1 APPLICATION**

**The RTC-20 protective canopy** (hereinafter – *the canopy*) is designed for use together with all the modifications of the **RTD-20** full height rotor turnstile (hereinafter – *the turnstile*). The canopy is designed as protection of the turnstile against atmospheric precipitations and also serves as an additional protection against climbing through the turnstile.

## **2 OPERATION CONDITIONS**

The canopy, in accordance with the resistance to environmental exposure, complies with GOST 15150-69, Category N1 (outdoor operation).

Operation of the canopy is allowed at ambient temperature from -40°C to +55°C and relative air humidity of up to 98% at +25°C.

## **3 TECHNICAL SPECIFICATIONS**

Overall dimensions (H × W × D) <sup>1</sup> .....	250×242×256 cm
Weight (net) .....	max 130 kg
Mean lifetime .....	min 8 years

<sup>1</sup> Overall dimensions of the canopy are shown in Fig. 1.

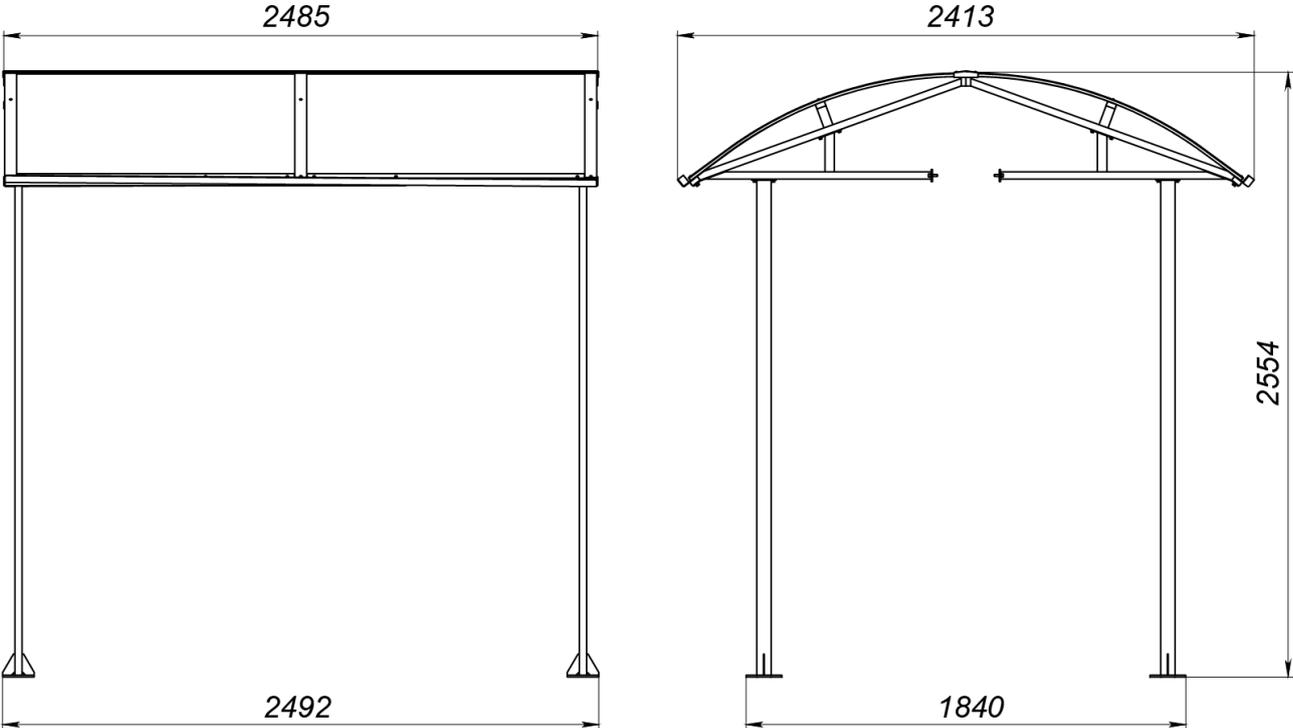


Figure 1. Overall dimensions of the canopy

## 4 DELIVERY SET

### 4.1 Standard delivery set

#### Primary parts:

Canopy's half-frame assembled .....	2
Bracket .....	4
Post .....	4
Jointing plate .....	2

#### Fasteners:

Hex socket screw M6×16 .....	32
Hex socket screw M6×20 .....	6
Hex socket screw M8×16 .....	8
Hex socket screw M8×30 .....	8
Hex socket screw and countersunk head M4×10 .....	6
Washer 6 .....	38
Washer 8 .....	16
Plug Ø16 .....	6

#### Spare parts and materials:

Plug Ø16 .....	2
Plug 40×20 .....	2

#### In-line documentation:

Assembly & operation manual .....	1
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#### Package:

Package box .....	3
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### 4.2 Optional equipment

As addition to the standard delivery set, the canopy can be supplied with optional equipment fittings:

Metal anchor with bolt M10×60 PFG IR10-15 («SORMAT», Finland) .....	16
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## 5 DESIGN

### 5.1 Main features

The main features of the canopy are as follows:

- **high corrosion resistance** of the construction made of steel profiles with combined coating ensures long period of service even in unfavourable environments;
- **low weight** makes the installation easier;
- **high durability polymeric powder keeps** the outward appearance essentially unchanged for many years of service.

### 5.2 The canopy design

The design is shown in Fig. 2. The overall dimensions of the canopy are shown in Fig. 1.

The canopy consists of:

- two canopy half-frame assembled;
- four brackets;
- four posts;
- jointing plate.

The canopy frame and its posts are made of steel profiles. The roof is made of polycarbonate sheets 10 mm thick.

The frame is assembled from two half-frames with a roof fixed to them. Half-frames of the canopy are connected by screws with each other and with posts.

The canopy is fixed with screws on the side walls of the turnstile top channel using brackets.

At the top, the connection of the half-frames is closed by the jointing plate (5).

The canopy posts are fixed to the mounting surface by M10 anchor bolts through the mounting holes in the support flanges of the posts.

## 6 SAFETY REQUIREMENTS

### 6.1 Installation safety requirements

Installation of the canopy should be carried out by qualified personnel only, in strict accordance with this Manual and general requirements for installation work.



#### **Warning!**

- While doing the installation work use only serviceable tools;
- Work should be carried out by at least three people. When installing the posts and connecting the frame with the turnstile top channel, be particularly careful, prevent the parts from fall.

### 6.2 Operational safety requirements



#### **Do not:**

- climb onto the canopy, stand on the canopy, put foreign objects on the canopy;
- use the elements of the product for other purposes, fix electrical cables on them, etc.

Make sure that snow that may cover the canopy in winters is not higher than 200 mm.

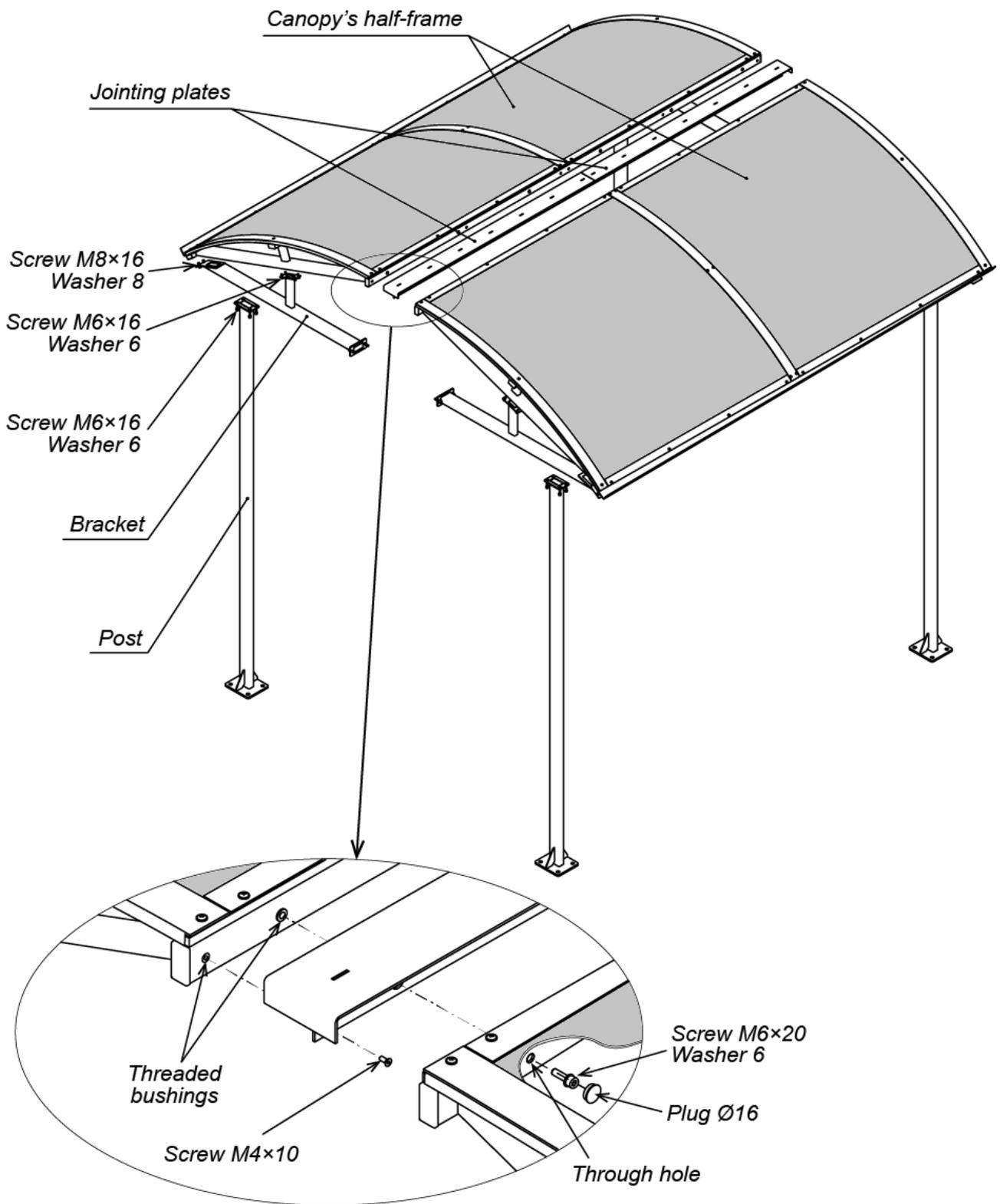


Figure 2. The canopy design

## 7 INSTALLATION WORK

When installing the canopy, observe the safety measures specified in Section 6.1.

Installation is an operation substantially responsible for durability and serviceable life of the canopy. Study this section carefully before commencing the installation work, and strictly follow the instructions.



### **Warning!**

The manufacturer will not accept liability for any damage to the canopy or otherwise loss caused as a result of improper installation, and will dismiss any claims by the customer should the installation work be carried out not in accordance with this Manual.

### 7.1 General recommendations

We advise:

- installation to be carried by at least three persons in assembly and installation work;
- mounting the canopy on flat, solid concrete floors (grade 400 or higher), stone or similar foundations at least 150 mm thick;
- using reinforcing elements 400×400×250 mm for weaker foundations;
- using mounting hardware as recommended in sect 4.2.

Recommendations for the preparation of holes in the base (of the mounting surface) for fastening the canopy posts are given taking into consideration the use of SORMAT anchor bolts for strong concrete floors (see Table1).

**Table 1. Fasteners**

Anchor type	Application	Drill diameter	Drill depth	Qty
PFG IR 10-15	Post fixing (3)	16 mm	60 mm	16 pcs.

### 7.2 Installation tools

Use the following tools and materials for the installation work:

- 1.2÷1.5 kW electric perforator;
- screw gun;
- Ø16 mm carbide drill bits;
- SW3, SW5, SW6 hex-nut wrenches;
- trammel-250 and 3 m tape-measure;
- level gauge;
- two stepladders (four steps or more)
- silicone sealer for outdoor use.



### **Note:**

Use of other similar tools is allowed as long as it does not reduce quality of the installation work.

### 7.3 Canopy installation

The content of the assembly operations is given taking into account the recommendations of Section 7.1. The following installation procedure is recommended:

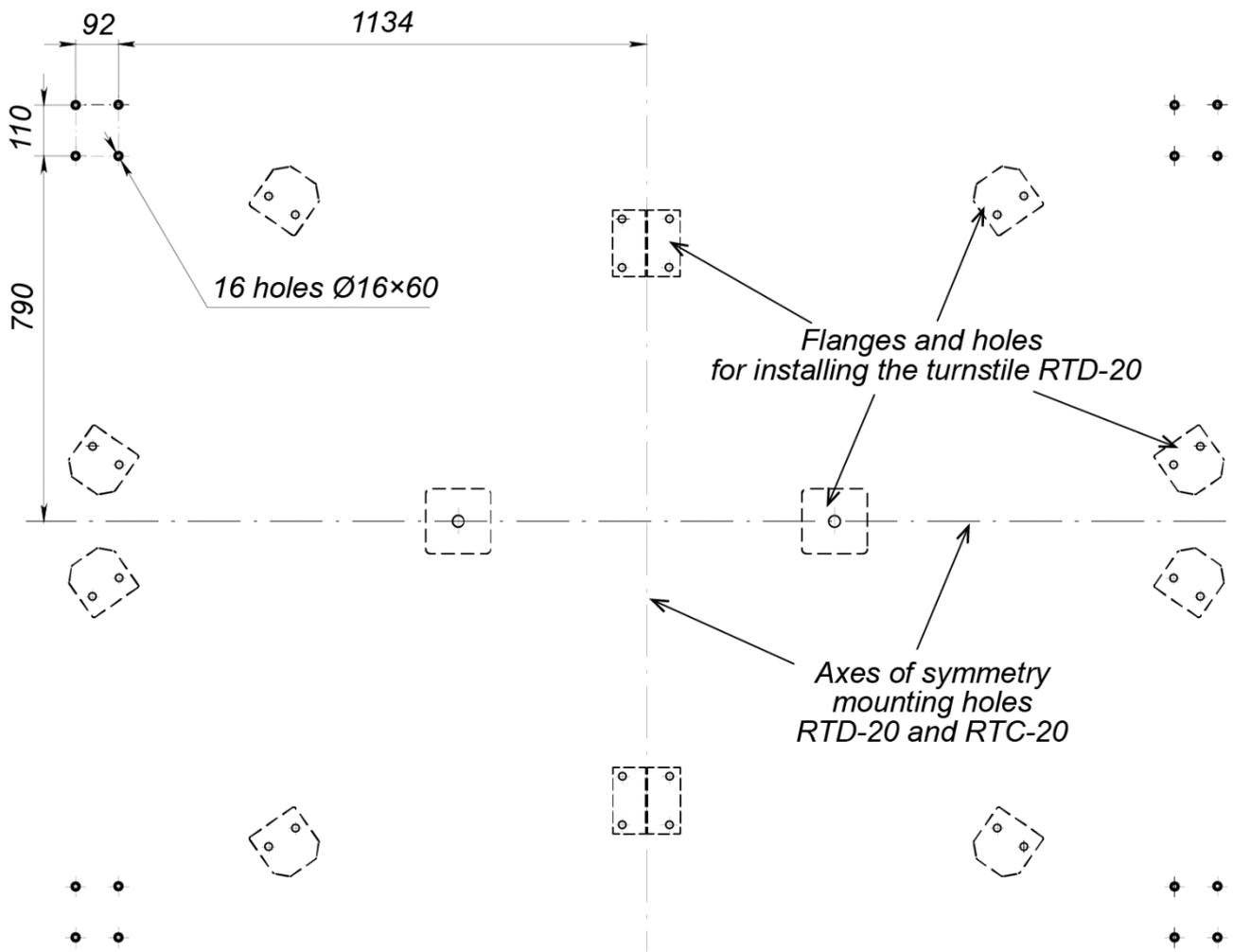
1. Unpack the boxes, check completeness of the delivery set according to sect. 4.1.

2. Mark out the mounting holes for installation of the posts (3) according to Fig. 3. Carry out the marking together with that for turnstile mounting holes. Symmetry axis of turnstile and canopy mounting holes geometrically coincide (Fig. 3).
3. Prepare holes for the anchor bolts on mounting surfaces.
4. Set the anchors all the way down the prepared holes. Anchors should not protrude from the mounting surface.

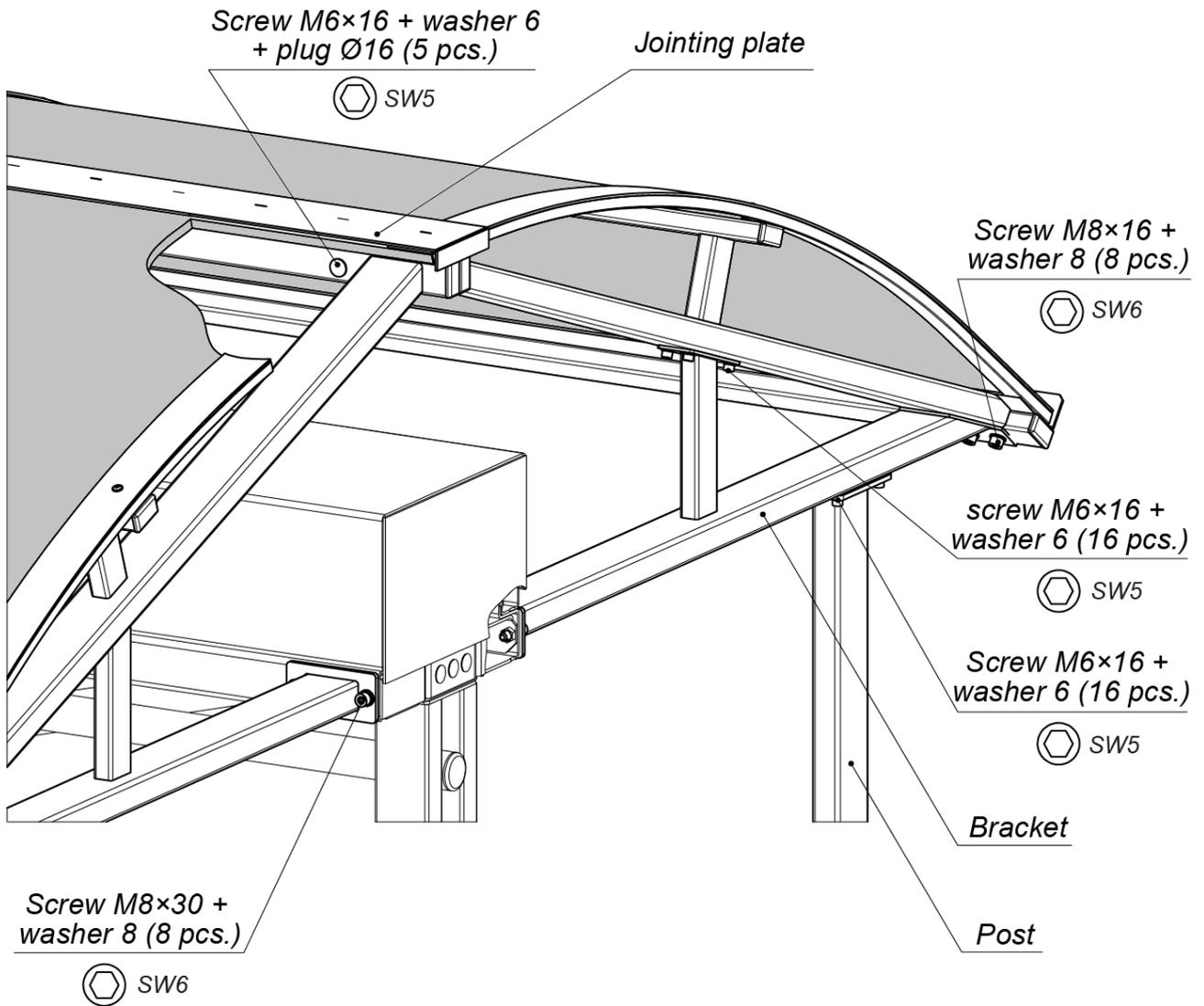


**Warning!**

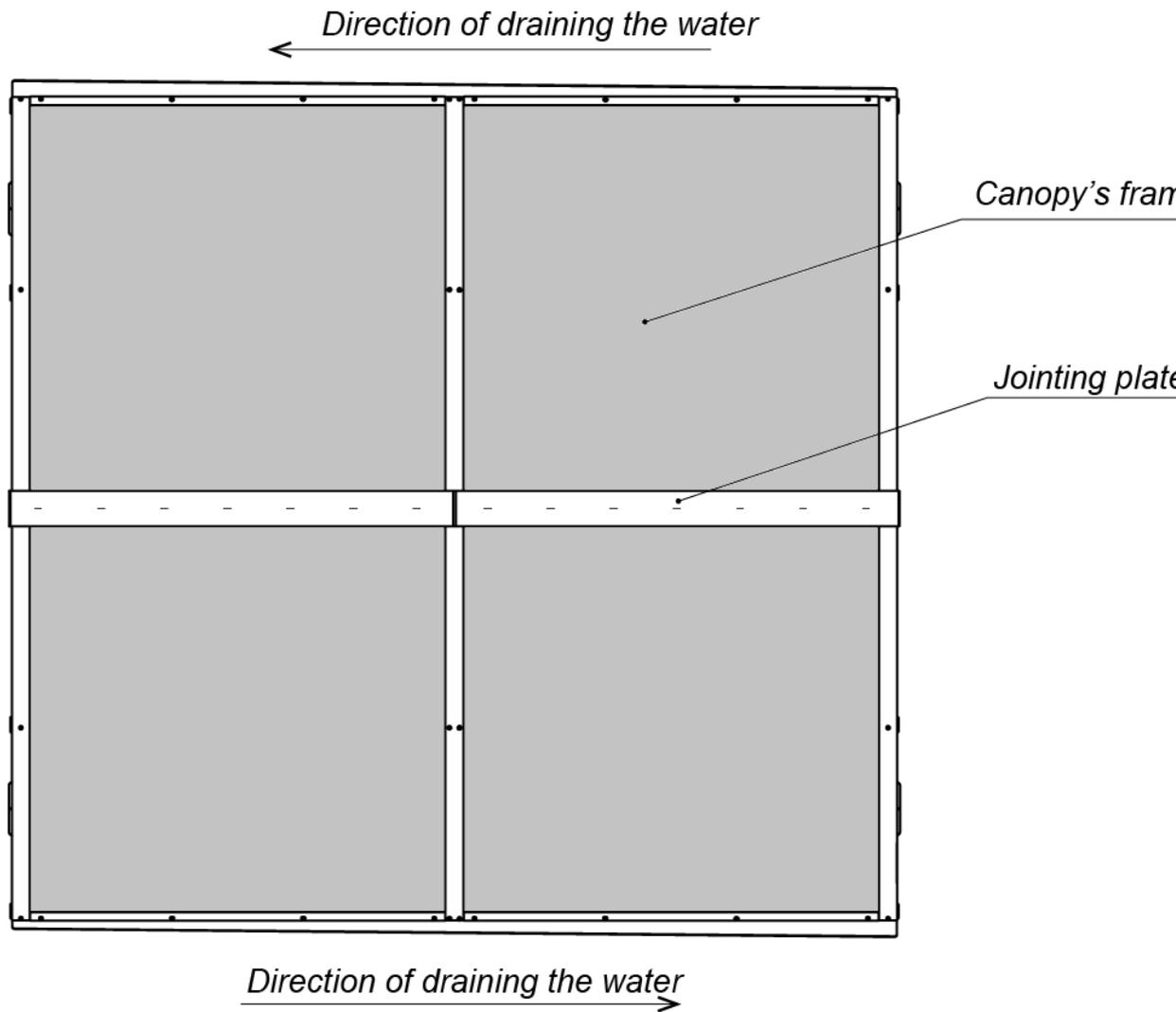
- Further work should be carried out after installation of the **RTD-20** turnstile.
  - Be particularly careful when installing parts of the canopy before they are secured in place, prevent the parts from fall. Work should be carried out by at least three people.
5. Sequentially install and fix the four canopy posts using anchor bolts. Mounting is preliminary.
  6. Remove the plugs from the side surfaces of the turnstile top channel (4 blue plugs on each side of the channel).
  7. Lift the bracket to the upper horizontal platform of the post, aligning the mounting holes and holes in the posts and orienting the flange of the bracket on the side surface of the turnstile top channel. Fix the bracket with bolts M6 × 16 on each post, wrench SW5 (see Figure 4).
  8. Fix the bracket with two M8×30 bolts to the turnstile top channel, wrench SW6 (see Figure 4). Tightening of bolts is preliminary. The joint of the flange and the top channel of the turnstile must be sealed with silicone before tightening the bolts.
  9. Fix the other brackets in the same way. Tightening of bolts is preliminary.
  10. Choose the half-frame of the canopy, in the upper profile of which there are threaded bushings (see Fig. 2). Install it on one side of the turnstile **RTD-20**, fixing it with M6×16 bolts - 8 pcs. (wrench SW5) and M8×16 - 4 pcs. (wrench SW6) on the installed brackets (see Figure 4).
  11. Set two jointing plates on the installed half-frame with six countersunk screws M4×10 (wrench SW3) (see Fig. 2).
  12. Similarly, carry out the installation of the second half-frame of the canopy on the other side of the turnstile.
  13. Connect the half-frames in the zone of the upper power tube with bolts M6×20 – 6 pcs. (wrench SW5) to obtain a sturdy construction (see Fig. 2). Use plugs for the bolt holes Ø16 mm.
  14. Check all threaded connections of the canopy frame and tighten them. The canopy is installed.



**Figure 3. The layout of the holes for the installation of the RTC-20 canopy:**  
**16 holes Ø16x60** – holes for fixing the canopy posts of **RTC-20**



**Figure 4. Juncture of the canopy to the turnstile top channel**



**Figure 5. The top view of the connected half-frames with the installed jointing plate**

Consult the nearest PERCo service center or sales and service center (see Appendix) when necessary

## 8 TRANSPORTATION AND STORAGE

The canopy in the standard delivery set (Section 4.1) is packed in two transport boxes, which protect its components from damage during transportation and storage.

**Table 2. Overall dimensions and boxes contents**

№	Dimensions (Length × width × height), cm	Contents	Weight (gross), , not more than
1	262×139×22	Canopy half-frame assembled - 2 pcs. Bracket - 4 pcs. Mounting fixture - 1 set.	110 kg
2	262×139×22	Canopy half-frame assembled - 1 pc. Jointing plate - 2 pc.	97 kg
3	222×45×30	Posts – 4 pcs.	42 kg

The canopy in the original package should be transported only in closed freight containers or other closed type cargo transport.

During storage and transportation, the boxes can be stacked no more than 2 layers high.

The canopy should be stored indoors at ambient temperatures between -40°C to +55°C and relative air humidity no more than 98% at + 25°C. The storage facilities should be free from acid and alkali vapours, or corrosive gases.

If prior to installation the canopy was transported or stored at below-zero temperatures or high air humidity, it should be kept in package for no less than 24 hours under operation conditions given in Sect. 2).

## 9 WARRANTY PERCo

PERCo (the Manufacturer) warrants that the **RTC-20 Protective Canopy for RTD-16 Full Height Rotor Turnstile** (the Product) complies with applicable statutory safety requirements, electromagnetic compatibility provided that the instructions on storage, installation and operation, given in the Assembly & Operation Manual, are observed.

The warranty period is **5 (five) years** commencing from the date of sale.

Should there be no date of sale on the warranty card, the warranty period shall commence from the date of manufacture specified in the Certificate and on the Product label.

In the post-warranty period the replacement parts/components are warranted to be free from defects in material or workmanship for a period of 3 (three) months from the date of shipment of the repaired/replaced Product to the Customer.

All claims with regard to quantity, completeness and defects to appearance of the Product delivered are accepted by the Manufacturer in writing within no more than 5 (five) working days after the products are received by the Customer. In case of failure to meet the abovementioned deadline no claims are accepted.

The Warranty does not cover:

- products, parts and components with:
  - external mechanical damages resulting in the Product's fault;
  - defects resulting from Customer's improper testing, operation, installation, maintenance, modification, alteration, or adjustment;
  - damages due to force majeure circumstances (natural disasters, vandalism etc.) or defects as a result of external circumstances (power surges, electric discharge, etc);
- fuses, accumulators, galvanic elements and other components, replacement of which is performed by the Customer in accordance with the Product's in-line documentation.

To the maximum extent permitted by the acting law, the Manufacturer does not incur a liability for any direct or indirect losses of the Customer, including but not limited to loss of profit or data, losses caused by idle period, missed profit, and etc related to use or impossibility to use products and software, including possible software errors and failures.

Within the warranty period the products are repaired free of charge at the Manufacturer's site. The Manufacturer reserves the right to repair failed product or replace it with an operational one. Time of repair is specified at the moment the Product is accepted for repair. Transportation cost to and back from the place of repair shall be borne by the Customer.

In order to shorten the repair time the Customer must inform the Manufacturer's Technical Support Department (the TSD) of the problem with the Product's operation and/or about the origin of the fault by submitting a filled-in Technical Support Form by e-mail, fax or via the Manufacturer's website or communicate directly a specialist of the TSD.

The Manufacturer reserves the right not to accept the Product for repair from the Customer who failed to submit the Technical Support Form.

**The Manufacturer's warranty obligations don't cover attendance by the experts of a Customer and maintenance of any Product on site**

If in the course of the examination taken by the Manufacturer of the Product or its parts/components believed to be faulty, no faults have been detected, the Customer is responsible for compensation of the Manufacturer's expenses related to the examination.

Apart from the warranties mentioned above the Manufacturer does not provide any other warranties with regard to compatibility of a Product purchased with software or products produced by other manufacturers as well as any warranties that this Product will fit for the purposes not stipulated in the Product's in-line documentation.

The warranty does not provide for any claims with regard to the technical specifications of the Product in case they are in compliance with those stated by the Manufacturer. The Manufacturer does not guarantee that the Product purchased will meet Customer's requirements and expectations.

**PLEASE NOTE THAT PERCo PRODUCES TECHNICALLY  
SOPHISTICATED PRODUCTS THAT, IF NOT FAULTY,  
CANNOT BE RETURNED BACK IF BY SOME REASON  
THE CUSTOMER DEEMS THEM UNSATISFACTORY**



# WARRANTY CARD



## RTC-20 Protective Canopy for RTD-20 Full Height Rotor Turnstile

Date of manufacture: \_\_\_\_\_ 201\_\_

Quality Control Seal

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Date of sale: « » \_\_\_\_\_ 201\_\_

\_\_\_\_\_  
(signature, seal)



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Cutting line

# WARRANTY REPAIR COUPON



## RTC-20 Protective Canopy for RTD-20 Full Height Rotor Turnstile

Date of manufacture: \_\_\_\_\_ 201\_\_

Quality Control Seal

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Date of sale: « » \_\_\_\_\_ 201\_\_

\_\_\_\_\_  
(signature, seal)





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