

Protective Canopy

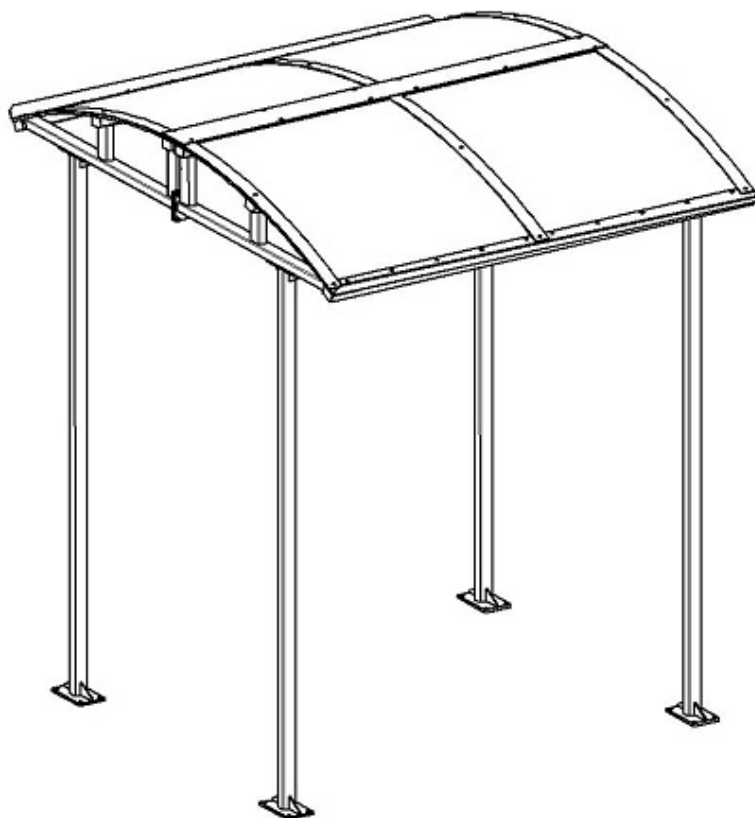


RTC-15

for RTD-15

Full Height Rotor Turnstile

Assembly and operation manual
Warranty card



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Dear Customer,

*Thank you for purchasing a PERCo product.
Please follow instructions given in the Operational Manual carefully,
and this quality product will provide many years of trouble-free use.*

The Operation Manual (the Manual) of the **RTC-15** protective canopy for the RTD-15 full height rotor turnstile contains data on transportation, storage, installation, operation, maintenance and warranty of the product.
The installation should be undertaken in strict accordance with this Manual.

1 APPLICATION

The RTC-15 protective canopy (the canopy) is designed for use together with the RTD-15 full height rotor turnstile (the turnstile) as protection of the turnstile against direct exposure to the elements.

2 OPERATION CONDITIONS

- 2.1 The canopy, in accordance with the resistance to environmental exposure, complies with GOST 15150-69, Category N2 (outdoor operation).
- 2.2 Operation of the canopy is allowed at ambient temperature from -40°C to +40°C and relative air humidity of up to 98% at +25°C.

3 TECHNICAL SPECIFICATIONS

Overall dimensions (Height x Width x Depth).....	2586x2388x2015mm
Weight (net), max.....	60 kg
Mean lifetime, min.....	8 years

4 DELIVERY SET

4.1. Standard delivery set

Primary parts:

– left roof section.....	1
– right roof section.....	1
– post.....	4
– bushing.....	2
– jointing plate.....	1
– sealing element.....	4 meters

Fasteners:

– hex socket screw M6x30.....	20
– hex socket screw M6x40.....	4
– hex socket screw M8x50.....	2
– nut M6.....	8
– nut M8.....	2
– nut 6.....	24
– nut 8.....	2
– spring washer 6.....	24
– spring washer 8.....	2
– self-tapping screw 4.2x16.....	12

In-line documentation:

– assembly & operation manual with warranty card.....	1
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Package:

– package box.....	3
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4.2. Optional equipment fittings

4.2.1 As addition to the standard delivery set, the canopy can be supplied with optional equipment fittings used in the canopy installation depending on adjacent equipment:

- mounting brackets*;
- connecting posts.

4.3. Mounting hardware**

We advise using the following metal anchors for medium heavy and heavy fixings in solid and hard foundations like concrete (400 grade or higher), stone, etc:

metal anchor with bolt M10x60.....	16
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Installation of the canopy on other types of foundations may require different mounting hardware.

This Manual gives information on attachment of the canopy to the turnstile by the «Turnstile-Canopy» bracket (see sect. 8). Fittings of any other type, their number and installation are dependent on the entrance layout. They should be specified in general mounting documentation for the entrance and cannot be given in this Manual.

* Not included in the standard delivery set.

5 DESIGN

5.1. Main features

The canopy meets current requirements to such equipment in compliance with GOST P 51241. The main features of the canopy are as follows:

- high corrosion resistance of the aluminium frame 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

5.2.1 The design is shown in Fig. 1. Overall dimensions of the canopy are given in Fig. 2a and 2b.

5.2.2 The canopy consists of:

- right roof section (1);
- left roof section (2);
- four posts (3);
- two bushings (7);
- sealing element (9);
- jointing plate (10).

Numbers of the position correspond to Fig.1.

5.2.3 The *roof sections* (1) and (2) with transparent infill, and the *posts* (3) with bottom flanges (4) for fixing the posts to the mounting surface and top flanges (5) for fixing the posts to the roof sections assembly, are made of high durability aluminum profile.

5.2.4 The lower parts of the roof sections should be assembled together by jointing flanges (6), while upper parts by bushes (7), installed between gussets (8).

5.2.5 The joint line between the roof sections is covered by a self-adhesive *sealing element* (9) and a *jointing plate* (10).

5.2.6 Each roof section has a sloping *drain* (11) for drainage.

5.2.7 Both front sides of the canopy are fixed by *fittings* (see sect. 4.2.2) to adjacent equipment (see sect. 8.2.14).

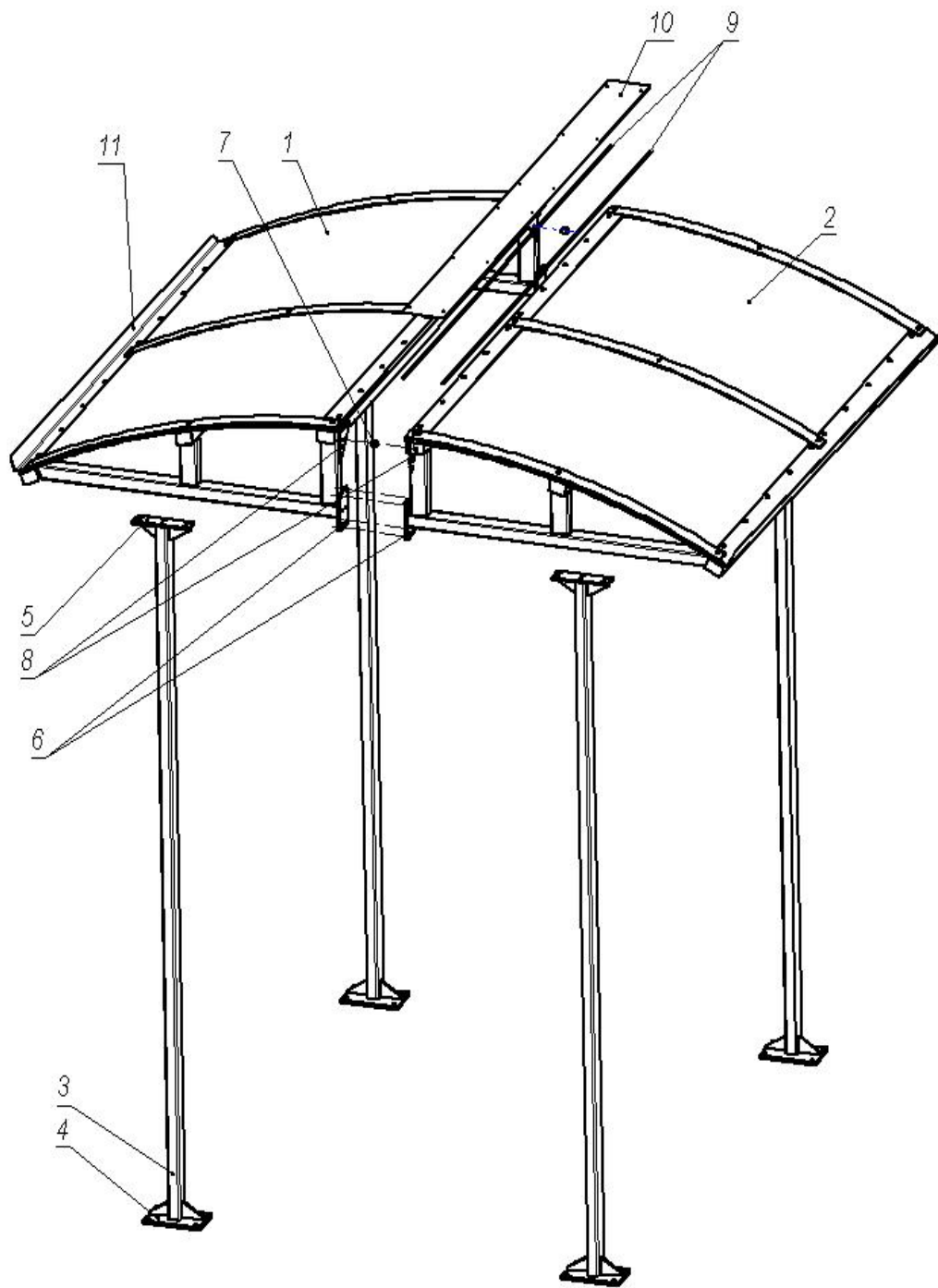


Fig. 1. The canopy design:

- 1 — right roof section*; 2 — left roof section*; 3 — post; 4 — bottom flange;
 5 — top flange; 6 — jointing flanges; 7 — bushing*; 8 — gussets**;
 9 — sealing element; 10 — jointing strip; 11 — drain.

· «Right» and «left» names for the roof sections are conventional and correspond to the name of the RTD-15 turnstile guide barrier section (Fig. 3, 7) below (see Operation Manual for the RTD-15 full height rotor turnstile).

* The bushing and gussets are also shown in Fig. 4.

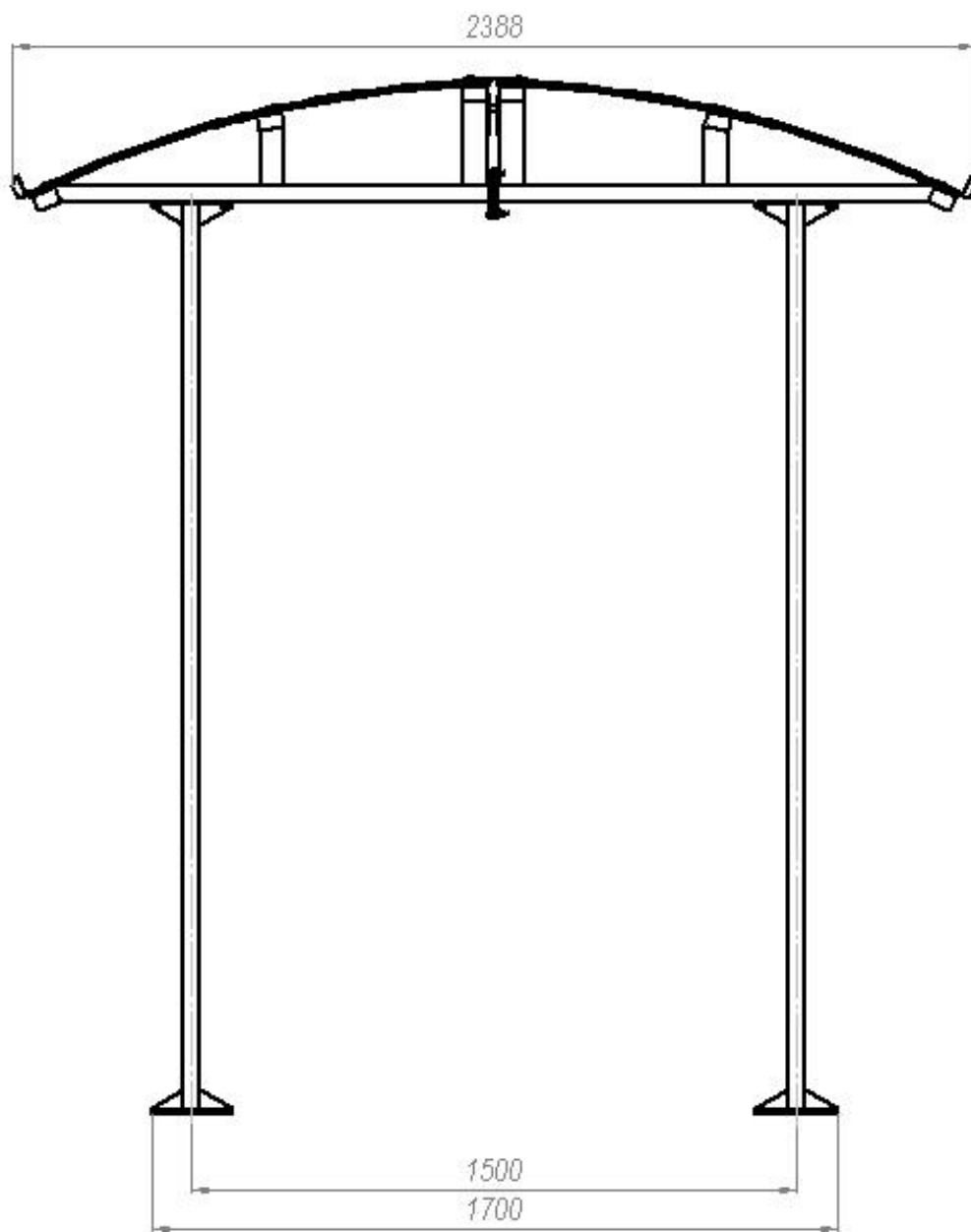


Fig. 2a. Overall canopy dimensions (frontal view)

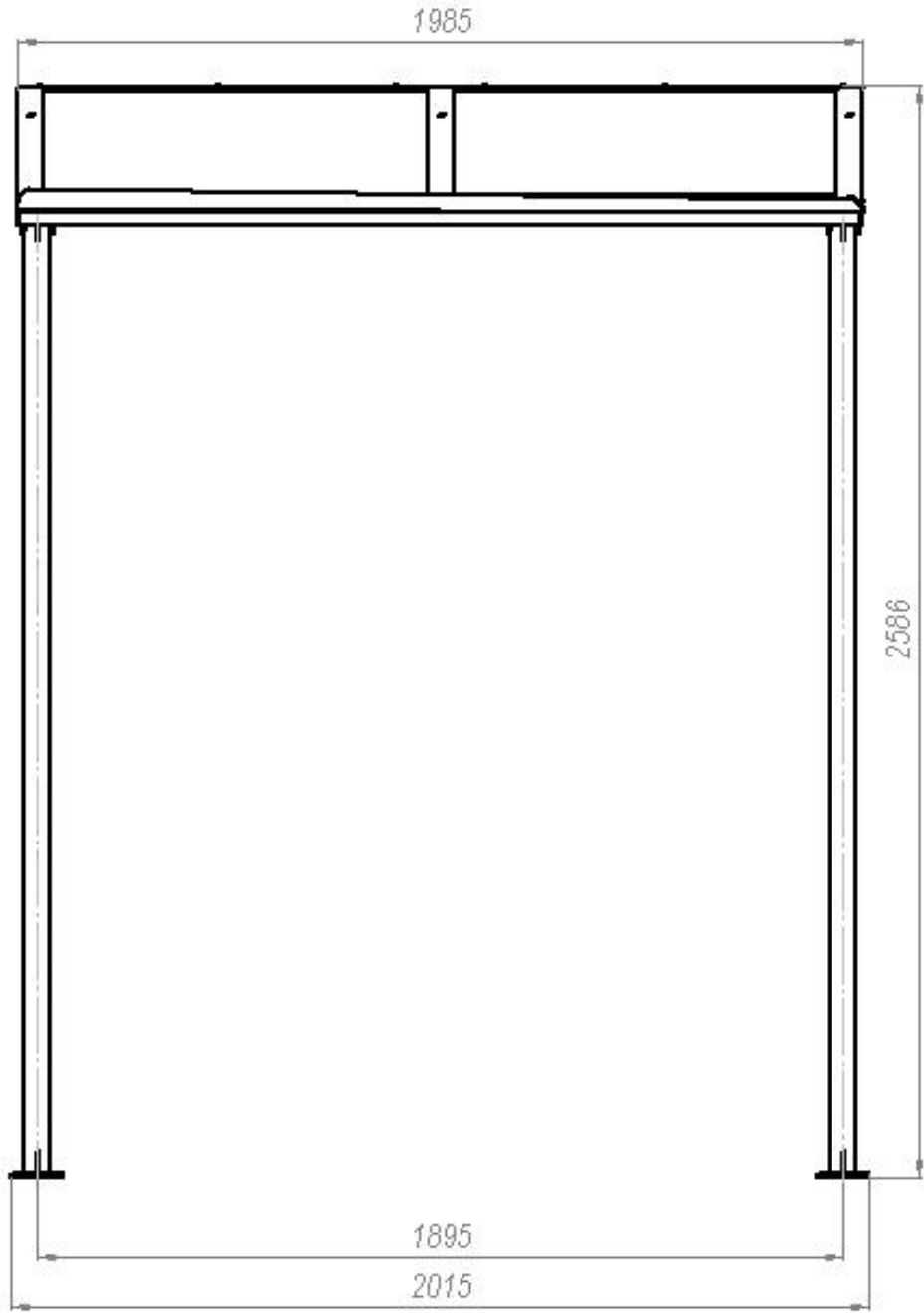


Fig. 2b. Overall canopy dimensions (side view)

6 MARKING AND PACKAGING

6.1 The canopy in the standard delivery set (see sect. 4.1) is packed in three package boxes to protect its parts against damage during transportation and storage.

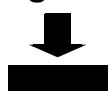
6.2 Overall dimensions and weight of the boxes are given in Table 1.

6.3 Each box bears a label with product and item name, date of manufacture, serial number, and a label with pictorial markings (Table 2).

TABLE 1

BOX NUMBER	OVERALL BOX DIMENSIONS (length x width x height), mm	BOX WEIGHT, kg
1	2100x1280x400	67
2	2100x1280x400	68
3	2386x526x300	70

TABLE 2

BOX PICTORIAL MARKINGS		
Requirement	Symbol	Qty in per box
«This way up»		2
«Fragile»		2
«Maximum load»	70 kg-f max 	2
«Keep away from water»		2

7 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.

While doing the installation work:

- use only serviceable tools;
- be particularly careful when installing parts of the canopy before they are secured in place, prevent the parts from fall.

Usage requirements:

- avoid mechanical shock and jerking of the canopy;
- avoid using substances and tools that may cause damage to the surface of the canopy.

WARNING!
DO NOT use the canopy if it is not fixed to the turnstile

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

8 INSTALLATION WORK

8.1. General recommendations

8.1.1 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 other equipment, 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.

8.1.2 We advise:

- installation to be carried by at least two 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 500x500x500 mm for weaker foundations;
- using mounting hardware as recommended in sect. 4.3.

8.1.3 Use the following tools for the installation work:

- 1,2÷1,5 kW electric perforator
- 0,6 kW electric drill;
- Ø16 mm carbide drill bits;
- Ø3,5 and Ø8,5 mm drill bits;
- S10; S13; S17 horn wrenches;
- S5; S6 hex-nut wrenches;
- №2 cross-tip screwdriver, 150 mm;
- pair of trammels;
- 3 m tape-measure;
- level gauge;
- two stepladders (four steps or more).

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

8.2. Canopy installation

8.2.1 Unpack the canopy, check completeness of the delivery set according to section 4.

8.2.2 Recommendations how to prepare mounting holes in the foundation (the mounting surface) are given with regard to anchor bolts for solid concrete floors or similar foundations (sect. 4.3 and Table 3).

Use relevant mounting hardware for installation on different foundations.

TABLE 3

ANCHOR TYPE	PURPOSE	DRILL DIAMETER, mm	DRILLING DEPTH, mm	QTY
M10x60	Fixing the posts (3) to mounting surface	16	60	16

8.2.3 Mark out the mounting holes for installation of the posts (3) according to Fig. 3.

Note. Carry out the marking together with that for turnstile mounting holes given in the Operational Manual to the RTD-15 Full Height Rotor Turnstile. Symmetry axis of turnstile and canopy mounting holes geometrically coincide (Fig. 3).

8.2.4 Prepare holes for the anchor bolts. Set the anchors all the way down the prepared holes.

WARNING!

Further work should be carried out AFTER installation of the turnstile. Be particularly careful when installing parts of the canopy before they are secured in place (sect. 8.2.5-8.2.16), prevent the parts from fall.

8.2.5 Erect and fix the posts with anchor bolts observing their verticality by means of a level gauge, use insertions when necessary.

8.2.6 Lay both roof sections side by side down a soft material (foam plastic, etc.) on a horizontal platform so that the jointing flanges (6) face each other, and the gap between the gussets (8) is 3-7 mm more than the length of the bushing (7).

8.2.7 Put the screw M8x45 through the hole in the left roof section gusset from inside, take the bushing on the screw. Put the screw inside the hole in the right roof section gusset (Fig. 4). Fix the screw by the nut M8 with two washers from inside the right roof section. Fix the other side gussets together. Do not tighten the screws.

8.2.8 Tie the jointing flanges together by fittings shown in Fig. 4. Do not tighten the screws.

8.2.9 Tighten all the screws jointing the roof sections: first in the gussets on one side together with the screws in the jointing flanges on the opposite side, then tighten the screws on the other sides.

8.2.10 Lay the jointing strip (10) down a flat surface, stick the self-adhesive sealing element (9) along the long sides of the strip closest to the edge. Trim the sealing element where necessary.

8.2.11 Lay the jointing strip along the joint line, the sealing element down. Drill 12 Ø3,5 mm holes 9 mm deep for the 4,2x16 self-tapping screw through the 12Ø5 mm holes in the strip (Fig. 5). Fix the strip on the roof sections with the screws.

8.2.12 Choose direction of the water drainage off the canopy and visually determine pitch of the drains (11). Lift and place the roof assembly on the posts in such way as to achieve the chosen drainage direction.

8.2.13 Drive the screws M6x30 with washers into the thread bushings in the roof sections through the four holes in the top flange (5) (Fig.6). Obtrusive ends of the thread bushings should enter the counterbored holes in the top flanges. Differences between diameters of the bushings and the holes, and the screw M6 and the flange hole allow compensating for possible installation faults.

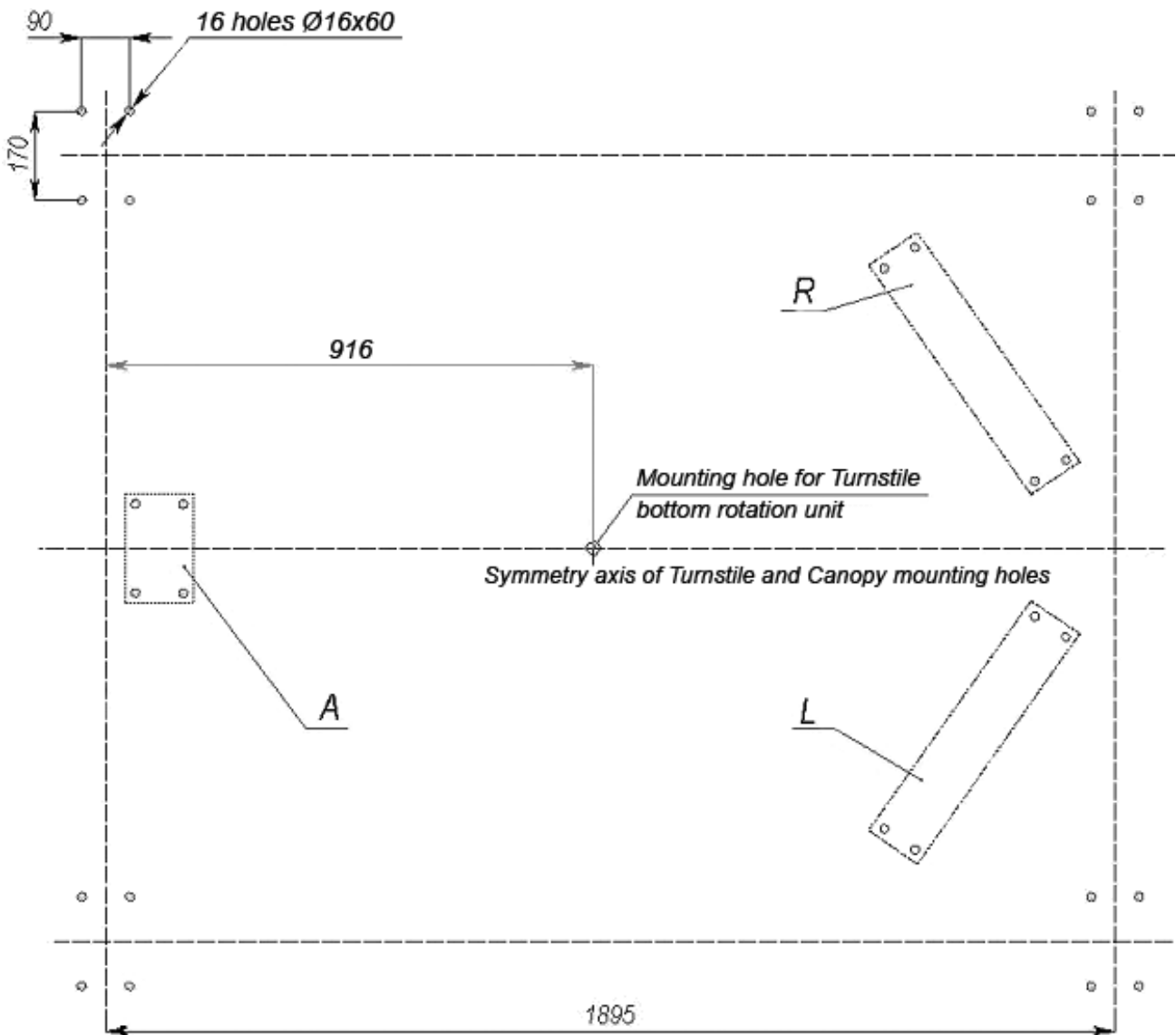


Fig. 3. Hole pattern for mounting of the canopy posts (3) relative to the turnstile mounting holes:

- A** — mounting point of the turnstile barrier section;
- L** — mounting point of the turnstile left guide barrier section;
- R** — mounting point of the turnstile right guide barrier section;

Figure 3 shows a sketch layout of the turnstile mounting holes.

Exact coordinates of the holes in A, L and R mounting points are given in the *Operational Manual to the RTD-15 Full Height Rotor Turnstile*.

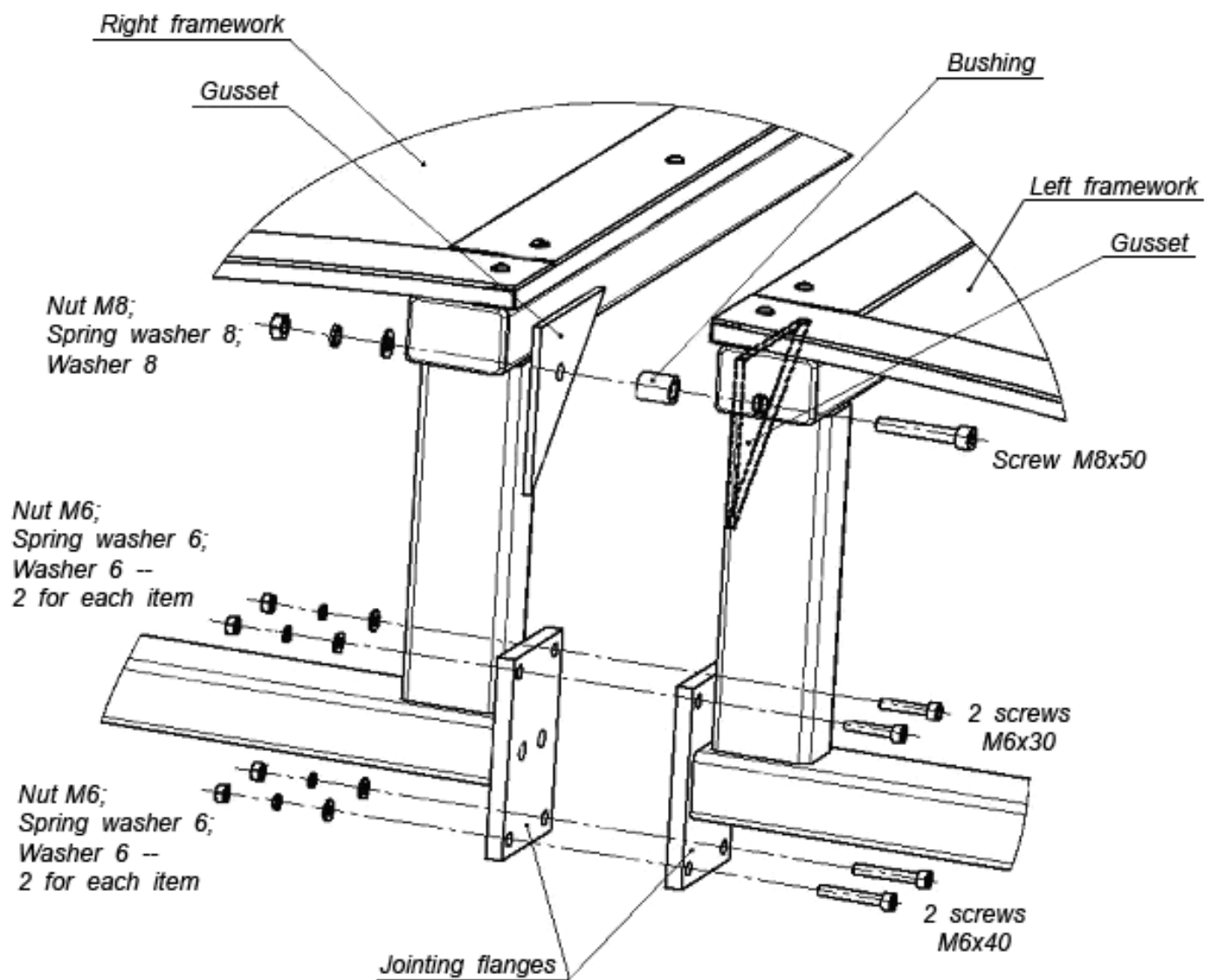


Fig. 4. Juncture of the roof sections (1) and (2)

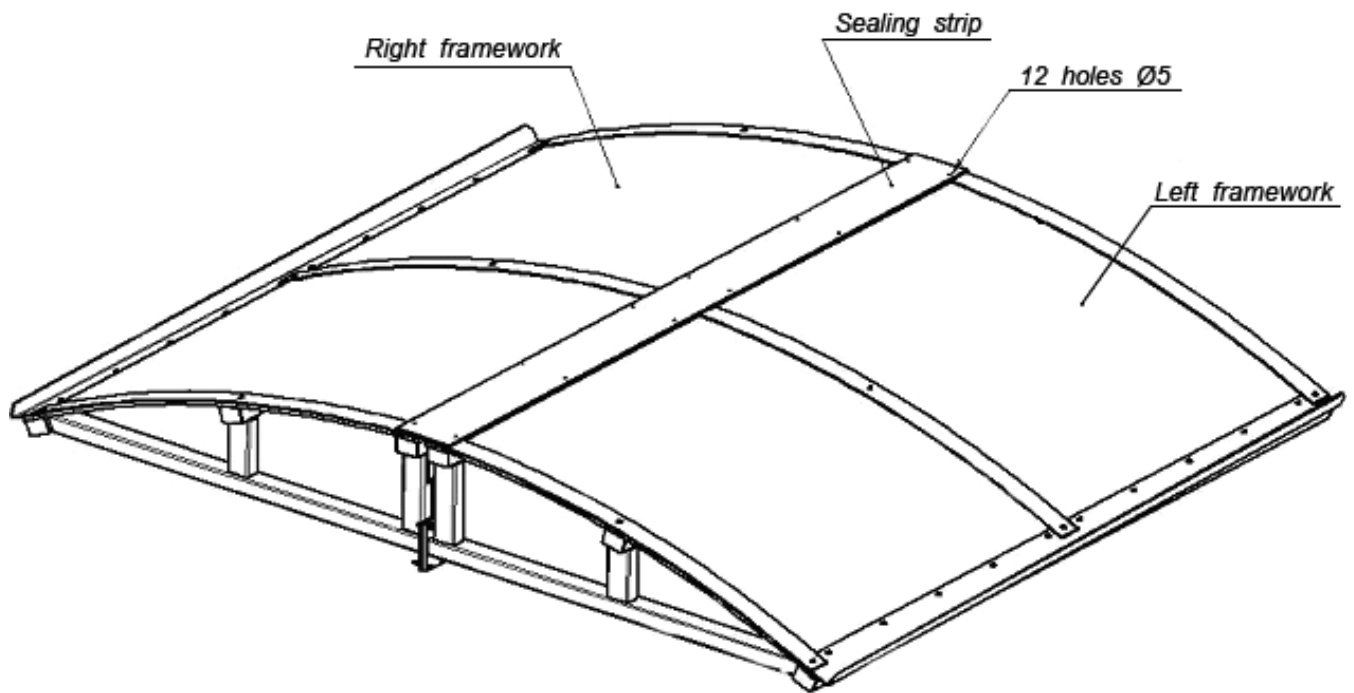


Fig. 5. Assembled roof

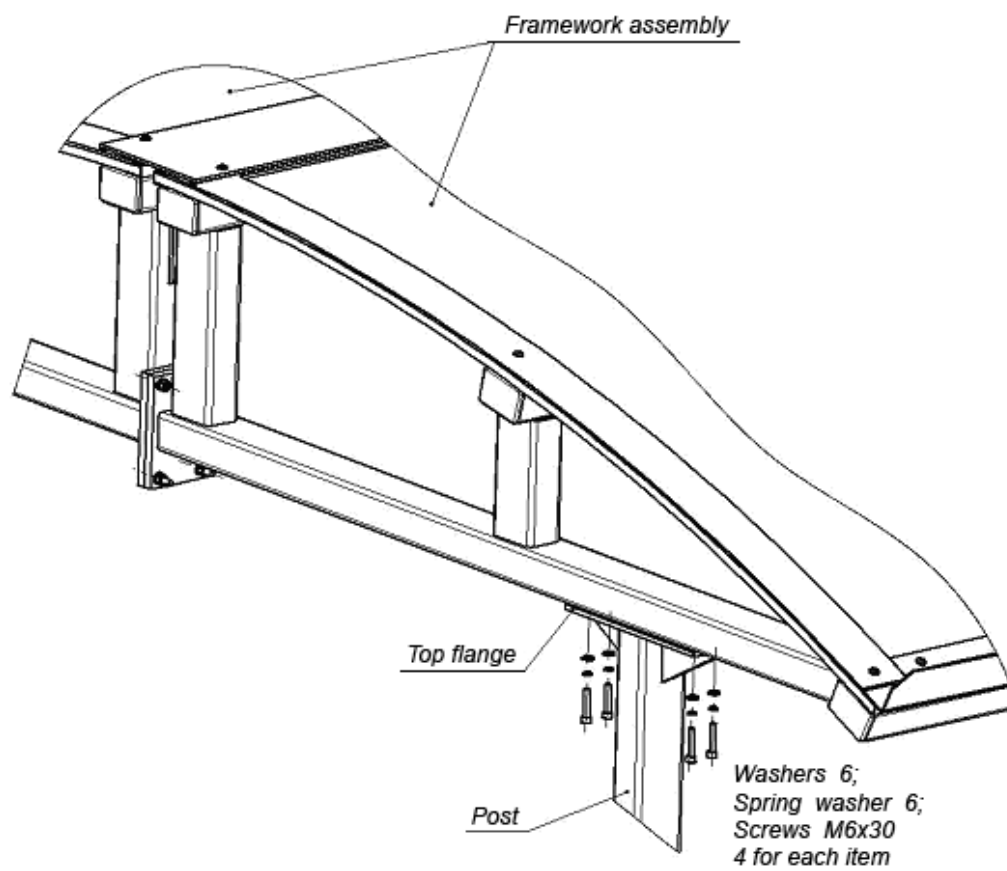


Fig. 6. Fixing the roof assembly to the post (3)

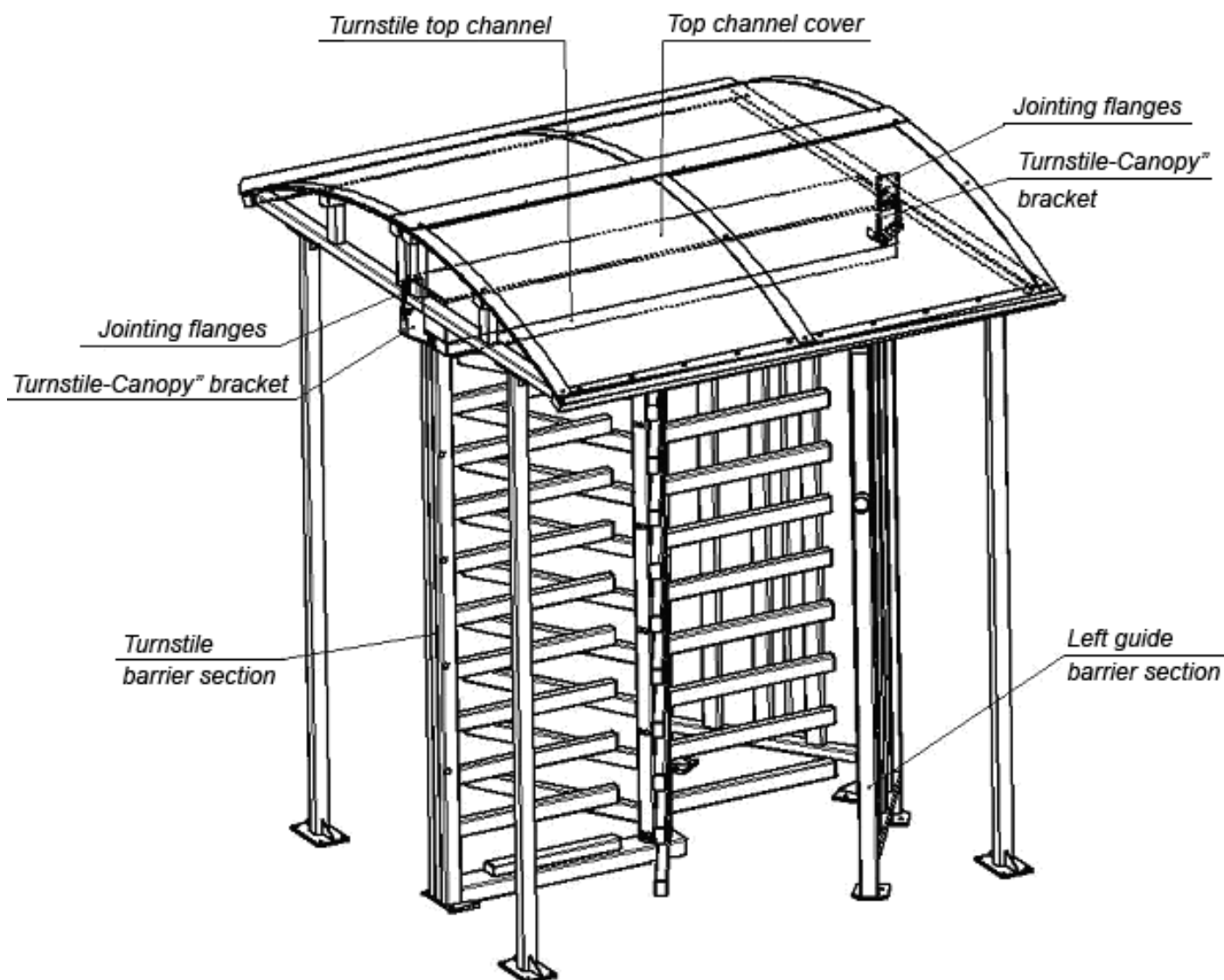


Fig. 7. Positioning of the «Turnstile-Canopy» brackets between the canopy jointing flanges (6) and the turnstile top channel

8.2.14 Use the fasteners and fix both sides of the canopy through the jointing flanges to adjacent equipment:

- when the canopy is used together with a standalone turnstile without railings, fix it to the turnstile top channel by two «Turnstile-Canopy» brackets mounted on both ends of the top channel (Fig. 7 and sect. 8.2.15);
- when two or more turnstiles are used together with canopies joined in a row, or when turnstiles are used together with canopies and railings installed at one or both frontal sides, follow instructions given in corresponding installation documents (see the footnote to sect. 4.2.1).

WARNING!

**Both frontal sides of the canopy should be fixed to adjacent equipment.
DO NOT use the canopy that is not fixed to the turnstile or railings with brackets!**

8.2.15 Install the «Turnstile-Canopy» bracket as follows:

- take off the top channel cover (refer to the RTD-15 Operation Manual);
- unscrew two bottom screws M6x40 with nuts and washers (Fig. 4) from the canopy jointing flanges on the side of the turnstile barrier section (Fig.7);
- install the bracket on the flanges and fix it with the earlier undone screws (Fig. 8);
- mark the turnstile top channel for two Ø8,5 mm holes to mount the bracket with the screws M8x30*;
- undo the screws and take off the bracket;
- drill two Ø8,5 mm holes as marked;
- mount the bracket on the flanges, fix the bracket by two screws M6x40 with nuts and washers. Do not tighten the screws;
- put two screws M8x30 through the holes in the bracket and fasten them by nuts with washers from inside the top channel, as shown in Fig. 8;
- tighten all the bracket screws.

8.2.16 In the same way, mount the «Turnstile-Canopy» bracket from the side of the turnstile guide barrier set (Fig. 7).

8.2.17 Paste the joint line between the flange edges and the flanges/the top channel with a clear silicon sealer.

* Screws M8x30, nuts M8, washers and spring washers for mounting of the bracket on the top channel are included in the bracket delivery set.

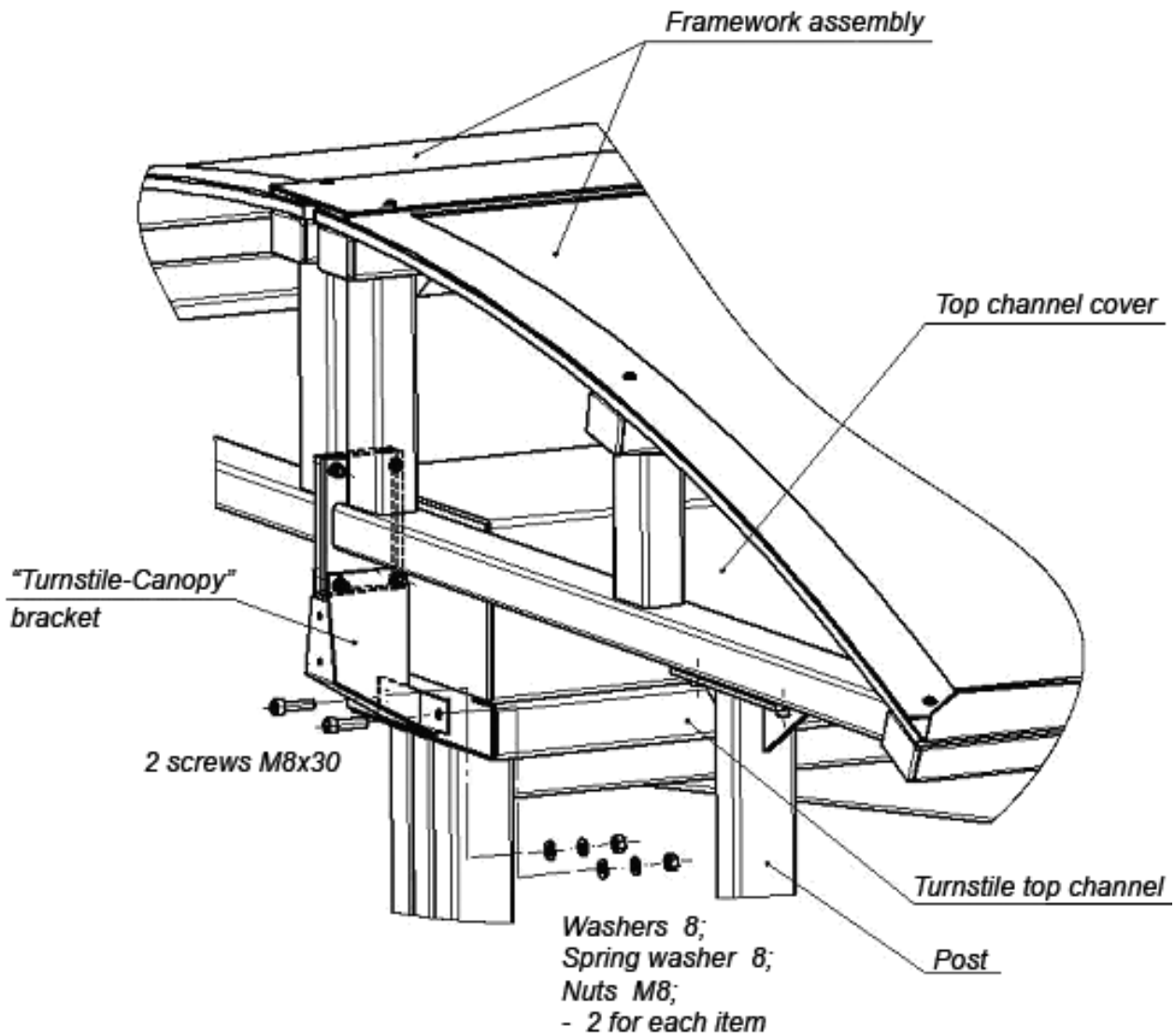


Fig. 8. Fixing the «Turnstile-Canopy» bracket to the canopy jointing flanges (6) and the turnstile top channel*

* Use bottom holes of the bracket and the jointing flanges with corresponding fasteners (two screws M6x40 with nuts and washers, Fig. 4).

8.3. Installation check-up

8.3.1 Take a visual check-up whether the direction of the water drainage off the canopy is as chosen.

8.3.2 Check all the threaded connections, tighten when necessary.

8.3.3 Install the cover on the turnstile top channel.

The canopy is installed.

Consult with PERCo Technical Support Department when necessary.

9 TRANSPORTATION AND STORAGE

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

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

9.3 The canopy should be stored indoors at ambient temperatures between -40°C to +45°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.

9.4 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. 2.1-2.2.