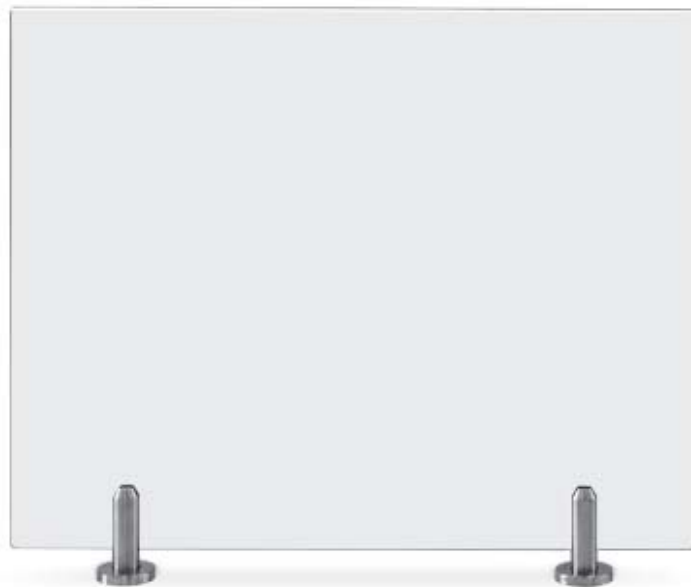




# Waist-high Railing System from Tempered Glass

## **BH-06**

ASSEMBLY AND OPERATION MANUAL



**CE**



# **Waist-high Railing System from Tempered Glass**

***BH-06***

**Assembly & Operation Manual**

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## ***Dear Customers!***

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

Assembly and Operation Manual for the **BH-06 waist-high railing from tempered glass** (hereinafter – *the Manual*) contains data that is necessary for the most full use of operating advantages of the turnstile as well as chapters on packaging, installation and maintenance.

## **1 APPLICATION**

**BH-06 waist-high railing from tempered glass** (hereinafter – *the railing*) is designed to form passageways and to complete the design of entrance points of industrial facilities, banks, administrative buildings, retail outlets, railway terminals, airports, etc.

The railing is a modular construction that consists of sections. Each section consists of two or three mini-posts from stainless steel with fixed in them a panel of tempered glass 10 mm thick. Selecting the number of sections and the dimensions of the glass, it is possible to form a railing system of any necessary configuration.

## **2 OPERATION CONDITIONS**

The railing with regard to resistance to environmental exposure complies with GOST15150-69, category NF3.1 (operation in self-ventilated premises without climate control).

Operation of the railing is allowed at ambient air temperature from -10°C to +40°C and at relative air humidity of up to 75% at +15°C..

## **3 TECHNICAL SPECIFICATIONS**

Thickness of tempered glass panel .....	10 mm
Glass height.....	1000 mm
Glass width .....	1000 or 1500 mm



### **Note:**

On request, it is possible to supply glass panels of other height and width, but not more than 1000 x 1500 mm.

Diameter of the mini-post.....	48 mm
Height of mini-post.....	158 mm
Height of the lower edge of the glass from the floor surface.....	48 mm
Number of mini-posts per section .....	2-3 <sup>1</sup>

The full dimensions of the mini-post are shown in Figure 1. Appearance and permissible dimensions of one section of the railing are shown in Figure 2.

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<sup>1</sup> For the glass panel 1000 mm width – 2 posts, for 1500 mm - 3.

## 4 DELIVERY SET

1. Railing sections (tempered glass panel)



**Note:**

The quantity of ordered sections and their dimensions (height and width) are specified by a customer.

2. Mini-posts BH-06 2-00..... 2 sets for one section 1000 mm width  
or 3 sets for one section 1500mm width

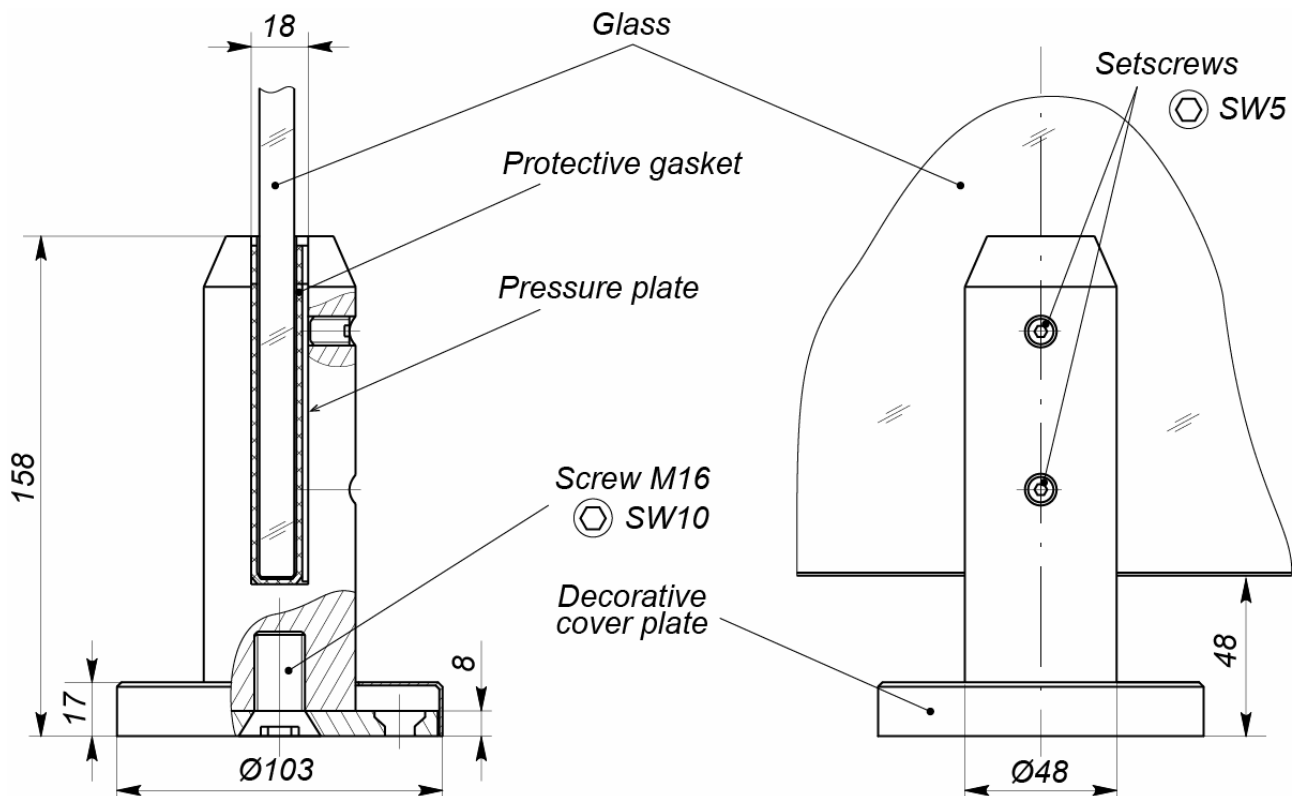
The mini-post set includes:

- post with flange ..... 1
- pressure plate ..... 1
- protective gasket from EPDM rubber ..... 1
- decorative cover plate for flange ..... 1
- mini-posts installation manual ..... 1

3. Operation manual ..... 1

**In addition to the delivery set, there may be provided:**

4. Anchor bolts M8 x 55 (DIN 7984 stainless, internal hexagon) with an anchor PFG IH 8 (SORMAT, Finland) ..... 4 pcs. per mini-post



**Figure 1. Appearance and dimensions of the mini-post BH-06 2-00**

## 5 SHORT DESCRIPTION

The railing section consists of a tempered glass panel fixed in two or three mini-posts **BH06 2-00**, fixed to the installation surface by means of anchor bolts.

The mini-post is a cylindrical post with a groove for glass, fixed with a screw M16 on the flange. The flange is fixed to the installation surface with 4 M8 anchor screws and is closed with the decorative cove plate. The glass is fixed in the groove with the pressure plate and two M10 setscrews (see Figure 1).

## 6 MARKING AND PACKAGING

Railing in standard delivery set is packed in transportation boxes in order to protect them from the damage during transportation and storage.

Overall dimensions of transportation boxes, their dimensions and weight depend on quantity of ordered elements of railing sections.

## 7 SAFETY REQUIREMENTS

### 7.1 Safety requirements during installation

The installation shall be carried out only by persons who have carefully studied this manual, in accordance with general installation requirements.



#### **Attention!**

During installation:

- use only serviceable tools;
- one should be especially careful to prevent them from falling.

### 7.2 Safety requirements during operation

The railing sections are made of safety tempered glass with increased mechanical and thermal strength, which provides a safe fracture mode (without the formation of large fragments).



#### **To avoid injury, do not:**

- strike the railing;
- lean on sections or hang something on them, thrust hands or feet under the railing, etc.

## 8 INSTALLATION

### 8.1 General recommendations

**Attention!**

Install equipment in accordance with safety requirements (see Clause 7.1).

Installation of railings is an important operation which impacts serviceability and life time of the product. Prior to installation works carefully study this section and follow the instructions given here.

**Attention!**

The manufacturer is not liable for the damage of railings or any other equipment, as well as for other damages caused by improper installation and rejects any claims of the customer if installation was performed with violation of the manual instructions.

Installation recommendations:

- At least three qualified installers should carry out installation works.
- Install railings on strong and level concrete or stone foundations (concrete with characteristics not less than mark 400, strength B22.5), at least 150 mm thick.
- If the foundation is not strong and level enough use reinforced foundation plates of 300×300×300 mm size.
- Before the railings installation check the horizontality and flatness of the foundation and align it if necessary; the maximum allowable deviation is 1.5 mm.
- Apply «SORMAT» anchor bolts for the installation.

### 8.2 Tools and equipment, necessary for installation

- 1.2 – 1.5 kW hammer drill;
- Ø14 mm hard alloyed drill bits;
- Allen key SW5; SW6; SW10;
- Measuring tape 3 m;
- Plumb line and level.

**Note:**

The application of other instruments is allowed if it doesn't reduce the quality of installation works.

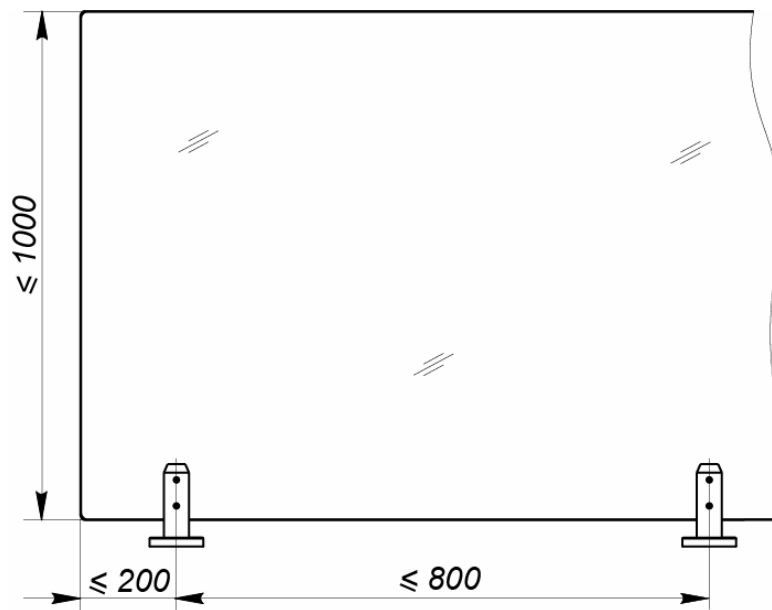
### 8.3 Installation of railing section



**Attention!**

The manufacturer strongly recommends the following maximum dimensions that ensure the necessary reliability of the railing installation:

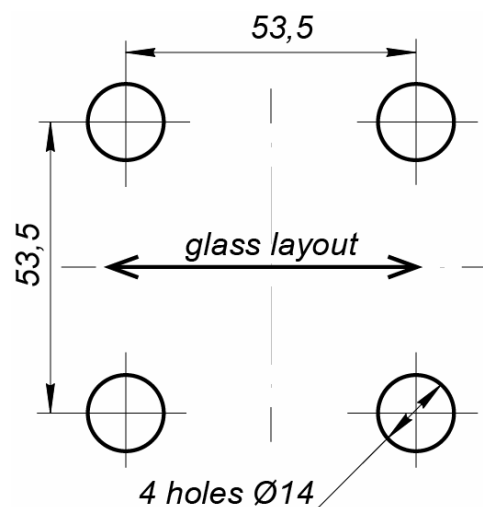
- the height of glass does not exceed 100 cm,
- the distance between the mini-posts does not exceed 80 cm,
- the lateral part of the glass behind the holders does not exceed 20 cm (see Figure 2).



**Figure 2. Recommendations for installing a glass railing**

Follow this order while installing railing section:

1. Check the horizontal orientation of the mounting surface. Mark the installation centers of railing section posts.
2. From the centers, mark 4 points for fixing flanges to the installation surface, as shown in Fig. 3, at these points, make holes  $\text{Ø}14$  for the anchors. Insert the anchors to the full depth of the prepared holes.



**Figure 3. Hole spacing for mini-posts fixing**

3. Unpack **BH-06** railing elements and check the delivery set.
4. Take one of the mini-posts. Release the M16 screw of the post flange fixing (with the Allen key SW10) and, temporarily fixing the post in the holes, adjust the required position of the post groove towards the installation of the glass. Remove the post and, tightening the screw, fix this position.
5. Set in working position and secure with M8 anchor bolts all the posts.
6. Put on decorative cover plates.
7. Unscrew for a few turns the setscrews from the post housing (with the Allen key SW5). Insert the pressure plate in the groove on the side of screws, and between it and the opposite side of the groove – insert the half folded protective rubber gasket (see Figure 1).
8. Unpack the glass.
9. Further work should be performed by three people!  
Carefully insert the glass into the grooves of the posts, aligning gaskets and pressure plates. Tighten all setscrews. Check the horizontality and verticality of the railing, release screws (if needed) and adjust; use of mounting gaskets is possible.



**Attention!**

When carrying out work before securing the railing sections, be especially careful, protect the elements of the sections from falling.

10. Similarly install the remaining sections of the railing.

If necessary, consult your nearest *PERCo* service center.

## 9 TRANSPORTATION AND STORAGE

Railings in the original package should be transported in closed type cargo transport units only (trains, containers, closed vehicles, in the holds, planes, etc.).

During the transportation the boxes with glass can be stacked in 5 rows.

Storage of the railings is allowed indoors at ambient temperature between -60°C and +50°C and at relative air humidity up to 80% at +27°C. The storage room should be free from acid vapors, alkalis and gases that can cause damage.

After the transportation and storage of the railings at low temperatures or at high air humidity it must be kept unpacked for not less than 24 hours indoors within normal climate conditions corresponding to the operation conditions prior to installation.



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