

BVC140 barriers assembly and installation manual

Read this manual carefully before performance of work

The BVC140 is delivered partially assembled and is assembled by the customer from the following elements: finite posts, connecting posts, section elements, fixing pipes, screws, post caps, self-tapping anchors.

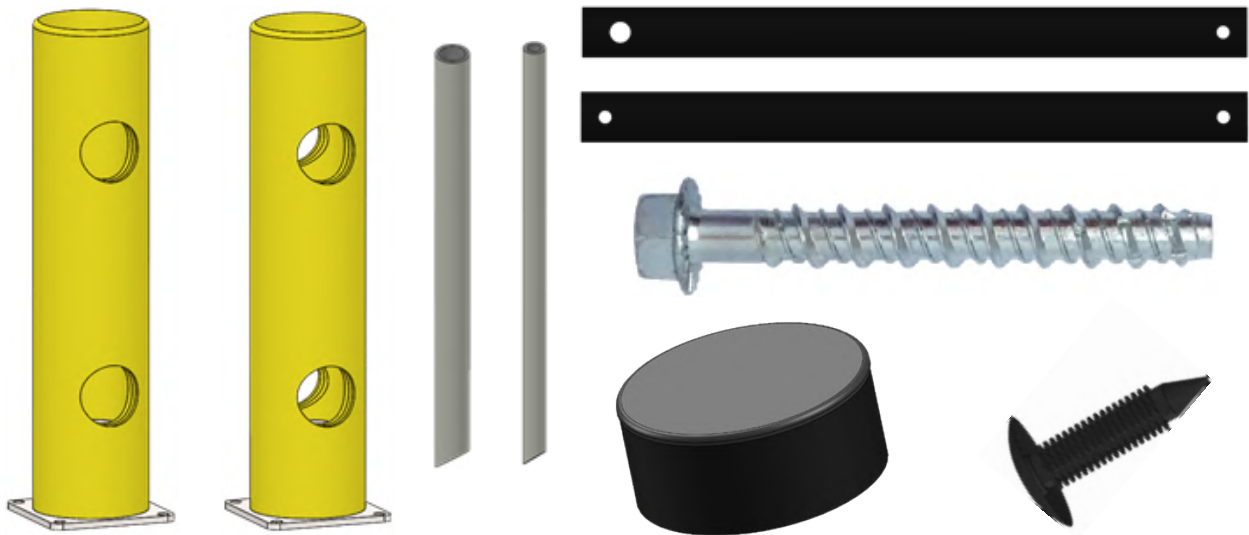


Figure 1. The BVC140 barrier main components (list from left to right): finite post (2 blind holes), connecting post (2 through holes), 32mm fixing pipe, 20mm fixing pipe, section elements (round black pipes, top view), self-tapping anchor, post cap, screw.

Post view	Section element	Post view
Finite		Connecting
Connecting		Connecting

Table 1. Sides of section elements.

The algorithm for assembling BVC140 barrier elements is as follows:

1. Insert the two black section elements (the first line of Table 1) with the side with the larger (32 mm) mounting hole against the stop into the holes of the finite post. The axes of the through-mounting holes in the section elements both here and later on must be placed vertically.

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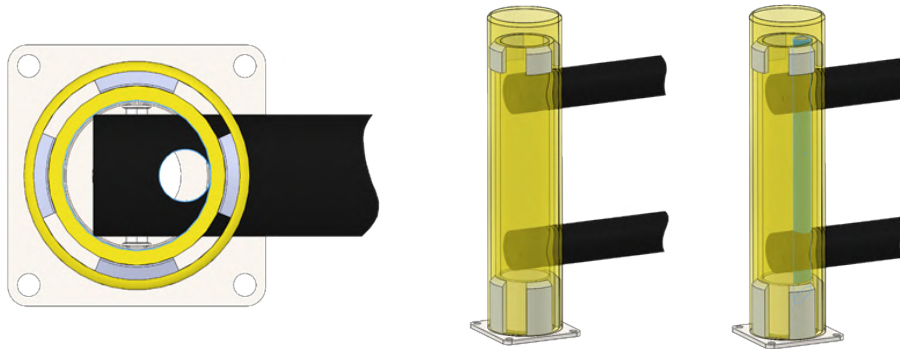


Figure 2. Installation of section elements into the finite post.

At the same time, the end of the section element must stop at the inner wall of the pipe inside the post, while the contour of the 32 mm mounting hole must be positioned at a tangent to the inner surface of the pipe (Fig. 3, top view).

Fix both section elements with a 32 mm fixing pipe through the hole (Fig. 3 on the right).

2. Insert the opposite sides of the section elements (which have pre-drilled 20 mm mounting holes) into the through holes of the connecting post so that their ends coincide with the axis of the post. At the same time, the contour of the 20 mm mounting hole should be located tangential to the inner surface of the post column.

Insert the elements of the next section into the opposite holes of this post. The properly installed elements of adjacent sections inside the connecting post are shown in fig. 3 on the left (top view).

Next, it is necessary to fix the elements of the adjacent sections inside the connecting post with two fixing pipes through 20 mm holes (Fig. 3 in the middle and on the right).

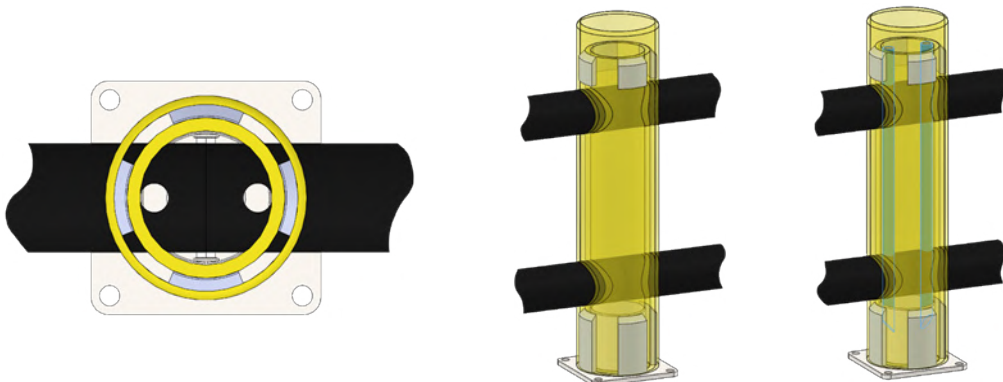


Figure 3. Installation of section elements into the connecting post.

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Repeat paragraph No.2 depending on the number of sections of the BVC140 barrier in the area to be protected. In case of a single-section BVC140 barrier, use a set of section elements with 32 mm diameter mounting holes on both sides.

4. The closing section of the BVC140 barrier must be assembled in accordance with paragraph No. 1.

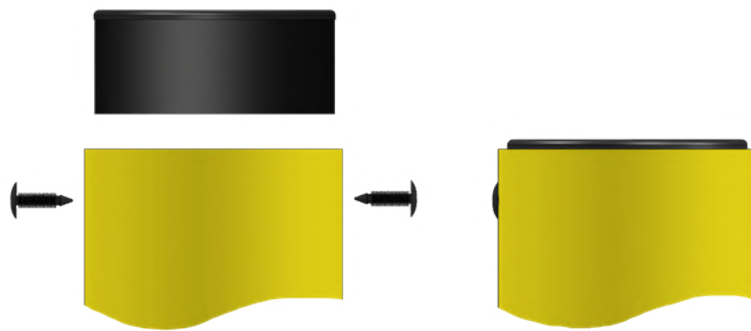


Figure 4. Installation of post caps.

4. Cover the tops of the posts with caps (Fig. 4). To reduce friction, it is recommended to lubricate the sides of the caps with a soapy solution. After installing the caps, they must be fixed with screws (2 screws per cap). To do this, drill 7 mm holes with a drill in the post in the plane of the barrier symmetry at a distance of 20mm from the top of the yellow pipe of the post, and hammer the screws into them (the axes of these holes must be oriented in the same direction as the section elements) see Fig. 5).

Installation of caps can be carried out both at the intermediate and at the final stage of the barrier assembling.

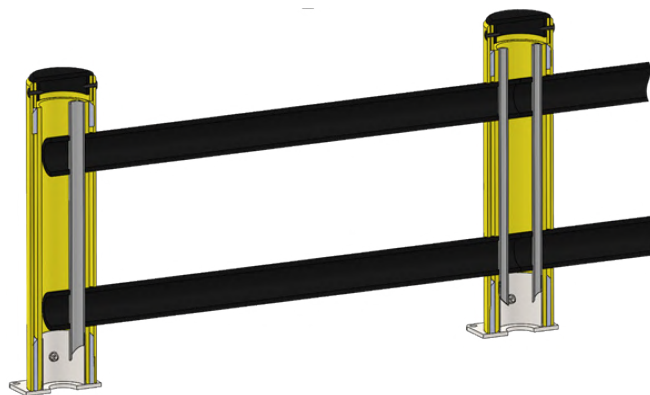


Figure 5. Sectional view of the properly assembled BVC140 barrier section.

5. After assembly, the barrier must be fixed to the foundation with self-tapping anchors, which are supplied as component parts. To mark the holes, it is recommended to use the holes in the metal supports of the barrier as templates.

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After marking, before drilling the floor, put the supports aside. Drilling should be performed with a 10 mm drill bit to a depth of at least 100 mm (Fig. 6.1). If larger diameter drill bits are used, the anchor will lose its efficiency during the barrier service. Drilling products must be removed from the holes in the foundation (Fig. 6.2). Install the barrier posts in loco and tighten the anchors. The properly installed self-tapping anchor will screw in tightly, so it is recommended to use an impact wrench with a flexible shaft (Fig. 6.3 and 6.4).

The impact wrench for screwing the self-tapping anchors which are supplied as component parts must provide a torque of 950 Nm and higher.

After the installation of the first post, the second and subsequent posts must be installed by tensioning to ensure maximum rigidity of the sections.

If a BVC140 barrier with such a large number of sections is used to protect the area that it is difficult to install it after the complete assembly of the product, it is necessary to fix the posts on the foundation at intermediate stages of assembly. In any case, it should be taken into account that the long length of the multi-section barrier will lead to the errors accumulation in the geometrical arrangement of the section elements, due to which the actual length of protection may deviate from the value specified in the project. Therefore, to ensure the possibility of the best positioning of the barrier in relation to the objects to be protected, it is necessary to install the product after its assembly when applicable.

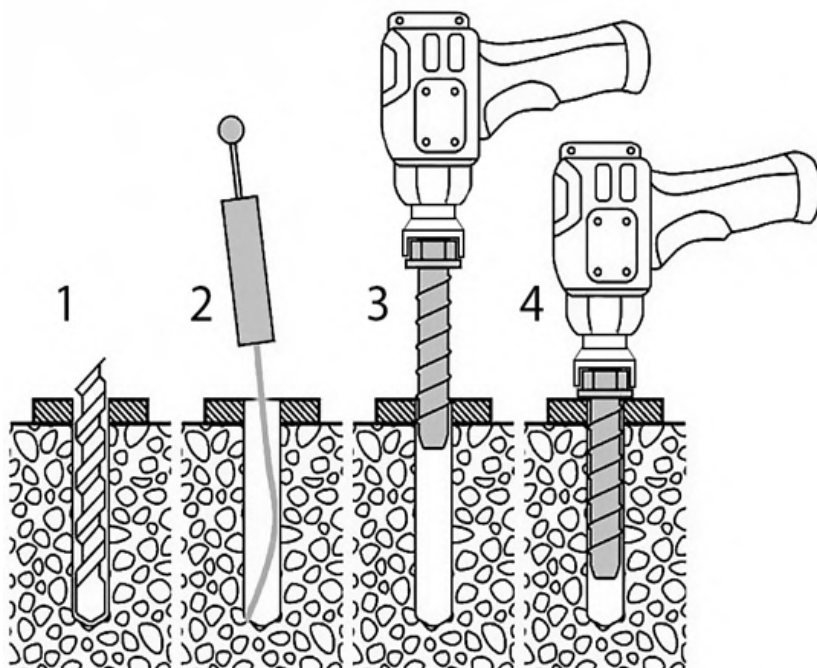


Figure 6. Barrier fixing



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To ensure the top efficiency of flexible protection with BVC140 barriers, they must be installed with the interval between the sections and the protected objects not less than 100-140mm.

The single-section BVC140 barrier is assembled in the same manner. To assemble it, you need to fulfill paragraphs No.1, 4 and 5.