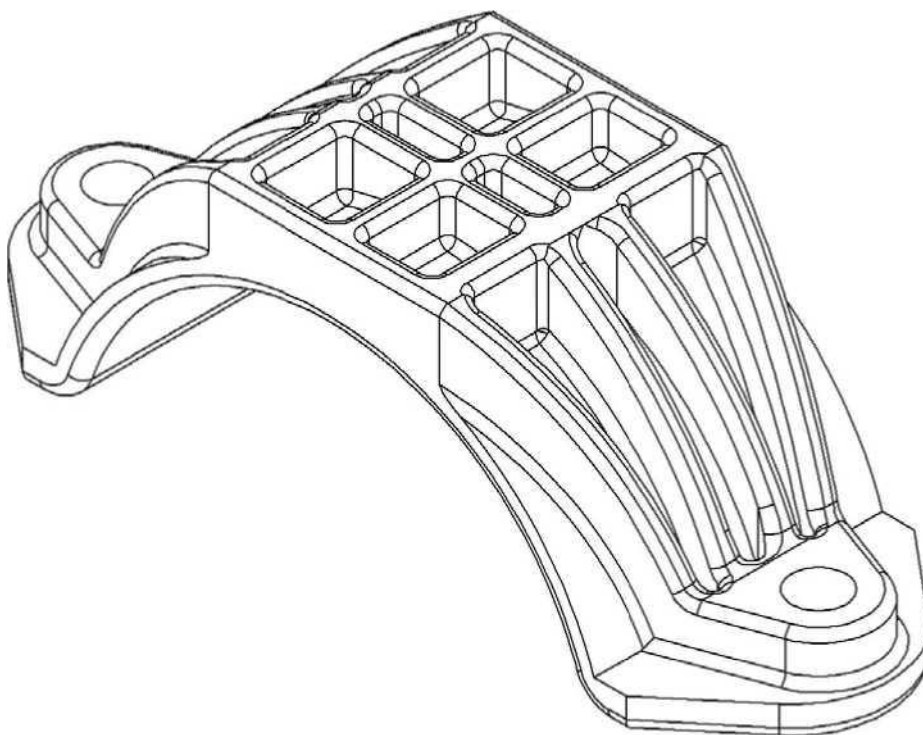


DATA SHEET

HIGH-VOLTAGE CABLE CLAMPS

TU 4834-002-98970470-2009



1. Application

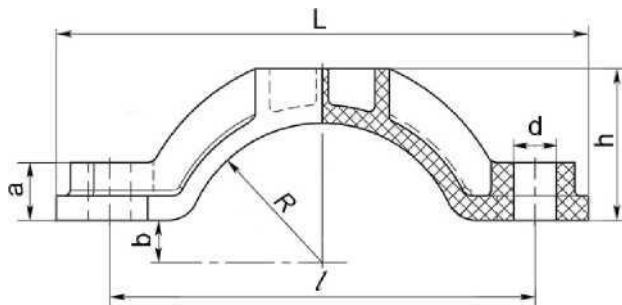
High-voltage cable clamps are designed for fixing all types of high- and superhigh single-phase voltage. The clamp design provides for required mechanical properties that guarantee reliable fixation and undamageability of cables even in high short-circuit currents. The product is resistant to weather impacts, the impacts of oil and other petroleum products, radiation and ultraviolet emission and to ozone.

The climatic versions are У, УХЛ (moderately cold climate), placement categories 1 and 2 to GOST 15150-69. The products are used at ambient temperatures from minus 60 to plus 60°C.

Cable can be fixed with BKK to metalworks having any angle of inclination relative to horizon. By agreement with the BKK3 manufacturer it is also permissible to suspend the cable under a shelf. The products can also be used for construction of vertical sections of cable runs.

2. External appearance and dimensions

The clamp comprises two interchangeable clips made of black polyamide. The clips are fitted with stiffening ribs for mechanical strength and resistance to shock loads. On both side of the clips legs there are holes to fix the product to supporting iron. The clamp is manufactured in different modifications. The external appearance and dimensions are presented in figure 1.



Designation	L mm	/ mm	h mm	a mm	b mm	R	Ød mm
BKK-65/90	175	140	50	19	14	46	13
BKK-85/105	185	150	64	20	11	53	13
BKK-100/125	204	170	67	19	14	63	13
BKK-125/150	234	200	81	20	14	75	13

Figure 1. External appearance and overall dimensions (mm)

3. Marking and packing

The outer surface of profile between stiffening ribs bears the product marking BKK-65/90 and the name of manufacturer.

Clamps are supplied in corrugated cardboard boxes. The size of packing and the number of products in a box may vary depending on the batch volume and transportation conditions. By agreement with the customer other types of packing may be used.

4. Complement

Products may be supplied with or without fittings (metalware).

BKK 65/90 (2 clips)

Fittings (subject to terms of supply)

Product data sheet (1 per product)

5. Quality control

Supplied batch is subjected to acceptance check in accordance with two-phase sampling plan and shall meet the requirements of TU 3494-002-72055024-2009.

Upon receipt and installation of clamps incoming control may be carried-out in accordance with the following program:

Item No.	Test	Criterion	Method
1	Complement check	Compliance of actual quantity with transport documents and labels	Comparison
2	Marking check	Compliance of product marking with transport documents and labels	Comparison
3	Material homogeneity	Absence of foreign inclusions, uniform coloring	Visual inspection
4	Manufacture quality check	Absence of cavities, chips and cracks	Visual inspection

6. Shelf and useful life

Shelf life - unlimited.

The useful life of the cable clamp unit is at least 25 years subject to user observance of transportation, storage, installation and operation requirements set forth in this specification. The useful life starts from the commissioning date of the clamp. The actual useful life of the cable clamp unit is not limited to the above useful life but is subject to its technical condition.

7. Installation

Cable line is installed in accordance cable manufacturer instructions for cable line installation.

Cable line installation using BKK clamps shall be performed by riggers experienced in and trained for laying and installation of high voltage cable lines.

Upon laying and fitting of the cable on bearing iron install the lower clip on the shelf under cable. After the clip is installed make sure to align the axes of clamp holes and shelf holes using a pin punch or a similar tool. Thereafter the top clip is installed on the cable and both clips and the cable are fastened to the shelf.

Clamp profiled are fixed with M 12 bolts, the length of a bolt is subject to the type of the clamp used, cable diameter and convenience of using drive sockets in cable installation. To fix the clamp insert a bolt in the upper clip hole, all the way through the bottom clip and the shelf holes and screw on a nut from beneath. Upon tightening the upper clip gets sprung creating a permanent load on the bolt joint thus eliminating the need of spring or plate washers. However, it is recommended after the first year of cable line operation to inspect the line to check clamp fixing quality. To avoid damage of cable outer sheaths and ensure BKK reliable operation be sure to use torque wrenches. The tightening torque of bolt joints - 6 Nm. Such torque provides for reliable clamp operation in short circuit mode, while preserving cable mobility at longitudinal thermal expansion and thus precluding sheath damage. Subject to cable manufacturer instructions, arrange compensatory loops at cable inputs into the joints.

If a cable is suspended from beneath a shelf or installed on metalworks with high inclination angles the installation procedure is similar to that described above, however clamp assembly is proceeded simultaneously with cable raising to the shelf. Such way of installation takes simultaneously two riggers.

Sometimes advance installation of a clip on the shelf is permitted, subject to relevant cable size. For that purpose insert bolts from the side of the shelf and screw them to the shelf with additional nuts. Nuts tightening must result in firm adherence of the clip and shelf surfaces, and such tightening could be done manually or with a wrench with minimum torque. After that the cable is raised and positioned in the opening of the installed clip. Then the bottom clip is fixed on the same bolts as the upper one. Following such sequence the clamp can be installed by one person however that increases the risk of damaging cable sheaths against protruding bolts, especially if cables are hoisted by mechanical devices.

The product is designed for M12 bolts, however, as necessary, you may use 10 mm diameter bolts. In such case an additional washer (with 13-17mm outer diameter) shall be installed under the bolt head.

In using clamps on vertical sections of cable runs silicone rubber gaskets shall be used (PST/ПСТ-80). Gasket material has high operating properties and preserves them under the impact of unfavorable environmental factors. Tightening torque of bolt joints in installation of products on vertical sections shall be raised to 8 Nm.

8. Warranty obligations

The manufacturer warrants that the product meets the requirements of this specification subject to user observance of transportation, storage, installation and operation requirements. Warranty shelf life is 1 year from the date of manufacture. Warranty useful life is 5 years. Warranty useful life starts from the clamp installation date.

9. Contact information

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10. Manufacturer acceptance control marks

Compliance with requirements of TU 4834-002-98970470-2009

Controlled by: _____

Signature: _____

Date: _____

11. For notes