

LOT 2

Main spare parts for rotary rectifier: ББД-4600-1500 АУЗ

1. List of alternative spare parts to be supplied

Table II-1

N o.	Alternative spare part/material name	Conformity of the original spare part, designation No.	Technical Requirements/characteristics/ drawing/dimensions/ presented as a minimum to the alternative spare part	Measurement Unit	Quantity
1.	Power diode - rotary, for anode pole	Д105-630-24 УХЛ2 by ТУ16-2006 ИЕАЛ.432518.001	In compliance with the requirements indicated in Appendix.: 2.1.	pcs	72
2.	Power diode - rotary, for cathode pole	Д105-630Х-24 УХЛ2 by ТУ16-2006 ИЕАЛ.432518.001		pcs	72
3.	fusible power fuse	1000 C1G ARB 500, cat. No.C1GAB10C500, dwg. No. D1012417, "Ferraz Shawmut"; 1000V; 500A	In compliance with the requirements indicated in item 2.2 of Appendix. 2: Geometric dimensions according to dwg.23.30.EO.GQ.PIIP.5633.00.30 – Appendix. 2.2.	pcs	144
4.	RC filter unit	Filter unit 6БС.388.350-01	General information and requirements in compliance with item 2.9 of Appendix 1.	pcs	72

2. Electrical parameters, dimensional characteristics, requirements and clarifications (known to Kozloduy NPP) that are set as a minimum to the design in selecting or manufacturing the alternative spare parts of Table II-1

2.1. Power diodes - rotary for anode and cathode poles - item 1 and item 2.

The detailed technical and dimensional characteristics of the original power rotor diodes (types: Д105-630-24 УХЛ2 and Д105-630Х-24 УХЛ2) used in the rotary rectifiers of 9 and 10GE exciters, which are also included as a minimum when selecting the alternative power rotor diodes, are given in Appendix 2.1.

2.2. Fusible power fuses – item 3.

The detailed technical characteristics of the original fusible power fuses (type: 1000 C1G ARB 500) used in the rectifiers making up the rotary rectifiers of 9 and 10GE, exciters which are also used as a minimum when selecting them or alternative ones, are:

- fusible power fuse type: No. C1GAB10C500, cat. No.C1GAB10C500, drawing D1012417 (1000V, 500A) "Ferraz Shawmut", manufactured by "MERSEN SB SAS" France.
- type of current for which they are designed: AC with frequency: 40 ÷ 1000Hz;
- rated current: 500A;
- rated voltage: 1000V;
- electrical resistance of the fusing component/indicated on the housing of each fuse/ in cool condition (~35°C): $R_{\Pi}=167\pm 19\mu\Omega$;
- tripping capability at maximum voltage: 100kA;
- fuse mass: 730±20g.;
- dimensions and connection sizes: according to drawing 23.30.EO.GQ.PIIP.5633.00.30 - Attachment 2.2.

2.3. RC filter units – item 4. General Technical Information

Each RC filter unit consists of the following types of components:

- 10 resistors connected in parallel type: C2-33H-2 with resistance of 180Ω each and power 2W;
- 8 parallel-sequential capacitors type: K73-16 $0,22\mu\text{F} \pm 5\%$, 1000V.

The general appearance and arrangement of the components in the RC filter unit is shown in Fig. П2-1. The components are mounted in a profiled aluminium alloy housing and filled with epoxy resin. The connections between the components are made by solder joints.

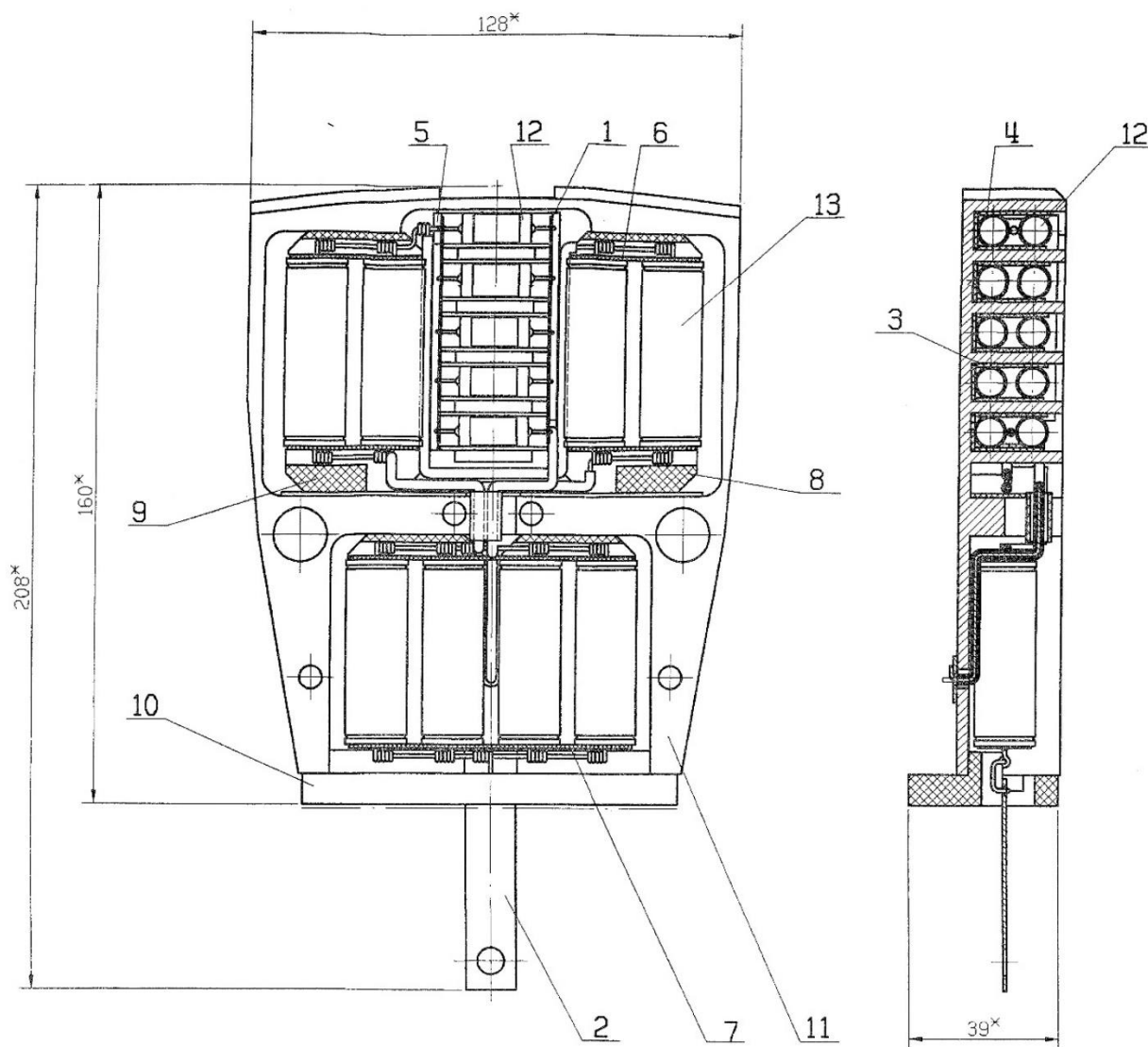


Fig. П2-1 General view of the layout of the RC components in the housing

- pos. 12 - 10 resistors connected in parallel type: C2-33H-2 with a resistance of each $180\Omega \pm 5\%$;
- pos. 13 - 8 parallel-sequential connected capacitors type: K73-16 $0,22\mu\text{F} \pm 5\%$, 1000V.

The circuit diagram of the RC components in the unit is shown in Fig. П2-2

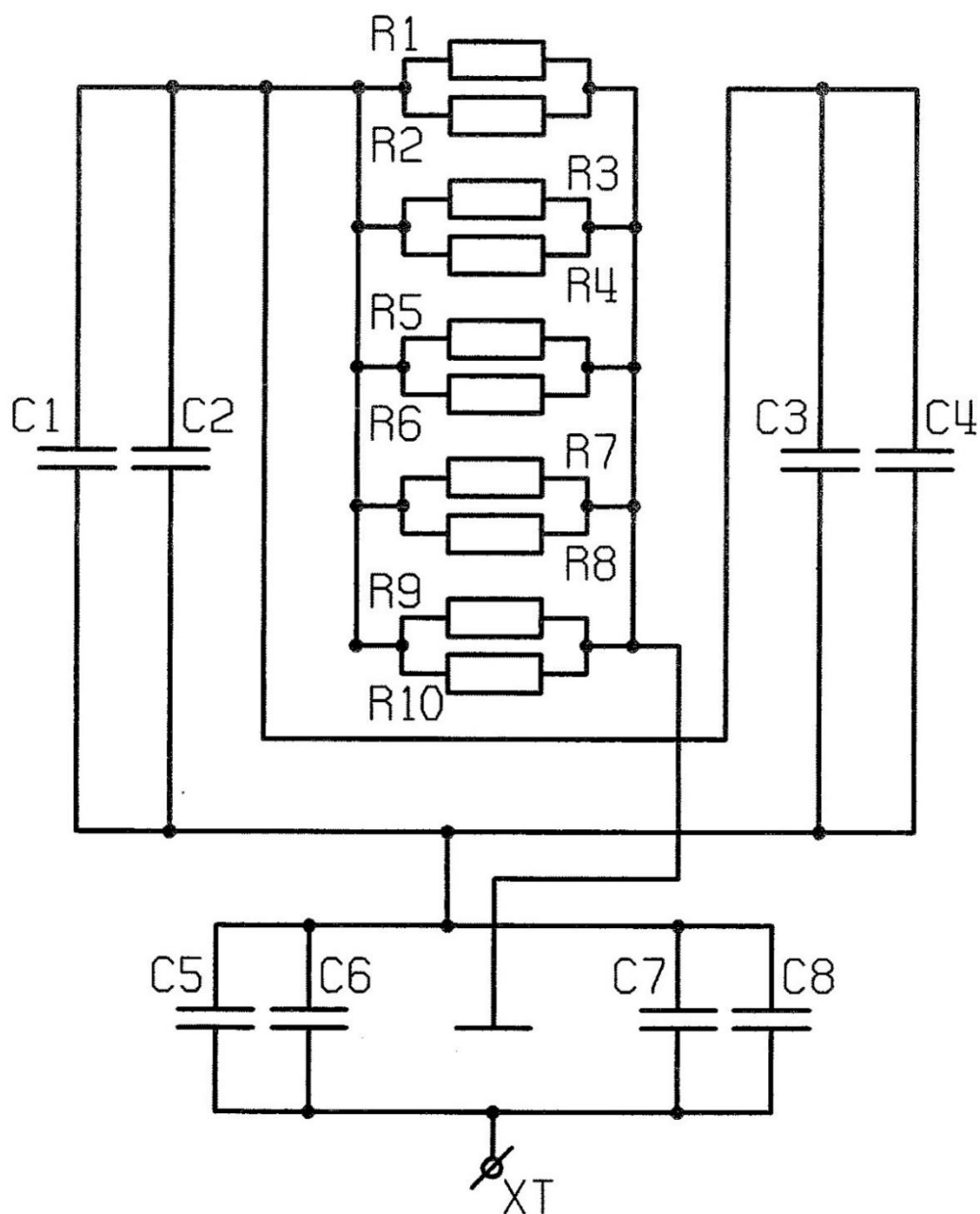


Fig. П2-2 Circuit diagram of RC filter unit.

- $R1=R2=R3=R4=R5=R6=R7=R8=R9=R10=180\Omega \pm 5\%$;
- $C1=C2=C3=C4=C5=C6=C7=C8=0,22\mu F \pm 5\%, 1000V$

The approximate dimensions of the original RC filter unit are shown in Fig. П2-3

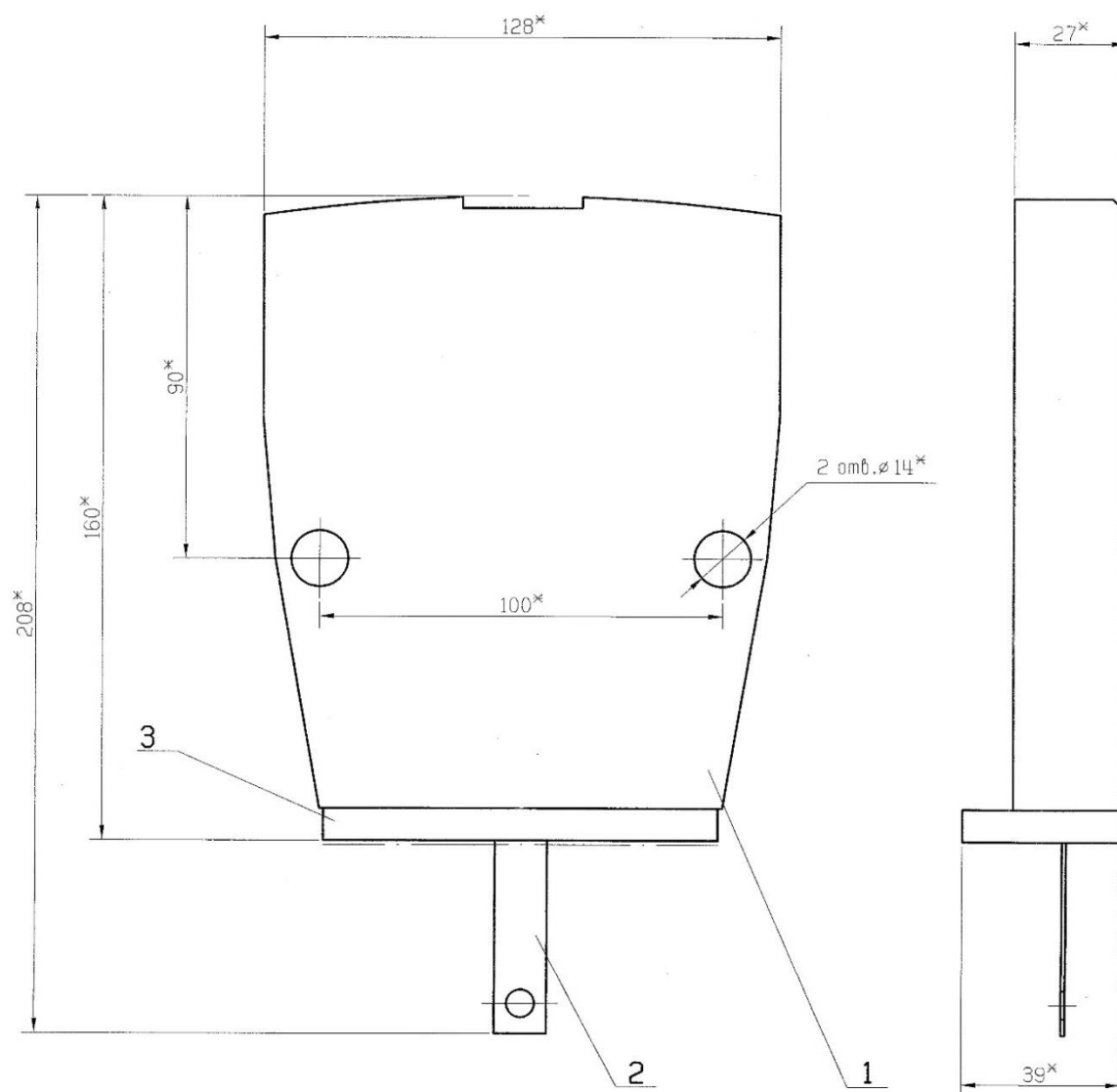


Fig. П2-3 Approximate dimensions of the RC filter unit housing.

When designing and fabricating components that are analogous to the original RC filter units, the following shall be considered:

- the selection of the alternative components shall be in accordance with the requirements stated for the respective types of original ones from which the unit is made;
- the arrangement of the components shall be similar to that indicated in Fig. П2-1;
- the circuit diagram of the components constituting the RC filter unit shall be according to Fig. П2-2;
- the weight of 1 of the new RC filter units shall match that of the original ones.