

Proton Launch System Mission Planner's Guide

APPENDIX E

Proton Launch System Options and Enhancements

E. PAYLOAD ENVELOPE

This appendix presents information on payload envelopes under the PayLoad Fairings (PLFs).

The payload envelope is the volume available under the fairing for the Spacecraft (SC), with due regard for manufacturing clearances on outside dimensions and thermal insulation thickness, which are defined by the SC manufacturer, but without consideration of dynamic SC displacements and discrepancies in SC installation under the fairing, which are defined by KhSC.

A SC may extend beyond the payload envelope, if its dynamic displacements and installation discrepancies are taken into account.

The clearances between the SC and the fairing shall be not less than 50 mm, with due regard for manufacturing clearances and dynamic displacements.

Currently, the payload envelopes shown in Sections E.1 through E.4 may be used.

Table E.1: Fairings and Adapter Systems Defining Payload Envelopes

Fairing	Adapter System	Section
PLF-BR-13305 (length = 13,305 mm)	937VB-1168	E.1
PLF-BR-15255 (length = 15,255 mm)	1194VX-1000 (1194VS-1000)	E.2
	1666V-1000	E.3
	1664HP-1000	E.4

E.1 PAYLOAD ENVELOPE UNDER FAIRINGS PLF-BR-13305 AND PLF-BR-15255 WITH ADAPTER SYSTEM 937VB-1168

Figures E.1-1a and E.1-1b show the payload envelope dimensions that depend on the fairing type.

Figure E.1-1c shows the payload envelope dimensions that depend only on the 937VB-1168 Adapter System (AS) and that are identical for both fairings.

Figure E.1-1a: Payload Envelope under Fairing PLF-BR-13305 with Adapter System 937VB-1168

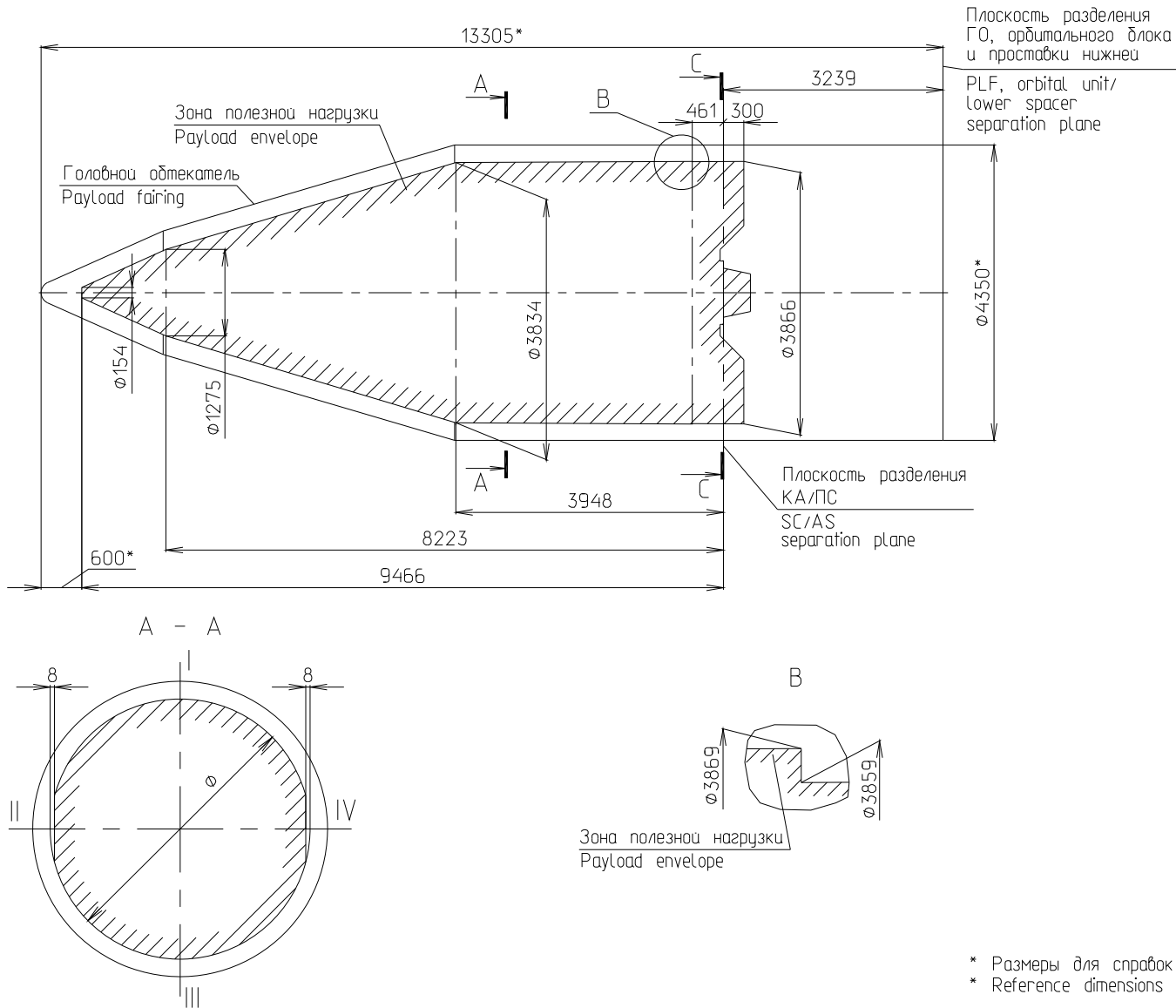


Figure E.1-1b: Payload Envelope under Fairing PLF-BR-15255 with Adapter System 937VB-1168

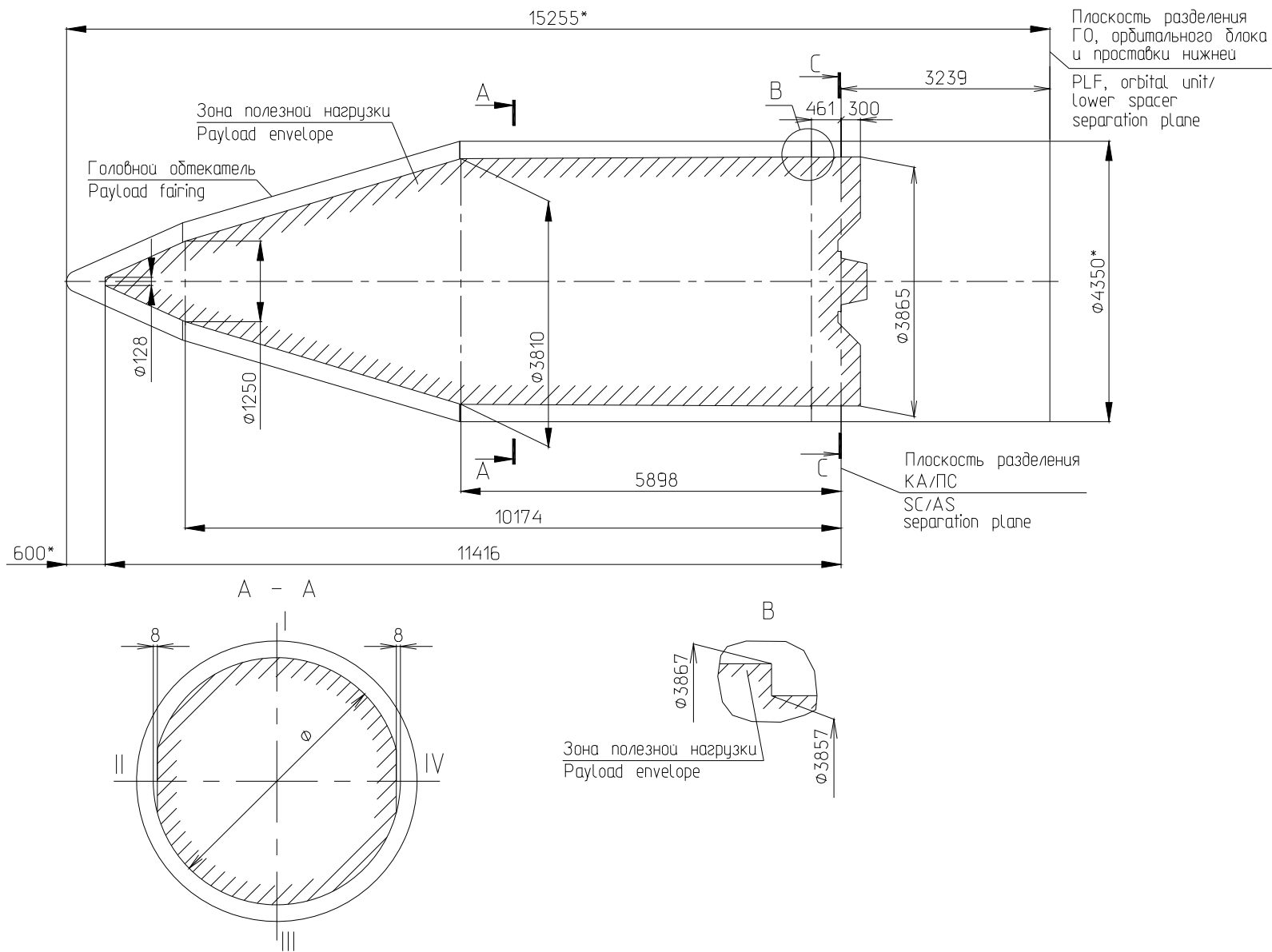
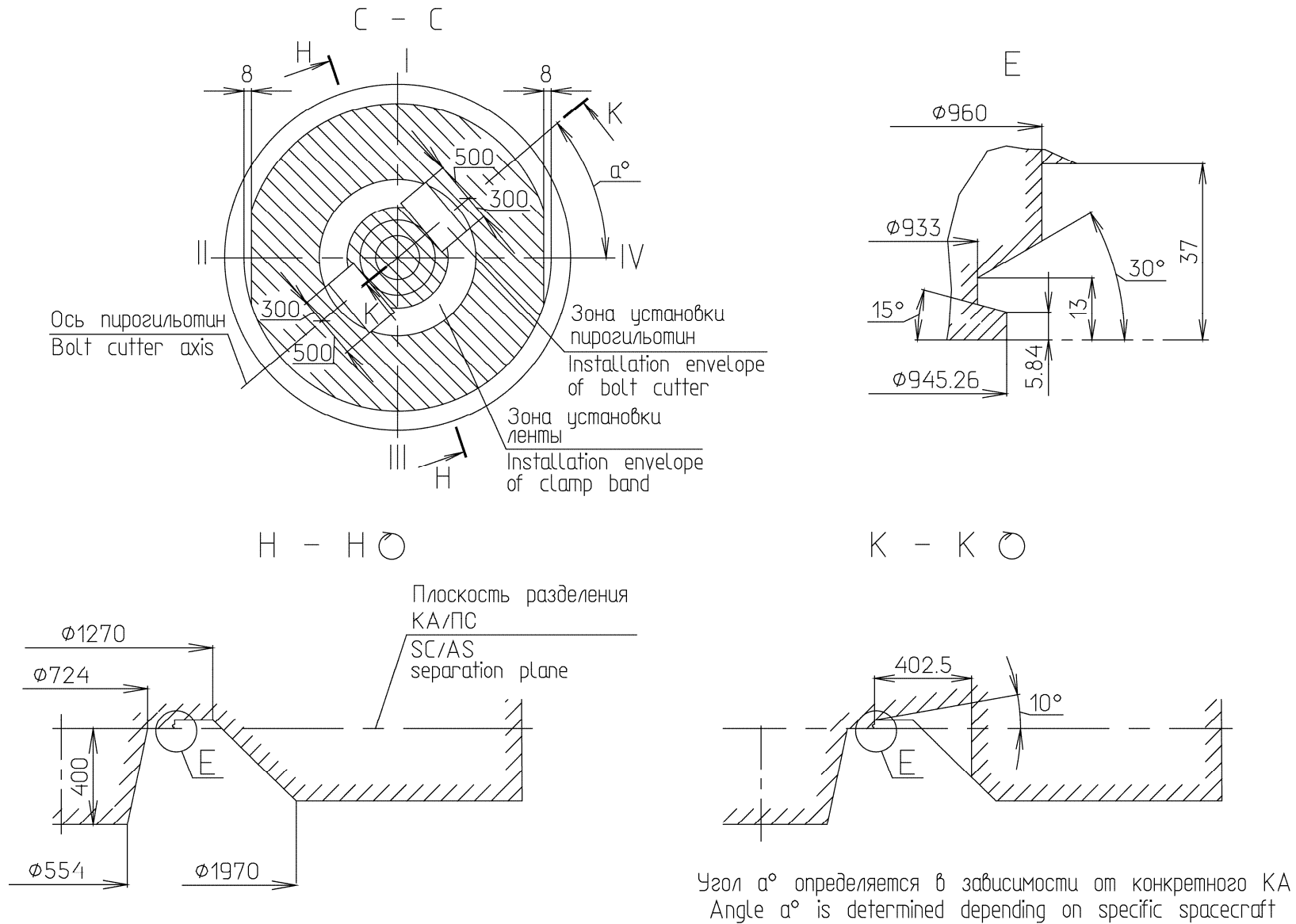


Figure E.1-1c: Payload Envelope under Fairings PLF-BR-13305 and PLF-BR-15255 with Adapter System 937VB-1168



E.2 PAYLOAD ENVELOPE UNDER FAIRINGS PLF-BR-13305 AND PLF-BR-15255 WITH ADAPTER SYSTEMS 1194VX-1000 AND 1194VS-1000

Figures E.2-1a and E.2-1b show the payload envelope dimensions that depend on the fairing type.

Figure E.2-1c shows the payload envelope dimensions that depend only on the 1194VX-1000 adapter system and that are identical for both fairings.

Figure E.2-1d shows the payload envelope dimensions that depend only on the 1194VS-1000 adapter system and that are identical for both fairings.

Figure E.2-1a: Payload Envelope under Fairing PLF-BR-13305 with Adapter System 1194VX-1000 (1194VS-1000)

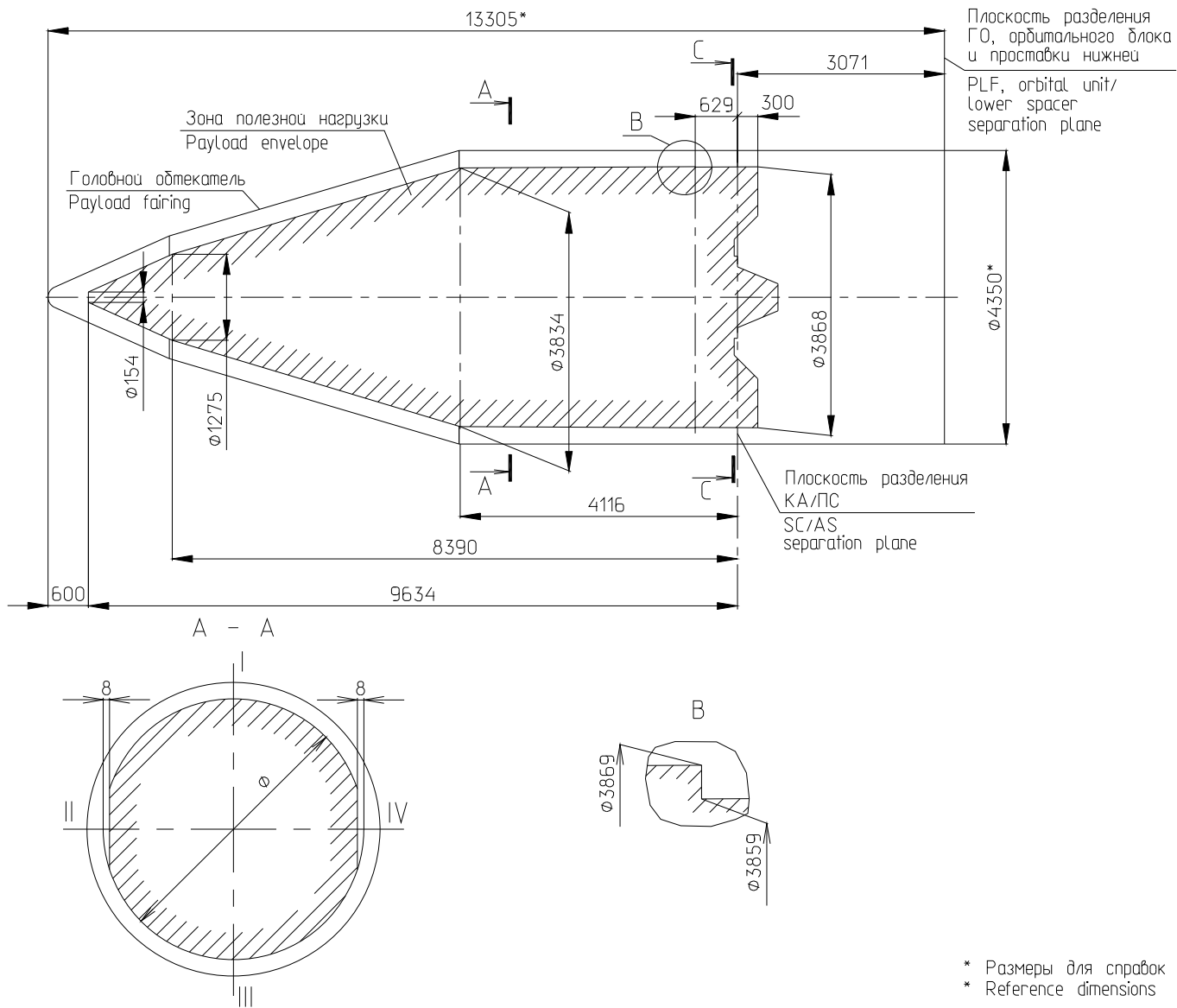


Figure E.2-1b: Payload envelope under Fairing PLF-BR-15255 with Adapter System 1194VX-1000 (1194VS-1000)

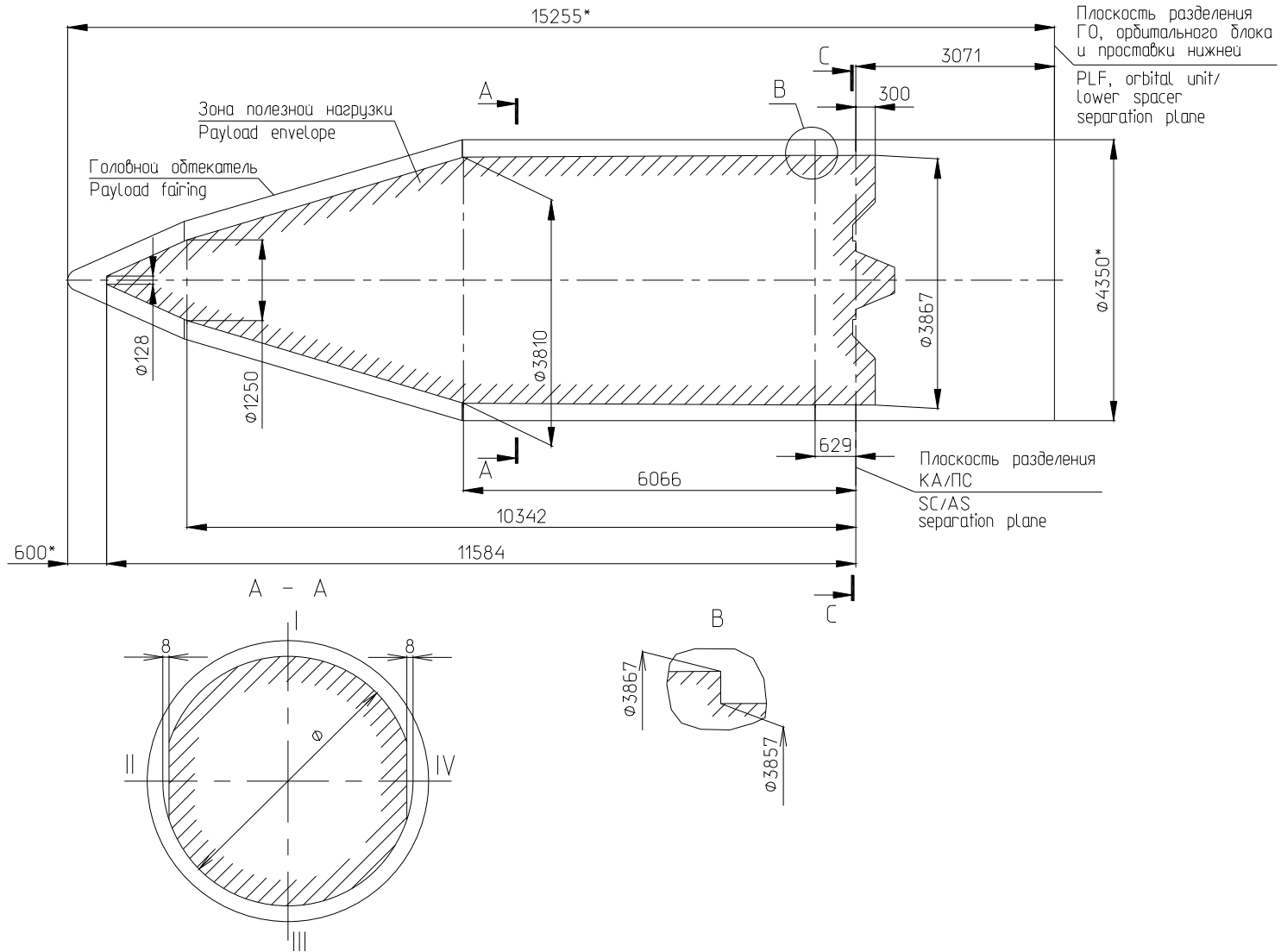


Figure E.2-1c: Payload Envelope under Fairings PLF-BR-13305 and PLF-BR-15255 with Adapter System 1194VX-1000

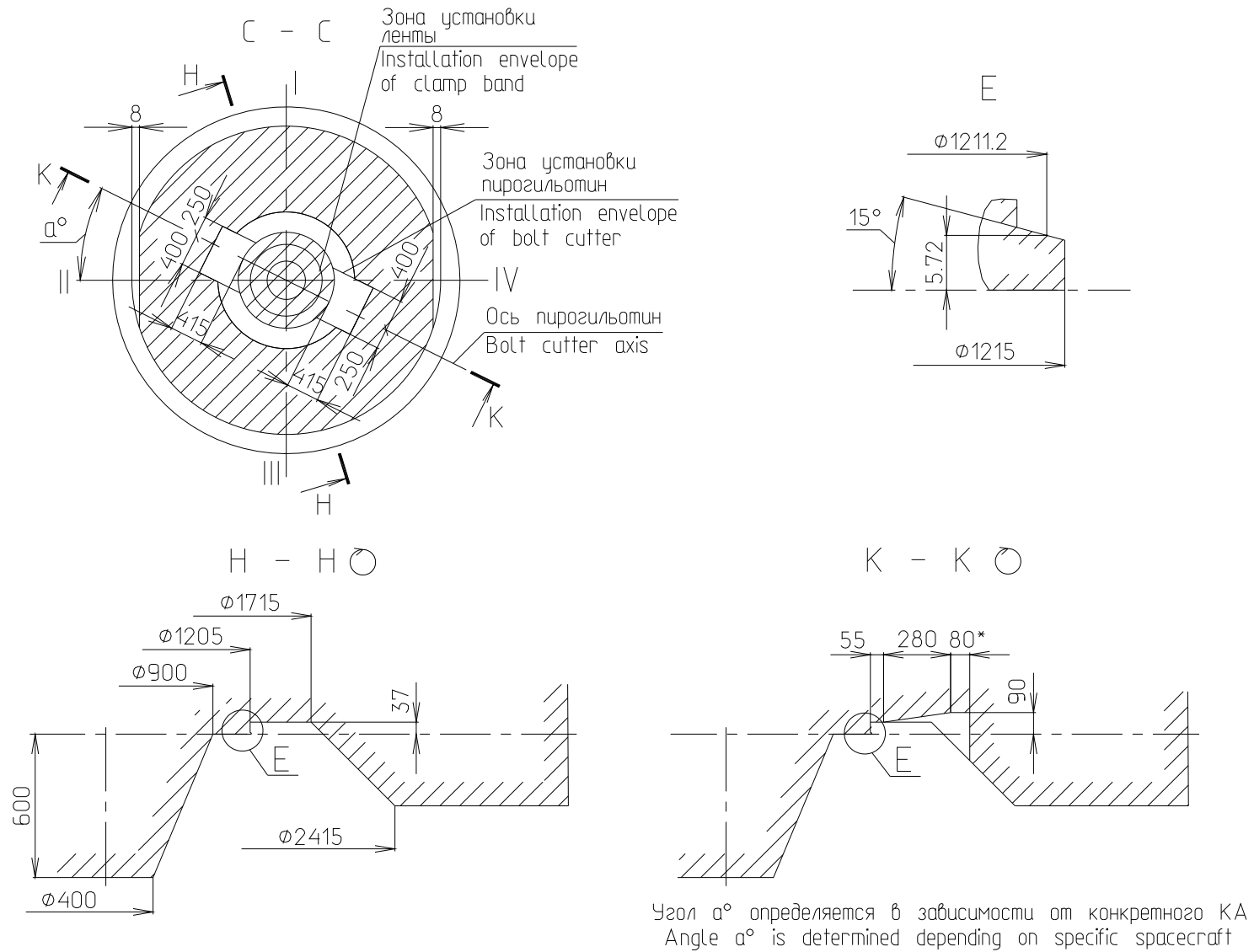
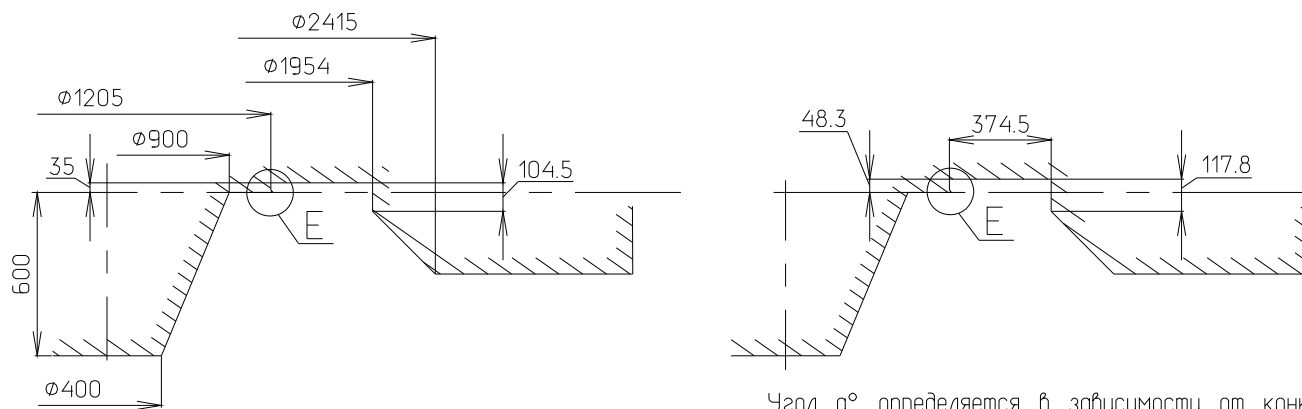
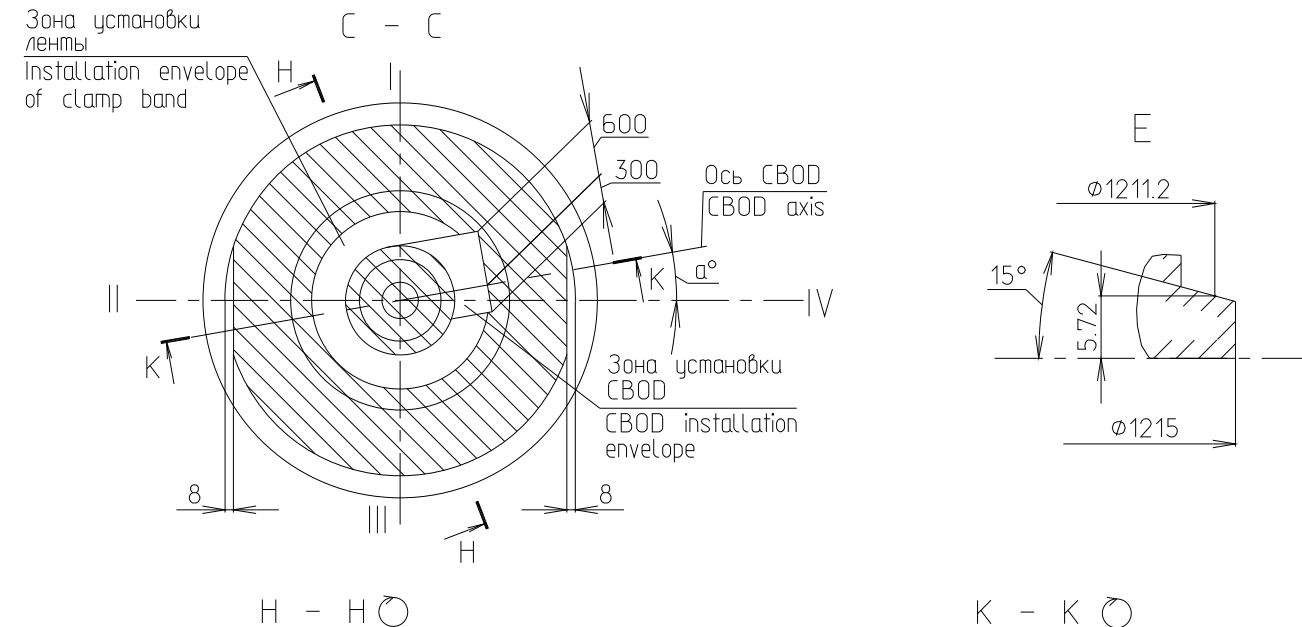


Figure E.2-1d: Payload Envelope under Fairings PLF-BR-13305 and PLF-BR-15255 with Adapter System 1194VS-1000



Угол α° определяется в зависимости от конкретного КА
 Angle α° is determined depending on specific spacecraft

E.3 PAYLOAD ENVELOPE UNDER THE FAIRINGS PLF-BR-13305 AND PLF-BR-15255 WITH ADAPTER SYSTEM 1666V-1000

Figures E.3-1a and E.3-1b show the payload envelope dimensions that depend on the fairing type.

Figure E.3-1c shows the payload envelope dimensions that depend only on the 1666V-1000 adapter system and that are identical for both fairings.

Figure E.3-1a: Payload Envelope under Fairing PLF-BR-13305 with Adapter System 1666V-1000

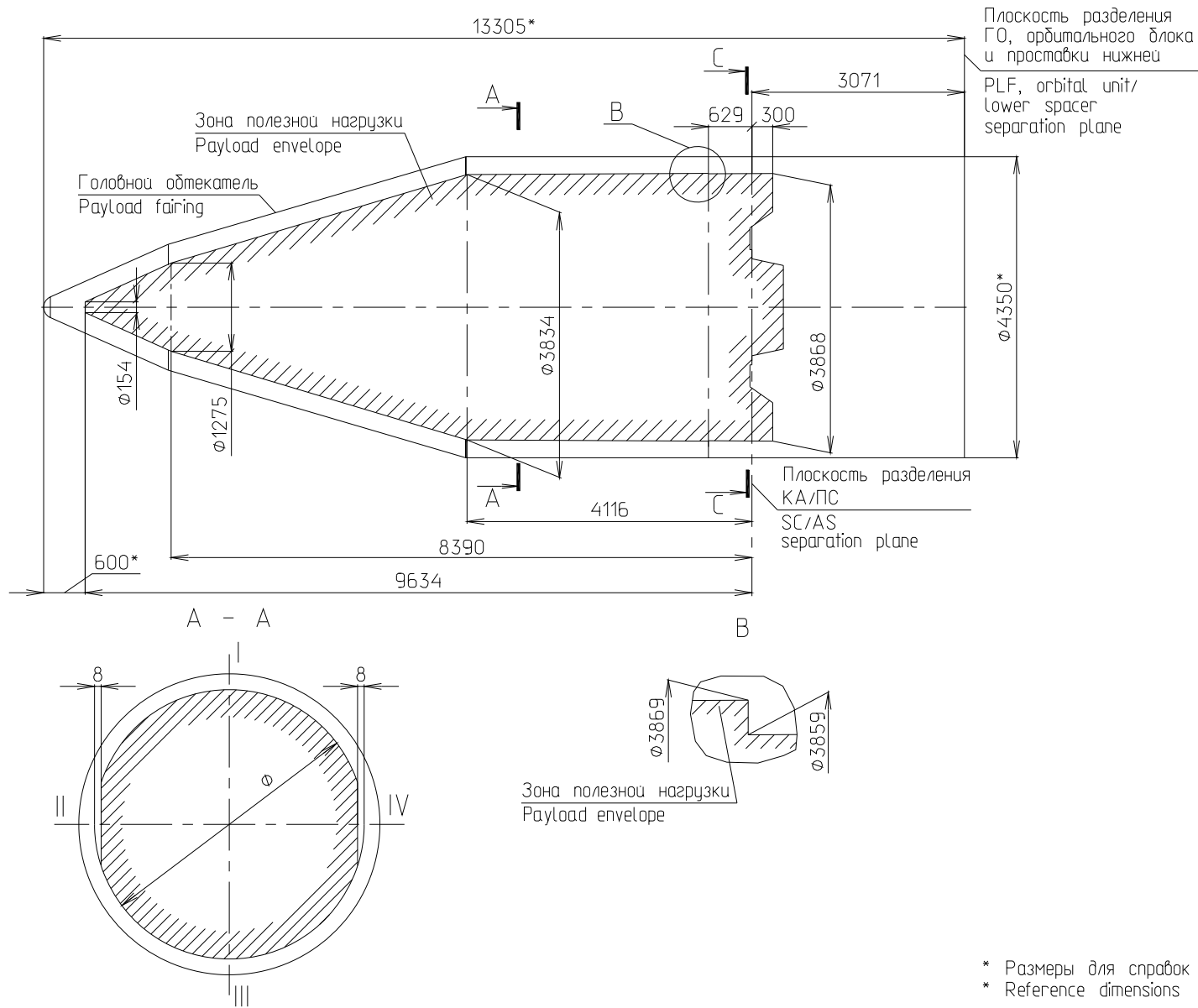


Figure E.3-1b: Payload Envelope under Fairing PLF-BR-15255 with Adapter System 1666V-1000

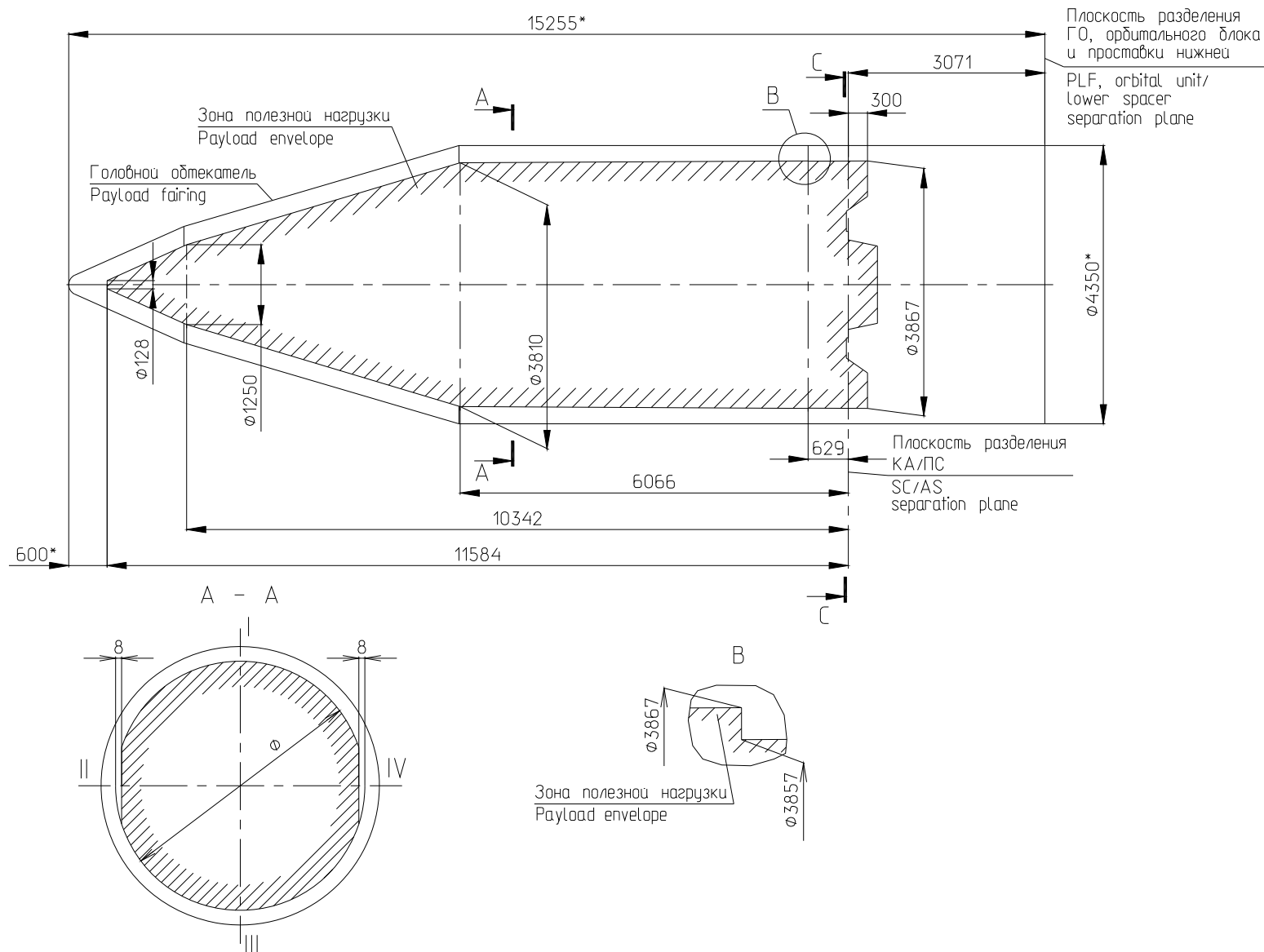
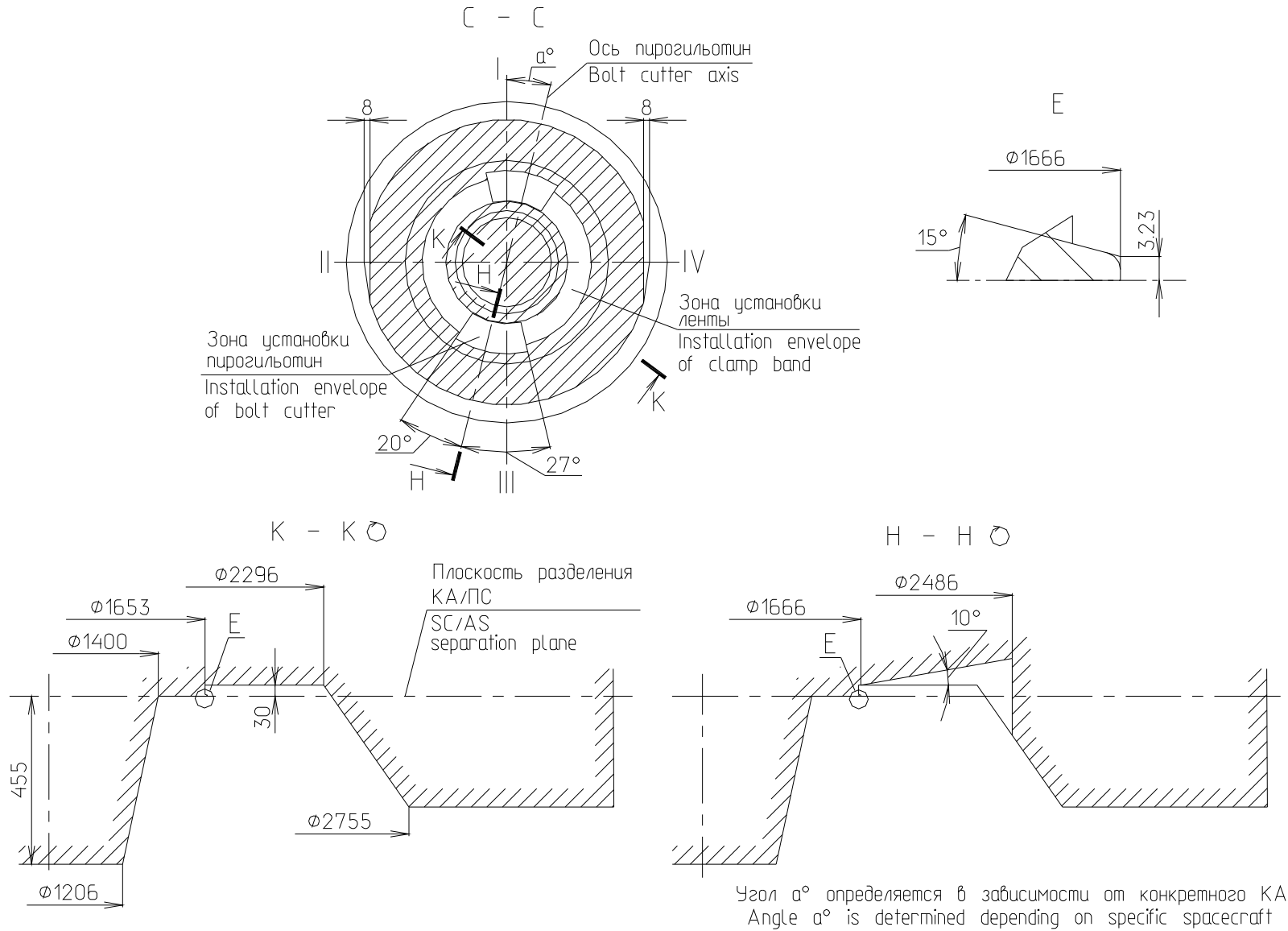


Figure E.3-1c: Payload Envelope under Fairings PLF-BR-13305 and PLF-BR-15255 with Adapter System 1666V-1000



E.4 PAYLOAD ENVELOPE UNDER FAIRINGS PLF-BR-13305 AND PLF-BR-15255 ADAPTER SYSTEM 1664HP-1000

Figures E.4-1a and E.4-1b show the payload envelope dimensions that depend on the fairing type.

Figure E.4-1c shows the payload envelope dimensions that depend only on the 1664HP-1000 adapter system and that are identical for both fairings.

Figure E.4-1a: Payload Envelope under Fairing PLF-BR-13305 with Adapter System 1664HP-1000

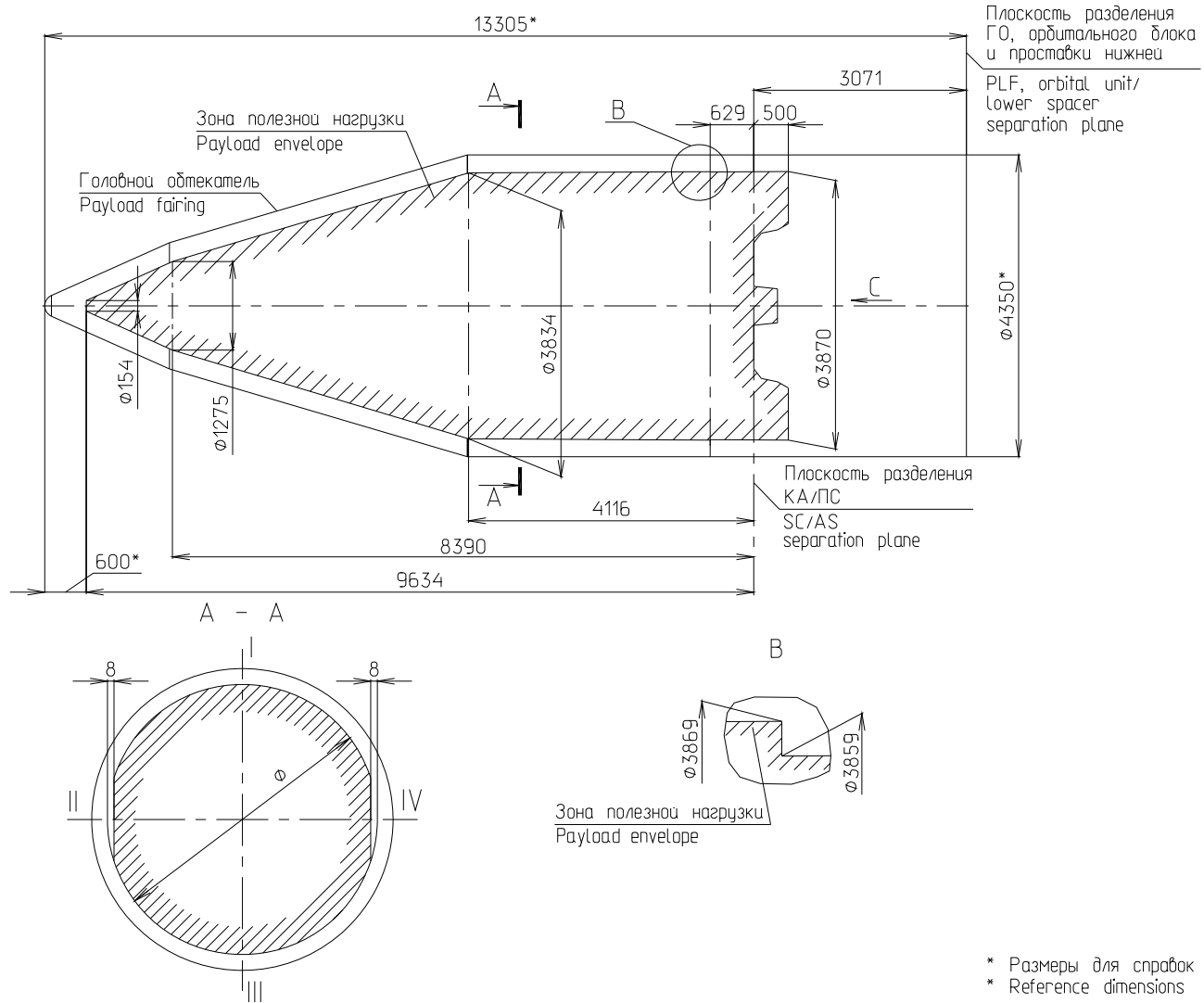


Figure E.4-1b: Payload Envelope under Fairing PLF-BR-15255 with Adapter System 1664HP-1000

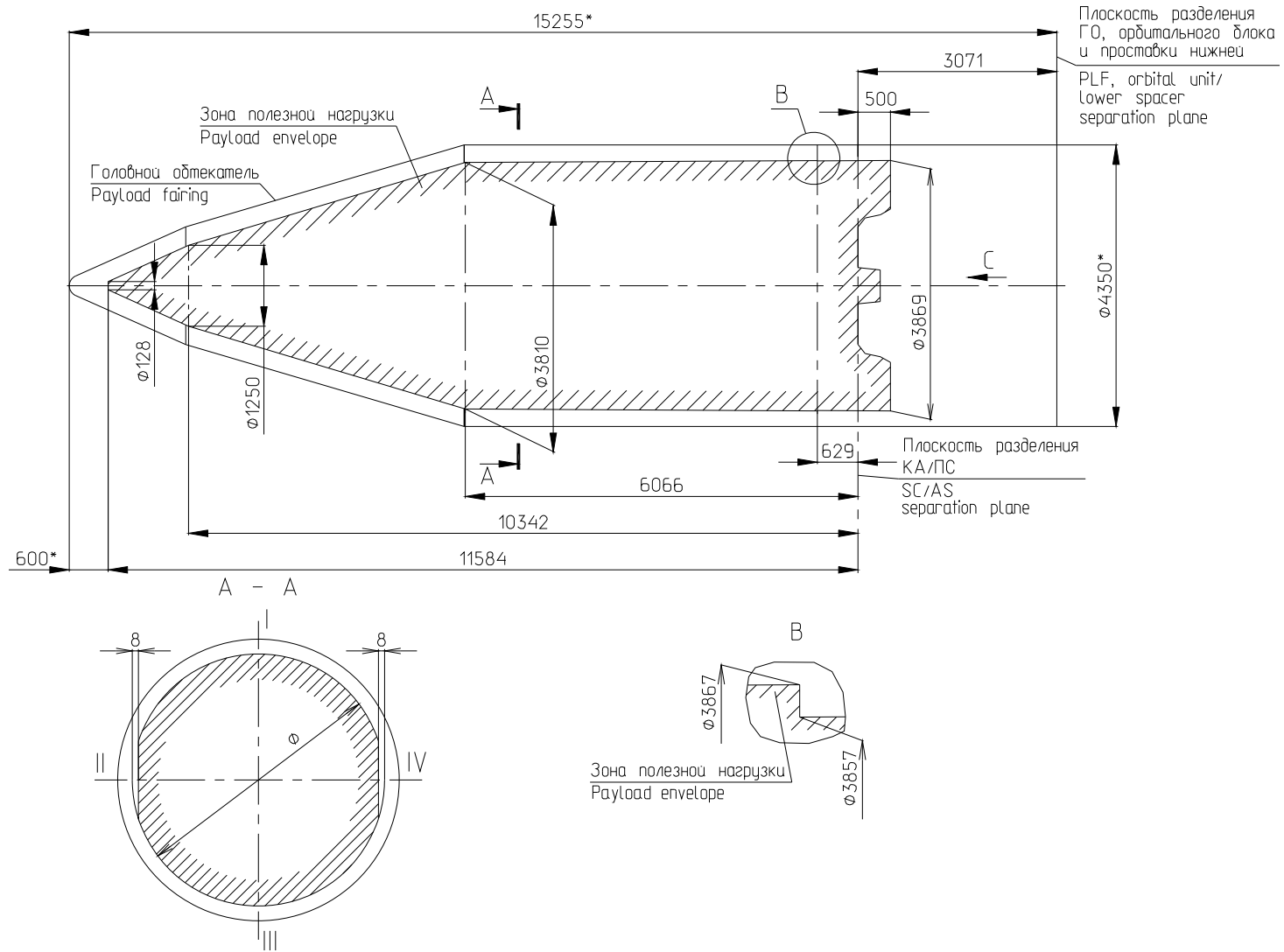


Figure E.4-1c: Payload Envelope under Fairings PLF-BR-13305 and PLF-BR-15255 with Adapter System 1664HP-1000

