
Adaptor 937

Annex 8.1

This adaptor is a carbon fibre structure in the form of a truncated cone, with a diameter of 937 mm at the level of the spacecraft separation plane. It is attached to the reference plane (\varnothing 1920) by a bolted connector frame, and also provides for spacecraft separation.

The 937 has a mass of 48 kg.

The actual spacecraft pair of values (M_{cu} , X_G) must remain within admissible limits [as defined in figure A8.1.1.](#)

The spacecraft is secured to the adaptor interface frame by a clampband. This comprises a metal strip applying a series of clamps to the payload and adaptor frames. The clampband assembly comprises two half clampbands, connected by bolts which are cut pyrotechnically to release the clampband, which is then held captive by the adaptor assembly.

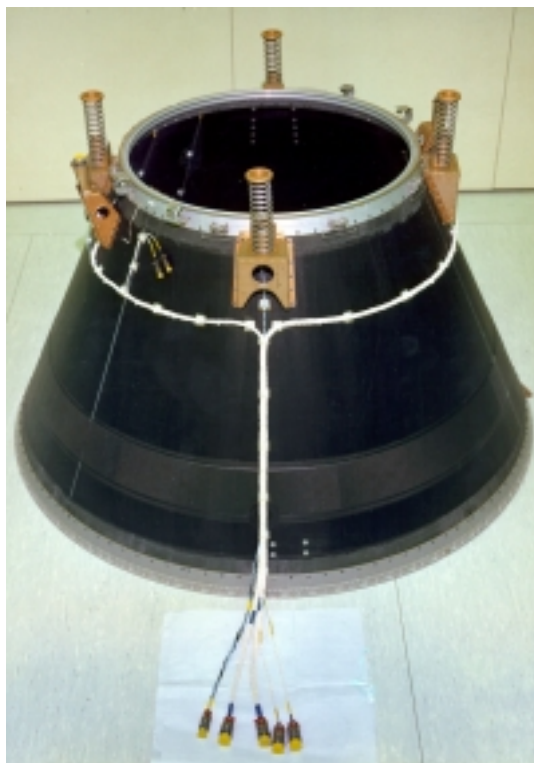
The clampband tension does not exceed 18 300 N at any time, it is defined to ensure no gapping between the spacecraft and adaptor interface frames in ground and flight environment.

The spacecraft is forced away from the launch vehicle by 4 springs integral with the adaptor and bearing on supports fixed to the spacecraft rear frame. The relative velocity between the adaptor and the spacecraft is about 0.5 m/s.

The force exerted on the spacecraft by each spring does not exceed: 900 N.

Adaptors are equipped either with external or internal springs on user request.

Umbilical connectors brackets: on the spacecraft side, the connectors brackets must be stiff enough to prevent any deformation greater than 0.5 mm under the maximum force of the connector spring.



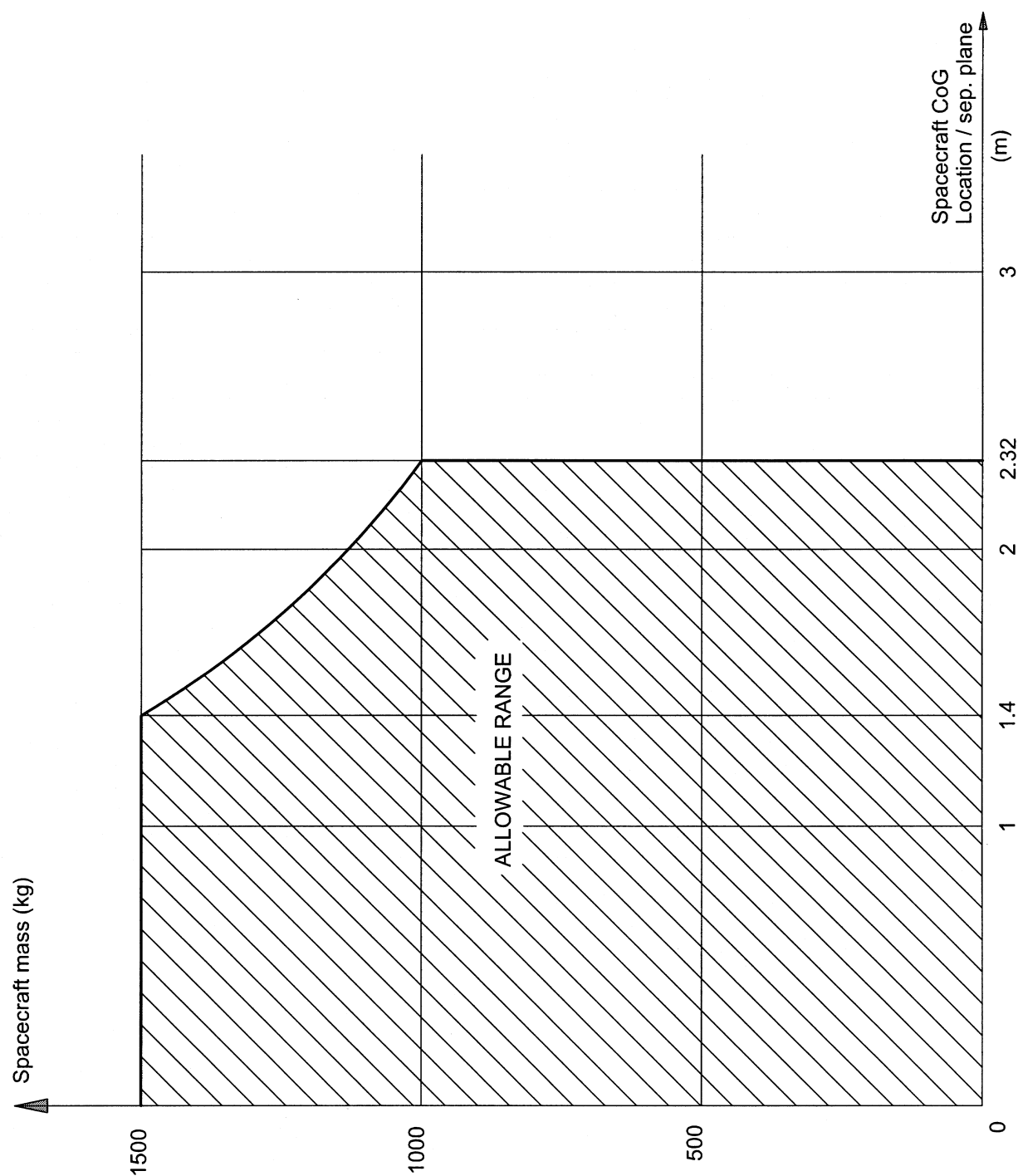


Fig. A8.1.1.– Limit loads of adaptor 937 at separation plane

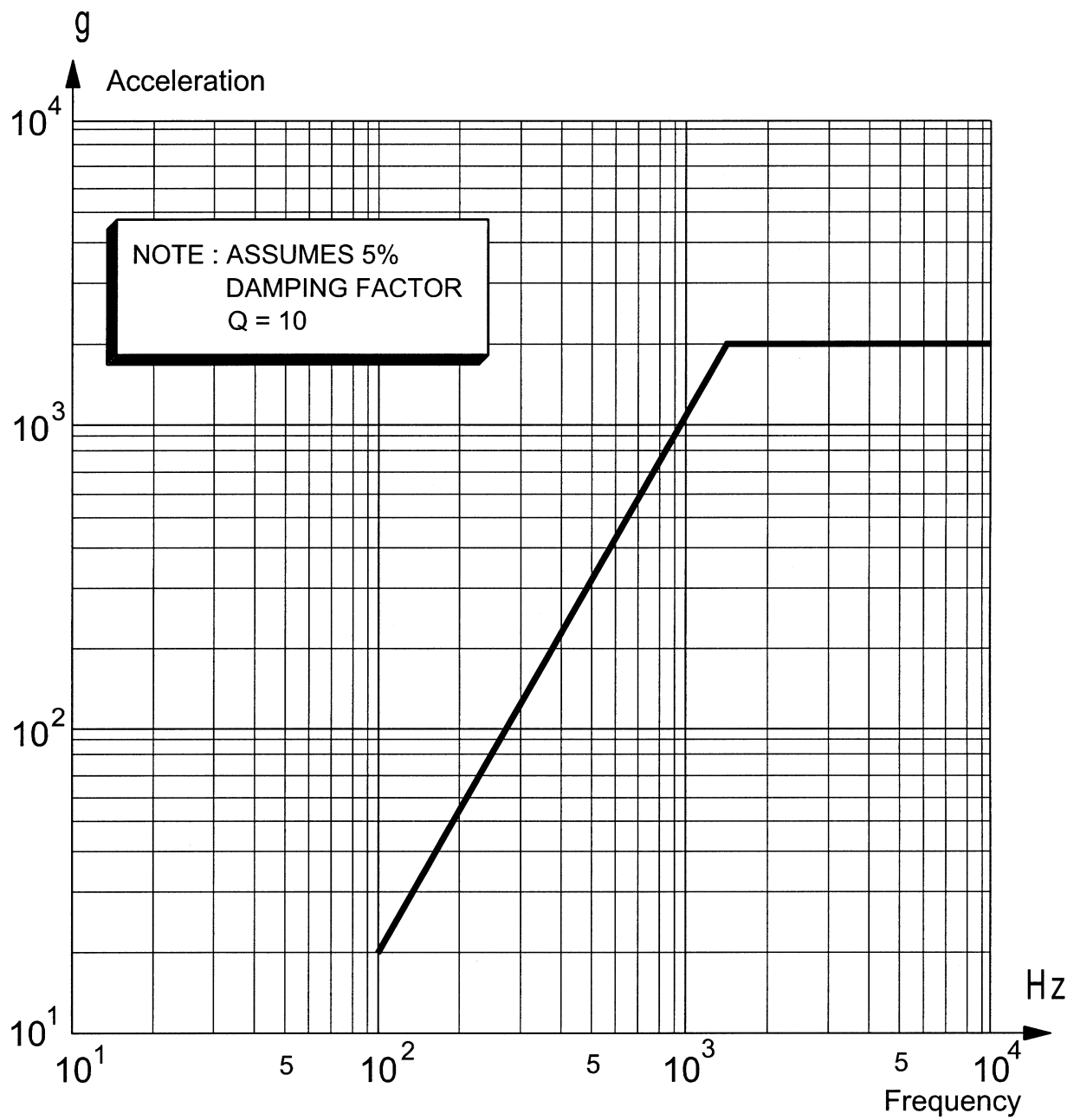


Fig. A8.1.2. – Adaptor 937

Shock spectrum at separation plane

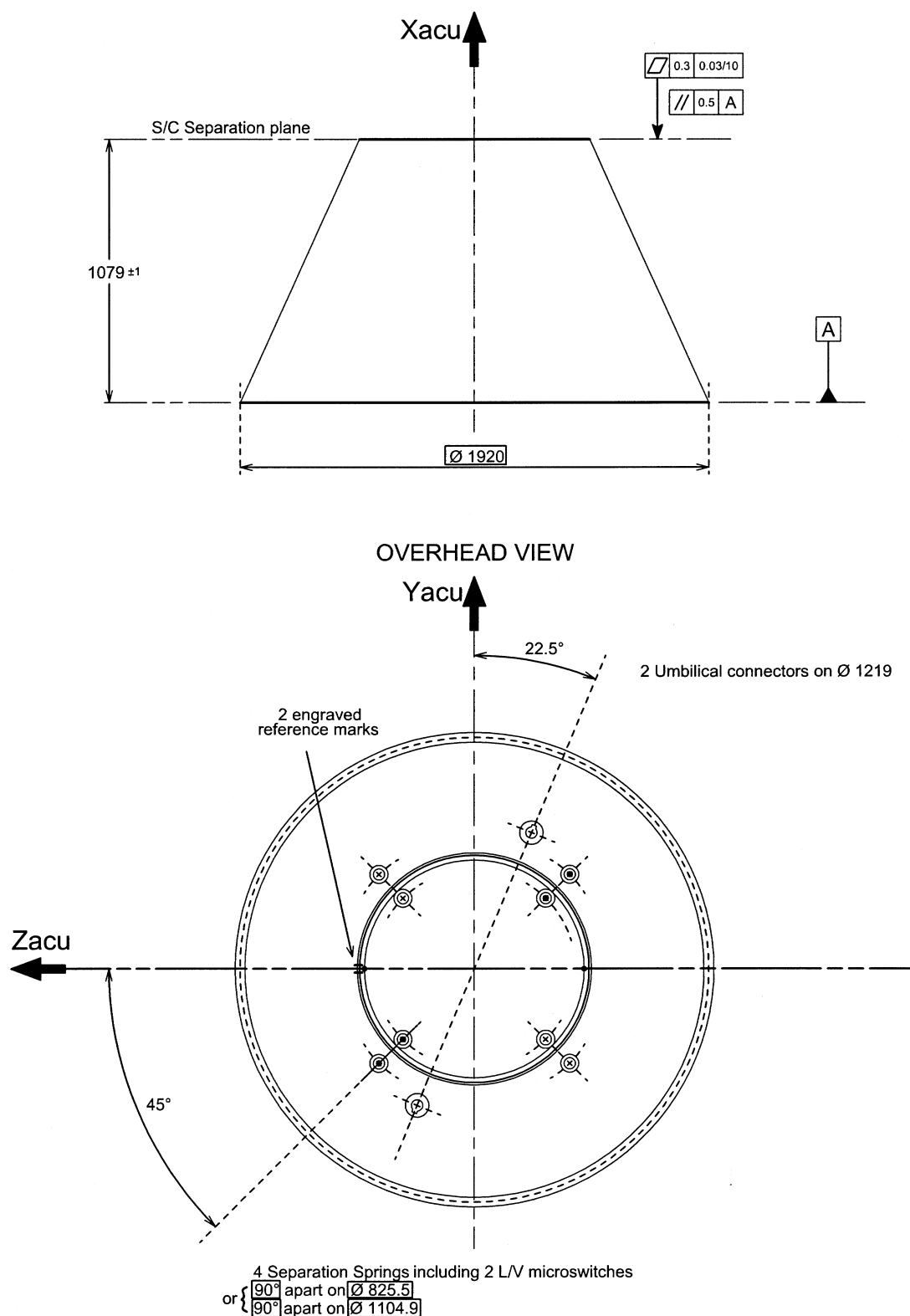


Fig. A8.1.3. – Adaptor 937

General view and main characteristics

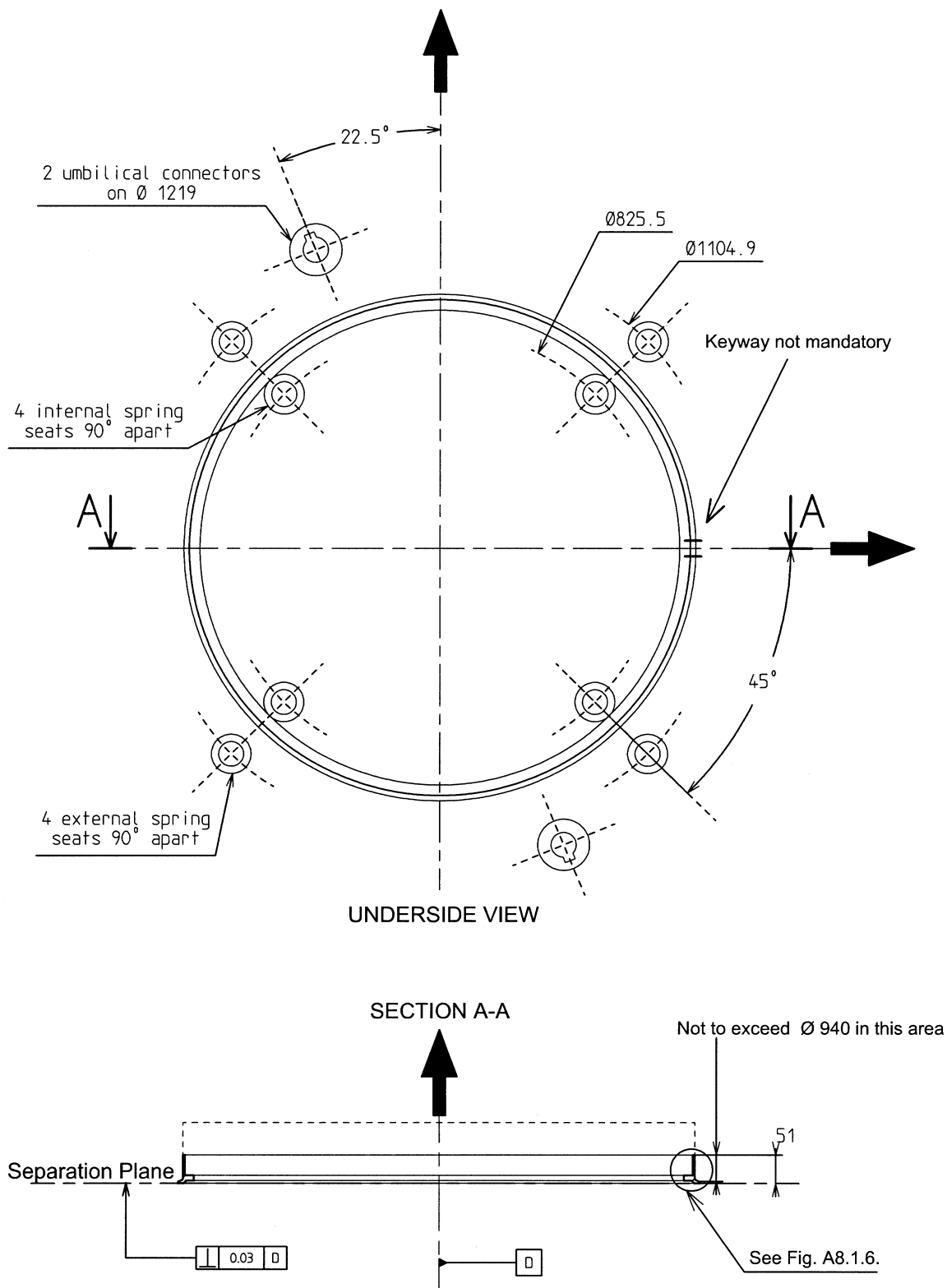


Fig. A8.1.4. – 937 spacecraft configuration

General view and main characteristics

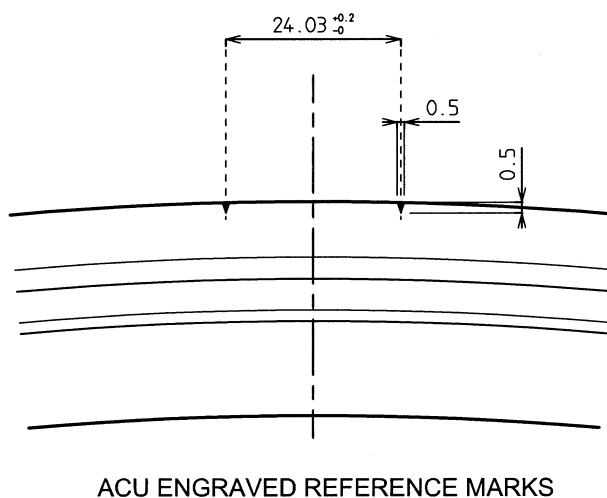
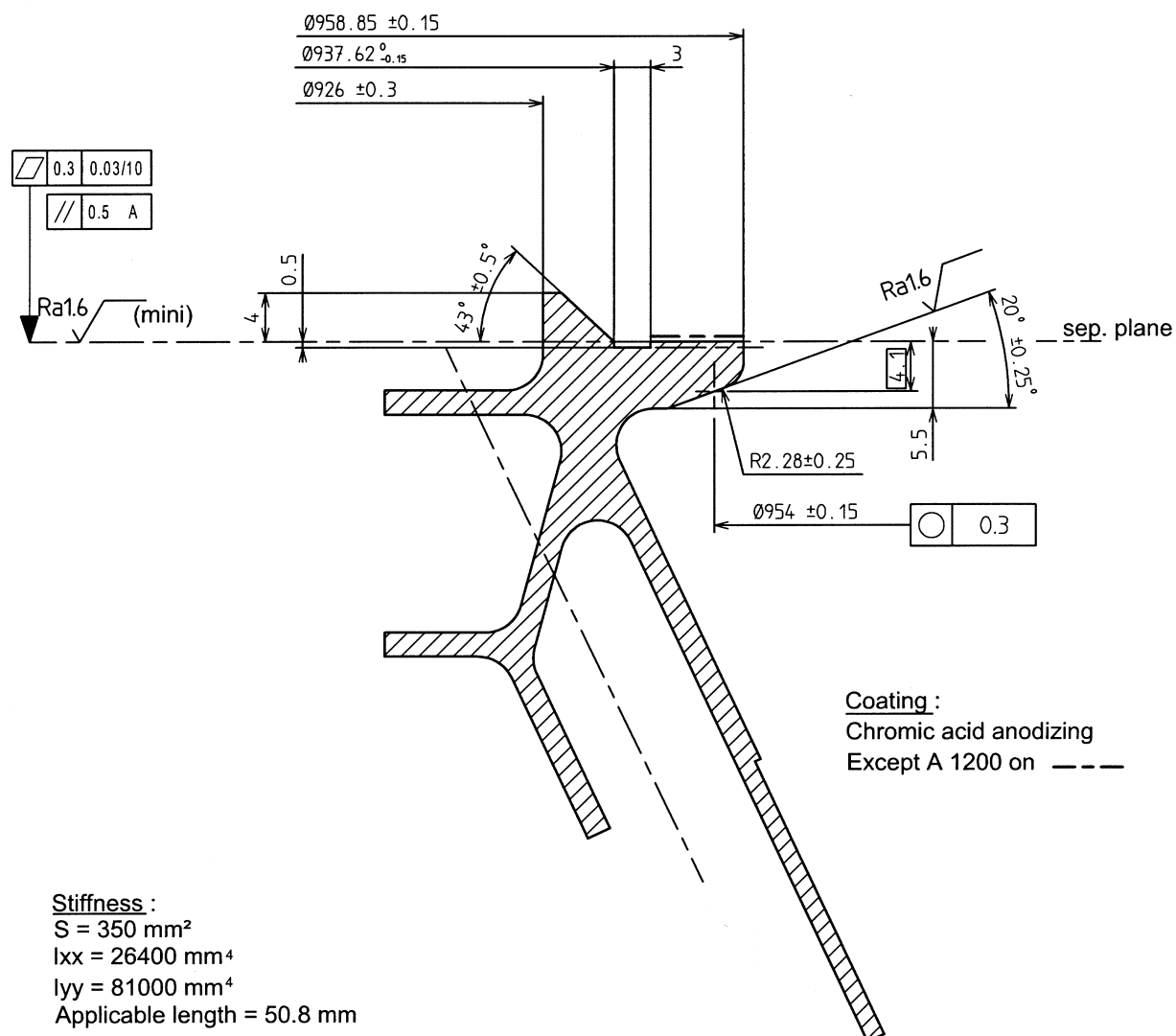


Fig. A8.1.5. – 937 adaptor interface frame (details)

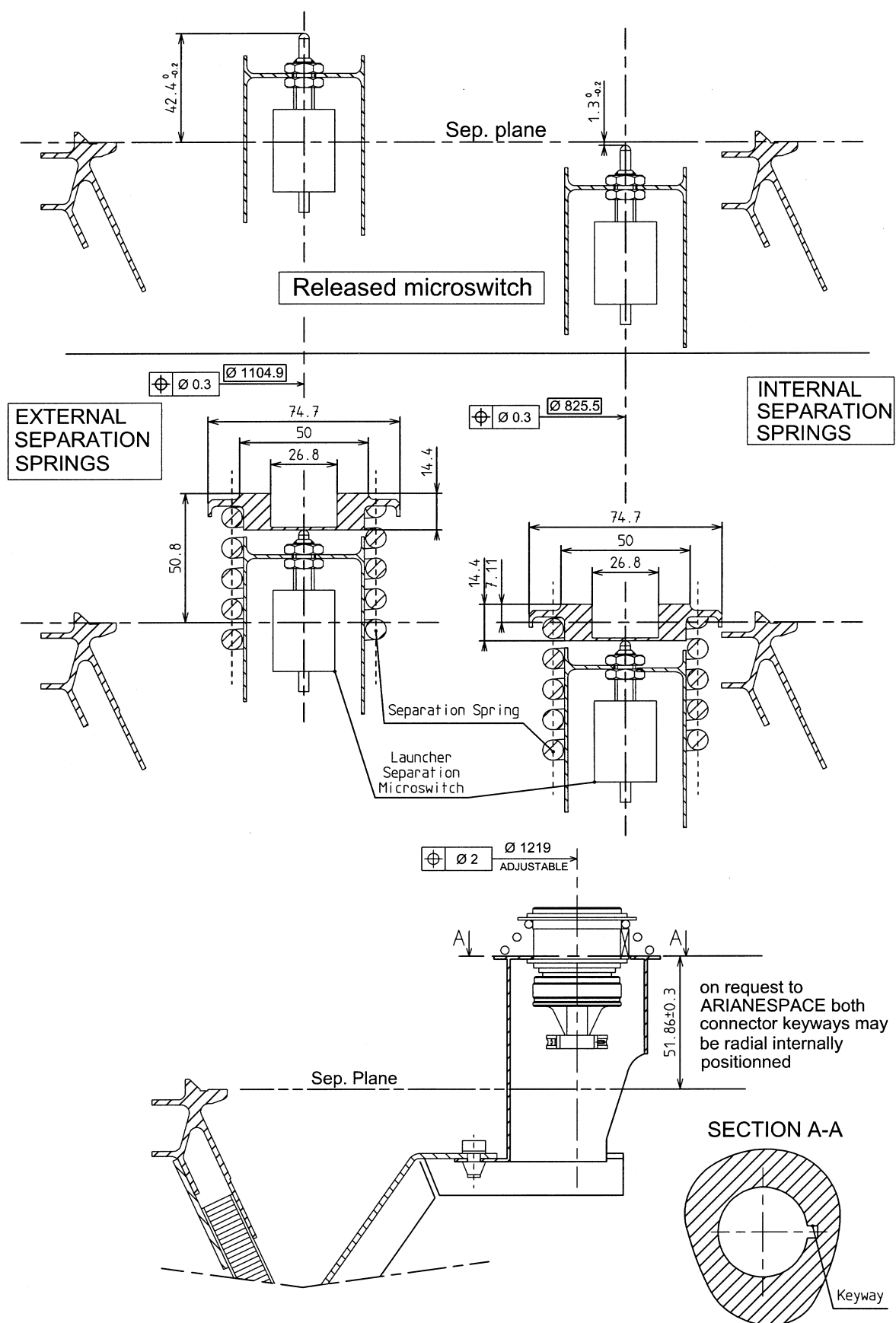


Fig. A8.1.7. – 937 adaptor mechanical interfaces (details)

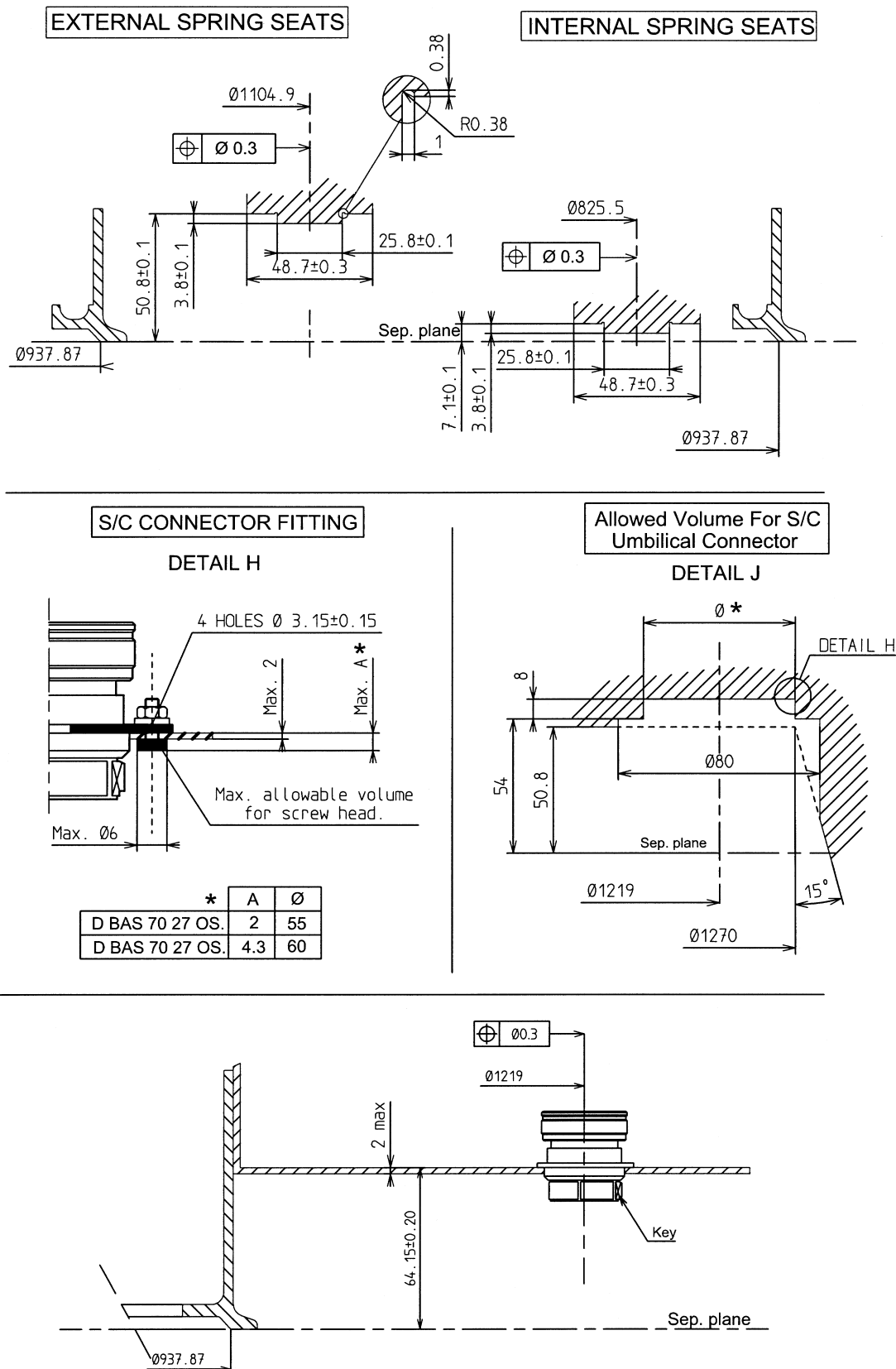


Fig. A8.1.8. – 937 spacecraft mechanical interface (details)

DUAL LAUNCH - UPPER POSITION Adaptor 937

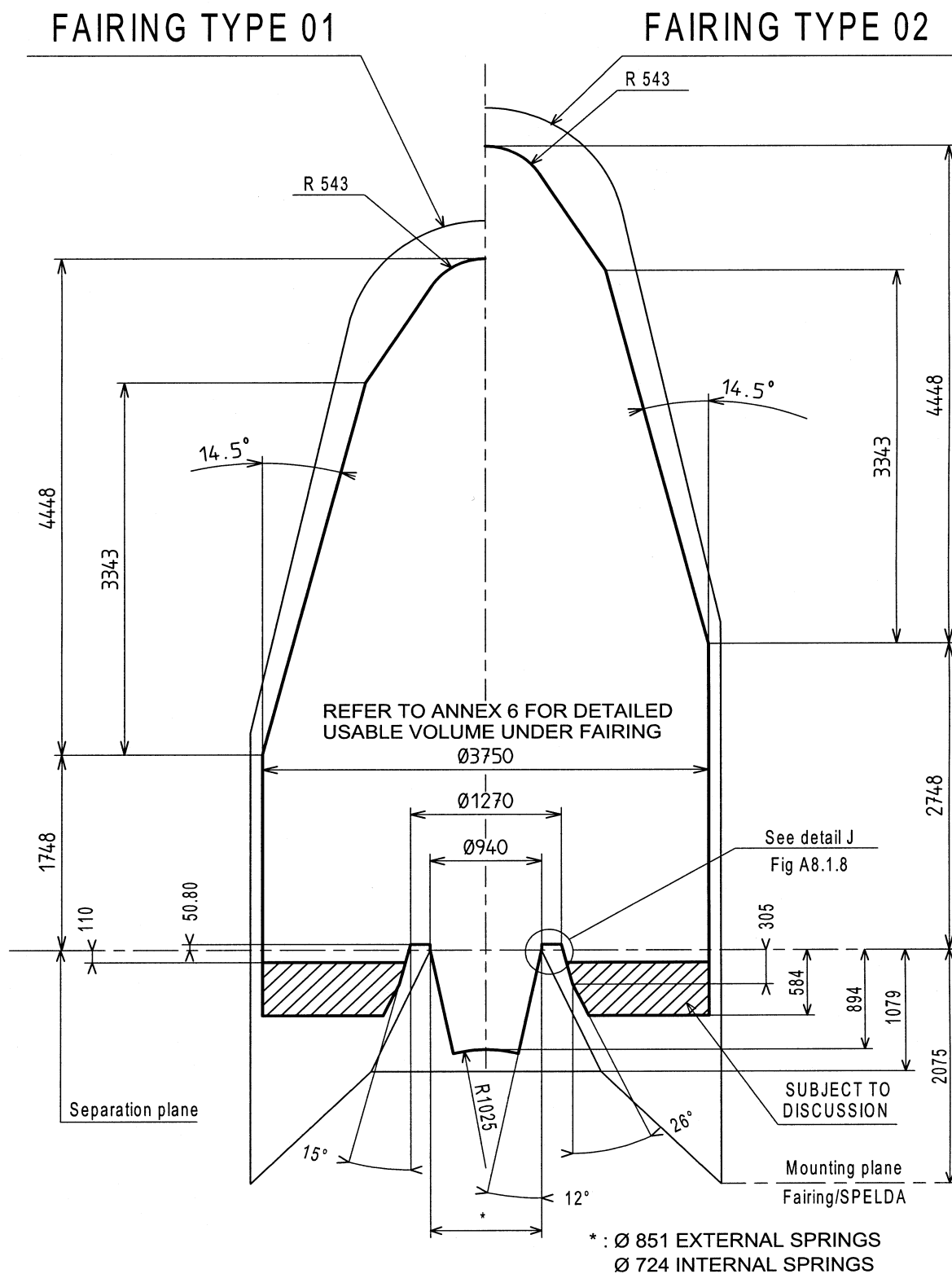


Fig. A8.1.9. – Usable volumes beneath fairings 01 and 02

DUAL LAUNCH-INNER POSITION Adaptor 937

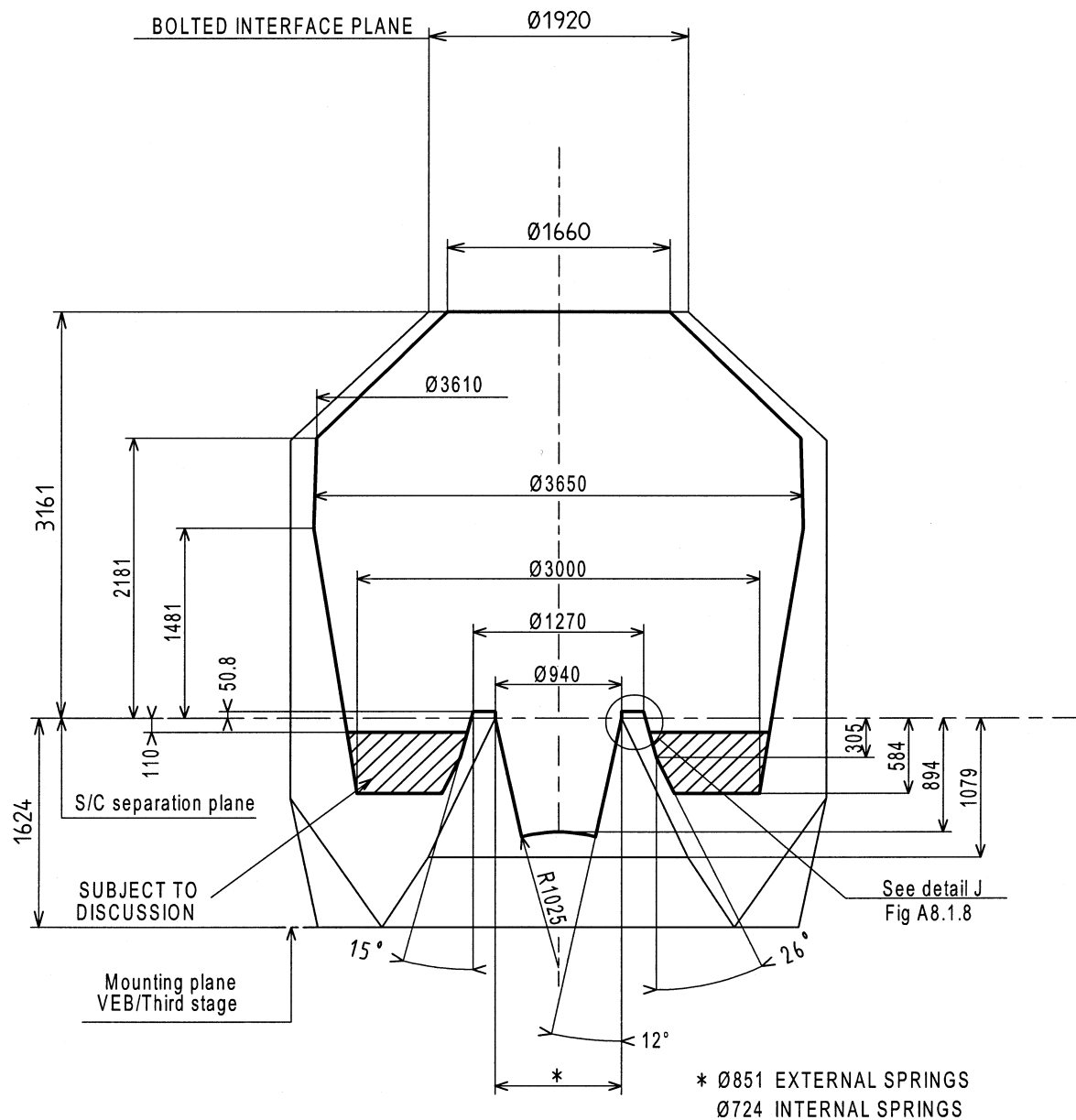


Fig. A8.1.10.- Usable volume beneath short SPELDA (type 10)