INTERNATIONAL STANDARD 1728

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Road vehicles — Pneumatic coupling between towing vehicles and trailers — Interchangeability

Véhicules routiers — Liaisons pneumatiques entre véhicules tracteurs et remorques — Interchangeabilité

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up has the right to be represented on that Committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

Prior to 1972, the results of the work of the Technical Committees were published as ISO Recommendations; these documents are now in the process of being transformed into International Standards. As part of this process, Technical Committee ISO/TC 22 has reviewed ISO Recommendation R 1728 and found it technically suitable for transformation. International Standard ISO 1728 therefore replaces ISO Recommendation R 1728-1971 to which it is technically identical.

ISO Recommendation R 1728 was approved by the Member Bodies of the following countries :

Belgium	Israel	Spain
Czechoslovakia	Italy	Sweden
Egypt, Arab Rep. of	Netherlands	Switzerland
Finland	New Zealand	Turkey
France	Peru	United Kingdom
Greece	Portugal	Yugoslavia
Hungary	Romania	
Ireland	South Africa, Rep. of	

The Member Bodies of the following countries expressed disapproval of the Recommendation on technical grounds :

Germany
Japan

The Member Body of the following country disapproved the transformation of ISO/R 1728 into an International Standard :

United Kingdom

Printed in Switzerland

Road vehicles — Pneumatic coupling between towing vehicles and trailers — Interchangeability

1 SCOPE

This International Standard specifies requirements which ensure interchangeability of the pneumatic coupling between towing vehicles and trailers.

2 FIELD OF APPLICATION

This International Standard concerns vehicles for commercial international transport with trailers the weights of which exceed 3,5 t when loaded.

It applies only to pneumatic braking systems with two lines, one direct braking line and one automatic braking line.

3 INTERCHANGEABILITY DIMENSIONS

3.1 Coupling head type

The "Palm type" coupling head shall be used. It shall be fitted with an inhibiting device to prevent incorrect coupling (see figures 1 and 2).

The towing vehicle shall be equipped with an automatic device ensuring, without manual operation, the continuity of the pipe-lines when they are coupled, and their closure on uncoupling; this device shall not affect interchangeability.

The coupling head shall make provision for any type of valve to be fitted to the towing vehicle, provided that the valve may be opened by the standard coupling head on the trailer.

3.2 Coupling head dimensions

The dimensions of the coupling heads shall be as shown in figures 1 and 2.

This International Standard specifies only the dimensional details necessary for the coupling. All other dimensions are left to the discretion of the manufacturer.

3.3 Coupling head location (see figure 3)

3.3.1 *Location of fixed coupling heads on the towing vehicle (prime-mover)*

The fixed coupling head for the direct braking line shall be located on the left of the longitudinal plane of symmetry when viewed from the rear, and the head for the automatic braking line shall be on the right of this plane under the same conditions.

The location of the coupling heads is specified as follows :

a) Perpendicular distance between a horizontal plane passing through the centre of the towing attachment and a horizontal plane passing through the axis of the coupling heads : 0 to 200 mm.

b) Distance between the longitudinal plane of symmetry of the vehicle and the vertical plane of the coupling faces : 200 to 350 mm.

c) Distance between the coupling axis and a vertical plane passing through the centre of the towing attachment normal to the longitudinal plane of symmetry of the vehicle : 0 to 150 mm.

3.3.2 *Location of fixed coupling heads on the semi-trailer*

The coupling head for the direct braking line shall be located on the left of the longitudinal plane of symmetry of the articulated vehicle when viewed from the rear, and the head for the automatic braking line shall be on the right of this plane under the same conditions.

The distance between the above-mentioned plane of symmetry and each coupling head shall be 75 to 225 mm.

The coupling heads shall be located in a horizontal plane between 100 and 500 mm above the fifth wheel coupling plate supporting the semi-trailer.

3.4 Orientation of coupling heads

The axis of the fixed coupling head shall be horizontal, with the sealing face vertical and directed as follows according to whether it concerns a towing vehicle with a trailer, or a semi-trailer :

3.4.1 *Towing vehicle*

Towards the right when the vehicle is viewed from the rear.

3.4.2 *Semi-trailer*

Towards the left when the vehicle is viewed from the rear.

3.5 Location and length of hoses (towing vehicle with trailer) (see figure 3)

The location and length of hoses result from the location of the coupling heads and from the fact that the maximum angle of the drawbar centre line with the longitudinal axis of the towing vehicle is 75°.

For angles less than 60° there shall be complete freedom of lateral movement, without any tension on the hoses or friction of hoses on one another; for angles from 60 to 75° lateral movement shall be possible without causing deterioration of the hoses.

Dimensions in millimetres

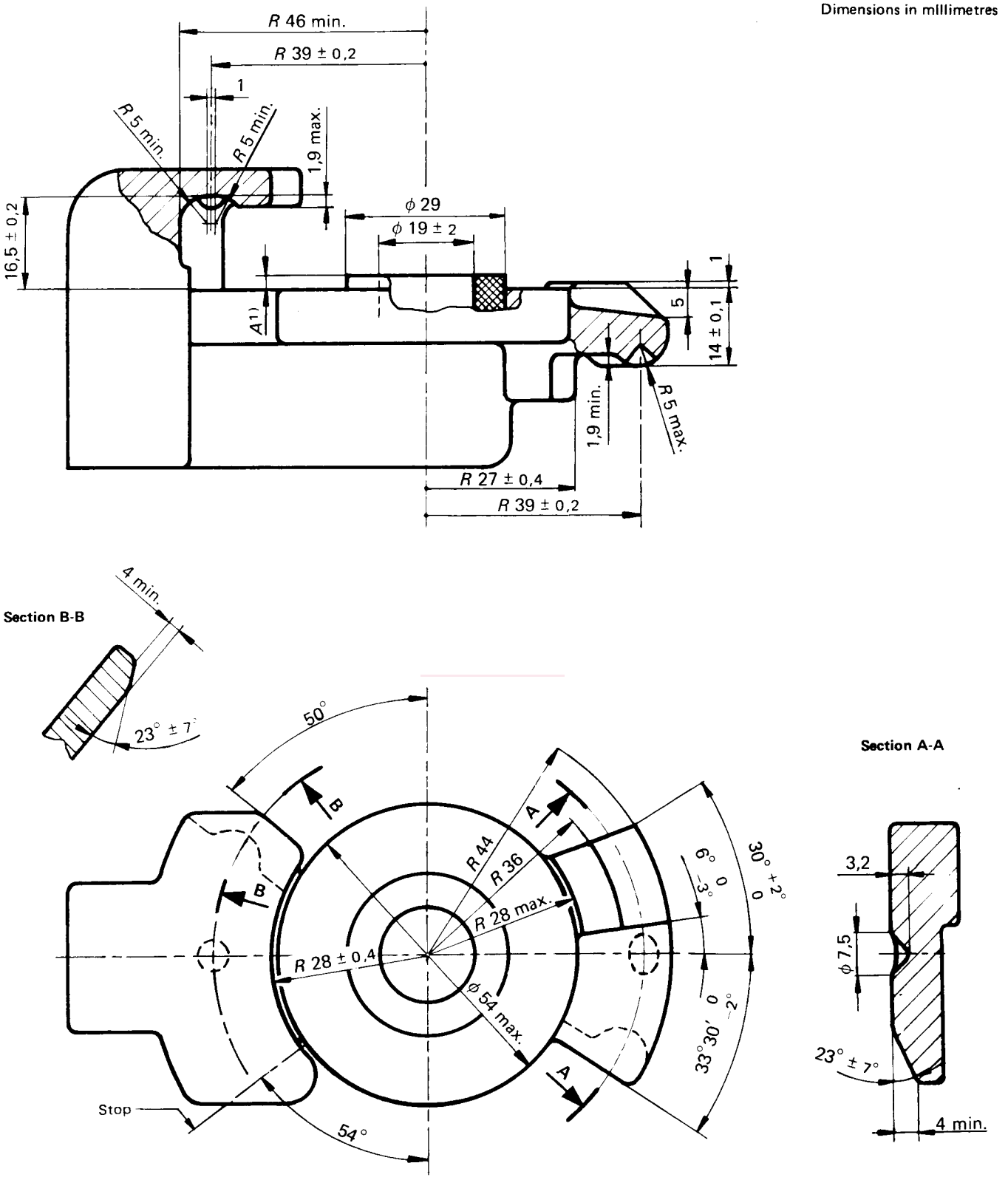

FIGURE 1 – **Coupling head for automatic braking line**

1) $A = \begin{cases} 2{,}7 \pm 0{,}5 \text{ for a resilient sealing ring;} \\ 4{,}5 \text{ max. for a spring-loaded seal; in this case, the opposite coupling head shall be provided with a resilient ring, for sealing purposes.} \end{cases}$

Dimensions in millimetres

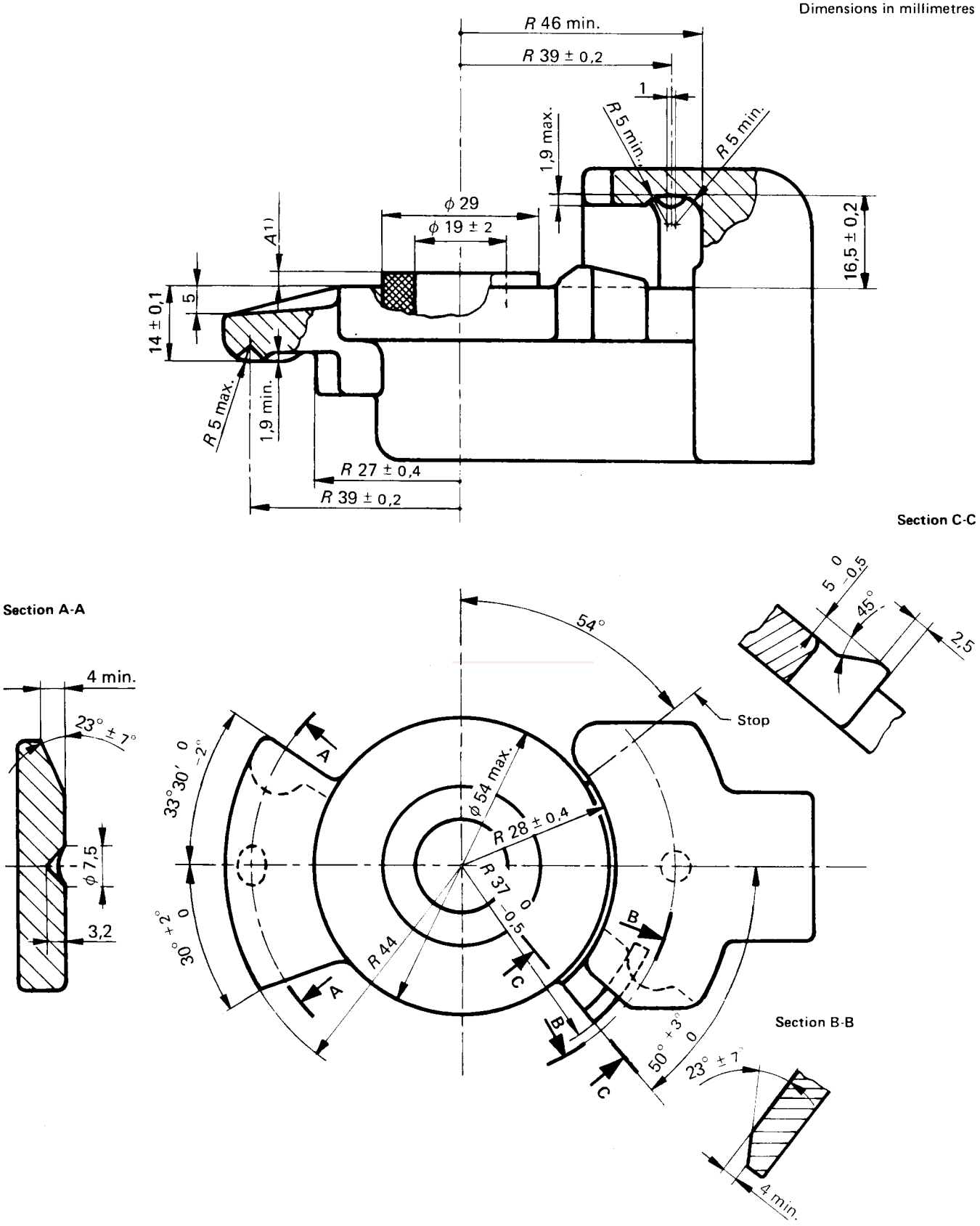

FIGURE 2 — **Coupling head for direct bracking line**

1) $A = \begin{cases} 2{,}7 \pm 0{,}5 \text{ for a resilient sealing ring;} \\ 4{,}5 \text{ max. for a spring-loaded seal; in this case, the opposite coupling head shall be provided with a resilient ring, for sealing purposes.} \end{cases}$

Dimensions in millimetres

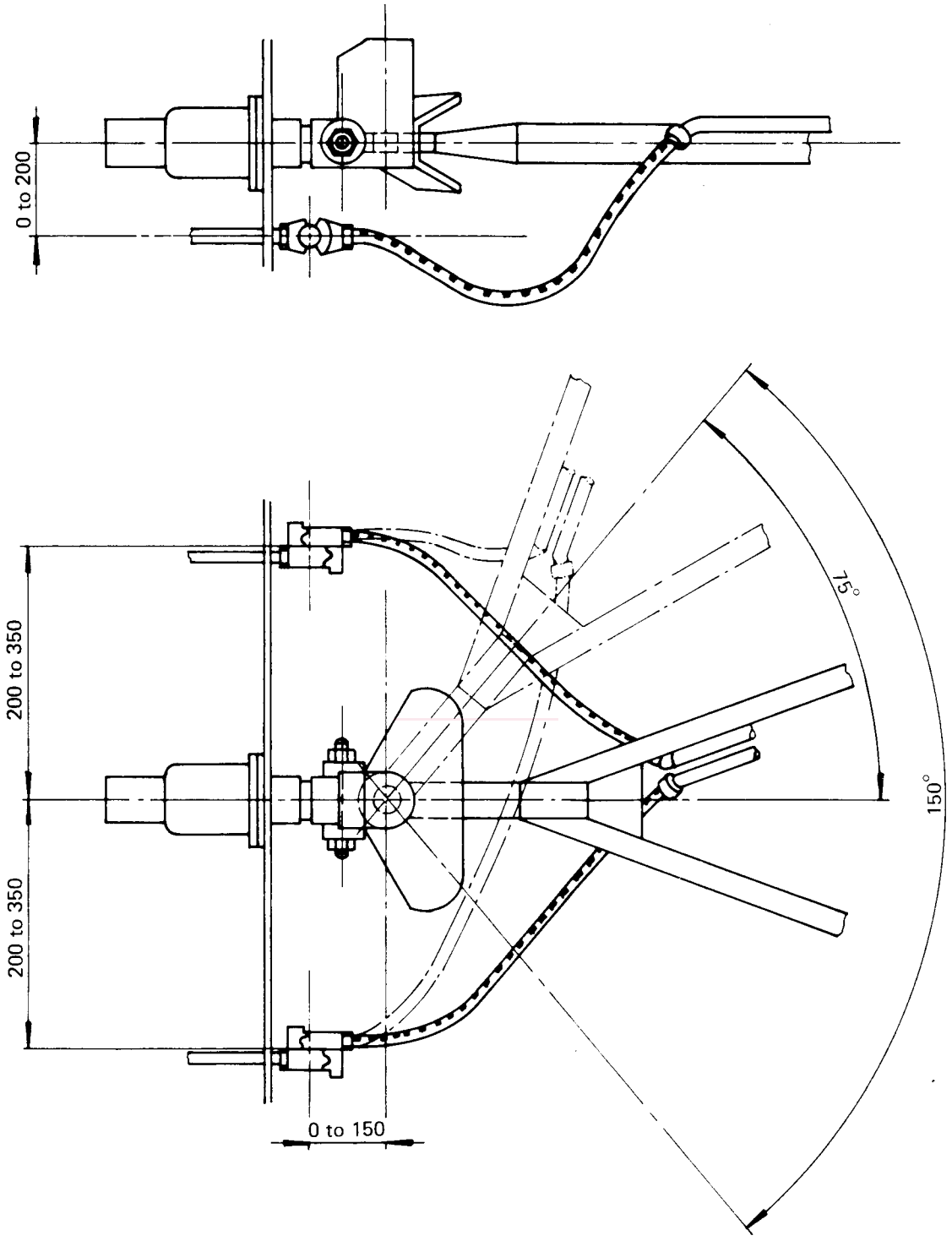

FIGURE 3 – **Location of coupling heads and of hoses**