International Standard 1728

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Road vehicles — Pneumatic braking connections between motor vehicles and towed vehicles — Interchangeability

Véhicules routiers — Liaisons de freinage pneumatique entre automobiles et véhicules tractés — Interchangeabilité

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Foreword

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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.

International Standard ISO 1728 was developed by Technical Committee ISO/TC 22, *Road vehicles*, and was circulated to the member bodies in February 1979.

It has been approved by the member bodies of the following countries :

Australia	Germany, F. R.	South Africa, Rep. of
Austria	Italy	Spain
Belgium	Japan	Sweden
Bulgaria	Korea, Dem. P. Rep. of	Switzerland
Chile	Korea, Rep. of	Turkey
Czechoslovakia	Netherlands	USA
Egypt, Arab Rep. of	Poland	USSR
France	Romania	

The member body of the following country expressed disapproval of the document on technical grounds :

United Kingdom

This second edition cancels and replaces the first edition (i.e. ISO 1728-1975).

Printed in Switzerland

Road vehicles — Pneumatic braking connections between motor vehicles and towed vehicles — Interchangeability

1 Scope

This International Standard specifies the requirements which ensure interchangeability of the pneumatic braking connections between motor vehicles and towed vehicles.

2 Field of application

This International Standard concerns vehicle combinations equipped with pneumatic braking systems with two lines : one control line and one supply line.

3 References

ISO 1102, *Road vehicles — Mechanical connections between towing vehicles and trailers — Interchangeability.*

ISO 1726, *Road vehicles — Mechanical coupling between tractors and semi-trailers — Interchangeability.*

ISO 4009, *Road vehicles — Towing vehicles — Mounting of electrical connections on rear cross members.*

4 Interchangeability requirements

4.1 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 pipelines 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 towed vehicle and that the ability to be coupled with all coupling heads corresponding to this International Standard is not compromised.

4.2 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 as well as details of design not shown are left to the discretion of the manufacturer.

4.3 Coupling head location (see figures 3 and 4)[1)]

4.3.1 Location of fixed coupling heads on the towing vehicle of a road train

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

For location of the coupling heads, see figure 3.

4.3.2 Location of fixed coupling heads on the semi-trailer

The coupling head for the control 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 supply line shall be on the right of this plane under the same conditions.

For location of the coupling heads, see figure 4.

4.3.3 Location of flexible pipe connections

The flexible pipe connections (with coupling head at the end of the pipe) are integrated components :

— of the trailer (in the case of a road train);

— of the tractor (in the case of an articulated road train).

1) In using pneumatic braking connections as specified in this International Standard and electrical connections as specified in ISO 4009, it is assumed that interference is avoided.

4.4 Colour coding for connections

— For the supply line : RED

— For the control line : YELLOW

The colour shall be related to the coupling head or to a clearly visible point close to the head, for example, pipes, an identification tag, etc.

4.5 Orientation of coupling heads

The coupling axis of the fixed coupling heads shall be horizontal; the vertical sealing face shall be located as follows, according to whether it concerns a road train or an articulated road train :

— truck : Towards the right when the vehicle is viewed from the rear.

— semi-trailer : Towards the left when the vehicle is viewed from the rear.

4.6 Length of flexible pipe connections[1)]

4.6.1 **Road train** (see figure 3)

The location and length of pipes depend on the location of the coupling heads and the fact that the maximum angle between the drawbar centre line and the longitudinal axis of the towing vehicle is 75° (see ISO 1102).

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

4.6.2 **Articulated road train** (see figure 4)

The location and length of pipes depend on the location of the coupling heads and the fact that the maximum angle of articulation is 90° (see ISO 1726).

For angles less than 75°, there shall be complete freedom of lateral movement, without any tension on the pipes or rubbing of the pipes against one another; for angles from 75 to 90°, lateral movement shall be possible without causing deterioration of the pipes.

1) An International Standard concerning the dimensions and the performance requirements of the coiled pipe assemblies for pneumatic braking connections is in preparation.

Dimensions in millimetres

	A	B
With resilient sealing ring (for heads "tractor" and "trailer")	2,7 ± 0,5	ϕ 19 ± 2
With mobile part providing for the opening of the automatic valve (see 4.1)	4,5 max.	ϕ 21 max. ϕ 11 min.

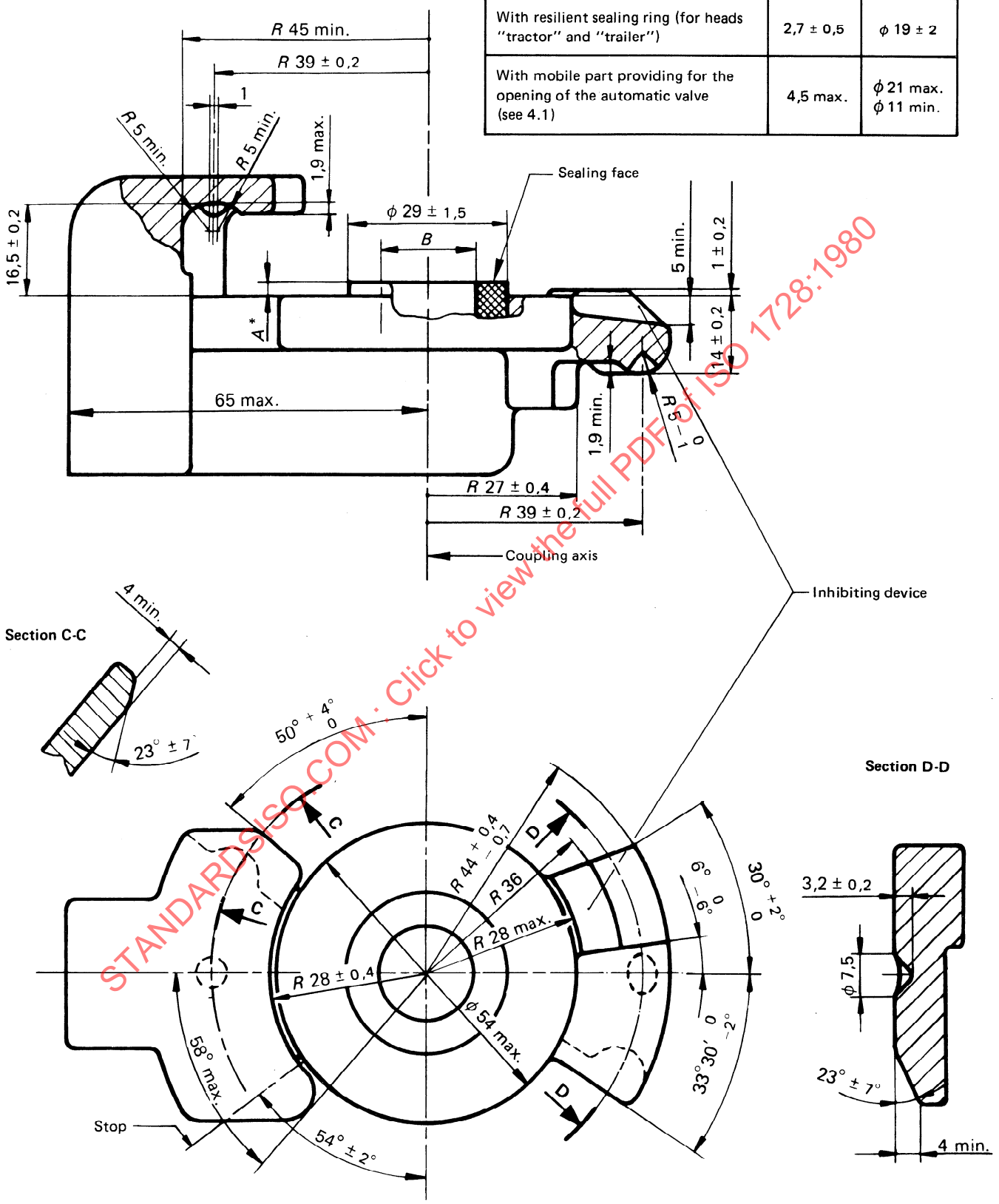

Figure 1 — Coupling head for supply line

* Dimension A — The opening of the automatic device must be assured even when two coupling heads with the most adverse tolerances for pushing down the mobile part are connected together. It must be possible to push down the sealing face until the dimension *A* is at zero.

	A	B
With resilient sealing ring (for heads "tractor" and "trailer")	2,7 ± 0,5	ϕ 19 ± 2
With mobile part providing for the opening of the automatic valve (see 4.1)	4,5 max.	ϕ 21 max. ϕ 11 min.

Dimensions in millimetres

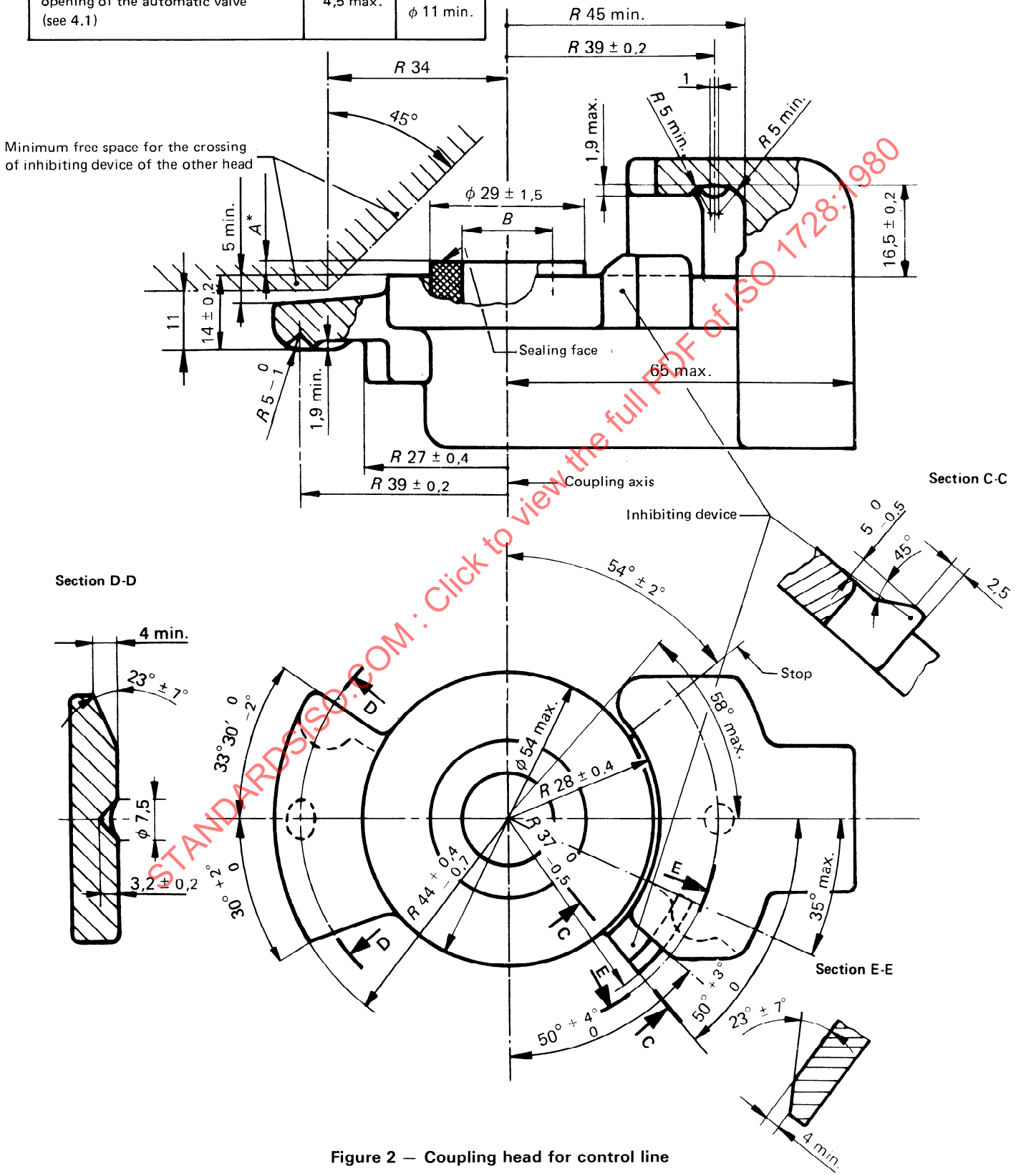

Figure 2 — Coupling head for control line

* Dimension A — The opening of the automatic device must be assured even when two coupling heads with the most adverse tolerances for pushing down the mobile part are connected together. It must be possible to push down the sealing face until the dimension *A* is at zero.