

Towing vehicle, trailer and semi-trailer pneumatic braking systems — “Contact” type couplings

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee AUE/11, Braking systems, upon which the following bodies were represented:

- British Friction Materials Council
- Department of Environment, Transport and the Regions
- Freight Transport Association
- Motor Industry Research Association
- National Caravan Council Ltd.
- Society of Motor Manufacturers and Traders Ltd.
- Transport and General Workers Union

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Foreword

This British Standard has been prepared by Technical Committee AUE/11. It supersedes BS AU 138a:1980 which is withdrawn. BSAU5:1963, although partially superseded by BS AU 138a:1980, remains current for vacuum braking systems.

NOTE From 1 April 1989 The Road Vehicles (Construction and Use) Regulations 1986 require that all new towing vehicles have air line couplings that incorporate self-sealing valves.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 9 and a back cover.

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1 Scope

This British Standard specifies the dimensions required for correct mating of “contact” type couplings for connecting the pneumatic braking system of towing vehicles to trailers or semi-trailers. If not specifically dimensioned, the couplings may follow a form to suit the manufacturer. This British Standard also specifies performance requirements for the couplings, identity markings, serviceability, inspections, and maintenance.

The layout and position of the couplings on the vehicle are defined in BS AU 195a:1991 and are not incorporated in this revised British Standard.

Rubber hose assemblies are specified in BS AU 110a:1995 and are not incorporated in this revised British Standard.

Coiled pipe assemblies are specified in ISO 7375-1:1996, ISO 7375-2:1998, ISO 7628-1:1998, and ISO 7628-2:1998, and are not incorporated in this revised British Standard.

This British Standard applies to two-line pneumatic braking systems and to three line pneumatic braking systems that include a secondary line.

This British Standard specifies C type and CA type “contact” couplings. C type couplings are used in two line braking systems, and the CA type exclusively for the secondary line of a three line braking system. Each of the assemblies specified in this British Standard are intentionally physically non-interchangeable. It is further intended that each of the assemblies cannot be dismantled or repaired.

This British Standard specifies the following:

- a) the form and dimensions of the mating parts of the C type “contact” coupling and for the self-sealing valve and valve lifter to be incorporated in the coupling, to enable it to be used on the control or on the supply line of a two-line or three-line pneumatic braking system;
- b) the form and dimensions of the mating parts of the CA type “contact” coupling and for the self-sealing valve incorporated into the female coupling, to enable it to be used on the secondary line of a three-line pneumatic braking system.

2 References

The following normative documents contain provisions that, through reference in this text, constitute provisions of this British Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. For undated references, the latest edition of the publication referred to applies.

BS 3643 (all parts), *ISO Metric screw threads*.

BS 7479:1991, *Methods for salt spray tests in artificial atmosphere*.

BS AU 195a:1991, *Specification for mounting electrical connections on rear cross member of towing vehicles*.

BS AU 110a:1995, *Specification for rubber hoses and hose assemblies for automotive air pressure braking systems*.

ISO 7375-1:1996, *Road vehicles — Coiled pipe assemblies for pneumatic braking connection between motor vehicles and towed vehicles — Part 1: Dimensions*.

ISO 7375-2:1998, *Road vehicles — Coiled pipe assemblies for pneumatic braking connection between motor vehicles and towed vehicles — Part 2: Performance requirements*.

ISO 7628-1:1998, *Road vehicles — thermoplastics tubing for air braking systems — Part 1: Dimensions and marking*.

ISO 7628-2:1998, *Road vehicles — thermoplastics tubing for air braking systems — Part 2: Mounting on vehicle and test methods*.

3 General requirements

3.1 Manufacturer's responsibility

The manufacturer of a semi-trailer shall supply and fit the couplings rigidly on to the fixed pipes of the trailer. For drawbar trailers, the manufacturer shall supply the couplings fitted to coiled pipe assemblies or flexible hoses that are connected to the fixed pipes of the trailer. The control line of each trailer shall be fitted with a coupling that incorporates a valve lifter. The manufacturer of the towing vehicle shall supply and fit on the towing vehicle, the couplings incorporating self-sealing valves, and for towing vehicles for semi-trailers, the coiled pipe assemblies. The manufacturer of the towing vehicle shall also provide suitable means to prevent water and dirt ingress when the vehicles are uncoupled and, if relevant, suitable means to stow the couplings to prevent damage.

3.2 Colour coding

The couplings shall be coloured or colour coded with a permanent tag or identifying collar as follows:

- a) control line (also called service or signal line): yellow;
- b) supply line (also called emergency line): red;
- c) secondary line (also called auxiliary line): blue.

3.3 Couplings

3.3.1 General

Types of coupling for each line and appropriate locations shall conform to Table 1. Couplings shall conform to the form and dimensions specified for the mating parts in Figures 1 to 6 as specified in Table 1. All couplings fitted to the towing vehicle, either directly or by means of flexible hoses or coiled pipe assemblies, shall incorporate a self-sealing valve.