

Specification for

**Dimensions of  
“contact” type  
couplings for air  
pressure braking  
systems on trailers and  
semi-trailers and their  
towing vehicles, and  
the arrangement  
of these couplings on  
articulated and  
drawbar combinations**

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# Foreword

This British Standard has been prepared under the direction of the Automobile Standards Committee and supersedes BS AU 5:1963, except in regard to its application to vacuum brake systems, and BS AU 138:1967. BS AU 138:1967 is withdrawn on publication of this edition. BS AU 5 is not withdrawn.

This edition of this standard makes no fundamental changes to these earlier standards but takes account of changes in normal practice since they were issued and clarifies certain details, particularly with regard to the operation of the self-sealing valves.

The form of coupling and layout of couplings specified in this standard constitute a system for use on any vehicle having a two- or three-line air pressure brake system.

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.

**Compliance with a British Standard does not of itself confer immunity from legal obligations.**

## Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 10 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

## Amendments issued since publication

| Amd. No. | Date of issue | Comments |
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## 1 Scope

This British Standard specifies the dimensions necessary to ensure the correct mating of “contact” couplings for connecting the air pressure brake systems of towing vehicles to trailers or semi-trailers, and the layout of these connections.

Two types of “contact” coupling are specified: the C type, and the CA type; these two types of coupling are intentionally physically non-interchangeable.

This standard specifies the following:

- a) the form and dimensions for a C type “contact” coupling and for the self-sealing valve, operating probe and operating adaptor that shall be fitted to one or the other of the members of the coupling to enable it to be used on the service or emergency line of a two-line or three-line air pressure system;
- b) the form and dimensions for a CA type “contact” coupling and for the self-sealing valve on the female coupling to enable it to be used on the secondary line of a three-line air pressure brake system;
- c) the general layout and location of flexible hoses/tubes and C type couplings for vehicles using a two-line air pressure brake system and of the additional secondary line and CA type coupling used in a three-line system.

## 2 References

The following standards publications are referred to in this standard.

BS 3643, *ISO metric screw threads — Part 3: Limits and tolerances for fine pitch threads (constant pitch series)*.

BS 5409, *Specification for nylon tube — Part 2: Plasticized and unplasticized nylon tubing types 11 and 12 for use primarily in the automobile industry*.

## 3 General requirements

**3.1 Introduction.** The requirements of this standard apply equally to both two- and three-line air pressure brake systems, except that in the case of a two-line system, the secondary line, its couplings and its stowing device shall be omitted.

**3.2 Manufacturers’ responsibility.** The manufacturer of the trailer shall supply and fit the pipes and couplings on the trailer and shall provide hoses in the case of drawbar trailers. Every trailer shall be fitted with an operating adaptor on the service line coupling whether or not the trailer is intended to be coupled to a towing vehicle with a self-sealing valve.

Whoever installs the fifth wheel or towing hook on the chassis shall supply, and fit on to the towing vehicle, the couplings and self-sealing valves, and for articulated operation, the flexible tubes and their stowing devices.

The manufacturer of the towing vehicle shall supply and fit temporary blanking plugs to the female threaded ends of the fixed pipes, ready for flexible tube connections, for articulated operation, or for the couplings, in the case of drawbar combinations.

NOTE When vehicles are uncoupled, the connecting tubes/hoses should be safely housed in their stowing devices.

**3.3 Colour coding.** If a colour is used for a line, it shall be as follows:

- a) *service line*, yellow or orange;
- b) *emergency line*, red;
- c) *secondary line*, blue.

### 3.4 Couplings

**3.4.1 General.** The type of coupling to be used on each line at the appropriate location shall be as specified in Table 1. The couplings shall comply with the form and dimensions specified in the figure referred to in the relevant entry of Table 1. As a requirement of Table 1, all couplings that are fitted to, or have a fixed connection with the towing vehicle shall have a self-sealing valve. With reference to Figure 1 to Figure 6, all couplings shall be threaded to a depth of 15 mm full length of thread. Some entries in Table 1 specify the inclusion of a self-sealing valve or operating adaptor in the coupling; the requirements for these components are as follows.

**3.4.2 Self-sealing valve.** A male coupling fitted with a self-sealing valve shall be so arranged to open only when the assembly is connected to a female coupling. A female coupling fitted with a self-sealing valve shall be so arranged to open only when the assembly is connected to a male coupling.

A male coupling (fitted with a self-sealing valve) on a service line shall be conspicuously marked to ensure that the assembly is coupled only to a female coupling that has an operating adaptor.

**3.4.3 Operating adaptor.** The operating adaptor fitted to the female coupling of a service line shall be of the type shown in Figure 2 and shall incorporate an integral tip. The tip shall be so arranged that it will open the self-sealing valve in the male member when the assembly is connected to it. For this purpose, the integral tip of the adaptor shall:

- a) be positioned according to the dimension specified in Figure 2(a); and
- b) be so shaped that it projects into the nozzle of the male member without fouling it; and