

Hose couplings for petrol, oil and lubricants —

Part 4: Specification for 100 mm quick-acting couplings: European type

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Institute of Petroleum	

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Foreword

This Part of BS 2464 has been prepared under the direction of the Mechanical Engineering Standards Committee and supplements Part 3 of the standard. It deals with the preferred hose coupling for use in the majority of the countries of the European Economic Community for road and rail tank wagons for the bulk transport of petrol, oil and lubricants.

This Part of this British Standard has been produced in order to provide the petroleum industry with a standard for a 100 mm quick-acting hose coupling interchangeable with the couplings manufactured in Germany. It has been necessary to issue a British Standard for this coupling on account of the failure of the European Committee for Standardization (CEN) to evolve a standard acceptable to the majority of participating members.

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 8, an inside back cover 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.

1 Scope

This British Standard specifies the requirements for materials, dimensions, testing and use of 100 mm European-type quick-acting hose couplings for use with petrol, oil and lubricants. The couplings are intended for use at temperatures between $-20\text{ }^{\circ}\text{C}$ and $+60\text{ }^{\circ}\text{C}$ and at pressures up to 20 bar ¹⁾.

2 References

The titles of the publications referred to in this standard are listed on the inside back cover.

3 Materials

3.1 Coupling components shall be made from one of the following materials, subject to pressure rating considerations, as agreed between the purchaser and the manufacturer:

- a) gunmetal castings (designation GM) complying with the requirements of BS 1400, grade LG2-C;
- b) brass castings (designation BR) complying with the requirements of BS 1400, grade SCB3;
- c) aluminium alloy castings (designation AL) complying with the requirements of BS 1490, grades LM25M, LM25TE, LM25TB7 or LM25TF, or aluminium forgings complying with the requirements of BS 1472.

For marking of the above designations, see clause 10.

NOTE In selecting a material from 3.1 attention should be given to the following factors.

- a) The avoidance of bimetallic corrosion due to the use of dissimilar metals in contact with each other. Guidance on undesirable combinations is given in PD 6484.
- b) The possibility of seizure between sliding surfaces through the use of similar metals.
- c) The risk of incendive sparking when materials containing aluminium, titanium, magnesium or manganese (or smears of these metals) impact on rusty iron. Reference should be made to Appendix B of BS 5345-1:1976.

3.2 Washers and seals shall be made of synthetic rubber (see BS 2494), rubber asbestos compound or leather, as specified by the purchaser.

3.3 Where aviation fuels are to be handled, materials shall comply with the requirements of the Ministry of Defence (PE) AQD, Materials Division.

3.4 All materials used shall be compatible with the liquid for which the coupling is to be employed.

4 Dimensions, location and use of coupling components

4.1 General. The variations permitted by 4.2 to 4.6 shall not affect interconnection with other couplings (other than grade selective couplings) manufactured in accordance with this standard, and shall not impair the performance of the couplings other than through changes in weight.

NOTE Dimensions of hose tail ends are specified in BS 2464.

4.2 Male half coupling. The dimensions of the male half coupling shall be as shown in Figure 1. This half coupling is the fundamental component; there shall be no variations from Figure 1 except in the locking arrangement, electrical bonding and for grade selection purposes (see clause 11).

NOTE It is recommended that the male half coupling, being the cheaper and more compact component, be installed on rail car outlets and on the standpipes of receiving tanks. Adequate clearance should be allowed for the operator to make the mating connection with the lever in the unlocked position.

4.3 Female half coupling. The dimensions of the female half coupling shall be as shown in Figure 2, except that variations are allowed for electrical bonding and for grade selection purposes (see clause 11).

Details of the lever and locking mechanism, which are not shown in Figure 2, shall be agreed between the purchaser and the manufacturer.

NOTE On road vehicles it is advantageous to fit the female half coupling on the outlets. Hoses are then equipped with male couplings at one end and female couplings at the other, giving the advantage that, when joining hoses, no adaptors are required.

4.4 Blanking cap. The dimensions of the blanking cap shall be as shown in Figure 3, except that variations are allowed in the locking arrangement and the position of the retainer hole.

4.5 Blanking plug. The dimensions of the blanking plug shall be as shown in Figure 4.

4.6 Sealing washer and sealing ring. The dimensions of the sealing washer and sealing ring shall be as shown in Figure 5. Sealing washers and sealing rings shall be supplied with each coupling.

5 Pipe threads

Each half coupling shall be threaded as shown in Figure 1 and Figure 2.

6 Electrical bonding

Means of electrical bonding between the coupling and the parent thread shall be provided.

NOTE Electrical bonding may be achieved by the use of grub screws as shown in Figure 1.

¹⁾ 1 bar = 10^5 N/m^2 = 100 kPa.