

Specification for

Hose clips (worm drive type) —

For general purpose use

Co-operating organizations

The Mechanical Engineering Industry Standards Committee, under whose supervision this British Standard was prepared, consists of representatives from the following Government departments and scientific and industrial organizations:

- Admiralty
- Air Ministry
- Associated Offices' Technical Committee
- Association of Consulting Engineers (Incorporated)
- Association of Mining Electrical and Mechanical Engineers
- British Chemical Plant Manufacturers' Association
- British Compressed Air Society
- British Electrical and Allied Manufacturers' Association
- British Engineers' Association
- British Gear Manufacturers' Association
- British Internal Combustion Engine Manufacturers' Association
- British Iron and Steel Federation
- British Railways Board
- Crown Agents for Oversea Governments and Administrations
- D.S.I.R. — National Engineering Laboratory
- Electricity Council, the Generating Board and the Area Boards in England and Wales
- Engineering Equipment Users' Association
- Gas Council
- High Commission of India
- Institute of Marine Engineers
- Institute of Petroleum
- Institution of Civil Engineers
- Institution of Gas Engineers
- Institution of Heating and Ventilating Engineers
- Institution of Mechanical Engineers
- Institution of Mechanical Engineers (Automobile Division)
- Institution of Production Engineers
- Locomotive and Allied Manufacturers' Association of Great Britain
- Machine Tool Trades Association
- Ministry of Labour (H.M. Factory Inspectorate)
- Ministry of Power
- Ministry of Public Building and Works
- Ministry of Transport
- National Coal Board
- National Physical Laboratory (D.S.I.R.)
- Radio Industry Council
- War Office*

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The Government department marked with an asterisk in the above list, together with manufacturers of hose clips, were directly represented on the committee entrusted with the preparation of this standard.

Amendments issued since publication

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Foreword

This standard makes reference to the following British Standards:

BS 970, *Wrought steels*.

BS 1449, *Steel plate, sheet and strip*.

BS 1706, *Electroplated coatings of cadmium and zinc on iron and steel*.

BS 2952, *Rubber hose for i.c. engine cooling systems*.

SP 91 and SP 92, *Hose clips (worm drive type) for aircraft*.

Some short time ago British Standards for hose clips of the worm drive type were produced specifically to meet high duty requirements imposed by use in the aircraft industry. These were published under British Standard (Aircraft Series) numbers SP 91 and SP 92¹⁾.

This work gave rise to the demand for a British Standard relating to hose clips of similar designs but intended for general purpose industrial and domestic use.

In response to the demand, this British Standard has been prepared under the authority of the Mechanical Engineering Industry Standards Committee. In accordance with BSI policy concerning the introduction of metric standards, this inch standard has been declared obsolescent. It will continue in use until such time that inch series hose clips are no longer specified.

NOTE The values expressed in British units are to be regarded as the standard. For convenience, tables are given in the Appendix to provide a ready means of calculating the approximate metric equivalents. More accurate conversions should be based on the tables in BS 350, "*Conversion factors and tables*".

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.

¹⁾ SP 91 and SP 92, "*Hose clips (worm drive type) for aircraft*".

1 Scope

This British Standard relates to the dimensions, materials, finish and testing of worm drive hose clips of the following individual types for general purpose use.

P Type Hose clips with pierced bands.

S Type Hose clips with serrated bands.

The standard does not relate to worm drive hose clips for aircraft use for which reference should be made to Aircraft Standards SP 91 and SP 92²⁾.

2 Nomenclature

For the purposes of this British Standard the nomenclature of Figure 1 has been adopted.

3 Designating size

The designating size of a hose clip shall be equal to the maximum external diameter of hose for which the clip is designed.

4 Materials

The following materials shall be used in the manufacture of hose clips:

- a) *Band*. From low carbon steel conforming to BS 1449³⁾ En2C.
- b) *Housing*. From low carbon steel conforming to BS 1449³⁾ En2A.
- c) *Screw*. From free cutting steel conforming to BS 970⁴⁾ En1A or B.
- d) *Washers (or retaining plates)*. From low carbon steel conforming to BS 1449³⁾ En2.

By agreement between purchaser and manufacturer, materials superior to those specified above may be used provided that the finished hose clips conform, in all other respects, with the requirements of this British Standard.

5 Manufacture

a) *Band*. The band shall have transverse serrations or slots centrally disposed, commencing at the free end and extending for a length (depending upon the size of the clip) sufficient to enable the clip to be tightened on to the smallest diameter of hose for which it is designed.

i) *Serrated bands*. The serrations shall be either rolled or milled. They shall not penetrate through the band nor shall they be longer than half the width of the band. The form and pitch of the serrations may be suited to the form and pitch of the screw [see Sub-clause 5 c) i)] and the dimensions of the band shall be in accordance with Figure 2a.

ii) *Pierced bands*. The pierced slots shall be not longer than half the width of the band. The form and pitch of the slots shall be suited to the form and pitch of the screw [see Sub-clause 5 c) ii)] and the dimensions of the band shall be in accordance with Figure 2b.

b) *Housing*. The housing shall be positively and permanently fixed in a rigid manner to one end of the band and for the purpose of controlling sideways and axial movement of the screw the housing shall have a thrust washer and/or retaining plate attached to each end or to a recess in the screw. The housing shall be of pressed steel, of rigid construction.

c) *Screw*. The screw shall conform to the following requirements:

- i) On clips having serrated bands, the minimum size of screw shall be of $\frac{1}{4}$ in diameter, having a 14 t.p.i. single-start, right-hand thread of square or Acme form.
- ii) On clips having pierced bands, the minimum size of screw shall be of $\frac{1}{4}$ in diameter, having a 10 t.p.i. single-start, right-hand thread of square or buttress form.

NOTE Slotted head screws are shown in the various illustrations in this British Standard. By arrangement between purchaser and manufacturer other forms of screw head are permissible provided that hose clips so fitted conform in every other respect to this British Standard.

²⁾ SP 91 and SP 92, "Hose clips (worm drive type) for aircraft".

³⁾ BS 1449, "Steel plate, sheet and strip".

⁴⁾ BS 970, "Wrought steels".