

BRITISH STANDARD 460 : 1964

**SPECIFICATION FOR
CAST IRON
RAINWATER GOODS**

BRITISH STANDARDS INSTITUTION

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B.S. 460 : 1964

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INCORPORATED BY ROYAL CHARTER

BRITISH STANDARDS HOUSE, 2 PARK ST., LONDON, W.1

TELEGRAMS: STANDARDS LONDON W1

TELEPHONE 01-629 9000

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THIS BRITISH STANDARD, having been approved by the Hardware and Ironmongery Industry Standards Committee and endorsed by the Chairman of the Building Divisional Council, was published in its present form under the authority of the General Council on 30th November, 1964.

B.S. 460. First published, September, 1932.

First revision, December, 1944.

B.S. 1205, Part 1, First published, January, 1945. } *Superseded*
B.S. 1205, Part 2, First published, October, 1945. } *by 1964*
} *revision*

B.S. 460. Second revision, November, 1964.

The Institution desires to call attention to the fact that this British Standard does not purport to include all the necessary provisions of a contract.

In order to keep abreast of progress in the industries concerned, British Standards are subject to periodical review. Suggestions for improvements will be recorded and in due course brought to the notice of the committees charged with the revision of the standards to which they refer.

A complete list of British Standards, numbering over 4000, fully indexed and with a note of the contents of each, will be found in the British Standards Yearbook. The B.S. Yearbook may be consulted in many public libraries and similar institutions.

This standard makes reference to the following British Standards:

B.S. 416. Cast iron spigot and socket soil, waste and ventilating pipes (sand cast and spun), fittings and accessories.

B.S. 1452. Grey iron castings.

British Standards are revised, when necessary, by the issue either of amendment slips or of revised editions. It is important that users of British Standards should ascertain that they are in possession of the latest amendments or editions.

The following B.S.I. references relate to the work on this standard:
Committee reference HIB/3 Draft for comment D/63/777

CO-OPERATING ORGANIZATIONS

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

- *British Ironfounders Association
- British Lock and Latch Manufacturers' Association
- British Plastics Federation
- British Waterworks Association
- Cast Butt Hinge Manufacturers' Association
- Copper Development Association
- *D.S.I.R.—Building Research Station
- Guild of Architectural Ironmongers
- *Institution of Municipal Engineers
- *London County Council
- Metal Window Association Ltd.
- *Ministry of Public Building and Works
- National Brassfoundry Association
- *National Federation of Builders' and Plumbers' Merchants
- National Federation of Building Trades Employers
- National Federation of Ironmongers
- *Royal Institute of British Architects
- *The Royal Institution of Chartered Surveyors
- Zinc Development Association

The Government departments and scientific and industrial organizations marked with an asterisk in the above list, together with the following, were directly represented on the committee entrusted with the preparation of this standard:

- Associated Master Plumbers and Domestic Engineers
- Association of Public Health Inspectors
- British Cast Iron Research Association
- British Constructional Steelwork Association
- Gas Council
- Institute of Plumbing
- Institution of Public Health Engineers
- National Association of Iron and Steel Stockholders

BRITISH STANDARD SPECIFICATION FOR CAST IRON RAINWATER GOODS

FOREWORD

The present revision of this British Standard is issued under the authority of the Hardware and Ironmongery Industry Standards Committee. This standard was previously designated by two British Standard numbers, B.S. 460 and B.S. 1205* : 1948, although it was published under one cover. It is now considered that the reference to B.S. 1205 can be omitted and the first B.S. number B.S. 460 used to cover all rainwater goods manufactured from cast iron. B.S. 460 and B.S. 1205 have accordingly been completely revised. In so far as it has been possible the general lay-out of the revision has been patterned on other British Standards for cast iron pipes and fittings.

Revisions have been made in line with current practice. The term 'light' referring to the lightest grade of pipe is no longer used. This standard therefore provides details for rainwater pipes and fittings for external use in one grade only viz. $\frac{1}{8}$ inch thick. Requirements for rainwater pipes and fittings of a heavier section than $\frac{1}{8}$ inch will be found in B.S. 416, 'Cast iron spigot and socket soil, waste and ventilating pipes (sand cast and spun), fittings and accessories'.

The standard provides an alternative 'A' or 'B' type socket profile which allows interchangeability between pipes manufactured by the sand cast process or spun process. Fittings are common to both types.

To achieve economy in cutting, double socket lengths of pipe have been included.

Owing to the restricted use of O.G. gutters and fittings, except in the maintenance of existing installations, the opportunity has been taken in this revision to transfer the section dealing with these units to an Appendix†. This allows details for O.G. gutters and fittings to remain in the standard for reference.

NOTE. Metric equivalents are given in Appendix B. The figures in British units are to be regarded as the standard. The metric conversions are approximate. More accurate conversions should be based on the tables in B.S. 350, 'Conversion factors and tables'.

SPECIFICATION

SCOPE

1. This British Standard deals with

- (i) Rainwater pipes, fittings and accessories (Figs. 1 to 9).
- (ii) Half-round gutters, fittings and accessories (Figs. 10 to 15).

It does not provide requirements for O.G. gutters, fittings and accessories but full particulars of these are given in Appendix A for reference.

* B.S. 1205, incorporated in B.S. 460, 'Cast iron rainwater goods'.

† Appendix A.

QUALITY OF MATERIAL

2. The metal used for the manufacture of cast iron rainwater pipes, gutters and fittings shall be suitable for the method of manufacture and shall be of a quality not less than that specified in B.S. 1452, Grade 10*.

MANUFACTURE

3. Rainwater pipes shall be manufactured by the sand cast or spun processes with Type A or Type B sockets, together with fittings, manufactured by the sand cast process.

NOTE. The majority of pipe fittings have Type A sockets. A limited range of Type B sockets is available.

FREEDOM FROM DEFECTS

4. Castings shall be sound and free from defects which render them unsuitable for their purpose.

Every pipe and fitting shall ring clearly when tested for soundness by being struck with a light hammer.

DIMENSIONS, WEIGHTS AND TOLERANCES

5. *a.* Straight pipes shall comply with dimensions shown in Table 1. They shall have an overall length of 6 ft and shall be subject to the following tolerances:

Weight	— 10 per cent
Thickness	$\pm \frac{1}{32}$ in
Length	$\pm \frac{1}{2}$ in

b. Pipe fittings and their sockets and spigots shall conform to the thickness and other dimensions specified for the corresponding parts of straight pipes, subject to the following tolerances:

Thickness	$\pm \frac{1}{32}$ in
Length	$\pm \frac{1}{8}$ in

Doubled socketed lengths of pipe shall comply with the requirements and tests laid down for the corresponding spigot and socket pipe.

c. Half-round gutters shall conform to the dimensions indicated in the various tables, subject to the following tolerances:

Weight	not less than specified
Thickness	$\pm \frac{1}{32}$ in
Length	$\pm \frac{1}{2}$ in

d. Half-round gutter fittings shall conform to the dimensions indicated in the tables, subject to the following tolerances:

Weight	not less than specified
Thickness	$\pm \frac{1}{32}$ in
Length	$\pm \frac{1}{8}$ in

B.S. 1452, 'Grey iron castings'.

EARS

6. Pipes and fittings may be supplied with or without ears as ordered by the purchaser.

If ears are required they shall be supplied as follows:

- a. *Sand cast pipes.* Cast during the manufacture of the pipe.
- b. *Spun pipes.* As loose bands, or rigidly attached to the socket of the pipe, or cast integrally with the pipe during the spinning operation.

If projecting ears are required they shall comply with the dimensions given in Table 1 and have the following projections:

Pipes up to 3 in nominal size $1\frac{1}{4}$ in (from back of ear to back of pipe)

Pipes over 3 in nominal size $1\frac{1}{2}$ in (from back of ear to back of pipe)

FINISH

7. Normally rainwater pipes, gutters and fittings shall be supplied painted with a quick drying grey paint as a protective coating during storage and transit. This shall not be considered a primary or base coat.

When pipes, fittings and gutters are required with a finish other than that indicated above they shall be specially ordered.

INSPECTION

8. The representative of the purchaser shall have free access to the works of the manufacturer at all reasonable times; he shall be at liberty to inspect the manufacture at any stage and to reject any material, finished pipe or fitting that does not conform to the terms of this specification.

The manufacturer shall, at his own cost, supply labour and appliances for such inspection as may be carried out on his premises.

Should the metal used in casting or manufacture of the pipes, gutters, fittings and accessories included in this British Standard not comply with the requirements laid down, or should any of the products not conform to the dimensions or other requirements, the product or products so failing, may be deemed not to comply with this British Standard and any marking indicating compliance shall be obliterated.

MARKING

9. a. The cast pipe or fitting shall, where practicable, have cast upon it in a legible manner the appropriate figure indicating the nominal size together with the manufacturer's name or trade mark and the number of this British Standard, e.g.

4

Manufacturer's name or trade mark

B.S. 460

6

b. Every spun pipe shall be marked as required in *a* above except that the letter ' S ' shall be added to the marking.

Pipes manufactured by the spinning process shall be deemed to comply with the marking requirements if the particulars required in this clause are legibly marked on each pipe instead of being cast on.

c. Gutters and fittings shall, when practicable, have cast upon them in a legible manner a number indicating the nominal size, the manufacturer's name or trade mark and the number of this British Standard, e.g.

4

Manufacturer's name or trade mark

B.S. 460

The mark B.S. 1205 on gutters and gutter fittings may be accepted as indicating compliance with the requirements of this British Standard.

NOTE. The mark B.S. 460 on the product is a claim by the manufacturer that it complies with the requirements of the standard.

The British Standards Institution is the owner of the registered certification trade mark shown below. This mark can be used only by manufacturers licensed under the certification mark scheme operated by the B.S.I. The presence of this mark on a product is an assurance that the goods have been produced to comply with the requirements of the British Standard under a system of supervision, control and testing operated during manufacture and including periodical inspections at the manufacturer's works in accordance with the certification mark scheme of the B.S.I.

Further particulars of the terms of licence may be obtained from the Director, British Standards Institution, 2 Park Street, London, W.1.



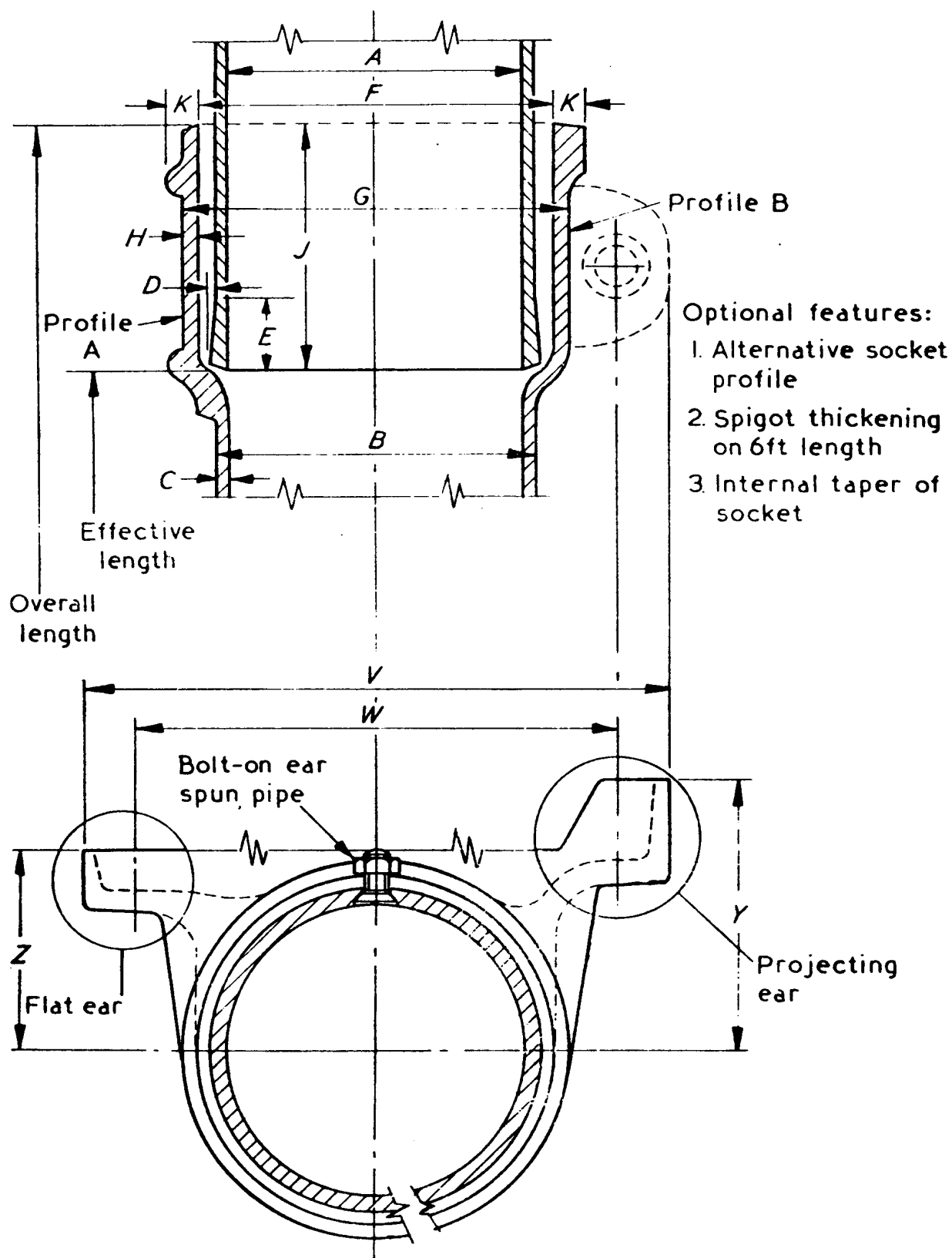


Fig. 1. Pipes, sockets and ears