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# Domestic front entrance gates

## Part 1. Specification for metal gates

ICS 91.090

# Committees responsible for this British Standard

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Association of Security Consultants  
 British Iron and Steel Producers' Association  
 Cold Rolled Sections Association  
 Country Landowners Association  
 Countryside Commission  
 County Surveyors Society  
 Department of the Environment (Property Holdings)  
 Electricity Association  
 European Fencing Industry Association  
 Fencing Contractors' Association  
 Institute of Leisure and Amenity Management  
 National Fencing Training Authority  
 Royal Institute of Chartered Surveyors  
 Scottish Office (Agriculture and Fisheries Department)

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## Foreword

This Part of BS 4092 has been prepared under the direction of Technical Committee B/201, Fences and gates. It supersedes BS 4092 : Part 1 : 1966, which is withdrawn. Part 2 was withdrawn in 1995.

This Part of the standard deals with domestic metal gates such as those commonly used as single or double front entrance gates for a house or a garage. The specification is aimed at setting down functional requirements and is in no way concerned with design apart from such requirements.

This revision of BS 4092 : Part 1 brings previously specified dimensions in line with current metric sizing and also updates the references. There are no technical changes.

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

# Specification

## 1 Scope

This Part of BS 4092 specifies dimensional, material and constructional requirements for domestic front entrance gates.

It applies to metal front entrance gates of tubular frame, mild steel or wrought iron flat frame constructions. It states certain functional requirements to which the design should conform, but does not specify detailed design.

Annex A lists the information to be obtained for the purpose of an order or an enquiry.

## 2 Normative references

This Part of BS 4092 incorporates, by dated or undated reference, provisions from other publications. These normative references are made at the appropriate places in the text and the cited publications are listed on the inside back cover. For dated references, only the edition cited applies; any subsequent amendments to or revisions of the cited publication apply to this Part of BS 4092 only when incorporated in the reference by amendment or revision. For undated references, the latest edition of the cited publication applies, together with any amendments.

## 3 Information and requirements to be agreed and to be documented

The following items to be agreed between the contracting parties, which are specified in the clauses referred to, shall be fully documented. Both the definitive requirements specified throughout the standard and the following documented items shall be satisfied before a claim of compliance can be made and verified.

- a) Gate size for rising drives (see 4.1).
- b) Panel infilling (see 7.2).
- c) Protective treatment (see clause 9).

NOTE. See also annex A.

## 4 Gate size

### 4.1 Height

The top of the gate frame shall be a minimum of 0.9 m above the ground when hung with a ground clearance of not more than 50 mm. For rising drives, where extra clearance may be required, the minimum height and maximum clearance shall be agreed between the manufacturer and purchaser.

### 4.2 Width

For new works, the gate width between the posts or piers shall be one of the values given in table 1.

**Table 1. Width of gates**

Type of gate	Width between posts or piers (m)
Single gates	0.9
	1.0
	1.1
Double gates	2.3
	2.4
	2.7

For double gates the leaves shall be of equal width.

NOTE. For existing front entrance gateways, the widths given in table 1 are preferred.

## 4.3 Clearance

The construction of the gate shall provide an effective clear opening that does not reduce the width given in 4.2 by more than 75 mm for single gates and 100 mm for double gates.

## 5 Materials

Gates shall be constructed of mild steel or wrought iron conforming to one of the following:

- a) mild steel of square or flat section conforming to BS EN 10025 : 1993, minimum grade SJ 275;
- b) mild steel tube conforming to BS 1387;
- c) mild steel structural hollow sections conforming to BS 6363.

## 6 Construction

### 6.1 Frames

Gates shall have a continuous framework. Gate frames shall be truly square, and shall be welded all round at junctions in accordance with BS 5135.

### 6.2 Infilling

Straight or shaped bars shall be welded all round at junctions with the frame in accordance with BS 5135.

#### 6.2.1

Scrollwork shall be fully welded along the top side at junctions in accordance with BS 5135.

#### 6.2.2

Tubular or hollow section infilling shall be welded all round at junctions in accordance with BS 5135.

### 6.3 Workmanship

Gates shall have no rough, sharp or jagged edges. Welding slag shall be removed.

## 7 Dimensions of components

### 7.1 Framework

The minimum dimensions of the components in the frame shall be as follows.

- a) Except for gates 2.7 m wide, a solid rectangular section shall have minimum dimensions 20 mm × 10 mm. For gates 2.7 m wide the minimum section shall be 25 mm × 10 mm.
- b) A solid square section shall have minimum dimensions 16 mm × 16 mm.
- c) A tubing or hollow section shall have a minimum thickness of 2.0 mm, and either:
  - 1) a minimum outside diameter of 20 mm for tube or circular hollow sections; or
  - 2) minimum dimensions 20 mm × 20 mm for square hollow sections.

### 7.2 Infilling

The minimum dimensions of the components used in the infill shall be as follows.

- a) Straight or shaped bars shall have minimum dimensions 12 mm × 12 mm or 14 mm × 14 mm, or a minimum diameter of 12 mm.
- b) Ornamental scrollwork shall have minimum dimensions 13 mm × 3 mm.
- c) Tubing or hollow section shall have a minimum thickness of 1.8 mm.
- d) Panel infilling other than that in a), b) or c) shall be agreed between the purchaser and the supplier.

NOTE. Other types of infilling such as mesh may be used.

## 8 Hanging and latching fittings

### 8.1 Hanging fittings

Hanging fittings shall be either welded all round or shall be bolted to the gate frame. The clearance between the pins and the eyes shall be such as to provide a reasonable fit. The material forming any eye for the hinge shall have minimum dimensions of 20 mm × 5 mm formed into an eye, or 25 mm × 10 mm holed to fit the pin. Hinge pins shall be not less than 12 mm in diameter.

NOTE. The hinge pin fittings should be reversible, so that the top hinge may be installed with the hinge pin pointing downwards. This should stop the gate from being lifted off its hinges once installed.

### 8.2 Fastenings

The fastenings shall be such that, when closed, the gates are held securely in position. If flat latch bars are used, they shall be not less than 25 mm × 6 mm.

### 8.3 Slam plates and drop bolts

Double gates shall be provided with a slam plate of minimum thickness 6 mm. One leaf shall be provided with a drop bolt of minimum diameter 12 mm with an adequate ground socket.

NOTE. The provision of a centre stop should be considered where gates open onto public areas.

## 9 Protective treatment

The protective treatment shall be agreed between the purchaser and the supplier. All rust and loose scale shall be removed from the surfaces before protective treatment.

Protective treatment shall be one of the following.

- a) One works coat of steel priming paint conforming to BS 5493.
- b) A metal coat conforming to BS 2569 : Part 1.
- c) Hot dip galvanizing conforming to BS 729.

NOTE 1. This standard does not specify the finishing coats; these should be applied after erection.

NOTE 2. The protective treatment specified in item a) is not intended to serve as a finishing coat. Immediately after erection it should be rubbed down and made good. It is also recommended that a further coat of primer should be applied to ensure adequate coverage of the profile prior to application of the finishing coats.

## 10 Marking

Metal gates shall be legibly marked by a stencil, or labelled with an adhesive label, with the following information:

- a) the manufacturer's name and/or trade mark;
- b) the number and date of this standard, i.e. BS 4092 : Part 1 : 1996.<sup>1)</sup>

<sup>1)</sup> Marking BS 4092 : Part 1 : 1996 on or in relation to a product represents a manufacturer's declaration of conformity, i.e. a claim by or on behalf of the manufacturer that the product meets the requirements of the standard. The accuracy of the claim is solely the claimant's responsibility. Such a declaration is not to be confused with third party certification of conformity, which may also be desirable.

## Annex

### Annex A (informative)

#### Information to be obtained for the purpose of an order or an enquiry

The following information should be obtained by the supplier in connection with any order or enquiry for domestic metal gates conforming to this standard.

- a) The width of the opening between the pillars or posts. The width of the gate required should not be stated; this should be determined by the manufacturer in accordance with the provisions of this standard.
- b) The height and maximum clearance of the gate for rising drives, if the manufacturer's standard designs are not required.
- c) Details of infilling, if the manufacturer's standard designs are not required.
- d) Details of the protective treatment required.
- e) For a single gate, whether it is to be hung from the left hand pillar when viewed from the outside (left hand), or from the right hand pillar (right hand).
- f) For double gates, whether the latch is fixed on the right hand gate when viewed from the outside and whether a centre stop is required.
- g) Which of the following fittings are required:
  - 1) for building into brickwork;
  - 2) for screwing into wooden posts;
  - 3) the size and type of fittings for bolting through concrete, wooden or metal posts.

It is not advisable to order gates to fit existing fittings as it is not generally possible, with the facilities available on site, to measure the position of the pins with sufficient accuracy. It is preferable to remove existing fittings and to re-set the fittings provided with the gate.





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## List of references (see clause 2)

### Normative references

#### BSI publications

BRITISH STANDARDS INSTITUTION, London

- |                         |   |
|-------------------------|---|
| BS 729 : 1971           | <i>Specification for hot dip galvanized coatings on iron and steel articles</i>   |
| BS 1387 : 1985          | <i>Specification for screwed and socketed steel tubes and tubulars and for plain end steel tubes suitable for welding or for screwing to BS 21 pipe threads</i> |
| BS 2569                 | <i>Specification for sprayed metal coatings</i>   |
| BS 2569 : Part 2 : 1965 | <i>Protection of iron and steel against corrosion and oxidation at elevated temperatures</i>  |
| BS 6363 : 1983          | <i>Specification for welded cold formed steel structural hollow sections</i>  |
| BS 5135 : 1984          | <i>Specification for arc welding of carbon and carbon manganese steels</i>  |
| BS 5493 : 1977          | <i>Code of practice for protective coating of iron and steel structures against corrosion</i>   |
| BS EN 10025 : 1993      | <i>Hot rolled products of non-alloy structural steels. Technical delivery conditions</i>  |

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