

Australian Standard<sup>®</sup>

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**PREFERRED DIMENSIONS  
OF WROUGHT METAL  
PRODUCTS**

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METAL BARS, SHEETS AND SHAPES (Aluminium and Aluminium  
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The following scientific and industrial organizations and departments were officially represented on the committee entrusted with the preparation of this standard:

Aluminium Development Council  
Australian Lead Development Association  
Australian Zinc Development Association  
Bureau of Steel Manufacturers of Australia  
Copper and Brass Information Centre

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## PREFACE

This standard was prepared under the direction of the Association's Metals Standards Board by the Preferred Metric Sizes Panel which includes representatives from the iron and steel, copper, aluminium, zinc and lead industries. The standard is a revision of and supersedes the following Australian standards which have been combined into one standard for the convenience of users:

- AS 1027 Preferred Metric Sizes of Wrought Ferrous and Non-ferrous Round, Square and Hexagonal Bar and Rod for General Engineering Purposes
- AS 1123 Preferred Metric Sizes of Wrought Ferrous and Non-ferrous Sheet and Strip
- AS 1153 Preferred Metric Sizes of Ferrous and Non-ferrous Round Wire for General Engineering Purposes
- AS 1184 Preferred Metric Sizes of Ferrous and Non-ferrous Plate
- AS 1256 Preferred Metric Sizes of Hot-rolled Flat Steel Bars and Wrought Non-ferrous Rectangular Bars

Since the publication of the above standards, experience has been gained in the manufacture of metric products, and the requirements of the various sectors of industry have become more clearly defined. The sizes included in the standard reflect the up-to-date requirements of industry, and the committee also took cognizance of overseas practice.

This standard requires reference to the following document:

SAA MP19 Report on Preferred Numbers and Their Use

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## STANDARDS ASSOCIATION OF AUSTRALIA

**Australian Standard**  
for  
**PREFERRED DIMENSIONS OF WROUGHT METAL PRODUCTS**

**1 SCOPE.** This standard establishes preferred sizes of wrought metal products manufactured from steel (hot-rolled and bright), copper, copper alloys, aluminium, aluminium alloys, zinc and zinc alloys.

It applies to round, square, hexagonal and rectangular metal products conventionally known as rod, wire and bar, and to flat metal products conventionally known as plate, sheet, strip and foil.

**NOTES:**

1. For the purposes of this standard, 'bright steel' is intended to cover cold-drawn, cold-sized and cold-finished steel.
2. Information on preferred sizes is given in Appendix A.

**2 APPLICATION.** The sizes included in this standard provide a rationalized series of sizes for products used for general purposes, and are intended to provide guidance in the selection of sizes.

It is recognized that for some applications, precise engineering requirements dictate a need for sizes other than those listed in this standard. It should be noted that sizes not listed do not preclude their production.

NOTE: Supply of such sizes is subject to negotiation. When negotiating these sizes, it is recommended that selection be in accordance with Clause 3.

It should also be noted that all the sizes included in this standard are not necessarily produced in all metals and grades. Manufacturers and distributors should be consulted in respect of availability of particular sizes for a given metal product.

**3 SELECTION OF SIZES.** Wherever tables show 'First preference' and 'Second preference' sizes, or where preferences are given for width and length of flat-rolled products, it is recommended that the first preference list be used for selection of sizes. If no size in the first preference list is suitable, only then should the second preference list be consulted.

For sizes not listed in the tables, it is recommended that selection of intermediate sizes be in accordance with Paragraph A3 of Appendix A.

**4 CROSS-SECTIONAL DIMENSIONS.**

**4.1 General.** The preferred sizes are given in the following tables:

Table 1 Preferred sizes of round metal products

Table 2 Preferred sizes of square metal products

Table 3 Preferred sizes of hexagonal metal products

Table 4 Preferred sizes of rectangular metal products

Table 5 Preferred thicknesses of flat metal products

**4.2 Basis of Tables (see Appendix A).** Most of the preferred sizes are derived from the Renard (R) series of preferred numbers, but some deviations occur as the result of rounding or specific requirements for sizes which do not follow the preferred series.

**4.3 Tolerances.** The tolerances on the dimensions of wrought metal products included in this standard shall be those specified in the product standard, as appropriate.

**5 WIDTH OF FLAT METAL PRODUCTS.** Width of flat metal products shall be as follows:

- (a) *Steel plate.* Range 900 mm to 3000 mm, increments of 100 mm.
- (b) *Copper and copper alloy plate.* Range 300 mm to 1500 mm, increments of 300 mm.
- (c) *Aluminium and aluminium alloy plate.* Range 600 mm to 2700 mm.
  - (i) *First preference.* Increments of 300 mm.
  - (ii) *Second preference.* Increments of 50 mm.
- (d) *Ferrous and non-ferrous sheet and strip.*
  - (i) *First preference.* Increments of 100 mm.
  - (ii) *Second preference.* Increments of 5 mm.

NOTE: Increments less than 5 mm are subject to special negotiation.

**6 LENGTH OF FLAT METAL PRODUCTS.** Length of flat metal products shall be as follows:

- (a) *Steel plate.* Increments of 300 mm.
- (b) *Copper and copper alloy plate.* Range 900 mm to 3000 mm, increments of 300 mm.
- (c) *Aluminium and aluminium alloy plate.*
  - (i) *First preference.* Increments of 300 mm.
  - (ii) *Second preference.* Increments of 50 mm.
- (d) *Ferrous and non-ferrous sheet and strip.*
  - (i) *First preference.* Increments of 100 mm.
  - (ii) *Second preference.* Increments of 5 mm.

NOTE: Increments less than 5 mm are subject to special negotiation.