

Dup

Under Revision See DR 94378
Superseded by AS/NZS 2804.1:1995

AS 2804—1985
UDC 692.817.005:343.71.004.4

Australian Standard[®] 2804—1985

INSTALLATION OF HINGED SECURITY SCREEN DOORS

[Title Allocated by Defence Cataloguing Authority:
DOOR, SCREEN (HINGED SECURITY, INSTALLATION)]



STANDARDS ASSOCIATION OF AUSTRALIA
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This Australian standard was prepared by Committee CS/23, Security Screen Doors. It was approved on behalf of the Council of the Standards Association of Australia on 4 June 1985 and published on 12 July 1985.

The following interests are represented on Committee CS/23:

Aluminium Development Council
Architectural Aluminium Fabricators Federation of Australia
Australian Consumers Association
Confederation of Australian Industry
Housing Commission of New South Wales
Insurance Council of Australia
Master Locksmiths Association of Australasia
Metal Trades Industry Association of Australia
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This standard was issued in draft form for comment as DR 84124.

AUSTRALIAN STANDARD

INSTALLATION OF HINGED SECURITY SCREEN DOORS

AS 2804—1985

First published 1985

**PUBLISHED BY THE STANDARDS ASSOCIATION OF AUSTRALIA
STANDARDS HOUSE, 80 ARTHUR ST, NORTH SYDNEY, N.S.W.**



ISBN 0 7262 3814 7

PREFACE

This standard was prepared by the Association's Committee on Security Screen Doors, in response to requests from a manufacturer of metal mesh, and from the Australian Consumer's Association, both of which had expressed concern that many screen doors, which were claimed to provide security, were in fact unable to withstand modest forces.

A separate standard has been prepared for the doors themselves, but it is recognized that there was also a need for a standard for the installation of security screen doors.

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STANDARDS ASSOCIATION OF AUSTRALIA

AUSTRALIAN STANDARD
for
INSTALLATION OF HINGED SECURITY SCREEN DOORS

FOREWORD

Screen doors are a traditional feature of housing in most parts of Australia, allowing for free circulation of air in hot weather, but excluding insects from the house. However fly screen doors offer little security and are easily broken through. The development of the concept of security screen doors, being strong enough to withstand most attempts at forced entry while retaining the advantages of a screen door, has led to a rapid rise in the number of these doors being sold and installed.

Requirements for the design, construction and performance of security screen doors are set out in AS 2803, Hinged Security Screen Doors, but those requirements apply to the door leaf and associated hardware as a manufactured product, and it must be acknowledged that the effectiveness of a security screen door depends both on the strength of the door itself and the adequacy of its installation and the strength of the door frame in which it is installed.

Furthermore, the use of unsuitable fastenings, or installation into a weak door frame can seriously undermine the ability of a security screen door to resist the attentions of an intruder.

Security screen doors are currently sold mainly as separate door leaves and are generally not supplied as part of a doorset. Hence they are fitted to existing exterior door frames, either as they stand or with the use of proprietary fittings. Accordingly the installer has an obligation to assess the strength and suitability of the existing door frame in addition to correctly installing the security screen door.

It should be noted that a correctly installed security screen door is not 'intruder proof' but is rather sufficiently strong to require an excessive amount of noise and time on the part of a would-be intruder.

Finally, attention is directed to the following two points:

- On fitting a security screen door, attention should be given to the relevant local government requirements which require ease of egress from certain types of dwellings for the purposes of fire safety, etc. In some situations the fitting of deadlocks may not be permissible.
- The installation of the security screen door should not significantly reduce the overall width of the doorway as this may present subsequent difficulties for delivery of appliances, access by wheelchairs etc.

SPECIFICATION

1 SCOPE. This standard sets out requirements for the installation of hinged, single leaf, security screen doors as specified in AS 2803. It specifies the minimum acceptable standards for the installation of security screen doors for normal domestic use.

2 REFERENCED DOCUMENTS. The following standards are referred to in this standard:

AS 1909 Installation of Timber Doorsets

AS 2803 Hinged Security Screen Doors

3 DEFINITIONS. For the purpose of this standard, the following definitions apply:

3.1 Door frame—a frame, previously assembled, surrounding and supporting a door, not necessarily the thickness of the wall. It consists primarily of two jambs and a head.

3.2 Face fitting—the fitting of a door to the outside edge of a door frame or the face of an architrave with or without a rebate formed by a planted stop on the outside edge or face.

3.3 Head—the horizontal member of a door frame.

3.4 Jamb—the vertical side members of a door frame.

3.5 Installer—the individual or organization responsible for the installation, or supply and installation of a security screen door. In the case of 'do it yourself' installations, the householder may be the installer.

3.6 Security screen door—a door intended to be resistant to forced entry and which incorporates a large area of grille or mesh material to allow the passage of light and air. Doors of this type are also referred to as safety doors or security doors.

4 SUITABILITY OF EXISTING DOOR FRAME. The door frame into which the security screen door is to be fitted shall first be assessed as to its ability to provide a solid mounting for the door. The opening shall be strong enough to support the door and provide security. The jambs must be in good condition, firmly fixed to the building, and of sufficient size to accept the fasteners that will be used to mount the door.

A door frame that has been installed in accordance with the relevant requirements for installation in external walls, set out in AS 1909, should be satisfactory for this purpose.

5 MEASUREMENTS. The door opening shall be accurately measured for the purpose of determining the necessary dimensions of the security screen door. The following measurements shall be made, viewing the opening from the outside:

- (a) Height—measured on both sides.
- (b) Width—measured at the top, centre and bottom.
- (c) Diagonals (to assess the squareness of the opening).
- (d) Height of handle of existing door, and its protrusion from the face of the door, noting whether this may interfere with the handle of the

security screen door when fitted. If so, alternative arrangements will need to be made (e.g. relocation of the existing door handle, or use of a suitable jamb to provide greater space between the existing door and the security screen door).

Record whether the security screen door is to be right-hand hung or left-hand hung (refer to Fig. 1).

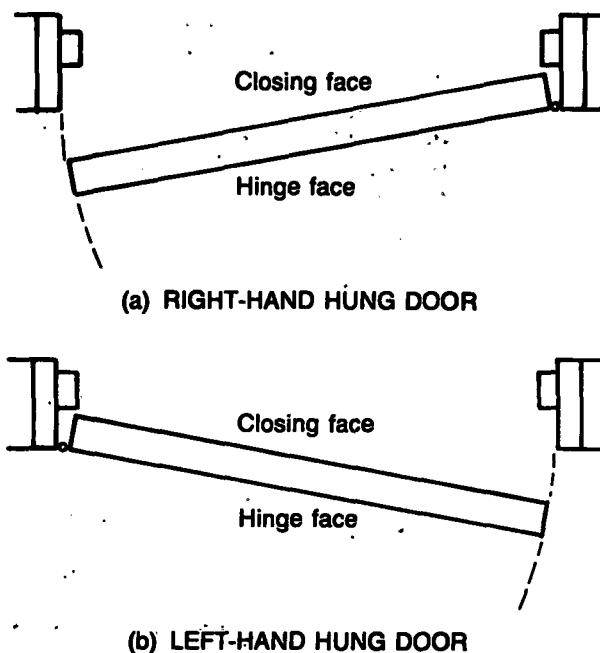


Fig. 1. DESIGNATION OF HINGE SIDE (RIGHT-HAND OR LEFT-HAND HUNG)

NOTE: There is considerable variation in the conventions used to describe the side upon which a door is hinged. Different organizations use different conventions and thus there is potential for confusion on this point. The above diagram, which represents the designated standard convention, is taken from AS 1909 and should be used in preference to other descriptions in order to progressively introduce a uniformly understood description.

6 DOOR DIMENSIONS AND CLEARANCES.

The optimum clearance for the overall width and overall height is 5 mm (i.e. nominally 2.5 mm each side and top and bottom). The maximum gap between the door and frame at the hinges and locking point shall be 4 mm. The gap at other points between the door and the frame should not normally exceed 6 mm and, if the clearance at any point is 8 mm or more, the householder should be consulted and either the existing door frame should be modified or a metal frame fitted to provide suitable clearances. The clearance at the bottom of the door may however be greater if it is necessary to allow for irregularities in the sill or floor.

The overall dimensions of the door shall be obtained by deducting the appropriate clearances from the measured height and width, where the door is to be fitted to the existing frame.

Where the use of additional door jambs and head is intended (e.g. where proprietary metal jambs and head are to be fitted), the thickness of these must also be allowed for in determining the dimensions of the door.