

Australian Standard™

**Filing cabinets**

**Part 3: Mobile pedestals  
(ANSI BIFMA X5.5—1998, MOD)**

This Australian Standard was prepared by Committee CS-088, Commercial Furniture. It was approved on behalf of the Council of Standards Australia on 17 September 2003 and published on 16 December 2003.

---

The following are represented on Committee CS-088:

Australia Post  
Australian Chamber of Commerce and Industry  
Australian Industry Group  
Business New Zealand  
Commercial Furniture Industry Association of Australia  
Ergonomics Society of Australia  
Furtech  
New Zealand Ergonomics Society  
Plastics and Chemicals Industries Association Incorporated  
Telstra Corporation

---

### **Keeping Standards up-to-date**

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about Standards can be found by visiting the Standards Australia web site at [www.standards.com.au](http://www.standards.com.au) and looking up the relevant Standard in the on-line catalogue.

Alternatively, the printed Catalogue provides information current at 1 January each year, and the monthly magazine, *The Global Standard*, has a full listing of revisions and amendments published each month.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at [mail@standards.com.au](mailto:mail@standards.com.au), or write to the Chief Executive, Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001.

---

*This Standard was issued in draft form for comment as DR 03365.*

STANDARDS AUSTRALIA

---

RECONFIRMATION

OF

AS 5079.3—2003

Filing cabinets

Part 3: Mobile pedestals (ANSI BIFMA X5.5-1998- MOD)

---

RECONFIRMATION NOTICE

Technical Committee CS-088 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 24 January 2014.

The following are represented on Technical Committee CS-088

Australian Chamber of Commerce and Industry  
Australian Industry Group  
Australia Post  
Business New Zealand  
Furnishing Industry Association of Australia  
Furniture Association of New Zealand  
Furntech—AFRDI  
New Zealand Ergonomics Society  
National Retailers Association  
Plastics and Chemicals Industries Association  
Plastics New Zealand

---

## NOTES

Australian Standard™

## Filing cabinets

### Part 3: Mobile pedestals (ANSI BIFMA X5.5—1998, MOD)

First published as AS 5079.3—2003.

#### COPYRIGHT

© Standards Australia International

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Published by Standards Australia International Ltd  
GPO Box 5420, Sydney, NSW 2001, Australia

ISBN 0 7337 5556 9

 **Documents**  
Document Sharing Hub

## PREFACE

This Standard was prepared by the Standards Australia/Standards New Zealand Committee CS-088, Commercial Furniture, at the request of manufacturers.

The objective of this Standard is to provide specifiers and manufacturers with a Standard for the determination of strength, stability, performance characteristics and durability of mobile pedestals and to enable purchasing authorities, retailers and users to use these criteria to assist in selection and evaluation.

The Standard is an adoption with national modifications and has been reproduced from ANSI BIFMA X5.5—1998, *Desk/Table Products—Tests*. Variations to the source document for application in Australia are listed in Appendix ZZ and the text affected is indicated by a marginal bar.

The pedestal is defined in ANSI/BIFMA X5.5—1998 as a ‘self contained unit with draws or doors’. It may be freestanding, and may be part of a desk/table product. A mobile pedestal is defined as a ‘freestanding pedestal with castors’.

Committee CS-088 considers that occupational health and safety considerations in Australia make it imperative for a cabinet to have a method of preventing toppling over when two or more loaded drawers are opened. A requirement has been added to the ANSI Standard to fit an anti-tilt device, if there is no other means of preventing toppling over of the filing cabinet when two or more loaded drawers are opened. This additional requirement is set out in Appendix ZZ.

This Standard is Part 3 of a series of requirements for filing cabinets, dimensions and testing of mobile pedestals. Other Parts in this series are as follows:

Part 1: Lateral filing cabinets

Part 2: Vertical filing cabinets

|                                                                                          | PAGE |
|------------------------------------------------------------------------------------------|------|
| 1 Scope . . . . .                                                                        | 1    |
| 2 Definitions . . . . .                                                                  | 2    |
| 3 General . . . . .                                                                      | 6    |
| 3.1 Types of Tests . . . . .                                                             | 6    |
| 3.2 Tolerances. . . . .                                                                  | 7    |
| 3.3 Manufacturer's Instructions . . . . .                                                | 7    |
| 3.4 Loading Guidelines . . . . .                                                         | 7    |
| 3.5 Recommended Test Report Format. . . . .                                              | 9    |
| 4 Unit Static Load Tests. . . . .                                                        | 18   |
| 5 Top Load Ease Test - Cyclic . . . . .                                                  | 25   |
| 6 Lock Tests . . . . .                                                                   | 27   |
| 7 Extendible Member Cycle Test . . . . .                                                 | 31   |
| 8 Out Stop Test . . . . .                                                                | 35   |
| 9 Rebound Test . . . . .                                                                 | 39   |
| 10 Racking Test . . . . .                                                                | 41   |
| 11 Drop Test . . . . .                                                                   | 43   |
| 12 Leg Strength Test . . . . .                                                           | 46   |
| 13 Stability Tests . . . . .                                                             | 50   |
| 14 Caster Durability Test for Mobile Pedestals . . . . .                                 | 53   |
| 15 Adjustment Tests for Adjustable Keyboard Surfaces and Input Device Supports . . . . . | 55   |
| 16 Interlock Test. . . . .                                                               | 57   |
| 17 Hinged Door Tests. . . . .                                                            | 60   |
| 18 Cycling Tests for Receding Doors . . . . .                                            | 63   |
| 19 Sliding and Roll Front Door Tests . . . . .                                           | 67   |
| 20 Door Latch Test. . . . .                                                              | 69   |
| 21 Durability Test for Desks and Tables with Casters. . . . .                            | 71   |
| 22 Work surface Adjustment Tests . . . . .                                               | 73   |
| 23 Force Stability Test for Tall Desk/Table Products. . . . .                            | 77   |
| 24 Dislodgment Test for Tall Desk/Table Products. . . . .                                | 79   |
| 25 Pull Force Test . . . . .                                                             | 81   |

| <b>Tables</b>                                           | <b>PAGE</b> |
|---------------------------------------------------------|-------------|
| 1 Test Loads. . . . .                                   | 18          |
| 2 Pedestal Extendible Members Wider Than Deep . . . . . | 33          |

## **Figures**

|                                                                                                |       |
|------------------------------------------------------------------------------------------------|-------|
| 1 No Figure. (The figures start at Figure 3 to align with section numbers.)                    |       |
| 2 No Figure.                                                                                   |       |
| 3 Loading Configurations for Extendible Members . . . . .                                      | 10-13 |
| 4 Unit Static Load Test (Section 4) . . . . .                                                  | 14-17 |
| 5 Top Load Ease Test (Section 5) . . . . .                                                     | 24    |
| 6 Lock Tests (Section 6) . . . . .                                                             | 26    |
| 7 Extendible Member Cycle Test (Section 7) . . . . .                                           | 30    |
| 8 Out Stop Test (Section 8). . . . .                                                           | 34    |
| 9 Rebound Test (Section 9) . . . . .                                                           | 38    |
| 10 Racking Test (Section 10). . . . .                                                          | 40    |
| 11 Drop Test (Section 11). . . . .                                                             | 42    |
| 12 Leg Strength Test Configurations (Section 12) . . . . .                                     | 44-45 |
| 13 Stability Tests (Section 13) . . . . .                                                      | 48-49 |
| 14 Caster Durability Test for Mobile Pedestals (Section 14). . . . .                           | 52    |
| 15 Adjustment Tests for Adjustable Keyboard Surfaces and<br>Input Device Supports (Section 15) | 54    |
| 16 Interlock Test (Section 16) . . . . .                                                       | 56    |
| 17 Hinged Door Tests (Section 17). . . . .                                                     | 58-59 |
| 18 Cycling Tests for Receding Doors (Section 18). . . . .                                      | 62    |
| 19 Sliding and Roll Front Door Tests (Section 19). . . . .                                     | 66    |
| 20 No Figure. (Section 20)                                                                     |       |
| 21 Durability Test for Desks and Tables with Casters (Section 21) . . . . .                    | 70    |
| 22 Vertical Adjustment Test (Section 22) . . . . .                                             | 72    |
| 23 Force Stability Test for Tall Desk/Table Products (Section 23) . . . . .                    | 76    |
| 24 Dislodgment Test for Tall Desk/Table Products (Section 24) . . . . .                        | 78    |
| 25 Pull Force Test (Section 25) . . . . .                                                      | 80    |

## AUSTRALIAN STANDARD

### Filing cabinets

#### Part 3: Mobile pedestals (ANSI BIFMA X5.5—1998, MOD)

##### 1 Scope

This standard is intended to provide a common basis for evaluating the safety, durability, and structural adequacy of freestanding desk/table products (units). The standard defines tests used to determine the acceptability of the product and specifies the acceptance levels of performance. *These tests are not intended to assess a product that has been in use.*

These acceptance levels are based on the actual field and test experience of The Business and Institutional Furniture Manufacturer's Association (BIFMA) members.

The intention of this standard is to describe the means of evaluating the function and safety of desk related products, independent of construction materials, manufacturing processes, or mechanical designs and aesthetic designs.

## 2 Definitions

Note: The common dictionary definition shall be used for terms not defined in this section.

- 2.1 **acceptance level:** The performance level required to pass the test.
- 2.2 **accessory item:** Items such as hanging rail bars, divider plates, and other items supplied by manufacturers for the convenience of the users of the products.
- 2.3 **adjustable glides:** Support devices for leveling and/or stabilizing a desk/table product. (Alternately referred to as “glides,” “levelers,” “adjustable supports,” or “height adjusters.”)
- 2.4 **anti-rebound:** The feature that ensures that an extendible member will stay closed and will not roll or bounce out of the compartment.
- 2.5 **categories of desks or tables:**
  - 2.5.1 **category I:** Desks or tables with surfaces greater than 610 mm (24 inches) in height and have a total work surface area greater than 0.46 m<sup>2</sup> (5 ft.<sup>2</sup>).
  - 2.5.2 **category II:** Desks or tables with surfaces which are always less than or equal to 610 mm (24 inches) in height.
  - 2.5.3 **category III:** Desks or tables with surfaces greater than 610 mm (24 inches) in height and have a total work surface area less than or equal to 0.46 m<sup>2</sup> (5 ft.<sup>2</sup>).

**Note:** The highest position of adjustable work surfaces is used to define the category. If a desk or table has multiple surfaces, its highest primary surface shall be used to define its category.
- 2.6 **caution label :** A label that is attached to the unit instructing a prospective user of precautions to be considered for the proper use of the unit and warning of any potential hazards of misuse.
- 2.7 **center/pencil drawers:** A drawer, with a clear height less than 76 mm (3 in.), attached to a desk or table or is part of a pedestal which is primarily intended for the storage of light office supplies (such as pencils, pens, erasers, staples, etc.)
- 2.8 **clear dimensions :** The clear dimensions of the extendible member are defined by the sides of the largest rectilinear box that fits into the member and clears all stationary elements as the extendible member is taken through its full travel.
  - 2.8.1 **clear depth** The horizontal dimension of the box in the direction of travel. The clear depth is not reduced by the presence of a compressor.
  - 2.8.2 **clear height** The vertical dimension of the box. Exception: In the case where there is no bottom for the extendible member, the clear height will not exceed 305 mm (12 in.).
  - 2.8.3 **clear width** The horizontal dimension of the box at right angles to direction of travel.

- 2.9 clear space:** The volume defined by the product of the clear dimensions. For example, clear space = clear depth x clear width x clear height.
- 2.10 closed:** The extendible members of the unit are fully retracted into the case and/or doors are in the position which blocks entry into the desk/table product.
- 2.11 compartments:** The areas into which the unit is divided.
- 2.12 compressor:** A device used to restrict the movement of the filed material.
- 2.13 credenza:** A unit with pedestals, generally 457 mm to 610 mm (18 in. to 24 in.) deep, used in combination with or connected to the desk unit for additional storage.
- 2.14 cycle:** A complete operation of loading and unloading or of stress reversal; one complete revolution; to operate in a cyclic fashion.
- 2.15 depth:** The horizontal dimension from front to rear.
- 2.16 desk:** An article of furniture having a work surface supported by legs and extendible member(s) for storage.
- 2.17 desk extension:** A unit that is attached to a desk to create a work surface that extends from the desk workstation.
- 2.18 desk/table product:** Freestanding furniture articles not covered by other ANSI/BIFMA standards: including but not limited to, single and double pedestal desks, desk attached overhead storage units, extended desk units, credenzas, freestanding pedestals, and tables.
- 2.19 doors:** A barrier by which an area is closed or opened. Types include: horizontal receding, vertical receding, tambour, sliding, vertical swinging, horizontal swinging, bi-fold, accordion, and others.
- 2.20 extendible member :** A movable load bearing storage component, including, but not limited to: drawers, shelves, and filing frames. (This excludes doors, writing shelves, and adjustable keyboard surfaces.)
- 2.21 force:** A vector quantity, expressed in Newtons N or pounds force (lbf.), that tends to produce an acceleration of a body in the direction of its application.
- 2.22 fully extended:** The extendible member pulled out to the limit of its stops.
- 2.23 functional load:** A level of loading believed to be typical of hard use.
- 2.24 ganged units:** Two or more units fastened together.
- 2.25 input device support:** A surface which is occupied exclusively by input devices such as computer mice, trackballs, and lightpens.
- 2.26 interlock:** A device which restrains the extension of one or more extendible members.
- 2.27 lbf.:** Abbreviation for pounds-force. The corresponding unit in the Metric System is the Newton(N).

- 2.28 **leg:** The support member of a desk, credenza, or table.
- 2.29 **length:** The measure of something along its greatest horizontal dimension. This may be applied to either the unit or to the drawers, so it should be specifically identified and described.
- 2.30 **leveled:** A condition where the desk/table product, when installed, adopts and maintains a true horizontal and vertical attitude. Leveling may be accomplished by, but not limited to, the use of adjustable glides or shimming.
- 2.31 **load:** An applied weight or force.
- 2.32 **lock:** A device that secures the stationary and extendible members of the unit against undesired access or opening.
- 2.33 **loss of serviceability:** The failure of any component to carry its intended load or to perform its normal function or adjustment.
- 2.34 **mobile pedestal:** A freestanding pedestal with casters.
- 2.35 **N:** Abbreviation for Newtons, a unit of force in the Metric System.
- 2.36 **out stops:** Part of the extendible member which limits the travel of the member in a direction away from the desk/table product.
- 2.37 **pedestal:** A self-contained unit with drawers or doors. It may be freestanding, and may be part of a desk/table product.
- 2.38 **proof load:** A level of loading or force in excess of hard use.
- 2.39 **pull:** The feature used to open the extendible member or door. Pull refers to both projecting or recessed features.
- 2.40 **stability:** The ability of a unit to resist tipping under normal loading and use conditions.
- 2.41 **stops:** Devices that limit travel of extendible members.
- 2.42 **support member:** A part of the unit or table which keeps the unit elevated above the floor.

## 2.43 surface classifications:

**2.43.1 adjustable keyboard surface:** An adjustable surface which is intended for placement of the keyboard, and/or other computer input devices and which cannot be classified as a primary surface.

**2.43.2 primary surface:** A surface which has the apparent potential for the highest loading or a surface on which a person may sit. In cases where more than one horizontal surface of a unit exists, there may be more than one primary surface.

**2.43.3 secondary surface:** A surface which is vertically separated from and smaller than the primary work surface(s). It is used for storage (that is, a shelf) or occupied exclusively by the equipment placed on the surface.

**2.43.4 transaction surface:** A surface which is less than 406 mm (16 in.) deep and is not enclosed. It is primarily used as a temporary work surface and not as a shelf.

**2.43.5 writing shelf:** A moveable, typically stowable surface that is not intended to carry loads greater than 11 kg (25 lbs.), whose primary function is to support ancillary office tasks, such as writing and short-term reference material handling.

**Note:** If it is unclear whether a surface is primary or secondary, the surface shall be considered primary.

**2.44 suspension:** The system that is used to facilitate the movement of the extendible member in and out of the unit (alternately referred to as “drawer slides” or “drawer supports”).

**2.45 table:** An article of furniture having a flat horizontal work surface supported by legs.

**2.46 tall desk/table product:** Any unit which is higher than 1067 mm (42 in.) tall.

**2.47 test platform:** The horizontal hard work surface, (concrete or other unyielding surface) on which the unit to be tested is placed during testing.

**2.48 tip over :** The condition where the unrestricted unit will not return to its normal upright position.

**2.49 unit:** The product to be tested

**2.50 user adjustable surfaces:** A surface which is intended to be adjusted by the user while under normal use.

**2.51 width:** A horizontal dimension from side to side. This may be applied to either the desk product or to the drawers, so it shall be identified and described.

**2.52 working edge:** The side of the surface at which the primary user sits. (Note: some surfaces may have more than one working edge; conference tables for example.)

**2.53 worst case condition :** The condition (i.e. size and construction of a given unit type) most likely to be adversely affected by the test.

### 3 General

#### 3.1 Types of tests

The testing and evaluation of a product against this standard may require the use of materials and /or equipment that could be hazardous. This document does not purport to address all the safety aspects associated with its use. Anyone using this standard has the responsibility to consult the appropriate authorities and to establish health and safety practices in conjunction with any applicable regulatory requirements prior to its use.

The types of tests employed fall into the following general categories:

- a) static load applications;
- b) dynamic load applications;
- c) endurance or durability cycling tests.

Two types of load levels are used:

- a) Functional loads are generally used to evaluate the durability/longevity of the products under hard use and typically define acceptable performance in terms of continuing serviceability.
- b) Proof loads are generally used to evaluate the performance of the product in excess of hard use and typically define acceptable performance in terms of structural integrity.

Each manufacturer's model or unit type in any configuration shall comply with applicable requirements when tested in accordance with this standard. Only worst case need to be tested for a specific unit type. A worst case condition shall be representative of all models or units of the type tested.

If "worst case condition" is not readily evident, a case-by-case product line analysis, by the manufacturer in consultation with the laboratory, that will take into consideration any special attributes, methods of construction, materials, and/or design features, etc., may be necessary.

It is not intended that all of the tests in this standard be conducted on a single unit. The tests may be performed on a series of units at the discretion of the manufacturer. When a test requires a functional load and a proof load be applied as part of the test criteria, the functional and proof loads shall be applied to the same extendible member or unit. Only one extendible member of each type, as applicable, per unit shall be tested. It is not necessary to repeat the tests for a particular type of extendible member because more than one is provided as part of a unit. Similarly, this rule of testing a singular item also applies to table/desk leg assemblies when these items are of identical construction.

### 3.2 Tolerances

Tolerances, unless otherwise specified, shall be:

- Test Weights,  $\pm 2\%$
- Forces, velocities, and time,  $\pm 5\%$
- Linear measurements,  $\pm 1.5 \text{ mm}$  (1/16 in.)
- Angles,  $\pm 5$  degrees
- Level, within 5 mm per meter (1/16 in. per linear foot or  $\pm 0.5$  degrees)
- All cycle requirements are minimums.

### 3.3 Manufacturer's Instructions

When a manufacturer provides specific assembly, operating, or loading instructions, caution labels, or maintenance adjustments that may be required in order to operate or maintain the product, these instructions shall be followed during testing unless otherwise specified by test procedures.

### 3.4 Loading Guidelines

#### 3.4.1 Loading Material for Other Than Extendible Members

Loading material of any density that meets the weight requirements of the test may be used. (Examples: concrete bricks, shot bags, metal plates, sand bags, typical bound copier paper, etc.)

#### 3.4.2 Loading Material for Extendible Members

The functional loading material shall have a density of  $672 \pm 80 \text{ kg/m}^3$  ( $42 \pm 5 \text{ lb./ft.}^3$ ). A typical loading material could be  $721 \text{ kg/m}^3$  ( $45 \text{ lb./ft.}^3$ ) industry standard particle board or typical bound copier paper. The loading material size may be adjusted to accommodate the size of the extendible member to be tested. If necessary, up to 15% of the weight may be made up of higher density plates placed on edge centered between the other loading material. For extendible members with clear heights greater than 216 mm (8.5 in.) the loading material shall be placed on its edge to minimize deflection of the extendible member bottom. For extendible members with clear heights less than 216 mm (8.5 in.) the loading material does not need to be placed on its edge. Note: higher density materials may be used for proof loads.

### 3.4.3 Loading - General Guidelines -

#### Dynamic testing of extendible members with bottom supported loads

(Figure 3(a) and 3(b)) (Note: Where extendible members have the capability of supporting loads *both* on the bottom and in hanging folders, test in accordance with 3.4.3.)

The clear space within an extendible member shall be loaded using the materials specified in Section 3.4.2. The loading material shall be uniformly distributed front to rear, and side to side in the bottom of the extendible member. The gap in the front and the gap in the rear shall each be  $25 \text{ mm} \pm 6 \text{ mm}$  (1.0 in.  $\pm$  0.25 in.). The loading materials may be adjusted with the use of rigid materials (such as styrofoam, steel, etc.) in order to obtain the specified front and rear air gaps. The front and rear air gaps are to be free of any materials. See Figure 3(a) for extendible members which are deeper than wide. See Figure 3(b) for extendible members which are wider than deep.

### 3.4.4 Loading - General Guidelines -

#### Dynamic testing of extendible members for hanging file supported loads

(See Figure 3(c) and 3(d))

The loading material specified in Section 3.4.2 shall be placed in hanging file folders of the appropriate size. The loading material shall be uniformly distributed front to rear, and side to side. The gap in the front and the gap in the rear shall each be  $25 \text{ mm} \pm 6 \text{ mm}$  (1.0 in.  $\pm$  0.25 in.). The loading materials may be adjusted with the use of rigid materials (such as styrofoam, steel, etc.) in order to obtain the specified front and rear air gaps. The front and rear air gaps are to be free of any materials. See Figure 3(c) for extendible members which are deeper than wide. See Figure 3(d) for extendible members which are wider than deep.

### 3.5 Recommended Test Report Format

Each test report should include at least the following:

1. a title: (i.e., "Test Report");
2. name and address of the laboratory;
3. unique identification of the report (such as serial number);
4. name and address of the client (where applicable);
5. description and unambiguous identification of the item tested;
6. characterization and condition of the test item;
7. date of receipt of the test item;
8. date(s) of the performance of test;
9. identification of the test method used;
10. any additions to, deviations from, or exclusions from the test method (such as environmental conditions);
11. a signature and title, or an equivalent identification of the person(s) accepting responsibility for the content of the report;
12. date of issue of the report;
13. test results;
14. a statement that the report shall not be reproduced, except in full, without the written approval of the laboratory.

### 3.6 Figures

Figures provided in this standard are intended as guidelines only and may not be representative of all possible test configurations.

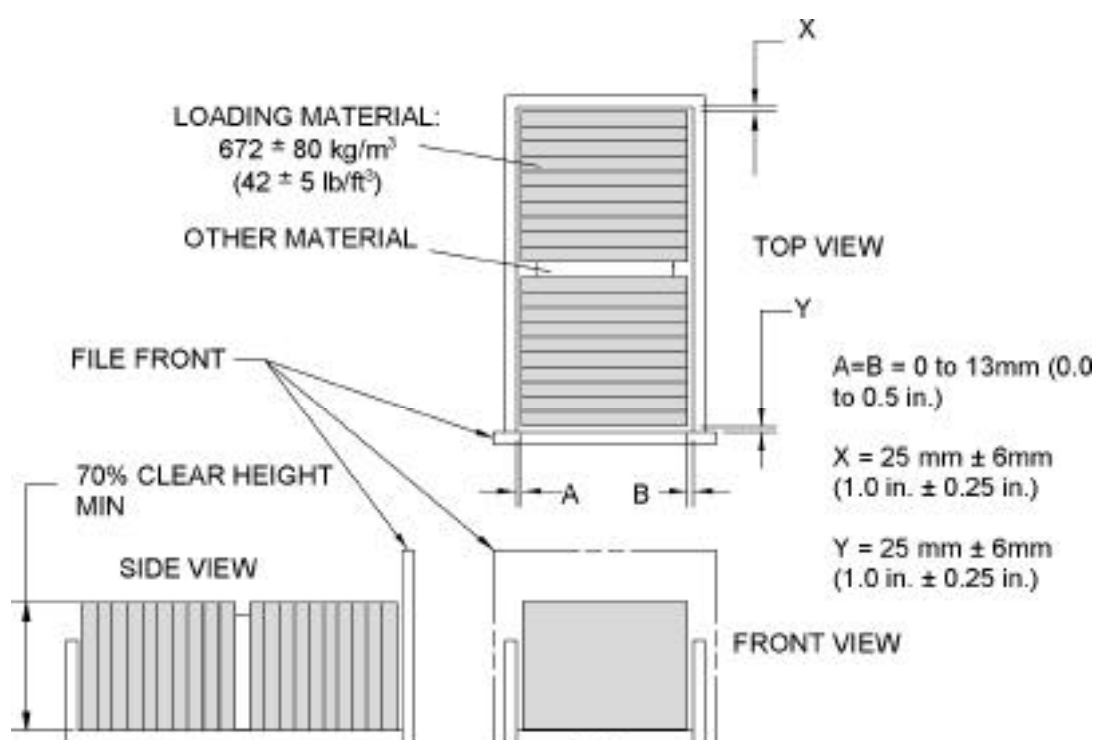


Figure 3a - Loading Configuration for Extendible Members (Deeper than Wide) with Bottoms.

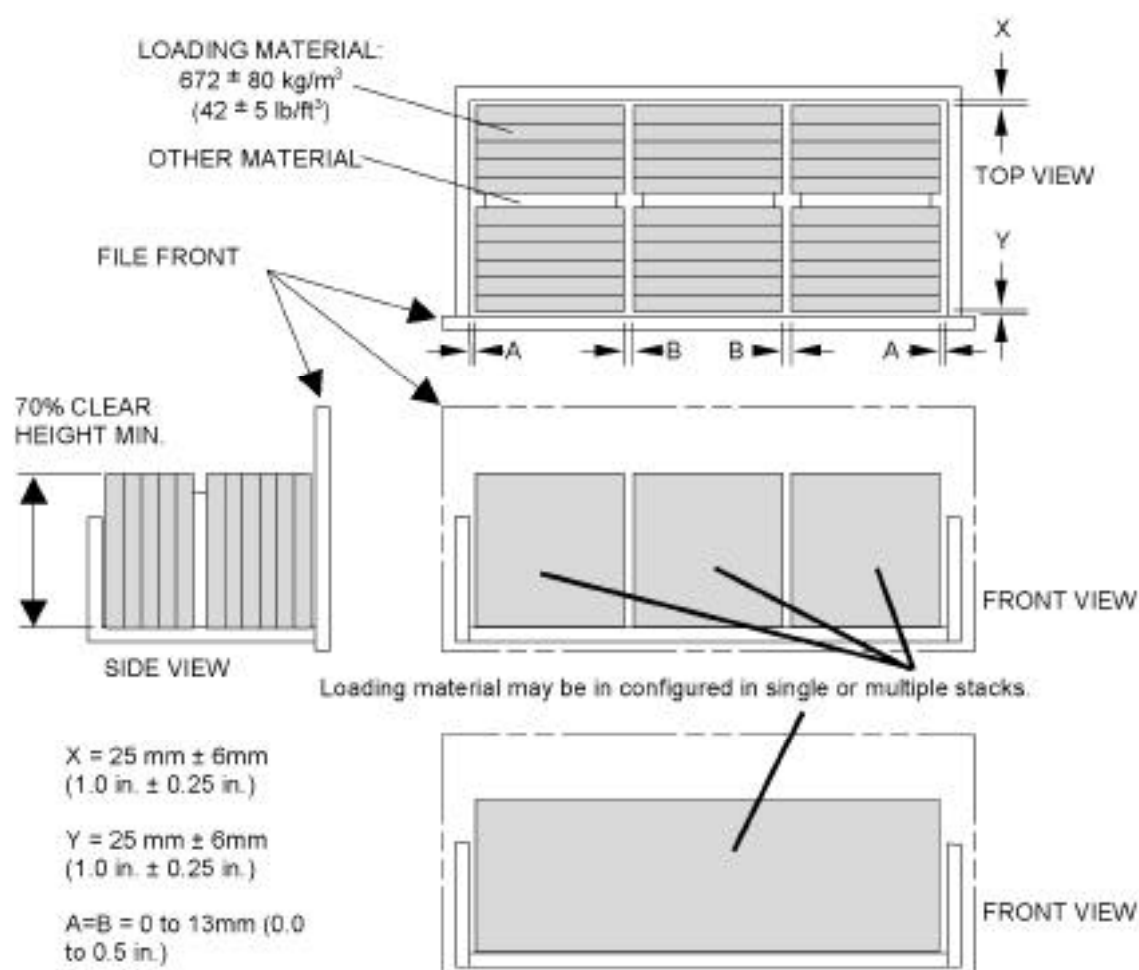


Figure 3b - Loading Configuration for Extendible Members (Wider than Deep) With Bottoms

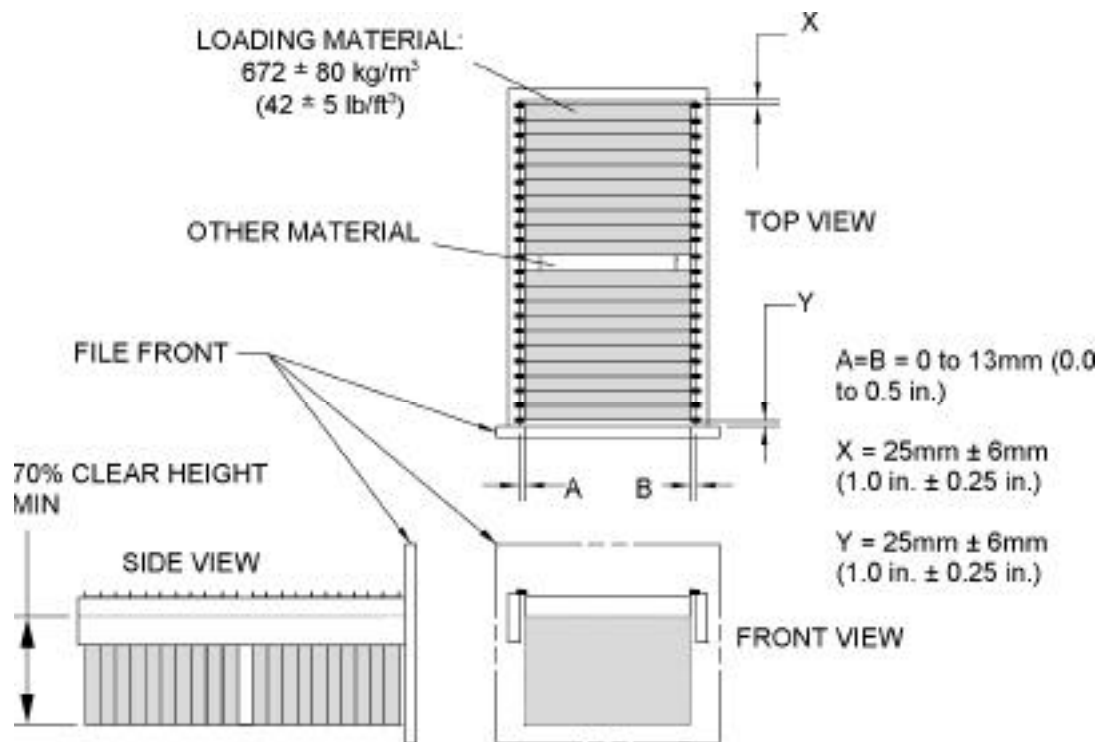


Figure 3c - Loading Configuration for Extendible Members (Deeper than Wide) without Bottoms.

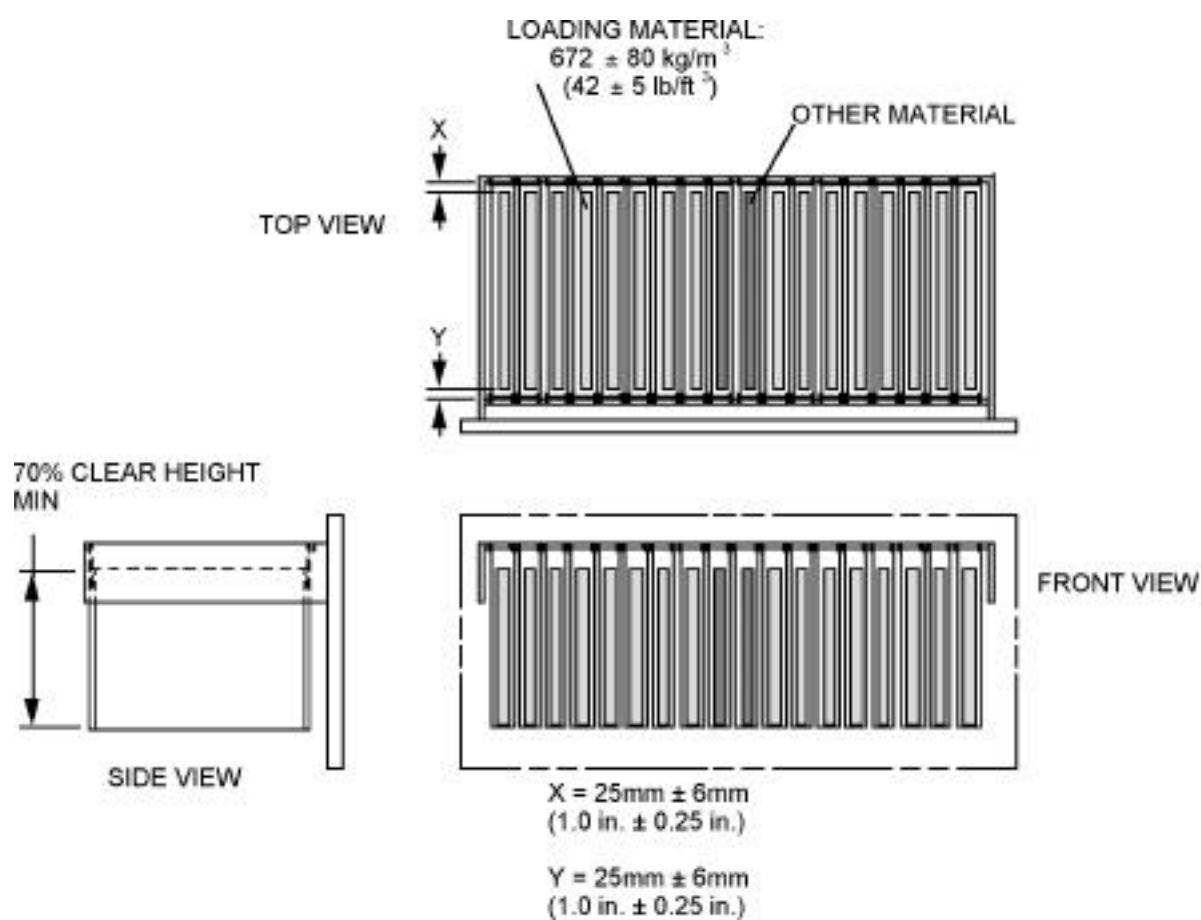
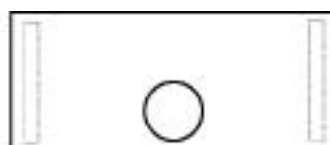
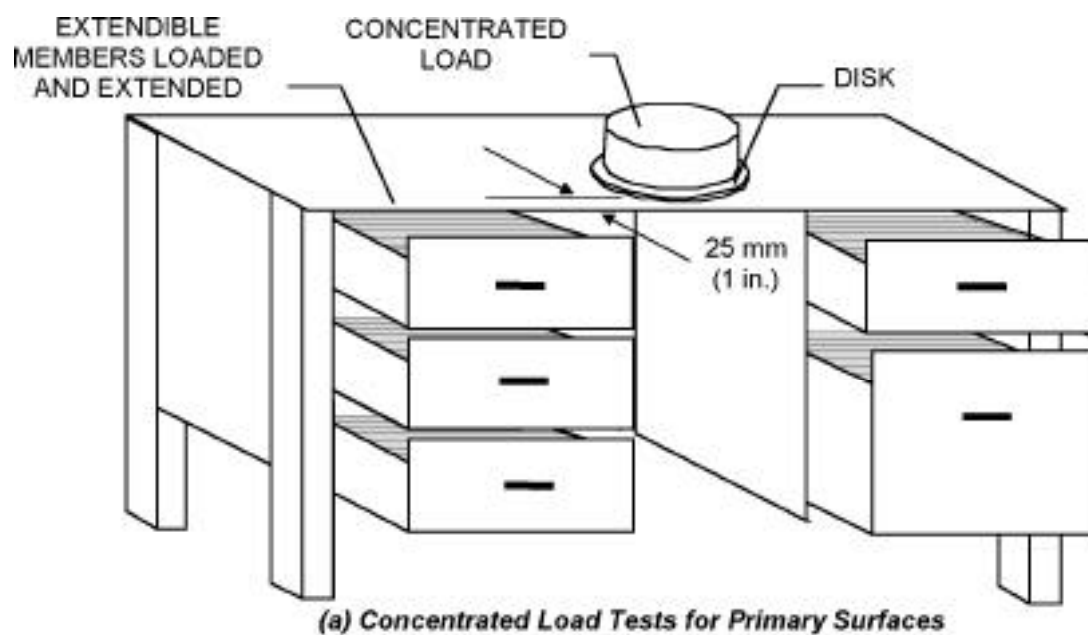
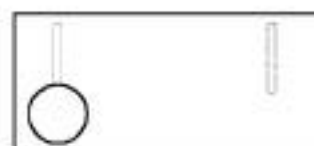


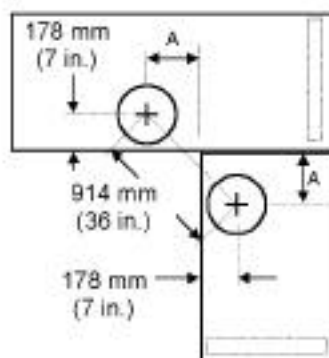
Figure 3d - Loading Configuration for Extendible Members (Wider than Deep) Without Bottoms



i) Center point of longest unsupported span.



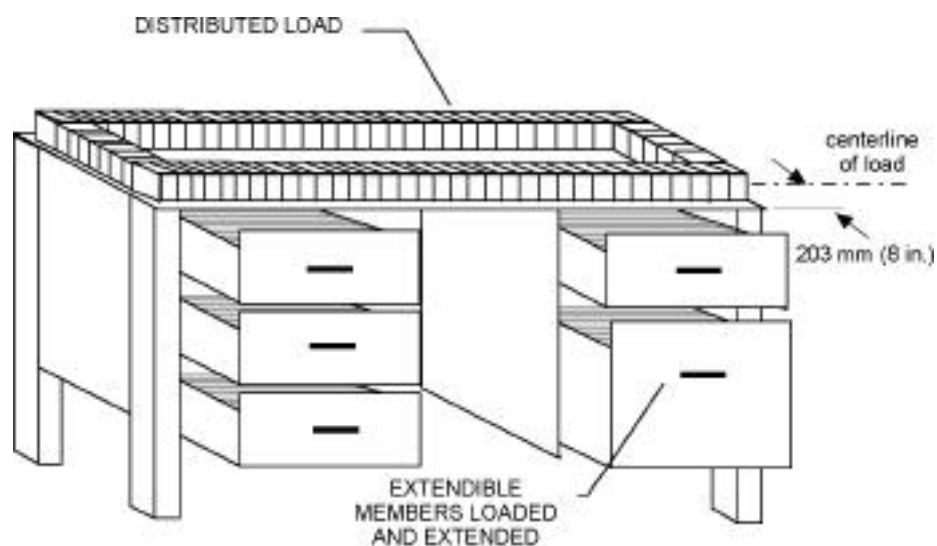
ii) Longest distance from cantilevered support to work surface edge



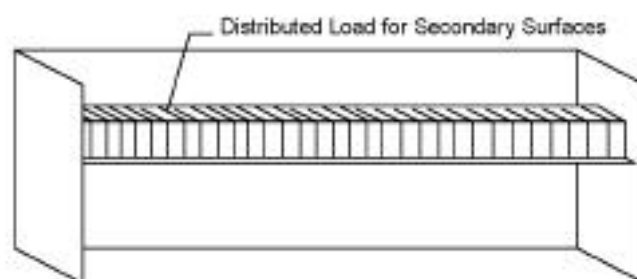
iii) Equidistant about a ganged edge.

**(b) Top View of Concentrated Load Tests**

**Figure 4 - Unit Static Load Test**



*(c) Distributed Load Tests for Primary Surfaces*



*(d) Distributed Load Tests for Secondary Surfaces*

**Figure 4 Continued - Unit Static Load Test**

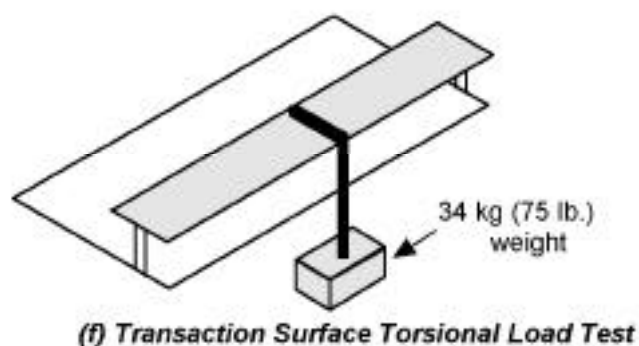
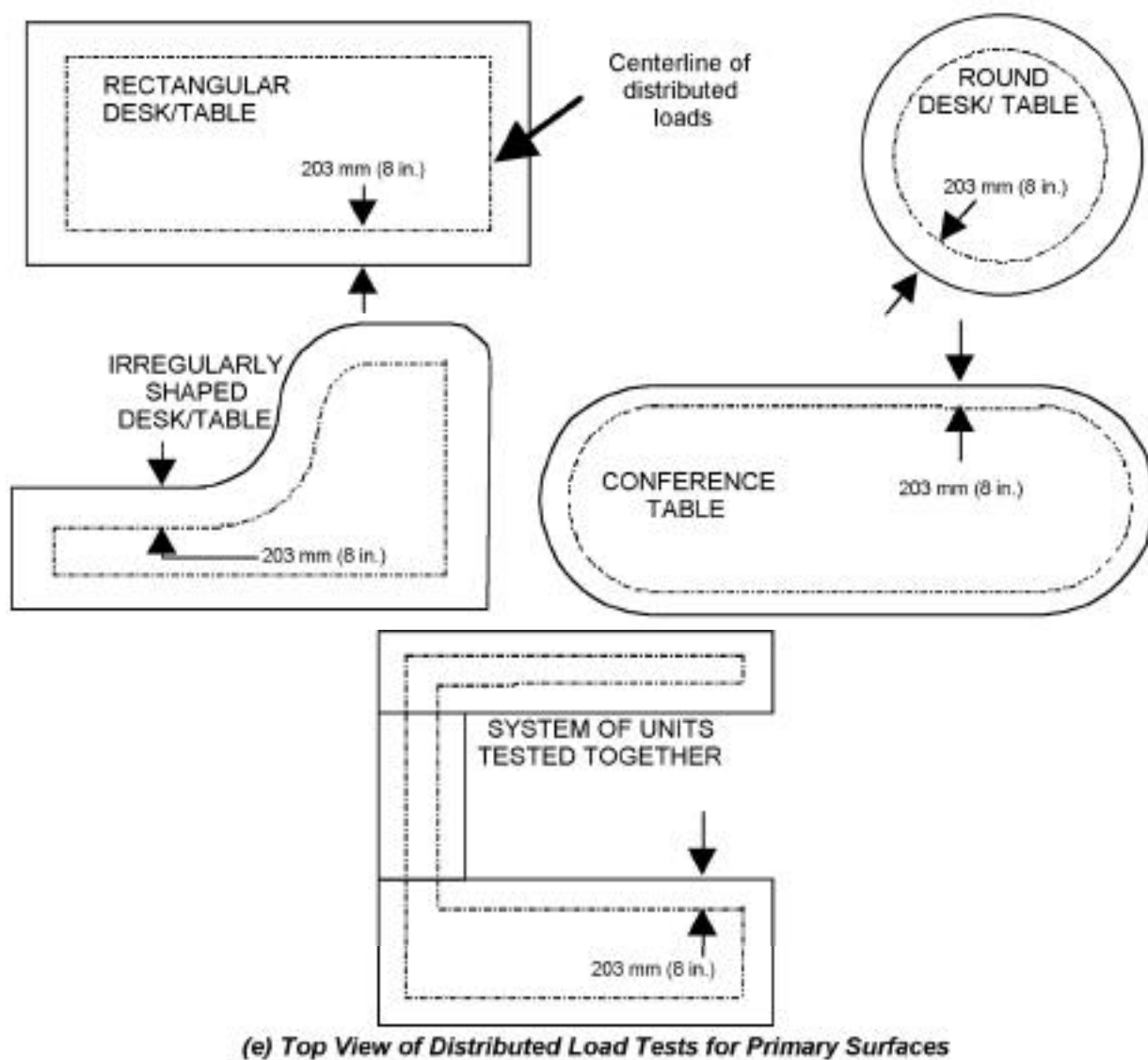


Figure 4 Continued - Unit Static Load Test

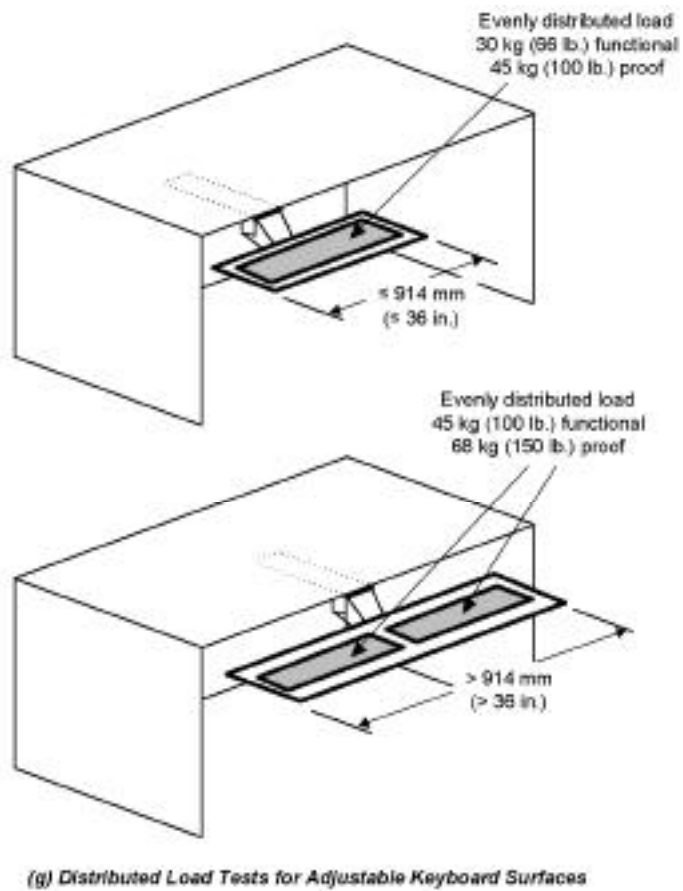


Figure 4 Continued - Unit Static Load Test

**Table 1**  
**Test Loads**

**All Categories of Desks or Tables**

| Surface Class          | Surface Size                                                | Functional Load                      |                                                            | Proof Load                            |                                                            |
|------------------------|-------------------------------------------------------------|--------------------------------------|------------------------------------------------------------|---------------------------------------|------------------------------------------------------------|
|                        |                                                             | Concentrated                         | Distributed                                                | Concentrated                          | Distributed                                                |
| Primary                | ≤ 1143 mm length<br>(length ≤ 45 in.)                       | 91 kg<br>(200 lb.)                   | N/A                                                        | 136 kg.<br>(300 lb.)                  | N/A                                                        |
| Primary                | 1143 mm < length<br>≤ 1829 mm<br>(45 in. < length ≤ 72 in.) | 91 kg<br>(200 lb.)                   | 0.0268 kg/mm<br>of perimeter<br>(1.5 lb./in. of perimeter) | 136 kg.<br>(300 lb.)                  | 0.0402 kg/mm<br>of perimeter<br>(2.3 lb./in. of perimeter) |
| Primary                | length > 1829 mm<br>(length > 72 in.)                       | Two loads of 91 kg<br>(200 lb.) each | 0.0268 kg/mm<br>of perimeter<br>(1.5 lb./in. of perimeter) | Two loads of 136 kg<br>(300 lb.) each | 0.0402 kg/mm<br>of perimeter<br>(2.3 lb./in. of perimeter) |
| Secondary              | ≤ 406 mm depth<br>(≤ 16 in. depth)                          | N/A                                  | 0.05 kg/mm<br>(3.0 lb./in.)                                | N/A                                   | 0.075 kg/mm<br>(4.5 lb./in.)                               |
| Secondary              | > 406 mm depth<br>(> 16 in. depth)                          | N/A                                  | 0.09 kg/mm<br>(5.0 lb./in.)                                | N/A                                   | 0.14 kg/mm<br>(7.5 lb./in.)                                |
| Adjustable<br>Keyboard | ≤ 914 mm width<br>(≤ 36 in. width)                          |                                      | 30 kg<br>(66 lb.)                                          |                                       | 45 kg<br>(100 lb.)                                         |
| Adjustable<br>Keyboard | > 914 mm width<br>(> 36 in. width)                          |                                      | 45 Kg<br>(100 lb.)                                         |                                       | 68 kg<br>(150 lb.)                                         |
| Writing Shelves        |                                                             |                                      | 11 kg<br>(25 lb.)                                          |                                       |                                                            |

**Note:** See Section 2.43 for definitions of surface classifications.

#### **4 Unit Static Load Tests** (See Figure 4 & Table 1)

##### **4.1 Purpose of Tests**

The purpose of these tests is to evaluate the ability of the unit to withstand static loads to which it may be subjected when in use. These tests are applicable to all desk/table products.

## 4.2 Concentrated Functional Load Test (See Figures 4(a) and 4(b))

### 4.2.1 Test Setup

- a) The unit shall be leveled in its normal operating position and may be secured to prevent tipping. The method of securing shall not affect the load application. Adjustable surfaces shall be loaded in their highest and most extended position. If the unit requires support from adjacent units, all units shall be tested together as a system.
- b) Apply the specified concentrated load described in Table 1 through a 305 mm (12 in.) diameter area 25 mm (1 in.) from the unit's edge at its apparent weakest point. The following are some typical weakest points (see Figure 4(b)):

- i) Center point of longest unsupported span.
- ii) Longest distance from cantilevered support to work surface edge
- iii) Each side of ganged surface edges.

When the weakest point is not obvious, several load applications may be necessary to properly test the product.

- c) When testing ganged units (see Step 4.2.1b(iii)), two concentrated loads are required. The concentrated loads, described in Table 1, are applied through 305 mm (12 in.) diameter areas. Place the two 305 mm (12 in.) diameter areas equidistant about the ganged edge while maintaining the centers of these areas  $914 \text{ mm} \pm 25 \text{ mm}$  (36 in.  $\pm 1.0$  in) apart and 178 mm (7 in.) in from the edge of the ganged unit's top. [Note: placing the center of the loading area 178 mm (7 in.) in from the edge of the ganged unit's top is the same as placing the edge of the loading area 25 mm (1 in.) in from the edge of the ganged unit's top.]
- d) When testing units with lengths (or diameters) greater than 1829 mm (72 in.), two concentrated loads are required. The concentrated loads, described in Table 1, are applied through 305 mm (12 in.) diameter areas. The centers of these areas shall be placed  $914 \text{ mm} \pm 25 \text{ mm}$  (36 in.  $\pm 1.0$  in.) apart and 178 mm (7 in.) in from the edge of the unit's top at the apparent weakest point. See Section 4.2.1b for guidelines.
- e) All extendible members shall be loaded with  $0.47 \text{ kg/dm}^3$  ( $0.017 \text{ lb./in}^3$ ) and fully opened for the duration of the test.

### 4.2.2 Test Procedure

- a) Loads shall be allowed to remain for 60 minutes and then removed.
- b) Perform the Pull Force Test in Section 25.

### 4.2.3 Acceptance Level

There shall be no loss of serviceability. Upon completion of the test, the extendible member(s) shall meet the pull force requirements of Section 25.

### 4.3 Distributed Functional Load Test (See Figures 4(c), 4(d), and 4(e))

#### 4.3.1 Test Setup

- a) The unit shall be leveled in its normal operating position and may be secured to prevent tipping. The method of securing shall not affect the load application.
- b) Depending on the desk/table surface classification, apply the specified distributed loads described in Table 1 as follows. The loads may be secured to the surface if necessary to perform this test. (Adjustable surfaces are loaded in their highest and most extended position. If desk/table products require support from adjacent desk/table products, all products shall be loaded together):
  - i) **Primary Surfaces** (see Figures 4(c) and 4(e)):
 

Load is calculated by multiplying the length of the perimeter in mm (inches) by the appropriate distributed load in Table 1. The load is evenly distributed and centered over a line 203 mm (8 in.) in from the edge along the entire perimeter. Loading materials shall not overhang the edge of the unit. For surfaces which are less than 406 mm (16 in.) deep, evenly distribute the load across the surface.
  - ii) **Secondary Surfaces** (load transaction surfaces as secondary surfaces)
 

(See Figure 4(d)):

Load is calculated by multiplying the length of the surface by the appropriate value in Table 1. The load is evenly distributed along the length of the surface at midpoint.
  - iii) **Keyboard Surfaces** (See Figure 4(g)):
 

Evenly distribute the load in Table 1 across the keyboard surface.
  - iv) **Writing Shelves:**

Evenly distribute the load in Table 1 across the writing shelf.
- c) All extendible members shall be loaded with  $0.47 \text{ kg/dm}^3$  ( $0.017 \text{ lb./in}^3$ ) and fully opened for the duration of the test.

#### 4.3.2 Test Procedure

- a) Loads shall be allowed to remain for 60 minutes and then removed.
- b) Close the extendible members and perform the Pull Force Test in Section 25.

#### 4.3.3 Acceptance Level

There shall be no loss of serviceability. Upon the completion of the test, the extendible member(s) shall meet the pull force requirements of Section 25.