

Australian/New Zealand Standard®

Domestic kitchen assemblies—Methods of test

Method 3: Determination of strength of shelf supports

1 SCOPE This Standard sets out the procedure for measuring the strength of shelf supports of a kitchen unit.

2 PRINCIPLE An impacting force is applied to a fully loaded shelf at a point near the shelf supports in order to determine their strength and suitability.

3 APPARATUS The following apparatus is required:

- (a) *Weights*—to provide a load that will not reinforce the unit or redistribute the load, e.g. metal bars or lead shot in bags.

NOTE: If metal bars are used the front row shall be aligned with the front edge of the surface. If lead shot in bags is used, the bags should be divided into small compartments to prevent the contents moving during testing.

- (b) *Steel impact plate*—of the appropriate mass and dimensions as specified in Table 1.

NOTE: An approximate width and thickness are given to allow for the impact plates to be machined to the correct mass.

- (c) *Measuring instrument*—for measuring dimensions to an accuracy of ± 0.2 mm.

4 PROCEDURE The procedure is as follows:

- (a) Load all the storage parts of the unit with the weights to the appropriate mass specified in Table 2, except at approximately 220 mm from the shelf support where the steel impact plate is placed.
- (b) Allow the impact plate to tip over 10 times at a point as close as possible to the supports (see Figure 1).
- (c) Inspect the shelf and measure its position at the supports before and after the test.
- (d) A unit or component shall record a pass if, at the completion of the test, none of the following defects affects the strength or function of the unit or component:
- (i) Fracturing of any member, joint or component.
 - (ii) Any loosening of joints intended to be rigid.
 - (iii) Deformation or wear of any component.
 - (iv) Loosening of any components fixed to the unit.

TABLE 1
STEEL IMPACT PLATE

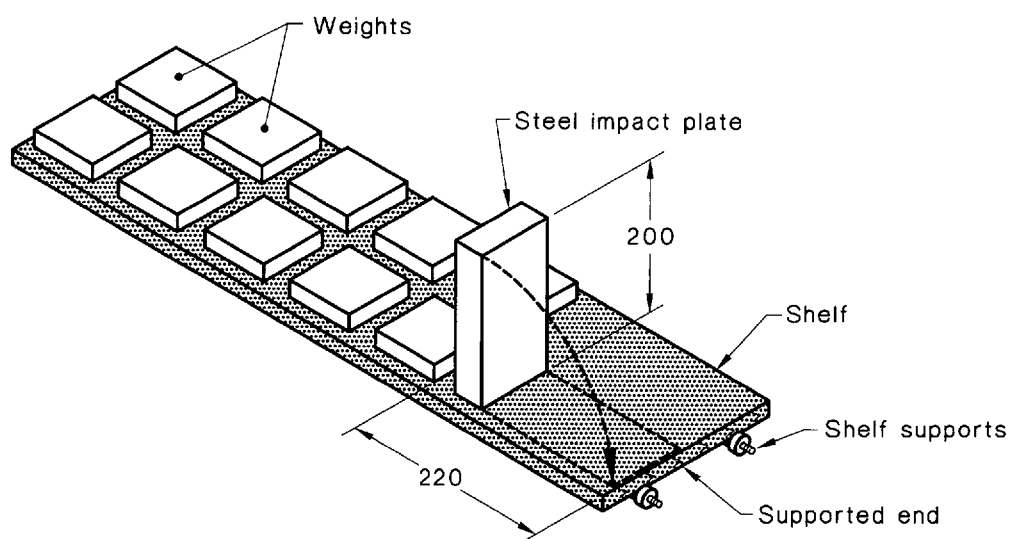
Parameters				
Mass kg	Approximate width mm	Approximate thickness mm	Length mm	Energy J
1.7	109	10	200	1.66

TABLE 2
**LOADS APPLIED TO PARTS OTHER THAN THE
PART BEING TESTED**

Part	Load	
	kg/m ²	kg/dm ³
Wall unit shelf Floor unit shelf Pantry shelf	66	—
Cutlery drawer	—	330
All other drawers Basket	—	250

NOTES:

- 1 The area of shelves is calculated by including any space between the back of the shelf and the inside face of the back panel or, where no back panel is fitted, the rear edge of the end panel of the unit.
- 2 Where there are part-width shelves, the load applicable to the area between the front of the shelf and the inside surface of the door should be transferred to the same area of the full-width horizontal surface immediately below.
- 3 Internal volume is equal to the area of drawer bottom times the maximum height free of obstruction.



DIMENSIONS IN MILLIMETRES

FIGURE 1 STRENGTH OF SHELF SUPPORTS

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