

Australian/New Zealand Standard®

Domestic kitchen assemblies—Methods of test

Method 11: Determination of slam shut of drawers

1 SCOPE This Standard sets out the procedure for determining the ability of a drawer to be slammed shut.

2 PRINCIPLE The storage parts and the drawer of the unit to be tested are fully loaded with weights. The drawer of the unit is then slammed shut from a partially open position in order to test integrity of the door system.

3 REFERENCED DOCUMENT The following document is referred to in this Standard.

AS/NZS

4387 Domestic kitchen assemblies—Methods of test

4387.16 Method 16: Determination of calibration of drawer slamming apparatus

4 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) *Glass marbles*— 12.75 ± 6 mm in diameter, having an average mass of 26 ± 5 g per 100 marbles.
- (c) *Drawer slamming apparatus*—consisting of a pneumatically actuated low-friction piston/cylinder with a means of regulating the pressure of air supplied from a reservoir. The airflow between the piston/cylinder and the reservoirs is controlled by an air-operated valve which allows the air stored in the reservoir to be connected to the piston/cylinder rapidly when the control valve is operated. This rate of flow is controlled by the incorporation of connecting tubing of specified bores and lengths.

5 PROCEDURE The procedure is as follows:

- (a) Load all parts intended for storage purposes, except for the drawer undergoing test, with the appropriate mass specified in Table 1.
- (b) Calibrate the drawer slamming machine using the method described in AS/NZS 4387.16.
- (c) Position the apparatus so that the ram reaches the end of its stroke before the drawer reaches the end of its travel.
- (d) Place the drawer on its runners and load with marbles to the appropriate mass specified in Table 2.

NOTE: The use of 'cling film' over the top of the drawer is permissible to retain the marbles in the drawer during the test.

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TABLE 1
LOADS APPLIED TO PARTS OTHER
THAN THE PART BEING TESTED

Part	Load	
	kg/m ²	kg/m 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.

TABLE 2
LOADS APPLIED TO PARTS
UNDERGOING TEST

Part	Test load		
	kg/m ²	kg/m ³	Cycles
Wall unit shelf Floor unit shelf Pantry shelf	175	—	—
Cutlery drawer	—	400	100 000
All other drawers	—	330	50 000
Basket	—	330	25 000

- (e) Open the drawer from the fully closed position to a maximum of 300 mm, or to a point at which one-third of the inside length (depth) of the drawer, or at least 100 mm, remains inside the carcass (see Figure 1). For drawers on runners that are equipped with a built-in stop, open the drawer up to a maximum of 300 mm or fully without stressing the stop.
- (f) Slam the drawer shut 10 times with the drawer slamming machine. When closing the drawer ensure that no downwards force is exerted on the drawer or runners, i.e. by having the point of application of the force either at or slightly above the level of runners.

NOTE: The closing velocity produced by the machine when slamming the drawer being tested may not be the same as the calibrated closing velocities specified in AS/NZS 4387.16.