

Australian/New Zealand Standard®

Domestic garage doors—Methods of test

Method 3: Durability cycle test

1 SCOPE This Standard sets out the method to be applied when testing domestic garage doors, as defined in AS/NZS 4505, for durability.

2 REFERENCED DOCUMENTS The following document is referred to in this Standard:

AS/NZS
4505 Domestic garage doors

3 DEFINITIONS For the purpose of this Standard, the definitions in AS/NZS 4505 apply.

4 PRINCIPLE A sample garage door is fitted into a door test stand and is then subjected to 20 000 cycles to test for durability.

5 APPARATUS The following apparatus is required:

- (a) A door test stand or a place to install the door, which will give a good view of both the front and rear surfaces of the door. The test stand shall be rigid and securely fixed to a flat surface.
- (b) A mechanism to operate the door through a full cycle. The mechanism can be attached to the door at the normal hand-operating position or via the manufacturer's recommended attachment point for commercially available door operators.
- (c) A mechanical counter to count the door cycles or another method of recording the door cycles.
- (d) A force measuring device calibrated in newtons.

6 TEST SAMPLE

6.1 Requirements for the test sample The test sample, with components, shall be representative in both size and shape of the largest standard assembly in the product range for each type of garage door (i.e. roller door, sectional overhead door, sliding door, rigid overhead door, and the like) for which certification is required. The materials and components of the test sample assembly shall be of the same type and size, and have the same details, methods of construction and surface finishes as those to be used in production.

6.2 Documentation of test sample The manufacturer shall supply copies of shop drawings or any other relevant information, such as installation manuals, to the test laboratory prior to the installation of the test sample. The documentation shall include the following information:

- (a) Typical elevations and sections of test sample.
- (b) Recommended support details.
- (c) Details of all-weather seals, gaskets, joint sealants and cladding materials.

6.3 Certificate of identity In addition to the documents specified in Clause 6.2, the manufacturer or client specifying the tests shall provide a statement to the test laboratory certifying that these documents accurately represent the test sample in all respects.

7 INSTALLATION OF TEST SAMPLE The test sample shall be supported and installed in accordance with the manufacturer's instructions.

8 TEST AND INSPECTION PROCEDURE

8.1 General The sequence of test and inspection shall be as laid out in the flow chart depicted in Figure 1.

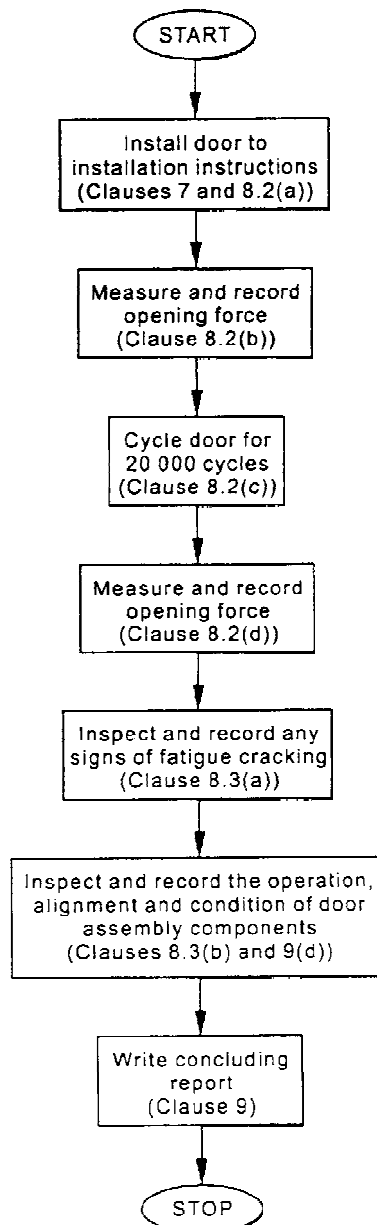


FIGURE 1 GARAGE DOOR ASSEMBLY TEST AND INSPECTION FLOW CHART

8.2 Test sequence The following sequence shall be used:

- (a) Install door into the door test stand according to the installation instructions provided.

NOTES:

- 1 Figure 2 gives an example of a satisfactory door test set-up for a roller door. A similar set-up would apply for any of the other types of door.
- 2 The manufacturer may specify a certain number of cycles to which the door can be subjected before the measurement of the opening force and the cycling commences.

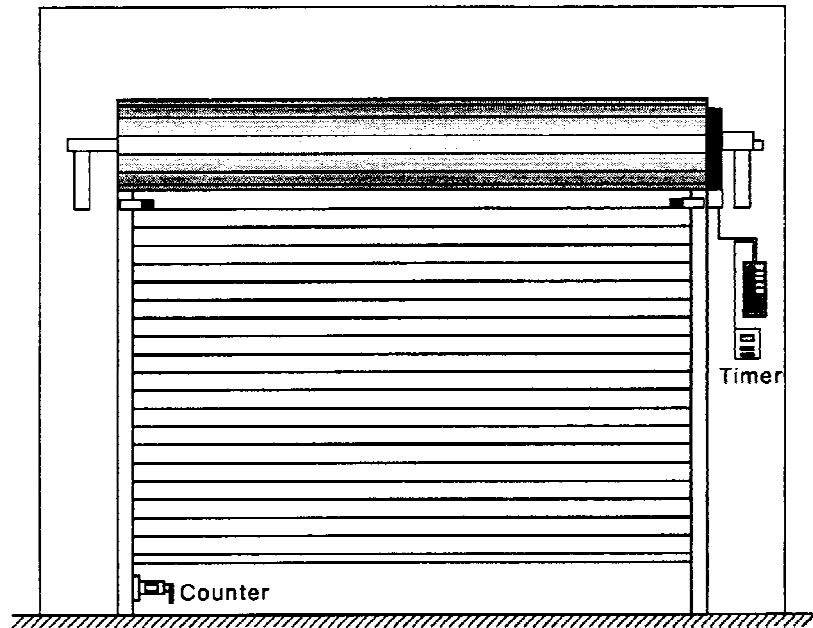


FIGURE 2 TYPICAL DOOR TEST SET-UP FOR A ROLLER DOOR

- (b) Measure and record the force required to manually operate (open and close) the door.
- (c) Cycle the door for 20 000 cycles with an operating speed of a minimum of 0.2 m/s and a maximum of 0.5 m/s.

NOTE: A maximum of one re-tension may be done during the cycling as long as it is part of the manufacturer's purchase contract specification.

- (d) Measure and record the force required to manually operate (open and close) the door.

8.3 Inspection sequence The following inspection sequence shall be used:

- (a) Inspect the door assembly for any visible signs of fatigue cracking. Record the results.
- (b) Inspect and record the operation, alignment and condition (if applicable) of the following (see Clause 9(d)):
 - (i) The guiding mechanism of the door curtain.
 - (ii) The rubbing strips.
 - (iii) Any wheels.
 - (iv) Any hinge bearings.