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Doorsets — Repeated opening and closing test

Blocs-portes — Essai de fonctionnement répété



Reference number
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Foreword

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International Standard ISO 9379 was prepared by Technical Committee ISO/TC 162, *Doors and windows*.

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Doorsets — Repeated opening and closing test

1 Scope

This International Standard specifies the method to be used when determining the effect on the doorset of repeated opening and closing the door under normal conditions.

It applies to all doorsets made of any material, with vertically hinged doorleaves in the normal operating condition for which they are designed and installed according to the manufacturer's recommendations as in a finished building, bearing in mind the test conditions defined below. It does not apply to doorsets with self-closing devices, such as fire-proof doors and smoke-control doors.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 8274:1985, *Doorsets — Determination of closing force*.

3 Principle

During testing, the door is opened and closed a considerable number of times in a manner similar to normal use. The testing includes the performance of the hardware fitted to the doorset. Before and after testing, the performance of the door is recorded.

4 Apparatus

4.1 A surround for the specimen to be tested shall be prepared. This shall be stiff enough to withstand the test pressures without deflecting to an extent likely to impair jointing or to impose bending stresses on the test specimen. When the installation conditions are known, the specimen shall be installed to simulate these, wherever practical, and otherwise installed in a way that ensures normal operating conditions.

4.2 Four displacement gauges, with an accuracy of $\pm 0,1$ mm, to measure the position of the doorleaf relative to its frame, in its own plane, are installed according to figure 1.

5 Preparation for test

5.1 Lubricate any parts according to the manufacturer's instructions.

5.2 Open and close the door five times and then take a reading of the displacement gauges.

6 Procedure

6.1 Connect the door to a device that opens and closes it with a maximum 15 opening and closing cycles per minute.

6.2 Open the doorleaf $80^\circ \pm 5^\circ$ and close it by pushing the doorleaf without operating the handle. The opening force is applied at the handle. The force when closing the door is also applied at the handle but is removed before the doorleaf strikes the frame.

6.3 Just before contact with the doorframe, the doorleaf shall have an angle velocity of $1 \text{ rad/s} \pm 0,1 \text{ rad/s}$ (around $60^\circ/\text{s}$) or the angle velocity according to the performance requirements of the door. The spring bolt shall grip in the striking plate in every cycle.

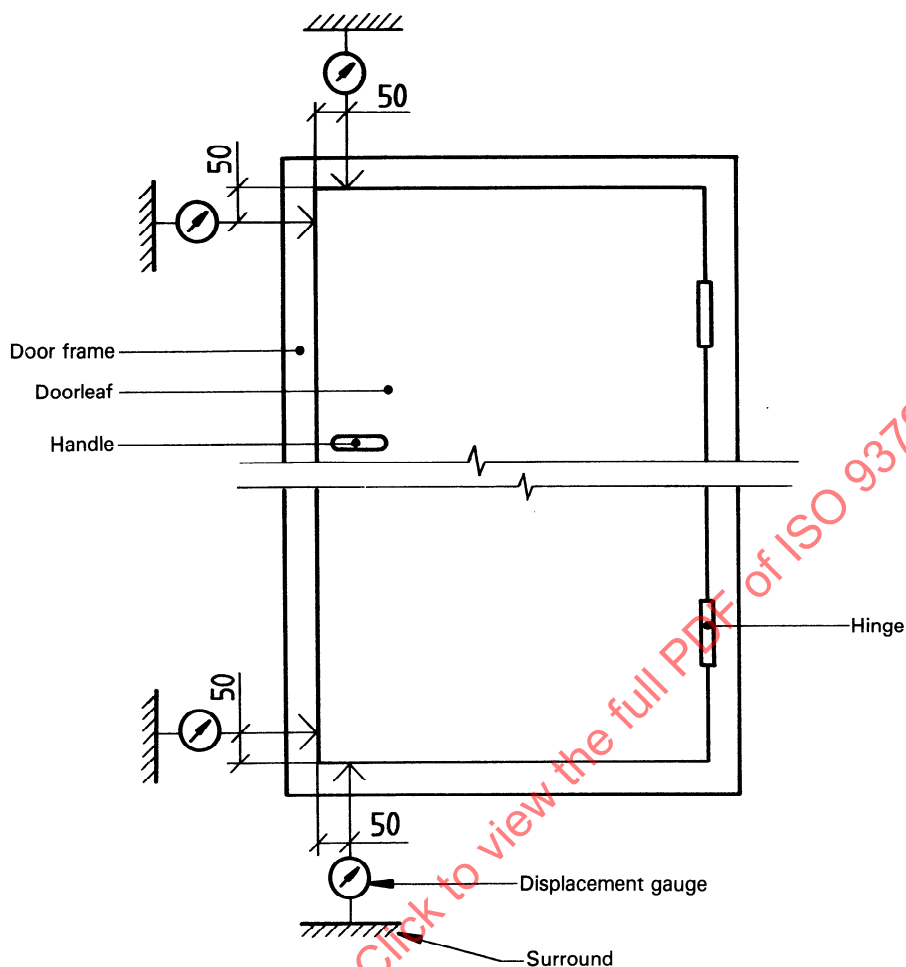


Figure 1

6.4 If an opening angle different from $80^\circ \pm 5^\circ$ (see 6.2) is used, this shall be noted in the test report.

6.5 During the test, readings of the displacement gauges are made at convenient intervals.

6.6 The number of cycles which shall be carried out for the test is given in the performance requirements.

6.7 After this, a final reading of the displacement gauges is taken and the force required to close the door is measured according to ISO 8274.

7 Test report

The test report shall include the following information:

a) the relevant details of type, dimensions, mass, form and construction of doorset;

b) the type of hardware and method of mounting in the doorset;

c) lubrication and adjustment if any;

d) closing force before and after testing;

e) the opening angle, if it deviates from $80^\circ \pm 5^\circ$;

f) the angular velocity;

g) number of cycles;

h) the time for one cycle;

i) the displacement of the top corner on the closing side;

j) all relevant damage appearing during the test.

Annex A
(informative)

Bibliography

ISO 1804:1972, *Doors — Terminology*.

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