

WDMA TM 8-23 Test Hinge Loading Test

August 2023

Test Method for Determining Hinge Loading Resistance of Wood Door Stiles



Window & Door Manufacturers Association

Washington DC Office
2001 K Street NW Ste. 300
Washington, DC 20006
202.367.1157

Chicago Office
300 N. Wabash Avenue, Ste 2000
Chicago, IL 60611
312.321.6802

WINDOW & DOOR MANUFACTURERS ASSOCIATION

WDMA T.M. 8-2023

TEST METHOD FOR

DETERMINING HINGE LOADING RESISTANCE OF WOOD DOOR STILES

Published By

Window and Door Manufacturers Association
330 N. Wabash Avenue, Suite 2000, Chicago, IL 60611
2001 K Street NW, Third Floor North, Washington, DC 20006

® Copyright 2023

No part of this publication shall be reproduced in any form, in an electronic retrieval system or otherwise, without the prior written permission of the publisher.

1. SCOPE

This test method determines the ability of a wood door stile to resist the horizontal withdrawal of an attached hinge. This is a small-scale test designed to simulate the application of a downward force to the knob area on the leading edge of a hinged swinging door.

2. APPLICABLE DOCUMENTS

- 2.1.** ASTM D1761-20, Standard Test Methods for Mechanical Fasteners in Wood
- 2.2.** ASME B18.6.4-1998 (R2005), Thread Forming and Thread Cutting Tapping Screws and Metallic Drive Screws, Inch Series

3. SIGNIFICANCE AND USE

This test method can be used to evaluate the attached hinge withdrawal resistance of various door stile materials as well as to compare different hinge types and fastening systems.

4. APPARATUS

The testing device shall consist of a universal testing machine (Instron or equivalent) with self-aligning equipment. The equipment must be capable of applying a uniform motion at a rate of 2.5 mm [0.10 inches] per minute and record the maximum load applied.

The assembly for testing the specimen shall be similar to Figure 1.