

ANSI/AMCA Standard 500-D-18

Laboratory Methods of Testing Dampers for Rating

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Air Movement and Control Association International

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Laboratory Methods of Testing Dampers for Rating

1. Purpose

The purpose of this standard is to establish uniform laboratory test methods for dampers. The characteristics to be determined include, as appropriate, air leakage, pressure drop, dynamic closure and operational torque.

It is not the purpose of this standard to specify the testing procedures to be used for design, production or field testing. Similarly, it is not the purpose of this standard to indicate or establish minimum or maximum performance ratings to be used for specifying these products.

2. Scope

This standard may be used as a basis for testing dampers when air is used as the test gas.

A test conducted in accordance with the requirements of this standard is intended to demonstrate the performance of a damper and is not intended to determine acceptability level for a damper. It is not within the scope of this standard to indicate the actual sequence of testing.

The parties to a test for guarantee purposes may agree to exceptions to this standard in writing prior to the test. However, only a test that does not violate any mandatory requirement of this standard shall be designated as a test conducted in accordance with this standard.

For more information on damper modulating control characteristics, see Annex C.

3. Definitions/Units of Measurement/Symbols

3.1 Definitions

3.1.1 Damper

A device mounted in a duct or opening which is used to vary the volume of air flowing through the duct or opening. It may be operated manually or mechanically and may have one or more blades.

3.1.1.1 Single blade damper

A damper having one blade.

3.1.1.2 Multi-blade damper

A damper having more than one blade. The damper is a parallel blade damper if the blades rotate in the same direction, and it is an opposed blade damper if adjacent blades rotate in opposite directions.

3.1.1.3 Curtain damper

A damper that uses a folded, interlocked series of blades.

3.1.1.4 Backdraft damper (shutter)

A damper that, when mounted in a duct or opening, permits the flow of air in one direction only. It is normally opened by the energy of the airstream, but it may be opened and/or closed by mechanical