Australian Standard™

Air filters for use in general ventilation and airconditioning

Part 2: Methods of test

Standards Australia

This Australian Standard was prepared by Committee ME-080, Air Filters. It was approved on behalf of the Council of Standards Australia on 7 March 2003 and published on 8 May 2003.

The following are represented on Committee ME-080:

Air-Conditioning and Refrigeration Equipment Manufacturers Association of Australia

Australian Chamber of Manufacturers

Australian Contamination Control Society

Australian Institute of Hotel Engineering

Australian Institute of Refrigeration Air Conditioning and Heating

CSIRO—Division of Animal Health

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PREFACE

This Standard was prepared by Standards Australia Committee ME-080, Air Filters, to supersede AS 1324.2—1996.

The objective of this Standard is to establish uniform comparative testing procedures, meaningful to users and manufacturers, for evaluating the performance of all air cleaning devices used in airconditioning and general ventilation to remove particulate matter. The Standard further establishes uniform specifications for equipment used to conduct such tests and a uniform method for reporting the performance obtained from the specified procedure.

Changes to the previous editions are the following:

(a) Dynamic arrestance tests have been deleted and Test Dusts Nos 2 and 3 tests have been separated and designated as special tests for assessing particular filter applications.

(b) Testing methodology and apparatus have been generally revised to improve the reproducibility of test results and to bring the test methods more in line with current European and American practices. This policy has been adopted in anticipation of an ISO International Standard being developed and adopted as a national Standard in Australia.

This Standard forms Part 2 of a two-part series of Standards that address general air filters. Part 1 of the series covers the application, performance and construction requirements for such filters.

The term ‘normative’ has been used in this Standard to define the application of the appendix to which it applies. A ‘normative’ appendix is an integral part of a Standard.

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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard provides test methods for laboratory or bench testing of air filters used in general ventilation and airconditioning systems. It also includes general information on test dusts, test rig and apparatus.

Test methods for filter applications are given in AS 1324.1.

NOTES:

1 Requirements of performance and construction of air filters for use in general ventilation and airconditioning are specified in AS 1324.1.

2 Methods for on-site testing of High Efficiency Particulate Air filters (HEPA filters) are specified in AS 1807 series. Performance, construction and methods of test for HEPA filters are specified in AS 4260.

1.2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

1289	Methods of testing soils for engineering purposes
1289.3.6.3	Method 3.6.3: Soil classification tests—Determination of the particle size distribution of a soil—Standard method of fine analysis using a hydrometer
1324	Air filters for use in general ventilation and airconditioning
1324.1	Part 1: Application, performance and construction
1349	Bourdon tube pressure and vacuum gauges
1807	Cleanrooms, workstations and safety cabinets—Methods of test
2360	Measurement of fluid flow in closed conduits
2360.1.1	Part 1.1: Pressure differential methods—Measurement using orifice plates, nozzles or Venturi tubes—Conduits with diameters from 50 mm to 1200 mm
4260	High efficiency particulate air (HEPA) filters—Classification, construction and performance

1.3 GENERAL INFORMATION

The three performance characteristics of greatest interest to users and manufacturers of air cleaning equipment are the ability of the equipment to remove particulates from the air stream, the resistance to airflow, and the dust holding capacity before cleaning or replacement is required. Test methods for filter application are given in AS 1324.1.