

ANSI/AHRI Standard 851 (SI)-2013

2013 Standard for Performance Rating of Commercial and Industrial Air Filter Equipment



Approved by ANSI on April 15, 2014



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IMPORTANT

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Note:

This standard supersedes ARI Standard 850-2004.
For I-P ratings, see ANSI/AHRI Standard 850 (I-P)-2013.

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PERFORMANCE RATING OF COMMERCIAL AND INDUSTRIAL AIR FILTER EQUIPMENT

Section 1. Purpose

1.1 *Purpose.* The purpose of this standard is to establish for commercial and industrial Air Filter Equipment: definitions; classifications; test requirements; rating requirements; minimum data requirements for Published Ratings; marking and nameplate data; and conformance conditions.

1.1.1 *Intent.* This standard is intended for the guidance of the industry, including manufacturers, engineers, installers, contractors and users.

1.1.2 *Review and Amendment.* This standard is subject to review and amendment as technology advances.

Section 2. Scope

2.1 *Scope.* This standard applies to factory-made Air Filter Equipment and Air Filter Media as used in such equipment, for removing particulate matter, when used in environmental conditioning of inhabited spaces in commercial and industrial facilities

2.2 *Exclusions.* This standard does not apply to the following:

2.2.1 Air Filter Equipment and Air Filter Media for removing particulate matter, when used in industrial or commercial processes not associated with environmental conditioning of inhabited space.

2.2.2 Air Filter Equipment when used in removing abnormally high concentrations of specific contaminants.

2.2.3 Appliances which include Air Filter Equipment in combination with fans, coils, dampers, etc., but can be applied to the Air Filter Equipment as used therein.

2.2.4 Residential air filter equipment covered by AHRI Standard 681 (SI)-2009.

2.2.5 This standard is not intended to apply to HEPA Filters.

Section 3. Definitions

All terms in this document will follow the standard industry definitions in the ASHRAE Wikipedia website (<http://wiki.ashrae.org/index.php/ASHRAEwiki>) unless otherwise defined in this section.

3.1 *Air Filter Equipment.* Air cleaning equipment used for removing particulate matter.

3.2 *Air Filter Media.* The part of the Air Filter Equipment which is the actual particulate removing agent. In the case of Group III equipment (Section 4), the terms charging section and/or collecting section shall be used.

3.3 *Arrestance (A).* A measure of the ability of an air-cleaning device with efficiencies less than 20% in the size range of 3.0-10.0 μm to remove loading dust from test air. Measurements are made of the weight of loading dust, as defined in ASHRAE 52.2, fed and the weight of dust passing the device during each loading step. The difference between the weight of dust fed and the weight of dust passing the device is calculated as the dust captured by the device. Arrestance is then calculated as the percentage of the dust fed that was captured by the device.