



Standard Practice for Presenting Selected Information on Vacuum Cleaners for Consumer Use¹

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1. Scope

- 1.1 This practice identifies the method of presenting information on selected performance and physical characteristics of a residential vacuum cleaner.
- 1.2 This information is intended to assist the consumer in comparing selected characteristics of vacuum cleaner models.
- 1.3 It is also intended that this information be presented in a manner that is meaningful and understandable to the consumer.
- 1.4 The characteristics are selected from those for which ASTM test methods have been developed.

2. Referenced Documents

2.1 *ASTM Standards:*²

- F395 [Terminology Relating to Vacuum Cleaners](#)
- F555 [Test Method for Motor Life Evaluation of an Upright Vacuum Cleaner](#)
- F558 [Test Method for Measuring Air Performance Characteristics of Vacuum Cleaners](#)
- F608 [Test Method for Evaluation of Carpet Embedded Dirt Removal Effectiveness of Household/Commercial Vacuum Cleaners](#)
- F888 [Test Method for Measuring Maximum Function Volume of the Primary Dirt Receptacle in a Vacuum Cleaner](#)
- F922 [Test Method for Motor Life Evaluation of an Electric Motorized Nozzle](#)
- F1038 [Test Method for Motor Life Evaluation of a Canister, Hand-held, Stick, and Utility Type Vacuum Cleaner Without a Driven Agitator](#)
- F1334 [Test Method for Determining A-Weighted Sound Power Level of Vacuum Cleaners](#)
- F1409 ~~[Test Method for Straight Line Movement of Vacuum Cleaners While Cleaning Carpets](#)~~ [Test Method for Straight Line Movement of Vacuum Cleaners While Cleaning Carpets](#)
- F2607 [Test Method for Measuring the Hard Surface Floor-Cleaning Ability of Household/Commercial Vacuum Cleaners](#)
- F2608 [Test Method for Determining the Change in Room Air Particulate Counts as a Result of the Vacuum Cleaning Process](#)
- F2756 [Test Method for Determining Energy Consumption of Vacuum Cleaners](#)

3. Method of Information Presentation

- 3.1 Information will be presented to consumers in the form of a buyer's guide.
- 3.2 The cleaner characteristics to be included in the buyer's guide are as follows:
 - 3.2.1 Brand,
 - 3.2.2 Model number,
 - 3.2.3 Weight of cleaner,
 - 3.2.4 Bag capacity,
 - 3.2.5 Maximum cleaning distance from outlet,
 - 3.2.6 Cleaning ability,
 - 3.2.6.1 Embedded dirt,
 - 3.2.6.2 Hard Surface Cleaning,
 - 3.2.7 Maneuverability,
 - 3.2.8 Maximum air power,
 - 3.2.9 ~~Quietness, and~~

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

TABLE 1 Cleaner Characteristics Not Requiring Boundaries

Cleaner Characteristic	ASTM Test Method	Value
1. Operational weight of cleaner	F395	pounds
2. Bag capacity	F888	quarts (dry)
3. Maximum cleaning distance from outlet	F395	feet plus inches
4. Average energy consumed while cleaning carpet	F2756	kilowatt-hours

3.2.10 Durability:

3.2.9 Quietness,

3.2.10 Durability, and

3.2.11 Dust Emissions as a Result of Vacuuming.

3.3 For an individual cleaner the information on weight of cleaner, bag capacity, and maximum cleaning distance from outlet should be presented as actual values obtained from the applicable test methods (see Table 1).

3.4 For an individual cleaner, the performance characteristics shown in Table 2 should be rated in accordance with the performance boundaries shown in Table 3. This rating represents a cleaner's performance for a given characteristic on a scale of 1 to 10 (the larger the number the better the performance).

3.4.1 Manufacturers who develop cleaners that exceed the high performance boundary shall be allowed to rate that characteristic as

3.4.1 The boundary values listed shall be considered the upper limit for each rating group. For example, a hard floor cleaning value of exactly 20.0 would result in a rating of 2, a value of 20.1 would result in a rating of 3.

3.4.2 Manufacturers who develop cleaners that exceed the high performance boundary shall be allowed to rate that characteristic as *Exceeds 10*. When this occurs, however, the manufacturer is asked to notify the Consumer Information Subcommittee to initiate a review of that characteristic's boundaries.

3.5 Embedded dirt, maneuverability, maximum air power, quietness, and durability tests must be conducted using the same settings (for example, nozzle height, motor speed, suction regulator, etc.) for each specific carpet.

TABLE 2 Cleaner Characteristics, Boundaries and Increments

Cleaner Characteristics	ASTM Test Method	Value	Performance, Low	Boundaries, High	Performance Increments
I. Embedded dirt removal					
— Level loop carpet	F608	%	0	100	10 %
— Level loop carpet	F608	%	0	90	9 %
— Multi-level carpet	F608	%	0	75	7.5 %
— Multi-level carpet	F608	%	0	70	7 %
— Plush/saxony carpet	F608	%	0	60	6 %
— Plush carpet	F608	%	0	60	6 %
— Shag carpet	F608	%	0	15	1.5 %
— Geometric Mean	F608	%	0	50	5 %
II. Maneuverability					
— (Level loop, multi-level, and plush/saxony carpet)	F1409	ft-lbf	72 (or higher)	—0	Ratings 2 to 10 are in increments of 8 ft-lbf. Rating 1 is anything higher than 72 ft-lbf.
— (Level loop, multi-level, plush, shag, and Geometric Mean)	F1409	ft-lbf	80 (or higher)	25	Ratings 2 to 10 are in increments of 5.5 ft-lbf. Rating 1 is anything higher than 80 ft-lbf.
III. Maximum air power	F2607	%	0	100	10 %
III. Hard Surface Cleaning	F2607	%	0	100	10 %
IV. Maximum air power at end of hose (suction power)	F558	airwatts	0	250	25-W
IV. Maximum air power at end of hose (suction power)	F558	airwatts	0	275	27.5 W
IV. Durability of motors	F1038 (straight air cleaners)	hours	0	720 (or higher)	Ratings 1 to 9 are in increments of 80 h.
V. Durability of motors	F1038 (straight air cleaners)	hours	0	720 (or higher)	Ratings 1 to 9 are in increments of 80 h.
	F555 (upright cleaners)	hours	0	720 (or higher)	Rating 10 is anything higher than 720 h.
	F922 (motorized nozzles)	hours	0	720 (or higher)	
V. Quietness	F1334	sound power, dB	greater than 91	lower than 75	Ratings 1 to 9 are in increments of 2 dB.
VI. Quietness	F1334	sound power, dBA	greater than 91	lower than 75	Ratings 1 to 9 are in increments of 2 dBA.
VII. Dust Emissions	F2608	particles/ft ³	0	50,000,000	Logarithmic Rankings