Overview
PW 101, Standard For Testing And Rating Performance Of Pressure Washers: Determination Of Pressure And Water Flow & Certification Program

PRESSURE WASHER PERFORMANCE

Consumers use pressure washers for cleaning exterior surfaces such as decks, driveways, concrete floors, siding, fences, cars, boats, RVs, etc. To ensure the proper selection of a pressure washer, consumers need to understand pressure washer performance.

A pressure washer's performance is rated by pounds per square inch or PSI, and gallons per minute or GPM. PSI measures pressure and GPM measures flow rate. A pressure washer's PSI rating is the maximum amount of force (pressure) developed by the pressure washer. A pressure washer's GPM rating refers to the water flow during one minute of operation. The higher the PSI and GPM, the more cleaning power available and the more articles that can be cleaned.

Performance Standard

PW101, *Standard for Testing and Rating Performance of Pressure Washers: Determination of Pressure and Water Flow* provides for a uniform method of testing and rating the pressure and water flow of pressure washers. The standard applies to pressure washers intended for the household, farm, consumer, or commercial/industrial markets.

PWMA members and other pressure washer manufacturers test their pressure washers in accordance with PW101. By testing pressure washers to PW101, manufacturers can determine the performance of the pressure washer (PSI and GPM).

The following highlights the key testing parameters as prescribed in PW101:

- All instrumentation must be calibrated in accordance with the National Institute of Standards & Technology (NIST) or other international measurement standards recognized by NIST.
- All test equipment (measuring devices) must be recorded. Equipment includes: pressure measurement device, flow measurement device, rpm sensor, ammeter and voltmeter.

- Units are tested after a break in period with production hose, gun wand, and nozzle as intended for sale. Units are broken in by running for a minimum of two (2) hours and a maximum of five (5) hours prior to test. Units are cycled on and off two times a minute (20 seconds in spray mode and 10 seconds in no-spray mode). There are more specific requirements for battery-operated units in the standard.
- Units are tested at factory settings or the maximum performance setting(s) that can be achieved when using the pressure washer.
- With consideration given to manufacturing tolerances of the engine or electric motor, pump assembly, nozzle, etc., performance shall be a minimum of 90% of rated psi and gpm for all units. For instance, if a company advertises a pressure washer's performance at 1800 psi and 1.1 gpm, then the test results cannot fall under 1620 psi or 0.99 gpm.

Third-Party Certification Program

Annually, the third party Program Administrator, Intertek, randomly selects pressure washers for testing. A program participant provides Intertek with a list of all their production models of pressure washers. Intertek then purchases the pressure washers from an outlet (e.g., internet, retailer) that sells the pressure washers. These units are tested to verify that they meet the program participants' certified published performance ratings.

Intertek conducts the testing as prescribed in PW101. Each program participant is required to have at least two models tested; however, it could be three models (one gas unit, one electric unit, one battery-operated). Three sample units of each model is tested so a minimum of six pressure washers are tested.

Intertek provides the program participants and the PWMA office with the test results. If the test models pass the testing performed by Intertek, the program participants can use the PWMA certification seal on their web site, products and product literature. If the tests reveal that the pressure washers do not meet the advertised performance ratings, the program participant is required to re-rate the pressure washers and change all advertisements to reflect the accurate performance ratings.

PWMA members are required to use a *third-party certification* program using an independent laboratory to conduct testing to evaluate performance in accordance with an industry standard. Pressure washer manufacturers whom are members of other trade associations may use *self-certified* products which are tested by the manufacturer using testing methods that they deem appropriate.

Summary

There are many brands of pressure washers to choose from in the market so consumers need to be educated on pressure washer performance. Advertised PSI and GPM ratings for pressure washers can be misleading. Consumers who purchase pressure washers with a PWMA certification mark on the packaging can be assured that the pressure washer will deliver the psi and gpm that is advertised.

For information on PW101, the certification, selection guidelines, maintenance tips, visit www.pwma.org.

PWMA
Pressure Washer Manufacturers' Association

The Pressure Washer Manufacturers' Association (PWMA) is a non-profit trade association of manufacturers of pressure washers. The association was first formed in 1997 to develop standards for pressure washers and to increase understanding of pressure washers by manufacturers, consumers, and the general public. Our members include major manufacturers of pressure washers in North America.

PWMA

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