

Definitions for Clothes Washer product listing column headers

Brand and Model

This is how a particular washer is identified. Retailers identify products they stock using the brand and model number. Some products may also be identified with a name or SKU, which is different from the brand or model number.

Model numbers often contain wildcard characters, such as *, #, and X, that are placeholders for non-energy attributes, such as color.

Type

Type refers to whether the product is a front-loading washer or a top-loading washer.

Volume

This is the tub capacity of the clothes washer in cubic feet.

KWH/Year

This is the estimated annual energy use of the washer under typical conditions. It is based on an annual usage of 392 loads per year, or around 8 loads per week. Actual energy consumption will vary depending on the amount of laundry done, the size of the loads, and the temperature settings used.

This figure is calculated according to the Department of Energy test procedure, Code of Federal Regulations, Title 10, Section 430. It incorporates the estimated energy consumed by the washer and also the energy needed to heat the water with an electric water heater. Households with a gas water heater will use significantly fewer kilowatt hours but will consume gas to heat the same water.

Modified Energy Factor

MEF is the official energy efficiency metric used to compare relative efficiencies of different clothes washers. MEF considers the energy used to run the washer, heat the water, and run the dryer. The higher the MEF, the more efficient the clothes washer.

ENERGY STAR qualified clothes washers must have a minimum MEF of 2.00. The minimum Federal standard requirement for clothes washers is an MEF of 1.26.

Water Factor

WF is a measurement of water efficiency that is calculated as gallons of water used per cubic foot of capacity

So, if a clothes washer uses 30 gallons per cycle and has a tub volume of 3.0 cubic feet, then the water factor is 10.0. The lower the WF, the more efficient the clothes washer.

ENERGY STAR qualified clothes washers must have a maximum WF of 6.0. The minimum Federal standard requirement for clothes washers is a WF of 9.5.

Annual Water Use (Gallons per year)

This is the estimated annual water use of the washer under typical conditions. It is based on an annual usage of 392 loads per year, or around 8 loads per week. Actual water consumption will vary depending on the amount of laundry done.

Clothes Washers Key Product Criteria

Equipment	Criteria
Clothes Washers	Minimum Modified Energy Factor (MEF) of 2.0 and a maximum Water Factor (WF) of 6.0.

The ENERGY STAR criteria for clothes washers changed on January 1, 2011. The new ENERGY STAR criteria require all qualified products to have a Modified Energy Factor (MEF) of 2.0 or greater as well as a Water Factor (WF) of 6.0 or lower.

Criteria/Product Type	Current Criteria Levels (as of January 1, 2011)
ENERGY STAR top and front loading	MEF \geq 2.0 WF \leq 6.0
Federal Standard top and front loading	MEF \geq 1.26 WF \leq 9.5

MEF = modified energy factor

WF = water factor (gallons per cycle per cubic foot)

ENERGY STAR Qualified Clothes Washer Eligibility

Only front and top loader clothes washers with capacities of greater than 1.6 ft³ are eligible to earn the ENERGY STAR.

Energy Performance Metrics

Energy Factor (EF) is the previous energy performance metric for clothes washers. It is the quotient of the capacity of the clothes container, C, divided by the sum of the machine electrical energy for the mechanical action of a cycle, M, and the water heating energy required for a cycle, E. The equation is shown here:

$$EF = C / (M + E)$$

The water heating energy may be from a gas or electric water heater. The units are cubic feet per kWh per cycle, ft³/kWh/cycle. The higher the value, the more efficient the clothes washer is.

Modified Energy Factor, MEF, is the energy performance metric for ENERGY STAR qualified clothes washers and all clothes washers as of January 1, 2004. This metric has the same units as the energy factor (EF): ft³/kWh/cycle. MEF is the quotient of the capacity of the clothes container, C, divided by the total clothes washer energy consumption per cycle, with such energy consumption expressed as the sum of the machine electrical energy consumption, M, the hot water energy consumption, E, and the energy required for removal of the remaining moisture in the wash load, D. The higher the value, the more efficient the clothes washer is. The equation is shown below:

$$MEF = C / (M + E + D)$$

Water Factor, WF, is the present water performance metric that allows the comparison of clothes washer water consumption independent of clothes washer capacity. Manufacturers must submit their water consumption factors with their ENERGY STAR qualified clothes washers.

WF is the quotient of the total weighted per-cycle water consumption, Q, divided by the capacity of the clothes washer, C. The lower the value, the more water efficient the clothes washer is. The equation is shown below:

$$WF = Q / C$$

The federal EnergyGuide label on clothes washers shows annual energy consumption and cost. These figures use the energy factor, average cycles per year, and the average cost of energy to make the energy and cost estimates. The Energy Factor, Modified Energy Factor, or Water Factor may not appear on the EnergyGuide label.