

## **Washing Machine**

Washing laundry is a significant use of water in the average home; accounting for 15% to 40% of the overall water consumption inside the typical household of four persons. The average American family washes almost 400 loads of laundry each year.

### **Water Factor**

Because washers come in various sizes and capacity, the water efficiency of clothes washers is rated using the term "Water Factor" to accurately compare water use. Water Factor (WF) is measured by the quantity of water (gallons) used to wash each cubic foot of laundry.

### **Older Washers**

An old school washer will use approximately 40 to 45 gallons of water per load and have a water factor of 10 or higher. A family of four using a standard clothes washer will generate more than 300 loads per year, consuming 12,000 gallons of water annually.

### **High Efficiency Washers**

New, High-Efficiency Washers can use 14 to 25 gallons of water per load and will have a water factor of 8 or less. Replacing an old and inefficient clothes washer can reduce this water use by more than 6,000 gallons per year save energy, clean the clothes better, and reduce fabric wear.

### **Clothes Washer Water Saving Tips**

1. Run full loads only, even if the washer has an adjustable load setting. A full load is the most efficient way to wash clothes.
2. Replace the old inefficient clothes washer with a new high-efficiency model to save water and energy.

### **Standard Washers**

The standard top loading clothes washer, using a vertical-axis drum, has changed little from General Electric's design in 1947. The vertical axis design requires enough water in the drum to suspend the fabric in the soapy water while the agitator churns the clothes to help remove dirt and stains. The large amount of water required to suspend the fabric in the tub limits the ability for this type of washer to efficiently use water. Historically, vertical axis washers consumed 45 gallons per load, though newer models of the past few years have reduced this to less than 40 gallons per load. Even the best designs manufactured today require more than 9 gallons of water per cubic foot of capacity.

### **High-Efficiency Washers**

High-efficiency front or top loading washers facilitate greater efficiency because they use less water and energy. These high-tech machines are proven to be more effective in cleaning the clothes with less water, and is gentler on the fabric when compared to old-school vertical axis washers. Additional benefits of lower water use are: a) less laundry detergent is required; and, b) less water needs to be heated resulting in energy conservation. Most high-efficiency washers use only 15 to 30 gallons of water to wash the same amount of clothes as older washers (29 to 45 gallons per load). The most efficient washers use less than 5 gallons per cubic foot of capacity.

### **Water Efficiency of Washers**

The smaller the water factor rating, the more water efficient the clothes washer. A typical residential clothes washer has a capacity of approximately 3 cubic foot, though sizes range from 1.7 cubic feet (48.13 L) to more than 4.2 cubic feet (118.9 L) for the extra large capacity machines. The Water Factor provides a means to directly compare water efficiency of different sized machines.

### **Looking for a New Water Efficient Washer?**

When buying a new machine, finding the Water Factor rating of a clothes washer is not always easy. Though manufacturers measure Water Factors for each model of washer, manufacturers are not required to display the rating on the machine. Fortunately, the Energy Star Program reports [Water Factors and energy use for nearly every HEW in the market.](#)