Home Energy Learning Program



ENERGY STAR[®] labelled, front-loading clothes washers

overview

SDCC

More energy-efficient than conventional washers, front-loading clothes washers can provide cost savings of up to \$95 a year through reduced use of energy, water and detergent. This h.e.l.p. sheet outlines the advantages and disadvantages of front-loading clothes washers to help you make an informed buying decision.

Now available

Currently, 98% of clothes washers in North America are conventional, top-loading models. In Europe, however, front-loading clothes washers have been widely used for many years, and they are now available in North America.

A different rotation

Most front-loading clothes washers rotate around a horizontal axis and operate more efficiently than traditional top-loading washers.

The main difference between the two washers is that the agitator has been removed. Instead of rotating around a vertical axis, the tub rotates in a horizontal plane, like a clothes dryer.

The clothes are then tossed in and out of a shallow pool of water at the bottom of the tub, while specifically designed baffles scoop up water and allow it to rain down on the tumbling clothes. The rotation direction will also alternate in most models to reduce tangling.

More features

Most horizontal-axis washers are front-loading and, like conventional top-loading clothes washers, allow

users to select different temperature settings, water levels and wash cycles. As in a conventional washer, a pump drains water at the end of the rinse cycle, and the drum spins to extract water from the clothing.

Some models will have different spin cycle speeds and internal water heaters, and many can be stacked.

ENERGY STAR®

All front-loading clothes washers sold in Canada are ENERGY STAR®



labelled, as compared with only a few top-loading washers earning the **ENERGY STAR®** mark.

ENERGY STAR[®] is the symbol for energy efficiency for many products in Canada and the United States. Major household appliances that qualify for the ENERGY STAR[®] mark save consumers money because they use less energy than conventional products, while offering the same or better performance. From an environmental perspective, the less energy an appliance uses, the fewer greenhouse gas emissions and other air pollutants it produces.

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Advantages

Front-loading clothes washers offer many advantages over top-loading models.

- *Reduced water consumption*. They use 35 to 50% less water than standard models, saving 14,000 to 22,000 litres of water a year.
- Reduced energy consumption. By using less water, the amount of energy to heat the water is reduced by up to 50%. Water heating accounts for up to 90% of the energy used in clothes washers.
- *Reduced drying time*. Front-loading washers have higher speeds than conventional washers and therefore extract more water, resulting in less energy needed to dry clothes.
- *Reduced detergent use.* Lower water levels reduce detergent consumption by up to two-thirds, saving money and helping the environment.
- *Reduced wear and tear on clothes.* The tumbling action treats clothes more gently and, with no agitator, there are fewer problems with off-balance loads.
- *Better soil removal*. Tests have shown that tumble-action washers are 25% more effective in removing soil from clothes.
- *Extra-large capacity*. With the agitator removed, space is freed up for more clothes capacity. Some models can handle large, bulky items such as ski parkas and sleeping bags.
- *Safety features*. Safety designs include electronic door locks to prevent opening during a wash cycle, and child-resistant safety catches or controls.

Disadvantages

Front-loading clothes washers do have some drawbacks.

- *Cost*. Front-loading washers generally cost more than their top-loading counterparts. The higher purchase price can be offset by savings resulting from greater energy efficiency.
- *Front-loading design*. This requires bending to add and remove laundry. Some models have an optional pedestal to raise the machine, while others are slightly tilted.
- Longer wash times. Wash times are generally longer than with conventional washers, particularly if the machine has an internal water heater. The total cycle time is from 35 to 50 minutes for a North American-made, and 60 to 120 minutes for a European-made washer, compared with

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about 35 minutes for a conventional agitator washer. In models with high spin speeds, the longer wash time will be offset by reduced drying times.

 Increased peak demand. Internal water heaters in some models increase peak electrical demand by approximately 1.8 kilowatts, resulting in additional operating costs of \$8 a year.

Availability

Both North American and European-manufactured front-loading clothes washer models are now widely available in British Columbia. Contact your local appliance dealer to find out what brands and models they sell.

ENERGY STAR® and EnerGuide

ENERGY STAR® is now being promoted in conjunction with Canada's EnerGuide rating system for appliances.

Although the EnerGuide label provides buyers with the information needed to compare the energy consumption of different products, **ENERGY STAR®** goes a step further by identifying the most energy-efficient models on the market. In some cases, the **ENERGY STAR®** mark may appear on the EnerGuide label.



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