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NF97-346 Making Decisions: Buying a Washing Machine

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Making Decisions: Buying a Washing Machine

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In top-loading washing machines, the washer's agitator moves the items in water and detergent to get them clean. After washing, the basket spins at a high speed to remove the detergent and water. The washer fills with water again, the agitator moves the items to remove any remaining detergent, and then it spins the items until they're dry enough to put into the dryer or hang on a line. Typically, about 45 gallons of water are used in a regular wash cycle.

Front-loading washers have a door on the front, through which you put the textile items and detergent. Front-loading washers then fill to just below the door opening. The items tumble in and out of the water to be cleaned. The items are spun to remove the detergent and water, rinsed and spun dry. Front-loading washers use less detergent, electricity and water (typically 20 to 28 gallons in a regular front-loading wash cycle, compared to 45 gallons in a regular top-loading wash cycle). Front-loaders allow a dryer to be stacked above the washer. Front-loading, high-efficiency washers are built on a horizontal axis and do not have agitators. Although these washers may cost more initially, reported savings in water and energy bills vary from \$60 to \$100 a year.

Once you have decided which washer type you want, ask yourself these questions:

- What cycles are needed? Most washers offer "regular" "permanent press" and "prewash" or "soak" cycles. The "permanent press" cycle is similar to the "regular" cycle, but cools items down before spinning, to prevent wrinkling. A "prewash" cycle lets you soak heavily soiled textiles. A "gentle" cycle agitates and spins items more slowly to protect delicate fabrics. A "heavy" cycle may provide a longer wash time and more rinses. A "delay start" cycle allows taking advantage of off-peak electricity rates. Ask the sales person to explain the cycles or read the machine's use and care book for explanations. People primarily use regular, permanent press and delicate cycles. Select a washer with only the cycles you will use.
- What temperature options are available? Most washers will provide for a hot, warm or cold water wash and a cold rinse. A hot water wash cleans whites and heavily soiled items better. It also uses

more energy. Do you need a hot water wash? If it does have a hot water wash, it may only have a cool water rinse. This is done to save energy. The 1994 Federal Energy Standards required manufacturers to meet energy efficiency standards. Eliminating warm water rinses with hot washes was one step taken. With most washers, the temperature of the hot and warm washes depends on the temperature supplied by the water heater. To change warm water temperature, you have to change the mix of hot and cold at the inlet or faucet.

- Do you wash pesticide or other contaminated clothing? Some people keep their old washer to wash only pesticide or other contaminated clothes. Launder pesticide contaminated clothing separately from other clothing. Use a full tub of water for a limited number of garments to maximize residue removal in laundering. For laundering pesticide contaminated clothing, a washing temperature of at least 120°F is recommended (140°F is best). Clean washer after use. For additional information, see NebGuide G89-943, *Laundering Pesticide Contaminated Clothing*.
- Would a lint filter help? Lint filters can keep stray fibers from settling on items as water is drained from the washer. They should be cleaned out regularly.
- Do you want a knob, push button or electronic computerized touch control panel? Do you have any sight or arm movement problems that might affect your ease in using any type? Ask about cost of repair and frequency of repairs on various types of control panels.
- Do you want dispensers for bleach and fabric softeners? These dispensers automatically dilute and add bleach and fabric softeners at the right time.

Some of these features are standard and will be on most models. Others will cost extra. Think about how much you will actually use a feature before you decide to pay extra. Spending more usually pays for more speed and cycle combinations, larger capacity, and a wider variety of water temperatures and levels.

Combination washer/dryer: Combination washer/dryers were made in the '50s and '60s in the United States. European manufacturers do produce a washer/dryer for a limited space. The washer can share the plumbing with sinks and showers, is smaller than U.S. models, and is loaded from the front. They heat their own water and operate on 220 volts. The combination washer/dryer can be installed in kitchens, bathrooms and other small spaces. Stacked washer and dryer units are also available.

Compact washing machines: The compact washer is about two feet square and 33" high. It is equipped with attachments to allow filling from faucets, and it drains into sinks. Some can hold about nine pounds of laundry. The controls are in front for stacking dryers above.

Safety Features: Safety features include out-of-balance safety switches, safety brakes to stop the spinning tub when the lid is opened during the spin cycle, torque-limiting clutch that limits acceleration in a spinning tub, internal motor protection fuse to stop the washer should the motor overheat, and an external grounding kit and switch to stop water flow should the washer overflow. Unbalanced loads can strain the machine's suspension.

Energy Features: Can you buy a washer that will save water and energy? The new, high-efficiency, front-loading washing machines use 50 percent to 65 percent less electricity, 40 percent to 50 percent less water, and are reported to be more effective in cleaning items, according to a joint study by water and wastewater utilities, the U.S. Department of Energy and several gas and electric utilities. About 20 gallons of water per load are saved. In addition to research claims of cleaner textile items, the tumble action is expected to extend the life of the articles washed. Up to 30 percent more water is removed in

spinning, reducing the drying cycle and saving energy. It is claimed that some front loader washers save up to about 7,000 gallons of water per year. The tub opening at the front is easier to load and unload for some consumers with certain types of disabilities, and also allows the top surface to be used.

Here are some things that can save water, energy and money with any washing machine:

- Look for the Energy Guide label on the washing machine. The label features the estimated annual energy consumption in kilowatt hours per year (electric) or therms per year (gas). The estimated yearly operating cost is on the bottom of the label. The most energy efficient models will have labels showing energy consumption at or near the left-hand end of the bar range, close to the words "uses least energy."
- Match the water level, water temperature and the amount of detergent to the size of the load.
- Don't pack the items to be washed in too tightly. This will cause the washer to wear out more quickly.
- Turn the water off at faucets to relieve pressure on hoses after daily laundry is finished; have leaky faucets fixed.
- If the washer has a lint filter, clean it frequently.
- Full loads are more economical and efficient, and save water and energy.

How do washers work? Agitation is used to provide water action removing soil and dirt in top loaders. The agitator usually has vanes of aluminum, steel or plastic. Vanes may have up and down, circular, pulsating or dual (up and down and circular) action. The tumbling of front-loaders, along with some baffles or "fins," is used to agitate or move the items.

The rinse action of a washer is designed to remove suspended soil, laundry aids, and prevent minerals in rinse water from creating films. A spray rinse during the spin phase creates a flushing action to remove soil. A deep rinse fills the basket with clean water, and briefly agitates or tumbles to flush water through the fabrics, removing soil and dirt. Overflow rinses (in top-loaders only) fill the wash basket and float soil over the top of the basket. Water extraction is done by spinning alone, bottom draining followed by spinning, or a combination of bottom draining and spinning.

Refer to a consumers' magazine or book for comparison studies about washing machines. Check with your library or local Cooperative Extension office.

Washing Machine Information			
Space for washing machine: Height _____ in. Width _____ in. Depth _____ in.			
	Model 1	Model 2	Model 3
Washing machine make and model			
Retailer			
Washing machine size (cubic feet)			
Washing machine dimensions			

(height, width, depth; w/ lid opened/closed)			
Features I need (list) <ul style="list-style-type: none"> ● unbalanced load features ● water levels ● water temperatures ● fill methods ● spin and agitation speeds ● lint filters ● cycles 			
Other features in each model <ul style="list-style-type: none"> ● suds saver ● extra cycles ● dispensers ● pump guard ● safety features ● materials/finishes 			
Control panel - knobs, push buttons, or electronic panel			
Separate washer, washer/dryer in one, stacked, or efficient all in one model			
Energy efficiency			
Water efficiency			
Availability, cost of repair service			
Tub capacity (cubic feet)			
Direction of lid/door opening			
Take old washer free or for a fee?			
Cost			
Repair history of model			

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- *Making Decisions: Buying a Dishwasher*, NF97-333
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- *Making Decisions: Buying a Clothes Dryer*, NF97-348
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