

When you buy



Laundry Equipment

WHEN YOU BUY LAUNDRY EQUIPMENT

There are a number of factors to consider before you buy any piece of mechanical equipment;

1. The over-all cost, which includes original price, servicing and expected life of the equipment.
2. Brand made by a well established manufacturer and bought through a reputable dealer. It is important to remember that an appliance is no better than the service available for it. Discount houses generally make no provisions for service or for home demonstrations. Check on what type of service is available, particularly after your guarantee is terminated.
3. When you finally decide on an appliance, be sure to get a manufacturer's instruction booklet. Before you use the appliance at home, study the instructions thoroughly. Take as good care of your appliance as you do your car.

- 5 4. An Underwriter's Laboratory Seal (UL) means that the motor and
544.3 electrical connections have been approved as safe.

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no. 236

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NORTH DAKOTA AGRICULTURAL COLLEGE

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WASHING MACHINES

All washers have been found to wash satisfactorily providing they are correctly used, according to the home economists of the Agricultural Research Service. However, be sure to buy the washing machine that best suits your needs.

Types:

A. Conventional

Conventional machines come equipped with a wringer or a spinner. The wringer is an advantage if you have set tubs. Then it can swing around to wring clothes in and out of the set tubs. Otherwise, the spinner is an advantage because you can rinse your clothes in it. Wringer rolls of the large soft "balloon" type are easier on buttons and other fasteners than the hard rubber type.

Features You May Consider Important

In Selecting A Conventional Washer

1. A pump or gravity drain - An electric pump that empties your washing machine is a time and labor saver. It is especially desirable if your laundry does not have a floor drain. With a floor drain the gravity type is satisfactory.
2. Tub cover attached or removable - If the cover is removable, you'll want one that hangs on the tub when not in use. A hinged cover makes a useful shelf when open, but may be hard to work around.
3. Casters - You'll want large rubber-covered swivel casters which roll easily, if you move your washer each time you use it. A lock on one caster will hold the machine steady when in use.
4. Legs - Some washers have adjustable legs. This feature is important if you are exceptionally short or tall.
5. Grounding device - A means of grounding the washer frame to avoid electric shock if electric insulation fails is important. Sometimes this is built in, so an extra ground wire is not needed.
6. Water line should be easy to see as you fill the tub.

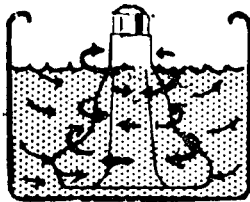
With these factors in mind you can usually judge whether a washer will be easy to operate and care for. However, there are many hidden values in materials and construction. Your best assurance of a good value is to buy a washer made by a reliable manufacturer. Read your guarantee to find out just what it includes.

B. Automatic

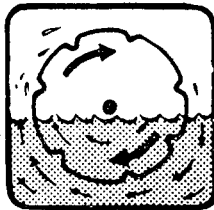
For best results with any automatic washing machine the following conditions are necessary:

1. Proper installation and adjustment of the machine.
2. Water pressure over 20 pounds per square inch. Some models have a valve which insures the proper water level no matter what pressure you have.
3. A sufficient quantity of hot water (140° - 160°). The total amount of water used by an automatic washer may be no greater than with a conventional washer, but the amount of hot water may be greater. If a new hot water tank is to be purchased it should be of at least 50 gallon capacity.
4. Weight of load of clothes not to exceed manufacturer's recommendations. Research has shown that under-loading any machine affords better cleaning and less electrical expense than over-loading. Loads need to be balanced with large and small pieces.
5. Correct amount and type of soap or syndet. In hard water areas syndets are more effective in automatic washers. In the tumbler type it is advisable to use a low sudsing detergent. A high suds given by some of the detergents act as a buffer and cuts down cleansing action.
6. Proper operation of controls.

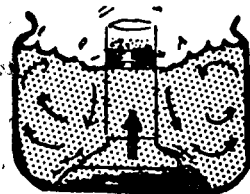
Types of Automatic Washers



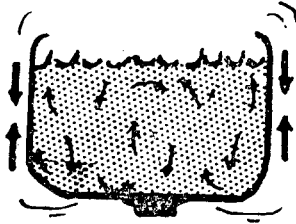
- a. Agitator - By oscillating back and forth on a central post this mechanism creates motion of the soiled clothes through the water. Washers having agitator action: Bendix Economat, Blackstone, Caloric, General Electric, Hamilton, Hotpoint, Kenmore, Laundry Queen, Maytag, Norge, Speed Queen, Thor, Whirlpool.



- b. Tumbler or Cylinder - A cylinder tub that revolves on either a horizontal or inclined axis within an outer tub containing wash water. Washers having tumbler action: Bendix, General Electric, Westinghouse Laundromat.



- c. Pulsator - This mechanism operates in an up-and-down motion. Washer having pulsator action: Frigidaire.



- d. **Bouncing Basket** - A bouncing or tossing of the inner tub creates an up and down motion of the water. Washers having bouncing basket action: Apex, Montgomery Ward.

C. Semi-Automatic

This is the type in which the flow of wash water must be shut off manually when the correct amount has entered the tub. The control dial is then given a new setting to bring about completion of the cycle.

Features Which You May Consider Important In Selecting An Automatic Washer

1. Good water extraction: The smaller the amount of water left in the clothes, the less weight to be handled and the less drying time needed. This is an important factor in the cost of operation of an automatic clothes dryer.

The speed of extraction varies from about 500 revolutions per minute to 1,140 revolutions per minute. In washers having the higher speed of extraction, only about 3-1/2 to 4 pounds of water will be left in a load of 8 pounds of dry clothes.

2. Opening of the door or lid: Access to the tub during washing is an advantage as items that require only a short washing can be added during the last few minutes of the washing period. Washers which will operate when only partially filled with water are advantageous for small loads.
3. Flexibility of the control dial is important. You may wish to shorten or lengthen the washing, rinsing or spinning process at any point particularly in the washing of woollens or finer fabrics.
4. Re-use of wash and/or rinse water is an advantage where the water supply is limited, where washings are large and hot water supply is limited, or where extremely soiled clothes need pre-washing treatment. The use of this feature requires two tubs or a double laundry sink next to the washer.
5. Clog-free drains and traps eliminate frequent cleaning of traps which when clogged, prevent water from draining.

CLOTHES DRYER

A clothes dryer has many advantages:

1. It eliminates dependence on weather

2. It saves work of carrying clothes to the line, hanging them and taking them down. You no longer walk 40 miles a year to hang clothes and you save 20 eight-hour-work-days a year.
3. It saves time. A dryer may be operated to dry one load of clothes while another is being washed. When clothes are damp dried, they may be ironed immediately without the necessity of sprinkling. It saves ironing time because there are so few wrinkles.
4. There is no fading of color by the sun.
5. It eliminates dirt and soot that may blow on clothes while hanging on the line.
6. It eliminates exposure of the housewife to cold, damp weather.

Dryers may be operated by either electricity or gas. Gas dryers and most electric dryers should be vented to the outside of the house to carry away moist air and, in case of the gas dryer, the products of combustion. A gas dryer should have the American Gas Association seal of approval to indicate that the dryer has passed certain safety requirements. A gas dryer will require a 110 volt electric convenience outlet to operate the blower and drying cylinder.

Most electric dryers require 3-wire, 220-volt circuit. Some electric dryers do not eject air or moisture or lint into the room and so do not require a vent, but they do require a cold water connection and a drain. The cold water is used to condense the moisture and then it is pumped out through the drain. In another model the lint-laden warm, moist air from the drum passes through an extensive tube section, which is cooled by the circulation of air around it. The moisture condenses and runs into the water tray. The lint is deposited on the sides of the tubes. A lint trap is provided in most dryers. In some models, lint is deposited on the condenser and removed by hand. In others it is washed down the drain by a cold water spray.

A 1/3 to 1/6 horsepower motor is commonly used to rotate the cylinder and drive the blower or fan. An interior light goes on when the door is opened, which increases the ease of inspecting the condition of the load.

Drying Time

Most dryers require 30-35 minutes to damp-dry a load of clothes and from 40 minutes to an hour for complete drying. The length of drying time depends on kind and weight of fabrics, size of load and amount of moisture retained in the clothes. In normal use the drum will continue to revolve for 5 to 7-1/2 minutes after the heat is automatically shut off. This allows the clothing to cool somewhat before it needs to be handled.

Levels of Heat

Dryers may provide three levels of heat, high, medium and low, varying from thermostat settings of 130° to approximately 200°F. Or a dryer may have one heat, usually medium, but sometimes low, with increased air circulation to speed up time. Since lower heat is available it is possible to dry many man-made fibers and woolen garments in the dryer. An ozone lamp is frequently installed to impart a fresh odor to the clothes.

A caution on over-drying: Over-drying results in deep-set wrinkles which are difficult to remove in ironing. It leaves clothing limp and lifeless.

Some Questions On Use Of A Dryer

1. CAN YOU DRY STARCHED CLOTHES IN A DRYER - Yes, use a heavier solution of vegetable starch. This is not necessary for plastic starch. Dry separately. You'll find ironing of starched items easier if you damp-dry rather than drying completely and then sprinkling. After drying a starched load, wipe the porcelain interior with a damp cloth.
2. DOES A DRYER GIVE WHITE CLOTHES A YELLOWISH CAST - No, you can't blame the dryer. Comparative tests at Ohio State University on whiteness of dryer-dried and line-dried fabrics showed differences so slight that they could scarcely be distinguished by a sensitive reflection meter. Incorrect washing procedures or using soap alone in hard water are the usual causes of "yellowing" white clothes.
3. CAN A DRYER BE USED WITH ANY WASHER - Yes, a dryer may be a better investment than an automatic washer if the family already has a good washer.
4. WHAT ABOUT SHRINKAGE - A good way to guard against shrinkage of T-shirts and knit underwear is to include turkish towels in the same load, which keeps knit things from becoming too dry. After about 20 minutes, the knit pieces can be removed, folded, and placed on top of the dryer. There they can finish drying while the towels continue to tumble.

COMBINATION WASHER-DRYER

Some manufacturers are making a machine that dries as well as washes your clothes automatically in one continuous operation.

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