HIGH EFFICIENCY
Washers and Detergents

Working in Harmony to Save Energy and Water

SDA

The Soap and Detergent Association

www.cleaning101.com

HE Washers and HE Detergents —
Working in Harmony to Save Energy and Water

About This Guide:

Compared to traditional washers, HE washers work in a completely different way. As a result, the detergents used in HE washers need to work differently, too.

That's why **The Soap and Detergent Association** and **washing machine experts** from around the country have worked together to bring you this handy resource.

- You'll discover how HE washers and HE detergents work … and how to properly use these customized laundry products in your HE washing machine.
- In addition, you'll find straightforward answers to your most frequently asked questions about "doing your laundry the HE way."

So read on for important information that will help you use your HE washer and HE laundry products *together* to save water and energy, while getting your laundry as clean as ever!

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BRINGING HIGH EFFICIENCY
To the Laundry Room

HE stands for *high efficiency*, and is used in reference to household appliances and laundry detergents.

HE is important to all of us … because it results in energy *and* water savings!

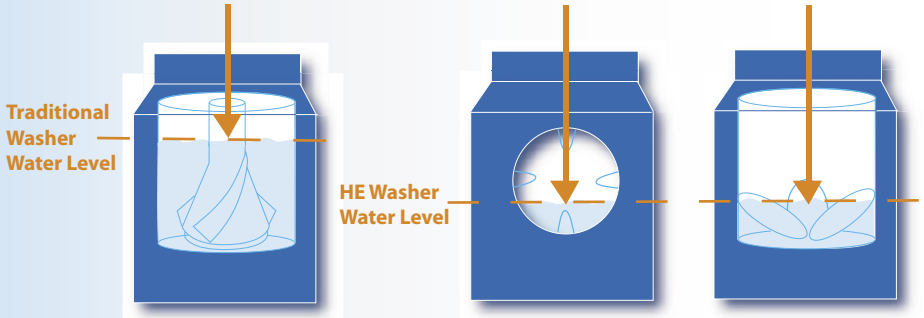
When **high efficiency washers** hit the market a decade ago, their water and energy savings were big news. Today, this legacy of advanced technology continues — but now the attention turns to **high efficiency cleaning *systems***!

Over the past few years, home appliance engineers and detergent scientists have worked collaboratively to develop HE washers and HE laundry detergents that work *together*. These advancements have resulted in a **harmonized cleaning system** that gives consumers improved cleaning performance while continuing to save water and energy.

Energy Savings At-A-Glance

- HE washers use **less water** than traditional washers — in fact, they only use from 20% to 66% of the water used by traditional agitator washers.
- **Energy use can be as little as 20 to 50 percent** of the energy used by traditional agitator washers because there's much less water to heat.
- These savings translate directly to **long-term cost savings** for consumers — as well as significant **long-term environmental benefits**.

HE Washers Save Water



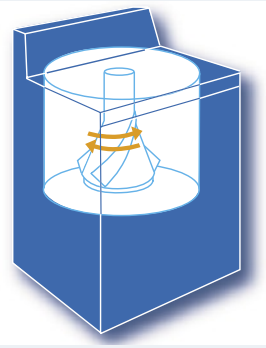
Traditional Washer | *Front Loading HE Washer* | *Top Loading HE Washer*

TODAY'S GENERATION
Of HE Washers

What About Traditional Washers?

Chances are that the type of washer you grew up with was a top-loading **"agitator" washer**. It's the tried-and-true machine that revolutionized "doing the laundry" many decades ago.

In fact, these traditional agitator washers are still used today in most U.S. homes. In these washers, clothing is *completely submerged in water* and an agitator moves the laundry back and forth to loosen soils.



Traditional agitator washers account for 85% of washer purchases in the U.S. as of 2005.

A Growing Market: HE Washers

In recent years, sales of HE washers have grown and today they're making a significant impact on the washing machine marketplace. And with current energy and water legislation affecting design for future washers, this trend is expected to continue into the foreseeable future.

As of 2005, sales of HE washers have grown from less than 1% to more than 15% of the market in only 10 years.

How They Work

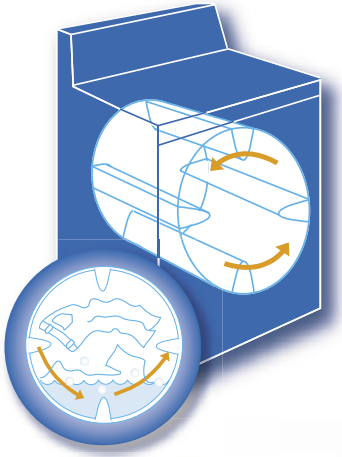
Unlike traditional agitator washers, most HE washers use a "tumbler" system with no agitator. Because the new systems are so efficient, HE washers can use **low-water wash and rinse cycles.**

- In many models the laundry is washed in a shallow pool of water.
- In some models, the water level is so low you may never even see a pool of water.

Despite their reduced water levels, HE washers can wash the same amount of laundry per load as traditional washers – in fact, many can clean even larger loads.

Types of HE Washers

There are two types of HE washers – front loading and top loading. Although each works via a different mechanical method, they both use considerably less water than traditional agitator washers. Environmentally-speaking, HE washers are great news!

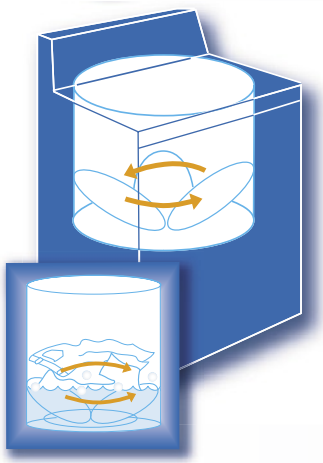


Front-loading HE Washers

In front-loading washers, the laundry *tumbles* back and forth through the water, as the tub rotates clockwise and then counterclockwise, moving the water and detergent through each garment and removing soils.

This repetitive tumbling motion is intended to do an efficient cleaning and rinsing job and is gentle on fabrics.

All front loading washing machines are HE and use low-water levels in the wash and rinse process.



Top-loading HE Washers

There are a growing number of HE washers that load from the top. These washers offer gentle motion to do the laundry, using spinning, rotating, and/or "wobbling" wheels, plates, or disks to achieve the gentle wash action. As with some front-loading HE washers, some top-loaders also spray or lightly shower clothes using re-circulated water from wash and/or rinse solutions.

Top-loading washers that are labeled "HE" use low-water volume wash cycles. They have either no center post or a smaller-sized center post instead of a traditional agitator.

TODAY'S GENERATION
Of HE Laundry Detergents

The Role of Traditional Laundry Detergents

Detergents are star performers on laundry day. Their primary task is to remove soils and stains, but they do much more than that. Detergents are designed to freshen, remove odors, and brighten fabrics as they clean.

Another key detergent function is to hold soils, and any dyes from colored fabrics, suspended in the wash water. This keeps soils and dyes from being re-deposited back onto the cleaned clothes.

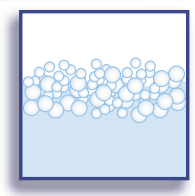
Traditional detergents are formulated to accomplish these tasks in **high water volumes** in traditional agitator washers.

Rising to the Challenge

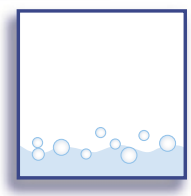
It's common sense, really: because of the low-water wash and rinse cycles in HE washers, HE detergents must work *differently* from traditional laundry detergents in order to be effective.

As a result of extensive research, HE detergents are formulated to be **low-sudsing** and **quick-dispersing** to get the best cleaning performance with HE washers.

- **Excess suds can cause problems** in HE washers by "cushioning" — or even preventing — the tumbling action. This can impact proper cleaning.
- HE detergents also hold soils and dyes in suspension in **low water volumes**, so they don't re-deposit onto cleaned clothes.



Traditional Detergent Sudsing



High-Efficiency Detergent Sudsing

HE laundry detergents can be identified by the HE symbol on the detergent box or bottle.

HE Detergents – The *Only* Choice for your HE Washer

Detergents formulated for HE washers work with energy-saving technology to provide the best possible cleaning in only 20% to 66% the amount of water used in traditional washers.

Use HE detergents to:

- Get the **maximum cleaning performance** that HE detergents and washers can deliver.
- Achieve **energy and water savings.**
- Keep your HE washer in **top working condition**.

▶ ***For best cleaning results, always read the laundry detergent label and use the recommended amount of detergent for your wash load size and amount of soil.***

Detergent Availability

As HE washers become more commonplace, detergent manufacturers will continue working to ensure that the appropriate detergents are available.

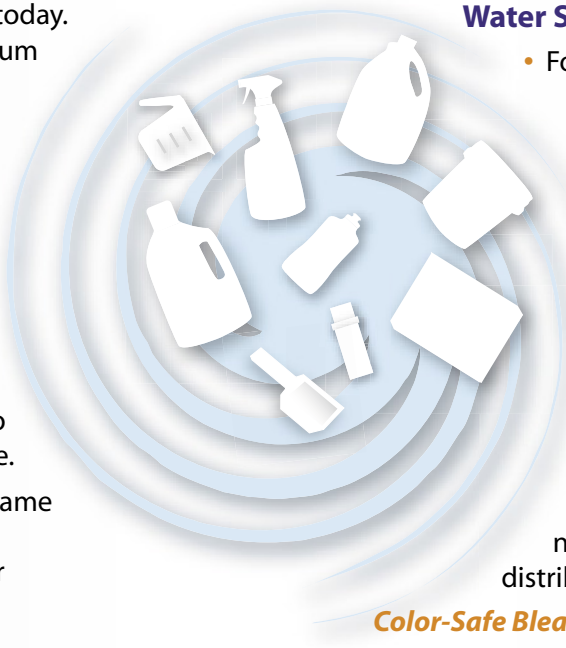
If you've purchased an HE washer and can't find HE detergents:

- Call the **toll-free number** on your current detergent package, or check the manufacturer's **Web site** to determine where or how to buy an appropriate HE detergent.
- Check the store where you purchased your washer. They may carry HE detergents — or know where you can purchase them.

LABEL ALERT! Some detergent manufacturers label their detergents "HE Compatible." Many of these detergents are *regular sudsing* detergents that should not be used in your HE washer. Be sure to read detergent labels carefully!

USING LAUNDRY PRODUCTS
In HE Washers

There is a wide variety of laundry products available today. The following guidelines will help you achieve optimum performance from your HE washer.



HE Laundry Detergents

- Most HE washers have **detergent dispensers.** Follow the washer manufacturer's use and care guide for proper use of the detergent dispenser.
- If there is no dispenser, follow the washer's **use and care guide.**
- Follow the detergent manufacturer's instructions to determine the **correct amount of detergent** to use.
- **Do not mix powder and liquid** detergents in the same dispenser compartment at the same time. Mixing powders and liquids together may cause "caking" or clogging in the dispenser.

Laundry Additives

Rinse-added Fabric Softeners

- Add fabric softener to the fabric softener dispenser so it gets dispensed at the right time. Follow the washer manufacturer's use and care guide for proper use of the dispenser.
- Follow the instructions on the fabric softener package to determine the correct amount to use.
- Do not use other softener dispensing agents in your HE washer, unless your washing machine's use and care guide recommends them.

Pretreats and Presoaks

- Pretreat and presoak products can be normal to high sudsing. Thus, their use should be limited in HE washers as they can cause oversudsing.
- If you experience oversudsing from pretreat or presoak products, you can use your HE detergent as a pretreater or presoaker.

Water Softener Additives

- Follow the water softener manufacturer's recommendations to determine the correct amount to use in your washer.
  - Add powder or liquid water softener to the empty tub before adding laundry.

    Note: *You can reduce the amount of water softener you usually use, since there is less water to soften.*

Bleach

Liquid Chlorine (Sodium Hypochlorite) Bleach

- Measure the bleach amount recommended in the washer manufacturer's use and care guide.
- Carefully pour the measured bleach into the bleach dispenser to avoid spills. The amount of bleach should not exceed the fill line on the bleach dispenser, as this may distribute the bleach into the wash load before desired.

Color-Safe Bleach

- Color-safe bleach is available in liquid and powder forms. For best results, follow the washer manufacturer's recommendations on **where** to put it, since different models of HE washers work differently and the manufacturer's specific directions will help you get the best results. Check the product label to determine **how much** to use.

***Liquid* Color-Safe Bleach**

- Do not mix liquid color-safe bleach with a liquid detergent, as this can decrease the effectiveness of both products.
- If there is no color-safe bleach dispenser, add the liquid color-safe bleach to the empty tub *before* adding the laundry.

***Powder* Color-Safe Bleach**

- A powder color-safe bleach may be added with a powder detergent in the detergent dispenser, if the dispenser is large enough.
- Do not add powder color-safe bleach with a liquid detergent. Mixing powders and liquids together may cause "caking" in the dispenser.
- If there is no color-safe bleach dispenser or if the detergent dispenser is not large enough for both powder detergent and bleach, add the powder bleach to the empty tub *before* adding the laundry.

Q&A *"Doing The Laundry" With Your HE Washer*

Q. Can I wash large loads of laundry in my HE washer?

A. HE washers are often designed to wash large loads. In fact, some of these washers will effectively clean significantly larger loads and/or bulkier loads than were possible in traditional agitator washers. Check your HE washing machine's use and care guide for specific loading capacity instructions.

Q. Do I still need to sort my laundry when I use my HE washer ?

A. Yes. Just as with a traditional washer, you need to sort by color, fabric type, soil levels, etc. It is especially important to sort by color, because there is less water in HE washers and dye transfer can be a potential problem.

Q. Can I select different wash cycles on my HE washer?

A. Yes. Wash cycles are comparable to those of agitator washers.

Q. Will my low-water HE washer rinse as well as my previous agitator washer?

A. Yes. Even though HE washers use considerably less water, they have two to four rinse cycles, rather than one rinse cycle as in many agitator washers. HE detergents assure good rinsing performance — and in fact, multiple rinses are typically better than one deep rinse.

Q. When I remove washed laundry from my HE washer, it sometimes seems almost dry. What setting should I use on my clothes dryer?

A. The most energy-efficient way to dry your laundry is to set your dryer on the auto-dry setting. This way the machine automatically shuts off when the laundry is dry.

As part of their energy-saving design, most HE washers remove more water from your laundry than traditional washers do. Thus, since the load may be less wet when removed from the washer, there can be additional energy savings in the dryer, too.

Q&A *Using HE Detergents – A "Must Do" For Your HE Washer*

Q. Why should I use only HE detergents in my HE washer?

A. HE washers are designed to save water and energy resources. To achieve these savings, HE washers are designed differently than traditional washers — for example, they use less water than traditional washers.

At lower water levels, cleaning problems can occur if detergents create too many suds or if soils from the laundry can't be completely rinsed out of both the laundry and the washer. Thus, detergents for HE washers need to be lower sudsing than regular detergents to provide good cleaning and thorough rinsing.

Detergent and washing machine manufacturers formulate and design their HE detergents and washers to work together as one effective cleaning system that gives you optimum cleaning performance while saving water and energy resources.

Q. What can happen if I don't use an HE detergent in my HE washer?

A. Using a regular detergent in an HE washer can create too many suds. These suds can interfere with the washer's washing/tumbling action by "cushioning" the laundry, thus reducing soil and stain removal performance and rinsing efficiency. These suds can also cause water and/or suds to overflow from the machine.

Excess suds can also cause the washer's pump to overheat or to add more water — this in turn can lengthen the wash cycle, thus reducing water/energy savings. These excess suds can also lead to residue buildup since they are not as easily rinsed away — and over time, they could lead to unpleasant odors, potential machine malfunctions or damage.

FACT The tumble action of high-efficiency washers creates more suds than the agitator action of traditional washers.

Q&A *Using HE Detergents (cont'd)*

Q. If suds are the problem, can I just use a smaller amount of regular laundry detergent?

A. No. Using a lesser amount of regular detergent will not alleviate the sudsing problem — and in addition, will compromise cleaning performance.

That's why HE detergents are recommended. They have a totally different formulation in order to clean your laundry effectively in low-water conditions.

Q. My new HE washer uses considerably less water than my agitator washer. Should I use less detergent?

A. No — you should not use less detergent in HE washers. Just as with a traditional agitator washer, you will need to use the **recommended amount** of HE detergent in an HE washer, based on your **load size**. (For bleach recommendations, check the HE washer's use and care guide.)

If you're washing large or heavily-soiled loads, then you may need to add *additional* HE detergent. The amount of detergent needed for the best cleaning performance depends on the size and soil level of the laundry load, not on the amount of water the HE washing machine uses.

Q. Will I need to use less HE detergent if I wash a small load?

A. Yes. Just as with a regular detergent, HE detergent use recommendations are based on "typical" wash conditions. Follow the instructions on the detergent package and adjust the detergent amount for conditions that are not typical. For example:

- Use less detergent for small loads, lighter soiling or soft water.
- Use more detergent for large loads, heavily-soiled laundry, or hard water.

Q&A *Peak Performance: Maintaining Your HE Washer*

Q. What can I do to keep my HE washer in top condition?

A. Because your HE washer is designed differently than agitator (high water level) machines, there are some specific things you can do to ensure that it performs at its best.

Low wash temperatures and/or use of regular detergent (which causes excess suds) may prevent some soils from completely rinsing out of the HE washing machines. Oily soils and some dirt-type soils are especially sensitive to lower wash temperatures and medium to high suds levels. Over time, these soils may accumulate in the HE washer and lead to the growth of bacteria and mold — and create odors in the HE washer.

You can usually avoid these potential problems by **using an HE detergent** and by **running a regular "maintenance cycle."** (See next question.) Contact your washing machine's manufacturer if you have a problem with soil buildup and/or unpleasant odors.

Q. What is a "maintenance cycle"?

A. A "maintenance cycle" involves running a full wash cycle without any laundry in the machine. Washing machine manufacturers recommend that you may need to perform this periodic machine maintenance once per week — or at minimum, once a month — to ensure that your HE washer remains clean and free from any soil buildups.

- Some HE washers offer a **special cycle**. **Check the use and care guide** to see if your machine has one. If it does, follow the manufacturer's recommendations.
- If your HE washer doesn't have an automated maintenance cycle, you may perform this function **manually**. (See page 14.)

Q. How do I run a "Manual Maintenance Cycle"?

A. Follow these steps if your HE washer does not offer a specific "maintenance" cycle. (Also see Q&A on page 13.)

1. Select the hot water setting. If there is no hot water setting, then select a "white" or a "stain" cycle setting. (Note: do not put laundry in the washer.)
2. Select the "extra rinse" option, if offered.
3. Add liquid chlorine bleach to the bleach dispenser. Fill to its maximum level.
4. Run the cycle through its completion.
5. If the HE washer does not have a second rinse option, manually select an additional rinse cycle to ensure that no chlorine bleach remains in your washer.
6. If your HE washer still has unpleasant odors, you may need to repeat steps 1 through 5 as necessary.

TIPS for Using Washing Machine Dispensers

- Use the **designated dispenser compartment** for each laundry product – detergent, bleach, and fabric softener.
- **Do not mix liquid and powder products** in the same dispenser at the same time. This can cause "caking."
- **Do not mix detergent and fabric softener** in the same dispenser compartment, as this will add the fabric softener at the wrong time.
- **Do not overfill** dispenser compartments. Overfilling may cause products to be dispensed too early.
- **Follow the washer manufacturer's instructions** for cleaning the dispensers.
- If you have questions, call the laundry product manufacturer or the washer manufacturer.

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Enhancing the health and quality of life through cleaning products and practices

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