

LAUNDRY PRO 2.0

A BEYOND BY AERUS TECHNOLOGY

Everyone does laundry, but only a few know of the costs associated with traditional washing. Detergents, fabric softeners, bleaches and hot water cost the average family over \$500 per year. It is a hidden expense for most families, and the chemicals in your laundry can leach into your skin and wear down your clothes; not to mention the environmental impact of the waste water and disposal of consumer containers. But there is a better, smarter, safer way to do laundry, and it is based on earth-friendly science and technology. Laundry Pro 2.0, designed and made in America, eliminates the need for hot water, detergents, fabric softeners and bleaches, thereby allowing it to pay for itself over and over again. And it is easily installed and used on both standard and high efficiency washers. Clean clothes are not an option, but wasting money, protecting your skin and making an earth-friendly difference should be!



The Cost of Clean

Based on information compiled from the Environmental Protection Agency (EPA) and U.S. Department of Energy, an average American household does around 392 loads of laundry per year at an approximate cost of \$1.12 to \$1.49. Costs include detergent, fabric softener, hot and cold water, and energy costs (actual cost will vary depending on geographic location). This represents an annual expenditure of up to \$585 without factoring in any investment in the washing appliance or related maintenance. By simply using cold water and needed electricity, it is possible to reduce this cost to about \$123 annually which would save as much as \$462 per year.

Detergent Use

Beyond their ever-increasing cost, laundry detergents contain chemical surfactants and fragrances which bring a number of issues to the wash. The web site www.eczema.ms states detergent residue can either irritate or cause eczema, while studies have shown it to be a cause of allergic contact dermatitis.¹ As the largest organ of the human body, the skin has the ability to absorb the chemicals it comes into contact with, something most people should prefer to mitigate. Used over time, detergent will embed in fabrics, weighing them down, dulling colors, and contributing to the allergic symptoms of sensitive individuals. Residue from detergent use tends to make fabric appear faded and cause stiffening when dried, prompting some appliance manufacturers to recommend washing clothing in hot water and vinegar as a remedy. Many consumers turn to regular use of chemical fabric softeners. Laundry soap can also accumulate in the internal workings of a washing machine resulting in, as reported by the Minnesota StarTribune, the build-up of mold and mildew inside the tub that is created when too much liquid detergent is used, creating a food source for bacteria.

Build up may also affect drains, as detergent and softeners are carried out with discharged wash water which, along with chemicals and dirt from the wash, can eventually find their way into local aquifers and water tables. Finally, the plastic containers used for liquid detergents take years to biodegrade in a landfill if they are not recycled.

Energy Consumption

One study performed in a small town in Kansas demonstrated the energy savings potential of doing laundry by switching from older washing machines to new high-efficiency front loading units, recording a water savings of 37.8% and energy savings of 57.6% for participants.² Per load, hot water usage for the study went down 58.26% while cold water use was reduced by 30%. In their Energy Savers Booklet, the U.S. Department of Energy points out that switching a washing machine's water temperature setting from hot to warm can cut a load's energy use in half, and that 90% of energy used for washing clothes in a conventional top-load washer is for heating the water. Based on this, saving energy when doing laundry can be achieved primarily through reduction of hot water usage by using warm/cold water settings, replacing an existing traditional model with a new high-efficiency machine, or eliminating the use of hot water altogether, with the highest potential savings coming from going to the use of cold water only.



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The ActivePure® Technology built into each Laundry Pro 2.0 is based on a variation of the technology originally developed for use on the International Space Station and is recognized as the exclusive Certified Space Technology in its category.

Laundry Without Detergent

Utilizing processes normally found in commercial laundry operations, LaundryPure 2.0 uses the bubbling and cleaning action of water with hydrogen and oxygen-based oxidizers to clean as it removes dirt, grime, and odor-causing bacteria without the need for detergents or bleach. In contrast to the typical detergent abrasive action of "scrubbing" on cloth fibers, the use of water with hydrogen and oxygen-based oxidizers in the laundry means clothing is cleaned by working to gently and effectively lift dirt from between fibers without leaving residues and chemicals behind. By preventing the build up associated with detergents, appearance and color of clothing remains visibly brighter, towels tend to retain their volume and feeling of softness, and dark-colored fabrics are less prone to developing a faded appearance, all with the additional benefit of keeping residual chemicals and fragrances away from sensitive or allergic skin. And while a pre-treatment or reduced amounts of detergent can be optionally used on aggressive staining, the reduction or removal of detergents and fabric softeners from the normal laundry routine can be beneficial from an economic point of view as well as an overall wellness standpoint.

Money Saving Technology

Taking away the need to repeatedly purchase detergent, bleach, and fabric softeners will clearly save on monthly household expenses, and the use of cold water only creates a significant additional savings. Average costs for water heating, electricity, detergent, and fabric softener have been used to calculate an approximate annual savings of up to \$462 when using Laundry Pro 2.0. Further savings may be realized through increased usable life of clothing and by delaying replacement of an existing traditional washing machine. And since no expensive modifications or changes are required regarding electrical, plumbing, or the existing washing machine appliance, installation of the Laundry Pro 2.0 can typically be performed by the homeowner.

Earth-Friendly Features

Unlike some leading oxygen-based powders, the cleaning action of Laundry Pro 2.0 works best in cold water, and unlike any brand of detergent, bleach, fabric softener, or eco-friendly laundry soap, there are no boxes, bottles, or buckets to throw out each month, or chemical-laden water to go down the drain and eventually into the environment. The technology in Laundry Pro 2.0 infuses incoming cold water with hydrogen and oxygen-based oxidizers that bubble through the wash then break down into basic oxygen within just a few minutes, leaving only water and dirt from clothing to continue on into the waste system. Laundry Pro 2.0 meets RoHS standards for lead (Pb), mercury (Hg), cadmium (Cd), hexavalent chromium (CrVI), polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE).

Space Certified Technology

Laundry Pro 2.0 uses a variation of the technology originally developed for use in the International Space Station and is recognized as a Certified Space Technology by the Space Foundation.

Who Should Use

Available for both high efficiency and standard washing machines, Laundry Pro 2.0 is intended to work with residential clothes washers and is for use by anyone interested in an economical, earth-friendly alternative to the typical detergents and chemicals currently available, without modifying existing appliances, electrical systems, or plumbing.

Unique Features of Laundry Pro 2.0

- **Eliminates the need for detergent** - Hydrogen and oxygen gases bubble into clothing to lift dirt and odors. A pre-treatment may be used for tough stains.
- **Prevents odor-causing bacteria without bleach** - Laundry Pro 2.0 combines the power of exclusive ActivePure®, a Certified Space Technology, with the cleaning action of water with hydrogen and oxygen-based oxidizers to lift dirt and grime away from the fibers of fabric and prevent the growth of odor-causing bacteria.
- **Helps eliminate allergic reactions due to detergent residue** - Laundry Pro 2.0 also helps eliminate the itching and redness caused by allergies due to detergents embedded in clothing, and the hidden effects of chemicals absorbed by skin.
- **Gets towels softer and fluffier and helps clothes last longer** - Build up on towels, linens, and clothes can weigh them down. Over time, Laundry Pro 2.0 lifts old detergents out of fibers, restoring their softness.
- **Makes whites whiter and colors brighter** - Laundry Pro 2.0 keeps clothes looking their best with the cleansing power of water with hydrogen and oxygen based oxidizers.
- **Protects the home** – The Laundry Pro 2.0 monitors its operations with status indicator lights. The lights glow blue during normal operation and will indicate when attention is required.
- **Designed and built in the USA with the user in mind** – Laundry Pro 2.0 is designed for simple use and installation. Easy to see indicator lights glows blue when operating normally and glow red when a problems exists.
- **Friendly to people, the planet and the pocketbook** - Laundry Pro 2.0 eliminates the need for hot water cycles. The unit itself is RoHS compliant and can be recycled.

Frequently Asked Questions

- **Does Laundry Pro 2.0 get out tough stains without pretreating?**

Tough stains could still require pretreatment.
- **Does the Laundry Pro 2.0 work with all types of water including hard water?**

Laundry Pro 2.0 will work with all household water qualities, but the better the incoming water quality the better the results. To improve results, if desired, use a water softener for hard water and/or a prefilter for chlorine.
- **Will the Laundry Pro 2.0 work with commercial washing machines?**

Laundry Pro 2.0 is designed for residential use only.
- **Is a plumber required to install Laundry Pro 2.0?**

The customer is responsible for installation of their Laundry Pro 2.0 unit. Some customers may prefer to have a plumber perform the installation although Laundry Pro 2.0 can be installed in most homes by the home owner using standard hand tools.
- **Can I connect the Laundry Pro 2.0 unit to anything other than a washing machine?**

Laundry Pro 2.0 is designed to work with residential washing machines. Use for any purpose other than as recommended by the manufacturer may void the product warranty.
- **What effect does Laundry Pro 2.0 have on elastic?**

Normal operation of a Laundry Pro 2.0 unit should have no negative impact on elastic in clothing.
- **Can I let my clothes soak overnight?**

It is not recommended that clothes are allowed to soak overnight in Laundry Pro 2.0 water.

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Installing

Laundry Pro 2.0 is designed to attach to a residential washing machine using the existing plumbing connection for cold water and standard washing machine hoses. Connections are made from the cold water valve outlet to the inlet on the Laundry Pro 2.0 and from the outlet on the Laundry Pro 2.0 to the cold water inlet on the washing machine. The hot water connection should remain connected from the hot water valve outlet to the hot water inlet on the washing machine. Power is supplied by a universal AC adapter inserted into a standard electrical outlet, with the DC power cord inserted into the Laundry Pro 2.0. Level, horizontally positioned installation on a stable, flat wall surface using appropriate wall anchors is required.

Using Laundry Pro 2.0

Laundry Pro 2.0 is completely automatic, requiring no additional effort for typical use beyond correct initial installation. Pre-treating can be done as normal for aggressive and tough staining. Sorting should be performed the same as before using Laundry Pro 2.0. For optimal performance and energy savings, use cold water only.

Specifications

Technology	ActivePure [®] Technology
Power Usage	0.4W AC (standby) 1.3W AC (operating)
Power Adapter Input	AC in: 100-240V ~50/60 Hz 0.45A
Power Adapter Output	DC out: 12V 2.5A
Water Pressure	min. 20 psi to 60 psi max./1.37~4.13 bar
Water Temperature	use cold water only
Operating Temperature	50°F to 100°F (10°C - 37.8°C)
Operating Humidity	40% to 85%
Size	17.3" wide x 5.19" tall x 3.69" deep (43.94 cm x 13.48 cm x 9.37 cm)
Weight	4.3 lbs / 1.95 kg

Special Considerations

- Water quality will affect results. A water softener or pre-filter may be installed if needed. Do not use with high iron content or high sediment water.
- To achieve desired results, aggressive or tough stains may require pre-treatment or a reduced amount of detergent before washing with Laundry Pro 2.0.
- Laundry Pro 2.0 is designed to work with residential washing machines. Use for any purpose other than as recommended by the manufacturer may void your warranty.
- When installed on an existing used washing machine, an initial cleaning cycle will be required to remove detergent build up that may dislodge and contaminate clothing.

Warnings

- Install indoors on potable water systems only. Do not install in areas where water may freeze.
- Water pressure of 20 to 60 psi is required for proper operation.
- Laundry Pro 2.0 reduces or eliminates the need for laundry detergent. While many users find that Laundry Pro 2.0 alone effectively cleans their laundry, some may find it necessary to pre-treat or use a reduced amount of detergent to remove certain stains. If it is determined that detergent is necessary, it is recommend using 1/8th the amount previously used before purchasing Laundry Pro 2.0.
- Do not operate Laundry Pro 2.0 with the front cover removed or improperly installed.
- See Laundry Pro 2.0 owner's manual for proper installation and operation procedures.

Key Scientific Studies

1. J Am Acad Dermatol. 2002 Feb;46(2):200-6. Allergic contact dermatitis to detergents: a multicenter study to assess prevalence. Belsito DV, Fransway AF, Fowler JF Jr, Sherertz EF, Maibach HI, Mark JG Jr, Mathias CG, Rietschel RL, Storrs FJ, Nethercott JR. Source Division of Dermatology, University of Kansas Medical Center, Kansas City, KS 66160-7319, USA.
2. Tomlinson, J.J., D.T. Rzy, "Bern Clothes Washer Study, Final Report," Energy Division, Oak Ridge National Laboratory, for U.S. Department of Energy, March 1998

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