

# New water filters for low-income households

Launch | November 2012 | user-centered design, standardization, and affordable performance

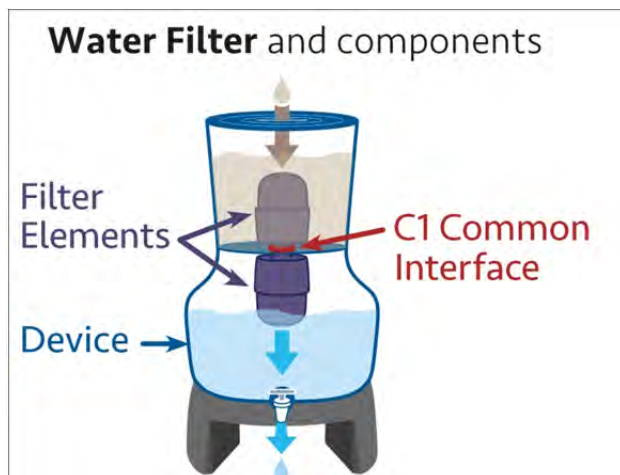
## INTRODUCTION

On behalf of our partners, PATH is pleased to announce a family of new water filters is now available from multiple manufacturers. These products are designed for low-income households in developing countries. Key benefits include user-centered design, standardization, and affordable performance. All of the products are standardized on the *C1 Common Interface*. This interface enables a device to accept any filter element that is also C1 compatible. Terminology is illustrated in the graphic below.

The C1 Common Interface creates a platform for innovation to benefit end-users and product innovators. For example, one partner has launched a new filter element representing a significant price-and-performance improvement for gravity-fed, ceramic filtration. Users will also enjoy more choice. The new family launches with three different devices and filter elements. The C1 Common Interface is available from PATH under a no-cost license—allowing any company to leverage this platform to reach new customers.

This fact sheet provides an overview of the products and their unique consumer benefits. More information, including a detailed *Guide to New Water Filters With the C1 Common Interface*, is available at: <http://sites.path.org/water/hwts/technology/new-water-filters-resources/>.

## KEY TO TERMINOLOGY USED BY PATH AND PARTNERS



## DEVICES



Devices from Dukang, Ningbo Clean, PureEasy (L to R).

## KEY BENEFITS

- User-centered design—applying the lessons from more than 600 hours of careful in-home observation in the field and sophisticated industrial design.
- Standardization—all products are standardized on the new C1 Common Interface, which enhances safety and usability and enables devices to accept any filter element that is also C1 compatible.
- Affordable performance—value engineered to minimize production cost, nested in compact packaging to reduce shipping cost, and compatible with a range of filter technologies that support low operating costs.

## USER-CENTERED DESIGN

User-centered design considerations run deep through the new products, based on PATH's *Household Water Treatment and Storage Design Guidelines* (available at: [www.path.org/hwts-design-guidelines/index.php](http://www.path.org/hwts-design-guidelines/index.php)). Selected user-inspired design choices are listed below:

- Aesthetics blend modern and traditional themes to evoke both aspiration and the comfort of familiarity.
- Intuitive assembly builds user confidence.

*Continues on reverse...*

- Wide mouth and the right height ease filling.
- The stand enables easy cup filling from the tap.
- Round corners allow fingers to easily remove grime; many households hand scrub kitchenware daily.



### STANDARDIZATION—THE C1 COMMON INTERFACE

The products are standardized on the new C1 Common Interface. This is a design specification for the common connection point between a water filter (specifically, the “device”) and the filter elements that go inside of it that require periodic replacement, creating a classic “light bulbs and sockets” scenario so different brands of products can work together. Features include:

- Built-in safeguards to prevent upside-down installation of filter elements and leak through of contaminated water around filter elements—even at the tricky moment when a user removes a filter element for cleaning and residual untreated water is present.
- Supports many current/future filter element types.
- Simple to use for easy cleaning and replacement.
- Flexible device styling and capacities from 12 L up.
- Attachment of up to two filter elements (upper/lower).  
The first available filter elements fit the upper position.

The C1 Common Interface improves choice for consumers and brands. Consumers can always choose the best available filter elements without replacing their whole filter. Filter element makers can more easily partner with water filter brands to reach developing-country consumers. Water filter brands can take advantage of more sourcing and technology options. Proliferation will support high-volume production, thus lowering prices. Product choices are likely to expand as more companies adopt the C1 Common Interface—which is easily available under a no-cost license from PATH.

### AFFORDABLE PERFORMANCE—FILTER ELEMENTS

The manufacturers estimate pricing of about \$15 or less for a complete water filter—including a device for around \$11 to \$13 and a filter element for between \$2 and \$3. Estimates are for wholesale orders of at least 1,000 units (factory gate, China). Prices will vary over time, by manufacturer and model, and with the cost of plastic, market conditions, and so on. For details see PATH’s *Guide to New Water Filters With the C1 Common Interface*, referenced at right.

Ceramic was selected as the initial filter element type due in part to its relatively long service life, correspondingly low cost, and solid research base demonstrating positive health impact. One model (above center, from PureEasy) may also represent a new performance benchmark for gravity-fed, ceramic filtration—it removed over 99.99% of bacteria under third-party testing. For details see the *Guide to New Water Filters With the C1 Common Interface*, noted below.

### COMMITTED PARTNERS—A COLLECTIVE EFFORT

PATH gratefully acknowledges the efforts of its commercial partners. Special thanks are due to the three companies whose products are featured in this fact sheet: Guangzhou PureEasy Hi-Tech Co., Ltd; Ningbo Dukang Ceramic Co., Ltd; and Ningbo Clean Water Purifying Equipment-Making Co., Ltd.—and also to Cascade Designs, Inc., which also played a key role in the advancement of this initiative.

### MORE INFORMATION

PATH’s *Guide to New Water Filters With the C1 Common Interface* provides much more detailed information, including:

- Specifications and model numbers.
- Product comparison advice.
- Manufacturers and pricing, procurement, and import advice—including manufacturers’ contact details.

Visit our resource page at <http://sites.path.org/water/hwts/technology/new-water-filters-resources/> for links to the guide and all other information available from PATH, including the no-cost license to the C1 Common Interface.

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