

porvair  
filtration group

# Residential and Commercial Filtration Solutions

Filtration Solutions for Tomorrow's World



World Class Filtration Solutions

[www.porvairfiltration.com](http://www.porvairfiltration.com)



## What is Sediment Filtration?

The water in your home can contain dirt, grime, sand, rust particles, mud and many other substances that make it unfit to drink.

### What can you do?

We offer a range of filter models depending on how small the particles are that you want to remove from your water.

The finer the filter cartridge material, the more efficient it will be removing particulate from the water.

Finer filtration also causes a greater resistance to flow which will result in a drop in water pressure. The correct filter for you will provide a large filtering surface and will allow an adequate flow of filtered water to reach your faucet, shower or other point-of-use.

The amount of filter area is a key factor in ensuring proper flow rates as well as total filtering capacity.

We will be happy to help you select the best choice for your specific filtration need.

### How can we help?

All of our most popular models are sold as complete units including a housing with a pleated cartridge inside.

We recommend pleated cartridges for sediment removal because they provide much more dirt holding capacity than other models.

Test data for a typical Porvair pleated sediment filter is shown in the chart on the right.



### When to change your filter?

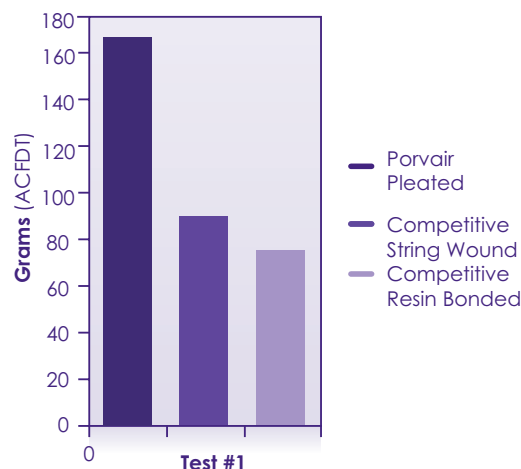
Filter changeout is dependent on the amount of dirt in your water and your water usage.

A change in your water flow is the best indicator that your filter cartridge needs to be changed. We also offer our filters with a color-coded pressure gauge to let you know when it is time to replace your cartridge.

Sediment filter cartridges should be changed at least once a year under normal conditions.

Filters can be purchased with wall bracket and/ or bowl wrench as accessories.

### Holding Capacity in AC Fine Test Dust (Dirt)



## Glossary

### Depth Filter Cartridge

A non-pleated filter whose effectiveness is based on the formation of a "cake" or multiple layers of dirt.

As dirt builds a "cake", depth filters become more effective.

### Micron

A linear measure equal to one millionth of a meter or 25,000th of an inch. The smallest particle that can be seen by the human eye is 40 microns.

Human hair is 50-75 microns.

### Pleated Filter Cartridge

Media has the appearance of a paper fan with multiple folds.

Effectiveness is based on amount of surface area.

### Point-of Entry

Point at which the water supply enters a house/facility - most often the basement of a home.

### Point-of-Use

Refers to actual location where water is used — usually kitchen or bathroom faucet.

### Potable Water

Water which is safe for human consumption.

### Resin Bonded Cartridge

A depth cartridge constructed of a drinking water resin.

### String Wound Cartridge

Constructed by wrapping layers of string or yarn around a center tube.

Effectiveness is based on the number of layers and weight of string.

### Nominally Rated

Filter may remove a certain percentage of particles at a specified size, but the efficiency may vary.

### Absolute Rated

Filter are specifically designed to remove all particles larger than a specified size.



## What is Carbon Filtration?



Water in your home can contain contaminants such as chlorine, sulfur (rotten egg smell), volatile organic chemicals (VOC's) and other bad tastes or odors.

### What can you do?

Solve your problems with our Giant Whole House Filters.

Activated carbon can be used as an effective method to adsorb various unpleasant contaminants, tastes and odors from your water.

Carbon is an ideal means of eliminating these problems because it is an environmentally sound solution. Carbon is made from organic matter such as coconut shells, coal and other natural materials.

Chlorine is commonly added to public water supplies to disinfect the water. It can be absorbed into pores and inhaled when showering.

Our Whole House Filter using any of these cartridges can reduce this concern. In addition, removing chlorine and toxins can give you smoother skin and shinier hair.

### Activated Carbon Filters

Activated carbon filters are most effective when installed at the point of use. Maximum contact time between the water and the carbon is critical for effective filtration.

In addition, it is essential that activated carbon filters be properly sized to accommodate home water flow requirements.

### When to change your filter?

It is very important to maintain your filter properly by changing the cartridge on a regular basis.

You will find that the life of your filter cartridges can vary depending on the amount of chlorine added to the water supply in your area.

The best way to determine when your taste/odor cartridge needs to be changed is to wait until the offending taste/odor returns.

If your problem is minimal or your water usage is low, the cartridge should be replaced at least once a year.

We offer a wide choice of filter models depending on the specific problem you want to solve.

Evaluate the many choices we offer and select the one that is right for your situation or call us for help with your selection.

## Glossary

### Adsorption

To take in or drink in, as a sponge imbibes water. Ability to adhere gases, liquids and other matter to a surface or exposed pores.

### Absorption

Ability to take in or assimilate gases, liquids and other matter into a structure.

### Activated Carbon Adsorption

Removal of soluble components from water by contact with adsorptive granular or powdered carbon.

### Chlorine

A gas widely used in the disinfection of water.

### Flow Rate

Quantity of water which passes a given point in a given period of time. Flow rate is expressed as gallons per minute.

### Giardia Cyst

A cyst, 4 to 12 microns in size, that can cause various digestive problems such as diarrhea and vomiting.

### MCL (Maximum Contaminant Level)

Applicable for public water systems.

### Micron

A linear measure equal to one millionth of a meter or 1/25,000 of an inch. The smallest particle that can be seen by the human eye is 40 microns.

Human hair is generally 50 to 75 microns in width.

### TCE (Trichloroethylene)

A volatile organic contaminant.

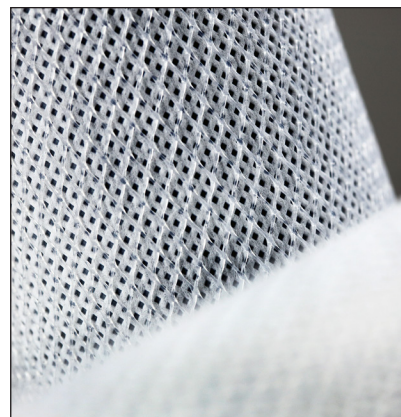
MCL = 0.005 mg/l.

### THM (Trihalomethanes)

Organic chemicals suspected of being carcinogenic. Formed in water when chlorine reacts with decayed vegetation. Chloroform is a common THM. MCL = 0.005 mg/l.

### VOC (Volatile Organic Chemical)

Any one of a large number of organic chemicals that can be found in a water supply



# AquaKey™ S 20-50µm

Giant Housing/  
Filter Combo Units



**Our AquaKey™ S GIANT® heavy sediment filter cartridges feature:**

- Polypropylene media designed for sand and heavy sediment removal
- High dirt holding capacity: 2-3 times the capacity of similarly sized depth cartridges
- Fits standard Porvair and most industry housings
- Replaces standard 10" filter cartridge

### Typical Applications

- Residential and commercial potable water
- Fine chemicals and solvents
- Process water

### Specifications

#### Materials of Manufacture

Filter media: Pleated Polypropylene

#### Cartridge Dimensions (Nominal)

Outside Diameter: 4.5" (114mm)  
Inside Diameter: 1" (25mm)  
Nominal Length: 10" (254mm)  
Overall Length: 9.75" (247mm)

#### Micron Rating

30µm, 50µm

#### Maximum Operating Temperature

180°F (82°C)

#### Packaging

Shrink wrapped 1 per pack / 8 per case

### Combination Housing Information

Part No.	Model No.	Micron Rating	Length	Cartridge Part	Model No.
052641CW	CG10CW	50 micron	10"	053252	GPE50
052643CW	CG20CW	50 micron	20"	053253	GPE50-20

### Replacement Cartridges

Part No.	Model No.	Length	Micron Rating
053256	GPE30	10"	30 micron
053254	GPE30-20	20"	30 micron

Part No.	Model No.	Length	Micron Rating
053235	GDH20	10"	20 Micron
053236	GDH20-20	20"	20 Micron

Part No.	Model No.	Length	Micron Rating
053252	GPE50	10"	50 Micron
053253	GPE50-20	20"	50 Micron

????????



# AquaKey™ S 5-20µm Standard Housing/ Filter Combo Units



## Problem

Particulates in your cold water.

## Solution

A 5 micron or 10 micron sediment removal filter.

A single 5 to 10 micron particle of sediment cannot be seen by the naked eye. In large numbers, they become noticeable and objectionable.

Our sediment filters utilize a pleated cartridge to provide a large amount of filtration surface area and greater dirt holding capacity. In water and water-like liquids, dirt is trapped on the outside surfaces of the filter cartridge.

The large surface area of a pleated cartridge greatly increases the life of the filter and allows our filters to perform in the same manner as the hard working, long lasting air and oil filters in your car.

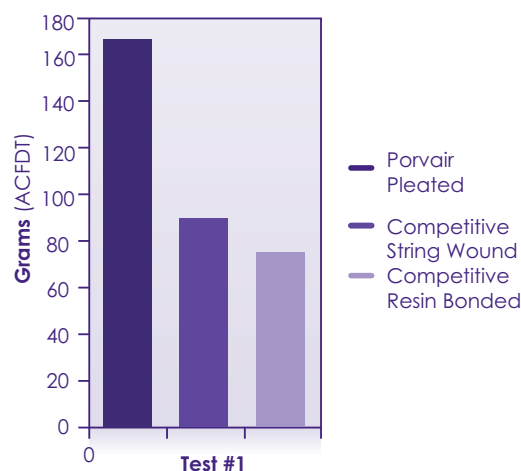
Independent tests prove that a pleated cartridge will last 2 to 3 times longer than other types of sediment cartridges.

A 5 micron filter cartridge provides adequate filtration for most situations. The addition of a small amount of polyester to the pleated media extends the cartridge life by adding strength for high pressure situations.

## Typical Applications

- Residential
- Commercial

## Holding Capacity in AC Fine Test Dust (Dirt)



## Note

Operating conditions can change performance. Actual results will vary depending on combinations and amounts of organic contaminants, changes in pH or other conditions encountered in actual use.

Use this range of products only with microbiologically safe water.

All information presented here is based on data believed to be reliable. It is offered for evaluation and verification, but is not considered to be a warranty of any kind.



**Combination Housing Information:**

Part No.	Model No.	Length	Micron Rating	Cartridge Part No.	Model No.
052005	1121N	10"	5 Micron	051993-024	110
051548	2121N	10"	20 Micron	053230-024	210
051837	2323N	20"	20 Micron	051836-025	230
051711	1232	5"	5 Micron	052003-048	120
053407	1131	10"	5 Micron	051993-024	110

????????

## AquaKey™ S Filter Kits

For Hot Water and High Pressure



The following units consist of a 5 micron fine particle removal cartridge in a glass reinforced nylon housing for hot water/high pressure applications. These filters can withstand temperatures to 180°F and pressures to 200 psi. They have the same sediment removal capabilities as our standard sediment units.

### Typical Applications

- Residential
- Commercial

### Filter Kit Specifications

Part No.	Model No.	Max Op Temp °F/°C	Flow Rate GMP / LPM	Dimensions (inches)	Shipping Weight (lbs)
053407	1131	180 (82)	10 (38)	12.63 x 5	3.6
051711	1232	180 (82)	10 (38)	7.75 x 5	2.6

### Replacement Cartridges

Part No.	Model No.	Max Op Temp °F/°C	Flow Rate GMP / LPM	Dimensions (inches)	Shipping Weight (lbs)
051993-024	110	200 (94)	10 (38)	9.75 x 2.5	4.5
052003-048	120	200 (94)	5 (19)	4.875 x 2.5	3.0

# Pure Polypropylene Housings



Our pure polypropylene filter housings are ideal for use in all industries where filtered liquids must remain totally free of contamination. These housings are especially essential in the semi-conductor, pharmaceutical and chemical processing industries. They are constructed entirely of virgin polypropylene without color, adders, fillers, reinforcements or lubricants.

In critical applications, these all-natural housings ensure pure, cost-effective filtration of a variety of solvents, acids, alcohols and chemicals without leaching or bacterial build up. Our 100% polypropylene housings provide an inexpensive alternative to Teflon™ or fluoropolymer housings.

## Typical Applications

- De-ionised water
- Laboratory instrumentation and equipment
- Pharmaceutical /cosmetic solvents
- Electronic solutions and chemicals
- Post filter for reverse osmosis or ultrafiltration

## Features and Benefits

- 100% polypropylene construction
- Smooth contact surfaces to prevent bacteria and dirt buildup
- Includes a non-lubricated silicone O-ring as standard
- Standard  $\frac{3}{4}$ " NPT or  $\frac{3}{4}$ " BSP connections

## Specifications

Model number*†	Max. operating temperature °F (°C)	Max. operating pressure psi (bar)**	Shipping weight kg (lb)***	Cartridge size	Cartridge type	Housing style
51NX	125 (52)	150 (10)	2.4 (1.09)	10" (254mm)	DOE	w/o pressure relief button
51NXD	125 (52)	150 (10)	2.4 (1.09)	10" (254mm)	DOE	w/ tapped drain
51NX-222	125 (52)	150 (10)	2.4 (1.09)	10" (254mm)	222	w/ 222 O-ring configuration
51NXD-222	125 (52)	150 (10)	2.4 (1.09)	10" (254mm)	222	w/ 222 O-ring configuration and drain
52NX	125 (52)	150 (10)	1.2 (0.54)	5" (127mm)	DOE	w/o pressure relief button
53NX	125 (52)	150 (10)	3.4 (1.54)	20" (508mm)	DOE	w/o pressure relief button
53NXD	125 (52)	150 (10)	3.4 (1.54)	20" (508mm)	DOE	w/ tapped drain
53NX-222	125 (52)	150 (10)	3.4 (1.54)	20" (508mm)	222	w/ 222 O-ring configuration
53NXD-222	125 (52)	150 (10)	3.4 (1.54)	20" (508mm)	222	w/ 222 O-ring configuration and drain

\* Housings can be ordered with a differential pressure gauge by adding the letter "G" after the model number.

† NPT fittings as standard. Add a B after the model number to order BSP fittings.

\*\*At 70°F (21°C). \*\*\*Multiply by 12 to obtain weight per case.  $\frac{1}{4}$ " NPT vent and drain.

????????

## Porvair's GIANT HOUSING® Series

The GIANT HOUSING® series offers maximum filtration capacity in a compact unit. These housings feature:

- Talc polypropylene, clear styrene, pure polypropylene and glass reinforced nylon construction
- Unique 'stacked threads' - both 1" and 1-1/2" NPT or BSP connections in the same head
- Bag housings in all materials, (bags are also available)
- Optional differential pressure gauge available



The GIANT HOUSING® series, with a 222 fitting in the head will only take 222 style GIANT cartridges. These are available with white talc polypropylene heads and white talk polypropylene or clear styrene bowls.

### Ordering Information

For ordering information please contact a member of the sales team.

### Specifications - for cold liquid applications

Model number*†	Max. operating temperature °F (°C)	Max. operating pressure psi (bar)*	Shipping weight lb (kg)**	Cartridge size	Cartridge type	Housing material and style
BG10	125 (52)	100 (6.9)	5.10 (2.31)	10" (254mm)	DOE	White polypropylene head, blue polypropylene bowl
BG10222	125 (52)	100 (6.9)	5.10 (2.31)	10" (254mm)	222	White polypropylene head, blue polypropylene bowl
BG20	125 (52)	100 (6.9)	7.13 (3.23)	20" (508mm)	DOE	White polypropylene head, blue polypropylene bowl
BG20222	125 (52)	100 (6.9)	7.13 (3.23)	20" (508mm)	222	White polypropylene head, blue polypropylene bowl
CG10	125 (52)	100 (6.9)	4.13 (1.87)	10" (254mm)	DOE	White polypropylene head, clear styrene bowl
CG10222	125 (52)	100 (6.9)	4.13 (1.87)	10" (254mm)	222	White polypropylene head, clear styrene bowl
CG20	125 (52)	100 (6.9)	7.12 (3.23)	20" (508mm)	DOE	White polypropylene head, clear styrene bowl
CG20222	125 (52)	100 (6.9)	7.12 (3.23)	20" (508mm)	222	White polypropylene head, clear styrene bowl
NPGX10	125 (52)	100 (6.9)	3.13 (1.42)	10" (254mm)	DOE	Pure polypropylene w/o pressure relief button
NPGXD10	125 (52)	100 (6.9)	3.13 (1.42)	10" (254mm)	DOE	Pure polypropylene w/ tapped drain
NPGX20	125 (52)	100 (6.9)	5.15 (2.34)	20" (508mm)	DOE	Pure polypropylene w/o pressure relief button
NPGXD20	125 (52)	100 (6.9)	5.15 (2.34)	20" (508mm)	DOE	Pure polypropylene w/ tapped drain
NG10222	125 (52)	100 (6.9)	3.13 (1.42)	10" (254mm)	222	Pure polypropylene head, blue polypropylene bowl
NG20222	125 (52)	100 (6.9)	5.15 (2.34)	20" (508mm)	222	Pure polypropylene head, blue polypropylene bowl

\* At 70°F (21°C). † NPT fittings as standard. Add a B after the model number to order BSP fittings. \*\* Multiply by 12 to obtain weight per case. 1/4" NPT vent and drain.

### Specifications - for high temperature applications

Model number*	Max. operating temperature °F (°C)	Max. operating pressure psi (bar)*	Shipping weight lb (kg)**	Cartridge size	Housing material and style
HTGX10	180 (82)	100 (6.9)	5.88 (2.67)	Full	Reinforced nylon head and bowl
HTGX20	180 (82)	100 (6.9)	8.25 (3.74)	Double	Reinforced nylon head and bowl

\* NPT fittings as standard. Add a B after the model number to order BSP fittings. \*\* Multiply by 12 to obtain weight per case.









**porvair**  
filtration group

**Porvair Filtration Group Inc.**  
301 Business Lane  
Ashland, Virginia 23005, USA  
Tel: +1 804 550 1600  
Email: [infoUS@porvairfiltration.com](mailto:infoUS@porvairfiltration.com)

**Porvair Filtration Group Ltd.**  
1 Concorde Close  
Segensworth, Fareham  
Hampshire, PO15 5RT, UK  
Tel: +44 (0)1489 864330  
Email: [info@porvairfiltration.com](mailto:info@porvairfiltration.com)

**Porvair Filtration India PVT. Ltd.**  
401 Centrum IT Park  
Plot No. C-3, Waggle Estate  
Thane (W), 400604, India  
Tel: +91 750 634 8491  
Email: [infoIN@porvairfiltration.com](mailto:infoIN@porvairfiltration.com)

**[www.porvairfiltration.com](http://www.porvairfiltration.com)**

Porvair, Sinterflo, GIANT HOUSING and Vyon are registered trademarks of Porvair plc.

GIANT HOUSING is a registered trademark of Porvair Filtration Group, Inc.

Teflon is a trademark of The Chemours Company FC, L.L.C.

Viton is a registered trademark of DuPont Performance Elastomers L.L.C.

© Copyright 2025. Porvair Filtration Group Ltd. All rights reserved.

Whilst every effort has been made to ensure the accuracy of this document, due to continuous product development, the data contained is subject to constant revision and Porvair Filtration Group Ltd. reserves the right to change, alter or modify its contents.