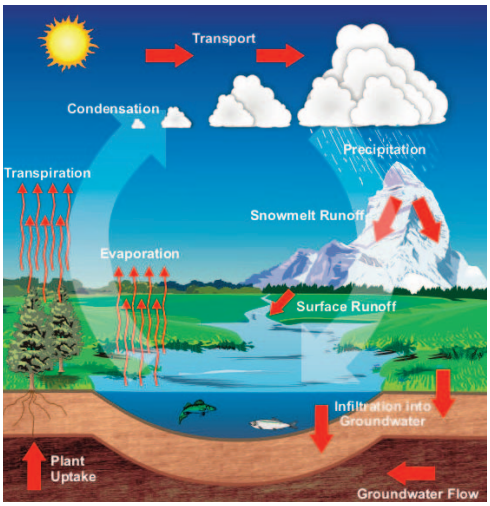
CHARGER
Water Treatment Products

# Filter Prep
## Water Filters
with WS1 1" Control Valve

**Making the Best of your Water**

# How Our Water Collects Contaminants




## Your Water, The Universal Solvent!

Water is considered the universal solvent. As it passes from liquid to vapor and back again, it tends to dissolve everything it touches -whether in the air as water vapor were it can mix with sulfur from smoke stacks forming acid or from the ground, absorbing calcium, magnesium, sulfur, iron, lead and limestone - water can have a negative impact on you, your household and your pocketbook. Depending on where you live, contaminants from sewage, industrial waste and agricultural run-off can also seep into your water supply.

## Filtration Options for Removing Nature's Contaminants

ACTIVATED CARBON - Used for taste, odor, chlorine and organics removal including VOCs. The 12 x 40 mesh size traps particles of 30 micron and larger.

CENTAUR NDS 12X40 GRANULAR ACTIVATED CARBON - A high grade catalytic carbon excellent for removing chloramines and hydrogen sulfide from potable waters.

NEUTRALIZING CRUSHED MARBLE - A sacrificial media that dissolves in acidic water to create a neutral water. This process adds some hardness to the water. Crushed marble, a mined material, is used in its natural state.

PYROLOX - A naturally mined ore, Pyrolox is a mineral form of manganese dioxide used in reducing hydrogen sulfide, iron and manganese.

FILTER-AG - A lightweight, silica, crystalline quartz media with excellent filtering capability, requiring lower backwash flow rates.

FILTER-AG PLUS - A clinoptilolite natural media with a large surface area and microporous structure used for the reduction of suspended matter.

KDF - A bi-metal copper and zinc material used for iron and hydrogen sulfide removal. KDF can control bacteria, algae and fungus growth.

BIRM - A lightweight catalytic filter media used for removing iron and manganese via oxidation. The oxidized iron or manganese is then filtered. Birm has an inert core coated with manganese dioxide.

MANGANESE GREENSAND - A glutonite greensand that is a catalytic material for the removal of iron, manganese and hydrogen sulfide. The media is intermittently regenerated with potassium permanganate or continuously with chlorine or a chlorine and potassium permanganate mixture.

MULTI-MEDIA - Multi-media is reverse graded layers of filter medias. The layered process allows for higher flow rates plus filtration down to 10 micron-sized particles. Works well for sediment, turbidity and red water iron.

ZEO💧PREP - Filters down to 5 microns. Excellent for removing suspended iron, manganese and turbidity. Removes dissolved iron, hardness and manganese through ion exchange. Can be regenerated with salt brine. Zeo💧Prep filters solids like nothing else. Zeo💧Prep's ion exchange properties make it a dual purpose option for problem water.

# Filter Prep Water Filters...

## Making the best of your water.

Filter Prep Water filtration systems make it easy to enjoy cleaner, healthier, better tasting water throughout your home. Whether for drinking, cooking, bathing or laundry, Filter Prep will improve the quality of your water.

Your water could contain chemical contaminants from pesticides, petroleum, solvents, or a variety of sources. Some water contains lead, mercury or other heavy metals. Filter Prep has a variety of units to remove these contaminants.

With a Filter Prep water filtration system, you can protect appliances, household plumbing, and your water heater by reducing sediment, sand or rust that can damage plumbing and appliances.

Filter Prep automatic filters can eliminate iron, sulfur and odor from your water supply 24 hours a day, in most cases, without having filter cartridges to change or chemicals to purchase.

### Filter Prep System features:

- WS1 1" NSF-rated HighFlo Automatic Control valve with Fully Adjustable Cycles
- NSF-rated Polyglass Media Tank
- Filters Available for Removing:
  - Iron
  - Manganese
  - Sulfur
  - Sediment
  - Color
  - Turbidity
  - Taste
  - Odor
  - Heavy Metals
  - Pesticides
  - Herbicides
  - Chemicals

# Filter Prep

Making the Best of your Water

**Coconut Shell-High Activated Carbon (CS-HAC) may be used for a variety of water treatment applications requiring the reduction of chlorine, tastes and odors.**

# Coconut Shell-High Activated Carbon (CS-HAC)

Clack granular activated carbon is designed for reduction of tastes, odors and dissolved organic chemicals from municipal and industrial water supplies. Manufactured from select grades of coconut shell coal to produce a high density, durable granular product capable of withstanding the abrasion and dynamics associated with repeated hydraulic transport, backwashing and mechanical handling. Activation is carefully controlled to produce exceptionally high internal surface area with optimum pore size for the adsorption of a broad range of low molecular weight organic contaminants and oxidizing agents like chlorine and ozone.

One of the most common applications for Clack Coconut Shell-High Activated Carbon (CS-HAC) is the reduction of the undesirable tastes and odors present in many chlorinated water supplies. CS-HAC has been successful for many years in the reduction of free chlorine from water supplies. The end product is clean, fresh water with no objectionable taste or odor characteristics.

To obtain maximum efficiency of the activated carbon in the adsorption process, it is desirable to have the greatest possible surface area in the smallest practical volume. This is necessary because the rate of adsorption is proportional to the amount of surface area of the adsorbing media. CS-HAC has a surface area of 1,050 square meters per gram. This results in high efficiency and greater system economy. Clack has for many years provided activated carbon to the OEM and replacement market as a pre-treatment for other water purification systems as well as for use in individual treatment equipment for the removal of specific impurities.

CS-HAC requires periodic backwashing to eliminate accumulated suspended matter and to re-grade the filter bed. CS-HAC has an extremely high capacity but must be replaced when the filter bed loses the capacity for reduction of taste and odor. CS-HAC may be used in either domestic or industrial applications using gravity flow or pressurized filter vessels.

### ADVANTAGES

- CS-HAC is an outstanding material for applications requiring taste, odor and dissolved organic chemical removal from water with suspended matter present. This product can be used for filtering waters having a wide range of pH levels.
- Large surface area results in an exceptionally high capacity and efficiency.
- Balanced pore structure gives a more efficient adsorption range.
- CS-HAC is very durable so losses due to attrition are kept to a minimum.
- CS-HAC has a very high carbon-low ash content.
- Service rates of 5 gpm/sq. ft. are practical for ordinary taste, odor and chlorine loads.
- CS-HAC will impart a high “polish” to the filtered water.

### PHYSICAL PROPERTIES

- Color: Black
- Mesh Size: 12 x 40
- Bulk Density: 28 lbs./cu. ft.
- Effective Size: 0.55-0.75 mm
- Ash Content: 2.5%
- Iodine Number: 1,000 mg/g
- Moisture as packed: 3%
- pH 10

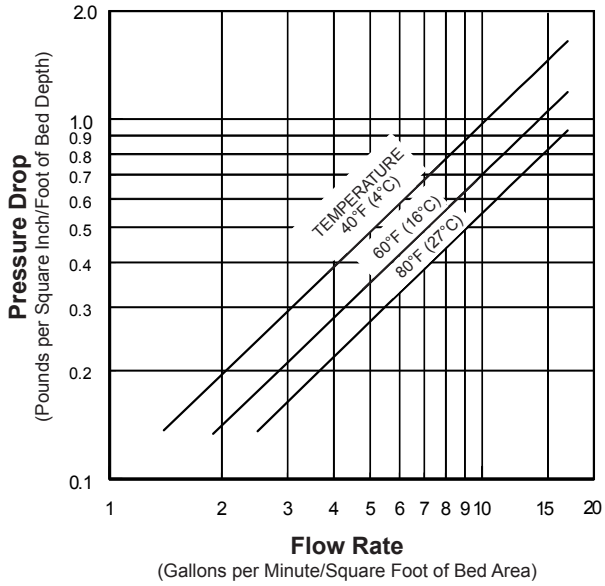
### CERTIFICATIONS AND APPROVALS

- NSF/ANSI Standard 61

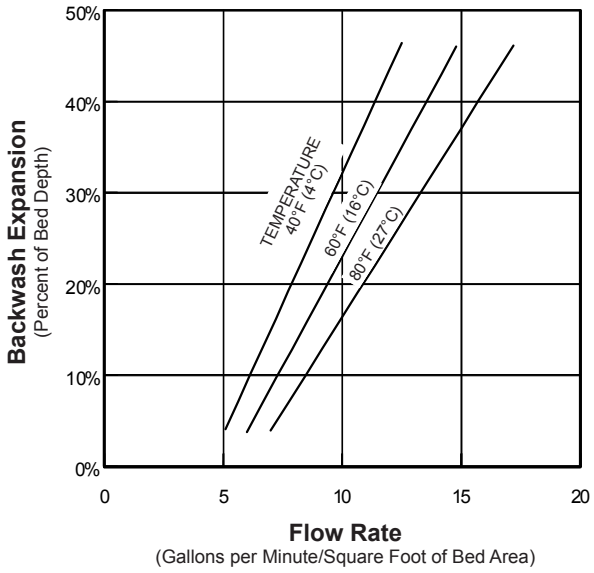
### CONDITIONS FOR OPERATION

- Water to be filtered should preferably be free of oil and suspended matter
- The water to be filtered should be relatively free of iron and turbidity for maximum service life
- Water pH range: wide range
- Bed depth: 26-30 in.
- Freeboard: 50% of bed depth (min.)
- Service flow rate: 5 gpm/sq. ft.
- Backwash flow rate: 10-12 gpm/sq. ft.
- Backwash bed expansion: 30-40% of bed depth
- Upon installation, backwash to remove carbon fines before placing unit into service

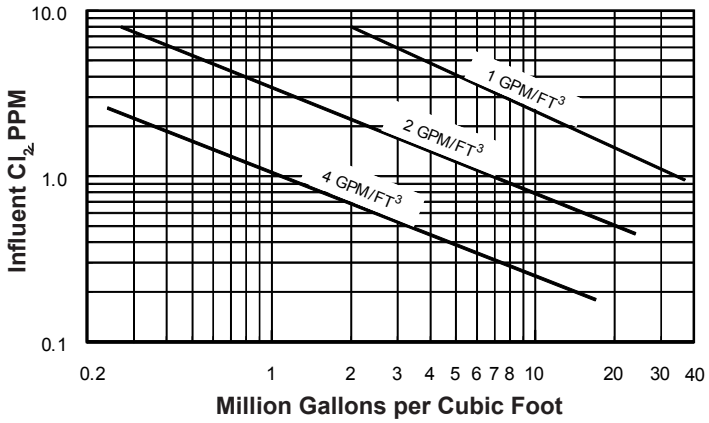
## Service Flow Pressure Drop




## Backwash Bed Expansion




## Dechlorination of Water (pH 7, 21°C)




Certified to NSF/ANSI Standard 61

Coconut Shell-High Activated Carbon (CS-HAC)
is manufactured by
Calgon Carbon Corporation
or
Jacobi Carbons, Inc.

## ORDER INFORMATION

| Part No. | Description | Cu. Ft./Bag | Wt./Cu. Ft.* | Bags/Pallet | Weight/Pallet | Pallet Dimensions |
|---|---|---|---|---|---|---|
| A8009-14 | CS-HAC 12 x 40 mesh | 1 | 28 lbs. | 70 | 2000 lbs. | 43″x43″x72″ (Calgon Carbon Corporation)<br>38″x46″x70″ (Jacobi Carbons, Inc.) |

*Weight per cubic foot is approximate.

CS-HAC manufactured by Calgon Carbon Corporation is made in Thailand and CS-HAC manufactured by Jacobi Carbons Inc. is made in Sri Lanka.

## NOT FOR INSTALLATION IN CALIFORNIA

The information and recommendations in this publication are based on data we believe to be reliable. They are offered in good faith, but do not imply any warranty or performance guarantee, as conditions and methods of use of our products are beyond our control. As such, Clack makes no express or implied warranties of any kind with respect to this product, including but not limited to any implied warranty of merchantability or fitness for a particular purpose. We recommend that the user determine whether the products and the information given are appropriate, and the suitability and performance of our products are appropriate, by testing with its own equipment. Specifications are subject to change without notice.

The information and recommendations given in this publication should not be understood as recommending the use of our products in violation of any patent or as a license to use any patents of the Clack Corporation.

The filter medias listed in this brochure do not remove or kill bacteria. Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

Clack will not be liable under any circumstance for consequential or incidental damages, including but not limited to, lost profits resulting from the use of our products.

Clack®
www.clackcorp.com

Clack Corporation
4462 DURAFORM LANE • WINDSOR, WISCONSIN 53598-9716 USA
PHONE (608) 846-3010 FAX (608) 846-2586 SALES/CUSTOMER SERVICE FAX (800) 755-3010

Form No. 2820 • 8/5/2011