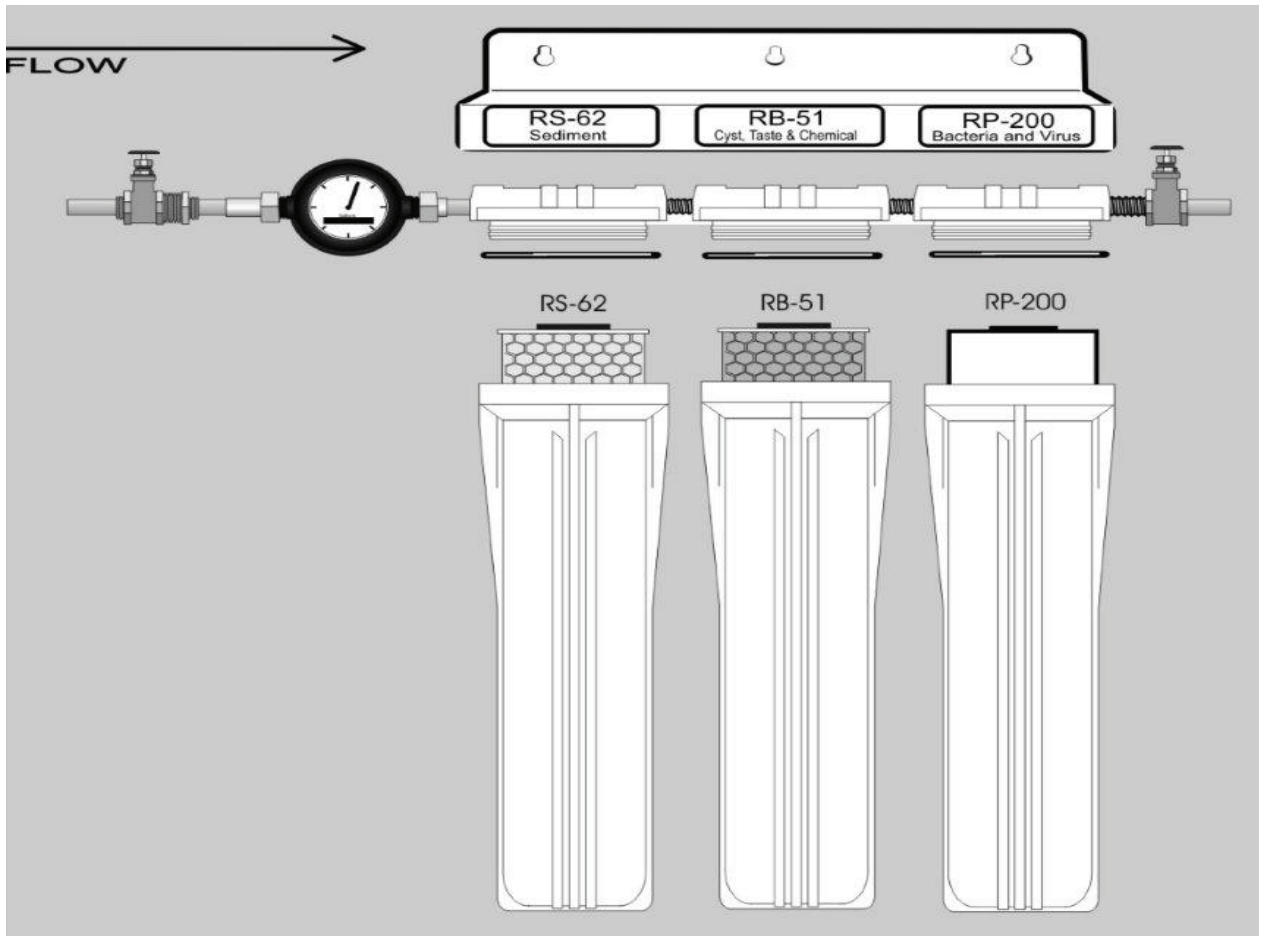




INSTALLATION AND OPERATING INSTRUCTION MANUAL





Congratulations!

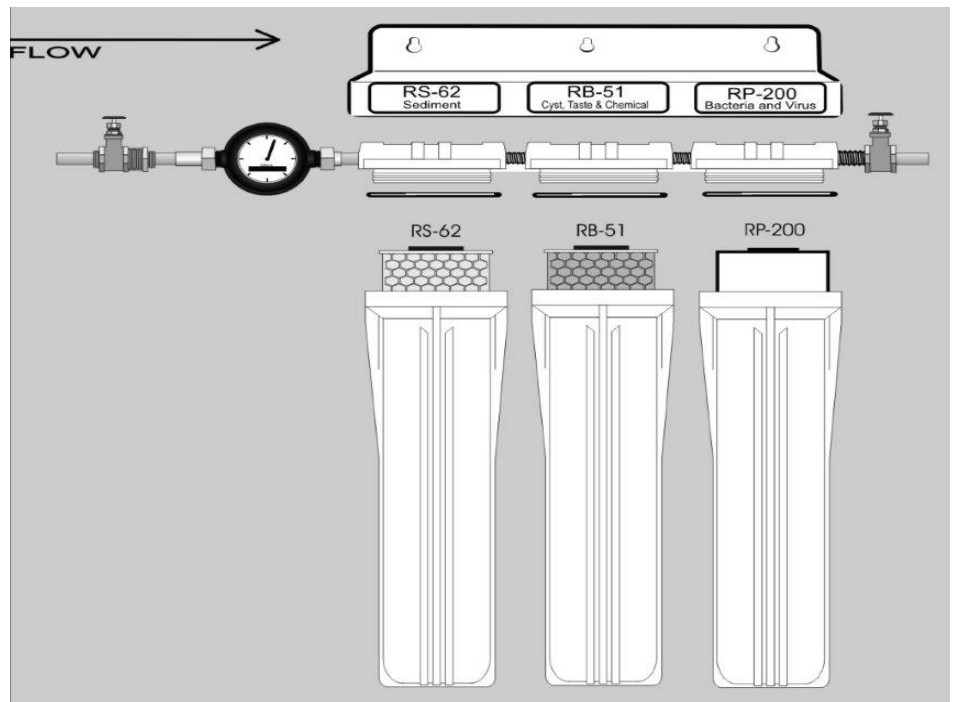
Thank you for choosing the B. David Company BDC3000BB Nanotechnology Whole House Purification System!

The BDC3000BB point of entry system is designed to treat water for the whole house - shower, laundry, bath and kitchen. The system incorporates various media with Nano technology to microbiologically treat your water.

This is a green system as no electricity, water waste or chemicals are utilized.

The BDC3000BB treats water with a three-stage process. First, a sediment filter removes dirt, debris, and other sediment down to 10 microns in size. The 2nd cartridge reduces VOC's, organic contaminants and particles as small as 0.5 microns by mechanical means. Additionally, the purification cartridge reduces cysts (such as Cryptosporidium and Giardia), bacteria and viruses by mechanical means. The system's flow meter provides a simple method for recording water usage and assists in determining the need for cartridge replacement.

- Reduces chlorine taste and odor and chloramines
- Reduces dirt, rust and other particulates
- Controls even extreme levels of common "off" tastes and odors
- Effectively reduces Volatile Organic Chemicals (VOCs), including Trihalomethanes (THMs)
- No Electricity required
- No chemicals used
- No water waste



Filters without any water wastage or additional water pressure

OPERATING SPECIFICATIONS



Specification	Metric	American Standard
Dimensions	64h x 16.5d x 91w (cm)	25h x 6.5d x 36w
Weight	29.5kg	65 lbs.
Flow Rate*	up to 45 liters/minute	up to 10 gallons/minute
Operating Temperature	4.4oC - 32oC	40oF - 90oF
Operating Pressure	1,750 g/mm2 minimum 5,600 g/mm2 maximum	21 PSI minimum 80 PSI maximum
Applications	Cold Water Applications Only! Point of Entry and Point of Use	

*Depends on incoming line pressure and flow.

NOTE: Flow meter volume is listed in US Gallons, 264 Gallons = 1,000 Liters

CARTRIDGE CAPACITIES

Item Cartridge	Metric	Maximum Capacity	Replacement
RS-62	5 micron Sediment / Dirt	20,000 - 40,000 Gallons	12 months
RB-51	0.5 micron Carbon Block	40,000 - 60,000 Gallons	24 months
RP-200	Proprietary Nano Filter	30,000 - 40,000 Gallons	24 months

*capacities are approximations and actual service needs are dependent upon the quality of raw water source

READ AND FOLLOW THESE INSTRUCTIONS CAREFULLY

A. Rules for Safe Installation

Because of possible damage when dealing with highly pressurized water, a professional should install this system.

This system was assembled for a water flow from left to right. Water should always flow through Cartridge (RS-62) first, the Purification Cartridge (RB- 51) second, and the final Filtration Cartridge (RP-200) last.

B. Before You Begin – Wash your hands thoroughly

There is a master water shut-off valve installed in your plumbing line. Most often is located near the point where the water enters the building. Use this master valve to shut off the water flow to the entire building prior to installing the system.

The plastic heads of the BDC3000BB water purification system housings are tapped in to the “National Pipe Thread”. Clean the connecting pipes of all oils before assembly. Do not over-tighten the pipe into the plastic head or use heat in the vicinity of this system.

If the system is installed to dispense water from a device other than a faucet (e.g. ice machine), a flush valve should be installed after the unit to facilitate flushing cartridges.

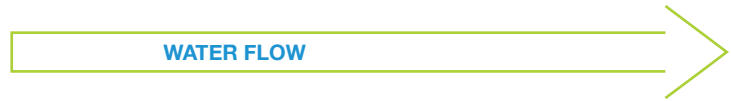
READ AND FOLLOW THESE INSTRUCTIONS CAREFULLY



C. System Installation

1. This system is designed to treat cold water therefore it must be installed before any heating equipment or installed directly into the cold-water line.
2. Select a location which allows the BDC3000BB system to be in a vertical position with a minimum of 6 inches (15 cm) unobstructed clearance below the cartridge housings to allow cartridges to be changed in the future.
3. Once proper location and height have been determined, remove filter housings and cartridges to make it easier to mount the bracket on the wall.
4. Before attaching bracket to wall, thread flow meter to the “IN” port or raw water feed side. Thread on option flushable pre-filter if utilized.
5. Thread on and tighten shut-off valves on both sides of the BDC3000BB system.
6. Mount the system to the wall using the wall anchors and screws provided. Be sure the system is NOT supported by any existing pipes. Be sure bracket is securely anchored to the wall as the system is quite heavy when filled with water and in operation
7. Thread on nipples and tighten. Repeat for both sides.
Because pipe diameters, compositions and threads vary tremendously worldwide, use the appropriate union or coupler to attach system to existing water line.

BDC3000BB WHOLE HOUSE HOOK UP



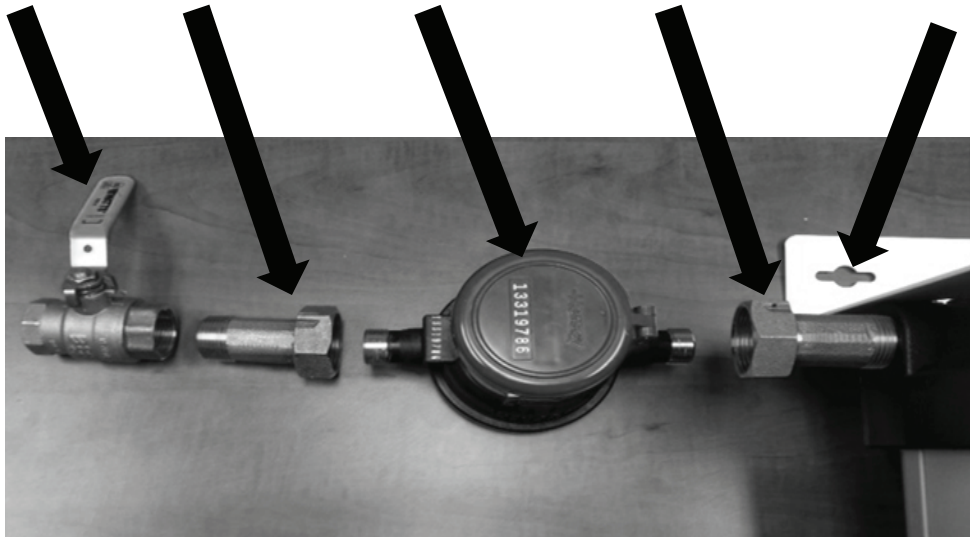
* Ball Valve

* 3/4" - 1" Coupling

* (1) Meter

* 3/4" - 1" Coupling

Mounting Screws



** Meter and parts included in a separate box.*

Add your own couplings to the plumbing on both the inlet side and the outlet end of the purification system. This will ensure the proper fit to your existing plumbing. (*1) the couplings will fit into the meter.



INSTALLATION



Read and follow these instructions carefully. Failure to do so could result in extensive property damage and/or inadequately purified water.

A. Rules for Safe Installation

Because of the damage possible when dealing with highly pressurized water, a professional should install this system.

B. Before You Begin

There is a master water shut-off valve installed in your plumbing line. Most often it is located near the point where the water enters the building. Use this master valve to shut off the water flow to the entire building prior to installing the system.

The plastic heads of the BDC3000BB water purification system housings are tapped 1" National Pipe Thread. Clean the connecting pipes of all oils before assembly. Do not over tighten the pipe into the plastic head.

Note: The head and adapters on this unit are plastic. Do NOT use heat on or in the vicinity of the system.

If the unit is installed to dispense water from a device other than a faucet (e.g. ice machine), a flush valve should be installed after the unit to facilitate flushing the cartridges.

INSTALLATION PROCEDURES



This system is designed to treat cold water. Therefore, it must be installed before any heating equipment or directly into the cold water line.

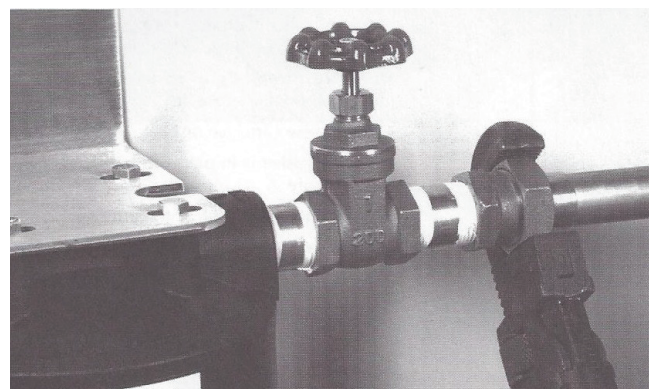
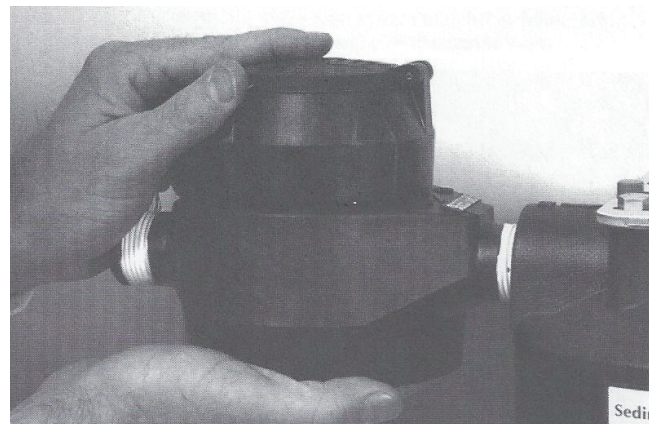
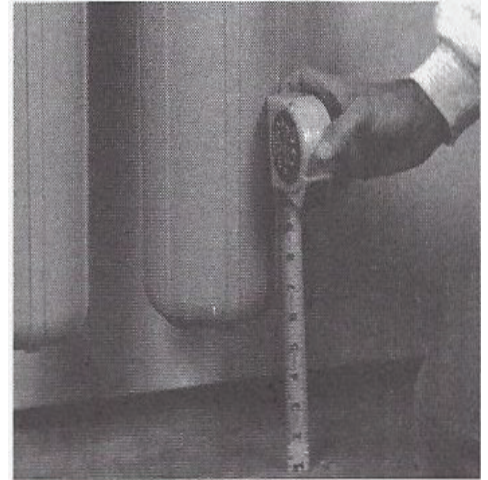
Select a location which allows the system to be in a vertical position with a minimum 60 mm (6 inches) of unobstructed clearance below the cartridge housings for changing cartridges in the future.

Once proper location and height has been determined, removing cartridges and filter housing sumps will allow for easier bracket mounting on the wall.

Prior to attaching bracket to wall, thread on flow meter to "In" port side or raw water feed side. Thread on optional flushable pre-filter if utilized.

Mount the system to a wall using the mounting brackets and screws provided. Be sure the system is NOT supported by any existing pipes.

As pipe diameters, compositions and threads vary tremendously worldwide, utilize the appropriate union or coupler to attach system to existing water line. The following sequence illustrates a typical example of this connection.



INSTALLING CARTRIDGES

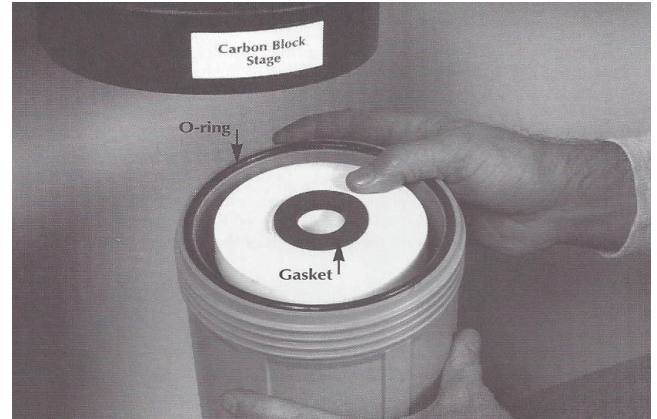


Before installing a new cartridge, wash inside of housing with a mixture of bleach and water.

Rinse with clean water.

Place cartridge in housing as shown on the right. Make sure gaskets and O-rings are seated properly. Carefully screw housing into filter head attached to bracket.

Note: Ensure cartridges are properly seating before tightening with spanner wrench. DO NOT FORCE.



When installing the cartridges into their housings, it is important to seat the gaskets at both ends of the cartridge.

To ensure The “Bottom” gasket remains in place, follow these few tips.

1. Place new cartridge on firm surface.
2. Ensure gasket is in place on both ends. See Figure 2.
3. Lower housing down onto cartridge.
4. Hold cartridge in place and turn housing and cartridge 180°.
5. Check to make sure gasket is in place at the top of the cartridge as shown and O-ring is in groove.

REPLACING CARTRIDGES



A. Shut Off Water Supply

Shut off the water supply at the gate valves on both sides of the system. See page 4.

B. Release Pressure

Prior to attempting to remove the filter housing, the pressure will need to be released. Push pressure relief buttons on each housing to release the pressure.

C. Removing Cartridges

Using the Spanner Wrench, unscrew the appropriate housing containing the Cartridge you wish to replace). This can be done by turning the cartridge housing counter clock-wise until loose. Unscrew the cartridge housing carefully as it will be filled with water and quite heavy. Remove and discard the exhausted cartridge.

When removing the Cartridge Housing, it is common for the O-ring seal to lift out of the groove and, at times, it may even stick to the Head of the Filter Housing. Do not lose the rubber O-ring seal.

Check the rubber O-ring for nicks and use the replacements provided if necessary. Rub Vaseline™ onto the O-ring and place back onto the housing. Do not wipe off residual Vaseline™. Ensure O-ring is well seated into groove.



FLUSHING THE SYSTEM



1. To flush the down-line plumbing complete the following steps:
 - A. Install all cartridges.
 - B. Slowly turn the water back on at the master shut-off valve located in front of the system. Check for leaks.
 - C. Open the down line faucets one at a time, and let the water run for a minimum of 4 minutes per faucet.
2. To Shut off the water at both of the gate valves. See page 4.
3. Relieve the pressure in all these housings by pressing the pressure relief button.
4. Flush the carbon fines (black powder) from the Carbon Cartridge complete the following steps:
 - A. Close the shut-off valve on the outlet side of the system to prevent back draining.
 - B. Remove the #3 housing. This housing currently does not contain a cartridge. Dump the water out of the housing. This housing will be heavy.
 - C. Insert the Nano Cartridge in the #3 housing. See page 9 for illustration.
 - D. Replace the housing and tighten with the spanner wrench.
 - E. Open the faucet nearest the system or the flush valve.
 - F. Turn the water on at the shut-off valves (master valve) and unit valve. This allows the water to fill the housings again.
 - G. Let the water run until carbon fines are no longer present. The water will then be clear and microbiologically purified. These carbon fines are not dangerous to your health but for aesthetic reasons, they should be removed.

The plumbing has now been flushed and the unit is ready to operate normally.

STORAGE

For brief periods of non-use (days), flush the entire system thoroughly (3-5 min.) before and after periods of storage and before drawing water for consumption.

Do not allow the system to freeze. Water contained within the system will expand and damage the System and its capacity to purify any water. For longer periods of non-use (weeks or months), the following steps must be taken:

1. Empty water from entire System.
2. Remove Cartridges from the Cartridge Housings.
3. Clean Cartridge Housings thoroughly.
4. Clean and Air dry exterior of Cartridges. Chamber #3 may not be stored for long periods of time, due to the possibility it will become contaminated.
5. Record Activity in Service Log.
6. Place Cartridges in clean plastic bags when dry.
7. Remember to replace ALL the Cartridges, in the proper order, and flush the system 5 to 7 minutes when reactivating the system.

SERVICING

Wash Hands Thoroughly before beginning.



A. Close the inlet shut-off valve then relieve the system pressure by turning on a faucet. Once the pressure is relieved, close the shut-off valve on the outlet side of the unit to prevent back-draining. Depress the pressure relief buttons at the top of each housing to ensure there is no pressure in the system.

B. Unscrew the appropriate housing (the one containing the cartridge you wish to replace) using the housing wrench provided. When opening the housings, it is common for the O-Ring to lift out of the groove and at times, may even stick to the head. Don't misplace the rubber O-Ring.

C. Remove the exhausted cartridge and discard.

D. Clean the interior of the housing:

1. Rinse out and fill approximately 1/3 full with water.
2. Add two caps full of 5% household bleach (5% sodium hypochlorite) and scrub with a brush or a sponge. If bleach is not available wash thoroughly with soap and warm water.
3. Rinse thoroughly.

E. Lubricate the O-Ring seal with a thin coat of petroleum jelly (Vaseline TM). (Do not wipe the O-ring clean of lubricant. This prevents the O-Ring from "crawling" when tightening the housing to the head).

F. Place the O-Ring in the groove of the housing and press it down completely- all the way around the housing.

G. Each time a cartridge is changed is a good time to flush the plumbing again. To flush the down-line plumbing complete the following steps:

1. Insert all filters in their respective housings. Replace all three housings and secure.
2. Open a faucet.
3. Ensure the outlet Shut-Off valve is open.
4. Turn on the water, slowly, at the inlet Shut-off valve.

H. Open each faucet, one at a time, and let the water run for a minimum of 4 minutes per faucet. Shutoff the water at the inlet shut-off valve.

I. Relieve the pressure in the system by opening a faucet.

J. Flush the system for 5 - 7 minutes to remove any carbon fines (black power) before using the water for consumption.



B.David Company
World Health Through Dynamic Filtration Systems

Tel: (952) 884-8417

Email: info@bdaavidwater.com

Visit our website: www.bdaavidwater.com