

Backflow Updates
Gary A. Espenschied
Class III & IV Workshop
August 4th, 2015

Backflow Prevention

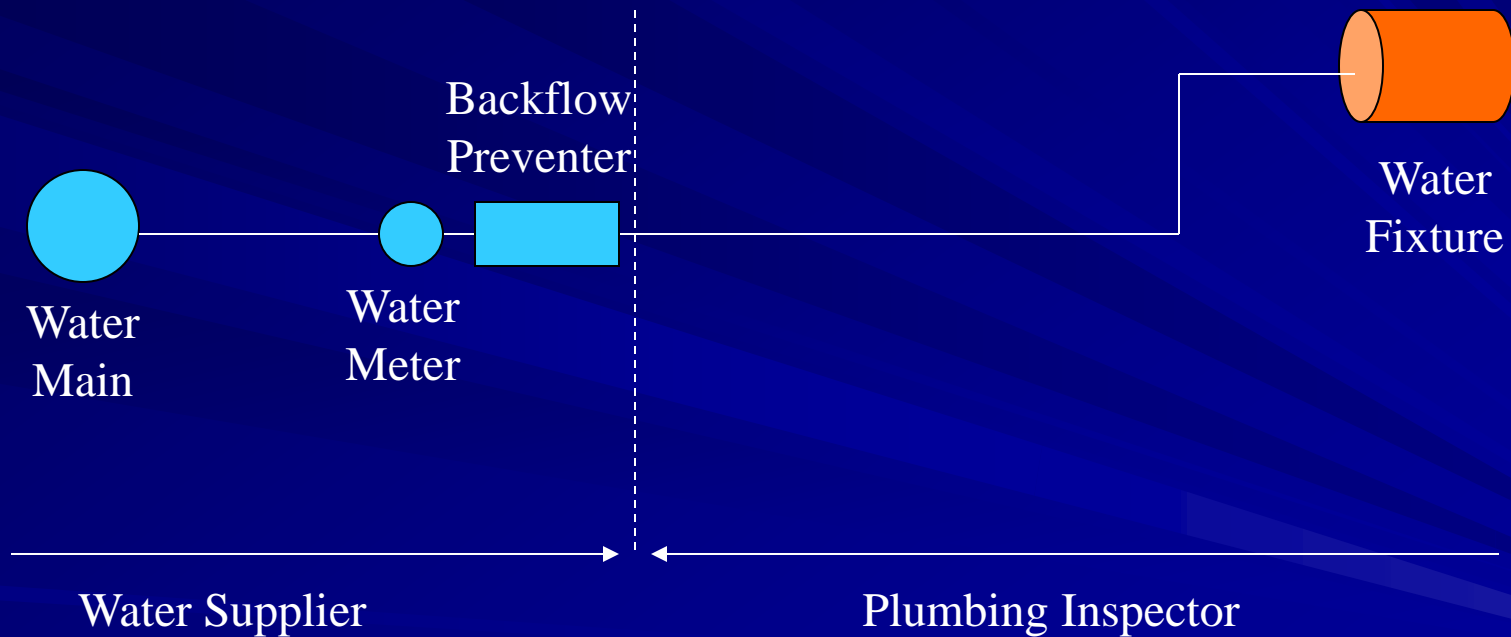
- Ohio EPA 101 – Administrative Code
- New Consumer Fixtures for the Water Supplier to be Aware Of

Ohio EPA 101 – 3745-95-01

- Severe Health Hazard
 - Can cause death or significant morbidity
- Health Hazard
 - Is a threat to the consumers' health
- System Hazard
 - Is a threat to the physical piping
- Pollution Hazard
 - Is aesthetically objectionable

Ohio EPA 101 – 3745-95-02

Responsibility for Water Quality



Ohio EPA 101 – 3745-95-05

- Severe Health – approved air-gap separation
- Health – reduced pressure assembly
- System – reduced pressure assembly
- Pollution – double check valve assembly

Ohio EPA 101

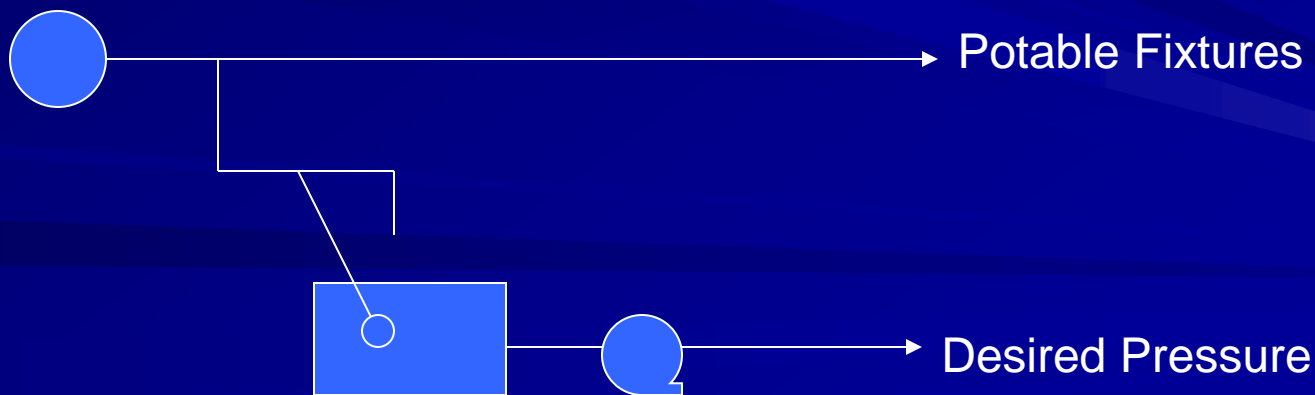
- Water Supplier has Four Primary Responsibilities
 - Conduct Surveys 3745-95-03 (A)
 - Determine Required Protection 3745-95-04 (A)
 - Follow-Up on Installation 3745-95-06 (B)
 - Ensure Tests are Completed 3745-95-06 (C)

Auxiliary Water -_3745-95-04 (C)

- Auxiliary in Building & Interconnection Desired
 - RPZ on City Service & Interchangeable Connector
- Auxiliary in Building & Interconnection Possible
 - RPZ on City Service
- Auxiliary Not in Building & Interconnection Improbable as Determined by Water Supplier
 - Need for RPZ Determined by Water Supplier
 - Water Supplier Assumes Other Liabilities

Booster Pumps – 3745-95-07 (A)

- A booster pump may not be installed in a 1 to 3 family unit dwelling unless an approved air-gap separation is provided



Low-Suction Cut Off – 3745-95-07 (B)

- Any Fire Protection Booster Pump Taking Direct Suction From Public Water Main Must be Prevented from Creating Backsiphonage
- Low-Suction Pressure Cut-Off Controller Requirement is Rescinded on Fire Pumps
- A Minimum Pressure Sustaining Valve Will Now be Required

Yard Hydrants – 3745-95-09 (A)

- Yard Hydrants with Weep Holes are Prohibited
- Sanitary Yard Hydrants that Meet ASSE Standard 1057 are Not Prohibited

Automatic Yard Watering System

Automatic Yard Watering System

Now you can have the benefits of an automatic sprinkler system without the messy and expensive installation. The Automatic Yard Watering System mounts to any outdoor hose faucet, and provides separate timed operation for each hose connected. Just attach your hoses to the solid brass manifold and set the Timer/Controller for the days of the week, time of day, and duration desired for each area. Control two hoses with the standard system, or add up to two additional valves for control of four different zones. Also has manual controls. Powered by three AA batteries, included.

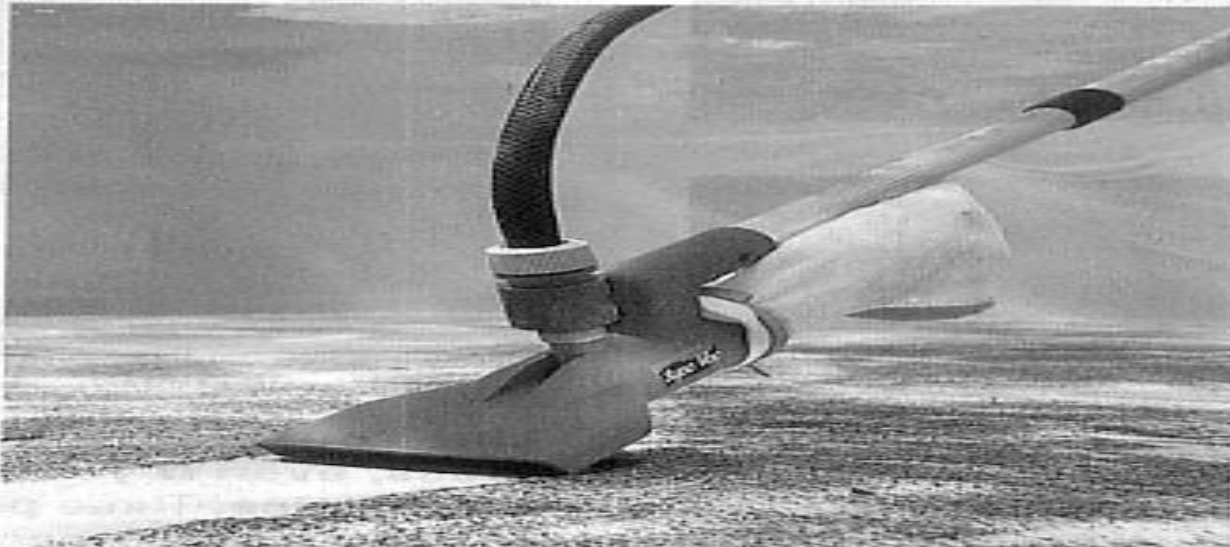
7196L Automatic Yard Watering System **\$72.95**

7897L Additional Valve **\$19.95**

Take the



Supa-Vac Water Care Kit



Pool maintenance made easy...and it's much less expensive than hiring a service.

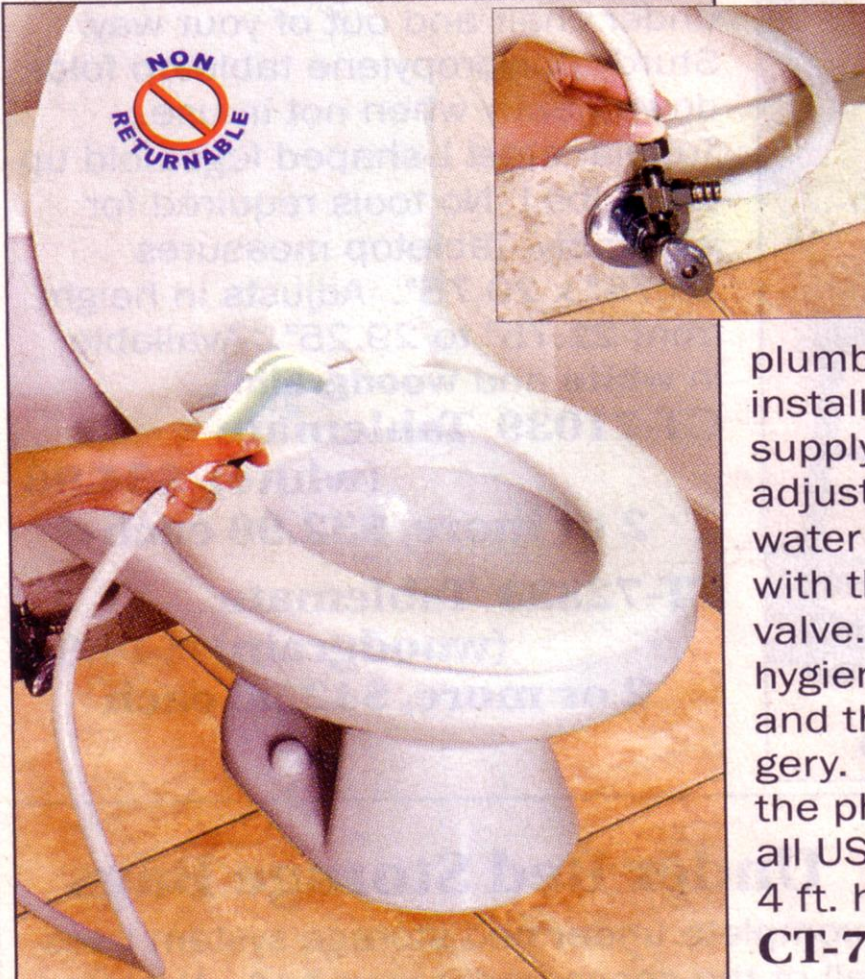
Supa-Vac Water-Care Maintenance Kit cleans up to a 12'-diameter pool, spa, fountain or pond, and can empty it too! Kit includes the underwater vacuum (suction power is created by your garden-hose water pressure); a Venturi pump attachment and 8' drain hose (for emptying); 3-section, 4' telescoping pole; 1' leaf scoop; debris-filter sock with retaining clip; plus fittings to attach to your garden hose.

239777 - Water-Care Maintenance Kit \$49.99

Ulti-Vac – www.pythonproducts.com



Personal Bidet



Add A Hygienic Bidet Spray In Minutes

Now you can have all the convenience of a bidet in your own home quickly and inexpensively. No

plumber needed. The Bidet Spray installs easily onto your toilet's supply line using only an adjustable wrench. Adjust the water flow to the desired pressure with the easy-to-reach control valve. Perfect for feminine hygiene, hemorrhoid sufferers, and those recovering from surgery. Great for elder care and for the physically challenged. Meets all USA plumbing codes. Includes 4 ft. hose. Made in the USA.

CT-71646 Bidet Spray

\$99.99

CatGenie – www.catGenie.com

The CatGenie™ Secret... Washable Granules™ not litter.

Collecting cat waste in a box of litter is unsanitary. Cleaning the mess out is unpleasant. To satisfy a cat's need to dig and cover, CatGenie uses comfy, permanent Washable Granules instead of disposable litter. To cats, it's just like using a clean litter box.

CatGenie is more than a cat toilet, it's a modern appliance. Every day, it automatically flushes just cat waste completely out of the home. Then washes itself clean. You never scoop, touch or change litter. CatGenie is cat sanitation that is as clean as a cat.

Unlike all litter boxes, only CatGenie automatically...

FLUSHES. The GenieHand scoops and separates solids, which get liquefied and flushed along with liquid waste for safe, easy drainage out of the home.

WASHES. Cold water mixes with SaniSolution. The GenieHand scrubs and scours both Basin and Granules. Thoroughly sanitizes to eliminate germs and odors.

DRIES. The GenieHand aerates the Granules so the built-in hot air blower can completely dry the interior for our cat's comfort.



CatGenie™

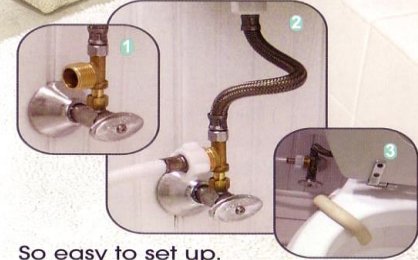
The world's only self-flushing, self-washing cat box
So hygienic, it's healthy



So easy to use.
Push a button to start or preset to run automatically. SaniSolution and Washable Granules are all you need for safe and easy operation. SaniSolution contains the same ingredients that veterinarians use to disinfect their exam tables. One cartridge lasts for 60 washings. Washable Granules need occasional replenishment, not changing.



Washable Granules vs. Clay & Clumping Litters



So easy to set up.
1) Add the supplied "T" connector to a cold water supply from a toilet, sink or laundry.
2) Screw on the GenieHose. 3) Place the drain hose over a toilet rim or laundry drain. Plug into an electrical outlet. You're done.

Maximum CatGenie Size: 19" Dia bowl, 16"W x 21"H x 23"D.
Color: Pearl Gray with Porcelain White.

No Spill – www.pythonproducts.com

.. **SAVING YOU TIME.**

At Python Products, Inc., we know that fish enthusiasts would rather spend time enjoying their fish than maintaining them. That's why we constantly strive to improve on the old methods of aquarium maintenance by adding time-wise, helpful products to our already popular product line.



If you're tired of the old routine, then it's about time you tried the **"NO SPILL CLEAN and FILL"**® Aquarium Maintenance System. You can cut your aquarium maintenance time in half with our complete, ready-to-use system. No buckets, no siphons, no mess, no tank tear downs — **EVER** again!

QUALITY!
We take all the steps necessary to ensure that the product you receive is manufactured only of the highest quality FDA approved materials. Unlike garden hoses, our patented systems consists of UV stabilized, non-porous tubing which eliminates the possibility of adding dangerous chemical toxins into your tank water.

ENVIRONMENTALLY RESPONSIBLE!
Due to our powerful 7 to 1 suction ratio, cleaning your tank uses about the same amount of water as flushing your toilet.

NO ASSEMBLY!
The **"NO SPILL CLEAN and FILL"**® Aquarium Maintenance System is complete and ready to use.

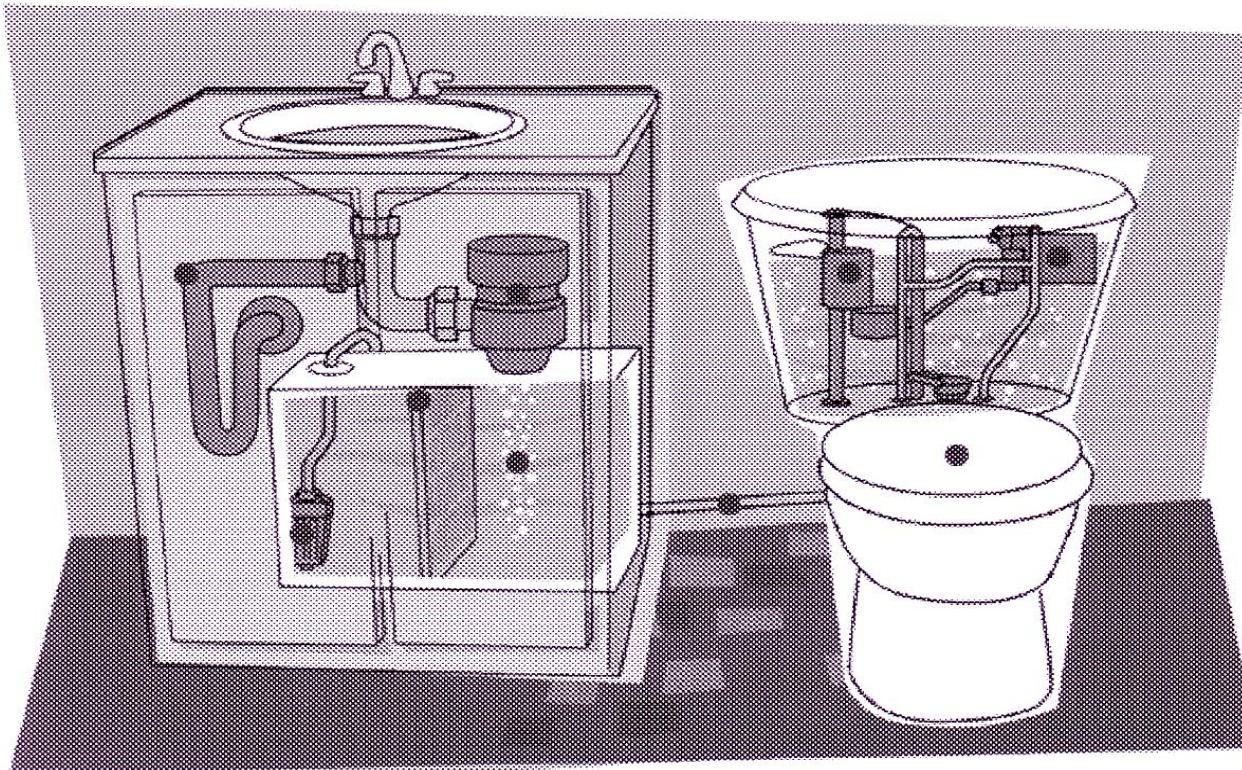
TIME SAVING!
Ease of use allows for smaller, more frequent water changes reducing stress on fish and user!



Aqus – www.watersavertech.com

How the AQUUS™ System Works

The AQUUS™ System captures water from the bathroom sink and filters and disinfects it to provide reused water for toilet flushing. Hover over the dotted sections (●) of the AQUUS system to learn how each component contributes to water conservation and savings.



Brac Systems – www.bracsystems.com

Brac Systems

How the Brac system works

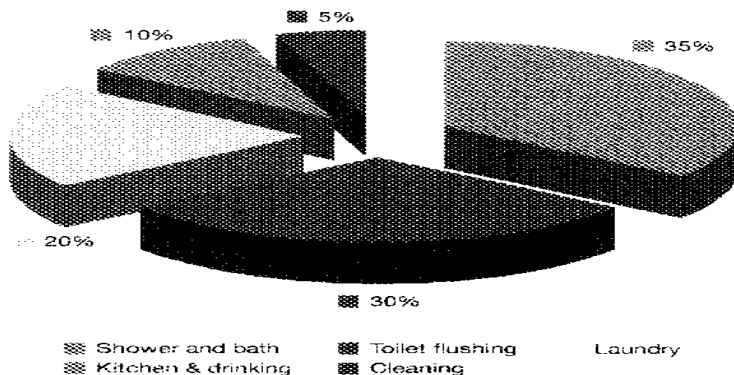
If you take into account that nearly a third of your water (and your water tax money) goes down the toilet, wouldn't it be a good idea to do something about it?

The Brac system is the solution. It is a patented, innovative tank that filters out foreign particles and impurities from your used shower/bath and laundry water and reuses it to flush your toilets. The grey water passes through a 100 micron filter within the Brac tank, and then is stored ready for reuse in your toilet tank. It's like using normal water, but without having to pay again, and while doing something effective for the environment.

Once installed in your home, the Brac system operates seamlessly, so the only difference you will notice is on your water bill.

Brac Systems Statistics

On average, a family of four uses 63,408 gallons of water per year. Well over half of our water is being used to shower, bathe and do the laundry, while nearly a third is being used to flush the toilet. A mere 10% of our home water supply is used in the kitchen and as drinking water. These statistics do not include irrigation.



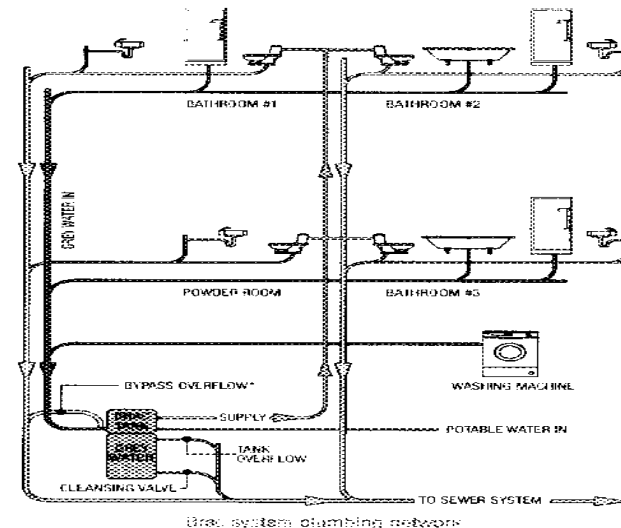
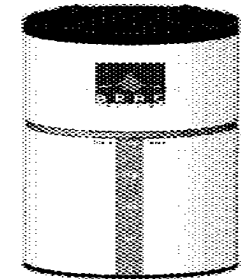
Brac Systems

W-200

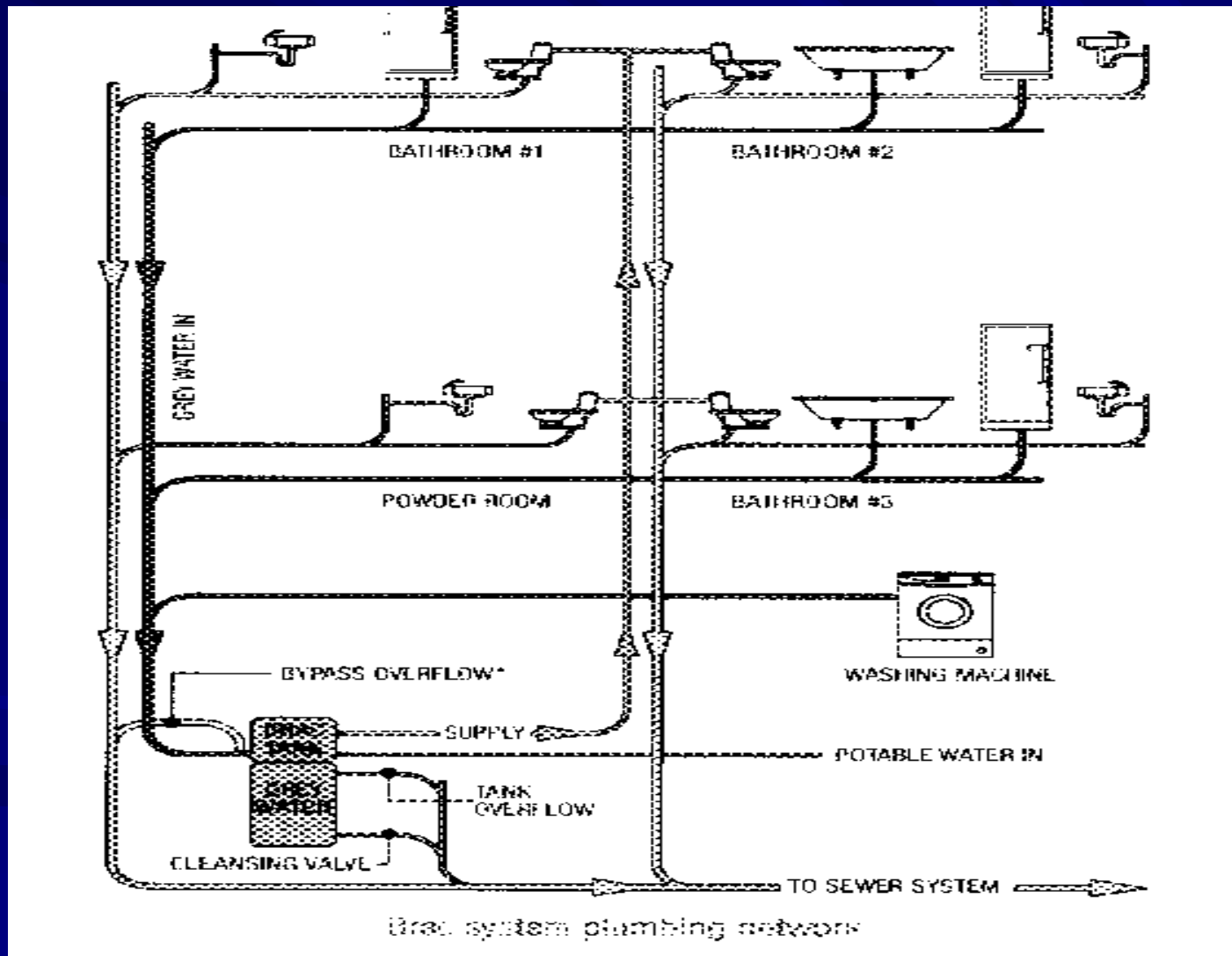
The W-200 is the smallest and most affordable of our water systems. This is the perfect solution for homes with five or less people who want to save money on their water bill while helping the environment. The Brac tank measures 60" high by 22" in diameter and weighs approximately 80 lbs.

Included in the Brac system:

- One 52.85 gallon tank with shell and cover – IAPMO Certified (certification number C-4845)
- One ½ h.p. electrical pump with 110/220 V electrical connection
- One ½" valve for draining tank
- One flotation system with connections
- One foot valve
- One filter
- All connections and fittings – factory installed



Brac Systems – www.bracsystems.com

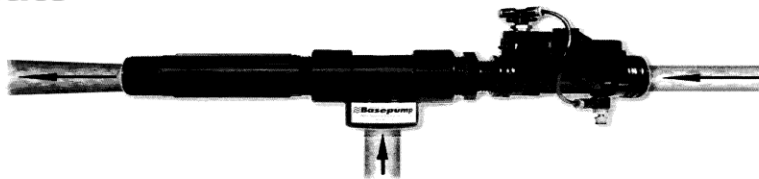


Basepump – www.basepump.com

BasepumpTM *Quality & performance. Ask for it by name.*

Premium Water Powered Backup Sump Pump

Discharge water exits here



Municipal water enters here

Sump water is drawn up into here

Product Specifications

Service Requirements

Municipal Water: 40 PSI Minimum
100 PSI Maximum

Municipal Water Pipe Diameter:

- Residential Model: 1/2" male thread
- High Performance Model: 3/4" male thread
- Commercial Model: 1" female thread

Connection Sizes

- Residential Model: 1" PVC socket
- High Performance Model: 1 1/4" PVC socket
- Commercial Model: 1 1/2" PVC socket

Materials of Construction

- Heavy duty sch. 80 polypropylene, PVC, stainless steel hardware

Pumping Rates

(average gallons per hour*)

- **Residential Model #RB750:**
750 – 900 GPH
- **High Performance Model #HB1000:**
1,000 – 1,400 GPH
- **Commercial Model #CB1500:**
1,500 – 2,000 GPH

*Based on 40 – 90psi @ 10 ft. suction lift

Materials Included

Ejector, float, adapters, fittings, discharge tube, transfer tube, mounting clamps, check valve, water alarm, miscellaneous hardware.

Theory of Operation

A float mounted in the sump pit above the normal high water level, is lifted when water rises too high. It activates a valve, sending a powerful stream of water from your municipal water supply through the Basepump Ejector.

Acting like a giant soda straw, it draws the sump water up from the pit and ejects it to the outdoors.

As the water is removed from the pit, the float returns to its lowest level, and the pumping stops.

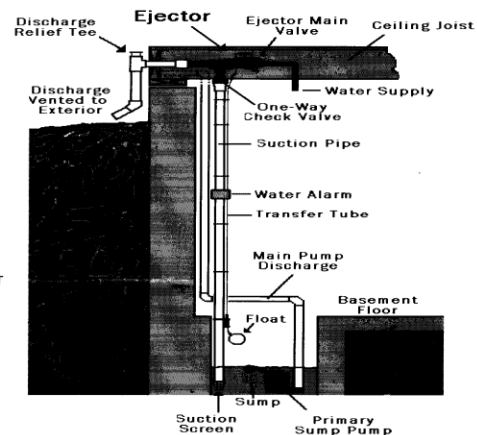
Features

- Basepumps available with either indoor or outdoor configurations
- Constructed of heavy duty, durable, corrosion resistant materials
- Only the float and suction tube are in contact with sump water
- Simple to install, full instructions included
- No moving parts to break and no maintenance required
- Integral backflow preventer
- 100% product satisfaction guarantee
- 3-year warranty

Optional:

- Solder-free no-sweat water supply piping kits in 1/2" and 3/4" sizes.

Typical Outdoor Installation



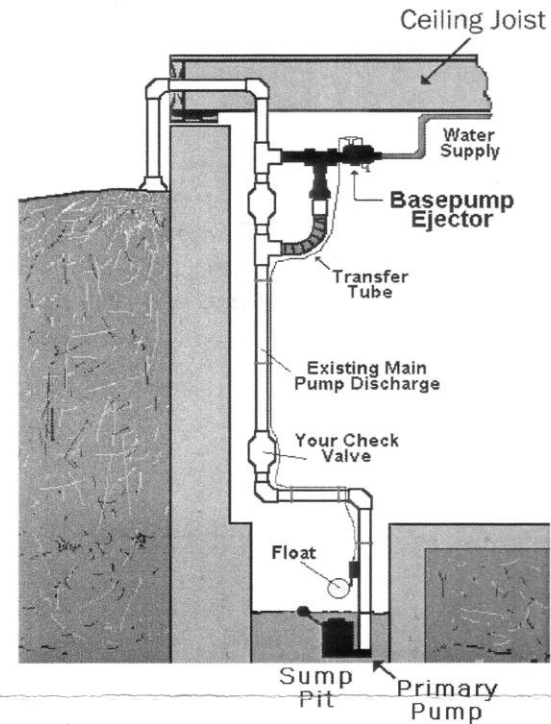
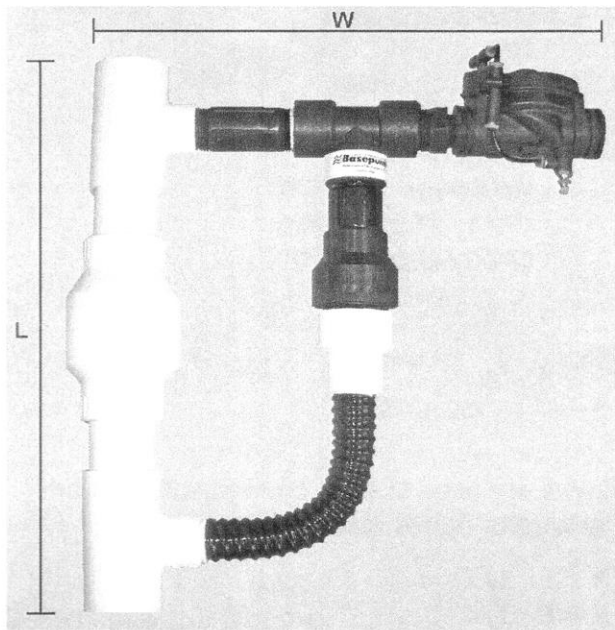
Installation Instructions

1. Mount Basepump Ejector
2. Install Suction Pipe
3. Install Float Assembly
4. Install Discharge Tubing
5. Connect Water Supply

Basepump – www.basepump.com

Indoor Suction & Discharge Kit

Installing the Basepump is made easy with the factory assembled indoor suction and discharge kit. Simply remove a section of your main sump pump discharge pipe, insert the assembly, and glue into place. Your Basepump is now mounted and ready for the water line connection. The suction/discharge kit can be mounted in either the vertical or horizontal position. Order the Basepump with the indoor suction/discharge kit included by specifying the pump with a **SDK** suffix. The estimated assembly time is 15 minutes.



Home Fire Sprinkler Association

www.homefiresprinkler.org

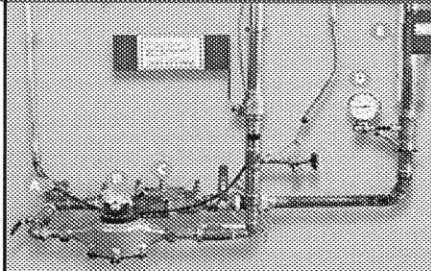


Installing Home Fire Sprinklers

BUILDERS

- Building Professionals Home
- How Sprinklers Work
- Fire Sprinkler Facts
- Water Usage
- Success Stories
- Trade-Ups
- Builder Resources
- Installation
- Videos
- Solutions Newsletter
- BUILT FOR LIFE
- Living with Sprinklers
- Site Map
- Contact
- Press Releases
- About HFSC

- CONSUMERS
- BUILDERS
- FIRE SERVICE
- REAL ESTATE AGENTS
- INSURANCE AGENTS
- POLICYMAKERS



- A "T" CONNECTION TO WATER MAIN
- B WATER METER
- C BACKFLOW VALVE
- D PRESSURE GAUGE
- E FLOW SWITCH

Typical Water Sprinkler Supply

Here's what you'll have with a typical stand-alone system. The water supply for the sprinklers comes from the household water main. There will be a "T" connection between the main and the water meter, feeding the sprinklers. This is called the "riser."

The riser is really the brains of the system. It includes the pressure gauge, a flow switch and a backflow valve (where required) and the test and drain assembly. NFPA 13D doesn't require a flow alarm, but your local codes might.

The flow switch monitors any water flow through the system and is wired to an inside bell. The flow switch can also be wired to an outside horn or strobe to alert neighbors to sprinkler activation in case fire strikes when no one is at home. The switch can also be tied in to a monitored security system.

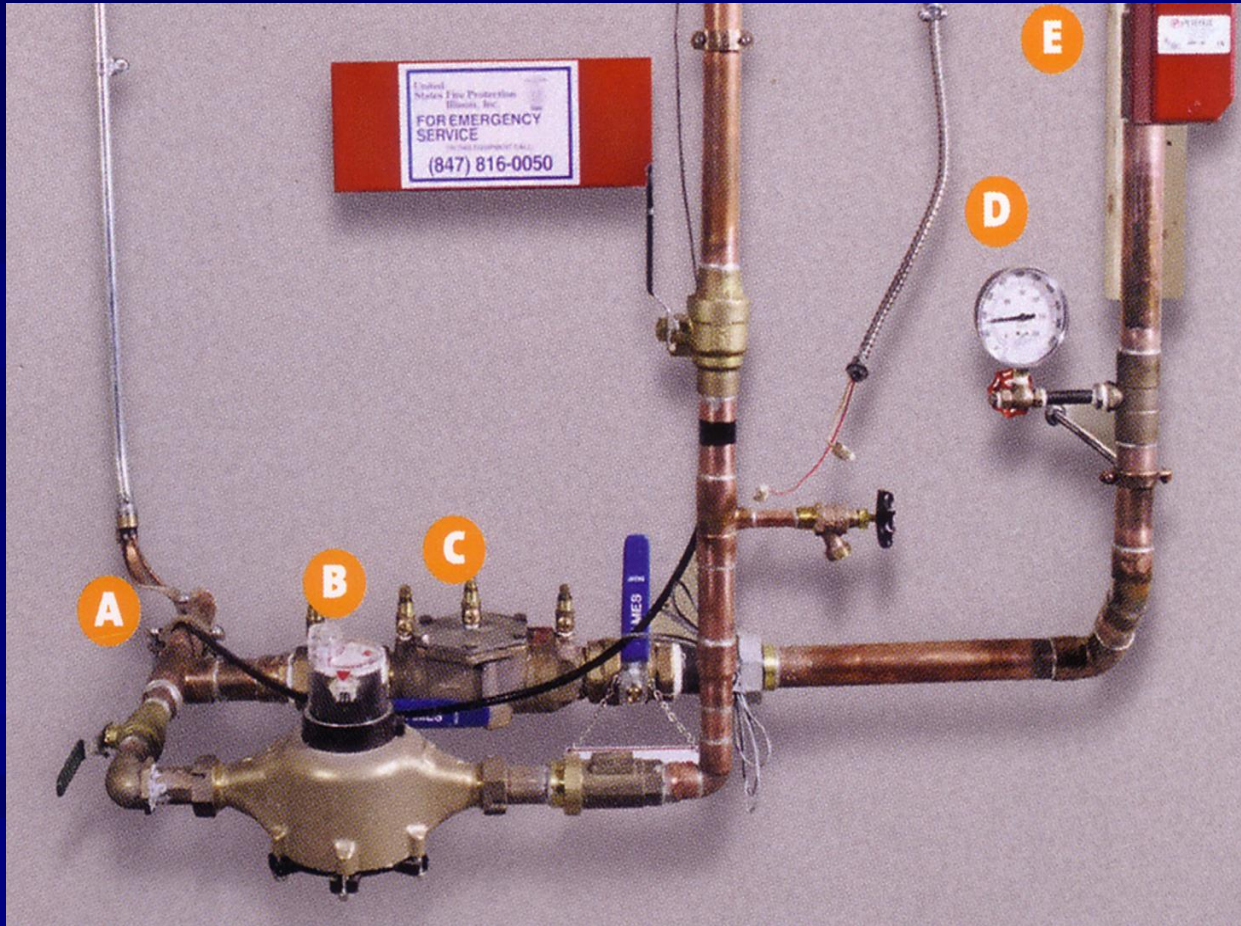
Backflow prevention devices are installed to isolate the water used for sprinklers from the water used for domestic purposes, to prevent any cross-contamination of potable water. Many local jurisdictions require these.

Backflow prevention devices and water meters reduce the available pressure for the sprinkler system, however, so when they are used it is necessary to use larger water taps and meters of at least one inch or more. Your sprinkler contractor will ensure you have the information you need to know about taps and meters before you install the system.

Learn about lowering costs with easier installations

See some of the new fire sprinkler designs

Home Fire Sprinkler Association www.homefiresprinkler.org



Are We Safe Yet?

■ Your Job # 1

- Keep Their Water Out of Your Water Main

■ You are Responsible

- for Following Ohio EPA Administrative Code

■ Be Watchful for New Water Using Fixtures

- Supa-Vac
- Personal Bidet
- Aqus Reclaim
- Basepump
- Ulti-Vac
- CatGenie
- Brac Water Reclaim
- Home Fire Sprinkler