BRAC SYSTEMS

2008 Product Catalog

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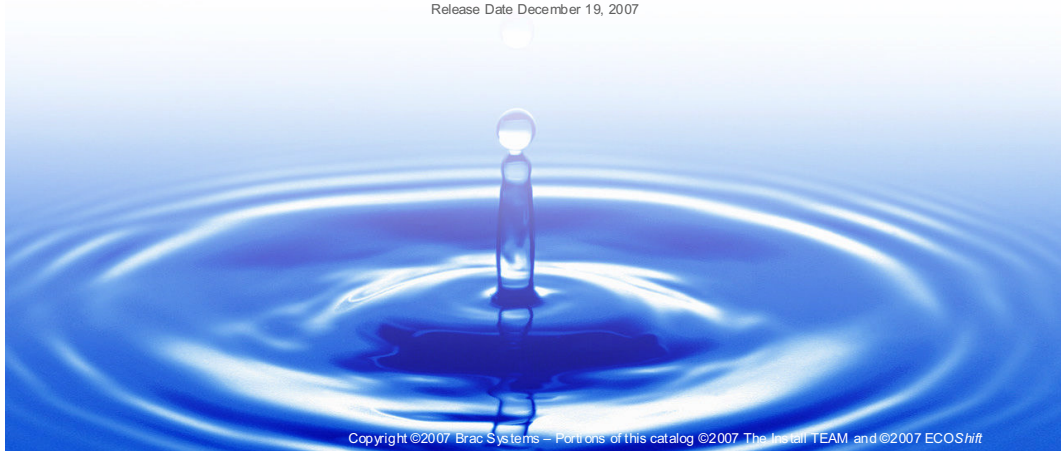

Why Flush Drinking Water Down The Toilet?

With a Greywater Recycling System from Brac, you no longer need to flush perfectly good drinking water down the toilet. The system reuses tub and shower water to flush your toilets.

Once installed, the Brac System collects grey water from your tub and shower, filters, disinfects and stores it for flushing toilets. When a toilet is flushed, the Brac springs in to action to supply the reclaimed water instead of using fresh drinking water.

What does this mean to you?

According to Environment Canada toilet flushing represents 30% of domestic water usage, so re-using bath and shower water will save approximately 30% on your water and sewage bill. Not only do you save money but you are also conserving one of our most precious resources for today, and for future generations.

A Solution For Today

Benefits

- Conserve Water and Reduce Sewage
- Save Money
- Reduce Demand on Your Well
- Reduce Load on Your Septic System
- Help Conserve one of our most precious resources
- Gain LEED & Built Green Points
- Build a better future for our children

RESIDENTIAL

Concerned About Drought?

Do you suffer from water concerns due a stressed well or an aging septic system?

Are you concerned about your well running dry?

Rainfall patterns all over the world are beginning to change and in some areas this means less water to replenish wells and ground water sources. If you have already experienced what it's like to run out of water you know how precious and important water really is.

What can you do?

By re-using your bathing water to flush your toilets you can reduce the demand on your water supply system and the load on your septic system by approximately 30%. This is a significant reduction in water consumption and may be sufficient to eliminate the possibility of running out of water during periods of drought or lighter than normal rainfall.

Without Water There Is No Life

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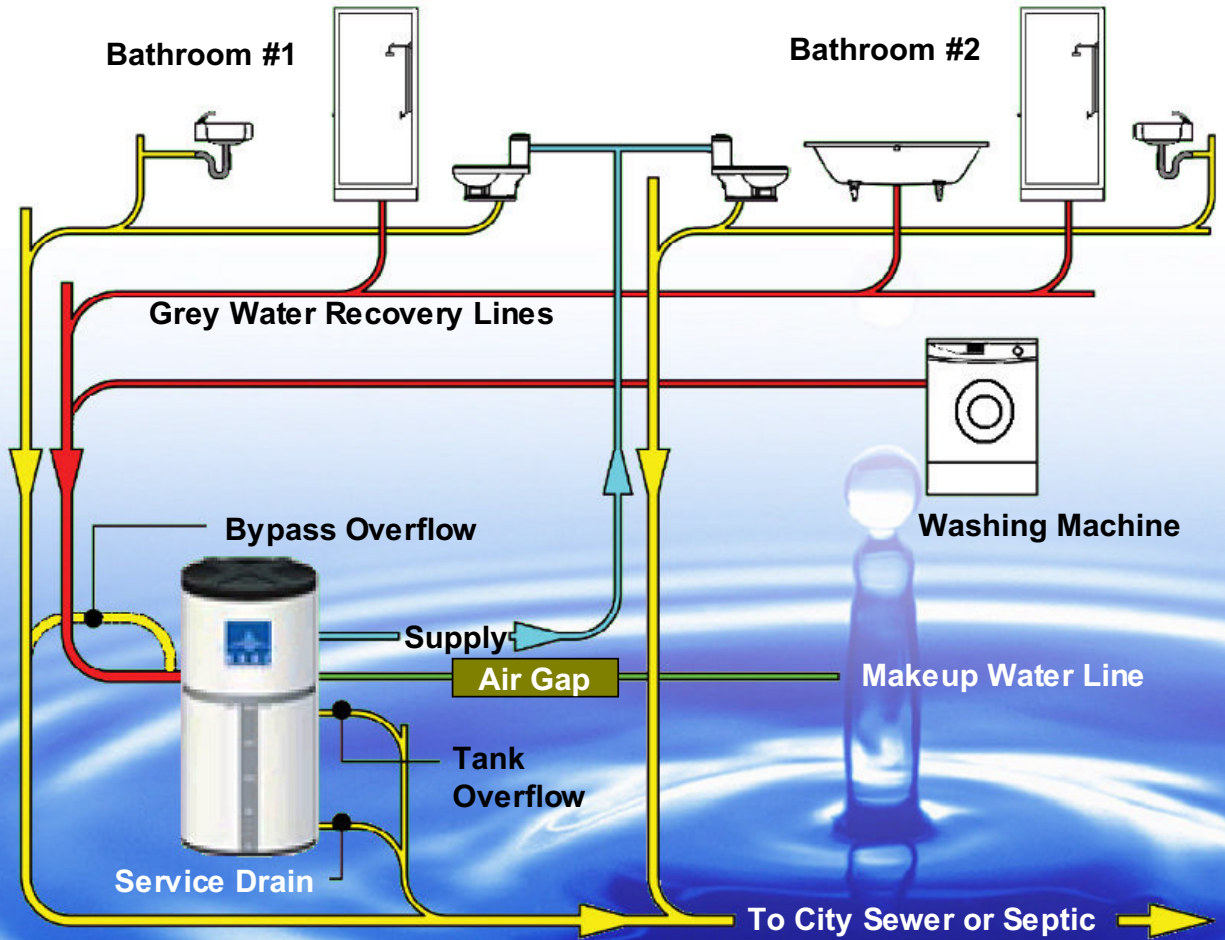
How it works



Plumbing Network Diagram

With a Brac Grey Water Recycling System installed in your house, used water from tubs and showers is collected through new **Grey Water Recovery Lines** (red) to allow grey water to be kept separate from traditional **Sewer or Septic** lines (yellow).
Grey water is then supplied to the toilets through new **Supply** lines (blue).
A **Bypass Overflow** line, installed with the system, ensures that any blockages that occur in the Brac System no not cause a backup in the new drain system.
A **Tank Overflow** drain line provides an outlet for surplus grey water if flushing needs don't match the amount of greywater collected.
A **Makeup Water Line** provides potable water if the available grey water source is temporarily exceeded.
All new piping is clearly marked with a roll of grey water identification tape that comes included with your new system.
The unit is also installed with proper ventilation as per local regulations and building codes.

IMPORTANT: It is recommended that the Brac products be installed by a licensed plumber and reviewed with the local inspectors to ensure compliance with building codes.

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How it works

In order to ensure that your traditional plumbing system, pipes and fixtures will continue to function normally and without problems, the Brac system filters the incoming grey water to remove any hair, solids and heavy soap residue. Then, the filtered water is chlorinated in a manner similar to swimming pools. Maintaining the water at near city water chlorine levels is the best method for ensuring the suitability of the water for use in flushing toilets.

Surplus Grey Water

If there is more grey water collected than the tank can store, surplus grey water follows a tank overflow drain line to the city sewage or septic system.

Not Enough Grey Water

On rare occasions that more water is required for flushing than there is available in the storage tank, the system collects potable water from the existing water supply to ensure continued toilet flushing. Only the minimum amount of potable water is collected to ensure that the next time you take a shower or bath the maximum amount of grey water can be collected. This ensures that you maximize your grey water usage and minimize the use of your fresh water supply as much as possible.

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1 Grey Water Collection

Grey water from your bath and shower are diverted to the Brac System for treatment and storage.

2 Re-Usable Filter

The reclaimed water flows through a reusable 100-micron filter to remove solids and heavy soap residue.

3 Chlorinator

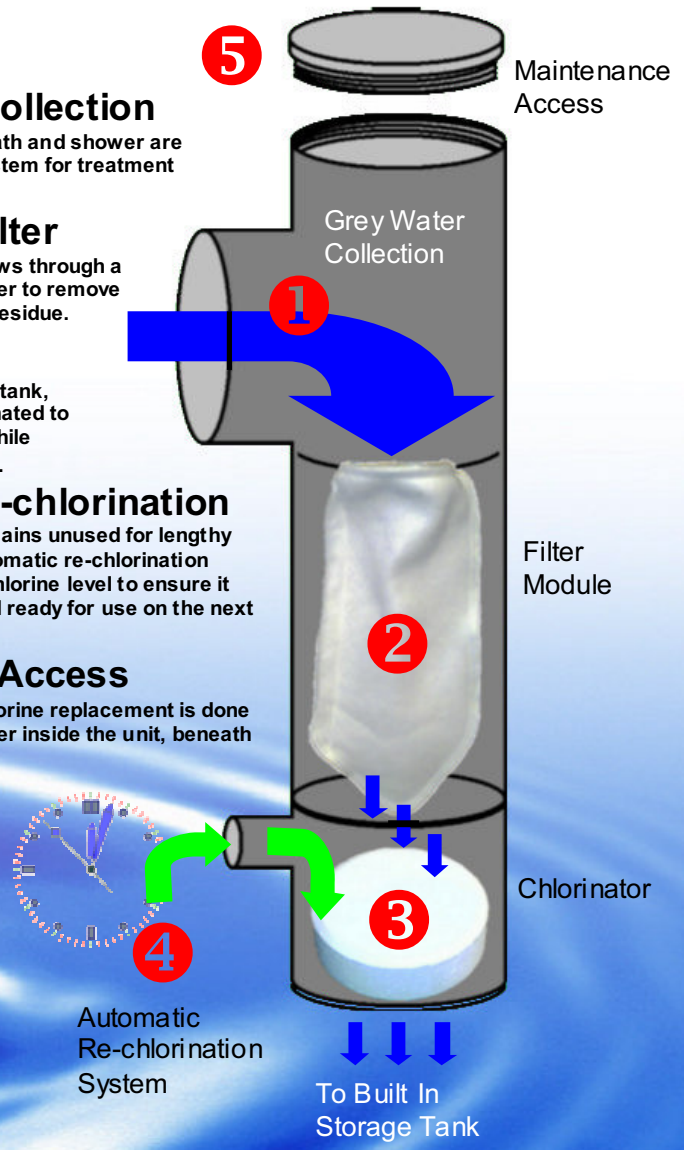
As it enters the storage tank, the grey water is chlorinated to near city water levels while being stored in the tank.

4 Automatic Re-chlorination

If stored grey water remains unused for lengthy periods of time, the automatic re-chlorination system maintains the chlorine level to ensure it remains disinfected and ready for use on the next flush.

5 Maintenance Access

Filter cleanings and chlorine replacement is done through the access cover inside the unit, beneath the main cover.



Residential Systems

RESIDENTIAL

Brac systems
Care for the environment while saving money

Residential Brac Systems are available in sizes to suit any application. Residential units from 150 to 450 liters are optimized to serve from one to twelve people.

All of the Brac RGW products are designed using only high quality components and each unit includes a 2 year manufacturer's warranty.

Residential Features Include:

- Long-lasting HDPE molded shell
- Electronic control pressure boosting pump
- Electronic control water "make-up" system
- Programmable electronic chlorination system
- Extra filter included
- Greywater pipe marking tape included

Residential RGW Series

Models

		RGW-150	RGW-250	RGW-350	RGW-450
Unit	**Capacity (litres/gal)**	150 / 39	250 / 66	350 / 92.5	450 / 119
	Ideal for (people)	1 to 3	up to 6	up to 9	up to 12
	Height (inches/cm)	45.5 / 115.5	60 / 152	53 / 134.5	60 / 152
	Width (inches/cm)	22.5 / 57	22.5 / 57	30.5 / 77.5	30.5 / 77.5
	Weight (lbs/kg)	90 / 41	95 / 43	105 / 47.5	110 / 50
Pump	**Power (HP)**	½	½	1	1
	Cycle (Hz)	60	60	60	60
	Phase	Single	Single	Single	Single
	Voltage (V)	115 / 230	115 / 230	115 / 230	115 / 230
	Amps (A)	6.0 / 3.0	6.0 / 3.0	11 / 5.5	11 / 5.5
	Pump Head Max (ft)	92	92	154	154
	Max Boost Pressure (psi)	40	40	67	67
	Q max. (GPM)	18.5	18.5	23.8	23.8
Consumption	**Est. Annual Power Usage & Cost**	*7 flushes per person per day (6l)- $0.10kW/h			
	2 People	41kW/h $4.10	41kW/h $4.10	53kW/h $5.30	53kW/h $5.30
	4 People	82kW/h $8.20	82kW/h $8.20	105kW/h $10.50	105kW/h $10.50
	6 People	123kW/h $12.30	123kW/h $12.30	158kW/h $15.80	158kW/h $15.80

Which System Is Right For You?

Sizing a system to meet your family's needs doesn't have to be a complicated task. Let's take a look at some basic considerations and formulas to help identify your average water usage and the appropriate system for your application.

A typical new home is likely to have 6 liter per flush toilets. The average person flushes 5 to 7 times per day. From this we can calculate that the daily range of water usage per person is between 30 and 42 liters.

Daily Usage Per Person (liters) = Number of Flushes Per Day * Toilet Capacity (liters)
Daily Usage Per Person (liters) = 7 Flushes Per Day * 6 liters = 42 liters

If you have 3 people in your family your typical daily consumption of water for flushing of toilets would be about 126 liters.

Daily Usage Per Family (liters) = Daily Usage Per Person (liters) * Number of People in Family
Daily Usage Per Family (liters) = 42 liters * 3 = 126 liters

In this example an RGW-150 would be a good choice as it provides a little additional storage for those days when there is a higher amount of flushing or you have guests. As each family and person is unique it is recommended that your system be sized to allow for excess grey water storage to handle unexpected visitors or higher flush volumes than the average statistics.

NOTE: These examples are provided for illustrative purposes and do not necessarily reflect the needs or usage patterns of all families.

The Responsibility Is In Our Hands

RESIDENTIAL

Commercial Systems

Brac Systems offers commercial systems that can service entire condominium developments and other commercial industrial buildings. If you are unsure, your Brac Systems dealer can help you select the system that's right for your application.

All of the Brac CGW products are designed using only high quality components and each unit includes a 2 year manufacturer's warranty.

Commercial Features Include:

- Long-lasting polyethylene shell tank and filter tanks
- 4200/5000/6600 liter capacities
- 5 HP Variable Frequency Constant Pressure Grey Water Pumping System with Dry Run Protection
- Chlorination System with Dedicated Pump
- Electronic control water "make-up" system
- Primary and Secondary Filters with Alarm
- Fresh Water and Grey Water Usage Counters

Intelligent Pumping System

Filter Tanks

4200/5000/6600 Liter Tank

COMMERCIAL

Pumps

Brac Systems offers a number of high quality pumps, used in our own systems, for your projects. Innovative quality design and competitive pricing make the Brac pumps a logical choice for all of your needs. Contact your dealer or distributor for more detailed information.

TPHIC SERIES
CONSTANT PRESSURE INVERTER CONTROL SYSTEM

Applications
Apartment buildings, houses, villa water supply, factories, water supply systems, drinking water systems. RO water treatment equipment, supermarkets, motels, spas, etc.

Product Features
- Smoothly Starting Pump
- Constant And Stable Pressure Control
- Dry Run Protection
- Automatic Stop
- Pressure Compensation For Pipeline Leaks
- Single Or Parallel Unit Operation
- Interchangeable Operation

TQ SERIES
ELECTRONIC CONTROL PUMP
Applications
The TQ Series pumps are designed for water supply and pressure boosting in residential, commercial and light industrial applications where low or inadequate water pressure exists. It is suitable for boosting pressure from underground or surface water supplies.

Product Features
- Complete, all-in-one unit, consisting of pump, motor, pressure tank, and electronic controller
- The built-in electronic controller provides constant pressure which ensures that the pump starts automatically when water is consumed and operates continuously until water is no longer required
- Compact design and quiet operation
- Constructed from top quality corrosion resistant materials
- Dry-run shut off with automatic reset
- Built-in thermal overload
- Anti-cycling feature
- Lift water up to 25 ft. when fitted with a foot valve

PUMPS

Accessories

Brac systems
Care for the environment while saving money

ACCESSORIES

Sump & Pump Kit

Because the BRAC system relies on gravity for grey water to drain from your bath or shower into the inlet of the system, owners with single level homes on a slab foundation (or other single-level structures) require this kit to pump the greywater up to the inlet. The sump is installed in the foundation or floor, below the level of the lowest drain you intend to capture grey water from. As grey water collects in the sump, a float-activated sump pump elevates the grey water to the system.
Kit includes tank, lid, sump pump, pump manual, and two-year warranty.

Every Drop Counts

Sand Filter

Cast iron body sand filter with visual glass.
1 1/4" NPT inlet and outlet.
This sand filter should be used if your water source is a lake, stream, or sand-point well, and contains sand or grit. It is installed on the suction pipe between the home's water pump and the water source. This filter will prevent the Brac System's potable water valve from being fouled with grit, leading to a failure of the valve. Homes on a municipal water supply should not need this filter.

Industry News

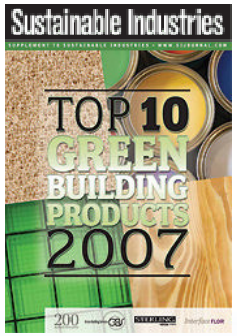
INDUSTRY NEWS

IAPMO Listed

To ensure the highest level of quality and compliance with regulatory requirements all Brac Grey Water Recycling Systems are IAPMO listed. This ensures that the RGW and CGW series products are manufactured in compliance with IGC 207-2006b and CSA B128-2006.

Ontario Building Code

In 2007 a rewritten Ontario Building Code was released which allows grey water to be used for flushing of toilets. This change was a monumental step toward water conservation and efficiency. With this change it is now possible to reduce the water consumption in your home by approximately 30% by re-using grey water to flush your toilets.



Question: Why do we use clean drinking water to flush our toilets? **Answer:** We don't have to.

Sustainable Industries judges were unanimous in their praise for Brac Systems' Gray Water Recycling System as great example of a gray water system. Water that does down non-toilet drains throughout a home or office is filtered, disinfected with readily available chlorine pucks, then stored in a tank. Flush the toilet and the renewed water is pumped up to the bathroom.

By most estimates, Brac's system can cut indoor water use by 30%. And because the storage tank is about the size of a household hot water tank, it is easily installed in existing homes, as well as new construction.

The Brac Systems Grey Water Recycling products won the New Product award in the Energy Efficiency category at the 2007 Mécanex Climatex trade show. Mécanex is one of the largest Business to Business mechanical trade shows and conferences in eastern Canada.