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*Commitment to a
Cleaner Environment*

Metito Sanicycler[®]

WATER RECYCLING - BUILD IT INTO YOUR BUDGET

Water Resources

Water accounts for almost two thirds of the human body. Apart from the air we breathe, it is our most vital requirement. It sustains all life. Without it we, and every other living organism on our planet, would die. However, throughout the world, this precious commodity is becoming scarcer. The reality of water scarcity is devastating and if we are to preserve water supplies for future generations, we must act now to protect and conserve this life sustaining resource.

What is Grey Water Recycling?

This is the utilisation of water which has been used for bathing and dishwashing as well as roof catchment water for the purpose of flushing toilets and irrigating gardens or green areas. The recycling system can be retrofitted or installed in a new dwelling. The recycled water is filtered and sterilised, and is odour free.

Why Recycle?

Although most professionals view grey-water recycling as an application only for the most radical "green" buildings, these systems are slowly making their way into the mainstream building market, thanks to rising water rates and the development of sustainable designs.

Every time we pull the plug in the bath, basin or shower, water is wasted. By re-using waste water from these sanitary outlets to flush toilets, water waste can be reduced by up to 40%.

In today's world of harsh commercial reality, payback is of course a major feature in determining capital investment. By harnessing modern technology, Metito has developed a reliable and low cost water recycling process for use in domestic and commercial premises that conserves water whilst delivering a viable payback period.

The Benefits of Grey Water Recycling

• Lower fresh water use

Grey water can replace fresh water in many instances,

saving money and increasing the effective water supply specifically in regions where irrigation is needed. Residential water use is almost evenly split between indoor and outdoor. All except toilet waste water could be recycled outdoors, achieving the good results with significantly less water diverted from nature.

• Less strain on septic tank or treatment plant

Grey water use greatly extends the useful life and capacity of septic systems. For municipal treatment systems, decreased waste water flow means higher treatment effectiveness and lower costs.

• Highly effective purification

When recycled for outdoor uses, grey water is purified to a spectacularly high degree in the upper, most biologically active region of the soil. This protects the quality of natural surface and ground waters.

• Less energy and chemical use

Less energy and chemicals are used due to the reduced amount of both fresh water and waste water that needs pumping and treatment. For those providing their own water or electricity, the advantage of a reduced burden on the infrastructure is felt directly.

• Ground water recharge

Grey water application in excess of plant needs could be used in certain areas to recharge ground water.

• Plant growth.

Grey water enables a landscape to flourish where water may not otherwise be available to support much plant growth.

• Increased awareness of and sensitivity to natural cycles.

Grey water use yields the satisfaction of taking responsibility for the wise economical utilisation of an important resource.



METITO Sanicycler® System Installed at a Housing Compound

How it works

Modern plant and innovative patented and accredited designs are the keys to success, and by combining the two, Metito now is one of the industry leaders in the water-recycling field.

Grey water systems employ dual water supply systems which permit the reuse of "grey" wastes from lavatories, bathtubs, showers and other fixtures discharging dilute non-fecal wastes as a secondary, non-potable water source.

These systems accomplish significant levels of water conservation by utilising water resources in a more efficient manner. As an additional benefit, grey water systems also reduce sewage loads and ease the impact on sewage treatment facilities.

Regardless of the size of your building, if it uses water, particularly in large quantities, Metito can engineer a system that will achieve a planned saving in water consumption with consequent cost savings. Adapted to meet the building's specific constraints and demands, the system collects recyclable water, whether from the building or from rain water, before pumping it through the system and, after chemical treatment, storing it for later use. The treated and recycled water, which is clean and absolutely harmless to individuals and the environment, is then used for WC flushing or any other suitable purpose.

The Metito Sanicycler®

The heart of the Metito Sanicycler® is the treatment equipment which conditions the recovered water, permitting its reuse in separate piping systems arranged in the plumbing of the building or dwelling.

The function of this equipment is to condition the water to a level consistent with the intended reuse of the effluent. At the most common desired level of treatment, the Metito Sanicycler® includes a holding tank where all grey water is collected. This tank also serves as a reaction tank where water is treated with Metito's specialty chemical "SaniTreat Plus®".

Chemically conditioned water is then pumped through a dual media or a cartridge filter depending on the capacity of the system, for reduction of suspended solids content, after which it is stored in an overhead tank for distribution to the final points of use.

Alternatively, depending upon specific needs, an intermediate booster system could be provided to supply the filtered water directly to the flushing water lines. An aeration system could also be provided in the case of higher biological loads or larger treatment units.

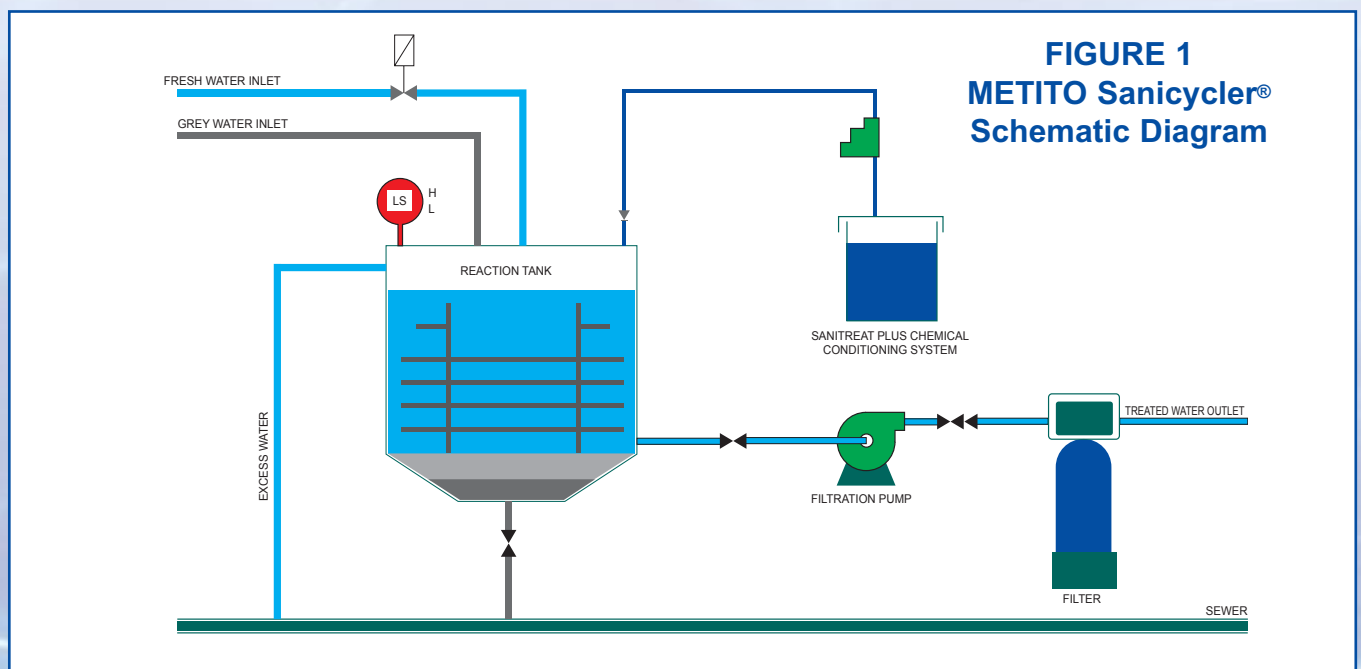
An automatic make up connection is provided on the reaction tank to supply fresh water in case the flow of grey water is insufficient to maintain the minimum storage requirements.

The Metito Sanicycler® is constructed from steel, GRP or other materials depending on size and capacity.

Metito recycling systems have been installed at numerous locations and have been tested and successfully accepted by a number of independent authorities worldwide. Water consumption savings of around 40% due to the use of the Sanicycler have been achieved, whilst at the same time providing disinfected water for toilet flushing that surpasses fresh water in the characteristics needed for the application. The mild detergent action of SaniTreat Plus® is septic tank safe; it virtually eliminates the unpopular task of frequent cleaning of the toilet bowl and keeps the sewer line cleaner and free flowing.

Maintenance of the Metito Sanicycler® is simple and requires 10-15 minutes monthly. The general procedure involves opening the drain valve on the tank to allow sediment to discharge into the sewer line, and replenishing the chemical supply in addition to backwashing the media filters or replacing the cartridges in the case of smaller systems. Fig 1 shows the schematic diagram of the Sanicycler®.

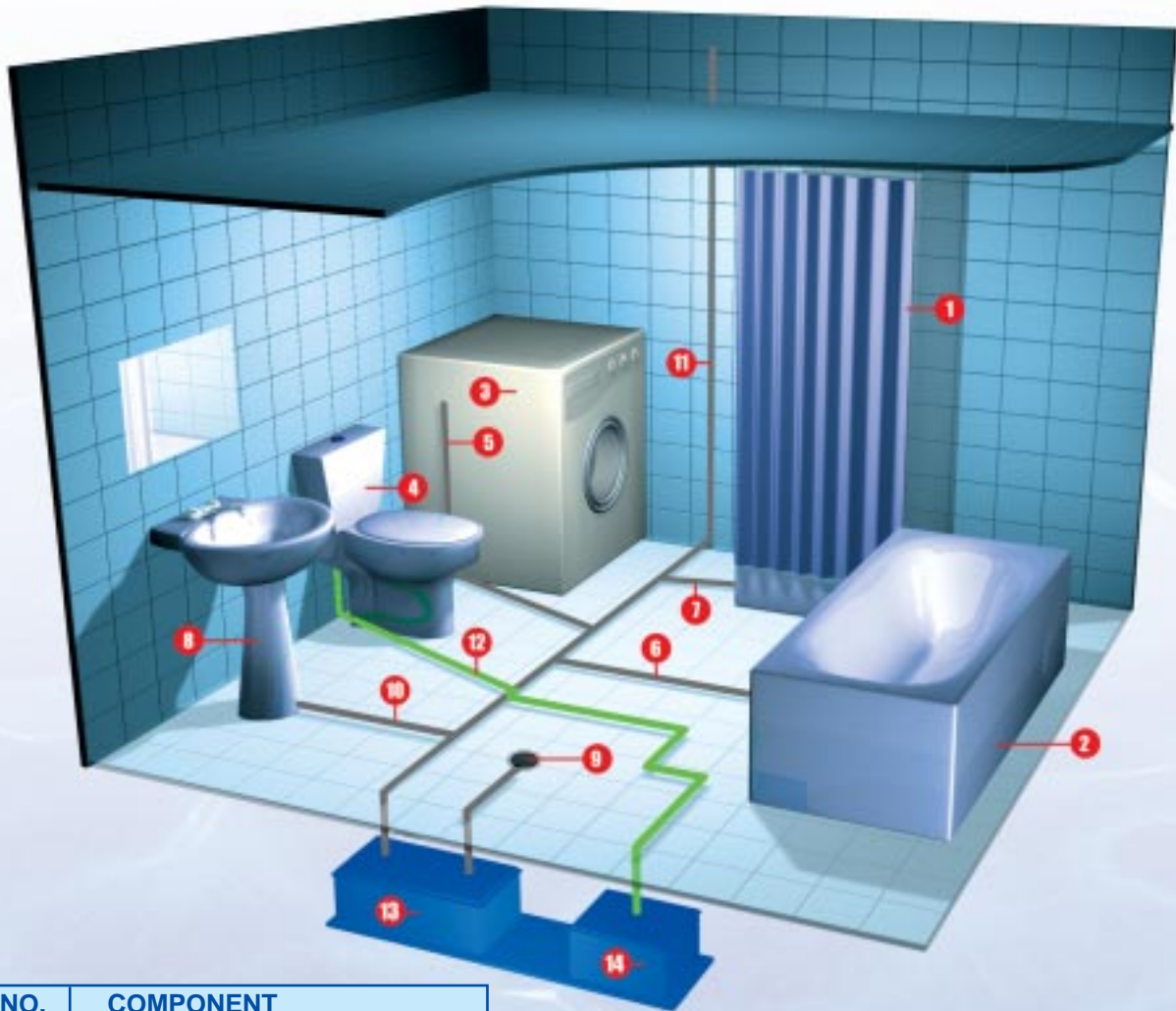
The Metito Sanicycler® is available in a range of sizes to suit different types of accommodation, from a single apartment or small villa, to a block of apartments.



Model	No. of Apartments
EC10	One
EC50	Five
EC100	Ten
EC150	Fifteen
EC200	Twenty

Table 1: Standard Sizes of Metito Sanicycler®

- Design is based on 6 persons per apartment.
- Customized designs to suit larger dwellings can be offered upon request.



NO.	COMPONENT
1	Shower
2	Bath Tub
3	Washing Machine
4	Toilet Cistern
5	Washing Machine Waste Water
6	Bath Waste Water
7	Shower Waste Water
8	Sink
9	Drain
10	Sink Waste Water
11	Vent
12	Recycled Water Pipe
13	Sanicycler
14	Recycled Water Tank

FIGURE 2
Typical Piping Layout of an Installed METITO Sanicycler®