

**FILTRATION** – A process of separating particulate matter from fluid by straining and trapping particles through pores or gaps. Filtration is either part of, or used prior to, a treatment process.

All water systems will need basic filtration as a minimum, to stop debris or particles clogging up equipment in the system. This is especially important for any treatment processes.

There are several types of filtration methods, depending on the source set-up, inlet quality and end use:

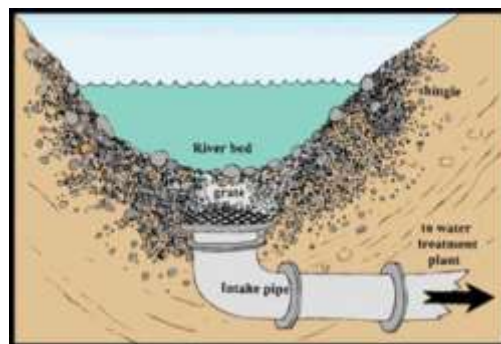


**INFILTRATION GALLERY** – either in the stream or spring extraction system at source.

- Good for reducing leaf, mud/silt and general debris
- Low cost and maintenance method

**SCREEN FILTRATION** – used for intake protection either at the dam/weir or inline prior to storage tanks and distribution.

- Good dam/weir intake protection for pump or treatment equipment as a simple mesh screen
- Easy to maintain manually, semi-auto or automatic backwashing system
- Accurate sizing to suit filtration need
- Available in all shapes and sizes

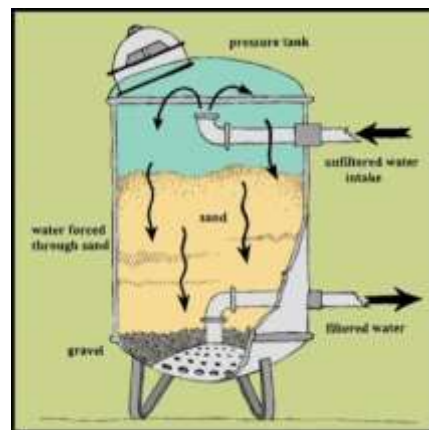


**DISC FILTRATION** – used inline after source and before storage or distribution.

- Good for inline filtration prior to storage and treatment system
- Well suited to silt and sand filtration
- Easy to maintain manually, semi-auto or automatic backwashing system
- Available in all micron ranges

**CARTRIDGE FILTRATION** – used inline after storage, prior to treatment, within distribution system and at point of use.

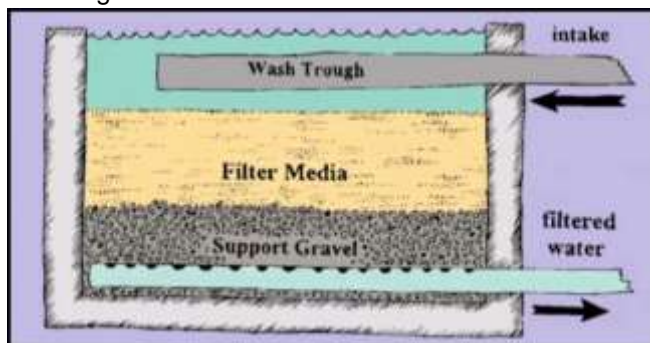
- Very good for final water polishing
- Carbon filters for odour and taste removal
- Used prior to Ultra Violet treatment
- Effective at inactivating pathogens (Giardia, Cryptosporidium)
- Two types of cartridge pore sizes – absolute and nominal



NB: screen, disc and cartridge filters are selected by micron (pore/mesh) sizing. From 0.2µm to 300µm (µm = micron).

**MEDIA FILTRATION** – used after source and inline; prior to storage or treatment.

- Rapid gravity or pressure
- Both types need to be backwashed/cleaned
- Media can be sand and/or various media in layers of more than one material
- Copes with a higher solids load and operates for longer periods (between backwashes)
- Greensand (a filter media) for iron and manganese removal



Filtration method and micron range is dependant on quantity, quality and treatment needs for your water system.

*Always get water quality analyses to make an accurate selection.*

Tune in next month to learn about the treatment process and methods.