

PB(012)-Multidisc Continous Filtration System(BDY series)

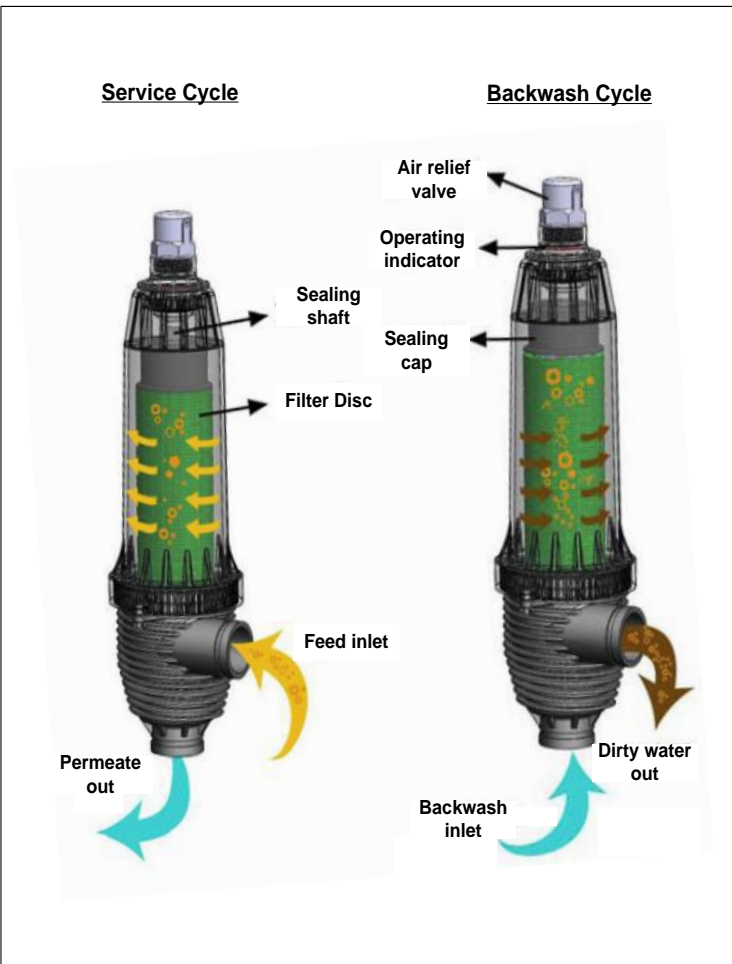
BYD Series Multidisc Water Filter System

Continous Auto-backwashing Mechanical Water Filter

OPERATING PRINCIPLE

To use mechanical filtration as replacement of pressurized sand-filter has been the desired choice of many plant engineer for many years, but its application has since been limited due to its relatively low solids loading capacity. For feed with solid loading exceeded 100 PPM, most mechanical filter will not be able to cope well or will fall in frequent backwashing mode. This is no more the case with the advent of multidisc continuous filter in particularly **BioREM BYD** series water filter.

The principle of operation of **BYD** filter is by the deployment of high number of discs as the equivalence of depth media that is found in the sand-filter. The surface area of the filtration is enhanced or enlarged with the use of hundreds of unit of disc and the porosity of filtration is governed by the V-shape grooves formed in between the adjacent discs.



Why Choose BioREM BYD Series Filter?

(1)BioREM BYD filter is a definite mesh-size cutoff filter compared to traditional pressurised sandfilter.

Unlike pressurized sand-filter, the mesh size cut-off of **BYD** filter is definite. **BYD** filter comes in 50, 100,150 and 200 micron size depending on your requirement and it is definite in size as any particles exceeding the specified size would not be allowed to pass through. As the filtration time increases the effective cut-off size would be gradually reduced. It does not have the disadvantages associated to sand-filter as in potential channeling of flow path. Sand-filter media is subject to potential channeling whenever the delta pressure is exceeded or when the backwashing was not performed well.

(2)BYD filter is being backwashed automatically whenever the differential pressure is exceeded or by expiring of preset duration of service.

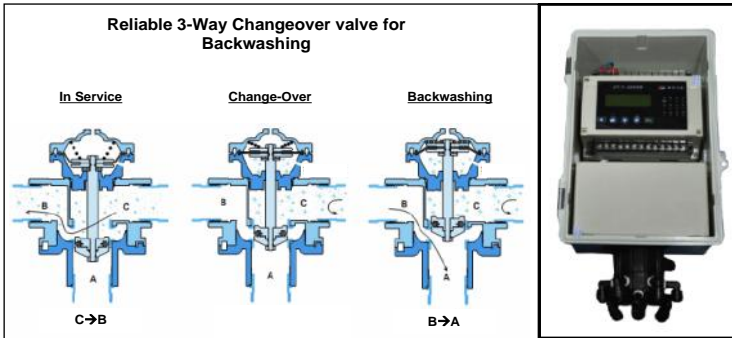
BioREM BYD filter is configured to conduct automatic backwashing and it is controlled with a dual selectable mode controller either in pressure differential or time of run-length. During backwash , the clean water spins the disks along with inside-out action maximizing efficiency of cleaning.



(3) BYD Filter is a continuous flow water filter in that permeate is being produced continuously, even when it is being backwashed.

BioREM BYD water filter will produce water continuously - due to its multiple filter element design and when one element is subject to backwashing, the others will continue to produce clean water. The clean water produced, a portion of it will be used to backwash and the extra as yield to process. Therefore the filter produces clean water non-stop throughout the day.

In comparison, a traditional pressurized sandfilter water system will normally require a standby unit and sometimes a treated buffer tank.



(4) BYD Filter is non-clogging and maintenance-free due to its effective backwashing

BioREM BYD filter uses a low resistant and reliable pneumatic 3-way change-over valve ensuring an effective backwash cycle; and with the rotating scrubbing function of the disc, the disc is always kept at clean and optimum conditions. The traditional issue of fouling and clogging associated with sand-filter is reduced to zero, even with high biological activity influent feed. This allows the **BYD** filter to work effectively as polishing filter for organic feed and enhancing its use solids-BOD removal application such as POME polishing process.



Principal Uses

BioREM BYD filter is suitable to be used for: (1) raw water treatment plant, either with or without chemical precipitation; (2) final polishing filter for final discharge of effluent in removing TSS content or for compliance of BOD; and (3) as pre-filtration system for ultrafiltration(UF) or reverse osmosis(RO) process in the water recycling process.

The number of units and micron-size of disc to be used will be determined in specific to the influent quality and flow rate required and the criticality of permeate water produced.

Definite Cut-Off; Non-Clogging Continuous and Auto-backwash Multi-DISK Water Filter