

EWT™ QuadraKleen™ Filter

Four Cell, Centrally Controlled Granular Media Filter

Key features & benefits

- Flexible design adapts to a wide range of filtration requirements
- Accommodates virtually any flow volume
- Automated unit controlled from a single central plant

How we create value

- Air scour cleaning reduces duration of backwash cycles and wash water volumes
- No need for backwash water storage, reducing costs
- Central access column simplifies maintenance
- Constructed from durable materials and fully factory assembled



EWT™ QuadraKleen™ Filter

Economical, Continuous Filtration for Large Flows

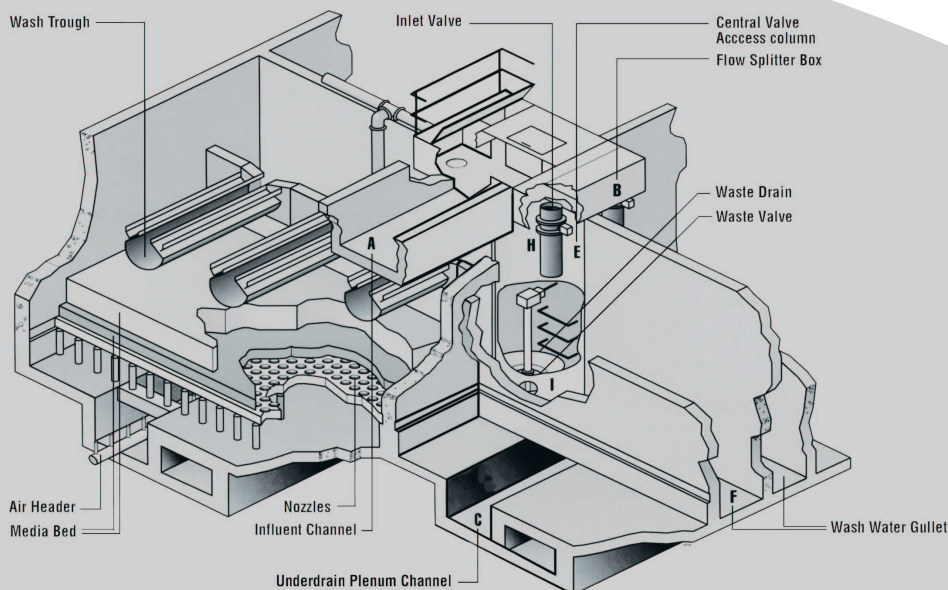
The EWT™ QuadraKleen™ filter is a modular, four cell granular media filter that delivers economical, continuous filtration in a variety of water treatment flowsheets. Each QuadraKleen module consists of four filter cells clustered around common influent, effluent and backwash channels. This arrangement allows individual cells to be backwashed using water produced by the other three cells, eliminating the need for backwash water storage and minimizing the filtration rate during backwash. Air scour cleaning ensures thorough removal of contaminants from the media bed while reducing the duration of backwash cycles and the volume of wash water required. Backwash operations are automatically initiated and all control valves are operated from a single, central plant.

Flexible Design

The QuadraKleen filter easily adapts to a wide range of filtration requirements. Its flexible basin geometry easily accommodates a variety of mono or dual media bed depths and media types, including sand, anthracite and granular activated carbon. Multiple QuadraKleen filters can be arranged around common influent/effluent channels, accommodating virtually any flow volume.

How it Works

Each QuadraKleen module is designed around common channels for influent distribution, filtered water collection and backwash diversion. This economical solution eliminates costly pipe galleries for flow transport. An influent flume (A) carries feed water to a central distribution box (B), where flow is equally split between all operating cells. Underdrain plenum channels (C) convey filtrate from operating cells to the common effluent channel (D), and carry wash water from the effluent channel to the cells during backwash. The central waste drain and valve access column (E) connects waste gulleys (F) in each cell with a common waste drain. Adjustable weirs (G) in the effluent/backwash channel allow filtered water to overflow into a channel leading to a clearwell or distribution system.



Centralized controls, convenient service access

All filtration and backwash flows are automatically controlled by centrally operated valves and a programmable logic controller.

Inlet valves (H) control influent distribution among the operating cells. Waste valves (I) pass waste backwash water from individual cells and the central waste column to a drain. Isolation valves (J) allow filtered water and backwash water to flow between individual filter cells and the common effluent channel. Air-scour valves (K) control pneumatic flow to cells during media cleaning.

Most valves and controls are grouped in or around the central access column for convenient maintenance.

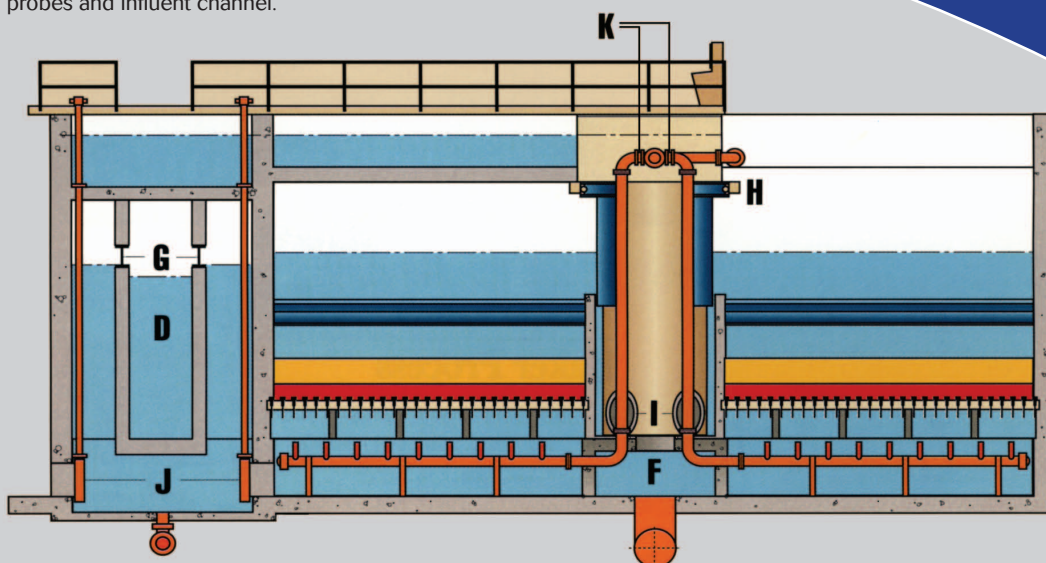


QuadraKleen™ unit, showing optional control room.



View into central valve access and waste drain column, showing individual cell waste valves and actuators.

A QuadraKleen™ filter during operation, showing: optional control room, air header pipe (green top), influent pipe from splitter box (beneath control room), control valves, level probes and influent channel.



High Performance Features Lock in Efficiency



The QuadraKleen filter cell is entirely constructed from concrete. The steel central valve access/waste drain column is prefabricated and fully factory assembled. The CastKleen[®] filter underdrain features monolithic slab construction and FlexKleen[®] flow control nozzles. The FlexKleen nozzles require no gravel distribution layer, and their adjustable, flow-balancing tailpipes ensure uniform air distribution during air scouring of the filter media. Optional ScourGuard[™] wash water collection troughs protect against media loss during air-assisted backwash.

In addition to providing a complete line of process equipment, Ovivo is your source for everything required to meet the total needs of a project, from inception to start-up and beyond.

Service

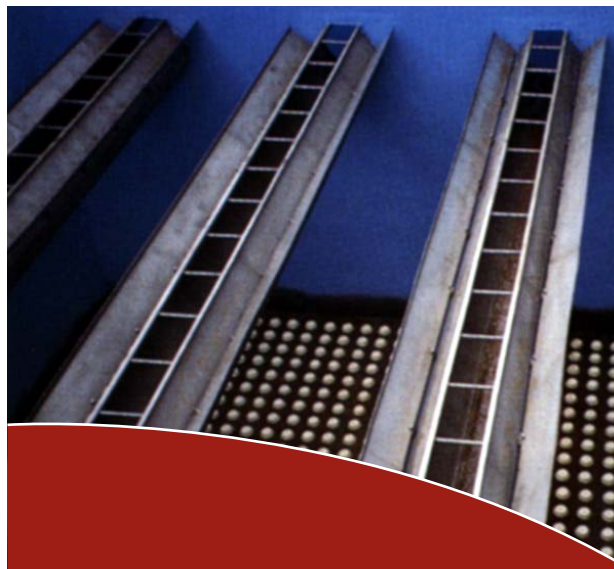
Our staff of skilled mechanical and process engineers can keep your equipment in top condition and help you avoid costly unscheduled interruptions.

Left: Half wall partition between filter cell and wash water gullet.

Below: Filter cell interior before media installation, showing CastKleen[®] Underdrain slab, FlexKleen[®] Nozzles and ScourGuard[™] backwash troughs.



Initiating feed flow to a QuadraKleen[™] cell following backwash. This view shows influent and air supply piping, wash water gullet partition, backwash troughs and supports, and level probes.



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