

## DGF and Integral DGF Provide Efficient, Dependable Filtration for Process and Wastewater Treatment

The Smith & Loveless Duplex Gravity Filter (DGF) and its counterpart, the Integral DGF, remove suspended solids and particles, improving effluent quality. The standard system is available in sizes to fit any application, providing up to 200 square feet (18.6 square meters) of effective filtration area per unit. The DGF and Integral DGF are simple, efficient systems that offer many advantages over single-media filters.

### The Dual-Media Advantage

- The influent filters through two graduations of media, increasing the DGF's filtration depth. The first is coarse-graded anthracite, and the second is a finer-graded silica sand.
- The filtration depth of the DGF far exceeds that of single-media filters. Single-media designs offer suffer blinding and head loss problems, requiring additional backwashing.
- The DGF's deep filtration also produces higher effluent quality.



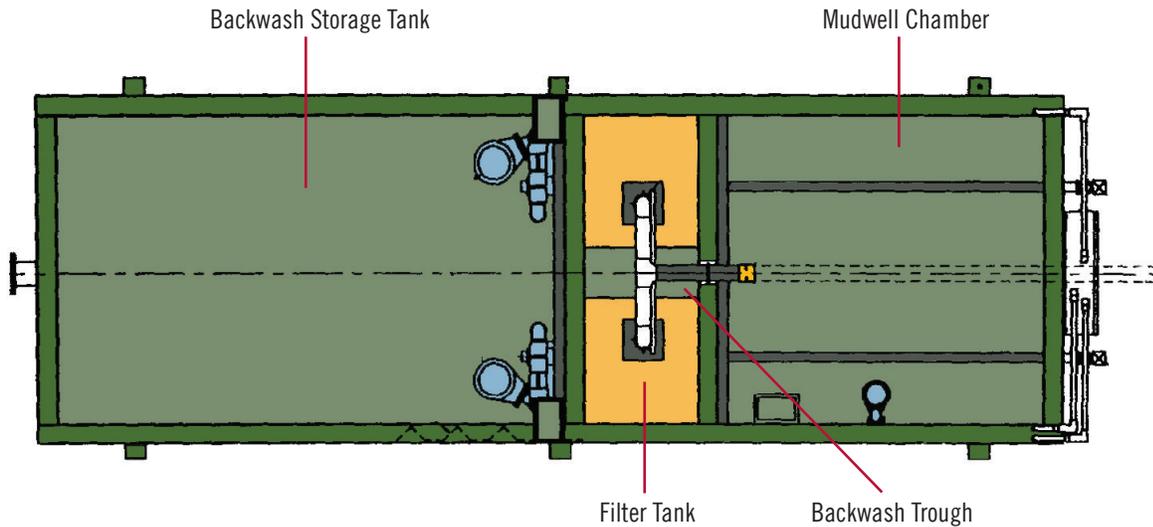
### Simplicity Means Reliability

- The DGF and Integral DGF house the media chamber, backwash pumps, backwash storage, mudwell and controls in a single factory-built or field-erected unit.
- The design used in the DGF eliminates the need for a vast array of sensors, pneumatically operated valves, multiple pumping arrangements and complicated controls.
- The backwash cycle is initiated when the water level inside either filter chamber reaches a predetermined level. The cycle, consisting of five minutes of reversed-flow backwashing and five minutes of up-flow air scouring, can also be activated on a timer or operator demand.



*DGF Systems are available in both above-grade and below-grade models. Each system has a range of sizes to match any application.*

## Plan View



## Quality Assembly

- The DGF System is factory-built or field-erected (as required for the project).
- Quality is consistent because all units are manufactured and field-erected by experienced craftsmen.
- Smith & Loveless carefully monitors the quality of each DGF System.

## Special Features

- The duplex design allows one cell to operate while the other backwashes, requiring only one DGF unit for continuous operation.
- The backwash storage and mudwell are integral with the filter tank.
- During backwash of one cell, the flow to that cell is diverted to the mudwell to prevent overloading of the remaining cell(s).
- The mudwell's backwash water is metered back to the plant for reprocessing.
- The Integral DGF can easily be built integral into Smith & Loveless' V-crimped wastewater treatment plants, such as the ADDIGEST® and Model R OXIGEST® plants.

## FILTER SURFACE AREAS

DGF Single Units	25 to 200 sq. ft. 2.3 to 18.6 sq. m.
Multiple Unit Configurations	800 sq. ft. 75 sq. m.

## Optional Configurations

- Chlorination equipment may be installed, allowing the backwash storage chamber to serve as a chlorine contact tank. Baffles in the compartment ensure proper mixing of chlorine before the liquid exits the filter.
- Ultraviolet disinfection capability can also be installed in the DGF.
- Water reuse for spray irrigation to meet California Title 22 and other state's requirements is available.