

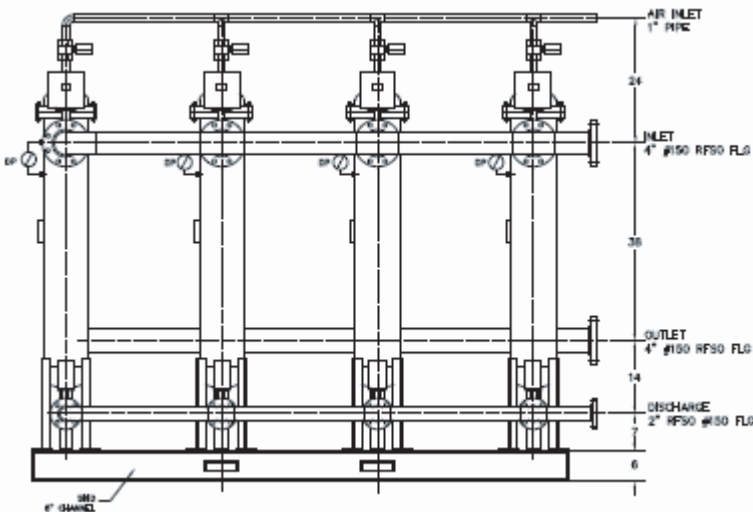
*Engineering & Innovation
Beyond Expectation*



**Engineered Systems
& Specialties**

ESS Corp. introduces its fully automated, self-cleaning filtration system. The system is designed to eliminate the need for cartridge /bag change or basket cleaning in order to reduce operating and labor costs associated with cooling system filter maintenance.

If your system design allows you to eliminate the use of bags or cartridges, go ESS and get automated!



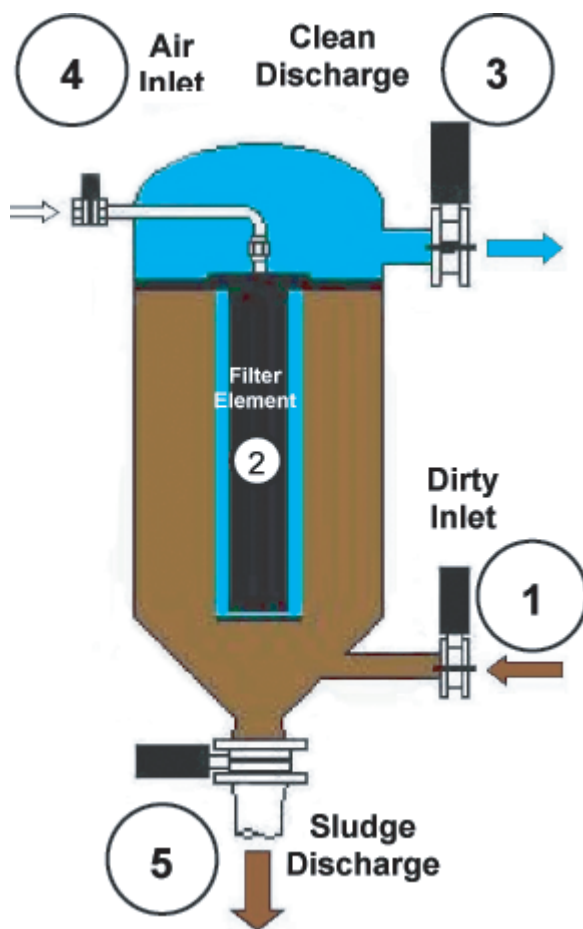
ESS CORP'S SELF CLEANING MULTIPLE VESSEL SYSTEMS

» Benefits and advantages of Multiple Vessel Systems

- Completely automated operation greatly reduces manpower requirements
- Control panel status/cycle indicator lights
- Fail safe design ensures main flow valves remain open and purge/drain valve remain closed during electrical or pneumatic failure
- Durable element design provides extended use without replacement
- Elements available in a variety of micron/mesh sizes
- Eliminates the need to buy replacement filter elements and expend labor resources for change-out and cleaning
- Compressed air flush (index) cycle minimizes effluent, reducing fluid loss and waste disposal
- Proprietary flow design promotes continuous cleaning of element surface during operation
- Optional multiple vessel arrangement allows full flow during flushing (indexing) and cleaning
- Redundant differential pressure (DP) driven flush (index) in the event DP exceeds user designated parameters prior to scheduled flush (index)
- Integral vent mechanism purges air from vessel, preventing it from migrating downstream
- Simple and compact skid mounted design minimizes space and time required for installation
- Units are shipped pre-calibrated
- MADE IN CANADA

» SCF Permanent Media Filters

1. Dirty Inlet Valve
2. Filter Element
3. Clean Discharge Valve
4. Air Inlet Valve
5. Sludge Discharge Valve



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ESS Corp.'s Self Cleaning
Permanent Media Filters
Multiple Vessel Arrangement
30 to 100 Micron Filtration
Filtration and Separation
Equipment for Efficient
Fluid Management

» Filtration and Separation Equipment for Efficient Fluid Management

- Control system initiates vessel isolation by rapidly closing inlet (1) and outlet isolation (3) valves, effectively trapping system pressure within the vessel. All additional vessels remain in operation for the duration of this cycle.
- Sludge drain (5) valve begins to slowly open, allowing pressure within the vessel to force effluent through the drain and initiate the cleaning.
- Compressed air inlet (4) opens rapidly while sludge drain (5) opens fully "blowing" debris free from element surface and out through the sludge drain for approximately 15seconds.
- Compressed air inlet (4) shuts rapidly and sludge drain closes slowly.
- Inlet valve (1) begins to open allowing fluid to enter the vessel which forces the float upward until all remaining air is expelled from the vent. (not shown)
- Outlet valve opens slowly and inlet valve (1) opens fully placing vessel back into operation once positive (system) pressure is confirmed by PLC(indicates absence of trapped air).