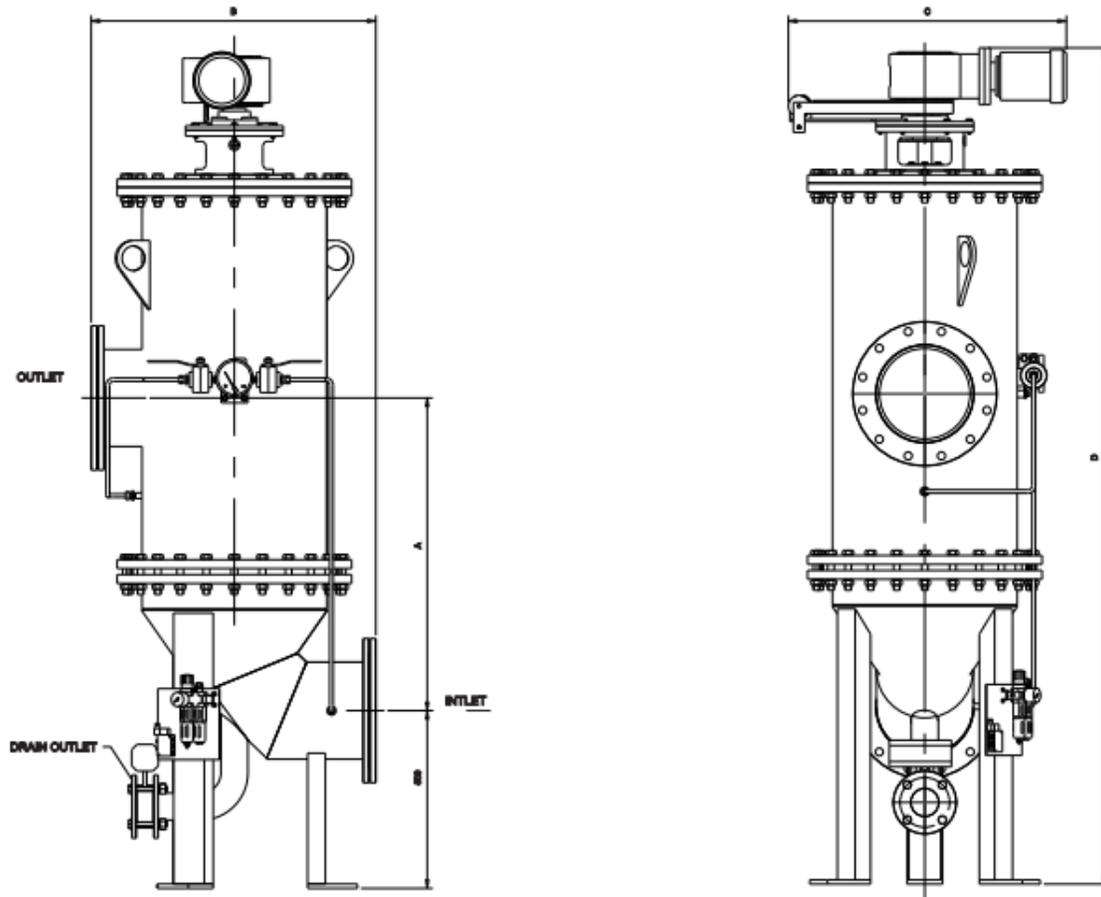


Self Cleaning Filters



Working:

“Veeraja” has developed a self-cleaning filter, designed to handle large flows, higher pressures & heavy dirt loads. It cleans itself automatically either by sensing pressure drop across the filter, or by timer, whichever occurs earlier. Dirt collected is ejected out automatically with little fluid.

Shell of the filter is fabricated in MS & is designed to handle working pressure of filter. Filter elements are SS304 wedge-wire screen candles, mounted vertically with their bottom ends open to dirty fluid & top ends closed.

All candles are exposed to flow of dirty fluid, except one. Dirt is collected inside the candles.

One of the candle’s outlet is opened to backwash port by aligning rotary face seal to it. Backwash outlet valve is opened for a short time so that the dirt collected in this candle is let



out to atmospheric pressure. Since large pressure differential is available between working pressure of filter & atmosphere, backwashing is very effective.

When the preset pressure drop reaches (or time elapsed is complete), the rotary face seal is aligned with next candle outlet & backwash outlet valve is opened for a short time to effect backwashing of that candle.

The process is repeated automatically to keep the filter clean & to eject the dirt. A recovery filter is provided to recover fluid ejected along with the dirt.

Wedge-wire screen openings, number of working candles, candle sizes can be altered depending on following: Flow & viscosity of fluid, quantity & type of dirt etc. The filter housing can be designed to handle required working pressure.

Filter presently developed has 8 candles, 1000 mm long X 100 mm diameter. It is designed for flow of 8000 LPM (480 m³/hr) of water based emulsion for filtration level of 100 microns. It is going to work as Roll Coolant Filter for a steel cold rolling mill.

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