**Horizontal Pressure Sand Filter**

Pressure Sand Filter typically offer lower initial and operating costs than conventional systems, and the package nature of these systems greatly simplifies the design and installation for the engineer and contractor.

Specifically, pressure filter systems have been developed to focus on common ground water problems like iron, manganese and hardness. For high iron and manganese applications, our pressure filters can be provided with manganese green sand and potassium permanganate feed systems.

Horizontal pressure filters are especially well suited for the high volume flows required by large municipalities, industries, and power utilities. Our unique multi-cell backwash system offers the economy of horizontal pressure filters, without the need for backwash pumps.

We supply different types of filter used for industrial and potable water supply. The filter are being used in potable and advance wastewater treatment plant and other industries.

**Working Principle**

In pressure sand filter, raw water flows downwards through the filter bed and as the suspended matter—which has usually been treated by addition of a coagulant like alum—is retained on the sand surface and between the sand grains immediately below the surface.

There is steady rise in the loss of head as the filter process continues and the flow reduces once the pressure drop across the filter is excessive. The filter is now taken out of service and cleaning of the filter is effected by flow reversal. To assist in cleaning the bed, the backwash operation is often preceded by air agitation through the under drain system. The process of air scouring agitates the sand with a scrubbing action, which loosens the intercepted particles. The filter is now ready to be put back into service.

Shubham offers horizontal pressure filters in diameters up to 12 feet. Different from other pressure filters in the industry; our pressure filters utilize the low head loss under drain and the systematically managed Air System. These unique features reduce backwash head requirements, improve backwash distribution characteristics, and achieve efficient backwash cycles. These features, along with standard instrumentation and control...
package, simplify design and minimize startup complications.

Our **Horizontal Pressure Sand Filters** are designed to save on space and cost without compromising performance, durability, or ease of operation. Each tank is manufactured by ASME Code certified welders from Type 316L stainless steel, a material which is specially fashioned to offer superior protection against corrosion in chloride environments. The result is a product that is virtually indestructible and perfectly suited to commercial swimming applications, insuring many years of reliable service.

Our largest standard units have more than 500 square feet of filtering area, and can reliably supply plants that treat from 1 to 25 million gallons per day.

Our horizontal multi-cell designs partition the unit to form individual filter cells. They can often be used as a cost-effective substitute to multiple vertical units.

- The **filters** are economically fabricated using optimum design parameters in accordance with ASME or BS standards.
- Slow and **rapid filter** rate is being implemented depending on the application.
- Filters are fully shop assembled and skid mounted.
- Filters operation can be automatic and manual.
- Horizontal filters are designed using capacity up to 400m3/hr.
- Air scouring is an option used depending on type of media and raw water and filter application.