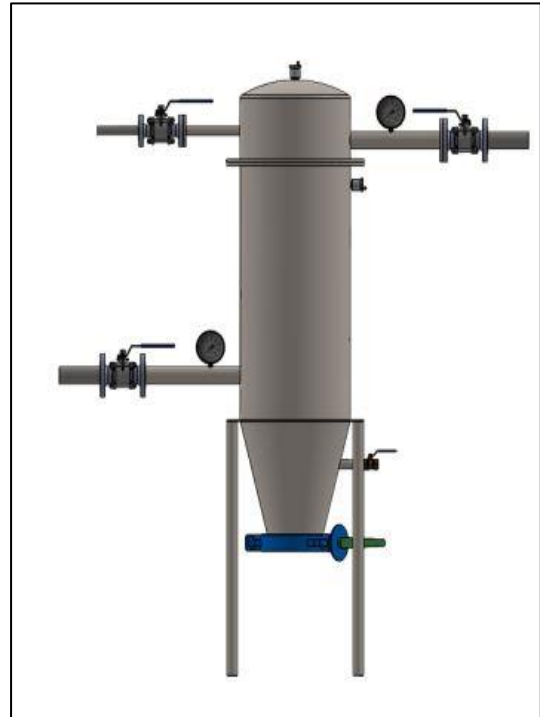
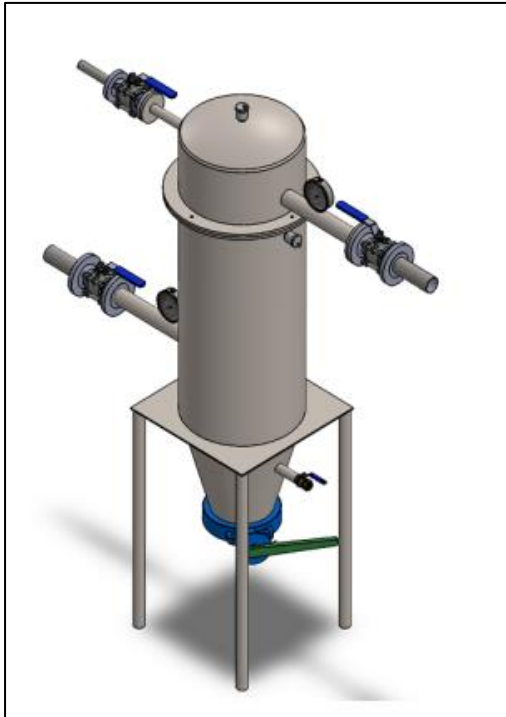




Specification Sheet
CATALYST FILTRATION
The next generation filter system



Catalyst and its importance:

A catalyst is a substance that speeds up a reaction without causing a chemical reaction.

Catalyst facilitates and accelerates chemical production processes.

Typical sizes range from 3-4 microns to 500 microns.

Catalysts are used in almost all industrial processes.

Existing methods for recovery of Catalyst:

Given below are different types of separation methods and their shortcomings-

Method 1

Using SS Sintered Filter Cartridges-

Because it is a depth filter cartridge, the catalyst is trapped in the thickness of the filter.

Deficiency –

The catalyst does not come out of the filter element easily because the media is asymmetrical.

Also, it's expensive.

Method 2

Using Filter press or Sparkler Filter Housing with PP cloth as filter media-

Catalyst accumulates on the PP cloth. Hi-Flow powder may be used if the catalyst is too fine. A Hi-Flow powder bed is prepared and the product solution is filtered over the catalyst. Cake formed on the filter media are removed at intervals.

Shortcomings –

1. It takes time.
2. Labour oriented.
3. A fine catalyst passes through the PP cloth.
4. The system is open and can be hazardous to your health.

Recovery of Catalyst:

CATALYST FILTER ELEMENT (SSF):

The filter element is constructed from a number of stacked nanofiber discs.

It is made up of an inner core with perforations that allow liquid product to pass through.

The other side is threaded, and one side is closed. The catalyst is supported at the margins of the filter element as a result of tangential filtration.

WORKING: -

The product enters the filter element from the outside.

The clean product exits the filter housing through the top.

On the outside of the filter element, the catalyst is deposited.

Filtration stops when the filter element is totally blocked, and the backwash process then begins.

BACKWASH: -

Backwashing can be done by flushing nitrogen or compressed air with a solvent or some water. The drain valve is opened for backwash, and both of the inlet/outlet valves are closed. Drain the entire catalyst with the product and return it to the reactor tank for the subsequent batch

PRO's OF OUR CATALYST FILTER: -

1. Since all of the catalyst is trapped on the surface of the filter element, Catalyst losses are kept to a minimum.
2. A single pass can yield a clean output.
3. There is no need for high flow powder to remove the catalyst.
4. The complete safety of humans is ensured by closed loop technology.
5. The entire system is automatable, requiring no human involvement.
6. Its lowest micron rating is 1-2 microns.
7. Because the base material is polypropylene, it can withstand practically any acid or alkali.
8. All parts in touch with the acid can be PTFE coated.