

*Ultra Precision Tools & Vessels Pvt., Ltd. is an ISO 9001 – 2000 company involved in Design and Manufacture of Liquid Filters and Pressure Vessels from past 20years. The product range includes Cartridge Filters, Mesh Strainers, Filtration Bags, Ultra filtration, Membrane Filtration in technical collaboration with various pioneering companies abroad along with Pressure Vessel Fabrication.*

### *Filtration Systems*

*We are involved in design and manufacture of filtration systems for Hydraulic and Lub. Oil Filtration, Sugar Cane juice filtration for Sugar Mills, Filtration Systems for General Engineering, Automobile Industries, Electro Plating, Paper Industries, Paint Shops, Food and Beverages, etc We are in the field for the removal of impurities in any fluid. Our filtration units are working successfully right from 0.2 microns to any size as required by the customer.*

*We stock and supply filtration Bags of Nylon, Polypropylene, Polyester of sizes varying from 1 to 100 microns. These Bags can be used in working temperatures up to 115C. The bags are supplied in various sizes as per the requirement of customers. The Bags may be preferred due to cost effectiveness, Easy Storage and very high dust holding capacity compared to Cartridge filters. Our Filtration Bags come with FDA (USA) (Food grade) certification.*

*We supply the filtration units for working pressures up to 400Bar. The Filtration cartridges and Bags are of Polypropylene, Polyester or Nylon and the strainers are SS304, SS304L, SS316 and SS316L. The Filter Vessels are fabricated from Carbon Steel, SS304L, SS316 and SS316L. Depending up on the customer requirements, our technical team will suggest the suitable material of construction for both Filter and the Vessel. We also supply Automatic and Manual Backwash Filter units and Skids for various applications like Sea Water, Amine Solution, weak acids, hard water, Ammonia filtration etc .*

*U P T V supply Bag Filters, Strainer and Cartridge Filters in many sizes to cater to different needs of the Industry. We supply Simplex, Duplex and Battery of Filtration Units as per the Customer Specifications*

### ***Simplex Filters:***



### ***Features:***

- *Easy removal Top Cover or Filter Elements without special tools*
- *Comes with either Flanged or Socket end connections*
- *Low Pressured Drop*
- *Adjustable height Legs*
- *Large area of filtration*
- *Dual Stage Filtration – Optional*
- *Available in Simplex, Duplex and Multiplex Models*
- *Carbon Steel / SS 304 / SS316 construction*

### ***Bag Filters***

*The Filter Bags are sandwiched in between two baskets made of perforated sheets or wire mesh with proper sealing. The Baskets are made out of SS304 as standard material of construction. Customer specific materials can be supplied.*

*The baskets are designed to with stand the differential pressures and hold the bags in place.*

*As shown in the figure, bags can be replaced with ease after its life.*

*The advantages of the Filter Bags are*

- 1. Very high dust holding capacity*
- 2. Low Pressure Drop*
- 3. Ease of Storage*
- 4. Very economical*
- 5. Large Area of Filtration*
- 6. Can withstand high temperatures (115 C)*
- 7. Can be used for acidic or corrosive liquid filtration*



8. Suitable for Sugar cane juice, edible oils and in other applications of food industry.
9. Our Bags are FDA (USA) (Food grade) certified
10. MOC of Polypropylene, Polyester and Nylon
11. Standard sizes of 8 – 30 & 4 – 12. Other sizes can be supplied on request
12. Micron rating from 1 to 100 microns
13. Available ex stock

**Filter Bags cannot be Backwashed**

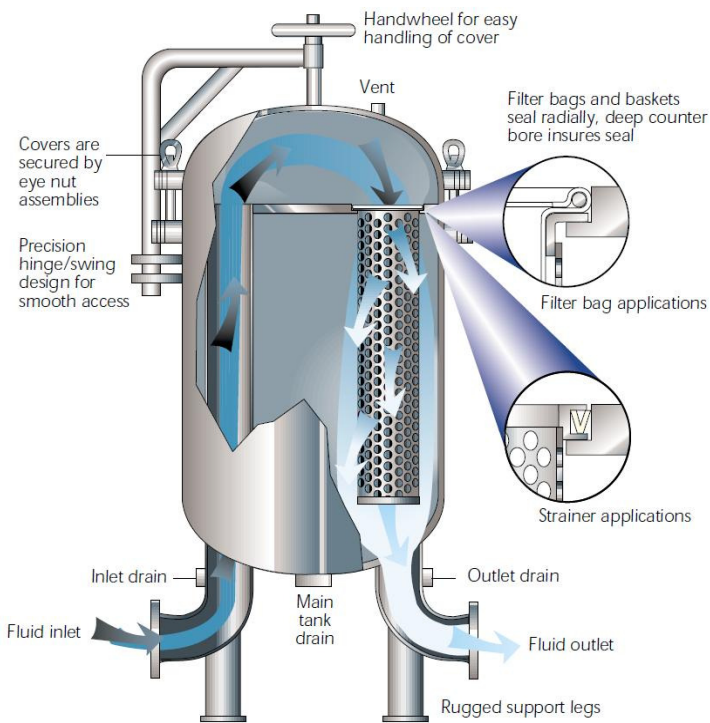


### **Metallic Strainers**

- a. Available in standard sizes of 4 – 12, 8 – 30 & 10 – 30
- b. Micron sizes from 10 to any size
- c. Back washable
- d. Can withstand very high temperatures
- e. High flow rate , low diff. Pressure
- f. Available in SS304, SS304L, SS 316, SS316L and any customer specific m o c.

### **Cartridge Filters**

1. High Filtration efficiency
2. Low pressure drop
3. Both metallic (SS304, SS304L, SS 316, SS316L ) and non metallic (Polypropylene, Polyester and Nylon) m o c
4. Pleated Cartridges for higher surface area and dirt holding



### ***Multi Basket Systems***

***When the flow rates are very high, a multi basket system is proposed.***

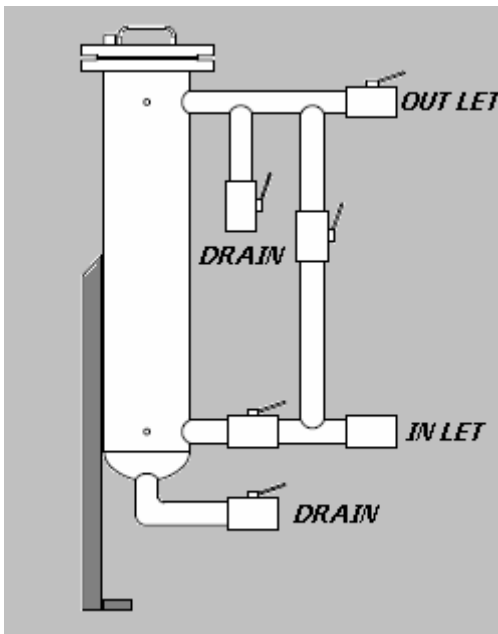
***Vessels are fabricated out of Stainless Steel / Carbon Steel. Suitable internal coating can be provided depending up on service conditions***

***As per our standards, the vessels are manufactured as per ASME Sec VIII Div I, Customer specific standards are used on request***



*Duplex Filters are recommended when uninterrupted flow is expected.*

*Any one of the Filters is always in line while the other is attended to for changing the clogged filter. Two filters are connected in parallel. The changeover can be either manual or automatic. The changeover is triggered by either pre set differential pressure value or timer controlled. A micro processor controller or a standard PLC is used for the operation. The Filtration units can be a single basket unit or Multi Basket unit depending up on the flow requirements.*



*Manual Back wash System is a cost effective solution where dirt load is excessive*

- *permanently piped*
- *Single Basket / Multi Basket systems*
- *Catering to any flow rates*
- *Available in CS / SS Models*
- *Strainers / Cartridges to suit various fluid properties*
- *Widely used in food processing, chemical and other process industries*



### *Skid Mounted Automatic Backwash Filter Assemblies*

*A set of filter vessels are connected in parallel. One vessel is retained as standby and one vessel is under backwash. A portion of the filtered liquid from the other filters is used to backwash the clogged filter. The sequence of operation is automatic and actuated by pre set differential pressure .The Skid is controlled through PLC. Duo flow filter bags are used to increase the filtration area for the same external dimensions of the vessels. Separate backwash fluid can also be provided.*

### ***Trolley mounted filtration unit***

- ***Versatile Portable Filter Cart***
- ***Easily movable between machines***
- ***Used for pre filtering and transferring the liquids***
- ***Most effective in controlling the particulate problems before they cause damage to critical machinery***
- ***High flow industrial quality centrifugal pump***
- ***Can be used for lub. Oil, hydraulic oil, any other fluid***
- ***High dirt holding capacity***



### ***Solid / Liquid Separator.***

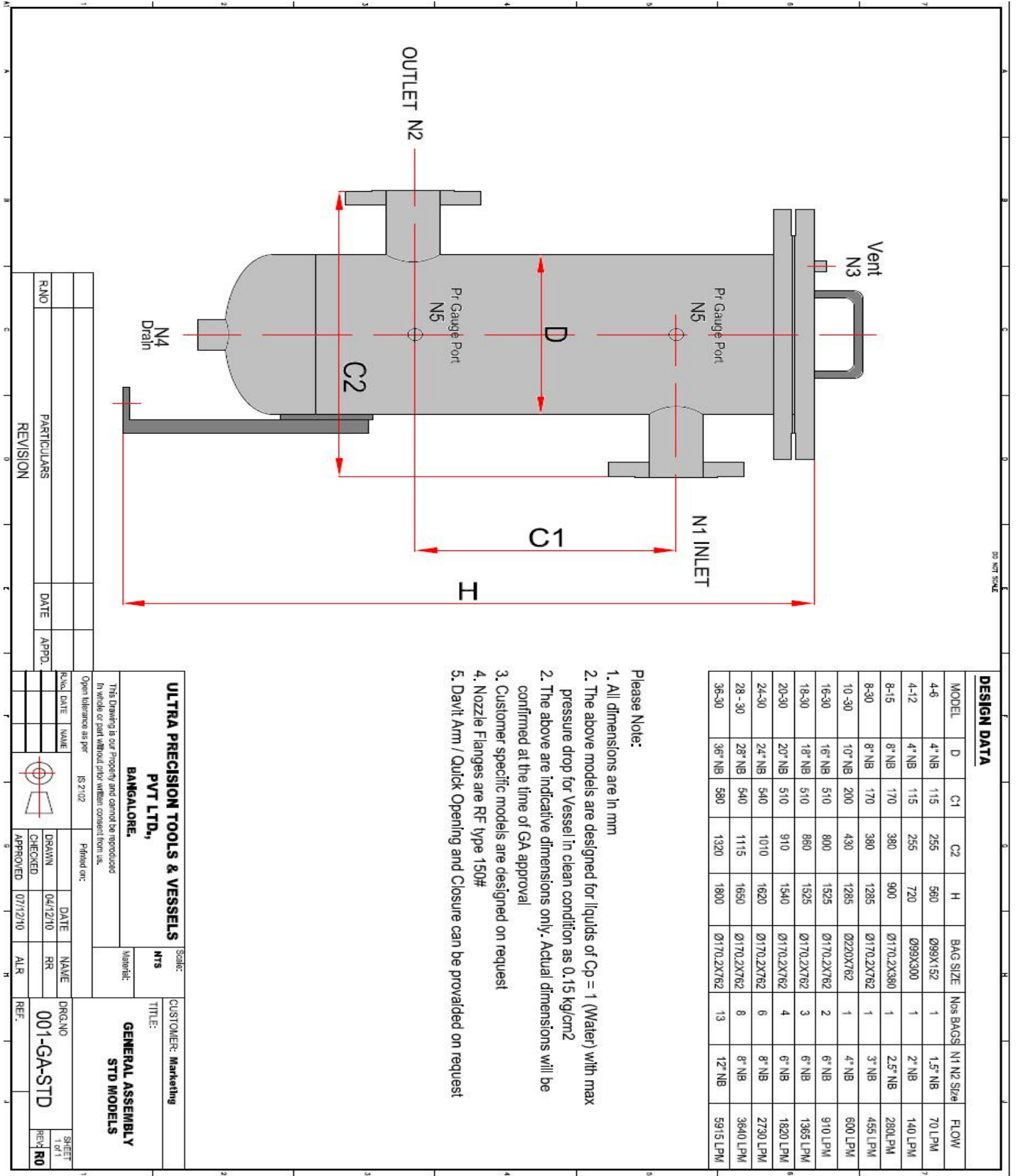
- ***Centrifugal action separates grit, sand, metal chips from the liquid***
- ***Perfect to use as pre filter to fine filtration system***
- ***No maintenance***
- ***No filter media***
- ***For flows from 25LPM and retention rating to 50 microns***
- ***Carbon Steel / SS Housings***

### ***Typical Applications:***

***Sea Water pre filtration, Food Processing, Pulp and Paper mills, Chip removal from cutting fluids, Steel mills, Mining, Power Plants, Chemical Processing, Car and Vehicle wash systems etc.***



Some of our Standard Models





## *Application Work Sheet*

<i>Company:</i>		<i>Date:</i>	
<i>Contact Person:</i>		<i>Phone:</i>	

### *Technical Data*

<i>Liquid</i>	
<i>Viscosity Cp</i>	
<i>Flow Rate LPM</i>	
<i>Design Pressure</i>	
<i>Design Temperature</i>	
<i>%age Contaminants PPM</i>	
<i>Pipe Size</i>	
<i>Flanged / NPT</i>	
<i>Vessel MOC</i>	
<i>Bag/Strainer/Cartridge</i>	
<i>Micron Rating</i>	
<i>MOC Filter Element</i>	
<i>Simplex/Duplex/Multiplex</i>	
<i>Notes</i>	

*Please contact us for our application engineer to help you.*

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