

# D.E. Filter VICTORIA: Configuration



## General View

Pls. Evaluate the monobloc configuration:  
The unit for Beer filtration is supplied on fixed base or wheels.

The electric motor for plate stack rotation is placed above the bell. This means that:  
It is very easy to take it out during maintenance;  
In that position doesn't rust because of water stagnation (that happens with filters with low level motor that cannot be done in stainless steel),  
Rotary seals (top and bottom) are made in high thermic and mechanical resistance construction and there is no parts in carbon (as in the competitors' seals).



## D.E. Filter VICTORIA: Configuration



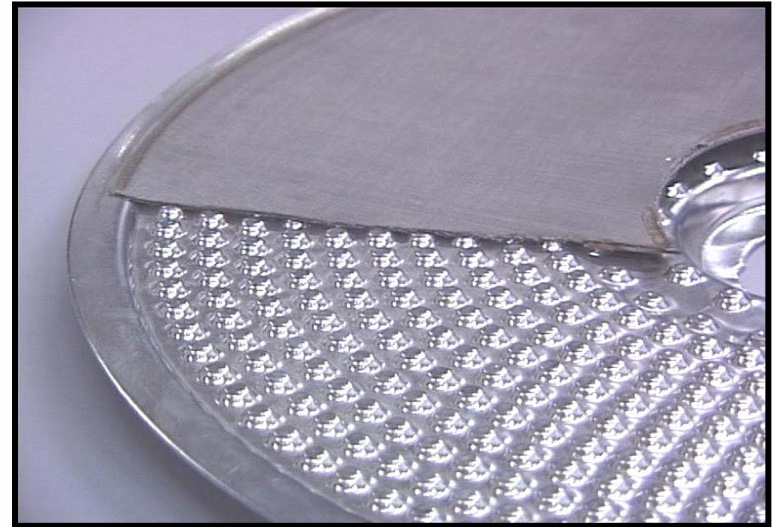
- Competitor's filters are provided only with the lower group seal flushing. Both the upper and lower seals are flushed and there is also a particular device to increase the cooling efficiency reducing the water consumption.
- The main shaft has a very large diameter so also with high flowrates (during precoat) no turbulence or cavitation is created, so precoat and cake grow very homogeneously.
- The flushing system is timerized to reduce at min. the water.
- The Mechanical seals are easily dismountable without bell' removing



## D.E. Filter VICTORIA: Filtering Plates



- Special plate profile (patented) made only by a dimpled plate and a welded screen. It guarantees:
- Higher rigidity of the plate (it doesn't bend)
- The smooth flat base of the dimples avoids screens breakage so it rests homogeneously stretched over the plate,
- The flat support base avoids any d.e. bleeding because precoat and cake are very uniform,
- The round base of dimples avoids any d.e. microbiologic sediments between the screens and the same plates (high sanitary system), specially viscous liquids as syrups
- The height of nipples favours the solids removal with a very limited quantity of water,





## D.E. Filter VICTORIA: Filtering Plates



- Screens are welded to the plates so no clamp is required and consequently no leakage (d.e. or yeasts) will take place.
- No back flush (counter-current washing) is required, so screens do not blow up and they do not risk to be broken,
- Competitors filters are very difficult to be re-screened. It is necessary to have special tools, at least two skill technicians and a lot of silicon (that is not sanitary). Besides the screens are very expensive. The jointed screen – plate Padovan system is manufactured as it is and it is convenient price-wise.



## D.E. Filter VICTORIA: D.E. Dosing Pump



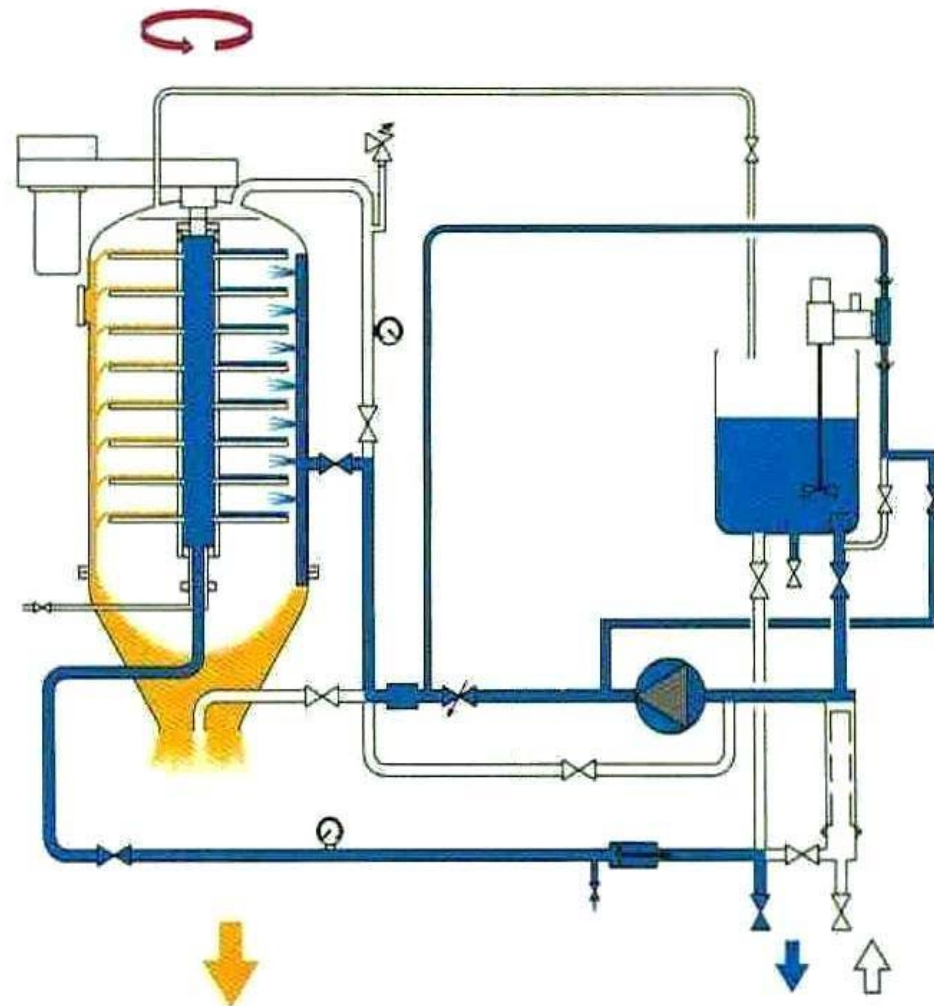
- Head in stainless steel to withstand very high process temperatures,
- Precise and accurate dosing,
- Wide passages to utilize all the different grades of D.E.,
- Strong check valves,
- Patented by Padovan



## D.E. Filter VICTORIA: Washing Device



- Because of the fact that back flush is not necessary the water consumption during washing is reduced to the minimum. (50 – 70 l/m<sup>3</sup>)
- The special geometry of the holes in the washing pipe permits the self rotation of the plates and their accurate and complete washing





## D.E. Filter VICTORIA: Fully Automatic



- PLC receives from the plant all the necessary data for the process, making controls. It sets all automatism, which are on the plant, improving the management.
- PLC digitally controls all the servo control valves and motor start-up. Analogically it controls the two inverters and modulating valve and so output, buffer tank levels, turbidity, pressure, and temperature.
- 6 coloured curves recorder for digital and analogic visualisation of:
  - Output
  - Different pressure between inlet and outlet
  - Temperature
  - Turbidity
  - Exit pressure



# D.E. Filter VICTORIA: Fully Automatic



The various operating are automatically controlled by PLC Siemens, with automatic phases and messages which appear on a crystal-liquid display.:

- Pressurisation
- Filling
- Precoating
- Beer feeding with kieselguhr dosing
- Filtration
- Recycling
- Beer discharge
- Cake discharge
- Filter rinsing
- Filter washing
- Filter sterilization

