



Especialistas en mecánica de fluidos

## Filterbelt press



### INTRODUCTION:

The **belt filter** allows the continuous dewatering of sludge, using a reduced energy consumption and a significantly higher degree of automation than that used in conventional filter presses. The production of the filter is very high, so the time required for pre-dewatering is reduced to a minimum.

The **belt filter** is used for digested organic sludge, paper processing, sludge from cutting and polishing, aggregate washing, etc.

During the dewatering process, the sludge is inoculated with a polymer in the sludge impulsion line and the formation of flocs begins.

The flocculated sludge is injected into a rotating pre-dewatering drum covered with a filter screen with the appropriate micronutrient. There, a natural drainage of the water phase released by flocculation occurs.

After dewatering, the sludge goes to a second stage where it must be pressed to extract a sufficient amount of water. To do this, it is loaded between two filter cloths and gradually pressed by means of variable size pressure rollers. The result is a dry cake of small thickness that is extracted continuously by means of a scratching system.

### DESCRIPTION:

Our filter consists of the following components:

- Mixer-predesydrator drum made of AISI-304 stainless steel or AISI-316 stainless steel, with polyester fabric.
- Support structure.
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- Three polydur skids in the gravity zone, six rollers in the guide zone and five or seven rollers in the pressure zone, depending on the configuration; two rollers tensioning the fabric, two drive rollers and two continuous fabric centering rollers.
- Continuous fabric centering device by means of two probes in contact with the fabric which, at any deflection of the fabric, drive two positioning cylinders of the centering drums through a three-way valve in the air circuit.
- Automatic fabric tensioning system by means of a pneumatic system.
- Pre-drier drive system with motor reducer.
- Plastic scrapers for separating and detaching cakes.
- Optionally, all the auxiliary elements of the process can be supplied: compressor, fabric washing pump, sludge feed pump, polymer dosing system, electrical panel and connection pipes, etc.

The **FM band filter** has a built-in pre-drier drum. It does not require a pre-mixing equipment device, which allows the filter cloth to be shorter and thus saves operating and maintenance costs.

Our **belt filter** is of open and horizontal execution, having all the supports of the clamping rollers, centering and drive rollers in view and accessible, simplifying and facilitating the maintenance work.

The washing nozzles of the fabrics used incorporate a self-cleaning device, by depressurizing the washing tube and then pressurizing it.

### **GENERAL DIMENSIONS:**

