

## PROCESS FILTRATION / SEPARATION

# Pressure Leaf for Food & Beverage Applications

Industry: Food & Beverage

Goals: Filtration to produce a product that will meet stringent clarity and purity standards

### Project Overview:

Particulate that is created during washing, cooking, frying, processing or fermentation must be removed to produce a product that is sparkling clear. Pressure leaf filters utilizing precoat and/or body feed are a very cost effective, flexible and well recognized technology for performing this function. The benefits of this technology are often realized in longer shelf life, better product clarity, less product rejection and better system ability to handle process upset conditions. These systems are readily available in sanitary designs allowing for chemical or in-situ steam sanitization cycles. Typical industries that use this type of filtration are; Beer, Wine and Spirits, Fruit Juice, Sugar and Edible oils.

### Critical Issues:

Able to remove, at very fine levels, particulate such as yeast and carbon from sugar and frying waste, dirt & grit, haze and silica gel.

### Vision for Solution:

- Care given to pH, temperature, and sanitization.
- Precoat to ensure sub-micron filtration.
- Bodyfeed for extended cycle requirements.

### Typical Project Scope:

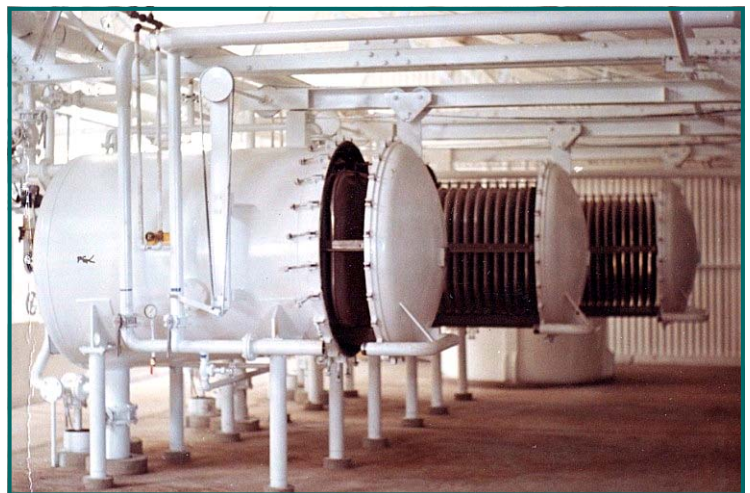
Complete system design  
Fabrication / integration  
Commissioning & start-up  
Detailed design engineering

### General Equipment Description:

Equalization / storage  
CIP (Clean-in-place) systems  
PLC controls  
Precoat and/or bodyfeed system  
Pressure leaf system

### Special Features:

- No changing or handling of bags or cartridge filters.
- Wide range of media and filtration options.
- Choice of discharge methods - Dry cake, sludge.
- Complete containment of filtration process containing vapors and minimizing operator exposure.



### Technical Data:

**Application** - Process flow filtration from storage tanks, fermentation vats, frying tanks or other processing of food and beverage products prior to bottling, canning or using as an additive or as a cooking medium.

**Equipment** - Pressure leaf filter, either vertical or horizontal tank configuration; dry cake or wet sludge discharge; manual or automated.

**Materials of Construction** - Stainless or carbon steel of various alloys as desired. Available in sanitary designs with provisions for in-situ cleaning and/or sterilization.

### Filtration Data:

**Flow Rate** ----- 0.2 GPM/sq.ft. to 1.0 GPM/sq.ft.

**Suspended Solids** ----- Sand & dirt, yeast, carbon, DE, etc.

**Cycle Length** ----- 8 hours to 1 week.

**Precoat / Bodyfeed** ----- DE, perlite, cellulose, carbon and others.