Effective beer filtration with Eaton filtration solutions

Eaton is a leading supplier of complete depth filtration solutions and develops, manufactures and provides high-quality depth filtration media for food, beverage, fine chemical and pharmaceutical applications.

In addition to a wide range of depth filter sheets, stacked disc cartridges, filter cartridges, filter aids and stabilizers, the product range also includes filtration systems for breweries in various designs and sizes.

Classic systems:
- BECO COMPACT PLATETM multi-sheet plate and frame filters

Enclosed systems:
- BECO INTEGRA CARTRIDGTM cartridge housings
- BECO INTEGRA DISCTM stacked disc cartridge housings
- BECO INTEGRA LAPP® laboratory filters

Automatic systems:
- StepFlow® filtration systems

Eaton also provides ideal filtration solutions for craft breweries. These include:
- BECOPAD® depth filter sheets and systems
- BECODISC® stacked disc cartridges and housings
- BECO® filter cartridges and housings
- Silica sol
- Filter bags and bag housings

For more information, please email us at filtration@eaton.com or visit www.eaton.com/filtration

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Most beers undergo a filtration process after storage. In this process, protein-based and tannin-based compounds, hop resins, and other materials are removed to ensure a clean, clear beverage. This step is crucial for maintaining the beer’s clarity and flavor.

**Processes in Beer Production**

- **CROSS-FLOW FILTRATION**
  - Sheet filtration
  - Depth filter cartridges
  - Membrane filtration

- **Centrifugation**
  - Removes suspended solids
  - Suitable for high volumes

- **Diatomaceous earth filtration**
  - Used for coarse filtration
  - High dirt-holding capacity

- **Alternative stabilization**
  - Removes fine haze and yeasts
  - Enhances beer’s shelf life

**Filtration Media in the Classic Beer Filtration Process**

1. **Sheet filtration**
   - Recommended for: yeast reduction, particle reduction
   - Advantages: high mechanical, thermal and chemical stability
   - Disadvantages: high-cost

2. **Depth filter cartridges**
   - Recommended for: yeast reduction, particle reduction
   - Advantages: high microbial retention, high bursting strength
   - Disadvantages: high cost

3. **Membrane filtration**
   - Recommended for: yeast reduction, particle reduction
   - Advantages: high purity, renewable
   - Disadvantages: high cost

**Recommended Product Advantages**

- **BECO PROTECT FS**
  - Depth filter cartridges (0.3 µm or 0.5 µm)
  - High mechanical, thermal and chemical stability
  - High microbial retention

- **BECO PROTECT PP Pure**
  - Membrane filter cartridges
  - Low burst pressure
  - High filter capacity

- **BECO PROTECT FS FineStream depth filter cartridge**
  - Recommended for: yeast reduction, particle reduction
  - Advantages: high bursting strength, high purity

**Recommended Filtration Aids**

- **PVPP**
  - Add to the storage tank
  - Improves the beer’s shelf life

- **BECOGUR 3500**
  - High mechanical, thermal and chemical stability
  - High compatibility with different storage conditions

**Recommended Membrane Filter Cartridges**

- **BECO MEMBRAN PS Beer™**
  - Recommended for: yeast reduction, particle reduction
  - Advantages: high mechanical, thermal and chemical stability

**Recommended Filtration Processes**

- **Centrifugation**
  - Recommended for: yeast reduction, particle reduction
  - Advantages: high mechanical, thermal and chemical stability

- **Diatomaceous earth filtration**
  - Recommended for: yeast reduction, particle reduction
  - Advantages: high dirt-holding capacity, biodegradable

- **Flash pasteurization (HTST)**
  - Recommended for: yeast reduction, particle reduction
  - Advantages: high mechanical, thermal and chemical stability

**Filtration Media for Final Purification**

- **Cartridge filtration**
  - Recommended for: yeast reduction, particle reduction
  - Advantages: high mechanical, thermal and chemical stability

**Recommended Filtration Aids for Final Purification**

- **BECOLITE®**
  - Recommended for: yeast reduction, particle reduction
  - Advantages: high mechanical, thermal and chemical stability

**Recommended Membrane Filter Cartridges for Final Purification**

- **BECO MEMBRAN PS Beer™**
  - Recommended for: yeast reduction, particle reduction
  - Advantages: high mechanical, thermal and chemical stability

**Product Availability**

- **BECO FILTERAID**
  - Product availability may vary in different countries.

**Additional Information**

- **CFI with technical article: On hops, filters and precious oils, Dr. Ilona Schneider**

- **Notes:**
  - For a full list of technical aids and processes, refer to the technical article provided.