

PROCESS FILTRATION / SEPARATION

Tubular Backwash Filters for RO Protection

Industry: Pure water for semiconductor, food & beverage and pharmaceutical manufacturing

Goals: Replace sand, bag and cartridge type filters to save cost and minimize maintenance

Project Overview:

RO (Reverse Osmosis) has grown to be the dominant method of providing high purity water for a host of industry applications. Keeping solids >5 micron from impacting RO membranes is critical to maintaining the proper operation and avoiding expensive fouling problems. To accomplish this removal, high efficiency filtration is required and tubular backwash filters offer an excellent cost effective alternative to other technologies. Tubular backwash filters save space as well as water when compared to sand filters. The costs to operate tubular backwash filters is by far less expensive than the costs of maintaining and changing bag and cartridge filters.

Critical Issues:

Provide excellent particulate removal of solids >5 micron.

Vision for Solution:

- Media is carefully selected to optimize protection.
- System sizing is based on flowrate and particle load.

Typical Project Scope:

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

General Equipment Description:

Complete Tubular Backwash Systems
Automation options to meet customer needs
Complete RO systems

Special Features:

- No changing of bags or cartridge filters thus saving a tremendous amount of cost over time.
- Wide range of media and filtration options.
- Saves money on backwash consumption compared to sand filters.
- Available in sanitary designs.



Technical Data:

Application - Post softening and chlorine removal, provides protection for RO membranes.

Equipment - Systems available in 3", 4" and 6" diameter units that are mounted on manifolds to form systems. Space and cost saving designs are available.

Materials of Construction - 316L Stainless Steel

Filtration Data:

Flow Rate ----- Low flows to several thousand GPM

Suspended Solids ----- Range from 5 micron and up (Tighter media available upon request)

Backwash Style ----- Manual or automatic backwash using internal (filtered water) or external backwash water source

Element Materials ----- Polypropylene, Nylon, Polyester, Stainless Steel Mesh or Wedgewire, TEFLON® and Cotton