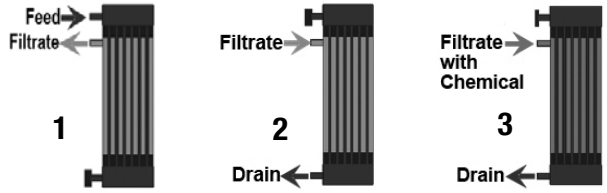
Operating Phases



1) Filtration

- Feed flow enters the membrane module and flows inside bores on each fiber; low positive pressure enables fluid to permeate fibers (excluding particles down to 0.02 micron)
- Filtrate is taken from the side port and directed to final discharge
- Flow direction alternates between down-flow and up-flow to create an even solids layer the entire length of fibers

2) Backwash

- Filtrate flows in reverse direction through the membrane fibers, from outside each fiber to inner bores, dislodging solids collected on the membrane surface
- Solids are flushed out of the module to the drain
- Flow direction alternates between down-flow and up-flow to evenly remove solids from the entire length of fibers

3) Chemically Enhanced Backwash (CEB)

- During backwash, a chemical is added to the filtrate flowing into the module to dissolve any contaminants adhered to the membrane surface

  - Membranes are compatible with a variety of chemicals

- Fibers are soaked in the chemical for 10–20 minutes to promote a chemical reaction
- Contaminants are flushed out of the module to the drain
- Flow direction alternates between down-flow and up-flow to dissolve contaminants the entire length of fibers
- Cleaning is automatic; manual initiation is optional
- Cleanings do not require membrane removal