

# MICROTRAINER

## VERY FINE MESH SCREEN



### PURPOSE

- ◆ Mesh apertures from 20 to 220 microns
- ◆ Microstraining is a very fine mesh screening system used for the following applications
- ◆ As preliminary treatment of drinking water drawn from lakes, reservoirs and rivers
- ◆ A complete treatment of water for industrial purposes
- ◆ Tertiary treatment of sewage water
- ◆ A means of recovering valuable fine particles or plankton from effluent water

### DESCRIPTION

- ◆ The BEAUDREY microstrainer is a horizontal, motor-driven drum screen covered in very fine mesh. It rotates between two wall-plates. The water enters the drum, flows through the mesh on which the particles are arrested. The drum rotates and the particle-laden mesh travels upwards out of the water. On reaching the top, it is back-washed by 1 or 2 low-pressure spray pipes with fantail jet nozzles.
- ◆ The particles and wash fall into an internal collection trough and exit axially for disposal. The sliding seal between the rotation drum and the end plates is specially designed to offer no gap larger than the mesh aperture.
- ◆ It operates best at a constant level of head-loss (approximately 100 mm). For this to happen, the drum's rotation velocity is constantly adjusted.

### ADVANTAGES

- ◆ Very compact plant
- ◆ Very low head-loss
- ◆ Use no chemicals
- ◆ Long-lasting mesh panels due to the bonded reinforcements
- ◆ Virtually no maintenance required
- ◆ Low-energy requirement (less than 15 kW per machine)
- ◆ Well-proven and reliable
- ◆ Stable and predictable efficiency
- ◆ Delivered fully-assembled, ready for installation

## SIZING

- ◆ Sizing is based on the flow rate and the clogging capacity of the water (as measured by the BEAUDREY PC\*\* for instance). The smaller the mesh aperture, the larger the machine required
- ◆ For the same flow rate, a microstrainer sized for a 20 micron aperture must be twice wider than a microstrainer required for a 35 micron mesh aperture
- ◆ BEAUDREY microstrainers are generally 2.8 m in diameter and up to 6 m wide
  
- ◆ Available standard mesh apertures are:
  - ◇ Reps or Hollander's Weave: 20, 35, 55 or 90 microns
  - ◇ Plain Weave: 112, 170 or 270 microns
- ◆ The quality of the water and the efficiency of a microstrainer can be easily assessed using a BEAUDREY Colmatometer.
- ◆ Typical values of the BEAUDREY PC (*Pouvoir Colmatant*, or dogging capacity) are:
  - ◇ Lakes and reservoirs with visible growth: 1 to 6
  - ◇ Clear mountain lakes: 0.1 to 0.7
  - ◇ Rivers: 0.5 to 15
  - ◇ Rivers during floods: 100 or more
  - ◇ Sewage water entering tertiary treatment : 3 to 6



## NECESSARY ANCILLARIES

- ◆ Spray-water supply at 1 bar
- ◆ Differential level monitoring system
- ◆ PLC control cabinet
- ◆ Pit isolation penstocks

## MATERIALS

- ◆ BEAUDREY microstrainers are generally entirely built from austenitic stainless steel (AISI 304L and AISI 316L)
- ◆ For seawater plants, all AISI 316L construction (or better) can be supplied



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