

TAD150



WATER SOFTENER AND DOSING PUMP



Experimental capabilities

- Identification of the components of a water treatment installation by softener
- Parametrizing of a softener (regeneration cycle, treated water hardness...)
- Role of the different components
- Use of different methods of water analysis (strips and colorimetric analysis)
- Programmation and study of a dosing pump

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Illustrations non contractuelles / Illustrations not contractual

version : FT-TAD150-STD-B

Operating principle

The bench TAD 150 is made to study a water softener and injection by a dosing pump.

The incoming water (hard water) is first filtered then softened (volumetric resin softener with regeneration process) and finally treated by injection with a dosing pump. The bench is equipped with all instrumentation needed to study the softener (inlet flowmeter, hard water meter, pressure gauge, bypass flowmeter, softened water meter...)

The bench is designed like an industrial system with a bypass circuit and all valves required for operation and sampling

The water network is made of copper piping. Sample valves are set up at different points of the circuit.

The robust design of this device makes it suitable for use in schools.

The equipment is set up on an Anodized aluminium frame on casters wheels. This gives it great strength and a flexibility of integration into your premises. The manufacture of this equipment complies with the European standard for machinery manufacturing.

Illustrations

Technical details

Composition of the bench:

1. A softener
 - Resin bed volume: 16l
 - Volumetric electronic control with daily programmation
 - Salt bin for regeneration with bottom grate and water level regulator
2. A water supply circuit of the softener with:
 - An inlet stop valve
 - A float flowmeter with the following scale 100-1000L/h
 - A pressure gauge of the network scale: 0-10bars
 - An adjustable water pressure reducer
 - A pressure manometer after reducer with the scale: 0-6bars
 - A volumetric meter of hard water
 - An intermediate stop valve
 - A 25µm filter cartridge
 - A sampling valve
3. A bypass line with stop valve ¼ turn
4. A setting line of the residual hardness including:
 - A membrane water flow rate adjustment valve
 - A flowmeter scale : 15-150L/h

5. A soft water network with:

- A sampling valve
- A volumetric water meter for the soft water
- A water flow rate adjustment valve

6. A power supply box with:

- A GFCI
- An emergency stop button
- An electrical energy meter
- Two electrical plugs

7. A dosing unit with dosing pump and its retention tank

- The pump is controlled by a meter with reed contact
- Adjustment of the piston stroke
- Adjustment of the pulsation frequency

8. The bench comes with the following accessories :

- Two bags of salt for the regeneration, 25kg each
- A set of connecting hose
- A water testing kit including a toolkit with colorimetric analysis kit, a box of hardness test strips and pH paper roll.

Services required

Documentation

- Electrical supply : 230 Vac – 50 Hz – 6 A
- Electrical network : 1 live(s) + Neutral + Earth.
- Water supply : 15 L/min – 3 bars
- Dimensions: (LxWxH mm): 1650 x 670 x 1600
- weight (Kg): 90

- User's manual
- Pedagogical manual
- Technical documentation of the components
- Lab exercises
- Wiring and fluidic diagrams
- Certificate of conformity CE

Note : if the equipment installation is operated by our staff, all supplies and exhaust connections required must stand at less than 2m from the machine