Dosing Pump

Metering pumps for chemical dosing in water and wastewater plants

Overview

A dosing pump meters a small, exact amount of chemical into a water line. It keeps antiscalant, chlorine, acid, alkali, coagulant and polymer at the right level, so the plant runs safely and you do not waste chemicals.

Arukal supplies solenoid and motor-driven diaphragm dosing pumps with tanks, mixers, injection quills and calibration columns. We help you size the pump for the dose and the line pressure, and set it up with the plant.

1 – 1,000 LPH	up to 10 bar	Diaphragm metering	±2 % typical
Flow range	Max pressure	Type	Accuracy

Key features

Accurate dosing Adjustable stroke length and speed for a steady, repeatable dose.	**Many sizes** From laboratory pumps to plant duty, up to about 1,000 LPH.
Chemical resistant PVDF, PP and PTFE wetted parts for acids, alkalis and oxidisers.	**Complete set** Tank, mixer, quill, foot valve and calibration column supplied together.
Flow-proportional Pulse or 4 – 20 mA input to dose in step with the water flow.	**Easy upkeep** Simple diaphragm and valve replacement on site.

Applications

RO antiscalant dosing • Boiler and cooling chemicals • Chlorine and hypochlorite dosing • pH correction • Coagulant and polymer dosing • ETP and STP chemicals

How it works

1. Chemical is drawn in	2. Diaphragm pushes	3. Injected into the line	4. Dose is set
The diaphragm moves back and the suction check valve draws chemical from the tank.	The diaphragm moves forward, closes the suction valve and pushes chemical out.	The discharge check valve opens and the chemical enters the water line at the injection point.	Stroke length and stroke speed set the dose. A signal can change it with the flow.

Care and handling

Install. Mount the pump below the chemical level where possible, with a foot valve and a pressure relief valve.
Prime. Prime with water first, then chemical, and check for air in the suction line.
Calibrate. Measure the real output with the calibration column and adjust the stroke.

Typical values. Values are typical for the product family and given for guidance. Exact figures depend on the make and model supplied; ask us for the data sheet of the specific model.

Pump (typical)

Type	Diaphragm metering pump (solenoid or motor driven)
Flow range	1 – 1,000 LPH (model dependent)
Maximum pressure	up to 10 bar (higher on request)
Accuracy	±2 % of set flow (typical)
Turndown ratio	10:1 to 100:1
Power	230 V single phase, 50 Hz (typical)
Control	Manual, pulse input or 4 – 20 mA

Materials

Pump head	PP, PVC or PVDF
Diaphragm	PTFE-faced
Valve balls and seats	Ceramic, SS 316 or PTFE
Seals	Viton / EPDM

Dosing set

Chemical tank	50 to 1,000 L PE tank with lid
Mixer	Optional, motor-driven
Accessories	Foot valve, injection quill, calibration column, pressure relief valve

Typical pump sizes

Size	Flow	Pressure	Typical use
Small	1 – 10 LPH	up to 10 bar	Antiscalant, small RO, lab
Medium	10 – 100 LPH	up to 7 bar	Boiler, cooling, pH control
Large	100 – 400 LPH	up to 5 bar	Effluent and sewage chemicals
Extra large	400 – 1,000 LPH	up to 3 bar	Coagulant and polymer dosing

Pressure falls as flow rises on motor-driven models. Final selection depends on dose and line pressure.

To receive a recommendation, send us:

- Chemical to be dosed and its strength
- Dose rate (mg/L) and water flow, or the flow needed in LPH
- Line pressure at the injection point
- Power supply and control signal available