

# BT-BTB MA/AD

The BT-BTB MA/AD range of pumps is a proven PTFE diaphragm type Solenoid Metering Pump that distinguishes itself with having a wide range of control options. Since its launch the BT-BTB pump range has given proven reliability and quality. It is the ideal solution for many chemical dosing applications where moderate flow rate BTB or high flow rate (BT) are required with counter pressures up to 20 Bar (290 PSI).

## Key Features:

Either wall (BT) or foot mount (BTB) installations options available.

**BTB** - pump body construction of Anti-acids mica-filled reinforced polypropylene.

**BT** - pump body pump housing is constructed of cast Aluminium, protected by double coats of Epoxy paint.

Excellent water resistant for tough applications. Pump protection: IP65.

Liquid low level option available to prevent loss of prime.

Flashing led showing pump's stroke frequency.

Manual air bleed polypropylene head for safe & easy priming with durable leak-free bleed valve assembly.

Diaphragms are of superior construction, robust PTFE machined part not bonded composite layers, for optimum flexibility and long durability.

A wide variety of chemicals can be pumped due to different liquid end materials include glass-filled polypropylene (GFPPL), PVC, Polyvinylidene Fluoride (PVDF), PTFE, Plexiglas and 316SS. Valves and sealing in FPM (Viton), EPDM (Dutral), Nitril, Silicone, ceramic and alloys.

Immediate installation and start-up, included as standard accessories with all models are an injection/back pressure valve assembly and a foot valve/strainer assembly, including discharge, suction and bleeding tubing.

Safe and easy priming and valve maintenance, included as a standard accessory is a bleed valve assembly, including return tubing (available only on those models with manual air bleed head).

Control panel protection assured by an adhesive polyester film, weather-proof and resisting UV light.

Silent version available upon request.

The products are manufactured according CE regulation.

Standard power supply (fluctuations not to exceed  $\pm 10\%$ ): 230-240 V a.c. 50-60 Hz single phase.

Optional power supply (fluctuations not to exceed  $\pm 10\%$ ): 110 V a.c. 50-60 Hz single phase. 48V a.c, 24V a.c/d.c., 12V d.c.

Overvoltage cat. II. Environmental Conditions: IP65 protection, altitude up to 2000m, ambient temperature 5°C to 40°C, maximum relative humidity 80% for temperatures up to 31°C decreasing linearly to 50% relative humidity at 40°C. Pollution degree 2



## Characteristics

The BT-BTB MA/AD metering pumps are activated by a PTFE diaphragm mounted on a piston of an electromagnet.

When the piston of the electromagnet is attracted, a pressure is produced in the pump body with an expulsion of liquid from the discharge valve. After each pump pulse is finished a spring brings the piston back to the initial position, with a recall of liquid through the suction valve.

The operation is simple the pump does not need lubrication, therefore maintenance is reduced almost to zero.

BT-BTB MA/AD metering pumps are analogical dosing pumps, manual flow rate adjustment from 0÷20% - 0÷100% thanks to a double regulating scale.

100% corresponds to the maximum stroke frequency, i.e. 120 strokes/min (180 strokes/min for high flow rate). Stroking rate gives very high rate of reproducible metering accuracy. If small flows are required activating the 0-20% turndown ratio it will be very easy an accurate flow rate tuning between 0 and 20% of the pump frequency stroking.

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#### **PUMP CONTROLS**

Power LED "green"

Pulse LED "red"

Level alarm LED "yellow" (only on version with level alarm)

Adjustment knob of injections/min numbers (0÷100% max flow).

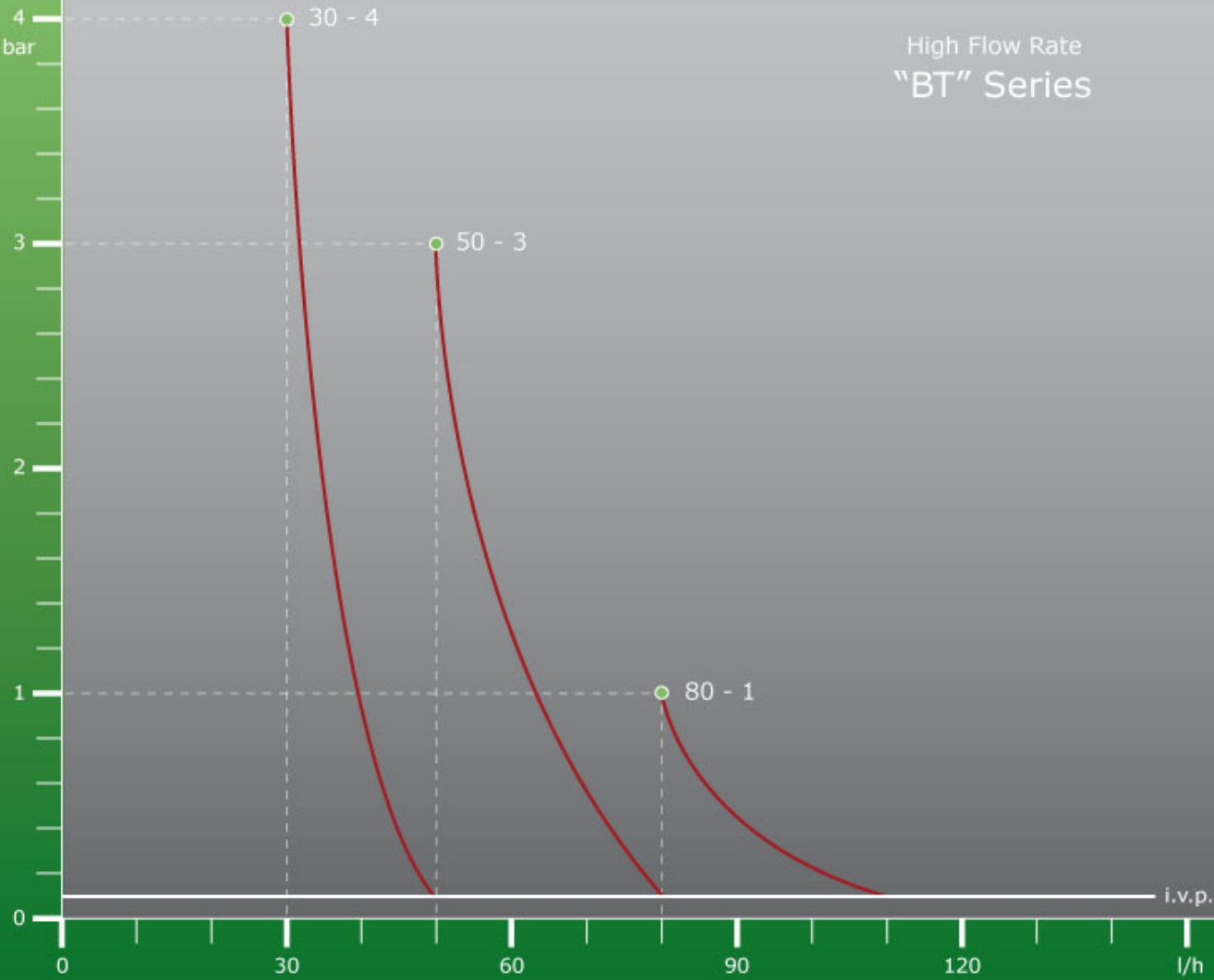
Pump flow rate can be controlled manually by setting the pump pulse rate by means of the knob.

The flow rate of the pump will depend on the counter pressure in the discharge line (please check flow vs. pressure diaphragm) and on the physical properties of the chemical to dose. As general rule higher will be the pump flow rate lower is the counter pressure the pump will face.

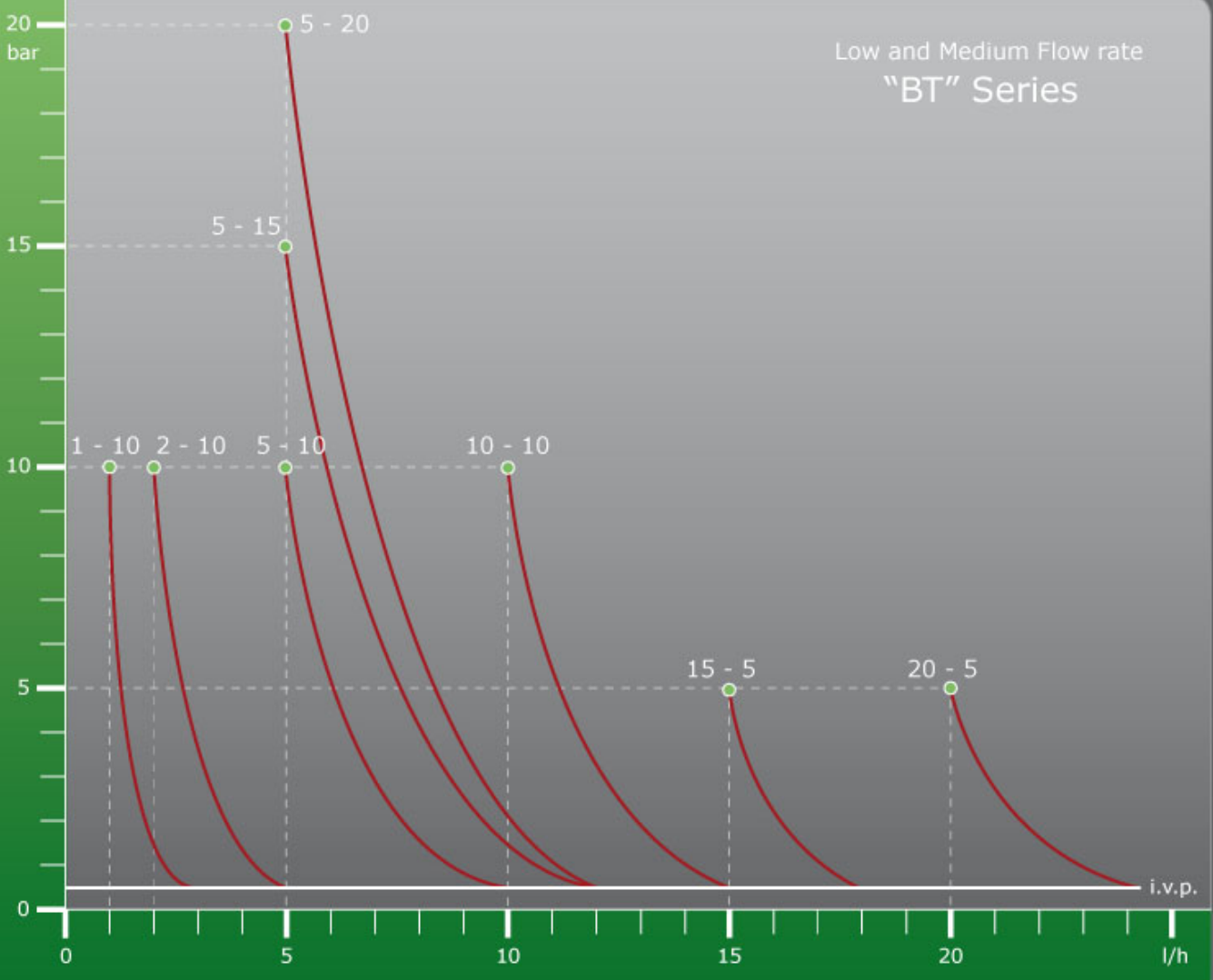
Its simplistic and intuitive design makes it an ideal pump for use in a wide range of industries and applications.

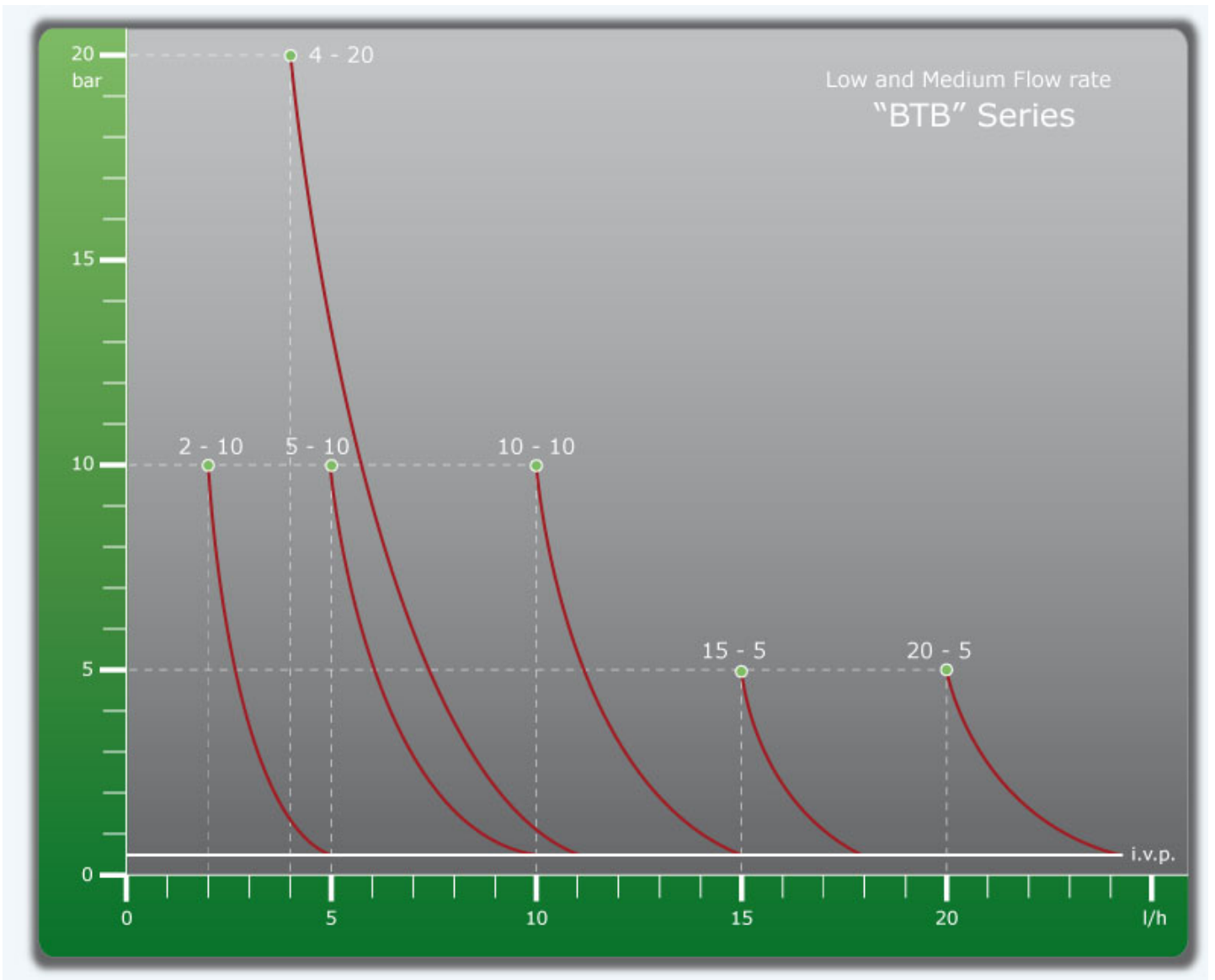
## **Pressure and Flow Rate Capacity**

High Flow Rate  
"BT" Series



Low and Medium Flow rate  
"BT" Series





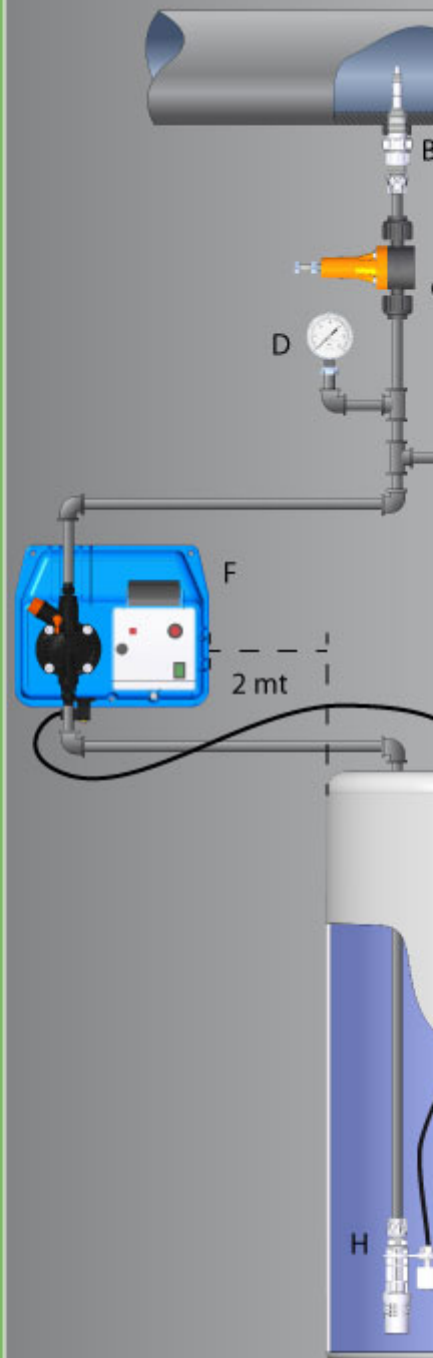
**Liquid End**

| Wetted Parts             | Standard Materials                                 |
|--------------------------|--|
| Pump Head                | PP up to 20l/h<br>PVC 30 to 140l/h                 |
| Diaphragm                | PTFE   |
| Lip valves               | FPM (Viton®) up to 30 l/h<br>Ceramic up to 140 l/h |
| Sealings                 | FPM (Viton®)                                       |
| Injection Valve          | PP/Ceramic   |
| Foot Filter              | PP/Ceramic   |
| Suction/Bleeding Tubings | PVC  |
| Delivery Tubing          | PE   |

| Wetted Parts                    | Standard Materials |
|---------------------------------|--------------------|
| Pump Head<br>with Gravity Balls | Ceramic            |

## Assembly and Dimensions

- A - Main Pipeline
- B - Injection Valve
- C - Backpressure Valve
- D - Pressure Gauge
- E - Relief Valve
- F - Dosing Pump
- G - Tank
- H - Foot Filter
- I - Level Switch



## Options

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