

AUTOMATED ATEX TROLLEY BATCHING SYSTEM

A Pharmaceutical Research and Development Company approached Tapflo UK to design and manufacture a bespoke fully Automated ATEX Trolley Batching System requiring minimal operator involvement.

In partnership with Tapflo Ireland, this system was designed for precise dosing, using the TX30 pump to deliver small quantities of fluid into the process vessels.

A 3-point verification system, including double stroke sensors, confirms the quantity of fluid being pumped. An oval gear flow meter and 4 load cells accurately measure the total weight of the fluid. The trolley-mounted system provides mobility between different process vessels.

The trolley consists of a base supporting the load cells and housing junction boxes, along with a secondary base featuring a drip tray, drain and storage space for 2 vessels. The closed system design maintains accuracy during weight measurement. The discharge of the pump includes a check valve and a pneumatically controlled 3-way ball valve for directing fluid flow. Electronic controls, including solenoid valves, enable precise operation. Fail-safe features are incorporated into the electrical system.

From Render to Reality



System Overview

- ✓ TX30 STT ¾" Sanitary Air Operated Diaphragm Pump with dual stroke sensors
- ✓ Solenoid-operated pneumatic 3-way ball valve and solenoid-operated air supply
- ✓ Sanitary oval gear flowmeter
- ✓ Portable trolley with a floating drip tray & drain point
- ✓ Load cells
- ✓ Check valve on discharge
- ✓ 20 litre process tank & 20 litre drain tank
- ✓ Flow rate indicator & totaliser
- ✓ 3-point verification of weight pumped & swivel castors.

Check out this link to find more:

[ATEX Trolley Batching System Video](#)

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