

» ATEX RATED HASTELLOY DOSING PUMPS

Tapflo UK were approached by a leading Pharmaceutical company to provide some ATEX Rated Hastelloy C Dosing Pumps on mobile trolleys. Our design team worked closely with the customer to provide a safe and simple solution based on specific requirements.

The Application Details:

One of our customers in the Pharmaceutical Industry needed 3 off safe, simple, accurate and mobile solutions for dosing a reagent (98-100% H2SO4 & Toluene at Ambient Temp) onto their process across a flow range of 23-138 l/hr with a max rated pressure of 10 Bar. The customer specified that the only approved wetted materials to be used were Hastelloy C-276 and PTFE, & that the pump also needed to be suitable for a Nitrogen Injection Clean Through (2 Bar through suction side of the pump) & fitted with Tri-Clamp Connections on the suction & discharge.

The pump sets also needed to be fitted to hygienic trolleys & suitable for use in an ATEX Zone 1 environment Following conversations about the pump, our team were able to provide the client with a complete turnkey trolley package that included a drip tray, custom suction & discharge adaptors, and pump risers.

Solution & Support Offered:

We worked with the client to design a bespoke trolley size that fitted their requirements (per the initial design). Once approved, we put all 3 packages into production and mounted all equipment at our facility in Southampton before shipping to the customer, delivering ready-to-use systems straight out the box.



Fitted with above equipment:

- ✓ 4 x Conductive Wheels, Swivel & Rear Locking w/ Earthing
- ✓ Drain Valve at Front
- ✓ Ra <1.6 Surface Finish
- ✓ Industrial Mounting Brackets for Pump to provide 100 mm Clearance from Base

Materials of Construction:

- ✓ Drip Tray: Stainless Steel AISI 304 (Inside Surface Electro-Polished, Outside Sandblasted)
- ✓ Handles: Stainless Steel AISI 304 (Ground)
- ✓ Support Plate between Handles: Stainless Steel AISI 304 (Sandblasted both sides)

- ✓ Wheel Supports: Stainless Steel AISI 304
- ✓ Drain Valve: Stainless Steel AISI 316
- ✓ Misc. Supports & Plates: Stainless Steel AISI 304 (Sandblasted both sides)
- ✓ Maximum Dimensions (L x W x H): 800 x 860 x 980 mm

Check out this link to find more:

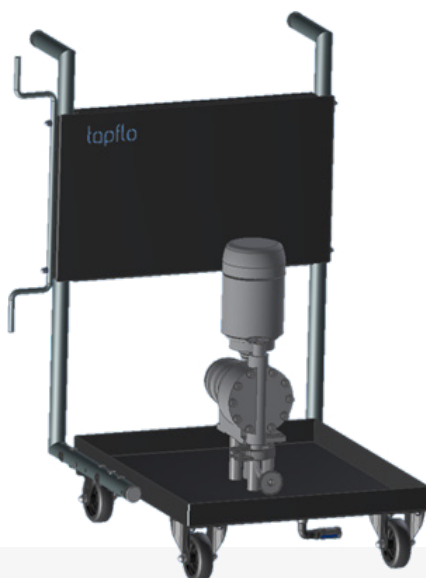
[Motor-Driven Diaphragm Metering Pump](#)

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From Render



to Reality



Equipment Supplied & Technical Details:

(3 x Motor Driven Mechanical Diaphragm Metering Pumps)

- ✓ Fluid: 98-100% H2SO4 & Toluene
- ✓ Flow Range: 23 – 138 l/hr (10-60 Hz)
- ✓ Strokes / min, 50 / 60 Hz: 106 / 127
- ✓ Displacement / Stroke: ~18 ml
- ✓ Accuracy: +/- 2% of rated flow, 0-100%
- ✓ Adjustment: 0-100% Manual Stroke Length Adjustment while running or steady, 1 mm / turn & VSD Controlled
- ✓ Max Suction Lift: 2-3 m from Dry, more with NRV fitted to suction line
- ✓ Max Discharge Pressure: 10 Bar
- ✓ Pump Head: Hastelloy C-276
- ✓ Diaphragm: PTFE
- ✓ Seat: Hastelloy C-276
- ✓ Cage: Hastelloy C-276
- ✓ Valve: Hastelloy C-276
- ✓ Valve Seal: PTFE
- ✓ Motor: 37 kW / 4 Pole / 230-400V / 3 Ph / 50 Hz / IP55 / Class F / ATEX II 2G Ex-d II B T4 – Suitable for VSD control between 10-60 Hz @ Constant Torque
- ✓ ATEX Classification: Motor: II 2G Ex-d IIB T4
- ✓ Pump: II 2 G T6
- ✓ Ambient Temp: -10°C to +40°C
- ✓ Max Fluid Temp: 40°C
- ✓ Noise Level: <70 dB(A)
- ✓ Certification:
 - 1 Material Certs (All Hastelloy Parts) - 2 Material Certs (All Elastomer Parts) - ATEX Certification (Covering Pump & Motor) - EC Declaration of Conformity
- ✓ 6 x 3/8" BSP M x 1/2" Tri- Clamp Adaptors in Hastelloy C-276 (1 per pump port)
- ✓ 3 x 90° Swept Bend (Hastelloy C-276) c/w 1/2" Tri Clamps (C-276), PTFE Flange Gasket & Tri Clamp Band SS or Hastelloy (1 per pump suction)
- ✓ 12 x 100 mm x 20 mm Pump Spacers w/ M8 Female Threads, AISI 303
- ✓ 3 x Customised Tapflo Hygienic Trolley Model HM0X with Rounded Handle Bars

Check out this link to find more: