

Expertise - Quality - Service



ASAUTOMECH
SOLUTIONS

Reagent Make-up Plants

ASAutoMech Solutions (PTY) Ltd.

Reg Nr. 2002/007472/07

161 Clydesdale Rd., Daggafontein Ext,
Springs, South Africa, 1564

☎ +27 11 363 0534/5/6

@ info@asautosol.co.za

📍 S 26° 17' 42.0" E 28° 28' 29.8"



www.asautomech.co.za



Applying the highest standards of Engineering through...

EXPERTISE, QUALITY & SERVICE





Reagent Make-up Plants

A Fully Automated with low operational costs

We engineer and develop equipment and systems for

INDUSTRIAL SOLUTIONS

in the Advanced Water Treatment, Mining Reagent Systems, and Food Processing Industries



Application

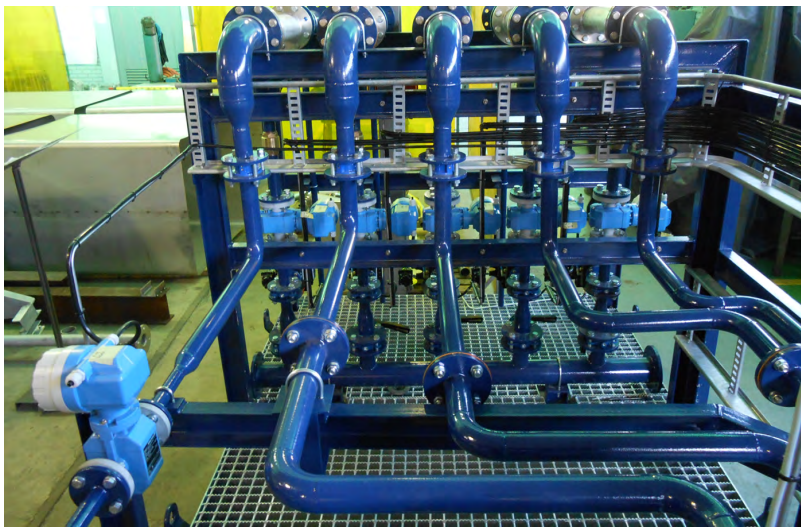
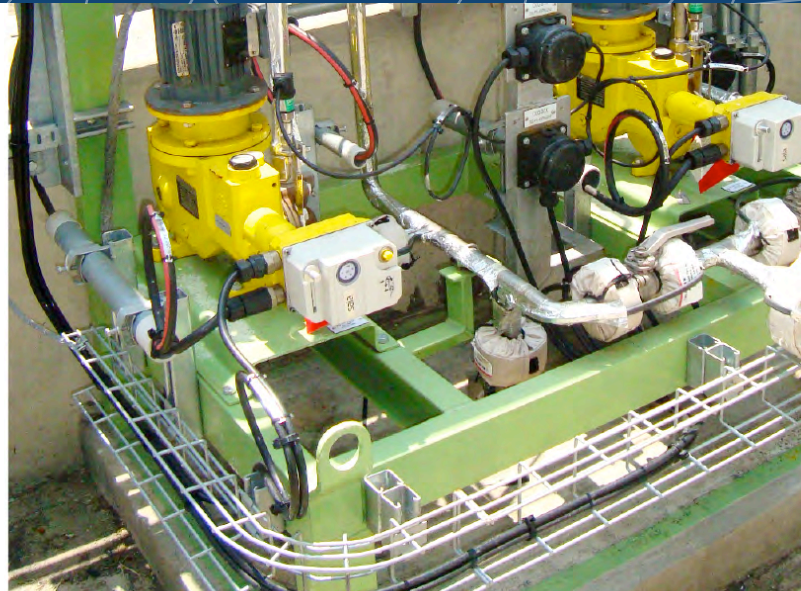
Commodity and specialised reagents such as Guar, Xanthate, Copper Sulphate, Coagulant, Lime, Urea, Magnesium Chlorite and Flocculent are used on nearly all-mineral beneficiation or Water plants.

The use of a Reagent or Flocculent improves the efficiency of recovering the mineral and facilitates efficient process or water recovery. Reagent plants are used wherever an additive is required to cause either a mineral or a waste product to settle out or float in the process or the water circuit. Water recovery operations often tend to lose or waste costly reagents due to the use of inefficient, ill equipped or make-shift preparation plants.

AS AutoMech Solutions has a selection of Compact Reagent and Flocculent plants with various bulk storage options designed to provide and accommodate delivery schedules and on site storage requirements. Our Preparation Plants is available in a range of sizes based on volumetric flow, retention and hydration times to meet the process demand. Advanced design features allow ease of logistics and installation.

Our unique and proprietary design of integral components were created by engineers who understands what it take to keep a processing plant functioning smoothly and efficient.





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Features 1

- Efficient compact layout minimises the total footprint.
- Delivers high quality performance with emergency redundancy capability.
- High capacity size range delivering up to 300 kg or more of hydrated reagents per hour.
- Very high process and operational availability with no loss of production.
- Design does not require any special civil works. A plant is easily accommodated on a concrete slab and is supported on stub legs. Plant is easily relocated if required.
- Full Engineering Calculation inclusive of Wind Load factors.
- Containerised dimensions with capability to consolidate and pack ancillaries within the tank sections for easy transport and export.

- Storage Options for Reagent Plants can range from a 70 Kg Hopper up to twin 65 M³ storage silos with De-Humidification and Dual AS Automation Active Jets TM or Hydrators.
- AS Automation Reagent Plants can accommodate any type of Flocculent or Reagent and any practical preparation concentration.
- Flocculent should not be made-up at concentrations above 0,35%. The chemical “uncoiling” of the flocculent molecule is inhibited by the lack of water able to reach it for chemical bonding to occur (hindered reaction kinetics)
- Available in stainless steel construction for hostile environments
- Interlock protection for all critical components
- Minimum of IP55 protection on all components.
- Conversion between Liquid and Powder polymers possible





Benefits

- Fully Automated
- Very low operational costs and limited maintainable items
- Accurately sized components ensures maximum efficiency of polymer and good hydration times
- Flexible concentration parameters and no excessive energy or shearing during make-up
- Low transport and installation costs with prompt commissioning times
- In-house engineering and fabrication with trail pre-erection and assembly ensuring fluent site assembly with limited site work.
- High quality paint specification, internally and externally for maximum practical life of equipment



Static Mixers for Inline Dilution

Reagent solutions can be easily post-diluted by these compact stations with integrated flow meter control. The required mixing is achieved before the stock solution is added into the medium to be treated. The Static Mixer is an inline-mixing device with no moving parts. This makes it a unique piece of processing equipment as it requires no external power source and is completely maintenance free. The Static Mixer produces a homogeneous blend. Typical flow rates of 400 to 50000 l/h can be achieved with AS Static mixers.



Screw or Rotary Feeder

An in-house designed dry material feeder allows dosing of dry and free flowing granulated products either directly or indirectly for make-up or transporting purposes. Dosing capacities of 0,5 to 8000 kg/h can be achieved accurately without blocking or bridging.

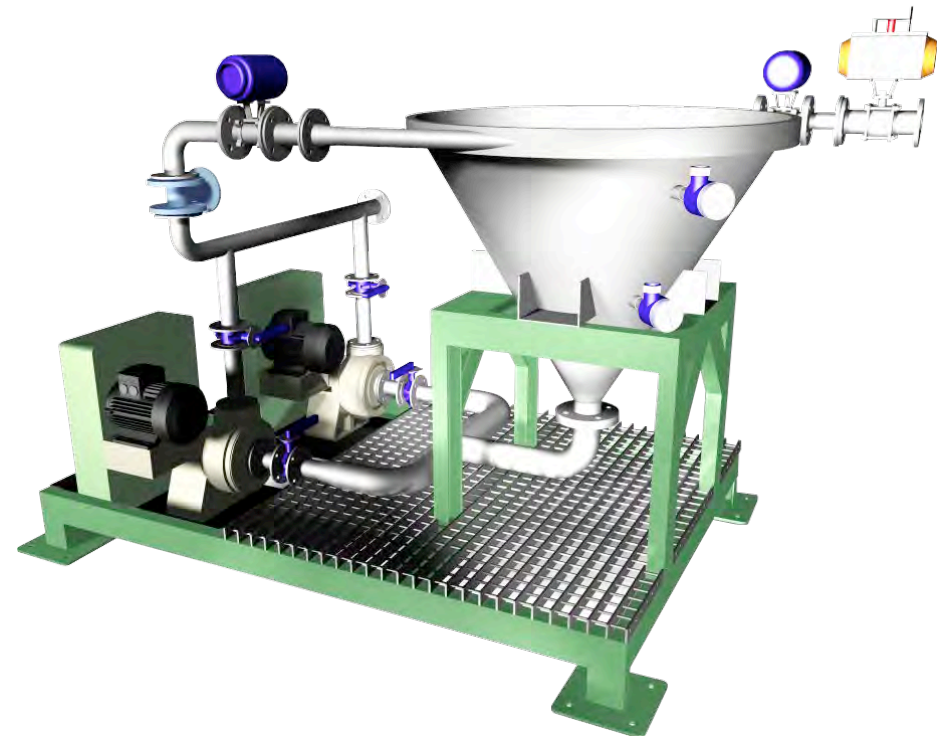
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Active Jets™ or Hydrators

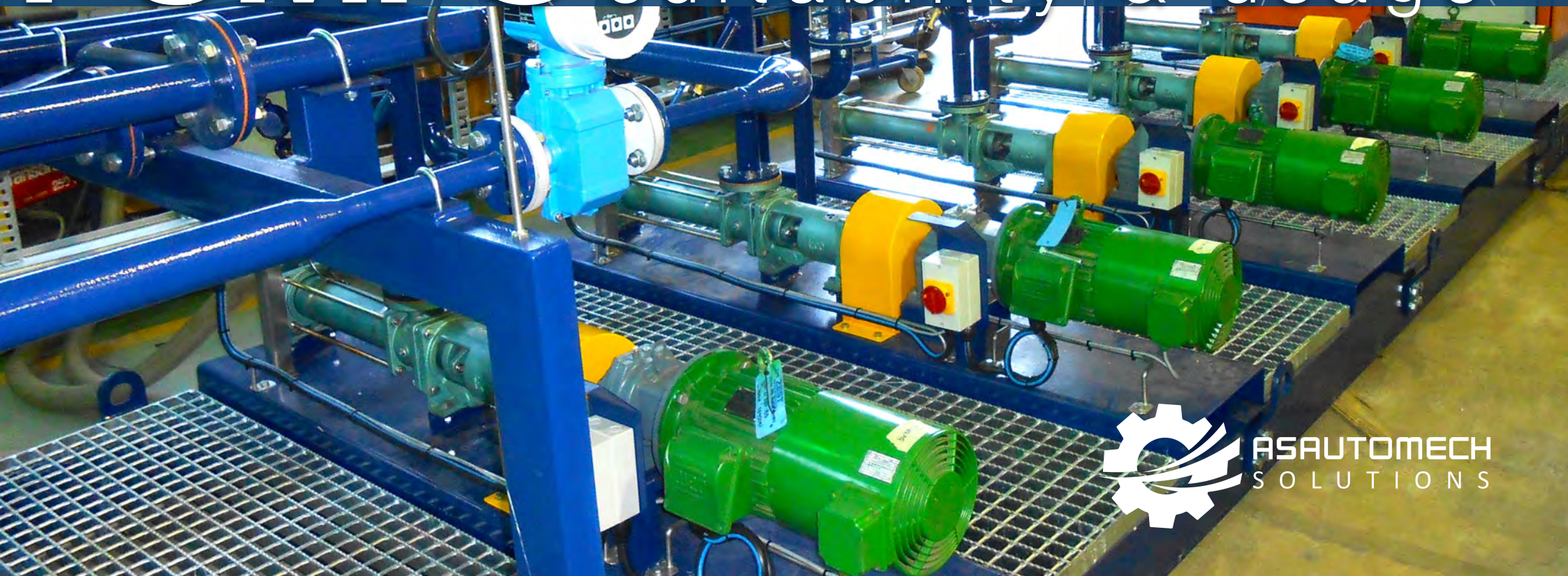
AS Automation has developed a unique Active Jet™ or Hydrator unit allowing for big volumes of highly concentrated polymers or reagents to be prepared and made-up in reasonably short times with highly effective de-coiling without sheering or damage to the molecule string of the reagent. Make-up rates of 50 to 500 Kg/hr can be reached if required.



Extremely well suited for remote
areas on the African continent



PUMPS suitability & usage



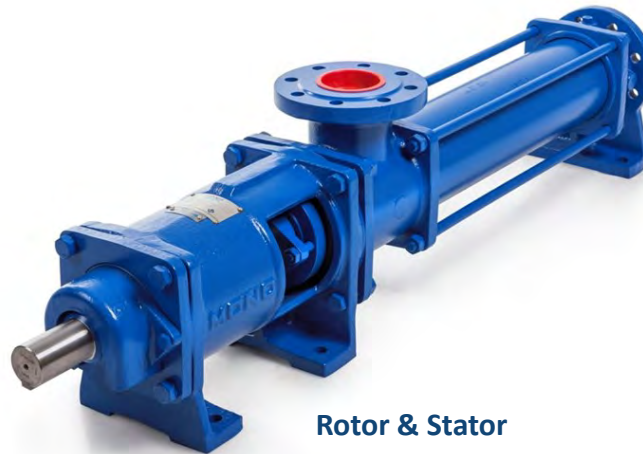
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Pump Models

Various pump types and models are available to compliment our units based on the application and process requirements. We do not have close alliances with any particular manufacturer or make but will always select known brands with reputable products.



Peristaltic



Rotor & Stator



Diaphragm



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