



HydraPol™ *Activ*

Game Changing Wastewater
Treatment Technology

WATER TECHNOLOGIES

HydraPol™ Activ

Rapid & Efficient Polymer Activation

Your water and wastewater treatment systems remain critical to your operation, producing either the influent water your production process requires, or the effluent water quality that your local authorities and NPDES permit require. Let Veolia Water Technologies revolutionary, patented HydraPol™ Activ emulsion polymer feed system help you improve your system performance & reduce your operating costs.



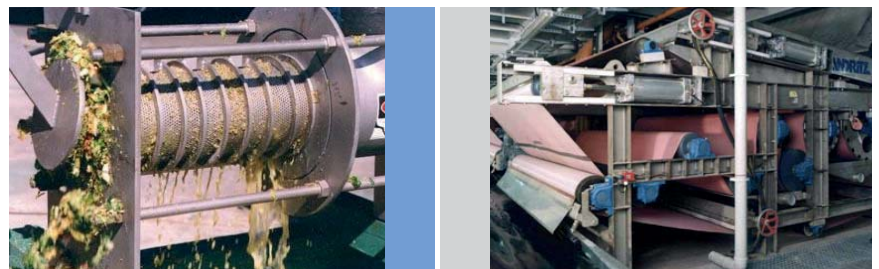
Features

- Combines 4 patented process design innovations to provide efficient and rapid activation of emulsion polymer
- Reduces polymer dosage requirements, enabling easier to feed and control emulsion chemistries to cost effectively replace both dry and liquid polymers
- Eliminates the need for expensive and bulky mixing and aging equipment associated with traditional polymer feed systems
- Designed specifically for use with Veolia's extensive line of Hydrex™ water & wastewater treatment emulsion polymers.

Application Flexibility

Combined with Hydrex™ emulsion polymers, HydraPol™ Activ can be used to help flocculate, precipitate and dewater impurities in a number of industrial and municipal applications:

- Raw Water Treatment
- Waste Water Treatment
- Process Water Treatment
- Recycle & Reclaim Water Treatment
- Sludge Dewatering



Application Value

- Minimal Footprint – The entire HydraPol™ Activ polymer feed system is skid mounted, requiring minimal space to install.
- Ease of Installation – The HydraPol™ Activ unit requires only a simple electrical connection, a water connection, and a connection to the neat polymer container.
- Optimized Design – HydraPol™ Activ can eliminate elaborate polymer mixing equipment, transforming neat emulsion polymer into “Super Activated” polymer feedstock in approximately 2 minutes.
- Lower Chemical consumption – By significantly increasing the activation level of emulsion polymers, HydraPol™ Activ can reduce polymer dosage rates as much as 80% in certain applications.
- Less Chemical waste – By producing a highly active, more efficient emulsion feed stock at lower dosage, HydraPol™ Activ allows customers to reduce polymer overfeed and chemical waste in their effluent and sludge.

HydraPol™ Activ

Case studies

Insulation Manufacturer Wastewater



A fiberglass insulation manufacturer was incurring high wastewater costs in the operation of their Dissolved Air Flotation system. These high costs were linked to surcharges on the

Total Suspended Solids in their plant discharge, as well as the high polymer dosage needed to remove them from the effluent and dewater them in their filter press.

Veolia's HydraPol™ Activ unit was brought in to help reduce polymer feed rates and costs in their Dissolved Air Flotation unit. Although the customer had just installed a new 3-stage polymer activation system to feed their emulsion polymer, polymer costs were still very high.

The client was adamant about insuring continuation of treatment. Veolia set the HydraPol™ Activ system up in parallel to be able to switch back and forth as a contingency.

Results

The 1st phase of the trial optimized emulsion feed through the customer's 3-stage activation system at a rate of 33 ml/min. A HydraPol™ Activ unit was brought on line. The emulsion dosage was optimized at only 15 ml/min to establish similar performance, resulting in a 55% savings for the customer using the HydraPol™ Activ unit in their DAF unit.

The 2nd phase of the trial was to determine the impact the HydraPol™ Activ unit could have on downstream sludge dewatering at their filter press. Their 3 stage emulsion activation system required an excessive dosage rate (52 ml/min) to optimize both DAF performance & filter press dewatering.

The HydraPol™ Activ unit required only a 35 ml/min emulsion feed rate, generating a 33% total cost reduction in polymer feed to their DAF/Filter Press system while improving performance.

Municipal Sludge Dewatering



Veolia's HydraPol™ Activ unit was installed to improve sludge dewatering on an activated sludge system. The customer was satisfied with the results of their current polymer, but due to the impact of polymer on their budget, agreed to a side-by-side trial. Criteria used to determine success were:

- Centrate Clarity
- Cake characteristics and dryness

Sludge flow as measured by flow meter was consistently 128 gpm. Polymer feed was optimized at 190 ml/min, based on cake appearance, centrate clarity and centrifuge torque during dewatering.

Results

The HydraPol™ Activ emulsion feed system replaced their Polyblend unit, and generated the following results:

- Polymer feed rate was reduced from 190 ml/min to 120 ml/min (37% savings)
- Dosage was reduced from 47.72 lbs/dry ton down to 31.34 lb/dry ton of sludge produced
- Cake dryness remained consistent
- Centrate clarity was not impacted

The HydraPol™ Activ unit was able to generate a 37% savings to the client.

Resourcing the world

Veolia Water Technologies

Kruger Inc. / 4001 Weston Parkway / Cary, NC 27513

Phone: 919.677.8310 • Fax: 919.677.0082

usmunicipal@veolia.com • www.krugerusa.com