JOHN MEUNIER

Hydra-Pol®

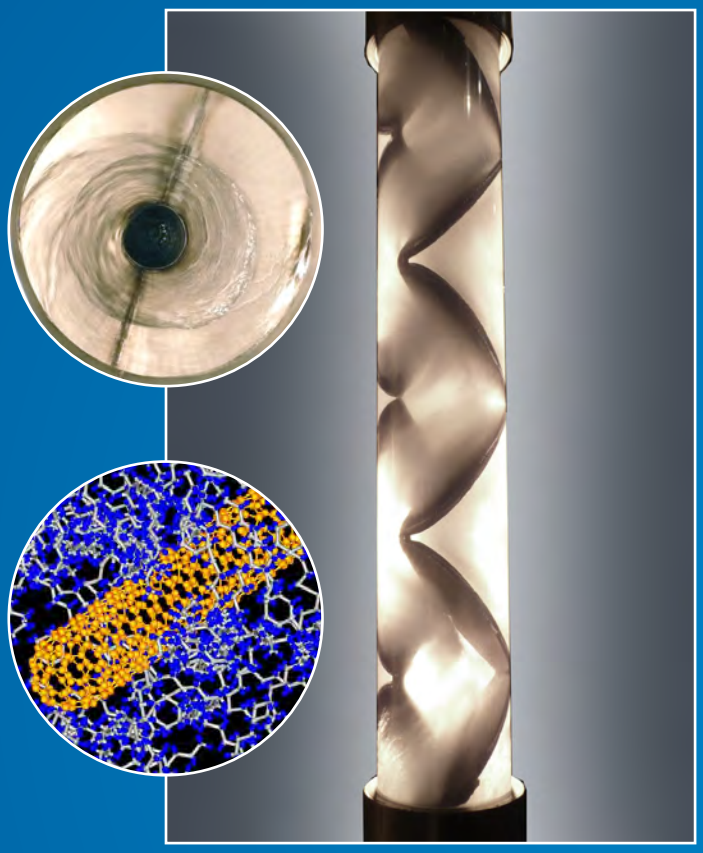
Preparation Systems for Polymer Powders

VEOLIA WATER

Solutions & Technologies

Hydra-Pol®

Complete Hydration of the Polymer



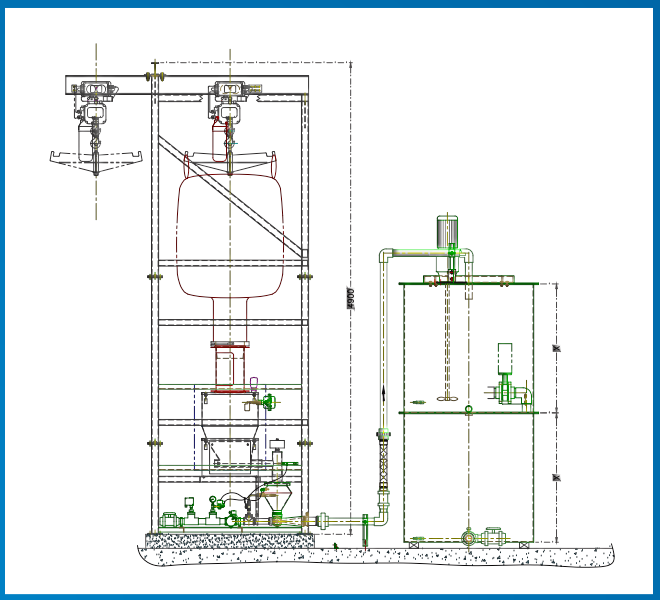
John Meunier's polymer preparation and dosing system is designed to prepare and activate our many types of dry polymer. The volumetric feeder technology introduces dry polymer (from 25 kg bags or super sacks) into the dampening system. The volumetric feeder includes a flexible hopper with external agitators to reduce the formation of arches and associated maintenance. The output of the volumetric feeder is equipped with an automatic shut-off valve which prevents any contact between moisture and dust.

The activation of dry polymers is initiated through an effective high shear pre-wetting stage to enhance the reaction of polymer chains avoiding formation of polymer lumps and clogging. The pre-wetting stage consists of a cone shaped stainless steel vortex for instantaneous dry polymer dispersion in water. Pre-wetted particles of polymer are then transported via an injector, to the mixing tank through a stainless steel transport pipe. The pipeline includes a high efficiency static mixer to ensure complete wetting of polymer before entering the mixing tanks.

In the mixing tank the polymer is continuously activated with a low shear agitator. JMI customizes the speed of the agitator and the diameter of the propeller, based on the geometry of the tank to ensure optimal activation of polymer. Once the polymer is properly mixed, the solution is transferred to the storage tank. The mixing and storage tanks are cylindrical in design and constructed of stainless steel. They are also mounted on top of each other to reduce total footprint. All operations are fully automated through a customizable control panel for easy management of polymer preparation.

Features

- Complete and autonomous system, designed for operators
- Accurate and consistent dosing, providing constant and repeatable concentrations
- Customizable control panel to govern operational sequences
- Handling system adapted to customer needs: vacuum or super-bag unloader
- Efficient design reducing footprint
- Multiple shearing zones ensuring optimal activation of dry polymer
- Easy maintenance



System capacities at a concentration polymer of 0.2% and 0.5% with a time maturation of 90 and 45 minutes.

Capacity (kg/h) :

Systems	0,5% solution		0,2% solution	
Maturation time	90 min	45 min	90 min	45 min
Hydra-Pol 250	0,77	1,46	0,31	0,59
Hydra-Pol 500	1,47	2,74	0,59	1,12
Hydra-Pol 750	2,18	4,02	0,89	1,67
Hydra-Pol 1000	2,81	5,03	1,15	2,11
Hydra-Pol 1250	3,39	6,04	1,40	2,56
Hydra-Pol 1500	4,12	7,35	1,69	3,08
Hydra-Pol 1750	4,66	8,34	1,92	3,52
Hydra-Pol 2000	5,51	9,87	2,25	4,09
Hydra-Pol 2500	6,81	12,17	2,79	5,09
Hydra-Pol 3000	8,52	15,57	3,47	6,43
Hydra-Pol 3500	9,75	17,73	3,98	7,35
Hydra-Pol 4000	10,73	18,92	4,39	7,86
Hydra-Pol 9000	22,17	36,66	9,27	15,80
Hydra-Pol 15000	33,86	51,87	14,43	23,10

New probe for the activation of polymer

- Allows real-time monitoring activation of the polymer
- Confirms the concentration of polymer
- Promotes the preparation optimization of polymer

Patent Pending 13/186,722

2000 Argentia Road
Plaza IV, suite 430
Mississauga, ON
L5N 1W1

T : 905 286 4846
F : 905 286 5805

instrumentation@johnmeunier.com
www.johnmeunier.com

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