

Let our professional team help you today!



WaterSolve, LLC has established a reputation as a national leader in chemical treatment for dewatering operations. Our approach of technical support to contractors, owners, and municipal agencies has built this reputation. Our professional staff, including engineers and technicians, works with clients from project concept through completion and can offer a complete range of services from supplying products to completion of entire project, working with our partner contractors and suppliers as required. The scope of services and WaterSolve's role on a specific application are tailored to meet the client's project objectives.

4964 Starr St. SE
Grand Rapids, MI 49546
Phone: (616) 575-8693
Fax: (616) 575-9031
E-mail: greggl@gowatersolve.com

WaterSolve
LLC



Contact us today for your water and wastewater treatment chemicals and equipment needs!



WaterSolve_{LLC}

WaterSolve's
Chemical Control
and Tracking
System



*Clearly Thinking
About Your Water
Treatment*

Phone: (616) 575-8693
Fax: (616) 575-9031
www.gowatersolve.com

WaterSolve's Chemical Control and Tracking System

This system has been designed and built to efficiently feed chemicals for dewatering applications. This system optimizes the application of chemical by automatically adjusting the feed rates based on variations in slurry line flow rate and in-line solids concentration. Our system also provides documentation and tracking of several applicable parameters.

Specifications listed below are for the base unit. We routinely customize the system to meet project specific requirements.

VMT-30P-3000-Rpx Liquid Polymer Blending System

Dilution Water Flow: 5 to 50 gpm
Polymer Flow Range: 3.0 to 30 gph

Polymer Mixing Chamber

Type: Staged Hydro-Mechanical
Body: Stainless Steel
Pressure Rating: 100 psi
Pressure Relief Valve

Neat Polymer Metering Pump

Type: Progressive Cavity type with 1/2 hp, 1750 rpm, 90 vdc, Wash-down Duty Motor
Gear Reducer
Thermal type loss of polymer flow sensor
Pressure relief valve plumbed to suction
Metering pump calibration assembly with isolation valves: 1000 ml (16 gph)

Dilution Water Inlet Assembly

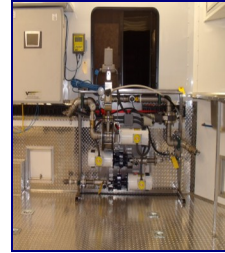
1-1/2" FNPT water inlet connection
Dilution Water ON/OFF Solenoid Valve
Linear Actuated Automatic Flow Control Valve
Primary Dilution water flow meter type: Paddle Wheel
0-160 psi inlet water pressure gauge (stainless steel, liquid filled)
Plumbing—SCH. 80 PVC

Solution Discharge Assembly

1-1/2" FNPT solution discharge connection
0-160 psi solution discharge pressure gauge (stainless steel, liquid filled)
Plumbing—SCH. 80 Stainless steel

Control Panel

Features: NEMA 4X FRP Enclosure
120 vac, 60 Hz, 1 Ph Service
NEMA 4X Conduit and fittings



Series Rpx Ratio Controller

The control system shall be designed to precisely control dilution water flow in proportion to polymer flow (polymer master) based on an operator input of desired solution concentration. The controller shall have two (2) modes of operation:

Manual Mode: Operator sets pump rate and water rate manually by increase and decrease push buttons on controller face.

Proportional Auto Mode: Operator sets desired solution concentration. (2) Input signals (4-20mA) are taken in from a solids analyzer and a flow meter, and are fed into a tuned loop. The Polymer Metering pump follows 4-20mA pump pacing input signal. Water rate is controlled to maintained desired solution concentration.

Additionally, a 4-20mA output is available to control a second chemical pump. This pump will include a control loop with input variables as described for the polymer pump above.

Operator Interface: Color Touch Screen

System ON/OFF

Mode (change mode, select mode):

- Manual mode
- Proportional Manual mode
- Proportional pump Pacing mode
- Set % Solution (proportional modes only)
- Set Poly Rate (Manual and remote pacing modes only)
- Set Water Rate (Manual and remote pacing modes only)
- Polymer Pump Calibrated Value Input

Up Arrow

Down Arrow

Display: Alpha Numeric Display

Pump Rate
Water Rate
Solution Concentration

Status/Alarm Indicators

Low Water Flow Alarm
Low Polymer Flow Alarm
Manual Mode
Proportional Manual Mode
Proportional Auto Mode
Calibration Mode
Inputs (signals by others)
Remote Start/Stop (discrete dry contact)
Pacing Signal Based on Process Flow (4-20mA)
Flow Meter Signal (4-20mA)
Solids Analyzer Signal (4-20mA)



Inputs (signals by others)

Remote Start/Stop (discrete dry contact)
Pacing Signal Based on Process Flow (4-20mA)
Flow Meter Signal (4-20mA)
Solids Analyzer Signal (4-20mA)

Outputs

System Running (discrete dry contact)
Remote Mode (discrete dry contact)
Common Alarm (discrete dry contact)
Polymer Pump Rate (4-20mA)
Additional Pump Rate (chemical pump) (4-20mA output)
Slurry Density Readings
Slurry Flow Rate Readings

Special Functions/Features

Proportional control of water to polymer flow (ratio control) as outlined above
Polymer pump rate input for calibration
Trending of polymer flow, water flow, additional chemical flow (4-20mA) and flow meter and solids analyzer data