Water Technologies

PolyBlend® DP500 Dry / Liquid Polymer Feed System

Product Sheet

SIEMENS

The PolyBlend® DP500 System is a member of the family of reliable dry polymer feed systems for use in water and wastewater applications. The DP500 is an integrated equipment package capable of automatically preparing a homogeneous polymer solution.

The DP500 consists of the DD4 dry polymer disperser, a fiberglass mix tank, and a gravity fed fiberglass hold tank.

The DP500 is specifically designed to provide uniform mixing. Dry polymer and water are initially mixed in the DD4 polymer disperser exposing the solution to a high shear agitation via mechanical mixing. The high shear agitation ensures proper activation of the polymer and prevents unwanted agglomerations. After brief exposure, the solution exits the high shear mixer and flows into the mix tank.

The second stage mix is a longer, low shear mix. The rotating impeller in the secondary mix tank is a U.S. patented "hollow-wing" design and covers over half the width of the tank. The low shear mixing continuously and uniformly moves the solution vertically and horizontally resulting in no agglomerations or broken polymer chains.

When a low level is sensed in the hold tank, a valve is automatically opened and the prepared solution is gravity fed into the holding tank. From the holding tank, the homogenous polymer solution can be transferred to the process with an optional feed pump skid.

Specifications

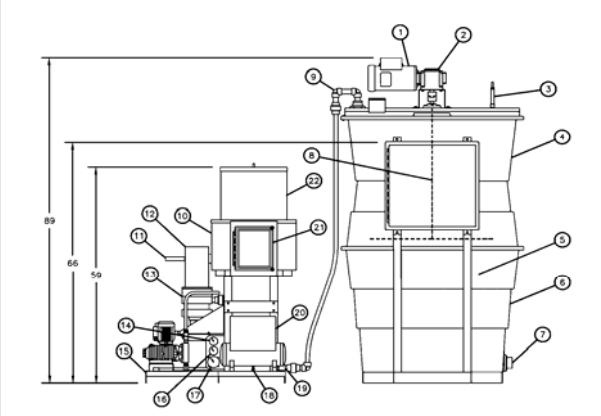
Electrical	208VAC/ 50-60 Hz/ 1 Ph 240VAC/ 50-60 Hz/ 1 Ph 240VAC/ 50-60 Hz/ 3 Ph 480VAC/ 50-60 Hz/ 3 Ph 575VAC/ 50-60 Hz/ 3 Ph
Water Supply	20-30 GPM (75.7-113.6 LPM)
Tank Size	160 USG (605.7 L)
*Polymer Feed	Up to 20lbs (9.1kg) /hr dry polymer based on a .75% solution and two (2) batches per hour
Control Panel	NEMA 4X PLC Based with color touch screen

***Note:** Consult Siemens Water Technologies with regards to dosing amount and your application.

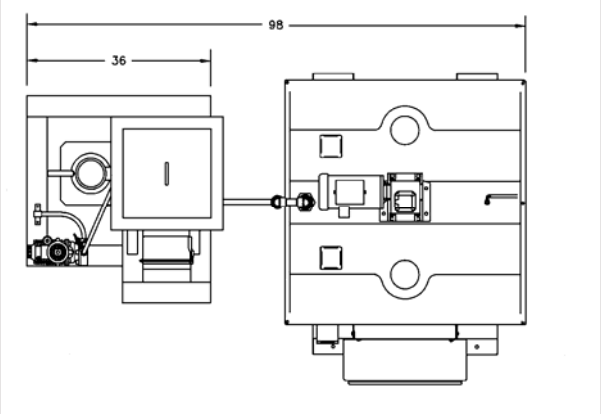
Benefits of the PolyBlend® DP500 System:

- Reliable Performance
- Fiberglass Mix and Hold Tanks
- Reduced Polymer Consumption
- Fully Automated Operation
- Operator Interface Controls
- Improved Safety Features
- Easy to Operate

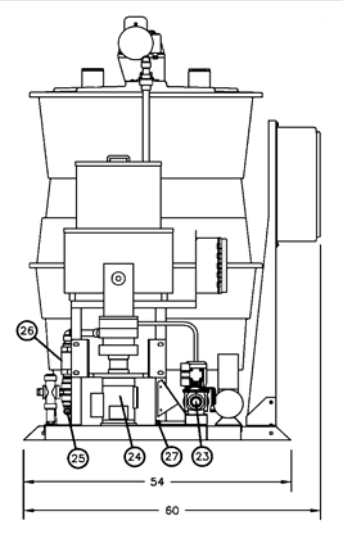
General Layout



Front View



Top View



Side View

NOTE: Drawings are shown with optional liquid polymer pump and 2.5 cu/ft (0.07 cu/m) hopper. Contact Siemens Water Technologies to select proper options to meet your process requirements.

Available Options

- Diaphragm Metering Pump
- Progressing Cavity Metering Pump
- SS Gear Metering Pump
- Batch Tanks/ Single or Tandem
- Integral Compressor
- 2.5 ft³ (0.07 m³) Hopper
- 20 ft³ (0.57 m³) Hopper
- Bulk Bag Frame
- Bulk Bag Frame with Hoist
- Bag Dump Hopper
- Low Powder Level Indication
- Over-Sized Feeder Screw Auger
- Supply Water Pressure Reducing Valve
- Final Feed Pumps
- Final Feed Post Dilution
- Large Hold Tanks
- Transfer Pumps

Key	Description
1	Motor, Tank Mixer, 1.5 HP, 1725 RPM, TEFC
2	Speed Reducer, Worm Gear, 15:1
3	Pneumatic Cylinder, Dump Valve Actuator
4	Mix Tank, 160 Working Gallons (605.7 L)
5	System Control Panel
6	Hold Tank, 160 Working Gallons (605.7 L)
7	Solution Discharge, 2" NPT (50.8mm)
8	Impeller, Mix Tank, 120 RPM
9	Solution Inlet, Mix Tank, 1" NPT (25.4mm)
10	Powder Feeder
11	Pneumatic Cylinder, Isolation Plunger Actuator
12	Wetting Bowl
13	Wetting Impeller Housing
14	Pressure Gauge, Compressed Air
15	Support Frame/ Base
16	Pressure Gauge, Supply Water
17	Pressure Gauge, Differential Water
18	Condensate Drain
19	Solution Discharge, Wetting Device, 1-1/2" NPT (38.1mm)
20	Air Compressor with Tank
21	Junction Box, Interconnections
22	Hopper, 2.5 cu/ft (0.07 cu/m)
23	Pump, Diaphragm (optional)
24	Motor, Impeller, 1.0 HP, 3450 RPM
25	Supply Water Inlet, 1-1/2" NPT (38.1mm)
26	Flow Control Valve, Water
27	Emulsion Polymer Inlet, 1/2" NPT (38.1mm)
*28	Mix Tank Level Switches; LO, HI, HI-HI
*29	Hold Tank Level Switches; LO, HI-HI
*30	Flow Control Valve, Supply Water
*31	Motor, Powder Feeder, 90 VDC, 1/4 HP, TENV
	* Not Shown

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Literature No. ST-DP500-PS-0407