SVENMIX.D

DRY CHEMICAL MIXING SYSTEM

Sioux Valley Environmental

SINCE 1978

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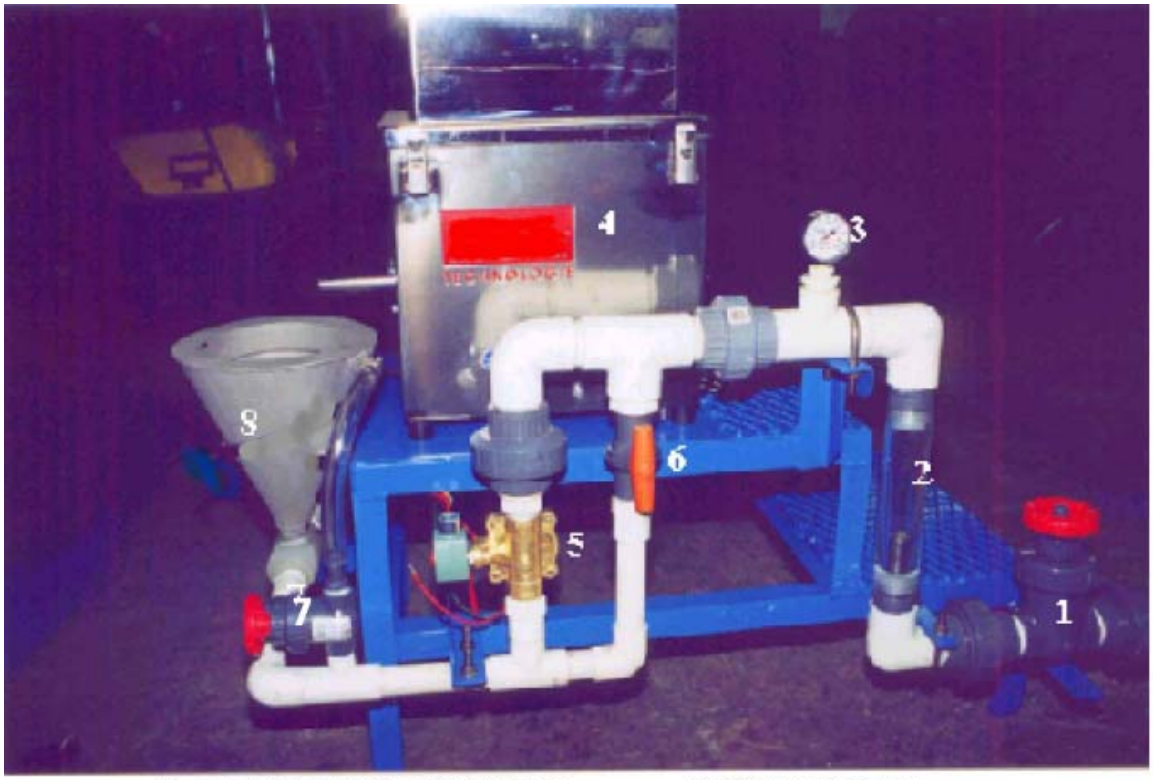
SVENMIX.D DRY POLYMER MIXING SYSTEM

Pictured is a SVENMIX.D Dry Chemical Mixing System In the background left is a SVENMIX.D Model 3325 with a 2.1 cu.ft. hopper. In the foreground right is a SVENMIX 1100 Gallon Polyethylene Tank with a ¼ HP 60 RPM SVENMIX LS Mixer. Mounted in the foreground bottom is a progressing cavity pump.

The air tight hopper on the SVENMIX.D is filled with chemical. The chemical is fed into the eductor funnel where it is wetted. Water flow carries the wetted chemical to the mixing tank where it is mixed into solution. The progressing cavity pump delivers the solution to the point of injection. The feeder on the SVENMIX.D and the progressing cavity pump are controlled via VFD's. Water flow is controlled by a flowmeter and gate valve.

The SVENMIX.D DRY CHEMICAL MIXING SYSTEM is a fully automated chemical mixing system that produces a thoroughly mixed solution for any application. Precise control of water flow and chemical feed provides the capability to produce the exact solution concentration for the particular application. The washdown eductor funnel wets the chemical and provides initial mixing that avoids the formation of "mud balls" or "fish eyes." Single or multiple mixing tanks with SVENMIX LS Mixers complete the solution preparation. Chemical injection pumps deliver the chemical solution to the point of application.
The SVENMIX.D SYSTEM reduces the labor intensive, time consuming job of chemical mixing to a simple automated task.

SVENMIX.D DRY CHEMICAL MIXING SYSTEM

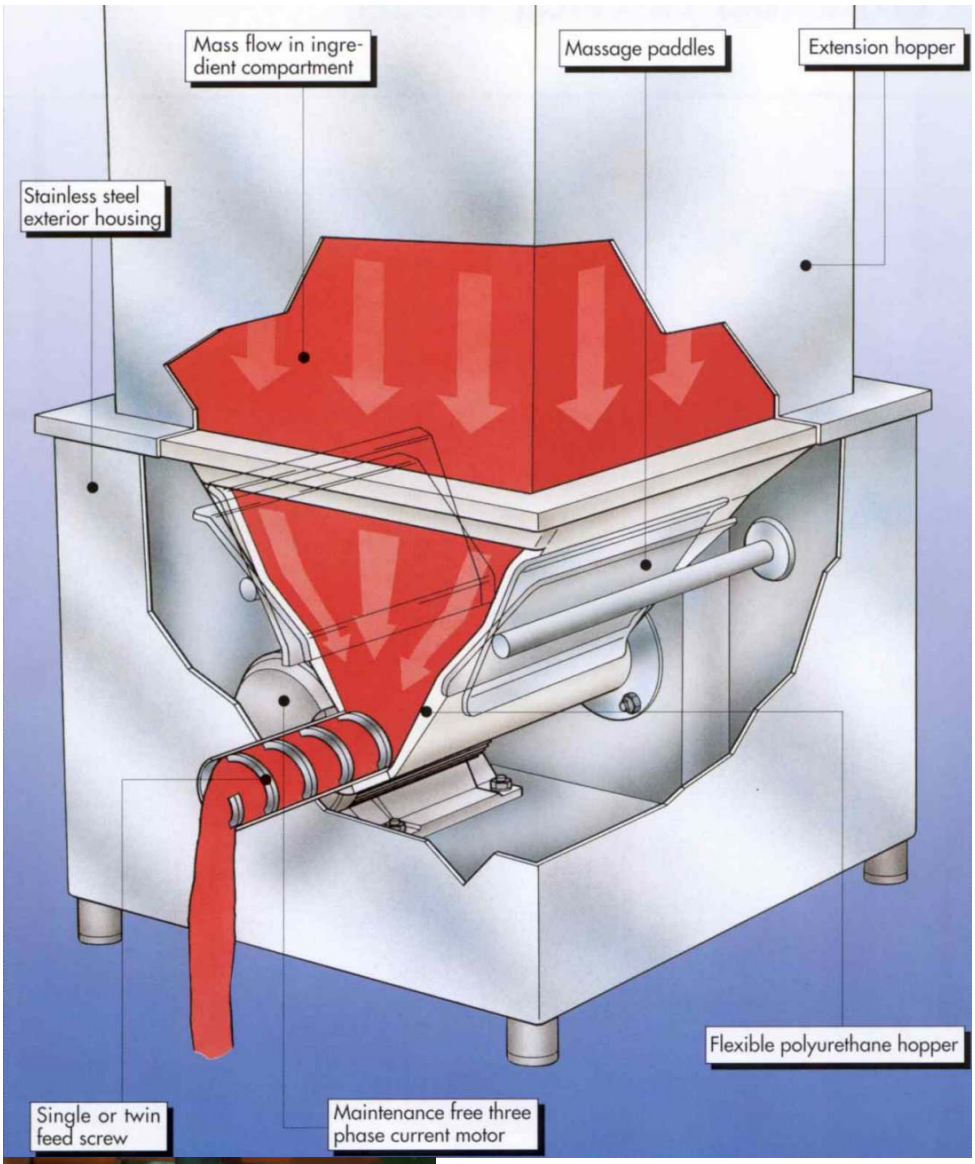


1] Flow Control/Shut-Off Valve
2] Flowmeter
3] Pressure Guage
4] Volumetric Feeder
5] Solenoid Valve
6] By-Pass Valve
7] Washdown Water Control Valve
8] Eductor/Mixing Funnel

Water flow through the SVENMIX.D is initiated by actuating the solenoid valve [5]. Adjusting the gate valve [1] in front of the Flowmeter [2] controls the water flow. The chemicalr is stored in the sealed hopper above the Volumetric Feeder [4], which keeps the chemical dry to avoid bridging and clumping. The Volumetric Feeders flexible Polyurethane receiving hopper with massaging paddles prevents bridging and insures a continuous flow of chemical to the feed screw. The Volumetric Feeders touch pad controller allows precise control of the chemical feed into the Eductor Funnel [8] where it is wetted and primary mixing takes place. The wetted chemical is carried by the water flow to the Mixing Tank(s) where the mixing process is completed to produce the chemical solution required. Following mixing the solution is ready to be pumped to the point of application with the Chemical Solution Pump.

The SVENMIX.D is a simple system that rapidly wets and solubilizes chemical to produce a homogeneous solution.

The entire system operates on 120v 1ph 60Hz power.



VOLUMETRIC FEEDER

TheSVENMIX.D Volumetric Feeder is manufactured of corrosion resistant materials for long life in harsh environments. The sealed hopper keeps the chemical dry. The Polyurethane Feed Hopper with Massaging Paddles prevents bridging and ensures even,"first in – first out" chemical flow to the Feed Screw. The Feed Screw delivers the chemical into the Eductor Funnel.

Simple and quick disassembly and reassembly provides for easy maintenance.

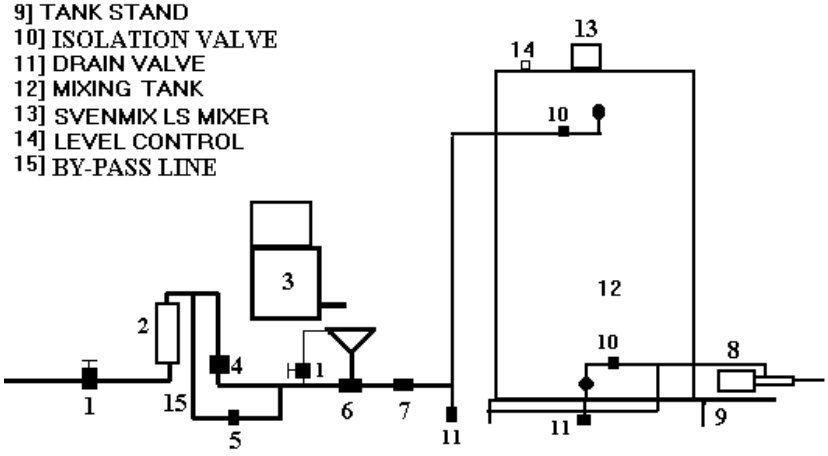
EDUCTOR FUNNEL

The Eductor Funnel provides the primary mixing of the chemical with water. As the chemical from the Volumetric Feeder is delivered to the Funnel the tangential flow of water into the upper rim of the funnel swirls around and down the sides of the funnel until it contacts the deflectors near the bottom of the funnel. The deflectors produce a cross spray that is drawn into the vortex by the vacuum created by the flow through the Eductor. As the flow is drawn in and through the Eductor the solution is diluted and continues to mix as it flows to the Mixing Tank(s).

SVENMIX.D CHEMICAL MIXING SYSTEM

1] GATE VALVE
2] FLOWMETER
3] DRY CHEMICAL FEEDER
4] SOLENOID VALVE
5] BALL VALVE
6] EDUCTOR w/MIXING FUNNEL
7] BALL CHECK VALVE
8] CHEMICAL SOLUTION PUMP
9] TANK STAND
10] ISOLATION VALVE
11] DRAIN VALVE
12] MIXING TANK
13] SVENMIX LS MIXER
14] LEVEL CONTROL
15] BY-PASS LINE

SVENMIX.D with Single Mixing/Aging Tank and SVENMIX LS Mixer.



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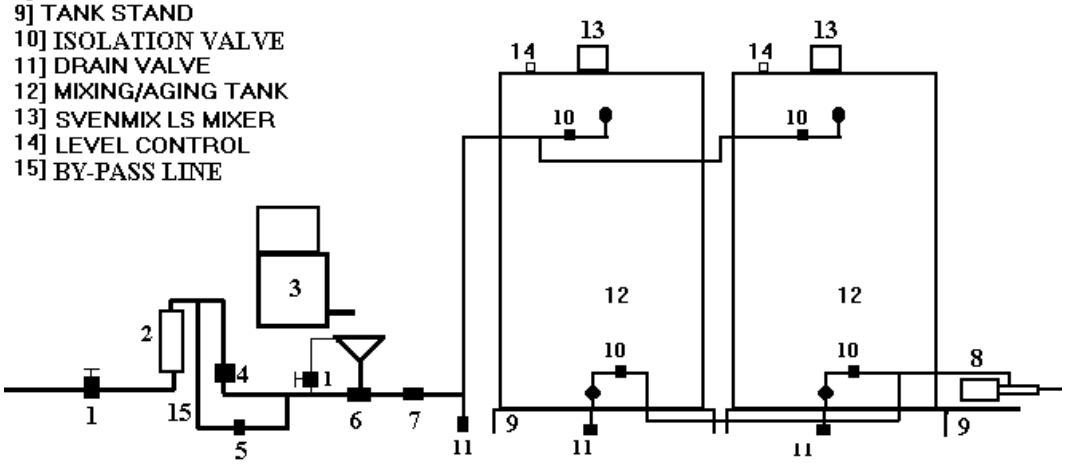
13] SVENMIX LS MIXER
14] LEVEL CONTROL
15] BY-PASS LINE

SVENMIX.D with Dual Mixing/Aging Tanks and SVENMIX LS Mixers.



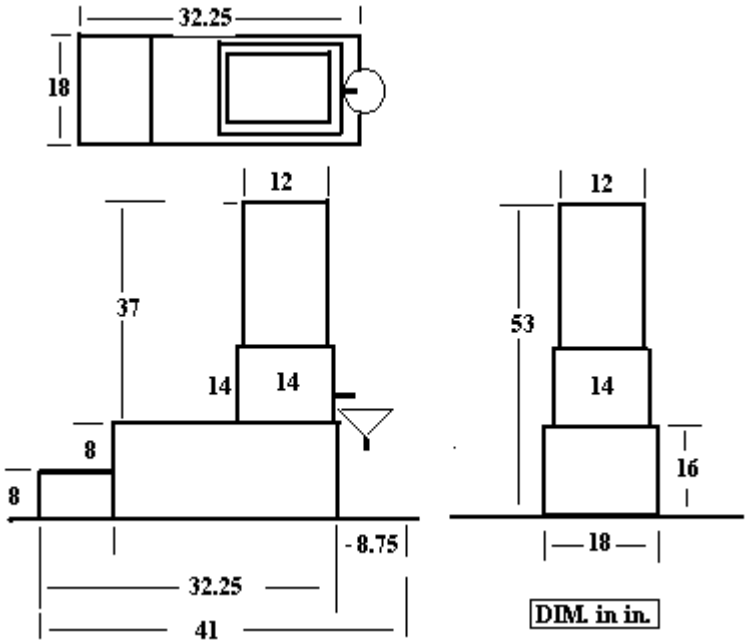
SVENMIX Systems can be built to accommodate bags, super sacks or bulk handling systems. Both Single Dual Mixing/Aging Tank Systems have a small footprint. The Mixing Tanks are separate components from the SVENMIX.D Unit. This means the SVENMIX.D can be mounted as a single assembly or the Mixing Tank(s) can be sited remote from the SVENMIX.D Unit. All that is required is the interconnecting pipe. The system is constructed of corrosion resistant materials. Standard support structures are coated steel. Stainless steel is available.

SVENMIX D
SPECIFICATIONS AND CAPACITIES
Model 3325

Equipment Specifications	Max. Cap.	
Water Flowmeter	50 GPM	3000 GPH
Volumetric Feeder	8.0 cu.ft./hr.	
Chemical Hopper (Std.)	2.1 cu.ft.	

Operational Data
Typical Applications

Solution Concentration	0.5%	
Dilution Water	50 GPM	3000 GPH
Chemical Feed	2.0 lbs/Mn.	120 lbs/Hr.
Solution Concentration	0.1%	
Dilution Water	50 GPM	3000 GPH
ChemicalFeed	0.42 lbs/Mn.	25 lbs/Hr.

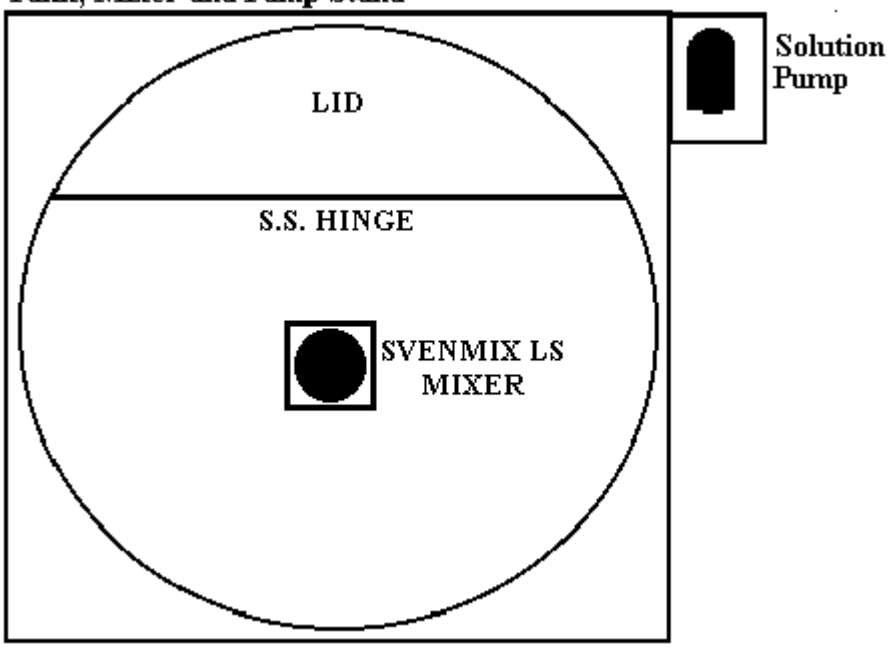


SVENMIX D

MIXING TANK SPECIFICATIONS

Tank Cap.	DxH	Tank Stand
150 Gal.	31 X 48 in.	33 X 33 X 4 in.
200 Gal.	36 X 48 in.	40 X 40 X 4 in.
350 Gal.	48 X 48 in.	52 X 52 X 4 in.
1000 Gal.	74 X 64 in.	76 X 76 X 4 in.
1200 Gal.	85 X 53 in.	88 X 88 X 4 in.

Tank, Mixer and Pump Stand



SVENMIX Mixing Tanks are manufactured from virgin Polyethylene or of high strength FRP. SVENMIX LS Mixers operate at 60-400 RPM, with ¼-1.0 HP Motors using either 120/240v 1ph or 240/480v 3ph power. SVENMIX LS Mixers employ single or multiple impellers of propeller, axial turbine or SVEN Multi-Directional design. Mixer shafts and impellers are manufactured from stainless steel. Polymer solution pumps are progressing cavity pumps, gear pumps or diaphragm pumps depending upon the application or specifications. Tank and pump stands are epoxy coated steel. Stainless steel support stands are available.

Materials of Construction

Volumetric Feeder is Stainless Steel w/Urethane lined hopper.

Mixing Funnel is Stainless Steel.

Eductor is PVC.

Mixing Tank is Polyethylene (FRP optional).

Mixer Shaft and Impellers are Stainless Steel.

Chemical Solution Pumps are Stainless Steel and Viton or PVC and EPDM.

Solenoid Valve is Brass.

Gate Valves and Ball Valves are PVC and Viton.

Piping and other Plumbing is PVC.

Volumetric Feeder Stand and Tank Stand are Epoxy Coated Steel (Stainless Steel optional).

Power Requirements

Solenoid Valve, Volumetric Feeder, SVENMIX LS motors, and Electrically Actuated Valves: 120v 60 Hz 1ph.

Chemical Solution Pumps
Diaphragm Pumps: 120v 60Hz 1ph
Progressing Cavity Pumps: 230v 3ph (480v 3ph optional)

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