

SVENMIX PLUS

POLYMER MIXING SYSTEM

Chemical
Mixing Systems
Since 1978

SVEN

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SVENMIX PLUS

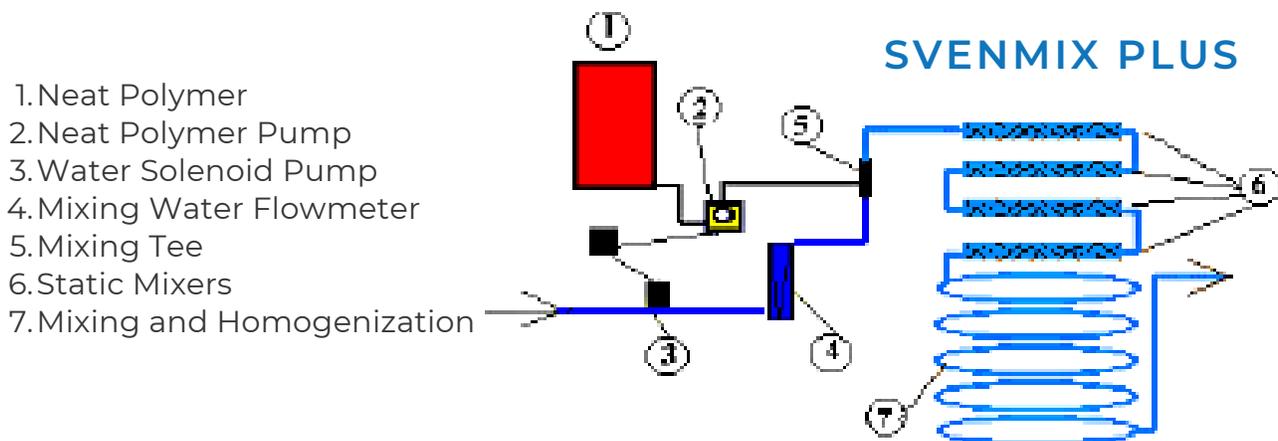
POLYMER MIXING SYSTEM

DESCRIPTION

SVENMIX PLUS, Polymer mixing system is an efficient system for producing a homogenous activated polymer solution. The SVENMIX PLUS can be used with either emulsion or solution polymers.

POLYMER MAKE DOWN UNIT & PROCESS

1. Integrated calibrated Polymer Reservoir that provides accurate measurement of daily polymer use. The Polymer Reservoir provides flooded suction to the Neat Polymer Pump, eliminating priming problems.
2. The Neat Polymer Pump has 100% - 0 turn down from maximum capacity. The Neat Polymer Pump injects the polymer into a mixing tee in front of the Primary Mixing Section.
3. The dilution water flows through a Solenoid valve and into the flow meter.
4. The flowmeter measures and controls the amount of dilution water through the system.
5. The Mixing Tee brings the dilution water and the polymer together and outlets into the Primary Mixing Section. This helps eliminate the formation of “ fish-eyes”.
6. The polymer and dilution water are blended and mixed through four static mixing sections.
7. The Homogenization section ages the polymer solution, resulting in a completely blended and activated polymer solution.



** Accessories available include aging vessels, tote or bulk tank connections, floor supports or wall mounting lugs. Every size SVENMIX can be equipped for post dilution. **

SVENMIX PLUS APD

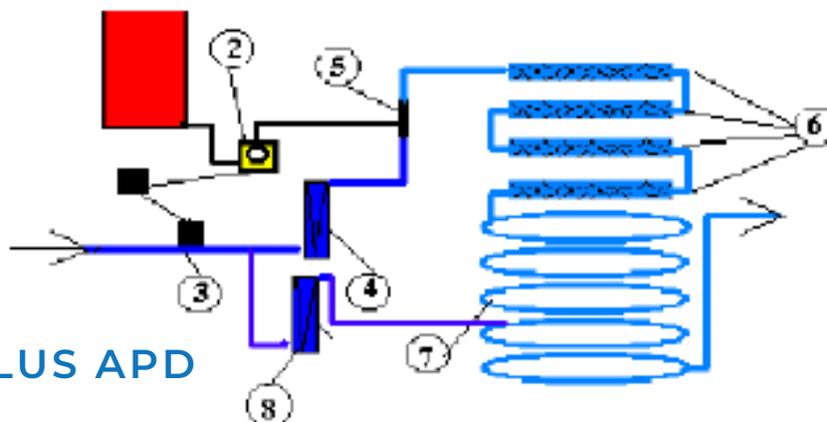
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4. The flowmeter measures and controls the amount of dilution water through the system.
5. The Mixing Tee brings the dilution water and the polymer together and outlets into the Primary Mixing Section. This helps eliminate the formation of “ fish-eyes”.
6. The polymer and dilution water are blended and mixed through four static mixing sections.
7. The Homogenization section ages the polymer solution and the result is a completely blended and activated polymer solution.
8. The Post Dilution Flowmeter provides additional dilution water to reduce the polymer Concentration delivered to the point of application.



SVENMIX PLUS APD

SVENMIX PLUS APD

POLYMER MIXING SYSTEM

SPECIFICATIONS

1) GENERAL

- A. The entire mixing system shall be mounted on a Stainless Steel or Powder Coated steel support frame.
- B. The mixing system shall operate on 120v 1ph AC power.
- C. The mixing system shall be capable of operating at up to 75psi water pressure.
- D. The unit shall produce a thoroughly diluted, mixed, and activated Polymer solution.
- E. The mixing system shall have an integral neat polymer day tank with calibrations (Gals or Liters) which will supply the neat polymer by flooded suction to the neat polymer pump.
- F. The system shall be operated by a digital controller with touchpad control, and Graphic Display. The Controller is capable of accepting external digital or analog signals, and capable of operating the neat polymer pump in SPM or SPH mode. The Controller can operate in Local or Remote Mode. The Controller has a programmable "Washdown" mode for cleaning purposes.

2) WATER PIPING

- A. Water flow through the system shall be initiated by energizing a normally closed solenoid valve. The solenoid valve is brass, and all other piping in the unit is PVC, P.E., or Stainless Steel.
- B. Water flow through the system is controlled by needle valves (or gate valves) connected to two flow meters (GPM or LPM) one flowmeter shall be for mixing water and one flowmeter for post-dilution water.
- C. Piping connections are NPT.

3) POLYMER MIXING

- A. The neat polymer pump shall be an electrically actuated diaphragm pump with speed and stroke length adjustment of 0-100%. A progressive cavity pump or gear pump are options on larger capacity systems. Proportional control by 4-20mA signal is available.
- B. The neat polymer day tank shall be a calibrated, 5 or 10 U.S. Gal. Polyethylene tank with cover. The tank shall be mounted on the unit to provide a flooded suction to the neat polymer pump. (CONTINUED ON NEXT PAGE)

SVENMIX PLUS APD

POLYMER MIXING SYSTEM

3) POLYMER MIXING (CONT.)

The neat polymer pump can also be connected directly to a drum, tote or bulk storage tank.

C. Polymer mixing and blending shall be accomplished by the neat polymer pump injecting polymer into the water flow in the mixing tee followed by 4 passes through inline static mixers. The primary and final static mixers are housed in clear PVC for visual observation of the mixing process.

D. Homogenization and activation are accomplished in the final section. As the solution passes through the outlet port it is ready to be delivered to the point of application.

E. Loss of water flow, detected by a pressure transducer, will turn off power to the neat polymer pump. The neat polymer pump will not restart until the water flow resumes.

4) OPTIONAL EQUIPMENT

- A) Analog Control
- B) Extended Aging Chambers.
- C) Calibration Column.
- D) Low Flow cut-off switch.
- E) Backflow Preventer.
- F) Post-Dilution water system.

5) REQUIREMENTS

- A) All electrical components shall be UL listed.
- B) All plumbing components shall be Schedule 40 min.
- C) Frame shall be 304 SS or Powder Coated Steel min.
- D) Housing shall be ¼" PolyPropylene min.

6) WARRANTY

The SVENMIX PLUS is warranted against defects in material and workmanship for 1 full year from the date of installation. Damage caused by mishandling, improper installation, or lack of maintenance will not be covered. Damage due to sediment or debris in the water supply will not be covered in this warranty.

SVENMIX PLUS APDFM

POLYMER MIXING SYSTEM

SPECIFICATIONS

1) GENERAL

- A. The entire mixing system shall be mounted on a Stainless Steel or Powder Coated steel support frame.
- B. The mixing system shall operate on 120v 1ph AC power.
- C. The mixing system shall be capable of operating at up to 75psi water pressure.
- D. The unit shall produce a thoroughly diluted, mixed, and activated Polymer solution.
- E. The mixing system shall have an integral neat polymer day tank with calibrations (Gals or Liters) which will supply the neat polymer by flooded suction to the neat polymer pump.
- F. The system shall be operated by a digital controller with touchpad control, and Graphic Display. The Controller is capable of accepting external digital or analog signals, and capable of operating the neat polymer pump in SPM or SPH mode. The Controller can operate in Local or Remote Mode. The Controller has a programmable "Washdown" mode for cleaning purposes.

2) WATER PIPING

- A. Water flow through the system shall be initiated by energizing a normally closed solenoid valve. The solenoid valve is brass, and all other piping in the unit is PVC, P.E., or Stainless Steel.
- B. Water flow through the system is controlled by needle valves (or gate valves) connected to two flow meters (GPM or LPM) one flowmeter shall be for mixing water and one flowmeter for post-dilution water.
- C. Piping connections are NPT.

3) POLYMER MIXING

- A. The neat polymer pump shall be an electrically actuated diaphragm pump with speed and stroke length adjustment of 0-100%. A progressive cavity pump or gear pump are options on larger capacity systems. Proportional control by 4-20mA signal is available.
- B. The neat polymer day tank shall be a calibrated, 5 or 10 U.S. Gal. Polyethylene tank with cover. The tank shall be mounted on the unit to provide a flooded suction to the neat polymer pump. (CONTINUED ON NEXT PAGE)

SVENMIX PLUS APDFM

POLYMER MIXING SYSTEM

3) POLYMER MIXING (CONT.)

The neat polymer pump can also be connected directly to a drum, tote or bulk storage tank.

C. Polymer mixing and blending shall be accomplished by the neat polymer pump injecting polymer into the water flow in the mixing tee followed by 4 passes through inline static mixers. The primary and final static mixers are housed in clear PVC for visual observation of the mixing process.

D. Homogenization and activation is accomplished in the final section. As the solution passes through the outlet port it is ready to be delivered to the point of application.

E. Loss of water flow, detected by a pressure transducer, will turn off power to the neat polymer pump. The neat polymer pump will not restart until the water flow resumes.

4) SVENMIX PLUS DIGITAL PROGRAMMABLE CONTROLLER

A. The Controller shall include: One (1) Polymer Feed Control Panel UL Type 4X Non-Metallic Enclosure Wall Mountable with Quick Release Latches

B) Circuit Breakers

1. Control

C) Pilot devices

1. On-Off-Remote Switches

D) Contacts for Remote Monitoring and Alarms

1. Loss of Flow

2. Polymer System On/Off

3. Polymer System Fail Status

4. Polymer System Local/Remote Status

E) Micro V-PAC II Programmable Controller

1. 128 x 64 Graphic Backlit LCD Display

2. (12) Discrete Inputs

3. (12) Discrete Outputs

4. (2) Analog Inputs

5. (2) Analog Outputs

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SVENMIX PLUS APDFM

POLYMER MIXING SYSTEM

4) SVENMIX PLUS DIGITAL PROGRAMMABLE CONTROLLER (CONT.)

- F) Circular Plastic Receptacle and Plug for Signal Input
- G) Terminal Blocks for All I/O
- H) Provisions To Mount and Wire
 - 1. Mini CAS Relay
 - 2. Telephone Dialer

5) OPTIONAL EQUIPMENT

- A) Analog Control
- B) Extended Aging Chambers.
- C) Calibration Column.
- D) Low Flow cut-off switch.
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POLYMER MIXING SYSTEM

MODEL	DILUTION WATER CAPACITY	NEAT POLYMER MAX. CAPACITY	MIN % SOLUTION	RESERVOIR
SM105P	0-10 GPM	0.42 GPH (10 GPD)	0.01	5.0 Gal.
SM1010P	0-10 GPM	0.42 GPH	0.01	10.0 Gal.
SM145P	0-10 GPM	0.60 GPH (14 GPD)	0.01	5.0 Gal.
SM1410P	0-10 GPM	0.60 GPH	0.01	10.0 Gal.
SM245P	0-10 GPM	1.0 GPH (24 GPD)	0.015	5.0 Gal.
SM2410P	0-10 GPM	1.0 GPH	0.015	10.0 Gal.
SM485P	0-10 GPM	2.0 GPH (48 GPD)	0.02	5.0 Gal.
SM4810P	0-10 GPM	2.0 GPH	0.02	10.0 Gal.
SM6010P	0-10 GPM	2.5 GPH (60 GPD)	0.03	10.0 Gal.
SM9610P	0-20 GPM	4.0 GPH (96 GPD)	0.01	10.0 Gal.
SM19210P	0-20 GPM	8.0 GPH (192 GPD)	0.02	10.0 Gal.
SM24010P	0-20 GPM	10.0GPH(240 GPD)	0.02	10.0 Gal.

DIMENSIONS:	SVENMIX PLUS	SVENMIX PLUS APD
5.0 Gal. Tank	24" X 24" X 39 H	24" X 24" X 39 H
10.0 Gal. Tank	24" X 24" X 43.5 H	24" X 24" X 43.5 H

Automatic controls, higher capacities, and larger reservoirs are available. Adapters for connection to totes or bulk tanks are available on request.

The standard SVENMIX PLUS requires 120 VAC. If 240 VAC or other power requirements are necessary please contact SVEN.

SVENMIX PLUS

POLYMER MIXING SYSTEM



SIOUX VALLEY ENVIRONMENTAL has been building chemical mixing and chemical injection systems for the water and wastewater industries since 1978.

The SVENMIX PLUS is just one of a family of polymer mixing systems that includes the SVENMIX.D Dry Polymer Mixing System and the SVENMIX.LD Polymer Mixing System for Liquid and/or Dry Polymers.