

Mix Processor

Maximize yields, reduce changeover times, and improve product quality with DSI's Mix Processor.



Process Features

Automatic Brix Blending

- Maintain brix setpoint regardless of syrup brix fluctuations
- System automatically determines the minimum syrup brix value that can be blended

No-Dump Start Up / End of Production

- Initial product is automatically blended rich to compensate for residual water in the filler
- Also due to residual water, initial product CO2 settings are automatically lowered during the initial bowl charge to achieve target CO2 setpoint.

Automatic Syrup Detection

- Perform automatic syrup cuts at the blender for sugared and diet syrups. The system significantly reduces syrup losses by automatically determining the presence and proper strength of the syrup.
- Syrup detection feature works automatically during syrup charges and syrup cuts.

Self Contained CIP System - Option

- Eliminates the need to provide an external CIP source

Changeover

- Automatic syrup detection and changeover controls are integrated to the syrup room, empty container system and the filler.
- Utilizing a three-stage rinse, the syrup system is rinsed completely before the production run is finished, allowing the next syrup to be charged ahead of time.
- Precise blending generates higher syrup yields, reduces losses and achieves lower BOD between changeovers.



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The Mix Processor is a multi-purpose blend system that can replace a traditional mix processor or become the core of a new system.

Specifications

Performance and Operation

Capacity (GPH)	7,000 – 12,000
Blend Ratios	4:1 to 7:1
Blend Accuracies	Brix ± 0.03 °Brix Diet $\pm 0.50\%$ Assay CO ₂ ± 0.05 Volumes
Minimum Syrup Brix	40 °Brix
Dimensions	8' L x 7' W x 10' H
Process Connections	Tri-Clamp
Gasket Material	EPDM/Viton (Optional)
Shipping Weight	5,000 LBS (Empty)
Treated Water	40-70 psig ± 5 psig, 150-200 GPM 3" Tri-Clamp Conn.
Syrup	30-50 psig ± 5 psig, 30-50 GPM 2" Tri-Clamp Conn.
CO ₂	250-300 psig, 1000 Lbs/HR 1" NPT Conn.
Amps	60
Voltage	460 VAC 60HZ / 3PH
Changeover Time	5-10 Minutes (Dependent upon filler)
Meter Accuracy	0.20% (By Weight)

Construction Material

All product contact surfaces are constructed of 304L SS.
All air and CO₂ piping is constructed of 304L SS.
All process connections are 304L sanitary tri-clamp style with manual butt-weld fittings.
All piping hangers are constructed of 304L SS.



With over 50 years of sanitary processing experience, DSI Process Systems is the process expert.

Using computer aided design, DSI engineers work closely with clients to build systems with equipment and features that will serve their needs well into the future. A multi-disciplined staff brings all aspects of the project under one roof, providing a "pull it all together" approach.

A project is considered complete when the client's needs are satisfied.

Controls & Software

- Coriolis mass flow meter blend system for syrup and water components
- Water and syrup reservoirs with automatic level control
- Allen Bradley PLC control system

Options:

- Meter based in-line carbonation
- Vacuum deaeration system
- Ammonia plate and frame chiller package
- Self-contained CIP system

Process/CIP Design
Automation/Electrical Design
Fabricated Modules/Components
Installation
Project Management
Commissioning/Training
System Integration
Design/Bulld Projects



We serve the following industries:
Carbonated and Non-Carbonated Beverages,
Juice, Water, Food, Dairy, Pet Food, Personal
Care Products, Pharmaceutical, Household
Goods and Specialty Chemical.