

INNOVATION IN AUTOMATION

Liquid Systems



SYSTEM PROFILE



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Leave your liquids to us.

We've handled it all when it comes to liquids, from bulk oil and sweetener systems all the way to E3A dairy compliance. We provide complete liquid systems, from the design, supply and installation of liquid vessels, meters, valves and pumps, to temperature controls and insulation. With our breadth of capabilities, we're a leader in liquid handling.



LIQUIDS CAPABILITIES

- › Bulk liquid systems
- › Tote systems
- › Water blending
- › Cream yeast systems
- › CIP (Clean-in-Place) skids
- › Metering & dosing systems
- › Liquid fermentation systems
- › Slurry systems
- › Liquid egg systems

TYPICAL LIQUID

INGREDIENTS HANDLED

- › Oil
- › Sweeteners
- › Cream yeast
- › Egg
- › Vinegar
- › Molasses
- › Invert sugar
- › Shortenings
- › Chocolate
- › Liquid sucrose

Bulk Liquid Systems

TYPICAL DESIGN

- › Tanks available in 6, 8, 10 & 12,000 gallon capacity (other sizes available)
- › Multiple options for heating & insulating tanks
- › Carbon steel with food grade lining or S/S steel with sanitary finishes available
- › Piping systems in sanitary S/S tubing with tri-clamp connections
- › Specified pumps and valves for process requirements
- › State-of-the-art mass flow meters for precise and accurate metering

OPTIONAL EQUIPMENT

Controls for automatic valving and pump regulation featuring:

- › Local or remote control
- › Automated supply valves
- › Temperature control
- › Water jacketed or heat traced piping
- › Recipe integration
- › Lot tracking



Liquid Tote Systems

TYPICAL DESIGN

- › Tote adapter
- › 2" food grade transparent hose with tri-clamp connections
- › Sanitary inline level switch
- › 304 S/S reservoir tank with vacuum breaker air bleed
- › Transfer pump
- › Mounted on a 304 S/S tote stand for sanitary environments

OPTIONAL EQUIPMENT

- › Multiple reservoir capacities per process requirement
- › Sanitary strainer
- › Sanitary magnet trap
- › Tank heater
- › Automated tilt feature for better clean out
- › Double stacked
- › Custom configuration

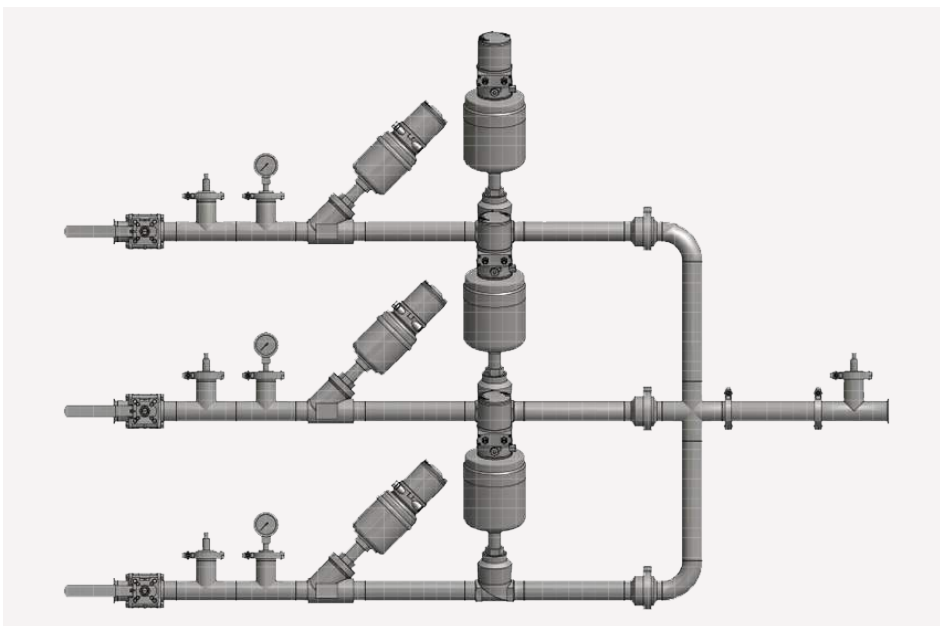
Water Blending

TYPICAL DESIGN

- › Multiple flow rates available (actual rate dependent upon facility water systems)
- › S/S sanitary tri-clamp down stream connections
- › NEMA 4X construction
- › S/S mounting rack for floor, wall or ceiling
- › +/- 1° Fahrenheit

OPTIONAL EQUIPMENT

- › Temperature control unit
- › Batch control unit





Sanitary Liquids

Cream Yeast Systems

TYPICAL DESIGN

- › Two 6,000-gallon 304 S/S jacketed, insulated and agitated storage tanks
- › Temperature controlled
- › Two sanitary centrifugal pumps - 304 S/S
- › CIP & ingredient transfer panel - 304 S/S
- › Sanitary automated valves

OPTIONAL EQUIPMENT

- › Unloading pump
- › Meter
- › Use point valving
- › CIP System



CIP (Clean-in-Place) Skids

TYPICAL DESIGN

- › 304 S/S product contact surface (316 S/S available)
- › 304 S/S frame and supports
- › Integrated supply pump
- › Tank level control
- › Automated supply and return valves
- › Automated water feed valves
- › Solution sampling valve

FLEXIBILITY

- › Single or multiple tank
- › Fully automated computer control and/or manual
- › Steam, electric or hot water heating
- › Mix proof valving available for full device automation
- › Spray device integration into existing equipment
- › Design compliance to meet applicable standards

APPLICATIONS

- › Cream yeast
- › Liquid egg
- › Dairy
- › Fermentation & brew systems



Liquid Fermentation Systems

TYPICAL DESIGN

- › Flour scale hopper
- › Mix tanks
- › Ferment tanks
- › Heat exchanger
- › Cold hold tanks
- › Sanitary transfer pumps

OPTIONAL EQUIPMENT

- › CIP system
- › Metering equipment
- › Cream yeast equipment

BULK STORAGE INFORMATION

VERTICAL STORAGE TANKS VOLUME (GALLONS/LITERS)	APPROXIMATE DIMENSIONS (FT.)	APPROXIMATE WEIGHTS EMPTY (LBS./KILOS)	APPROXIMATE WEIGHTS FULL (WATER) (LBS./KILOS)
6,000/22,712	10 x 19	10,500/4,763	60,540/27,456
8,000/30,283	10.5 x 20	13,000/5,897	79,720/36,154
10,000/37,854	10.5 x 24	16,000/7,258	99,400/45,080

* HORIZONTAL TANKS ALSO AVAILABLE