

MADDEN PUMP

Chemical Feed Systems

Heavy duty tank and pump systems for practically any chemical addition need.

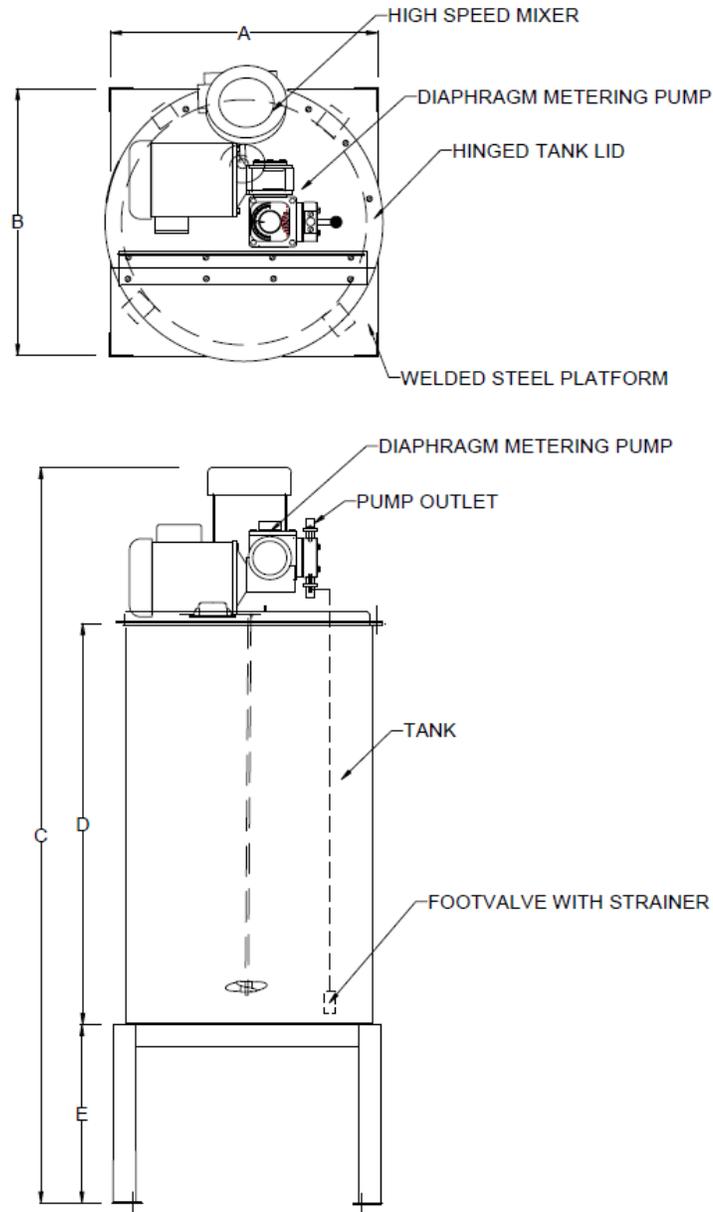


Custom build, chemical feed system

Chemical feed systems combine on one platform a tank for mixing and storing chemical solutions, a mixer, a Madden diaphragm metering pump to inject the chemical solution, and suction and relief piping. Standard pre-engineered systems are available, as well as customized systems with equipment and features specified by the user. Features include:

- **Tanks:** durable polyethylene tanks are standard. Polypropylene and stainless steel tanks are options. Hinged lids and piping connections are included. Sizes from 30 to 110 gallon capacity are standard, with optional sizes available to meet any storage capacity requirement.
- **Pumps:** Madden diaphragm metering type pumps are used to inject chemicals into the plant operating system. Madden pumps are industrial grade, heavy duty construction, with adjustable output control. Output from 2 gallons per day for the smallest pump, to 360 gallons per hour for the largest. See Madden P04 metering pump brochure for complete pump details.
- **Mixers:** Madden high speed, slow speed, or variable speed mixers are used to mix the chemical solution needed. Stainless steel shaft and propeller are standard. See the Madden mixer brochure for complete mixer details.
- **Platforms:** welded steel construction designed to support the filled tank, and serve as a mounting for the mixer, pump and piping. Platforms raise tank 16" from the floor to enable easy access by the operator. Custom platforms can be made for multiple tanks and pumps. Standard finish is acrylic enamel, with highly corrosion resistant epoxy primer with polyurethane top coat as an option.

Compact layout with top mounted pump and high speed mixer



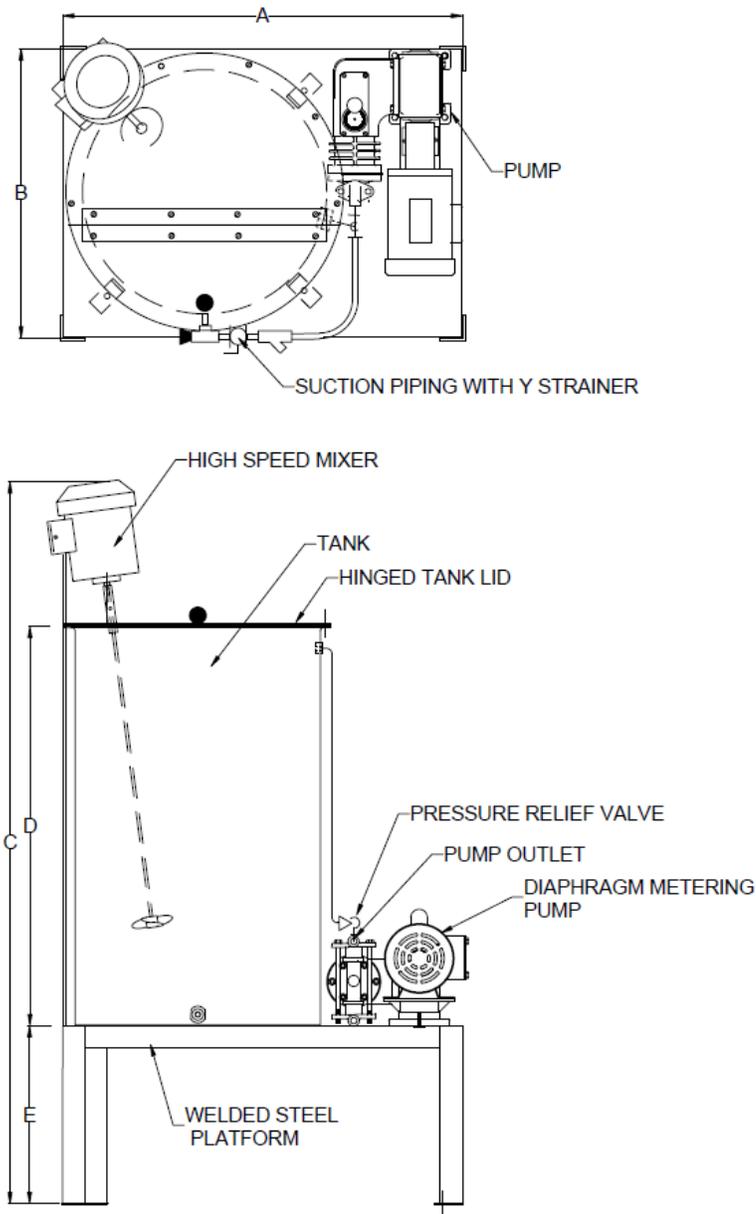
For dimensions see table on page 4

Sample Specifications:

The Contractor shall furnish and install a Madden chemical feed system, consisting of the following equipment:

- Pump, Madden (part no.) simplex diaphragm metering pump, rated for () gallons per hour at a maximum pressure of (150, 250, or 300) psi. The pump output will be adjustable while the pump is running. The motor will be () HP, 1/60/115 or 3/60/230, TEFC.
- Pump wetted end construction: (material), diaphragm: (material), valve balls: (material).
- The pump shall be bolted to the tank cover. Tank, (capacity) gallon polyethylene, includes hinged cover with polyethylene bottom and steel top, with mixer mounting brackets welded to the steel top section. The cover will be bolted to the tank top flange.
- The mixer will be 1725 rpm direct drive with 5/8" SS shaft, 4" SS propeller, and 1/3 HP 1/60/115 or 3/60/230 TEFC motor, bolted to the mounting brackets on the tank cover.
- A platform for pump and tank, (size) X 16" high, welded steel construction, finished with acrylic enamel (optional epoxy/polyurethane). Pump suction tubing will be 1/4" PVC with a PVC foot valve strainer at the lower end. (Optional: pump relief valve, set at () psi, with piping to return to tank.)

Side mounted pump system with high speed mixer



For dimensions see table on page 4

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The Contractor shall furnish and install a Madden chemical feed system, consisting of the following equipment:

- Pump, Madden (part no.) simplex diaphragm metering pump, rated for () gallons per hour at a maximum pressure of (150, 250, or 300) psi. The pump output will be adjustable while the pump is running. The motor will be () HP, 1/60/115 or 3/60/230, TEFC.
- Pump wetted end construction: (material), diaphragm: (material), valve balls: (material).
- The pump shall be bolted to the platform. Tank, (capacity) gallon (polyethylene or 304 SS), includes hinged cover and piping connections.
- The mixer will be 1725 rpm direct drive with 5/8" SS shaft, 4" SS propeller, and 1/3 HP 1/60/115 or 3/60/230 TEFC motor, bolted to the mounting brackets on the tank cover.
- A platform for pump and tank, (size) X 16" high, welded steel construction, finished with acrylic enamel (optional epoxy/polyurethane). Pump suction tubing will be 3/8" (PVC or 304 SS) with ball valve and Y strainer. (Optional: pump relief valve, set at () psi, with piping to return to tank.)

Chemical Feed System Data

Model Number	Tank capacity in gallons	Tank Material *	A	B	C	D	E	Drawing page number
TE501	30	HDPE**	25"	21"	38"	29"	N/A	2
TE502	55	HDPE	24"	24"	66"	36"	16"	2
TE503	110	HDPE	32"	32"	65"	36"	16"	2
TE504	55	HDPE	36"	26"	65"	36"	16"	3
TE504S	55	304SS	42"	30"	54"	27"	16"	3
TE505	110	HDPE	48"	32"	65"	36"	16"	3
TE505S	110	304SS	48"	36"	65"	36"	16"	3

Notes:

* Standard piping for HDPE tanks is schedule 80 PVC and PVC hose. For 304SS tanks schedule 40 304 SS.

**HDPE material is high density polyethylene. HDPE tanks are translucent so the liquid level can be seen through the wall of the tank. 304 SS tanks are supplied with a sight glass to determine the liquid level in the tank.

CUSTOMER SPECIFIED OPTIONS

For those customers with special requirements for a chemical feed system Madden is ready to modify the standard systems shown above, or start from scratch with a complete new layout. Here are some of the features we frequently get requests to include in a chemical feed system:

- Tank level switch
- Electrical control box, including wiring in flexible conduit to each motor
- Pipe, valve and fitting features specified by the customer
- Motors: standard motors are TEFC 1/60/115-230 or 3/60/230-460. Optional motors are available for 50 HZ electric power, or special enclosure requirements
- Calibration column to measure pump output
- Duplex systems with two pumps, one for service and one for backup
- Pump materials of construction specified by the customer
- Flow meter, automatic pump flow control

**MADDEN
PUMP**

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Form No. CF16