

SECTION 11263 - ROTARY VOLUMETRIC LIQUID FEEDERS

City of San Diego, CWP Guidelines

PART 1 - GENERAL

1.1 WORK OF THIS SECTION

- A. The WORK of this Section includes providing rotary type volumetric liquid feeders designed to feed chemical solutions or slurries of [PAC] [lime] [] by gravity, and drives, motors, valves, supports, controls, and accessories.

1.2 RELATED SECTIONS

- A. The WORK of the following Section applies to the WORK of this Section. Other Sections of the Specifications, not referenced below, shall also apply to the extent required for proper performance of the WORK.
 1. Section 11260 Chemical Feeding Equipment, General

PART 2 - PRODUCTS

2.1 GENERAL

- A. **Components:** Feeders shall include a tank in which a constant liquid level is maintained, a metering wheel for transferring the liquid over a baffle into a discharge section, a variable speed drive with controls for adjusting the speed of the wheel, a totalizer to register wheel revolutions, and a tank agitator. Feeders shall be equipped with a stainless steel paddle, or propeller type agitator designed to maintain a uniform slurry suspension. The paddle shall sweep back and forth near the tank bottom, and shall be actuated by a constant speed shaft.
- B. **Discharge:** Outlet openings of the feeding mechanism shall be shaped to prevent solution from back flow into the tank. The feeder discharge shall be continuous at all rates. The feeders shall maintain an accuracy of ± 1 percent of full scale. The rate of feed shall be indicated by a linear adjustment scale readable to 1/10 of 1 percent.
- C. **Feeder Construction:** Feeders shall be supplied through a pipe controlled by a float valve located in the feeder. The float valve shall be designed to maintain the proper liquid level in the feeder at the maximum rate required at the indicated pressures and to shut off tight when the feeder is stopped. The body and float shall be constructed of materials selected to resist the corrosive action of the chemical solution. The inlet pipes shall be designed to prevent the incoming liquid from splashing out of the tank and shall be constructed of materials designed to resist the corrosive action of the chemical solution. The feeder shall be constructed of a 10-gauge HRS fiberglass reinforced plastic lined tank; a fiberglass reinforced plastic polyester resin dipper and cover; a Type 316 stainless steel shaft and internal parts; and shall include shaft seals of Teflon Fluoroflex I, or equal with; PVC bearings and overflow pipe.
- D. **Tank Mounting:** The tank shall have integral supporting feet.

- E. **Drive:** The feeder shall be furnished with a variable speed drive and an electric motor complying with Section 16040. Motor shall be 1/4-hp, totally-enclosed and suitable for operation on 115-volt, single-phase, 60-Hz. Manual or magnetic motor starting switches with overload protection, shall be provided.
- F. **Control:** Feeders, when indicated for automatic operations, shall be designed to deliver liquid automatically in proportion to the rate of flow. Automatic proportional shall be of the type which shall operate the feeder motor in response to a 4-20 mA control signal. Provisions for adjusting the dosage by means of an adjustable mechanical speed unit housed within the feeders shall be included for manual adjustment of the feed rate, and by remote control with a selector switch.

2.2 SCHEDULE OF ROTARY VOLUMETRIC LIQUID FEEDERS

- A. Feeders shall comply with the following:

<u>I.D. No.</u>	<u>Location</u>	<u>Service (Chemical)</u>	<u>Capacity (gph)</u>	<u>Concentration of Solution (percent)</u>
[]	[]	[]	[]	[]

2.3 MANUFACTURERS

- A. Products shall be manufactured by one of the following (or equal):
 1. B.I.F. Rotodip Liquid Feeder
 2. Komline-Sanderson Liquid Feeder

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Rotary feeders shall be installed in accordance with Section 11260.

** END OF SECTION **