

Specifications – PowerPro® Gravity System

Part 1: CALCIUM HYPOCHLORITE TABLET CHLORINATION SYSTEM

1.01 *General Description.*

The system shall be designed to feed low concentrations of calcium hypochlorite in solution intermittently or continuously as required for water treatment applications, such as process, potable, waste, etc. The system shall be a single pre-assembled, package unit in a welded aluminum frame consisting of chlorinator and electrical box for ease of installation and operation. Multiple-unit systems shall not be acceptable. The system shall be the PowerPro® Model _____ by PPG Industries, Inc. Only Accu-Tab® SI (scale inhibitor) calcium hypochlorite tablets by PPG Industries, Inc shall be used.

The base proposal requires furnishing equipment as specified herein, though substitutions will be considered. The bidder is cautioned that substitutions must meet the quality and operational requirements of each feature specified in Section 1.02 below. Batch systems with pressure mixing components producing chlorine concentrations exceeding the limits of the specifications will not be considered.

Any system offered shall use an NSF Standard 61 listed erosion feeder, an NSF Standard 60 listed calcium hypochlorite tablet, and shall be capable of meeting all requirements of the Health Department having jurisdiction over the installation.

1.02 *System Features.*

- a. A maximum chlorine solution level of 0.05% (500 ppm) shall be maintained to prevent calcification in system components. Systems producing chlorine concentrations higher than 0.05% shall not be acceptable.
- b. Delivery shall be by erosion feed technology to control accurate and consistent concentration limits in the chlorine treatment solution. Spray and/or vortex technology systems shall not be acceptable.
- c. The chlorinator shall automatically and continuously feed a limited quantity of chlorine in solution as needed; when the system is not running, no chlorine will be stored. Batch systems preparing excess quantities of solution for delivery over an extended period shall not be acceptable.
- d. Systems requiring the use of a pump to feed pre-prepared standing solution shall not be acceptable.
- e. All piping in the chlorinator unit shall be Schedule 80 PVC for durability. Systems with flexible tubing shall not be acceptable.

1.03 System Components.

a. *Tablet Chlorinator.* Accu-Tab® chlorinators by PPG Industries, Inc are designed exclusively for Accu-Tab® SI calcium hypochlorite tablets by PPG Industries, Inc. Tablets are placed on a sieve plate inside the chlorinator; as water flows across the sieve plate, the tablets erode at a rate proportional to the flow rate.

b. *Inlet Water Supply Connection with Filter.*

Model 3012	1" FNPT	(fresh water supply of 10 GPM required)
Model 3075	1" FNPT	(fresh water supply of 20 GPM required)
Model 3150	1-1/2" FNPT	(fresh water supply of 60 GPM required)
Model 3530 and larger	1-1/2" FNPT	(fresh water supply of 60 GPM required)

c. *Inlet Solenoid Valve.* Opens and closes on command when the system receives a signal. 110 VAC required.

d. *Digital Flow Meter.* A flow sensor transmits a pulse signal to a digital monitor, measuring the flow of the fresh water-dissolving stream.

e. *Flow Control Valve.* PVC gate valve mounted in line with the flow meter allows operator to adjust flow of water-dissolving stream.

f. *Outlet Connection.*

Model 3012	1-1/2"
Model 3075	2"
Model 3150	3"
Model 3530 and larger	4"

g. *Nema 4X Electrical Enclosure.*

h. *Aluminum Frame, Type 6061-T.*

1.04 Optional Equipment.

a. *Motor Operated Valve.* Electrically activated valve controlled by process controller.

b. *Weight Scale.* Load cell factory-installed under the chlorinator to measure tablet weight.

c. *Process Controller.* Factory-installed PLC for automatic chemical delivery. Capability to control in Flow-Pacing, Residual, or Compound Loop modes.

d. *Chlorinator Dehumidifier.* Factory installed air blower to prevent tablets from moisture pick-up.

1.05 *Electrical Requirements.*

Two electrical circuits are required for operation: (1) dry contact or 110v 5 amp control, and (1) 110v 5 amp power.

1.06 *Warranty.*

The manufacturer shall guarantee in writing that this unit, if operated in accordance with written instructions given and accepted by the Owner, will perform in complete accord with the specifications. All components will be warranted against manufacturers' defects for twelve (12) months from its original installation date or thirteen (13) months from its PPG shipment date, whichever first occurs. **Only Accu-Tab® SI tablets can be used in these chlorination systems. Use of any other tablet will invalidate the warranty.**

1.07 *Extended Warranty*

The manufacturer shall guarantee an additional year(s) provided the end user customer agrees, in writing, to continue purchasing Accu-Tab® SI tablets from PPG's authorized Industrial Specialist, for that additional year(s).