SECTION 463653 - CHEMICAL TABLET FEEDING EQUIPMENT

Note that this section has only been edited for NYSOGS standardization and has not been technically edited. The designer shall make all technical edits specific to the project for this section.

Chlorination and dechlorination chemical tablet feeders are typically used for treating relatively small flow rates and may be useful in remote locations such as manholes since basic systems require no electricity. Typical applications include highway rest stops, mobile home parks, offshore drilling platforms, rural drinking water systems, schools, campgrounds, and cooling towers.

Some tablet dispensing systems are designed to work only with the equipment manufacturer's tablets; coordinate with tablet supplier to ensure that equipment is compatible with their product.

1. GENERAL
	* + 1. SUMMARY
				1. Section Includes:

Chemical tablet feeding equipment and appurtenances.

Tablets for chlorination and dechlorination.

* + - * 1. Related Requirements:

List other Sections directly related to or affecting Work of this Section. Include Sections specifying information expected to be found in this Section as well as Sections required to describe complete system or assembly requirements.

Section 055000 - Metal Fabrications: Fasteners, brackets, and other miscellaneous metal fabrications as required by this Section.

Division 40 - Process Interconnections: Valves as required by this Section.

Section 460553 - Identification for Water and Wastewater Equipment: Nameplates for equipment specified in this Section.

* + - 1. DEFINITIONS:
				1. PE: Polyethylene.
			2. REFERENCE STANDARDS

List reference standards included within text of this Section, with designations, numbers, and complete document titles.

* + - * 1. NSF International:

NSF 61 - Drinking Water System Components - Health Effects.

NSF 372 - Drinking Water System Components - Lead Content.

* + - 1. COORDINATION
				1. Coordinate Work of this Section with Work of other Sections.
			2. PREINSTALLATION MEETINGS
				1. Convene minimum [**one week**] <**\_\_\_\_\_\_\_\_**> [**weeks**] prior to commencing Work of this Section.
			3. SUBMITTALS
				1. Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.
				2. Manufacturer’s installation instructions shall be provided along with product data.
				3. Submittals shall be provided in the order in which they are specified and tabbed (for combined submittals).
				4. Section 013300 - Submittals: Requirements for submittals.
				5. Product Data: Submit manufacturer product data for system materials and component equipment.
				6. Shop Drawings: Indicate system materials and component equipment.
				7. Manufacturer’s Certificate: Certify that [**products**] <**\_\_\_\_\_\_\_\_**> meet or exceed [**specified requirements**] <**\_\_\_\_\_\_\_\_**>.

Include separate Paragraphs for additional certifications.

* + - * 1. Manufacturer Instructions: Submit detailed instructions on installation requirements, including storage and handling procedures.
				2. Source Quality-Control Submittals: Indicate results of [**shop**] [**factory**] tests and inspections.
				3. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.
				4. Manufacturer Reports: Certify that equipment has been installed according to manufacturer instructions.
				5. Qualifications Statement:

Coordinate following Subparagraph with requirements specified in QUALIFICATIONS Article.

Submit qualifications for manufacturer.

* + - 1. CLOSEOUT SUBMITTALS
				1. Project Record Documents: Record actual locations of installed chemical tablet feeding equipment.
			2. MAINTENANCE MATERIAL SUBMITTALS
				1. Spare Parts:

Furnish [**one set**] [**two sets**] of manufacturer's recommended spare parts.

\*\*\*\*\*\* [OR] \*\*\*\*\*\*

Furnish [**two**] <**\_\_\_\_\_\_\_\_**> of <**\_\_\_\_\_\_\_\_**>.

* + - * 1. Extra Stock Materials:

Furnish [**10**] <**\_\_\_\_\_\_\_\_**> <**\_\_\_\_\_\_\_\_**>-lb. [**pails**] [**drums**] of [**chlorination**] [**and**] [**dechlorination**] tablets.

* + - * 1. Tools: Furnish special [**wrenches**] <**\_\_\_\_\_\_\_\_**> and other devices required for Director’s Representative to maintain and calibrate equipment.
			1. QUALITY ASSURANCE

Include this Article to specify compliance with overall reference standards affecting products and installation included in this Section.

* + - * 1. Materials in Contact with Potable Water: Certified to NSF Standards 61 and 372.

In following Paragraph insert "State of New York Department of Transportation," "Municipality of \_\_\_\_\_\_\_\_ Department of Public Works," or other agency as appropriate.

* + - * 1. Perform Work according to <**\_\_\_\_\_\_\_\_**> standards.

Include following Paragraph only when cost of acquiring specified standards is justified.

* + - * 1. Maintain <**\_\_\_\_\_\_\_\_**> [**copy**] [**copies**] of each standard affecting Work of this Section on Site.
			1. QUALIFICATIONS

Coordinate following Paragraph with requirements specified in SUBMITTALS Article.

* + - * 1. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum [**three**] <**\_\_\_\_\_\_\_\_**> years' [**documented**] experience.
			1. DELIVERY, STORAGE, AND HANDLING
				1. Inspection: Accept materials on Site in manufacturer's original packaging and inspect for damage.
				2. Store materials according to manufacturer instructions.
				3. Protection:

Protect materials from moisture and dust by storing in clean, dry location remote from construction operations areas.

Provide additional protection according to manufacturer instructions.

* + - 1. EXISTING CONDITIONS
				1. Field Measurements:

Verify field measurements prior to fabrication.

Indicate field measurements on Shop Drawings.

* + - 1. WARRANTY

This Article extends warranty period beyond one year. Extended warranties may increase construction costs and Owner enforcement responsibilities. Specify warranties with caution.

* + - * 1. Furnish [**five**] <**\_\_\_\_\_\_\_\_**>-year manufacturer's warranty for chemical tablet feed equipment and accessories.
1. PRODUCTS
	* + 1. CHEMICAL TABLET FEEDERS
				1. [Manufacturers](http://www.specagent.com/LookUp/?ulid=12289&mf=04&src=wd):

Designer to provide two manufacturers and approved equivalent for all listed products.

\*\*\*\*\*\* [OR] \*\*\*\*\*\*

In following Paragraph insert "State of New York Department of Transportation," "Municipality of \_\_\_\_\_\_\_\_ Department of Public Works," or other agency as appropriate.

* + - * 1. Furnish materials according to <**\_\_\_\_\_\_\_\_**> standards.

Insert descriptive specifications below to identify Project requirements and to eliminate conflicts with products specified above.

* + - * 1. Description:

Flow-rated, proportional, dry chemical dosing unit.

Type: Gravity.

Material:

[**PE**] [**PVC**] <**\_\_\_\_\_\_\_\_**>.

UV resistant.

* + - * 1. Performance and Design Criteria:

Design Plant Flow Rate: [**500**] [**5,000**] [**50,000**] <**\_\_\_\_\_\_\_\_**> gal./day

* + - * 1. Fabrication:

Skid-mounted assembly.

* + - * 1. Accessories:

Mixing Chamber: No moving parts.

* + - 1. TABLETS
				1. Chlorination:

Minimum [**Calcium Hypochlorite**] [**and**] [**Bromine**] Content: [**70**] <**\_\_\_\_\_\_\_\_**> percent.

Dimensions: <**\_\_\_\_\_\_\_\_**> inches in diameter by <**\_\_\_\_\_\_\_\_**> inch thick.

Weight: <**\_\_\_\_\_\_\_\_**> oz

Nominal Dissolution Rate: <**\_\_\_\_\_\_\_\_**> oz./hr

* + - * 1. Dechlorination:

Minimum Sodium Sulfite Content: [**90**] <**\_\_\_\_\_\_\_\_**> percent.

Dimensions: <**\_\_\_\_\_\_\_\_**> inches in diameter by <**\_\_\_\_\_\_\_\_**> inch thick.

Weight: <**\_\_\_\_\_\_\_\_**> oz

* + - 1. SOURCE QUALITY CONTROL
				1. Provide shop inspection and testing of chemical tablet feed equipment and accessories.

Include one or both of following Paragraphs to require Director's inspection or witnessing of test at factory.

* + - * 1. Director’s Inspection:

Make completed tablet feeder available for inspection at manufacturer's factory prior to packaging for shipment.

Notify Director’s Representative at least [**seven**] <**\_\_\_\_\_\_\_\_**> days before inspection is allowed.

* + - * 1. Director’s Witnessing:

Allow witnessing of factory inspections and test at manufacturer's test facility.

Notify Director’s Representative at least [**seven**] <**\_\_\_\_\_\_\_\_**> days before inspections and tests are scheduled.

Include following Paragraph if reliance on fabricator's approved quality-control program is sufficient for Project requirements.

* + - * 1. Certificate of Compliance:

If fabricator is approved by authorities having jurisdiction, submit certificate of compliance indicating Work performed at fabricator's facility conforms to Contract Documents.

Specified shop tests are not required for Work performed by approved fabricator.

1. EXECUTION
	* + 1. EXAMINATION
				1. Verify that Work is ready to receive chemical tablet feeding equipment.
			2. INSTALLATION
				1. According to manufacturer instructions.

\*\*\*\*\*\* [OR] \*\*\*\*\*\*

In following Paragraph insert "State of New York Department of Transportation," "Municipality of \_\_\_\_\_\_\_\_ Department of Public Works," or other agency as appropriate.

* + - * 1. Installation Standards: Install Work according to <**\_\_\_\_\_\_\_\_**> standards.
			1. FIELD QUALITY CONTROL
				1. Inspect for proper operation.
				2. Testing:

Functional Testing: Prior to system startup, inspect components for proper alignment and connection and acceptable operation.

* + - * 1. Manufacturer Services: Furnish services of manufacturer's representative experienced in installation of products furnished under this Section for not less than <**\_\_\_\_\_\_\_\_**> days on Site for installation, inspection, field testing, and instructing Director’s Representative in maintenance of equipment.
				2. Equipment Acceptance:

Adjust, repair, modify, or replace components failing to perform as specified and rerun tests.

Make final adjustments to equipment under direction of manufacturer's representative.

* + - * 1. Furnish installation certificate from equipment manufacturer's representative attesting that equipment has been properly installed and is ready for startup and testing.
			1. ADJUSTING
				1. Check control functions and adjust as required.
			2. DEMONSTRATION
				1. Demonstrate equipment startup, shutdown, routine maintenance, and emergency repair procedures to Director’s Representative.

END OF SECTION 463653