SECTION 463353 - DRUM PUMPS

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.

This Section includes positive-displacement drum liquid pumps with electric or air motors, used to transfer chemicals and other liquids from drums and barrels. If a manual (crank-, lever-, or piston-operated) pump is specified, edit this Section accordingly.

1. GENERAL
   * + 1. SUMMARY
          1. Section Includes: Drum pumps and accessories.
          2. 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.

* + - 1. COORDINATION
         1. Coordinate Work of this Section with [**plant operations**] [**Director’s Representative's operations**] <**\_\_\_\_\_\_\_\_**>.
      2. SUBMITTALS

Only request submittals needed to verify compliance with Project requirements.

* + - * 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. Product Data:

Submit manufacturer's information regarding construction and fabrication materials, wiring diagrams, performance charts, and other details.

* + - * 1. Manufacturer's Certificate: Certify that [**products**] <**\_\_\_\_\_\_\_\_**> meet or exceed [**specified requirements**] <**\_\_\_\_\_\_\_\_**>.

Include separate Paragraphs for additional certifications.

* + - * 1. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.
        2. Qualifications Statement:

Coordinate following Subparagraph with requirements specified in QUALIFICATIONS Article.

Submit qualifications for manufacturer.

* + - 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. WARRANTY

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

* + - * 1. Furnish [**five**] <**\_\_\_\_\_\_\_\_**>-year manufacturer's warranty for drum pumps.

1. PRODUCTS
   * + 1. DRUM PUMPS
          1. [Manufacturers](http://www.specagent.com/LookUp/?ulid=11957&mf=04&src=wd):

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

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

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

Furnish materials according to <**\_\_\_\_\_\_\_\_**> standards.

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

Pump Designation:

Repeat following Subparagraph as necessary to describe every pump of this type in Project.

[**P-<\_\_\_\_\_\_\_\_>.**]

* + - * 1. Performance and Design Criteria:

Flow Rate: <**\_\_\_\_\_\_\_\_**> gpm

Minimum Flow Total Dynamic Head: <**\_\_\_\_\_\_\_\_**> feet

Service Liquid: <**\_\_\_\_\_\_\_\_**>.

Specific Gravity: <**\_\_\_\_\_\_\_\_**>.

Viscosity: <**\_\_\_\_\_\_\_\_**> lbf-s/sq. ft

Average Fluid Temperature: <**\_\_\_\_\_\_\_\_**> degrees F

[**Drum**] [**Barrel**] Size: [**15**] [**30**] [**55**] <**\_\_\_\_\_\_\_\_**> gal

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

Air motor with air safety shutoff.

Consider specifying nonmetallic materials if transferring a corrosive fluid. Consult with pump manufacturer.

* + - * 1. Materials:

Pump Casing: [**Aluminum**] [**Stainless steel**] [**Polypropylene (PP)**] <**\_\_\_\_\_\_\_\_**>.

Diaphragm: [**PTFE**] [**Polyurethane**] <**\_\_\_\_\_\_\_\_**>.

Siphon Tube: [**PP**] [**Type 316 stainless steel**] [**PTFE**] [**Polyvinylidene fluoride**] [**CPVC**] <**\_\_\_\_\_\_\_\_**>.

* + - * 1. Accessories:

Hose:

Material: [**PVC**] <**\_\_\_\_\_\_\_\_**>.

Diameter: <**\_\_\_\_\_\_\_\_**> inch

Length: <**\_\_\_\_\_\_\_\_**> feet

Fitting: <**\_\_\_\_\_\_\_\_**> inch

Consider using following Subparagraph if transferring flammable or combustible liquids.

Static protection.

Bung adapter fitting.

Flow meter.

Discharge nozzle.

Strainer.

1. EXECUTION
   * + 1. FIELD QUALITY CONTROL
          1. Startup and Performance Testing:

Operate pump using clear water for 10 continuous minutes in presence of Di.

Verify pump performance by performing time-drawdown test or time-fill test.

Check pump and motor for high temperature and excessive vibration.

Check for motor overload by taking ampere readings.

* + - * 1. Equipment Acceptance:

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

* + - 1. DEMONSTRATION
         1. Demonstrate pump startup, shutdown, routine maintenance, and emergency repair procedures to Director’s Representative.

END OF SECTION 463353