SECTION 407363 - DIAPHRAGM SEALS

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 specifies diaphragm seals for use if isolation of pressure gages or other device is required. Pressure gages are specified in Section 407313 and gage-pressure transmitters are specified in Section 407326.

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

Section 407313 - Pressure and Differential Pressure Gauges: Pressure gages requiring isolation from process fluid.

Section 407326 - Gauge-Pressure Transmitters: Pressure transmitters requiring isolation from process fluid.

* + - 1. 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 [**piping Work**] [**tank Work**] [**pump installation**] <**\_\_\_\_\_\_\_\_**>.
      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 information for system materials and component equipment, including connection requirements.
        5. Shop Drawings:

Indicate system materials and component equipment.

Submit installation requirements and other details.

* + - * 1. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

Include separate Paragraphs for additional certifications.

* + - * 1. Source Quality-Control Submittals: Indicate results of [**shop**] [**factory**] tests and inspections.
        2. Field Quality-Control Submittals: Indicate results of Contractor-furnished tests and inspections.
        3. 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 equipment and accessories.
      2. QUALITY ASSURANCE

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

* + - * 1. Ensure that materials of construction of wetted parts are compatible with process liquid.
        2. Materials in Contact with Potable Water: Certified to NSF 61 and NSF 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. WARRANTY

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

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

1. PRODUCTS
   * + 1. DIAPHRAGM SEALS

Diaphragm seals may be required to prevent process fluid from clogging or corroding Bourdon tubes or to prevent process fluid in the measuring element from freezing.

* + - * 1. [Manufacturers](http://www.specagent.com/LookUp/?ulid=12566&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.

* + - * 1. Description:

In following Subparagraph, consider using a flexible extension for mounting gage away from diaphragm seal to provide easier reading or to limit temperature of gage.

Mounting:

Directly to pressure gage socket.

[**Provide flexible, stainless-steel-armored line assembly.**]

Wetted Parts and Bolt Materials: Corrosion resistant to process fluid.

Provide fill/bleed screw for filling of diaphragm seal.

Instrument Connection: NPT, 1/4 inch.

Process Connection: NPT, 1/2 inch

Flushing Connection: NPT, 1/4 inch

Working Pressure Rating: [**Pipeline working pressure**] <**\_\_\_\_\_\_\_\_**>.

Calibration: Provide cleanout ring to be removed for recalibration or cleaning, without loss of filling liquid or change in calibration.

* + - 1. SOURCE QUALITY CONTROL
         1. Diaphragm Seals:

Factory-assemble, fill, and calibrate entire assembly, including gage [**switch**] [**and**] [**transmitter**], prior to shipment.

Field filling is not acceptable.

* + - * 1. Provide shop inspection and testing of completed assembly.

1. EXECUTION
   * + 1. EXAMINATION
          1. Verify that items provided by other Sections of Work are ready to receive Work of this Section.
       2. INSTALLATION
          1. According to manufacturer instructions.
          2. Mount only one pressure element per diaphragm seal.

\*\*\*\*\*\* [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. 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. DEMONSTRATION
         1. Demonstrate equipment startup, shutdown, routine maintenance, and emergency repair procedures to Director’s Representative.

END OF SECTION 407363