

Section 02523

PRESSURE REDUCING VALVES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Pressure reducing valves (PRV).

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.

1. Payment for pressure reducing valves is on unit price basis for each valve installed.
2. Payment includes vault, piping, manhole, fittings, and appurtenances necessary for complete installation of valve.
3. Refer to Section 01270 - Measurement and Payment for unit price procedures.

- B. Stipulated Price (Lump Sum). If Contract is a Stipulated Price Contract, payment for work in this Section is included in total Stipulated Price.

1.03 REFERENCES

- A. ASME B 16.1 - Cast Iron Pipe Flanges and Flanged Fittings.
- B. ASTM A 48 - Standard Specification for Gray Iron Castings.

1.04 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit manufacturer's product data for proposed valves for approval.
- C. Submit design calculations and shop drawings for valve vaults and manholes, sealed by Engineer registered in the State of Texas.

1.05 QUALITY CONTROL

- A. Submit manufacturer's affidavit that pressure reducing valves purchased for Work, were manufactured and tested in the United States, and conform to requirements of this Section.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Provide Cla-Val Model 90-01BYSKCG, Watts ACV Model 115M or approved equal, PRV with basket strainer in location and arrangement as shown on Drawings.
1. Valve body: Ductile iron with ASME B16.1, Class 125, flanges
 2. Valve cover: ASTM A 48 cast iron
 3. Valve internals:
 - a. Provide top and bottom single moving disc and diaphragm assembly.
 - b. Use flexible nylon fabric reinforced elastomer diaphragm integral with assembly.
 - c. Provide valve internal trim (seat ring, disc guide, and cover bearing) made of stainless steel.
 - d. Provide heat fusion bonded epoxy coating to internal and external surfaces of valve body including disc retainer and diaphragm washer. Holiday test coating applied to valve body.
 - e. Treat stem and seat with penetrative salt nitride process.
 - f. Use Xylan coated seat.
 - g. Do not use leather parts.
- B. Control Tubing: Contain shutoff cocks with Y-strainer.
- C. PRV: Equip with visual valve position indicator. Fit valve position indicator with air bleed petcock. Initially set in field by authorized manufacturer's representative with 60-psi downstream pressure.
- D. Provide basket strainer upstream of PRV as shown on Drawings.
1. Strainer body: Quick-opening type, fabricated-steel construction with ANSI B 16.1, Class 150, flanges
 2. Basket: Type 304, stainless steel

- 3. Model: Provide Hayward Model 90, or approved equal, for PRV 4 inches through 24 inches. Provide Hayward Model 510, or approved equal, for PRV 14 inches or greater when space limitations dictate use of smaller strainer housing.
- E. Provide pressure reducing pilot that has adjustable range of 20 - 175 psi. Provide and install pilot system components according to manufacturers recommendations unless otherwise approved by City Engineer.
- F. Valve Vaults: Provide as shown on Drawings and conforming to requirements of Section 02085 - Valve Boxes, Meter Boxes, and Meter Vaults

PART 3 EXECUTION

3.01 EARTHWORK

- A. Conform to applicable provisions of Section 02317 - Excavation and Backfill for Utilities.

3.02 SETTING VALVES

- A. Provide services of technical representative of valve manufacturer on site during installation of valves and to serve as adviser on aspects of installation. Take necessary precautions to protect pilot system during PRV installation.
- B. Prior to installing valves, remove foreign matter from within valves. Inspect valves in open and closed position to verify that parts are in satisfactory working condition.

3.03 DISINFECTION AND TESTING

- A. Disinfect valves and appurtenances as required by Section 02514 - Disinfection of Water Lines and test as required by Section 02515 - Hydrostatic Testing of Pipelines.

3.04 PAINTING OF PIPING AND VALVES

- A. Paint piping and valves located in vaults, stations, and above ground using ACRO Paint No. 2215, or approved equal.

END OF SECTION