

# NYC DEP SPECIFICATION

## FOR MODEL D86

- (5) The manual actuator shall be provided with a torque-limiting device called Aunspach, suitable for the valve duty, with a 2-inch AWWA wrench nut. The AWWA wrench nut clockwise movement i.e. right-hand movement shall OPEN the valves. Aunspach torque shall be limited to the maximum torque permissible for the actuator.
- (6) Materials for the valve shall comply with the requirements of the Safe Drinking Water Act and other federal, state and local requirements and ANSI/NSF Standard 61.
- (7) The manufacturer shall submit design calculations as per AWWA C504-00 Sec. 4.5.3.3 when requested.
- (8) The valve manufacturer shall be responsible for the proper working and testing of the BFV and the actuator as a unit after installation.
- (9) The maximum shut-off design pressure shall be 150 psig or 250 psig as ordered. The maximum flow shall be 40 MGD (Million Gallons per Day) for the 24-inch; 75 MGD for the 30-inch; 90 MGD for the 36-inch; 130 MGD for the 48-inch; 200 MGD for 60-inch and 290 MGD for 72-inch nominal size valves. These values shall be used for the valve and the valve actuator design.
- (10) The manufacturer shall submit fully dimensioned drawings, bill of materials, flow characteristics, actuator torque calculations, actuator manufacturer and model number, shop test procedures, quality control and quality assurance procedures in accordance with this specification for approval to DEP-BWSO-ME&QA. The drawings shall list calculated / estimated weight of the valve without the actuator and the weight of the actuator.

### (B) VALVE ENDS

- (1) 24-inch BFV shall be with mechanical joint-ends or flanged ends as specified in the purchase order; 30-inch, 36-inch, 48-inch, 60-inch & 72-inch BFV shall be Short-body flat flanged type.
- (2) Valve waterway flanges shall be flat faced finished with serrated-spiral or concentric grooves in accordance with MSS Standard Practice SP-6. The face dimensions and drilling shall be in accordance with Cast Iron Pipe Flanges and Flange Fittings, ASME B16.1 Class 125 or to ANSI/AWWA C207 Class "D" or Class "E" as ordered, except that the bolt-holes shall have 1/8-inch larger diameter than the standard to accept Mylar insulating sleeves, this dimension shall be verified with the insulating bolt sleeves to be used. Back face of flange bolt-holes shall be spot faced in accordance with MSS Standard Practice SP-9. The spot face diameter shall be at least 1/2-inch larger than the insulating washer diameter. If tapped holes are required in the waterway flanges, they shall be Unified Inch Screw Threads, ASME B1.1, with Class 28 fit; the contractor shall coordinate the threads form with the BFV manufacturers and the Stud / Bolts & Nut manufacturer.
- (3) Mechanical joint-end dimensions shall conform to ANSI/AWWA C111/A21.11. Slotted bolt openings of the same width as the diameter of the bolt-holes shall be provided instead of holes only where absolutely necessary for the insertion of bolts.

### (C) VALVE ACTUATORS

- (1) See **Subsection 20.03.4(A)(5)** of this specification.
- (2) All components of the actuators shall meet or exceed the requirements of ANSI/AWWA.
- (3) C-504 for the manual actuators.
- (4) The actuator suitability tests for the subject BFV, duly certified by the testing authority to meet the requirements of ANSI/AWWA C504, shall be submitted to DEP-BWSO-ME&QA for approval.

In addition to the above, the actuator shall meet the following. AWWA wrench nut turns for 90 degrees rotation of the valve disc from fully open to fully closed position.

# NYC DEP FOR MODEL D80 SPECIFICATION

SANITARY CONTRACT NO. 987

5. Manual Operation Torque Limiting Device: The operating mechanisms of the actuator and gearbox shall be designed and sized to limit the transmission of force from the actuator hand wheel and chain wheel to the actuated valve and gate components to physically prohibit damage to the actuated components (e.g. valve/gate stem, seat, etc.) regardless of the force applied to the actuator hand wheel. Torque Overload Protection shall be via a torque limiting device as detailed below:
  - a. Device shall be sized and mounted as recommended by the actuator, actuated device, and torque limiting device manufacturers. Units shall be sized and supplied to transmit full operating torque in either direction. If excessive torque is applied, the drive shall disengage automatically and prevent damage of any equipment and assemblies of the actuator. Device shall protect the actuator and actuated equipment regardless of the direction of rotation.
  - b. Over torque protector shall have an operating temperature range of -25 to 100C.
  - c. Device shall have a fusion-bonded epoxy coating and stainless-steel fasteners.
  - d. Device shall have IP68 rating for up to 55 meters submersion. The overtorque clutch shall be permanently lubricated, hermetically sealed with an easy single-point calibration. Calibration screw shall be concealed to discourage tampering.
  - e. The Contractor shall provide Aunspach Overtorque Protection by Aunspach Control Company Inc. or approved equal.
6. Declutch Lever: Changing from motor to manual operation shall be accomplished by engaging the declutch lever. Declutch lever shall be padlock-able in the motor or manual position to prevent unauthorized valve movement. Energizing the motor shall return the actuator to motor operation. The declutch lever shall be pad lockable in the manual and motor position.
7. Declutch Lever Linkage: Linkage shall be provided to manually and remotely engage and disengage the actuator declutch lever from the main operating floor level if it is not located at an accessible location. Linkage shall be provided anywhere an actuator chain wheel or remote local operation pushbutton station has been provided.
  - a. Actuator manufacturer shall provide means on the actuator declutch lever to attach linkage. Provision of linkage shall be coordinated with the equipment and system manufacturers. Linkage shall be 316 stainless steel and materials that promote an equal or greater level of corrosion resistance. If required by the provided actuator to reengage motor operation, additional mechanisms similar to those detailed above shall be provided.
8. Provide hand wheel and low gear ratio combined to give maximum rate of movement possible with 50 lb rim pull.