HYDRA-STOP
FROM PENTAIR

PRODUCT OPERATION AND MAINTENANCE GUIDE

Insta-Valve 250, Insta-Valve Plus 250, Insta-Valve 20-24

The ongoing maintenance of valves installed in a distribution system is essential. Exercising valves (closing and opening) should be done yearly to ensure they continue to work over a long period. Many manufacturers' warranties can be void if the valves in a distribution system are not operated regularly.

The following paragraphs are excerpts from the AWWA Manual of Water Services, Chapter 5, Operation and Maintenance.

Valves in a distribution system are too important to be allowed to sit idle with no maintenance over a number of years. Neglect almost always ensures that the valves will be inoperable, inaccessible, or unable to be located when needed. A practical valve maintenance program can be designed for initial implementation at a low cost, ultimately resulting in cost savings for the water system and in more reliable service for its customers.

PLANNING A MAINTENANCE SCHEDULE

Before implementing a maintenance program, operators should develop a list of system priorities. A high priority might be the largest part of the system (based on the assumption that it carries the most water), or it might be the oldest part of the system (because those valves have not been operated for the longest period of time). Other priorities could be the part of the system that serves the most critical customers, such as hospitals. Regardless of the criteria used and priorities set, an improvement in the system can be achieved immediately if a pilot maintenance program focuses on the most troublesome areas.

One of the major problems in implementing a scheduled preventive maintenance program for valves is the apparent magnitude of the job. There may be hundreds of valves in even a small distribution system. However, if a systematic maintenance schedule is applied, the task becomes less daunting. In general, the following rules for operation, inspection, and maintenance apply:

- *Inspections should be made of each valve on a regularly scheduled basis (annually if possible) and at more frequent intervals for valves with a 16-in. diameter and larger.*
- *Inspection should include examining the condition of the valve box or vault, operating the valve several times, and lubricating where required.*
- *Preventive maintenance should be performed as necessary or as suggested by the manufacturer.*
- *All gate valves should be cycled from full open to full close and back to open at least once every two years. Caution should be exercised when large valves in critical single-source transmission mains are cycled to the fully closed position. Some valves (such as butterfly valves that have a seating where a resilient coating meets stainless steel, or valves with actuators isolated from the contents of the line) may need less exercise. Follow manufacturers' guidelines.*
- *Repairs should be made promptly and correctly. Records of all operation and maintenance should be maintained. Computer programs are available for such record keeping.*

VALVE MAINTENANCE PROCEDURES

A valve that has not been operated for a number of years needs to be closed by using a series of up and down motions. Crews should follow these guidelines to close a valve properly:

1. *Begin with a steady amount of torque in the direction necessary to close the valve, moving through 5 to 10 rotations.*
2. *Reverse for two or three rotations.*
3. *Reverse again and rotate 5 to 10 more turns in the closing direction.*
4. *Repeat this procedure until full closure is attained.*
5. *Once the valve is fully closed, it should be opened a few turns so that high-velocity water flowing under the gates can move the remainder of the sediment downstream with more force and clear the bottom part of the valve body for seating.*
6. *Fully close the valve again.*

The reason for this cautious approach is that debris and sediment often build up on the cartridge, valve stem, or resilient wedge. If this material is compacted while the valve is being closed, the torque required to close the valve continues to build as the material is loaded. If the procedure described above is used, the stem and other parts are "scrubbed" by a series of back-and-forth motions, and water in the system can flush the debris that has broken loose away.

Hydra-Stop Notes

1) Hydra-Stop recommends noting the location, size, installation date, and any other pertinent data for future reference. Keeping track of the valves in your system will assist crews in locating operable valves for routine maintenance or during an emergency.

2) As mentioned in the AWWA document, Hydra-Stop recommends inspecting your Insta-Valve annually and exercising it at least once every two years.

3) If the installed valve is visible, make sure to observe the general condition of the valve. Do you see any leaks? Do you observe moisture in the soil or surrounding the valve? Are all the bolts and nuts fastened to the valve? Is there any extensive corrosion?

4) If you cannot visually inspect the valve, your only maintenance course is to operate and exercise the valve. Hydra-Stop recommends following the AWWA advice (steps 1-6 above) on closing and opening a valve during maintenance inspections.

5) Insta-Valve Insertion Valves operate at three turns per inch, closing or opening within +/- 3 turns of a standard gate valve for most pipe types and classes. Additional turns may be required for certain pipe types and classes. Please contact your Hydra-Stop representative should you have additional questions.

6) In the unlikely event that a valve cartridge becomes damaged or inoperable, replace the valve cartridge by reversing the installation process and installing the replacement cartridge. Contact Hydra-Stop or the company that installed your valve for assistance.

7) For Customer Service or Technical Support, contact Hydra-Stop at 708-389-5111 or visit the Hydra-Stop website at www.hydra-stop.com.

HYDRA-STOP
FROM PENTAIR

© 2026 Pentair. All Rights Reserved.

144 TOWER DRIVE SUITE A, BURR RIDGE, IL 60527
PH: 708.389.5111 | E: CONTACT_US@HYDRA-STOP.COM | HYDRA-STOP.COM

Because we are continuously improving our products and services,
Hydra-Stop from Pentair reserves the right to change specifications without prior notice.