



Model AV150 and AV250 Angle Valves Installation Instructions

Intended Use

Dixon Powhatan® brand angle valves are intended to provide connection to a water source for hose service for standpipe connections, and to supply sprinkler systems. Working conditions are limited to the liquid range of water. As these valves have resilient seals, they are suitable for either wet or dry systems. They offer the advantage of gradual, controlled opening and closing, reducing the possibility of a "water hammer".

Before Installation

Connection on the inlet side is by either 1-1/2" or 2-1/2" NPT thread, depending on valve size. Standard outlet connection is NH in the nominal valve size for hose connection, or female NPT for sprinkler systems. Reference chart below for thread configurations and equivalent length values.

Valve Size	Inlet Female NPT	Outlet Male Thread	Outlet Female Thread	Equivalent Length Value
AV150	1-1/2"	1-1/2" NST (NH)	1-1/2" NPT	10.8ft
		1-1/2" NPSH		
		1-1/2" NPT		
AV250	2-1/2"	2-1/2" NST (NH)	2-1/2" NPT	12.6ft
		2-1/2" NYFD		

Other hose thread sizes are available. The 2-1/2" valve is available with grooved inlet connections.

Ensure that the inlet and outlet threads are undamaged and free of debris. Check operation of the valve that it fully opens and closes smoothly and that the stem has not been bent in transport.

Installation

The angle valve installation and use are in accordance with NFPA 13, NFPA 13R, NFPA 14 or NFPA 20.

System should be flushed prior to installation.

Threaded connections: Clean the male and female threads at connection point. Apply thread sealant, paste or tape as approved by the AHJ, to the male threads to which the valve is to be connected. Rotate the entire valve onto the threaded male pipe connection. Tighten to the desired orientation using a wrench on the hex on the inlet side of the valve. Do not insert a bar or other such object into the outlet of the valve in order to tighten.

Grooved connections: Inspect the gasket to ensure it is free from any nicks or scuffing on the sealing surfaces. If permitted by the AHJ, lubricate with O-ring grease or other silicone lubricant prior to installation. Slide the gasket onto the prepared pipe until it is clear of the end. Place and support the valve flush against the end of the pipe. With the valve supported so that its outlet is diametrically aligned and tightly against the end of the pipe, slide the gasket onto the inlet of the valve. Making sure that the gasket is between the two grooves now, install the clamp over the gasket. Align the clamp so that the outer ends are seating in the grooves. Tighten the clamping bolts according to the clamp manufacturer's specifications. Ensure that the gap is equal to within .030" on either side of the clamp.

After Installation

Close the valve fully and apply system pressure. Maximum working pressure is **300 PSI (20.7 Bar, 2.07 Mega Pascal)**. In wet sprinkler systems, air may be purged by loosening the stuff nut at the top of the valve. Re-tighten the stuff nut once the air has been purged. Check for any leakage at the inlet connection. If there is any leakage, the valve must be removed, and the sealant reapplied.

Maintenance

Dixon angle valves do not require regular maintenance under normal use. They should be operated at least once a year to ensure the mechanism operates freely.

Service

The only wear part that may require replacement in regular service is the packing O-ring. To access it, close the valve and turn off any upstream water supply.

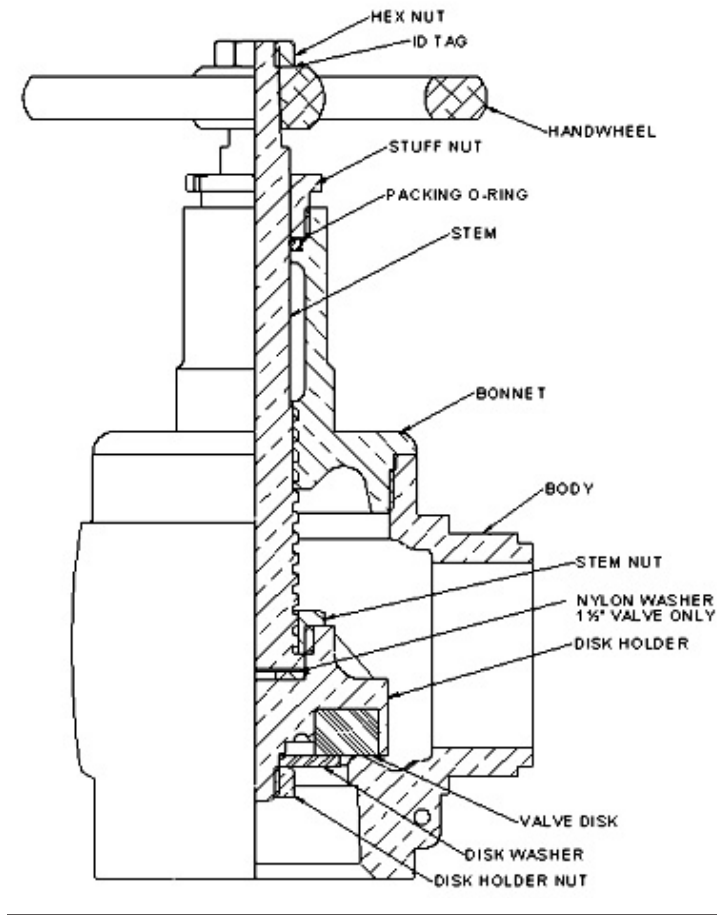
Loosen the hex nut above the handwheel and remove and set aside the nut and the ID tag. Remove the handwheel. Handwheel may be tapped parallel to the stem with a rubber mallet if it does not come off by hand. Do not strike the handwheel sideways as this may damage the stem. Remove the stuff nut to access the O-ring. If the O-ring does not come out easily, do not pry with a metal object as this may damage the sealing surfaces. Plastic or wood may be used as a pick to loosen the O-ring. Opening the valve will also bring out the O-ring as the stem rises.

Repair

Valve Disc Replacement: The valve must be removed from the system to replace the valve disc. The valve must be fully closed to access the disc holder nut and for rotation of the disc holder. Remove the disc holder nut and disc washer through the valve inlet opening. Open the valve again to pull the old disc out through the outlet with pliers or packing removal tool. Squeeze the new disc into an oval and feed back in through the outlet. Through the inlet opening, fit the disc into the holder, close valve to lock up rotation, and reinstall washer and nut

The valve should be tested and maintained in accordance with NFPA 25 standard.
<https://www.nfpa.org/codes-and-standards/2/5/nfpa-25>.

Dixon® Angle Valve Breakdown



Dixon
325 Arbor Court
Winchester, VA 22602
540-535-2181
dixonvalve.com