TOP MOUNTED OIL DASHPOT SEQUENCE OF OPERATION

The opening and closing of the Tilted Disc® Check Valve can be controlled by an optional hydraulic dashpot cylinder to reduce valve slamming and water hammer. The cylinder rod extends out the bottom of the cylinder and is connected to the disc of the check valve. When the check valve disc is opened or closed by the forces of the flowing water in the pipeline, the cylinder rod is stroked in the dashpot cylinder. Control valves are set to independently control operating times, typically 5 to 30 seconds

OPENING STROKE:

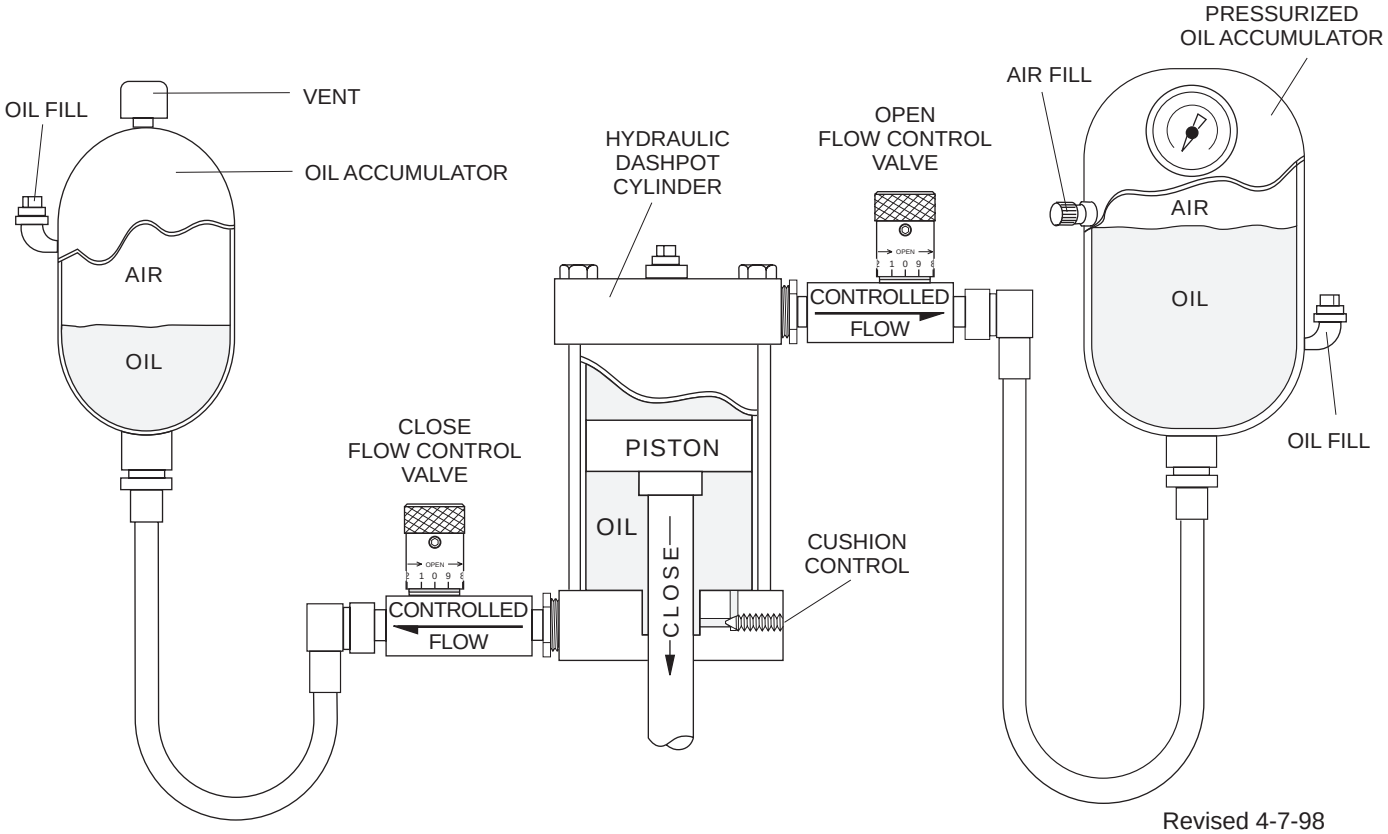
When the water system pump is started, the water pressure will force the check valve disc open thereby pushing the cylinder rod upward. The oil over the cylinder piston will become pressurized and flow through the “Open Flow Control Valve” and into the “Pressurized Oil Accumulator”. Oil will also be drawn into the lower portion of the cylinder through the check valve portion of the “Close Flow Control Valve” and the vented oil accumulator.

CLOSING STROKE:

When the water system pump is stopped, the weight of the disc and reverse flow of the water will force the check valve disc closed thereby pulling the cylinder rod down. The oil under the cylinder piston will become pressurized and flow through the “Close Flow Control Valve” and into the vented “Oil Accumulator”. Oil will also flow into the top of the cylinder from the “Pressurized Oil Accumulator” through the check portion of the “Open Flow Control Valve”. The “Pressurized Oil Accumulator” is maintained at 20% of the water line pressure to assist in valve closure.

FINAL 10% OF CLOSURE:

During the last 10% of closure, the larger diameter portion of the cylinder rod enters a cushion chamber in the lower head of the dashpot cylinder. The speed of closure during the last 10% of closure can be controlled further using the “Cushion Control” adjustment screw located on the cylinder head, typically 1 to 5 seconds.



Revised 4-7-98

TOP MOUNTED OIL DASHPOT SEQUENCE OF OPERATION	DATE 7-31-97
VAL-MATIC® VALVE AND MANUFACTURING CORP.	DRWG. NO. SS-1401