

American Wheatley Wafer Style Non Slam Check Valve Installation, Operation & Maintenance

GENERAL INFORMATION:

American Wheatley Wafer Style Non Slam Check Valves are designed to automatically prevent back-flow in systems where it is desirable to permit flow in one direction and prevent flow in the opposite direction. When the pump starts and the downstream flow creates the required pressure drop in the forward direction, the disc will automatically open. When the pump stops and the flow ceases, the force of the spring will automatically close the disc prior to flow reversal. This creates a positive shutoff against flow reversal and minimizes system surges and water hammer.

For additional information regarding American Wheatley’s Wafer Style Non Slam Check Valves, please refer to published catalog information.

Prior to selection of a American Wheatley Wafer Style Non Slam Check Valve, the following factors must be determined:

- Material construction requirements of the Check Valve
- Design and working pressure/temperature requirements
- Operating conditions

UNPACKING AND INSPECTION:

Visually inspect the Check Valve for any signs of damage including scratches, loose parts, broken parts or any other physical damage that may have occurred during shipment. If damage is observed, immediately file a claim with the shipping carrier. Check Valves that are damaged during transportation are the responsibility of the customer. For information regarding American Wheatley’s warranty policy, please refer to published standard terms & conditions of sale (www.wheatleyhvac.com).

Before installation, the check valve should be inspected internally for any loose or foreign materials that may have become trapped inside the Check Valve during transportation.

If the Check Valve is not required to be installed immediately, it should be stored indoors in a clean and dry environment.

INSTALLATION:

Pre-Installation Checklist

Ensure Working conditions (pressure and temperature) are within the specified capacity of the product being installed. Please refer to published catalogue information.

JOB NAME _____
LOCATION _____

CONTRACTOR _____
CONTRACTOR P.O. NO. _____

ITEMS	QUANTITY
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____



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Ensure that the service media is filtered to remove unwanted debris prior to installing the Check Valve. If the service media is not sufficiently clean, debris particles can prevent the Check Valve from sealing correctly and impair product performance.

Inspect sealing surfaces to insure they are clean and smooth. The pipeline should also be checked for proper alignment. American Wheatley Check Valves should never be utilized to realign an existing piping system.

For efficient function and improved service life, recognized piping standards stipulate placing Check Valves 5 to 10 pipe diameters from any turbulence producing devices (elbows, pumps, tees, expansions, reductions, and swages).

Step 1: Remove plastic flange protectors and other packaging materials from the Check Valve.

Step 2: Orientate the flow arrow (cast into the side of the valve body or printed on the nameplate) in the direction of the pipeline flow. In the correct position, the valve disc will move away from the valve seat, in the direction of the pipeline flow. American Wheatley Wafer Style Non Slam Check Valves can be installed in any position: horizontal, vertical (with upward flow) or any varying angle. For vertical installation with downward flow, please consult factory as a stronger spring may be required:

Step 3: While supporting the existing pipeline, lift the Check Valve into position. For large or heavy Check Valves, appropriate material handling equipment must be used in order to prevent injury and possible damage to the Check Valve.

Step 4: Install a standard, 1/8" thick flange gasket (in accordance with ANSI B16.5) between valve and mating flanges (on both sides). Ensure the flange gaskets are centered correctly to prevent leakage.

Step 5: Install lubricated flange bolts and hand tighten. Flange bolts should then be tightened using a star or crisscross pattern to evenly load the bolts.

OPERATION:

Start-up Procedure: Once proper installation has been successfully completed, start the system gradually, at start up as well as after shut down. This eliminates sudden shock to the Check Valve and other equipment in the line.

MAINTENANCE:

American Wheatley Check Valves are designed to provide trouble-free service and seldom require maintenance. If removal of Check Valve is required for inspection, please follow these steps.

VALVE REMOVAL:

Step 1: To remove the Check Valve from the pipeline, first isolate the Check Valve by shutting off the upstream pump and closing the downstream isolation valve. Drain the system as much as possible.

Step 2: Relieve pressure from both sides of the Check Valve by venting the line.

Step 3: Loosen the outlet side bolts, securing the valve to the pipeline, never loosen the inlet side. Once pressure has been relieved, the inlet bolts may be loosened & removed.

Step 4: Remove Check Valve from the pipeline and place the Check Valve with outlet side on the ground. Inspect internal components for wear or damage. If replacement parts are required, please contact American Wheatley for repair recommendations.

SPARE PARTS LIST:

For the bill of materials and spare parts listing of each Wafer Style Non Slam Check Valve, please refer to published catalogue information.

TROUBLE SHOOTING:

- Leakage: Periodic inspections for leakage should be performed. If leakage is present, check the flange gasket and flange bolt torque. In some situations, it may be necessary to isolate the Check Valve by shutting off upstream and downstream valves. Then remove the Check Valve and inspect the seating surfaces for damage.
- Vibration: Verify that flow rate is within published recommended range. Additionally, verify that the Check Valve is 5 to 10 pipe diameters from any turbulence producing devices (elbows, pumps, tees, expansions, reductions, and swages). Remove Check Valve from piping system and inspect the spring. Verify that the spring is providing the proper tension.
- Restricted Flow: If flow is halted at the Check Valve, verify that the flow direction arrow (casted into the side of the body or printed on the nameplate) is pointing in the direction of the flow. Remove Check Valve from piping system and inspect the spring. Verify that the spring is providing the proper tension