ASI Self-priming Check Valves

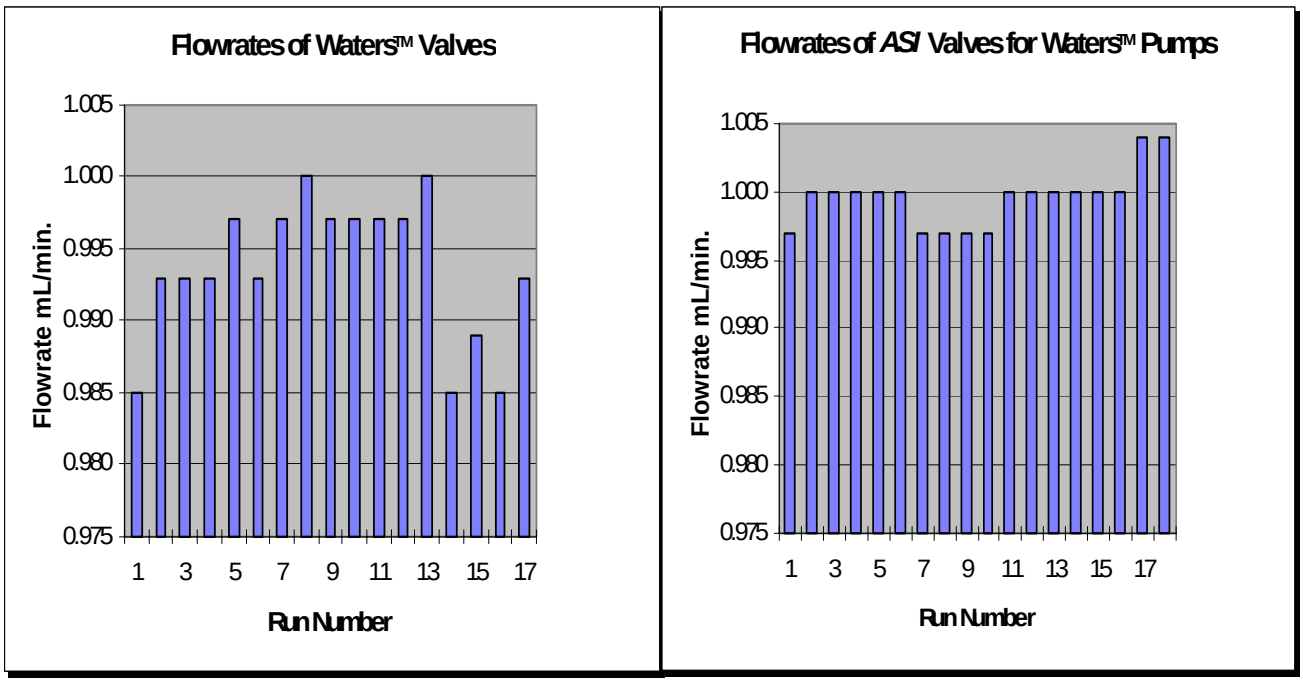
Why *ASI* Check Valves are the Best

➢Self-priming

With the *ASI* valve, priming is easy. Open the pump outlet to release backpressure on the pump, and turn on the pump. Your pump will prime itself, even if the head and intake lines are completely dry. You won't need to use syringes or draw-off valves to prime your pump.

➢Superior Flow Rate Stability

Because of the rapid and repeatable closure rate of the valve, the ball returns to the seat and seals before solvents have a chance to flow back through the valve. The result is a flow rate that is extremely repeatable and accurate, which means more repeatable retention times.
Please see the following data.



Data Certified by: Baseline Services, Mercerville, NJ May 21, 1997, Bodman Chromatography Aston, PA May 21, 1997

➢Rugged Construction

The valve will not crush, crack or leak due to high pressure. We designed the *ASI* cartridge so that loads are transmitted through the valve casing rather than through the seat, as in conventional valves. The result is a valve that can withstand up to a 10,000 PSI continuous operating pressure, and will never fail no matter how much you tighten the housing (go ahead and try it – it's guaranteed!). High pressure valves, up to 15,000 PSI, are also available.

➢Pre-tested

100% *ASI* valves we ship must pass three stringent tests before it is shipped.
These tests are by far the most stringent in the HPLC industry, and indeed it is unlikely that any other valves would even pass these tests. But we do all these tests because we know how important it is to make sure that when you put a new valve in your pump, it will perform properly. After all, HPLC is hard enough as it is without worrying about your check valves!

1) Self-prime Test

This test uses a special pump test fixture that simulates an HPLC pump to verify that the valve is self-priming. After the test pump and intake line are purged of water, the valve must operate well enough so that the pump can draw water from a reservoir that is 36 inches below the pump intake. If the valve fails to prime, or "skips" even once during this test, it is rejected. This test not only guarantees that the valve will prime, but also that the valve will perform properly even at very low pressures, where most other valves do not work well.

2) High Pressure Leak Test

The valve is pressurized to 12,000 PSI and tested for leakage. Valves that exceed 50 nano liters per minute are rejected. This test not only insures valve integrity at very high pressures, but it also insures that the valve will still function properly even when the customer inadvertently over tightens the valve housing. We do not monitor nitrogen bubbles to measure leak rate, because a liquid can leak due to capillary action whereas gas will not. Besides, the chromatographer is pumping liquids, not gas!

3) Low Pressure Leak Test

The valve is pressurized to 500 PSI and tested for leakage. Valves that exceed 50 nano liters per minute are rejected. Most valves have difficulty closing and sealing properly in the absence of the large closing forces due to high pressure. *ASI* valves are designed so that they do not require any backpressure to operate properly, and this test verifies it.

➢Convenient and Economical Cartridge Design

When it's time for routine maintenance, you only replace the cartridge, not the entire assembly. The *ASI* cartridge costs no more than most conventional valve rebuild kits, and you won't spend time chasing balls all over the lab bench.