

AWWA C504, MSS SP108 Proof of Design Test Certification
(12" Rectangular Ported Eccentric Plug Valve)

1. ITEM TESTED:

12"-125# Val-Matic Model 5812R Eccentric Plug Valve
Cast Iron Construction, Robotically Welded Overlay Nickel Seat
Neoprene Plug, 316 SS Bearings, Buna-N V-Packing
EIM Motor Actuator MGN4-3, 10 Second Operation
Valve Serial No. M677740 Issued 02/29/96

2. PURPOSE:

To perform the Proof of Design Test requirements given in American Water Works Association Standard AWWA C504 (Butterfly Valves) and MSS-SP-108 (Plug Valves). Tests were witnessed by Professional Service Industries, Inc., an independent inspection company.

3. RECORD OF TEST:

The subject valve was tested with the "Seat Side" oriented upwards and sealed with ANSI Class 150# steel blind flanges. Prior to the test, the valve was leak tested to 175 psig in both the Direct and Reverse directions and found to be drop tight.

An adjustable water piston pump was set at 175 psig and connected to the bottom of the valve. The valve was rotated closed by the motor actuator. The closed limit switch energized the pump which supplied a pressure of 175 psig across the closed plug. The valve was then signalled to the full open position which relieved the pressure. The process was repeated through 10,000 cycles over a 7 day period.

After 10,000 cycles, the valve was pressure tested at 175 psig in both the Direct and Reverse directions for 5 minutes and found to be drop-tight. No adjustment for wear was required. The valve was then hydrostatically tested to twice the rated pressure (350 psig) for 5 minutes in the Reverse, Direct, and Open positions.

The valve was cycled to verify operation, disassembled, and examined for wear. Wear on the plug was noted but not significant enough to affect sealability of the valve. No packing or shaft surface wear was observed. The metal bearing surfaces were measured before and after the test with no wear found. No permanent deformation was measured in the plug or body.

4. CERTIFICATION:

Based on the above Test Record, we hereby certify that the subject valve has successfully met all of the Proof of Design Requirements given in AWWA C504 and MSS SP108 and therefore qualifies similar valves in the 3"-20" size range and of equal or lesser pressure classes to the same standards.

TESTED BY: *Robert A. Infusino* DATE: 7/15/96
Robert A. Infusino (Val-Matic Valve & Manufacturing Corp.)

CERTIFIED BY: *John V. Ballun* DATE: 7-15-96
John V. Ballun, P.E. (Val-Matic Valve & Manufacturing Corp.)

WITNESSED BY: *Gregg Haney* DATE: 7-15-96
Gregg Haney (Professional Service Industries, Inc.)

12" PLUG VALVE PROOF OF DESIGN CERTIFICATION

DATE 7-2-96

VAL-MATIC VALVE AND MANUFACTURING CORP.

DRWG. NO.
SS-1235

AWWA C504, MSS SP108 Proof of Design Test Certification (24" Rectangular Ported Eccentric Plug Valve)

1. ITEM TESTED:

24"-125# Val-Matic Model 5824R.2 Eccentric Plug Valve
Cast Iron Construction, Robotically Welded Overlay Nickel Seat
Buna-N Plug, 316 SS Bearings, Buna-N V-Packing
EIM Motor Actuator MGN4-3, 30 Second Operation
Valve Serial No. M670660 Issued 01/31/96

2. PURPOSE:

To perform the Proof of Design Test requirements given in American Water Works Association Standard AWWA C504 (Butterfly Valves) and MSS-SP-108 (Plug Valves). Tests were witnessed by Professional Service Industries, Inc., an independent inspection company.

3. RECORD OF TEST:

The subject valve was tested with the "Seat Side" oriented upwards and sealed with ANSI Class 150# steel blind flanges. Prior to the test, the valve was leak tested to 150 psig in both the Direct and Reverse directions and found to be drop tight.

An adjustable water piston pump was set at 150 psig and connected to the bottom of the valve. The valve was rotated closed by the motor actuator. The closed limit switch energized the pump which supplied a pressure of 150 psig across the closed plug. The valve was then signalled to the full open position which relieved the pressure. The process was repeated through 5000 cycles over an 8 day period.


After 5000 cycles, the valve was pressure tested at 150 psig in both the Direct and Reverse directions for 10 minutes and found to be drop-tight. No adjustment for wear was required. The valve was then hydrostatically tested to twice the rated pressure (300 psig) for 10 minutes in the Reverse, Direct, and Open positions.

The valve was cycled to verify operation, disassembled, and examined for wear. Wear on the plug was noted but not significant enough to affect sealability of the valve. No packing or shaft surface wear was observed. The metal bearing surfaces were measured before and after the test with no wear found. No permanent deformation was measured in the plug or body.

4. CERTIFICATION:

Based on the above Test Record, we hereby certify that the subject valve has successfully met all of the Proof of Design Requirements given in AWWA C504 and MSS SP108 and therefore qualifies similar valves in the 24"-42" size range and of equal or lesser pressure classes to the same standards.

TESTED BY: <u> <i>Robert A. Infusino</i> </u>	DATE: <u> 3/28/96 </u>
Robert A. Infusino (Val-Matic Valve & Manufacturing Corp.)	
CERTIFIED BY: <u> <i>John V. Ballun</i> </u>	DATE: <u> 3-28-96 </u>
John V. Ballun, P.E. (Val-Matic Valve & Manufacturing Corp.)	
WITNESSED BY: <u> <i>Gregg Haney</i> </u>	DATE: <u> 3-28-96 </u>
Gregg Haney (Professional Service Industries, Inc.)	

24" PLUG VALVE PROOF OF DESIGN CERTIFICATION	DATE 3-28-96
 VAL-MATIC VALVE AND MANUFACTURING CORP.	DRWG. NO. SS-1230