

M&J VALVE

AN SPX BRAND

Installation, Operation & Maintenance Manual Swing Check Valve



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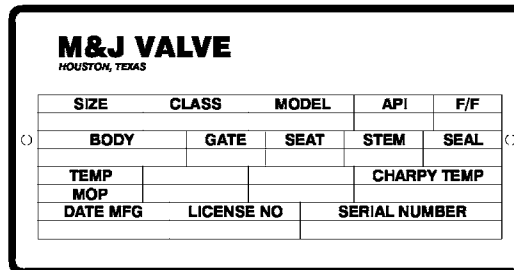
Web Site: www.mandjvalve.com

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Installation, Operation, and Maintenance Manual for M&J Check Valves

I General information

1. The M&J swing check valve provides back flow control for piping systems. It is designed, manufactured, and tested in accordance with API-6D Q1 unless otherwise specified. The cast body design conforms to ANSI B16.34. Flanged end valve flanges are in accordance with ANSI B16.5 (24" and smaller) and MSS SP-44 (larger than 24").
2. Carbon steel weld end valves have end connections that are ready to be welded in the field. End preparations match specified mating pipe bores. Transition pieces are provided when specified.
3. Located on the valve cover plate, the nameplate (Figure 1) provides applicable information including size, pressure, class, materials, seals, pressure/temperature, ratings and serial number. Provide the valve serial number when contacting M&J Valve Company in regards to your valve. This will expedite any request and insure that correction information is given. Note: The serial number is also stamped on the body near the cover plate joint.



M&J VALVE HOUSTON, TEXAS					
SIZE	CLASS	MODEL	API	F/F	
BODY	GATE	SEAT	STEM	SEAL	
TEMP				CHARPY TEMP	
MOP					
DATE MFG	LICENSE NO	SERIAL NUMBER			

Figure 1

II Installation

1. Unpacking

1.1 All valves should be inspected on receipt for lost or damaged components.

1.2 Remove end connection protectors and thoroughly inspect valve interior for damage and/or foreign material. Remove all shipping supports.

1.3 Install all loose items as soon as possible to prevent loss or damage.

2. Handling

2.1 Small valves may be lifted with slings, straps, or by hooking into end flanges. Large valves are furnished with lifting holes in the cover plate.

Caution:



Always use handling equipment that is suitable for the valve weight. Follow good lifting practices. Take care not to damage valve or component assemblies.

3. Installation

Standard M&J check valves are designed for horizontal service. When vertical flow is intended, valves must be specifically ordered for that service.

3.1 For horizontal service, valves should be installed with the inlet and outlet at the same level. The cover plate should be facing upward to allow proper clapper action. The arrow on the body must be pointing in the direction of intended flow. For vertical flow up service, install the check valve with the clapper seat end down. The flow arrow should be pointing up.

3.2 Clean the end connections and mating pipe prior to valve installation. It is recommended that the valve be supported properly to prevent strain and fatigue of the end connections.

III Maintenance

4. Maintenance

M&J swing check valves require minimal maintenance. Under normal operating conditions, no periodic maintenance is necessary. Recommended spare parts available through M&J Valve Company consist of clapper and cover seals, clapper, shaft, retainer pin, and arm. For valves having removable seats, seat rings and seat seals are also recommended.

When ordering spare parts, specify the valve serial number, valve size, ANSI pressure class, and type of service.

Inspection and Repair

Caution: **Body pressure MUST be relieved before any attempt is made to service internal parts of the swing check valve. Follow all safety procedures and appropriate regulations for handling the pipeline media.**



4.1 Remove the valve cover plate. Remove and inspect cover seal replacing if damaged or showing excessive set. NOTE: M&J Valve recommends that the cover seal be replaced each time the cover is removed.

4.2 Clapper removal.

4" and smaller

4.2.1 Lift clapper assembly out of valve hanger section.

4.2.2 Inspect clapper seal for damage. Replace if required. Inspect clapper for any imbedded foreign material. Remove as required. NOTE: Severely damaged clappers may require replacement.

4.2.3 Clean and inspect clapper bushings.

6" and larger

4.2.1 Remove shaft-retaining plug. Larger valve sizes may have a bolted on cap.

4.2.2 Support clapper assembly and inspect arm hanger section of body noting bushing orientation between arm and body.

4.2.3 Remove shaft. A 3/8"-16UNC tapped hole is provided in the shaft end to aid in shaft removal. To remove the shaft, screw a cap

screw or eyebolt into the tapped hole and pull on the screw. Clean and inspect shaft for damage before re-installing into valve. Replace shaft if required.

4.2.4 Remove clapper/arm assembly and inspect seal for damage. Replace if required. Inspect clapper for any imbedded foreign material. Remove as required. NOTE: Severely damaged clappers may require replacement.

4.2.4.1 To replace clapper, remove retainer pin and nut then pull clapper from arm. Install new clapper onto arm shaft and replace retainer nut and pin.

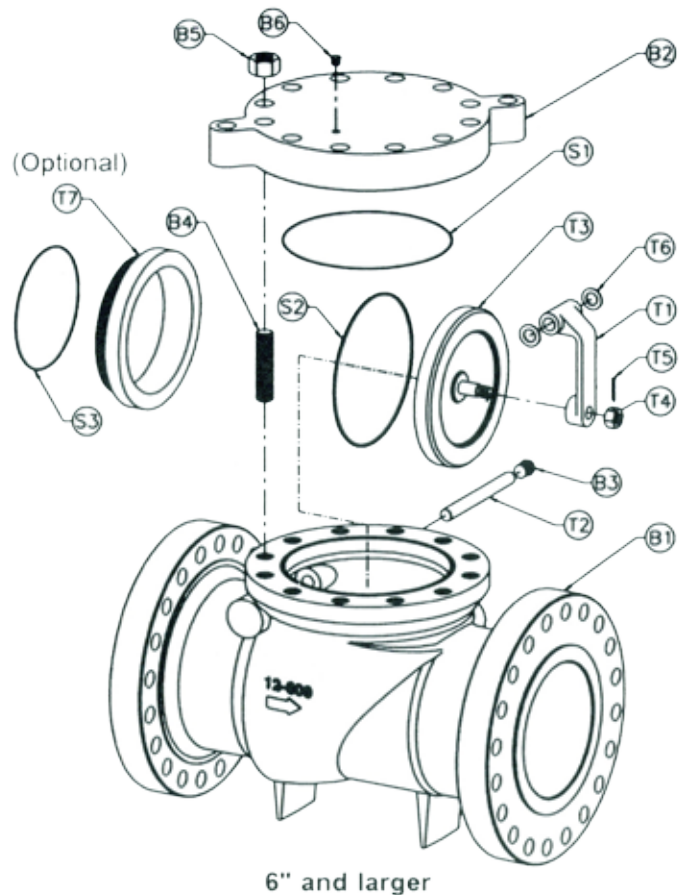
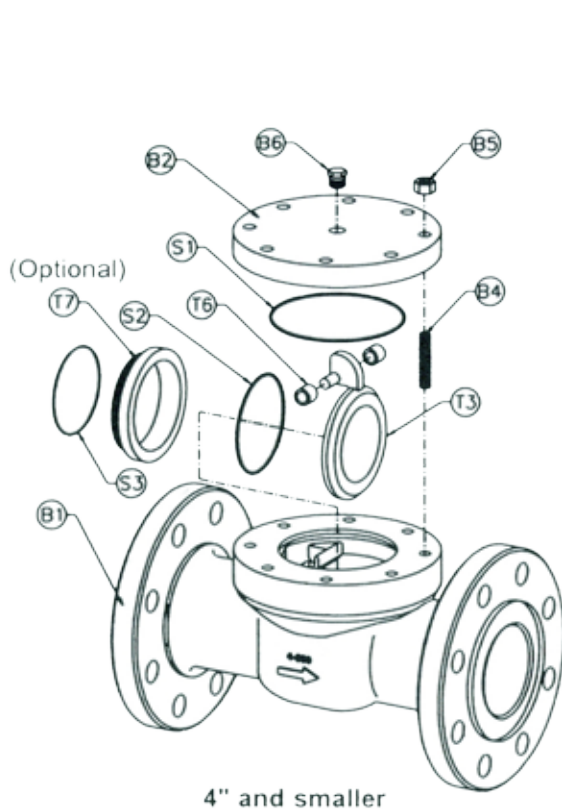
NOTE: Clapper retainer pin must be replaced to insure safe operation.

4.2.5 With clapper and shaft removed, inspect body seat face and arm hanger section of body for wear.

4.2.6 Reassemble valve in reverse order, insuring that shaft washers are replaced in original order.

Weights

Valve Size	ANSI Class	Weight (lbs.)	Valve Size	ANSI Class	Weight (lbs.)
2	150	35	10	150	630
	300	42		300	790
	600	45		600	970
	900	150		900	1160
3	150	70	12	150	970
	300	70		300	1100
	600	75		600	1450
	900	180		900	1890
4	150	80	16	150	1680
	300	120		300	2210
	600	140		600	2520
	900	250		900	2840
6	150	160	20	150	2100
	300	220		300	2580
	600	360		600	4000
	900	420		900	4200
8	150	300	24	150	3530
	300	340		300	4200
	600	600		600	5520
	900	760		900	8420



B1 - BODY. The body is cast carbon steel unless otherwise specified. Top entry allows easy inspection and maintenance. Bosses are provided for drain taps or bypass as specified.

B2 - COVER. The cover, complete with integral lifting holes, is made from plate unless otherwise specified. A plugged $\frac{1}{2}$ "NPT port is provided.

B3 - SHAFT PLUG. The shaft plug covers the shaft opening. It is made from carbon steel unless otherwise specified.

B4 - COVER PLATE STUD. Used to attach cover plate to body. Material is as specified.

B5 - COVER NUT. Used to attach cover plate to body. Material is as specified.

B6 - PIPE PLUG. Used to plug off cover port.

S1 - COVER SEAL. The cover seal provides the seal between the body and cover. Material is as specified.

S2 - CLAPPER SEAL. The clapper seal provides the seal between the body and clapper. Material is as specified.

S3 - SEAT SEAL (Optional). Used when removable seat is required. Material is as specified.

T1 - ARM. The arm is cast carbon steel unless otherwise specified. It holds and guides the clapper.

T2 - SHAFT. The shaft is made from 300 series stainless steel unless otherwise specified. It supports the arm.

T3 - CLAPPER. The clapper is cast carbon steel unless otherwise specified. It holds the clapper seal. The arm attaches to the back of the clapper using an integral threaded stud with a nut and retainer pin.

T4 - CLAPPER RETAINER NUT. The clapper retainer nut holds the clapper on the arm.

T5 - CLAPPER RETAINER PIN. This pin keeps the clapper retainer nut from inadvertently coming loose. It is made from 300 series stainless steel unless otherwise specified.

T6 - BUSHING. The bushing isolates the arm from the body allowing free movement.

T7 - REMOVABLE SEAT (Optional). Allows seat to be replaced if seal area becomes damaged. Carbon steel unless otherwise specified.

Notes



Your local contact:



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For more information about our worldwide locations, approvals, certifications, and local representatives, please visit www.spxfc.com.

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