Serving the Water & Waste Water Industry Since 1878

IN-PLANT VALVES

M&H Valve is a division of McWane, Inc.

www.mh-valve.com

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For Generations
AUTOMATION

MORIN ACTUATOR DESCRIPTION:
The Morin Actuator is a heavy-duty, quarter-turn scotch yoke piston design available in ductile iron/carbon steel, ductile iron/stainless steel and all stainless steel through 238,000 in. lbs. of torque. It is available as double acting (air-to-air) and spring return (fail-safe). Available accessories include:
• solenoid valves, positioners, filter/regulator/lubricators
• partial stroke test device
• lockout device
• jackscrew, hydraulic overrides
• AWWA tested per C504 for water or pneumatic service

WATER INDUSTRY APPLICATIONS
• filter galleries
• pump control/isolation
• submersible
• fail-safe isolation

Electric motor actuators can be furnished when required. Quarter-turn actuators are available for butterfly and eccentric plug valves. Multi-turn actuators are available for resilient wedges and double disc gate valves.

All actuators contain the following standard accessories: a handwheel for manual operation, open and close position limit switches to assure motor shut-off at the ends of travel, open and close torque limit switches to protect the valve from excessive actuator torque and a separate drive nut or coupling. The motors have been designed for high starting torque and long service life. Quarter-turn actuators are furnished with adjustable end of position mechanical stops.

Optional accessories include intermediate position limit switches, position feedback devices and integral motor controls. Generally, motor controls consist of reversing starters, control transformer, push buttons, selector switches and indicating lights. For these applications requiring control by an analog signal (usually 4-20 mA DC), a positioner can be furnished with motor controls.
M&H ECCENTRIC PLUG VALVES

**AVAILABLE END CONNECTIONS & SIZE RANGE**
- **Flanged End:** 3”–24”
- **M.J:** 2”–24”
- **Grooved:** 3”–16”

**ACCESSORIES**
- Floorstands
- Extension Stems
- 2" sq. Operating Nuts
- Handwheels
- Lever Wrench Head
- Chainwheels
- Worm Gear Actuators
- Electric Motor Actuators
- Cylinder Actuators
- Limit Switches
- Stem Guides
- Floor Boxes
- "T" Handles
- Chain levers
- Extended Bonnet

**SIZE RANGE**

<table>
<thead>
<tr>
<th>SIZE RANGE</th>
<th>WATER WORKING PRESSURE PSI</th>
<th>HYDROSTATIC TEST PSI</th>
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<tr>
<td>3”–12”</td>
<td>175</td>
<td>265</td>
</tr>
<tr>
<td>14”–24”</td>
<td>150</td>
<td>225</td>
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</table>

M&H BUTTERFLY VALVES

**AVAILABLE END CONNECTIONS & SIZE RANGE**
- **Flanged End:** 3”–54”
- **M.J:** 2”–48”
- **Flanged X M.J:** 6”, 8”, 12”, 16”
- **Wafer:** 4”–20”

**ACCESSORIES**
- Floorstands
- Extension Stems
- Traveling Nut & Screw Actuator
- Worm Gear Actuators
- Hand Lever Actuators
- Electric Motor Actuators
- Limit Switches
- Cylinder Actuators
- Solenoid Valves
- Positioners
- Speed Controls
- Chainwheels
- 2" sq. Operating Nuts
- Handwheels
- Cranks
- "T" Handles
- Floor Boxes
- Extended Bonnet

**SIZE RANGE**

<table>
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<th>CLASS 150B</th>
<th>WATER WORKING PRESSURE PSI</th>
<th>BUBBLE-TIGHT TEST PSI</th>
<th>HYDROSTATIC TEST PSI</th>
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<tbody>
<tr>
<td>3”–54”</td>
<td>150</td>
<td>150</td>
<td>300</td>
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**RESILIENT WEDGE**

**AVAILABLE END CONNECTIONS & SIZE RANGE**
- **End Connection:** R/W®
- **Double Disc:** 2”–24”
- **M.J:** 2”–48”
- **Flanged End (OS&Y):** 2”–24”

**ACCESSORIES**
- Floorstands
- Indicator Posts
- Electric Actuators
- Manual Operators
- Extension Stems
- Stem Guides
- Chainwheels
- "T" Handles
- "T" Handles

**DOUBLE DISC GATE VALVE**

<table>
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<th>SIZE RANGE</th>
<th>WATER WORKING PRESSURE PSI</th>
<th>HYDROSTATIC TEST PSI</th>
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</thead>
<tbody>
<tr>
<td>2”–12”</td>
<td>200</td>
<td>400</td>
</tr>
<tr>
<td>14”–48”</td>
<td>150</td>
<td>300</td>
</tr>
</tbody>
</table>

Contact your local representative for sizes up to 120".

Also available: High pressure double disc gate valve.
**M&H MUD VALVES**

**AVAILABLE END CONNECTIONS & SIZE RANGE**
- Flanged End, Non-Rising Stem  4” – 24”
- Flanged End, Rising Stem  4” – 24”

**NOTE:**
Flanged ends are faced and drilled to ANSI 125 pound template except holes under yoke/flange connection.

**ACCESSORIES**
- Handwheels
- 2” Square Operating Nut
- Floorstands
- Extension Stems
- Electric Motor with Extension Stem
- Manual Actuator
- "T" Handles
- Stem Guides
- Floor Boxes

**SIZE RANGE**  
<table>
<thead>
<tr>
<th>Working Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>4” – 24”</td>
</tr>
</tbody>
</table>

Recommended for use in lines of low seating or unseating pressures only

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**M&H SWING CHECK VALVES**

**AVAILABLE END CONNECTIONS & SIZE RANGE**
- Flanged  2” – 30” (Plain)
- Flanged  2” – 30” Outside Weight & Lever
- Flanged  2” – 30” Outside Spring & Lever

**ACCESSORIES**
- Outside Weight and Lever
- Outside Spring and Lever
- Limit Switches
- Iron Rubber Faced Gates

**SIZE RANGE**  
<table>
<thead>
<tr>
<th>Water Working Pressure PSI</th>
<th>Hydrostatic Shell Pressure PSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>2” – 12”</td>
<td>200</td>
</tr>
<tr>
<td>14” – 30”</td>
<td>150</td>
</tr>
</tbody>
</table>

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**M&H CUSHIONED SWING CHECK VALVE**

**AVAILABLE END CONNECTIONS**
Flanged  4” – 30” Outside Weight and Lever

**ACCESSORIES**
- Outside Weight and Lever
- Iron Rubber Faced Gates

**SIZE RANGE**  
<table>
<thead>
<tr>
<th>Water Working Pressure PSI</th>
<th>Hydrostatic Shell Pressure PSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>3” – 12”</td>
<td>200</td>
</tr>
<tr>
<td>14” – 30”</td>
<td>150</td>
</tr>
</tbody>
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**M&H INCREASING SWING CHECK VALVES**

**AVAILABLE END CONNECTIONS**
- Flanged -(Plain)
- Flanged–Outside Spring & Lever
- Flanged–Outside Weight & Lever

**ACCESSORIES**
- Outside Weight and Lever
- Outside Spring and Lever
- Iron Rubber Faced Gates

**SIZE RANGE**  
<table>
<thead>
<tr>
<th>Water Working Pressure PSI</th>
<th>Hydrostatic Shell Pressure PSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>3” X 4”</td>
<td>8” X 10”</td>
</tr>
<tr>
<td>4” X 6”</td>
<td>8” X 12”</td>
</tr>
<tr>
<td>4” X 8”</td>
<td>10” X 12”</td>
</tr>
<tr>
<td>6” X 8”</td>
<td>6” X 10”</td>
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</tbody>
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Water Working Pressure 175 PSI  
Hydrostatic Shell Pressure 350 PSI

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**M&H KENFLEX RESILIENT SEATED CHECK VALVES**

**SIZE RANGE**  
<table>
<thead>
<tr>
<th>Water Working Pressure PSI</th>
<th>Hydrostatic Shell Pressure PSI</th>
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</thead>
<tbody>
<tr>
<td>4” – 12”</td>
<td>250</td>
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**M&H INCREASING SWING CHECK VALVES**

**AVAILABLE END CONNECTIONS**
Flanged -(Plain)
Flanged–Outside Spring and Lever
Flanged–Outside Weight and Lever

**ACCESSORIES**
- Outside Weight and Lever
- Iron Rubber Faced Gates

**SIZE RANGE**  
<table>
<thead>
<tr>
<th>Water Working Pressure PSI</th>
<th>Hydrostatic Shell Pressure PSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>3” X 4”</td>
<td>8” X 10”</td>
</tr>
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<td>4” X 6”</td>
<td>8” X 12”</td>
</tr>
<tr>
<td>4” X 8”</td>
<td>10” X 12”</td>
</tr>
<tr>
<td>6” X 8”</td>
<td>6” X 10”</td>
</tr>
</tbody>
</table>

Water Working Pressure 175 PSI  
Hydrostatic Shell Pressure 350 PSI
M&H SHEAR GATE VALVES

M&H FLOOR TYPE PRESSURE RELIEF VALVES

M&H WALL TYPE PRESSURE RELIEF VALVE

M&H FLAP VALVES

F3000-T

**AVAILABLE END CONNECTIONS & SIZE RANGE**
Flanged End Frame 4” – 30”

**NOTE:** Flanged End Frame is faced and drilled to ANSI 125 pound template.

**ACCESSORIES**
Lifting Handle and Hooks

<table>
<thead>
<tr>
<th>SIZE RANGE</th>
<th>Working Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>4” – 30”</td>
<td>Recommended for use in lines of low seating and unseating pressures only</td>
</tr>
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</table>

<table>
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<th>SIZE RANGE</th>
<th>Working Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>4” – 30”</td>
<td>Valves unseat and swing open under unseating pressure to release the outfall fluid and close when pressure is relieved.</td>
</tr>
</tbody>
</table>

**F3012-T**

**AVAILABLE END CONNECTIONS & SIZE RANGE**
Flanged End 4” – 30”

**ACCESSORIES**
4” & 6” F-1496T Wall Pipe with Grate

**PRESSURE:**
The cover for the Pressure Relief Valve weighs approximately 6 lbs. and starts to open at a head of approximately 9” of water.

**INSTALLATION:**
In order for the F-1493T Floor Type Valve to operate correctly, it must be installed in a vertical position.

Length can be increased to desired dimension by adding PVC or Ductile pipe into bell.

**SIZE**
4” & 6”

Standard Body
Length (inches) 8”
ACCESSORIES

FLOOR STANDS
F-5500-T Standard Pattern N.R.S.
F-5505-T Standard Pattern N.R.S.
Indicating

FLOOR BOX
F-5695-T Bushed
Max. Length 12”
Min. Length 8”
Max. Stem Dia. 1 3/4”

STEM GUIDES F-5660-T

<table>
<thead>
<tr>
<th>SIZE</th>
<th>MIN. LENGTH</th>
<th>MAX. LENGTH</th>
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<tbody>
<tr>
<td>#3</td>
<td>2 1/2”</td>
<td>17”</td>
</tr>
<tr>
<td>#5</td>
<td>15”</td>
<td>24”</td>
</tr>
<tr>
<td>#6</td>
<td>24”</td>
<td>35”</td>
</tr>
</tbody>
</table>

T-HANDLE VALVE WRENCHES
F-2520-T Rigid Wrench

EXTENSION STEMS
Diameters up to 2 1/2”
Any Length

COMMITTED TO ENVIRONMENTAL RESPONSIBILITY
M&H VALVE COMPANY IS COMMITTED TO PROTECTING OUR NATURAL RESOURCES THROUGH ENVIRONMENTALLY RESPONSIBLE MANUFACTURING PRACTICES, INCLUDING THE USE OF 80+% RECYCLED CONTENT IN OUR HYDRANTS AND VALVES.

To learn more about our commitment to the environment, call 256-237-3521.

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M&H Valve is a division of McWane, Inc.
SIZE RANGE
PRESSURE RATING
SUGGESTED SPECIFICATIONS

M&H VALVE—FLAP VALVES (4”-30”)
STYLE 47-02

<table>
<thead>
<tr>
<th>SIZE RANGE</th>
<th>WORKING PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>4”-30”</td>
<td>Valves unseat and swing open under unseating pressure to release the outfall fluid and close when pressure is relieved.</td>
</tr>
</tbody>
</table>

**SUGGESTED SPECIFICATIONS:**
Flap valves shall be of the circular port design with offset single pivoted hinge. They shall be of the iron body bronze mounted type and furnished with a flanged end.

The assembly shall consist of three parts: flap gate, body and hinge pin. The flap gate and body shall be cast iron conforming to ASTM specifications A-126 Class B. The seats and hinge pin shall be furnished of bronze. The flap gate seat ring shall be rolled into a dovetailed groove under pressure to make one inseparable unit. The body seat ring shall be threaded and screwed into place in the body. Both gate and body seat ring faces shall be machined to a smooth finish. The valve shall be constructed with a 10 degree offset from vertical to ensure positive closure. The flange shall be drilled using an ANSI 125 pound template. Valves shall be as furnished by M&H Valve or approved equal.

July 2005 / M&H Flap Valves
INSTALLATION
OPERATION
MAINTENANCE

M&H VALVE—FLAP VALVES (4”-30”)
STYLE 47-02

**General**
Inspect all assemblies at time of delivery for shipping damage and to confirm compliance with order. The valve should be protected from rough handling. Water and debris should not be allowed to collect in valve.

**I. Installation**
A. Check that valve end joints are clean
B. Remove any material used to restrain the gate during shipment and storage.
C. The gate should be checked to insure freedom of motion and proper operation
D. When handling the valve, do not use the outside mechanism for lifting.
E. Prepare pipe end of manhole as required, and install valve as per appropriate instructions for the specified joint. Bolt holes should straddle the vertical centerline.

**II. Operations**
Once properly installed, the valve will operate as pressure conditions dictate. The valve will open under direct pressure to release the outfall fluid and will close to prevent entrance of backwater when the direct pressure is relieved. The flap valve is a 10 degree inclined plane to insure positive seating.

**III. Maintenance**
Frequency of inspection should be at least on an annual basis. Joint should be visually inspected for leakage. Raise and lower the flap so pin can be checked for free operation.

**Troubleshooting:**
Exercise and lubricate the hinge/shaft pin (*with suitable lubricant) at least annually to assure free operation. Check bronze flap ring and seat ring for freedom from damage. Remove any debris found on inside of valve.

**Notes:**
There are no recommended spare parts

*Recommend food grade grease similar to Chevron FM Grease EP NLGI 2.

July 2005 / M&H Flap Valves
<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>REQ'D</th>
<th>MATERIAL</th>
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<tbody>
<tr>
<td>1</td>
<td>F/V DISC</td>
<td>1</td>
<td>CAST IRON A126 CL. B</td>
</tr>
<tr>
<td>2</td>
<td>DISC RING</td>
<td>1</td>
<td>BRONZE B62</td>
</tr>
<tr>
<td>3</td>
<td>SEAT RING</td>
<td>1</td>
<td>BRONZE B62</td>
</tr>
<tr>
<td>4</td>
<td>F/V BODY</td>
<td>1</td>
<td>CAST IRON A126 CL. B</td>
</tr>
<tr>
<td>5</td>
<td>COTTER PIN</td>
<td>2</td>
<td>BRASS CDA360</td>
</tr>
<tr>
<td>6</td>
<td>HINGE PIN</td>
<td>1</td>
<td>BRASS CDA360</td>
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M&H VALVE COMPANY
ANNISTON, ALABAMA
A DIVISION OF MCWANE INC.

4” THRU 30” FLAP VALVES
VALVE ASSEMBLY / MATERIAL LIST
STYLE 47-02
FLANGED END
### DIMENSIONS

<table>
<thead>
<tr>
<th>ITEM</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
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**M&H VALVE COMPANY**  
ANNISTON, ALABAMA  
A DIVISION OF MCWANE INC.

**DWN:** TRIJ  
**DATE:** 7/1/05  
**DWG. NO:** FV−A2  
**4" THRU 30" FLAP VALVES**  
**GENERAL DIMENSIONS**  
**STYLE 47−02**  
**FLANGED END**