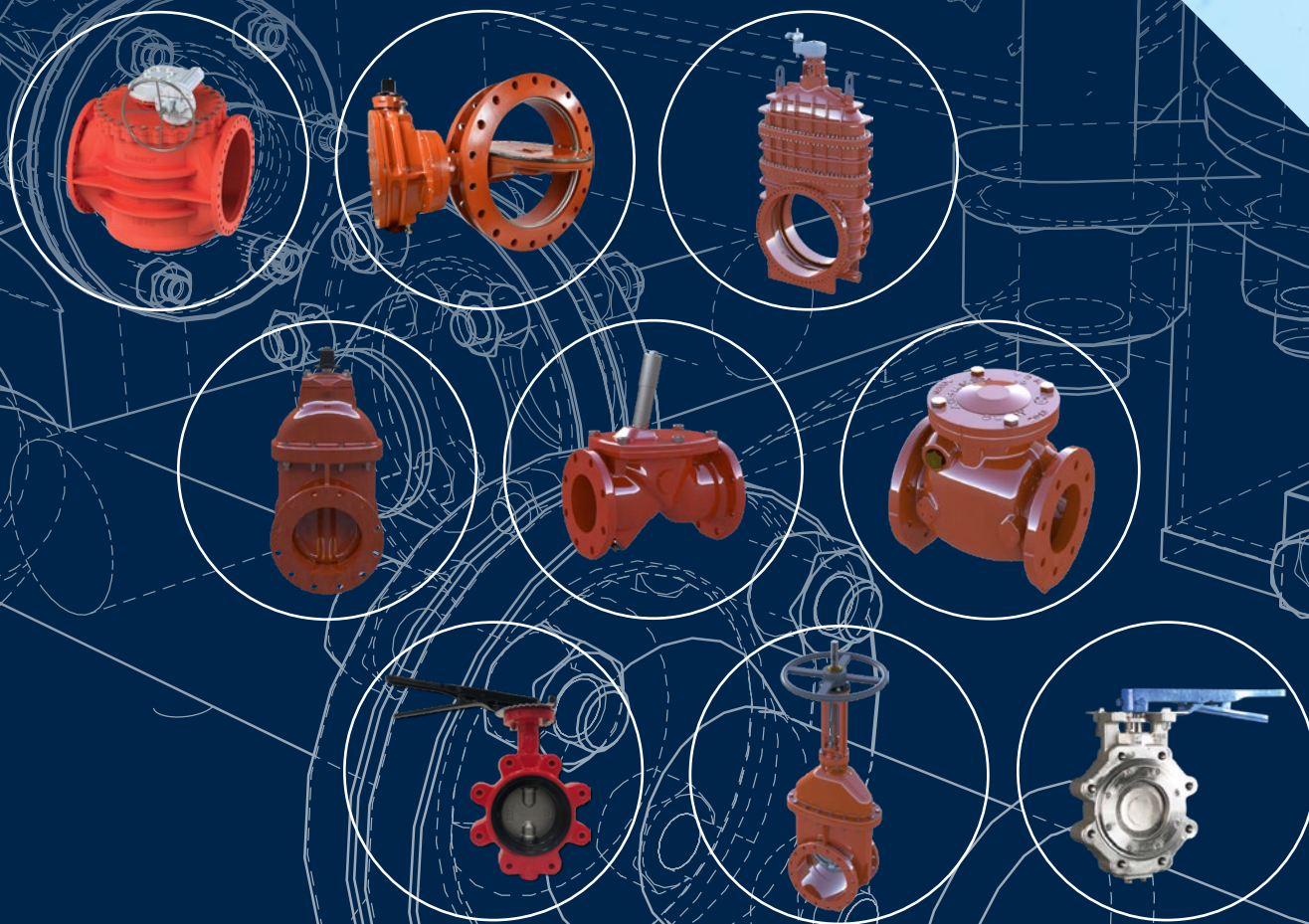


# VALVE SELECTION GUIDE



Scan for  
detailed drawings



ECCENTRIC PLUG VALVE  
AWWA C504 BUTTERFLY VALVE  
ROTATING DISC GATE VALVE  
RESILIENT SEAT GATE VALVE  
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HIGH PERFORMANCE BUTTERFLY VALVE

# AWWA C504 BUTTERFLY VALVES

Designed for years of dependable service, the superior design of our butterfly valve provides ease of adjustment along with the ensured dependability expected in any distribution system or plant installation. MPI offers both seat-on-disc and seat-on-body valve designs with both using EPDM rubber seats as standard. The rubber seat provides a 'zero leakage' alternative to metal-seated valves.

For pump station and treatment plant applications, butterfly valves offer flow control advantages (such as throttling) over gate valves, and are much more economical. Our butterfly valves are manufactured in accordance with the American Water Works Association (AWWA) C504 standard. Butterfly valves are constructed of ductile iron, stainless steel, rubber seats & seals. The strength of ductile iron along with stainless steel components provide corrosion resistance for buried service applications.



| KEY CHARACTERISTICS | SEAT-ON-DISC   |
|---------------------|--|
| Size Range          | 3"-72"   |
| Materials           | Ductile Iron ASTM A536 body cover and vane, seat ring 316 SS, 304 or 630 SS shafts, EPDM         |
| Shaft Seals         | Chevron V-Type 3"-24" and O-ring type 30" and up   |
| Pressure Range      | CL 150B or CL 250B   |
| Temperature Range   | 0°F-250°F  |
| Body Style          | FLG, MJ or MJxFLG  |
| Actuator Types      | Traveling Nut Operator, Lever, Handwheel, 2" OP nut, Electric Motor Operator, Pneumatic Operator |
| Standards           | AWWA C504, NSF/ANSI 61/372 certified (4" and larger)   |

| KEY CHARACTERISTICS | SEAT-ON-BODY   |
|---------------------|--|
| Size Range          | 3"-36"   |
| Materials           | Ductile Iron ASTM A536 body body and disc (316SS disc for 3" size), edge, 316SS stem and fasteners (630SS stem on CL 250B), EPDM seat and packing. |
| Shaft Seals         | Chevron (V-type)   |
| Pressure Range      | CL 150B or CL 250B   |
| Temperature Range   | 0°F-250°F  |
| Body Style          | FLG, MJ  |
| Actuator Types      | Traveling Nut Operator, Lever, Handwheel, 2" OP nut, Electric Motor Operator, Pneumatic Operator   |
| Standards           | AWWA C504, NSF/ANSI 61/372 certified (4" and larger)   |



## ROTATING DISC GATE VALVE

MPI rotating disc gate valves are prized for their reliability and low maintenance. They have been utilized successfully for decades in water/wastewater treatment plants and water lines all over the United States. The rotating action of the discs cleans deposits during travel and creates a different seating position each time the valve is closed. Uneven or excessive wear is prevented, so the sealing components remain smooth and operational years longer without maintenance or replacement.



| KEY CHARACTERISTICS        |  |
|----------------------------|--|
| Size Range                 | 3"-108"  |
| Materials                  | Ductile Iron ASTM A536, Iron Body Bronze Mounting (IBBM), 304 SS Stems |
| Pressure Range             | Rated pressure up to 300PSI  |
| Temperature Range          | 33°F-160°F   |
| Body Style and Connections | NRS or OS&Y FLG, MJ, or FLG x MJ                                       |
| Actuator Types             | Spur or Bevel Gear, Electric Motor Operator                            |
| Standards                  | AWWA C500, NSF/ANSI 61/372 certified                                   |

## RESILIENT SEAT GATE VALVE

Resilient seated gate valves were introduced to the waterworks industry in the 1980s and became a dominant preference for use in distribution systems. Valves comply with AWWA C515 reduced wall standard. The valve contains a wedge fully encapsulated with EPDM rubber that is permanently bonded to the wedge and meets ASTM D429. The valve body, bonnet, and stuffing plate are coated with fusion bonded epoxy (FBE) and applied in accordance with AWWA C550 and is ANSI/NSF 61/372 certified. Optional configurations also include non-rising stem (NRS) or outside screw and yoke (OS&Y) and can be ordered with a spur or bevel gear.



| KEY CHARACTERISTICS |  |
|---------------------|--|
| Size Range          | 2"-54"   |
| Materials           | Body/Bonnet/Stuffing Box ATSM A-536 Ductile Iron, ASTM A126 Class B Cast Iron, Fully Encapsulated EPDM wedge |
| Stem materials      | Bronze, 304 SS, 316 SS   |
| Pressure Range      | 250 PSI Working Pressure   |
| Temperature Range   | 33°F- 125 °F   |
| Body Style          | NRS or OS&Y, FLG, MJ or MJ x FLG and MJ x Tap  |
| Actuator Types      | Spur or Bevel Gearing, Electric Motor Operator upon request  |
| Standards           | AWWA C509, AWWA C515, ANSI/NSF 61/372 Certified  |



# SOLID WEDGE GATE VALVE

Kennedy Solid Wedge Gate Valves are available in both NRS and OS&Y bonnet configuration options. Both styles are available with Flanged ends and MJ ends. The Flanged ends valve available in nominal pipe sizes, MJ ends valve available in sizes 3" through 48"NPS. The valves are designed, manufactured and tested in accordance with AWWA C500. Available with hand wheels, operating nuts and when required, integrally cast mounting pads for gears or electric actuators. Valves are protected externally and internally with coatings conforming with AWWA C550.

| KEY CHARACTERISTICS |   |
|---------------------|---|
| Size Range          | Flanged ends and Mechanical joint ends 3" to 48"                      |
| Materials           | Ductile Iron Body, SS Stems, 2 Part Epoxy interior & exterior coating |
| Pressure Range      | CL 150 or CL 250  |
| Temperature Range   | 33 - 180°F  |
| Body Style          | NRS or OS&Y style, FLG or MJ ends                                     |
| Actuator Types      | Manual, Spur or Bevel Gear, Electric Motor Operator                   |



# MUD VALVE

MPi's NRS style ductile iron/stainless steel mud valves are designed primarily for use in settling tanks of water and wastewater treatment plants. They are available in both ductile iron and stainless steel bodies. Their intended use is to drain tanks for maintenance or cleaning. Mud Valves are furnished with a 2" square operating nut; however, they can be supplied with optional extension stem or handwheel. The valve uses a Buna-N resilient seat on the plug. The ductile iron/stainless steel body assembly features ASTM A276 stainless steel stems and fasteners to prevent corrosion from years of submerged service.

| KEY CHARACTERISTICS |  |
|---------------------|--|
| Size Range          | 3"-12"   |
| Materials           | Ductile iron or stainless steel body, plug and stem cap; Buna-N gasket and stainless steel hardware; |
| Temperature Range   | 0°F-250°F  |
| Body Style          | ANSI CL 125-lb. flange   |



## AWWA C508 SWING CHECK VALVE

MPI swing check valves are designed and manufactured in conformance with AWWA C508. They are self-contained, free-swinging disc style which can be purchased with an outside lever and weight or outside lever and spring options. The valves can also be purchased with outside air or oil cylinders when required by customer requirements or project specifications. Valves sizes 2"-24" can be ordered with double lever arms. Valve sizes 30" come with standard double lever arms.



| KEY CHARACTERISTICS |  |
|---------------------|--|
| Size Range          | 2"-36"   |
| Materials           | Bronze or Resilient disc seat, Cast Iron A126B or Ductile Iron A536 body, Bronze or SS body seat ring, Limit Switch, Double Lever Arms, air and oil cushions |
| Pressure Range      | 2"-12" 200 PSI, 14"-36" 150 PSI  |
| Temperature Range   | 0°F-250°F  |
| Body Style          | Flanged Connection   |
| Standards           | AWWA C508, NSF/ANSI 61/372 certified   |

## KEN-FLEX™ CHECK VALVE

The KEN-FLEX™ resilient-hinged check valve provides reduced maintenance and faster closing than most traditional swing check valves. The rubber-encapsulated flapper assembly is the only moving part and is easily accessed through a full-size cover with the valve in line. The resilient flapper material makes KEN-FLEX™ ideal for "dirty water" applications, and the fast-closing action is ideal for surge prevention. The optional position indicator is spring loaded and provides the added benefit of accelerated closing speed.



| KEY CHARACTERISTICS |   |
|---------------------|---|
| Size Range          | 3"-24"  |
| Materials           | Ductile Iron Body, EPDM Flapper, Stainless Steel Hardware, Buna-N O-Rings |
| Pressure Range      | 250 PSI   |
| Temperature Range   | 0°F-250°F   |
| Body Style          | Flanged Connection  |
| Standards           | AWWA C508, NSF/ANSI 61/372 certified                                      |

# RESILIENT SEATED BUTTERFLY VALVE

The MPI Resilient Seated Butterfly Valve combines robust construction materials and reliable sealing capabilities, making this suitable for a diverse range of industrial applications. Our valve features a one-piece ductile iron body with a T431SS stem standard on all our valves, bubble tight shutoff and availability of a wide selection of resilient seat materials. The MPI Resilient Seated Butterfly Valves are designed to handle a wide variety of applications such as water treatment, pulp and paper, power, automotive, mining, ethanol, oil, gas and other general service applications where a resilient seated butterfly valve is required.



| KEY CHARACTERISTICS |   |
|---------------------|---|
| Size Range          | 2" - 36"  |
| Materials           | ASTM A536 65-45-12 Ductile Iron body; EPDM (Standard), BUNA-N, or FKM seat; T431SS shaft; ASTM A351 gr. CF8M disc |
| Operating Pressure  | 230PSI  |
| Temperature Range   | -20°- 400°F   |
| Body Connections    | Lug Style or Wafer Style  |
| Actuator Types      | Hand Lever, Gear w/Hand Wheel, IP68 Gear (Buried Service)   |
| Standards           | API 609 Category A, API 598   |

# HIGH PERFORMANCE BUTTERFLY VALVE

Tri-Seal Quarter-Flex Butterfly Valves contain improvements and refinements not found in any other high-performance butterfly valves. These features serve to insure a long and trouble-free life as well as providing simple and less expensive maintenance when required. The valves are manufactured to meet or exceed API 609 standard. Tri-Seal valve applications included air, water, steam, oxygen, and NACE service. Tri-Seal ANSI CL 150 valves are rated up to 285PSI while ANSI CL 300 valves are rated up to 740PSI.



| KEY CHARACTERISTICS |   |
|---------------------|---|
| Size Range          | 2 1/2" - 36"  |
| Materials           | A 351 CF8M Stainless Steel or A 216 WCB Carbon Steel bodies; PTFE, MPTFE, RPTFE, Graphite Seat and Packing; 17-4 or 316 SS shafts (Other material available upon request; CF8M Stainless Steel Discs. |
| Pressure Range      | ANSI Class 150 or ANSI Class 300  |
| Temperature Range   | -35°- 450°F   |
| Body Connections    | Lug Style or Wafer Style  |
| Actuator Types      | 10 Position Locking Lever, Gear Operator w/ HW or 2" Op Nut, Electric Motor Operator  |
| Standards           | API 609   |

# ECCENTRIC PLUG VALVE

MPi Eccentric Plug Valves are designed for consistent performance, durability and longevity. Built to the AWWA C517 standard, the Eccentric Plug Valves are available in sizes 3"-48" for 100% port with a variety of end connections. A reliable and engineered product capable of bi-directional flow at fully rated pressures. Dependable in a variety of service applications.



| KEY CHARACTERISTICS |   |
|---------------------|---|
| Size Range          | 3"-48"  |
| Materials           | Ductile Iron ASTM A536, 95% pure nickel welded seat, Buna-N Plug                                |
| Pressure Range      | 175PSI 3"-12", 150PSI 14" - 48"   |
| Temperature Range   | 0°F-250°F   |
| Body Style          | FLG or MJ   |
| Actuator Types      | Direct drive with 2" square operating nut; electric, pneumatic or hydraulic actuator, worm gear |
| Standards           | AWWA C517   |





# VALVE SELECTION GUIDE



| Size/Pressure Range                         | 3"-72"<br>CL 150<br>or<br>CL 250 | 3"-48"<br>175psi<br>3-12",<br>150psi<br>14-48" | 3"-108"<br>Rated<br>pressure<br>up to<br>300psi | 2"-54"<br>250psi<br>working<br>pressure | 2.5"-72" FLG<br>3-48" MJ<br>CL 150 or<br>CL 250 | 2"-36"<br>200psi<br>2-12",<br>150psi<br>14-36" | 3"-24"<br>250psi | 4"-12"<br>N/A | 2.5"-36"<br>ANSI CL 150<br>275psi,<br>ANSI CL 300<br>740psi | 2"-36"<br>230psi |
|---|----------------------------------|--|---|---|---|--|------------------|---------------|---|------------------|
| <b>SERVICE APPLICATIONS</b>                 |                                  |  |   |   |   |  |                  |               |   |                  |
| On/Off                                      | X                                | X  | X   | X                                       | X   | X  | X                |               | X   | X                |
| Throttling                                  | X                                | X  |   |   |   |  |                  |               | X   | X                |
| Buried/Vault Service                        | X                                | X  | X   | X                                       | X   | Vault not Buried                               | Vault not Buried | X             | Vault not Buried  | Vault not Buried |
| Potable Water                               | X                                | X  | X   | X                                       | X   | X  | X                | X             | X   | X                |
| Raw Water                                   |                                  | X  | X   |   | X   | X  | X                | X             |   |                  |
| Industrial Wastewater                       |                                  | X  | X   | X                                       | X   | X  | X                | X             | X   | X                |
| Industrial Water                            |                                  | X  | X   | X                                       | X   | X  | X                | X             | X   | X                |
| Industrial Spill/Overflow Containment Basin |                                  |  |   |   |   |  |                  | X             |   |                  |
| Water/Wastewater Treatment Basin            |                                  |  |   |   |   |  |                  | X             |   |                  |
| Irrigation                                  | X                                | X  | X   |   | X   | X  | X                |               |   | X                |
| Slurries (Sludge)                           |                                  | X  | X   |   | X   | X  | X                |               |   |                  |
| Gritty Service                              |                                  | X  | X   |   | X   |  |                  |               |   |                  |
| Slurries (Fibrous)                          |                                  | X  | X   |   | X   |  |                  |               |   |                  |
| Primary Effluent                            |                                  | X  | X   |   | X   | X  | X                |               |   |                  |
| Secondary Effluent                          | X                                | X  | X   | X                                       | X   | X  | X                |               |   | X                |
| Raw Sewage                                  |                                  | X  | X   |   | X   | X  | X                |               |   |                  |
| Screened Sewage                             |                                  | X  | X   |   | X   |  |                  |               |   |                  |
| Air Service                                 | Consult Factory                  |  |   |   |   |  |                  |               | X   | X                |
| Low Pressure Gas                            | Consult Factory                  | Consult Factory                                |   |   |   |  |                  |               | X   | X                |
| Pigging                                     |                                  | X  | X   | X                                       | X   |  |                  |               |   |                  |
| Tapping                                     |                                  |  | X   | X                                       | X   |  |                  |               |   |                  |
| High Pressure                               | Up to 250PSI                     | Up to 175PSI                                   | Up to 300PSI                                    | Up to 350PSI                            | Up to 250PSI                                    | Up to 200PSI                                   | Up to 250PSI     |               | Up to 740PSI  | Up to 230PSI     |
| Low Head Loss                               | X                                | X  | X   | X                                       | X   |  |                  |               | X   | X                |
| Horizontal Installation                     | X                                | X  | X   | X                                       | X   | X  | X                |               | X   | X                |
| Vertical Installation                       | X                                | X  | X   | X                                       | X   | Yes-Flow Up                                    | Yes-Flow Up      |               | X   | X                |
| Intermittent Submersion (fresh water)       | X                                | Consult Factory                                | X   | X                                       | X   |  |                  |               |   | X                |
| Continuous Submersion (fresh water)         | Consult Factory                  | Consult Factory                                | X   | Consult Factory                         | X   | Consult Factory                                |                  |               |   |                  |



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