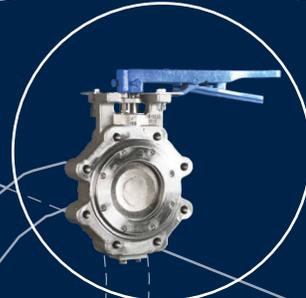
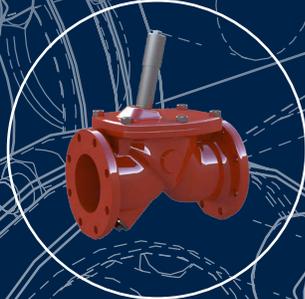
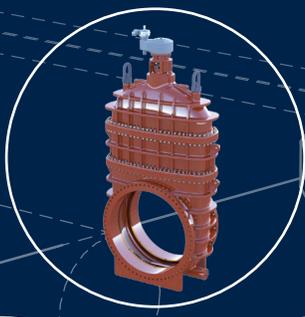


# VALVE SELECTION GUIDE



ECCENTRIC PLUG VALVE  
AWWA C504 BUTTERFLY VALVE  
ROTATING DISC GATE VALVE  
RESILIENT SEAT GATE VALVE  
SOLID WEDGE GATE VALVE  
AWWA C508 SWING CHECK VALVE  
KEN-FLEX CHECK VALVE  
MUD VALVE  
TRI-SEAL HIGH PERFORMANCE BUTTERFLY VALVE

# AWWA C-504 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. Our butterfly valve has a 100% bubble tight seal via a 316 stainless steel ring located in the body, and rubber seat located on the vane. 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	
Size Range	3"-54" (other sizes available upon request)
Materials	Ductile Iron ASTM A536 body cover and vane, seat ring 316 SS, 304 or 630 SS shafts, EPDM
O-Ring Seals	Chevron Type 3"-24" and O-ring type 30" and up
Pressure Range	CL 150 or CL 250
Temperature Range	33°F-125°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"-54" only)

# ECCENTRIC PLUG VALVE

MPIs 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	33°F - 125°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



# ROTATING DISC GATE VALVE

MPI's line of rotating disc gate valves has been utilized successfully for decades in water/wastewater treatment plants and water lines all over the United States.

MPI's rotating disc gate valves clean themselves with every operation. Deposits are removed in travel, so nothing builds up on the seating surfaces that could cause leakage. Discs are free of pockets that could collect solids. The rotating action of the discs 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. Since the discs rotate, they cannot foul on the body guides.

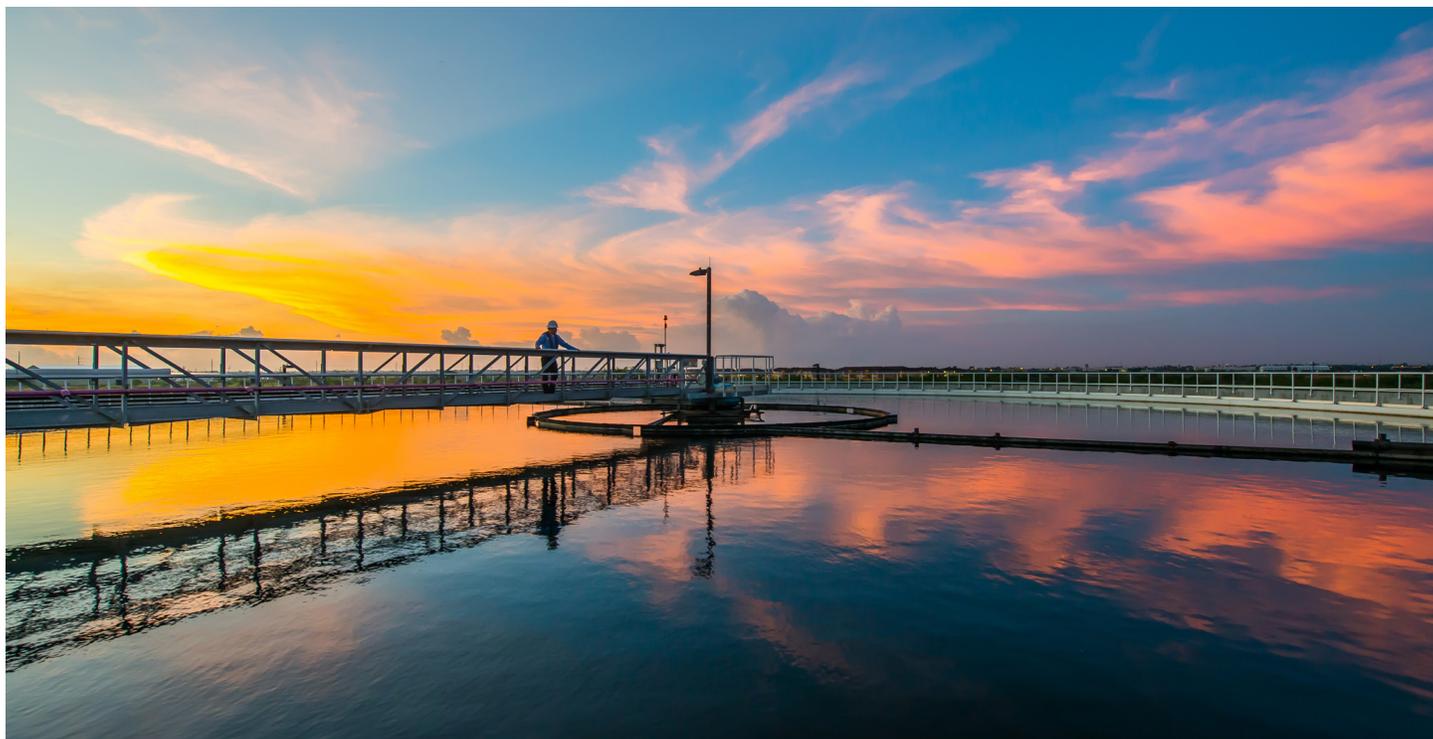
This superior valve design provides independent wedging and seating action for smoother valve opening and closing with less operating force. Discs are fully interchangeable and reversible, ensuring simple and inexpensive maintenance.

These advantages, along with uncompromising quality control, ensure that MPI's rotating disc gate valves are ideal for water and wastewater applications. The unique valve design features make these valves fully capable of taking on services no other metal-seated gate valve can handle.

So for reliability, versatility, and long-life, specify MPI's line of rotating gate valves.



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

## AWWA C508 SWING CHECK VALVE

MPIs Swing Check Valves are designed and manufactured in conformance with AWWA C508. Under certain circumstances where it is desirable to have more positive control of the closing on the disc, the valves can be supplied with either level-and-spring or level-and-weight.

Swing check valves are used for the prevention of backflow in water systems where there is the possibility of a pollutant in the user's system back flowing into the potable water system. They are self-contained, free-swinging disc style which can be purchased with an outside lever and weight or outside lever and spring options conforming to AWWA C508 standards. 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.

For check valves to function properly and not be a source of chatter and water hammer, there must be at least 1/2 psi differential across the valve under normal flow conditions. When in doubt the check valve should be undersized. For service in normal environments (clear water or dry air) at temperatures less than 100° F, resilient seated valves will allow less backflow and minimize water hammer vs. metallic seated valves. For service other than clean water consult the factory.



### KEY CHARACTERISTICS

Size Range	2"-30"
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	Resilient Seat Max Temp 125°F, Bronze Seat Max Temp 150°F
Body Style	Flanged Connection
Standards	AWWA C508, NSF/ANSI 61/372 certified

## KEN-FLEX CHECK VALVE

The Ken-Flex Resilient Hinged Check Valve eliminates most problems associated with swing check valves. Because of its simplicity, it is ideal for "dirty water" applications. The addition of the position indicator not only provides flapper location feedback, but also acts as a surge preventer. The position indicator is spring loaded, causing the flapper to quickly close in the event of loss of flow. The Jack Screw option allows the check valve to be back flushed, clearing the waterway.

The AWWA C508 Ken-Flex Spring-Loaded Check Valve features buckling springs to aid in eliminating water hammer (patent pending). Buckling springs produce their highest load when extended, where it's most valuable, when the check valve is closed. Opposite, leaf spring loaded Flex Check Valves have their highest load when fully open and lowest at closed. As a result, buckling springs offer a superior solution when dealing with water hammer.



### KEY CHARACTERISTICS

Size Range	3"-12" (16" & 24" spring loaded available)
Materials	Ductile Iron Body, EPDM Flapper, Stainless Steel Hardware, Buna-N O-Rings
Pressure Range	250 PSI
Temperature Range	Up to 125°F
Body Style	Flanged Connection
Standards	AWWA C508, NSF/ANSI 61/372 certified

# MUD VALVE

MPIs 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	33°F-125°F
Body Style	ANSI CL 125-lb. flange

# TRI-SEAL 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, 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

# VALVE SELECTION GUIDE

AWWA C504 Butterfly Valve

Eccentric Plug Valve

Rotating Disc Gate Valve

Resilient Seat Gate Valve

Solid Wedge Gate Valve

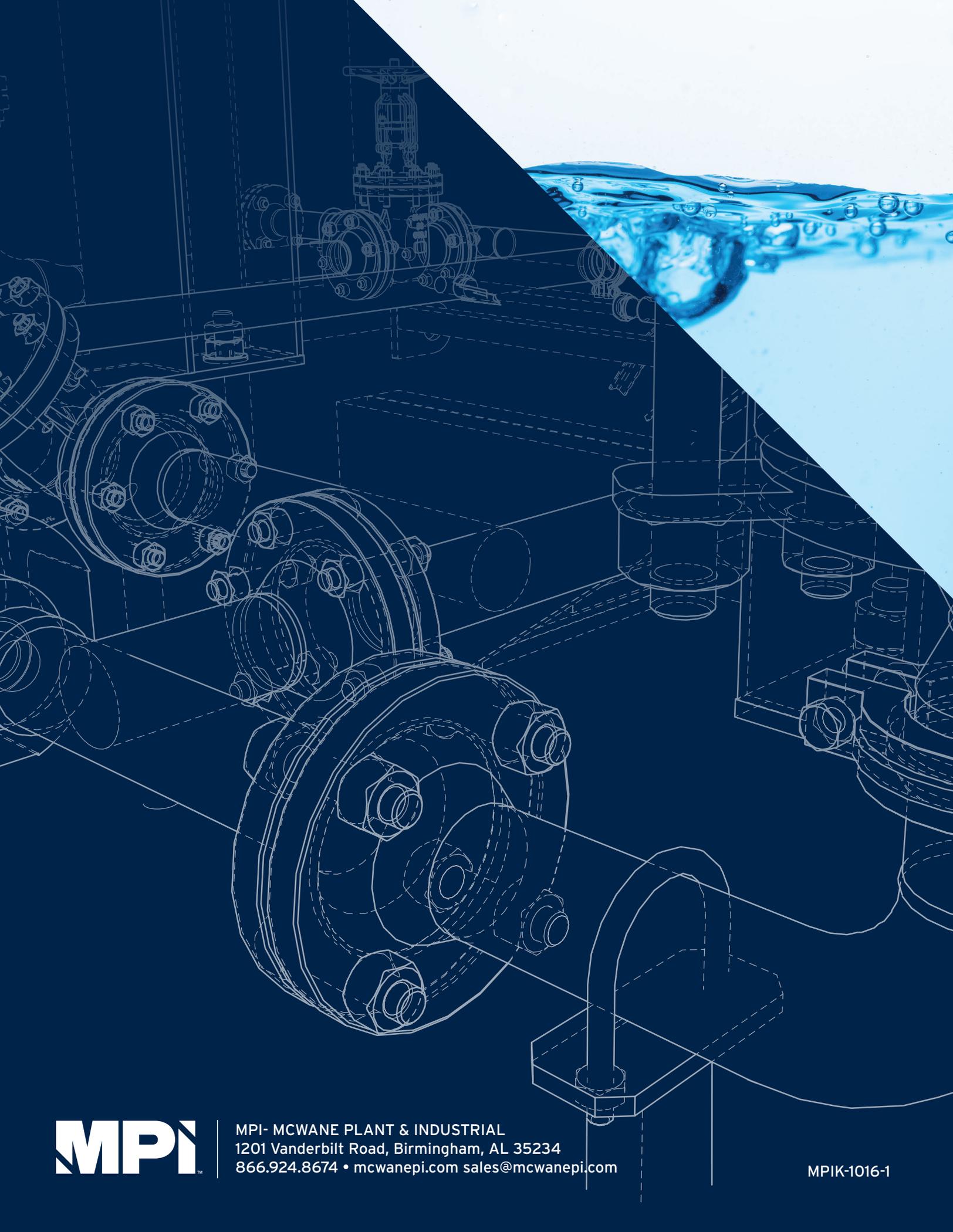
AWWA C508 Swing Check Valve

Ken-Flex Check Valve

Mud Valve

Tr-Seal High-Performance BFFV

Size/Pressure Range	3"-72" CL 150 or CL 250	3"-48" 175psi 3'-12", 150psi 14'-48"	3"-108" Rated pressure up to 300psi	2"-54" 250psi working pressure	2.5"-72" FLG, 3'-48" MJ, CL 150 or CL 250	2"-36" 200psi 2'-12", 150psi 14'-36"	3"-12" 250psi	4"-12" N/A	2.5"-36" ANSI CL 150 275psi, ANSI CL 300 740psi
<b>SERVICE APPLICATIONS</b>									
On/Off	X	X	X	X	X	X	X		X
Throttling	X	X							X
Buried/Vault Service	X	X	X	X	X	Vault not Buried	Vault not Buried	X	Vault not Buried
Potable Water	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
Industrial Water		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		
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		
Raw Sewage		X	X		X	X	X		
Screened Sewage		X	X		X				
Air Service	Consult Factory								X
Low Pressure Gas	Consult Factory	Consult Factory							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
Low Head Loss	X	X	X	X	X				X
Horizontal Installation	X	X	X	X	X	X	X		X
Vertical Installation	X	X	X	X	X	Yes-Flow Up	Yes-Flow Up		X
Intermittent Submersion (fresh water)	X	Consult Factory	X	X	X				
Continuous Submersion (fresh water)	Consult Factory	Consult Factory	X	Consult Factory	X	Consult Factory			



MPI- MCWANE PLANT & INDUSTRIAL  
1201 Vanderbilt Road, Birmingham, AL 35234  
866.924.8674 • mcwanepi.com sales@mcwanepi.com

MPIK-1016-1