



Master Valve Product Summary

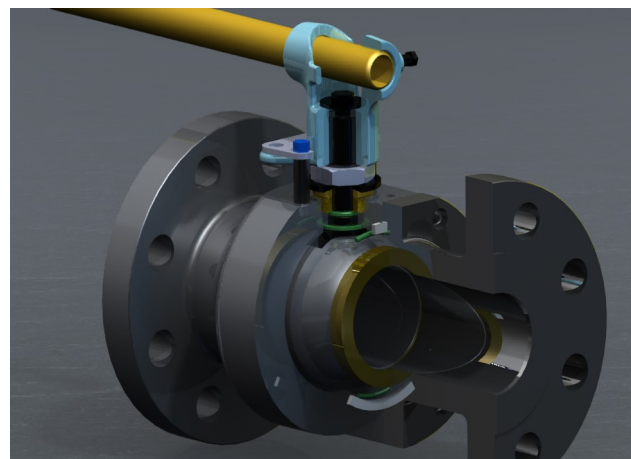
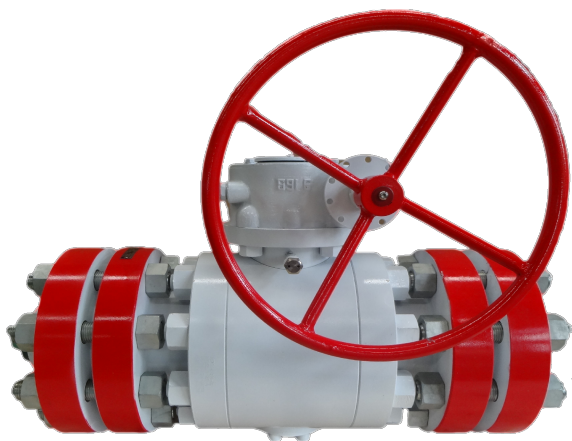
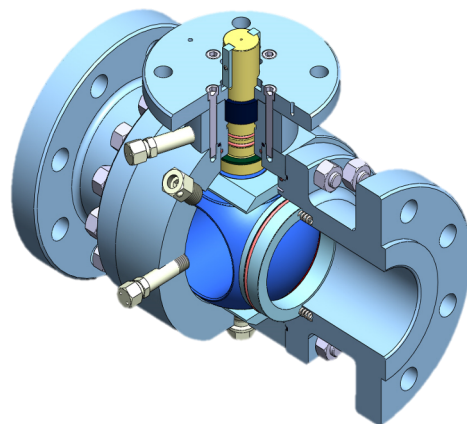
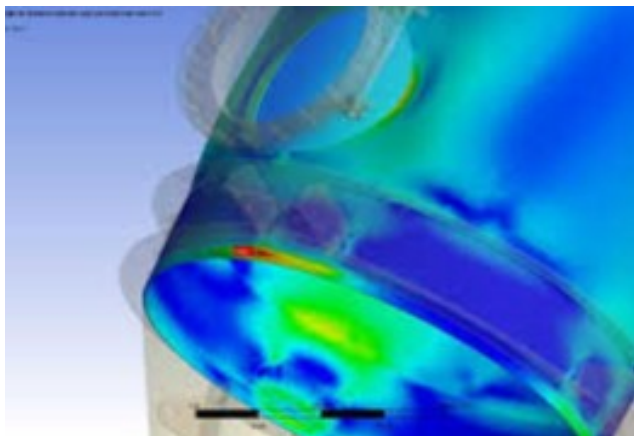


Coretech Flow America INC

Innovative Engineering Design

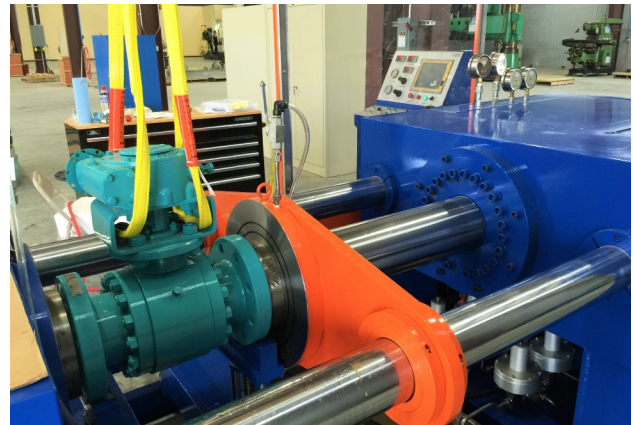
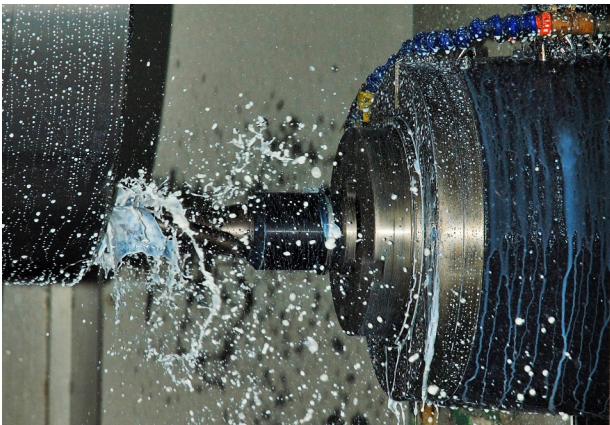
Based on years of valve application experience and material breakthrough, Master Valve's innovative ball valve designs deliver following features to our customers:

- Low stem torques, typically 20% lower than the norm, which drives your automation costs lower
- Better performance in sealing and leak protection due to new materials used
- High featured design such as double piston effect (DPE) with downstream/upstream redundant seals. A customer buys 1 valve with 2 shutdown production in place



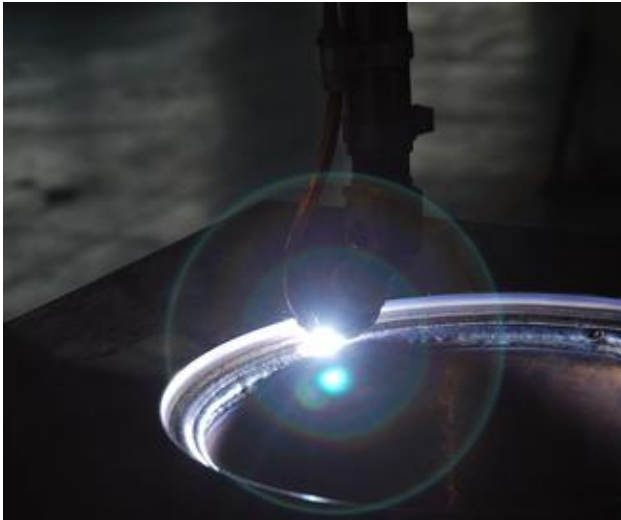
Quality Controls

- All manufacturing is conducted under API Q1/ ISO 9001 certified quality management system
- Products are stringently manufactured in accordance with applicable industry standards and to specific Master Valve Design Specifications.
- Designs are compliant with ASME B16.34, API 608, API 600, API 6D, API 6A and MSS-SP110
- Pressure testing is conducted to API 6D, API 6A, API 598, MSS SP-110 as applicable
- Fire test certifications to API 607 and API 6FA as applicable
- All Master Valve products certified to NACE meet the predefined material requirements of NACE MR-0175/ISO 15156 or NACE MR-0103
- Material Test Reports per EN 10204-1991 3.1.B & EN10204 3.1 available for each valve



Manufacturing Capabilities





Master Valve has access to world class manufacturing and sourcing capabilities and top-notch quality control in the whole supply chain, covering forging, heat treatment, machining, assembly, coating, painting and final testing. We learned to handle high quality materials from API 6A high pressure and high integrity requirements. In addition to the strong manufacturing and sourcing capabilities shared with our partner companies, Master Valve establishes a 15,000 square feet factory in the heart of Houston to house assembly, testing and customer support operations.




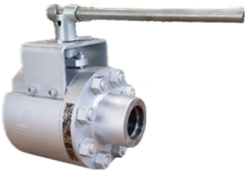


Inventory for Short Lead-time





Inventory is a critical piece of our business model to make customers life easier. Master Valve and associated companies keep inventory from forging material, work-in-progress to finished valves. In today's environment, our customers need our inventory to cut their project delivery short and archive high Return On Investment (ROI).












			
MV Series	BG1 Series Ball Valve for API 6D pipeline and API 6A applications	BG2 Series Ball Valve for API 6D pipeline and API 6A applications	BW1 Series Ball Valve for API 6D pipeline and API 6A applications
Design Standards	API 6D / ISO 14313 API 6A / ISO 10423	API 6D / ISO 14313 API 6A / ISO 10423	API 6D / ISO 14313 API 6A / ISO 10423
Standard Design Feature	Trunnion mounted, 3-piece, side-entry, forged body; DBB or Double Piston Effect (DIB-2)	Trunnion mounted, 2-piece, side entry, forged body; DBB or Double Piston Effect (DIB-2)	Trunnion mounted, 2 piece, forged welded body; DBB or Double Piston Effect (DIB-2)
Sizes	2"~ 56"; 1 13/16" ~ 18 3/4"	2"~ 56"; 1 13/16" ~ 18 3/4"	2" ~ 36"
Pressure Range	API 6D Class 150-2500; API 6A API 2000- 15000	API 6D Class 150-2500; API 6A API 2000- 15000	API 6D Class 150-2500; API 6A API 2000- 5000
Port	Full port & Reduced port & Speical port	Full port & Reduced port & Speical port	Full port & Reduced port & Speical port
Body Materials	Forged carbon steel, low temp C.S. stainless steel, or Duplex SS or speical materials	Forged carbon steel, low temp C.S. stainless steel, or Duplex SS or speical materials	Forged carbon steel, low temp C.S. stainless steel, or Duplex SS or speical materials
Trim Materials	C.S+ENP, SS, Duplex SS, or speical	C.S+ENP, SS, Duplex SS, or speical	C.S+ENP, SS, Duplex SS, or speical
Seat/Seal Materials	G/PTFE, Nylon, Molon, Peek, Delrin, Devlon, others / Viton, Buna-N, HNBR, Lip seal, Tungsten Carbide Coating, or others	G/PTFE, Nylon, Molon, Peek, Delrin, Devlon, others / Viton, Buna-N, HNBR, Lip seal, Tungsten Carbide Coating, or others	G/PTFE, Nylon, Molon, Peek, Delrin, Devlon, others / Viton, Buna-N, HNBR, Lip seal, Tungsten Carbide Coating, or others
End Configurations	Flanged, Weld ends, or Special	Flanged, Weld ends, or Special	Flanged, Weld ends, or Special
Actuator Mounting	ISO 5211 / MSS SP-101	ISO 5211 / MSS SP-101	ISO 5211 / MSS SP-101
Optional Features	Metal to metal seat, PMSS (primary metal secondary soft), welding overlay, live loaded stem, lipseal, cryogenic service, Buried service with extented stem design, DIB-1 design, tandem design, or special	Metal to metal seat, PMSS (primary metal secondary soft), welding overlay, live loaded stem, lipseal, cryogenic service, Buried service with extented stem design, DIB-1 design, tandem design, or special	Metal to metal seat, PMSS (primary metal secondary soft), welding overlay, live loaded stem, lipseal, cryogenic service, Buried service with extented stem design, DIB-1 design, tandem design, or special
Test Standard	API 6D / API 6A/ API 607 / API 6FA ISO 15848	API 6D / API 6A/ API 607 / API 6FA ISO 15848	API 6D / API 6A/ API 607 / API 6FA ISO 15848
Confromance Standards	ASME B16.5 - Steel pipe flanges and fittings ASME B16.10 - Face to Face & end to end dim. ASME B16.25 – Butt welding ends ASME B16.34 - Steel valves-flanged and buttweld end ASME B31.1 - Chemical plant and petroleum refinery piping ASME B31.4 - Liquid petroleum transportation piping systems ASME B31.8 - Gas transportation and distribution piping systems NACE MR-01-75 / ISO 15156 - Petroleum and natural gas industries - Materials for use in H2S containing environments	ASME B16.5 - Steel pipe flanges and fittings ASME B16.10 - Face to Face & end to end dim. ASME B16.25 – Butt welding ends ASME B16.34 - Steel valves-flanged and buttweld end ASME B31.1 - Chemical plant and petroleum refinery piping ASME B31.4 - Liquid petroleum transportation piping systems ASME B31.8 - Gas transportation and distribution piping systems NACE MR-01-75 / ISO 15156 - Petroleum and natural gas industries - Materials for use in H2S containing environments in oil	ASME B16.5 - Steel pipe flanges and fittings ASME B16.10 - Face to Face & end to end dim. ASME B16.25 – Butt welding ends ASME B16.34 - Steel valves-flanged and buttweld end ASME B31.1 - Chemical plant and petroleum refinery piping ASME B31.4 - Liquid petroleum transportation piping systems ASME B31.8 - Gas transportation and distribution piping systems NACE MR-01-75 / ISO 15156 - Petroleum and natural gas industries - Materials for use in H2S containing environments





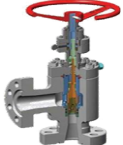
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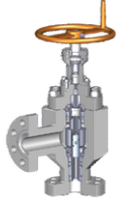
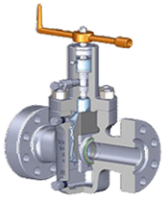
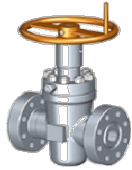
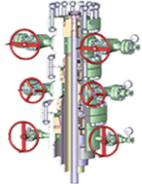
			
MV Series	BP Series High Temp (up to 1200°F) Ball Valve for power plant applicaitons	FB1 1 Piece Floating Ball	FB2 2 Piece Floating Ball
Design Standards	ASME B16.34/ API 6D	ASME B16.34/API 608/BS 5351	API 6D/ ASME B16.34/BS 5351
Standard Design Feature	Floating, 2 piece forged, Integral metal seat, Metal body seal ring, Live loading gland bolting,	Floating, One-piece Cast Valve Body	Floating, 2 piece cast body
Sizes	1/2" ~ 36"	3/4"~6"	1/2"~12"
Pressure Range	Class 150 ~ 600	Class 150-300	Class 150-300
Port	Full port & Reduced port & Special port	Reduced port	Full port & Reduced port
Body Materials	Forged carbon steel, low temp C.S. stainless steel, or Duplex SS or speical materials	Casted carbon steel, low temp C.S., stainless steel	Casted carbon steel, low temp C.S., stainless steel
Trim Materials	C.S+ENP, SS, Duplex SS, or speical	C.S+ENP, SS	C.S+ENP, SS
Seat/Seal Materials	Tungsten-Carbide Coating with ingegral seat design(Temp limit up to 1200 °F)	G/PTFE or others / Viton or HNBR or others	G/PTFE or others / Viton or HNBR or others
End Configurations	Raised Face Flanged as standard, Other end connections availavle upon request	Flanged ends	Flanged ends
Actuator Mounting	ISO 5211 / MSS SP-101	ISO 5211 / MSS SP-101	ISO 5211 / MSS SP-101
Optional Features	Zero-leakage upon request	Metal to metal seat, welding overlay	Metal to metal seat, welding overlay
Test Standard	ASME B16.34 API 607 / API 6FA	API 598 / BS 6755 API 607 / API 6FA	API 598/ BS 6755 API 607 / API 6FA
Confromance Standards	ASME B16.5 - Steel pipe flanges and fittings ASME B16.10 - Face to Face & end to end dim. ASME B16.25 – Butt welding ends ASME B16.34 - Steel valves-flanged and buttweld end ASME B31.1 - Chemical plant and petroleum refinery piping ASME B31.4 - Liquid petroleum transportation piping systems ASME B31.8 - Gas transportation and distribution piping systems NACE MR-01-75 / ISO 15156 - Petroleum and natural gas industries - Materials for use in H2S containing environments in oil and gas production	ASME B16.5 - Steel pipe flanges and fittings ASME B16.10 - Face to Face & end to end dim ASME B16.34 - Steel valves-flanged and buttweld end ASME B31.1 - Chemical plant and petroleum refinery piping ASME B31.4 - Liquid petroleum transportation piping systems ASME B31.8 - Gas transportation and distribution piping systems	ASME B16.5 - Steel pipe flanges and fittings ASME B16.10 - Face to Face & end to end dim ASME B16.34 - Steel valves-flanged and buttweld end ASME B31.1 - Chemical plant and petroleum refinery piping ASME B31.4 - Liquid petroleum transportation piping systems ASME B31.8 - Gas transportation and distribution piping systems

			
MV Series	BS1, BS2 , Subsea Ball Valve (BS1 - Top entry, BS2 - Fully welded)	TBC1, TBC2 Series Cryogenic Ball Valve (TBC1 - 3 piece, TBC2 - 2-piece)	BR Series High Temp (up to 650°F) Ball Valve for chemical & refinery applications
Design Standards	API 6DSS 20+ year service	BS 6364 ASME B16.34	ASME B16.34/ API 6D
Standard Design Feature	Trunnion mounted, Top-entry (BS1 series), or Fully welded (BS2 series), forged, DBB or Double Piston Effect (DIB-2)	Trunnion mounted, 3 piece/2 piece Cast/forged body, DBB	Trunnion mounted, 2 piece forged, metal-seated, Live loading gland bolting, DBB
Sizes	2" ~ 24", 2-1/16" ~ 11"	2"-12"	2" ~ 24"
Pressure Range	API 6DSS Class 150 ~ 2500 API 6A 2000~5000	Class 150-2500	Class 150 ~ 2500
Port	Full port & Reduced port & Speical port	Full port & Reduced port & Special port	Full port & Reduced port & Special port
Body Materials	Forged carbon steel, stainless steel, nickel alloys, or speical materials	316/316L stainless steel (-320°F / -196°C), or Materials listed in Table 2 of BS 6364	Forged carbon steel, low temp C.S. stainless steel, or Duplex SS or speical materials
Trim Materials	C.S+ENP, SS, nickel alloys, or speical G/PTFE, Nylon, Molon, Peek, Delrin, Devlon, others / Viton, Buna-N, HNBR, Lip seal, Tungsten Carbide Coating, or others	316 / 316L Stainless Steel, or special PCTFE / Lip seal	C.S+ENP, SS, Duplex SS, or speical Tungsten-Carbide Coating / Pure graphite (Temp limit up to 650 °F)
Seat/Seal Materials	Full port & Reduced port & Speical port	Full port & Reduced port & Special port	Full port & Reduced port & Special port
End Configurations	Flanged, Weld ends, or Special	Flanged, Weld ends, or Special	Flanged, Weld ends, or Special
Actuator Mounting	ISO 13628-8 - Petroleum and natural gas industries -- Design and operation of subsea production systems -- Part 8: Remotely Operated Vehicle (ROV) interfaces on subsea production systems	ISO 5211 / MSS SP-101	ISO 5211 / MSS SP-101
Optional Features	Metal to metal seat, welding overlay, DIB-1 design, or special	Live loaded gland bolting	DIB-2 Design DIB-1 Design Zero-leakage upon request
Test Standard	API 6DSS / API 6A / API 607 / API 6FA ISO 15848	BS 6364/API 607 / API 6FA ISO 15848	ASME B16.34 / API 6D/ API 607 / API 6FA ISO 15848
Confromance Standards	AASME B16.5 - Steel pipe flanges and fittings ASME B16.10 - Face to Face & end to end dim. ASME B16.25 – Butt welding ends ASME B16.34 - Steel valves-flanged and buttweild end ASME B31.1 - Chemical plant and petroleum refinery piping ASME B31.4 - Liquid petroleum transportation piping systems ASME B31.8 - Gas transportation and distribution piping systems NACE MR-01-75 / ISO 15156 - Petroleum and natural gas industries - Materials for use in H2S containing environments in	ASME B16.5 - Steel pipe flanges and fittings ASME B16.10 - Face to Face & end to end dim ASME B16.25 - Buttwelding ends ASME B16.34 - Steel valves-flanged and buttweild end ASME B31.1 - Chemical plant and petroleum refinery piping ASME B31.4 - Liquid petroleum transportation piping systems ASME B31.8 - Gas transportation and distribution piping systems NACE MR-01-75 / ISO 15156 - Petroleum and natural gas industries - Materials for use in H2S containing	AASME B16.5 - Steel pipe flanges and fittings ASME B16.10 - Face to Face & end to end dim. ASME B16.25 – Butt welding ends ASME B16.34 - Steel valves-flanged and buttweild end ASME B31.1 - Chemical plant and petroleum refinery piping ASME B31.4 - Liquid petroleum transportation piping systems ASME B31.8 - Gas transportation and distribution piping systems NACE MR-01-75 / ISO 15156 - Petroleum and natural gas industries - Materials for use in H2S containing environments

			
MV Series	FB3 2 Piece Floating Forged Ball	6DGA Gate Valve	600GA Gate Valve
Design Standards	API/ 6D/ ASME B16.34/ BS 5351	API 6D	API 600
Standard Design Feature	Floating, 2 piece forged body	Bolted body, slab & expanding disc	Bolted Bonnet, OS&Y, Die formed graphite stem packing
Sizes	1/2"~10"	2"~36"	2"~42"
Pressure Range	Class 150-2500	Class 150-2500	Class 150-2500
Port	Full port & Reduced port	Full port	Full port
Body Materials	Forged carbon steel, low temp C.S. or stainless steel	Cast carbon steel, low temp C.S.	WCB or LCC
Trim Materials	C.S+ENP, SS	C.S+ENP, SS	API trim# 5/8/12
Seat/Seal Materials	G/PTFE, Nylon, Molon, Peek, Delrin, Devlon, others / Viton, Buna-N, HNBR, or others	Nylon, Devlon or RPTFE/PTFE, Viton	HF/Stainless steel graphite gaskets
End Configurations	Flanged ends	Flanged, Weld ends	RF Flanged
Actuator Mounting	ISO 5211 / MSS SP-101	ISO	NA
Optional Features	Metal to metal seat, welding overlay	Thermal relief configurations	Live loaded stem packing
Test Standard	API 598/ BS 6755/ API 607 / API 6FA	API6D/API598	API 598
Conformance Standards	ASME B16.5 - Steel pipe flanges and fittings ASME B16.10 - Face to Face & end to end dim ASME B16.34 - Steel valves-flanged and butt weld end ASME B31.1 - Chemical plant and petroleum refinery piping ASME B31.4 - Liquid petroleum transportation piping systems ASME B31.8 - Gas transportation and distribution piping systems	API 6FA fire safe ASME B16.5 - Steel pipe flanges and fittings ASME B16.10 - Face to Face & end to end dim. ASME B16.25 - Butt welding ends ASME B16.34 - Steel valves-flanged and butt weld end NACE MR-01-75 / ISO 15156	API 600 ASME B16.5 - Steel pipe flanges and fittings ASME B16.10 - Face to Face & end to end dim. ASME B16.25 - Butt welding ends ASME B16.34 - Steel valves-flanged and butt weld end NACE MR-01-75 / ISO 15156

				
MV Series	CGL Globe Valve	FGL Forged Globe	CSC Check Valve	FSC Forged Check
Design Standards	API 600	API 602 ASME B16.34	ASME B16.34, API 6D, API 594	API 602/ ASME B16.34
Standard Design Feature	Bolted bonnet, OS&Y	Bolted bonnet, OS&Y	Bolted bonnet, Sterlite 6 hard face	Bolted bonnet, Sterlite 6 hard face
Sizes	2"-14"	1/2"~2"	2" ~ 48"	1/4"~2"
Pressure Range	Class 150-600	Class 800-2500	Class 150-2500	Class 800-2500
Port	Full port	Full port	Full port	Full port
Body Materials	Cast carbon steel, alloy steel, stainless steel	Forged steel, stainless steel	Cast carbon steel, alloy steel, stainless steel	Forged carbon steel, alloy steel, stainless steel
Trim Materials	API trim# 5/8/10	API trim# 5/8/10	API trim	API trim
Seat/Seal Materials	HF/Stainless steel graphite gaskets	HF/Stainless steel graphite gaskets	HF/Stainless steel graphite gaskets	HF/Stainless steel graphite gaskets
End Configurations	RF Flanged	Flanged, Weld ends	Flanged, Weld ends	Flanged, Weld ends
Actuator Mounting	NA	NA	NA	NA
Optional Features	Special cleaning for applications	Higher pressure class	Dual plate	Higher pressure class
Test Standard	API 598	API 598	API 6D/API 598	API 598
Conformance Standards	API 600 ASME B16.5 - Steel pipe flanges and fittings ASME B16.10 - Face to Face & end to end dim. ASME B16.25 – Butt welding ends ASME B16.34 - Steel valves-flanged and butt-weld end NACE MR-01-75 / ISO 15156	API 602, BS 5352 ASME B16.5 - Steel pipe flanges and fittings ASME B16.10 - Face to Face & end to end dim. ASME B16.25 – Butt welding ends ASME B16.34 - Steel valves-flanged and butt-weld end	API 6D ASME B16.5 - Steel pipe flanges and fittings ASME B16.10 - Face to Face & end to end dim. ASME B16.25 – Butt welding ends ASME B16.34 - Steel valves-flanged and butt-weld end	API 602, BS 5352 ASME B16.5 - Steel pipe flanges and fittings ASME B16.10 - Face to Face & end to end dim. ASME B16.25 – Butt welding ends ASME B16.34 - Steel valves-flanged and butt-weld end

				
MV Series	HPB Butterfly	MOV Orifice Choke	H2 Adjustable Choke	MOS Multi Orifice Sleeve Choke
Design Standards	API 609/ASME B16.34/ASME B16.10	API 6A	API 6A	API 6A
Standard Design Feature	Triple offset,	Provide accurate, calibrated flow control and increased choke service life in all applications, including erosive conditions.	Designed and manufactured in accordance with API 6A, including performance verification testing for PR-2 level choke valves	Utilizes a Multi-Orifice Sleeve (MOS) trim to minimize erosion and control single or multi-phase flow with the presence of sand.
Sizes	2" ~ 24"	2-1/16" ~ 4-1/16"	2-1/16"~4-1/16"	2-1/16"~4-1/16"
Pressure Range	Class 150-600	2000psi ~ 10000psi	2000psi~15000 psi	2000psi~15000 psi
Port	Full port	Full port	Full port	Full port
Body Materials	Carbon steel, stainless steel	AA, BB, CC, DD, EE, FF, HH	AA, BB, CC, DD, EE, FF, HH	AA, BB, CC, DD, EE, FF, HH
Trim Materials	316 SS	Low Alloy/SS	Low Alloy/SS	Low Alloy/SS
Seat/Seal Materials	RPTFE	Low Alloy/SS	Low Alloy/SS	Low Alloy/SS
End Configurations	Flange/ wafer/ lug	NA	NA	NA
Actuator Mounting	ISO 5211 / MSS SP-101	NA	NA	NA
Optional Features	Pneumatic/ electric actuation	Consult factory	Consult factory	Consult factory
Test Standard	API 609	API 6A	API 6A	API 6A
Conformance Standards	API 609 ASME B16.10 - Face to Face & end to end dim. ASME B16.25 – Butt welding ends ASME B16.34 - Steel valves- flanged and buttweld end	API 6A	API 6A	API 6A

				
MV Series	EXT Cage & Sleeve Choke	EG-20 Expanding Gate	SG-22 Forged Steel Slab Gate Valve	CW Type Wellhead Equipment
Design Standards	API 6A	API 6A	API 6A	API 6A
Standard Design Feature	Enlarged body gallery maximizes flow capacity and minimizes body & outlet erosion. Bolted bonnet enhances safety	Expanding, wedge-type gate; a non-rising stem; and metal-to-metal seal technology	Metal-to-Metal Sealing, Reliability Through Simplicity of Design, symmetrical, bi-directional design without a preferred direction of operation	Corrosion-resistant overlay, ultra low temperature sealing, fire prevention technology, wearing-resistant thermal spray technology, PR2 technology
Sizes	2-1/16"~4-1/16"	2-1/16"~4-1/16"	1-13/16"~ 9"	All size of API 6A
Pressure Range	2000psi~15000 psi	2000psi~5000 psi	2000 psi ~20000psi	2000psi~20000psi
Port	Full port	Full port	Full port	Full port
Body Materials	AA, BB, CC, DD, EE, FF, HH	AA, BB, CC, DD, EE, FF	AA, BB, CC, DD, EE, FF	AA, BB, CC, DD, EE, FF, HH
Trim Materials	Low Alloy/SS	Low Alloy/SS	Low Alloy/SS	Low Alloy/SS
Seat/Seal Materials	Low Alloy/SS	Low Alloy/SS	Low Alloy/SS	Low Alloy/SS
End Configurations	NA	NA	NA	NA
Actuator Mounting	NA	NA	NA	NA
Optional Features	Consult factory	Consult factory	Consult factory	Consult factory
Test Standard	API 6A	API 6A	API 6A	API 6A
Conformance Standards	API 6A	API 6A	API 6A	API 6A



ISO 9001-2008 Certified

Master Valve USA

TOUGH BALL VALVE FOR TOUGHEST FLOW

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