CONTROL VALVE BROCHURE

COMPLETE SET SOLUTIONS
FOR CHEMICAL CONTROL VALVES

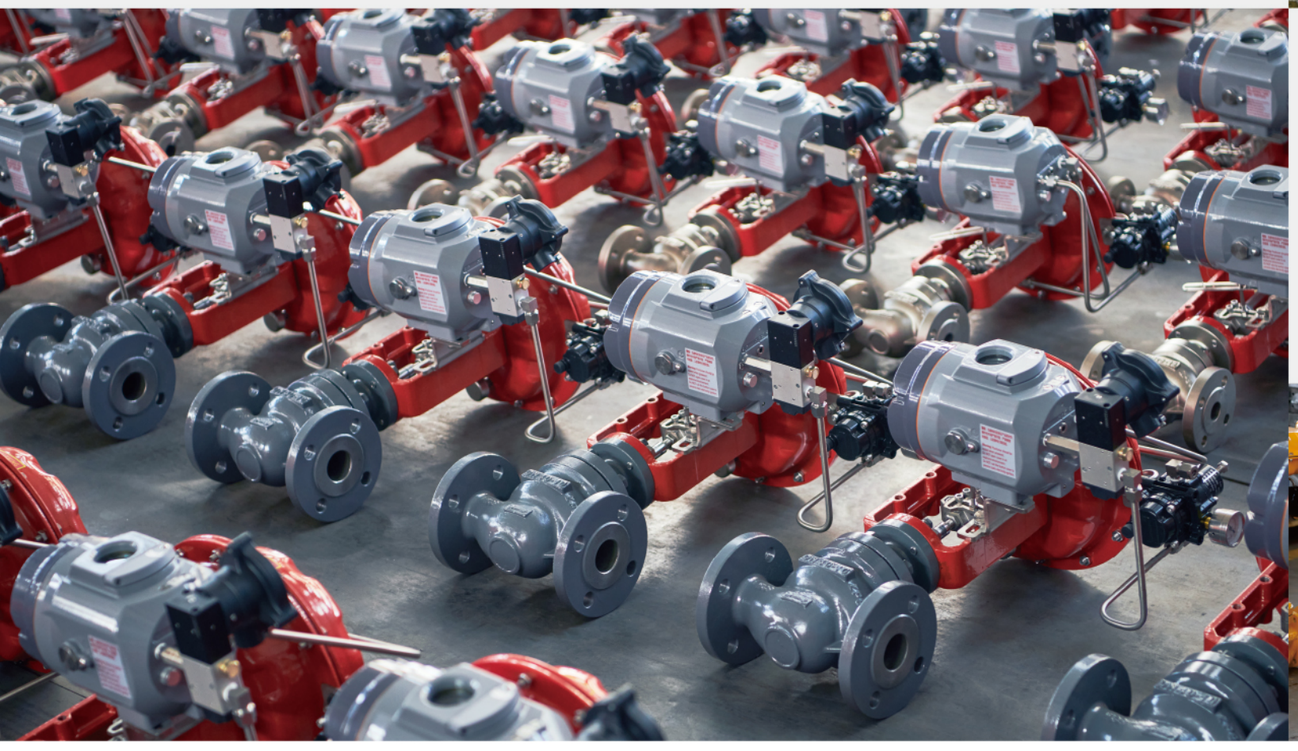
LIVE PRODUCT DEMO





Providing Expert Control Valve Solutions You Can Trust

As a high-tech enterprise company deeply rooted in the chemical industry, we are committed to product diversification, differentiation, and innovation as our core pillars, delivering professional and reliable control valve solutions for the chemical sector.

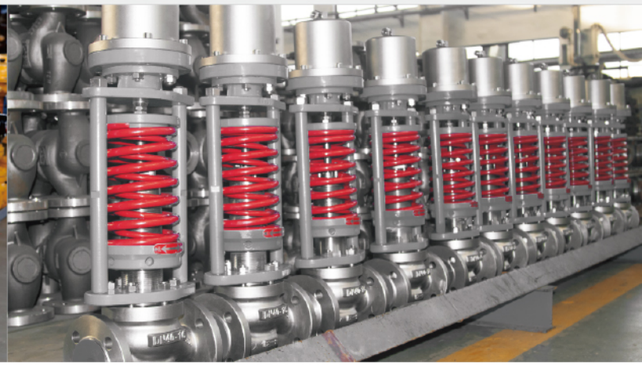




5
MAJOR PRODUCT SERIES

1000+
SPECIFICATIONS

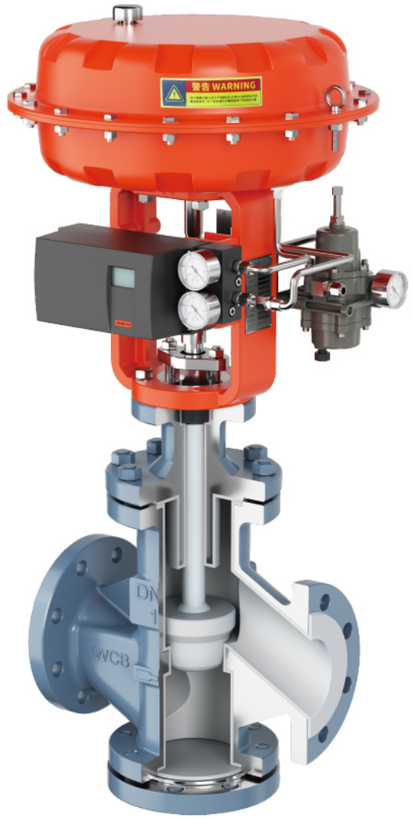




PNEUMATIC LINED SINGLE-SEAT CONTROL VALVE

Product Overview

ZPL510F Lined Single-Seat Control Valve (Packing Seal) The valve body and trims in contact with the fluid are fully lined with high-temperature molded fluoroplastic. The metal valve body cavity features a V-groove reinforced treatment, ensuring complete bonding between the lining material and metal substrate. This significantly enhances the service life and performance of the lining system, completely isolating corrosive media from contact with metallic components. The valve delivers excellent sealing, responsive actuation, and precise flow characteristics, making it ideal for handling: Strongly corrosive media (acids, alkalis, salts), Volatile/permeating gases and liquids.



Main Technical Parameters

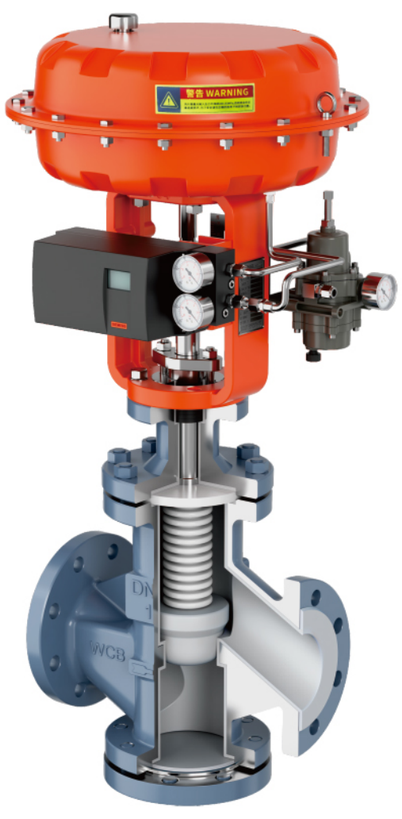
Body Type	Straight-Through Type		
Size	DN15~DN350		
D&M Std.	GB/T4213, HG/T3704		
F2F Std.	GB/T12221, HG/I3704		
PT&I Std.	GB/T4213, API598, ANSI FCI 70-2		
Conn. Std.	Flange Sealing Face	RF Type, FM/M Type, T/G Type, FF Type	
	HG/T20592	PN10, PN16, PN25	
	ASME B16.5	150LB	
Sealing Type	Seat Type	Soft Seat	
	Stem Sealing Type	Packing Sealing, Bellows Sealing	
Materials	Body/Bonnet Material	WCB, LCB, SS304, SS316L	
	Plug Material	WCB, F304, F316L	
	Stem Material	17-4PH	
	Lining Material	FEP(F46), PTFE(F4), PFA	
	Bellows Material	"Daikin" TFM-1600	
	Packing Material	PTFE	
Technical Parameters	Temperature Range	FEP/F46 -30°C~+120°C	Acids, Alkalis, Salts, and highly corrosive media
		PTFE/F4 -30°C+150°C	
		PFA -60°C~+180°C	
	Flow Characteristic	Equal percentage(EQ%)/Linear(LIN)/ Quick opening(QO)	
	Leakage Level	IEC 60534-4, ANSI FCI 70-2, ASME B16.104	
	Rangeability	50:1	
	Basic Error	w/o pos.:≤±8% w/ pos.:≤±1.5%	
	Hysteresis Error	w/ pos.:≤1.5%	
	Dead Band	w/o pos.:≤6% w/ pos.:≤0.5%	
Accessories	Actuator	Pneumatic Actuator	ZP6100 Series ZP6200 Series
		Electric Actuator	ZP8000 Series
	Main Accessories	Positioner, Air Filter Regulator, Handwheel	
	Others	Limit Switch, Solenoid Valve, position transmitter, Volume booster, Lock-up valve	

Features	Description
Superior Corrosion Resistance	V-groove reinforced full lined flow path with compression-molded internals blocks corrosive media
Rigid Stem Design	Monobloc plug/stem construction with contoured plug profile delivers precision flow characteristics
Vibration-Damping Design	The extended guide bonnet design ensures precise valve stroke control, enhances stem rigidity, and effectively prevents vibration.
Adhesion Guarantee	The perforated reinforcement pattern on disc/seat assembly enhances fluoropolymer-metal interfacial bonding, achieving tight sealing performance
Reliable Sealing Performance	The V-ring packing design delivers excellent sealing with low operating torque. Dual O-rings in the gland structure prevent media leakage along the valve stem.
Maintenance-Friendly	Removable bottom plate enables easy routine maintenance, allowing effective removal of accumulated crystals and impurities.

PNEUMATIC LINED SINGLE-SEAT CONTROL VALVE

Product Overview

ZPL510WF Lined Bellows-Seal Control Valve This valve features an enhanced stem sealing system that combines PTFE bellows sealing with V-shaped PTFE packing, creating a dual-seal structure that completely eliminates external media leakage through the valve stem. The multi-barrier sealing design provides absolute containment, making it particularly effective for handling highly toxic media (such as chlorine gas and liquid chlorine) where zero-leakage performance is critical.



Main Technical Parameters

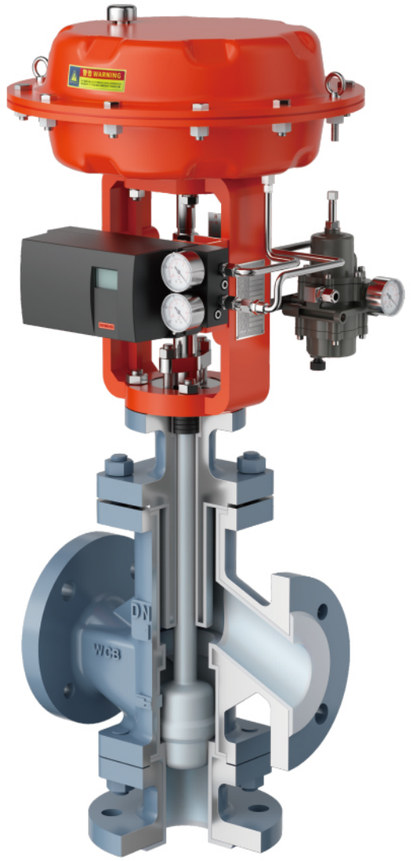
Body Type	Straight-Through Type		
Size	DN15~DN350		
D&M Std.	GB/T4213, HG/T3704		
F2F Std.	GB/T12221, HG/I3704		
PT&I Std.	GB/T4213, API598		
Conn. Std.	Flange Sealing Face	RF Type, FM/M Type, T/G Type, FF Type	
	HG/T20592	PN10, PN16, PN25	
	ASME B16.5	150LB	
Sealing Type	Seat Type	Soft Seat	
	Stem Sealing Type	Packing Sealing, Bellows Sealing	
Materials	Body/Bonnet Material	WCB, LCB, SS304, SS316L	
	Plug Material	WCB, F304, F316L	
	Stem Material	17-4PH	
	Lining Material	FEP(F46),PTFE(F4),PFA	
	Bellows Material	"Daikin" TFM-1600	
	Packing Material	PTFE	
Technical Parameters	Temperature Range	FEP/F46 -30°C~+120°C	Acids, Alkalis, Salts, and highly corrosive media
		PTFE/F4 -30°C+150°C	
		PFA -60°C~+180°C	
	Flow Characteristic	Equal percentage(EQ%)/Linear(LIN)/ Quick opening(QO)	
	Leakage Level	IEC 60534-4, ANSI FCI 70-2, ASME B16.104	
	Rangeability	50:1	
	Basic Error	w/o pos.:≤±8% w/ pos.:≤±1.5%	
	Hysteresis Error	w/ pos.:≤1.5%	
	Dead Band	w/o pos.:≤6% w/ pos.:≤0.5%	
Accessories	Actuator	Pneumatic Actuator	ZP6100 Series ZP6200 Series
		Electric Actuator	ZP8000 Series
	Main Accessories	Positioner, Air Filter Regulator, Handwheel	
	Others	Limit Switch, Solenoid Valve, position transmitter, Volume booster, Lock-up valve	

Features	Description
Superior Corrosion Resistance	V-groove reinforced full lined flow path with compression-molded internals blocks corrosive media
Dual Sealing System	The integrated bellows-and-packing dual-seal system provides superior containment performance, eliminating hazardous media leakage risks
High-Strength Bellows	Imported "Daikin" TFM-1600 material provides the bellows have exceptional elastic deformation range and superior corrosion resistance.
Adhesion Guarantee	The perforated reinforcement pattern on disc/seat assembly enhances fluoropolymer-metal interfacial bonding, achieving tight sealing performance
Reliable Sealing Performance	The V-ring packing design delivers excellent sealing with low operating torque. Dual O-rings in the gland structure prevent media leakage along the valve stem.
Maintenance-Friendly	Removable bottom plate enables easy routine maintenance, allowing effective removal of accumulated crystals and impurities.

PNEUMATIC LINED 3-WAY CONTROL VALVE

Product Overview

ZPL520F Lined Three-Way Control Valve,The valve consists of an actuator and a lined three-way control valve body. The wetted surfaces (valve interior and internals) are lined with 3~5mm thick fluoropolymer via high-temperature molding. The metal valve body features V-groove reinforced treatment to ensure complete bonding between the lining and base metal, fully isolating corrosive media from metallic contact. This design effectively prevents corrosion on all metal components while enhancing the longevity and performance of the lining system.This product delivers excellent sealing performance, responsive actuation, and precise flow characteristics, making it widely suitable for handling highly corrosive media including acids, alkalis, salts, as well as volatile and permeative gases/liquids



Main Technical Parameters

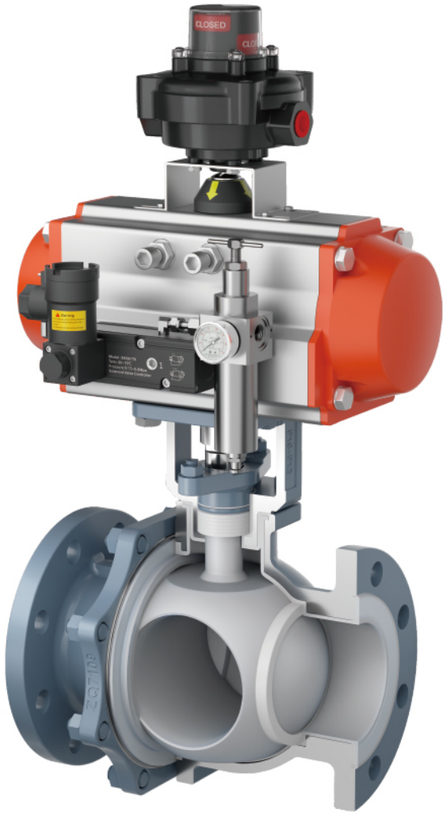
Body Type	3-Way Converging/Diverting Type		
Size	DN15~DN350		
D&M Std.	GB/T4213, HG/T3704		
F2F Std.	GB/T12221, HG/T3704		
PT&I Std.	GB/T4213, API598		
Connection Standards	Flange Sealing Face	RF Type, FM/M Type, T/G Type, FF Type	
	HG/T20592	PN10, PN16, PN25	
	ASME B16.5	150LB	
Sealing Type	Seat Type	Soft Seat	
	Stem Sealing Type	Packing Sealing, Bellows Sealing	
Materials	Body/Bonnet Material	WCB, LCB, SS304, SS316L	
	Plug Material	WCB, F304, F316L	
	Stem Material	17-4PH	
	Lining Material	FEP(F46),PTFE(F4),PFA	
	Bellows Material	"Daikin" TFM-1600	
	Packing Material	PTFE	
Technical Parameters	Temperature Range	FEP/F46 -30°C~+120°C	Acids, Alkalis, Salts, and highly corrosive media
		PTFE/F4 -30°C+150°C	
		PFA -60°C~+180°C	
	Flow Characteristic	Equal percentage(EQ%)/Linear(LIN)/ Quick opening(QO)	
	Leakage Level	IEC 60534-4, ANSI FCI 70-2, ASME B16.104	
	Rangeability	50:1	
	Basic Error	w/o pos.:≤±8% w/ pos.:≤±1.5%	
	Hysteresis Error	w/ pos.:≤1.5%	
	Dead Band	w/o pos.:≤6% w/ pos.:≤0.5%	
Accessories	Actuator	Pneumatic Actuator ZP6100 Series, ZP6200 Series	
		Electric Actuator ZP8000 Series	
	Main Accessories	Positioner, Air Filter Regulator, Handwheel	
	Others	Limit Switch, Solenoid Valve, position transmitter, Volume booster, Lock-up valve	

Features	Description
Superior Corrosion Resistance	V-groove reinforced full lined flow path with compression-molded internals blocks corrosive media
Rigid Stem Design	Monobloc plug/stem construction with contoured plug profile delivers precision flow characteristics
Vibration-Damping Design	The extended guide bonnet design ensures precise valve stroke control, enhances stem rigidity, and effectively prevents vibration.
Hazardous Media Isolation	Integrated bellows design ensures zero external leakage with superior sealing performance, featuring wide elastic deformation range and excellent corrosion resistance.
Adhesion Guarantee	The perforated reinforcement pattern on disc/seat assembly enhances fluoropolymer-metal interfacial bonding, achieving tight sealing performance
Reliable Sealing Performance	The V-ring packing design delivers excellent sealing with low operating torque. Dual O-rings in the gland structure prevent media leakage along the valve stem.
Simplified Seat Design	The valve bottom can be converted to a three-way seat, offering excellent versatility for multi-purpose applications.

PNEUMATIC LINED O-PORT SHUT-OFF BALL VALVE

Product Overview

ZPR710F Lined O-Port Shut-off Ball Valve is a 90° rotary quarter-turn shut-off valve. All wetted components (valve interior and internals) are lined with fluoropolymer via high-temperature molding, completely isolating the metallic valve body from corrosive media. This design effectively prevents corrosion on all metal flow path components while delivering:Excellent sealing,Rapid actuation,Precise flow control. When paired with pneumatic actuators, solenoid valves, and limit switches, it achieves reliable on/off control. The valve is optimized for aggressive media:Acids,Alkalis,Salts,and so on.



Main Technical Parameters

Body Type	Straight-Through Type		
Size	DN15 ~ DN350		
D&M Std.	GB/T12237, HG/T3704		
F2F Std.	GB/T12221, HG/T3704, ANSI B16.10		
PT&I Std.	GB/T13927, API598		
Conn. Std.	Flange Sealing Face	RF Type, FM/M Type, T/G Type, FF Type	
	HG/T20592-2009	PN10, PN16, PN25	
	ASME B16.5	150LB	
Sealing Type	JIS B2210	10K	
	Seat Type	Soft Seat	
Materials	Stem Sealing Type	Packing Sealing	
	Valve Body Base Material	WCB, LCB, SS304, SS316L	
		WCB, F304, F316L	
		WCB, F304, F316L	
	Lining Material	FEP(F46),PTFE(F4),PFA	
	Packing Material	PTFE	
Technical Parameters	Temperature Range	FEP/F46 -30°C~+120°C	Acids, Alkalis, Salts, and highly corrosive media
		PTFE/F4 -30°C+150°C	
		PFA -60°C~+180°C	
	F.C.	Equal percentage(EQ%)/Linear(LIN)/ Quick opening(QO)	
	Leakage Level	IEC 60534-4, ANSI FCI 70-2, ASME B16.104	
	Max. Rotation	90°	
Accessories	Actuator	Pneumatic Actuator ZP7100 Series	
		Electric Actuator ZP9000 Series	
	Main Accessories	Solenoid Valve, Air Filter Regulator, Limit Switch	
	Others	Manual Mechanism, Dump Valve, Air-Controlled Valve, Lock-up valve	

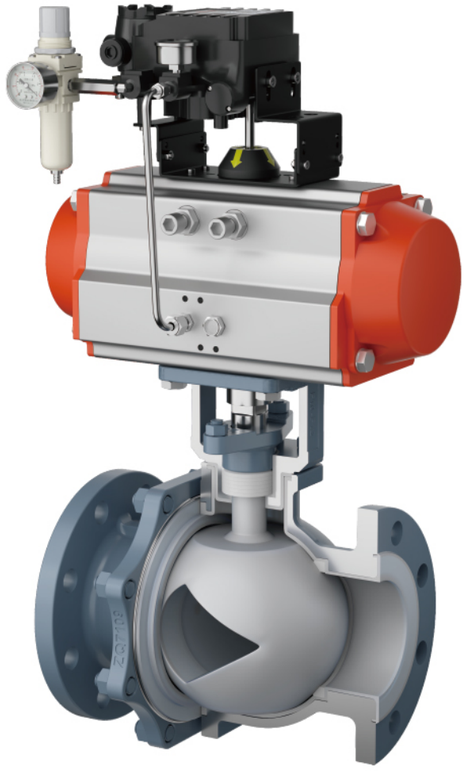
Features	Description
Superior Corrosion Resistance	V-groove reinforced full lined flow path with compression-molded internals blocks corrosive media
High-Rigidity Plug & Stem	Forged-welded ball & stem assembly ensures structural rigidity while eliminating casting imperfections
Micro-Clearance Fit Structure	Micro-clearance insert design for body/bonnet/packing box prevents fluoropolymer deformation, eliminating external leakage
Adhesion Guarantee	The perforated reinforcement pattern on ball enhances fluoropolymer-metal interfacial bonding, achieving tight sealing performance
Reliable Sealing Performance	The "Daikin" TFM-1600 seat and V-ring packing provide excellent sealing with low operating torque, while the dual O-rings in the gland structure ensure zero external leakage along the valve stem.
Standard Mounting Platform	One-piece body/bracket ensures stable operation with ISO 5211-compliant actuator mounting.
High-Strength Stem Connection	The connection shaft is manufactured from Grade 45 steel or 2Cr13 alloy through hot-forging and CNC center machining, ensuring precise fit and enhanced rigidity.

LINED CONTROL VALVE SERIES

PNEUMATIC LINED V-PORT SEGMENTED BALL VALVE

Product Overview

ZPL720F Lined V-Port Control Ball Valve is a high-performance upgrade from standard O-port lined ball valves, featuring a precision-engineered V-notch ball design that delivers quasiequal percentage flow characteristics.The valve body and all wetted components are lined with 3~5mm thick fluoropolymers (Such as:FEP/PFA/PTFE) - through high-temperature molding process. This advanced design offers:Absolute isolation of metallic components from corrosive media,Excellent sealing,and Precise flow control. When integrated with pneumatic actuators, solenoid valves and limit switches, the system enables both on/off operation and modulating control. The valve is optimized for aggressive media:Acids,Alkalis,Salts,and so on.



Main Technical Parameters

Body Type	Straight-Through Type		
Size	DN15 ~ DN350		
D&M Std.	GB/T12237, HG/T3704, API608		
F2F Std.	GB/T12221, HG/T3704, ANSI B16.10		
PT&I Std.	GB/T13927, API598		
Conn. Std.	Flange Sealing Face	RF Type, FM/M Type, T/G Type, FF Type	
	HG/T20592	PN10, PN16, PN25	
	ASME B16.5	150LB	
Sealing Type	SeatType	Soft Seat	
	Stem Sealing Type	Packing Sealing	
Materials	Body/Bonnet Material	WCB, LCB, SS304, SS316L	
	Ball Material	WCB, F304, F316L	
	Stem Material	WCB, F304, F316L	
	Lining Material	FEP(F46),PTFE(F4),PFA	
	Packing Material	PTFE	
Technical Parameters	Temperature Range	FEP/F46 -30°C~+120°C	Acids, Alkalis, Salts, and highly corrosive media
		PTFE/F4 -30°C+150°C	
		PFA -60°C~+180°C	
	Flow Characteristic	Equal percentage(EQ%)/Linear(LIN)/ Quick opening(QO)	
	Leakage Level	IEC 60534-4, ANSI FCI 70-2, ASME B16.104	
	Rangeability	200:1	
	Basic Error	w/ pos.:≤±2%	
	Hysteresis Error	w/ pos.:≤2%	
	Max. Rotation	90°	
Accessories	Actuator	Pneumatic Actuator ZP7100 Series	
		Electric Actuator ZP9000 Series	
	Main Accessories	Positioner, Air Filter Regulator, Manual Mechanism	
	Others	Solenoid Valve, Limit Switch, Dump Valve, Air-Controlled Valve, Lock-up valve	

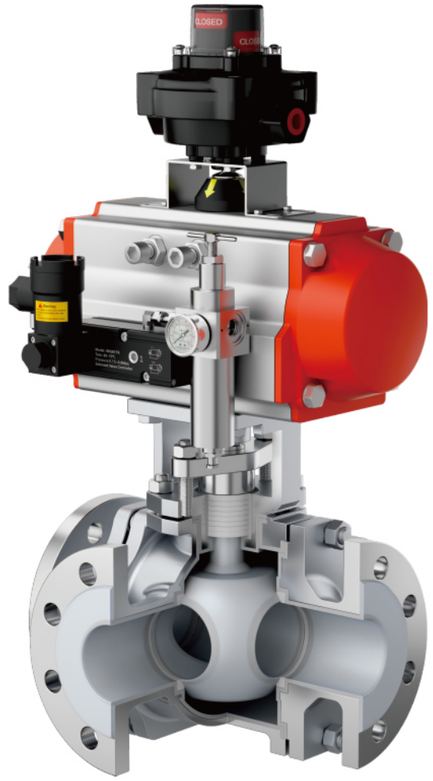
Features	Description
Superior Corrosion Resistance	V-groove reinforced full lined flow path with compression-molded internals blocks corrosive media
High-Rigidity Plug & Stem	Forged-welded ball & stem assembly ensures structural rigidity while eliminating casting imperfections
Multi-Application	V-port trim with customizable opening angles enables precise flow control and modulation.
Micro-Clearance Fit Structure	Micro-clearance insert design for body/bonnet/packing box prevents fluoropolymer deformation, eliminating external leakage
Adhesion Guarantee	The perforated reinforcement pattern on ball enhances fluoropolymer-metal interfacial bonding, achieving tight sealing performance
Reliable Sealing Performance	Daikin TFM-1600 seats & V-packing for superior sealing with low torque, Dual O-rings for leak-proof reliability
Standard Mounting Platform	One-piece body/bracket ensures stable operation with ISO 5211-compliant actuator mounting.
High-Strength Stem Connection	The connection shaft is manufactured from Grade 45 steel or 2Cr13 alloy through hot-forging and CNC center machining, ensuring precise fit and enhanced rigidity.

LINED CONTROL VALVE SERIES

PNEUMATIC LINED 3-WAY DIVERTER BALL VALVE(T-FLOW/L-FLOW)

Product Overview

ZPL730 Fluorine-Lined Three-Way Diverter Ball Valve consists of a quarter-turn piston-type pneumatic actuator and a three-way ball valve, forming a rotary-type shut-off valve renowned for its tight sealing, compact structure, lightweight design, and easy maintenance. All fluid-contact surfaces-including the valve body interior and internal components-are lined with corrosion-resistant, aging-resistant fluoropolymers (such as PFA/FEP/PTFE) through high-temperature molding, ensuring exceptional corrosion resistance and sealing reliability. The four-seat sealing system enables flexible control of media convergence or diversion in pipelines. When paired with pneumatic actuators, solenoid valves, and limit switches, it achieves reliable on/off control, making it ideal for handling highly corrosive acids/alkalis as well as toxic, volatile, and permeable gas/liquid media.



Main Technical Parameters

Body Type	T type, L type		
Size	DN25~DN250		
D&M Std.	GB/T12237, HG/T3704		
F2F Std.	GB/T12221, HG/T3704, ANSI B16.10		
PT&I Std.	GB/T13927, API598		
Conn. Std.	Flange Sealing Face	RF Type, FM/M Type, T/G Type, FF Type	
	HG/T20592-2009	PN10, PN16, PN25	
	ASME B16.5	150LB	
Sealing Type	Seat Type	Soft Seat	
	Stem Sealing Type	Packing Sealing	
Materials	Body/Bonnet Material	WCB, LCB, SS304, SS316L	
	Ball Material	WCB, F304, F316L	
	Stem Material	WCB, F304, F316L	
	Lining Material	FEP(F46),PTFE(F4),PFA	
	Packing Material	PTFE	
Technical Parameters	Temperature Range	FEP/F46 -30°C~+120°C	Acids, Alkalis, Salts, and highly corrosive media
		PTFE/F4 -30°C+150°C	
		PFA -60°C~+180°C	
	Flow Characteristic	Equal percentage(EQ%)/Linear(LIN)/ Quick opening(QO)	
	Leakage Level	IEC 60534-4, ANSI FCI 70-2, ASME B16.104	
	Max. Rotation	90°	
Accessories	Actuator	Pneumatic Actuator ZP7100 Series	
		Electric Actuator ZP9000 Series	
	Main Accessories	Solenoid Valve, Air Filter Regulator, Limit Switch	
	Others	Manual Mechanism, Dump Valve, Air-Controlled Valve, Lock-up valve	

Features	Description
Superior Corrosion Resistance	V-groove reinforced full lined flow path with compression-molded internals blocks corrosive media
Independent Sealing Structure	Features a triple-passage quadruple-seal design for superior sealing performance, with each flow path independently sealed
Multi-Application	T-flow and L-flow configurations enable multi-position operation for diverse application requirements
High-Rigidity Plug & Stem	Forged-welded ball & stem assembly ensures structural rigidity while eliminating casting imperfections
Adhesion Guarantee	The perforated reinforcement pattern on ball enhances fluoropolymer-metal interfacial bonding, achieving tight sealing performance
Reliable Sealing Performance	Daikin TFM-1600 seats & V-packing for superior sealing with low torque, Dual O-rings for leak-proof reliability
Standard Mounting Platform	One-piece body/bracket ensures stable operation with ISO 5211-compliant actuator mounting
High-Strength Stem Connection	The connection shaft is manufactured from Grade 45 steel or 2Cr13 alloy through hot-forging and CNC center machining, ensuring precise fit and enhanced rigidity.

LINED CONTROL VALVE SERIES

PNEUMATIC LINED INCLINED STEM DISCHARGE BALL VALVE

Product Overview

The ZPRX740F Lined Inclined Stem Discharge Ball Valve is a specially designed discharge valve primarily used for bottom discharge in reaction vessels. All wetted surfaces, including the valve body interior and internal components, are lined with corrosion-resistant and aging-resistant fluoropolymers (such as FEP/PFA) through high-temperature molding, ensuring reliable corrosion resistance and sealing performance. The valve features an innovative Inclined stem design with a 105° inclination angle between the stem and valve body, which prevents interference between the actuator and vessel bottom during installation. When closed, the arc-shaped ball sealing surface precisely matches the curved flange connected to the vessel bottom, effectively preventing material residue. With excellent sealing performance, material nonaccumulation characteristics, and responsive operation. this product is widely used for controlling highly corrosive media such as acids, alkalis, and salts.



Main Technical Parameters

Body Type	Straight-Through Type		
Size	DN15~DN350		
D&M Std.	GB/T12237, HG/T3704		
F2F Std.	GB/T12221, HG/T3704, ANSI B16.10		
PT&I Std.	GB/T13927, API598		
Conn. Std.	Flange Sealing Face	RF Type, FM/M Type, T/G Type, FF Type	
	HG/T20592-2009	PN10, PN16, PN25	
	ASME B16.5	150LB	
Sealing Type	Seat Type	Soft Seat	
	Stem Sealing Type	Packing Sealing	
Materials	Body/Bonnet Material	WCB, LCB, SS304, SS316L	
	Ball Material	WCB, F304, F316L	
	Stem Material	WCB, F304, F316L	
	Lining Material	FEP(F46),PTFE(F4),PFA	
	Packing Material	PTFE	
	Temperature Range	FEP/F46 -30°C~+120°C	Acids, Alkalis, Salts, and highly corrosive media
		PTFE/F4 -30°C+150°C	
		PFA -60°C~+180°C	
Technical Parameters	Flow Characteristic	Equal percentage(EQ%)/Linear(LIN)/ Quick opening(QO)	
	Leakage Level	IEC 60534-4, ANSI FCI 70-2, ASME B16.104	
	Rangeability	200:1	
	Basic Error	w/ pos.:≤±2%	
	Hysteresis Error	w/o pos.:≤2%	
	Max. Rotation	90°	
Accessories	Actuator	Pneumatic Actuator ZP7100 Series	
		Electric Actuator ZP9000 Series	
	Main Accessories	Positioner, Air Filter Regulator, Manual Mechanism	
	Others	Solenoid Valve, Limit Switch, Dump Valve, Air-Controlled Valve, Lock-up valve	

Features	Description
Superior Corrosion Resistance	V-groove reinforced full lined flow path with compression-molded internals blocks corrosive media
High-Rigidity Plug & Stem	Forged-welded ball & stem assembly ensures structural rigidity while eliminating casting imperfections
Non-Interference Design	The 15° angled valve stem effectively prevents interference between the actuator and vessel, while avoiding material accumulation at the outlet
Micro-Clearance Fit Structure	Micro-clearance insert design for body/bonnet/packing box prevents fluoropolymer deformation, eliminating external leakage
Adhesion Guarantee	The perforated reinforcement pattern on ball enhances fluoropolymer-metal interfacial bonding, achieving tight sealing performance
Reliable Sealing Performance	Daikin TFM-1600 seats & V-packing for superior sealing with low torque, Dual O-rings for leak-proof reliability
Standard Mounting Platform	One-piece body/bracket ensures stable operation with ISO 5211-compliant actuator mounting
High-Strength Stem Connection	The connection shaft is manufactured from Grade 45 steel or 2Cr13 alloy through hot-forging and CNC center machining, ensuring precise fit and enhanced rigidity.

LINED CONTROL VALVE SERIES

PNEUMATIC LINED RISING-/LOWERING-STEM DISCHARGE CONTROL VALVE

Product Overview

ZPL180F Lined Rising-Stem and ZPL170F Lined Lowering-Stem Discharge Valves are specifically designed for bottom discharge applications in reaction vessels, storage tanks, and other containers. Conventional fluoropolymer-lined ball-type discharge valves often fail to meet the demands of extreme conditions involving strong erosion, easy crystallization, and high flow resistance. The ZPL180F Rising-Stem Valve features a simplified structure with an extended valve seat reaching the vessel bottom plane. Its conical plug sealing mechanism, coupled with bottom flange mounting, completely eliminates residual media accumulation at container outlets. All wetted surfaces-including the valve interior and internals are lined with high-temperature molded fluoropolymers (FEP/F46 and PFA), creating a complete corrosion barrier between aggressive media and metallic components. With Excellent sealing, fast actuation, and precise flow control, these valves achieve reliable on/off control when paired with pneumatic actuators, solenoids, and limit switches. Ideal for handling acids, alkalis, salts and other highly corrosive media.

Classification of Bottom Discharge Valves:

- Rising-Stem Type (ZPL180F):
  Resists flow resistance/scaling/erosion/clogging Not suitable for high vacuum conditions
- Lowering-Stem Type (ZPL170F):
  Handles high vacuum conditions,Moderate resistance capability

※Selection Guide:

Users should consider:Pressure differential/Temperature /Media state/ Installation orientation /Leakage requirements



Main Technical Parameters

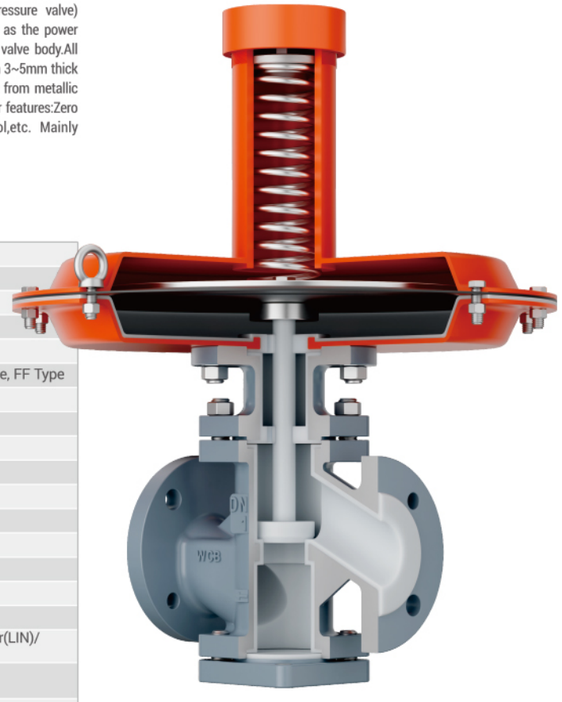
Body Type	Straight-Through Type		
Size	DN15 ~ DN350		
D&M Std.	IEC 60534		
PT&I Std.	GB/T13927, API598		
Conn. Std.	Flange Sealing Face	RF Type, FM/M Type, T/G Type, FF Type	
	HG/T20592	PN10, PN16, PN25	
	ASME B16.5	150LB	
Sealing Type	Seat Type	Soft Seat	
	Stem Sealing Type	Packing Sealing	
Materials	Body/Bonnet Material	WCB, LCB, SS304, SS316L	
	Plug Material	WCB, F304, F316L	
	Stem Material	17-4PH	
	Lining Material	FEP(F46),PTFE(F4),PFA	
	Packing Material	PTFE	
Technical Parameters	Temperature Range	FEP/F46 -30°C~+120°C	Acids, Alkalis, Salts, and highly corrosive media
		PTFE/F4 -30°C+150°C	
		PFA -60°C~+180°C	
	Flow Characteristic	Equal percentage(EQ%)/Linear(LIN)/ Quick opening(QO)	
	Leakage Level	IEC 60534-4, ANSI FCI 70-2, ASME B16.104	
	Rangeability	100:1	
	Basic Error	w/ pos.:≤±2%	
	Hysteresis Error	w/ pos.:≤2%	
Accessories	Actuator	Pneumatic Actuator ZP6000 Series	
		Electric Actuator ZP9000 Series	
	Main Accessories	Solenoid Valve, Limit Switch, Positioner, Air Filter Regulator	
	Others	Manual Mechanism, Dump Valve, Air-Controlled, ValveLock-up valve	
		Flange, Gasket, Bolt	

Features	Description
Superior Corrosion Resistance	V-groove reinforced full lined flow path with compression-molded internals blocks corrosive media
Insert-Guiding Structure	This Design enables flush mounting between the valve seal and vessel bottom, effectively reducing stroke while preventing material accumulation
Multi-Application	Universal body structure accommodates both rising stem and lowering stem configurations for flexible application scenarios
High-Rigidity Plug & Stem	Forged-welded plug & stem assembly maintains structural rigidity to prevent stem deflection under maximum thrust load
Adhesion Guarantee	The perforated reinforcement pattern on seat & plug enhances fluoropolymer-metal interfacial bonding, achieving tight sealing performance
Reliable Sealing Performance	Daikin TFM-1600 seats & V-packing for superior sealing with low torque, Dual O-rings for leak-proof reliability.
Vacuum-Optimized Design	The dual-pressure system combines a single-acting spring mechanism with pneumatic assist to prevent seal leakage under vacuum conditions
Aluminum Housing Actuator	The actuator housing is made of aluminum alloy, achieving significant weight reduction to alleviate load-bearing stress at vessel mounting interfaces while ensuring excellent corrosion resistance

LINED SELF-REGULATED MICRO-PRESSURE CONTROL VALVE

Product Overview

ZPL640F Lined Self-regulated Micro-Pressure Control Valve (referred to as pressure valve) operates without external power supply, utilizing the energy of the medium itself as the power source for automatic regulation. The product consists of an actuator and alined valve body.All wetted surfaces (including the valve interior and internal components) are lined with 3~5mm thick fluoropolymers via high-temperature molding, effectively isolating corrosive media from metallic components while enhancing the lining's service life and performance.The regulator features:Zero external energy required, Excellent sealing, Fast response,Precision control,etc. Mainly applications:Acid/alkali/salt solutions,Volatile gases,Permeative liquids,etc.



Main Technical Parameters

Body Type	Straight-Through Type	
Size	DN20~DN100	
D&M Std.	GB/T4213	
F2F Std.	GB/T17213.3	
PT&I Std.	GB/T4213, API598	
Conn. Std.	Flange Sealing Face	RF Type, FM/M Type, T/G Type, FF Type
	HG/T20592-2009	PN10, PN16, PN25
	ASME B16.5	150LB
Sealing Type	Seat Type	Soft Seat
	Stem Sealing Type	Packing Sealing
Materials	Body/Bonnet Material	WCB LCB SS304 SS316L
	Plug Material	WCB F304 F316L
	Stem Material	17-4PH
	Lining Material	FEP(F46),PTFE(F4),PFA
	Packing Material	PTFE
Technical Parameters	Temperature Range	-30°C ~ 160°C
	Flow Characteristic	Equal percentage(EQ%)/Linear(LIN)/ Quick opening(QO)
	Leakage Level	IEC 60534-4, ANSI FCI 70-2, ASME B16.104
Accessories	Regulation Accuracy	±5%
	Actuator	Pneumatic Actuator ZP6100 Seiries

Features	Description
Superior Corrosion Resistan	V-groove reinforced full lined flow path with compression-molded internals blocks corrosive media
High-Rigidity Plug & Stem	Forged-welded ball & stem assembly ensures structural rigidity while eliminating casting imperfections
Internal Pressure Collecting	The internal pressure collecting structure eliminates external pipes, effectively resolving corrosion and leakage issues in pipeline bypass scenarios
Adjustable Operation	The adjusting spring is designed at the top of the diaphragm actuator for convenient field debugging
Non-Packing Design	Packing-free design: The valve stem moves vertically without friction, ensuring reliable upper sealing
High Sensitivity Actuator	The actuator is equipped with highly sensitive sensing elements capable of detecting even the slightest pressure variations
Stable Performance	Balanced design structure, unaffected by upstream pressure variations

PNEUMATIC LINED REGULATED BUTTERFLY VALVE

Product Overview

ZPR810F Series Lined Regulated Butterfly Valve consists of a pneumatic piston actuator and a PTFE-sealed butterfly valve, suitable for corrosive-demanding working conditions with temperatures ≤160°C. The valve adopts thick polymer lining technology on all fluid-contact components (valve body, disc, and stem), demonstrating excellent corrosion resistance and compatibility with any concentration of acids, alkalis, salts, oxidizers, reducing agents, and organic solvents. As an ideal product for shut-off and regulation in pipelines and containers handling gases, liquids, and semi-fluids, it is widely used in chemical, petroleum, pharmaceutical, food, steel smelting, paper-making, and hydropower systems. The fully lined PTFE (F4) and FEP (F46) butterfly valve offers superior corrosion resistance, zero leakage, and extended service life. This corrosion-resistant butterfly valve is particularly suitable for concentrated sulfuric acid, hydrochloric acid, nitric acid, hydrofluoric acid, aqua regia, various organic acids and other highly corrosive media.



Main Technical Parameters

Body Type	Wafer-Type(centerline) /Flange Type	
Size	DN50~DN1200	
D&M Std.	GB/T12238, HG/T3704	
F2F Std.	GB/T12221(Short-Body Series)	
PT&I Std.	GB/T13927, API598	
Conn. Std.	End	Wafer-Type /Flange Type
	Flange Sealing Face	RF Type, FM/M Type, T/G Type, FF Type
	HG/T20592	PN10, PN16, PN25
	ASME B16.5	150LB
Sealing Type	Seat Type	Soft Seat
	Stem Sealing Type	Sleeve Packing
Materials	Body/Bonnet Material	WCB, LCB, SS304, SS316L
	Disc Material	WCB, F304, F316L
	Seat Material	FEP(F46), PTFE(F4), PFA
	Stem Material	17-4PH
	Lining Material	FEP(F46), PTFE(F4), PFA
Technical Parameters	Temperature Range	-30°C ~ 160°C
	Flow Characteristic	Equal percentage(EQ%)/Linear(LIN)/ Quick opening(QO)
	Leakage Level	IEC 60534-4, ANSI FCI 70-2, ASME B16.104
	Rangeability	50:1
	Basic Error	w/ pos.:≤±2%
	Hysteresis Error	w/ pos.:≤2%
Accessories	Actuator	Pneumatic Actuator ZP7000 Series
		Electric Actuator ZP9000 Series
	Main Accessories	Solenoid Valve, Limit Switch, Positioner, Air Filter Regulator
	Others	Manual Mechanism, Dump Valve, Air-Controlled Valve, Lock-up valve

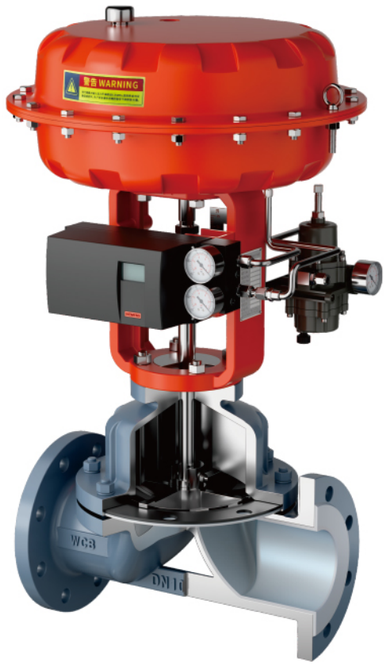
Features	Description
Superior Corrosion Resistance	Independent seat assembly + fully lined flow path eliminates metallic corrosion exposure
Exclusive Material	Due to PTFE's non-flow characteristics, the butterfly valve is the only valve type capable of being produced with PTFE material
Structural Uniqueness	Split valve body design, the shaft seals is achieved through a rotating fluororubber-incorporated interface between the disc and seat
Customizable Disc	PTFE disc and shaft adopt square shaft insertion design, while FEP and PFA utilize flat shaft welded structure
Reliable Sealing Performance	Fully-lined disc and silicone gasket under the valve seat ensures reliable tight sealing performance
Diverse Options	Selection based on working conditions: Fully-lined butterfly valves and semi-lined butterfly valves are available
Standard Mounting Platform	One-piece body/bracket ensures stable operation with ISO 5211-compliant actuator mounting.

LINED CONTROL VALVE SERIES

PNEUMATIC/LINED REGULATED DIAPHRAGM VALVE

Product Overview

ZPL160F Series Pneumatic-Operated Lined Regulated Diaphragm Valve consists of a multi-spring pneumatic diaphragm actuator and a diaphragm valve. The diaphragm valve body features smooth flow passage with an elastic diaphragm as the throttling element, and the valve bonnet is designed without a stuffing box. Consequently, the valve offers greater flow capacity than conventional control valves while maintaining zero leakage, and can function as a shut-off valve within the allowable pressure differential range. The air-to-open and air-to-close operations are achieved through direct and reverse acting actuators respectively. This valve is particularly suitable for regulating high-viscosity fluids, suspensions containing particles, fibrous media, as well as toxic and corrosive media applications.



Main Technical Parameters

Body Type	Weir-Type;Straight-Through Type;Low-Resistance Type	
Size	DN15 ~ DN300	
D&M Std.	GB/T12239, HG/T3704	
F2F Std.	GB/T12221, HG/T3704	
PT&I Std.	GB/T13927, API598	
Conn. Std.	End	Flange
	Flange Sealing Face	RF Type, FM/M Type, T/G Type, FF Type
	HG/T20592-2009	PN6, PN10, PN16
Sealing Type	ASME B16.5	150LB
	Sealing Type	Soft Seat
Materials	Stem Sealing Type	–
	Body/Bonnet Material	WCB, LCB, SS304, SS316L
	Plug Material	WCB, F304, F316L
	Stem Material	17-4PH, F304, F316L
	Lining Material	F46(FEP), F4(PTFE), PFA
Technical Parameters	Temperature Range	-30°C ~ 160°C
	Flow Characteristic	Equal percentage(EQ%)/Linear(LIN)/ Quick opening(QO)
	Leakage Level	IEC 60534-4, ANSI FCI 70-2, ASME B16.104
	Rangeability	100:1
	Basic Error	w/ pos.:≤±2%
	Dead Band	w/ pos.:≤2%
Accessories	Actuator	Pneumatic Actuator ZP6000 Series
		Electric Actuator ZP8000 Series
	Main Accessories	Solenoid Valve, Limit Switch, Positioner, Air Filter Regulator
	Others	Manual Mechanism, Dump Valve, Air-Controlled, ValveLock-up valve
		Flange, Gasket, Bolt

Features	Description
Super Corrosion Resistance	V-groove reinforced full lined flow path with compression-molded internals blocks corrosive media
Anti-Clogging Weir Design	Featuring an anti-clogging weir design that effectively prevents material crystallization and accumulation
Flow Regulation Function	The diaphragm features an arc-shaped design with near-equal percentage characteristics, providing both shut-off and flow regulation functions
Non-Packing Design	Packing-free design: The valve stem moves vertically without friction, ensuring reliable upper sealing
Wide-Ranging Applications	Handle challenging medias including suspended particulate matter, fibrous content, toxic substances and corrosive fluids
Features	Large passage capacity, Anti-rotation design, stabilized flow velocity, Wide adjustable range
Linear Actuator	Can be equipped with various types of actuators to accommodate different working conditions and pressure requirements

METAL CONTROL VALVE SERIES

PNEUMATIC CAGE-GUIDED SINGLE-SEAT REGULATING VALVE

Product Overview

The ZPL210Y/ZPL210WY series cage-guided single-seat control valve adopts a top-guided single-seat sealing structure with a cage and plug. The valve body features an S-shaped flow path and an anti-swirl flow design, ensuring smooth fluid movement, high flow capacity, wide adjustable range, precise flow characteristic curves, and low seat leakage . Additionally, its soft-sealing structure provides both regulating and shut-off functions, making it a control & isolation valve that can also serve as a shut-off valve.

Due to its unique structural characteristics (high fluid thrust on the plug, requiring significant unbalance force), this valve is not suitable for high-pressure differentials or large diameters. It is designed for applications demanding low leakage and small pressure drops. Thus, cage-type single-seat control valves are generally recommended for: Small-bore, high-pressure differential conditions or Large-bore, low-pressure differential conditions. These single-seat control valves are widely used in industrial automation control across sectors such as: Power generation, Metallurgy, Chemical processing, Petroleum, Textiles, Pharmaceuticals, Paper manufacturing. etc.



Main Technical Parameters

Body Type	Straight-Through Type	
Size	DN15 ~ DN200	
D&M Std.	GB/T4213	
F2F Std.	GB/T17213.3, ISA 75.03, ISA 75.16	
PT&I Std.	GB/T4213, ANSI FCI 70-2-2006	
Conn. Std.	Flange Std.	RF Type, FM/M Type, T/G Type, FF Type
	HG/T20592-2009	PN10, PN16, PN25, PN40
	ASME B16.5	150LB, 300LB
	JIS B2210	10K, 16K, 20K
Sealing Type	Seat Sealing Type	Metal+STL Seated;Soft Seated
	Stem Sealing Type	Packing Sealing, Bellows Sealing
Materials	Body/Bonnet Material	LCB, WCB, WC6, WC9, SS304, SS316L
	Plug Material	F304,F316L,etc
	Stem Material	17-4PH,F304,F316L,etc
	Seat Material	F304,F316L,etc
	Bellows Material	SS316L
	Packing Material	V-RingPTFE;Graphite+PTFE
Bonnet Type	Standard Type	-17°C ~ +230°C
	Extended(Finned)Type	230°C
	Cryogenic Type	196°C ~ -17°C
	Bellows Type	Toxic, Volatile, or Hazardous media
Technical Parameters	Flow Characteristic	Equal percentage(EQ%)/Linear(LIN)/ Quick opening(QO)
	Leakage Level	Metal Seated: ANSI B16.104 Class IV Soft Seated: ANSI Actuator B16.104 Class VI
	Rangeability	50:1
	Basic Error	w/o pos.:≤±8%, w/ pos.:≤±1.5%
	Hysteresis Error	w/ pos.:≤1.5%
	Dead Band	w/o pos.:≤6%, w/ pos.:≤0.5%
Accessories	Actuator	Pneumatic Diaphragm Actuator ZP6100 Series
		Electric Piston Actuator ZP6200 Series
		Electric Actuator ZP8000 Series
	Main Accessories	Positioner, Air Filter Regulator, Handwheel
	Others	Limit Switch, Solenoid Valve, Volume booster, position transmitter, Lock-up valve

Features	Description
Dependable Bonnet	Integrally forged bonnet for superior material density and structural stability, delivering enhanced pressure containment performance
Low-Emission Packing	Advanced graphite-reinforced PTFE packing system, featuring excellent sealing performance, low friction, and low torque characteristics
High-Rigidity Plug & Stem	Monolithic plug & stem design ensures continuous stable operation under cyclic loading
High-Gloss Stem	The packing-contact stem is precision-finished by CNC grinding, achieving superior concentricity and dimensional accuracy.
Replaceable Seat	Quick-release & Dual-sealing face seat design, for enhanced maintainability & service life
Superior Sealing Performance	The valve body, disc, and seat are precision-machined using dedicated CNC equipment, delivering superior structural integrity and enhanced leakage protection
Multi-Application	The cooling fins accommodates high-temperature service, integrated bellows provide absolute containment for hazardous media

METAL CONTROL VALVE SERIES

PNEUMATIC BALANCED-CAGE REGULATING VALVE

Product Overview

The ZPL220/ZPL220W series balanced cage control valve is a pressure balanced regulating valve. Featuring a compact valve body design with high output force, its S-shaped flow passage incorporates a flow guiding vane that optimizes balanced fluid distribution around the cage. This design delivers: Minimal pressure loss. High flow capacity with wide adjustable range. Precise flow characteristics (compliant with IEC 60534-2-1-201/GB4213) Enhanced dynamic stability with low noise and reduced cavitation erosion and Leakage rate meeting ANSI FCI 70-2-2013 standards. When compressed air enters the actuator, the piston rod drives the plug to modulate valve opening. This movement proportionally adjusts gas flow for precise control. The ZPL220/ZPL220W series control valve ideal for high/low temperature and high-pressure fluid control across industries including: Power Generation, Metallurgy, Chemical Processing, Petroleum, Textiles, Pharmaceuticals, Paper Manufacturing The valve's material versatility and customizable designs ensure optimal performance in diverse automated process control systems.



Main Technical Parameters

Body Type	Straight-Through Type, Angle-Type, Jacket-Insulated Type	
Size	DN40 ~ DN400	
D&M Std.	GB/T4213	
F2F Std.	GB/T17213.3	
PT&i Std.	GB/T4213 API598	
Conn. Std.	Flange Std.	RF, FM/M, T/G, FF, RJ
	HG/T20592-2009	PN16, PN25, PN40, PN63, PN100
	ASME B16.5	150LB, 300LB, 600LB
Sealing Type	Seat Type	Metal+STL Seated;Soft Seated
	Stem Sealing Type	Packing Sealing, Bellows Sealing
Materials	Body/Bonnet Material	LCB, WCB, WC6, WC9, SS304, SS316L
	Plug Material	F304,F316L,etc
	Stem Material	17-4PH,F304,F316L,etc
	Seat Material	F304,F316L,etc
	Bellows Material	SS316L
	Packing Material	V-RingPTFE;Graphite+PTFE
Bonnet Type	Standard Type	-17℃ ~ +230℃
	Extended(Finned)Type	> 230℃
	Cryogenic Type	-196℃ ~ -17℃
	Bellows Type	Toxic, Volatile, or Hazardous media
Technical Parameters	Flow Characteristic	Equal percentage(EQ%)/Linear(LIN) /Quick opening(QO)
	Leakage Level	Metal Seated: ANSI B16.104 Class IV
		Soft Seated: ANSI Actuator B16.104 Class VI
	Rangeability	50:1
	Basic Error	w/o pos.:≤±8%, w/ pos.:≤±1.5%
	Hysteresis Error	w/ pos.:≤1.5%
	Dead Band	w/o pos.:≤6%, w/ pos.:≤0.5%
Accessories	Actuator	Pneumatic Diaphragm Actuator ZP6100 Series
		Electric Piston Actuator ZP6200 Series
		Electric Actuator ZP8000 Series
	Main Accessories	Positioner, Air Filter Regulator, Handwheel
	Others	Limit Switch, Solenoid Valve, Volume booster, position transmitter, Lock-up valve

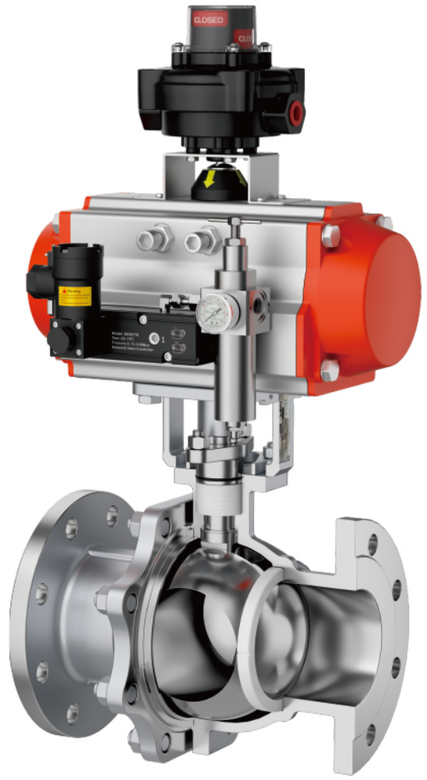
Features	Description
Dependable Bonnet	Integrally forged bonnet for superior material density and structural stability, delivering enhanced pressure containment performance
Low-Emission Packing	Advanced graphite-reinforced PTFE packing system, featuring excellent sealing performance, low friction, and low torque characteristics
High-Rigidity Plug & Stem	Monolithic plug & stem design ensures continuous stable operation under cyclic loading
High-Gloss Stem	The packing-contact stem is precision-finished by CNC grinding, achieving superior concentricity and dimensional accuracy.
Adjustable Flow Characteristic	Modifying the sleeve orifice geometry enables flow characteristic adjustment while enhancing sealing surface erosion resistance
Superior Structural Properties	The valve plug's oversized guiding design provides superior shock absorption, noise reduction and enhanced resistance to both cavitation damage and flash evaporation
Multi-Application	The cooling fins accommodates high-temperature service, integrated bellows provide absolute containment for hazardous media.

METAL CONTROL VALVE SERIES

PNEUMATIC O-PORT SOFT-SEATED SHUT-OFF BALL VALVE

Product Overview

The ZPR750F O-port Soft-Seat Shutoff ball valve is a widely used control valve consisting of valve body, ball, stem, seats and actuator. When the valve shaft rotates, the ball turns accordingly while the resilient seats deform to achieve effective sealing, thereby changing the valve's open/close status. This valve features: Compact structure, Reliable sealing performance, Quick response, Precise flow characteristics. The sealing surfaces maintain constant contact with the ball in closed position, providing excellent erosion resistance against process media. With simple operation and easy maintenance, it can be equipped with pneumatic actuators, solenoid valves and limit switches for on/off control applications. Suitable for: General service media: water, solvents, acids, natural gas. Severe service media: oxygen, hydrogen peroxide, methane, ethylene. This valve finds extensive applications across multiple industries including petrochemical, power generation, pharmaceuticals and water treatment.



Main Technical Parameters

Body Type	Floating Type/Trunnion Type	
Size	DN15~DN500	
D&M Std.	GB/T12237, API608	
F2F Std.	GB/T12221, ANSI B16.10	
PT&I Std.	GB/T13927, API598	
Conn. Std.	Soft Sealing	RF, FM/M, T/G, FF, RJ
	HG/T20592-2009	PN10, PN100
	ASME B16.5	150LB, 600LB
	JIS B2210	10K
Sealing Type	Seat Type	Soft Seat
	Stem Sealing Type	Packing Sealing
Materials	Body/Bonnet Material	WCB LCB SS304 SS316L
	Ball Material	WCB F304 F316L
	Stem Material	17-4PH F304 F316L
	Seat Material	≤120°C - Daikin M112
		≤160°C - Daikin M4215
		≤250°C - Polyimide PI
Technical Parameters	Temperature Range	-30°C ~ 250°C
	Flow Characteristic	Equal percentage(EQ%)/Linear(LIN) /Quick opening(QO)
	Leakage Level	IEC 60534-4, ANSI FCI 70-2, ASME B16.104
	Max. Rotation	90°
Accessories	Actuator	Pneumatic Actuator ZP7100 Series
		Electric Actuator ZP9000 Series
	Main Accessories	Solenoid Valve, Air Filter Regulator, Limit Switch
	Others	Manual Mechanism, Dump Valve, Air-Controlled Valve, Lock-up valve
		Flange, Gasket, Bolt

Features	Description
Bonnet Metal Gasket	Selecting metal gasket materials tailored to specific media prevents PTFE aging issues while significantly enhancing sealing performance
Anti-Blowout Stem	Anti-ejection design, effectively preventing stem blowout caused by gland loosening
Anti-Static Structure	An electrostatic discharge device is installed between the ball, stem, and valve body to eliminate static electricity accumulation
Fire-Proof Design	Automatic Metal Seal: In case of fire, the non-metallic seat melts, allowing media pressure to push the ball against the metal seat, creating a metal-to-metal hard seal.
Superior Sealing	"Daikin" TFM-1600 PTFE seat and V-shaped packing, enhances sealing performance while delivering superior self-lubrication and reduced operating torque
Standard Mounting Platform	Design with deep packing box and cast bracket isolates actuator from body heat, maintaining ISO 5211 compliance for universal pneumatic/electric actuator compatibility
High-Strength Stem Connection	Octagonal connection shafts are manufactured from Grade 45 steel or 2Cr13 alloy through hot-forging Multi-Application and CNC center machining, delivering superior fit accuracy and enhanced structural rigidity.

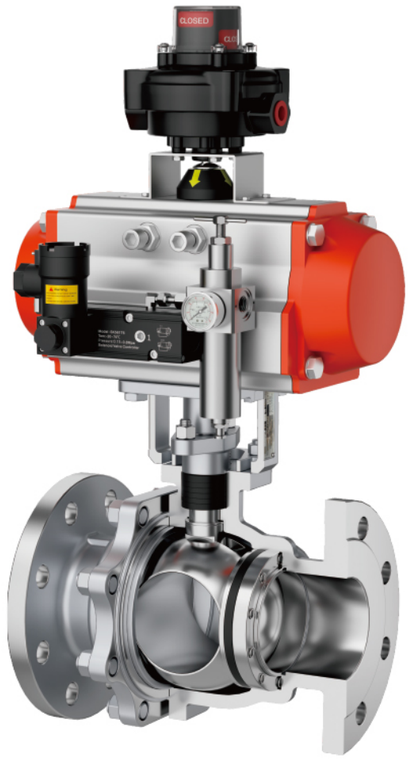
METAL CONTROL VALVE SERIES

PNEUMATIC O-PORT METAL-SEATED SHUT-OFF BALL VALVE

Product Overview

The ZPR750Y O-port Metal-seated shutoff ball valve is a high-performance fluid control device and a type of ball valve renowned for its excellent sealing performance, high-pressure resistance, and superior corrosion resistance. As a critical industrial fluid control solution, it provides robust support for safe production and efficient operations in demanding applications, including:High-temperature & high-pressure environments,Highly corrosive media,Fluids containing particulate matter. The ZPR750Y features the advantages as: Exceptional sealing reliability (metalto-metal sealing),Robust construction for harsh service conditions, Long service life with minimal maintenance.

Due to its outstanding performance, the ZPR750Y is widely used in the following industries for on/off control of gases, liquids, and slurries: Petroleum & Natural Gas,Chemical Processing,Pharmaceuticals, Metallurgy,Textiles,Paper Manufacturing and Wastewater Treatment,etc.



Main Technical Parameters

Body Type	Floating Type	
Size	DN15~DN500	
D&M Std.	GB/T12237, API608	
F2F Std.	GB/T12221, ANSI B16.10	
PT&I Std.	GB/T13927, API598	
Conn. Std.	Soft Sealing	RF, FM/M, T/G, FF, RJ
	HG/T20592-2009	PN10, PN100
	ASME B16.5	150LB, 600LB
Sealing Type	Seat Type	Metal Seated
	Stem Sealing Type	Packing Sealing
Materials	Body/Bonnet Material	WCB, LCB, SS304, SS316L
	Ball Material	F304, F316L + Ni60
		F304, F316L + STL
		F304, F316L + WC
	Metal Seated	F304, F316L + Ni55
		F304, F316L + STL
		F304, F316L + WC
	Stem Material	17-4PH, F304, F316L
	Packing Material	PTFE/Flexible Graphite
Technical Parameters	Temperature Range	-96°C ~ 425°C
	Flow Characteristic	Equal percentage(EQ%)/Linear(LIN) /Quick opening(QO)
	Leakage Level	IEC 60534-4, ANSI FCI 70-2, ASME B16.104
	Max. Rotation	90°
Accessories	Actuator	Pneumatic Actuator ZP7100 Series
		Electric Actuator ZP9000 Series
	Main Accessories	Solenoid Valve, Air Filter Regulator, Max. Rotation
	Others	Manual Mechanism, Dump Valve, Air-Controlled Valve, Lock-up valve

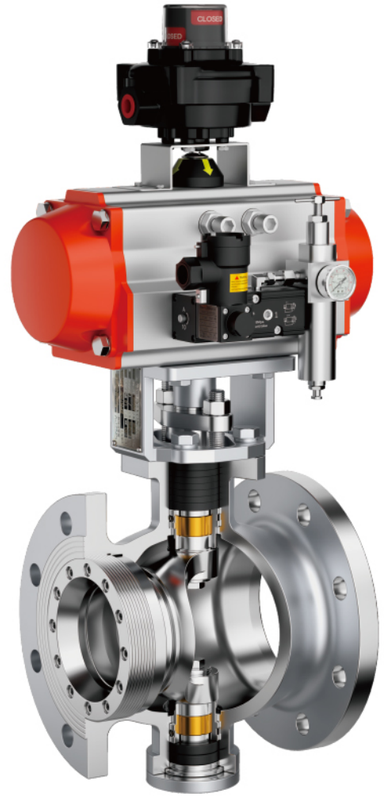
Features	Description
Bonnet Metal Gasket	Selecting metal gasket materials tailored to specific media prevents PTFE aging issues while significantly enhancing sealing performance
Anti-Blowout Stem	Anti-ejection design, effectively preventing stem blowout caused by gland loosening
Anti-Static Structure	An electrostatic discharge device is installed between the ball, stem, and valve body to eliminate static electricity accumulation
Multiple Seat Options	The compensative metal-seat design with multi-spring or disc spring ensures reliable sealing regardless of installation orientation
Hardening Treatment Options	The ball and seat are hardfaced with Stellite or other wear-resistant alloys to achieve superior abrasion resistance
Standard Mounting Platform	Design with deep packing box and cast bracket isolates actuator from body heat, maintaining ISO 5211 compliance for universal pneumatic/electric actuator compatibility
High-Strength Stem Connection	Octagonal connection shafts are manufactured from Grade 45 steel or 2Cr13 alloy through hot-forging and CNC center machining, delivering superior fit accuracy and enhanced structural rigidity.

METAL CONTROL VALVE SERIES

PNEUMATIC V-PORT REGULATED BALL VALVE

Product Overview

The V-port control ball valve is a type of ball valve featuring a V-notched on its hemispherical closure element. The sharp-edged V-notch provides a shearing function during rotation, delivering strong shut-off capability against media flow. The V-shaped opening and valve seat flow passage form a sector-shaped area, enabling precise flow regulation by varying the flow cross-section during operation. As an rotary controlled valve, it maintains the same sealing performance as standard ball valves while combining both regulating and shut-off functions. When paired with pneumatic or electric actuators, it becomes an ideal solution for industrial automation systems. Widely used in processes requiring : Accurate flow control. High shut-off reliability, Abrasive/ slurry media handling. This design is particularly effective in pulp & paper, mining, and wastewater treatment applications where both modulation and tight shut-off are required.



Main Technical Parameters

Size	DN25~DN300
Pressure	PN16, PN25, PN40, PN64 PN100, 150LB, 300LB, 600LB
Conn. Std.	HG/T20592, ANSI B16.5
Temp.Range	-196°C ~ 420°C
F.C.	Equal percentage(EQ%)/Linear(LIN)/Quick opening(QO)
Matching Actuator	Pneumatic Actuator, Electric Actuator
D&M Std.	GB/T4213
F2F Std.	GB/T12221
PT&I Std.	GB/T 4213 GB/T 17213.4
	ASME B16.104 ISO 5208
Accessories	Solenoid Valve, Limit Switch, Filter, Positioner

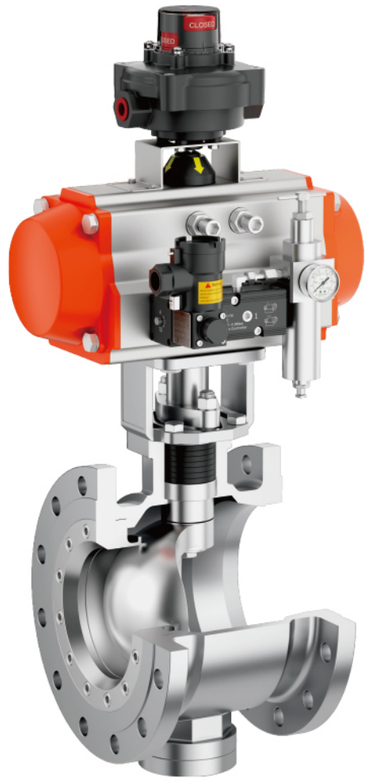
Features	Description
One-Piece Body	Monobloc body design with integral wafer/flange connections, offering superior rigidity to prevent deformation and external leakage
Rotary shearing Function	The V-notch ball design effectively shears fibers and fine particles in the medium, preventing valve clogging
Precision Regulation	The V-port design provides exceptional regulating performance, delivering near-equal percentage flow characteristics with a turndown ratio of 300:1
Stem Guiding Structure	Advanced stem-guided ball drive system,guidance with self-lubricating bearings, reducing friction resistance while lowering operating torque and enhancing valve efficiency and service life.
Shape-Memory Alloys	The monolithic shape-memory alloy seat effectively eliminates seal failure caused by spring fatigue in traditional spring-energized seats
Superior Sealing	The ball and seat surfaces are hardfaced with Stellite or other wear-resistant alloys, delivering superior abrasion resistance
Standard Mounting Platform	Design with deep packing box and cast bracket isolates actuator from body heat, maintaining ISO 5211 compliance for universal pneumatic/electric actuator compatibility

METAL CONTROL VALVE SERIES

PNEUMATIC ECCENTRIC ROTARY CONTROL BALL VALVE

Product Overview

The ZPR770Y eccentric rotary control ball valve (C-type/camflex valve), features a straight-through flow design with an eccentrically rotating spherical disc for low resistance and self-cleaning.
Opening: Disc lifts off seat at 3° (0.05mm gap), reducing wear and torque.
Closing: Progressive wiping action (0°-3°) enhances sealing.
90° rotation: Disc shifts sideways to avoid direct flow impact. Ideal for slurries, powders, and corrosive media due to wide rangeability and stable torque.
Working Principle: A sector-shaped ball rotates eccentrically, with its spherical crown tangentially contacting the seat.
Opening: The ball disengages from the seat.
Closing: The ball gradually presses against the seat, creating sealing force.



Main Technical Parameters

Size	DN25~DN300
Pressure	PN16, PN25, PN40, PN64, PN100, 150LB, 300LB, 600LB
Conn. Std.	HG/T20592, ANSI B16.5
Temp.Range	-196°C ~ 420°C
F.C.	Equal percentage(EQ%)/Quick opening(QO)
Matching Actuator	Pneumatic Actuator, Electric Actuator
D&M Std.	GB/T4213
F2F Std.	GB/T12221
PT&I Std.	GB/T 4213 GB/T 17213.4
	ASME B16.104 ISO 5208
Accessories	Solenoid Valve, Limit Switch, Filter, Positioner

Features	Description
One-Piece Body	Monobloc body design with integral wafer/flange connections, offering superior rigidity to prevent deformation and external leakage
Self-Centering Structure	The seat sealing surface and ball feature self-centering capability, facilitating routine maintenance
Trunnion-Mounted Ball	The trunnion-mounted ball design resolves centering, positioning, and erosion protection issues for the stem-disc assembly, Suitable for high-purity media applications
Flat Sealing System	A precision-machined flat metal-to-metal seal between the seat and body replaces traditional gaskets, forming a rigid sealing structure
Shape-Memory Alloys Seat	The shape-memory alloy seat (elastic seat) achieves bidirectional high-pressure sealing whilecompensating for disc/seat wear, featuring self-cleaning and shearing capabilities during shut-off
Superior Sealing	The ball and seat surfaces are hardfaced with Stellite or other wear-resistant alloys, delivering superior abrasion resistance
Standard Mounting Platform	Design with deep packing box and cast bracket isolates actuator from body heat, maintaining ISO 5211 compliance for universal pneumatic/electric actuator compatibility

METAL CONTROL VALVE SERIES

PNEUMATIC INCLINED STEM DISCHARGE BALL VALVE

Product Overview

The ZPRX740F inclined stem discharge valve is a specialized bottom-discharge solution for reaction vessels, featuring a three-piece modular design (curved flange, intermediate flange, and valve body) for easy installation. Its 105° angled stem prevents actuator interference with the vessel while the arcuate ball surface ensures residue-free sealing when closed. The quarter-turn operation provides reliable flow control, making it ideal for chemical, pharmaceutical, food/beverage, petrochemical, and water treatment applications.



Main Technical Parameters

Body Type	Straight-Through Type	
Size	DN15, DN350	
D&M Std.	GB/T12237, API608	
F2F Std.	GB/T12221, ANSI B16.10	
PT&I Std.	GB/T13927, API598	
Conn. Std.	Flange Sealing Face	RF, FM/M, T/G, FF
	HG/T20592-2009	PN10, PN16, PN25
	ASME B16.5	150LB
Sealing Type	Seat Type	Soft Seat
	Stem Sealing Type	Packing Sealing
Materials	Body/Bonnet Material	WCB LCB SS304 SS316L
	Ball Material	WCB F304 F316L
	Stem Material	17-4PH
	Lining Material	FEP(F46), PTFE(F4), PFA
	Packing Material	PTFE
	Temperature Range	-30°C ~ 160°C
Technical Parameters	Flow Characteristic	Equal percentage(EQ%)/Linear(LIN)/ Quick opening(QO)
	Leakage Level	IEC 60534-4, ANSI FCI 70-2, ASME B16.104
	Rangeability	200:1
	Basic Error	w/ pos.:≤±2%
	Hysteresis Error	w/ pos.:≤2%
	Max. Rotation	90°
Accessories	Actuator	Pneumatic Actuator ZP7100 Series
		Electric Actuator ZP9000 Series
	Main Accessories	Positioner, Air Filter Regulator, Manual Mechanism
	Others	Solenoid Valve, Limit Switch, Dump Valve, Air-Controlled Valve, Lock-up valve

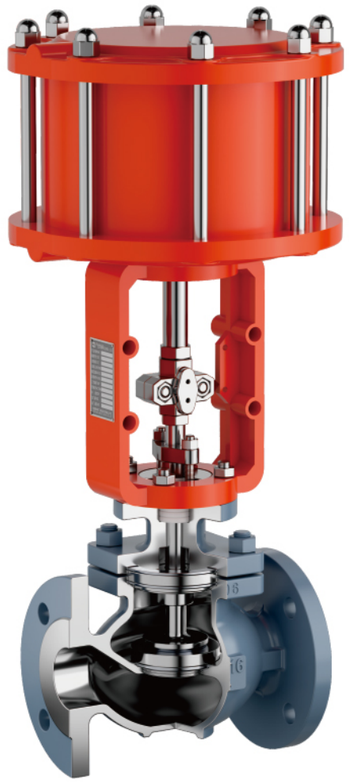
Features	Description
One-Piece Body	The flush-mounted bonnet design, minimizing the clearance between internal components and the vessel bottom. This configuration effectively reduces agitation dead zones and discharge port accumulation
Self-Centering Structure	Stem blowout-proof design/Static-dissipative device/Fire-safe certified design,delivering enhanced performance and superior structural integrity
Trunnion-Mounted Ball	The 15° angled valve stem effectively prevents interference between the actuator and vessel, while avoiding material accumulation at the outlet
Flat Sealing System	The flanged container bottom features a curved bonnet design that prevents media retention, ensuring smooth flow. This valve is compatible with both curved flanges and valve bodies
Shape-Memory Alloys Seat	Forged-welded plug & stem assembly maintains structural rigidity to prevent stem deflection under maximum thrust load
Superior Sealing	One-piece body/bracket ensures stable operation with ISO 5211-compliant actuator mounting.
Standard Mounting Platform	The connection shaft is manufactured from Grade 45 steel or 2Cr13 alloy through hot-forging and CNC center machining, ensuring precise fit and enhanced rigidity.

METAL CONTROL VALVE SERIES

LINEAR MOTION SPHERICAL-HOUSING SHUT-OFF GLOBE CONTROL VALVE

Product Overview

The ZPL270F Spherical-Housing Shut-Off Globe Control Valve is a highperformance linear motion fluid control valve. It features a normally closed pneumatic design with a single-acting spring-return cylinder in a high-in/low-out configuration, combining the functions of a check valve and safety valve. The cylinder is equipped with a high-temperature fusible plug that provides automatic pressure relief and shut-off functionality in case of excessive temperature. During operation:Valve Opening: Air pressure acts on the cylinder, pushing the piston upward against the spring force.Valve Closing: When air supply is cut off, the spring force and medium pressure from the storage tank drive the piston downward With its excellent sealing performance and rapid shut-off characteristics, this valve serves as a critical device for industrial fluid control, providing reliable safety protection and operational efficiency for industrial processes. This Valve with the key features as:Linear stroke operation,Available in soft seal or metal seal versions,Fusible plug safety feature,Combines check valve and safety valve functions&Fast response time. This valve plays a crucial role in industrial applications,ideal for critical shutoff applications in: Petrochemical plants,Gas distribution systems, Industrial process control,Safety protection systems,etc.



Main Technical Parameters

Body Type	Straight-Through Type	
Size	DN15~DN350	
D&M Std.	GB/T12237, HG/T3704, API608	
F2F Std.	GB/T12221, HG/T3704, ANSI B16.10	
PT&I Std.	GB/T13927, API598	
Conn. Std.	Flange Sealing Face	RF, FM/M, T/G, FF, RJ
	HG/T20592-2009	PN10, PN16, PN25
	ASME B16.5	150LB
Sealing Type	JIS B2210	10K
	Seat Type	Soft Seat
Materials	Stem Sealing Type	Packing Sealing
	Body/Bonnet Material	WCB, LCB, SS304, SS316L
	Plug Material	WCB, F304, F316L
	Stem Material	17-4PH
	Lining Material	FEP(F46), PTFE(F4), PFA
	Packing Material	PTFE
Technical Parameters	Temperature Range	-30°C ~ 160°C
	Flow Characteristic	Equal percentage(EQ%)/Linear(LIN)/ Quick opening(QO)
	Leakage Level	IEC 60534-4, ANSI FCI 70-2, ASME B16.104
	Max. Rotation	90°
Accessories	Actuator	Pneumatic Actuator ZP7100 Series
		Electric Actuator ZP9000 Series
	Main Accessories	Solenoid Valve, Air Filter Regulator, Limit Switch
	Others	Manual Mechanism, Dump Valve, Air-Controlled Valve, Lock-up valve

Features	Description
Dependable Bonnet	Integrally forged bonnet for superior material density and structural stability, delivering enhanced pressure containment performance
Superior Sealing	The packing adopts a combination of graphite and high-temperature resistant PTFE, which provides better sealing performance, lower friction coefficient, and lighter operating torque
Rapid-Replacement Design	The plug & stem feature a "Quick-Connect" design, enabling switching between soft sealing & metal sealing configurations
High-Gloss Stem	The packing-contact stem is precision-finished by CNC grinding, achieving superior concentricity and dimensional accuracy.
Linear-Stroke Spherical Structure	Seamless transition between Ultra-hot steam and low temperature brine services. with sealing performance achieving Class VI
High-Performance Seat	The body & trims are precision-machined with dedicated CNC equipment, ensuring stable performance and high leakage integrity
Multi-Application	Standard ball valve face-to-face dimensions ensure leak-proof performance across multiple service conditions and enable direct replacement

METAL CONTROL VALVE SERIES

PNEUMATIC RISING-STEM DISCHARGE CONTROL VALVE

Product Overview

The ZPL180Y bottom discharge valve is mainly used for bottom discharge in reactors, storage tanks, and other containers. Installed on the tank bottom flange, the valve eliminates the residual phenomenon of process media that usually occurs at the container outlet. As a special type of shut-off valve, it is primarily applied to the bottom of various storage containers. Its smooth and streamlined valve body flow channel design, combined with the spherical single-seat valve plug type, facilitates medium flow, making it widely used in industries such as polymerization reactions, chemical fiber, food, and fermentation. It is also an ideal choice for occasions involving slurries and high-density fluids. When selecting valves of this series, factors such as the temperature, pressure, adhesiveness, and corrosiveness of the medium in the storage container must be considered to maximize adaptability to different working conditions.

Classification of Bottom Discharge Valves:

- Metal rising-stem discharge valve: ZPL180Y (resistance-resistant, erosion-resistant, crystallization-resistant, anti-clogging)
- Metal lowering-stem discharge valve: ZPL170Y (resistance-resistant)

※Users can select the appropriate type based on operating conditions (pressure difference,temperature, medium state, installation method) and leakage requirements.



Main Technical Parameters

Body Type	Straight-Through Type	
Size	DN15~DN350	
D&M Std.	GB/T12237, HG/T3704 , PI608	
F2F Std.	GB/T12221, HG/T3704, ANSI B16.10	
PT&I Std.	GB/T13927, API598	
Conn. Std.	Flange Sealing Face	RF, FM/M, T/G, FF, RJ
	HG/T20592-2009	PN10, PN16, PN25
	ASME B16.5	150LB
Sealing Type	Seat Type	Soft Seat
	Stem Sealing Type	Packing Sealing
Materials	Body/Bonnet Material	WCB LCB SS304 SS316L
	Plug Material	WCB F304 F316L
	Stem Material	17-4PH
	Lining Material	FEP(F46), PTFE(F4), PFA
	Packing Material	PTFE
Technical Parameters	Temperature Range	-30°C ~ 160°C
	Flow Characteristic	Equal percentage(EQ%)/Linear(LIN)/ Quick opening(QO)
	Leakage Level	IEC 60534-4, ANSI FCI 70-2, ASME B16.104
	Rangeability	100:1
	Basic Error	w/ pos.:≤±2%
	Hysteresis Error	w/ pos.:≤2%
Accessories	Actuator	Pneumatic Actuator ZP6000 Series
		Electric Actuator ZP9000 Series
	Main Accessories	Solenoid Valve, Limit Switch, Positioner, Air Filter Regulator
	Others	Manual Mechanism, Dump Valve, Air-Controlled Valve, Lock-up valve Flange, Gasket, Bolt

Features	Description
Dependable Bonnet	The sealing surfaces feature welded Stellite hard alloy cladding, making them suitable for both granular media and crystallizing fluids.
Superior Sealing	The valve outlet features a 45° or 50° angled design relative to the vessel, ensuring smoother material discharge while increasing clearance from the vessel bottom -effectively resolving installation challenges in concave-bottom containers.
Rapid-Replacement Design	This Design enables flush mounting between the valve seal and vessel bottom, effectively reducing stroke while preventing material accumulation
High-Gloss Stem	Universal body structure accommodates both rising stem and lowering stem configurations for flexible application scenarios
Linear-Stroke Spherical Structure	Forged-welded plug & stem assembly maintains structural rigidity to prevent stem deflection under maximum thrust load
High-Performance Seat	The dual-pressure system combines a single-acting spring mechanism with pneumatic assist to prevent seal leakage under vacuum conditions
Multi-Application	The actuator housing is made of aluminum alloy, achieving significant weight reduction to alleviate load-bearing stress at vessel mounting interfaces while ensuring excellent corrosion resistance

SELF-OPERATED PRESSURE REGULATOR

Product Overview

The ZPL610F (ZZYP) self-operated pressure regulator requires no external energy supply. It utilizes the energy of the controlled medium itself as the power source, introducing it into the actuator to control the position of the valve plug, thereby changing the flow area, adjusting the pressure difference and flow rate at both ends, and ultimately stabilizing the upstream or downstream pressure at the set value. Featuring advantages such as sensitive action, excellent sealing performance, and minimal pressure fluctuation, it's widely applied in automatic control systems for pressure reduction/stabilization or pressure relief/stabilization of gas, liquid, and steam media in various industrial equipment.



Main Technical Parameters

Body Type	Straight-Through Type	
Size	DN20~DN300	
D&M Std.	GB/T4213	
F2F Std.	GB/T17213.3	
PT&I Std.	GB/T4213 API598	
Conn. Std.	Flange Sealing Face	RF, FM/M, T/G, FF
	HG/T20592-2009	PN10, PN16, PN25
	ASME B16.5	150LB
Sealing Type	Seat Type	Soft Seat
	Stem Sealing Type	Packing Sealing
Materials	Body/Bonnet Material	WCB, LCB, SS304, SS316L
	Plug Material	WCB, F304, F316L
	Stem Material	17-4PH
	Lining Material	FEP(F46), PTFE(F4), PFA
	Packing Material	PTFE
Technical Parameters	Temperature Range	-30°C ~ 160°C
	Flow Characteristic	Equal percentage(EQ%)/Linear(LIN)/ Quick opening(QO)
	Leakage Level	IEC 60534-4, ANSI FCI 70-2, ASME B16.104
	Regulation Accuracy	±5%
Accessories	Actuator	Pneumatic Actuator ZP6100 Series
	Others	Flange, Gasket, Bolt

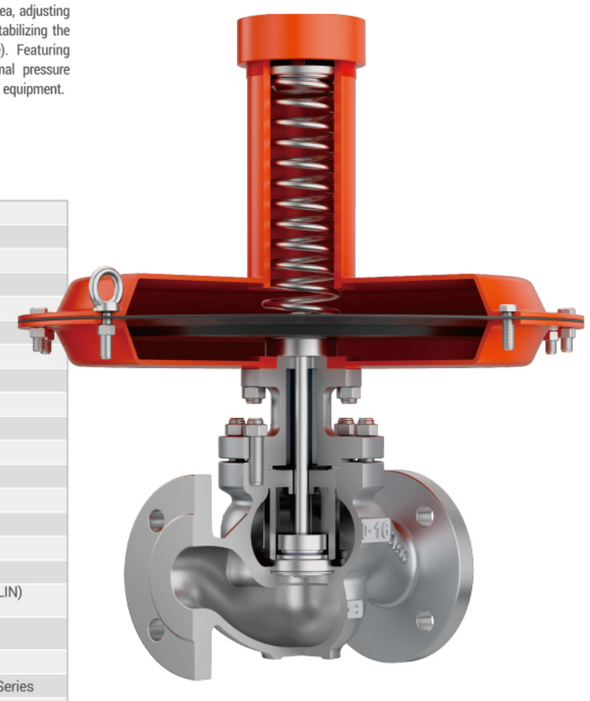
Note: ① Please specify in advance when seat leakage rate must meet Class V;
② For potential flashing media, select cavity-reduced trim with Stellite™hardfaced(ST) disc and seat surfaces RTFE: Reinforced PTFE ; ST: Stellite™ hardfacing ; HT: Heat treatment ;SS: Full Stellite™ overlay.

Features	Description
Auto-Regulation	This regulator integrates measurement, actuation, and control functions, capable of stable operation in pneumatic-free and electricity-free environments
Diverse Trim Configurations	Multiple structural types are available: Single-seat pressure-close type (ZPL611-16B), Double-seat pressure-close type (ZPL612-16B), and Sleeve pressure-close type (ZPL613-16B), suitable for different pressure regulation requirements. The pressure-close type (B) is used for downstream pressure regulation, while the pressure-open type (K) is applied for upstream pressure regulation
High-Precision Control	The valve delivers high control accuracy, with the following specifications.Metal-seated single-seat (Class IV): Control precision ≤10-4 × rated valve capacity Double-seat & sleeve (Class II): Control precision ≤5×10-3 × rated capacity Soft-seated versions: Flow rates of 0.15, 0.45, and 6.75 ml/min respectively
Actuator Options	The valve is available with diaphragm-type or piston-type actuators. The actuation modes include: Upstream pressure control (pressure relief/retention type),Downstream pressure control (pressure reducing/stabilizing type),This versatility ensures adaptability to diverse operating conditions
Multi-Application	This regulator equipped with insulated condensate pot maintains stable operation at temperatures 300°C, making it ideal for high-temperature media regulation

SELF-OPERATED MICRO-PRESSURE REGULATOR

Product Overview

The ZPL620F (ZZVP) self-operated micro-pressure regulator requires no external energy supply. It utilizes the energy of the controlled medium itself as the power source, introducing it into the actuator to control the position of the valve plug, thereby changing the throttling area, adjusting the pressure difference and flow rate at both ends, and achieving the purpose of stabilizing the outlet pressure (downstream type) or relieving inlet pressure (upstream type). Featuring advantages such as sensitive action, excellent sealing performance, and minimal pressure fluctuation, it is widely applied in micro-pressure control of gases in various industrial equipment.



Main Technical Parameters

Body Type	Straight-Through Type	
Size	DN20~DN100	
D&M Std.	GB/T4213	
F2F Std.	GB/T17213.3	
PT&I Std.	GB/T4213, API598	
Conn. Std.	Flange Sealing Face	RF, FM/M, T/G, FF
	HG/T20592-2009	PN10, PN16, PN25
	ASME B16.5	150LB
Sealing Type	Seat Type	Soft Seat
	Stem Sealing Type	Packing Sealing
Materials	Body/Bonnet Material	WCB, LCB, SS304, SS316L
	Plug Material	WCB, F304, F316L
	Stem Material	17-4PH
	Lining Material	FEP(F46), PTFE(F4), PFA
	Packing Material	PTFE
Technical Parameters	Temperature Range	-30°C ~ 160°C
	Flow Characteristic	Equal percentage(EQ%)/Linear(LIN) /Quick opening(QO)
	Leakage Level	IEC 60534-4, ANSI FCI 70-2, ASME B16.104
	Regulation Accuracy	±5%
Accessories	Actuator	Pneumatic Actuator ZP6100 Series
	Others	Flange, Gasket, Bolt

Features	Description
Auto-Regulation	This regulator integrates measurement, actuation, and control functions, capable of stable operation in pneumatic-free and electricity-free environments
High Sensitivity Actuator	The actuator is equipped with highly sensitive sensing elements capable of detecting even the slightest pressure variations
High-Precision Control	This regulator features a simple internal structure and reliable operation, ensuring high control precision and accuracy. It is ideally suited for applications demanding stringent control performance
Multi-Application	The compact design features quick-opening flow characteristics with responsive actuation and tight sealing, making it ideal for diverse industrial installations
Actuator Options	The valve is available with diaphragm-type or piston-type actuators. The actuation modes include: Upstream pressure control (pressure relief/retention type),Downstream pressure control (pressure reducing/stabilizing type),This versatility ensures adaptability to diverse operating conditions

METAL CONTROL VALVE SERIES

PILOT-CONTROLLED SELF-ACTING PRESSURE REGULATOR

Product Overview

The ZPL630F (ZZYVP) pilot-controlled self-acting pressure regulator requires no external energy supply. It utilizes the energy of the controlled medium itself as the source, introducing it into the valve's pilot to control the position of the main valve plug, thereby changing the throttling area. This adjusts the medium flow rate through the regulating valve and stabilizes the downstream pressure.

Pressure setting is achieved by adjusting the spring on the pilot, making the process convenient, quick, labor-saving, and time-efficient. It allows continuous setting during operation, with a simple structure and minimal maintenance workload. Boasting a pressure reduction ratio of ≤4000:1, high control precision, sensitive action, and excellent sealing performance, it is widely applied in automatic pressure reduction and stabilization control of gases in various industrial equipment, and is particularly suitable for nitrogen blanketing systems of storage tanks. A globe valve is included as an accessory. Before the valve operates, this globe valve must be closed to prevent overpressure and impurities from entering the actuator, thus protecting the diaphragms and seals inside the actuator and avoiding damage to the entire valve due to overpressure.



Main Technical Parameters

Body Type	Straight-Through Type	
Size	DN20~DN100	
D&M Std.	GB/T4213	
F2F Std.	GB/T17213.3	
PT&I Std.	GB/T4213, API598	
Conn. Std.	Flange Sealing Face	RF, FM/M, T/G, FF
	HG/T20592-2009	PN10, PN16, PN25
	ASME B16.5	150LB
Sealing Type	Seat Type	Soft Seat
	Stem Sealing Type	Packing Sealing
Materials	Body/Bonnet Material	WCB, LCB, SS304, SS316L
	Plug Material	WCB, F304, F316L
	Stem Material	17-4PH
	Lining Material	FEP(F46), PTFE(F4), PFA
	Packing Material	PTFE
Technical Parameters	Temperature Range	-30°C ~ 160°C
	Flow Characteristic	Equal percentage(EQ%)/Linear(LIN) /Quick opening(QO)
	Leakage Level	IEC 60534-4, ANSI FCI 70-2, ASME B16.104
	Regulation Accuracy	±5%
Accessories	Actuator	Pneumatic Actuator ZP6100 Series
	Others	Flange, Gasket, Bolt

Features	Description
Power-Free & Auto-Regulation	No need external energy input, utilizing the energy of the controlled medium itself as the power source. Through a pilot that detects and controls the actuator, it precisely adjusts the valve plug position to modulate the medium flow rate, thereby maintaining constant downstream pressure
Adjustable Operatetion	The pressure setpoint can be conveniently adjusted directly on the pilot valve, allowing for continuous in-process calibration without system shutdown
Modular Structure Design	This regulator features an innovative compact design with fast response. It eliminates the need for downstream pressure tapping (optional tapping ports are available if required), ensuring easy installation,wide pressure adjustment range, and positive shutoff
Micro-Pressure SensingCapability	The ZPL630 Self-operated Pressure Regulating Valve (Nitrogen Supply Valve) delivers highly responsive actuation and precise control. Its oversized pressure-sensing diaphragm and low-stiffness setting spring ensure exceptional sensitivity. The packing-free design minimizes stem friction, enabling fast response and high-precision regulation

METAL CONTROL VALVE SERIES

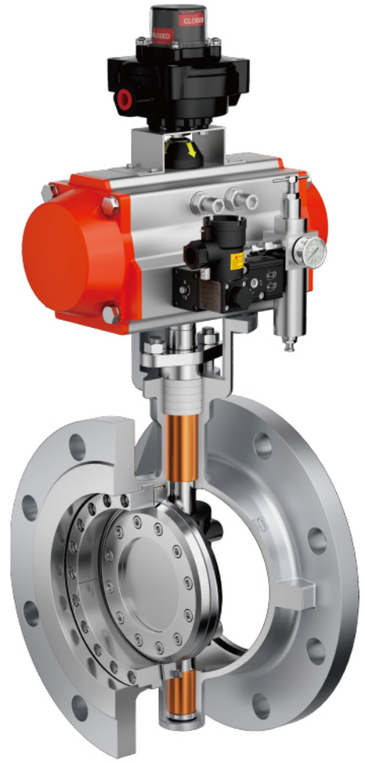
ECCENTRIC METAL-SEATED BUTTERFLY VALVE

Product Overview

The ZPR820 metal sealing eccentric butterfly valve (with soft seal or metal seal options) is a new type of butterfly valve designed by integrating the advantages of several different structural butterfly valves. It adopts a double-eccentric butterfly disc with a spherical sealing surface, matched with a single-piece sealing seat, making it suitable for occasions requiring reliable sealing and regulatory characteristics. Thanks to the double-eccentric design of the butterfly disc, the valve features tight sealing performance and an ultra-long service life. It can be used for quick shut-off or flow regulation. The product is applicable to the transportation of liquids and gases (including steam) in various industrial pipelines. With the advantages of small volume, light weight, a wide manufacturing range, and easy maintenance.

Due to the adoption of the 3D eccentricity principle in this butterfly valve, the spatial movement trajectory of the sealing surfaces is optimized. There is no friction or interference between the sealing surfaces, and combined with the appropriate selection of sealing materials, the butterfly valve achieves reliable sealing performance, corrosion resistance, high-temperature resistance, and wear resistance.

The ZPR820 high-performance butterfly valve, when paired with an electric valve positioner, can be controlled by inputting a 4~20mADC signal and a 0.4~0.7MPa air supply, enabling regulation of parameters such as pressure, flow rate, temperature, and liquid level. When equipped with a solenoid valve, limit switch, pressure reducing valve, and a 0.4-0.7MPa air supply, the valve can achieve on-off operations and output two pairs of passive contact signals to indicate the valve's open/close status.



Main Technical Parameters

Body Type	Wafer-Type /Flange Type	
Size	DN50~DN1200	
D&M Std.	API 609	
F2F Std.	GB/T12221 (Short-Body Series)	
PT&I Std.	GB/T13927, API598	
Conn. Std.	End	Wafer-Type/Flance Type
	Flange Sealing Face	RF, FM/M, T/G, FF
	HG/T20592-2009	PN10, PN16, PN25
Sealing Type	ASME B16.5	150LB
	Seat Type	Soft Seat
Materials	Stem Sealing Type	Sleeve Packing
	Body/Bonnet Material	WCB, LCB, SS304, SS316L
	Disc Material	WCB, F304, F316L
	Seat Material	SS304+PTFE or Graphite;Hard Alloy
	Stem Material	17-4PH
Technical Parameters	Temperature Range	-30°C ~ 160°C
	Flow Characteristic	Equal percentage(EQ%)/Linear(LIN)/ Quick opening(QO)
	Leakage Level	IEC 60534-4, ANSI FCI 70-2, ASME B16.104
	Rangeability	100:1
	Basic Error	w/ pos.:≤±2%
	Hysteresis Error	w/ pos.:≤2%
Accessories	Actuator	Pneumatic Actuator ZP7000 Series Electric Actuator ZP9000 Series
	Main Accessories	Solenoid Valve, Limit Switch, Positioner, Air Filter Regulator
	Others	Manual Mechanism, Dump Valve, Air-Controlled Valve, Lock-up valve

Features	Description
Multi-Eccentric Structure	The eccentric design significantly eliminates scraping between the disc and seat, reducing wear and extending seat service life.
Wide Compatibility	The design prevents particle accumulation during fluid flow erosion while maintaining reliable shut-off performance.
High-Temperature Resistance	Configurable with metal seats or composite seats (elastomer + metal), supporting fire-safe design (achieving ANSI-B10.4 Class IV sealing at high temperatures).
Superior Sealing	Mechanical compression sealing design,replacing traditional reliance on elastic seat deformation.
Wide Operating Range	Applicable Temperature: -253 ~ +815 , Pressure Rating: 150Lb ~ 2500Lb, suitable for applications in water plants, power plants, chemical pipelines, etc.
Low Operating Torque	The eccentric design structure ensures lower operating torque compared to other valve types.

METAL CONTROL VALVE SERIES

PNEUMATIC 3-WAY CONVERGING /DIVERTING CONTROL VALVE

Product Overview

The ZPL310Y/ZPL320Y series pneumatic 3-way converging/diverting control valve features a dual-valve-plug structure with upper and lower guiding, paired with various spring actuators. The valve body has a 4-way structure, available in two configurations: one-inlet-two-outlets (diverting type) for fluid splitting or two-inlets-one-outlet (converging type) for fluid mixing. These configurations enable functions such as temperature adjustment through fluid mixing or uneven liquid diversion, meeting diverse operational requirements.

The valve body offers advantages including compact structure, light weight, sensitive action, minimal pressure drop loss, high allowable pressure difference, large capacity, precise flow characteristics, and easy maintenance. It is suitable for various working conditions, particularly temperature control systems in petroleum industry heat exchangers and automation control across industries. Available in multiple forms such as standard types and hightemperature types, the product offers pressure ratings of PN1.6, 4.0, and 6.4; size ranging from DN25 to 200; leakage classes II and IV; and flow characteristics of linear and equal percentage. A wide range of specifications is available for selection.



Main Technical Parameters

Body Type	3-Way Converging/Diverting Type	
Size	DN25~DN200	
D&M Std.	GB/T4213	
F2F Std.	GB/T12221	
PT&I Std.	GB/T4213, API598	
Conn. Std.	Flange Sealing Face	RF, FM/M, T/G, FF
	HG/T20592	PN10, PN16, PN25
	ASME B16.5	150LB
Sealing Type	Seat Type	Metal Seated
	Stem Sealing Type	Packing Sealing, Bellows Sealing
Materials	Body/Bonnet Material	WCB, LCB, SS304, SS316L
	Plug Material	WCB, F304, F316L
	Stem Material	17-4PH
	Packing Material	PTFE
Technical Parameters	Temperature Range	-30°C ~ 160°C
	Flow Characteristic	Equal percentage(EQ%)/Linear(LIN)/ Quick opening(QO)
	Leakage Level	IEC 60534-4, ANSI FCI 70-2, ASME B16.104
	Rangeability	50:1
	Basic Error	w/o pos.:≤±8%, w/ pos.:≤±1.5%
	Hysteresis Error	w/ pos.:≤1.5%
	Dead Band	w/o pos.:≤6%, w/ pos.:≤0.5%
Accessories	Actuator	Pneumatic Actuator ZP6100 Series ZP6200 Series
		Electric Actuator ZP8000 Series
	Main Accessories	Positioner, Air Filter Regulator, Handwheel
	Others	Limit Switch, Solenoid Valve, position transmitter, Volume booster, Lock-up valve

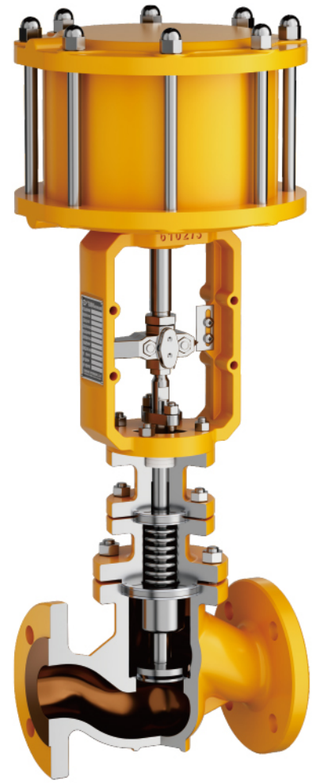
Features	Description
Multi-Application	This 3-way control valve enables multi-scenario flow switching between diverting (1-inlet/2-outlet) and combining (2-inlet/1-outlet) configurations.
Dual-Disc Control Structure	The independent disc-seat paired configuration enables one disc to open while the other synchronously closes, achieving precise flow splitting or merging control
Dual-Function Stabilization	The sleeve with balance holes reduces fluid-induced unbalanced forces, improving stability. The disc sidewall, seat bore, and upper bushing form a cooperative guidance system to enhance vibration resistance.
Application & Cost-Saving	This valve can replace the combination of an air-to-open valve and an air-to-close valve, reducing costs by over 30%, saving installation space, and being suitable for bypass control, fluid ratio adjustment, and similar applications.
Leakage Class State	Standard leakage class II~IV, upgradable to Class IV (Enhanced Sealing Requirement) through advanced cage trim optimization
Selectable Flow-Char.	Flow characteristic selectable between linear and parabolic, adapting to varying process requirements and control precision needs

CHLORINE CONTROL VALVE

PNEUMATIC CHLORINE-SERVICE CONTROL /ISOLATION VALVE

Product Overview

The ZPL280W chlorine isolation valve and ZPL290W chlorine regulated valve are dedicated linear motion control valves for chlorine (dry chlorine), liquid chlorine, and various high-risk media. Their unique soft and metal sealing design ensures reliable sealing performance (with metal sealing achieving Class VI leakage rating). A bellows seal is added to the packing seal structure, forming a double-sealing mechanism that effectively prevents external leakage of hazardous media. The valve plug and valve seat sealing adopt highly corrosion-resistant PTFE and Stellite alloy, featuring stable sealing performance, safe and reliable operation, strong corrosion resistance, no internal or external media leakage, and easy operation. Primarily used to shut off (or open) pipeline media, they are suitable for liquid chlorine and chlorine gas applications in chemical pipelines. These chlorine-specific valves play a role in controlling and regulating chlorine flow, pressure, etc., during chlorine production, transportation, storage, and usage, ensuring the safe operation of the system.



Main Technical Parameters

Body Type	Straight-Through Type	
Size	DN15~DN350	
D&M Std.	GB/T12237, API608	
F2F Std.	GB/T12221, ANSI B16.10	
PT&I Std.	GB/T13927, API598	
Conn. Std.	Flange Sealing Face	RF, FM/M, T/G, FF
	HG/T20592-2009	PN16, PN25
	ASME B16.5	150LB
Sealing Type	Seat Type	Soft Seat/Metal Seated
Materials	Stem Sealing Type	Bellows Sealing
	Body/Bonnet Material	LCB, 16Mn
	Plug Material	HC276, 316L
	Stem Material	17-4PH, 316L, HC276
	Bellows Material	HC276
	Packing Material	PTFE
Technical Parameters	Temperature Range	-25°C ~ 150°C
	Flow Characteristic	Equal percentage(EQ%)/Linear(LIN) /Quick opening(QO)
	Leakage Level	IEC 60534-4, ANSI FCI 70-2, ASME B16.104
	Stroke Type	Linear Stroke
Accessories	Actuator	Pneumatic Actuator ZP6100 Series ZP6200 Series
		Electric Actuator ZP9000 Series
	Main Accessories	Solenoid Valve, Air Filter Regulator, Limit Switch, Positioner
	Others	Manual Mechanism, Dump Valve, Air-Controlled Valve, Lock-up valve

Features	Description
Superior Anti-Corrosion	The 16Mn valve body with Hastelloy C276 bellows and internals resists severe corrosion from chlorine gas and liquid chlorine, ensuring reliable operation in harsh conditions.
Anti-Vibration	The center flange reinforcement sleeve ensures stem concentricity and enhances rigidity, can effectively reducing valve vibration.
Bellows Protection Sleeve	The built-in bellows protection sleeve effectively shields against particulate damage while extending service life under vacuum conditions.
Interlocking Sealing Structure	The center flange utilizes a dovetail groove sealing structure, ensuring zero leakage at the valve body joint even under pipeline pressure fluctuations.
Superior Sealing	The plug and seat are hardfaced with Stellite alloy, ensuring resistance to medium erosion and significantly extending valve service life.
Bellows-Sealed Stem	The bellows and stem are integrated into a modular cartridge, enabling plug-and-play replacement to eliminate traditional bellows-to-bonnet weld leaks while simplifying maintenance.



Flange-Type Lined Butterfly Valve



Wafer-Type Lined Butterfly Valve



Lined Diaphragm Valve



Lined Bellows Seal Globe Valve



Lined Globe Valve



Lined Gate Valve



Lined Ball Valve



Lined Bottom Ball Valve



Lined Angled-Port Discharge Ball Valve



H41 Type Lined Check Valve



H42 Type Lined Check Valve



H44 Type Lined Check Valve



Lined Y-Strainer



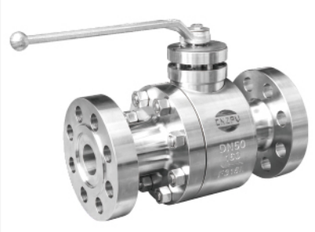
Lined Basket Strainer



Lined Sight Glass



Lined Sight Flow Indicator



Forged Steel Ball Valve



Stainless Steel Ball Valve