



China

HollySys Group (Group Headquarters)
No.2 Di Sheng Middle Road, Economic-Technological Development Area, Beijing 100176
Tel: +86 10 58981000 Fax: +86 10 58981100
Hangzhou HollySys Automation Co., Ltd. (Industrial Automation Headquarters)
No.1 North No.19 Street, Qiantang District, Hangzhou 310018
Tel: +86 571 81633600 Fax: +86 571 81633700

Singapore

HollySys (Asia Pacific) Pte. Ltd. (International Headquarters)
Changi Business Park Crescent, #04-01/02/03 Plaza 8 @ CBP, Tower A, Singapore 486025
Tel: +65 6777 0950 Fax: +65 6777 2730

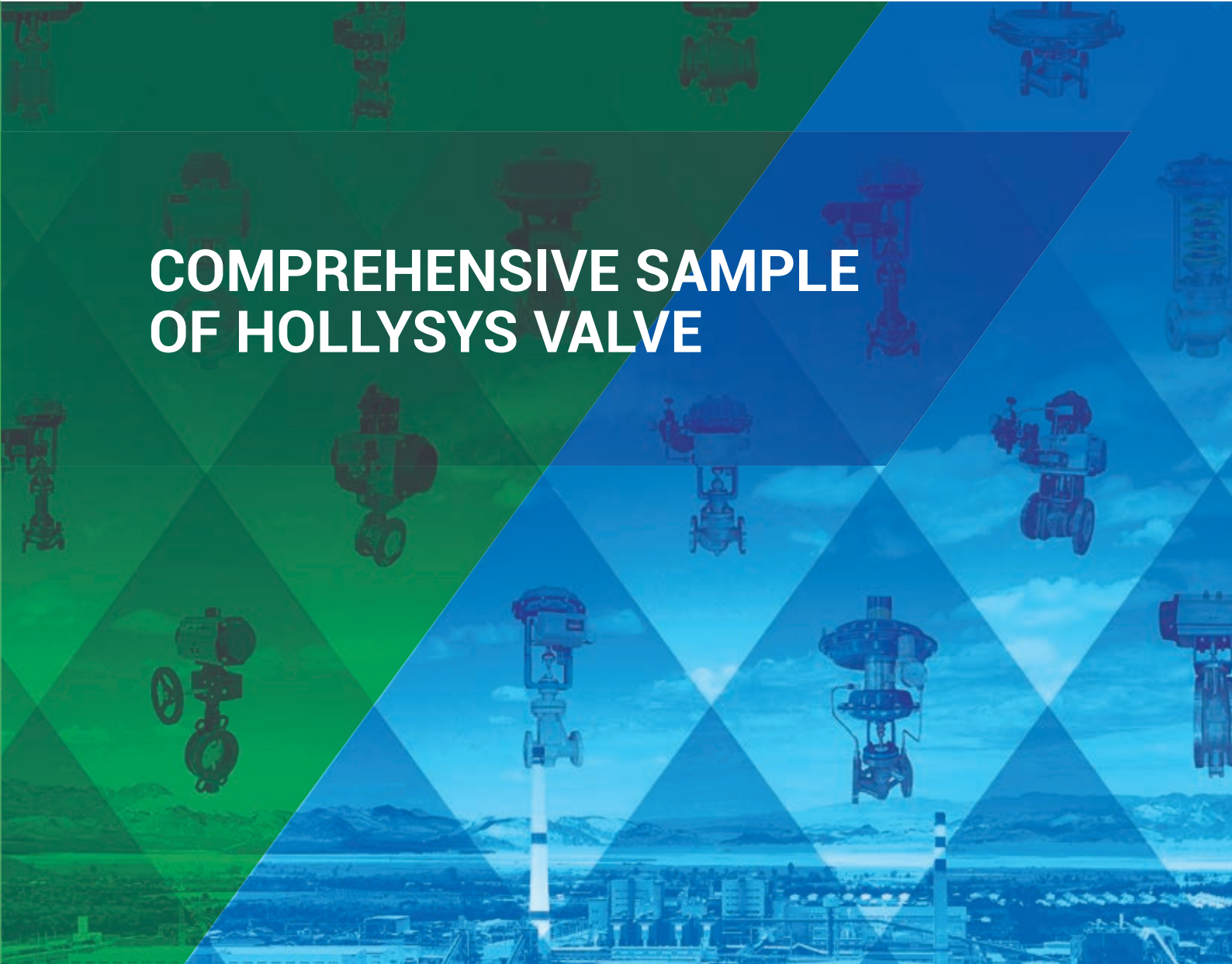
India

HollySys Automation India Pvt. Ltd.
D-84, Ground Floor, Sector 63, Noida, Uttar Pradesh 201301
Tel: +91 12045 50652

Indonesia

PT. HollySys Automation Indonesia
Metropolitan Tower, 10th Floor Unit E, Jl. R.A. Kartini Kav. 14, Jakarta 12430
Tel: +62 21 2918 2926 Fax: +62 21 2918 2936

Web: www.hollysys.com
E-mail: sales_international@hollysys.com (Sales)
iaservice@hollysys.com (After-sales Service)



Intelligence
For Excellence

Profile

Founded in 1993, HollySys is a leading supplier of intelligence solutions with more than 4,700 employees and operates in both China and abroad. HollySys is headquartered in Beijing with R&D, production, and service bases in Beijing, Hangzhou, Xi'an, Singapore, and local branches in major cities in China, as well as offices in India, Malaysia and Indonesia, establishing a comprehensive service network across the world.

HollySys business consists of industrial intelligence, transportation intelligence, and food and pharmaceutical intelligence, covering the main industries for the national economy and the people's livelihood. With years of technological accumulation in various fields and continuous capacity building, we can provide customers with customized integrated solutions, stable and reliable products, and full lifecycle services, helping them improve market competitiveness. Over the past three decades, we have served more than 35,000 clients, successfully completed more than 45,000 projects, and gained more than 1,000 new clients each year, making HollySys a world-renowned brand in automation and intelligence filed.

The HOLLIAS industrial control platform of HollySys features a series of advanced, practical and reliable industrial automation systems and HollySys automation instrumentations products. The system products include MACS-K, MACS-S industrial control system DCS, professional control systems such as DEH, ETS and SIS, and whole-process information-based software for manufacturing enterprises. Instrumentation products include isolated safety barriers, signal isolators, surge protectors, power transmitters, pressure transmitters, electromagnetic flowmeters, metal tube float meters, magnetic level gauges, radar level gauges, throttling elements, thermal elements, and pressure gauges.

The company's products have been successfully applied to major projects and key equipment, including 1000MW ultra-supercritical thermal power units, 1.2 million tons of urea and 5 million tons of oil refining main units, earning a good reputation in the industry.

Specializing in HollySys Instrumentation and control system engineering and integration, the company can provide both new and brown field projects of enterprises with HollySys proprietary products, as well as comprehensive engineering services such as customized design and construction & commissioning.

HollySys has always pursued continuous innovation and R&D while sticking to its vision "create the most valuable intelligent company through stable and sustainable development" to provide more reliable, secure, and intelligent technology and products for our customers.

Contents

A1 Series Straight Stroke Control Valve Products

- A100-P Single-Seat Control Valve 1
- A100-LP Sleeve Single-Seat Control Valve 3
- A100-DL Low Leakage Cage Type Control Valve 5
- A104-P Bellows Seal Single-Seat Control Valve 7
- A104-DL Low Leakage Bellows Seal Cage Type Control Valve 9
- A100-F Fluorine Lined Single-Seat Control Valve 11

A4 Series Ball Valve Products

- A400 Eccentric Half-ball Valve 13
- A450-0 Floating Soft/Hard Seal Ball Valve 15
- A450-G0 Fixed Soft/Hard Seal Ball Valve 17
- A450-V Soft/Hard Seal V-shaped Ball Valve 19
- A450-V-F Fluorine Lined V-shaped Ball Valve 21
- A450-0-F Fluorine Lined Ball Valve 23

A7 Series Butterfly Valve Products

- A750 Double Eccentric Butterfly Valve 25
- A760 Triple Eccentric Butterfly valve 27
- A790 Rubber Lined Butterfly Valve 29
- A780 Fluorine Lined Butterfly Valve 31

Self-operated Control Valve Products

- ZZYP Self-operated Pressure Control Valve 33
- ZZYP-16II Controller Operation type Self-operated Pressure Control Valve 35
- ZZCP/ZZVP Self-operated Differential/Micro Pressure Control Valve 37

Actuator Products

- A812 Series (Straight Stroke) Multi-spring Pneumatic Diaphragm Actuator 39
- 831/832 Series (Angular Stroke) Pneumatic Actuator 43
- 833/834 Series (Angular Stroke) Shift Fork Pneumatic Actuator 45

Accessories

- Electro-pneumatic Valve Positioner 47
- Intelligent Valve Positioner 49
- Air Filter Pressure Reducing Valve 51

Product Selection Code Description and Selection Requirements 53

A100-P Single-Seat Control Valve

Application

- Complying with GB, ANSI and other standards
- Control valves for process industry and equipment requiring high control accuracy and small leakage
- Nominal diameter: DN15 ~ DN300, NPS 1/2" ~ 12"
- Nominal pressure: PN16 ~ PN63, ASME CL150 ~ CL300
- Temperature range: -100° C ~ +566° C

Features

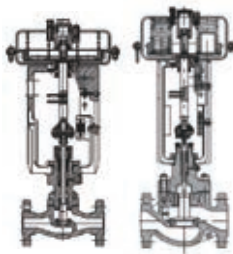
- Multi-spring pneumatic diaphragm actuator available for selection, simple and firm structure, **large output force and long service life**
- Various valve body materials for selection, such as cast steel, cast stainless steel, low-temperature and high-alloy steel or special materials
- **Suitable for various fluids with different pressures and temperatures.** S-shaped streamlined channel of valve body, enabling small pressure drop loss, wide adjustable range, high accuracy of flow characteristics, large guide area of valve element and good vibration resistance

Supporting Actuator

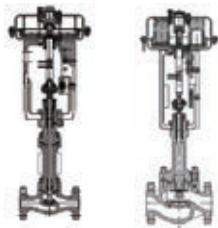
- A101-P1 room temperature type: matching with A812 actuator
- A103-P1 elongation type I: matching with A812 actuator
- A105-P1 elongation type II: matching with A812 actuator



Single-Seat control valve



Room temperature type bonnet Single-Seat control valve



Elongation type I bonnet Single-Seat control valve

Technical Data

Product model	A101-P1	Bonnet type	Room temperature					Operating temperature ° C	-17~+230	
	A103-P1		Elongation type I						+230~+566	
	A105-P1		Elongation type I						-45~-17	
			Elongation type II						-100~-45	
Nominal diameter	DIN	15 ~ 300								
	NPS	1/2" ~ 12"								
Nominal pressure		PN16 ~ PN63								
Pressure grade ASME		CL150, CL300								
Connection type	Flange type	FF, RF, RJ, FM concave etc.								
	Welded type	SW, BW								
Characteristics		Linear/equal percentage/quick opening								
Cv value	High accuracy	0.1	0.16	0.25	0.4	0.63	1	1.6	2.5	4
		6.3	10	14	17	24	44	68	99	175
		275	360	640	1000	1400				
	High capacity	0.25	0.4	0.63	1	1.6	2.5	4	6.3	10
		14	30	50	85	125	200	420	700	
	Quick opening	10	14	35	55	95	135	220	460	720
Packing		PTFE V-shaped packing, filled PTFE V-shaped packing, flexible graphite packing								
Leakage quantity		The metal valve seat conforms to Class IV of ANSI/FCI 70-2 or Class IV of GB/T4213-2008. If you need valve seats that conform to Class V and Class VI, please contact us for customization; soft valve seat ≤ rated Cv value×10-7. The quick-opening valve element conforms to Classes V and VI of ANSI/FCI 70-2 or GB/T4213-2008								

Description

- Valve supporting accessories can be selected as required, including positioner, air filter pressure reducing valve, handwheel mechanism, limit switch, solenoid valve, valve position transmitter, lock-up valve
- Electric actuator or other actuators can be selected as required
- For special materials, special process processing requirements and other issues, please consult technicians

A100-LP Sleeve Single-Seat Control Valve

Application

- Complying with GB, ANSI and other standards
- Control valves for process industry and equipment requiring high adjustment accuracy and small leakage, especially for the applications of high pressure difference and flashing cavitation
- Nominal diameter: DN15 ~ DN200, NPS 1/2" ~ 8"
- Nominal pressure: PN16 ~ PN63, ASME CL150 ~ CL300
- Temperature range: -100° C ~ +566° C

Features

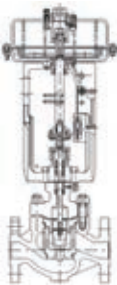
- Multi-spring pneumatic diaphragm actuator available for selection, simple and firm structure, **large output force and long service life**
- **Various valve body materials for selection**, such as cast steel, cast stainless steel, low-temperature and high-alloy steel or special materials
- S-shaped streamlined channel of valve body, **enabling small pressure drop loss, wide adjustable range, high accuracy of flow characteristics**

Supporting Actuator

- A101-P1 room temperature type: matching with A812 actuator
- A103-P1 elongation type I: matching with A812 actuator
- A105-P1 elongation type II: matching with A812 actuator



Sleeve Single-Seat control valve



Room temperature type sleeve control valve



Elongation type I sleeve control valve

Technical Data

Product model	A101-LP1	Bonnet type	Room temperature		Operating temperature ° C	-17~+230			
	A103-LP1		Elongation type I			+230~+566			
	A105-LP1		Elongation type I			-45~-17			
			Elongation type II			-100~-45			
Nominal diameter	DIN	15 ~ 200							
	NPS	1/2" ~ 8"							
Nominal pressure		PN16 ~ PN63							
Pressure grade ASME		CL150, CL300							
Connection type	Flange type	FF, RF, RJ, FM concave etc.							
	Welded type	SW, BW							
Characteristics		Linear/equal percentage/quick opening							
Cv value	Linear	0.01	0.04	0.1	0.16	0.25	0.4	0.63	1
		1.6	2.5	4	6.3	12	21	30	50
		85	125	200	310				
	Equal percentage	0.25	0.4	0.63	1	1.6	2.5	4	6.3
		12	21	30	50	85	125	200	310
Packing		PTFE V-shaped packing, filled PTFE V-shaped packing, flexible graphite packing							
Leakage quantity		The metal valve seat conforms to Class IV of ANSI/FCI 70-2 or Class IV of GB/T4213-2008. If you need valve seats that conform to Class V and Class VI, please contact us for customization; soft valve seat ≤ rated Cv value×10-7. The quick-opening valve element conforms to Classes V and VI of ANSI/FCI 70-2 or GB/T4213-2008							

Description

- Valve supporting accessories can be selected as required, including positioner, air filter pressure reducing valve, handwheel mechanism, limit switch, solenoid valve, valve position transmitter, lock-up valve
- Electric actuator or other actuators can be selected as required
- For special materials, special process processing requirements and other issues, please consult technicians

A100-DL Low Leakage Cage Type Control Valve

Application

- Complying with GB, ANSI and other standards
- Control valves for process industry and equipment requiring high control accuracy and small leakage
- Nominal diameter: DN40 ~ DN400, NPS 1-1/2" ~ 16"
- Nominal pressure: PN16 ~ PN63, ASME CL150 ~ CL300
- Temperature range: -100° C ~ +538° C

Features

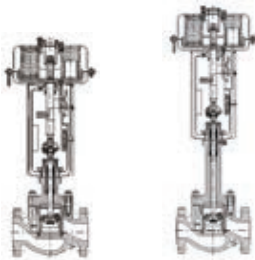
- Multi-spring pneumatic diaphragm actuator or cylinder-type double-acting actuator available for selection, **simple and firm structure, large output force and long service life**
- **Various valve body materials for selection**, such as cast steel, cast stainless steel, low-temperature and high-alloy steel or special materials
- S-shaped streamlined channel of valve body, **enabling small pressure drop loss, large flow capacity, wide adjustable range, high accuracy of flow characteristics**
- Pressure balance structure of valve element, using small actuator thrust to control the high pressure difference, and a sealing ring between the valve element and the sleeve to reduce leakage

Supporting Actuator

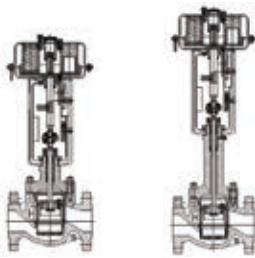
- A107-DL1 room temperature type: matching with A812/800 cylinder-type actuator
- A108-DL1 elongation type I: matching with A812/800 cylinder-type actuator
- A105-DL1 elongation type I&II: matching with A812/800 cylinder-type actuator



Low leakage cage type control valve



Room temperature Elongation type I



Room temperature Elongation type I

Low leakage cage type control valve

Technical Data

Product model	A107-DL1	Bonnet type	Room temperature		Operating temperature ° C	-17~+230			
	A108-DL1		Elongation type I			+230~+538			
	A105-DL1		Elongation type I			-45~-17			
			Elongation type II			-100~-45			
Nominal diameter	DIN	40 ~ 400							
	NPS	1-1/2" ~ 16"							
Nominal pressure		PN16 ~ PN63							
Pressure grade ASME		CL150, CL300							
Connection type	Flange type	FF, RF, RJ, FM concave etc.							
	Welded type	SW, BW							
Characteristics		Linear/equal percentage/quick opening							
Cv value 75 240 820 2250	11	17	24	36	40	44	60	68	
	99	100	110	140	150	175	220		
	275	360	395	420	435	640	650		
	850	1000	1440	1600	1800	1900	2000		
	2450	3870	3935	4520	5152				
Packing		PTFE V-shaped packing, filled PTFE V-shaped packing, flexible graphite packing							
Leakage quantity		The metal valve seat conforms to Class IV of ANSI/FCI 70-2 or Class IV of GB/T4213-2008. If you need valve seats that conform to Class V and Class VI, please contact us for customization; soft valve seat ≤ rated Cv value×10 ⁻⁷ . The quick-opening valve element conforms to Classes V and VI of ANSI/FCI 70-2 or GB/T4213-2008							

Description

- Valve supporting accessories can be selected as required, including positioner, air filter pressure reducing valve, handwheel mechanism, limit switch, solenoid valve, valve position transmitter, lock-up valve
- Electric actuator or other actuators can be selected as required
- For special materials, special process processing requirements and other issues, please consult technicians

A104-P Bellows Seal Single-Seat Control Valve

⇒ Application

- Complying with GB, ANSI and other standards
- It is widely adopted in the automatic control system of highly toxic, highly corrosive, radioactive and rare precious media
- Nominal diameter: DN15 ~ DN300, NPS 1/2" ~ 12"
- Nominal pressure: PN16 ~ PN63, ASME CL150 ~ CL300
- Temperature range: -45° C ~ +350° C

⇒ Features

- Multi-spring pneumatic diaphragm actuator available for selection, **simple and firm structure, large output force and long service life**
- **Various valve body materials for selection**, such as cast steel, cast stainless steel, low-temperature and high-alloy steel or special materials
- Control valve with a top-guiding structure, compact structure and S-shaped streamlined channel of valve body, **enabling small pressure drop loss, large flow, wide adjustable range**. Bellows seal structure adopted for the upper bonnet, eliminating the possibility of medium leakage from the valve stem movement clearance

⇒ Supporting Actuator

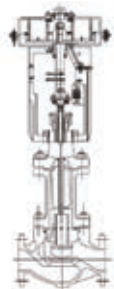
- A104-P1: matching with A812 actuator



Bellows seal Single-Seat control valve



Room temperature



Elongation type I
Bellows seal Single-Seat control valve

⇒ Technical Data

Product model	A104-P1	Bonnet type	Room temperature				Operating temperature ° C	-17~+230		
			Low temperature					-45~-17		
			High temperature					+230~+350		
Nominal diamete	DIN	15 ~ 300								
	NPS	1/2" ~ 12"								
Nominal pressure		PN16 ~ PN63								
Pressure grade ASME		CL150, CL300								
Connection type	Flange type	FF, RF, RJ, FM concave etc.								
	Welded type	SW, BW								
Characteristics		Linear/equal percentage/quick opening								
Cv value	High accuracy	0.01	0.04	0.1	0.16	0.25	0.4	0.63	1	1.6
		2.5	4	6.3	10	14	17	24	68	99
		175	275	360	395	640	1000	1400		
	High capacity	0.25	0.4	0.63	1	1.6	2.5	4	6.3	10
		14	30	50	85	125	200	420	700	
	Quick opening	10	14	35	55	95	135	220	460	720
Packing		PTFE V-shaped packing, filled PTFE V-shaped packing, flexible graphite packing								
Leakage quantity		The metal valve seat conforms to Class IV of ANSI/FCI 70-2 or Class IV of GB/T4213-2008. If you need valve seats that conform to Class V and Class VI, please contact us for customization; soft valve seat ≤ rated Cv value×10-7. The quick-opening valve element conforms to Classes V and VI of ANSI/ FCI 70-2 or GB/T4213-2008								

Description

- Valve supporting accessories can be selected as required, including positioner, air filter pressure reducing valve, handwheel mechanism, limit switch, solenoid valve, valve position transmitter, lock-up valve
- Electric actuator or other actuators can be selected as required
- For special materials, special process processing requirements and other issues, please consult technicians

A104-DL Low Leakage Bellows Seal Cage Type Control Valve

Application

- Complying with GB, ANSI and other standards
- It is widely adopted in the automatic control system of highly toxic, highly corrosive, radioactive and rare precious media
- Nominal diameter: DN40 ~ DN300, NPS 1-1/2" ~ 12"
- Nominal pressure: PN16 ~ PN63, ASME CL150 ~ CL300
- Temperature range: -45° C ~ +350° C

Features

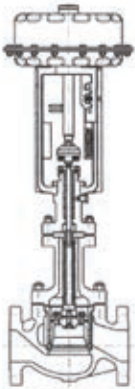
- Multi-spring pneumatic diaphragm actuator or cylinder-type double-acting actuator available for selection, **simple and firm structure, large output force and long service life**
- **Various valve body materials for selection**, such as cast steel, cast stainless steel, low-temperature and high-alloy steel or special materials
- Compact structure and S-shaped streamlined channel of valve body, **enabling small pressure drop loss, large flow, wide adjustable range, high accuracy of flow characteristics**
- Pressure balance structure of valve element, using small actuator thrust to control the high pressure difference, and a sealing ring between the valve element and the valve cage to reduce leakage
- Bellows seal structure adopted for the upper bonnet, **eliminating the possibility of medium leakage from the valve stem movement clearance**

Supporting Actuator

- A104-DL1: A812/800



Low leakage bellows seal cage type control valve



Low leakage bellows seal cage type control valve

Technical Data

Product model	A104-DL1	Bonnet type	Room temperature		Operating temperature ° C	-17~+230			
			Low temperature			-45~-17			
			High temperature			+230~+350			
Nominal diameter	DIN	40 ~ 300							
	NPS	1-1/2" ~ 12"							
Nominal pressure		PN16 ~ PN63							
Pressure grade ASME		CL150, CL300							
Connection type	Flange type	FF, RF, RJ, FM concave etc.							
	Welded type	SW, BW							
Characteristics		Linear/equal percentage/quick opening							
Cv value	High capacity	Equal percentage	36	60	100	140	220	420	820
		Linear	40	75	110	150	240	435	850
	High accuracy		11	17	24	44	68	99	175
			275	360	395	640	650	1000	1440
Packing		PTFE V-shaped packing, filled PTFE V-shaped packing, flexible graphite packing							
Leakage quantity		The metal valve seat conforms to Class IV of ANSI/FCI 70-2 or Class IV of GB/T4213-2008. If you need valve seats that conform to Class V and Class VI, please contact us for customization; soft valve seat ≤ rated Cv value×10-7. The quick-opening valve element conforms to Classes V and VI of ANSI/FCI 70-2 or GB/T4213-2008							

Description

- Valve supporting accessories can be selected as required, including positioner, air filter pressure reducing valve, handwheel mechanism, limit switch, solenoid valve, valve position transmitter, lock-up valve
- Electric actuator or other actuators can be selected as required
- For special materials, special process processing requirements and other issues, please consult technicians

A100-F Fluorine Lined Single-Seat Control Valve

Application

- Complying with GB, ANSI and other standards
- Control valves for process industry and equipment requiring high adjustment accuracy and small leakage, widely used in the process control of acid, alkali and other strong corrosive media and toxic and volatile media in the industries of chemical, petroleum, metallurgy, medicine, electric power, etc.
- Nominal diameter: DN20 ~ DN200, NPS 3/4" ~ 8"
- Nominal pressure: PN16, ASME CL150
- Temperature range: -20° C ~ +150° C

Features

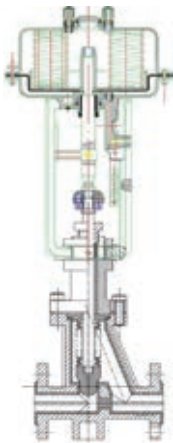
- Multi-spring pneumatic diaphragm actuator available for selection, simple and firm structure, **large output force and long service life**
- **Corrosion-resistant valve body** Valve body made of F46 or PFA lined cast steel available
- Tetrafluoroethylene-hexafluoropropylene copolymer (F46), a corrosion-resistant and aging-resistant material, lining at the valve body inner cavity, valve element, valve stem and other parts in contact with the medium
- Double seal with PTFE bellows and packing to ensure **no leakage**

Supporting Actuator

- A104-P1-F: matching with A812 actuator



Fluorine Lined Single-Seat Control Valve



Fluorine Lined Single-Seat Control Valve

Technical Data

Product model	A104-P1-F		Bonnet type		Room temperature	Operating temperature ° C		-20~+150	
Nominal diameter	DN		20 ~ 200						
	NPS		NPS 3/4" ~ 8"						
Nominal pressure			PN16						
Pressure grade ASME			CL150						
Connection type	Flange type		FF, RF, FM concave etc.						
Characteristics			Linear/equal percentage						
Cv value	Linear	DN20	1.4	2.3	3.7	5.8	9	14	23
		to 200	37	58	82	117	280	526	
	Equal percentage	DN20	1.4	2.3	3.7	5.8	9	14	23
		to 200	37	58	82	117	280	526	
Packing			PTFE bellows + PTFE V-shaped packing						
Leakage quantity			Conforming to Class VI of ANSI B16.104						

Description

- Valve supporting accessories can be selected as required, including positioner, air filter pressure reducing valve, handwheel mechanism, limit switch, solenoid valve, valve position transmitter, lock-up valve
- Electric actuator or other actuators can be selected as required
- For special materials, special process processing requirements and other issues, please consult technicians

A400 Eccentric Half-ball Valve

Application

- Complying with GB, ANSI and other standards
- Control valves for process industry and industrial application
- Nominal diameter: DN25 ~ DN300, NPS 1" ~ 12"
- Nominal pressure: PN16 ~ PN63, ASME CL150 ~ CL300
- Temperature range: -100° C ~ +525° C

Features

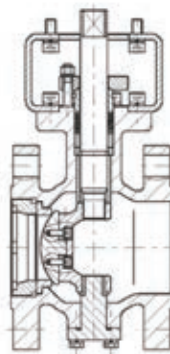
- **Various valve body materials for selection**, such as cast steel, cast stainless steel, low-temperature and high-alloy steel or special materials
- Very small torque on the valve element and valve stem during valve opening and closing due to the fact that they only perform rotational motions
- Very small leakage and lower thrust of the actuator required to close the valve when compared with that of the ball valve and butterfly valve
- Small valve body volume, light weight and **excellent adjustment and cut-off performance**
- **Simple flow path, large flow capacity and long service life**
- Suitable for various working conditions with soft and hard sealing for selection and hardenable sealing surface
- Both adjustment and cut-off functions supported
- Valve body of a larger thickness available to extend the scouring life according to the site conditions

Supporting Actuator

- Matching with 830 angle actuator/A840 actuator



Eccentric half-ball valve



Room Temperature Type
Eccentric Half-ball Valve

Technical Data

Product model	A401	Operating temperature ° C	Room temperature	-45~+316
	A403		High temperature	+317~+525
	A405		Low temperature	-100~-46
Nominal dimension	DN	25 ~ 300		
	NPS	1" ~ 12"		
Nominal pressure		PN16 ~ PN63		
Pressure class		CL150, CL300		
Control mode		Regulation type, cut-off type		
Connection type		Flange type (CL150 ~ CL300), wafer type (CL150 ~ CL300)		
Type of valve seat		Soft seal (-100 ~ +200° C), hard seal (-100 ~ +525° C)		
Stroke angle		0 ~ 50° , 0 ~ 90°		
Flow characteristics		Approximately linear (equal percentage can be achieved by positioners)		
Adjustable ratio	0 ~ 50° Stroke		100: 1	
	0 ~ 90° Stroke		160: 1	
Flow direction		Flow-opening type, flow-closing type (flow-opening type by default)		
Packing		Braided PTFE packing, carbon fiber packing ring, V-shaped PTFE, flexible graphite ring. Other special sealing packing		
Leakage quantity	Metal valve seat		Class V, ASME B16.5.104	
	Soft valve seat		Class VI, ASME B16.5.104	

Description

- Valve supporting accessories can be selected as required, including positioner, air filter pressure reducing valve, handwheel mechanism, limit switch, solenoid valve, lock-up valve
- Electric actuator or other actuators can be selected as required
- For special materials, special process processing requirements and other issues, please consult technicians

A450-0 Floating Soft/Hard Seal Ball Valve

Application

- Complying with GB, ANSI and other standards
- Control valves for applications that require tight cut-off and low adjustment requirements in various industries
- Nominal diameter: DN15 ~ DN200, NPS 1/2" ~ 8"
- Nominal pressure: PN16 ~ PN63, ASME CL150 ~ CL300
- Temperature range: -60° C ~ +450° C

Features

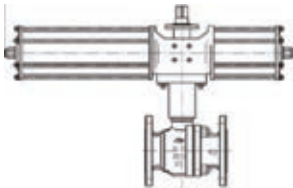
- **Various valve body materials for selection**, such as cast steel, cast stainless steel, low-temperature and high-alloy steel or special materials
- **Long service life and reliability due to various sealing structures for selection**
- **Fire-proof, anti-static and anti-blowout stem structure for selection**
- **Suitable for various working conditions** with soft and hard sealing for selection and hardenable sealing surface
- Two-way sealing, with the seal at any flow direction of the fluid being the main seal

Supporting Actuator

- A451-0, 451-R0: matching with 830 actuator
- A453-0: matching with 830 actuator
- A455-0: matching with 830 actuator



Floating O-shaped Soft/
Hard Seal Ball Valve



Floating O-shaped Soft/
Hard Seal Ball Valve

Technical Data

Product model	A451-0/R0	Sealing type	Soft seal			Operating temperature (° C)		-45~+200
	A452-0		Hard seal					-60~+250
	A453-0		Hard seal					-60~+450
Nominal diameter	DN	15 ~ 200						
	NPS	1/2" ~ 8"						
Nominal pressure		PN16 ~ PN63						
Pressure grade ASME		CL150, CL300						
Connection type		Flange type						
Characteristics		Inherent characteristics						
Cv value	25		45	85	130	200	323	
	450		600	1100	1700	2600	4250	
Packing		Braided PTFE, carbon fiber packing ring, packing ring (PTFE), flexible graphite ring. Other special sealing packing						
Leakage quantity	Valve specifications DN mm	Soft seal			Hard seal			
		Drop/min Bubble/min			Liquid test (drop/min)		Gas test (bubble/min)	
	≤ 50	0			0		0	
	65-150				12		24	
	200-300				20		40	
	≥ 350				28		56	

Description

- Valve supporting accessories can be selected as required, including positioner, air filter pressure reducing valve, module handwheel, limit switch, solenoid valve, governor, locking valve
- Electric actuator or other actuators can be selected as required
- For special materials, special process processing requirements and other issues, please consult technicians

A450-G0 Fixed Soft/Hard Seal Ball Valve

Application

- Complying with GB, ANSI and other standards
- Control valves for applications that require tight cut-off and low adjustment requirements in various industries
- Nominal diameter: DN40 ~ DN400, NPS 1-1/2" ~ 16"
- Nominal pressure: PN16 ~ PN63, ASME CL150, CL300
- Temperature range: -60° C ~ +540° C

Features

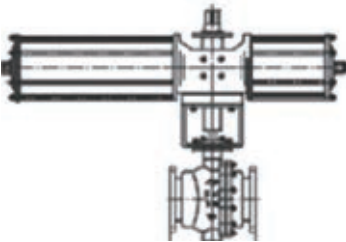
- **Various valve body materials for selection**, such as cast steel, cast stainless steel, low-temperature and high-alloy steel or special materials
- With upper and lower shafts used to fix the ball, the ball will not move from side to side due to the influence of pipe pressure, so the valve seat will not be damaged and provide **sealing performance**
- The valve seat is designed to be supported by spring to press the ball, the valve seat features small torque and stable sealing performance that lead to a **long service life**
- **Fire-proof, anti-static and anti-blowout stem structure for selection**
- Suitable for various working conditions with soft and hard sealing for selection and hardenable sealing surface

Supporting Actuator

- A451/3/5-G0, A451-RG0, A453-RG0, A455-RG0: matching with 830 series actuator



Fixed O-shaped Soft/
Hard Seal Ball Valve



Fixed O-shaped Soft/
Hard Seal Ball Valve

Technical Data

Product model	A451/3/5-G0	Sealing type	Hard seal		Operating temperature (° C) -45~+250			-60~+540	
	A451-GR0		Soft seal						
Nominal diameter	DN	40 ~ 400							
	NPS	1-1/2" ~ 16"							
Nominal pressure		PN16 ~ PN63							
Pressure class		CL150, CL300							
Connection type		Flange type							
Characteristics		Inherent characteristics							
Cv value	24	55	100	160	260	450	720	1100	2200
	3000	5500	10000	17000	24000	28000	36000	46000	57000
Packing		Braided PTFE, carbon fiber packing ring, packing ring (PTFE), flexible graphite							
Leakage quantity	Metal valve seat	Valve specifications DN (mm)	Soft seal		Hard seal				
			Drop/min Bubble/ min		Liquid test (drop/min)		Gas test (bubble/min)		
		≤ 50	0	0		0			
		65-150		12		24			
		200-300		20		40			
		≥ 350		28		56			
	Soft valve seat		Conforming to Class VI of ANSI B16.5 or JB/T9092-1999 (AP I 598)						

Description

- Valve supporting accessories can be selected as required, including positioner, air filter pressure reducing valve, module handwheel, limit switch, solenoid valve, governor, locking valve
- Electric actuator or other actuators can be selected as required
- For special materials, special process processing requirements and other issues, please consult technicians

A450-V Soft/Hard Seal V-shaped Ball Valve

Application

- Complying with GB, ANSI and other standards
- Control valves for applications that require tight cut-off and low adjustment requirements in various industries
- Nominal diameter: DN25 ~ DN600, NPS 1" ~ 24"
- Nominal pressure: PN16 ~ PN63, ASME CL150 ~ CL300
- Temperature range: -40° C ~ +425° C

Features

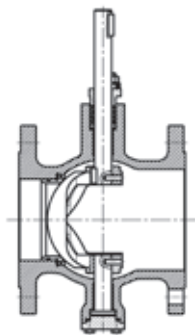
- Various valve body materials for selection, such as cast steel, cast stainless steel, low-temperature and high-alloy steel or special materials
- Metal hard seal valve seat featuring firmness and wear resistance. **Extended service life of valve seat**, with its sealing surface not exposed to the flow passage directly. Soft seal valve seat also available
- Valve element with special V-notch design, enabling an approximately equal percentage of flow characteristics. A large shear force between the valve element and the valve seat during movement, removing the attached materials and making the valve especially **suitable for viscous fluids, fiber and fluids containing solid particles**
- Small flow and noise reduction valve elements available

Supporting Actuator

- A451-RV, 451-V: matching with 830 actuator



V-shaped ball valve



V-shaped ball valve

Technical Data

Product model	A451-V	Sealing type	Hard seal				Operating temperature (° C)		-40~+425		
	A451-RV		Soft seal						-40~+150		
Nominal diameter	DN	25 ~ 600									
	NPS	1" ~ 24"									
Nominal pressure		PN16 ~ PN63									
Pressure grade ASME		CL150, CL300									
Control mode		Regulation type, cut-off type									
Connection type		Wafer type, flange type									
Characteristics		Approximately equal percentage, quick opening									
Cv value (approximately equal percentage)		27	47	70	135	210	390	560	790	1130	
		1860	2900	4320	6640	8000	10000	12200	17270		
Packing		PTFE, graphite									
Leakage quantity		Class IV, V, VI of ANSI/FCI 70-2									

Description

- Valve supporting accessories can be selected as required, including positioner, air filter pressure reducing valve, module handwheel, limit switch, solenoid valve, governor, locking valve
- Electric actuator or other actuators can be selected as required
- For special materials, special process processing requirements and other issues, please consult technicians

A450-V-F Fluorine Lined V-shaped Ball Valve

Application

- Complying with GB, ANSI and other standards
- Valves for applications with strict sealing requirements, especially suitable for strong corrosive media
- Nominal diameter: DN15 ~ DN250, NPS 1/2" ~ 10"
- Nominal pressure: PN10 ~ PN16, ASME CL150
- Temperature range: -30° C ~ +150° C

Features

- Valve body made of F46 or PFA lined cast steel available
- Fluoroplastics of PTFE and FEP selected, enabling superior **corrosion resistance** and excellent sealing performance
- Rotation between the valve element and the valve seat featuring no clearance, with **large shear force and self-cleaning performance**
- Proportional adjustment available if equipped with valve positioner
- Simple structure, **easy for maintenance**



Fluorine Lined
V-shaped Ball Valve

Supporting Actuator

- A451-RV-F: matching with 830 series actuator

Technical Data

Product model	A451-RV-F	Operating temperature (° C)	-20~+150
Nominal diamete	DN	15 ~ 250	
	NPS	1/2" ~ 10"	
Nominal pressure		PN10 ~ PN16	
Pressure grade ASME		CL150	
Connection type		Flange type	
Packing		PTFE	
Leakage quantity		10-7*Cv, conforming to Class VI of ANSI B16.104	

Description

- Valve supporting accessories can be selected as required, including positioner, air filter pressure reducing valve, module handwheel, limit switch, solenoid valve, governor, locking valve
- Electric actuator or other actuators can be selected as required
- For special materials, special process processing requirements and other issues, please consult technicians

A450-0-F Fluorine Lined Ball Valve

Application

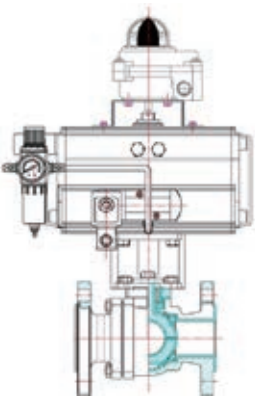
- Complying with GB, ANSI and other standards
- Valves for applications with strict sealing requirements, especially suitable for strong corrosive media
- Nominal diameter: DN15 ~ DN250, NPS 1/2" ~ 10"
- Nominal pressure: PN10 ~ PN16, ASME CL150
- Temperature range: -30° C ~ +150° C

Features

- Valve body made of F46 or PFA lined cast steel available
- Fluoroplastics of PTFE and FEP selected, enabling superior **corrosion resistance and excellent sealing performance**
- Two-way sealing function of valve seat
- Ball valve featuring **large flow capacity, simple structure, easy for maintenance**



Fluorine Lined Ball Valve



Fluorine Lined Ball Valve

Supporting Actuator

- A451-R0-F: matching with 830 series actuator

Technical Data

Product model	A451-R0-F	Operating temperature (° C)	-20~+150
Nominal diameter	DN	15 ~ 250	
	NPS	1/2" ~ 10"	
Nominal pressure		PN10 ~ PN16	
Pressure grade ASME		CL150	
Connection type		Flange type	
Packing		PTFE	
Leakage quantity		10-7*Cv, conforming to Class VI of ANSI B16.104	

Description

- Valve supporting accessories can be selected as required, including air filter pressure reducing valve, module handwheel, limit switch, solenoid valve, governor, locking valve
- Electric actuator or other actuators can be selected as required
- For special materials, special process processing requirements and other issues, please consult technicians

A750 Double Eccentric Soft Seal Butterfly Valve

Application

- Complying with GB, ANSI and other standards
- Control valves for applications that require tight cut-off and low adjustment requirements in various industries
- Nominal diameter: DN50 ~ DN600, NPS 2" ~ 24"
- Nominal pressure: PN10 ~ PN16, ASME CL150
- Temperature range: -29° C ~ +150° C

Features

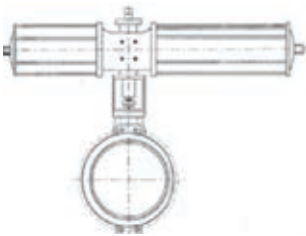
- Adopting the design of ISO5211 **direct-mounting actuator platform**
- Valve stem sealing structure having **pre-tightening force to compress the packing**
- Small opening and closing torque, flexible and convenient operation, **labor-saving and energy-saving**
- Excellent flow performance, **long service life, easy seal interchange**
- Special structural design, **widely used in biopharmaceutical, food and other industries**

Supporting Actuator

- A751: matching with 830/830 (shift fork) cylinder actuator



Double Eccentric
Butterfly Valve



Double Eccentric
Butterfly Valve

Technical Data

Product model	A751	Operating temperature (° C)	-29~+150
Nominal diameter	DN	50 ~ 600	
	NPS	2"~ 24"	
Nominal pressure		PN10 ~ PN16	
Pressure grade ASME		CL150	
Connection type		Wafer type	
Flow characteristics		Approximately equal percentage, quick opening	
Rated Cv value	Nominal diameter		ASME CL150 PN16
	DN	NPS	
	50	2	90
	80	3	125
	100	4	250
	125	5	550
	150	6	900
	200	8	1810
	250	10	2800
	300	12	4260
	350	14	5300
	400	16	8170
	450	18	9980
	500	20	13020
	600	24	19060
Packing		Reinforced PTFE, flexible graphite etc.	
Leakage quantity		Class VI of ANSI B16. 104	

Description

- Valve supporting accessories can be selected as required, including positioner, air filter pressure reducing valve, module handwheel, limit switch, solenoid valve, governor, locking valve
- Electric actuator or other actuators can be selected as required
- For special materials, special process processing requirements and other issues, please consult technicians

A760 Triple Eccentric Butterfly Valve

Application

- Complying with GB, ANSI and other standards
- Control valves for applications that require tight cut-off and low adjustment requirements in various industries
- Nominal diameter: DN80 ~ DN800, NPS 3" ~ 32"
- Nominal pressure: PN16 ~ PN63, ASME CL150 ~ CL300
- Temperature range: -45° C ~ +525° C

Features

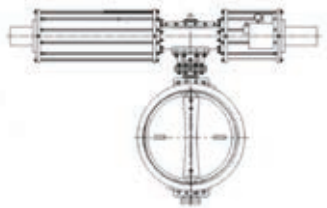
- Triple eccentric and conical sealing structure; sealing pair that will become tighter and tighter; and **effective removal of the scaling on the valve seat**
- Suitable for different working conditions with multi-layer hard sealing and pure metal sealing both available
- Simple structure, small volume, light weight and small mounting dimension
- Small driving force, easy operation and swift response

Supporting Actuator

- A761, A763: matching with 830/830 (shift fork) cylinder actuator



Triple eccentric butterfly valve



Triple eccentric butterfly valve

Technical Data

Product model	A761	Operating temperature (° C)		-45~+300		
	A763			+300~525		
Nominal diameter	DN	50 ~ 800				
	NPS	2"~ 32"				
Nominal pressure		PN16 ~ PN63				
Pressure grade ASME		CL150, CL300				
Connection type	Flange type	RF, FM, G, FF, RJ				
	Wafer type					
Flow characteristics		Approximately equal percentage, quick opening				
Rated CV value	Nominal diameter		ASMECL150PN16		ASMECL300PN50	
	DN	NPS	60°	90°	60°	90°
	80	3	100	125	90	110
	100	4	200	250	180	220
	125	5	400	550	310	420
	150	6	560	900	400	580
	200	8	1060	1810	730	1240
	250	10	1690	2800	1360	2310
	300	12	2440	4260	2150	3850
	350	14	3030	5300	2760	4600
	400	16	4370	8170	3490	6280
	450	18	5660	9980	4770	8290
	500	20	6700	13020	5740	10350
	600	24	10050	19060	8100	18000
	700	28	13540	30450	/	/
	800	32	18880	43030	/	/
Packing		V-shaped PTFE ring, filled PTFE packing, flexible graphite etc.				
Leakage quantity		Class V of ANSI B16. 104 (all-metal sealing), Class VI of ANSI B16. 104 (multi-layer sealing)				

Description

- Valve supporting accessories can be selected as required, including positioner, air filter pressure reducing valve, module handwheel, limit switch, solenoid valve, governor, locking valve
- Electric actuator or other actuators can be selected as required
- For special materials, special process processing requirements and other issues, please consult technicians

A790 Rubber Lined Butterfly Valve

Application

- Complying with GB, ANSI and other standards
- Valves to control corrosive fluids with high sealing requirements, also suitable for urban water plants and sewage treatment systems
- Nominal diameter: DN40 ~ DN800, NPS1.5' ~ 32"
- Nominal pressure: PN10 ~ PN16, ASME CL150
- Temperature range: -40° C ~ +120° C

Features

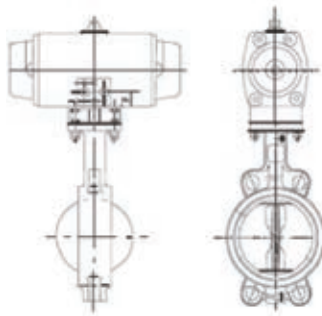
- Optional valve body made of cast iron, carbon steel lined rubber and other materials
- Rubber lined valve body inner cavity, providing anti-corrosion function
- Various rubber lined materials available that can also be replaced
- Compact and simple structure, light weight, small resistance and large flow capacity
- Unrestricted installation position and orientation

Supporting Actuator

- A790: matching with 830 series compact cylinder actuator
- A790: matching with various types of electric actuators



Rubber Lined Butterfly Valve



Rubber Lined Butterfly Valve

Technical Data

Product model	A790	Operating temperature (° C)		-40~+120			
Nominal diameter	DN	80 ~ 600					
	NPS	1.5" ~ 32"					
Nominal pressure		PN10 ~ PN16					
Pressure grade ASME		CL150					
Connection type		Wafer type					
Characteristics		Approximately equal percentage, quick opening					
Cv value	240		440	820	1320	3020	3980
	6820		7260	10690	13870	17200	26450
Packing		PTFE					
Leakage quantity		10-7*Cv, conforming to Class VI of ANSI B16. 104					

Description

- Valve supporting accessories can be selected as required, including positioner, air filter pressure reducing valve, module handwheel, limit switch, solenoid valve, governor, locking valve
- Electric actuator or other actuators can be selected as required
- For special materials, special process processing requirements and other issues, please consult technicians

A780 Fluorine Lined Butterfly Valve

⇒ Application

- Complying with GB, ANSI and other standards
- Valves to control strong corrosive media, also suitable for urban water plants and sewage treatment systems
- Nominal diameter: DN40 ~ DN800, NPS 1.5" ~ 32"
- Nominal pressure: PN10 ~ PN16, ASME CL150
- Temperature range: -20° C ~ +150° C

⇒ Features

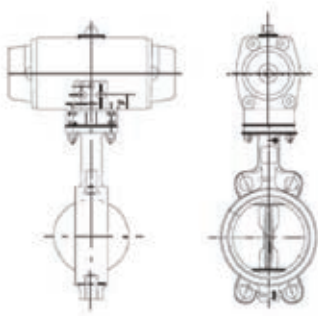
- Valve body made of PTFE or PFA lined cast steel available
- PTFE lined valve body inner cavity and valve plate, ensuring no contact between the media and metal
- Elastic compensation type sealing mechanism for the sealing surface of valve seat and valve plate, providing superior valve sealing performance
- Compact and simple structure, light weight, **small resistance and large flow capacity**

⇒ Supporting Actuator

- A780: matching with 830 series compact cylinder actuator
- A780: matching with various types of electric actuators



Fluorine Lined
Butterfly Valve



Fluorine Lined
Butterfly Valve

⇒ Technical Data

Product model	A780	Operating temperature (° C)		-20~+150			
Nominal diameter	DN	40 ~ 800					
	NPS	1.5" ~ 32"					
Nominal pressure		PN10 ~ PN16					
Pressure grade ASME		CL150					
Connection type		Flange type, wafer type					
Characteristics		Approximately equal percentage, quick opening					
Cv value	240		440	820	1320	3020	3980
	6820		7260	10690	13870	17200	26450
Packing		PTFE					
Leakage quantity		10-7*Cv, conforming to Class VI of ANSI B16. 104					

Description

- Valve supporting accessories can be selected as required, including positioner, air filter pressure reducing valve, module handwheel, limit switch, solenoid valve, governor, locking valve
- Electric actuator or other actuators can be selected as required
- For special materials, special process processing requirements and other issues, please consult technicians

ZZYP Self-operated Pressure Control Valve

Application

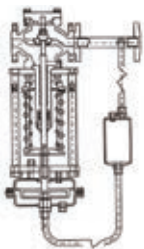
- Complying with GB, ANSI and other standards
- Control valves applied to occasions where there is no external energy on site, the control accuracy is not high, and automatic pressure stabilization control is required
- Nominal diameter: DN15 ~ DN300, NPS 1/2" ~ 12"
- Nominal pressure: PN16 ~ PN63, ASME CL150 ~ CL300
- Temperature range: -60° C ~ +550° C



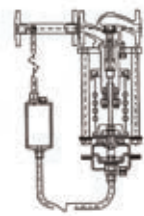
Self-operated Pressure Control Valve

Features

- **Various valve body materials for selection**, such as cast steel, cast stainless steel, low-temperature and high-alloy steel or special materials
- No external energy required, with the constant pressure value before (or behind) the valve being automatically adjusted and stabilized with the pressure change of the medium only
- An ideal **energy-saving** product that is widely used in various industries for pressure maintaining and stabilizing of various non-corrosive media with the pressure before the valve being not greater than 1.6MPa



Pressure tapping behind the valve



Pressure tapping before the valve

Technical Data

Nominal diameter DN (mm)	15/20	25	32	40	50	65	80	100	125	150	200	250	300
Rated flow coefficient KV	5	8	12.5	20	32	50	80	125	160	320	450	630	900
Rated stroke (mm)	8		10		12	15	18	20	30	40	45	60	65
Nominal diameter DN (mm)	15 (or G1/2")												
Diameter of valve seat	2	3	4	5	6	7	8	9	10	12		15	20
Rated flow	0.02	0	0.2		0.32	0.5	0.8	1.2	1.8	2.8		4	5
Coefficient KV													
Nominal pressure PN	Mpa		1.6, 2.5, 4.0, 6.4 (6.3) /2.0, 5.0										
	Bar		16, 25, 40, 64 (63) /20, 50										
	Lb		ANSI: Class150、C1ass300										
Pressure segmentation range Kpa	15~50, 40~80, 60~100, 80~140, 120~180, 160~220,												
	200~260, 240~300, 280~350, 330~400, 380~450, 430~500,												
	480~560, 540~620, 600~700, 680~800, 780~900, 880~1000,												
	900~1200, 1000~1500, 1200~1600, 1300~1800, 1500~2100,												
Flow characteristics	Quick opening												
Adjustment accuracy	±5 ~ 10 (%)												
Operating temperature	-60 ~ 350 (° C) (special design adopted when below -60° C) 350 ~ 550 (° C)												
Allowable leakage quantity	Class IV (hard seal) Class VI (soft seal) (GB/T4213-92)												
Pressure reducing ratio	1.25 ~ 10 (special design adopted when beyond the range)												

ZZYP-16II Controller Operation Type Self-operated Pressure Control Valve

Application

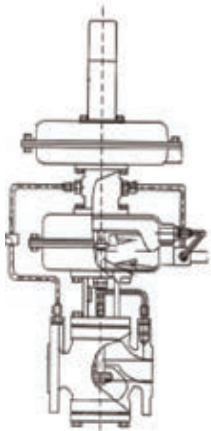
- Complying with GB, ANSI and other standards
- Control valves applied to occasions where there is no external energy on site, the control accuracy is not high, and automatic pressure stabilization control is required
- Nominal diameter: DN15 ~ DN150, NPS 1/2" ~ 6"
- Nominal pressure: PN16, ASME CL150
- Medium temperature: -40° C ~ +80° C

Features

- Various valve body materials for selection, such as cast steel, cast stainless steel, low-temperature and high-alloy steel or special materials
- Pressure setting on the controller supported, which is convenient, quick and labor-saving, and allows continuous setting in running state
- Improved control accuracy, being about twice as accurate as that of ZZY self-operated type
- Highly sensitive, being capable of sensing very small pressure changes
- Large pressure reducing ratio, for example the differential pressure ratio reaches 1600 (0.8MPa before the valve and 50mmH2O behind the valve)
- Often adopted for the nitrogen sealing system of storage tanks to adjust the pressure of nitrogen in the tank



Controller Operation Type
Self-operated Pressure
Control Valve



Controller Operation Type
Self-operated Pressure
Control Valve

Technical Data

Nominal diameter DN (mm)	15/20			25	32	40	50	65	80	100	125	150
Diameter of valve seat D (mm)	6	15	20	25	32	40	50	65	80	100	125	150
Rated flow coefficient (Kv)	0.32	4	5	8	12.5	20	32	50	80	125	160	320
Range of pressure adjustment (kPa)	Selection in the range of 0.5 ~ 100											
Nominal pressure PN (MPa)	1.0 1.6											
Medium temperature (° C)	-40~80											
Flow characteristics	Quick opening											
Adjustment error (%)	≤ 5											
Allowable pressure drop (MPa)	1.6				1.6		1.1		0.6		0.4	
Effective area of actuator diaphragm (cm2)	200				280				400			
Allowable leakage quantity	Hard valve element: Class IV (10-4×Kv), Soft valve element:Class VI (GB/T4213-2008), basically no leakage											

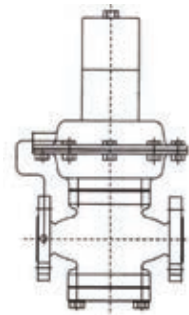
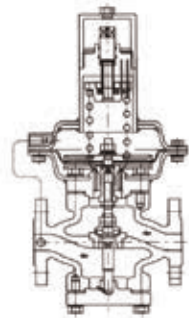
ZZCP/ZZVP Self-operated Differential/ Micro Pressure Control Valve

Application

- Control valves applied to occasions where there is no external energy on site, the pressure difference is very low, and automatic pressure stabilization control is required
- Nominal diameter: DN20 ~ DN150, NPS 3/4" ~ 6"
- Nominal pressure: PN16, ASME CL150
- Medium temperature: -40° C ~ +80° C

Features

- Various valve body materials for selection, such as cast steel, cast stainless steel, low-temperature and high-alloy steel or special materials
- No external energy required, with the pressure difference between one or two media being adjusted automatically, so as to maintain a constant pressure difference
- Extremely sensitive actuator elements, being capable of sensing very small pressure changes
- Convenient pressure regulation, allowing adjustment of the setting value without interrupting manufacturing



Self-operated Micro/
Differential Control Valve

Technical Data

Nominal diameter DN (mm)		20	25	32	40	50	65	80	100
Rated flow coefficient KV	ZZCP/ZZVP	5	8	12.5	20	32	50	80	125
Rated stroke (mm)		5	6		10		15		20
Nominal pressure PN (MPa)		0.10 1.0							
Adjustment range of differential pressure (kPa) General design range		0.5~5.5 26~33	5~10 31~38	9~14 36~44	13~19 42~51	18~24 49~58	22~28 56~66	64~78 76~90	88~100
Medium temperature (° C)		-40° C~+80° C							
Adjustment accuracy (%)		≤ 10							
Allowable leakage quantity (l/h)	ZZCP/ZZVP	Hard valve element 10-4 × rated capacity of valve (Class VI) (GB/T4213-92)							
		Soft seal: Class VI							

A812 Series (Straight Stroke) Multi-spring Pneumatic Diaphragm Actuator

Application

- The actuator is a multi-spring pneumatic diaphragm actuator that controls the opening and closing of straight stroke control valves, and can be used with our A100 series and other straight stroke valves

Features

- **Convenient model selection and application**, because the specification and model of the actuator can be configured according to the caliber and pressure rating of the control valve
- Modular combined structure, bringing about strong universality of parts. **Fewer spare parts needed**, because direct and reverse actions can be realized by adjusting the direction of the diaphragm head and easy maintenance
- Compact structure design, **small size, light weight, high accuracy, large thrust and suitable for extensive use in various scene**
- Unique push rod sealing design structure, which can prevent corrosion caused by the external environment, enhance the sealing effect, and have **a longer service life**
- Unique diaphragm pressing structure, ensuring reasonable compressing of the diaphragm and **facilitating maintenance and replacement of the diaphragm**
- Smooth and aesthetic plastic-sprayed outer surface of the diaphragm cover with strong **corrosion resistance**
- Top-mounted, side-mounted, hydraulic and other types of manual mechanisms to meet various user demands



Pneumatic diaphragm actuator without handwheel



Pneumatic diaphragm actuator with handwheel

- Compatible with integrated and easy-to-calibrate AVP-400 series intelligent valve positioner and YT-1000 series electro-pneumatic valve positioner, as well as other types of valve positioners
- Convenient and quick connection with solenoid valve, stroke switch, lock-up valve, pneumatic control valve, relay, valve position transmitter and other accessories
- Intelligent module featuring advanced technology and fault diagnosis function, when so required by the user

Technical Data

Structure type	Action mode		Ambient temperature (° C)		Gas source interface		
Single-acting multi-spring type	Direct action, reverse action		-40~+80		G1/8, G1/4, Rc1/2		
Material of main parts	Diaphragm cover	Pallet	Diaphragm	Bracket	Push rod	Spring	Y-shaped seal ring
	High-quality carbon steel or stainless steel	High-quality carbon steel or stainless steel	Imported nitrile rubber 240 with fabric	Spheroidal graphite cast iron, carbon steel, stainless steel	Stainless steel	Spring steel	High-grade polyurethane

Table 1-1: Technical Parameters of Reverse Action (Air-to-open)

Actuator code	Actuator model	Effective area of diaphragm (cm2)	Quantity of springs (pcs)	Stroke (mm)	Spring range (MPa)		Output force (KN)	
					From	To		
A812-22	A812-320-20B	320	3	(14.3) 16 (20)	0.075	0.13	2.4	
						0.14		
			(0.15)			0.27		4.8
			(0.3)					
A812-23	A812-320-30B	320	3	25 (30)	0.075	0.14	2.4	
						(0.15)		0.28
			6			0.15		
A812-33	A812-720-30B	720	3	25 (30)	0.07	0.14	5	
						(0.15)		0.27
			6		0.14	(0.3)		
						9	0.18	0.34
			(0.37)		0.40			16
			12			0.22	(0.44)	
			A812-34		A812-720-60-B	720	3	38 (40)
0.123								
6	0.14	(0.24)		10				
		0.25						
9	0.17	(0.29)		12				
		0.30						
12	0.2	(0.35)		14				
		0.35						
3	50 (60)	0.07		(0.14)			5	
				0.15				
6		0.14		(0.27)			10	
				0.3				
9		0.17		(0.33)			12	
				0.36				
12		0.2		(0.39)			14	
				0.43				
A812-47	A812-1500-60-B	1500	12	50 (60)	0.132	(0.26)	19.8	
						0.29		
			24		0.188	(0.37)	28.2	
						0.40		
A812-47	A812-1500-100-B	1500	2	100	0.07	0.15	10.5	
			4		0.14	0.3	21	
			6		0.17	0.37	25.5	
			8		0.2	0.44	30	

Table 1-2: Technical Parameters of Direct Action (Air-to-close)

Actuator code	Actuator model	Effective area of diaphragm (cm2)	Quantity of springs (pcs)	Stroke (mm)	Spring range (MPa)		Output force under different air pressure (KN)			
					From	To	0.25MPa	0.3MPa	0.4MPa	0.5MPa
A812-22	A812-320-20-A	320	3	14.3	0.075	0.13	3.8	5.4	8.6	11.8
			3	16	0.075	0.135	3.7	5.3	8.5	11.7
			3	20	0.075	0.15	3.2	4.8	8	11.2
A812-23	A812-320-30-A	320	3	25	0.075	0.138	3.6	5.2	8.4	11.6
			3	30	0.075	0.15	3.2	4.8	8	11.2
A812-33	A812-720-30-A	720	3	25	0.07	0.137	8.1	11.7	18.9	26
			6	25	0.14	0.273	—	—	9.1	16.3
			3	30	0.07	0.15	7.2	10.8	18	25.2
			6	30	0.14	0.3	—	—	7.2	14.4
A812-34	A812-720-60-A	720	3	38	0.07	0.121	9.3	12.9	20.1	27.3
			6	38	0.14	0.241	—	—	11.5	18.7
			3	40	0.07	0.123	9.1	12.7	19.9	27
			6	40	0.14	0.247	—	—	11	18.2
			3	50	0.07	0.137	8.1	11.7	18.9	26
			6	50	0.14	0.273	—	—	9.1	16.3
			3	60	0.07	0.15	7.2	10.8	18	25.2
			6	60	0.14	0.3	—	—	7.2	14.4
A812-47	A812-1500-60-A	1500	6	50	0.066	0.131	17.9	25.4	40.4	55.4
			12	50	0.132	0.262	—	—	20.7	35.7
			6	60	0.066	0.144	15.9	23.4	38.4	53.4
			12	60	0.132	0.288	—	—	16.8	31.8
A812-47	A812-1500-100-A	1500	2	100	0.07	0.15	15	22.5	37.5	52.5
	A812-1500-100-A		4	100	0.14	0.3	—	—	15	30

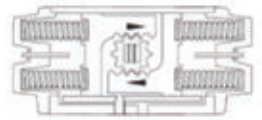
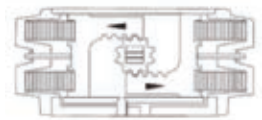
831/832 Series (Angular Stroke) Pneumatic Actuator

Application

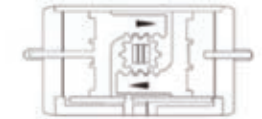
- The angular stroke cylinder piston actuator is suitable for A400, A450, A760, A770 and A780 series control valves. Single-acting model: 831, double-acting model: 832

Features

- Compact double-piston rack and pinion mechanism, with **reliable and stable angular stroke output**
- Die-cast aluminum alloy cylinder body, light weight and resistant to high pressure; standard connecting flange, **facilitating replacement and installation**
- Output shaft top design facilitating manual operation and easy to maintain; customizable module combination of manual mechanism that can be installed and replaced according to user demands
- **Aesthetic and clear** connection of indicators, limit switches, stroke indicators and valve positioners
- Roll finishing inner wall of cylinder with strong wear resistance and **long service life**
- The regulation type adopting internal air supply structure, without external pipeline, micro-positive pressure relative to external atmospheric pressure, and **strong corrosion resistance**
- Aesthetic and firm plastic-sprayed surface with **strong corrosion resistance**
- Easy exchange of single- and double-acting mechanisms, requiring only installing or removing the spring after the cylinder head is replaced



Single-acting Action - Schematic Diagram



Double-acting Action - Schematic Diagram

Technical Data

Model	831	832
Type and principle of action	Single action	Double action
Fault safety action	Reversible	None
Output torque (Nm)	3.6~6988	3.6~12466
Pressure range (bar)	3.0~8.0	3.0~8.0
Connection	Square head	
Cylinder diameter	50~400	
Stroke	0~90°	
Gas source interface	G1/4", G1/2"	
Housing material	Aluminum alloy	
Operating gas flow	Air, non-corrosive gas and oil	
Ambient temperature (° C)	Standard type (using nitrile rubber O-ring) -20 ~ +80	
	Low-temperature type (using silicone rubber O-ring) -40 ~ +80	
	High-temperature type (using fluorine rubber O-ring) -15 ~ +150	
Stroke adjustment	Adjustable range of ±5° at position of 90°	
Lubrication	No lubricant is required under normal operating conditions	
Installation	Suitable for indoor or outdoor installation	
Maximum operating pressure	Input pressure does not exceed 8 bar	

833/834 Series (Angular Stroke) Shift Fork Actuator

Application

- The angular stroke cylinder piston actuator is suitable for A400, A450, A760, A770, A780and A790 series control valves. Single-acting model: 833, double-acting model: 834

Features

- The combination of piston rod and guide rod with excellent surface treatment and self-lubricating bearing, ensuring **excellent wear resistance and extending the service life of sliding parts**
- Nickel, chrome or PTFE coating on the inner wall of the cylinder; **enhanced wear resistance and anti-corrosion/electrostatic spraying on the surface** meeting the requirements of petrochemical and chemical industry
- Driving device consisted of transmission, cylinder, spring and side attachment modules, featuring **convenient disassembly, replacement and fewer inventories**
- Reliable. Removal of the safety spring module as a whole from the driving device along the axis of the cylinder module only, avoiding damage of spring force to people and the driving device
- Featuring quick-opening and quick-closing, compatible with manual operating mechanism/various control accessories



Shift Fork Pneumatic Actuator



Shift Fork Pneumatic Actuator and Manual/Hydraulic Mechanism Connection

Technical Data

Model	833	834
Type and principle of action	Single action	Double action
Fault safety action	Reversible	None
Output torque (Nm)	573~108564	1188~277117
Pressure range (bar)	4~6	
Connection	Key	
Cylinder diameter	200~1100	
Stroke	0~90°	
Gas source interface (NPT)	1/2", 3/4", 1", 1-1/2", 2"	
Housing material	Steel	
Operating gas flow	Air, non-corrosive gas	
Ambient temperature (° C)	Standard type (using nitrile rubber O-ring) -20 ~ +80	
	Low-temperature type (using silicone rubber O-ring) -40 ~ +80	
	High-temperature type (using fluorine rubber O-ring) -15 ~ +150	
Stroke adjustment	Adjustable range of ±6° at position of 90°	
Lubrication	No lubricant is required under normal operating conditions	
Installation	Suitable for indoor or outdoor installation	
Maximum operating pressure	Input pressure does not exceed 6 bar	

Electro-pneumatic Valve Positioner

Application

- Force-balanced valve positioner for various control valves, suitable for various series of control valves

Features

- Direct connection with A812 pneumatic diaphragm actuator supported, internal air supply, no external pipeline, **compact structure and high cost performance**
- Simple and reliable connection with the actuator, and **easy to replace on site**
- Flexible. Compatible with various pneumatic actuators, suitable for straight stroke, angular stroke, split range control, direct action, reverse action, large stroke and small stroke control valves, with no restriction on combination
- Component combined structure design, close connection with pneumatic diaphragm actuator, direct combination with air filter pressure reducer supported, simple structure, **convenient for repair and maintenance**
- High vibration resistance** (no effect between 5Hz and 200Hz)
- Simple adjustment and easy **exchange of direct and reverse actions**
- Elimination of oscillation by adjusting the pore flow in the case of small actuators
- 1/2 equal division control without replacement of parts
- Convenient feedback connection and **low air consumption**



Electro-pneumatic Valve Positioner



Straight stroke electro-pneumatic positioner



Angular stroke electro-pneumatic positioner

Technical Data

Input signal	4-20mA DC
Resistance	250±15Ω
Gas supply pressure	1.4~7Kgf/cm2 (20~100psi)
Stroke	10~150mm 0~90°
Gas pipe interface	PT (NPT) 1/4
Pressure gauge interface	PT (NPT) 1/8
Electrical interface	1/2NPT PF1/2 (G1/2) M20×1.5
Explosion-proof grade	Exd II BT6 ExdII CT6 Exia II CT6
IP grade	IP66
Ambient temperature	-20~+70° C
Linearity	±0.2%FS ±0.2%FS
Hysteresis	±0.1%FS
Flexibility	±0.2%FS ±0.5%FS
Repeatability	±0.5%
Air consumption	3LPM (Sup=1.4Kgf/cm220psi)
Flow	80LPM (Sup=1.4Kgf/cm220psi)
Material	Cast aluminum
Weight	2.8Kg

Description

- Electro-pneumatic positioner can use position feedback device
- For specific and detailed parameters, please contact technicians to confirm

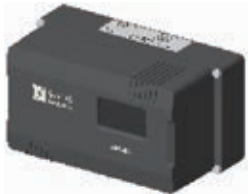
Intelligent Valve Positioner

Application

- Intelligent valve positioner for various control valves, suitable for various series of control valves

Features

- Convenient and simple intelligent commissioning system, suitable for straight stroke, angular stroke, split range control, direct action, reverse action, single action, double action, large stroke and small stroke control valves, with no restriction on combination
- Designed for various complex working conditions**, with strong modular design, good temperature adaptability, anti-vibration and anti-shock
- Metal enclosure sealed electrical components, **anti-electromagnetic interference**
- IP65 enclosure protection level, **maintenance-free**
- With position feedback module, limit switch module and **HART module**
- Three-cutoff protection: The pneumatic amplifier integrates the three-cutoff protection function, and the actuator will be locked up in place in case of power cutoff and air cutoff
- Safety protection**: It can ensure that the actuator can be turned on or off when there is no signal



Intelligent Valve Positioner



Straight stroke intelligent valve positioner



Angular stroke intelligent valve positioner

Technical Data

Stroke range		Stroke range: 10 ~ 150mm; angle range: 30 ~ 105°
Rated signal current		4-20mA
Gas source indicator	Instrument gas supply	Oil-free, dust-free, water-free, in line with DIN/ISO8573-1. Pollution and oil content, standard of Class 2
	Gas supply pressure	0.14-0.7MPa/influence of gas supply pressure on valve position: <0.1% at intake pressure of 10%
Input impedance		4500 at 20mA
Operating environment conditions	Storage temperature	-30~+80° C
	Operating temperature	-30~+60° C
	Relative temperature	<75%, without condensation>
Housing	IP grade	IP65 gas source interface: Rc1/4 housing surface: visible digital valve position display
	Housing material	Casting aluminum alloy Stainless steel
Connection mode	Cable connection	2 1/2NPT threaded connections
	Gas circuit connection	Rc1/4 threaded connection
Explosion-proof type	Intrinsically safe type	Exiall CT6 ExdII CT6
	Explosion-proof type	
Action type		Single-acting/double-acting
Accessories		Feedback lever assembly, pneumatic actuator mounting bracket, pressure gauge assembly, filter pressure reducing valve
Fault diagnosis		Control accuracy analysis, packing density analysis, action continuity/stability analysis, sealing force analysis, opening statistics/action frequency analysis/spring analysis/diaphragm chamber seal analysis

Description

- For specific and detailed parameters, please contact technicians to confirm

Air Filter Pressure Reducing Valve

Application

- Suitable for pressure regulation and filtration of compressed air, and compatible with various valve positioners

Features

- Advanced control principle, high pressure regulation accuracy and superior characteristics
- Die casting aluminum (standard) housing, material 316L available, **suitable for highly corrosive environment**
- Compact structure and aesthetic appearance
- High output stability, sensitive in response, and **always stable output pressure**
- Filtering of tiny solid particles with a minimum diameter of 5 microns and **self-cleaning function**
- Multiple air outlets designed to facilitate adjustment of installation direction
- Light weight, small size, easy installation and maintenance
- Bottom blowdown apparatus, with manual and automatic modes available for selection
- Usage at -40° C supported by the low-temperature type

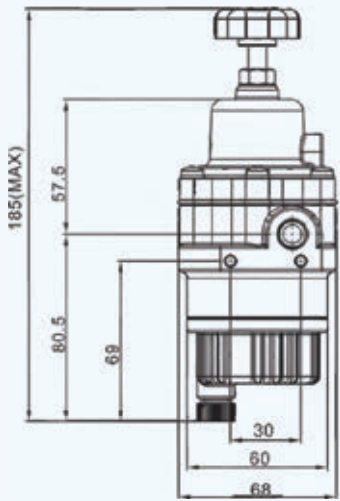


Filter Pressure Reducing Valve

Technical Data

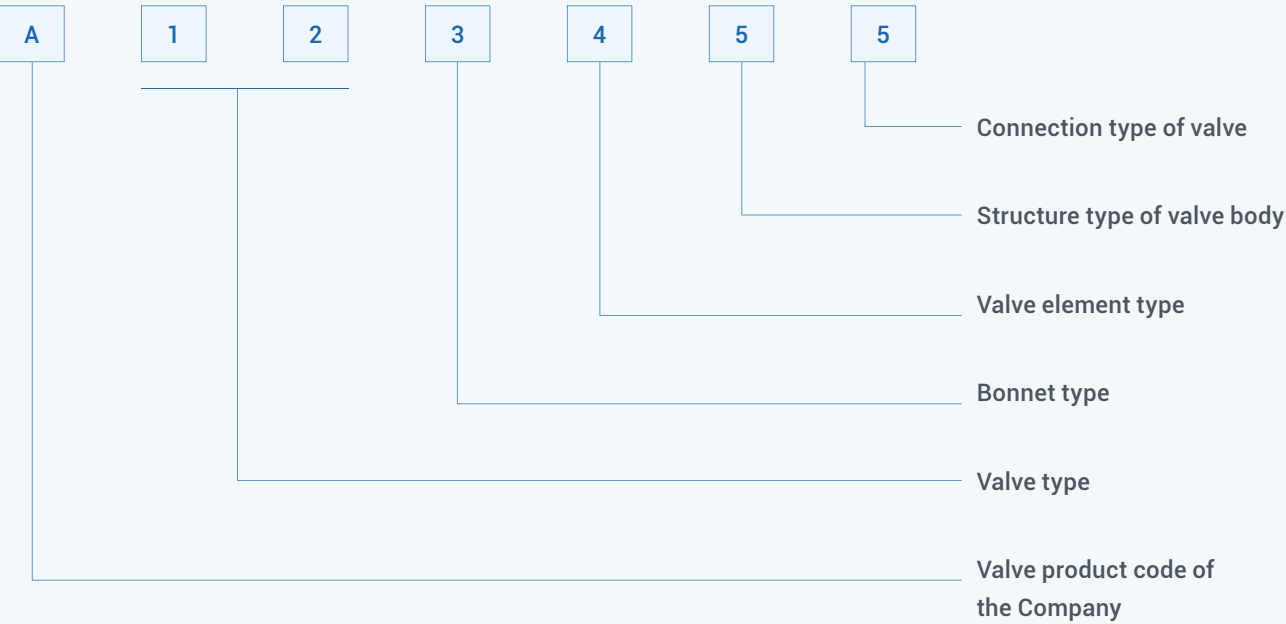
Output pressure range (MPa)	Maximum input pressure (MPa)	Operating temperature (° C)	Humidity of operating environment	Filtration accuracy (μm)	Weight (kg)
0.01~0.6	1	-20~+70 -20~+120 -40~+70	5%~95%	5	0.6

Housing and installation dimensions



Product Selection Code Description and Selection Requirements

Product Selection Code Description



Valve Type

Code	Valve type	Nominal pressure
10	Control valve, top-guiding	PN10 ≤ nominal pressure ≤ PN63
20	Straight stroke, three-way control valve	PN10 ≤ nominal pressure ≤ PN40
30	Straight stroke, angle control valve	PN10 ≤ nominal pressure ≤ PN63
40	Eccentric half-ball valve	PN10 ≤ nominal pressure ≤ PN63
45	Ball valve	PN10 ≤ nominal pressure ≤ PN63
56	Cut-off valve	PN10 ≤ nominal pressure ≤ PN40
57	Antibiotic cut-off valve	PN10 ≤ nominal pressure ≤ PN40
68	Rising stem gate valve	PN6 ≤ nominal pressure ≤ PN25
69	Non-rising stem gate valve	PN6 ≤ nominal pressure ≤ PN25
74	Ventilation butterfly valve	PN6 ≤ nominal pressure ≤ PN16
75	Double Eccentric Butterfly Valve	PN6 ≤ nominal pressure ≤ PN16
76	Triple eccentric butterfly valve	PN10 ≤ nominal pressure ≤ PN16
77	Rubber Lined Butterfly Valve	PN6 ≤ nominal pressure ≤ PN16
78	Fluorine Lined Butterfly Valve	PN6 ≤ nominal pressure ≤ PN25
81	Upward discharge valve	PN6 ≤ nominal pressure ≤ PN25
82	Downward discharge valve	PN6 ≤ nominal pressure ≤ PN25
83	Kettle bottom discharge valve	PN6 ≤ nominal pressure ≤ PN25
ZZ	Self-operated valve	PN10 ≤ nominal pressure ≤ PN63
*9	Special design	

Bonnet type and packing, balanced structure

1 Standard bonnet (room temperature)	2 Double packing special sealing bonnet	3 Bonnet with cooling fins (medium temperature, high temperature)	4 Bellows bonnet
5 Low-temperature type bonnet	7 Valve with pressure balanced element (room temperature)	8 Valve with pressure balanced element and cooling fins (medium temperature, high temperature)	9 Special design
Self-operated control type			
YP Pressure control type	YP-II Controller pressure control type	VP Micro pressure control type	CP Differential pressure control type

Requirements for the type of valve element (Priority is given in left-to-right order, if there is no one, do not write)

Control valve				
R	P1	LP*	DL*	Q
Soft seal element structure (Do not indicate in the case of metal hard seal)	Valve element is parabolic in structure	Sleeve characteristic structure, *=1-n(layer), regulation type	Cage characteristic structure, *=1-n(layer)	Straight stroke: labyrinth structure
X (L*)	E (L*)	S	T	M
Sleeve structure with balance ring that small hole is in the upper chamber, *=1-n (layer)	Sleeve structure with balance ring that small holes are in the upper and lower chamber, and in the valve element, *=1-n (layer)	Straight-stroke valve with cut-off type valve element structure (including various discharge valves)	Shunt structure	Straight stroke: confluence structure Angular stroke: two-way seal structure (Do not indicate in the case of one-way seal)
Ball valve				Butterfly valve
0	V	R	G	R
O-shaped ball valve	V-shaped ball valve	Soft seal element structure (Do not indicate in the case of metal hard seal)	Fixed element ball valve structure (Do not indicate in the case of floating ball valve)	Soft seal element structure (Do not indicate in the case of metal hard seal)

Notes: n represents the number of stages or layers, represented by numbers (positive integer).

Description for the type of valve body structure
(Priority is given in left-to-right order, if there is no one, do not write)

F	A	H	L	E (with half-lined)	
Fluorine lined valve	Fire-proof, anti-static and anti-differential pressure rising structure, and dust-proof structure	With jacket	L-shaped three-way ball valve	Partially lined butterfly valve (normally lined valve body and non-lined butterfly plate)	
Y	T	K1-n	LK1-n	LS1-n	W
Y-shaped three-way ball valve	T-shaped three-way ball valve	Porous sleeve structure, number of layers: 1-n layers	Porous sleeve structure, number of layers: 1-n layers (Specifically refers to the noise reduction box)	With rectifier plate (1-n stages)	Welded structure valve (do not write castings)
C	II, III	HG	Z	X	SD
Ceramic lined valve	II: Elongation bonnet type II III: Elongation bonnet type III	Specifically referring to the manual or pneumatic discharge valve that adopts the HG standard of the Ministry of Chemical Industry	Z-shaped valve body (high and low port valve body)	Rubber lined valve	Manual
QG	BM	DD			
Cylinder type	Diaphragm type	Electric			

Notes: n represents the number of stages or layers, represented by numbers (positive integer)

Valve connection type (Do not indicate in the case of integrated flange type)

DJ	HT	NL	SW	BW	KG
Wafer type connection	Loose flange type connection	Internal thread type connection	Socket welding	Butt welding	Clamp type connection
WL	U	DH			
External thread type connection	Lug type connection	Forging welded valve body			

Parameters Required for Calculating Selection

Pos. No.		Valve seat material	
Purpose		Flange standard/level	
Pipe No.		☆ Flow characteristics	
Pipe material		Flow-opening/flow-closing	
Pipe specification		Leakage level	
Operating conditions		Actuator	
☆ Process medium		Type	
☆ Operating temperature ° C		Spring range	
☆ Upstream pressure Mpa (G)		Handwheel	
☆ Downstream pressure Mpa (G)		Gas supply pressure MPa	
☆ Maximum pressure difference MPa		Gas signal interface dimension	
Gas flow Nm3/h Steam flow Kg/h Liquid flow m3/h	☆ Maximum	Positioner	
	☆ Normal	Input signal	
	Minimum	Electrical interface dimension	
☆ Liquid/steam operating density Kg/h		Gas source connector	
☆ Standard density of gas Kg/h		IP grade	
Dynamic viscosity mPa.s		☆ Explosion-proof grade	
Compressibility coefficient		Accessory	
Isentropic index		Filter Pressure Reducing Valve	
Gasification pressure MPa		Limit switch	
Critical pressure MPa		Solenoid valve	
Noise		Power supply	
☆ Gas source fault valve open/close		Explosion-proof grade	
Specification of valve body/valve element		Electrical interface dimension	
Valve type		Under normal working conditions NC/NO	
Valve body material		Lock-up valve	
Valve element material		Other accessories	

Description

- The parameters marked with ☆ must be provided. It is best to provide all flow parameters (at least provide maximum flow or normal flow), and provide the rest parameters as much as possible

Special Instructions

- Special inspection
- Forbidding copper treatment
- Specified color coating
- Oil and water removal treatment
- Tropical and cold zone
- Sand and dust proof type
- Anti-strong corrosion type
- High action frequency
- Open/close time
- Special air piping and special gas source connector
- For vacuum working conditions

Characteristics of HollySys' Selection Software

- Easy to use, easy to learn and operate, and flexible process. Users can get help from F1 in each step and a large amount of data is stored for use in F1
- Accurate calculation: Blocking, flashing, cavitation, two-phase and three-phase flow, pipeline set parameters and Reynolds number correction are fully considered in the Company's selection software
- Comprehensive calculation data: It can calculate not only the flow coefficient (Cv, Cv/Cvs) and opening, but also the liquid cavitation index, upstream and downstream pipeline sizes, medium pipeline velocity, sound pressure level at various flows, recommended straight pipe length, minimum wall thickness and required axial thrust of the actuator.
- False alarm: Whenever there is a logic error in the input data, an automatic alarm will be given. When the calculated data is not suitable for process measurement, an alarm will also be given.