

ACID RESISTANT CONTROL VALVES

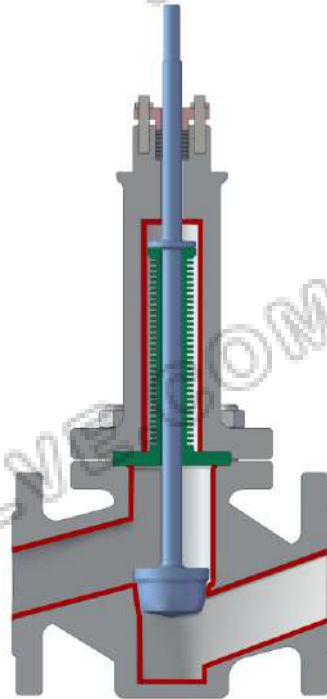


SERIES **10F**

► Acid Resistant Control Valves

▲ Overview

The valve model 10F is an acid resistant control valve for controlling corrosive and/or poisonous fluids. The body cavity, valve plug, valve seat, valve stem are all lined with material F46 or PFA in thickness of 3 - 8mm to resist acid, alkali and strong corrosion. The valve is suitable for controlling medium with strong acid, strong alkali, volatile, easy penetration, so it is widely applied in industrial automation device with special media control system, including chemical, petroleum, metallurgy, medicine, textile etc.



Fields of application

Flow control of corrosive, hazardous, pure and/or slightly solids-laden liquids, vapours and gases in the chemical, pharmaceutical and other industries.

The 10F series is especially suitable

- for media where stainless steel is not sufficiently corrosion-resistant.
- as an alternative to valves made of special metals (Hastelloy, Monel, titanium etc.).
- for environmentally critical media.
- for metal-reactive media, e.g. H₂O₂.
- for biotechnology and high-purity media where good cleaning and anti-adhesive surfaces are important.
- for highly permeating media.

Operating range

- -30 to +200 °C (-37 to 400 °F) operating temperature
- 0.1 mbar vacuum up to 16 bar (235 psi) operating pressure

► Acid Resistant Control Valves

Standard Specification

Type	Acid Resistant Control Valve
Body size	1/2"~12"(DN15~DN300)
Plug form	P-port single seated, Q-port single seated
Characteristic	EQ%, Linear, Quick-Opening
Body rating	ANSI Class 150; PN 16
Body connections	Flanged (RF)
Body & Bonnet Material	WCB+PFA, CF8+PFA, CF8M/CF3M+PFA WCB+F46, CF8+F46, CF8M/CF3M+F46
Trim Material	SS304+PFA, SS316+PFA, SS316L+PFA SS304+F46, SS316+F46, SS316L+F46
Bonnet type	Standard type : -30~+200°C Bellows seal type : -30~+200°C
Packing	V-PTFE
Painting	Silver, or other specified color. In the case of stainless steel body, no painting is standard.
Actuator type	Pneumatic diaphragm, Pneumatic cylinder, Electric

Performance

Rated Kvs	See Table 1.
Flow characteristics	EQ%, Linear, Quick-Opening
Rangeability	50:1
Seat Leakage	ANSI Class VI

Table 1 Kvs value and travel

Nominal size inch(mm)	Port size inch(mm)	Rated Kvs		Stroke mm	Nominal size inch(mm)	Port size inch(mm)	Rated Kvs		Stroke mm
		EQ%					EQ%		
3/4(20)	1/4(8)	0.52		16	2 1/2(65)	2 1/2(65)	63		40
	3/8(10)	1.6			3(80)	3(80)	100		
	1/2(15)	4			4(100)	4(100)	160		
	3/4(20)	6.3			5(125)	5(125)	250		
1(25)	1(25)	10		6(150)	6(150)	400		60	
1 1/4(32)	1 1/4(32)	16		8(200)	8(200)	630		60	
1 1/2(40)	1 1/2(40)	25		10(250)	10(250)	1000		100	
2(50)	2(50)	40		12(300)	12(300)	1600		100	

Note : In the case of Q port, plug size is equal to valve size.

► Acid Resistant Control Valves

Body Structure And Material List

Table 2 Material List(Lining material-PFA)

No.	Part Name	Material		
1	Body	WCB+PFA	CF8+PFA	CF8M/CF3M+PFA
2	Body stud bolt	A193 B7	A193 B8	A193 B8M
3	Plug and stem	304+PFA	304+PFA	316+PFA
4	Nut	A194 2H	A194 8	A194 8M
5	Bellows	PFA	PFA	PFA
6	Bonnet	WCB+PFA	CF8+PFA	CF8M/CF3M+PFA
7	Packing	V-PTFE	V-PTFE	V-PTFE
8	Gland flange	WCB	CF8	CF8M
9	Gland stud bolt	A193 B7	A193 B8	A193 B8M
10	Nut	A194 2H	A194 8	A194 8M
Operating temp. °C		-5~+200	-30~+200	-30~+200

Table 3 Material List(Lining material-F46)

No.	Part Name	Material		
1	Body	WCB+F46	CF8+F46	CF8M/CF3M+ F46
2	Body stud bolt	A193 B7	A193 B8	A193 B8M
3	Plug and stem	304+F46	304+F46	316+F46
4	Nut	A194 2H	A194 8	A194 8M
5	Bellows	F46	F46	F46
6	Bonnet	WCB+F46	CF8+F46	CF8M/CF3M+ F46
7	Packing	V-PTFE	V-PTFE	V-PTFE
8	Gland flange	WCB	CF8	CF8M
9	Gland stud bolt	A193 B7	A193 B8	A193 B8M
10	Nut	A194 2H	A194 8	A194 8M
Operating temp. °C		-5~+120	-30~+120	-30~+120

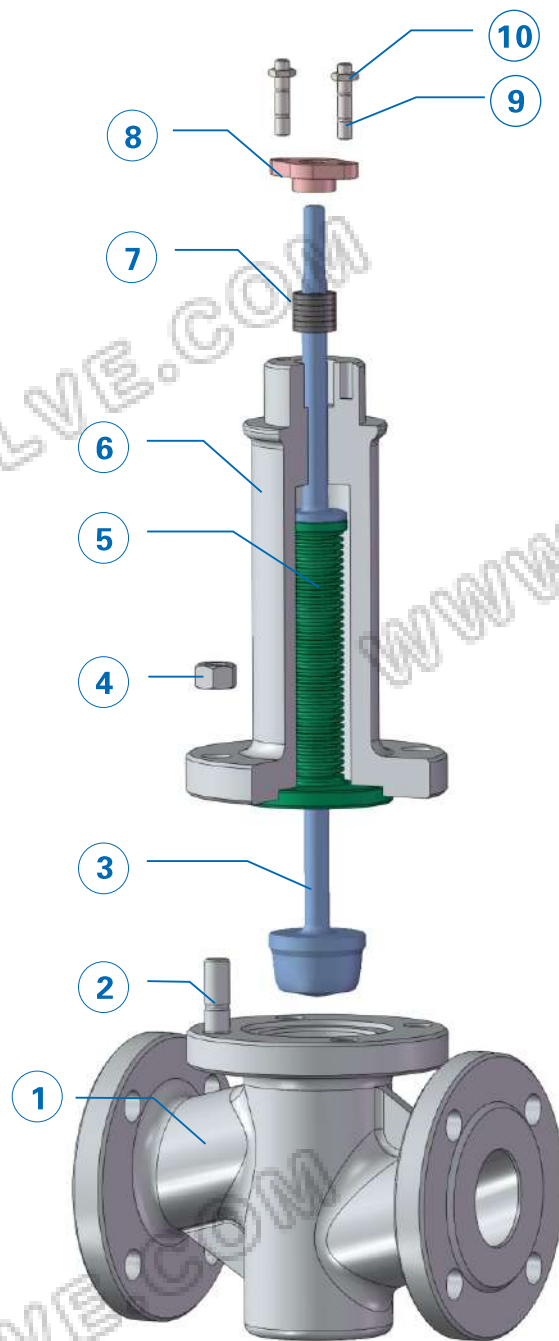


Figure 1 Body structure

► Acid Resistant Control Valves

Design features

(1) Face-to-face to DIN 3202-1999 F1

- flanges EN 1092 Form B1
- flanges ASME B16.5 Cl.150 RF

(2) Thick-walled PFA lining

- Optional F46 antistatic
- Lining thickness: 3-8 mm

(3) One-piece valve body

as well as all other pressure-bearing components.

- Made of cast carbon steel or cast stainless steel
- Absorbs system pressure and pipe forces.
- Top entry = simple maintenance of bellows, plug and seat.
- Body heating on request.

(4) PFA bellows(Figure 2)

hermetically seals the product chamber from the atmosphere and protect the valve stem against corrosion.

- Standard PFA bellows
- Optional F46 bellows

5) Safety stuffing box

adjustable from outside as a standard feature.

(6) Easy top entry maintenance of the wetted internals:

removable valve bonnet

High-quality external corrosion protection:

- Epoxy coating of the valve;
- valve stem and screws made of stainless steel

(7) Actuators and accessories

- Pneumatic or electric actuators
- Positioners, limit switches etc.

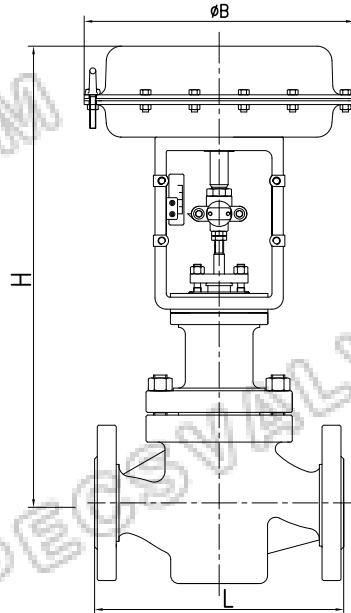


Figure 2 PFA bellows

► Acid Resistant Control Valves

Dimensions

Table 4. Face-to-face and external dimensions(Standard bonnet)



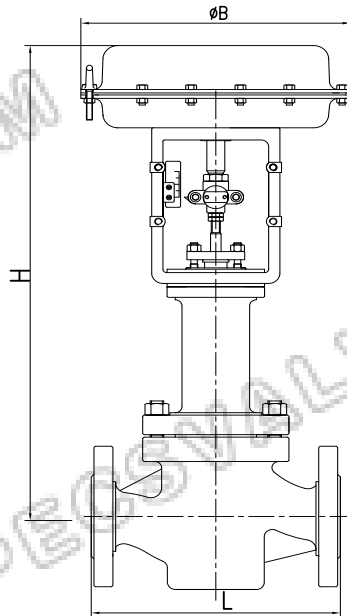
[Unit: mm]

Nominal size inch(mm)	Actuator model	L	H	ØB
		ANSI 150, PN16	Standard bonnet	
1/2(15)	ZHA/B22	135	415	290
3/4(20)	ZHA/B22	155	415	290
1(25)	ZHA/B22	160	420	290
1 1/4(32)	ZHA/B22	185	440	290
1 1/2(40)	ZHA/B23	205	440	290
2(50)	ZHA/B23	235	445	290
2 1/2(65)	ZHA/B34	290	610	365
3(80)	ZHA/B34	315	620	365
4(100)	ZHA/B34	350	630	365
5(125)	ZHA/B45	400	815	475
6(150)	ZHA/B45	485	840	475
8(200)	ZHA/B45	600	850	475
10(250)	ZHA/B56	660	/	590
12(300)	ZHA/B56	787	/	590

► Acid Resistant Control Valves

Dimensions

Table 5. Face-to-face and external dimensions(Bellows bonnet)



[Unit: mm]

Nominal size inch(mm)	Actuator model	L	H	ØB
		ANSI 150, PN16	Bellows bonnet	
1/2(15)	ZHA/B22	135	515	290
3/4(20)	ZHA/B22	155	515	290
1(25)	ZHA/B22	160	530	290
1 1/4(32)	ZHA/B22	185	570	290
1 1/2(40)	ZHA/B23	205	575	290
2(50)	ZHA/B23	235	720	290
2 1/2(65)	ZHA/B34	290	730	365
3(80)	ZHA/B34	315	770	365
4(100)	ZHA/B34	350	1025	365
5(125)	ZHA/B45	400	1045	475
6(150)	ZHA/B45	485	1165	475
8(200)	ZHA/B45	600	1250	475
10(250)	ZHA/B56	660	/	590
12(300)	ZHA/B56	787	/	590



SPECS[®]

WENZHOU SPECS VALVE CO.,LTD

Dong'ou Industrial Zone, Oubei Town, Wenzhou City,
Zhejiang Province, China

Tel: +86-577-67379084

Fax: +86-577-66997700

Email: info@specsvalve.com

www.specsvalve.com

Specialized Serve For Industrial Valves