

## High-frequency Blowback Cleaning Valve



Antiwear (Suzhou) Industrial Intelligent Technology Co., Ltd.





## Leading Manufacturer and Designer of Full Ranges of Industrial Valves

Antiwear Group, as a leader in designing and manufacturing of full ranges of industrial valves, from general use applications to severe conditions, supplies ball valve, butterfly valve, plug valve, gate valve, globe valve, check valve, piston valve, regulating valve, rotating disc valve and labyrinth control valve, which are widely used in refinery, oil & gas, power generation, water treatment, petrochemical, urban construction, paper & pulp, pipeline transferring and other industries. The performance of above valves supplied by Antiwear is appreciated by more and more end users worldwide.

Antiwear firmly believes that honesty is not just a virtue, but also a working and living attitude. In the high-speed development of Antiwear, the company has gradually formed "It's reliable" corporate culture, which means reliable products, reliable people and reliable service. Antiwear Group has completed the quality assurance system certification and passed a series of certificates, including ISO9001, ISO14000, ISO18000, TS, API6D, API607, ISO15848, PED, API 6A and so on.

Antiwear Group boasts manufacturing workshops in Suzhou, Wenzhou, and Shanghai, China and will establish localized warehouses, sales and distributors around the world. Through Internet + production, it can quickly respond to customer's requests. Antiwear's ultimate goal is to "help you enjoy good life"

## Best Solution

In the spirit of excellence, continuous improvement, Antiwear keeps on improving the quality of the valve. Besides general use application, Antiwear has done fruitful research on critical service conditions including high temperature, high pressure, strong corrosion, crystallized, high frequently operated and other severe conditions in silicon chemical industry, coal gasification, petrochemical, hydrometallurgical, etc. and summed up the excellent solution in a large number of practice.

- High temperature and high pressure pure oxygen or hydrogen conditions ---- oxygen and hydrogen metal-seated ball valve, globe valve, check valve
- Solid abrasive material conditions ----- metal seated ball valve, rotating disc valve, rotating twin-disc valve
- High temperature exceeding 450 °C conditions ----- Ball valve, disc valve, gate valve



- PP/PE facilities annual operating cycles reaching 1.6 million ----- PDS high-frequency metal and soft seated ball valve
- Solid abrasive particles at high pressure differential breeding and regulating conditions ----- slide plating valve
- Corrosive working conditions ----- plug valve, ball valve
- Fiber and pulp working conditions ----eccentric semi-ball valve
- High temperature solid particles bi-directional seated ball valve- S ZORB ball valve

- Flushing, flashing, cavitation conditions ---- angle control valve
- Zero-leakage request with gas medium at large pipe size ---- triple-offset butterfly valve
- Slurry conditions ---- Y-type globe valve
- Crystallization or slurry conditions ----- plug valve, eccentric semi-ball valve
- Precipitation conditions ---- piston valve
- Multi-level buck and flash conditions ---- labyrinth control valve

#### Overall solution

- Full range of valves
- All industry applications
- Application of all conditions
- Customize for customers
- Excellent performance under critical conditions
- Extensive R&D and experience

#### Best quality

- 100% parts inspection critical
- 100% finished product inspection
- 100% supplier certification
- 100% process tracking
- Advanced processing and testing equipment
- Complete quality control system and certification

## Five advantages of Antiwear

#### Quick response

- 24 hours fast response
- Global warehousing
- Global sales and distributors
- Quick inquiry / quote in one minute
- Order information bar code query system

#### Internet + production model

- Online sales and service
- Personalized customization
- Specialized small intelligent factory
- Online development, design, procurement, production

#### Reliable culture

- Reliable product
- Trustworthy person
- Timely service
- Help you enjoy good life

## Product under Severe Working Conditions



### Metal seated ball valve

Applying for quantitative compression, dual-bearings, Belleville spring design and many different hard coatings. Widely used at abrasive fluid and high temperature conditions.

Nominal Size: DN15~DN600, 1/2"~24"

Temperature range: -196° C~850° C

Pressure rating: PN10~PN670,  
Class 150~Class 4500



### Oxygen service metal-seated ball valve

Completely overcome metal to metal "bite" under high pressure and temperature condition with ultra-high pure gas fluid. On/off operating smoothly without any jam. Valve is fireproof and anti-static design with fully derosination. Internal leakage rate meets and exceeds Class VI of ASME B16.104.

Nominal Size: DN15~DN600, 1/2"~20"

Temperature range: -196° C~500° C

Pressure rating: PN10~PN670,  
Class 150~Class 4000



### Triple-offset butterfly valve

No friction between plate and seat while operating the valve. Normally the valve is single directional sealed. And di-directional sealing is also available.

Nominal Size: DN50~DN4500, 2"~180"

Temperature range: -196° C~600° C

Pressure rating: PN10~PN420,  
Class 150~Class 2500



### High temperature and high pressure differential ball valve

Specially designed at high temperature and high pressure differential condition with solid catalyst particles fluid.

Nominal Size: DN50~DN300, 2"~12"

Temperature range: ≤650° C

Pressure rating: PN10~PN260,  
Class 150~Class 1500



### Rotating disc valve

Mainly used in coal chemical and polysilicon industry. Excellent performance and long working life under abrasive fluid conditions at block and venting system.

Nominal Size: DN25~DN1200, 1"~48"

Temperature range: -196° C~850° C

Pressure rating: PN10~PN260,  
Class 150~Class 1500



### High temperature double-wedge gate valve

Double-wedge design for high temperature and frequently operating application. Excellent sealing performance and long service life.

Nominal Size: DN200~DN1400, 8"~56"

Temperature range: ≤816° C

Pressure rating: PN10~PN420,  
Class 150~Class 2500



### High frequently operated PDS ball valve

Designed for quick on/off cycling and high frequently operated applications with solid fluid at system. Widely used in various applications where frequently operated is necessary, especially at PDS system of polyethylene and polypropylene facilities.

Nominal Size: DN15~DN400, 1/2"~16"

Temperature range: -46° C~450° C

Pressure rating: PN10~PN260,  
Class 150~Class 1500



### Rotating twin disc valve

Specially designed for block, venting, balance valve at lock hopper system with solid fluid. Excellent sealing performance and much longer service life than ball valve. Widely used at coal chemical industry.

Nominal Size: DN40~DN600, 1.5"~24"

Temperature range: -196° C~850° C

Pressure rating: PN10~PN260,  
Class 150~Class 1500



### Labyrinth control valve

Up to 24 stages labyrinth discs design for high pressure differential adjusting and regulating application. Excellent performance and long service life at many industries, especially at power plant field.

Nominal Size: DN25~DN600, 1"~24"

Temperature range: ≤700° C

Pressure rating: PN10~PN760,  
Class 150~Class 4500

## Patents



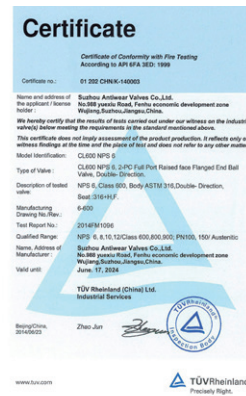
## Certificates



ISO9001



API607



API6FA



PED



ISO14001



OHSAS18001



ISO15848



API6D

## High-frequency Blowback Cleaning Valve

### Product Introduction and Application

High-frequency Blowback Cleaning Valve is a key control valve at dry fly-ash removal system. It can generate high-frequency pulsed nitrogen (or other inert gas) flow in the ceramic or metal sintered filter to purge the fly-ash in order to avoid pressure differential increasing or even filter breaking. Currently it is mainly used at coal gasification field to clean the fly-ash inside synagas at dry filtration system. Since it has many good features such as high cycle speed, good cleaning effect, long working life and reliable operation, it can be also used in many other industries such as chemical cement, iron&steel, silicon refinery and so on.

### Product Features & Specification

- Quick Open-close: Valve can be operated within 0.2 second
- Nominal Size: NPS1.5" ~ 8"
- Pressure Rating: ANSI Class150 ~ Class2500 LB
- Design Temperature:  $\leq 300^{\circ}\text{C}$
- Valve Pattern: Angle
- Body Material: Forged or casting stainless steel, other material available
- Seat Material: PPL, PEEK, PBI
- Control Mode: Pneumatic
- Control Pressure: 0.6~ 1.0 Mpag.
- Remark: Other raw materials are also available upon request



Patent of invention, all rights reserved

Open-close Time:

Pressure Size	Class150	Class300	Class600	Class900	Class1500	Class2500
1.5"	$\leq 50$ ms	$\leq 50$ ms	$\leq 150$ ms	$\leq 250$ ms	$\leq 350$ ms	$\leq 400$ ms
2"	$\leq 50$ ms	$\leq 50$ ms	$\leq 150$ ms	$\leq 250$ ms	$\leq 350$ ms	$\leq 400$ ms
3"	$\leq 150$ ms	$\leq 150$ ms	$\leq 250$ ms	$\leq 250$ ms	$\leq 350$ ms	$\leq 400$ ms
4"	$\leq 250$ ms	$\leq 250$ ms	$\leq 500$ ms	$\leq 650$ ms	$\leq 750$ ms	$\leq 850$ ms
6"	$\leq 300$ ms	$\leq 400$ ms	$\leq 600$ ms	$\leq 750$ ms	$\leq 850$ ms	$\leq 850$ ms
8"	$\leq 300$ ms	$\leq 400$ ms	$\leq 600$ ms	$\leq 750$ ms	$\leq 850$ ms	$\leq 900$ ms

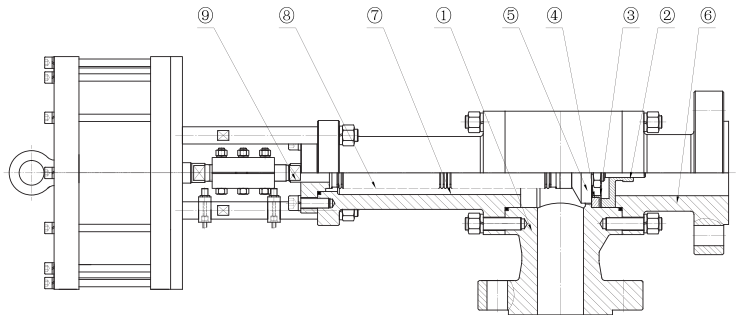
## Features and Structure

### Manufacturing Specifications

Design Standard: ASME B16.34

Inspection Standard: ASME B16.104

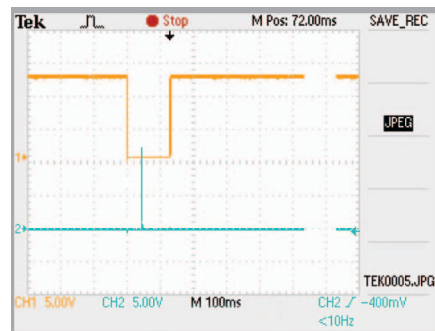
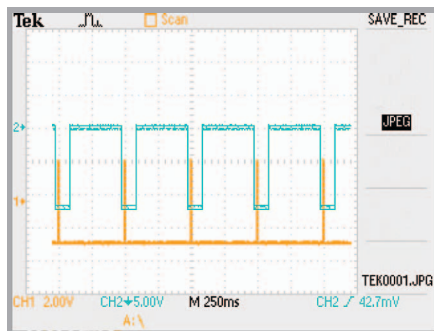
Flange Standard: ASME B16.5



### Material of Bill List

Code		1	2	3	4	5	6	7	8	9
Name		Body	Guide	Seat Ring	Seat	Disc	Out Flange	Cap	Bellows	Stem
Code	01	A182 F304	A564 630	A564 630	PBI/PEEK/PPL	A564 630	A182 F304	A182 F304	A182 316L/316Ti	A564 630
	02	A182 F316	A564 630	A564 630	PBI/PEEK/PPL	A564 630	A182 F316	A182 F316	A182 316L/316Ti	A564 630

### Open-close Time Test



Test result: In the high pressure condition, the whole open-close-open time of 3" Class 900 valve is only 104ms

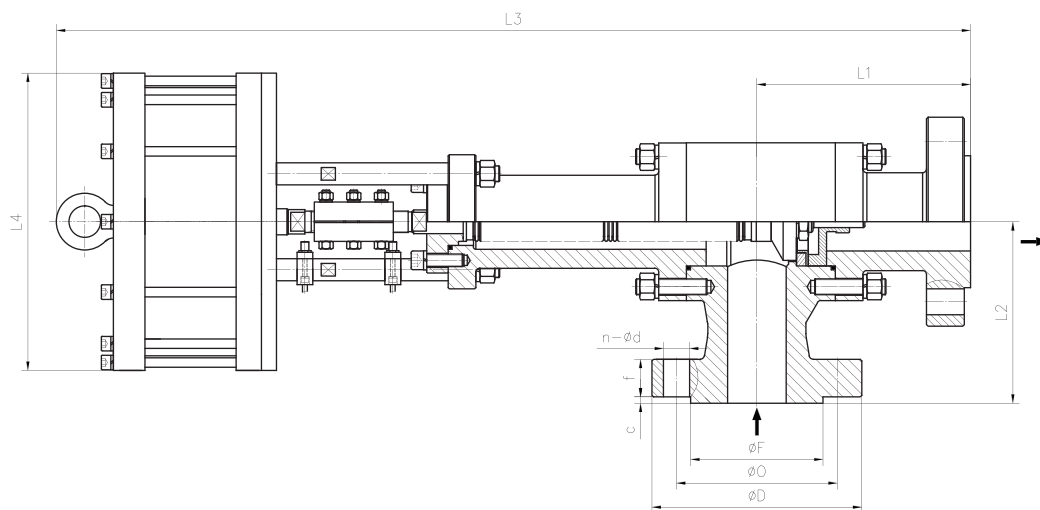


Low Pressure Test



High Pressure Test

## Outline Dimensions



Pressure Rating	Size	Outline Dimensions (mm)										Valve Weight (kg)
	NPS	L1	L2	L3	L4	D	O	F	C	f	n-φd	
Class150	2	140	140	750	120	150	120.5	92	2	17.5	4_18	65
	3	220	200	977	210	190	152.5	127	2	22	4_18	87
	4	255	230	977	270	230	190.5	157.5	2	22	8_18	108
	6	375	305	977	270	280	241.5	216	2	23.5	8_22	138
Class300	2	140	140	750	120	165	127	92	2	20.5	8_18	81
	3	220	200	977	210	210	168.5	127	2	27	8_22	98
	4	255	230	977	270	255	200	157.5	2	30	8_22	120
	6	375	305	1043	350	320	270	216	2	35	12_22	154
Class600	2	190	190	750	270	165	127	92	7	25.5	8_18	91
	3	220	200	1050	270	210	168.5	127	7	32	8_22	106
	4	255	230	1043	350	275	216	157.5	7	38.5	8_26	138
	6	375	305	2040	584	355	292	216	7	48	12_29.5	176
Class900	2	190	190	750	270	215	165	92	7	38.5	8_26	103
	3	220	200	1011	270	240	190.5	127	7	38.5	8_26	123
	4	255	230	1043	350	290	235	157.5	7	44.5	8_32.5	155
	6	375	305	2040	584	380	317.5	216	7	56	12_32.5	194

1.For 1500LB and 2500LB valve,please consult Antiwear.

2.All the dimensions and weights are for reference only. The factory reserves the right to make any modifications.

## Ordering Instruction

### How To Order



#### 1、Product Code Name

AM—High-frequency Blowback Cleaning Valve

#### 2、Nominal Diameter

NPS	2	3	4	6	8
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#### 3、Pressure Rating

Class 150	Class 300	Class 600	Class 900	Class 1800	Class 2500
150	300	600	900	1800	2500

#### 4、Connection Mode

Raised face flange	Ring joint
RF	RJ

#### 5、Body Material

02	03	04
A182 F304	A182 F316	Others

#### 6、Seat Material

P	K	L	X
PBI	PEEX	PPL	Others

#### 7、Open-close Time (ms)

1	2	3	4	5	X
≤ 50	≤ 150	≤ 250	≤ 500	≤ 750	Others

## Users



End User: Sinopec Hubei Branch  
 Application: SHELL-SCGP      Size: NPS 3  
 Pressure Rating: ANSI Class 900      Inlet Pressure: 9MPa  
 Outlet Pressure: 3.96MPa      Raw Material: ASTM A182 F304SS  
 Fluid: High pressure nitrogen      On-line Time: 2015/05/01  
 Operating Temperature: 250°C      Failure Report: None



End User: Yunnan Dawei Ammonia Co., Ltd.  
 Application: SHELL-SCGP      Size: NPS 3  
 Pressure Rating: ANSI Class 900      Raw Material: ASTM A182 F304  
 Fluid: High pressure nitrogen      On-line Time: 2011/03/13  
 Operating Temperature: 225°C      Failure Report: None



End User: Air Products Lu'an Co., Ltd.  
 Application: SHELL-SCGP      Size: NPS 4  
 Pressure Rating: ANSI Class 900      Inlet Pressure: 9MPa  
 Outlet Pressure: 9MPa      Raw Material: ASTM A182 F316  
 Fluid: Medium syngas      On-line Time: 2015/03/10  
 Operating Temperature: 225°C      Failure Report: None



End User: Yunnan Yuntianhua Co., Ltd.  
 Application: SHELL-SCGP      Size: NPS 3  
 Pressure Rating: ANSI Class 900      Inlet Pressure: 7.8MPa  
 Outlet Pressure: 7.8MPa      Raw Material: ASTM A182 F316  
 Fluid: High pressure nitrogen      On-line Time: 2012/07/01  
 Operating Temperature: 250°C      Failure Report: None



End User: CNOOC Huizhou Petrochemical Co., Ltd.  
 Application: EGAS Filtration Unit      Size: NPS 3  
 Pressure Rating: ANSI Class 1500      Inlet Pressure: 9.72MPa  
 Outlet Pressure: 4.2MPa      Raw Material: ASTM A182 F316L  
 Fluid: Syngas      On-line Time: 2018/06/15  
 Operating Temperature: 275°C      Failure Report: None



End User: Sichuan Yongxiang Polysilicon Co., Ltd.  
 Application: Polusilicon Filtration Unit      Size: NPS 2  
 Pressure Rating: ANSI Class 600      Inlet Pressure: 9.72MPa  
 Outlet Pressure: 4.2MPa      Raw Material: ASTM A182 F316L  
 Fluid: Hydrogen, HCL, chlorosilane      On-line Time: 2018/06/01  
 Operating Temperature: 250°C      Failure Report: None

# ANTIWEAR VALVES

Antiwear enterprise culture——It's reliable

Core philosophy: Open, Reliable, Enterprising, Innovative

Open Reliable Enterprising Innovative



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