



**QUANSHUN FLOW CONTROL**

**Brochures of  
Y Pattern Globe Valve for Slurry Control**



HENAN QUANSHUN FLOW CONTROL SCIENCE& TECHNOLOGY CO.,LTD

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## Introduction

Y Pattern Globe Valve is a high performance industry valve which made by henan quanshun flow control science & technology Co,ltd,which has characteristics of anti-abrasive,anti-high pressure and anti-scrab . Y Pattern Globe Valve is widely used in alumnia ,metallurgy and mining plant for controlling slurry .



## Design standard

ASME B16.34 Valves, Flanged, Threaded and Welding End

API 623 Steel Globe Valves - Flanged and Butt Welding Ends, Bolted Bonnet

ASME B16.10 Face-to-Face and End-to-End Dimensions of Valves

ASME B16.11 Forged Fittings, Socket Welding and Threaded

ASME B16.25 Butt Welding Ends

ASME B16.5 Pipe Flanges and Flanged Fittings

API 598 Valve Inspection and Testing

MSS SP-25 Standard Marking System for Valves, Fittings, Flanges and Unions

MSS SP-42 Corrosion Resistant Gate, Globe, Angle and Check Valves

MSS SP-61 Pressure Testing of Valves

## Performance data

1 ANSI standards

Pressure class	150Lb	300Lb	600Lb
Shell Test (MPa)	3.0	7.7	15.3
Sealing test (MPa)	2.0	5.7	11.3

Applicable medium	Alumina slurry ,pulp,Pulverized-coal ash etc
Applicable temperature	t≤425℃

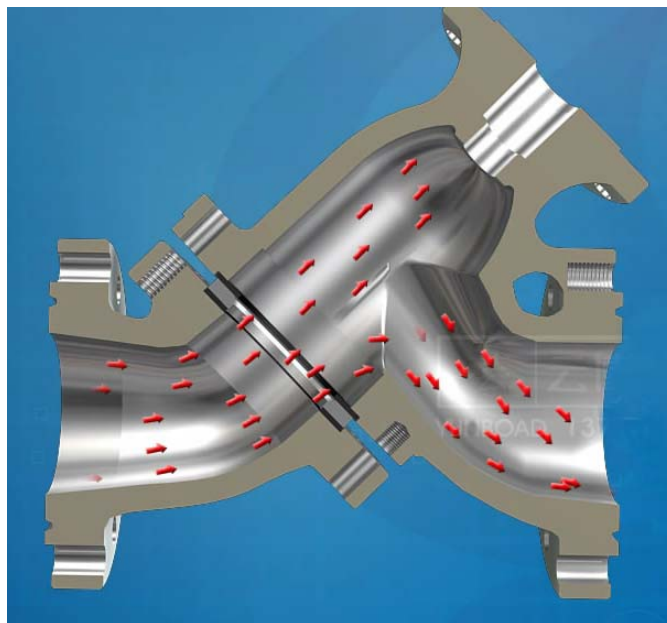
## 2 GB standards

Nominal pressure (MPa)	0.6	1.0	1.6	2.0	2.5	4.0	5.0	6.4	10
Shell Test (MPa)	0.9	1.5	2.4	3.0	3.75	6.0	7.5	9.6	15
Sealing test (MPa)	0.66	1.1	1.76	2.2	2.75	4.4	5.5	7.04	11
Applicable medium	Alumina slurry ,pulp,Pulverized-coal ash etc								
Applicable temperature	t≤425℃								

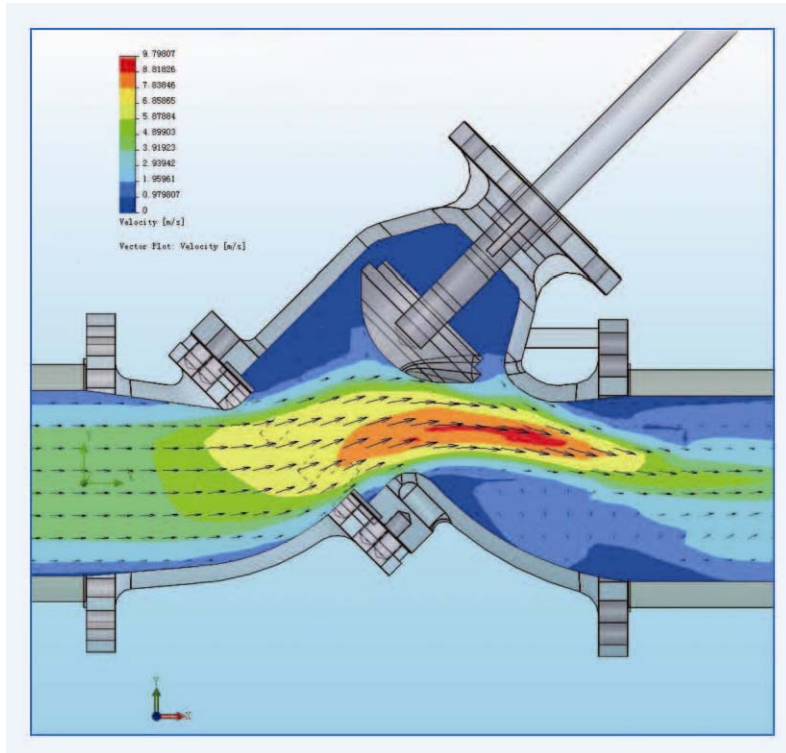
## Design feature

### 1.valve body design

The valve body of the slurry valve is divided into left and right parts with a seat between them. The bolt connecting the two parts can be disassembled the valve seat. Valve body designed by computer solidworks soft ware and the flow channel is analysed by ANSY software to simulate site working situation.



Valve 3D design model



Analysis of valve inner cavity flow field

## 2.Special plated

An anti-washing and anti-corrosion protection plate is set in the cavity of the valve body. At the moment of the valve opening, the plate can protect the valve from washing and corrosion, and carry out chemical Ni/P plating treatment on the whole valve, which makes the surface hardness up to HRC60.

## 3.Sealing surface

The sealing adopts spherical seal, the surface of which is line connecting. This can ensure the sealing reliability and avoid scarring. Moreover, the valve body has back sealing structure which can protect packing in full-open state.

## 4.Rotation-resistant device

A rotation-resistant device is set up to ensure that the valve stem only has straight line motions, and no more revolving motions.



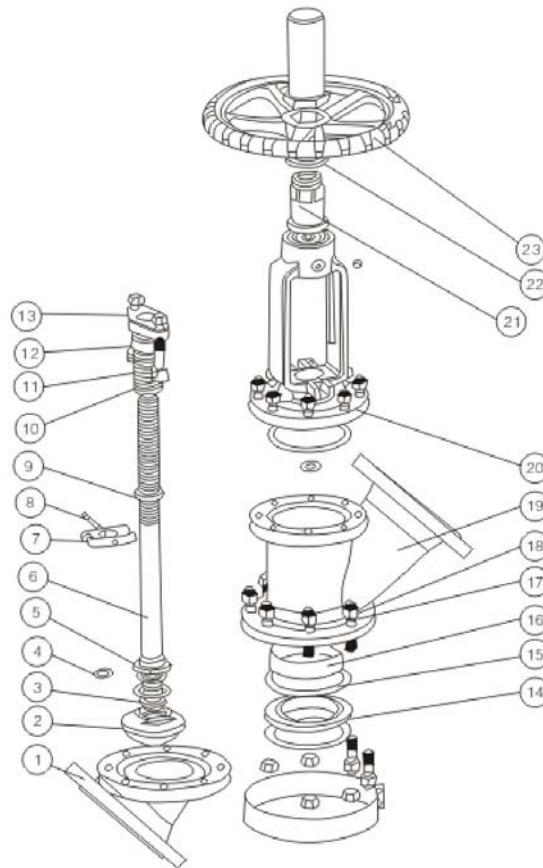
**5. Seperate valve body and seat design**

Valve body and seat is designed seperately to make maintenance easier .

**6. A variety of driving method can be choosed**

The driving manner of the valve include hand driving ,electric driving ,pneumatic and gear driving .

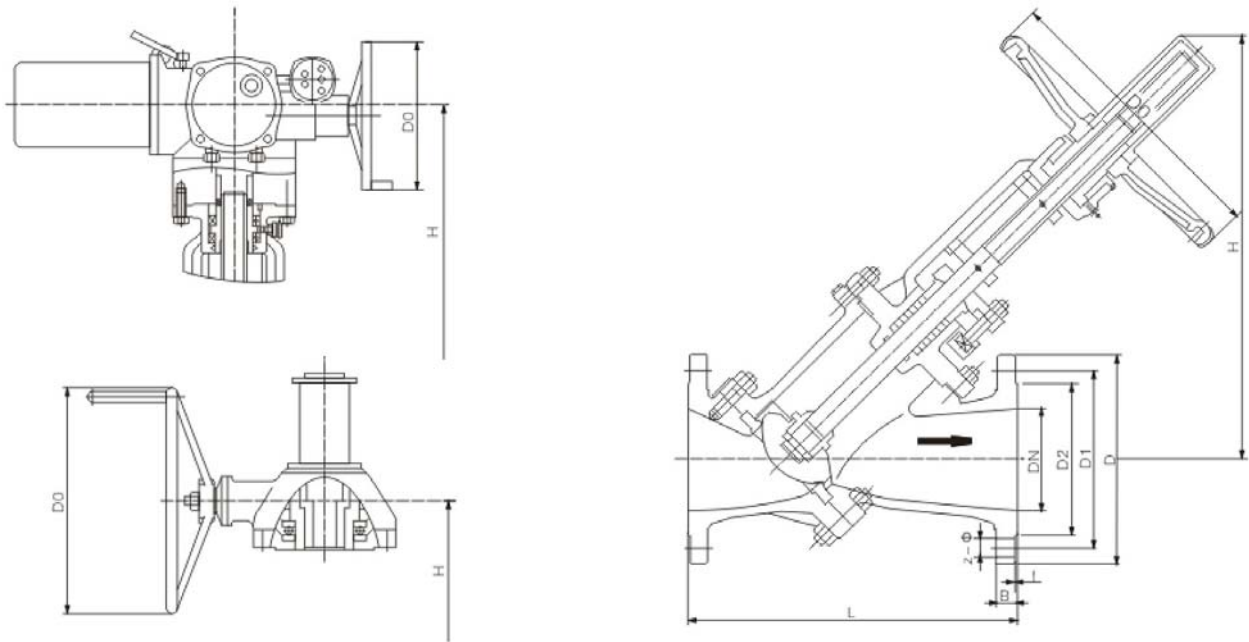
## Main parts materials



No.	Part name	Material	No.	Part name	Material
1	Left valve body	WCB	13	Gland	WCB
2	Valve disc	25+STL	14	Seat	25+SH
3	Split ring	2Cr13	15	Gasket	Graphite+SS
4	O- ring	Rubber	16	Guard plate	35CrMO
5	Valve flat cover	45	17	Bolt	35
6	Valve stem	2Cr13	18	Nut	45
7	Rotating-proof block	35	19	Right valve body	WCB
8	Pin	35	20	Bonnet	WCB
9	Packing seat	1Cr13	21	Valve stem nut	Copper alloy
10	Packing	Graphite	22	Bearing gland	45
11	Preloaded screw bolt	35	23	Driving device	
12	Stuffing cover	1Cr13			

Notes :Materials listed in above table is a common materials ,we can also make valve by other materials by the user's demand.

## Connect dimensions



Class 150

Size		Driving method	L	D	D1	D2	B	Z-Ø	f	Do	H
DN (mm)	NPS (in)										
50	2	Hand wheel	230	150	120.5	92	16	4-18	2	250	307
80	3		310	190	152.5	127	19.5	4-18	2	250	386
100	4		350	230	190.5	157.5	24	8-18	2	250	448
125	5		400	255	216	186	24	8-22	2	320	519
150	6		480	280	241.5	216	25.5	8-22	2	360	600
200	8	Bevel	600	345	298.5	270	29	8-22	2	450	795
250	10		730	405	362	324	30.5	12-26	2	600	880
300	12		850	485	432	381	32	12-26	2	600	935
350	14		980	535	476	413	35	12-30	2	600	1088
200	8	Electric	600	345	298.5	270	29	8-22	2	305	995
250	10		730	405	362	324	30.5	12-26	2	305	1045
300	12		850	485	432	381	32	12-26	2	305	1105
350	14		980	535	476	413	35	12-30	2	305	1250



Size		L	L1	D	D1	D2	C	n-d0
Inch	DN(mm)							
PN2.0MPa(Class150)								
2	50	178	45	150	120.5	92	16	4-18
2-1/2	65	190	45	180	139.5	105	17.5	4-18
3	80	203	45	190	152.5	127	19.5	4-18
4	100	229	63	230	190.5	157.5	24	8-18
5	125	254	63	255	216	186	24	8-22
6	150	267	78	280	241.5	216	25.5	8-22
8	200	292	78	345	298.5	270	29	8-22
10	250	330	120	405	362	324	30.5	12-26
12	300	419	126	485	432	381	32	12-26
14	350	550	120	535	476	413	35	12-29.5
16	400	600	140	600	540	470	37	16-29.5
18	450	650	186	635	578	533.5	40	16-32.5
20	500	700	186	700	635	584	43	20-32.5
24	600	800	186	815	479.5	692	48	20-35.5
PN5.0MPa(Class 300)								
2	50	216	45	165	127	92	22.5	8-18
2-1/2	65	241	45	190	149	105	22.5	8-22
3	80	283	45	210	168.5	127	29	8-22
4	100	305	63	255	200	157.5	32	8-22
5	125	381	63	280	235	186	35	8-22
6	150	403	78	320	270	216	37	12-22
8	200	419	120	380	330	270	41.5	12-26
10	250	457	140	445	387.5	324	48	16-29.5
12	300	502	186	520	451	381	51	16-32.5

## Application



Alumina plant evaporation system



Seed precipitation system --overflow cock outlet



Thickener system in alumina plant

## How to order

Please give detail information about Y pattern globe valve for slurry valve

### 1-Driving type code:

Worm gear drive      Pneumatic drive      Electric hydraulic drive

### 2-Connecting way code:

Flange connection      Welding connection      Wafer type connection

### 3-Valve structure code :

(5) Straight through type

### 4-Sealing surface material code:

Y-Hard alloy      M-Surfacing Monel Alloy      H--Stainless steel      M1-Spray WC

### 5-Nominal pressure :

10 times of the MPa

### 6-Valve body material:

C-Cast steel      P-Stainless steel 304      R-Stainless steel 316      I-Chromium-molybdenum steel

### 7- Other information about medium

Temperature , medium ,PH value ,etc