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ZHENGZHOU FREE FLUID CONTROL TECHNOLOGY CO., LTD

## 产品目录 Product Catalog



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# 工程陶瓷气动旋转摆式阀

## Pneumatic Rotating Type Ceramic Gate Valve

### 产品特征 Product Feature

工程陶瓷气动旋转摆式阀主要用于火力发电厂气动输灰系统仓泵上进料，也可用于其他粉料输送管道如氧化铝干粉、水泥和粉煤灰等进料启闭。本阀门密封面经过研磨加工，确保密封的可靠性，因此阀门具有密封性良好、耐磨性强，启



FREE-Valve's Pneumatic Rotating Type Ceramic Gate Valve is mainly used in transport materials on the fly ash conveying system in electrostatic precipitator systems(ESP systems) of Coal-Power plants, and also used in other powder conveying pipeline, such as: alumina dry powder, cement and coal ash etc. The whole of ceramic sealing faces of the valves are well ground and polished, which is ensure a reliable sealing performance of the valve, so the valve has good sealing performance, high wear-resistance, open and close flexible and have no ash and dust phenomenon.

### 产品性能规范 Products Performance Specification

法兰标准 The standards of flange ends	ASME B16.5, GB/T9113
公称压力 Nominal Pressure	1.0MPa, Class150
公称通径 Size Rang	DN150~DN 300, NPS6 ~NPS12
连接形式 Connection type	法兰 Flange
工作温度 Working Temperature	≤250°C
驱动方式 Operating Type	气动 Pneumatic
密封面材质 Sealing surface material	增韧陶瓷Engineering ceramic
压力测试 Pressure test	GB/T13927, API598
结构长度 Face to Face	GB/T12221, API609

注：本公司可根据用户要求提供产品  
Note : Our company can provide products according to the customer's request.

# 工程陶瓷气动旋转摆式阀

## Pneumatic Rotating Type Ceramic Gate Valve

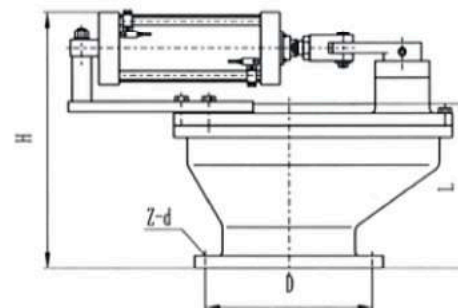


### 适用范围 Application

适用介质：粉煤颗粒，粉煤灰  
Applicable medium: Coal particles, coal ash



### 主要连接及安装尺寸 Main connection and installation dimensions



公称压力 Nominal pressure	尺寸 (mm) Dimension				
	DN	D	L	H	Z-d
1.0MPa	150	240	210	360	8-Ø22
	200	295	220	385	8-Ø22
	250	350	300	390	12-Ø22
	300	400	300	500	12-Ø22
Class150	NPS6	241.3	210	360	8-Ø22
	NPS8	298.5	220	385	8-Ø22
	NPS10	362.0	300	390	12-Ø26
	NPS12	431.8	300	500	12-Ø26



# 工程陶瓷气动双闸阀 Pneumatic Ceramic Double Disc Gate Valve

## 产品特征 Product Feature

新型气动工程陶瓷平衡双闸板闸阀主要适用于干粉物料的进、放料及输送管道，它不仅采用了增韧工程陶瓷作为关断及抗冲刷材料，而且设计了以弹簧双向柔性预紧压力自密封及闸板运行自转的结构形式，使得处于干粉料介质中的阀门密封面在频繁启闭的过程中得到均匀磨损，从而保证了这类介质管道阀门的较高的关闭密封性能要求及



FREE-Valve's Pneumatic Ceramic Double Disc Gate Valve is mainly used in feeding and dumping the dry powder and the transport pipeline, which not only adopt toughening ceramic as shut off and wear out resistance material, but also design construction of autofrettage pressure self-sealing and valve disc auto-rotate, so as to the sealing surface within the dry powder get more wear resistance in process of opening and closing frequently, thereby, which guarantee the high requirements of sealing performance of this valve and long working time.



## 适用范围 Application

电厂除灰-干除灰系统  
水泥行业-干粉料输送、放料  
选矿厂-干矿粉灰物料的选择、输送

Power plant ash handling system  
Cement industry-dry powders' conveying and dumping  
Dressing works-dry powder materials' selection and conveying

# 工程陶瓷气动双闸阀 Pneumatic Ceramic Double Disc Gate Valve



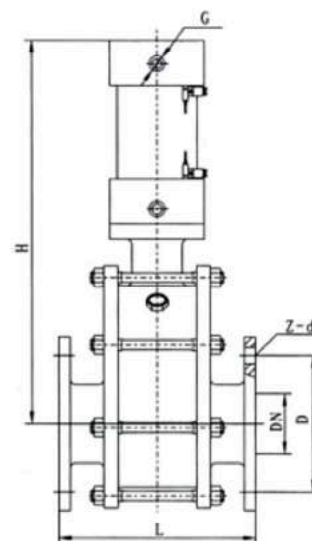
## 产品性能规范 Products Performance Specification

法兰标准 The standards of flange ends	ASME B16.5, GB/T9113
公称压力 Nominal Pressure	1.0MPa, Class150
公称口径 Size Rang	DN150~DN 300, NPS6 ~NPS12
连接形式 Connection type	法兰 Flange
工作温度 Working Temperature	≤250°C
驱动方式 Operating Type	气动、手动 Pneumatic, manual
密封面材质 Sealing surface material	增韧陶瓷 Engineering ceramic
压力测试 Pressure test	GB/T13927, API598
结构长度 Face to Face	GB/T12221, API609

注：本公司可根据用户要求提供产品

Note : Our company can provide products according to the customer' s request.

## 主要连接及安装尺寸 Main connection and installation dimensions



公称压力 Nominal Pressure	尺寸 (mm) Dimension						气缸 (mm) Cylinder
	DN	D	L	H	Z-d	G	
1.0MPa	50	125	210	406	4-Ø18	G3/8	63
	65	145	210	438	4-Ø18	G1/2	80
	80	160	230	516	8-Ø18	G1/2	100
	100	180	248	565	8-Ø18	G1/2	100
	125	210	264	684	8-Ø18	G3/4	125
	150	240	279	737	8-Ø23	G3/4	160
	200	295	343	920	8-Ø23	G1	200
	250	350	406	1028	12-Ø23	G1	250
	300	400	432	1425	12-Ø23	G1	320
	Class 150	NPS2	120.7	210	406	4-Ø18	G3/8
NPS2-1/2		139.7	210	438	4-Ø18	G1/2	80
NPS3		152.4	230	516	4-Ø18	G1/2	100
NPS4		190.5	248	565	8-Ø18	G1/2	100
NPS5		215.9	264	684	8-Ø22	G3/4	125
NPS6		241.3	279	737	8-Ø22	G3/4	160
NPS8		298.5	343	920	8-Ø22	G1	200
NPS10		362.0	406	1028	12-Ø26	G1	250
NPS12		431.8	432	1425	12-Ø26	G1	320



产品特征 Product Feature



工程陶瓷刀闸阀是专门针对固液两相流工况介质管道而设计制造的，它采用了增韧型工程陶瓷来作为关断抗冲刷的主要材料，以满足该类介质管道的关断使用功能。该型阀门具有轻便、便于安装以及适应在不同排布管道上任意角度安装，深受用户欢迎。经多年的实践证明，与普通排渣浆液阀相比使用寿命得到大幅提高。

FREE-Valve's Ceramic Knife Gate Valve is designed and produced specially for pipeline with solid-liquid two-phase flow medium, which adopt toughening engineering ceramic as the main materials to shut off and avoid the flow wear out, so as to meet the function of the shutoff. This valve is light, easy to install, and installed at any angle on the pipeline with different configuration, so, obtain the welcome by the user. It is also proven that this valve's working life is greatly prolonged comparing with common slagging slurry valve.

产品性能规范 Products Performance Specification

法兰标准 The standards of flange ends	ASME B16.5, GB/T9113
公称压力 Nominal Pressure	1.0MPa, Class150
公称通径 Nominal diameter	DN50-DN600, NPS2" -NPS24"
连接形式 Connection type	对夹 Wafer
工作温度 Working Temperature	≤300°C
驱动方式 Operating Type	电动、手动 Electric, Manual
密封面材质 Sealing surface material	增韧陶瓷 Ceramic
压力测试 Pressure test	GB/T13927, API598
结构长度 Face to Face	GB/T12221, API609

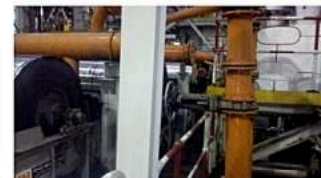
注：本公司可根据用户要求提供产品  
Note: Our company can provide products according to the customer's request.

主要连接及安装尺寸

Main connection and installation dimensions

公称压力 Nominal Pressure	尺寸 (mm) Dimension							Md(φ)	
	DN	D	L	H开 open	H关 close	Do	n		
1.0MPa	50	125	43	370	420	300	4	M16(φ20)	
	65	145	50	400	460	300	8	M16(φ20)	
	80	160	50	430	510	300	8	M16(φ20)	
	100	180	50	472	580	400	8	M16(φ20)	
	125	210	50	500	620	300	8	M16(φ20)	
	150	240	60	514	666	400	8	M20(φ23)	
	200	295	64	670	860	400	8	M20(φ23)	
	250	350	70	770	1020	400	12	M20(φ23)	
	300	400	80	850	1140	400	12	M20(φ23)	
	350	460	90	940	1280	400	16	M20(φ23)	
	400	515	90	1120	1520	500	16	M24(φ27)	
	450	565	90	1170	1620	500	20	M24(φ27)	
	500	620	90	1280	1750	600	20	M24(φ27)	
	600	725	132	1460	2050	600	20	M27(φ30)	
	Class 150	NPS2	120.7	43	370	420	300	4	5/8(3/4)
		NPS2-1/2	139.7	50	400	460	300	4	5/8(3/4)
NPS3		152.4	50	430	510	300	4	5/8(3/4)	
NPS4		190.5	50	472	580	400	8	5/8(3/4)	
NPS5		215.9	50	500	620	300	8	3/4(7/8)	
NPS6		241.3	60	514	666	400	8	3/4(7/8)	
NPS8		298.5	64	670	860	400	8	3/4(7/8)	
NPS10		362.0	70	770	1020	400	12	7/8(1)	
NPS12		431.8	80	850	1140	400	12	7/8(1)	
NPS14		476.3	90	940	1280	400	12	1(1-1/8)	
NPS16	539.8	90	1120	1520	500	16	1(1-1/8)		
NPS18	577.9	90	1170	1620	500	16	1-1/8(1-1/4)		
NPS20	635.0	90	1280	1750	600	20	1-1/8(1-1/4)		
NPS24	749.3	132	1460	2050	600	20	1-1/4(1-3/8)		

适用范围 Application



采矿、钢铁工业—用于煤炭、滤渣浆等  
造纸工业—用于任何浓度纸浆、料水混合物

电站除灰—用于灰渣浆液  
洗选煤行业、洗煤厂—煤浆的 Mining, steel industry-used for coal, filter residue, etc.

造纸工业—用于纸浆、料水混合物  
用于任何密度的浆液和纸浆。

电站除尘—用于灰渣浆液  
用于灰渣浆液。

洗选煤行业、洗煤厂—用于洗煤厂 - used for

产品特征 Product Feature

陶瓷球阀利用结构陶瓷的耐腐蚀性、耐磨损性的特点和先进的设计结构。广泛应用于电厂脱硫系统、化工厂等场合。该阀门可提供手动、电动、气动等多种驱动方式。本阀门具有密封性良好、耐磨



FREE-Valve's Ceramic Ball Valve takes advantage of the characters of corrosion resistance and wear resistance of the structural ceramic and the advanced designing structure. The valve is widely used in power plant desulfurizing system, chemical plant ,etc. According to the conditions, manual driving, electric driving and pneumatic driving and so on can be supplied. The valve has good sealing performance,high wear-resistance performance, open and close flexible.

产品性能规范 Products Performance Specification

法兰标准 The standards of flange ends	ASME B16.5, GB/T9113
公称压力 Nominal Pressure	1.0MPa,Class150
公称通径 Nominal diameter	DN25-DN200, NPS1" -NPS8"
连接形式 Connection type	法兰 Flange
工作温度 Working Temperature	≤200°C
驱动方式 Operating Type	手动、气动、电动 Manual, Pneumatic and Electric
密封面材质 Sealing surface material	增韧陶瓷 Ceramic
压力测试 Pressure test	GB/T13927, API598
结构长度 Face to Face	GB/T12221, API609

产品应用 Application



适用介质：

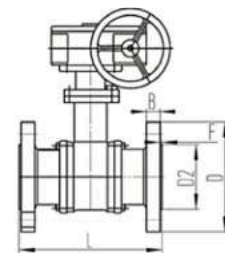
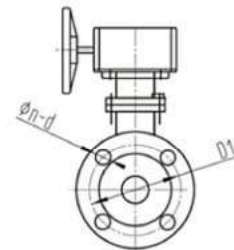
水灰、干灰、矿浆、酸碱盐及灰浆混合介质等。

Applicable medium:

Water ash, dry ash, pulp, acid-alkali-sault and mixture medium like ash slurry.

主要连接及安装尺寸 Main connection and installation dimensions

公称压力 Nominal Pressure	尺寸 (mm) Dimension							
	DN	D	D1	D2	B	F	L	n-d
1.0MPa	25	115	85	65	18	2	140	4-φ14
	50	165	125	102	18	3	200	4-φ18
	65	185	145	122	20	3	220	4-φ18
	80	200	160	135	22	3	250	4-φ18
	100	220	180	158	22	3	280	8-φ18
	125	250	210	188	24	3	320	8-φ18
	150	285	240	212	24	3	360	8-φ22
	200	340	295	268	26	3	500	8-φ22
Class 150	NPS1	110	79.4	50.8	12.7	2	140	4-φ16
	NPS2	150	120.7	92.1	17.5	2	200	4-φ18
	NPS2-1/2	180	139.7	104.8	20.7	2	220	4-φ18
	NPS3	190	152.4	127.0	22.3	2	250	4-φ18
	NPS4	230	190.5	157.2	22.3	2	280	8-φ18
	NPS5	255	215.9	185.7	20	3	280	8-φ18
	NPS6	280	241.3	215.9	23.9	2	360	8-φ22
	NPS8	345	298.5	269.9	27.0	2	500	8-φ22







产品特征 Product Feature

耐磨陶瓷管道主要包括耐磨弯头、直管、三通、变径管等结构件，主要用于气力和泵输送磨损性物料管道。由于输送介质具有硬度高、流速快、流量大等特点，陶瓷管道的应用能有效降低输送介质长期持续对管壁产生冲击、磨损和磨蚀等使管道产生疲劳致使渐渐被磨穿的速度。陶瓷复合管道的耐磨层是氧化铝陶瓷（氧化铝陶瓷含量不低于95%）。氧化铝陶瓷硬度在HRC88以上。相当于镍硬质合金，耐磨性比普通钢管高20倍以上，能承受一定的冲击



FREE-Valve's Ceramic Pipe and Ceramic Elbow mainly include elbow, short section ,Tee joint ,reducer etc ,which are widely used in the powder of pneumatic conveying and pumping conveying.Due to the large abrasives ,high hardness ,high speed ,large flow rate of medium ,the ceramic ring lined composite pipes can greatly prolong the speed of pipes wear out . The wear resistant layer is made up of alumina ceramic which content is no less than 95%. The hardness of ceramic chips (or rings) is HRC88, which is equal to dock nickel carbide. The abrasion resistance performance of ceramic is about 20 times of steel's, which can be worked at the seriously conditions. The ceramics also can be suffering some impact force.



应用领域Application



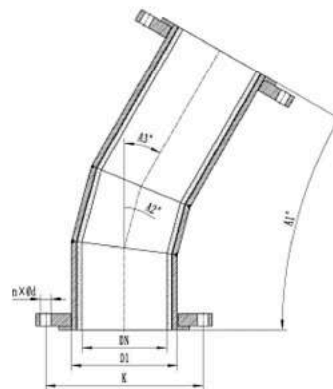
耐磨管道主要用于有磨损性介质的输送、常用在

FREE-Valve's Ceramic Pipe and Ceramic Elbow are widely used in the mining industry ,coal washing industry, power plant, cement industry ,metallurgy industry to transport the wearable medium.

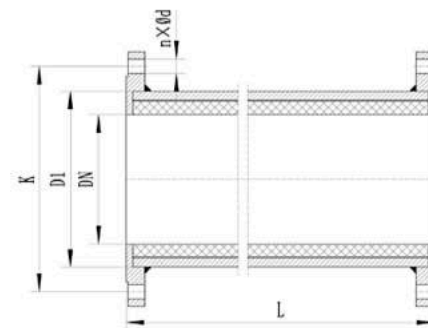
尺寸 Dimensions

注：订货前请提供如下的图纸，我们可按照用户图纸进行制作变径管。

Note : Please supply the following drawings when ordering . Different



陶瓷弯头Ceramic Elbow



陶瓷复合直管Ceramic Straight Pipe



### 订货须知 Ordering Instructions

为了选择最适合的陶瓷阀，在订货时请提供以下资料：提供详细的介质和使用工况对选型尤其重要，如果在选型和使用中有任何疑问，欢迎咨询！

In order to select the proper FREE-Valve's ceramic valves for you application, please provide the information listed below. Details of the process fluid and conditions are especially important, if you have any doubt as to selection or application of valves, please contact us.

Email: sales@free-valve.com , technical@free-valve.com

序号 No.	项目信息 Item	
1	订单项目 Ordering Project	
2	行业-系统 Industry-System	
3	口径 Valve Size	
4	阀门等级和端面形式 Valve Flange Rating and facing type	
5	使用介质及状况 Service fluid and State	
6	最大工作温度(°C) Max service temperature	
7	最大工作压力(bar) Max service pressure	
8	主要零部件材质 Valve material of main parts	
9	数量 Quantity	
10	其他要求 Other ordering requirements	



### 价值观 Our Values

我们不仅仅为客户提供简单的商务报价服务，而且还根据工况条件为客户提供专业性的技术解决方案和及时的服务！

- 为客户设计出安全可靠的阀门产品。
- 高度重视客户需求，为客户提供定制化的阀门需求解决方案。
- 为客户在售前、售中、售后提供优质服务。
- 为客户提供优质阀门产品和优质的技术支持。

At FREE- Valve company ,we understand that creating value is not only simply the price of supplying the valve for customers , but also supply professional solutions according to the site working conditions and in time service .

- **The value** is about designing valves that are reliability and safety.
- **The value** is pay great attention to customer needs ,made customized solutions to according customer needs.
- **The value** is the before sale ,selling and after sale service at any time to our customer.
- **The value** is meeting the needs of our customers by providing the products of the high quality-valve and the best technical support

### 使命 Our Mission

坚持一流品质、持续创新、优质服务、相互信任与您合作共赢的发展理念，孚瑞人长期发扬工匠精神！

FREE- valve focus on High Quality, Continuous Improvement, Outstanding Service and Trust both in the company and in the relationships with customers. The people of FREE- valve always carry the spirit of craftsman all the time , so we are known as an excellent source for high quality valve supplies and service.

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