

产品概述 Product overview

PC双偏心半球阀是在消化吸收国内外先进技术研发成功借鉴德国类似而开发的国产化创新产品，其结构采用偏心紧压原理，通过传动结构达到闸紧、调节、关闭的目的，其核心技术属国内领先水平。它的开发成功，为化工、石油、冶金、电力等行业部门管道工艺流程中为易堵塞、结晶析出而影响流通的场合中提供了可靠的控制阀门。为提高我国工业管道装备水平提供了新型优质产品。它设计独特结构新颖。第一：双偏心结构阀门在开启时球体藏于阀腔内，流通截面大，且阀门不被冲刷，无流阻。关闭时阀芯不被冲刷，阀芯球面沿阀座渐进，具有剪断功能，有效切除结垢障碍，实现可靠密封。它对容易结垢的介质固体析出输送特别有效。第二：阀门的半球采用双金属，在球体上堆焊不同的合金，阀座也作相应堆焊，经特殊处理。密封面组成防腐、耐磨、耐高温等各种类型。满足不同场合需求。第三：密封严密，输送有害气体可达零泄露。第四：阀座与球体留有补偿量，当阀座磨损后，关闭时再转动少许，仍能可靠密封，延长使用寿命。此外用户将压紧螺母拧掉调整或更换后，阀座仍可使用，避免了众多阀门密封失效整台报废的弊端。

根据不同用户需要堆焊不同合金，双金属密封圈的选配可以用于耐磨、耐腐蚀、耐高温等而又要求严格密封的不同工业部门。

PC double eccentric half ball valve is a domestic innovative product developed by digesting and absorbing the domestic and foreign advanced technologies, implementing successful research and development and borrowing German similar products. The structure is in accordance with the theory of eccentric tightening; it aims to attain the objective of tightening, adjusting and closing through transmission structure; the core technology is taking a domestic leading position. The successful development has provided reliable control valve for the difficulty of affecting solution process flow in the chemical engineering, petroleum, gas, metallurgical and power departments due to sedimentation scaling and crystal separation and offered new and extraordinary products for China to upgrade the equipment level of industrial pipe. It is featured as unique design and stylish structure. First, the double eccentric structure valve is concealed in the valve cavity once opening; it is featured as large circulation section, no valve flushing or flowing blockage. Once it is closed, the valve core is not flushed; the sphere of valve core steps forward along the valve seat; given shearing function, it can effectively cut off the scale obstacle and realize reliable sealing. It is highly effective to the separation and transportation of easily scaling solid medium. Secondly, the half ball of valve is in the double metal structure; different alloy materials are stacked and welded in the sphere; the valve seat is also stacked and welded and has to undergo a special treatment process. The sealing surface is adopted to form the anti-corrosive, wear resistant and high temperature resistant structures and thus meet various demands. Thirdly, the sealing is tight; during the transportation of hazardous gas, it can guarantee no leakage. Fourthly, the compensation margin is reserved for the valve seat and sphere; upon abrasion of valve seat, it is rotated a little upon closing; therefore, it can be reliably sealed and use life is lengthened. Besides, the valve seat can still be adopted upon user's unfastening, adjusting or replacing the compressive screw. Therefore, it can avoid the defect of wastage in the whole machine due to sealing invalidation of numerous valves.

Different alloy materials are stacked and welded according to the user's actual demand; the double metal seal ring is adopted for different industrial departments with wear resistance, corrosion resistance, high temperature resistance and strict sealing requirements.



Q940电动偏心半球阀
Q940 Electric eccentric half ball valve

产品用途 Product purpose

1、通用阀：适用于污水处理、纸浆、氧化铝、城市采暖供热要求严格的场合。

1. Universal valve: It is applicable to the areas with strict heat supply requirements such as sewage treatment, pulp, alumina and urban heat supply facilities.

2、油化工专用阀：适用于原油、重油等各类油品、化工行业耐腐蚀、两相混流介质。耐温可达425℃。

2. Oil chemical engineering valve: It is applicable to the crude oil, heavy oil, anti-corrosive and two-phase mixed flow medium in the chemical engineering industry.

The temperature resistance is 425℃.

3、燃气专用阀：适用于煤气、天然气、液化气的输送控制。产品结构特点是密封圈堆焊不同的铬合金，密封严密、抗腐蚀。

3. Gas valve: It is applicable to the transportation control of gas, natural gas and liquefied gas. The product structure is featured as follows: stacking and welding valve of seal ring contains different chromium alloy materials; the sealing is tight and it is anti-corrosive.

4、料浆专用阀：适用于液态、固态两相混流或液态输送中化学反应有结晶析出或结垢的工业管道输送。产品结构特点根据顾客所需介质、温度要求不同，球体受用铬铝、钨合金堆焊，阀座采用铬、钼合金、钛合金、不锈钢合金堆焊满足不同料浆输送的需要。

4. Slurry valve: It is applicable to the transportation of industrial pipe with crystal separation or scaling during the chemical reaction of solid-fluid mixed flow or fluid transportation. The product structural features vary according to the client's needed medium and temperature requirements; the sphere is stacked and welded by chromium, molybdenum and vanadium alloy; the valve seat is made of chromium, molybdenum alloy, vanadium alloy and stainless steel alloy welding rods to meet the transportation demand for different slurries.

5、煤粉灰渣专用阀：适用于电厂、水力除渣或气态输送管道的控制。产品要求耐磨性能，球体采用组合球式双金属，具有相当的刚度并非常耐磨，阀座采用整体耐磨钢或全堆焊。

5. Pulverized coal ash valve: It is applicable to the control of power plant, hydraulic slag removal or gas transportation pipe. The wear resistant performance is required for the products; the sphere is made of combined ball type double metal; it enjoys a very high rigidity and wear resistance; the valve seat is made of overall wear resistant steel or total overlaying.

产品特点 Product features

1、阀座设计外台阶与阀体设计内台阶相配合的结构，非常有效的防止球体与阀座发生卡阻，阀座脱离等现象。

1. A structure is designed to match up between the external step of valve seat and internal step of valve body; therefore, it can effectively prevent the blockage of sphere and valve seat and disconnection of valve seat.

2、流通面积大无流阻：这是因为开启后球体藏于阀腔内，无流阻直通通道，流通畅通不会出现积灰或卡死现象，压力损失小，介质不会沉积在阀腔内。

2. Large circulation area and no flow blockage: It is because sphere is concealed in the valve cavity upon opening. There is no tunnel for flow resistance; the smooth flow tunnel does not suffer from accumulative ash or blockage; in case of small pressure losses, the medium does not sediment the valve cavity.

3、开关轻便：由于偏心的原理，开启时球体与阀座完全脱离开，无任何接触，启闭扭矩小，转90度即可启闭完成，操作轻便。

3. Convenient opening and closing: Given the theory of eccentricity, the sphere is totally disconnected from the valve seat upon opening; there is no contact and opening and closing torque is small; the opening and closing are fulfilled by 90 degrees; the operation is convenient.

4、密封可靠使用寿命长：在双偏心的作用下本阀在关闭时，偏心球体与阀座越关越紧，完全达到良好的密封目的；半球切口的球体与阀座之间具有剪切和挤切作用，能有效的除去密封面的结垢或污垢，保持良好的密封。开启时球体与阀座完全脱离，故密封面受到良好的保护。密封面耐磨，阀座与球体留有补偿量，当阀座磨损后，关闭时再转动少许，仍能可靠密封，另阀座可调整或更换，延长使用寿命。这是半球阀最显著的特点。

4. Reliable sealing and long use life: Under the double eccentric role, the eccentric sphere is even closer with the valve seat once the valve is closed in order to totally attain the objective of excellent sealing; the shearing and guillotine role is realized between the sphere with half ball incision and valve seat to effectively remove scale or dirt on the sealing surface and maintain a good sealing performance. Upon opening, the sphere is totally disconnected from the valve seat; therefore, the sealing surface is well protected. The sealing surface is wear resistant; the compensation margin is reserved in the valve seat and sphere; upon abrasion of valve seat, it is rotated a little upon closing; it can still be sealed reliably; besides, the valve seat can be adjusted or replaced to lengthen the use life; it is the most obvious feature in the half ball valve.

5、根据不同的温度、介质，生产各种不同的耐磨、耐腐蚀、耐高温产品。

5. Various wear resistant, anti-corrosive and high temperature resistant products are produced according to different temperature and medium.

执行标准 Administer Standard

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| 1、设计和制造: GB/T12237-2007; | API608/API 6D |
| 2、检验和试验: GB/T13927-2008/JB9092-1999; | API598 |
| 3、法兰连接: JB/T79.1-4-1994; | ASME/ANSI B 16.5 |
| 4、结构长度: GB/T12221-2005; | ASME/ANSI B16.10 |
| 1、Design and Manufacture: GB/T12237-2007; | API608/API 6D |
| 2、Inspection and Test: GB/T13927-2008/JB9092-1999; | API598 |
| 3、Flange ends: JB/T79.1-4-1994; | ASME/ANSI B 16.5 |
| 4、Face to Face: GB/T12221-2005; | ASME/ANSI B16.10 |

性能规范 Performance node

公称压力PN(MPa) Nominal pressure	1.0	1.6	2.5	4.0	6.4	Class150	Class300
常温最大工作压力 (Mpa) Maximum work pressure under normal temperature (Mpa)	1.0	1.6	2.5	4.0	6.4	2.0	5.0
壳体强度试验压力 (Mpa) Test pressure of crust strength (Mpa)	1.5	2.4	3.8	6.0	9.6	3.0	7.5
气密封试验压力 (Mpa) Test pressure of gas sealing (Mpa)	0.6	0.6	0.6	0.6	0.6	0.6	0.6
高压密封试验压力 (Mpa) Test pressure of high-pressure sealing (Mpa)	1.1	1.76	2.75	4.4	7.1	2.2	5.5
泄漏率 Leakage and seepage rate	< 0.1 x DNmm ³ /s (符合GB/T13927-2008标准) (It is in accordance with GB/T13927-2008 standard.)						
适用温度 (°C) Applicable temperature (°C)	软密封: -46°C~280°C; 硬密封: -46°C~545°C Soft sealing: -46°C~280°C; Hard sealing: -46°C~545°C						
适用介质 Applicable medium	天然气、水蒸气、油品类、酸类、碱类、煤粉、煤灰、废渣、泥浆、含颗粒状、含纤维等各类介质; Various medium such as natural gas, water steam, oil products, acid, alkali, coal powder, coal ash, waste slag, slurry, particle and fiber;						
传动形式 Transmission mode	蜗轮传动、电动传动、气动传动、液动传动 Worm driving, electrical transmission, pneumatic transmission and hydraulic transmission						

主要零件材料 Form of major parts material

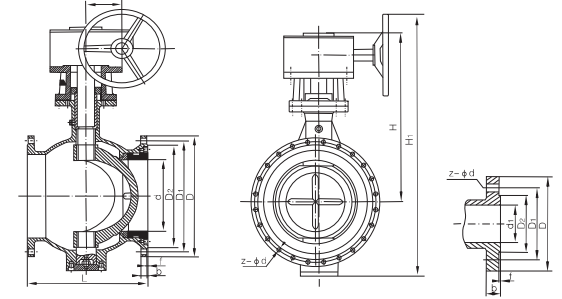
阀体、压板 Body、plate	GB	WCB	LCB	ZG1Cr18Ni9Ti	ZG0Cr18Ni12Mo2Ti	ZG15Cr1Mo1V
ASTM	A216 WCB	A352-LCB	A351 Cf8	A351 CF8M	A217 Wc9/WC6	
球体 Ball	GB	WCB+硬铬 hard chrome	LCB+硬铬 hard chrome	1Cr18Ni9Ti表面特殊处理 Surfaces special handling	0Cr18Ni12Mo2Ti表面特殊处理 Surfaces special handling	25Cr2Mo1V表面特殊处理 Surfaces special handling
ASTM	A216 WCB+HF	A35 LCB+HF	A351 Cf8+HF	A351 CF8M+HF	A217 WC6/WC9	
阀杆 Stem	GB	20Cr13	20Cr13	1Cr18Ni9Ti	0Cr18Ni12Mo2Ti	25Cr2Mo1V
ASTM	A276 420	A276 410	A276 304	A276 316	A182 F22a	
阀座 Seats	GB	Q235A+PTFE/堆焊	LF2+PTFE/堆焊	1Cr18Ni9Ti/PTFE	0Cr18Ni12Mo2Ti/PTFE	25Cr2Mo1V/PTFE
ASTM	A276 420/PTFE	A182 LF2+PTFE/HF	A182F 304/PTFE	A182 F316/PTFE	A182 F22a/PTFE	
填料 Packing	GB	柔性石墨 flexible graphite	柔性石墨 flexible graphite	柔性石墨 flexible graphite	柔性石墨 flexible graphite	柔性石墨 flexible graphite
ASTM	柔性石墨 flexible graphite	柔性石墨 flexible graphite	柔性石墨 flexible graphite	柔性石墨 flexible graphite	柔性石墨 flexible graphite	柔性石墨 flexible graphite
螺栓 Bolts	GB	35CrmoA	35CrMoA	0Cr18Ni9	0Cr18Ni9	15Cr1Mo1V
ASTM	A193 B7	A193 L7	A193-B8M	A193-B8M	A193 B16	
螺母 Nuts	GB	45	45	0Cr18Ni9	0Cr18Ni9	20CrMo
ASTM	A194 2H	A194-4	194-8M	194-8M	A194-16	

订货须知

- 硬(软)密封偏心半球阀有不同的温度级别、不同的使用介质, 请需方订货时必须注明使用温度、介质。
- 需方若需要超越现有的操作方式、规格、尺寸及材料范围的硬(软)密封偏心半球阀, 本厂也可单独设计制造, 但必须在订货合同中注明

Ordering notice

- The hard (soft) sealing eccentric half ball valve has different temperature levels and medium; during the goods ordering, the demander must mark the utilization temperature and medium.
- Once the demander needs the hard (soft) sealing eccentric half ball valve beyond the existing operation methods, specification, overall dimension and materials scope, the plant can design and manufacture independently; however, it must mark in the ordering contract.



PQ340F/H/Y 偏心半球阀
PQ340F/H/Y Eccentric half ball valve

主要外形和连接尺寸 Main connection and external dimensions

公称压力 PN(MPa) Nominal pressure	公称口径DN(mm) Nominal diameter	尺寸 Dimension(mm)								
		L 法兰 Flange	D	D1	D2	H	b	f	Z-φd	
PQ640 Y-1.0 P H C F R	40	32	165	145	110	85	260	16	3	4-18
	50	38	178	160	125	100	270	16	3	4-18
	65	49	190	180	145	120	280	18	3	4-18
	80	62	203	195	160	135	290	20	3	4-18
	100	74	229	215	180	155	330	20	3	8-18
	125	100	254	245	210	185	345	22	3	8-18
	150	123	267	280	240	210	370	24	3	8-23
	200	150	292	335	295	265	405	24	3	8-23
	250	200	330	390	350	320	480	26	3	12-23
	300	250	356	440	400	368	520	26	4	12-23
	350	266	450	500	460	428	570	28	4	16-23
	400	303	530	565	515	482	630	28	4	16-25
	450	334	580	615	565	532	690	30	4	20-25
	500	385	660	670	620	585	740	30	4	20-25
	600	487	680	780	725	685	840	34	5	20-30
	700	538	900	895	840	800	960	38	5	24-30
800	589	1000	1010	950	905	1080	42	5	24-34	
900	684	1100	1115	1050	1005	1190	38	5	28-33	
1000	779	1200	1230	1160	1080	1310	38	5	28-36	
1200	874	1300	1455	1380	1292	1420	44	5	28-39	
PQ640 Y-1.6 P H C F R	40	32	165	145	110	85	260	16	3	4-18
	50	38	178	160	125	100	270	16	3	4-18
	65	49	190	180	145	120	280	18	3	4-18
	80	62	203	195	160	135	290	20	3	8-18
	100	74	229	215	180	155	330	20	3	8-18
	125	100	254	245	210	185	345	22	3	8-18
	150	123	267	280	240	210	370	24	3	8-23
	200	150	292	335	295	265	405	26	3	12-23
	250	200	330	405	355	320	480	30	3	12-25
	300	250	356	460	410	375	520	30	4	12-25
	350	266	450	520	470	435	570	34	4	16-25
	400	303	530	580	525	485	630	36	4	16-30
	450	334	580	640	585	545	690	40	4	20-30
	500	385	660	705	650	608	740	44	4	20-34
	600	487	680	840	770	718	840	48	5	20-41
	700	538	900	910	840	788	960	50	5	24-41
800	589	1000	1020	950	898	1080	52	5	24-41	
900	684	1100	1120/1125	1050	998	1190	44	5	28-39	
1000	779	1200	1255	1170	1110	1310	46	5	28-42	
1200	874	1300	1485	1390	1325	1420	52	5	32-48	