

DQVT/DQVTM/DQVTW

料浆专用阀使用说明书

DQVT/DQVTM/DQVTW Series

Slurry Special Valve Manual



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1、产品概述

(1)、用途

DQVT/DQVTM/DQVTW 料浆专用阀是在吸收几种不同结构球阀优点的基础上设计而成的新型球阀，性能稳定，使用寿命长，阀内件采用特殊耐磨处理。填料采用子母填料结构，极大地提高了填料的密封性。执行机构有气动和手动两种形式。其中，气动执行机构采用高性能 AT 气缸活塞执行机构，结构简单、输出力矩大，而且输出力矩基本上符合旋转类阀门（如球阀、蝶阀等）的操作力矩要求。AT 执行机构有双作用和单作用两种结构，关于 AT 执行机构的详细介绍，请参阅 AT 气缸活塞执行机构产品使用说明书。

料浆专用阀按气动执行机构的作用方式可分为单、双作用两大类，单作用阀特点是动力源一旦发生故障，阀门将按控制系统要求自动地处于关闭或开启位置；双作用阀将保持原位。



图 1 气动双偏心半球阀

料浆专用阀与电磁阀、过滤减压阀等气动元件配套使用，可实现对煤泥、料浆、矿渣等颗粒状介质及氧化铝、钼矿、铜矿等工矿场合的带颗粒流体的控制。

1) 本产品广泛用于多种行业的介质管路上作启闭器，接通或截断介质，具有流体阻力小。操作方便，开闭迅速，便于远距离的控制等优点。

2) 广泛的应用适用于污水处理、纸浆、氧化铝、城市采暖供热要标严紧的场合，或电厂、水力除渣或气态输送管道的控制。

(2)、结构特点

1) 结构参见图 2。

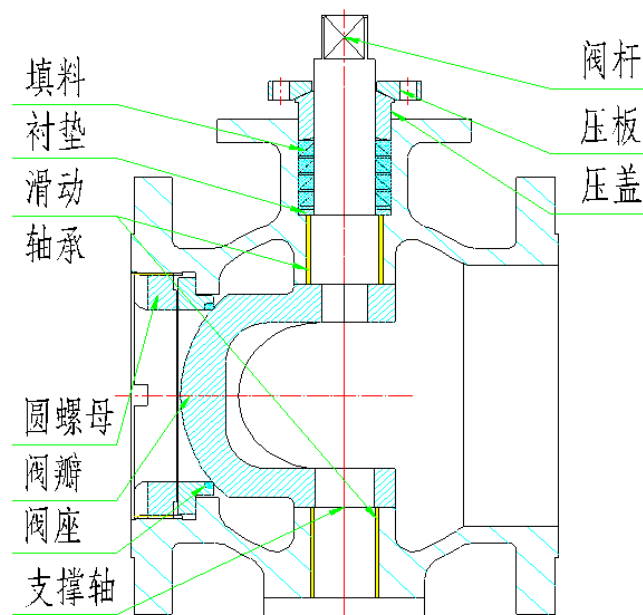


图 2 料浆专用阀结构图

2) 本阀门结构新颖、性能稳定、开关迅速、耐磨性强、密封可靠、易于调整维修及直通式结构流通快等特点；较闸阀、截止阀与蝶阀等阀门流阻小、系统降压小、能自行破除结垢、方便启闭及无“死区”等优点；克服了普通球阀易堵塞等弊端，显示其独特的优越性。

3) 本阀靠执行器使阀杆转动而带动阀瓣转动来达到启闭目的。

4) 本阀固定半球结构，在全关闭或全开启状态下没有所谓普通球阀的副腔，所以不会出现堵死现象。

5) 装有轴承使其操作扭矩小，保证了阀门在苛刻工况下工作过程无故障。

I. Introduction

(1)、 Use

DQVT/DQVTM/DQVTW slurry special valve is a new type of ball valve designed on the basis of absorbing the advantages of several different structure ball valves. It has stable performance and long service life. The valve internals are treated with special wear resistance. The packing adopts the structure of child and mother packing, which greatly improves the sealing property of the packing. The actuator has two forms: pneumatic and manual. Among them, the pneumatic actuator adopts a high-performance AT cylinder piston actuator, which has simple structure and large output torque, and the output torque basically meets the operating torque requirements of rotary valves (such as ball valves, butterfly valves, etc.). AT actuator has two kinds of structure, double action and single action, for a detailed introduction of AT actuator, please refer to the AT cylinder piston actuator product instruction manual.

Slurry special valve according to the mode of action of the pneumatic actuator can be divided into single and double acting two categories, the characteristics of the single acting valve is that once the power source fails, the valve will automatically be in the closed or open position according to the

requirements of the control system; The double acting valve will remain in place.



Fig. 1 Pneumatic double eccentric half ball valve

Slurry special valve and solenoid valve, filter pressure reducing valve and other pneumatic components used together, can realize the control of granular media such as coal slime, slurry, slag and alumina, molybdenum ore, copper ore and other industrial and mining occasions with granular fluid.

1) This product is widely used in a variety of industries of the medium pipe as a opener, through or cut off the medium, with low fluid resistance. Easy to operate, open and close quickly, easy to remote control and other advantages.

2) A wide range of applications for sewage treatment, pulp, alumina, urban heating and heating to standard tight occasions, or power plants, hydraulic slag removal or gas pipeline control.

(2)、Structural characteristics

1) The structure is shown in Fig. 2.

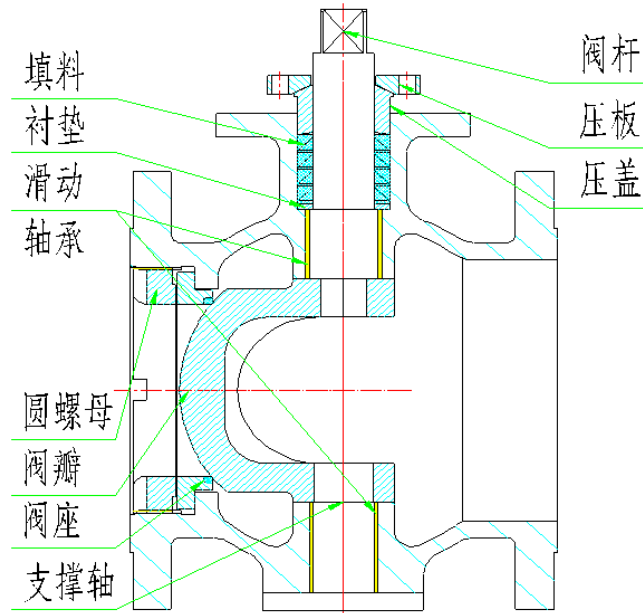


Fig. 2 Structure diagram of slurry valve

2) The valve has the characteristics of novel structure, stable performance, fast switching, strong wear resistance, reliable sealing, easy adjustment and maintenance, and fast circulation of straight-through structure; compared with gate valve, globe valve and butterfly valve, the flow resistance is small, the system pressure reduction is small, can break the scale by itself, convenient opening and closing and no "dead zone"; It overcomes the disadvantages such as easy blockage of ordinary ball valve and shows its unique superiority.

3) The valve depends on the actuator to turn the valve stem and drive the valve disc to turn to achieve the purpose of opening and closing.

4) The valve has a fixed hemisphere structure, and there is no secondary chamber of the so-called ordinary ball valve in the fully closed or fully opened state, so there will be no blockage phenomenon.

5) Equipped with bearings to make its operating torque small, to ensure that the valve in harsh working conditions of the working process without fault.



2、产品规格

阀 体：

型 式 双偏心半球阀

公称通径 50~250mm

公称压力 PN1.6、2.5、4.0、6.4MPa；ANSI 150/300/600；JIS
10K/20K/40K

连接形式 法兰连接 RF

法兰标准按 JB/T79.1-94 JB/T79.2-94、HG20592、JIS 或 ANSI B16.5
规定及 DIN 标准

材 料 ZG25I、ZG1Cr18Ni9 和 ZG0Cr17Ni12Mo2

介质温度 -40~+180℃，180℃~425℃

填 料 V 型聚四氟乙烯，柔性石墨

执行机构：

型 式 ATD(S)单作用（双作用）气缸活塞执行机构/手动

气源接头 RC1/8, RC1/4, RC1/2

环境温度 -40~+80℃

供气压力 0.4~0.6MPa

附 件：

电磁阀、行程开关和过滤减压阀，侧装手轮机构和保护装置（只适用
双作用执行机构）

2、Specifications



Valve body:

Type: double eccentric half ball valve

Nominal diameter : 50 ~ 250mm

Nominal pressure: PN1.6, 2.5, 4.0, 6.4MPa; ANSI 150/300/600; JIS 10K/20K/40K

Connection type : Flange connection RF

Flange standard according to JB/T79.1-94 JB/T79.2-94, HG20592, JIS or ANSI B16.5 regulations and DIN standards

Materials: ZG25I, ZG1Cr18Ni9 and ZG0Cr17Ni12Mo2

Medium temperature : -40 ~ +180°C, 180 ~ 425°C

Filling: V-type PTFE, flexible graphite

Executing agency:

Type : ATD(S) Single acting (double acting) cylinder piston actuator/manual

Air source connectors: RC1/8, RC1/4, RC1/2

Ambient temperature : -40 ~ +80°C

Gas supply pressure : 0.4 ~ 0.6MPa

Attachments:

Solenoid valves, travel switches and filter pressure reducing valves, side mounted handwheel mechanisms and protection devices (for double acting actuators only)

3、使用说明

(1)、使用

- 1) 本阀使用工况必须与铭牌和使用说明书的规定相符。
- 2) 本阀使用时只能作开启、切断阀使用，阀杆旋转 90 度的操作。

(2)、检查

- 1) 阀门在使用期间应定期检查如下项目，发现问题及时修理。
- 2) 紧固件是否被均匀紧固。
- 3) 填料压紧螺母是否松动，需重新锁紧。
- 4) 填料是否被严重磨损，垫片是否被损坏（停车检修）。
- 5) 驱动是否轻便、灵活。
- 6) 阀杆是否被严重磨损或变形。
- 7) 密封面是否被损坏或严重磨损（停车检修）。
- 8) 壳体是否被严重腐蚀或磨损，导致壳体明显变薄，甚至出现渗漏，如果出现这些现象，应报废（停车检修）。
- 9) 阀门检修装配后，必须按相应标准进行压力试验，每次检修后应做好情况记录，以备考查。

3、Instructions for use

(1)、Use

- 1) The operating conditions of the valve must be consistent with the provisions of the nameplate and the operating manual.
- 2) When the valve is used, it can only be used to open and cut the valve,

and the valve stem can be rotated 90 degrees.

(2)、Check

1) The valve should be regularly checked during the use of the following items, find problems in time to repair.

2) Whether the fasteners are uniformly fastened.

3) Whether the packing compression nut is loose, it needs to be re-locked.

4) Whether the packing is seriously worn, whether the gasket is damaged (parking maintenance).

5) Whether the drive is light and flexible.

6) Whether the valve stem is seriously worn or deformed.

7) Whether the sealing surface is damaged or seriously worn (parking maintenance).

8) Whether the shell is seriously corroded or worn, resulting in a significant thinning of the shell, or even leakage, if these phenomena occur, should be scrapped (parking maintenance).

9) After the valve repair and assembly, the pressure test must be carried out according to the corresponding standard, and the situation should be recorded after each repair for inspection.

4、安装指南

(1)本阀可装于任何位置（依实际工况），但须注意检修和操作方便。

(2)安装前应仔细核对阀门型号、压力、口径是否符合要求，确认无误

后方可安装。

(3)安装本阀应清洗内腔和密封面，检查密封面、填料压紧、阀杆旋转是否自如等情况。

(4)安装时阀体上标有箭头符号，表示阀门适用于单向受压的管道，安装时应保持箭头指示方向与管道介质流向一致，切勿装反。连接管道时应均匀对称拧紧连接螺栓。

(5)阀门出厂处于全关位置，阀位启闭开度均调试定位，使用时不得随意调整操作系统定位装置。

(6)安装后，阀门须全开进行管道吹扫和系统压力试验。

4. Installation guide

(1) The valve can be installed in any position (according to the actual working conditions), but must pay attention to maintenance and easy operation.

(2) Before installation, carefully check whether the valve model, pressure, caliber meets the requirements, and can be installed after confirmation.

(3) The installation of the valve should clean the inner cavity and sealing surface, check the sealing surface, packing pressure, valve stem rotation is free.

(4) The installation of the valve body marked with an arrow symbol, indicating that the valve is suitable for one-way pressure pipeline, installation should keep the direction of the arrow indicating the same as the flow of the pipeline medium, do not install reverse. Tighten the connection bolts evenly and symmetrically when connecting pipes.

(5) The valve is in the fully closed position, the valve position opening and

closing opening degree are debugged and positioned, and the operating system positioning device shall not be adjusted at will when used.

(6) After installation, the valve must be fully opened for pipeline purging and system pressure test.

5、维护与保养

(1)本阀须保管存放在干燥、通风的室内，放置整齐，阀杆不得着力。

(2)本阀存放期间，阀杆及机加工表面应用容易清除的防锈剂涂覆。

(3)阀门如长期存放，应定期检查，消除表面污垢锈迹，加工面上需要涂防锈油。

(4)气动阀门搬运时应小心轻放，保持干燥，防止接触腐蚀物质，以免损坏电气元件和机械零件。

5、Repairment and maintenance

(1) The valve shall be kept in a dry and ventilated room, placed neatly, and the valve stem shall not be strained.

(2) During the storage period of the valve, the stem and machined surface should be coated with anti-rust agent that can be easily removed.

(3) If the valve is stored for a long time, it should be checked regularly to eliminate surface dirt and rust, and anti-rust oil needs to be applied on the processing surface.

(4) Pneumatic valve handling should be carefully handled, keep dry, prevent contact with corrosive substances, so as not to damage electrical



components and mechanical parts.

6、常见问题与解决方案

6、Common problems and solutions

故障现象 Fault phenomenon	原 因 Cause	排 除 Elimination
填料渗漏 Packing leakage	1. 填料压盖未压紧 2. 填料圈数不足 3. 填料损伤失效 1. Packing gland is not pressed tightly 2. Insufficient number of packing rings 3. Filler damage failure	1. 均匀拧紧螺母 2. 增加填料 3. 换填料 1. Tighten the nuts evenly 2. Add stuffing 3. Change the stuffing
密封面渗漏 Sealing surface leakage	1. 密封面有污染物附着 2. 密封面被损坏 3. 密封面长期使用被磨损 4. 关闭位置没有到位 1. Contaminants are attached to the sealing surface 2. The sealing surface is damaged 3. The sealing surface is worn for a long time 4. The closing position is not in place	1. 去除污物 2. 更换阀座 3. 更换阀瓣 4. 调节气缸调节螺母 5. 支架松动，在阀门开启位置锁紧支架。 Step 1 Remove dirt 2. Replace the valve seat 3. Replace the valve disc 4. Adjust the cylinder adjusting nut 5. If the support is loose, lock the support in the opening position of the valve.
开关转动不灵活或球不能启闭 The switch is not flexible or the ball cannot be opened or closed	1. 填料压盖与轴锈死 2. 填料压盖装置歪斜 3. 阀杆有损坏或有污物 4. 阀杆弯曲 1. Packing gland and shaft rust dead 2. The packing gland device is skewed 3. The valve stem is damaged or has dirt 4. The stem is bent	1. 压盖与轴间隙处加入润滑油 2. 调正填料压盖 3. 拆开修整螺纹或清除污物 4. 更换阀杆 1. Add lubricating oil to the gap between the gland and the shaft 2. Adjust the packing gland 3. Disassemble and trim threads or remove dirt 4. Replace the stem



7、注意事项

(1) 阀门材料的选择及其在使用中变质的可能性和必要的定期检查由用户负责考虑。

(2) 本阀门设计只考虑一般工况，如有特殊要求须在合同中注明。

(3) 阀门工作温度范围不得超过规定，超过（含瞬时）此范围引起的后果完全是用户的责任。

(4) 本阀适用的介质超出约定使用范围引起的后果完全是用户的责任。

(5) 阀门工作过程中的体表温度可能引起人体接触烫伤，用户必需在相应部位设置警示标志。

(6) 阀门不得带压增加或更换填料，上密封结构不作为用户带压更换填料的理由。

(7) 阀门运行过程中不得焊接修理和外表涂漆。

(8) 阀门在受压状态下不得拆卸。

(9) 本阀门设计未考虑地震载荷，由此引起的后果，制造厂概不负责。

7. Precautions

(1) The choice of valve material and its possibility of deterioration in use and the necessary regular inspection by the user is responsible for consideration.

(2) The valve design only consider the general conditions, if there are special requirements must be noted in the contract.

(3) The valve operating temperature range shall not exceed the provisions,

exceed (including instantaneous) this range caused by the consequences are entirely the user's responsibility.

(4) The consequences caused by the medium applicable to this valve beyond the agreed scope of use are entirely the responsibility of the user.

(5) The valve working process of the body surface temperature may cause human contact burns, the user must set a warning sign in the corresponding part.

(6) The valve shall not have pressure increase or replacement filler, the upper seal structure is not used as a reason for the user to replace the filler with pressure.

(7) The valve shall not be welded for repair or painted during operation.

(8) The valve shall not be disassembled under pressure.

(9) The valve design does not consider the seismic load, the resulting consequences, the manufacturer is not responsible.

8、订货须知

订货时，请写明：

- (1)、产品型号
- (2)、公称通径
- (3)、公称压力
- (4)、执行机构（单/双作用指明）
- (5)、介质温度



- (6)、阀体和阀内件材料
- (7)、附件
- (8)、其它特殊要求

8. Instructions for ordering

When ordering, please state:

- (1)、Product model
- (2)、Nominal diameter
- (3)、Nominal pressure
- (4)、The executive mechanism (single/double role specified)
- (5)、Medium temperature
- (6)、Valve body and valve interior materials
- (7)、Accessories
- (8)、Other special requirements



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