

# 气动调节/开关蝶阀 TD671X/D671X



图 1. D671X 气动蝶阀

Figure 1. TD671X/D671X Pneumatic butterfly valve

## 操作和维护手册

## Instruction Manual

**SZ/CZ001-2022 CN/EN**

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TS



TS2733117-2024

ISO 9001:2008

## 序言 Introduction

本说明书是气动执行机构与衬胶蝶阀组合而成的TD671X/D671X系列气动衬胶蝶阀的使用说明书。其他型号的阀门请勿使用本说明书。

This instruction manual is TD671X/D671X series pneumatic control valve which is composed of series pneumatic actuator and Butterfly valve with rubber lined. Please do not use it for other types of valves.

本说明书对于初次使用苏正公司阀门的客户固然很有必要，就是对于具有使用经验的客户，也可使其进一步加深理解，这一点也是编者的宗旨。希望客户仔细阅读本说明书，完全理解后再付诸实践。另外，设备在正常开车后，设备操作员与维修人员须将此说明书就近保管好，以便需要时参阅。

This manual is necessary for customers who use SZ valve for the first time, but also for customers with experience in use, it can further deepen their understanding, which is also the purpose of the editor. We hope that customers will read this manual carefully and fully understand it before putting it into practice. In addition, after the equipment is normally driven, the equipment operator and maintenance personnel must keep this manual nearby for reference when needed.

本说明书的主要内容包括验收·搬运、保管、拆箱、安装、开车准备及开车、日常检查及定期检查、故障·异常的辨别方法及措施等几个部分。

The main contents of this manual include acceptance, handling, storage, unpacking, installation, starting preparation and starting, daily inspection and regular inspection, fault and abnormal identification methods and measures.

由于控制阀的研究与改进在不断进行，因此本使用说明书的内容有可能与所购买产品的具体情况有不符之处，如对购买的产品或本说明书有疑问，请与下述部门联系：

Due to the continuous research and improvement of the control valve, the content of this manual may be inconsistent with the specific situation of the purchased product. If you have any questions about the purchased product or this manual, please contact the following departments:

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## 安全指导 Safety Guidance

**设备的安装，启动和维修必须由经过培训和有资质的人员进行，遵守公认的行业规范，确保使用者或第三者不易受到任何伤害。必须遵照安装和操作说明中的所有安全说明和警告，特别是有关于安装，启动和维修的。**

The installation, start-up and maintenance of the equipment must be carried out by trained and qualified personnel and comply with recognized industry regulations to ensure that users or third parties are not vulnerable to any injury. All safety instructions and warnings in the installation and operating instructions must be followed, especially regarding installation, start-up and maintenance.

**控制阀遵守 TS 中国特种设备制造许可证和 ISO9001 质量管理体系等其他要求。**

The control valve shall comply with the requirements of China's special equipment manufacturing license, ISO9001 quality management system and other relevant standards.

**为正确操作，要确认控制阀只使用在工作压力和温度没有超出定货时提供的阀门尺寸选用的工作值。制造商不承担任何由外力或任何其它外部影响导致的损害责任。任何因工艺介质、操作压力或控制阀可动部件所引起的伤害均可采取正确的措施手段加以防止。**

For correct operation, it is necessary to make sure that the control valve is only used when the working pressure and temperature do not exceed the working value of the valve size provided at the time of order. The manufacturer is not responsible for any damage caused by external forces or any other external influences. Any damage caused by the process medium, operating pressure or the movable parts of the control valve can be prevented by taking correct measures.

**正确的运输和合理的存贮总是必要的。**

Proper transportation and reasonable storage are always necessary.



## 警告 Warning

如果不遵守注意事项将随时可能发生伤亡事故。

If you don't follow the precautions, casualties may occur at any time.

对于阀门的安装和维修，要确定使相关管道段减压，排放光工艺流体。如果需要，在对阀门开始任何工作前，让控制阀冷却或加温达到环境温度。在检修阀门前，确定断开控制信号或关断仪表空气供给，防止可动部件造成的所有危险。

For the installation and maintenance of the valve, it is necessary to make sure that the relevant pipeline section is depressurized, and the process fluid is discharged. If necessary, allow the control valve to cool or warm to ambient temperature before starting any work on the valve. Before repairing the valve, make sure to disconnect the control signal or turn off the instrument air supply to prevent all hazards caused by movable parts.

### 安全信号词和符号 Safety Signal Words And Symbols

注意下面的信号词及安全警示符号

Pay attention to the following signal words and safety warning symbols!



## 警告 Warning

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If you do not follow the precautions, casualties may occur at any time.



## 注意 Warning

如果不遵守注意事项将随时可能造成控制阀或其它设备的损坏及故障。

If you do not follow the precautions, it may cause damage and failure of the control valve or other equipment at any time.



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TD671X/D671X 型气动衬橡胶调节蝶阀由气动活塞式执行机构和衬橡胶蝶阀组成,属旋转类控制阀。

TD671X/D671X pneumatic liner rubber regulating butterfly valve is composed of pneumatic piston actuator and rubber liner butterfly valve, which belongs to rotary control valve

该产品以压缩空气为动力源,接受控制仪表 4~2mA 信号(或开关信号),通过电-气阀门定位器(或电磁阀)实现对阀门的连续调节(或位式控制)。

The product uses compressed air as the power source, accepts the 4-2mA signal (or switch signal) of the control instrument, and realizes the continuous adjustment (or solenoid valve) of the valve through the E/P positioner (or solenoid valve).

橡胶衬里蝶阀是一种阀体内腔衬有橡胶的防腐蚀蝶阀。腐蚀性流体不与阀体接触,阀体可用普通铸铁或碳钢,由此降低蝶阀的成本。衬里材料有各种橡胶可供选择,还可更换。

Rubber lined butterfly valve is a kind of anti-corrosion butterfly valve with rubber lining in the body cavity. Corrosive fluids are not in contact with the valve body, and the valve body can be cast iron or carbon steel, thereby reducing the cost of butterfly valves. Lining materials are available in a variety of rubbers and can be replaced.

该产品结构简单,输出力矩大,性能优越。通常适用于密封要求比较高的腐蚀性流体。

The product has the advantages of simple structure, large output torque and superior performance. It is usually suitable for corrosive fluids with high sealing requirements.

## TD671X/D671X 气动调节蝶阀

TD671X/D671X Pneumatic Butterfly Valve

### 阀体 BODY

型式 TYPE 扁平式阀体 Flat valve body  
公称通径 DN 40、50、65、80、100、150、200、250、300、  
400、450、500、600、700、800、900、1000mm  
公称压力 PN PN1.0MPa  
ANSI Class 150  
JIS 5K、10K  
连接形式 对夹式 法兰式 Wafer Flange  
Connect. HT200、WCB、CF8、CF8M 衬橡胶/With Rubber  
材料  
Materials 标准型：与阀体一起铸造  
上阀盖 Standard type: Cast with valve body  
Bonnet -20~+80°C  
介质温度  
Tempera.

### 阀内组件 TRIM

阀板形状 中心旋转式  
Disc Type Rotation  
阀板材料 A216WCB、A351CF8、A351CF8M、A351CF3、  
Disc MAT. A351 CF3M  
阀板转角 调节型70°  
ROTATION CONTROL Type 70°  
轴材料 2Cr13、304、316、17-4PH  
Shaft MAT.  
流量特性 近似等百分比  
Flow Chart. Appro. E0%

### 阀内腔材料 TRIM MAT.

阀座材质 Seat MAT.	使用温度范围 Operating Temp.	适用介质 Applicable medium
天然胶NB	-20~+85°C	酒类、饮料、奶制品等Alcohol, beverages, dairy products, etc
氯丁橡胶Neoprene	-29~+94°C -35~+113°C (Short time)	水、油、缓和化学品、酸类、脂肪等 Water, oil, palliative chemicals, acids, fats, etc
丁腈橡胶NBR	-23~+82°C -23~+120°C (Short time)	淡水、空气、气体、化学品、酒类等 Fresh water, air, gas, chemicals, alcohol, etc
乙丙橡胶EPDM	-40~+135°C -50~+170°C (Short time)	水、油、饮料、奶制品等 Water, oil, beverages, dairy products, etc
氟橡胶VITON	-23~+150°C	水、油、空气、酸类等 Water, oil, air, acid, etc
聚四氟乙烯PTFE	-20~+80°C	酸碱类腐蚀性介质 Acid and alkali corrosive medium

### 执行机构 ATUATOR

型式 GTX/GTD单作用/双作用气动活塞执行机构  
Type GTX/GTD Single action/double action pneumatic piston actuator  
供气压力 0.4~0.7MPa  
Supply air  
气源接口 1/4NPT  
Air Connect.  
阀作用型式 单作用：气关式或气开式  
Action Type Single action: FC or FO  
双作用：根据信号转换控制阀开、阀关  
Double action: Control valve opening and closing based on signal conversion.

### 附件 ACCESSORY (根据要求配置) Configure according to requirements

定位器, 空气过滤减压阀, 手轮机构, 限位开关, 电磁阀, 阀位变送器, 气动加速器, 限位阀, 其它。  
Positioner, Air filter, Hand wheel, Limit switch, Solenoid Valve, Position Transmitter, Booster, Locked Valve, others.

### 性能 PERFORMANCE

基本误差 带定位器:  $\leq \pm 2.5\%$  With Positioner  $\leq \pm 2.5\%$   
Basic Error  
回差 带定位器:  $\leq \pm 2.5\%$  With Positioner  $\leq \pm 2.5\%$   
Difference  
死区  $\leq 1.0\%$   
Dead Space  
泄漏量 FCI70.2/ANSI B16.104 VI, GB/T4213-2018 VI  
Leakage

## TD671X/D671X 气动调节蝶阀

TD671X/D671X Pneumatic Butterfly Valve

### 额定流量系数KV、 额定行程 Rated flow coefficient KV, rated stroke

公称通径 DN mm	40	50	65	80	100	125	150	200	300	250	350	400	450	500	600	700	800	900	1000
额定流量 系数Kv	45	85	100	225	340	500	770	1360	2130	3060	4160	5450	6900	8500	12200	15800	20700	25440	31700
额定行程 Stroke	70° / 90°																		

### 执行机构配置和允许压差 Actuator configuration and allowable differential pressure

#### 允许压差(配用GT 型横式气缸执行机构)

Allowable differential pressure (with GT type transverse cylinder actuator)

#### (1) 配用GTD 型双作用气缸执行机构(气源压力0.5MPa)

MPa

Equipped with GTD double-acting cylinder actuator (air source pressure 0.5MPa)

执行机构 Model	输出力矩N.m Force output	公称通径 Nominal diameter																	
		50	65	80	100	125	150	200	250	300	350	400	450	500	600				
GTD-60	34.9	2.4	1.10	0.53	0.32	0.18													
GTD-85	75.5		2.45	1.22	0.71	0.37	0.21												
GTD-105	127.3			2.28	1.14	0.63	0.36	0.15											
GTD-125	248				2.28	1.20	0.62	0.31	0.16										
GTD-140	415					2.00	1.48	0.51	0.26	0.15									
GTD-160	633						1.82	0.78	0.40	0.23	0.15								
GTD-210	1380							1.69	0.87	0.51	0.32	0.22							
GTD-270	2317								1.46	0.86	0.54	0.36	0.25						
GTD-300	3177									1.17	0.74	0.49	0.34	0.26					
GTD-350	4756										1.10	0.74	0.52	0.38	2.2				
GTD-400	6781											1.06	0.75	0.54	0.31				

#### (2) 配用GTX 型单作用气缸执行机构(气源压力0.5MPa)

MPa

Equipped with GTX type single acting cylinder actuator (air source pressure 0.5MPa)

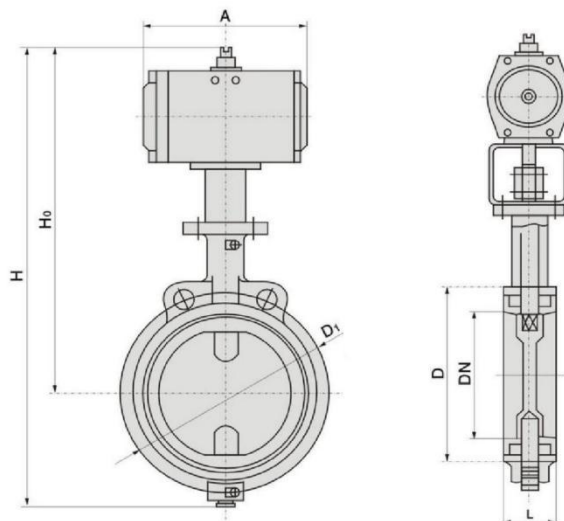
执行机构 Model	输出力矩N.m Force output	公称通径 Nominal diameter																	
		50	65	80	100	125	150	200	250	300	350	400	450	500	600				
GTX-60	14.3	1.01	0.48	0.26	0.14														
GTX-85	34.3		1.14	0.62	0.32	0.17													
GTX-105	40.7			0.73	0.38	0.20	0.12												
GTX-125	76				0.71	0.37	0.21	0.09											
GTX-140	134					0.65	0.38	0.16	0.08										
GTX-160	166						0.47	0.20	0.10	0.06									
GTX-210	445							0.54	0.28	0.17	0.10								
GTX-270	586								0.37	0.22	0.14	0.09							
GTX-300	1025									0.38	0.24	0.16	0.11						
GTX-350	1492										0.35	0.23	0.16	0.11					
GTX-400	2109											0.33	0.23	0.17	0.09				

\*\*\*以上输出扭矩是在标准试验情况测出的扭矩, 具体工况请与公司技术部联系。

The above output torque is measured under standard test conditions. Please contact the company's technical department for specific working conditions.

**TD671X/D671X气动调节蝶阀**  
 TD671X/D671X Pneumatic Butterfly Valve

**外形尺寸及重量**      **Dimensions and weight**



单位: mm

标准值 Standard Value					参考值 Reference Value				
DN	L	D	D1	Z-d	H	Ho	A	B	W(kg)
50	43	99	125	4-18	170	130	177	120	24.7
65	46	118	145	4-18	170	145		120	25.6
80	46	132	160	4-18	320	186		240	27
100	52	156	180	4-18	320	192		100	30.8
125	56	184	210	4-18	345	200	216	118	37.6
150	56	211	240	4-22	385	230		118	43.2
200	60	266	295	4-22	471	297		143	100.8
250	68	319	350	4-22	533	327		143	118.5
300	78	370	400	4-22	606	364	290	178	159
350	78	429	460	4-22	694	404	290	178	180.7
400	87	480	515	4-26	757	444		248	216.8
450	106	530	565	4-26	814	472	368	232	266.1
500	127	582	620	4-32	902	522		232	325
600	154	682	725	4-30	1048	590		318	355
700	165	794	840	4-30	1277	810		318	385
800	190	901	950	4-33	1385	844	450	350	798
900	203	1001	1050	4-33	1490	899		350	906
1000	216	1112	1160	4-26	1620	950		350	1055

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## 阀门安装 INSTALLATION

蝶阀安装不符合要求而出故障会造成巨大的浪费，反之，安装得当，可保证正常开工并可延长使用寿命。减少维修工作量和获得良好的系统控制性能。

The installation of the control valve does not meet the requirements and the failure will cause huge waste. On the contrary, the proper installation can ensure the normal operation and prolong the service life. Reduce maintenance workload and obtain good system control performance.

### (1) 安装蝶阀总体上应考虑以下方面：

Generally, the following aspects should be considered when installing the valve:

1.1 安全：安装过程中人员和设备的安全。

1.2 控制性能：配管系统压力损失应与计算蝶阀尺寸时所考虑的压力损失一致，以保证所需的流量特性。进出口应尽量保证足够的直管段。

Control performance: The pressure loss of the piping system should be consistent with the pressure loss considered when calculating the size of the control valve to ensure the required flow characteristics. The import and export should try to ensure enough straight pipe sections.

1.3 安装位置：应有足够的空间便于操作人员手动操作（包括旁路操作）以及保证蝶阀和附件的就地拆卸和维修的可能性。

Installation position: there should be enough space for operators to operate manually (including bypass operation) and ensure the possibility of local disassembly and maintenance of control valve and accessories.

1.4 蝶阀组：一般在工艺过程配管中均安装切断阀的旁路阀与蝶阀配成阀组，以适应设备连续操作的需要。维修蝶阀时用切断阀隔离。用旁路阀调节。下面图 1 中推荐蝶阀组布置方式。

Installation position: there should be enough space for operators to operate manually (including bypass operation) and ensure the possibility of local disassembly and maintenance of control valve and accessories.

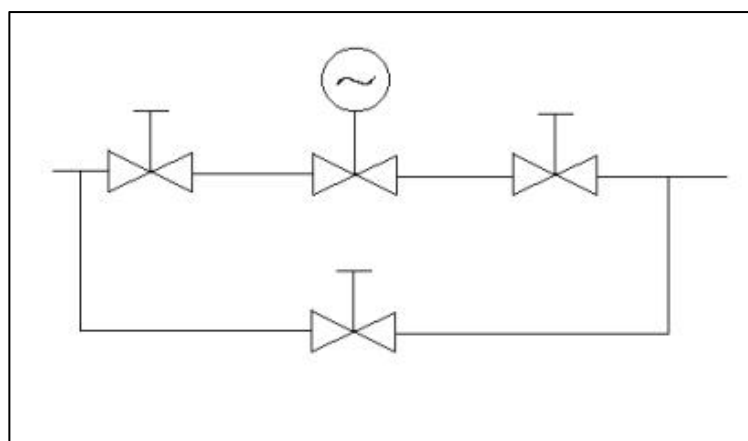


图 1 旁路管道安装图例

Figure 1 Illustration of Bypass Pipe Installation

### (2) 实地安装 Field Installation

安装人员首先应认识到蝶阀是一种精密的仪器设备，不准碰撞跌摔，以免损坏。具体注意以下几点：The installer should first realize that the control valve is a kind of precision instrument and equipment, and it is not allowed to crash or fall to avoid damage. Pay attention to the following points:

2.1 阀最好正立垂直安装在管道上。阀自重较大和有震动场合应加支承架。

It is best to install the valve upright and vertically on the pipeline. A support frame should be added to the valve with large weight and vibration.

2.2 阀体要避免因前后配管或调和的法兰严重不同轴而受到过大的应力。

The valve body should avoid the excessive stress caused by the serious misalignment between the front and rear piping or the reconciling flange.

2.3 在初次开工前和停工检修后应先冲洗配管系统后装蝶阀。或在阀前安装过渡滤口。

The piping system should be flushed before the first start of work and after the shutdown for maintenance, and then the valve should be installed. Or install a transition filter in front of the valve.

2.4 必按照阀体上流动方向的箭头安装蝶阀。

The valve must be installed in accordance with the arrow on the flow direction on the valve body.

2.5 阀应安装在环境温度为-20℃~60℃，相对湿度≤95%，无严重腐蚀性气体的环境中。

The valve should be installed in an environment where the ambient temperature is -20℃~60℃, the relative humidity is ≤95%, and there is no severe corrosive gas.

2.6 当阀门与管线并排时，应留有足够的空间用以操作与维护；

When the valve and pipeline are arranged side by side, there should be enough space for operation and maintenance.

2.7 用户依照工作温度、压力、介质选择适当的螺柱、垫片，用固定的力矩对角式拧紧螺母，第一次拧紧力矩为要求预紧力矩的 2/3 左右；

The user selects the appropriate studs and gaskets according to the working temperature, pressure and medium, and tightens the nut diagonally with a fixed torque. The first tightening torque is about 2/3 of the required pre-tightening torque.(refer to table 1)

螺母的参考预紧力矩(表 1)

The reference pr-tightening torque of the nut (Table 1)

螺纹规格 Thread size	预紧力范围 (N.m) Pre-tightening force range	螺纹规格 Thread size	预紧力范围 (N.m) Pre-tightening force range
5/8-11 UNC	100~130	1-3/8-8 UN	1100~1300
3/4-10 UNC	160~210	1-1/2-8 UN	1400~1800
7/8-9 UNC	280~330	1-5/8-8 UN	1800~2200
1-8 UNC	420~500	1-3/4-8 UN	2200~2600
1-1/8-8 UN	500~600	1-7/8-8 UN	2800~3300
1-1/4 -8UN	850~1000	2-8 UN	3500~4200

2.8 选择管线的内径应确保阀门能完全开启。当安装阀门时，在阀体上的流向标记应与实际流向一致；

The inner diameter of the pipeline shall be selected to ensure that the valve can be fully opened. When installing the valve, the flow direction mark on the valve body shall be consistent with the actual flow direction.

2.9 推荐按首选流向安装阀门才能达到其最大关断压力。

It is recommended to install the valve in the preferred flow direction to achieve its maximum shut-off pressure.

**阀门操作调试 VALVE OPERATION & COMMISSIONING****1. 配管·配线工程 Piping and Wiring Work**

由于气动执行机构选配不同厂家和型号，请按相应执行机构说明书进行接线和配管。

As electric actuators are equipped with different manufacturers and models, please follow the instructions of the corresponding actuator for wiring and piping.

**注意 Warning**

为了保证控制阀的性能，请注意下述事项。

In order to ensure the performance of the control valve, please pay attention to the following matters.

- 执行机构的操作气源应符合相应要求。

The operating air source of the actuator shall meet the corresponding requirements.

- 按用户要求安装的限位开关等附件，均是与阀门整体组装后出厂，请注意不要使其受损。

The limit switch and other accessories installed according to the user's requirements are all assembled with the valve before leaving the factory. Please be careful not to damage it.

- 在控制阀上配有附件时，要按照各附件的使用说明书进行仪表配管、配线。

When the control valve is equipped with accessories, the instrument piping and wiring must be carried out in accordance with the instruction manual of each accessory.

- 配线工程不要在雨天或周围有降水的环境中进行，以免引起漏电及仪表损坏。

Do not carry out the wiring work in rainy weather or in an environment with precipitation around it, so as to avoid leakage and instrument damage.

- 为充分保证附件的性能请选用合适的电线规格。

In order to fully ensure the performance of the accessories, please select the appropriate wire specifications.

- 在配线过程中要确保外部电线接口密封防水。

During the wiring process, ensure that the external wire interface is sealed and waterproof.

**2. 开车准备 Work Preparation**

所有苏正控制阀在出厂前已经经过调试，但在运输及安装过程中难免遇到撞击、摔落等不利情况，所以在安装完成后，要重新进行检查，如有偏差应进行调整及校正。

All SUZHENG valves have been tested before they leave the factory, but they will inevitably encounter unfavorable conditions such as bumps and drops during transportation and installation. Therefore, after the installation is completed, they must be re-checked. If there are deviations, they should be adjusted and corrected.

**注意 Warning**

- 若控制阀执行机构安装有附件，请不要在雨天或周围有降水的环境中作开车准备，否则将造成漏电或性能降低。

If the control valve actuator is equipped with accessories, please do not make preparations for working in rainy weather or in an environment with precipitation around it, otherwise it will cause leakage or performance reduction.

- 需要接通电源的附件在接入电源前，请确认件电源电压是否与附件铭牌标示的电压相符。

Before connecting to the power supply, please confirm whether the power supply voltage of the accessory matches the voltage indicated on the accessory nameplate.

### 3. 执行机构的调试 Testing of Actuator

若需要进行调试，**请按照相应执行机构或附件的使用说明书进行**。另外，对执行机构进行调试检测控制阀开度时，请使用最小读数为 0.1 度的开度检测仪器。

If you need to test, please follow the instruction manual of the corresponding actuator or accessory. In addition, when testing the actuator to detect the opening of the control valve, please use an opening detection instrument with a minimum reading of 0.1 degrees.

### 4. 开车 Working



#### 注意 Warning

- 运转中要将附件以及配线端子箱上的盖子盖紧。以防因雨水或周围液体的侵入而导致漏电、附件产生故障，引起触电事故。

During operation, the accessories and the cover on the wiring terminal box shall be tightly covered. In order to prevent leakage of electricity and accessories from being damaged due to the invasion of rainwater or surrounding liquid, and electric shock accident may be caused.

#### 4.1 手动操作 Manual Operation

请在没有控制信号或电源的情况下，手动操作阀门的开关。（用于带有手动操作机构的阀门）

Please operate the valve manually without control signal or air source ( For valves with manual operation mechanism)



#### 注意 Warning

- 对于有手动控制的阀门，请按执行机构说明书要求进行操作。  
For the valve with manual control, please operate according to the actuator manual.
- 当需要回到自动远传状态，必须严格按说明书要求进行操作。若不按照下述顺序进行操作，将有可能导致执行机构损坏。

When it is necessary to return to the automatic remote state, the operation must be carried out in strict accordance with the requirements of the instruments. If the operation is not carried out in the following order, the actuator may be damaged.





## 注意 Warning

- 对于有手动控制的阀门，请按执行机构说明书要求进行操作。

For the valve with manual control, please operate according to the actuator manual.

- 当需要回到自动远传状态，必须严格按说明书要求进行操作。若不按照下述顺序进行操作，将有可能导致执行机构损坏。

When it is necessary to return to the automatic remote state, the operation must be carried out in strict accordance with the requirements of the instruments. If the operation is not carried out in the following order, the actuator may be damaged.

## 可能发生的故障、原因及解决方法 FAULTS, CAUSES & SOLUTIONS

故 障 Faults	原 因 和 解 决 方 法 Causes & Solutions
<p><b>A. 阀门动作不稳定 Unstable Valve Action</b></p> <ul style="list-style-type: none"> <li>·接近全关位置出现不规则振荡</li> <li>·Irregular oscillations appear close to the fully closed position</li> <li>·供气压力不稳定</li> <li>·Unstable air supply pressure</li> <li>·输入信号不稳定</li> <li>·The input signal is unstable</li> <li>·输入信号稳定，阀还是不规则振荡</li> <li>·The input signal is stable, and the valve still oscillates irregularly</li> </ul>	<ul style="list-style-type: none"> <li>·Cv 值太大，减少 Cv 值。</li> <li>·CV value is too large, reduce CV value</li> <li>·检查供气管路，减压阀安装规格或安装是否合适。</li> <li>·Check the gas supply line, filter installation specification or installation is appropriate.</li> <li>·检查供气源容量、管线容量、节流容量是否合适。</li> <li>·Check whether the supply capacity, pipeline capacity and throttle capacity are appropriate.</li> <li>·调节器输出不稳定，调整调节器输出。</li> <li>·The regulator output is not stable, adjust the regulator output</li> <li>·定位器输出不稳定，检查或更换定位器。</li> <li>·If the output of the positioner is unstable, check or replace the positioner.</li> <li>·介质压力波动大，执行机构输出力太小，更换执行机构。</li> <li>·The medium pressure fluctuates greatly, and the output force of the actuator is too small. Replace the actuator.</li> </ul>
<p><b>B. 阀门振动 Valve Vibration</b></p>	<ul style="list-style-type: none"> <li>·管道振动，牢固的固定管道。</li> <li>·The pipeline vibrates, and the pipeline is firmly fixed.</li> <li>·检查其他振动源。</li> <li>·Check other vibration sources.</li> <li>·检查介质工作条件。</li> <li>·Check the working conditions of the medium.</li> </ul>
<p><b>C. 阀门卡死或动作不灵活 Valve Stuck Or Inflexible</b></p>	<ul style="list-style-type: none"> <li>·供气管线漏气或执行机构漏气。</li> <li>·The air supply pipeline leaks or the actuator leaks.</li> <li>·阀杆导向部分滞留污物或阀杆弯曲折断。</li> <li>·The guide part of the valve stem remains dirt or the valve stem is bent and broken.</li> <li>·填料老化或硬化，引起滞后增加。</li> <li>·The aging or hardening of filler causes the increase of hysteresis.</li> <li>·定位器有故障，检查定位器。</li> </ul>

D. 填料函渗漏 Leakage Of Stuffing Box	<ul style="list-style-type: none"><li>· 检查填料压盖是否松动，是否有油脂。</li><li>· Check the packing gland for looseness and grease</li><li>· 检查阀杆是否有损坏。</li><li>· Check the valve stem for damage.</li></ul>
E. 阀关死，仍然泄漏很大 The valve is closed, and still leaks heavily	<ul style="list-style-type: none"><li>· 密封面上有杂物。</li><li>· There is debris on the sealing surface.</li><li>· 执行机构、供气源和定位器泄漏。</li><li>· Leakage of actuator, air supply and positioner.</li><li>· 阀座有磨损情况。</li><li>· The valve seat is worn out.</li><li>· 检查导向部分是否卡死。</li><li>· Check whether the guide part is stuck.</li></ul>
F. 阀门两端面泄漏 Leakage at both ends of valve	<ul style="list-style-type: none"><li>· 两侧密封垫片失效，更换密封垫片。</li><li>· The sealing gaskets on both sides are invalid. Replace the sealing gaskets.</li><li>· 管法兰压紧力不均或未压紧，请均匀用力压紧法兰螺栓。</li><li>· If the pressing force of the pipe flange is uneven or not, please press the flange bolts evenly.</li></ul>

## 阀门使用与维修 USE MAINTENANCE

1. 阀门使用中应周期地检查以保证密封良好，填料未失效，密封面无过量磨损或阀体没有过量腐蚀，从而保证阀门安全。当检查确定阀门有缺陷时，阀门应立即卸下修理或更换。用于油或水工况的阀门应每三个月进行检查，用于腐蚀工况中的阀门应每月检查或依照当地法规规定。

During the use of the valve, the valve shall be checked periodically to ensure that the seal is good, the packing is not invalid, the sealing surface is free of excessive wear or the valve body is not corroded excessively, so as to ensure the safety of the valve. When the inspection determines that the valve is defective, the valve shall be removed for repair or replacement immediately. Valves for oil or water conditions shall be inspected every three months, and valves used in corrosion conditions shall be checked monthly or in accordance with local regulations.

2. 如阀门检修、重新组装，应依照制造标准重新检查和测试。更换的零件应有清单记录以备查证。

If the valve is repaired and reassembled, it shall be rechecked and tested according to the manufacturing standard. The replaced parts shall be recorded in the list for verification.

3. 在重新安装阀门时建议更换连接阀门用的螺柱；

It is recommended to replace the stud used to connect the valve when reinstalling the valve.

4. 任何有关密封处的修理、更换，在安装阀门前应先行进行密封试验和壳体试验；

For the repair and replacement of any seal, the seal test and shell test shall be conducted before the installation of the valve.

5. 零件部分的任何修理应由最初制造方提供，由第三方提供的修理或零部件，苏正不承担由此造成损失的责任；

Any repair of the parts shall be provided by the original manufacturer. For the repair or parts provided by a third party, SUZHENG shall not be liable for the loss caused by it.

6. 苏正不主张由第三方制造的承压件留在阀门内；

SUZHENG does not advocate that pressure-bearing parts manufactured by a third party should be remain in the valve.

7. 对在线阀门进行焊接维修将是不允许的，否则制造方将中止质量保证；

Welding and repair of online valves will not be allowed, otherwise the manufacturer will suspend the quality assurance.

8. 不允许在阀门上行走或加支承设施；

It is not allowed to walk on the valve or add supporting facilities.

9. 在使用高温阀门时，建议在工作场所设置标识以示警告。

When using high temperature valves, it is recommended to set signs in the workplace to show warning.

## 运输与贮存 TRANSPORTATION STORAGE

1. 阀门装箱前应认真检查以防损伤，为避免阀门受损，建议不使用链条、电缆绳做吊绳，阀门运输时阀门应在全关状态。如阀门在装配前需要贮藏，应检查阀门在是否在全关状态。

Check the valve carefully before packing to prevent damage. In order to avoid damage to the valve, it is recommended not to use a chain or cable as a hoisting rope. The valve should be fully closed during transportation. If the valve needs to be stored before assembly, check whether the valve is in the fully closed state.

2. 阀门吊装时，吊绳带应安装在阀体上，起吊点不得在阀杆或驱动装置上。

When hoisting the valve, the rope belt should be installed on the valve body, and the lifting point should not be on the valve stem or the drive device.

3. 阀门油漆、铭牌及法兰水线在整个运输及装运中应有保护，避免任何违规操作对阀门或密封面造成损伤；

Valve paint, nameplate and flange waterline should be protected throughout transportation and shipment to avoid damage to the valve or sealing surface caused by any illegal operation

4. 阀门应选择合适的地点来贮藏，以免受到空气、水气、外部污物的污染。阀门安装前，阀门法兰端部将做为主要保护点；

The valve should be stored in a suitable place to avoid pollution by air, water, and external dirt. Before valve installation, the flange end of the valve will be the main protection point;

5. 如阀门贮藏期超过规定的，阀门应重新检查，清除污物，特别是密封面处。如阀门贮藏期超过 12 个月，阀门应重新进行压力试验，合格后使用。

If the valve storage period exceeds the specified, the valve should be re-checked to remove dirt, especially the sealing surface. If the valve storage period exceeds 12 months, the valve should be re-tested and used after passing the test.



## 注意 Warning

拆除包装后，为防止控制阀损伤、必须注意下述事项。

After unpacking, in order to prevent damage to the control valve, you must pay attention to the following matters

- 请勿损伤法兰密封面，以免造成密封面流体的泄漏。

Do not damage the sealing surface of the flange as shown in to avoid leakage of fluid on the sealing surface.

- 当本控制阀的执行机构上安装有定位器、增速器、电磁阀等附件及手动操作机构时，不要在它们上面连接吊带。

When the actuator of this control valve is equipped with accessories such as position er, speed Booster solenoid valve and manual operating mechanism, do not connect a sling to them.

- 另外，将本控制阀放在地面上时，附件及手动操作机构不要直接接触地，以免受到控制阀的挤压。

In addition, when the control valve is placed on the ground, the accessories and manual operating mechanism should not directly touch the ground to avoid being squeezed by the control valve.

## 质量保证 GUARANTEE

1. 苏正提供给代理商的阀门保质期为：从出货之日起到 18 个月内，或者最终用户安装阀门 12 个月内，制造商对由于材料的缺损和按正常使用及运行的质量负责，因不适当的使用、安装、维修、改动而造成的损坏，制造商将不负责；

The warranty period of the valves provided by **SUZHENG** to the agent is: within 18 months from the date of delivery, or within 12 months after the end user installs the valves, the manufacturer shall be responsible for the defects of materials and the quality of normal use and operation, and the manufacturer shall not be responsible for the damage caused by improper use, installation, maintenance and modification.

2. 购方应告之苏正所发现的任何质量问题，苏正保留对这些问题的调查权利；

Buyer shall inform **SUZHENG** of any quality problems found, and **SUZHENG** reserves the right to investigate these problems.

3. 苏正保证的项目限于下列条件：

The project guaranteed by **SUZHENG** is limited to the following conditions:

- 材料修补；Material repair.
- 零件、材料的更换；Replacement of parts and materials.
- 补偿用户的采购费用；Compensate users for purchase costs.

4. 苏正对自然灾害，如地震、台风等造成的任何损坏结果不负责任；

**SUZHENG** is not responsible for any damage caused by natural disasters, such as earthquake, typhoon, etc.

5. 对超出本限定范围的其它保证，可由用户与苏正商定；

Other guarantees beyond the scope of this limitation can be negotiated by the user and **SUZHENG**.

**订货须知 ordering**

- |                  |   |
|------------------|---|
| 1. 产品型号与名称;      | Product Model And Name.   |
| 2. 公称通径 DN (mm); | Nominal Diameter.   |
| 3. 公称压力 PN;      | Nominal Pressure.   |
| 4. 流量特性;         | Flow Characteristics.   |
| 5. 阀体/内件材质与密封要求; | Valve Body /Trim Material And Sealing Requirements.                   |
| 6. 额定流量系数;       | Rated Cv.   |
| 7. 介质状态和温度范围;    | Medium State And Temperature Range.                                   |
| 8. 阀前后压力 (压差);   | Inlet Pressure Outlet Pressure(or $\Delta P$ (Pressure Difference) ). |
| 9. 电压和控制信号;      | Voltage And Control Signals.  |
| 10. 其它特殊要求;      | Other Special Requirement   |



**苏正自控**

ZHEJIANG

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