



苏正自控

# 气动 O 型球阀 Q641F/H



图 1. 气动 O 型球阀 Q641F/H  
Figure 1. Pneumatic Ball valve Q641F/H

## 操作和维护手册

Instruction Manual

**SZ/CZ002-2022 CN/EN**

April 28, 2022

TS



TS2733117-2024

ISO 9001:2008

## 序言 Introduction

本说明书是气动执行机构与 O 型球阀组合而成的 Q641F/H 系列气动 O 型球阀的使用说明书。其他型号的阀门请勿使用本说明书。

This instruction manual is Q641F/H series pneumatic control valve which is composed of series pneumatic actuator and Ball valve . 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

如果不遵守注意事项将随时可能发生伤亡事故。

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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## Q641F/H 气动二通O型切断球阀 Pneumatic 2-way O-type cut-off ball valve

Q641F/H系列气动二通O型切断球阀由球阀和气动活塞式执行机构组成。

Q641F/H series pneumatic ball valve is composed of ball valve and pneumatic piston actuator.

DN15~200为浮动球式结构, DN250~300为固定球式结构, 阀座采用挠性的唇缘结构, 具有磨损补偿和中腔自动泄压作用, 因而密封可靠, 寿命长。

DN15~200 is a floating-ball structure, DN250~300 is a trunnion ball structure, the valve seat adopts a flexible lip edge structure, with wear compensation and automatic pressure relief in the cavity, so the seal is reliable, long life.

执行机构采用公司的GT系列活塞气动执行机构。该执行机构具有体积小、重量轻、输出力大等特点, 且活塞与缸体间配有摩擦系数较低的非金属导向环, 避免了活塞与缸体的直接接触, 降低了摩擦力, 因而执行机构动作灵敏、使用寿命长。

The actuator adopts the company's GT series piston pneumatic actuator. The actuator has the characteristics of small volume, light weight and large output force, and the piston and the cylinder are equipped with a non-metallic guide ring with low friction coefficient, avoiding the direct contact between the piston and the cylinder, reducing the friction force, so the actuator has sensitive action and long service life.

气动O形切断球阀具有结构简单、体积小、重量轻、密封可靠、寿命长、操作方便等优点, 可广泛应用于石油、化工、电力、轻工等行业的自动控制。

Pneumatic ball valve has the advantages of simple structure, small size, light weight, reliable sealing, long life, easy operation, etc., and can be widely used in petroleum, chemical, electric power, light industry Automatic control of other industries.

浙江苏正自控阀门有限公司  
ZHEJIANG SUZHENG AUTOMATIC CONTROL VALVE CO., LTD

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SUZHENG  
08\2022



**Q641F/H 气动二通O型切断球阀**  
**Pneumatic 2-way O-type cut-off ball valve**

**阀体 BODY**

型式 直通两开式全腔型铸造球阀  
YTYPE Cast ball valve  
公称通径 DN15~300mm  
DN/NPS PN1.6、2.5、4.0、6.4MPa  
公称压力 ANSI 150、300  
PN/CL/K JIS 10K、20K  
连接型式 RF、凹凸式 /RF/FM  
CONNECT. Standard: JB/T79.1-94  
ANSIB16.5-1981  
JIS B2201-1984  
材料 WCB、ZG1Cr18Ni9Ti、ZG0Cr18Ni12Mo2Ti、Ti  
MTAL. (CF8、CF8M、CF3、CF3M)  
(SCPH2、SCS13A、SCS14A)  
注：可根据用户要求提供其它材料  
上阀盖 标准型：与阀体一体铸造 Standard type: cast as one body  
BONNET -20~+180℃  
工作温度 -20~300℃(阀座材料对位聚苯)/PPL  
TEMP. 聚四氟乙烯、石墨 PTFE/Graphite

**执行机构 ACTUATOR**

型式 GTX单作用气动活塞执行机构(带弹簧复位)  
YTYPE GTX single Acting Pneumatic Piston Actuator with spring reset  
GTD 双作用气动活塞执行机构  
GTD double acting pneumatic piston actuator  
供气压力 0.4~0.7MPa  
SUPPLY AIR  
气源接口 1/4NPT  
AIR CONN.  
阀作用型式 单作用：气关式或气开式  
Action type Single action: air closed or air open  
双作用：根据信号转换控制阀开、阀关  
Double function: according to the signal conversion control valve opening, valve closing

**附件 ACCESSORIES (根据要求配置) Configure as required**

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

**阀内组件 TRIM**

阀芯形式 圆柱形通孔球阀阀芯 Ball valve  
TYPE  
流量特性 快开特性 ON-OFF  
CHAR. 聚四氟乙烯、增强聚四氟乙烯、对位聚苯、SS  
阀座 PTFE/RPTFE/PPL/SS  
SEAT  
材料 2Cr13、1Cr18Ni9Ti、0Cr18Ni12Mo2Ti、Ti  
MATL. (CF8、CF8M、CF3、CF3M)  
垫圈 增强聚四氟乙烯、SS+柔性 RPTFE/SS+Graphite  
GASKET  
阀芯转角 90°  
TRAVLE

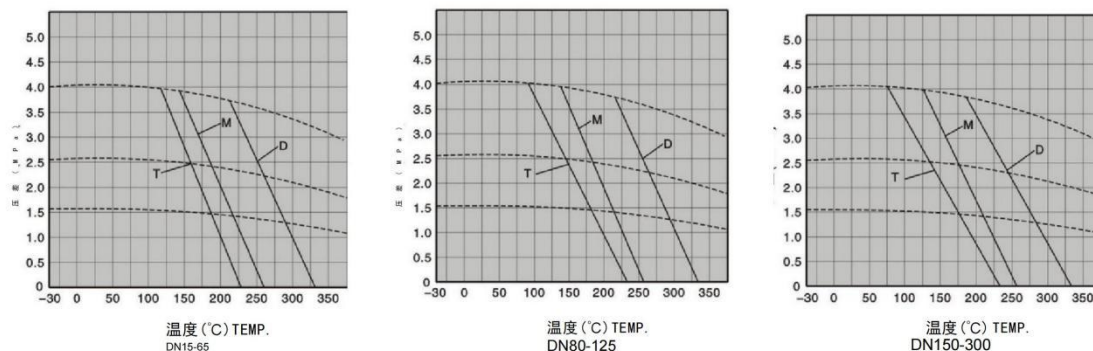
**额定流量系数Kv、额定行程Rated flow coefficient Kv, rated stroke**

**表1 TABLE1**

公称通径DN(mm)	15	20	25	32	40	50	65	80	100	125	150	200	250	300
额定流量系数(KV)	21	38	72	112	170	273	384	512	940	1452	2222	3589	5128	7359
额定行程 rated stroke	90°													
泄漏量 Leakage	ANSI B16.104 IV/V/VI													

### Q641F/H 气动二通O型切断球阀 Pneumatic 2-way O-type cut-off ball valve

最大工作压差与温度关系 (见图一) The maximum working pressure difference is related to the temperature (see Figure 1)



图一 Figure 1

- a、图中虚线为WCB时的阀体最大工作压力，其它材料的阀体最大工作压力见表2。
- b、阀门最大的工作压差、温度不能超出实线与各虚线构成的左下方范围。
- c、由于执行机构输出力的原因，某些阀门与执行机构组配后的使用压差应不大于推荐值，具体推荐值见各执行机构标准组配表。

- A. The dashed line in the figure is the maximum working pressure of the valve body under WCB, and the maximum working pressure of the valve body of other materials is shown in Table 2.
- b. The maximum working pressure difference and temperature of the valve shall not exceed the lower left range formed by the solid line and the dotted line.
- c. Due to the output force of the actuator, the use pressure difference between some valves and actuators should not be greater than the recommended value. The specific recommended value is shown in the standard assembly table of each actuator.

注：阀座材料T-聚四氟乙烯，M-增强聚四氟乙烯，D-对位聚苯。  
Note: Seat material T-PTFE, M-reinforced PTFE, D-PPL

#### 阀体温度—压力额定值Body temperature - pressure rating

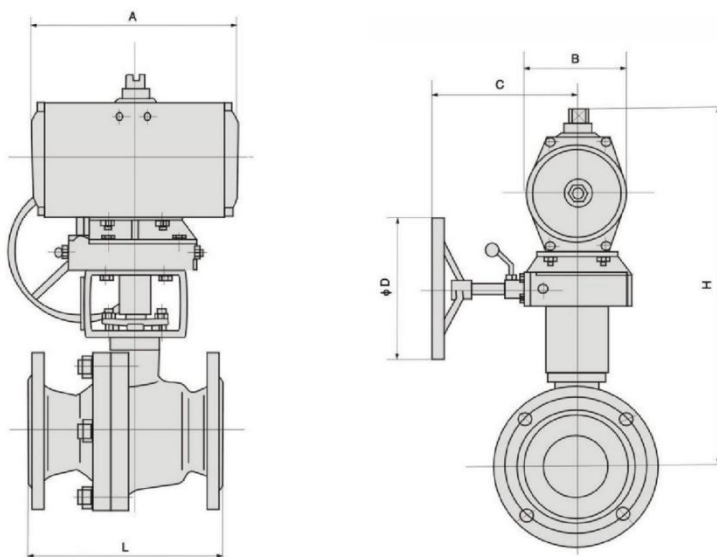
表2 TABLE2

		温度(°C) TEMP.	20	100	150	200
阀体最大工作压力 Body of valve Max. Work pres. (MPa)	PN 1.6 MPa	WCB	1.6	1.6	1.57	1.52
		ZG1Cr18Ni9Ti	1.52	1.31	1.29	1.21
		ZG1Cr18Ni12Mo2Ti	1.52	1.31	1.29	1.21
	PN 2.5 MPa	WCB	2.5	2.5	2.45	2.38
		ZG1Cr18Ni9Ti	2.38	2.15	2.01	1.89
		ZG1Cr18Ni12Mo2Ti	2.38	2.15	2.01	1.89
	PN 4.0 MPa	WCB	4.0	4.0	3.9	3.8
		ZG1Cr18Ni9Ti	3.8	3.44	3.22	3.02
		ZG1Cr18Ni12Mo2Ti	3.8	3.44	3.22	3.02

**Q641F/H 气动二通O型切断球阀**  
**Pneumatic 2-way O-type cut-off ball valve**

**外形尺寸及重量 Dimensions and weight**

带手轮机构的整机外形尺寸 (单位: mm) 及重量  
Overall dimensions (unit: mm) and weight of the machine with hand wheel



图二 Figure 2

**(1) 配用双作用执行机构 With double action actuator**

a、PN1.6MPa, 阀座材料: 聚四氟乙烯 SEAT MARL:PTFE

表3 TABLE3

公称通径DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300
A	133	133	133	133	133	160	203	203	294	337	337	540	540	540
B	70	70	70	70	70	83	100	100	120	172	172	224	224	224
C	195	195	195	195	195	195	195	195	195	225	225	233	233	233
D	200	200	200	200	200	200	200	200	200	250	250	300	300	300
H	346	350	355	375	380	405	442	456	510	568	613	769	896	941
L	130	140	150	165	180	200	220	250	280	320	360	400	533	610
重量 Weight(kg)	17.5	18.5	19.0	21.5	23.5	29.1	37.5	46.0	66.4	111	133	223	357	515

**Q641F/H 气动二通O型切断球阀**  
**Pneumatic 2-way O-type cut-off ball valve**

(2) 配用单作用执行机构 With single action actuator

a、PN1. 阀座材料：聚四氟乙烯 SEAT MARL:PTFE

表4 TABLE4

公称通径DN	15	20	25	32	40	50	65	80	100	125	150	200	250	300
A	133	133	160	203	222	222	300	300	380	420	450	683	683	683
B	70	70	83	100	120	120	137	137	172	224	224	272	272	272
C	195	195	195	195	195	195	195	195	225	233	233	277	277	277
D	200	200	200	200	200	200	200	200	250	300	300	400	400	400
H	346	350	367	404	432	445	485	499	581	644	678	816	943	989
L	130	140	150	165	180	200	220	250	280	320	360	400	533	610
重量 Weight(kg)	17.7	18.7	20.0	23.9	27.9	32.9	43.8	52.7	79.0	141	165	299	433	591

## 阀门安装 INSTALLATION

球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) 安装球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球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）以及保证球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 球阀组：一般在工艺过程配管中均安装切断阀的旁路阀与球阀配成阀组，以适应设备连续操作的需要。维修球阀时用切断阀隔离。用旁路阀调节。下面图 1 中推荐球阀组布置方式。

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.

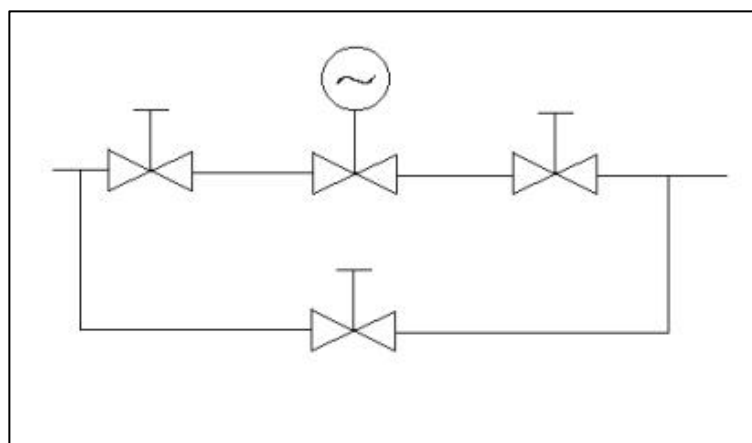


图 1 旁路管道安装图例

Figure 1 Illustration of Bypass Pipe Installation

### (2) 实地安装 Field Installation

安装人员首先应认识到球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球阀。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球阀。

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，请确认附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.

### 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>A. 阀门动作不稳定 Unstable Valve Action</p> <p>·接近全关位置出现不规则振荡</p> <p>·Irregular oscillations appear close to the fully closed position</p> <p>·供气压力不稳定</p> <p>·Unstable air supply pressure</p> <p>·输入信号不稳定</p> <p>·The input signal is unstable</p> <p>·输入信号稳定，阀还是不规则振荡</p> <p>·The input signal is stable, and the valve still oscillates irregularly</p>	<p>·Cv 值太大，减少 Cv 值。</p> <p>·CV value is too large, reduce CV value</p> <p>·检查供气管路，减压阀安装规格或安装是否合适。</p> <p>·Check the gas supply line, filter installation specification or installation is appropriate.</p> <p>·检查供气源容量、管线容量、节流容量是否合适。</p> <p>·Check whether the supply capacity, pipeline capacity and throttle capacity are appropriate.</p> <p>·调节器输出不稳定，调整调节器输出。</p> <p>·The regulator output is not stable, adjust the regulator output</p> <p>·定位器输出不稳定，检查或更换定位器。</p> <p>·If the output of the positioner is unstable, check or replace the positioner.</p> <p>·介质压力波动大，执行机构输出力太小，更换执行机构。</p> <p>·The medium pressure fluctuates greatly, and the output force of the actuator is too small. Replace the actuator.</p>
<p>B. 阀门振动 Valve Vibration</p>	<p>·管道振动，牢固的固定管道。</p> <p>·The pipeline vibrates, and the pipeline is firmly fixed.</p> <p>·检查其他振动源。</p> <p>·Check other vibration sources.</p> <p>·检查介质工作条件。</p> <p>·Check the working conditions of the medium.</p>
<p>C. 阀门卡死或动作不灵活 Valve Stuck Or Inflexible</p>	<p>·供气管线漏气或执行机构漏气。</p> <p>·The air supply pipeline leaks or the actuator leaks.</p> <p>·阀杆导向部分滞留污物或阀杆弯曲折断。</p> <p>·The guide part of the valve stem remains dirt or the valve stem is bent and broken.</p> <p>·填料老化或硬化，引起滞后增加。</p> <p>·The aging or hardening of filler causes the increase of hysteresis.</p> <p>·定位器有故障，检查定位器。</p>
<p>D. 填料函渗漏 Leakage Of Stuffing Box</p>	<p>·检查填料压盖是否松动，是否有油脂。</p> <p>·Check the packing gland for looseness and grease</p> <p>·检查阀杆是否有损坏。</p> <p>·Check the valve stem for damage.</p>
<p>E. 阀关死，仍然泄漏很大 The valve is closed, and still leaks heavily</p>	<p>·密封面上有杂物。</p> <p>·There is debris on the sealing surface.</p> <p>·执行机构、供气源和定位器泄漏。</p> <p>·Leakage of actuator, air supply and positioner.</p> <p>·阀座有磨损情况。</p> <p>·The valve seat is worn out.</p> <p>·检查导向部分是否卡死。</p> <p>·Check whether the guide part is stuck.</p>

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>
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## 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

SUZHENG

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