



超低温截止阀 使用说明书



一、安全

严禁用于超过公称压力，否则有可能发生破损事故。

气缸充入气压为0.4~0.7MPa，严禁超过0.7MPa，否则有可能发生破损事故。

严禁随意更换未经认可的密封装置。

一、Safety

It is strictly forbidden to use it beyond the nominal pressure, otherwise a damage accident may occur.

The cylinder filling pressure is 0.4~0.7MPa, and it is strictly forbidden to exceed 0.7MPa, otherwise a damage accident may occur.

It is strictly forbidden to replace unapproved sealing devices at will.

二、工作原理

气缸充入指定压力时，活塞上升带动阀杆开启阀门，关闭时释放气缸内的气体，活塞在弹簧的作用下带动阀杆与阀瓣向下运动，密封件压紧阀座，阀门关闭；

气动操作时，当阀门的周围环境温度达到易熔金属熔化温度时(用于低温槽车、低温储罐式集装箱的紧急切断阀易熔塞应在 $75^{\circ}\text{C} \pm 5^{\circ}\text{C}$ 应熔化),易熔塞内部的易熔金属就会熔化，气缸内的工作压力会自然排放，活塞在弹簧的作用下会带动阀杆和阀瓣向下运动，密封件压紧阀座，阀门关闭；

旋转顶部的手轮带动阀杆与阀瓣向上运动，可手动开启阀门

二、Working Principle

When the cylinder is filled with the specified pressure, the piston rises and drives the valve stem to open the valve. When closing, the gas in the cylinder is released. The piston drives the valve stem and valve disc downward under the action of the spring, and the seal presses the valve seat, and the valve is closed;

During pneumatic operation, when the ambient temperature of the valve reaches the melting temperature of the fusible metal (the fusible plug of the emergency shut-off valve used for low-temperature tank trucks and low-temperature storage tank containers should melt at $75^{\circ}\text{C} \pm 5^{\circ}\text{C}$), the fusible metal inside the fusible plug will melt, and the working pressure in the cylinder will be naturally discharged. The piston will drive the valve stem and valve disc downward under the action of the spring, and the seal presses the valve seat, and the valve is closed;

The hand wheel on the top is rotated to drive the valve stem and valve disc upward, and the valve can be opened manually

三、安装

在焊接前必须彻底清扫管道内的异物，反复确认管道内有无异物，然后再安装。

开袋后也可以直接安装。(为防万一还是先确认法兰处的清洁状态为好，如需清扫，请先清扫后再安装。)

要按照阀体侧面所表示的流向进行配管安装。安装在液相管道上的阀门原则上要垂直安装。不得带角度时在与垂直方向 45° 的范围内安装。严禁在 45° 的范围以上或横向、朝下安装，否则将会因结霜(冰)造成阀门无法正常工作。

三、Installation

Before welding, you must thoroughly clean the foreign matter in the pipeline, repeatedly check whether there is any foreign matter in the pipeline, and then install it.

You can also install it directly after opening the bag. (Just in case, it is better to confirm the cleanliness of the flange first. If cleaning is required, please clean it before installation.)

The piping should be installed according to the flow direction indicated on the side of the valve body. In principle, the valve installed on the liquid phase pipeline should be installed vertically. If it has to be installed at an angle, install it within 45° of the vertical direction. It is strictly forbidden to install it above 45° or horizontally or downward, otherwise the valve will not work properly due to frost (ice).

中国。上海金钢自控阀门有限公司制造

厂址：上海市嘉定区园区路268号

技术服务热线：17621084704 18918698000

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四、控制气源及管路安装

控制气源应是清洁干燥空气、氮气或储罐自身的气相，气源压力为0.4~0.7MPa，否则可能会影响阀门阀门的正常工作
推荐使用独立专供紧急切断阀的气源装置，如压缩空气、氮气瓶；
如使用储罐自身的气相，应在电磁阀的上游安装一个止回阀，当气缸动作开启后，保持气缸内压力不变控制气源管原件为一个调压阀、一个单向阀、一个二位三通电磁阀(防爆型)及一个压力表。

注明：在系统首次预冷后请检查螺栓螺母及填料压帽等紧固件的锁紧状况，如出现微量泄漏，是由材料遇冷收缩而引起的，可将上述紧固件在冷态下紧固。

四、Control gas source and pipeline installation

The control gas source should be clean and dry air, ammonia or the gas phase of the tank itself, and the gas source pressure should be 0.4~0.7MPa, otherwise it may affect the normal operation of the valve
It is recommended to use an independent gas source device dedicated to the emergency shut-off valve, such as compressed air and nitrogen cylinders:
If the gas phase of the tank itself is used, a check valve should be installed upstream of the solenoid valve. When the cylinder is opened, the pressure in the cylinder is kept constant. The original components of the control gas source pipe are a pressure regulating valve, a one-way valve, a two-position three-way solenoid valve (explosion-proof type) and a pressure gauge.

Note: After the system is precooled for the first time, please check the locking condition of fasteners such as bolts, nuts and packing caps. If there is a slight leakage, it is caused by the shrinkage of the material when it is cold. The above fasteners can be tightened in the cold state.

五、阀门操作

只要从阀门气动空气供给口送入指定的压力，阀门就能打开；关闭时只要将气缸压力排空，阀门将关闭；
在自动操作时，应顺时针转动顶部手轮使开启指示片处于最低点(即看不见开关指示片下方坐标的红漆部分)：手动操作：逆时针转动手轮即可手动开启阀门。

请注意，如果用顶部手轮手动使阀门处于开启状态(即能看见开关指示器下方的红漆部分)，即使排放了气缸内的压力，也不能使阀门关闭!在不使用手动操作时，必须看不见开关指示器下方的红漆部分!
手动操作只有在气动压力低于规定值而无法开启阀门时才允许短时间使用，且操作人员应在场监护，并应尽快提高气源压力，恢复气动操作!
如气源压力接近或达到最大规定压力，阀门仍然不能开启，则应停车修复!
易熔塞已熔化或已破损，阀门禁止操作，应立刻更换易熔塞!

五、Valve operation

The valve can be opened by supplying the specified pressure from the pneumatic air supply port of the valve; when closing, the valve will be closed by exhausting the cylinder pressure;
In automatic operation, the top hand wheel should be turned clockwise to make the opening indicator plate at the lowest point (that is, the red painted part of the coordinates below the switch indicator plate cannot be seen):
Manual operation: Turn the hand wheel counterclockwise to manually open the valve.
Please note that if the valve is manually opened with the top hand wheel (i.e. the red painted part below the switch indicator can be seen), the valve cannot be closed even if the pressure in the cylinder is discharged! When manual operation is not used, the red painted part below the switch indicator must not be visible!
Manual operation is only allowed for a short time when the pneumatic pressure is lower than the specified value and the valve cannot be opened, and the operator should be on site for supervision, and the air source pressure should be increased as soon as possible to restore pneumatic operation!
If the air source pressure approaches or reaches the maximum specified pressure and the valve still cannot be opened, the vehicle should be stopped for repair!
The fusible plug has melted or broken, and the valve is prohibited from operation. The fusible plug should be replaced immediately!

六、故障分析与排除

(1)因漏气进行修理或零部件交换时，请参照原阀门结构，在清洁的场所进行。此时，需要确认阀内已无压力后再作业。
(2)检修后必须做动作确认，并按规定做气密试验确认无泄漏后再投入运行。
(3)如故障无法自行排除，请联系我公司售后服务部。

六、Fault Analysis and Troubleshooting

(1) When repairing or replacing parts due to air leakage, please refer to the original valve structure and perform the repair in a clean place. At this time, it is necessary to confirm that there is no pressure in the valve before operating.
(2) After maintenance, the action must be confirmed, and the air tightness test must be performed according to regulations to confirm that there is no leakage before putting it into operation.
(3) If the fault cannot be eliminated by yourself, please contact our after-sales service department.

七、运输

运输搬运中请小心轻放，不要损坏包装，防止日晒雨淋。
注意砸伤脚背或手指被夹。

七、Transportation

Please be careful during transportation and do not damage the packaging. Protect from sun and rain.
Be careful not to hurt the instep or pinch the fingers.

八、开箱及检查

先打开运输用的包装箱，在阀门装在塑料袋里的状态下清点数量。在阀门安装之前从塑料袋里取出阀门和摘除防尘盖，为尽可能避免阀门沾上油脂和灰尘，请穿干净的工作服及手套。

八、Unpacking and Inspection

First open the shipping box and count the number of valves in the plastic bag. Before installing the valve, take out the valve from the plastic bag and remove the dust cover. To avoid grease and dust on the valve as much as possible, please wear clean work clothes and gloves.

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