

防混阀(双座阀)&防混罐底阀

Mixing proof valve (Double seat valve)  
& Mixing proof Tank bottom valve



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国家高新技术企业 浙江省著名商标  
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|      |  |
|------|--|
| 0.1  | 自控调节阀+控制器<br>Automatic control regulating valve<br>+Control head                               |
| 0.2  | 生物制药隔膜阀<br>Biopharmaceutical diaphragm valve   |
| 0.3  | 高洁净泵<br>High purity pumps  |
| 0.4  | 防混蝶阀+蝶阀<br>Mixing proof butterfly valve<br>+Butterfly valve                                    |
| 0.5  | 球阀<br>Ball valve   |
| 0.6  | 截止换向阀+防混阀+罐底阀<br>Divert seat valve+Mixing proof valve<br>+Tank bottom valve                    |
| 0.7  | 角座阀+截止阀<br>Angle seat valve+Globe valve  |
| 0.8  | 止回阀+恒压阀+安全阀+减压阀<br>Check valve+constant pressure valve+safety valve<br>+Pressure release valve |
| 0.9  | 清洁技术+取样阀+视镜+照明技术<br>Clean technology+sample valve+sight glass<br>+lighting technology          |
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| 0.11 | 卫生管件<br>Sanitary fittings<br>ASME BPE DIN11852 B94825<br>SMS ISO IDF 3A                        |



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Technological innovation, rapid development of the market and customer needs are the greatest challenges facing us today. Facing with these challenges we are confident, because of highly professional products and technological innovation, we will meet the growing demand of market and customer with our better and better products.

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东正的专业与品质的邂逅源于创新的精神



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温州空港经济园区生产基地  
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Covering an area of 29000 m<sup>2</sup>, with total investment after construction is expected to 120 million yuan, introduces new ABB industrial robot, Japan mazar-e-sharif grams of five axis machining center, ABB machine Polishing equipment.

东正创立于1993年，注册资金5508万，是一家专注于研发高品质PID过程控制器、阀门定位器、流量控制器、阀门控制单元、高洁净过程控制阀、智能自控阀、高洁净泵、高洁净管件和管道配件。公司高度专业化的产品和技术专注于生物制药、食品饮料、酿酒、精细化工等工业领域。东正众多的创新解决方案，对满足全球，尤其是新兴市场不断增长生物制药和食品饮料行业的需求起到了积极作用。

东正制造的产品母材料、加工技术、焊接技术、表面处理等技术指标均已达到国内外先进水平。且符合ASME BPE、EHEDG、FDA、3A等一系列国际标准和规范要求，先后通过了由德国TÜV机构实施的欧盟承压设备指令(PED-97/23/EC)和(MD-06/42/EC)认证、美国3A机构实施的3-A卫生标准认证、中国安全阀特种制造设备(TS)许可证和中国质量认证中心CQC ISO9001:2008质量管理体系认证等多项国际权威认证。

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Donjoy was built up in 1993, with registered capital RMB 55.08 millions. We focus on developing high quality PID process controller, the valve positioner, the flow controller, the valve control unit, high purity process control valve, intelligent self-control valve, high purity pump, high purity tubing fitting and pipeline accessories. Donjoy's products and technologies are widely used in biopharmaceutical, food, drink, wine fine chemicals and other industrial fields. Donjoy's innovation solutions meet the growing demand of the industry of biopharmaceutical, food and beverage from the whole world, especially the emerging market.

Raw material, processing technology, welding technology, surface treatment from Donjoy have achieved advanced levels of domestic and foreign market. Donjoy productions according to ASME BPE, EHEDG, FDA and 3A standard, get certificate of PED-97/23/EC and MD-06/42/EC issued by TUV, 3A issued by 3A organization, TS licence and ISO9001:2008.

Donjoy with advanced technology, excellent quality and perfect after-sales service system, has been assessed as the national high-tech enterprises, the Provincial Famous Trademark, the Provincial Science and Technology Enterprises, Innovative Enterprises, Patent Model Enterprises, R & D Center, AAA Credit Enterprises.



创立于2005年现代化工厂  
温州滨海经济开发区生产基地  
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**DONJOY high-purity valve, pump, control system, pipe and accessories, provide the most excellent solution for various business scopes.**



Biopharmaceutical



Dairy



Food



Beverage



Water Processing



Brewing



Fine Chemical

## 制造与检验 Manufacturing and testing



机器人生产线 Robot production line



全自动弯管设备 Automatic pipe bending equipment

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Science and technology constitute a primary productive force, also the core competitive strength of the enterprise. Continuously intensifying the research, development and innovation of core technology, pursuing prominence and keeping improving, ensuring the excellent quality and performance of every single product by advanced production equipment, strict quality control and precise production and inspection procedures.



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|   |   |
|---|---|
|    | <p><b>3A</b></p> <p>东正是美国3A认证组织的金牌赞助商，3A是一个自愿组织，致力于维护公共卫生和奶制品产品质量通过独特的行业监管程序的设备，用于处理乳制品的卫生标准3A认证。</p> <p>东正通过认证产品，阀门系列55-02-1783、64-00-1784、84-02-1786、85-03-1787、53-06-1782、54-02-1580、68-00-1785，管件(63-03)证书号(1581)等多种规格型号。</p> |
|    | <p><b>PED/97/23/EC &amp; MD/06/42EC</b></p> <p>东正通过了TUV 欧共体压力设备97/23/EC质量保证模式H&amp;材料(管件)制造认证。</p> <p>阀门证书 NO.CE 0036</p> <p>泵类证书 NO.705201402401-00</p>  |
|   | <p><b>FDA177.2600</b></p> <p>东正生产的阀门和泵以及流体设备等，与物料接触密封圈全部通过或符合美国食品和药品管理局和联邦法规第21条第，CRF 21 FDA177.2600和FDA177.1550认证，其涵盖：</p> <p>EPDM VITON(FPM) SILICON HNBRPTFE橡胶塑料材料等。</p>   |
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|  | <p><b>浙江省著名商标</b></p> <p>东正09年获得了温州市著名商标，2012年获得了浙江省著名商标。</p>   |

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# 防混双座阀(IS-C系列)

## Mixproof double seat valve (IS-C series)

### 应用

- ◆ 这种防混阀是高度的卫生双密封阀门。
- ◆ 通过两条流体之间的分界面，这种系统可以在两个阀体中实现同步过程，防止了物料被污染的可能性。
- ◆ 泄腔和检漏器可以通过阀座提升实现自清洗。
- ◆ 该防混阀在食品处理工艺，尤其是在饮料、乳制品工业中应用。

### Applications

- ◆ The mixproof valve is a completely hygienic double sealing valve.
- ◆ This system allows for the simultaneous processes in the two bodies of the valve by providing interface between the two fluids, preventing the possibility of product contamination.
- ◆ The leakage chamber and leakage detector can be self cleaned through seat lifting.
- ◆ The mixproof valve is applied to food processing industries, especially in the beverage and dairy industries.

### 工作原理 Operating principles

- ◆ 提升型防混阀是通过压缩空气进行自控操作的。该阀门未启动操作时是常闭的。
- ◆ 该型阀门是具有两个独立的阀芯密封件，在正常工作状态时这两个密封件之间就会形成一个与大气相通的泄漏腔。在偶尔可能出现的故障性产品泄漏的情况下，产品就会流进这个泄漏腔，并且从排出口被排放出去。
- ◆ 当阀门处于开启状态，该漏腔是闭合的。因此所输送的产品就能够从一条管线流到另一条去。该阀门可以进行CIP清洗，用户有多种CIP和SIP杀菌和清洗模块组合选择。(参考清洗杀菌功能选项)
- ◆ 清洁系统可对上、下端阀杆以及泄漏腔进行清洗，这有助于使该款阀门达到卫生流体工业处理中所要求的高卫生标准。该系统的清洗操作更为高效便捷，可以确保原位清洗(CIP)专用流体的直接冲刷能达到所有表面，而且比较常规清洁系统，其所用时间也更短。
- ◆ 用于提升型的所有外设原位清洗(CIP)系统都将高洁净的设计作为标准配置。高洁净系统的另一项益处就是它允许提升型混阀应用在接近无菌的工况。如果用户将蒸汽送入原位清洗(CIP)管路，则高洁净系统就会构成能隔绝空气的蒸汽屏障。

- ◆ Lift type mixing proof valve is remotely operated through compressed air. It is normally closed before running.
- ◆ The mixing proof valve is constructed with two independent plugs, which will form a leakage chamber that interlinks to atmosphere under normal working status. When occasional failure of the medium leakage happen, medium will flow into the chamber and be discharged at the out port.
- ◆ The leakage chamber is closed when the valve is operating. So medium can flow through one pipeline to another. This valve can be clean in place. Many options of CIP and SIP combinations are available to users. (Refer to cleaning sterilization function options)
- ◆ Clean system can clean the upper, lower stem and leakage chamber. Which ensures the valve to be high hygienic. Effectively cleaning system makes the fluid that special for CIP clean in place directly wash all the inside valve body. The cleaning system commoner, it will take shorter time. Another beneficial of the high cleaning system is that the lift type mixing proof valve can be applied to aseptic processing. If user's steam into CIP pipeline, the system will constitute a shield that can isolate air.







### 设计和特点 Design and features

- ◆规格从DN40-1.1/2"到DN100-4"
- ◆阀门配有常闭式气动执行器
- ◆锻造球型阀体
- ◆可通过阀门底部泄露管是否有液体流出, 可判断密封圈是否损坏
- ◆易拆卸, 只要卸掉卡箍即可
- ◆焊接连接(毫米或英寸)
- ◆压力平衡设计
- ◆最大工作压力: 10bar
- ◆最小工作压力: 绝对真空
- ◆工作温度: -10℃到 130℃ (140℃用于短时期或消毒)
- ◆压缩空气压力: 5.5bar-7bar
- ◆供气连接: R1/8" (BSP)

- ◆Size: DN40-1.1/2" to DN100-4"
- ◆Valves with normally closed pneumatic actuator
- ◆Forged spherical bodies
- ◆Judge whether the gasket is broken by observing whether the liquid flows out on the bottom of the valve
- ◆Easy disassembly by releasing the clamp
- ◆Weld connection (mm or inch)
- ◆Balanced design
- ◆Max. Operating pressure: 10bar
- ◆Min. Operating pressure: Absolute vacuum
- ◆Working temperature: -10℃ to 130℃ (140℃ for short periods or sterilisation)
- ◆Compressed air pressure: 5.5bar-7bar
- ◆Air supply connections: R1/8" (BSP)



# 防混双座阀(IS-C系列)

## Mixproof double seat valve (IS-C series)



### 材质Materials

- ◆与物料接触部分: AISI 316L
- ◆其他不锈钢部分: AISI 304
- ◆内表面处理:  $Ra \leq 0.8 \mu m$
- ◆垫圈(标准): EPDM符合FDA 177.2600

- ◆Parts in contact with the media: AISI 316L
- ◆Other stainless steel parts: AISI 304
- ◆Internal surface finish:  $Ra \leq 0.8 \mu m$
- ◆Gasket (standard): EPDM in compliance with FDA 177.2600

### 选项Options

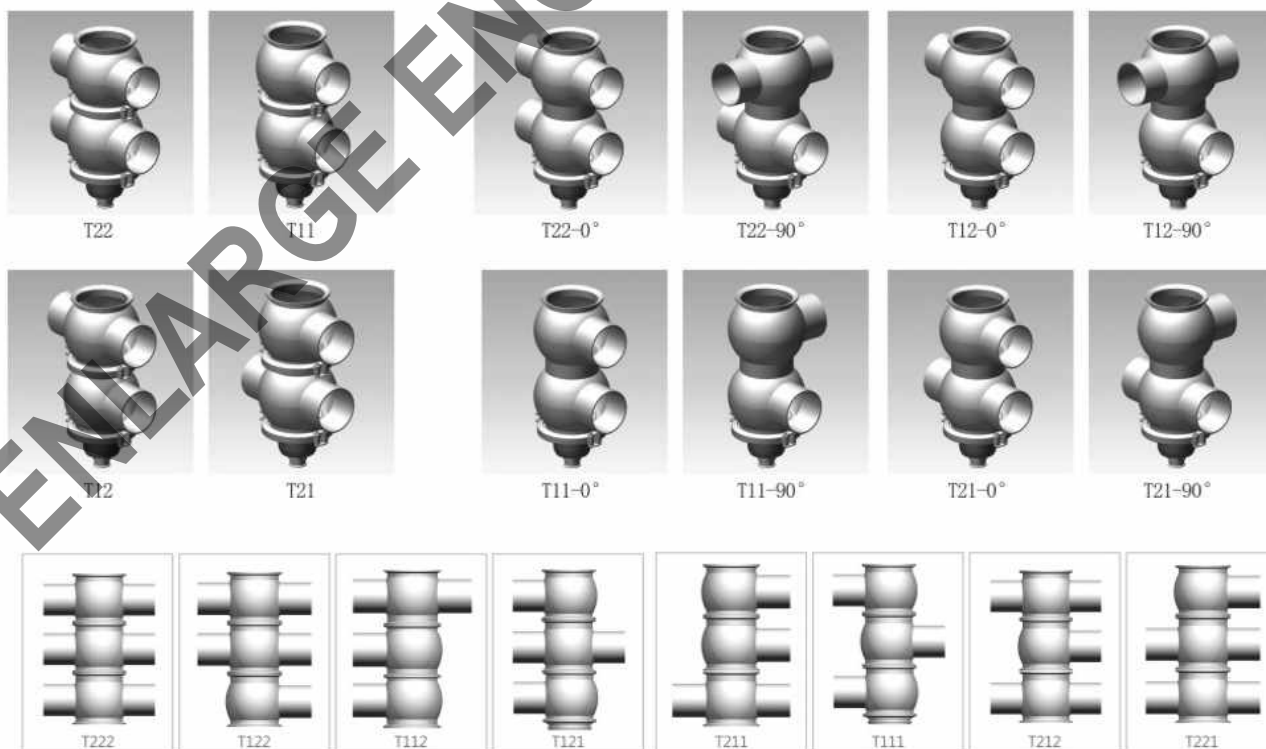
- ◆垫圈: NBR、FPM (Viton)
- ◆连接: DIN、SMS、RJT...
- ◆控制盒C-Top: 电子连接, AS-I总线连接
- ◆表面处理:  $Ra \leq 0.4 \mu m$
- ◆阀体组合(见图1)

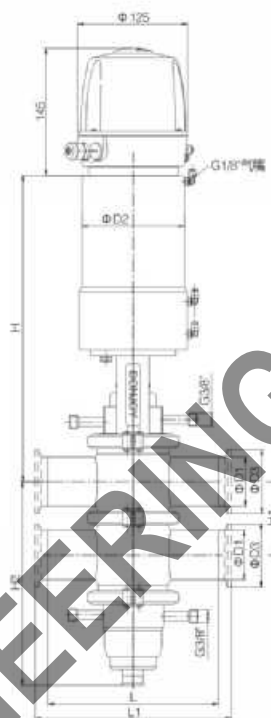
- ◆Gaskets: NBR and FPM (Viton).
- ◆Connections: DIN, SMS, RJT...
- ◆Control C-top: electric connection, AS-I bus connection
- ◆Surface finish:  $Ra \leq 0.4 \mu m$
- ◆Body combination (see chart 1)

提升式防混阀阀体组合图(图1)  
Body combination diagram (Figure 1)

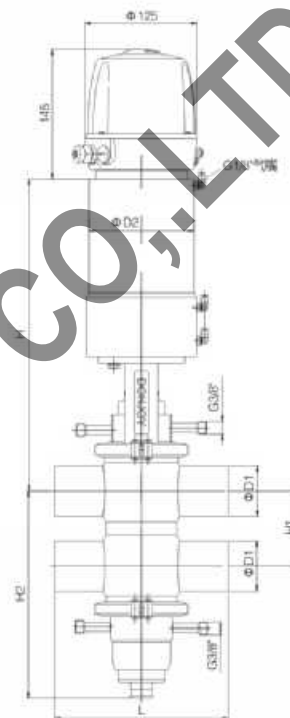
卡箍式阀体连接组合  
Clamped body combination

一体式阀体  
One-piece valve body





卡箍阀体  
Clamp body  
NO.VFT101Q1-41022-0°



一体式阀体  
One-piece valve body  
NO.VFT101Q1-42022-0°

#### 提升式防混阀(INCH) Mixing proof valve

| SIZE   | D1    | D2  | D3   | H1  | H2    | H     | 焊接 welding | 卡箍 clamp |
|--------|-------|-----|------|-----|-------|-------|------------|----------|
|        |       |     |      |     |       |       | L          | L1       |
| 1.5"   | 38.1  | 118 | 50.5 | 70  | 204   | 356.5 | 160        | 185.4    |
| 2"     | 50.8  | 118 | 64   | 80  | 224   | 356.5 | 160        | 185.4    |
| 2 1/2" | 63.5  | 133 | 77.5 | 96  | 263.5 | 396   | 220        | 245.4    |
| 3"     | 76.2  | 133 | 91   | 110 | 281.5 | 404   | 220        | 245.4    |
| 4"     | 101.6 | 168 | 119  | 130 | 338.5 | 455.5 | 254        | 285.6    |

#### 提升式防混阀(DN) Mixing proof valve

| SIZE  | D1    | D2  | D3   | H1  | H2    | H     | 焊接 welding | 卡箍 clamp |
|-------|-------|-----|------|-----|-------|-------|------------|----------|
|       |       |     |      |     |       |       | L          | L1       |
| DN40  | 40/41 | 118 | 50.5 | 70  | 204   | 356.5 | 160        | 185.4    |
| DN50  | 52/53 | 118 | 64   | 80  | 224   | 356.5 | 160        | 185.4    |
| DN65  | 70    | 133 | 91   | 96  | 263.5 | 396   | 220        | 245.4    |
| DN80  | 85    | 133 | 106  | 110 | 283.5 | 404   | 220        | 245.4    |
| DN100 | 104   | 168 | 119  | 130 | 338.5 | 455.5 | 254        | 285.6    |



# 防混双座阀(IS-C系列)

## Mixproof double seat valve (IS-C series)



**整体阀体**  
Whole valve body

一体式阀体优势在于，上下阀体之间的连接没有任何密封圈与液体接触，进、出口方向是一定的不可旋转(订购时必须注意!)

One-piece valve body's advantage is that there is no connection between the upper and lower valve body seal contact with the liquid, inlet and outlet direction is not rotating (do specify when order!)



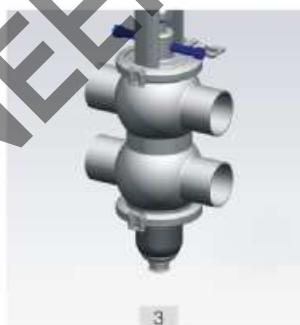
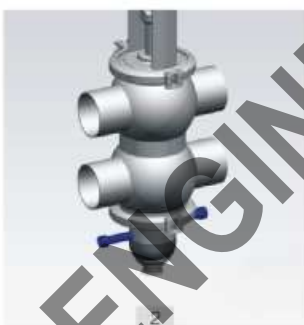
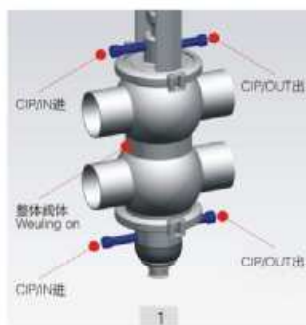
**卡箍式连接阀体**  
Clamp valve body connection

卡箍阀体连接，优势在于可以360°任意旋转进、出口流体方向。

Advantage of clamp valve body connection, is arbitrary 360° rotation of the inlet and outlet fluid direction.

### 清洗/杀菌部位选项

#### Cleaning/sterilization Parts for options



1、超洁净(上下阀杆清洗/杀菌+阀座提升清洗)

2、下阀杆清洗/杀菌+阀座提升清洗

3、上阀杆清洗/杀菌+阀座提升清洗

4、阀座提升清洗(基本型)

1. Unique ultraclean(upper and lower stem cleaning / sterilization + seat lift cleaning)

2. The lower stem cleaning/sterilization + Seat lift cleaning

3. The upper stem cleaning/sterilization + Seat lift cleaning

4. Seat lift cleaning (basic)

### 压力平衡设计选型

#### Pressure balance design selection

A、下阀杆平衡

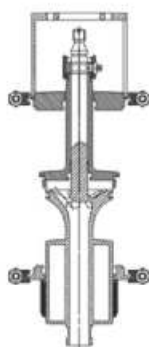
B、上阀杆平衡

C、上下阀杆平衡

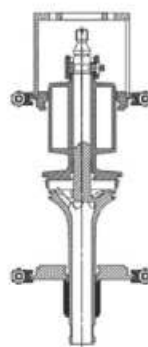
A.Upper Stem Balance

B.Lower Stem Balance

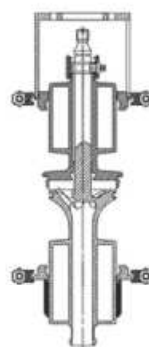
C.Upper and Lower Stem Balance



A



B



C

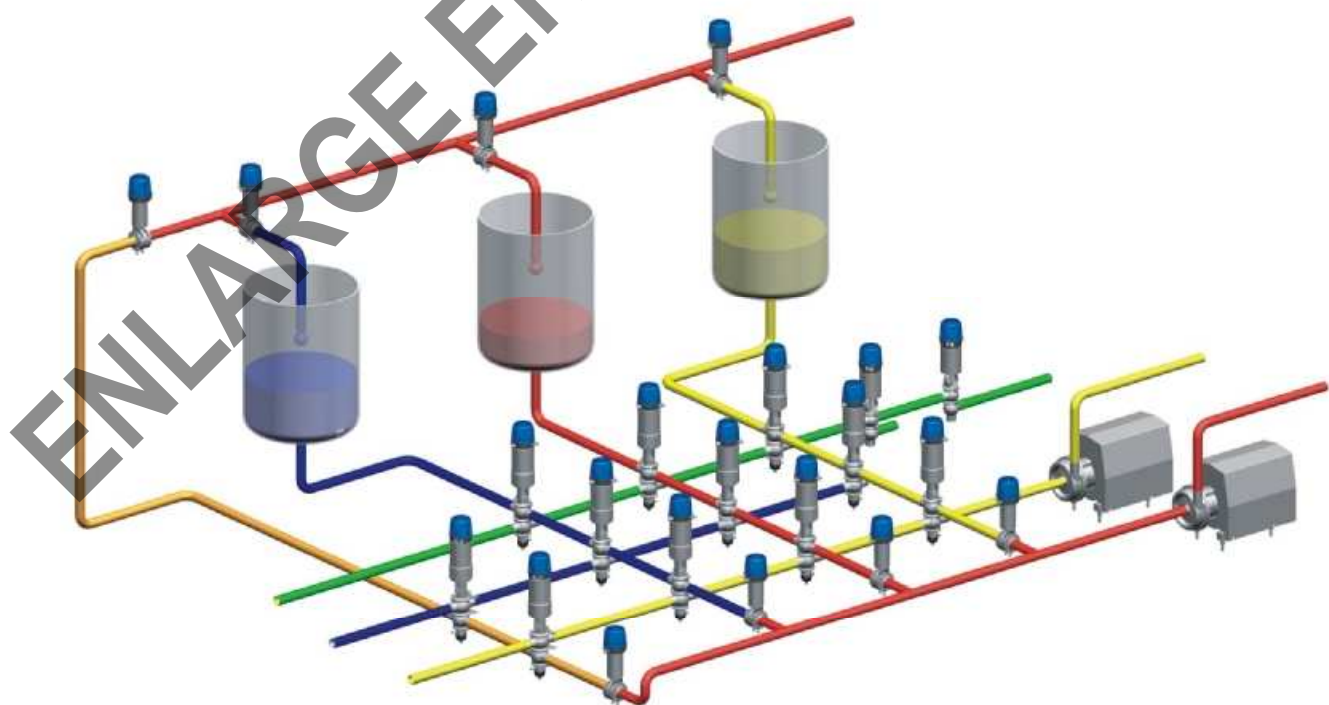


## 阀座提升工作示意图 Seat lift work plan

- ◆ 阀门关闭
- ◆ 下部提升阀通过主弹簧保持关闭。
- ◆ 上部提升阀通过中间的弹簧和物料的压力保持关闭。
- ◆ 物料由双密封保护。
- ◆ 中间打开和大气相通。
- ◆ Valve closed
- ◆ The lower seat remains close by main spring.
- ◆ Upper seat remains close by intermediate spring and product pressure.
- ◆ Media protected by double seals.
- ◆ Interspace open to atmosphere.
- ◆ 阀门开启
- ◆ 主活塞被空气压力抬升到主执行器限位处。
- ◆ 动作通过中心杆传输到下部提升阀。
- ◆ 下部提升阀连同上部提升阀一起抬升。
- ◆ 和大气相通的泄漏通道关闭。
- ◆ 阀门完全开启
- ◆ Valve open
- ◆ Main piston raised by air pressure to main actuator connection.
- ◆ Motion transmitted through central shaft to the lower seat.
- ◆ Lower seat engages on upper seat.
- ◆ Leakage path to atmosphere closes.
- ◆ Valve fully opens.
- ◆ 上部提升阀座清洗
- ◆ 下部活塞被空气压力推至限位处。
- ◆ 动作通过外部的杆传输到上部的提升阀。
- ◆ 下部提升阀由主弹簧来保持其关闭。
- ◆ 在上部提升阀体中的流体越过提升阀密封，经过中间面流到大气中。
- ◆ Upper Seat Clean
- ◆ Lower piston pushed by air pressure to bottom air connection.
- ◆ Motion transmitted through outer shaft to the upper seat.
- ◆ Lower seat positively held closed by main spring.
- ◆ Fluid in upper body passes to atmosphere over seat seal and through interspace.
- ◆ 下部提升阀清洗
- ◆ 下部活塞被空气压力推到限位处。
- ◆ 动作通过中心杆传中心杆传输到下部提升阀。
- ◆ 压力同时被应用到上面的主活塞。
- ◆ 上部提升阀被保持关闭。
- ◆ 在下部提升阀体中的流体越过提升阀密封，经过中间面流到大气中。
- ◆ Lower seat Clean
- ◆ Upper piston is pushed by air pressure to top limit.
- ◆ Motion transmitted through central shaft to the lower seat.
- ◆ Pressure simultaneously applied above main piston.
- ◆ Upper seat positively held closed.
- ◆ Fluid in lower body passes to atmosphere over seat seal and through interspace



## 防混阀典型应用 Mixing proof valve typical applications



# 阀阵 Manifold

## 应用

- 该阀阵可以将各种功能的容器按一定的标准组件聚集起来，以此来提高系统的工作台效率和控制整个生产过程。阀阵可以自动的选择灵活的软管和偏流器面板来改变弯度，这种自动化的操作安全、灵活、而且见效快。一组阀阵可服务于多条管路，当其他容器在被注入或清空物料的同时，可以对其中的某个容器进行清洗，不会污染到物料。
- 这种方案已经授用于乳品、果汁、饮料、酿酒厂、葡萄酒等食品加工工业，以及化妆品和制药领域。

## 材质materials

- 与物料接触部位：AISI 316L
- 其他金属部分：执行器、板车、排水盘、控制面板AISI 304
- 与物料接触的密封圈：EPDM
- Parts in contact with the medium: AISI 316L
- Other parts: actuators, skid and drain tray, control panel AISI 304
- Gaskets in contact with medium: EPDM

## Applications

- The manifold can be assembled by containers with various functions together. It can improve working efficiency of system and control the whole production process. The manifold can choose any flexible hose pipe and jet deviator to change the flexure automatically. The kind of automatic operation is safe, flexible and effective. One set of manifold can served to multi pipelines. Meanwhile other containers are filled in or empty, operator can clean up any one of them. The liquid won't be polluted.
- Widely used in dairy, juice, beverage, brewery, wine, food processing, cosmetic, pharmacy industries.

## 工作原理operating principles

- 根据要执行的功能，这些阀门要和内容器或者工作管道(例如液管道，排泄管道，CIP清洗管道)相连接。无需手动，全部是自动化操作，以避免任何风险事故。
- According operation function, these valves should be connected with containers and working pipelines(such as filling pipes, drainage pipes and CIP cleaning pipes). The operation is automatic, not manual to avoid any risks of accidents.





# 阀阵 Manifold

## 其他变量Other variants

- ◆连接: 焊接\卡箍、SMS、RJT、IDF、法兰
- ◆垫圈: 氟橡胶、丁腈
- ◆混合阀体尺寸(阀体有不同的尺寸)
- ◆轨道焊接
- ◆压力测试(PED)
- ◆执行器压力到10bar

- ◆Connections: weld, clamp, SMS, RJT, IDF, flanges
- ◆Gaskets: viton(R), NBR
- ◆Dimensions of valves(different valve bodies)
- ◆Orbital welding
- ◆Pressure tests(PED)
- ◆Actuator pressure up to 10 bar

## 控制系统Control system

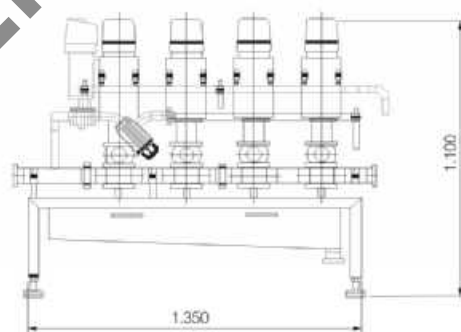
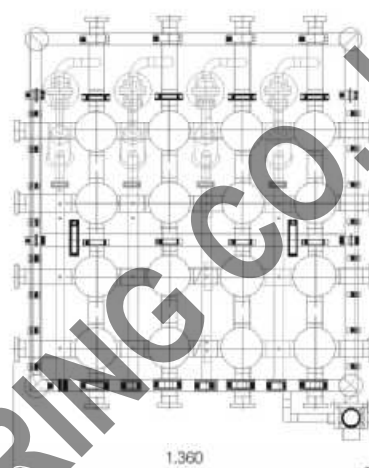
- ◆在每气动执行器(电磁阀和传感器)上配一个简单的智能控制器C-TOP
- ◆配一个AS-I总线连接的智能控制器(C-TOP)
- ◆不配智能控制器C-TOP, 在控制面板上安装一个电磁阀, 在执行器上安装一个传感器
- ◆PLC控制
- ◆在控制面板上显示阀门的状态
- ◆With a simple C-TOP on every pneumatic actuator (solenoids and sensors)
- ◆With a C-TOP of AS-I field bus
- ◆Without C-TOP, solenoids are installed in the control panel and sensors on the pneumatic actuator
- ◆PLC control
- ◆The states of the valves can be displayed on the control panel

## 技术规格Technical specifications

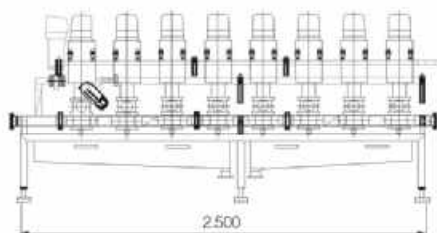
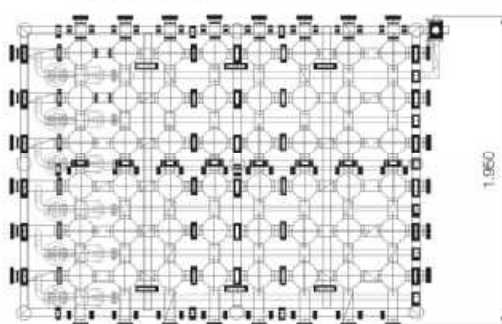
- ◆最大温度(EPDM垫圈)120°C
- ◆气动执行器5bar
- ◆智能控制器C-TOP带1个电磁阀2个传感器用于腔喷射
- ◆智能控制器C-TOP带3个电磁阀2个传感器用于阀座提升式
- ◆尺寸有DN40、DN50、DN65、DN80、DN100
- ◆用于DN25腔喷射系统的CIP管道带有一个角式过滤器
- ◆矩阵: 从4只到48只阀门
- ◆Max.temperature(EPDM gaskets)120°C
- ◆Pneumatic actuator 5 bar
- ◆C-TOP with 1 solenoid valve +2 sensors for the cavity spray mixing proof valve
- ◆C-TOP with 3 solenoid valves +2 sensors for the Seat Lift mixing proof valve
- ◆Sizes: DN40, DN50, DN65, DN80 and Dn100
- ◆CIP line for the Cavity Spray system DN25 with an angle filter
- ◆Matrix:from 4 up to 48 valves

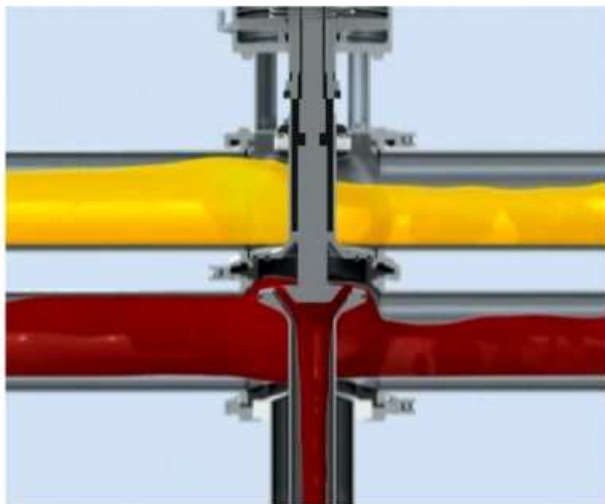
## 标准阀阵样例Examples of A Standard Manifold

阀阵Manifold 4×4



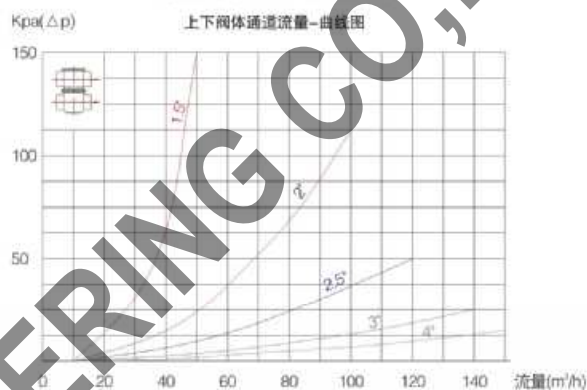
阀阵Manifold 8×6



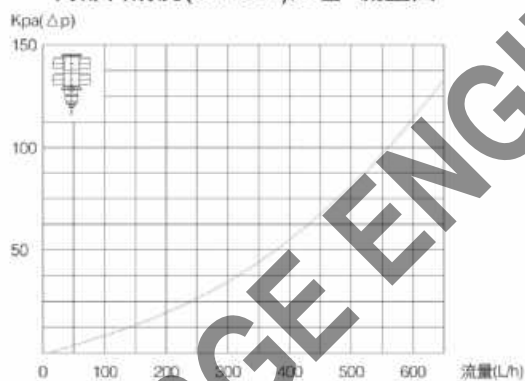


提升式防混阀压降-流量图  
Seat lift type pressure drop – flow chart

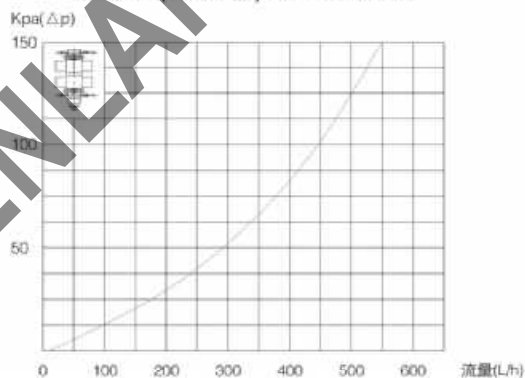
防混阀压差-流量图



内部自清洗(CIP/SIP)压差-流量图

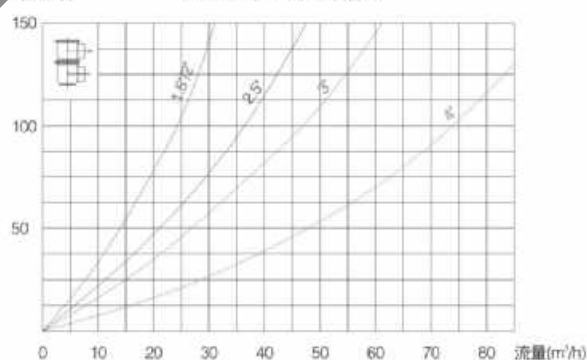


清洗管(CIP/SIP)压差-流量图

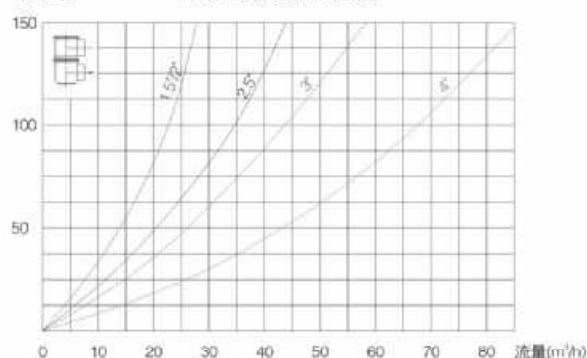


说明：测试条件基于，介质水，水温20°，测量符合VDI2173  
Description: test conditions based on, water temperature 20° , measurement accord with VDI2173

下进、上出压差流量-曲线图



上进、下出压差流量-曲线图



说明：测试条件基于，介质水，水温20°，测量符合VDI2173  
Description: test conditions based on, water temperature 20° , measurement accord with VDI2173

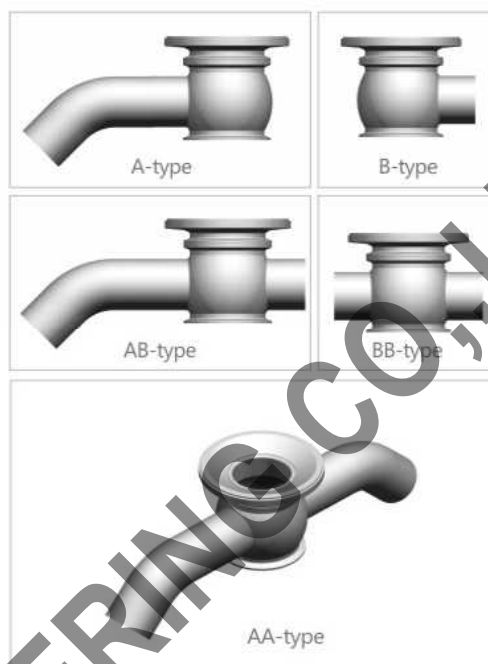
# 防混罐底阀

## Mixing proof tank bottom valve



### 非常灵活的阀体组合

### Flexible body selection

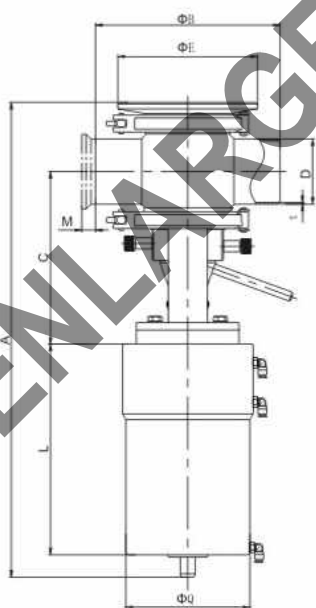


### 工作原理

防混罐底阀的特点是极高的灵活性及简单的操作。标准组件的设计使您能在所有的防混罐底阀中找到的最完美的阀体组合和配置。该阀是通过压缩空气的方式进行自控操作的。该阀具有两个独立的阀芯密封件，当阀门处在关闭状态时这两个密封件之间就会形成一个与大气相通的汇漏腔，如果出现泄漏液体就会经过泄漏腔排放出去，此时就会观测到阀门是否有故障或密封损坏信息，同时防止出现泄漏和故障导致两种介质混合。当阀门开启时，漏腔是关闭的。

### Operating principles

The concept of this double seat valve is characterized by excellent flexibility and easy operation. The typical design let you feel the most perfect body assembled and equipment in all mixproof tank bottom valve. This mixing proof is remotely operated through compressed air. The mixing proof valve is constructed with two independent plugs, which will form a leakage chamber that interlinks to atmosphere under normal working status. When occasional failure of the medium leakage happen, medium will flow into the chamber and be discharged at the out port, here it will see if any conk out or seat seal detected, preventing the possibility of products contamination due to leakage and conk out. When the valve is open, the leakage chamber is closed.



NO. VFT200Q1-21020

| SIZE | A   | B   | C   | D     | t        | E   | Q   | L   | M    |
|------|-----|-----|-----|-------|----------|-----|-----|-----|------|
| 1.5" | 460 | 160 | 161 | 38.1  | 1.5/1.65 | 130 | 120 | 216 | 12.7 |
| 2"   | 460 | 160 | 161 | 50.8  | 1.5/1.65 | 130 | 120 | 216 | 12.7 |
| 2.5" | 505 | 198 | 180 | 63.5  | 2/1.65   | 150 | 133 | 226 | 12.7 |
| 3"   | 526 | 198 | 193 | 76.2  | 2/1.65   | 150 | 133 | 226 | 12.7 |
| 4"   | 600 | 254 | 230 | 101.6 | 2        | 195 | 168 | 246 | 15.8 |

| SIZE  | A   | B   | C   | D   | t   | E   | Q   | L   | M    |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|------|
| DN40  | 460 | 160 | 161 | 40  | 1.5 | 130 | 120 | 216 | 12.7 |
| DN50  | 460 | 160 | 161 | 52  | 1.5 | 130 | 120 | 216 | 12.7 |
| DN65  | 505 | 198 | 178 | 70  | 2   | 150 | 133 | 226 | 12.7 |
| DN80  | 526 | 198 | 193 | 85  | 2   | 150 | 133 | 226 | 12.7 |
| DN100 | 600 | 254 | 230 | 104 | 2   | 195 | 168 | 246 | 15.8 |

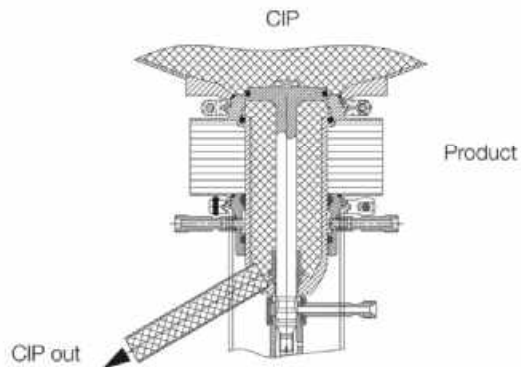
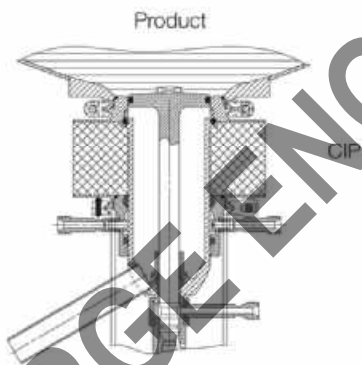




注意：轴杀菌和清洗(选型)标准配置不包含此功能

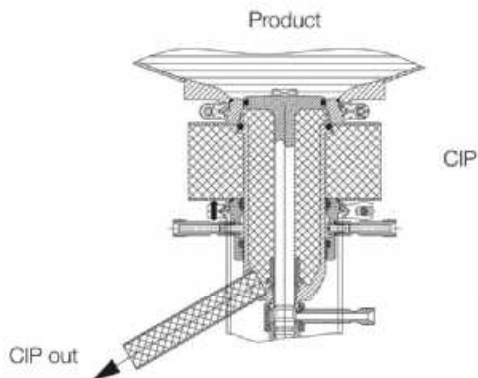
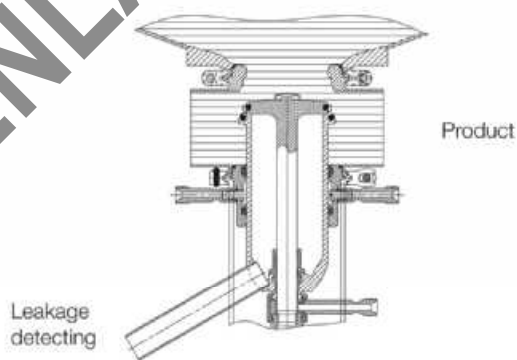
1. 关闭 Closed valve

2. 阀座提升,罐设备和阀腔清洗  
Seat lift cleaning with tank plug (optional)



3. 开启 Open valve

4. 阀座下降,管道和阀腔清洗  
Seat lift cleaning with balanced plug



## 防混阀(E-C系列)

### Mixing proof valve(E-C series)



#### 应用

外供CIP型是一款气动式座阀,设计用来满足当有两种不同产品流经同一只阀门时,既保证防止流体的混合又便于监测其工作情况。该款型阀门应用于不锈钢管道系统内。

#### 工作原理

- ◆ 外供CIP通过压缩空气进行自动操作。该阀门正常状态下常闭(NC)。该阀门装配有两只小型的、正常状态下开启的气动阀门,一只监测阀门和一只原位清洗(CIP)用的阀门。
- ◆ 阀芯(上端阀杆在一个换向阀内)具有两个密封件,彼此之间形成一个漏腔。泄漏的产品即可流进泄漏腔中,并经过检测阀排出。对该款型阀门可以进行原位清洗(CIP)操作,只需向气动头供应压缩空气即可。
- ◆ 在进行阀门清洁时,流体流向正对阀芯方向,可以使外供CIP阀门对于水锤效应不敏感。

#### 标准设计

外供CIP型阀门有两种款型供货,即带一个阀体的截止阀,或者是作为带三个阀体的换向阀。

#### Applications

The external supply CIP mixing proof valve is designed to meet when there are two different product flows through the same only valve, both guarantee to prevent fluid mixing and convenient for monitoring the working condition.

#### Operating principles

- ◆ Remotely control through compressed air this valve is normally closed(NC). This valve is companied with two small Pneumatic valves(Normally open). One for monitoring. Another one for CIP.
- ◆ Plug(upper stem inside of a changeover valve) has two seals. Which form a leakage chamber between each other. The leakage medium flow into the chamber, discharges through detector valve. Supply air to actuator can make the valve clean in place(see figure 2).
- ◆ Under cleaning, fluid flow directly to the plug. This valve is unsensitive to water hammer effect.

#### Standard design

Two optional designs: One valve body(stop reversing)  
Three valve bodies(divert seat valve)

## 材质

- ◆与物料接触部分: AISI 316L
- ◆其他不锈钢部分: AISI 304
- ◆内表面处理:  $Ra \leq 0.8 \mu m$
- ◆垫圈(标准): EPDM符合FDA 177.2600

## 选项

- ◆垫圈: 丁腈、FPM (Viton)
- ◆连接: DIN、SMS、RJT...
- ◆控制盒C-TOP: 电子连接, AS-I总线连接
- ◆表面处理:  $Ra \leq 0.4 \mu m$

各种阀体组合详见下页 Various body combination see page 2

## 设计和特点

- ◆规格从DN40-1.1/2"到DN100-4"
- ◆阀门配有常闭式气动执行器
- ◆锻造球型阀体
- ◆设计紧凑
- ◆360° 角取向

## Materials

- ◆Parts in contact with the media: AISI 316L
- ◆Other stainless steel parts: AISI 304
- ◆Internal surface finish:  $Ra \leq 0.8 \mu m$
- ◆Gasket (standard): EPDM in compliance with FDA 177.2600

## Options

- ◆Gaskets: NBR and FPM (Viton®)
- ◆Connections: DIN, SMS, RJT...
- ◆Control box C-TOP: electric connection, AS-I bus connection
- ◆Surface finish:  $Ra \leq 0.4 \mu m$

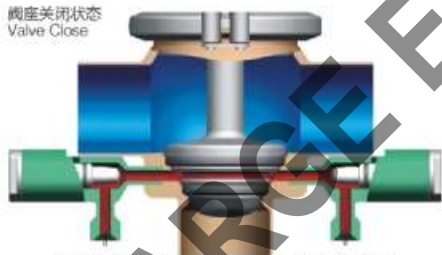
## Design and features

- ◆Available from DN40-1.1/2" to DN100-4"
- ◆Valves with normally closed pneumatic actuator
- ◆Forged spherical bodies
- ◆Compact design
- ◆Angular orientation 360°

## 防混阀工作示意图

### Mixing valve working schematic diagram

阀座关闭状态  
Valve Close



CIP清洗液进口  
CIP inlet

CIP清洗液出口  
CIP outlet

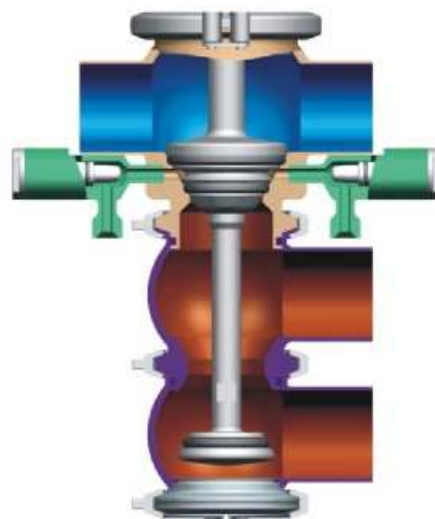
- 1) CIP 进
  - 2) CIP 出
- A. 截止阀关闭:  
对泄漏腔进行清洁。  
工作/清洗

- 1) CIP inlet
  - 2) CIP outlet
- A. Stop reversing valve closed:  
leakage cavity cleaning.  
Work / cleaning



- B. 截止阀开启:  
对阀体以及泄漏腔进行清洁。

- B. Stop reversing valve open:  
the body and leakage cavity  
cleaning.



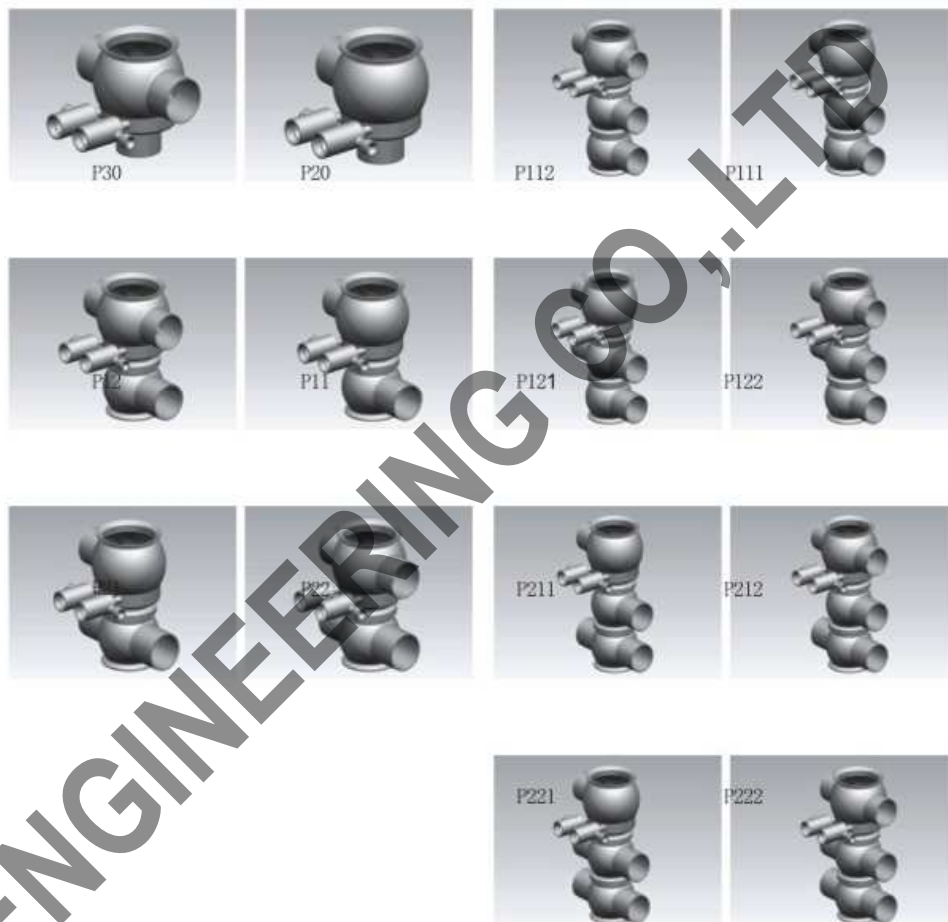
- C. 换向阀关闭:  
对上端阀体进行清洁。

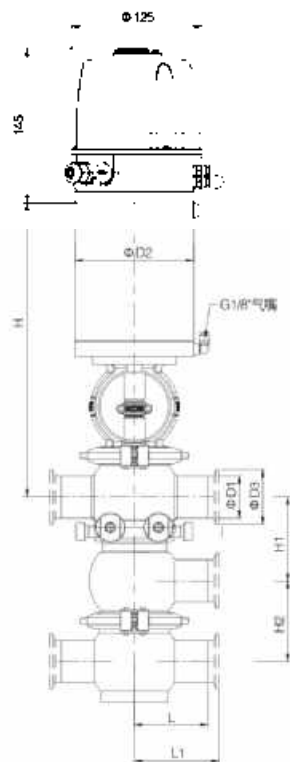
- C. Reversing valve closed:  
the upper body to undertake  
cleanness.



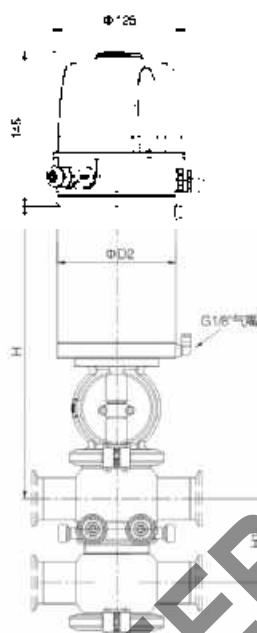
# 防混阀(E-C系列) Mixing proof valve(E-C series)

阀体组合图  
Body Combinations





NO.VFP101Q1-21212



NO.VFP101Q1-21022



NO.VFP101Q1-21030

#### 喷射式防混阀(INCH)

| SIZE   | D1    | D2  | D3   | H1    | H2    | H3  |       |       | H     | 焊接 welding | 卡箍 clamp | d  |
|--------|-------|-----|------|-------|-------|-----|-------|-------|-------|------------|----------|----|
|        |       |     |      |       |       | 一位  | 二位    | 三位    |       | L          | L1       |    |
| 1.5"   | 38.1  | 113 | 50.5 | 93.5  | 76.5  | 80  | 137   | 214   | 280.5 | 80         | 92.7     | 12 |
| 2"     | 50.8  | 113 | 64   | 102   | 76.5  | 80  | 148   | 224   | 280.5 | 80         | 92.7     | 12 |
| 2 1/2" | 63.5  | 132 | 77.5 | 109.5 | 88.5  | 99  | 159.5 | 248   | 290   | 99         | 111.7    | 12 |
| 3"     | 76.2  | 132 | 91   | 127   | 105.5 | 99  | 188   | 293.5 | 290   | 99         | 111.7    | 12 |
| 4"     | 101.6 | 180 | 119  | 163.5 | 146   | 114 | 246   | 392   | 385.5 | 114        | 129.8    | 12 |

#### 喷射式防混阀(DN)

| SIZE  | D1  | D2  | D3   | H1    | H2    | H3  |     |       | H     | 焊接 welding | 卡箍 clamp | d  |
|-------|-----|-----|------|-------|-------|-----|-----|-------|-------|------------|----------|----|
|       |     |     |      |       |       | 一位  | 二位  | 三位    |       | L          | L1       |    |
| DN40  | 40  | 113 | 50.5 | 93.5  | 76.5  | 80  | 137 | 214   | 280.5 | 80         | 92.7     | 12 |
| DN50  | 52  | 113 | 64   | 102   | 76.5  | 80  | 148 | 224   | 280.5 | 80         | 92.7     | 12 |
| DN65  | 70  | 132 | 91   | 127   | 105.5 | 99  | 188 | 293.5 | 290   | 99         | 111.7    | 12 |
| DN80  | 85  | 132 | 106  | 127   | 105.5 | 99  | 188 | 293.5 | 290   | 99         | 111.7    | 12 |
| DN100 | 104 | 180 | 119  | 163.5 | 146   | 114 | 246 | 392   | 385.5 | 114        | 129.8    | 12 |

## 各种配置的防混阀

Mixing proof valves with various configurations



### 阀位可调式防混阀

Valve position can be adjusted

#### 技术特点：

可以扳手实现流量调节，低成本优势

#### Technical features:

Flow controlling by wrench, Low cost.

阀位调节器  
Valve position regulator

调节扳手  
Control wrench



### 无菌防混阀带PTFE膜片

Aseptic mixing proof valve (with PTFE diaphragm)

#### 技术特点：

该阀门拥有标准防混阀功能

PTFE隔膜隔离了阀门内部与外部

泄漏仓可提供隔膜损坏的情况通过检漏管提供信息

#### Technical features:

The valve has the same function of mixing proof valve  
PTFE diaphragm isolates the inside and outside  
Diaphragm's damage can be seen at leakage chamber through the leakage detecting tube.

泄漏仓 Leakage bin

检漏管 Leakage detector tube



### 无菌防混阀

Aseptic mixing proof valve

#### 技术特点：

该阀门具有标准防混阀功能

一个可经液体清洗或蒸气消毒的轴的配置，保证了阀杆被彻底清洗。

#### Technical features:

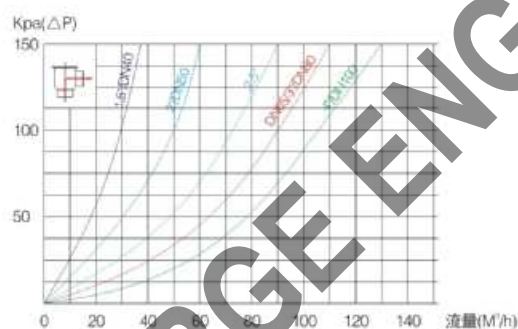
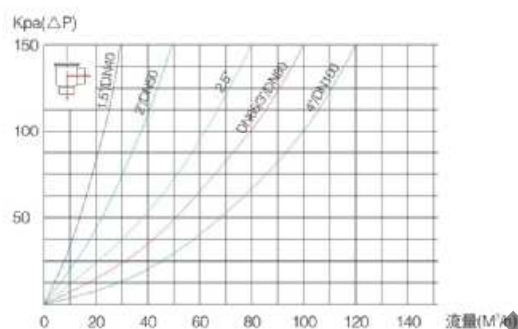
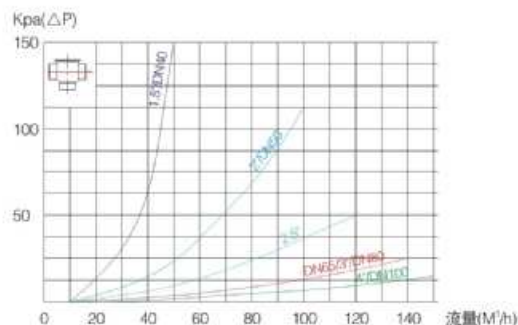
The valve has the same function of mixing proof valve  
Equipped with a stem that can be sterilized by cleaning fluid and steam. Ensure the stem be completely cleaned.



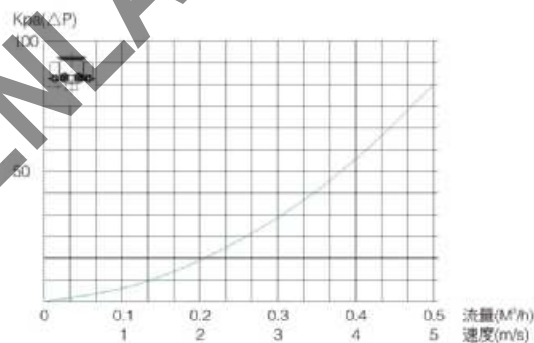
# 防混阀流量曲线图

## Flow rate curve of mixing proof valve

单座防混阀压降-流量图  
Single seat prevent mixing valve pressure drop – flow chart

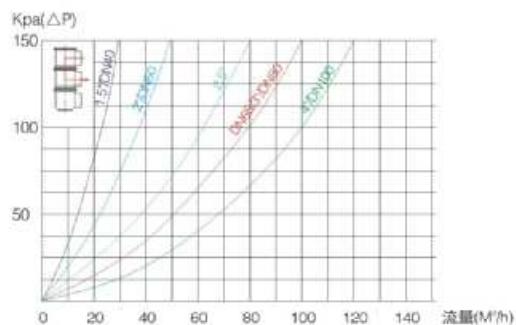
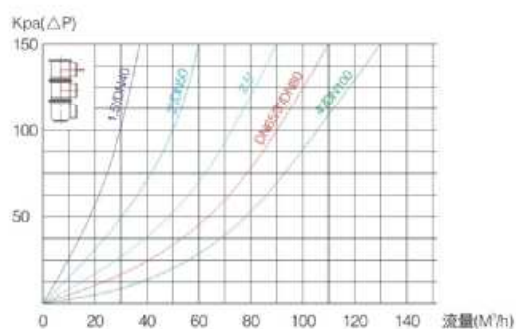
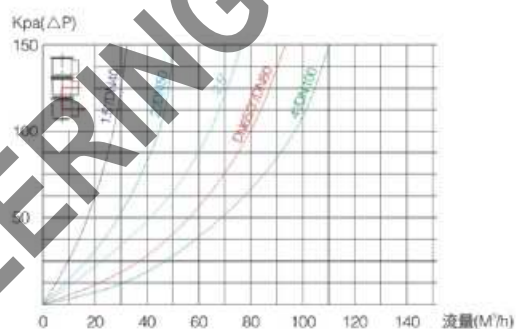
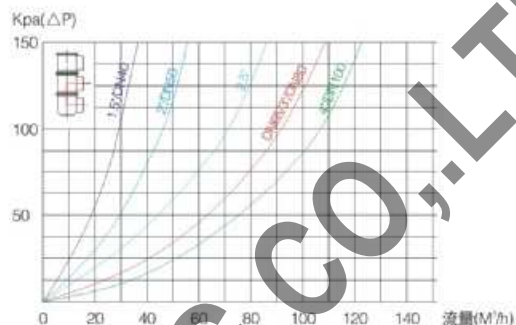


CIP(原位清洗)腔压降-流量及流速图  
CIP (Clean in place) cavity pressure drop – flow and flow chart



说明: 测试条件基于, 介质水, 水温20°, 测量符合VDI2173  
Description: test conditions based on, water, water, temperature 20°, measurement accord with VDI2173

换向型防混阀压降-流量图  
Reversing type anti mixed valve pressure drop – flow chart



说明: 测试条件基于, 介质水, 水温20°, 测量符合VDI2173  
Description: test conditions based on, water, water, temperature 20°, measurement accord with VDI2173



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