

# 两片式法兰球阀

## 2PC Flange ball valve

**HANKSON**®

Hankson GmbH & Fluid Control System



系列 Series  
Q200

Q200系列球阀采用浮动式球体，浮动球阀适用于中低压力和中小口径，能降低操作扭矩，延长使用期限。此类结实耐用的球阀专用于工业应用。

Q200 series ball valve adopts floating ball, the floating ball valve is suitable for medium and low pressure and small and medium caliber, can reduce the operating torque, prolong the service life., These heavy-duty ball valves are designed for industrial applications

连接方式：德标法兰 DIN Flange

Connection 国标法兰 GB Flange 工作温度：-40°C-250°C

美标法兰 ANSI Flange Temperature

日标法兰 JIS Flange

HANKSON的法兰式系列阀门提供石墨阀杆填料，在极端环境下，也能达到最高级的防火安全标准。如在烟火中，过高的温度损害了密封弹性阀座，球体会与经书阀体直接接触，行程第二级密封，阀体阀盖之间密封为不锈钢和石墨构成的石墨不锈钢丝缠绕垫圈，能防止泄露。石墨的阀杆填料能防止阀杆泄露。

HANKSON flanged series valves with graphite stem packing meet the highest fire safety standards under extreme conditions. In the event of a fire, after heat destroys the primary resilient seat, the ball makes contact with the secondary metal seat, forming a secure seal. The body seal, composed of Stainless Steel and Graphite wound into a spiral, prevents external leakage. The Graphite stem rings prevent stem leakage.

## 阀杆密封Stem seals

Q200系列阀门提供活动加载式，具有自动调节的双重密封。独有的蝶形垫片设计，使阀杆可自动调整至平衡位置来适应温度的变化和日常的磨损。HANKSON的阀门专门提供一个单独的填料压盖，不需要重新移动其他部件，就可自动进行调整。填料压盖的设计，能够更均匀的分散经过密封圈的流体压力。第一重密封是由轴密封构成。而可调节的阀杆填料在阀杆和阀体之间形成了第二重密封。阀杆填料的标准配置为RPTFE（增强聚四氟乙烯），由一组V型垫圈叠加而成。所有防火型阀门的标准配置是石墨阀杆填料

Q200 Series valves feature live-loaded, self-adjusting primary and secondary sealing. Utilizing Belleville washers, the stem seal automatically adjusts to compensate for changes in temperature and normal wear. HANKSON valves utilize an independent packing gland which can be easily adjusted without removing mounting hardware or operator. The packing gland is contoured to more uniformly distribute the load across the packing. The primary seal is a thrust washer. An adjustable stem packing creates a secondary seal between the stem and body. The stem packing is composed of RPTFE V-rings as standard-graphite stem packing is standard on all Fire Safe valves

## 阀体Body

不锈钢阀体采用精密铸造工艺，经固溶退火，确保高性能，且能承受更大强度压力。碳钢阀体表面经黑色磷化处理，抗腐防锈。每件阀体铸件印有铸造厂的炉号，以备质量追溯。

valve bodies are investment cast and solution annealed/normalized for the highest quality and added strength. All body castings are marked with a foundry heat number for full traceability. Carbon Steel bodies are phosphate coated for increased corrosion resistance.

## 阀杆Stem

HANKSON制造能承载重负载，高质量阀杆。阀杆采用双“D”结构连接球体和操作机构。球体与阀杆精确配合，所有HANKSON阀杆都是有阀体内部装入，可以防止阀杆被吹出，防吹式阀杆的设计增大了安全系数。

HANKSON manufactures heavy duty, high quality stems with double "D" connection to ball and operator mounting. Stems are mated with the ball to ensure positive contact. All HANKSON stems are internal entry and blowout proof for maximum safety.

## 阀座Seat

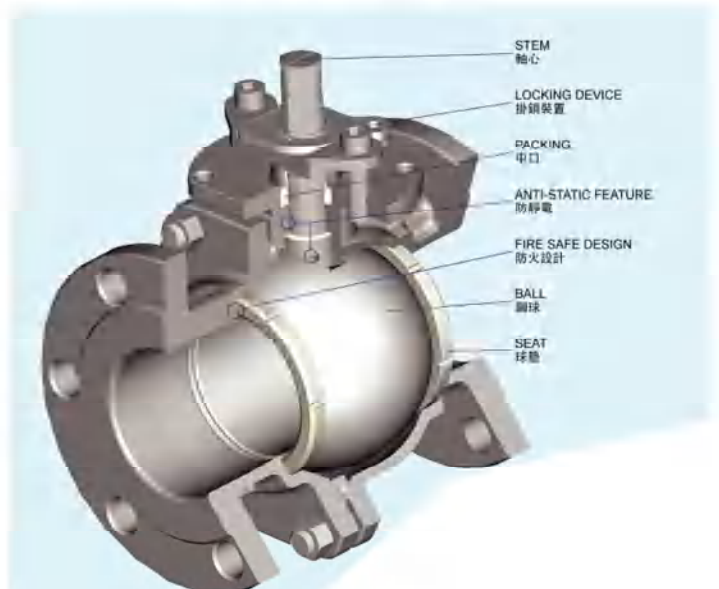
阀座设计在确保降操作扭矩的同时，保持双向零泄漏。所有弹性阀座外径上都有泄压槽，来降低经过入口端的流体压力，同时具备良好的预加载来保证低压真空密封。

Seat design ensures bidirectional, bubble-tight sealing with low operating torque. All resilient seats feature relief slots or seat O.D. clearance to relieve pressure past the upstream seat, and positive preloading to ensure low pressure/vacuum sealing

## 球体Ball

球体经精密机械加工，且经过镜面抛光。确保零泄漏，操作扭矩小。此外，还有一个额外增加的安全特性，即每个球体阀杆槽中设有一个孔，当阀门处于开启位置时，可使阀腔和流体之间的压力均等。

Balls are precision machined and mirror finished for bubble-tight shut off and less operating torque. As an added safety feature, a hole in the stem slot of each ball equalizes pressure between the body cavity and the line media flow.





# Q200/常规配置

## General configuration

### 产品简介Product introduction

两片式结构漏点少，浮动球芯结构，经济实用，适用于绝大多数工况。

Two structure leak less, floating ball core structure, economical and practical, suitable for most conditions



### 设计和特点Design and Features

操作：手把式、气动、电动

连接标准：德标法兰，美标法兰，国标法兰

压力范围：PN16/150LB, PN25, PN40/300LB

Operation: Handle, Pneumatic, Electric

Connection standard: DIN, ANSI, GB

Pressure range: PN16/150LB, PN25, PN40/300LB



### 气动执行器 Pneumatic actuator

缸体：铝合金（其他请咨询）

气源压力：4-8 bar

环境温度：-20℃-+80℃（其他请咨询）

气源介质：过滤后的压缩空气或者其他惰性气体

选项：两位三通或两位五通电磁阀，电子或物理指示器，

定位器，过滤减压阀，手动离合器

Body: Aluminum alloy (Others on request)

Pilot pressure: 4-8 bar

Temperature of the environment: -20℃ up to +80℃ (Others on request)

Pilot media: Filtered compressed air or other inert gases

option: 3/2-ways or 5/2-ways solenoid valve, electronic or physical

indicators, locator, filter pressure reducer, manual clutch

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### 选项Options

球芯类型：标准，30°球芯，45°球芯，60°球芯，半球

阀体材质：碳钢，304SS，316SS，316L

内件材质：304SS，316SS，316L

阀座密封：PTFE，TFM，PEEK（其他请咨询）

阀杆填料：PTFE，TFM，PEEK

Type of valves: Standard, 30ball, 45ball, 60ball, eccentric ball

Body: WCB, 304SS, 316SS, 316L

Trim: 304SS, 316SS, 316L

Seat: PTFE, TFM, PEEK (Others on request)

Packing: PTFE, TFM, PEEK



### 电动执行器 Electric actuator

可选电压：220VAC, 380VAC, 24VDC（其他请咨询）

环境温度：-20℃-+60℃

防护等级：IP67

标准设备：两限位开关，物理指示器，手动控制，

开关型+干接点

选项：除湿加热器，过力矩保护，

4-20mA调节，Exd IIB T4，更多要求请咨询

Optional voltage: 220VAC, 380VAC,

24VDC (Others on request)

Temperature of the environment: -20℃ up to +80℃

Protection: IP 67

Standard equipment: 2 additional limit switches,

optical position indicator, manual override,

On/Off+Limit switch option: Dehumidification

heater, overtorque protection, modulate type

4-20mA, Exd I B T4, more requests please contact

# 三片式球阀

## 3PC ball valve

**HANKSON**®

Hankson GmbH & Fluid Control System



## 系列 Series Q300

HANKSON Q300系列球阀为3片式的设计形式，方便用户更灵活地选择连接端、阀座材质。为满足用户的不同要求，阀门可装上调节阀用的V型球体，或者有三个端口的球体（用于阀腔排液）。对于特殊用途的球阀，还可以安装空隙填充阀座。作为具有互换性阀门的一种品种，此系列球阀的球体、阀杆、阀杆填料、手柄以及安装平台上装配零件的设计在不同尺寸、不同系列之间具有更广泛的互换性。该设计可减少备品备件库存，并降低维修费用。

HANKSON Series Q300 ball valves offer the highest flexibility in selection of end connections, seat materials and 3 piece design. To meet customer demands for a valve with the widest possible range of applications, these valves can be fitted with control or tri-ported balls (for full cavity drainage), as well as cavity fillers for special service requirements. The Series A100 is designed with extensive interchangeability of balls, stems, stem packing, handles and mounting hardware between valve sizes and series members. This system reduces parts inventory and maintenance costs.

连接方式

Connection

G螺纹 G thread

NPT螺纹 NPT thread

对焊 Bolt weld

承插焊 Socket weld

卡箍 Clamp

工作温度

Temperature

-40°C—+250°C





## 阀杆Stem

HANKSON制造能承载重负载，高质量阀杆。阀杆采用双“D”结构连接球体和操作机构。球体与阀杆精确配合，所有HANKSON阀杆都是有阀体内部装入，可以防止阀杆被吹出，防吹式阀杆的设计增大了安全系数。

HANKSON manufactures heavy duty, high quality stems with double "D" connection to ball and operator mounting. Stems are mated with the ball to ensure positive contact. All HANKSON stems are internal entry and blowout proof for maximum safety.

## 手柄Handle

阀门设有保险扳口可以防止球体位置误移动，操作可有单手方便完成。扳口可将手柄固定在开或关的位置上。如无需使用扳口，可用小销钉将其固定在手柄上。阀门可使用挂锁固定手柄位置，防止误移位。

The valve is provided with a wrench opening can prevent insurance ball position error of mobile, operation can be completed in one hand convenient. Opening of the spanner handle can be fixed in the open or closed position. If no need to use the wrench mouth, can use the small pin which is fixed on the handle. Valve can be used in fixed position of handle padlock, prevent false shift.

## 阀杆Stem

HANKSON制造能承载重负载，高质量阀杆。阀杆采用双“D”结构连接球体和操作机构。球体与阀杆精确配合，所有HANKSON阀杆都是有阀体内部装入，可以防止阀杆被吹出，防吹式阀杆的设计增大了安全系数。

HANKSON manufactures heavy duty, high quality stems with double "D" connection to ball and operator mounting. Stems are mated with the ball to ensure positive contact. All HANKSON stems are internal entry and blowout proof for maximum safety.

## 阀座Seat

阀座设计在确保降操作扭矩的同时，保持双向零泄漏。此设计可降低摩擦，使阀座磨损达到最小化，以降低操作扭矩。

Seat design ensures bidirectional, bubble-tight sealing with low operating torque. This seat design reduces friction, minimizes seat wear and reduces operating torque.

## 双锁定螺母设计Double lock nut design

双锁定螺母使阀门可在管线承压调节下拆卸手柄，既安全又简单。

Standard on the Series 300, the double lock nuts allow handles to be easily and safely removed while the valve is under full line pressure.

## 阀体Body

阀体Body阀体为精密铸造并经固溶退火/正火处理，增加强度和高质量。每件阀体铸件都有铸造厂的熔炼炉号以被质量追溯，碳钢阀体表层黑色磷化处理，抗腐蚀防锈。

Valve bodies are investment cast and solution annealed /normal-ized for the highest quality and added strength. Body castings are marked with a foundry heat number for full traceability. Carbon steel bodies are phosphate coated for increased corrosion resistance.

## 阀杆填料Stem packing

可调的V型填料密封环，在阀体和阀杆间产生3个或4个环组成（取决于阀门口径），具有寿命长和抗蠕变、抗冷流的特性。支腿轴承和止推垫圈作为初级密封，减少扭矩和方式咬合。这种设计是HANKSON产品的特色。

An adjustable V-ring design creates a multiple seal between the stem and body. Each stem assembly is composed of three or four (dependent on valve size) rings providing a very high cycle life by resisting creep and cold flow. The thrust washer and the thrust washer protector combine to provide a primary seal, reduce torque and prevent galling. This design is the HANKSON product characteristics.

## 安装平台Installation platform

整体铸造的顶部安装平台确保执行器的安装，消除执行器长期持续运行时产生松动，在管道承压状况下可方便安全地拆卸执行器。安装平台设计符合ISO5211标准。

The top integral casting installation platform to ensure that the actuator installation, remove actuator long-term continuous operation of loosening, in the pipeline pressure bearing conditions can be conveniently and safely remove actuator. Installation of platform design conforms to the ISO5211 standard.

## 阀体铰链Body hinges

承受达荷载的铰链，可保证阀体与端盖在线维修时能保持铰链。

Heavy duty hinges, throughout the entire size range, provide positive alignment of body to end connection during swing-out, in-line servicing.

# Q300/常规配置

## General configuration

### 产品简介 Product introduction

三片式球阀，结构简单，经济实用，更换方便，适用于绝大多数工况。  
3-PC ball valve, simple structure, economical and practical, easy to replace, suitable for most working conditions

### 设计和特点 Design and Features

操作：手把式、气动、电动

连接：螺纹、焊接

压力范围：1000PSI、2000PSI

Operation: Handle, Pneumatic, Electric

Connection: Thread, Weld

Pressure range: 1000PSI、2000PSI



### 气动执行器 Pneumatic actuator

缸体：铝合金（其他请咨询）

气源压力：4-8 bar

环境温度：-20℃~+80℃（其他请咨询）

气源介质：过滤后的压缩空气或者其他惰性气体

选项：两位三通或两位五通电磁阀，电子或物理指示器，定位器，过滤减压阀，手动离合器

Body: Aluminum alloy (Others on request)

Pilot pressure: 4-8 bar

Temperature of the environment: -20℃ up to +80℃ (Others on request)

Pilot media: Filtered compressed air or other inert gases

option: 3/2-ways or 5/2-ways solenoid valve, electronic or physical indicators, locator, filter pressure reducer, manual clutch

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### 选项 Options

球芯类型：标准，30°球芯，45°球芯，60°球芯，半球

阀体材质：碳钢，304SS，316SS，316L

内件材质：304SS，316SS，316L

阀座密封：PTFE，TFM，PEEK（其他请咨询）

阀杆填料：PTFE，TFM，PEEK

Type of valves: Standard, 30ball, 45ball, 60ball, eccentric ball

Body: WCB, 304SS, 316SS, 316L

Trim: 304SS, 316SS, 316L

Seat: PTFE, TFM, PEEK (Others on request)

Packing: PTFE, TFM, PEEK



### 电动执行器 Electric actuator

可选电压：220VAC，380VAC，24VDC（其他请咨询）

环境温度：-20℃~+60℃

防护等级：IP67

标准设备：两限位开关，物理指示器，手动控制，开关型+干接点

选项：除湿加热器，过力矩保护，

4-20mA调节，Exd IIB T4，更多要求请咨询

Optional voltage: 220VAC, 380VAC,

24VDC (Others on request)

Temperature of the environment: -20℃ up to +80℃

Protection: IP 67

Standard equipment: 2 additional limit switches, optical position indicator, manual override,

On/Off+Limit switch option: Dehumidification heater, overtorque protection, modulate type

4-20mA, Exd I B T4, more requests please contact



# 三通球阀

## 3-Way Ball valve

# HANKSON®

Hankson GmbH & Fluid Control System



## 系列 Series Q400

HANKSON Q300系经济实用的多通径阀门，既具有多流向的控制功能又具有开关阀的特性，排除了使用多个阀门和额外的开关阀的必要性列之间具有更广泛的。

**Cost effective Multiport Series ball valves feature multidirectional control combined with shutoff capacity in one valve. Valve duplication and the need for an extra shutoff valve are eliminated.**

连接方式

Connection

G螺纹 G thread

NPT螺纹 NPT thread

对焊 Bult weld

承插焊 Socket weld

法兰 Flange

工作温度

Temperature

-40°C—+250°C

# Q400

## 结构特征Structural features



### 标准应用Standard application

混合通道介质向不同的方向分流使介质避开过滤器，仪表，热交换器等引导介质从储存罐中排出或流进关闭来自不同流向的介质。

Mixing or blending of line medias Diversion of flow to different locations Bypass of flow around strainers, meters, heat exchangers, etc. Direct flow out of or into storage tanks Shutoff flow from different directions

### 阀杆密封Stem seals

HANKSON 阀门都具有活动加载式阀杆密封以确保密封性。利用蝶型弹簧垫片和阀杆密封可自动调节来适应温度变化和日常磨损。阀门提供一级和二级阀杆密封。第一级密封是由一个止推垫片和氟橡胶O型圈组成的。第二级密封在阀门的上部形成了在阀杆和阀体之间可调节的阀杆密封。

HANKSON valves all feature a live-loaded stem packing assembly for positive stem sealing. Utilizing bellville washers, the stem seal automatically adjusts to compensate for changes in temperature and normal wear. The valves also offer primary and secondary stem sealing. The primary seal is a thrust washer and O-ring assembly. The adjustable stem packing creates a secondary seal between the stem and body in the upper stem journal area.

### 阀座Seat

球与阀杆的连接方式的设计确保了两者之间的稳固连接。1/4"-2" 阀门的阀杆与球有小销钉连接，2-1/2"-6" 阀杆和球是固定的一体式结构。所有阀杆提供防吹出保护。球体经精密机加工和抛光，确保气泡级关闭密封和较低的操作扭矩。HANKSON球体的边缘经机加工，以减少阀座磨损和延长工作年限。

The ball and stem connection is designed to ensure a positive connection. 1/4"-2" valve stems are pinned, 2 1/2"-6" stems and balls are one-piece with trunnion mounting. All stems offer blow-out proof protection. Balls are precision machined and mirror finished for bubble-tight shutoff with less operating torque. HANKSON balls have machined edges to reduce seat wear providing a high life cycle.

### 互换性特性Interchangeability

许多部件，包括球，阀杆，阀座，阀杆密封和阀体密封都可以在同一个规格不同类型的阀门中互换。

Many parts including balls, stems, seats, and stem and body seals are interchangeable between different models of the same size valve.

### 球体/阀杆Ball/Stem

HANKSON制造能承载重负载，高质量阀杆。阀杆采用双“D”结构连接球体和操作机构。球体与阀杆精确配合，所有AISENBERG阀杆都是有阀体内部装入，可以防止阀杆被吹出，防吹式阀杆的设计增大了安全系数。

HANKSON manufactures heavy duty, high quality stems with double "D" connection to ball and operator mounting. Stems are mated with the ball to ensure positive contact. All Aisenberg stems are internal entry and blowout proof for maximum safety.

### 阀座选择Seat selection

有多种阀座材料可供选择，可以满足绝大多数工况要求。标准阀座配置为PTFE。还可以选择RPTFE，TFM和PEEK。HANKSON阀座在高温高循环和蒸汽工况中可提供较低的扭矩和较长使用寿命。

A wide range of seat materials are available to meet most applications. The standard seat is PTFE. Options include RPTFE, TFM and PEEK. HANKSON seats offer reduced torque in high temperature, high cycle, and steam service applications.





# Q400/常规配置

## General configuration

### 产品简介Product introduction

三通球阀，适用于介质的分流或者换向或者合流。

3-Way ball valve for diversion medium or commutation or confluence.



### 设计和特点Design and Features

操作：手把式、气动、电动

连接标准：德标法兰，美标法兰，国标法兰

压力范围：PN16/150LB, PN25, PN40/300LB, 1000psi

Operation: Handle, Pneumatic, Electric

Connection standard: DIN, ANSI, GB

Pressure range: PN16/150LB, PN25, PN40/300LB, 1000psi



### 气动执行器 Pneumatic actuator

缸体：铝合金（其他请咨询）

气源压力：4-8 bar

环境温度：-20℃~+80℃（其他请咨询）

气源介质：过滤后的压缩空气或者其他惰性气体

选项：两位三通或两位五通电磁阀，电子或物理指示器，

定位器，过滤减压阀，手动离合器

Body: Aluminum alloy (Others on request)

Pilot pressure: 4-8 bar

Temperature of the environment: -20℃ up to +80℃ (Others on request)

Pilot media: Filtered compressed air or other inert gases

option: 3/2-ways or 5/2-ways solenoid valve, electronic or physical

indicators, locator, filter pressure reducer, manual clutch

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### 选项Options

球芯类型：L型，T型

阀体材质：碳钢，304SS，316SS，316L

内件材质：304SS，316SS，316L

阀座密封：PTFE，TFM，PEEK（其他请咨询）

阀杆填料：PTFE，TFM，PEEK

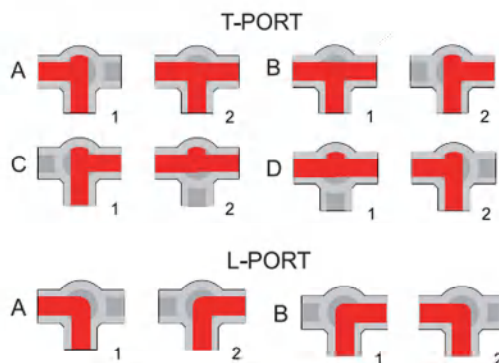
Type of valves: L port, T port

Body: WCB, 304SS, 316SS, 316L

Trim: 304SS, 316SS, 316L

Seat: PTFE, TFM, PEEK (Others on request)

Packing: PTFE, TFM, PEEK



### 电动执行器Electric actuator

可选电压：220VAC，380VAC，24VDC（其他请咨询）

环境温度：-20℃~+60℃

防护等级：IP67

标准设备：两限位开关，物理指示器，手动控制，

开关型+干接点

选项：除湿加热器，过力矩保护，

4-20mA调节，Exd IIB T4，更多要求请咨询

Optional voltage: 220VAC, 380VAC,

24VDC (Others on request)

Temperature of the environment: -20℃ up to +80℃

Protection: IP 67

Standard equipment: 2 additional limit switches,

optical position indicator, manual override,

On/Off+Limit switch option: Dehumidification

heater, overtorque protection, modulate type

4-20mA, Exd IIB T4, more requests please contact

# V型半球型球阀

## V-hemispherical Ball valve

**HANKSON**<sup>®</sup>  
Hankson GmbH & Fluid Control System



系列 Series  
Q500

HANKSON Q400是一种多用途V型半球型调节球阀，专门设计用于不同行业内的节流或切断应用，包括造纸、化工、电力、石油和天然气以及采矿等。

HANKSON Q400 is a Multi-purpose V-hemispherical ball valve, specially designed for throttling the different industries or cut application, including papermaking, chemical, electric power, petroleum and natural gas and mining etc..

连接方式： 德标法兰 DIN Flange  
Connection 国标法兰 GB Flange  
美标法兰 ANSI Flange  
日标法兰 JIS Flange

工作温度： -40°C-250°C  
Temperature



## Q500/先进的球形控制球阀

### Advanced ball control ball valve



标准的圆形通道球阀一直被用于，并将继续被用于多种控制用途，如用于需要适度压降的工况。现在，随着HANKSON的V形球阀的诞生，已可提供具备出色的流量控制的，全系列的控制球阀。与其他公司提供的同等尺寸的截止阀和分段控制阀相比，这些90°开关控制阀的结构更为紧凑，重量更为轻便，价格更为经济实惠。因装有先进的数控执行机构以及球阀固有的优势，HANKSON形球阀对控制指令反应迅速。这些阀门超过了六级密封等级，气泡关闭密封时为零泄漏。其他特点还包括超大的可调范围和重复性能，大流量，能在含有附体和纤维的流体中作业，易于维护，易于PLC界面和计算机指令兼容等。

Standard round ported ball valves have been used, and continue to be used, for many control applications such as services involving moderate pressure drops. Now, with the development of HANKSON's characterized V-balls, a full range of control applications is available with superior flow control. These 1/4 turn control ball valves are more compact, lighter weight and much less expensive than comparably sized globe valves and segmented control valves offered by other companies. HANKSON control valves offer fast response times to control signals due to advanced digital control of actuation and the inherent strengths of ball valves. These valves exceed Class VI offering bubble tight shut off with zero leakage. Other features include superior rangeability and repeatability, high flow capacity, the ability to function with fluids containing solids and fibers, ease of maintenance and exceptional interface with PLCs and computer command signals.

### 增加线性响应 Increased linear response

由于线性设计的固有特性配合控阀的特点，管道介质得以呈线性状流管道系统。这种设计增强了对介质的控制，以及对控制指令的快速反应。

Due to the in-line design inherent with characterized control ball valves, line media flows linearly through, the piping system. The direct pattern provides increased media control and rapid response times to controller commands.

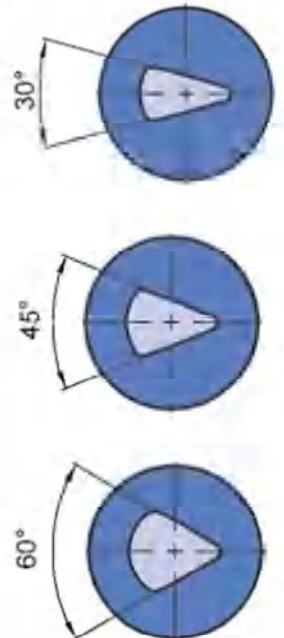
### 优良的控制特性 Exceptional characterized Control

HANKSON的V形球阀能够对球阀下游提供预期的和精确地流量控制。这些切割精确地V形球阀可与截止阀的控制性能媲美，且具有经济实惠，体积小，重量轻的球阀特点。HANKSON可提供多种V形端口槽形端口的球体。60°端口球体，像标准圆孔球体一样，提供等百分比流量的特点。槽形球体和V形球体有一个小的打开角度，30°球体，具有改进的等百分比流量特性。

HANKSON characterized balls provide predictable and accurate control of downstream flow rates. These precision cut balls match the control performance of globe valves while offering the economy, features and reduced size and weight of ball valves.

HANKSON offers a wide range of V-Port and Slotted Port characterized balls. The 60° balls, like standard round hole balls, offer an equal percentage inherent flow characteristic.

A slotted ball and a V-Port ball with a small angle opening, medium angle V-Port valves such as a 30° ball furnish a modified equal percentage inherent flow characteristic.



### 流量大 High flow capacity

HANKSON控制提供最大化流量，与相同尺寸的截止阀比，实际上要大得多。控制球阀固有的形态，能提高流速，在很多应用中，即使球阀口径小于管道尺寸，亦可使用。球阀阀座与球的自洁功能可使球阀被用于泥浆和多纤维介质工况中。

HANKSON control ball valves have been designed to offer maximum flow characteristics that are substantially higher than comparably sized globe valves. The inherent flow pattern of ball valves increases flow rates and in many applications valves smaller than pipeline size can be used. The self-cleaning action of the ball against the seat makes the ball valve acceptable for slurry and high fiber media services.

# Q500

## 结构特征Structural features



Q500是独特的V型半球型球体，提供较大的调节范围并采用花键连接阀杆，控制精确，用于易于维护的V型球-阀杆组件、低摩擦的阀杆与滑动轴承结构，使用寿命更长，一体式执行器安装平台以及可互换的阀座。

The valve features a characterized ball segment for high rangeability with splined stem connection for precise control, maintenance friendly segment-stem assembly, low friction shaft and thrust bearings for longer life, integral actuator mounting pads, and interchangeable seats.

### 阀体Body

一体式设计，提供了更好的刚性，可承受管道载荷。消除了两体式阀体设计泄漏问题。one-piece body design which offers greater rigidity against fluctuating pipe loads. Eliminates the leak path associated with two piece body designs.

### 球体-阀杆连接Ball-Stem connection seat

阀杆与球体采用花键紧密配合连接，具有高强度，可消除阀杆滞回或死区。完美定向，独特设计的轴销有利于V型球体的自动对准，同时在例行保养过程中简化装配和拆卸操作。lose-fit splined connection between stem and the segment offers extra strength with no lost motion or dead band. Perfectly oriented, specially designed shaft pin facilitates self-alignment of the ball segment while simplifying the assembly and disassembly during routine maintenance.



### 阀座Seat

自动预紧阀座设计，即使在非常低的压差下也能提供极好的密封。自动定心阀座不受外部管道负载影响，即使在恶劣工况下也能提供极好的密封。标准金属阀座经硬化处理，在316不锈钢基材上堆焊有硬质合金。标准软密封阀座设计采用PTFE材料，耐化学性和耐热性好。

Pressure energized seat design offers excellent sealing even at very low differential pressures. Self-aligning seat is independent of external pipe loads and offers excellent sealing even in adverse conditions. Standard metal seat has hard-faced seat surface with Stellite overlay on 316 SS base material. Standard soft seat design uses PTFE to maintain exceptional chemical and heat resistance.

### 球心 Ball

设计精巧，具有独特的V型端口，提供超过300:1的可调范围，是高浓度纸浆或泥浆节流的理想选择。带圆角的精细研磨球面，降低金属阀座的操作扭矩，硬质涂层球面防止磨损。型球体设计精巧，优化流量。阀座在高开度时支撑稳固，可防止阀门摇摆和故障。carefully designed with characterized V-port to offer rangeability in excess of 300:1, ideal for throttling applications in high consistency pulp services or slurry applications. Perfectly ground spherical surface with rounded edges ensure lower operating torques for metal seated valves. Hard coated spherical surface prevents galling. The seat is supported during higher openings to prevent rocking motion and possible failure of the valve.



# Q500/常规配置

## General configuration

### 产品简介Product introduction

多用途V型半球型调节球阀，专门设计用于不同行业内的节流或切断应用。

Multi-purpose V-hemispherical ball valve, specially designed for throttling the different industries or cut application

### 设计和特点Design and Features

操作：手把式、气动、电动

连接标准：德标法兰，美标法兰，国标法兰

压力范围：PN16/150LB, PN25, PN40/300LB

Operation: Handle, Pneumatic, Electric

Connection standard: DIN, ANSI, GB

Pressure range: PN16/150LB, PN25, PN40/300LB



### 气动执行器 Pneumatic actuator

缸体：铝合金（其他请咨询）

气源压力：4-8 bar

环境温度：-20°C~+80°C（其他请咨询）

气源介质：过滤后的压缩空气或者其他惰性气体

选项：两位三通或两位五通电磁阀，电子或物理指示器，

定位器，过滤减压阀，手动离合器

Body: Aluminum alloy (Others on request)

Pilot pressure: 4-8 bar

Temperature of the environment: -20°C up to +80°C (Others on request)

Pilot media: Filtered compressed air or other inert gases

option: 3/2-ways or 5/2-ways solenoid valve, electronic or physical

indicators, locator, filter pressure reducer, manual clutch

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### 选项Options

球芯类型：标准，30°球芯，45°球芯，60°球芯，半球

阀体材质：碳钢，304SS，316SS，316L

内件材质：304SS，316SS，316L

阀座密封：PTFE，TFM，PEEK（其他请咨询）

阀杆填料：PTFE，TFM，PEEK

Type of valves: Standard, 30ball, 45ball, 60ball, eccentric ball

Body: WCB, 304SS, 316SS, 316L

Trim: 304SS, 316SS, 316L

Seat: PTFE, TFM, PEEK (Others on request)

Packing: PTFE, TFM, PEEK



### 电动执行器 Electric actuator

可选电压：220VAC，380VAC，24VDC（其他请咨询）

环境温度：-20°C~+60°C

防护等级：IP67

标准设备：两限位开关，物理指示器，手动控制，开关型+干接点

选项：除湿加热器，过力矩保护，

4-20mA调节，Exd IIBT4，更多要求请咨询

Optional voltage: 220VAC, 380VAC,

24VDC (Others on request)

Temperature of the environment: -20°C up to +80°C

Protection: IP 67

Standard equipment: 2 additional limit switches, optical position indicator, manual override,

On/Off+Limit switch option: Dehumidification

heater, overtorque protection, modulate type

4-20mA, Exd I B T4, more requests please contact

# 高压球阀

## High pressure Ball valve

**HANKSON**®

Hankson GmbH & Fluid Control System



## 系列 Series Q600

Q600系列为三片式阀体设计，三片式设计该特点为维护及安装提供了方便。Q600的阀体为标准的316不锈钢，符合NACE标准。每个阀体上都铸有一个材料出炉编号可供查询。

Q600 series is a three piece body design, the characteristics of three piece design provides convenience for the maintenance and installation. Q600 valve is a standard 316 stainless steel, in line with the NACE standard. Every body is cast with a material released number available for query.

连接方式

Connection

G螺纹 G thread

NPT螺纹 NPT thread

焊接 Weld

卡套 Tube

工作温度

Temperature

-40°C +250°C



# Q600

## 结构特征Structural features



### 连接方式Connection

此系列阀门提供多种端口的连接，满足客户多样化的安装方式。

This series of valves provide connections to various ports, to meet the diversified customer installation.

### 安装平台Secure mount

316不锈钢的安装支架确保牢固安装执行机构。控制设备可以简便安全地在阀门全压工作状态下拆除。安装平台设计符合ISO5211标准。

The mounting bracket of 316SS stainless steel ensure firmly installed actuator. The control device can be easily and safely removed at full pressure under the operating state of the valve. Installation of platform design conforms to the ISO5211 standard.



Q600系列球阀所有部件均为锻件，采用下装式阀杆，设置倒密封结构，确保填料处可靠密封及防止阀杆脱出。采用镶嵌式阀座。阀座背后设置O型圈，确保介质不外漏。浮动式球芯设计提供了正向气泡级密封，低扭矩平稳的操作。另外还有可选的手柄或指示器，行程限位，可替换的阀座及密封圈的优点。锁定装置可以确保阀保持在任意开度位置。

Q600 series valve all components are forging, by downloading the stem, setting back seal structure, to ensure reliable sealing and preventing the valve stem prolapsed. The use of mosaic type valve seat. A valve seat arranged behind the O-ring, to ensure that the media does not leak. A floating ball design provides a positive, bubble tight shut off with smooth quarter turn operation at low operating torque. Additional Instrumentation Series advantages include a choice of lever or pointer handles, travel limit stop pins and replaceable seats and seals. Locking kits which secure the valve in a desired position are also available.

# Q600/常规配置

## General configuration

### 产品简介Product introduction

用于高压气体或者液压系统。所有高压球阀都满足气泡级关断密封，精密机加工球体和阀座确保阀门绝对不漏。独特的防吹出阀杆设计不会受到高压介质的任何影响。

For the high-pressure gas or hydraulic system. All high-pressure valve are met bubble-off seals, precision machined valve ball and seat to ensure absolutely no leakage. The unique anti-blow-out stem design will not be affected in any high-pressure media.



### 设计和特点Design and Features

操作：手把式、气动、电动

连接标准：螺纹、焊接、卡套

压力范围：PN250-500

Operation: Handle, Pneumatic, Electric

Connection standard: thread, weld, tube

Pressure range: PN250-500



### 气动执行器 Pneumatic actuator

缸体：铝合金（其他请咨询）

气源压力：4-8 bar

环境温度：-20℃+80℃（其他请咨询）

气源介质：过滤后的压缩空气或者其他惰性气体

选项：两位三通或两位五通电磁阀，电子或物理指示器，

定位器，过滤减压阀，手动离合器

Body: Aluminum alloy (Others on request)

Pilot pressure: 4-8 bar

Temperature of the environment: -20℃ up to +80℃ (Others on request)

Pilot media: Filtered compressed air or other inert gases

option: 3/2-ways or 5/2-ways solenoid valve, electronic or physical

indicators, locator, filter pressure reducer, manual clutch

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### 选项Options

选项Options

阀体材质：碳钢，304SS，316SS

内件材质：304SS，316SS

阀座密封：POM，PEEK

阀杆填料：POM，PEEK

Body: A105, 304SS, 316SS

Trim: 304SS, 316SS

Seat: POM, PEEK

Packing: POM, PEEK



### 电动执行器 Electric actuator

可选电压：220VAC，380VAC，24VDC（其他请咨询）

环境温度：-20℃+60℃

防护等级：IP67

标准设备：两限位开关，物理指示器，手动控制，开关型+干接点

选项：除湿加热器，过力矩保护，

1-20mA调节，Exd IIB T4，更多要求请咨询

Optional voltage: 220VAC, 380VAC,

24VDC (Others on request)

Temperature of the environment: -20℃ up to +80℃

Protection: IP 67

Standard equipment: 2 additional limit switches, optical position indicator, manual override,

On/Off+Limit switch option: Dehumidification

heater, overtorque protection, modulate type

4-20mA, Exd I B T4, more requests please contact