SWEK®

抗冲刷高压差调节阀

史威阀

Anti-erosion high pressure difference Control valves







碳钢Carbon Steel

合金钢Alloy Steel

不锈钢Stainless Steel

3/8"~4" 4500Lb 610℃

网址（Web）：www.swekvalve.com

SWEK

史威阀工业阀门公司成立于1955年，总部位于美国德克萨斯州休斯敦。史威阀是阀门行业的领先制造企业，具有四个生产厂。在世界各地20多个国家和地区有史威阀的独立办公室和代理销售网络。史威阀具有丰富的、独一无二的阀门设计制造经验，其产品广泛应用于电力、石化、环境工程、采暖制冷、供水、排水工程、建筑、造船以及食品及饮料企业。

史威阀按照ANSI、ASME、API等先进标准设计制造阀门，主要产品有闸阀、截止阀、止回阀、调节阀、球阀、蝶阀、仪表阀、伺服阀等；主要零件采用WCB、WC6、WC9、CF8、CF8M、CF3、CF3M、A105、F22、WB36、F91、F92、321、316SS、316L、316H、347H等；驱动形式有手动、齿轮传动、电动、气动和液动；阀门规格从DN10～DN2000（3/8″～80″）；公称压力从1.0MPa～42.0MPa（150～4500Lb）；适用温度从-196℃～700℃。史威阀以优异的品质、合理的性价比，受到用户的普遍欢迎。

SWEK Industrial Valves Inc . was founded in 1955, is headquartered in Houston Texas. SWEK is the world's regions have their own offices and agent network. Design and production of its rich experience and unique design features of the valves, are widely used in Power plants, petrochemical, environmental engineering, heating refrige -ration, water supply and drainage engineering, buildings, shipbuilding, such as food and beverage industry.

SWEK valves manufacture standards are ANSI, ASME, API and etc. The whole products of Gate valve, Globe valve, Check valve, Control valve, Ball valve, Butterfly valve, Instrument valve ,Servo valve and etc. The main ma -terial is WCB, WC6, WC9,CF8, CF8M,CF3, CF3M,A105,F22, WB36, F91, F92,321,316SS,316L,316H,347H and etc. The drive type is manual, gear, electric, pneumatic and hydraulic. Nominal diameter is from 3/8″to 80″, nominal pressure is from 150lb to 4500lb,applicable temperature is from -196℃ to 700℃. SWEK valves received the prai -se of the users because the excellent quality and reasonable price.





抗冲刷高压差调节阀
Anti-erosion high pressure difference control valves

按ASME B16.34标准，专为高压差等苛刻工况设计制造，圆满解决介质高速冲刷、气泡内爆剥蚀而导致的内漏，使用寿命长。

案内产品，通过减少流体系统的泄漏和维护量，达到延长设备的安全运行时间，降低运行成本，从而提高用户的经济效益。

This valve is designed and manufactured according to ASME B16.34，the valve is specially for the high-pressure inferior harsh working situation. If using this valve, you can solute the internal leakage which is caused by the washout of the high speed medium, the internal detonation and the disintegration of the air bubble. This valve's service life is long.

Erosion resistance HP-regulating valve can lengthen the equipment's safe operation time, reduce the run lost by reducing the fluid system's divulging and maintenance quantity. Thus the user's economic efficiency will be enhanced.



高压差调节阀与普通阀门的比较

部件	抗冲刷高压差调节阀	普通阀
阀座	为活动可卸式，硬质合金堆焊层大于 8mm；阀座的热处理、堆焊、机加工及对加工后的硬度、光洁度、精度、与阀瓣的吻合度、硬度差等，均在阀体外方便准硬的进行加工和质量检验，为阀门优良的密封性提供了有力保证。	硬质合金直接堆焊在阀体上，由于中孔较深，堆焊和加工质量很难控制，且不能校验硬度、光洁度和精度。
减压保护装置	置于阀体内腔中，采用优良的不锈钢经氮化处理而成，阀门开启时，介质首先进入该装置，经其减压后再通过阀座密封面流出。由于流速减慢、压力降低，不仅避免了气蚀现象的发生，而且阀座和阀瓣的密封面不被介质直接冲刷，所受冲刷力大为减小，从而保护了密封面，使阀门长期运行而密封良好。	无此装置，介质的气蚀和高速冲刷直接作用于阀体密封面和阀瓣密封面上，容易使其损坏。
阀瓣	硬质合金堆焊层 8mm 以上，密封面硬度较高；运行中阀瓣位于减压保护装置上端，所受冲刷较轻。阀门关闭时，由于减压装置的导向作用，其回座率达 100%，与阀座密封面吻合如初，获得良好的密封效果。	硬质合金堆焊层 4mm 以下，因无减压装置保护，被介质直接冲刷和气蚀，极易损坏。
密封补偿装置	阀门长期运行中的反复启闭，极易造成填料磨损而外漏。此装置随填料磨损情况随时释放压力来压紧填料，确保填料处于良好的密封状态，防止了阀门的外漏。	无此装置，防外漏性能差。
阀杆	在阀杆导向装置和直升降装置的配合下，阀杆启闭时只做上下升降运动。不仅减轻了对填料的磨损，且在填料密封补偿装置作用下，杜绝了外漏，力矩很小，启闭操作轻便。	启闭时旋转运动，支填料磨损较严重；易造成外漏，同时由于力矩较大，启闭操作费力。
维修	不需将阀门从管道上割下，由于阀座为活动可拆卸式，使用我厂配套的专用工具，即可将阀座和阀瓣从阀门内轻松取出，经研磨或修整再装入阀体内或更换一套新的阀座和阀瓣，更换操作一般只需 2 个小时左右，阀门便完好如新。既省时省力，又保证了检修质量。	须将阀门从管道上割下后，对阀座和阀瓣进行修复和研磨，费时、费力、质量得不到保证。

Comparison of the high pressure difference regulating valves and the common valves

Components	Anti-erosion high pressure difference regulating valves	Common valves
Valve base	Removable, more than 8mm bead weld layer of hard alloy; the processing and quality inspection can be conducted outside of the valve body, for example: processing work like the thermal treatment, bead welding and mechanical processing of valve base, the inspection work such as its hardness, fineness, precision after processed, its goodness of fit, hardness difference with the flap, providing a strong guarantee to the excellent sealing property of the valve.	The hardness alloy is directly bead-welded on the valve body, as the mesopore is deep, it is very difficult to control the bead-welded and processing quality, and its hardness, fineness and precision can not be checked.
Pressure reducing device for protection	It is made of high-quality stainless steel which has undergone liquid nitrogen quenching. It is put into the void of the valve body. When the valve is opened, the medium flow into this device firstly, and flow out through the sealing surface of the valve base after its pressure is reduced. As the flow speed is slowed down, the pressure reduced, it not only prevents cavitation erosion, but also the sealing surface of the valve base and the valve flap is free from the direct erosion of the medium, the erosion force is greatly decreased, thus protecting the sealing surface greatly and enabling the valve to have excellent sealing property in long-term operation.	Without such a device, the cavitation erosion and high-speed erosion of the medium directly apply to the sealing surface of the valve body and the sealing surface of the flap, enabling it to be easily damaged.
Flap	As the bead-welded layer of hard alloy is over 8mm and the hardness of the sealing surface is very high, the flap is on the pressure reducing device for protection in operation, the erosion of the flap is fairly light. When the valve is closed, owing to the steering function of the pressure reducing device, the ratio between the popping pressure and the lockup pressure reaches 100%, fully tallied with the sealing surface of the valve base, ensuring excellent sealing.	As the bead-welded layer of hard alloy is less than 4mm and without the protection of the pressure reducing device, it is easily damaged due to the direct erosion and cavitation erosion.
Compensation device for sealing	As the valve is opened and closed repeatedly in its long-term operation, it may leak due to the wear of the filler. The device may release pressure in accordance with the wear condition of the filler, thus prevent external leakage of the valve.	Without such a device. Poor leak-proof property.
Stem	With the coordination of the guiding device of the valve stem and the vertical lift device, the valve stem will only more up and down when it is opened or closed, thus not only reducing the wear to the filler, but also eliminating leakage under the coordination of the compensating device for sealing of the filler. As the moment is small, it is easy and convenient to get it opened and closed.	The valve stem rotates in opening and closing, the wear of the filler very serious, resulting leakage easily, meanwhile, as the moment is big, it is difficult to get it opened and closed.
Maintenance	As the valve base is removable, it is unnecessary to cut the valve down from the pipeline. The valve base and the flap may be taken out easily from the valve with the professional matching tool of our factory, and assembled into the valve body after being grinded or repaired or be replaced by a new set of valve base and flap. The replacement may only last about 2 hours. After such work is completed, the valve may be used as a new one. Therefore, with such a valve, it may not only save time and effort, but also guarantee the overhaul quality.	The valve base and the valve flap can only be repaired and grinded after the valve is cut down from the pipeline, thus it not only takes more time and effort, but also the quality of the valve can not be guaranteed.

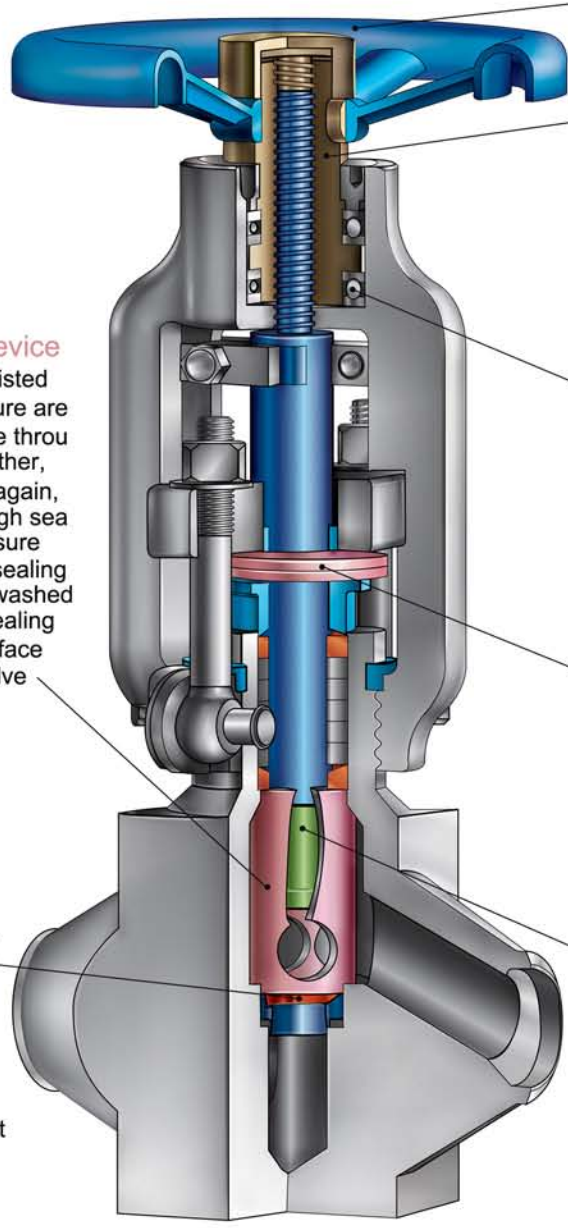
当今世界最独特的高压差调节阀
The world's most unique high-pressure differential Regulating valve

减压保护装置
阀门开启后，介质先被其阻挡减速减压，后从对孔进入并对冲，再次减速减压，通过阀座密封面流出，由于流速减慢、压差变小，避免了气蚀的发生，阀座和阀瓣的密封面不被介质直接冲刷，所受冲刷大为减轻，从而保护了密封面，使阀门长期运行而密封良好

Rediced pewssure & Protective device
after the valve is opened,the media is resisted by this device firstly,the speed and pressure are all reduced,then the media enter the valve throu -gh the opposite hole and washes each other, the speed and the pressure are reduced again, the media flow away from the valve through sea -ling surface,because the speed the pressure are reduced,the caviation is avoided,the sealing surface of the seat and the petal are not washed by the media directly,the erosion of the sealing surface is reduced greatly,the sealing surface is protected and the working life of the valve is very long

活动可卸式阀座
超厚硬质合金堆焊，硬度高，耐冲刷，更换阀座时不需要将阀门从管道上割下，维护更换方便

Removable seat
The seat is built-welded with the extra-thick hard alloy,has high hardness,good anti-erosion resistance,when the valve is maintained or replaced,the valve dose not need to be cut off from the pipe



圆手轮　力矩大
Round handle　large torque

阀杆螺母
与阀杆配合启闭阀门，与轴承配合，实现阀杆升降不旋转，阀门启闭灵活轻便

Stem nut
to open and close the valve with the stem,help the stem to move up and down directly together with the bearing,the valve can be ope -nedand closed tightly

轴承装置
与阀杆螺母配合实现阀杆无旋转升降

Bearing
help the stem to move up and down directly together with the stem nut

密封补偿装置
随填料磨损情况随时释放压力来压紧填料，确保填料处于良好的密封状态，防止了阀门的外漏

Sealing compensator
This device can release the pressure at any time to compress the packing, this can guarantee the packing in the good sealing position,the outside lea -kage of the valve is avoided

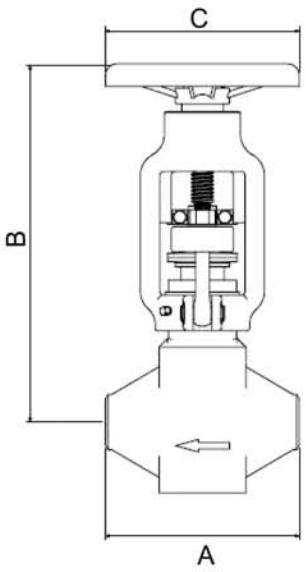
硬质合金阀瓣
超厚硬质合金堆焊，硬度高，耐冲刷，运行中阀瓣位于保护装置上端，不受冲刷，从而保护了密封面，回座率达100%，与阀座密封面吻合如初，使阀门长期运行而密封良好

Hard alloy petal
The petal is built-welded with the extra -thick hard alloy,in operation the petal locates on the top of the protective de -vice the sealing surface is protected the rate of back to seat is 100%,the sealing surface of the seat and the petal is matches ever,the working life of the valve is very long

剖视图　Cutaway view

尺寸表 Dimensions

通径Diameter	结构长度A structure length	中心高B Center high	手柄长度C Handwheel length	重量Kg Weight
DN15 / 1/2″	135	250	150	7
DN20 / 3/4″	152	280	180	10
DN25 / 1″	180	325	240	23
DN32 / 1 1/4″	180	325	240	31
DN40 / 1 1/2″	250	400	250	36
DN50 / 2″	250	455	250	45
DN65 / 2 1/2″	280	495	300	59
DN80 / 3″	330	545	350	72
DN100 / 4″	350	650	350	105



材质表 Component material

类别 Category / 部件 Component	A105	F22 12Cr1MoV	WB36	F91	F92	F321	F316	F316H	F347H
阀体 Body	A105	F22	WB36	F91	F92	F321	F316	F316H	F347H
阀瓣 Petal	司太立 STL	司太立 STL	司太立 STL	司太立 STL	司太立 STL	司太立 STL	司太立 STL	司太立 STL	司太立 STL
减压装置 R&P Device	304	316	316	316	316	316	316	316	316
阀座 Seat	司太立 STL	司太立 STL	司太立 STL	司太立 STL	司太立 STL	司太立 STL	司太立 STL	司太立 STL	司太立 STL
阀杆 Stem	304	316	316	316	316	316	316	316	316
手轮 Handwheel	冲压 Stamping	冲压 Stamping	冲压 Stamping	冲压 Stamping	冲压 Stamping	冲压 Stamping	冲压 Stamping	冲压 Stamping	冲压 Stamping
支架 Supporting	A105	12Cr1MoV	WB36	F91	F92	F321	F316	F316H	F347H
填料 Filler	柔性石墨 Flexible Graphite	柔性石墨 Flexible Graphite	柔性石墨 Flexible Graphite	柔性石墨 Flexible Graphite	柔性石墨 Flexible Graphite	柔性石墨 Flexible Graphite	柔性石墨 Flexible Graphite	柔性石墨 Flexible Graphite	柔性石墨 Flexible Graphite

抗冲刷高压差调节阀
Anti-erosion high pressure difference control valves

适用于：

给水泵再循环系统阀门（最小流量阀）
给水泵暖泵系统阀门
主蒸汽管道各疏、放水阀门
高加事故放水系统阀门
除氧器水位阀门
凝结水再循环阀门
锅炉定排系统阀门
锅炉连排系统阀门
再热器减温水阀门
锅炉事故放水阀门
直流炉水分离器疏水阀门
锅炉吹灰器减压用阀门
主给水、锅炉排放水系统阀门
其他大压差易汽化系统阀门

Application:

- feed pump recycling system valve (smallest flow valve)
- feed pump warm pump system valve
- the main steam pipe draining valve
- high temperature heater accident drainage system valve
- the water level valve of the instrument eliminating the oxygen
- the valve used to circulate the condensing water again
- boiler regular drain-down system valve
- boiler continuous drain-down system valve
- the re-heater reduces the lukewarm water valve
- if boiler have accident, the valve used to turn on the water
- direct-current ashes separator draining valve
- the valve used to reduce the pressure of the boiler soot blower
- main feed water system , boiler drain-down system valve
- other big differential pressure easy to vaporize system valve



阀座拆卸专用工具
Professional matching tool of our factory

安装维护说明

1、产品出厂时已经严格检验，请勿解体，可打光谱，可试压；
2、阀门尽可能按阀杆垂直水平面安装，如需其他方法安装，请说明；
3、安装时应使介质流向与阀体所示箭头方向一致(高进低出）， 切勿装反；
4、第一次使用时，须全开阀门，对阀门及管道进行清洗。调整压板螺母，确保填料处于良好密封状态；
5、运行中，当工况温度变化较大（如停机维修）时，检查并旋紧压板螺母，压紧填料。以防阀杆处外漏；
6、更换阀芯（阀座、阀瓣）时，请在获得SWEK的技术支持后进行。

Installment and Maintenance instruction

1. Our valves have been examined strictly when leaving the plant, please do not disintegrate. You may hit the spectrum and carry on the pressure test.
2. Along the valve stem vertical horizontal plane to install the valve as far as possible, if you need other installment, please explain.
3. When installing the valve, you should cause the medium to flow consistent with the arrow direction(from high to low), do not install instead.
4. When installing the valve, please open the valve completely, clean the valve and the pipeline. You should tighten the stem nut. This can guarantee the good seal of the padding.
5. In the working time, if the situation temperature changes greatly, please check and tighten the clamp nut, compact the padding, thus the outside leakage from the valve stem will be prevented.
6. When replacing the valve core(seat, petal), please obtain SWEK technical support.

阀门的结构、材质、尺寸、性能与手动一致

除标准配置外，也可根据用户需要选配不同品牌的气动执行机构

The structure, material, dimensions and performance of the pneumatic anti-erosion high pressure difference regulating valves is according with the manual valves.

In addition to the standard configurations,other brands of pneumatic actuators can be used according to the need of the user.



电动抗冲刷高压差调节阀
Electric anti-erosion high pressure difference control valves

阀门的结构、材质、尺寸、性能与手动一致

除标准配置外，也可根据用户需要选配不同品牌的电动执行机构

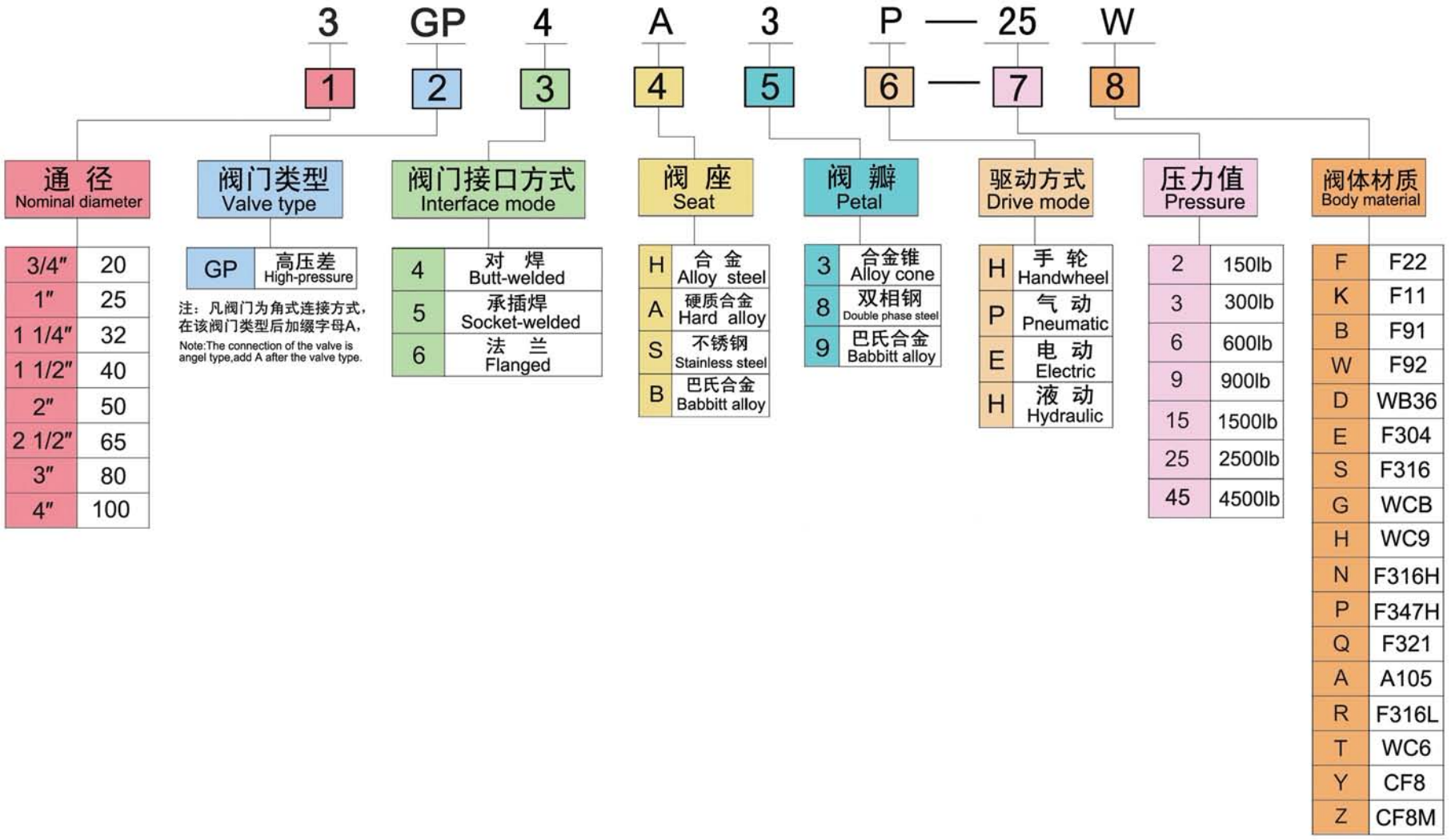
The structure, material, dimensions and performance of the electric anti-erosion high pressure difference regulating valves is according with the manual valves.

In addition to the standard configurations,other brands of electric actuators can be used according to the need of the user.

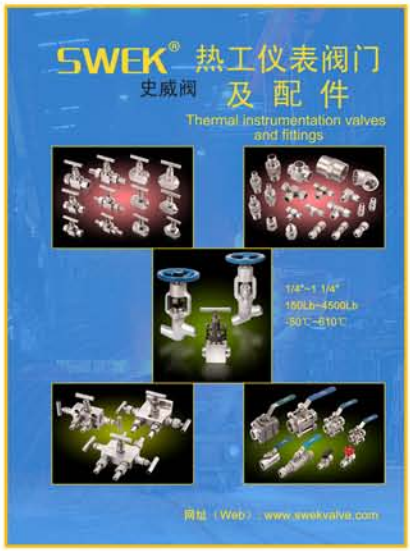


SWEK® 史威阀 高压差调节阀型号释意

Model interpretation of Anti-erosion high pressure difference regulating valve





















Distributor（经销商）：