

ZZY型自力式压力调节阀

ZZY Type self-acting pressure adjusting valve

一、用途与特点 Function and feature

ZZY型自力式压力调节阀是不需要任何外加能源，利用被调介质自身能量而实现自动调节的执行器产品。该产品最大特点，能在无电、无气的场所工作，同时又节约了能源，压力设定值在运行中可随意调整。采用快开流量特征，动作灵敏、密封性能好，因而它广泛应用于石油、化工、电力、冶金、食品、轻纺、机械制造与居民建筑楼群等各种是工业设备中用气体、液体及蒸汽介质减压、稳压（用于阀后调节），或泄压、稳压（用于阀前调节）的自动控制。

ZZY type self-acting pressure adjusting valve is the execution product that doesn't need any sur-energy and adjusts automatically by the own energy of the adjusted medium. The biggest feature of this product is that it can work at the place without electricity and air and save energy that the setting value of pressure can be adjusted freely while working. It is widely used for the automatically control of industrial equipments for pressure reducing and steady pressure of air, liquid, steam (uses for outlet adjusting) or pressure relief and steady pressure (uses for inlet adjusting) in the petroleum, the chemical industry, the electric power, the metallurgy, food, textile, the machine manufacture and the inhabitant building.

二、结构与作用原理 Structure and action principle

调节阀主要有检测执行机构、调压阀、冷凝器与阀后接管等四部分组成，其结构(见图一)。

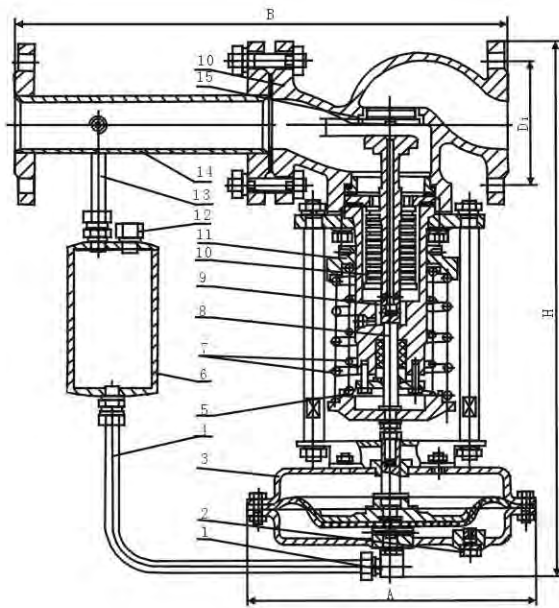
图一a、用于控制阀后压力调压阀，阀的作用方式为压闭型。其原理如下：介质由箭头方向流入阀体、经阀芯、阀座节流后输出。另一路经冷凝器（介质为蒸汽时使用）冷却后，被引入执行机构作用于膜片上，使阀芯随之发生相应的位移，达到减压、稳压之目的。如阀后压力增加，作用于膜片上的力增加，压缩弹簧，带动阀芯，使阀门开启度减小，直至阀后压力下降到设定值为止。同理，如阀后压力降低，作用在膜片上的减小，由于弹簧的反作用力，带动阀芯，使阀门开启度增大，直到阀后压力上升到设定值为止。

The adjusting pressure valve mainly makes up of inspection actuating device, adjusting pressure valve, condenser and outlet nipple, (see chart1 for structure.

Chart 1 a. the mode of action of the adjusting valve used for control the outlet pressure is pressure-closing type. Its principle is as follows: the medium inflow the body according to the direction of the arrow and outflow after throttle by valve core and seat. When the other medium cools via the condenser (it is used while the medium is steam), acts on the diaphragm after being lead into the actuating device and causes the valve core to have the corresponding displacement in order to realize the purpose of pressure reducing and steady pressure. When the outlet pressure increases, the pressure acting on the diaphragm increases, compress spring, drives valve core and reduce the valve opening until the outlet pressure reduces to the setting value. In the same way, when the outlet pressure reduces, the pressure acting on the diaphragm reduces, drives valve core because of the reacting force of spring and increases valve opening until the outlet pressure reach to the setting value.

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1. 进液接头 Inlet liquid connection
1. 排气塞 Core vent
2. 检测执行机构 Inspection actuating device
3. 进液管 Inlet liquid pipe
4. 压盖螺钉 Gland screw
5. 冷凝器 Condenser
6. 弹簧 Spring
7. 阀杆 Stem
8. 阀芯 Valve core
9. 波纹管 Bellows
10. 压力调节盘 Pressure adjusting disk
11. 注液口螺钉 Charge mouth screw
12. 取压管 Tapping pipe
13. 阀后接管 Outlet connector
14. 阀座 Seat
15. 阀体 Body

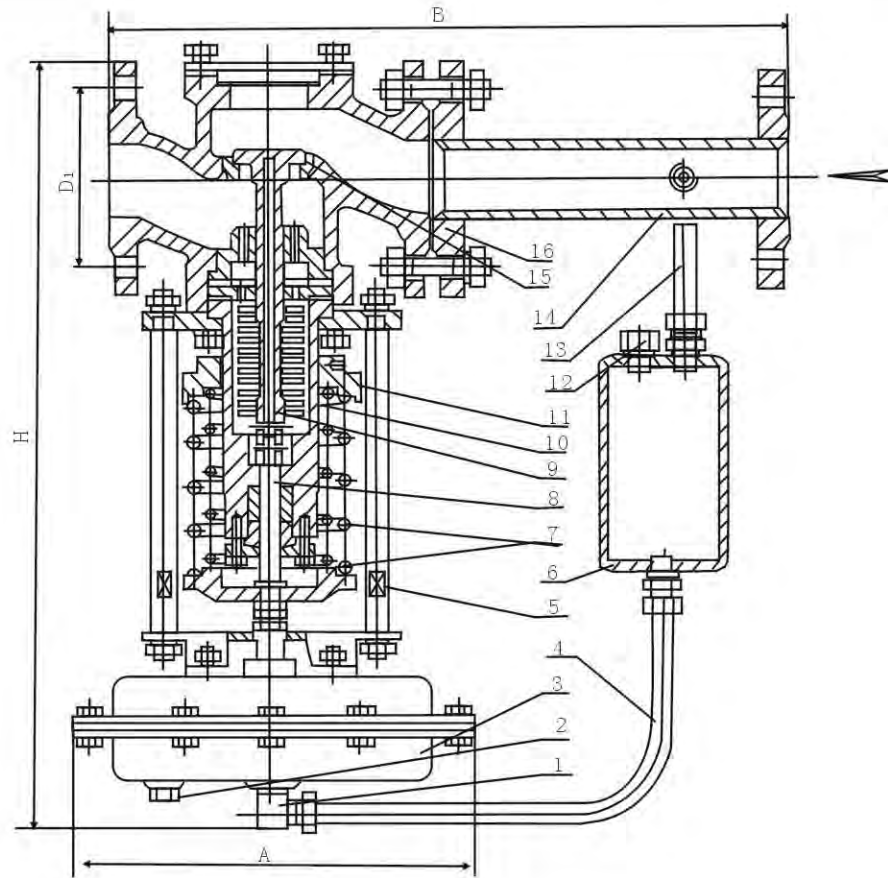
图一a、ZZYP-16B自力式压力调节阀
chart1 a ZZY-16B self-acting pressure adjusting valve

图一b、用于控制阀前压力的调压阀，阀的作用方式为压开型。其原理如下：介质由箭头方向流入阀体，另一路经冷凝器（介质为蒸汽时使用）冷却后，被引入执行机构作用于膜片上，使阀芯随之发生相应的位移，达到泄压、稳压之目的。如阀前压力增加，作用于膜片上的力增加，压缩弹簧，带动调芯，使阀门开启度增大，直到阀前压力下降到设定值为止。同理，如阀前压力降低，作用于膜片上的力减少，由于弹簧的反作用力，带动阀芯，使阀门开启度减小，直到阀前压力上升到设定值为止。

Chart1 b. the mode of action of the adjusting valve used for control the inlet pressure is pressure-opening type. Its principle is as follows: the medium inflow the body according to the direction of the arrow. The other medium cools via the condenser (it is used while the medium is steam), acts on the diaphragm after being lead into the actuating device and causes the valve core to have the corresponding displacement in order to realize the purpose of pressure relief and steady pressure. When the inlet pressure increases, the pressure acting on the diaphragm increases, compress spring, drives valve core and reduce the valve opening until the inlet pressure reduces to the setting value. In the same way, when the inlet pressure reduces, the pressure acting on the diaphragm reduces, drives valve core because of the reacting force of spring and increases valve opening until the inlet pressure reach to the setting value.

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图一b、ZZYP-16K型自力式压力调节阀
Chart 1 b ZZYP-16K type self-acting pressure adjusting valve

- | | |
|---------------------------------------|-----------------------------------|
| 1. 进液接头 Inlet liquid connection | 9. 阀芯 Valve core |
| 2. 排气管 Vent-pipe | 10. 波纹管 Bellows |
| 3. 检测执行机构 Inspection actuating device | 11. 压力调节盘 Pressure adjusting disk |
| 4. 进液管 Inlet liquid pipe | 12. 注液口镙钉 Charge mouth screw |
| 5. 压盖螺钉 Gland screw | 13. 取压管 Tapping pipe |
| 6. 冷凝器 Condenser | 14. 阀前接管 Inlet connector |
| 7. 弹簧 Spring | 15. 阀座 Seat |
| 8. 阀杆 Stem | 16. 阀体 Body |

ZZY型自力式压力调节阀

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三、主要技术参数和性能指标、材料 Main technique parameter and performance figure, material

1. 主要接数参数和性能指标

Main technique parameter and performance figure

表一
Form 1

公称通径DN (mm) Nominal bore	20	25	32	40	50	65	80	100	125	150	200	250	300
额定流量系数(Kv) Rated flow coefficient	7	11	20	30	48	75	120	190	300	480	760	1100	1750
额定行程(mm) Rated stroke	8		10		14	20		25	40		50	60	70
公称压力(MPa) Nominal pressure	1.6、4.0、6.4												
压力调节范围(KPa) Pressure adjusting range	15~50		40~80		60~100		80~140		120~180		160~220		
	200~260		240~300		280~350		330~400		380~450		430~500		
	480~560		540~620		600~700		680~800		780~900		880~1000		
	600~1500		1000~2500										
流量特性 Flow characteristic	快开 Open rapidly												
调节精度(%) Adjusting precision	±5												
使用温度(℃) working temperature	<350												
允许泄漏量 Allowable leakage	硬密封(l/h) Hard seat	单座:10^{-4}阀额定容量(IV级); 双座、套筒:5×10^{-3}阀额定容量(II级) Single seat:10^{-4}rated capacity of valve(IVclass); Double seat,bush:5×10^{-3}rated capacity of valve											
	软密封(ml/h) Soft seat	0.15	0.30	0.45	0.60	0.90	1.7	4.0	6.75	11.10	11.60		
减压比 Pressure reducing ratio	最大 Maximum	10											
	最小 Minimum	1.25											

2、压力调节范围确定

压力调节范围分段，见主要参数及性能指标表，控制压力应尽量选取在调节范围中间值附近（见表一）。

2. Pressure adjusting range confirmation

See the main technique parameter and performance figure form for pressure adjusting range section. The control pressure should be selected near the middle value of adjusting range. (see form 1)

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3、阀后压力调节阀，其阀前压力与阀后压力的关系

3. The relationship of inlet pressure and outlet pressure of outlet pressure adjusting valve.

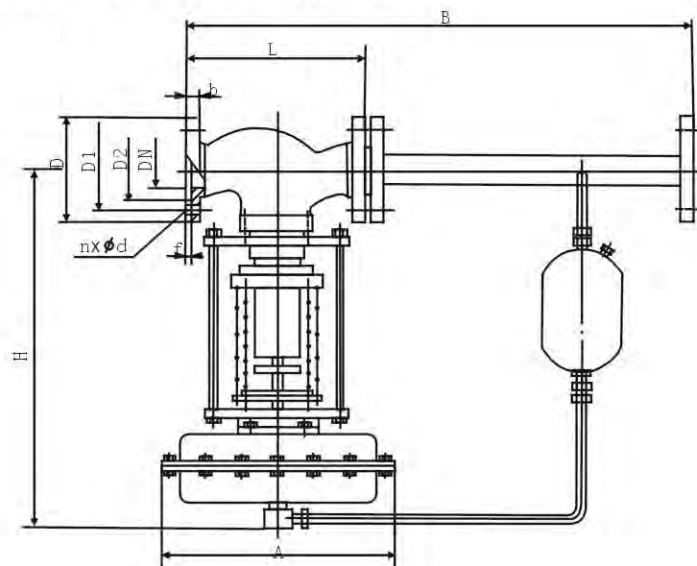
自力式调节阀本身是一个调节系统，阀本身又有一定的压降要求，对阀后压力调节阀(B型)，为保证阀后压力在一定范围内，其阀前压力必须达到一定值，其要求可参见表二。

The self-action adjusting valve itself is an adjusting system. It also has the certain pressure drop request for outlet pressure adjusting valve (B type). The inlet pressure must reach certain value in order to make sure the outlet pressure in the certain range. See form 2 for the request.

表二 Form 2

阀前压力 KPa Inlet pressure	30	50	100	150	200	250	300	350	400	450	500	550	600
阀后压力 KPa Outlet pressure	15~ 24	15~ 40	15~ 80	15~ 120	20~ 160	25~ 200	30~ 240	35~ 280	40~ 320	45~ 360	50~ 400	55~ 440	60~ 480
阀前压力 KPa Inlet pressure	650	700	750	800	850	900	950	1000	1250	1500	2000	2500	3000
阀后压力 KPa Outlet pressure	65~ 520	70~ 560	75~ 600	80~ 640	85~ 680	90~ 720	95~ 760	100~ 800	125~ 1000	150~ 1200	200~ 1600	250~ 2000	300~ 2400

外形尺寸图 The drawing of overall dimension



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4、外形尺寸与重量

单位: mm

表三

4. Overall dimension and weight

unit: mm

form 3

公称通径DN Nominal bore	20	25	32	40	50	65	80	100	125	150	200	250	300
法兰接管尺寸B Flange connector dimension	383		512		603	862		1023	1380		1800	2000	2200
法兰端面距L Flange ends distance	150	160	180	200	230	290	310	350	400	480	600	730	850
压力 调节 范围 pres- sure adju- sting range	15-140	H	475	520	540	710	780	840	880	915	940	1000	
		A	280	308									
	130-300	H	455	500	520	690	760	800	870	880	900	950	
		A	230										
	280-500	H	450	490	510	680	750	790	860	870	890	940	
		A	176			194			280				
	480-1000	H	445	480	670	740	780	850	860	880	930		
		A	176			194			280				
	600-1500	H	445	570	600	820	890	950	1000	1100	1200		
		A	85	96									
	1000-2500	H	445	570	600	850	890	950	1000	1100	1200		
		A	85	96									
重量kg Weight	26		37	42	72	90	114	130	144	180	200	250	
导压管接头螺纹 Connecting pipe connection thread	M16×1.5												

5、主要零件材料 (表四)

表四

5. Main parts material (form 4)

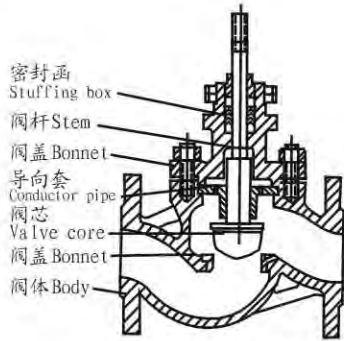
(form 4)

零件名称 Part name	材料 Material
阀体 Body	ZG230-450、ZG1Cr18Ni9Ti、ZGCr18Ni12Mo2Ti
阀芯 Valve core	1Cr18Ni9Ti、Cr18Ni12Mo2Ti
阀座 Seat	1Cr18Ni9Ti、Cr18Ni12Mo2Ti
阀杆 Stem	1Cr18Ni9Ti、Cr18Ni12Mo2Ti
橡胶膜片 Rubber diaphragm	丁睛、乙炳、氟、耐油橡胶 NBR, EPDM, Fluorine, Oil resistant rubber
膜盖 Membrane lid	A3、A4钢涂四氟乙烯 A3, A4 steel coating TFE
填料 Packing	聚四氟乙烯、柔性石墨 PTFE, Flexible graphite

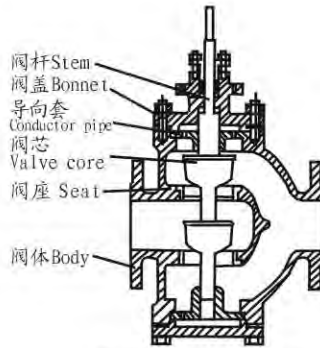
ZZY型自力式压力调节阀

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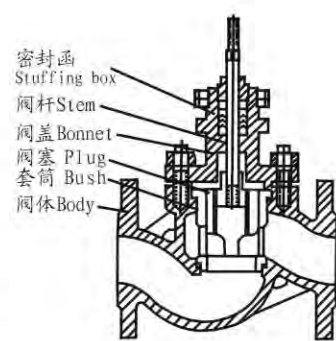
阀芯结构形式 The structure formation of valve core



自力式单座调节阀
Self-acting single seat adjusting valve



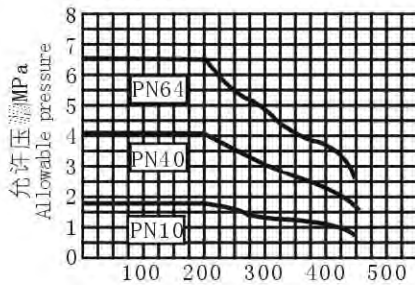
自力式双座调节阀
Self-acting double seat adjusting valve



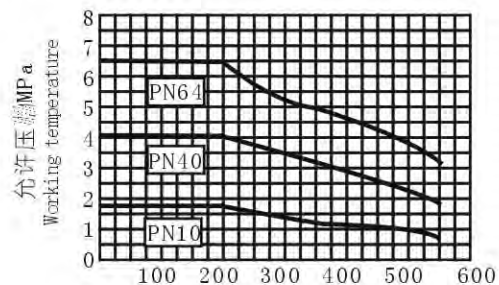
自力式套筒调节阀
Self-acting bush adjusting valve

阀体工作温度与允许压力

The working temperature of body and allowable pressure



工作温度℃
Working temperature℃
ZG230-450阀体
ZG230-450Body



工作温度℃
Working temperature℃
ZG1Cr18Ni9Ti阀体
ZG230-450Body

四、安装、使用与维护 Installation, operation and maintenance

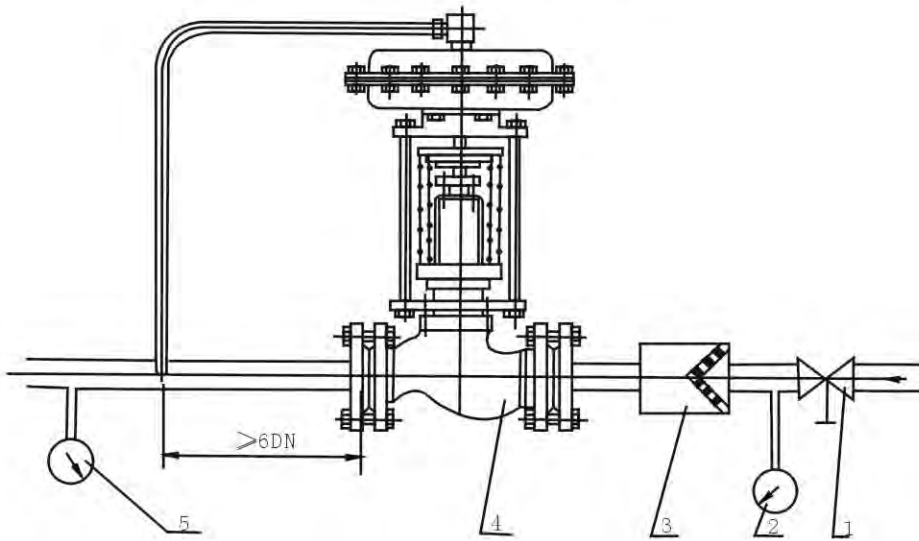
1. 安装 Installation

阀在常温下 ($\leq 80^\circ\text{C}$) 或低粘度液体介质中使用时, 此时与通常的气动薄膜调节阀相同为直立安装在水平管道上, 如图三所示。

The valve should be installed on the horizontal pipeline erectly, which is the same as the pneumatic diaphragm while using in normal temperature ($\leq 80^\circ\text{C}$) or mobile liquid medium. See chart 3

ZZY型自力式压力调节阀

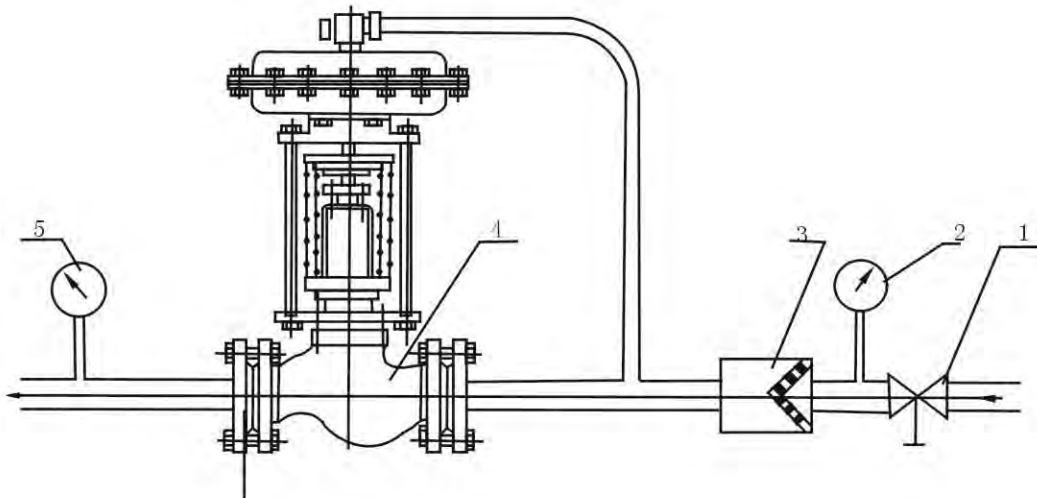
ZZY Type self-acting pressure adjusting valve



A. ZZY-16B型自力式压力调节阀

A. ZZY-16BG type self-acting pressure adjusting valve

- | | |
|-----------------------|--------------------------------------------------|
| 1. 截止阀 Globe valve | 4. 自力式压力调节阀 Self-acting pressure adjusting valve |
| 2. 压力表 Pressure gauge | 5. 压力表 Pressure gauge |
| 3. 过滤器 Strainer | |



B. ZZY-16K型自力式压力调节阀

B. ZZY-16K type self-acting pressure adjusting valve

图三 介质为气体或低粘度液体时的安装

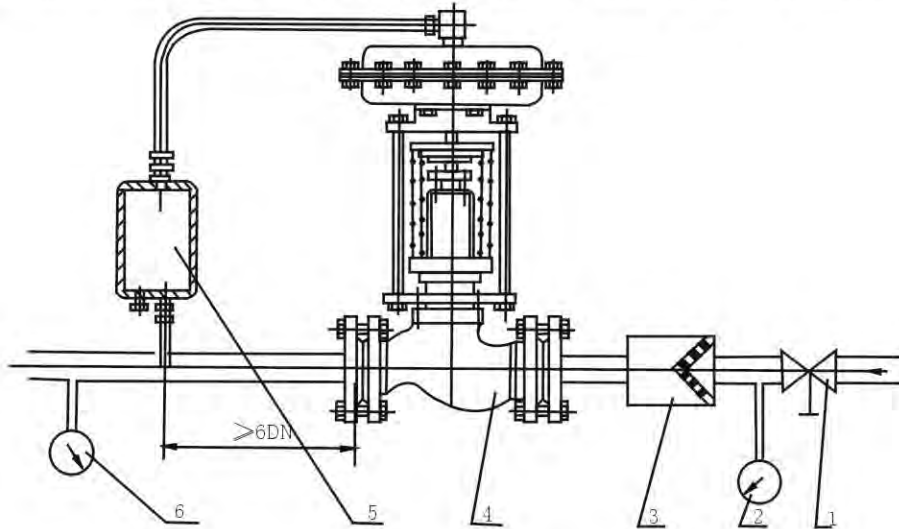
Chart 3 installation when the medium is air or mobile liquid medium

ZZY型自力式压力调节阀

ZZY Type self-acting pressure adjusting valve

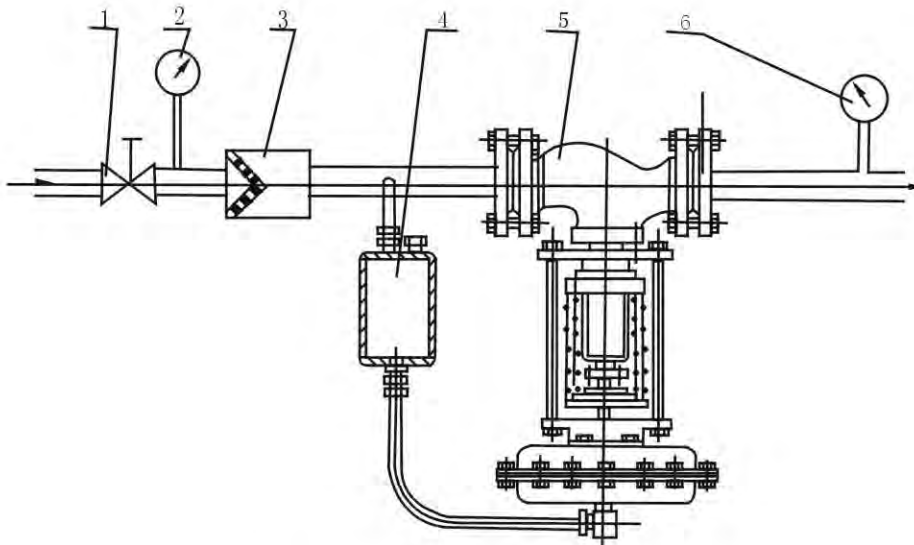
如果使用的介质为蒸汽时，自力式压力调节阀需倒立安装在水平管道上，如图四所示。

If the working medium is steam, the self-acting pressure adjusting valve should be installed upside down on the horizontal pipeline. See chart 4.



A、ZZYP-16B型调压阀

A.ZZYP-16B type adjusting pressure valve



B、ZZYP-16K型调压阀

B.ZZYP-16K type adjusting pressure valve

- | | | |
|------------------|-------------------------------|--------------|
| 1、截止阀Globe valve | 2、6、压力表Pressure gauge | 3、过滤器Straine |
| 4、冷凝器Condenser | 5、调压阀Adjusting pressure valve | |

图四 介质为蒸汽时的安装

Chart 4 Installation when the medium is steam

ZZY型自力式压力调节阀

ZZY Type self-acting pressure adjusting valve

安装时，注意以下几点：

Please notice the following points while installation:

(1) 冷凝器必须高于调压阀的执行机构而低于阀后（阀后调压阀）或阀前（阀前调压阀）接管，以保证冷凝器内充满冷凝液。

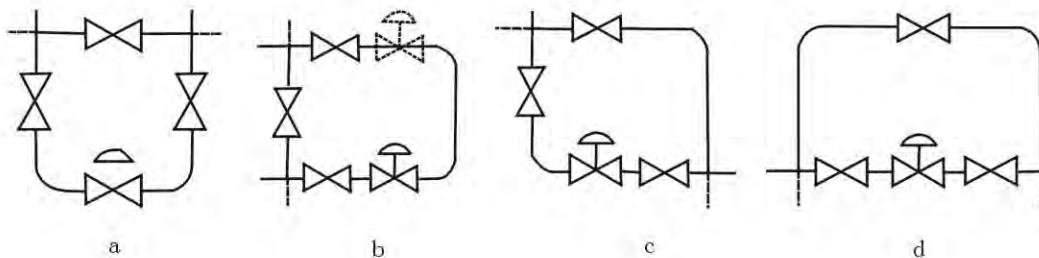
(2) 取压点应取在离调压阀适当的位置，阀前调压阀应大于2倍管道直径，阀后调压阀应大于6倍管道直径。

(3) 为便于现场维修及操作，调压阀四周应留有适当空间，阀前后应设置截止阀与旁路手动阀，如图五所示。

(1) The condenser should be higher than the actuating device of adjusting valve but lower than the outlet connector (outlet adjusting pressure valve) or inlet connector (inlet adjusting pressure) in order to make sure the condenser is full of condensate.

(2) Tapping point should be chose at suitable position from adjusting pressure valve. Inlet adjusting pressure valve should be bigger than 2 times of the diameter of pipeline. Outlet adjusting pressure valve should be bigger than 6 times of the diameter of pipeline.

(3) All round adjusting valves should leave suitable space and the inlet and outlet of valve should establish globe valve and bypass hand-operated valve in order to maintain and operate conveniently on spot. See chart 5.



图五 调压阀阀组安装方案

Chart 5 group adjusting pressure valve installation project

注：图中虚线表示管道出入口的另一种允许方向

Remark: The dotted lines in the chart indicate the other allowable direction of the inlet and outlet of the pipeline.

(4) 调压阀口径过大 ($DN > 100$ 时)，应有固定支架

(4) The adjusting pressure valve should have steady rest when its size is too big ($DN > 100$)

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(5) 介质流动方向与阀体上箭头指向一致，前后管道中心应对准调压阀两法兰中心，避免阀体受过大的应力。

(6) 阀体应设置过滤器以防止介质中杂质堵塞。

(7) 调节阀应安装在环境温度不超过-25℃到55℃的场所。

(5) The flow direction of medium should be the same as the arrow and the center of inlet and outlet pipeline should aim at the center of two flanges of adjusting pressure valve in order to avoid the body bearing too large stress.

(6) The valve should have strainer in order to prevent the impurity in medium blocking up.

(7) The adjusting valve should be the place whose ambient temperature is between -25℃ to 55.

2. 使用 Operation

在常温下使用气体或低粘度液体场合时的操作程序（参见图三）

(1) 缓慢开启阀前后截止阀

(2) 拧松排气塞,直至气体或液体从执行机构溢出为止

(3) 然后重新拧紧排气塞,调压阀即可工作，所需压力值的大小可通过压力调节盘的调整而得到。调整时，注意观察压力表示值，动作应缓慢，不得使阀杆跟着转动。

Operational programs while using air or mobile liquid in normal temperature (see chart 3).

(1) Open the globe valve slowly.

(2) Unscrew core vent until air or liquid overflows from actuating device.

(3) Screw down core vent again, and then the adjusting pressure valve will work. Request pressure value can be adjusted by pressure adjusting disk. Please notice the pressure indicated value while adjusting. The movement should be slowly and the stem is not allowed to revolve along with it.

ZZY型自力式压力调节阀

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使用蒸汽场合时的操作程序（参见图四）

- (1) 从冷凝器上拧下注液口螺钉。
- (2) 拧松执行机构排气塞。
- (3) 使用漏斗通过注液口加水直至排气孔流出为止。
- (4) 拧紧排气塞，继续注水直至溢出注液口。
- (5) 拧紧注液口螺钉。
- (6) 缓慢开启调压阀前后截止阀。
- (7) 调整压力调节盘，并观察压力表示值达到要求为止。

Operational programs while using steam (see chart 4)

- (1) Screw out the charge mouth screw from condenser.
- (2) Unscrew core vent of actuating device.
- (3) Use funnel to water through charge mouth until air vent to flow out.
- (4) Screw down the core vent, go on watering until water overflow the charge mouth.
- (5) Screw down the charge mouth screw.
- (6) Open the globe valve before and behind adjusting valve slowly.
- (7) Adjusting pressure adjusting disk until the pressure indicated value reach the requirement.

3. 维修 maintenance

调节阀投入运行后，一般维修工作最很小，平时只要观察阀前、阀后压力示值是否符合工艺所需即可。另外，观察填料函与执行机构是否渗漏，若渗漏应拧紧或更换填料及膜片。调压阀常见故障排除方法（见表五）。

Usually speaking, the adjusting valve doesn't need to be maintained after putting into operation. It will be Ok so long as observing whether the inlet and outlet pressure indicated value conforms to request value for schedule or not. In addition, observe whether the stuffing box and actuating leak or not. If it is leakage, you should screw down or change the packing and diaphragm. The common methods of trouble resolution of adjusting pressure valve. (see chart 5).

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表五

故障现象	产生原因	排除方法
阀后压力不稳定随着阀前压力变动而变动	<ol style="list-style-type: none"> 1、阀芯被异物卡住 2、阀杆、推杆卡住 3、进液管道堵塞 	<ol style="list-style-type: none"> 1、重新拆装排除异物 2、重新调整 3、疏通
阀后压力降不下来，始终在需求值上方变动	<ol style="list-style-type: none"> 1、设定弹簧钢度太大 2、阀口径过大 3、阀前压力过高、减压比过大 	<ol style="list-style-type: none"> 1、更换弹簧 2、更换较小口径 3、阀前压：阀后压超过10：1应2级降压
阀后压力升不上去，始终在需求值下方变动	<ol style="list-style-type: none"> 1、设定弹簧钢度太小 2、阀口径过小 3、减压比过小 	<ol style="list-style-type: none"> 1、更换弹簧 2、更换较大口径 3、阀前压：阀后压低于1.25应提高阀前压
阀后压力升不上去，始终在需求值下方动作	<ol style="list-style-type: none"> 1、设定弹簧钢度太小 2、阀芯被异物卡住 3、阀杆、推杆卡住 4、阀芯、阀座损坏、泄漏量过大 5、阀口径太大 	<ol style="list-style-type: none"> 1、更换弹簧 2、重新拆装 3、重新调整 4、重新研磨或更换 5、更换较小口径
阀前压力降不下来，始终在需求值上方动作	<ol style="list-style-type: none"> 1、设定弹簧钢度太大 2、阀口径太小 3、阀芯、阀杆、推杆等卡死 	<ol style="list-style-type: none"> 1、更换弹簧 2、更换较大口径 3、排除卡死原因，重新调整
阀后压或阀前压波动过于频繁	<ol style="list-style-type: none"> 1、阀口径过大 2、执行机构膜室容量太小 	<ol style="list-style-type: none"> 1、选择恰当的阀口径 2、在进液管道内增设阻尼器

ZZY型自力式压力调节阀

ZZY Type self-acting pressure adjusting valve

Trouble	Reason	Resolution
The outlet pressure is not steady and change along with inlet pressure	<ol style="list-style-type: none"> 1. The foreign matter blocks the valve core 2. Stem and lifter are blocked 3. Charge pipe is stemmed 	<ol style="list-style-type: none"> 1. Disassembly and assembly again to eliminate foreign matter 2. Adjust again 3. Dredge
The outlet pressure can't reduce and always change on the request value	<ol style="list-style-type: none"> 1. The setting rigidity of spring is too big 2. The size of valve is too big 3. Inlet pressure is too high and pressure reducing ratio is too big 	<ol style="list-style-type: none"> 1. Change spring 2. Change smaller size 3. If the inlet pressure: outlet pressure exceeds 10: 1, you should do 2 classes pressuring
The outlet pressure can't increase and always change under request value	<ol style="list-style-type: none"> 1. The setting rigidity of spring is too small 2. The size of valve is too small 3. Inlet pressure is too high and pressure reducing ratio is too small 	<ol style="list-style-type: none"> 1. Change spring 2. Change bigger size 3. If the inlet pressure: outlet pressure lower 1: 25, you should do increase inlet pressure
The inlet pressure can't increase and always change under request value	<ol style="list-style-type: none"> 1. The setting rigidity of spring is too small 2. The foreign matter blocks the valve core. 3. Stem and lifter are blocked 4. Valve core and seat are damaged and leakage is too big 5. The size of valve is too big 	<ol style="list-style-type: none"> 1. Change spring 2. Disassembly and assembly again 3. Adjust again 4. Grind or change again 5. Change smaller size
The inlet pressure can't reduce and always change on the request value	<ol style="list-style-type: none"> 1. The setting rigidity of spring is too big 2. The size of valve is too small 3. Core, stem and lifter are blocked. 	<ol style="list-style-type: none"> 1. Change spring 2. Change bigger size 3. Eliminate the blocking reason and adjust again
The fluctuation of inlet pressure or outlet pressure is too frequently	<ol style="list-style-type: none"> 1. The size of valve is too big 2. The diaphragm room capacity of actuating device is too small 	<ol style="list-style-type: none"> 1. Choose correct size 2. Put up damper in the charge pipe

ZZY型自力式压力调节阀

ZZY Type self-acting pressure adjusting valve

五、订货须知

订货时请用户提供以下资料：

型 号		名 称	
公称通径		公称压力	
信号范围		作用方式	
介质参数		介质工作温度	
额定流量系数		固有流量特性	
阀前最大压力 阀前最小压力 阀前正常压力		阀后最大压力 阀后最小压力 阀后正常压力	
最大流量 最小流量 正常流量		液体粘度 液体重度 气体重度	
材质：阀芯 阀体 内阀件 填料		附 件	
工艺管道尺寸		耐蚀等特殊要求	
自力式调压范围 调温范围 压差调节范围 微压调节范围			

ZZY型自力式压力调节阀

ZZY Type Self-acting Pressure Regulator

VI. ordering notice

Please provide the following information for the order:

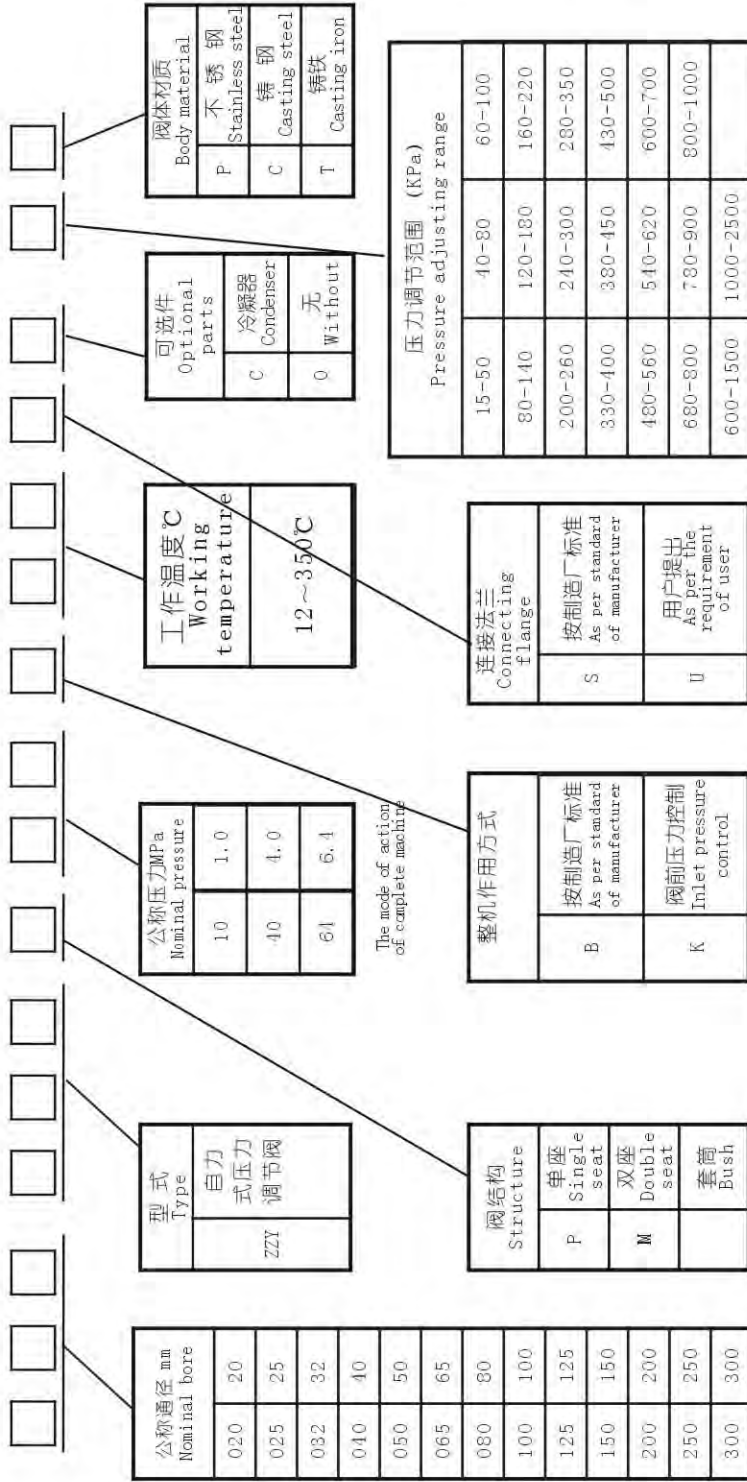
Model No.		Name	
Nominal bore		Nominal pressure	
Signal range		Mode of action	
Medium parameter		Working temperature of medium	
Rated flow coefficient		Intrinsic flow characteristic	
Inlet maximum pressure Inlet minimum pressure Inlet normal pressure		Outlet maximum pressure Outlet minimum pressure Outlet minimum pressure	
Mmaximum flow Minimum flow Normal flow		Liquid viscosity Liquid absolute density Air absolute density	
Mterial:Valve core Body Inner valve parts Packing		Accessory	
Schedule pipeline dimension		Special requirement, such as anticorrosion and so on	
Self-acting adjusting pressure range Adjusting temperature range Differential pressure adjusting range Micro pressure adjusting range			

ZZY型自力式压力调节阀

ZZY Type self-acting pressure adjusting valve

六、ZZY自力式压力调节阀型号

VI. ZZY self-acting pressure adjusting valve Model No



例:

050ZZYP10B12SQ280~350P表示阀口径为50mm的自力式压力单座调节阀, 其阀座公称压力为1.0MPa, 调节阀后压力, 连接法兰按制造厂标准, 不带冷凝器, 压力调节范围为280~350KPa, 阀体材质为不锈钢。

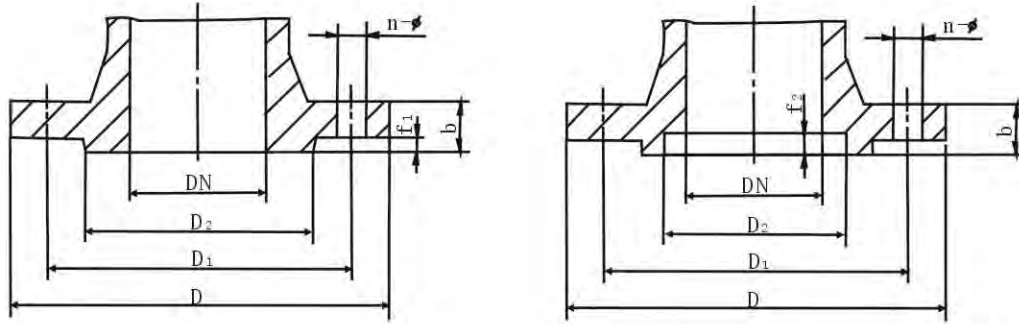
For example:

The meaning of 050zzYP10B12SQ280-350P is as follows: it is self-acting single seat adjusting valve. Its size is 50mm. The nominal pressure of seat is 1.6 Mpa; adjusting outlet pressure; connecting flange is according to the standard of manufacturer; without condenser; the pressure adjusting range is 280-350Kpa; body material is stainless steel.

ZZY型自力式压力调节阀

ZZY Type self-acting pressure adjusting valve

七、法兰尺寸 Flange dimension



单位Unit:mm

公称直径 mm Nominal pressure	20	25	32	40	50	65	80	100	125	150	200
法兰端面距 (L) Flange ends distance	PN16	150	160	180	200	230	290	310	350	400	600
	PN10	150	160	180	200	230	290	310	350	400	600
	PN64	230	230	260	260	300	340	380	430	500	650
D	PN16	105	115	140	150	165	185	200	220	250	340
	PN10	105	115	140	150	165	185	200	235	270	375
	PN64	130	140	155	170	180	205	215	250	295	415
D ₁	PN16	75	85	100	110	125	145	160	180	210	295
	PN10	75	85	100	110	125	145	160	190	220	320
	PN64	90	100	110	125	135	160	170	200	240	345
b	PN16	16	16	18	18	20	20	20	22	22	24
	PN10	16	16	18	18	20	22	24	24	26	28
	PN64	20	22	24	24	26	28	30	32	36	44
n-φ	PN10	4-14	4-14	4-18	4-18	4-18	4-18	8-18	8-18	8-18	8-22
	PN40	4-14	4-14	4-18	4-18	4-18	8-18	8-18	8-22	8-26	8-26
	PN64	4-18	4-18	4-23	4-23	4-23	8-23	8-23	8-25	8-30	8-34
f ₁ ×D ₂	PN10	2×65	3×65	3×76	3×84	3×99	3×118	3×132	3×156	3×211	3×266
f ₂ ×D ₅	PN40	3×51	3×58	3×66	3×76	3×84	3×99	3×118	3×132	3×156	35×204
	PN64	4×51	4×58	4×66	4×76	4×88	4×110	4×121	45×150	45×176	45×260

注：1、本产品法兰连接尺寸PN10、PN40按GB9113-88标准，PN64按JB79.2-94标准，结构长度按GB12221-89标准。
2、本产品法兰密封面形式有凸面和凹面两种，可按用户指定，用户未指定时，PN10按凸面，PN40、PN64按凹面。

Remarks: 1. The flange dimension of PN16, PN40 valve is according to GB9113-88A. The flange dimension of PN64 valve is according to JB79.2-94. Face to face to GB12221-89S.

2. The sealing surface of flange has male and female. We can make them according to the requirement of user. But PN16 will be male and PN40, PN64 will be female without the requirement.