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Meisonilan®

梅索尼兰

80W2

氮封装置控制阀

Meisonilan®

梅索尼兰，携手共辉煌

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CONTROL VALVE



► 80W02 氮封装置控制阀

▲ 概述

80W02 氮封装置控制阀，由控制阀门、执行器、压力弹簧、指挥器、脉冲管等部件组成。主要用于保持容器顶部保护气体（一般为氮气）的压力恒定，以避免容器内物料与空气直接接触，防止物料挥发、被氧化，以及容器的安全。特别适用于各类大型储罐的气封保护系统。该产品具有节能、动作灵敏、运行可靠、操作与维修方便等特点。广泛应用于石油、化工等行业。



技术参数和性能		
阀体		
公称通径	DN20、25、32、40、50、65、80、100mm	
公称压力	PN1.6、4.0、6.4MPa	
法兰标准	JB/T79.1-94、79.2-94等	
阀体材料	铸钢(HT200)、铸钢〔ZG230-450〕铸不锈钢〔ZG1Cr18Ni9Ti、ZG1Cr18Ni12Mo2Ti〕	
阀芯型式	单座〔P〕、双座〔N〕、套筒〔M〕	
阀芯材料	硬密封	不锈钢〔1Cr18Ni9Ti、1Cr18Ni12Mo2Ti〕；
	软密封	不锈钢镶嵌橡胶圈
阀杆材料	不锈钢〔1Cr18Ni9Ti、1Cr18Ni12Mo2Ti〕	
压力平衡	不锈钢波纹管	
流量特性	快开	
使用温度	≤80℃	
执行器		
压力设定范围(KPa)	0.4~0.5 5~10 9~14 13~19 18~ 24 22~28 27~33 36~44 42~51 49~58 56~66	
膜盖材料	钢板镀锌	
膜片材料	丁晴橡胶、乙炳橡胶、氟橡胶、耐油橡胶	

► 80W02 nitrogen sealing device



▲ Summary

The80W02 nitrogen sealing device is composed of the control valve, actuator, pressure spring, pilot, pulse pipe and other parts. It is mainly used for maintaining the pressure of gas (generally nitrogen) at the top of the vessel constant so as to prevent the materials in the vessel from contacting the air, volatizing and being oxidized and ensure vessel safety. It is especially suitable for gas sealing protection systems of various large-sized storage tanks. The product has such features as energy saving, agile action, reliable running, convenient operation and maintenance, etc. It is widely used in petroleum, chemical industry, etc.

Technical parameters and performances		
Body		
DN	DN20、25、32、40、50、65、80、100mm	
PN	PN1.6、4.0、6.4MPa	
Flange standard	JB/T79.1-94、79.2-94等	
Body material	Cast iron (HT200), cast steel (ZG230-450), cast stainless steel (ZG1Cr18Ni9Ti, ZG1Cr18Ni12Mo2Ti)	
Plug type	Single-seat (P), double-seat (N), sleeve (M)	
Plug material	Hard seal	Stainless steel (1Cr18Ni9Ti, 1Cr18Ni12Mo2Ti)
	Soft seal	Stainless steel embedded with rubber ring
Stem material	Stainless steel (1Cr18Ni9Ti, 1Cr18Ni12Mo2Ti)	
Pressure balancing	Stainless steel bellows	
Flow characteristic	Quick open	
Working temperature	≤80℃	
Actuator		
Pressure setting range	0.4-0.5 5-10 9-14 13-19 18- 24 22-28 27-33 36-44 42-51 49-58 56-66	
Diaphragm cover material	Teflon coated A3, A4 steel sheet	
Diaphragm material	NBR, EPR, fluorine rubber, oil resistant rubber	

► 80W02 氮封装置控制阀

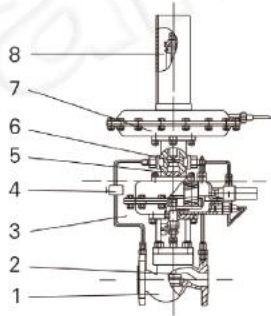


图1：30W02-01供氮装置

- 1、主阀
- 2、主阀阀芯
- 3、主阀执行机构
- 4、减压阀
- 5、节流阀
- 6、指挥器阀芯
- 7、检测机构
- 8、预设弹簧

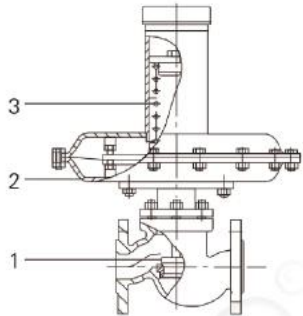


图2：30W02-02泄氮装置

- 1、主阀
- 2、检测机构
- 3、弹簧

性能

设定值偏差		±5%
允许泄漏量	标准型	IV级(符合GB/T4312-92标准)
	严密型	VI级(符合GB/T4312-92标准)

额定流量系数、额定行程、性能

30W02-01供氮装置

公称通径 DN	25										32	40	50	65	80	100
阀座通径 DN	5	6	7	8	10	12	15	20	25	32	40	50	65	80	100	
流量系数Kv	0.2	0.32	0.5	0.8	1.8	2.8	4.4	6.9	11	20	30	48	75	120	190	
额定行程L	8										10		14	20		25

30W02-02泄氮装置

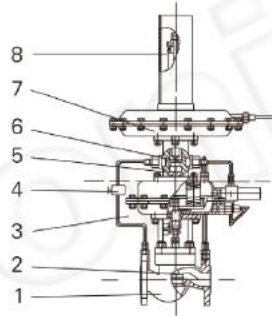
公称通径 DN	20	25	32	40	50	65	80	100
阀座通径 DN	20	25	32	40	50	65	80	100
流量系数Kv	6.9	11	20	30	48	75	120	190
额定行程L	8		10		14	20		25

工作原理

供氮装置(见图1), 将设在罐顶的取压点的介质经导压管引入检测机构(7), 介质在检测元件上产生一个作用力与预设弹簧(8)预紧力相平衡。当罐内压力降低至低于供氮装置压力设定点时, 平衡破坏, 使指挥器阀芯(6)打开, 使阀前气体经减压阀(4)、节流阀(5)、进入主阀执行机构(3)上、下膜室, 打开主阀阀芯(2), 向罐内充注氮气; 当罐内压力升至供氮装置压力设定点, 由于预设弹簧力, 关闭指挥器阀芯(6)、由于主阀执行机构中的弹簧作用, 关闭主阀, 停止供氮。

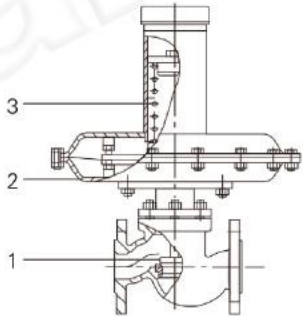
泄氮装置(见图2), 该装置采用内反馈结构, 介质直接经阀盖进入检测机构(2), 介质在检测元件上产生一个作用力预设弹簧(3)预紧力相平衡。当罐内压力升高至于泄氮装置压力设定点, 平衡被破坏, 是阀芯(1)上移, 打开阀门, 向外界泄放氮气; 当罐内压力降至泄氮装置压力设定点, 由于预设弹簧力作用, 关闭阀门。

► 80W02 nitrogen sealing device



30W02-01 nitrogen supply device

1. Main valve
2. Main valve plug
3. Main valve actuator
4. Pressure reducing valve
5. Throttle valve
6. Pilot plug
7. Detection mechanism
8. Preset spring



30W02-02 nitrogen discharge device

- 1.Main valve
- 2.Detection mechanism
- 3.Spring

Performance

Set value error		±5%
Allowable leakage	Standard type	Class IV (conforming to GB/T4312-92)
	Tight type	Class VI (conforming to GB/T4312-92)

Rated flow coefficient, rated travel, performance

30W02-01 nitrogen supply device

DN	25										32	40	50	65	80	100
Seat size	5	6	7	8	10	12	15	20	25	32	40	50	65	80	100	
Flowcoefficient	0.2	0.32	0.5	0.8	1.8	2.8	4.4	6.9	11	20	30	48	75	120	190	
Rated travel	8										10		14	20		25

30W02-02 nitrogen discharge device

DN	20	25	32	40	50	65	80	100
Seat size	20	25	32	40	50	65	80	100
Flowcoefficient	6.9	11	20	30	48	75	120	190
Rated travel	8		10		14	20		25

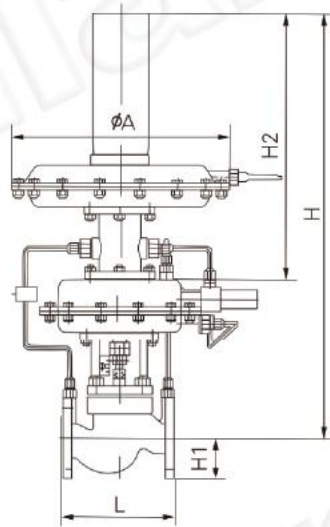
Working principle

In the nitrogen supply device (see figure 1), the medium at the pressure point at the top of the tank is introduced to the detection mechanism (7) through the pressure pipe. The medium produces an acting force on the detection element, which balances the pre-tightening force of the preset spring (8). When the pressure in the tank drops to be lower than the pressure set point of the nitrogen supply device, the balance is destroyed, so that the pilot plug (6) is opened, and the before-valve gas enters the upper and lower diaphragm chambers of the main valve actuator (3) after passing through the pressure reducing valve (4) and throttle valve (5). The main valve plug (2) is opened and nitrogen is filled into the tank. When the pressure in the tank rises to the pressure set point of the nitrogen supply device, the pilot plug (6) is closed by the preset spring force. Due to the spring action in the main valve actuator, the main valve is closed and nitrogen supply is stopped.

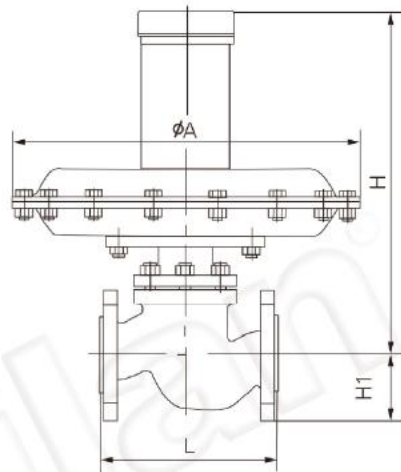
The nitrogen discharge device (see figure 2) is an internal feedback mechanism. The medium enters the detection mechanism (2) after passing through the bonnet. The medium produces an acting force on the detection element, which balances the pre-tightening force of the spring (3). When the pressure in the tank rises to be higher than the pressure set point of the nitrogen discharge device, the balance is destroyed, so that the plug (1) moves upward to open the valve and discharge nitrogen to the outside. When the pressure in the tank falls to the pressure set point of the nitrogen discharge device, the valve is closed by the preset spring force.



► 80W02 氮封装置控制阀
80W02 nitrogen sealing device



供氮装置外形尺寸图
Outline dimensions figure
of nitrogen supply device



泄氮装置外形尺寸图
Outline dimensions figure of
nitrogen discharge device

1.供氮装置外形尺寸及重量							
1. Outline dimensions and weight of nitrogen supply device							
公称通径DN(mm)	25	32	40	50	65	80	100
L	160	180	200	230	290	310	350
A	308	308	308	308	394	394	394
H2	415	415	415	115	415	415	415
H1	60	75	80	85	95	105	120
H	720	730	730	750	790	840	890
重量 Weight (kg)	32	35	40	50	90	115	280

1.泄氮装置外形尺寸及重量							
1. Outline dimensions and weight of nitrogen supply device							
公称通径DN(mm)	25	32	40	50	65	80	100
L	160	180	200	230	290	310	350
A	308	308	308	308	394	394	394
H1	60	75	80	85	95	105	120
H	380	400	420	430	550	560	570
重量 Weight(kg)	12	13	15	17	20	28	38