

# HTR

## 高温蒸汽疏水调节阀

DRAIN CONTROL VALVE FOR MAIN STEAM



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### 概 要:

HTR 高温蒸汽疏水阀是一种串级式高压差调节阀。该阀适用于火力发电厂主蒸汽和再热蒸汽管道的疏水系统上,控制以上高压降饱和水。高温蒸汽疏水阀可以是气动或电动控制,也可用手动控制,它是大型火力发电机组的关键调节阀之一。

高温蒸汽疏水阀具有如下优点:

1、流体逐级降压,流体方向不断改变,增加流阻,控制流速 30m/S 左右,防止空化破坏,允许压差 25MPa。

2、节流面与密封面分开,根据疏水流量设有不同的节流元件,阀内组件表面渗氮硬化处理,表面硬度达到 HRC70 左右。关闭严密,寿命长。

3、阀体组件采用高压自密封结构,压差越大,密封性越好。

4、阀体组件与执行机构采用浮动式连接,可消除阀芯与推杆不同心造成的卡死现象。

### General

HTR control valve is multi-stage control valve for high pressure drops. The valve is applicable to drain main steam and reheat steam in thermal power generation plant and controls the high pressure saturation water over 4250C. Many operations can be optional, such as pneumatic, electric and manual operation. In addition, it is a key control valve in thermal power generation set.

The valve has the following advantages:

1、The multi-stage underpressure controls velocity of flow within about 30m/s and prevents from cavitating and wrecking by forcing the process fluid to follow a tortuous path.; Allowable pressure drop is 25MPa.

2、Throttling surface, sealing surface are separated, setting the different throttling units according to the flow of draining water ; Surface of valve internal component are hardened up to HRC70. So the valve can provide longer service life and tighter shutoff performance.

3、Because Valve body assembly adopts the structure of high pressure self-sealing, the pressure drop is bigger , leak tightness is better.

4、The floating adjacent is used to remove the jamming of the plug and the putter between valve body assembly and actuator.

### 本体部 BODY

阀体型式 Body type	锻造直通型 Forging straight way type
公称通径 Body size	DN25、DN32、DN40、DN50(1"、1 1/4"、1 1/2"、2" )
阀体材质 Body & Bonnet Material	20# 锻钢(温度 ≤425℃ 时用); 20# forging carbon (temperature up to 425℃); 12Cr1MoV 锻钢(温度 ≥425℃ 时用) 12Cr1MoV forging carbon (temperature great and equal to 425℃)
阀芯形状 Plug form	防空化串级式节流阀芯 Anti-cavitation concatenation throttling plug
阀内件材质 Trim materials 阀内件处理 Trim treatment	9Cr18MoV 或不锈钢材料 9Cr18MoV or Stainless steel 渗氮硬化处理 NT=Nitriding treatment
公称压力 Body ratings	HG20592 PN25、32MPa; ANSI B16.5 ANSI1500、ANSI2500
连接方式 Body connections	焊接式 BW 或按用户要求 Welded ends BW or according to client's requirement
上阀盖形式 Bonnet type	螺栓压紧式 Bolt hold down
填 料 Packing	石墨加因科镍丝编织填料 Graphite Inco nickel weave packing
表面涂层 Painting color	阀体喷银色环氧树脂 Argentate munsell on carbon steel

## 执行机构 ACTUATOR

规格 Specification	形式 Type	电动式 Electric Motor type
		SIPOS 5 Flash
用途 Purpose		开关 on-off
供气压力或供给电压 Air supply or Power supply		供电电源:380V 50Hz Power supply 输入信号:4~20mA Input signal
接口 Connection		进出线口:M25X1.5(2个) Conduit entry
正作用 Direct action		输入信号增加阀闭 Signal increase to valve shut
反作用 Reverse action		输入信号增加阀开 Signal increase to valve open
滞后 Hysteresis		≤0.8%
线性 Linearity		≤±1%
允许环境温度 Ambient Temp		-20℃~+60℃
标准涂层色 Painting		中国蓝 China blue
选购设备 Option		限位开关 Limit switch

## 性能 PERFORMANCE

额定 Kv 值及行程 Rated Kv and stroke	请参见表 1 See Table 1
流量特性 Flow characteristics	线性 Linear
可调比 R Rangeability	30:1
阀座泄漏量 Seat leakage	符合 ANSI B16.104-1976 IV级 According to ANSI B 16.104-1976 Class IV
允许压差 Allowable pressure drops	25MPa

表 1 Kv 值和行程

Table 1 Rated Kv and Stroke

公称通径(mm) Body size	25	32	40	50
公称压力(MPa) Body Ratings	ANSI1500、2500 或(or)PN25、32MPa			
Kv 值 Rated Kv	5.5		9.5	
行程(mm)Stroke	20			

图 1.本体部构造 Fig.1 BODY SECTION VIEW

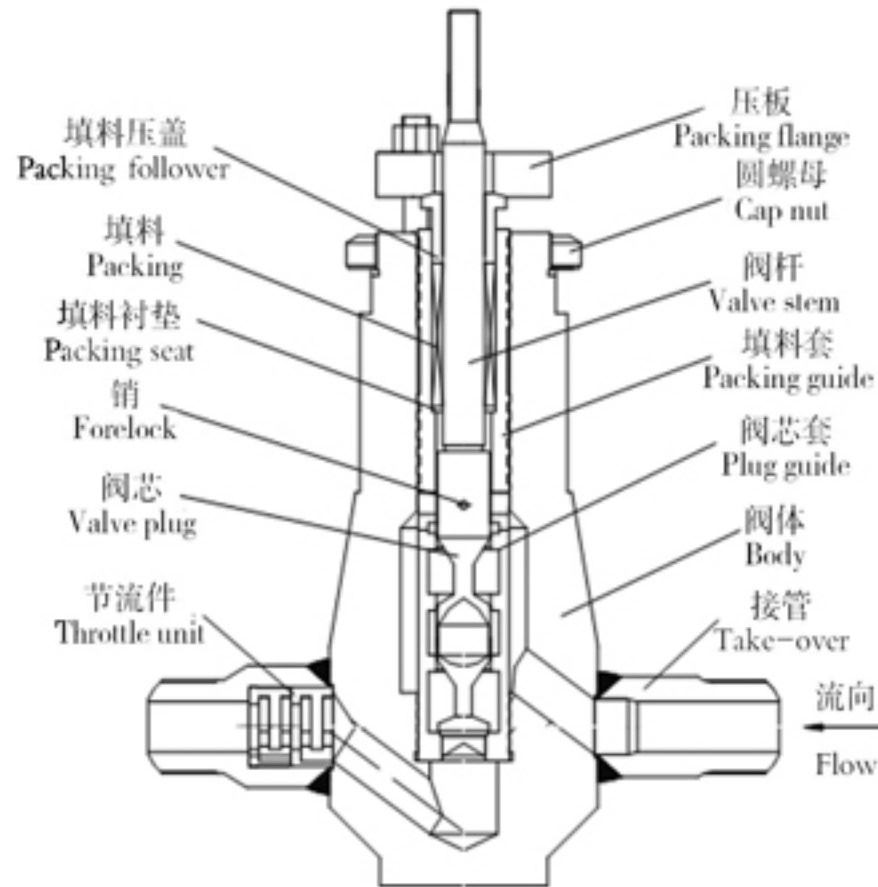


图 2.配 SIPOS 5 Flash 电动执行机构外形图

Fig.2 Outline with SIPOS 5 Flash electric motor

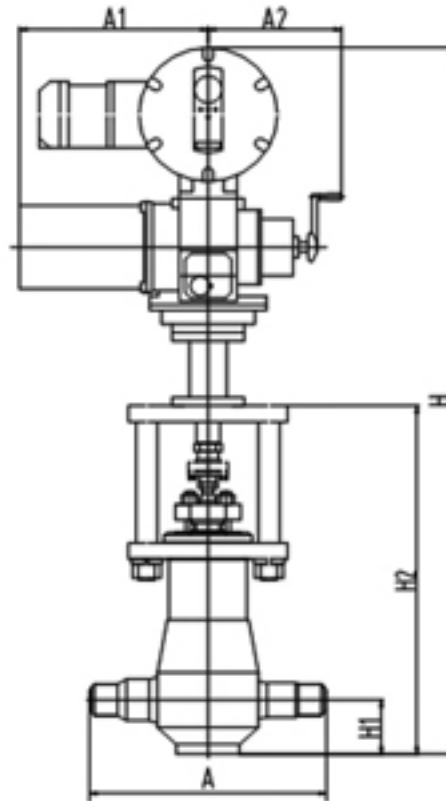


表 2. 配 SIPOS 5 Flash 电动执行机构外形尺寸(单位:mm)

Table 2. Outline size with SIPOS 5 Flash electric motor (UNIT:mm)

公称通径 (mm) Body size	公称 压力(MPa) Body ratings	电动执行机构 Electric Motor SIPOS 5 Flash	A	H1	H2	H	A1	A2
DN25	PN32MPa	LE50.1	376	89	576	1338	325	235
DN32								
DN40		LE70.1	436	108	626	1415	325	235
DN50			396					

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