



## HCP 平衡笼式单座调节阀 Balance Cage Guided Single seated Control Valve

HCP 平衡笼式单座调节阀是一种改进型压力平衡式的调节阀，该阀在阀塞或套筒上使用了高性能的密封环。阀体结构紧凑，流体通道呈 S 型，还设有一个改善套筒周围流体平衡流动的导流翼，使其压降损失小，流量大，可调范围广，流量特性精度高，符合 IEC60534-2-1-2011 标准。调节阀动态稳定性好，噪音低，空化腐蚀小。调节阀泄漏量符合 ANSI FCI 70-2-2006 标准。调节阀配用多弹簧薄膜或气缸执行机构，其结构紧凑，输出力大。

HCP 型调节阀适用于控制各种高温、低温的高压流体。

产品符合 GB/T4213-2008 标准

HCP Balance cage guided single seated control valve is a kind of improved pressure balanced valve. The high-performance seal ring is used on the valve plug or cage. The valve with a compact structure, S type flow way and a guide wing that improved the fluid balance around the cage makes the low pressure loss, large flow, wide adjustable range and high-precision flow characteristic are available. The design of valve is in compliance with IEC60534-2-1-2011. This valve represents dynamic stability, low noise and small cavitation corrosion. The leakage rate accords with ANSI FCI 70-2-2006 standard. The compact size and large output force are available when the control valve is combined with multi-spring diaphragm actuator or cylinder actuator. The leakage rate accords with ANSI FCI 70-2-2006 standard. The compact size and large output force are available when the control valve is combined with multi-spring diaphragm actuator or cylinder actuator.

The HCP Control Valve is suitable for controlling variety of high pressure fluids under high temperature or low temperature.

This product complies with the GB/T4213-2008 standards.

### 标准规格 STANDARD SPECIFICATION

#### 阀体 BODY

形式 Type	直通单座铸造球型阀 Straight-through, single seated, cast globe valve
公称通径 Normal size	32、40、50、65、80、100、125、150、200、250、300、350、400、450、500、600mm
公称压力 Pressure rating	ANSI Class 125, 150, 300, 600; JIS 10K, 20K, 30K, 40K; PN 1.6, 4.0, 6.4 MPa *
连接型式 End connections	法兰型 Flanged: FF、RF、RJ、TG、MFM 焊接型 Welded end: SW (40~50mm); BW (65~600mm)
尺寸 Dimensions	请参见表 5 See Table 5
阀体及上阀盖材质 Body & Bonnet Material	SCPH2/WCB, SCPH21/WC6, SCS13A/CF8, SCS14A/CF8M, SCS16A/CF3M, Ti and other alloy steels. 各种材质的使用温度·压力范围，请参见表 1 和表 2 As to the operating pressure-temperature limitation for each material, see Table 1& 2
上阀盖型式 Bonnet type	常温型 (P) Plain type : -17~+230℃ 伸长 I 型 (EI) Extension Type I: +230~+566℃; -45~-17℃

	伸长 II 型 (EII) Extension Type II: $-100\sim-45^{\circ}\text{C}$ 注: 工作温度不准超过各种材料的允许范围。 Note: Take care not to exceed the operating temperature ranges specified for required materials.
压盖型式 Gland type	螺栓压紧式 Bolted gland
填料 Packing	V 型聚四氟乙烯填料、石墨填料请参见图 2 Teflon V-ring, Grafoil, etc. See Fig.2.
垫片 Gasket	锯齿型 (SUS316、SUS316L)、缠绕型 (SUS316/316L+四氟/石墨) Saw-tooth type (Stainless steel) Spiral-wound type (SUS316/316L+PTFE/Grafoil)
表面涂层 Surface coating	银灰色 (环氧树脂)。但是阀体材质为不锈钢时, 本体部不加涂层。 SLV (Epoxy resin group) is standard. In the case of stainless steel body, no painting is standard.

\* 法兰标准 Standard: JIS B2201-1984、JB/T79.1-94(PN1.6MPa);JB/T79.2-94(PN4.0、6.4MPa);  
ANSI B16.5-2009;HG20592-2009、HG20615-2009

### 阀内组件 TRIM

阀芯型式 Valve plug type	带组合密封圈或活塞环的压力平衡式阀芯 Pressure-balanced type plug with the composite seal ring or piston ring
阀内件材质 Trim materials	标准材质组合及使用温度·压力范围, 请参见表 1 及图 1
阀内件处理 Trim materials	See Table 1&Fig.1 for hardening treatment and operating pressure-temperature
流量特性 Flow characteristics	高容量流量特性, 参见图 4-1 等百分比特性 (%C) 和线性特性 (LC) High-capacity flow characteristics, see Fig.4-1 Equal percentage (%C) and Linear (LC) 高精度流量特性, 参见图 4-2 等百分比特性 (%CF) 和线性特性 (LCF) High-precision flow characteristics, see Fig.4-2 Equal percentage (%CF) and Linear (LCF) 注: 关于司太莱堆焊的适用范围, 请参见图 1 Note: For the applicable ranges for soft seat, see Fig.1

执行机构 ACTUATOR

型号 Type	气动薄膜式 Pneumatic Diaphragm type	气缸活塞式 Cylinder piston type	电子式 Electronic type	智能式 Intelligent type
规格 Specification	HA 多弹簧型 Multi-Spring type	VP 双作用 Double acting	EIL	M8 系列
用途 Purpose	调节 Modulation	调节 Modulation	调节 Modulation	调节 Modulation
供气压力或 供给电压 Air supply or Power supply	供气压力(弹簧范围) Air supply (Spring range) 280 (80~240) kPa 400 (80~240) kPa	供气压力 Air supply 300~500kPa	电压: 220 /380V 50HZ Power supply:220 /380V 50Hz 输入信号 Input signal: 4~20mA DC	电压: 220 /380V 50HZ Power supply:220 /380V 50Hz 输入信号 Input signal: 4~20mA DC
接口 Connection	空气配管: Rc1/4 Air piping: Rc1/4	空气配管 Air piping: Rc3/8 (VP5、VP6); Rc1/2 (VP7)	配线: PG13.5 Wiring:PG13.5	配线: PG13.5 Wiring:PG13.5
正作用 Direct action	气压增加阀闭 Air to valve close	气压增加阀闭 Air to valve close	输入信号阀闭 Signal increase to valve shut	输入信号阀闭 Signal increase to valve shut
反作用 Reverse action	气压增加阀开 Air to valve open	气压增加阀开 Air to valve open	输入信号阀开 Signal increase to valve open	输入信号阀开 Signal increase to valve open
回差 Hysteresis error	≤1%FS (带定位器) ≤3%FS (不带定位器) ≤ 1%FS ( With positioner) ≤ 3%FS ( Without positioner)	≤1%FS (带定位器) ≤3%FS (不带定位器) ≤ 1%FS ( With positioner) ≤3%FS (Without positioner)	≤1%FS	≤1%FS
基本误差 Limit of intrinsic error	≤±1%FS (带定位器) ≤±5%FS (不带定位器) ≤ ±1%FS ( With positioner) ≤ ±5%FS ( Without positioner)	≤±1%FS (带定位器) ≤±5%FS (不带定位器) ≤ ±1%FS ( With positioner) ≤ ±5%FS (Without positioner)	≤±1%FS	≤±1%FS
环境温度 Ambient temperature	标准型 Standard type-30~+70℃ 高温型 High Temp.service 0~ +100℃ 低温型 Low Temp.service -40~ +40℃	标准型 Standard type-20~+60℃ 高温型 High Temp.service 0~ +100℃ 低温型 Low Temp.service -50 ~ +60℃	-20~+70 °C	-25~+70 °C

<b>油漆颜色 Painting</b>	蓝色 Munsell 色标 10B5/10 Blue (Munsell color 10B5/10)	蓝色 Munsell 色标 10B5/10 Blue (Munsell color 10B5/10)		
<b>附件 Accessories</b>	定位器、空气过滤减压阀、保位阀、阀传送器、手轮机构等 Positioner, Air-set, Lock-up valve, Position transmitter, Hand wheel and others	定位器、空气过滤减压阀、保位阀、阀传送器、手轮机构等 Positioner, Air-set, Lock-up valve, Position transmitter, Hand wheel and others	EIL 执行机构手轮 Handwheel	M8 执行机构手轮 Handwheel

### 性能 PERFORMANCE

CV 值及行程 Rated CV value and Travel	请参见表 3 See Table 3
阀座泄漏量 Seat Leakage	请参见表 1 See Table 1
可调范围 Rangeability	50 : 1
允许压差 Allowable pressure drops	请参见表 4 See Table 4
产品重量 Weight	请参见表 5 See Table 5

表 1 阀体、阀内件材质组合及使用温度范围• 阀座允许泄漏量

**Table 1 BODY/TRIM STANDARD MATERIAL COMBINATION, OPERATING TEMPERATURE AND SEAT LEAKAGE**

- R.TFE: 强化聚四氟乙烯 Reinforced Teflon
- HT : 热处理 Heat treatment
- ST : 堆焊司太莱合金 Partial stellite
- SS : 部分堆焊司太莱合金 Stellite seat surface
- SF : 全部堆焊司太莱合金 Stellite full surface

表 1-1 阀体材质：碳钢

Table 1-1 BODY MATERIAL: CARBON STEEL

阀体材质 Body material		SCPH2/A216-WCB,SCPH21/A217-WC6,SCPL1/A352-LCB			
套筒 Cage	材质 material	SUS630			
	处理 treatment	HT			
阀芯 Plug	材质 material	SUS410			
	处理 treatment	HT			
阀座 Valve seat	材质 material	SUS316+R.TFE	PEEK	SUS630	SUS630
	处理 treatment	—	—	HT	HT
平衡密封环 Balanced seal ring	材质 material	R.TFE	R.TFE	R.TFE	Inconel 750
	垫环 gasket ring	SUS316	SUS316	SUS316	—
垫圈 Gasket	材质 material	SUS316L	SUS316L	SUS316L	SUS316L
阀座允许泄漏量 Seat Leakage		Class V/VI	Rated Cv × 0.0001%	Class IV	Class IV
使用温度 Operating Temp. °C	SCPH2/WCB Body	-17~+230	-17~+270		-17~+425
	SCPH21/WC6 Body	-17~+230	-17~+270		-17~+566
	SCPL1/LCB Body	-45~+230	-45~+270		-45~+350

表 1-2 阀体材质：不锈钢

Table 1-2 BODY MATERIAL: STAINLESS STEEL

阀体材质		SCS13A/A351-CF8, SCS14A/A351-CF8M, SCS16A/A351-CF3M			
套筒 Cage	材质 material	SUS304/316/316L			
	处理 treatment	—			
阀芯 Plug	材质 material	SUS304/316/316L	SUS304/316/316L	SUS304/316/316L	SUS304/316/316L
	处理 treatment	—	—	ST	ST
阀座 Valve seat	材质 material	SUS304/316/316L +R.TFE	SUS304/316/316L +PEEK	SUS304/316/316L	SUS304/316/316L
	处理 treatment	—	—	ST	ST
平衡密封环 Balanced seal ring	材质 material	R.TFE	R.TFE	R.TFE	Inconel 750
	垫环 gasket ring	SUS316/哈氏 C (Hastelloy C)	SUS316/哈氏 C (Hastelloy C)	SUS316/哈氏 C (Hastelloy C)	—
垫圈 Gasket	材质 material	SUS316L	SUS316L	SUS316L	SUS316L
阀座允许泄漏量 Seat Leakage		Class V/VI	Rated Cv × 0.0001%	Class IV	Class IV
使用温度 Operating Temp. °C		-75~+230	-75~+270	-196~+270	-196~+566

注：流体温度在-75℃以下，平衡密封环的材质：Fluoroloy G；垫环：Elgiloy。

**Note:**When the liquid temperature is below -75℃, the material of balanced seal ring is Fluoroloy G and one of ring is Elgiloy.

表 2 阀体材质使用温度· 压力范围

Table 2 BODY MATERIAL/OPERATING PRESSURE-TEMPERATURE RATING

表 2-1 Table 2-1 ANSI

UNIT:MPa

温度 Temp.℃	ANSI150					ANSI300					ANSI600				
	LCB	WCB	WC6	SCS13A CF8	SCS14A CF8M	LCB	WCB	WC6	SCS13A CF8	SCS14A CF8M	LCB	WCB	WC6	SCS13A CF8	SCS14A CF8M
-196~38	—	—	—	1.90	1.90	—	—	—	4.95	4.95	—	—	—	9.91	9.92
-45~38	1.84	—	—	1.90	1.90	4.78	—	—	4.95	4.95	9.57	—	—	9.91	9.92
-5~38	1.84	1.96	1.99	1.90	1.90	4.78	5.10	5.16	4.95	4.95	9.57	10.2	10.32	9.91	9.92
50	1.81	1.92	1.92	1.84	1.84	4.72	5.00	5.16	4.77	4.80	9.46	10.1	10.32	9.56	9.62
100	1.72	1.76	1.76	1.56	1.61	4.51	4.63	5.14	4.08	4.21	9.02	9.27	10.29	8.17	8.43
150	1.57	1.57	1.57	1.39	1.47	4.40	4.51	5.01	3.62	3.85	8.78	9.04	10.03	7.26	7.69
200	1.40	1.40	1.40	1.25	1.37	4.26	4.38	4.88	3.27	3.56	8.54	8.75	9.75	6.54	7.12
250	1.20	1.20	1.20	1.16	1.20	4.05	4.16	4.62	3.04	3.34	8.11	8.33	9.26	6.10	6.67
300	1.01	1.01	1.01	1.01	1.01	3.76	3.87	4.23	2.91	3.15	7.54	7.74	8.48	5.80	6.32
350	0.84	0.84	0.84	0.84	0.84	3.59	3.69	4.01	2.81	3.03	7.18	7.38	8.04	5.60	6.07
375		0.73	0.73	0.73	0.73		3.64	3.88	2.77	2.96		7.28	7.75	5.54	5.93
400		0.64	0.64	0.64	0.64		3.44	3.65	2.74	2.91		6.89	7.31	5.48	5.81
425		0.55	0.55	0.55	0.55		2.88	3.44	2.71	2.87		5.74	6.91	5.42	5.72
450		0.47	0.47	0.47	0.47		1.99	3.08	2.68	2.81		4.00	6.17	5.37	5.61
475		0.37	0.37	0.37	0.37		1.35	2.58	2.65	2.73		2.70	5.17	5.30	5.46
500		0.28	0.28	0.28	0.28		0.88	2.02	2.60	2.67		1.75	4.04	5.20	5.37
525		0.18	0.18	0.18	0.18		0.51	1.53	2.19	2.57		1.03	3.07	4.77	5.15
550		—						1.20	2.00	2.40			2.40	4.00	4.60
566								1.00	1.90	2.20			2.00	3.80	4.50

表 2-2 Table 2-2 JB/T79-94 或 HG20592-2009

UNIT:MPa

温度 Temp.℃	PN16	PN40	PN63	PN100	温度 Temp.℃	PN16	PN40	PN63	PN100
	ZG230-450					ZG0Cr18Ni9			
-5~200	1.60	4.00	6.30	10.0	-45~200	1.60	4.00	6.30	10.0
~250	1.40	3.50	5.40	9.00	~300	1.40	3.50	5.40	9.00
~300	1.20	3.00	4.80	7.50	~400	1.20	3.00	4.80	7.50
~350	1.10	2.60	4.00	6.60	~480	1.10	2.60	4.00	6.60
~400	0.90	2.30	3.70	5.80	~520	0.90	2.30	3.70	5.80
~425	0.80	2.00	3.20	5.00	~560	0.80	2.00	3.20	5.00
~435	0.70	1.80	2.80	4.50					
~445	0.62	1.60	2.50	4.20					
~455	0.57	1.40	2.30	3.60					

图 1 阀内件材质·处理

Fig.1 TRIM MATERIAL/TREATMENT

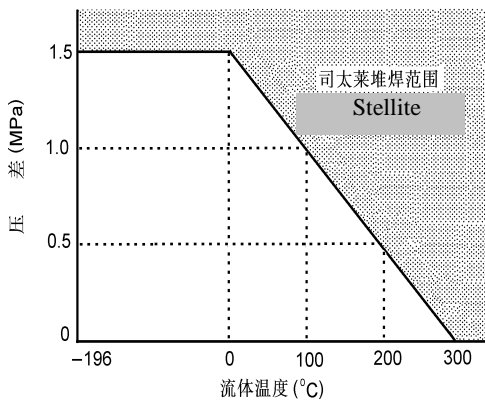


图 1-1 司太莱的工作范围

Fig.1-1 Temperature/normal differential pressure ranges requiring Stellite

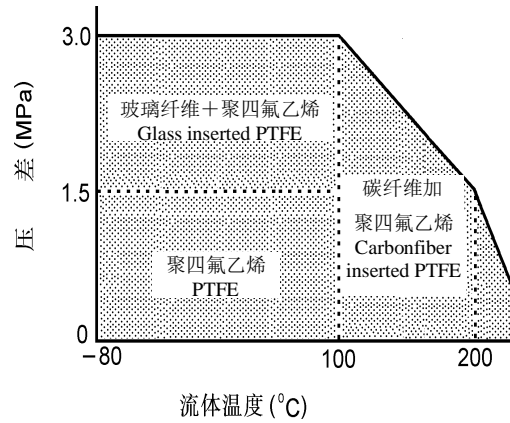


图 1-2 软阀座的工作温度和压差的范围

Fig.1-2 Temperature and maximum differential pressure range for soft seat

注: 1. 17-4PH 不锈钢 (SCS24) 不需堆焊。

2. 空化、闪蒸、禁油场合, 不管温度和压力多大, 建议堆焊司太莱合金。

Note: 1. SCS24 (Precipitation-hardened stainless steel) requires no stellite.

2. For cavitation/flashing service, or oil prohibitive service, Stellite is recommended regardless of temperature or pressure drops.

图 2 软阀座及填料使用温度·压力范围

Fig.2 SOFT SEAT MATERIAL & PACKING PRESSURE · TEMPERATURE RATINGS

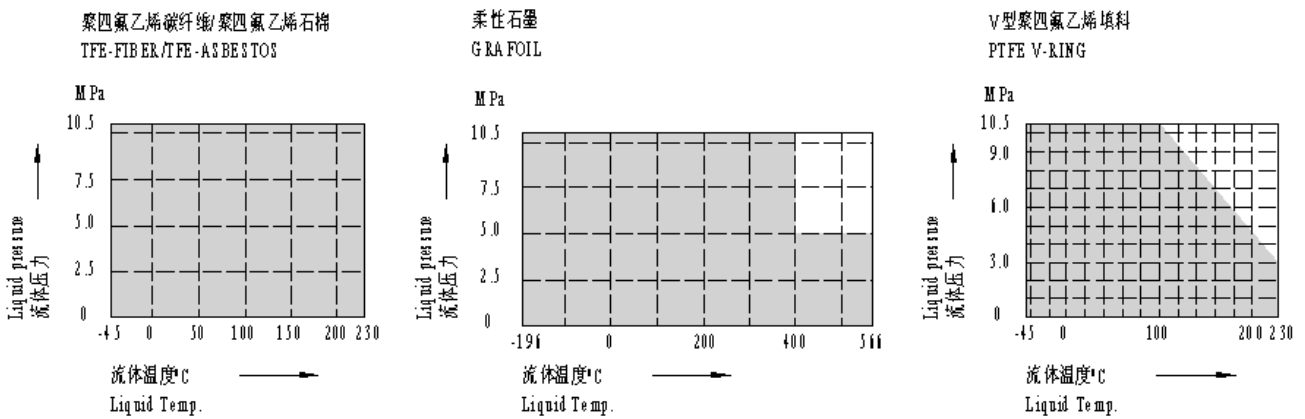


图 3 阀体部件结构 Fig.3 BODY SECTION

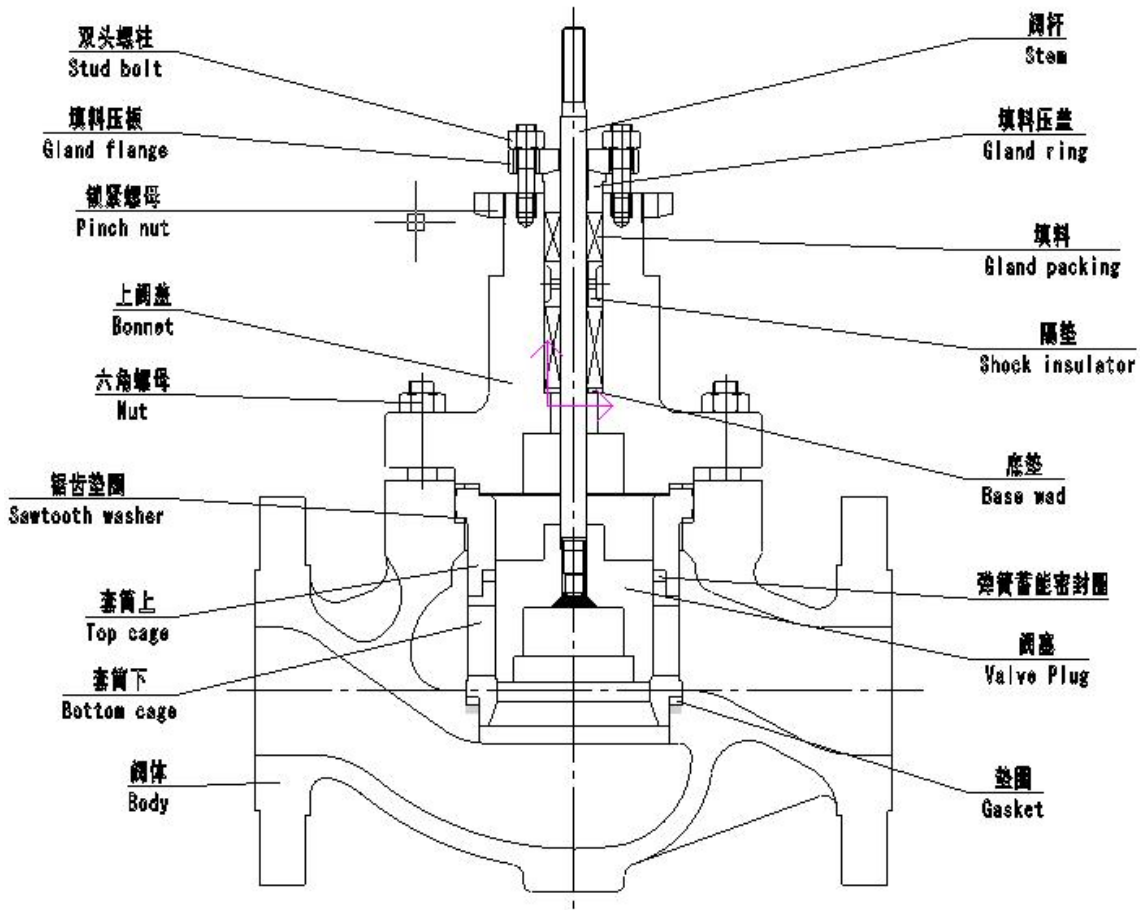


表 3 CV 值和行程

Table 3 Rated Cv value and Travel

表 3-1 高容量阀芯 (%C,LC)

Table 3-1 High-capacity flow characteristics valve plug (%C,LC)

公称通径 Nominal size	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
阀座直径 Seat size	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
额定 Cv 值 Rated Cv value	等百分比 Equal percentage	24	36	60	100	140	220	320	420	820	1300	1560	2120	2750	3300	4300
	线性 Linear	26	40	75	110	150	240	365	435	850	1350	1560	2120	2750	3300	4650
额定行程(mm) Rated travel	25		38			50		75		100		120		150		
额定 Cv 值 Rated Cv value	等百分比 Equal percentage									1350	1650	2250	2850	3650	4850	
	线性 Linear									1400	1650	2250	2920	3870	5170	6450
加大行程(mm)									120		150		200			



表 3-1 高精度阀芯 (%CF,LCF)

Table 3-1 High-precision flow characteristics valve plug (%CF,LCF)

公称通径 Nominal size	32		40			50			65			80			100			125			150			200								
阀座直径 Seat size	25	32	25	32	40	32	40	50	40	50	65	50	65	80	65	80	100	80	100	125	100	125	150	125	150	200						
额定 Cv 值 Rated Cv value	11	17	11	17	24	17	24	44	24	44	68	44	68	99	68	99	175	99	175	275	175	275	360	275	360	650						
等百分比 线性 Equal percentage	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△						
金属阀座 Metal seat	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△						
额定行程(mm) Rated stroke	25								38								50								75							
公称通径 Nominal size	250				300				350				400				450				500				600							
等百分比 Equal	1050				1220				1700				1800				2500				3540				4180							
线性 percentage	1350				1560				2120				2750				3300				4650				5500							
额定行程(mm) Rated stroke	100								120								150															

注:符号△表示阀的规格范围。

Note: △ denotes production ranges.

图 4 典型流量特性曲线

Fig.4 TYPICAL FLOW CHARACTERISTICS

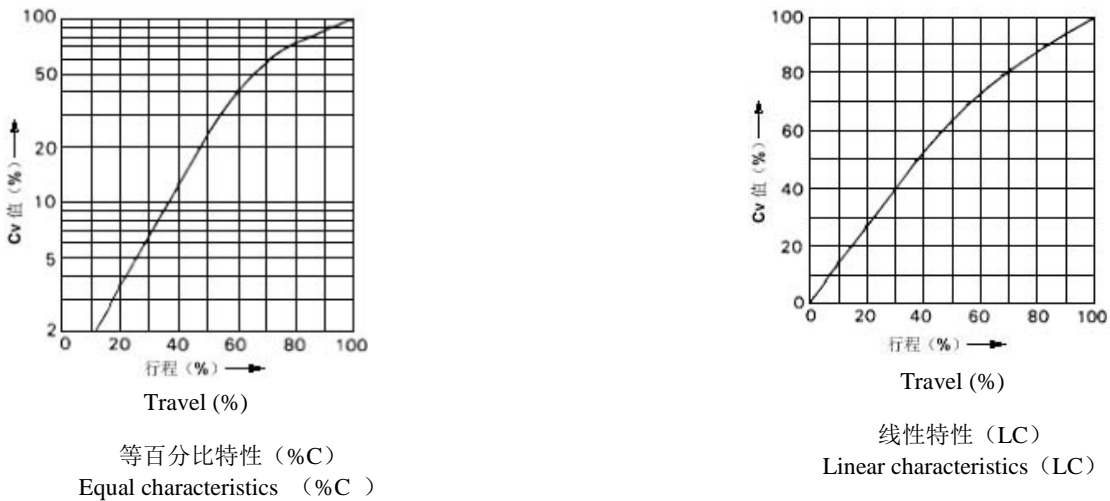
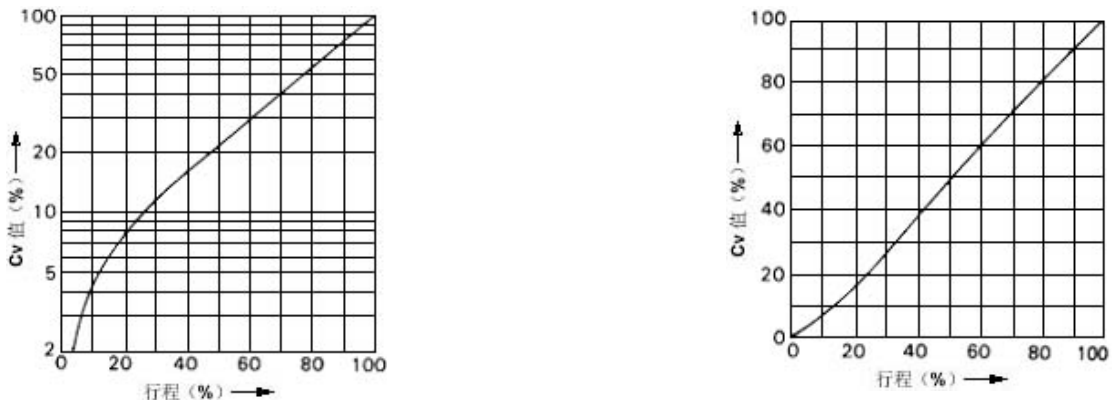


图 4-1 大容量流量特性曲线  
Fig.4-1 High-capacity flow characteristics



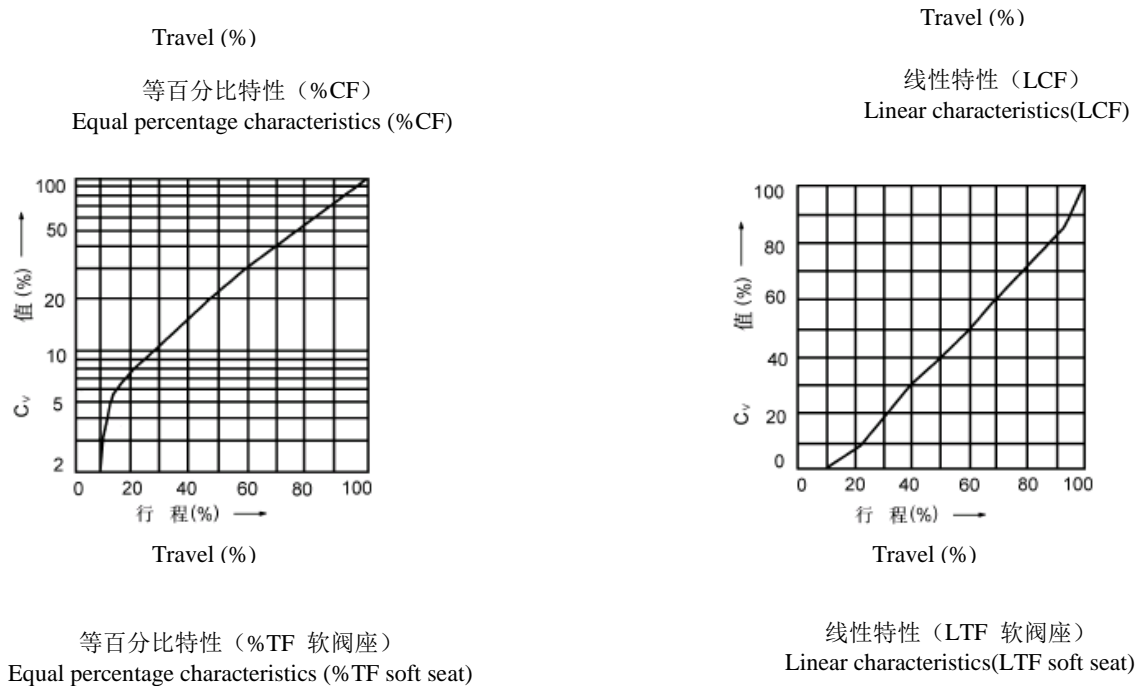


图 4-2 高精度流量特性曲线  
 Fig.4-2 High-precision flow characteristics

表 4 允许压差

Table 4 ALLOWABLE PRESSURE DROPS

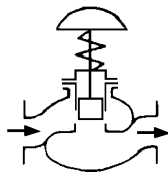
表 4-1 薄膜式执行机构 (HA)

Table 4-1 DIAPURAGM ACTUATOR (HA)

表 4-1-1 气—关式阀

Table 4-1-1 Air-to-close

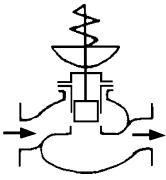
100kPa



执行机构 Actuator	供气压力 Air supply	弹簧范围 Spring range	阀座型式 Seat type	平衡密封环 Balance Seal	允许压差 Allowable pressure drops									
					公称通径 Nominal size									
					40	50	65	80	100	125	150	200	250	300
HA2D	4.0	0.8~2.4	金属密封 Metal seal	SUS316/RTFE	100	100	—	—	—	—	—	—	—	—
				Inconel 750	—	—	—	—	—	—	—	—	—	
			软密封 Soft seal	SUS316/RTFE	—	—	—	—	—	—	—	—	—	
HA3D	4.0	0.8~2.4	金属密封 Metal seal	SUS316/RTFE	100	100	100	100	100	—	—	—	—	—
				Inconel 750	—	—	83.3	—	—	—	—	—	—	
			软密封 Soft seal	SUS316/RTFE	30	30	—	—	—	—	—	—	—	
HA4D	4.0	0.8~2.4	金属密封 Metal seal	SUS316/RTFE	—	—	100	100	100	100	100	80	—	—
				Inconel 750	—	—	83.3	83.3	83.3	83.3	83.3	—	—	
			软密封 Soft seal	SUS316/RTFE	—	—	30	30	30	30	30	—	—	
HA4X2D	4.0	0.8~2.4	金属密封 Metal seal	SUS316/RTFE	—	—	—	—	—	—	—	100	—	—
				Inconel 750	—	—	—	—	—	83.3	83.3	83.3	—	—
			软密封 Soft seal	SUS316/RTFE	—	—	—	—	—	—	—	30	—	—
HA5YD	4.0	1.06~2.4	金属密封 Metal seal	SUS316/RTFE	—	—	—	—	—	—	—	100	100	100
				Inconel 750	—	—	—	—	—	—	—	83.3	83.3	83.3
			软密封 Soft seal	SUS316/RTFE	—	—	—	—	—	—	—	30	30	30

表 4-1-2 气—开式阀  
Table 4-1-2 Air-to-open

100kPa



执行机构 Actuator	供气压力 Air supply	弹簧范围 Spring range	阀座型式 Seat type	平衡密封环 Balance Seal	允许压差 Allowable pressure drops									
					公称口径 Nominal size									
					40	50	65	80	100	125	150	200	250	300
HA2R	4.0	0.8~2.4	金属密封 Metal seal	SUS316/RTFE	88.2	62.7	—	—	—	—	—	—	—	—
				Inconel 750	—	—	—	—	—	—	—	—	—	
			软密封 Soft seal	SUS316/RTFE	30	30	—	—	—	—	—	—	—	
HA3R	4.0	0.8~2.4	金属密封 Metal seal	SUS316/RTFE	100	100	100	90	60	—	—	—	—	
				Inconel 750	83.3	83.3	—	—	—	—	—	—	—	
			软密封 Soft seal	SUS316/RTFE	30	30	—	—	—	—	—	—	—	
HA4R	4.0	0.8~2.4	金属密封 Metal seal	SUS316/RTFE	—	—	100	100	100	100	76.4	40	—	—
				Inconel 750	—	—	83.3	83.3	83.3	83.3	83.3	—	—	—
			软密封 Soft seal	SUS316/RTFE	—	—	30	30	30	30	30	—	—	—
HA4X2R	4.0	0.8~2.4	金属密封 Metal seal	SUS316/RTFE	—	—	—	—	—	—	—	100	—	—
				Inconel 750	—	—	—	—	—	83.3	83.3	83.3	—	—
			软密封 Soft seal	SUS316/RTFE	—	—	—	—	—	—	—	30	—	—
HA5YR	5.0	2.12~4.8	金属密封 Metal seal	SUS316/RTFE	—	—	—	—	—	—	—	100	100	100
				Inconel 750	—	—	—	—	—	—	—	83.3	83.3	83.3
			软密封 Soft seal	SUS316/RTFE	—	—	—	—	—	—	—	30	30	30

表 4-2 气缸式执行机构 (VP)  
Table 4-2 CYLINDER TYPE ACTUATOR (VP)

100kPa

执行机构 Actuator	供气压力 Air supply	定位器 Positioner	阀座型式 Seat type	允许压差 Allowable pressure drops											
				公称口径 Nominal size											
				100	125	150	200	250	300	350	400	450	500	600	
VP4	5	金属密封 Metal seal	SUS316/RTFE	100	100	100	—	—	—	—	—	—	—	—	
			Inconel 750	100	100	100	—	—	—	—	—	—	—		
		软密封 Soft seal	SUS316/RTFE	30	30	30	—	—	—	—	—	—	—		
VP5	5	金属密封 Metal seal	SUS316/RTFE	—	—	—	100	68	62	—	—	—	—		
			Inconel 750	—	—	—	100	68	62	—	—	—			
		软密封 Soft seal	SUS316/RTFE	—	—	—	30	30	30	—	—	—			
VP6	5	金属密封 Metal seal	SUS316/RTFE	—	—	—	—	100	100	88	—	—	—		
			Inconel 750	—	—	—	—	100	100	88	—	—			
		软密封 Soft seal	SUS316/RTFE	—	—	—	—	30	30	30	—	—			
VP7	5	金属密封 Metal seal	SUS316/RTFE	—	—	—	—	100	100	100	100	100	—		
			Inconel 750	—	—	—	—	100	100	—	—	—			
		软密封 Soft seal	SUS316/RTFE	—	—	—	—	30	30	30	30	30			
VP8	5	金属密封 Metal seal	SUS316/RTFE	—	—	—	—	—	—	—	—	—	100	100	

		软密封 Soft seal	SUS316/RTFE													30	30
--	--	------------------	-------------	--	--	--	--	--	--	--	--	--	--	--	--	----	----

注：最大允许压差不准超过 ANSI B16.43-1981 或 JIS B2201-1984 标准规定的最大工作压力。

Note: Take care not to cause the allowable maximum pressure drops to exceed the maximum operating pressure designated by ANSI B16.43-1981 or JIS B2201-1984.

表 4-3 电子式执行机构 (EIL) 及电动式执行机构 (M8)

Table 4-3 ELECTRONIC ACTUATOR (EIL) & ELECTRIC MOTOR ACTUATOR (M8) 100kPa

执行机构 Actuator	阀座形式 Seat type	平衡密封环 Balance Seal	公称通径 (mm) Nominal size (mm)														
			40	50	65	80	100	125	150	200	250	300	350	400	450		
EIL04	金属阀座 Metal seat	SUS316/RTFE	100	100	—	—	—	—	—	—	—	—	—	—	—	—	—
		Inconel 750	83.3	83.3	—	—	—	—	—	—	—	—	—	—	—	—	—
	软阀座 Soft seat	SUS316/RTFE	30	30	—	—	—	—	—	—	—	—	—	—	—	—	—
EIL08 M8610+L82 10	金属阀座 Metal seat	SUS316/RTFE	—	—	100	100	100	—	—	—	—	—	—	—	—	—	—
		Inconel 750	—	—	83.3	83.3	83.3	—	—	—	—	—	—	—	—	—	—
	软阀座 Soft seat	SUS316/RTFE	—	—	30	30	30	—	—	—	—	—	—	—	—	—	—
EIL12	金属阀座 Metal seat	SUS316/RTFE	—	—	—	—	—	98.3	88.8	—	—	—	—	—	—	—	—
		Inconel 750	—	—	—	—	—	83.3	—	—	—	—	—	—	—	—	—
	软阀座 Soft seat	SUS316/RTFE	—	—	30	30	30	30	30	—	—	—	—	—	—	—	—
EIL20 M8620+L82 20	金属阀座 Metal seat	SUS316/RTFE	—	—	—	—	—	—	—	100	—	—	—	—	—	—	—
		Inconel 750	—	—	—	—	—	—	83.3	83.3	—	—	—	—	—	—	—
	软阀座 Soft seat	SUS316/RTFE	—	—	—	—	—	—	—	30	—	—	—	—	—	—	—
EIL25 M8620+L82 30	金属阀座 Metal seat	SUS316/RTFE	—	—	—	—	—	—	—	—	80	75	—	—	—	—	—
		Inconel 750	—	—	—	—	—	—	—	—	65	57	—	—	—	—	—
	软阀座 Soft seat	SUS316/RTFE	—	—	—	—	—	—	—	—	30	30	—	—	—	—	—
M8630+L82 40	金属阀座 Metal seat	SUS316/RTFE	—	—	—	—	—	—	—	—	100	100	88	50	40	—	—
		Inconel 750	—	—	—	—	—	—	—	—	83.3	83.3	—	—	—	—	—
	软阀座 Soft seat	SUS316/RTFE	—	—	—	—	—	—	—	—	30	30	30	30	30	—	—

注：1. 以上允许压差为阀全关时的允许压差。  
2. 灰框数字表示阀配用标准规格执行机构。

Note: 1. The figures denote the allowable pressure drops at full closure.  
2. The figures in gray denote the standard actuator specifications.

表 5 尺寸

Table 5 DIMENSIONS

表 5-1 法兰距尺寸

Table 5-1 Fact-to-Face dimensions

mm

公称 口径 Nominal size	A							
	ANSI 125 FF ANSI 150 RF JIS 10K FF RF PN1.6 RF	JIS 16K RF	ANSI 300 RF JIS 20K RF JIS 30K RF PN4.0 MFM	ANSI 600 RF JIS 40K RF PN6.4 MFM	JIS 16K TG	JIS 20K TG	JIS 30K TG	JIS 40K TG
32、40	222	231	235	251	235	236	248	251
50	254	263	267	286	265	267	276	286
65	276	288	292	311	290	292	303	311
80	298	313	317	337	310	317	326	337
100	352	364	368	394	360	368	379	394
125	403	—	425	457	—	425	—	457
150	451	465	473	508	475	473	486	508
200	543	560	568	610	570	568	580	610
250	673	—	708	752	—	—	—	—
300	737	—	775	819	—	—	—	—
350	889	—	927	972	—	—	—	—
400	1016	—	1057	1108	—	—	—	—
450	1140	—	1181	1239	—	—	—	—
500	1267	—	1308	1372	—	—	—	—
600	1556	—	1600	1676	—	—	—	—

公称 口径 Nominal size	A						
	ANSI 150 RJ	ANSI 300 RJ	ANSI 600 RJ	ANSI 300 TG	ANSI 600 TG	ANSI 150 SW、BW	ANSI 150、600 SW、BW
32、40	235	248	251	244	248	251	251
50	267	283	289	276	283	286	286
65	289	308	314	302	308	311	311
80	311	333	340	327	333	337	337
100	365	384	397	378	391	394	394
150	464	489	511	483	505	473	508
200	556	584	613	578	606	568	610

注：法兰距符合 IEC 534-3-1976 标准。

Note: Face-to-face dimensions conform to IEC 534-3-1976 Standard.

表 5-2 外形尺寸

Table 5-2 Other dimensions

表 5-2-1 外形尺寸

Table 5-2-1 Other dimensions

mm

公称 通径 Nomina l size	执行机构 Actuator	H			B	B1	B2	B3	B4	H1
		常温型(P) Plain bonnet	伸长 I 型(E I) Extension bonnet Type I	伸长 II 型(E II) Extension bonnet Type II						
32	HA2D、R	575	745	850	281	—	—	—	—	70
	HA3D、R	700	870	1015	363	—	—	—	—	
	EIL04	790	960	1065	267	—	258	—	—	
40	HA2D、R	575	745	850	281	—	—	—	—	70
	HA3D、R	700	870	1015	363	—	—	—	—	
	EIL04	790	960	1065	267	—	258	—	—	
50	HA2D、R	575	745	855	281	—	—	—	—	80
	HA3D、R	700	870	980	363	—	—	—	—	
	EIL04	790	960	1070	267	—	258	—	—	
65	HA3D、R	735	915	1035	363	—	—	—	—	88
	HA4D、R	920	1100	1215	520	—	—	—	—	
	EIL08	925	1105	1225	229	—	338	—	—	
	M8610+L8210	975	1155	1275	—	285	346	253	350	
80	HA3D、R	745	925	1065	363	—	—	—	—	98
	HA4D、R	925	1115	1240	520	—	—	—	—	
	EIL08	930	1110	1230	229	—	338	—	—	
	M8610+L8210	985	1170	1305	—	285	346	253	350	
100	HA3D、R	770	980	1105	363	—	—	—	—	113
	HA4D、R	945	1165	1305	520	—	—	—	—	
	VP4	1180	1400	1545	334	—	—	—	—	
	EIL08	960	1170	1295	229	—	338	—	—	
	M8610+L8210	1010	1220	1245	—	285	346	253	350	
125	HA3D、R	840	1100	1300	363	—	—	—	—	146
	HA4D、R	1010	1270	1485	520	—	—	—	—	
	VP4	1190	1450	1665	334	—	—	—	—	
	EIL08	1050	1310	1515	229	—	338	—	—	
150	HA3D、R	840	1100	1300	363	—	—	—	—	170
	HA4D、R	1010	1270	1485	520	—	—	—	—	
	VP4	1190	1450	1665	334	—	—	—	—	
	EIL12	1050	1310	1515	229	—	338	—	—	
200	HA4D、R	1150	1410	1655	520	—	—	—	—	220
	VP5	1420	1685	2050	382	—	—	—	—	
	EIL20	1295	1550	1800	258	—	356	—	—	
	M8620+L8220	1485	1750	2021	—	313	350	253	350	
250	HA5YD、R	1455	1725	—	605	—	—	—	—	305
	VP5	1355	1620	—	382	—	—	—	—	
	VP6	1470	1735	—	480	—	—	—	—	
	EIL25	1540	1805	—	258	—	356	—	—	
	M8620+L8230	1865	2470	—	—	313	350	253	350	
300	HA5YD、R	1455	1720	—	605	—	—	—	—	345
	VP5	1355	1620	—	382	—	—	—	—	
	VP6	1470	1735	—	480	—	—	—	—	
	EIL25	1535	1780	—	258	—	356	—	—	
	M8620+L8230	1505	1845	—	—	313	350	253	350	
350	VP6	1565	1850	—	480	—	—	—	—	385
	VP7	1565	1850	—	580	—	—	—	—	
	M8630+L8240	1540	1880	—	—	375	455	266	350	
400	VP7	2005	2115	—	730	—	—	—	—	420
	M8630+L8240	2300	2400	—	—	375	455	266	350	
450	VP7	2100	2250	—	730	—	—	—	—	430
	M8630+L8240	2350	2450	—	—	375	455	266	350	

DN500	VP8								
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表 5-2-2 外形尺寸

Table 5-2-2 Other dimensions

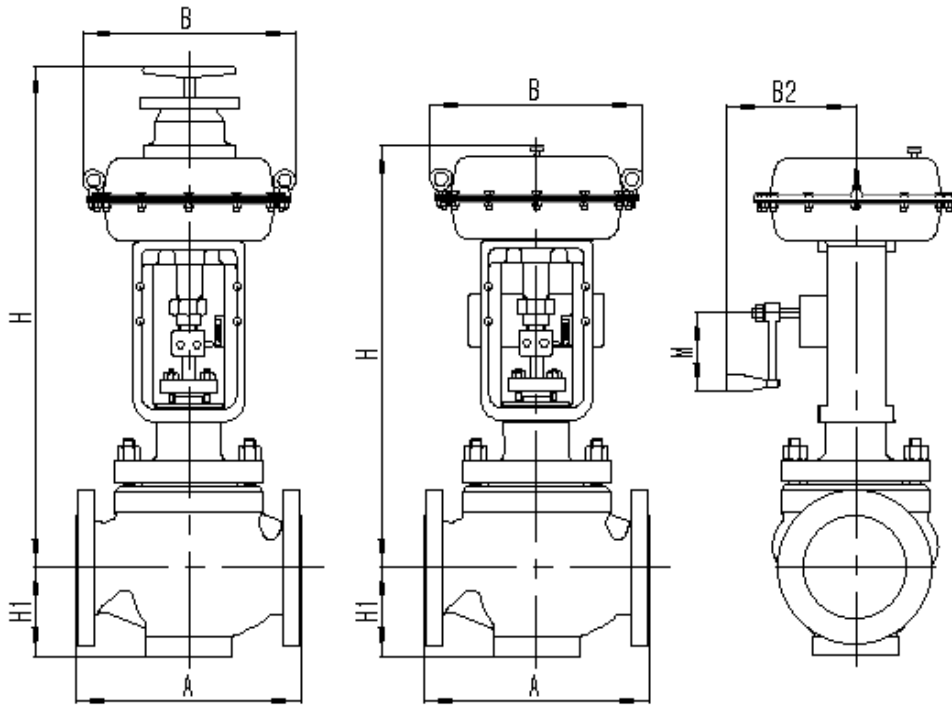
mm

公称 口径 Nominal size	执行机构 Actuator	H						B2	M
		侧装手轮			顶装手轮				
		常温型(P) Plain bonnet	伸长 I 型(E I) Extension bonnet Type I	伸长 II 型(E II) Extension bonnet Type II	常温型(P) Plain bonnet	伸长 I 型(E I) Extension bonnet Type I	伸长 II 型(E II) Extension bonnet Type II		
32	HA2D、R	575	745	850	840	1005	1110	273.5	175
	HA3D、R	700	870	1015	990	1160	1305	278.5	175
40	HA2D、R	575	745	850	840	1005	1110	273.5	175
	HA3D、R	700	870	1015	990	1160	1305	278.5	175
50	HA2D、R	575	745	855	840	1005	1110	273.5	175
	HA3D、R	700	870	980	990	1160	1305	278.5	175
65	HA3D、R	735	915	1035	1025	1205	1325	278.5	175
	HA4D、R	920	1100	1215	1320	1500	1615	303	φ320
80	HA3D、R	745	925	1065	1035	1215	1355	278.5	175
	HA4D、R	925	1115	1240	1325	1515	1640	303	φ320
100	HA3D、R	770	980	1105	1160	1270	1395	278.5	175
	HA4D、R	945	1165	1305	1345	1565	1705	303	φ320
	VA6R	1610	1830	1975	—	—	—	384	φ380
	VP4	1290	1510	1655	—	—	—	324	φ380
125	HA3D、R	840	1100	1300	1130	1390	1590	278.5	175
	HA4D、R	1010	1270	1485	1410	1670	1885	303	φ320
	VA6R	1675	1935	2150	—	—	—	384	φ380
	VP4	1300	1560	1775	—	—	—	324	φ380
150	HA3D、R	840	1100	1300	1130	1390	1590	278.5	175
	HA4D、R	1010	1270	1485	1410	1670	1885	303	φ320
	VA6R	1675	1935	2150	—	—	—	384	φ380
	VP4	1300	1560	1775	—	—	—	324	φ380
200	HA4D、R	1150	1410	1655	1550	1810	2055	303	φ320
	VP5	1530	1790	2160	—	—	—	324	φ380
250	HA5YD、R	1805	2075	—	1730	1995	—	380	φ325
	VP5	1465	1730	—	—	—	—	324	φ380
	VP6	1595	1860	—	—	—	—	384	φ380
300	HA5YD、R	1455	2070	—	—	—	—	380	φ325
	VP5	1465	1730	—	—	—	—	324	φ380
	VP6	1595	1860	—	—	—	—	384	φ380
350	VP6	1690	1975	—	—	—	—	384	φ380
	VP7	1690	1975	—	—	—	—	384	φ380
400	VP7	2130	2240	—	—	—	—	384	φ380
450	VP7	2225	2375	—	—	—	—	384	φ380
500	VP8								

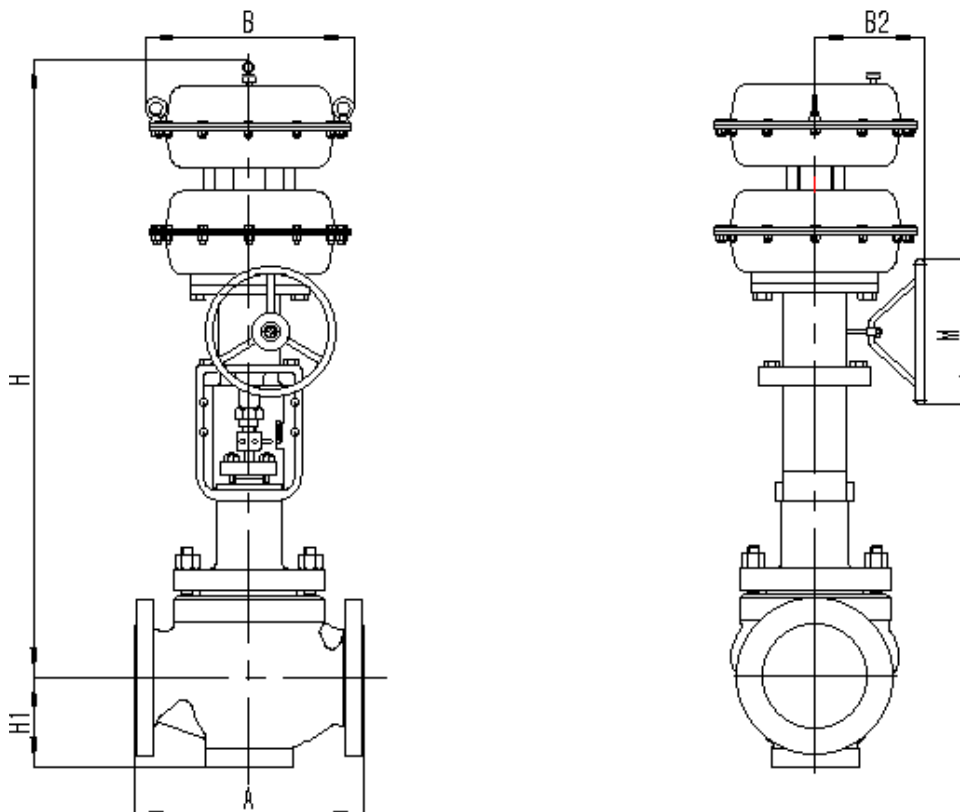
注：表 5-2-2 上 H 栏尺寸是气动执行机构（带手轮）调节阀高度。

Note: The size of H in Table 5-2-2 shows the height of the valve and pneumatic actuator (with handwheel) combined

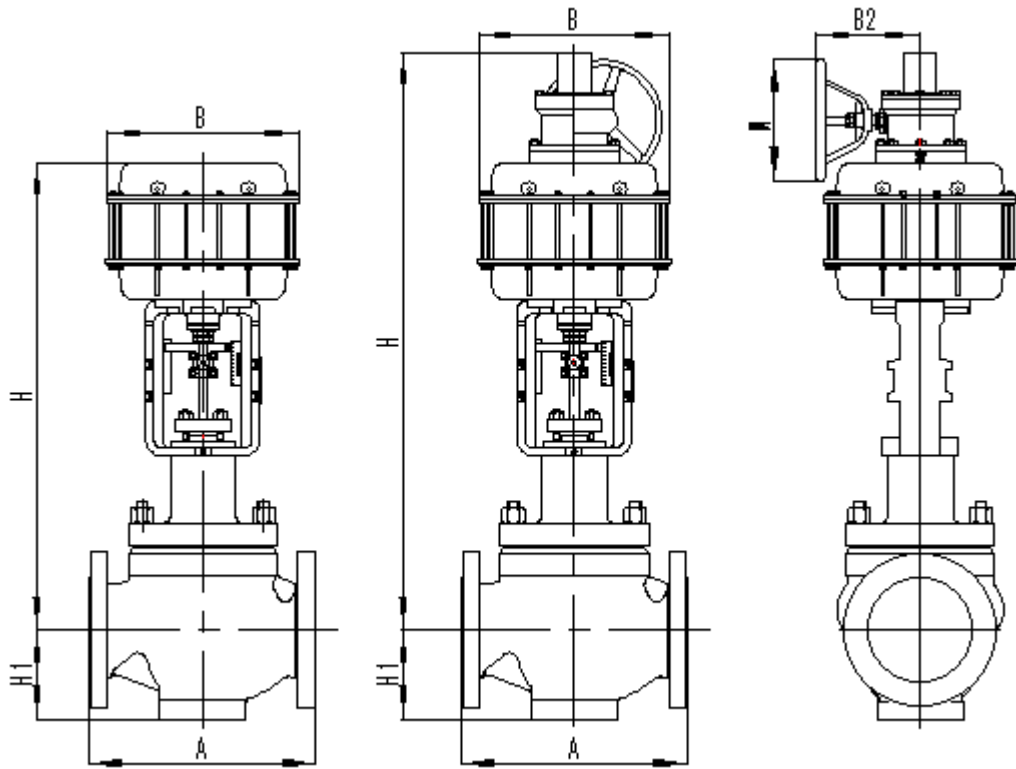




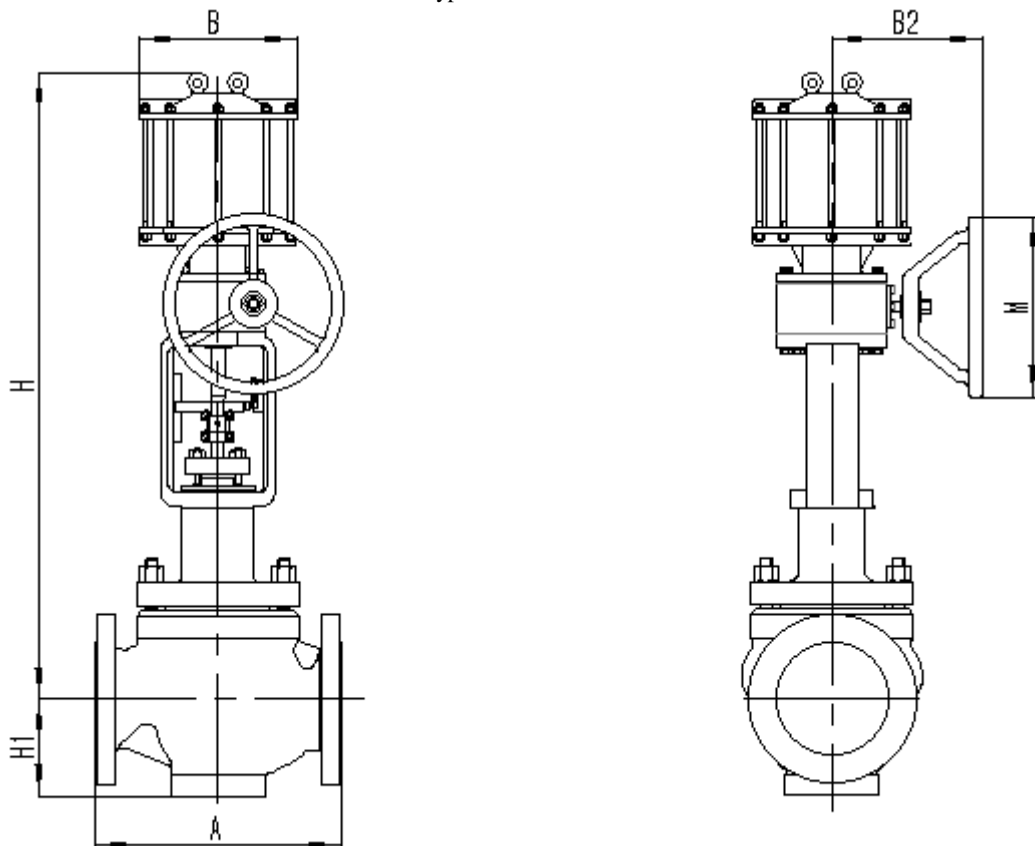
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With type HA



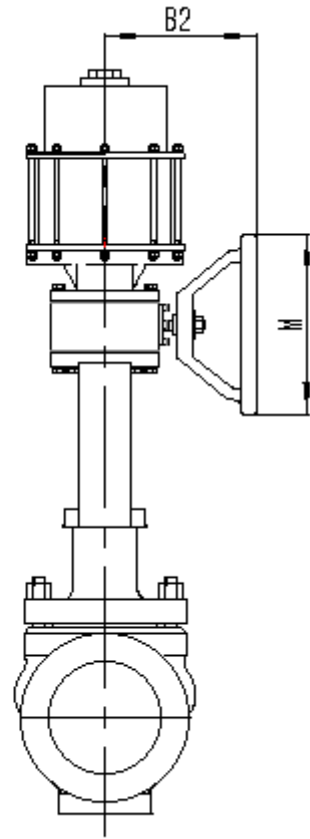
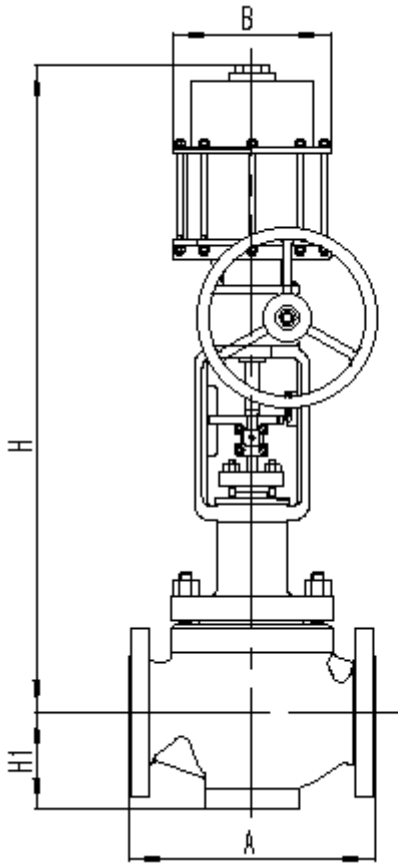
配 HA4X2 执行机构  
With type HA4X2



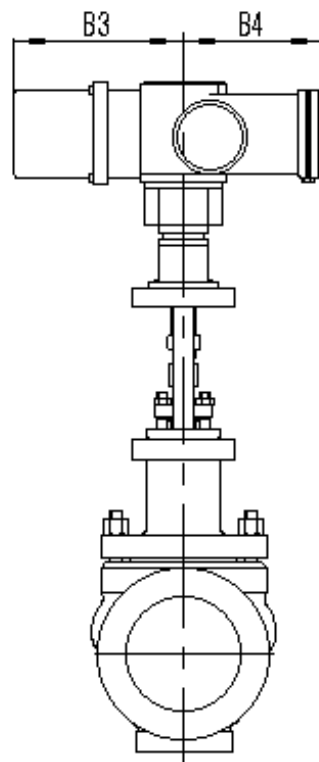
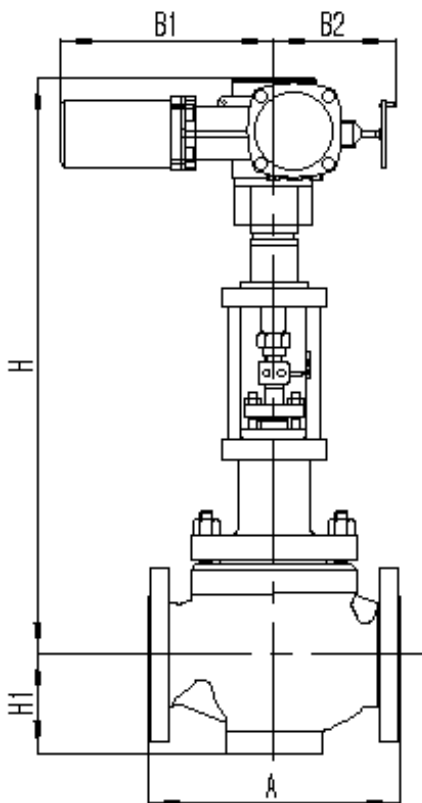
配 HA5YD、R 执行机构  
With type HA5YD、R



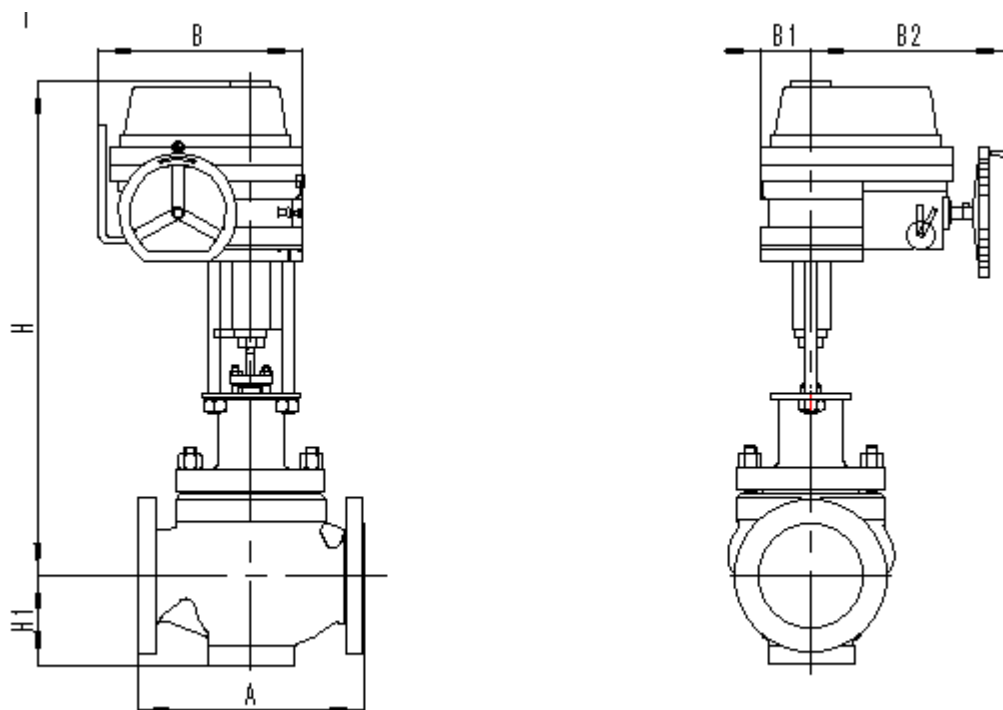
配 VA 执行机构  
With type VA



配 VP 执行机构  
With type VP



配 EIL 执行机构  
With type EIL



配 M8 执行机构  
With type M8

图 5 法兰距及外形尺寸  
Fig.5 Face-to-Face dimension and Other dimensions

表 6 重量  
Table 6 WEIGHT

kg

公称通径 Nominal size	执行机构 Actuator	法兰连接 Flanged type									焊接连接 Welded type		
		ANSI 125、150 JIS 10K			ANSI 300 JIS 16、20、30K			ANSI 600 JIS 40K			ANSI 150、300、600 JIS 10、16、20、30K		
		P	E I	E II	P	E I	E II	P	E I	E II	P	E I	E II
32	HA2D、R	31	34	37	36	39	42	44	47	50	36	39	42
	HA3D、R	40	43	46	42	45	48	45	48	52	48	51	54
	EIL04	25	28	31	30	33	36	38	41	444	30	33	36
40	HA2D、R	31	34	37	36	39	42	44	47	50	36	39	42
	HA3D、R	43	46	49	48	51	54	56	59	62	48	51	54
	EIL04	25	28	31	30	33	36	38	41	444	30	33	36
50	HA2D、R	37	40	43	42	45	48	47	50	43	42	45	48
	HA3D、R	49	52	55	54	57	60	59	62	65	54	57	60
	EIL04	31	34	37	36	39	42	41	44	37	36	39	42
65	HA3D、R	55	59	63	60	64	68	77	81	85	60	64	68
	HA4D、R	86	90	94	91	95	99	108	112	116	91	95	99
	EIL08	41	45	49	46	50	54	63	67	71	46	50	54
	M8610+L8210	90	94	98	95	99	103	143	147	151	126	128	134
80	HA3D、R	65	71	77	75	81	87	97	103	109	75	81	87
	HA4D、R	96	102	108	106	112	118	128	134	140	106	112	118
	EIL08	51	56	63	61	67	73	83	89	95	61	67	73
	M8610+L8210	100	106	112	110	116	122	132	138	144	110	116	121

100	HA3D、R	75	85	90	90	100	105	125	135	140	87	97	102
	HA4D、R	106	116	121	121	131	136	156	166	171	118	128	133
	EIL08	61	71	76	76	86	91	111	121	126	73	84	88
	M8610+L8210	110	120	125	125	135	138	160	170	175	122	132	168
125	HA3D、R	157	172	179	187	202	209	237	252	259	177	192	199
	HA4D、R	188	203	210	218	233	240	268	283	290	208	223	230
	VP4	198	213	220	228	243	250	278	293	300	218	233	240
	EIL12	140	155	162	170	185	192	220	235	242	160	175	182
150	HA3D、R	157	172	179	187	202	209	237	252	259	177	192	199
	HA4D、R	188	203	210	218	233	240	268	283	290	208	223	230
	VP4	198	213	220	228	243	250	278	293	300	218	233	240
	EIL12	140	155	162	170	185	192	220	235	242	160	175	182
200	HA4D、R	268	288	298	318	338	348	438	458	468	308	328	338
	VP5	300	320	330	350	370	380	470	490	500	340	360	370
	EIL20	228	248	258	278	298	308	398	418	428	268	288	298
	M8620+L8220	268	288	298	318	338	348	438	458	468	308	328	338
250	HA5YD、R	720	780	—	890	950	—	1020	1135	—	—	—	—
	VP5	620	680	—	790	850	—	920	1035	—	—	—	—
	VP6	670	730	—	740	800	—	870	985	—	—	—	—
	EIL25	550	605	—	715	775	—	795	910	—	—	—	—
	M8620+L8230	600	660	—	770	830	—	900	1015	—	—	—	—
300	HA5YD、R	850	920	—	980	1050	—	1050	1120	—	—	—	—
	VP5	750	820	—	880	950	—	950	1020	—	—	—	—
	VP6	800	870	—	930	1000	—	1000	1070	—	—	—	—
	EIL25	675	745	—	805	875	—	875	950	—	—	—	—
	M8620+L8230	730	800	—	860	1030	—	930	1000	—	—	—	—
350	VP6	980	1080	—	1250	1350	—	1450	1550	—	—	—	—
	VP7	1130	1230	—	1400	1500	—	1600	1700	—	—	—	—
	M8630+L8240	930	1030	—	1230	1300	—	1400	1500	—	—	—	—
400	VP7	1650	1750	—	1900	2030	—	2100	2300	—	—	—	—
	M8630+L8240	1450	1550	—	1700	1830	—	1900	2100	—	—	—	—
450	VP7				2800								
500	VP8	2800											