

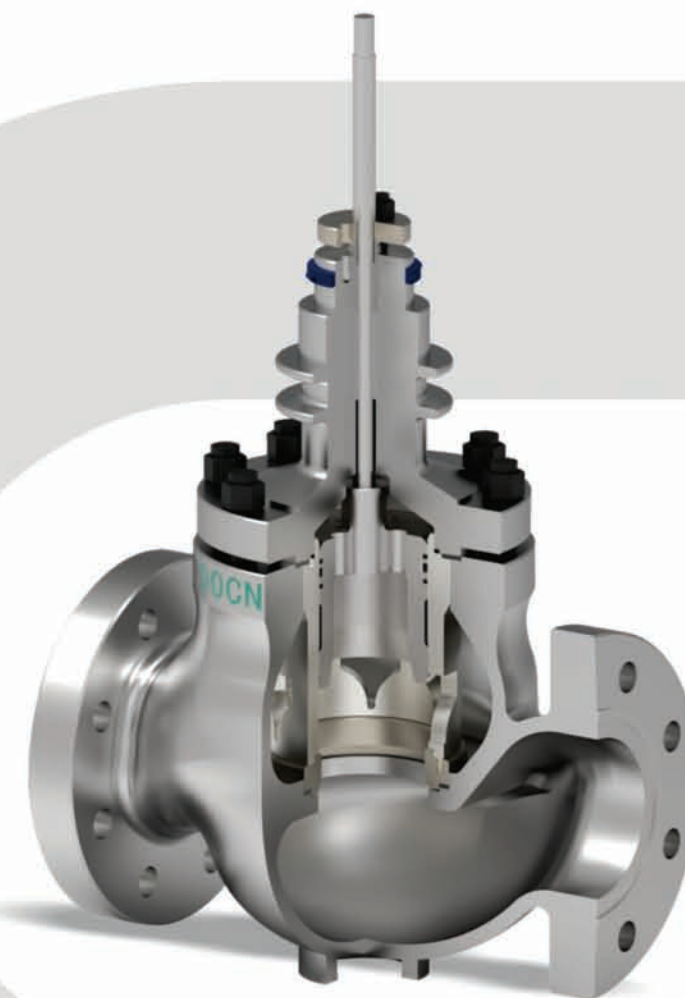


DC1624 标准套筒调节阀

Standard sleeve control valve

专业提供过程控制阀门解决方案
Professionally provide process control valve solutions

Rev.2020



浙江东辰阀门科技有限公司

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◆主要特点Main features

标准套筒调节阀是东辰公司设计的应用最为广泛的通用调节阀。

标准套筒座调节阀的基本型为直通式阀体、平衡阀芯、套筒导向的调节阀，广泛应用于常规的工况。

流体主要由精密窗口或特殊钻孔的套筒调节，套筒为阀芯提供全程连续导向。特殊设计的阀芯能够减小最小可调节流量及阀芯侵蚀，提高阀门的可调比。与传统的窗口套筒阀芯相比，该系列产品压力恢复系数高，能够在可压缩流体场合下保证高流量及降低液体场合的气蚀的风险和效应。

对于不可压缩流体，特殊C型金属密封环用于阀芯密封，可满足IEC泄漏等级V级，并无实际的使用温度限制。

标准套筒调节阀通常配用DOCN气动薄膜多弹簧执行机构，气缸式双作用执行机构、电动或液动执行机构也可根据要求选配。

Standard sleeve control valve is the most widely used general control valve designed by Dongchen company.

The basic type of standard sleeve seat regulating valve is straight through valve body, balance valve core and sleeve guided regulating valve, which is widely used in conventional working conditions.

The fluid is mainly regulated by a precision window or a specially drilled sleeve, which provides a full stroke continuous guide for the valve core. The specially designed valve core can reduce the minimum adjustable flow and erosion of the valve core, and improve the adjustable ratio of the valve. Compared with the traditional window sleeve valve core, the pressure recovery coefficient of this series of products is high, which can guarantee the high flow rate and reduce the risk and effect of cavitation in the case of compressible fluid.

For incompressible fluid, special C-type metal sealing ring is used for valve core sealing, which can meet IEC leakage class V, and has no actual use temperature limit.

The standard sleeve regulating valve is usually equipped with docn pneumatic film multi spring actuator, cylinder type single and double acting actuator, electric or hydraulic actuator can also be selected according to the requirements.

◆标准规格 Standard specification

本体部 Body

型式 Type	平衡阀芯型，球型直通 Balanced plug
公称通径 Body Size	NPS 3/4" -24" (DN 20-DN600)
阀芯形状 Plug form	柱塞型不平衡结构，多孔式平衡结构（本体部构造结构图见图1） Plunger type unbalanced structure, porous type balanced structure (see Figure 1 for the structure diagram of the main body)
流量系数 Rated CV	标准流向为流开式，流关可选 The standard flow direction is flow open, and flow close is optional
流量特性 Characteristics	请参见表5-阀门CV对照表 See Table 5 - valve CV comparison table
阀内件材质 Trim material 阀内件处理 Trim treatment	请参见表4-标准材质组合 See Table 4 - standard material combinations
公称压力 Body ratings	符合GB/T12224、EN 12516-1及ASME B16.34，具体详见表1-压力等级尺寸对照表 In accordance with GB /12224, en 12516-1 and ASME B16.34, see Table 1 - comparison table of pressure class dimensions for details
连接方式 Body connections	GB/T12224、ANSI，EN法兰连接（RF,RTJ） GB/T12224、ANSI B16.25 BW 对焊连接（BW） UNI EN 12627 对焊连接（BW） GB/T12224、承插焊连接，≤2"（SW）
法兰距 Face to Face dimension	请参见表2 See Table 2
阀体上盖材质 Body&Bonnet material	请参见表4-标准材质组合 See Table 4 - standard material combinations
上阀盖型式 Bonnet type (上盖结构图参见图1)(refer to figure 1 for the structural drawing of the upper cover)	标准型 Standard type -29℃ - 230℃ 散热型 Heat dissipating type -29℃ - 620℃ 深冷型 Cryogenics -196℃ - 55℃
填料Packing (填料使用压力温度范围见表7)(see Table 7 for the pressure and temperature range of packing)	尼龙纤维增强型PTFE填料：≤250℃-150bar (PN16) 柔性纯石墨填料组合,无实际温度限制(氧化性介质最高250℃) 纯PTFE填料(用于氧气场合)：≤200℃-150bar (PN16) Nylon fiber reinforced PTFE filler: ≤ 250℃ -150bar (PN16) Flexible pure graphite packing combination, no actual temperature limit (max. 250℃ for oxidizing medium) Pure PTFE packing (for oxygen): 200℃ - 150bar (PN16)
垫圈 Gasket	请参见表4-标准材质组合 See Table 4 - standard material combinations
泄漏等级 Leakage class	符合GB/T4213或IEC60534-4，非平衡型阀芯结构在最高允许温度下均可达最高VI级。 GB/T4213 or IEC60534-4, the structure of non-equilibrium valve core can reach the highest level VI under the maximum allowable temperature.
可选特殊结构 Options	经过认证的低排放型填料、防砂型结构，特殊规格参见表3。 Certified low emission packing and sand proof structure, see Table 3 for special specifications
表面涂层色 Painting color	阀本体标准色为灰色，执行机构为绿色，具体可根据客户要求 The standard color of the valve body is gray, and the actuator is green, which can be specified according to the customer's requirements

企业简介

Company profile

浙江东辰阀门科技有限公司（原杭州东辰热力辅机有限公司）成立于2006年，专业设计、制造特种阀门，各种高中压调节阀、减温减压器、汽机旁路阀、锅炉给水调节阀、最小流量阀、闸阀、球阀、蝶阀、截止阀、止回阀、排污阀等阀门及相关的汽轮机辅机、锅炉辅机。产品广泛应用于各种参数的燃煤火电机组，燃机热电联产项目以及炼油、化工、冶金、集中供热等领域。

公司拥有一批专业从事阀门设计和开发的技术人员，掌握着国内外领先的阀门专业技术，有着丰富的设计、制造和现场调试经验。产品最高压力等级为PN76MPa，最高温度620℃，应用于最大单机容量为1030MW超超临界机组。

公司目前有40多项发明专利和实用新型专利，经过多年发展建立了一套完整的符合《特种设备生产和充装单位许可规则》的压力管道元件制造管理体系，并取得国家市场监管总局颁发的TS特种设备制造许可A1级证书，许可项目为电动调节阀、气动调节阀、闸阀、截止阀、止回阀、球阀、蝶阀、减温减压装置。取得中国质量认证中心CQC颁发的ISO9001质量管理体系认证，ISO14001&45001环境与职业健康安全体系认证。

公司被评为国家高新技术企业，浙江省科技型企业，浙江省守合同重信用AAA单位，浙江省阀门研发中心，浙江省信用管理示范单位，安全生产标准化单位，同时也是中国阀门协会会员单位，中国石油化工热工协会理事单位；现已成为中石油、中石化、中海油、中国神华、中核集团、华能、华电、国电、大唐、中电投、浙能集团等合格供应商。

结合市场特点，公司在技术创新、产品选型、投标、合同签订、产品设计、工艺制造、检验试验，供货安装、运行调试、售后服务、以及用户回访等各个环节，都严格遵循质量管理体系程序。

Zhejiang Dongchen Valve Technology Co., Ltd. (formerly Hangzhou Dongchen Heating Auxiliary Machinery Co., Ltd.) was established in 2006. It specializes in designing and manufacturing special valves, various high and medium pressure regulating valves, temperature reducing and reducing devices, steam turbine bypass valves, and boiler feed water. Regulating valve, minimum flow valve, gate valve, ball valve, butterfly valve, globe valve, check valve, blowdown valve and other valves and related steam turbine auxiliary equipment, boiler auxiliary equipment. The products are widely used in various parameters of coal-fired thermal power units, gas-fired combined heat and power projects, as well as in the fields of oil refining, chemical industry, metallurgy, and central heating.

The company has a group of technical personnel who are specialized in valve design and development, mastering the leading valve technology at home and abroad, and has rich experience in design, manufacturing and field commissioning. The highest pressure level of the product is PN76MPa, the highest temperature is 620 ° C, and it is used in ultra-supercritical units with a maximum single-unit capacity of 1030MW.

The company currently has more than 40 invention patents and utility model patents. After many years of development, it has established a complete set of pressure pipeline component manufacturing management system that complies with the "Special Equipment Production and Filling Unit Licensing Rules" and has been issued by the State Administration of Market Supervision. TS special equipment manufacturing license A1 certificate, the approved items are electric regulating valve, pneumatic regulating valve, gate valve, globe valve, check valve, ball valve, butterfly valve, temperature reducing and reducing device. Obtained ISO9001 quality management system certification, ISO14001 & 45001 environmental and occupational health and safety system certification issued by China Quality Certification Center CQC.

The company has been rated as a national high-tech enterprise, a science and technology enterprise in Zhejiang Province, an AAA unit in Zhejiang Province that abides by its contract, and is a AAA unit in Zhejiang Province. Member of China Petrochemical Thermal Engineering Association; has now become a qualified supplier of PetroChina, Sinopec, CNOOC, China Shenhua, China Nuclear Group, Huaneng, Huadian, Guodian, Datang, China Power Investment Corporation, Zhejiang Energy Group.

Combining market characteristics, the company strictly follows the quality management system in all aspects of technological innovation, product selection, bidding, contract signing, product design, process manufacturing, inspection and testing, supply and installation, commissioning, after-sales service, and customer return visits. program.

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◆表1 压力等级与尺寸对照表 Table 1 pressure ratings

压力等级 Pressure rating															
ANSI		150	300	600	900	1500	2500	ANSI		150	300	600	900	1500	2500
PN		10/16	25/40	63/100	160	250	420	PN		10/16	25/40	63/100	160	250	420
DN								DN							
3/4"	20	■	■	■	■	■	■	8"	200	■	■	■	■	■	(1)
1"	25	■	■	■	■	■	■	10"	250	■	■	■	■	■	
1 1/2"	40	■	■	■	■	■	■	12"	300	■	■	■	■	■	
2"	50	■	■	■	■	■	■	14"	350	■	■	■			
3"	80	■	■	■	■	■	■	16"	400	■	■	■			
4"	100	■	■	■	■	■	■	20"	500	■	■	■			
6"	150	■	■	■	■	■	(1)	24"	600	■	■	■			

◆表2 法兰距尺寸 Table2 fcae to face dimension

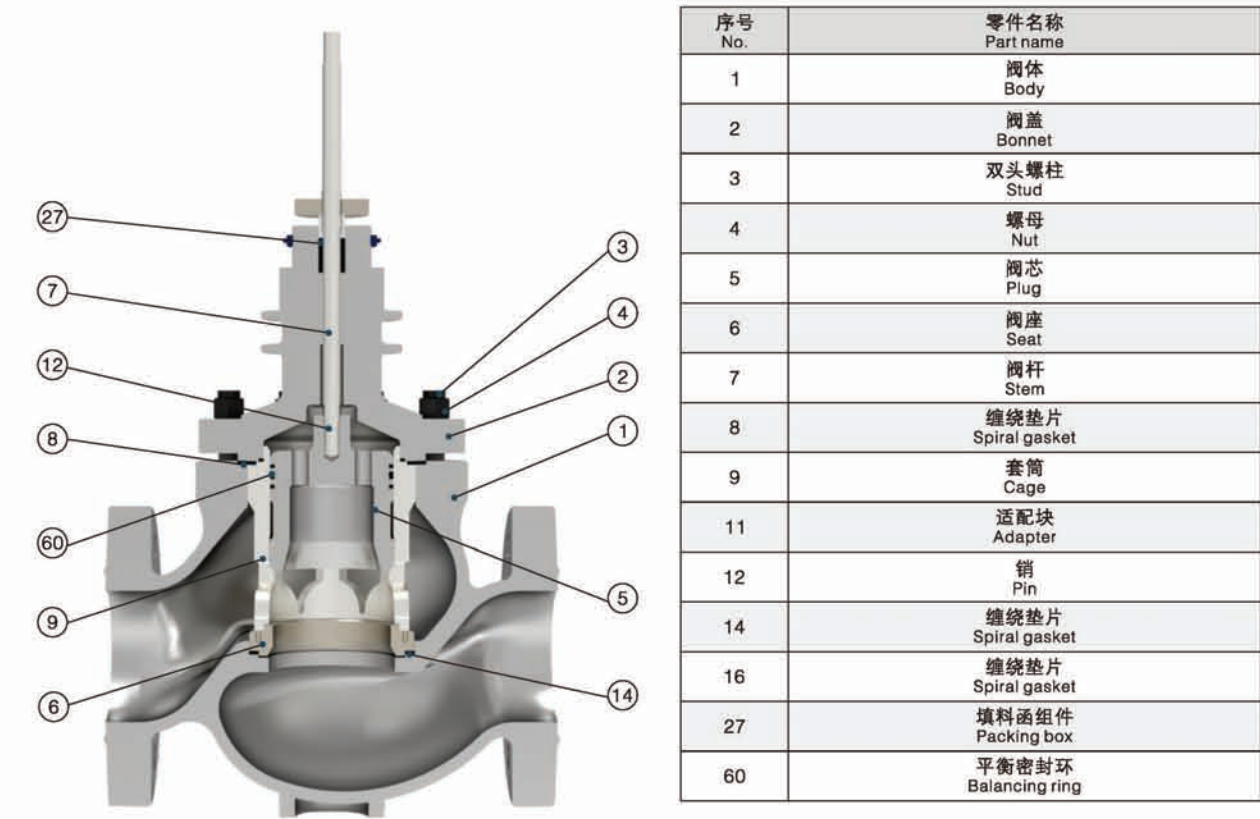
DN		法兰距 Face to face dimension (A)																		
		ANSI 150		ANSI 300		ANSI 600			ANSI 900			ANSI 1500			ANSI 2500					
		PN10/16		PN40		PN63/100			PN160			PN250			PN420					
		RF	BW	RF	BW	RF	RJ	BW	RF	RJ	BW	RF	RJ	BW	RF	RJ	BW			
3/4"	20	184	206	194	206	206	206	206	273	273	279	273	273	279	318	318	318			
1"	25	184	210	197	210	210	210	210	273	273	279	273	273	279	318	318	318			
1 1/2"	40	222	251	235	251	251	251	251	333	333	330	333	333	330	381	384	359			
2"	50	254	286	267	286	286	289	286	375	378	375	375	378	375	413	416	400			
3"	80	298	337	317	337	337	340	337	441	444	460	460	463	460	660	666	498			
4"	100	352	394	368	394	394	397	394	511	514	530	530	533	530	737	747	575			
6"	150	451	508	473	508	508	511	508	714	717	768	768	774	768	按照需求 As required					
8"	200	543	610	568	610	610	613	610	781	784	832	838	848	832						
10"	250	673	752	708	752	752	755	752	864	867	991	991	1001	991						
12"	300	737	819	775	819	819	822	819	1016	1019	1130	1130	1148	1130						
14"	350	889	1029	927	1029	972	975	1029												
16"	400	1016	1108	1057	1108	1108	1111	1108												
20"	500	1278	1420	1320	1420	1400	1413	1460												
24"	600	1680	1680	1724	1724	1800	1809	1800												

◆表3 特殊规格(有偿) Table 3 optional special specifications (additional cost is required)

本体部特殊检查 Special testing for body	材料化学成分检查、液体渗透探伤检查(PT)、射线检验(PT)、磁粉探伤(PT)、低温试验、蒸汽试验、流量特性检查等等 Material certification、PT、RT、MT、Cryogenic Test etc.
本体部特殊清洗 Special cleaning for body	完全禁油、除水处理 Oxygen clean、water-free
本体部及执行机构特殊规格 Special specification for body&actuator	防砂、防尘型、防盐腐蚀性、寒冷地区用、无铜处理特殊、空气配管及特殊气接头、真空工作条件用、接触大气部分的螺栓螺母采用不锈钢、特定涂色等等 Sand proof, dust-proof, salt corrosion proof, cold area use, special copper free treatment, air piping and special bolts and nuts for air joints, vacuum working conditions and parts in contact with the atmosphere shall be made of stainless steel with special coloring wait

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◆图1 标准套筒调节阀本体部结构图
Fig. 1 Structure of standard sleeve control valve



序号 No.	零件名称 Part name
1	阀体 Body
2	阀盖 Bonnet
3	双头螺柱 Stud
4	螺母 Nut
5	阀芯 Plug
6	阀座 Seat
7	阀杆 Stem
8	缠绕垫片 Spiral gasket
9	套筒 Cage
11	适配块 Adapter
12	销 Pin
14	缠绕垫片 Spiral gasket
16	缠绕垫片 Spiral gasket
27	填料函组件 Packing box
60	平衡密封环 Balancing ring

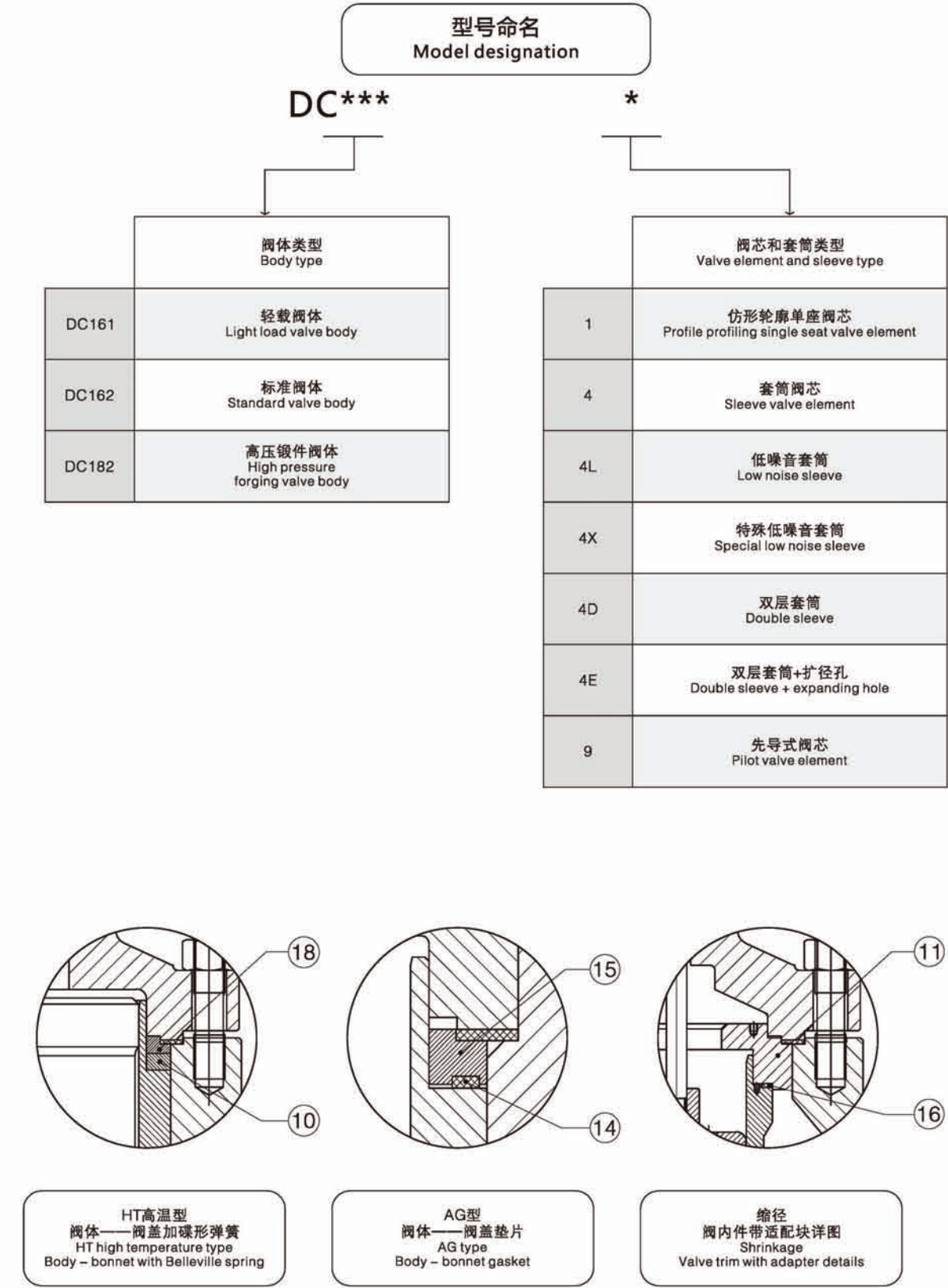


多孔套筒
Porous sleeve



窗口套筒
Window sleeve

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◆表4 标准套筒调节阀材质组合
Table 4 material combination of standard sleeve regulating valve

		碳钢及CrMo合金钢 Carbon steel and CrMo alloy steel			不锈钢 Stainless steel		NACE(根据要求可选) NACE (optional on request)	
温度范围 Temperature range		-29~-+427℃	-29~-+566℃	-29~-+620℃	-196~-+343℃	-196~-+343℃	-29~-+427℃	-196~-+343℃
序号 No.	零件名称 Part name							
1	阀体 Valve body	A216 WCB	A217 WC6(9)	A217 C12A	A351 CF8(M)	A351 CF3(M)	A216 WCB HRC22 max	A351 CF8M HRC22 max
2	阀盖 Bonnet	A216 WCB	A217 WC6(9)	A217 C12A	A351 CF8(M)	A351 CF3(M)	A216 WCC HRC22 max	A351 CF8M HRC22 max
		A105/20	A182 F11(22) 15CrMo 12Cr1MoV	A 182 F91 (F92)	A479 316(L)	A479 304(L)	A105 HRC22 max	A479 316 HRC22 max
3	阀体螺栓 Body studs	35	35CrMo	GH4145	A479 XM-19		A193 B7	A479 XM-19
			25Cr2Mo1V		A193 B7			
4	螺母 Nut	25	30CrMo	25Cr2Mo1V	A 194 gr.8		A 194 gr.4	A 194 gr.8
			35CrMo	GH4145	A 194 gr.4			
5	阀芯** Valve element**	A182 F6NM+STL 渗氮(Nitriding)			A479 316	A479 316L	A182 F6NM HRC22 max 渗氮(Nitriding)	A479 316 HRC22 max
					A479 316L			A479 316HRC22 Max+STL gr.6
					A479 316 +STL gr.6	A479 316L +STL		
6	阀座** Valve seat**	GB/T1220 S30408+STL	A182 F6NM+STL 渗氮(Nitriding)		A479 316	A479 316L	DN≤3 " :A479 316 HRC22 max+STL	A479 316 HRC22 max
					A479 316L			A479 316 HRC22max+STL
					A479 316 +STL	A479 316L +STL		
7	阀杆** Stem**	GB/T1220 17-4PH	A479 XM-19	Inconel 718	A479 316	A479 316L	A479 316 HRC22 max 镀铬(Chrome plating)	
8-14 -16	垫片** Gasket**	S30408+柔性石墨、S31608+柔性石墨 S30408 + flexible graphite, S31608 + flexible graphite						
9	套筒 Sleeve	A182 F6NM 渗氮(Nitriding)			A479 316镀铬 (Chrome plating)	A479 316镀铬 (Chrome plating)	A182 F6NM HRC22 max渗氮 (Nitriding)	A479 316 HRC22 max 镀铬 (Chrome plating)
10	碟形弹簧 Belleville spring	INCONEL718硬化(Hardening)						
11	适配块 Adapter block	A105/20	A182 F11(22) 15CrMo 12Cr1MoV	A182 F91 F92	A479 316L		A105 HRC22 max	A479 316L HRC22 max
12	销钉 Pin	GB/T1220 S30408					A479 304 HRC22 max	
13	隔环 Septal ring	GB/T1220 S31608					A479 316L HRC22 max	
15 -18	隔垫 Septum	A105/20	A182 F11(22) 15CrMo 12Cr1MoV	A182 F91 F92	A182 F316L		A105 HRC22 max	A479 316L GRC22 max
27填料* Packing*		柔性石墨组合 Flexible graphite combination						
		尼龙纤维增强PTFE Nylon fiber reinforced PTFE						
		纯PTFE Pure PTFE						

* 推荐启动及试运行备件
** 推荐两年运行备件
*Recommended start-up and commissioning spare parts
**Recommended spare parts for two years operation

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◆表5 标准套筒调节阀阀门额定CV-行程对照表
Table 5 standard sleeve control valve rated CV – stroke comparison table

线性 Linear					
DN (in)	Port (inch)	阀座直径(mm) Valve seat diameter	行程Trip (mm)	CV5%	CV100%
3/4"	3/4"	18.5	17	0.185	8.5
	1/2"	12.5	17	0.13	5.93
	3/8"	9	17	0.0559	3.75
1"	3/4"	18.5	17	0.185	9.62
	1/2"	12.5	17	0.13	6.67
	3/8"	9	17	0.0559	3.78
1 1/2"	1 1/2"	37.5	34	0.351	33.3
	1"	27.5	34	0.262	24.9
				0.262	19.2
				0.262	15.7
	3/4"	18.5	17	0.185	11.5
2"	2"	64	34	1.21	68.1
				1.21	55.2
	1 1/2"	37.5	37	0.351	39.3
				0.262	29.4
	1"	27.5	34	0.262	19.3
				0.262	15.7
3"	3"	82	45	1.54	130
				1.21	101
	2"	64	34	1.21	79
				0.351	46.8
4"	4"	103.5	60	2.74	212
	3"	82	45	1.54	165
	2"	64	34	1.21	113
6"	6"	125.5	60	3.01	392
	4"	103.5	60	2.74	301
	3"	82	45	1.54	185
	2"	64	34	1.21	113
8"	8"	160.5	76	5.13	632
	6"	125.5	60	3.01	428
	4"	103.5	60	2.74	305
	3"	82	45	1.54	165
10"	10"	214.5	100	8.42	1150
	8"	160.5	76	5.13	700
	6"	125.5	60	3.01	460
12"	12"	242.5	120	11.1	1430
	10"	214.5	100	8.42	1230
	8"	160.5	76	5.13	740
14"	14"	291.5	150	12.5	2010
	12"	242.5	120	11.1	1650
	10"	214.5	100	8.42	1350
16"	16"	341.5	200	16.5	2660
	14"	291.5	150	12.5	2240
	12"	242.5	120	11.1	1760
20"	20"	440.5	250	26.2	4540
	16"	341.5	200	16.5	3590
24"	24"	521.5	300	39.8	6460
	20"	440.5	250	26.2	5520

等百分比 Equal					
DN (in)	Port (inch)	阀座直径(mm) Valve seat diameter	行程Trip (mm)	CV5%	CV100%
3/4"	3/4"	18.5	17	0.185	7.88
	1/2"	12.5	17	0.13	5.9
	3/8"	9	17	0.0559	3.75
1"	3/4"	18.5	17	0.185	7.88
	1/2"	12.5	17	0.13	6.05
	3/8"	9	17	0.0559	2.5
1 1/2"	1 1/2"	37.5	34	0.351	30.7
	1"	27.5	34	0.262	24.4
				0.262	18.3
				0.262	12.8
	3/4"	18.5	17	0.185	9.4
2"	2"	64	34	1.21	51.4
	1 1/2"	37.5	34	0.351	36.8
				0.262	25.3
				0.262	18.4
3"	3"	82	45	1.54	107
	2"	64	34	1.21	90.4
				1.21	69.5
				1.21	52.1
4"	4"	103.5	60	2.74	178
	3"	82	45	2.74	158
				1.54	123
				1.54	91.6
6"	6"	125.5	60	3.01	70
	4"	103.5	60	1.21	52.1
				3.42	259
				2.74	209
8"	8"	160.5	76	5.13	124
	6"	125.5	60	1.54	91.6
				5.13	524
				3.01	363
10"	10"	214.5	100	8.42	262
	8"	160.5	76	2.74	210
				2.74	162
				3.01	381
12"	12"	242.5	120	11.1	1290
	10"	214.5	100	3.42	262
				11.1	1290
				8.42	1080
14"	14"	291.5	150	12.5	613
	12"	242.5	120	5.13	262
				11.1	1440
				8.42	1160
16"	16"	341.5	200	16.5	2360
	14"	291.5	150	12.5	1990
				11.1	1520
				11.1	1520
20"	20"	440.5	250	26.2	4060
	16"	341.5	200	16.5	2930
	12"	242.5	120	11.1	1520
24"	24"	521.5	300	39.8	5830
	20"	440.5	250	26.2	4720

DC1624 标准套筒调节阀

DC1624 Standard sleeve control valve

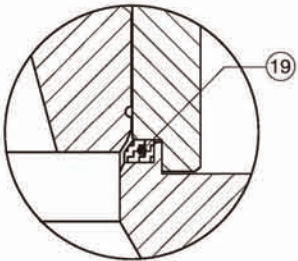
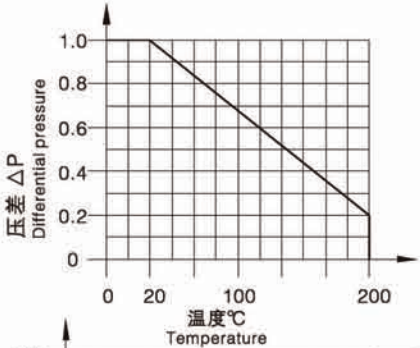
◆表6 标准套筒调节阀阀座泄漏等级及平衡密封环
Table 6 seat leakage grade and balance seal ring of standard sleeve control valve

	密封环代码 Seal ring code	密封环类型 Seal ring type	温度范围 temperature range	阀芯尺寸 Valve core size	最大泄漏等级 Maximum leakage level
金属密封阀座 Metal seal seat	N	非平衡型 Unbalanced type	-29~+566℃	3/4"~6"	V
	D	加强型碳-石墨密封环 Reinforced carbon graphite sealing ring	-29~+566℃	2"~24"	IV
	B	碳-石墨密封环, 柔性石墨+支撑环加强型 Carbon graphite seal ring, flexible graphite + support ring reinforced	-29~+566℃	2"~24"	IV S1
	C	C型金属密封环, 平衡型阀芯 C-type metal seal ring, balanced valve core	-29~+566℃	3/4"~24"	V
	S	石墨填充、压力加强型PTFE密封环 Graphite filled and pressure strengthened PTFE sealing ring	-29~+200℃	2"~24"	V
软密封阀座 Soft seal seat	E	软阀座、非平衡型阀芯 Soft seat, unbalanced valve element	-29~+200℃	3/4"~6"	VI
	F	软阀座、平衡型阀芯(石墨填充、压力加强型PTFE密封环) Soft seat, balanced valve core (graphite filled, pressure strengthened PTFE sealing ring)	-29~+200℃	2"~24"	VI

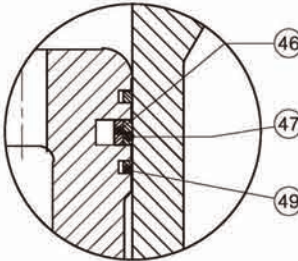
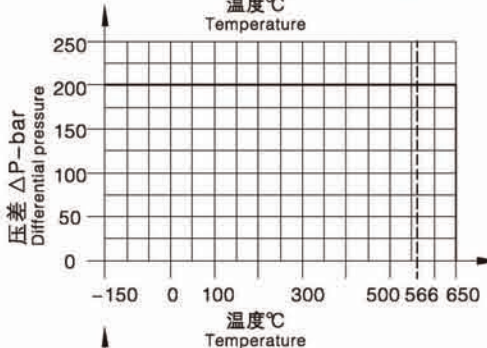
密封环代码 Seal ring code		D	N	B	C	S	E
序号 No.	名称 name						
19	密封嵌入环 Seal insert ring	-	-	-	-	-	PTFE
32	密封环 Sealing ring	-	-	-	-	石墨填充PTFE Graphite filled	-
46	加强环 Reinforcing ring	A182 F6NM 硬化 hardening	-	-	-	-	-
47	密封环 Sealing ring	碳-石墨 Carbon graphite	-	碳-石墨 Carbon graphite	-	-	-
48	密封支撑环 Seal support ring	-	-	柔性石墨 Flexible graphite	-	-	-
49	杆密封 Rod seal	A182 F6NM 硬化 hardening	-	A182 F6NM 硬化 hardening	A182 F6NM 硬化 hardening	-	-
51	O型环 O-ring	-	-	-	-	-	-
52	密封环 Sealing ring	-	-	-	-	-	-
110	密封环 Sealing ring	-	-	-	INCONEL X 750 镀银 silver plated	-	-
112	螺钉 screw	-	-	-	A479 316	-	-
114	垫圈 Washer	-	-	-	A479 304	-	-

DC1624 标准套筒调节阀
DC1624 Standard sleeve control valve

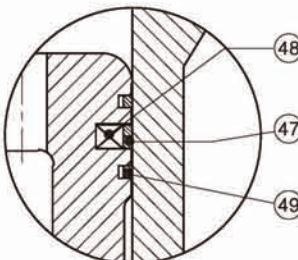
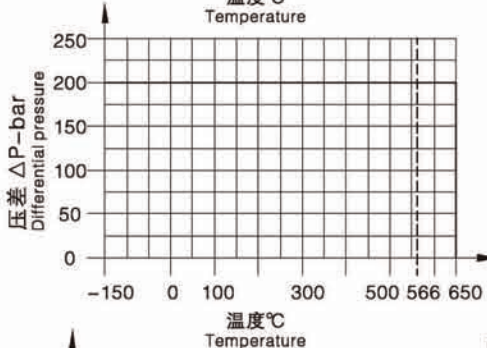
软密封阀座 Soft seal seat	
代码 code	E、F
密封泄漏等级 Seal leakage level	VI



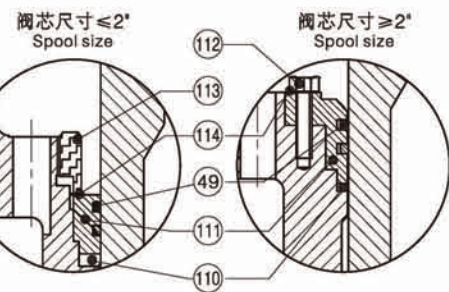
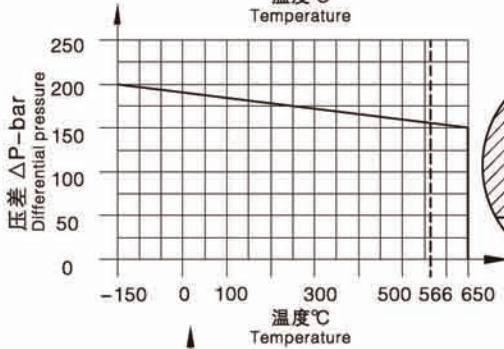
加强型碳=石墨密封环 Reinforced carbon = graphite seal ring	
代码 code	D
密封泄漏等级 Seal leakage level	IV



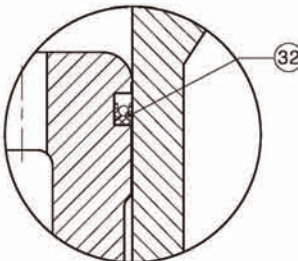
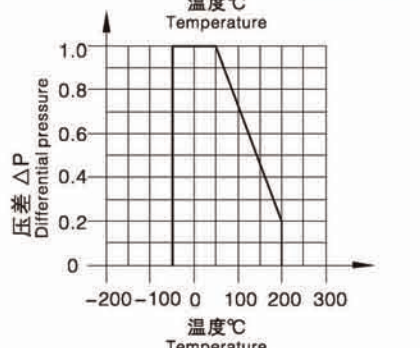
碳-石墨密封环 柔性石墨+支撑环加强型 Carbon graphite sealing ring Flexible graphite + support ring reinforced	
代码 code	B
密封泄漏等级 Seal leakage level	IV S1



C型金属密封环 C-type metal seal ring	
代码 code	C
密封泄漏等级 Seal leakage level	V



压力加强型PTFE密封环 Pressure strengthened PTFE sealing ring	
代码 code	S
密封泄漏等级 Seal leakage level	VI



DC1624 标准套筒调节阀
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◆表7 填料使用压力、温度对照表 Table 7 Comparison table of packing pressure and temperature

填料类型 Type of packing	温度极限℃ Temperature limit °C		增大压力 bar Increase pressure bar		真空工况 Vacuum condition	PH值范围 PH range
	连续运行 Continuous operation	泄漏 leak	连续运行 Continuous operation	泄漏 leak		
尼龙纤维增强型PTFE填料 Nylon fiber reinforced PTFE filler	-200~+250	-220~+260	150	225	适用 Apply	2~12
柔性纯石墨填料组合 Flexible pure graphite packing combination	-150~+650	-200~+650	400	450	适用 Apply	0~14
衬PTFE填料(用于) PTFE lined packing (for)	-200~+200	-220~+250	150	225	适用 Apply	0~14

◆表8 温度适用等级 - 阀座允许泄漏量 Table 8 Temperature applicable class - allowable leakage of valve seat

公称通径 Nominal diameter	压力等级 Pressure rating	密封型式 Sealing type	填料材质 Filler material	温度范围 temperature range					
				标准阀盖 Standard bonnet		延伸型阀盖 (°) Extended bonnet (°)		泄漏等级 Leakage class IEC 60534-4 ANSI/FCI 70.2	
				Min.	Max.	Min.	Max.		
3/4"-24"	见表1 See Table 1	硬密封 Hard seal	PTFE	-25℃	220℃	-55℃	566℃	IV	V-VHS
			石墨 graphite	-25℃	450℃	-55℃	566℃		
		软密封 Soft seal	any	-25℃	220℃	-55℃	220℃	VI	

◆表9 阀门主要性能指标 Table 9 Main performance index of valve

项目 project		指标值 Index value	项目 project		指标值 Index value
基本误差% Basic error%	不带定位器 Without positioner	±8.0	基本误差% Basic error%	不带定位器 Without positioner	±5.0
	带定位器 With positioner	±1.5		带定位器 With positioner	±1.0
回差% Backwardness%	不带定位器 Without positioner	3.0	回差% Backwardness%	不带定位器 Without positioner	±2.5
	带定位器 With positioner	1.5		带定位器 With positioner	±5.0
死区% Deadband%	不带定位器 Without positioner	6.0	死区% Deadband%	不带定位器 Without positioner	±1.0
	带定位器 With positioner	0.6		带定位器 With positioner	±1.0
额定行程偏差% Rated stroke deviation%		+2.5	泄漏标准 Leakage criteria		GB/T4213、ANSI IV.V (软密封 Soft seal VI)

◆表10 执行机构最大允许压差表及外形尺寸图索引
Table 10 maximum allowable differential pressure of actuator and index of outline dimension drawing

序号 No.	描述 describe	页码 Page
1	不平衡式阀芯 -N- Unbalanced spool/Unbalanced spool-N-	Page-10
2	加强型石墨碳环 -D- Reinforced graphite carbon ring-D-	Page-11
3	压力加强型PTFE密封环 -S- Pressure strengthened PTFE seal ring-S-	Page-12
4	不平衡式阀芯 -N/E- Unbalanced spool-N/E-	Page-13
5	压力加强型PTFE密封环 -S/F(S+E)- Pressure strengthened PTFE seal ring-s / F (S+E)-	Page-14
6	C型金属密封环 -C- C-type metal seal ring-C-	Page-15
7	调节阀带气动薄膜执行机构 Regulating valve with pneumatic diaphragm actuator	Page-16
8	阀门外形尺寸及重量 Overall dimension and weight of valve	Page-17

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◆不平衡式阀芯 -N- Unbalanced spool-N-

泄漏等级 Leakage class : IV IEC 60534-04或GB/T4213

Port In	行程 Travel mm	执行机构 Actuator type	最大压力等级 Max. Rating	反作用 Air To Open (reverse)						正作用 Air To Close (direct)					
				Spring range			Supply	P shut-off			Supply	P shut-off			
				psi			psi	bar			psi	bar			
3/8"	17	1-X280 D12	600	11	-	29	40	95	9	-	22	40	165		
		1-X280 D25	1500	17	-	43	60	233	7	-	26	60	430		
				11	-	29	40	146	3	-	13	40	378		
1/2"	17	1-X280 D12	600	11	-	29	40	50	9	-	22	40	105		
		1-X280 D25	1500	17	-	43	60	95	7	-	26	60	135		
				11	-	29	40	58	3	-	13	40	155		
		1-X280 D33	1500	30	-	44	60	430	13	-	27	60	430		
				20	-	29	40	302	7	-	13	40	408		
3/4"	17	1-X280 D12	600	11	-	29	40	30	9	-	22	40	60		
		1-X280 D25	1500	17	-	43	60	58	7	-	26	60	90		
				11	-	29	40	36	3	-	13	40	99		
		1-X280 D33	1500	30	-	44	60	242	13	-	27	60	269		
				20	-	29	40	158	7	-	13	40	214		
1"	34	1-X280 D33	1500	16	-	32	40	50	8	-	16	40	75		
		1-X280 D39	2500	25	-	45	60	138	12	-	28	60	178		
				17	-	30	40	90	6	-	14	40	143		
		1-X280 D46	2500	24	-	44	60	197	7	-	28	60	269		
				16	-	29	40	129	4	-	14	40	216		
1 1/2"	34	1-X280 D33	1500	16	-	32	40	28	8	-	16	40	42		
		1-X280 D39	2500	25	-	45	60	79	12	-	28	60	101		
				17	-	30	40	51	6	-	14	40	82		
		1-X280 D46	2500	24	-	44	60	112	7	-	28	60	154		
				16	-	29	40	74	4	-	14	40	123		
2"	34	1-X280 D33	1500	16	-	32	40	10	8	-	16	40	16		
		1-X280 D39	2500	25	-	45	60	28	12	-	28	60	37		
				17	-	30	40	18	6	-	14	40	30		
		1-X280 D46	2500	24	-	44	60	41	7	-	28	60	56		
				16	-	29	40	27	4	-	14	40	45		
3"	45	1-X280 D39	2500	19	-	47	60	13	7	-	28	60	22		
				13	-	31	40	8	4	-	14	40	18		
		1-X280 D46	2500	24	-	44	60	25	12	-	28	60	34		
				16	-	30	40	16	6	-	14	40	27		
4"	60	1-X280 D46	2500	19	-	48	60	12	7	-	28	60	21		
				13	-	32	40	7	4	-	14	40	17		
		1-X280 D63	2500	21	-	42	60	29	10	-	26	60	48		
				14	-	28	40	19	5	-	13	40	37		
6"	60	1-X280 D46	2500	19	-	48	60	8	7	-	28	60	14		
				13	-	32	40	5	4	-	14	40	11		
		1-X280 D63	2500	21	-	42	60	20	10	-	26	60	33		
				14	-	28	40	13	5	-	13	40	26		
8"	76	1-X280 D63	2500	15	-	42	60	8	7	-	26	60	20		
				10	-	28	40	5	3	-	13	40	15		

DC1624 标准套筒调节阀
DC1624 Standard sleeve control valve

◆加强型石墨碳环 -D- Reinforced graphite carbon ring -D-

泄漏等级 Leakage class : IV IEC 60534-04或GB/T4213 (Max. ΔP=200bar)

Port In	行程 Travel mm	执行机构 Actuator type	最大压力等级 Max. Rating	反作用 Air To Open (reverse)						正作用 Air To Close (direct)					
				Spring range			Supply	P shut-off			Supply	P shut-off			
				psi			psi	bar			psi	bar			
2"	34	1-X280 D33	1500	16	-	32	40	105	8	-	16	40	170		
		1-X280 D39	2500	/	/	/	/	-	12	-	28	60	200		
				17	-	30	40	200	6	-	14	40	112		
		1-X280 D46	2500	/	/	/	/	-	7	-	28	60	200		
				/	/	/	/	-	4	-	14	40	180		
3"	45	1 X 280 D39	2500	19	-	47	60	200	7	-	28	60	170		
				13	-	31	40	157	4	-	14	40	83		
		1-X280 D46	2500	/	/	/	/	-	12	-	28	60	200		
				16	-	30	40	200	6	-	14	40	109		
4"	60	1-X280 D46	2500	/	/	/	/	-	7	-	28	60	190		
				13	-	32	40	200	4	-	14	40	93		
		1-X280 D63	2500	/	/	/	/	-	10	-	26	60	200		
				/	/	/	/	-	5	-	13	40	163		
6"	60	1-X280 D46	2500	19	-	48	60	200	7	-	28	60	149		
				13	-	32	40	197	4	-	14	40	72		
		1-X280 D63	2500	/	/	/	/	-	10	-	26	60	200		
				14	-	28	40	200	5	-	13	40	127		
8"	76	1-X280 D63	2500	/	/	/	/	-	7	-	26	60	200		
				10	-	28	40	200	3	-	13	40	105		
10"	100	1-X250 D63	2500	15	-	34	60	200	6	-	30	60	182		
12"	120	1-X250 D63	2500	15	-	38	60	200	5	-	34	60	180		
14"	150	1-X250 D63	2500	15	-	30	60	177	6	-	30	60	128		
16"	200	1-X250 D63	2500	10	-	29	60	94	6	-	30	60	103		

DC1624 标准套筒调节阀

DC1624 Standard sleeve control valve

◆压力加强型PTFE密封环 -S- Pressure strengthened PTFE seal ring -S-

泄漏等级 Leakage class : IV IEC 60534-04或GB/T4213 (Max.ΔP=250bar)

Port In	行程 Travel mm	执行机构 Actuator type	最大压力等级 Max. Rating	反作用 Air To Open (reverse)					正作用 Air To Close (direct)				
				Spring range		Supply	P shut-off		Spring range		Supply	P shut-off	
				psi		psi	bar		psi		psi	bar	
2"	34	1-X280 D33	1500	16	-	32	40	160	8	-	16	40	200
		1-X280 D39	2500	/	/	/	/	-	12	-	28	60	244
				17	-	30	40	250	6	-	14	40	116
		1-X280 D46	2500	/	/	/	/	-	7	-	28	60	250
				/	/	/	/	-	4	-	14	40	189
3"	45	1-X280 D39	2500	19	-	47	60	250	7	-	28	60	178
				13	-	31	40	188	4	-	14	40	84
		1-X280 D46	2500	/	/	/	/	-	12	-	28	60	233
				16	-	30	40	250	6	-	14	40	112
4"	60	1-X280 D46	2500	/	/	/	/	-	7	-	28	60	198
				13	-	32	40	250	4	-	14	40	95
		1-X280 D63	2500	/	/	/	/	-	10	-	26	60	250
				/	/	/	/	-	5	-	13	40	169
6"	60	1-X280 D46	2500	/	-	/	/	-	7	-	28	60	154
				13	-	32	40	250	4	-	14	40	73
		1-X280 D63	2500	/	/	/	/	-	10	-	26	60	250
				/	/	/	/	-	5	-	13	40	131
8"	76	1-X280 D63	2500	/	/	/	/	-	7	-	26	60	222
				10	-	28	40	250	3	-	13	40	108
10"	100	1-X250 D63	2500	15	-	34	60	250	6	-	30	60	189
12"	120	1-X250 D63	2500	15	-	38	60	250	5	-	34	60	186
14"	150	1-X250 D63	2500	15	-	30	60	210	6	-	30	60	131
16"	200	1-X250 D63	2500	10	-	29	60	104	6	-	30	60	105

DC1624 标准套筒调节阀

DC1624 Standard sleeve control valve

◆不平衡式阀芯 -N/E- Unbalanced spool -N/E-

泄漏等级 Leakage class : V & VI IEC 60534-04或GB/T4213

Port In	行程 Travel mm	执行机构 Actuator type	最大压力等级 Max. Rating	反作用 Air To Open (reverse)					正作用 Air To Close (direct)				
				Spring range			Supply	P shut-off	Spring range			Supply	P shut-off
				psi			psi	bar	psi			psi	bar
3/8"	17	1-X280 D12	600	11	-	29	40	85	9	-	22	40	155
		1-X280 D25	1500	17	-	43	60	233	7	-	26	60	430
				11	-	29	40	146	3	-	13	40	378
1/2"	17	1-X280 D12	600	11	-	29	40	40	9	-	22	40	95
		1-X280 D25	1500	17	-	43	60	85	7	-	26	60	115
				11	-	29	40	50	3	-	13	40	135
		1-X280 D33	1500	30	-	44	60	430	13	-	27	60	430
				20	-	29	40	302	7	-	13	40	408
3/4"	17	1-X280 D12	600	11	-	29	40	18	9	-	22	40	23
		1-X280 D25	1500	17	-	43	60	55	7	-	26	60	90
				11	-	29	40	23	3	-	13	40	95
		1-X280 D33	1500	30	-	44	60	242	13	-	27	60	269
				20	-	29	40	158	7	-	13	40	214
1"	34	1-X280 D33	1500	16	-	32	40	40	8	-	16	40	71
		1-X280 D39	2500	25	-	45	60	138	12	-	28	60	178
				17	-	30	40	88	6	-	14	40	143
		1-X280 D46	2500	24	-	44	60	197	7	-	28	60	269
				16	-	29	40	129	4	-	14	40	216
1 1/2"	34	1-X280 D33	1500	16	-	32	40	20	8	-	16	40	38
		1-X280 D39	2500	25	-	45	60	76	12	-	28	60	101
				17	-	30	40	45	6	-	14	40	79
		1-X280 D46	2500	24	-	44	60	112	7	-	28	60	154
				16	-	29	40	70	4	-	14	40	123
2"	34	1-X280 D33	1500	16	-	32	40	4	8	-	16	40	10
		1-X280 D39	2500	25	-	45	60	23	12	-	28	60	32
				17	-	30	40	13	6	-	14	40	25
		1-X280 D46	2500	24	-	44	60	36	7	-	28	60	52
				16	-	29	40	21	4	-	14	40	41
3"	45	1-X280 D39	2500	19	-	47	60	8	7	-	28	60	18
				13	-	31	40	3	4	-	14	40	14
		1-X280 D46	2500	24	-	44	60	21	12	-	28	60	30
				16	-	30	40	12	6	-	14	40	23
4"	60	1-X280 D46	2500	19	-	48	60	8	7	-	28	60	18
				13	-	32	40	4	4	-	14	40	13
		1-X280 D63	2500	21	-	42	60	26	10	-	26	60	45
14	-			28	40	16	5	-	13	40	35		
6"	60	1-X280 D46	2500	19	-	48	60	5	7	-	28	60	11
				13	-	32	40	2	4	-	14	40	8
		1-X280 D63	2500	21	-	42	60	17	10	-	26	60	30
14	-			28	40	10	5	-	13	40	23		
8"	76	1-X280 D63	2500	15	-	42	60	6	7	-	26	60	17
				10	-	28	40	3	3	-	13	40	13

DC1624 标准套筒调节阀
DC1624 Standard sleeve control valve

◆压力加强型PTFE密封环 -S/F(S+E)- Pressure strengthened PTFE seal ring -S/F(S+E)-

泄漏等级 Leakage class : V & VI IEC 60534-04 或GB/T4213 (Max. ΔP=250bar)

Port In	行程 Travel mm	执行机构 Actuator type	最大压力等级 Max. Rating	反作用 Air To Open (reverse)					正作用 Air To Close (direct)				
				Spring range		Supply	P shut-off		Spring range		Supply	P shut-off	
				psi		psi	bar		psi		psi	bar	
2"	34	1-X280 D33	1500	16	-	32	40	130	8	-	16	40	200
		1-X280 D39	2500	/	/	/	/	-	12	-	28	60	244
				17	-	30	40	250	6	-	14	40	116
		1-X280 D46	2500	/	/	/	/	-	7	-	28	60	250
				/	/	/	/	-	4	-	14	40	189
3"	45	1-X280 D39	2500	19	-	47	60	250	7	-	28	60	178
				13	-	31	40	188	4	-	14	40	84
		1-X280 D46	2500	/	/	/	/	-	12	-	28	60	233
				16	-	30	40	250	6	-	14	40	112
4"	60	1-X280 D46	2500	/	/	/	/	-	7	-	28	60	198
				13	-	32	40	250	4	-	14	40	95
		1-X280 D63	2500	/	/	/	/	-	10	-	26	60	250
				/	/	/	/	-	5	-	13	40	169
6"	60	1-X280 D46	2500	/	/	/	/	-	7	-	28	60	154
				13	-	32	40	250	4	-	14	40	73
		1-X280 D63	2500	/	/	/	/	-	10	-	26	60	250
				/	/	/	/	-	5	-	13	40	131
8"	76	1-X280 D63	2500	/	/	/	/	-	7	-	26	60	222
				10	-	28	40	250	3	-	13	40	108
10"	100	1-X250 D63	2500	15	-	34	60	250	6	-	30	60	189
12"	120	1-X250 D63	2500	15	-	38	60	250	5	-	34	60	186
14"	150	1-X250 D63	2500	15	-	30	60	210	6	-	30	60	131
16"	200	1-X250 D63	2500	10	-	29	60	-	6	-	30	60	141

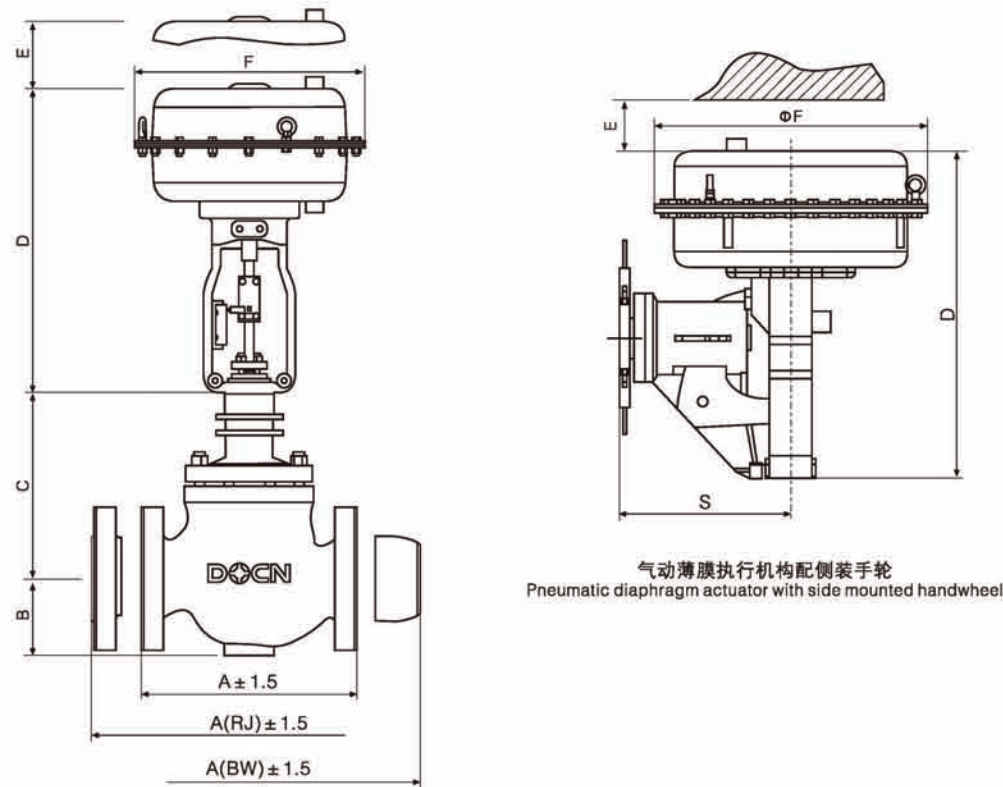
DC1624 标准套筒调节阀
DC1624 Standard sleeve control valve

◆C型金属密封环 -C- C-type metal seal ring-C-

泄漏等级 Leakage class : V IEC 60534-04或GB/T4213 (Max. ΔP=250bar)

Port In	行程 Travel mm	执行机构 Actuator type	最大压力等级 Max. Rating	反作用 Air To Open (reverse)					正作用 Air To Close (direct)				
				Spring range		Supply	P shut-off		Spring range		Supply	P shut-off	
				psi		psi	bar		psi		psi	bar	
2"	34	1-X280 D33	1500	16	-	32	40	30	8	-	16	40	40
		1-X280 D39	2500	25	-	45	60	345	12	-	28	60	56
				17	-	30	40	178	/	/	/	/	-
		1-X280 D46	2500	/	/	/	/	-	7	-	28	60	179
				16	-	29	40	345	/	/	/	/	-
3"	45	1-X280 D39	2500	19	-	47	60	271	7	-	28	60	68
				/	/	/	/	-	/	/	/	/	-
		1-X280 D46	2500	24	-	44	60	329	12	-	28	60	113
				16	-	30	40	221	/	/	/	/	-
4"	60	1-X280 D46	2500	19	-	48	60	263	7	-	28	60	87
				/	/	/	/	-	/	/	/	/	-
		1-X280 D63	2500	/	/	/	/	-	10	-	26	60	212
				/	/	/	/	-	5	-	13	40	63
6"	60	1-X280 D46	2500	19	-	48	60	219	7	-	28	60	58
				/	/	/	/	-	/	/	/	/	-
		1-X280 D63	2500	/	/	/	/	-	10	-	26	60	159
				14	-	28	40	219	5	-	13	40	38
8"	76	1-X280 D63	2500	15	-	42	60	173	7	-	26	60	127
				/	/	/	/	-	3	-	13	40	20
10"	100	1-X250 D63	2500	15	-	34	60	153	6	-	30	60	81
12"	120	1-X250 D63	2500	15	-	38	60	114	5	-	34	60	86
14"	150	1-X250 D63	2500	15	-	30	60	-	6	-	30	60	36
16"	200	1-X250 D63	2500	10	-	29	60	-	6	-	30	60	18

DC1624 标准套筒调节阀
DC1624 Standard sleeve control valve



◆调节阀带气动薄膜执行机构 Regulating valve with pneumatic diaphragm actuator

1-X280 系列多弹簧气动薄膜执行机构 multi spring pneumatic film actuator				
尺寸 size	D	E	F	S
	正作用或反作用 Positive or negative effects			
D12	342	100	220	—
D25	400	150	262	300
D33	510	150	333	300
D39	574	200	395	360
D46	644	200	465	365
D63	796	250	640	455

1-X280 系列多弹簧气动薄膜执行机构重量 (kg) Weight of multi spring pneumatic film actuator (kg)					
执行机构 Actuator	尺寸 size	正作用 Positive action	反作用 Reaction	手轮 handwheel	
				侧装 Side mounting	顶装 Top mounting
1-X280	D12	12	12	—	+6
	D25	18	18	+9	+8
	D33	26	26	+10	+9
	D39	41	41	+19	+16
	D46	67	67	+19	+16
	D63	153	153	+35	+30

DC1624 标准套筒调节阀
DC1624 Standard sleeve control valve

◆阀门体外形尺寸及重量 Overall dimension and weight of valve body

DN	尺寸 size B						尺寸 size C ³⁾					
	ANSI						标准型上盖 Standard upper cover			散热型上盖 Heat dissipating upper cover		
	150	300	600	900	1500	2500	150-600	900-1500	2500	150-600	900-1500	2500
3/4"	70	70	70	85	85	90	137	176	196	179	218	238
1"	70	70	70	85	85	90	137	176	196	179	218	238
1½"	86	86	86	110	110	120	177	221	261	236	280	320
2"	98	98	98	135	135	150	184	227	257	264	310	340
3"	120	120	120	170	170	180	235	245	275	330	340	370
4"	160	160	160	200	200	220	279	317	347	362	400	430
6"	290	200	205	210	222	1)	340	370	1)	430	460	1)
8"	200	200	220	220	230		380	420		480	520	
10"	258	258	265	300	335		500	550		620	670	
12"	290	290	300	330	370		600	650		710	760	
14"	350	360	380	1)	1)		640	1)		780	1)	
16"	370	380	410				750			910		
20"	490	490	500				880			1080		
24"	520	520	580				1040			1260		

◆阀本体重量(*) Weight of valve body (*)

法兰连接 Flange connection							对焊连接 Butt welding connection				
DN	ANSI 150	ANSI 300	ANSI 600	ANSI 900	ANSI 1500	ANSI 2500	ANSI 300	ANSI 600	ANSI 900	ANSI 1500	ANSI 2500
3/4"	15	20	20	30	30	38	21	15	28	28	31
1"	15	20	20	30	30	38	21	15	28	28	31
1 1/2"	35	38	40	60	60	54	41	43	55	55	44
2"	40	55	60	102	102	143	57	60	93	93	129
3"	70	87	90	180	180	340	88	94	170	164	311
4"	110	120	135	260	260	500	111	121	243	236	457
6"	190	245	295	420	560		256	273	384	507	
8"	300	335	422	680	980		322	392	620	897	
10"	470	576	789	1200	1700		543	726	1120	1560	
12"	677	805	789	1580	2250		760	1080	1470	2020	
14"	960	1240	1650	非标定做 Non standard customization			1180	1570	非标定做 Non standard customization		
16"	1416	1700	2100				1630	1990			
20"	2900	3300	3900				3260	3730			
24"	3400	4100	5000				4050	4780			

* 以上重量为标准型上盖重量，高温型请联系东辰技术部。
*The above weight is the standard upper cover weight, please contact Dongchen technology department for high temperature type.
* 以上重量为近似值。
*The above weights are approximate.

◆特殊规格 Special specifications

- 氧气介质场合的清理 -Cleaning of oxygen medium
- 异径管 -Reducer
- 电动或液动执行机构 -Electric or hydraulic actuator
- 特殊材质 -Special material
- 阀体疏水接口 -Drain connection of valve body
- 专业工具 -Professional tools

◆推荐性备品备件 Recommended spare parts

- 推荐性安装及试运行用备品备件
Recommended spare parts for installation and commissioning
- 阀体垫片 -Body gasket
 - 阀杆填料 -Stem packing
 - 平衡式阀芯的软密封环(PTFE/石墨) for balanced valve element