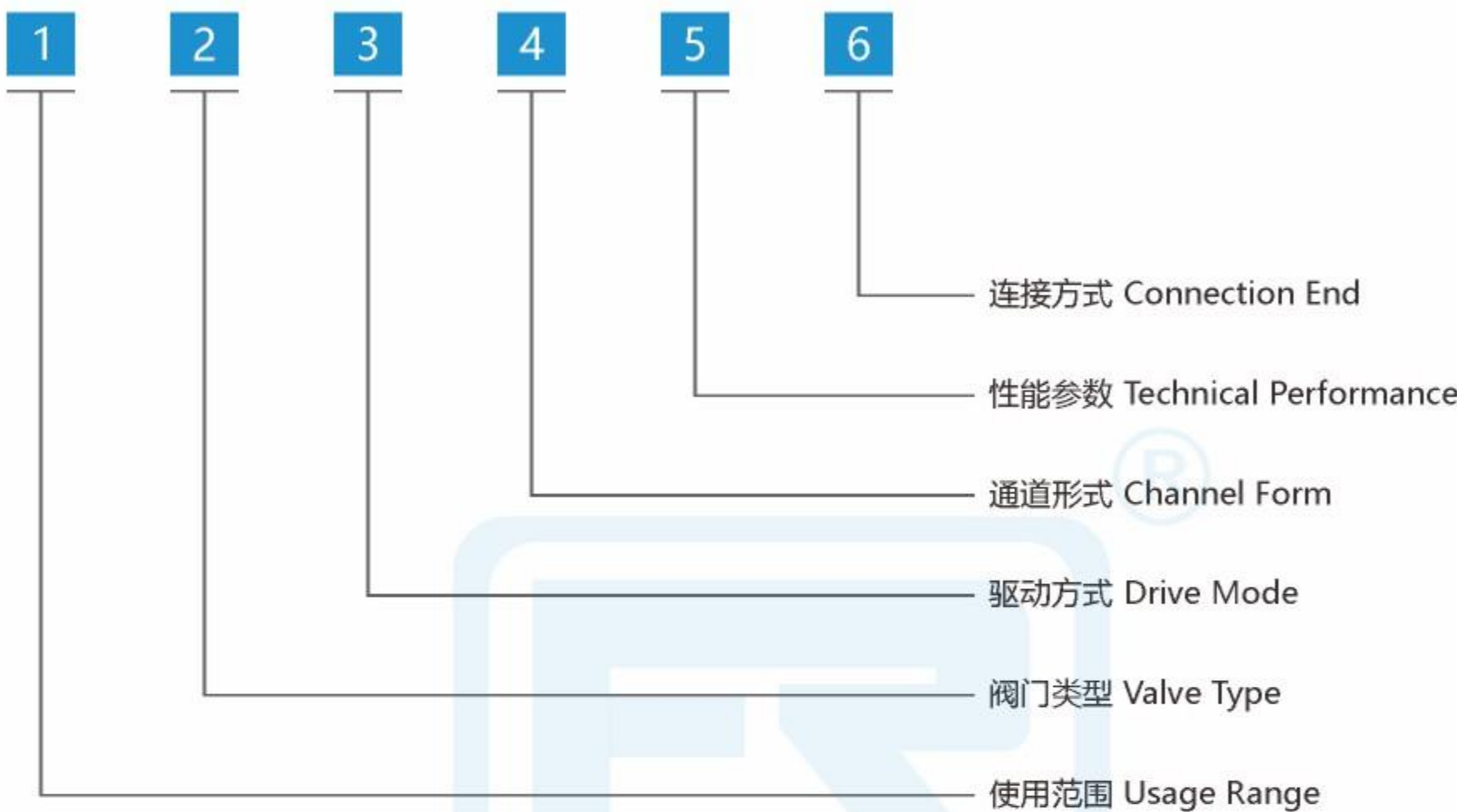


真空球阀系列 VACUUM BALL VALVE SERIES



REFERENCE TABLE FOR SELECTION OF VACUUM VALVE MODELS 真空阀门型号选型参照表



使用范围 Usage Range	阀门类型 Valve Type	驱动方式 Drive Mode	通道形式 Channel Form	性能参数 Technical Performance	连接方式 Connection End
C:超高真空 G:高真空 D:低真空 C: Super High Vacuum G: High Vacuum D: Low Vacuum	D:挡板阀 C:插板阀 F:翻板阀 M:隔膜阀 I:蝶阀 Z:锥型阀 W:微调阀 Q:充气阀 U:球阀 Y:压差阀 D: Angle Valve C: Gate Valve F: Flap Valve M: Diaphragm Valve I: Butterfly Valve Z: Cone Valve W: Fine-tuning Valve O: Inflatable Valve U: Ball Valve Y: Differential Pressure Valve	D:电动 C:磁动 Q:气动 Y:液动 Qb:气-摆动 手动省略 D: Electric C: Magnetic Q: Pneumatic Y: Hydraulic Qb: Pneumatic-swing	S:三通式 J:直角式 Z:直通式 S: Three-way Type J: Right Angle Type Z: Through-way Type	用阿拉伯数字表示公称通径,单位为毫米。带充气的阀门在型号前面加Q。带通电的阀门在型号后面加D。轴封为波纹管的,在数字后面加b。 The nominal diameter is expressed in Arabic numerals in millimeters. For valves with inflatable, add Q after the type. For valves with power supply, add D after the type. If the shaft seal is a bellows, add b after the number.	H:两端为焊接管式 H1:一端为焊接管式 KF:快卸法兰(GB4982) F:活套法兰 G:内管螺纹 H: Both End with Butt Weld H1: One End with Butt Weld KF: Quick-release Flange(GB4982) F: Loose Flange (F) G: Female Thread

真空球阀是用来接通或切断真空管路中的气流;阀门开闭具有锁定功能,转转平稳,密封可靠。
适用于压力和真空系统管路中,工作介质为空气以及非腐蚀性气体。

Vacuum ball valve is used to connect or cut off the air flow in vacuum pipelines; The valve has a locking function for opening and closing, ensuring smooth rotation and reliable sealing.Suitable for pressure and vacuum system pipelines, the working medium is air and non corrosive gases.

系列 Series

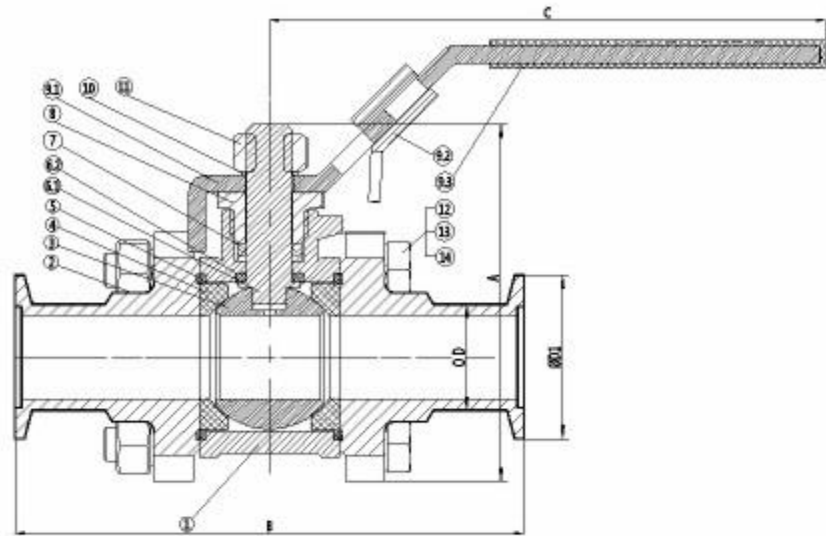
KF快卸法兰;ISO卡钳法兰;活套法兰(F);CF法兰。
Quick-release Flange; ISO Flange; Loose Flange(F); CF Flange.

主要技术性能 Technical performance

适用范围 Usage Range	10 ⁻⁵ ~1.3x10 ⁻⁹ Pa
阀门漏率 Valve Leakage Rate	≤1.0x10 ⁻⁹ Pa.m ³ /S
工作温度 Working Temperature	-20℃ ~+80℃(PTFE) -30℃ ~+150℃(PPL)
法兰标准 Flange Standard	KF快卸法兰 Quick-release Flange:GB 4982 ISO法兰 ISO Flange:GB 6070 GU活套法兰 Loose Flange(F):JB 919;GB 6070 CF法兰 CF Flange:GB 6070
驱动方式 Drive Mode	手动;电动;气动;涡轮 Manual, Electric,Pneumatic,Turbine
驱动器安装位置 Driver Installation Location	任意 Any Location
电动开关时间 Electric Open&Close Time	≤30S
控制电路(电动)Control Circuit (Electric)	标准出厂 Standard:AC220V/50Hz开关型 特殊指定 Special Designation:AC380V;DN24V开关型 ≥DN40,6S/15S/20S/60S 4~20mA DC调节型 1~5V DC调节型
执行器(气动)Actuator(Pneumatic)	标准出厂:双作用 Standard: Double Action 特殊指定:单作用 Special Designation: Single Action
选配 Optional	电磁阀;信号反馈器;防爆电磁线圈 Solenoid Valve;Signal Feedback Device; Explosion-proof Electromagnetic Coil

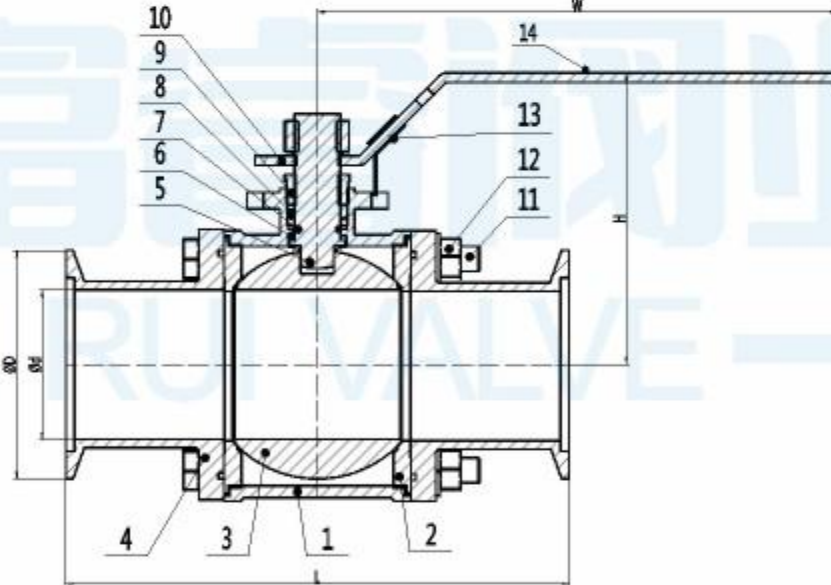
主要零件材料 Material parts materials

阀体、阀盖、阀杆 Valve Body, Valve Cover, Valve Stem	不锈钢 Stainless Steel
阀座 Valve Seat	聚四氟乙烯 PTFE
密封圈 Seals	氟橡胶、丁腈 FKM,NBR



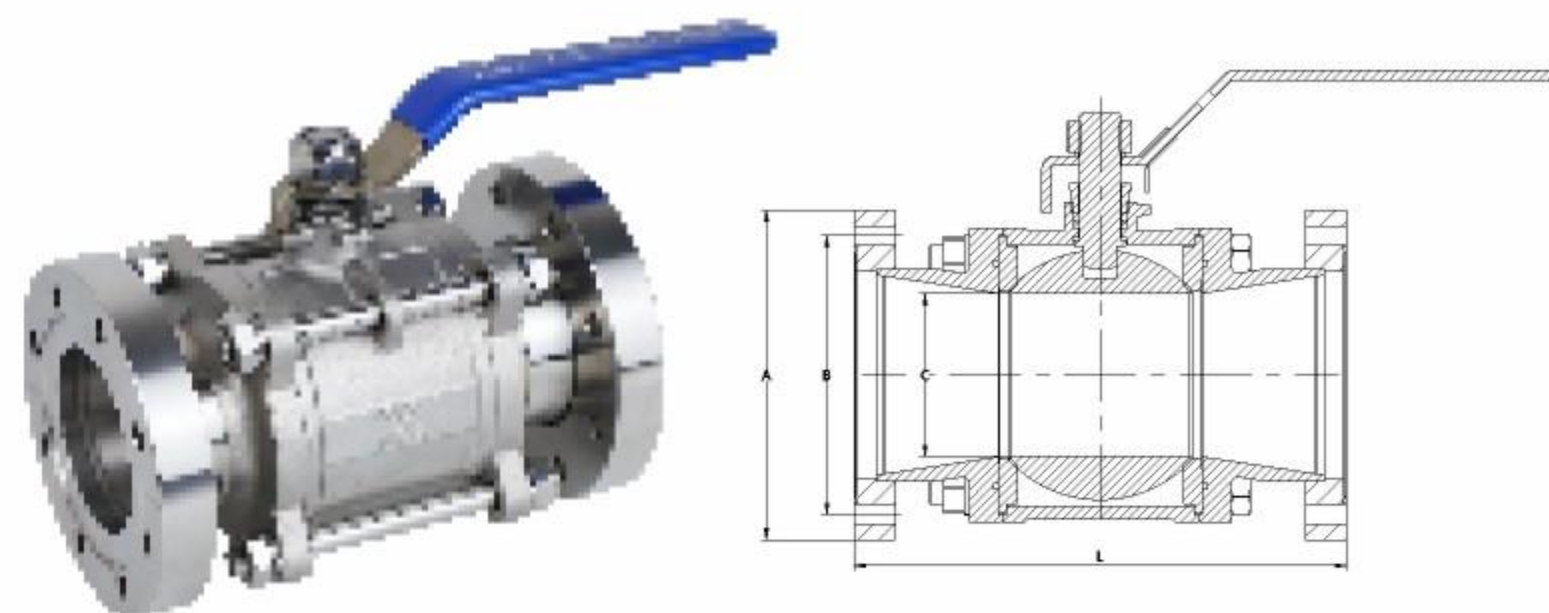
手动真空球阀 Manual Vacuum Ball Valve

型号 Model	A	B	C	OD	D1
GU-KF16	72	92	110	19.5	30
GU-KF25	82	110	130	26	40
GU-KF40	110	139	160	39	55
GU-KF50	130	147	170	51.5	75



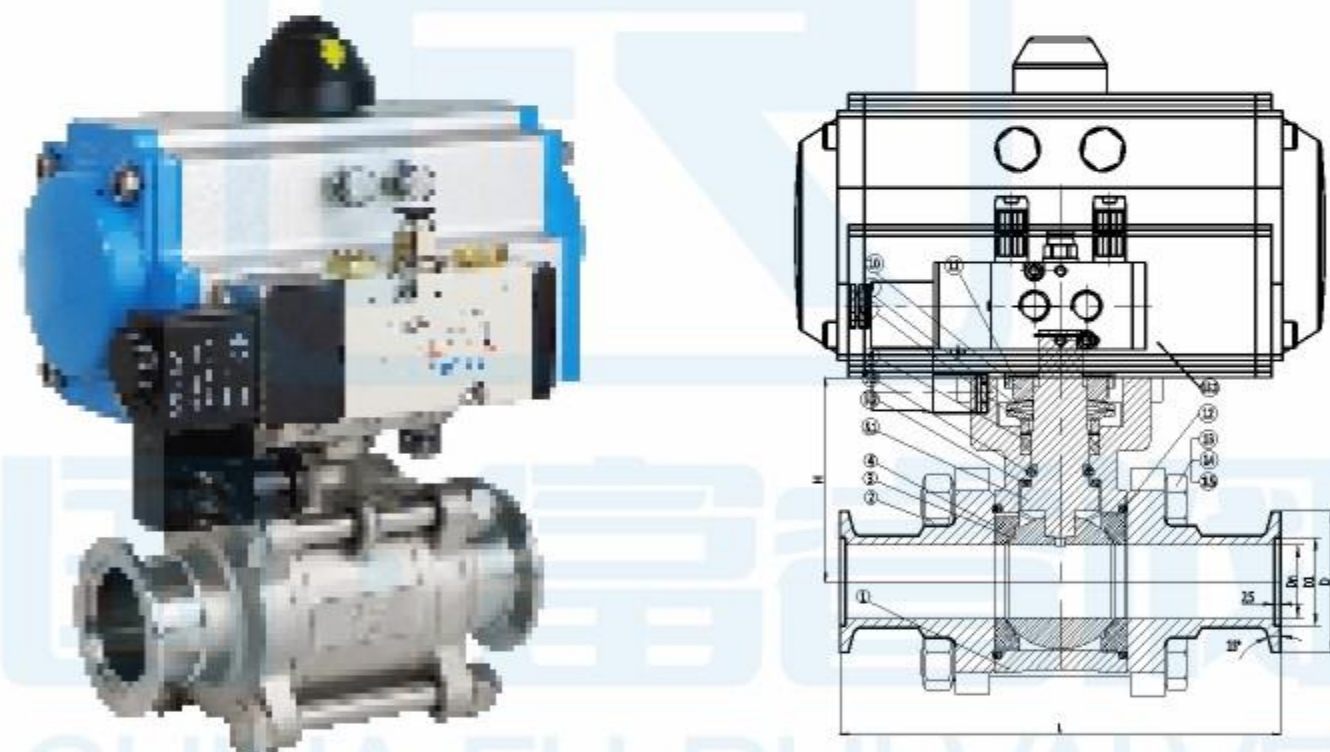
手动真空球阀 Manual Vacuum Ball Valve

型号 Model	L	d	D	H	W
GU-KF63	190	57	87	135	205
GU-KF80	243	72	114	145	205
GU-KF100	300	95	134	165	240



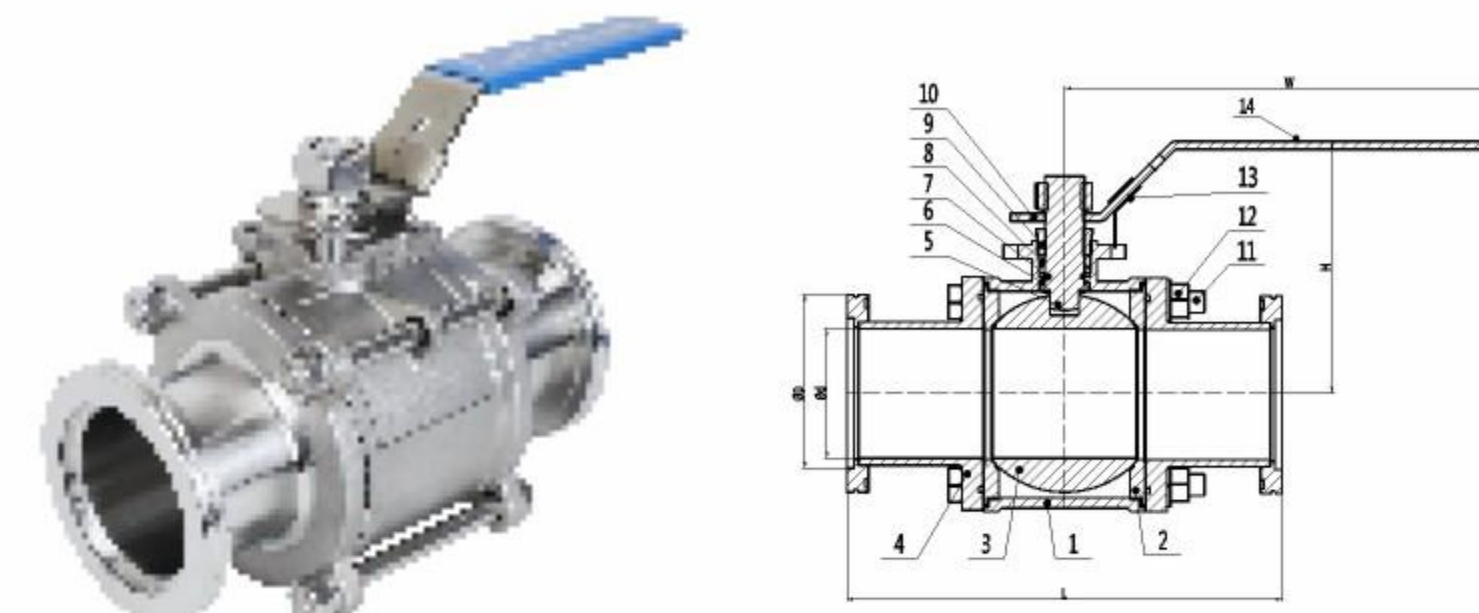
手动真空球阀 Manual Vacuum Ball Valve

型号 Model	A	B	C	L	a-øb
GU-CF63	114	92.3	50	173	8-8.4
GU-CF80	130	110	65	209	16-8.4
GU-CF100	152	130.3	78	237	16-8.4



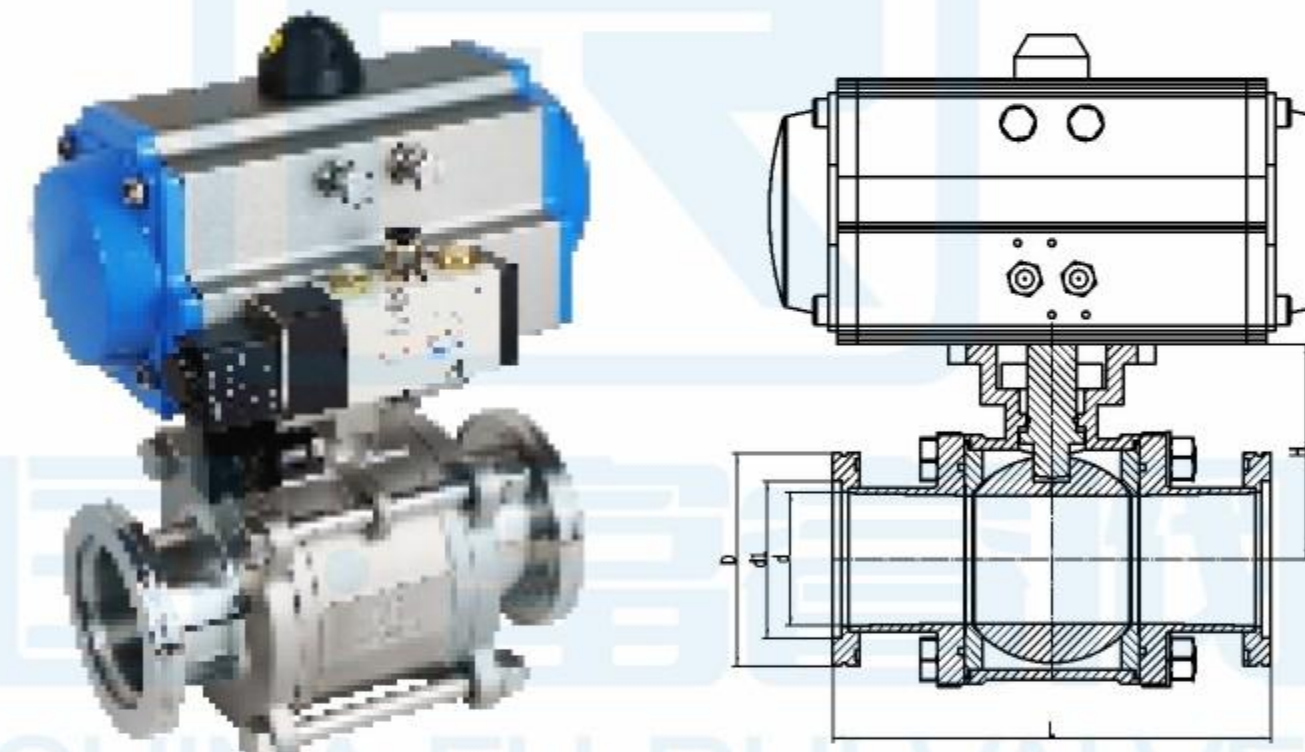
气动真空球阀 Pneumatic Vacuum Ball Valve

型号 Model	L	Dn	D1	D	H
GUQ-KF16	89	15.8	17.2	30	30
GUQ-KF25	110	22.1	26.2	40	45
GUQ-KF40	139	34.8	41.2	55	64
GUQ-KF50	147	47.5	52.2	75	74
GUQ-KF63	190	57	70	87	96
GUQ-KF80	243	72	83	114	104
GUQ-KF100	300	95	102	134	136



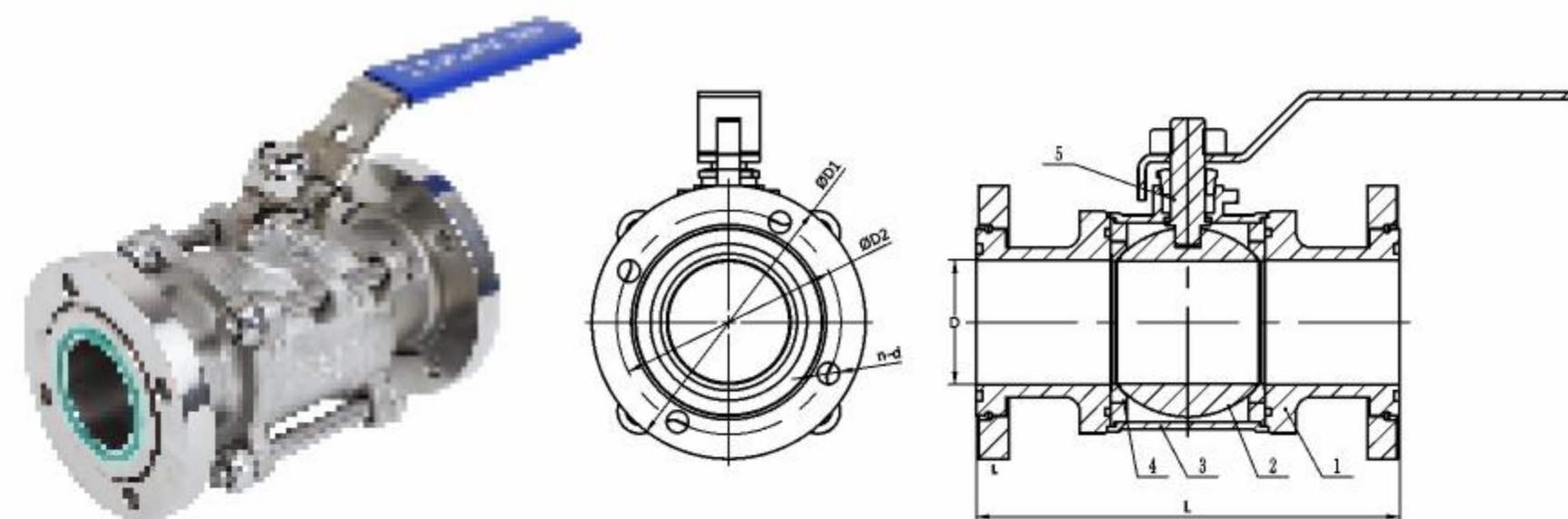
手动真空球阀 Manual Vacuum Ball Valve

型号 Model	L	d	D	H	W
GU-ISO63	194	57	95	135	205
GU-ISO80	242	72	110	145	205
GU-ISO100	304	95	130	165	240



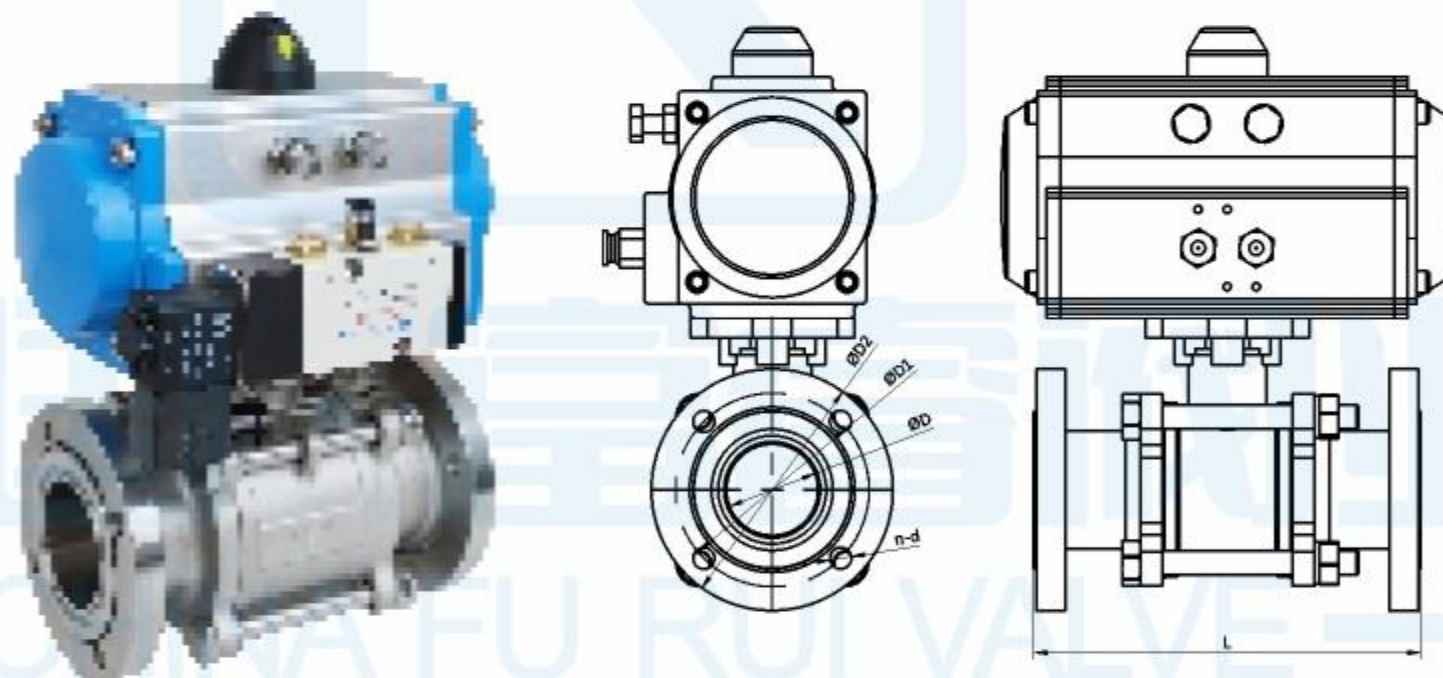
气动真空球阀 Pneumatic Vacuum Ball Valve

型号 Model	L	d	d1	D	H
GU-ISO63	194	57	70	95	96
GU-ISO80	242	72	83	110	104
GU-ISO100	304	95	102	130	135



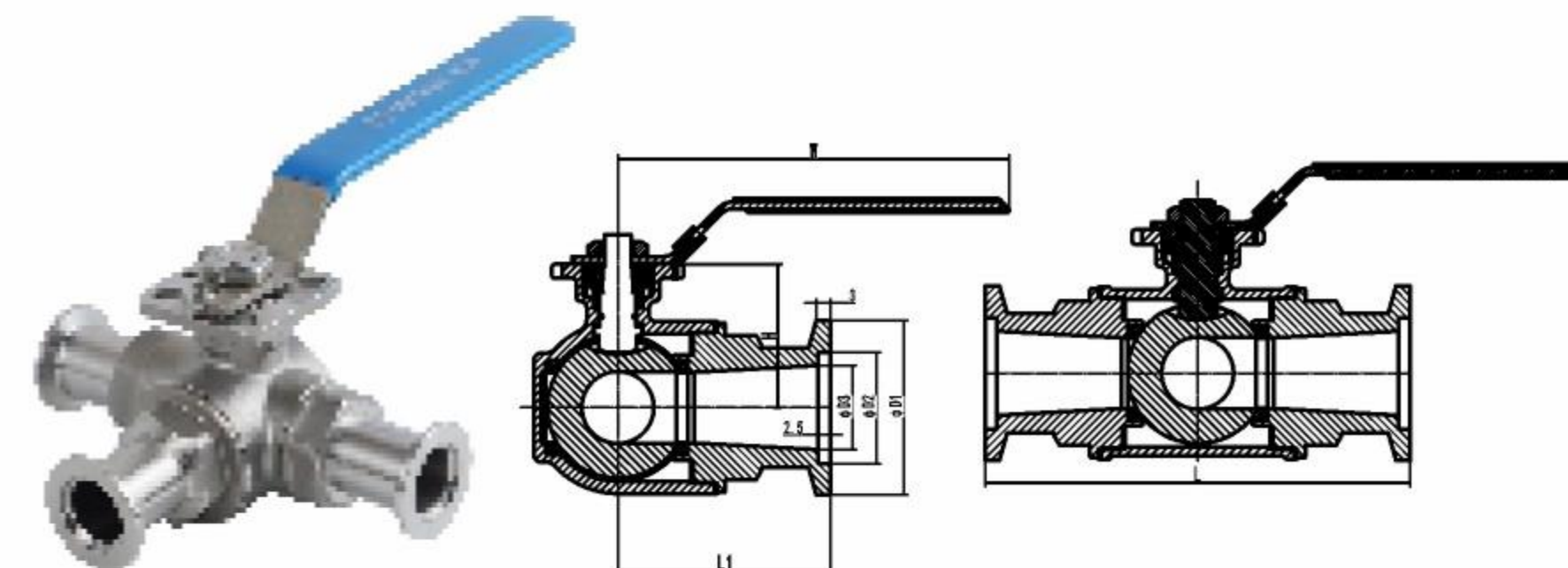
手动真空球阀 Manual Vacuum Ball Valve

型号 Model	L	D	D1	D2	n-d
GU-16F	100	15	60	45	4-6.6
GU-20F	114	20	65	50	4-6.6
GU-25F	114	25	70	55	4-6.6
GU-32F	140	32	90	70	4-9
GU-40F	160	40	100	80	4-9
GU-50F	170	50	110	90	4-9



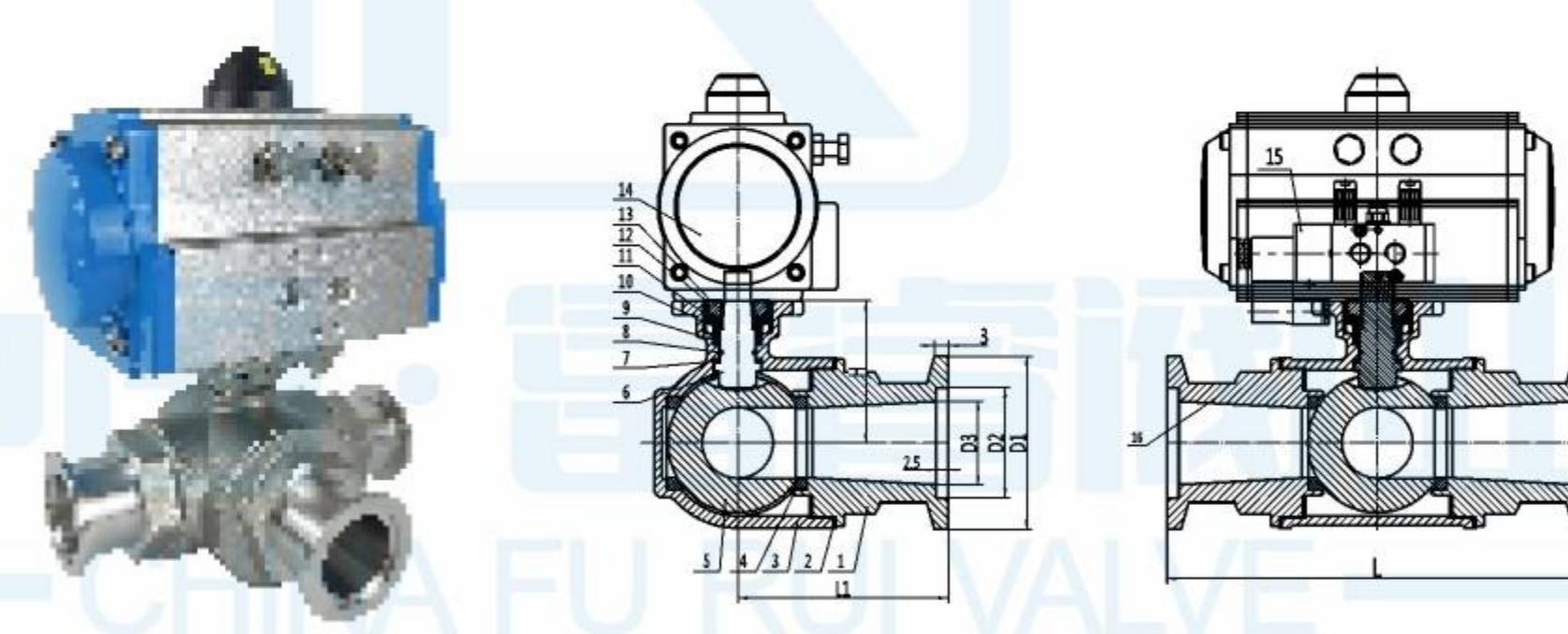
气动真空球阀 Pneumatic Vacuum Ball Valve

型号 Model	L	D	D1	D2	n-d	方芯	ISO5211
GU-16F	100	15	60	45	4-6.6	9x9	F05
GU-20F	114	20	65	50	4-6.6	9x9	F05
GU-25F	114	25	70	55	4-6.6	11x11	F05
GU-32F	140	32	90	70	4-9	11x11	F05/F07
GU-40F	160	40	100	80	4-9	14x14	F05/F07
GU-50F	170	50	110	90	4-9	14x14	F05/F07



手动三通真空球阀 Manual 3-Way Vacuum Ball Valve

型号 Model	L	D1	D2	D3	H	L1
GU-KF16	142	30	17.2	15.8	46	71
GU-KF25	160	40	26.2	22.1	49	80
GU-KF40	182	55	41.2	34.8	69	91
GU-KF50	216	75	52.2	47.5	74	108



气动三通真空球阀 Pneumatic 3-Way Vacuum Ball Valve

型号 Model	L	D1	D2	D3	H	L1
GUQ-KF16	142	30	17.2	15.8	46	71
GUQ-KF25	160	40	26.2	22.1	49	80
GUQ-KF40	182	55	41.2	34.8	69	91
GUQ-KF50	216	75	52.2	47.5	74	108

阀体材质的使用温度 - 压力范围

Working temperature and pressure range of valve body material

温度 Temp°C	LCB				WCB				CF8				CF8M			
	PN16	PN25	PN40	PN64	PN16	PN25	PN40	PN64	PN16	PN25	PN40	PN64	PN16	PN25	PN40	PN64
-29~38	1.5	2.4	3.9	6.1	1.6	5	4.0	6.4	1.5	2.4	4.0	6.3	1.5	2.4	3.9	6.3
93	1.4	2.2	3.8	5.7	1.4	2.3	3.7	5.9	1.4	2.1	3.3	5.2	1.3	2.0	3.4	5.4
149	1.3	2.1	3.7	5.6	1.3	2.1	3.6	5.7	1.3	1.9	3.0	4.7	1.2	1.9	3.1	4.9
204	1.1	1.9	3.5	5.4	1.1	1.9	3.4	5.6	1.1	1.7	2.8	4.3	1.1	1.7	2.8	4.5
260	1.0	1.7	3.3	5.1	1.0	1.7	3.2	5.2	1.0	1.5	2.6	4.0	1.0	1.6	2.6	4.1
315	0.8	1.4	3.0	4.7	0.8	1.4	2.8	4.8	0.8	1.3	2.3	3.7	0.8	1.3	2.4	3.9
343	0.7	1.3	2.9	4.6	0.7	1.3	2.7	4.7	0.7	1.2	2.3	3.7	0.7	1.2	2.3	3.8
371	0.6	1.2	2.8	4.5	0.6	1.2	2.7	4.7	0.6	1.1	2.2	3.7	0.6	1.1	2.2	3.7
399	0.5	1.1	2.5	4.2	0.5	1.1	2.6	4.4	0.5	1.0	2.1	3.6	0.5	1.0	2.2	3.7
427	0.5	0.9	2.1	3.3	0.5	1.0	2.1	3.6	0.5	0.9	2.0	3.5	0.5	0.9	2.1	3.6
454	0.4	0.7	1.5	2.3	0.4	0.7	1.4	2.3	0.4	0.8	2.0	3.4	0.4	0.8	2.0	3.6
482					0.3	0.5	0.9	1.5	0.3	0.7	1.9	3.3	0.3	0.7	1.9	3.6
510					0.2	0.3	0.5	0.9	0.2	0.6	1.8	3.2	0.2	0.6	1.8	3.3
538					0.1	0.1	0.3	0.4	0.1	0.4	1.5	2.8	0.1	0.4	1.6	3.0

ISO5122 连接标准的最大转矩

Maximum torque of ISO5122 connection standard

法兰代号	F03	F04	F05	F07	F10	F12	F14	F16	F25	F30	F35	F40	F48	F60
转矩 /N.m	32	63	125	250	500	1000	2000	4000	8000	16000	32000	63000	125000	250000
圆轴尺寸 mm	12	14	18	22	28	36	48	60	72	98	160	180	220	280
键销长度 mm	25	27	27	30	42	52	60	75	105	125	175	192	242	302
方轴尺寸 mm	9	11	14	17	22	27	36	46	55	75				

注：表中扭矩规定值是在螺栓拉伸应力只有 290Mpa 且法兰接合面之间的摩擦系数为 0.2 的基础上确定的，不同的参数会得出不同的传输转矩值。

Note: The specified torque value in the table is determined on the basis that the tensile stress of the bolt is only 290Mpa and the friction coefficient between the flange joint surfaces is 0.2. Different parameters will result in different transmission torque values.

阀门常用材料牌号对照表

Comparison table of common valve materials

材料名称 Material name	美国 (ASTM) ASTM	日本 (JIS) JIS	德国 (DIN) DIN	中国 (GB) GB	主要化学成分 Major chemical composition
碳素钢 (铸) Carbon Steel(cast)	WCA、WCB、WCC	SCPH2	1.0501	WCA、WCB、WCC	C: ≤ 0.30
铬钼钢 (铸) Cr-Mo Steel(cast)	WC6 WC9	SCPH21 SCPH32	1.7335	15CrMo 15Cr2Mov	C: ≤ 0.20 C: ≤ 0.18
不锈钢 (铸) Stainless Steel(cast)	CF8	SCS13 SCS13A	1.4308	CF8(GB12230)	C: ≤ 0.08 Cr: 18.0-21.0
	CF8M	SCS14 SCS14A	1.4580 1.4581	CF8M(GB12230)	C: ≤ 0.08 Cr: 18.0-21.0 Mo:2.0-3.0
	CF3	--	1.4306	CF3 (GB12230)	C: ≤ 0.03 C: ≤ 17.2-21.0
	CF3M	--	1.4435	CF3M (GB12230)	C: ≤ 0.03 Cr: 7.0-21.0
不锈钢 (棒) Stainless Steel(rod)	304	SUS304	1.4301	0Cr18Ni9	C: ≤ 0.08 Cr: 7.0-20.0
	316	SUS316	1.4401 1.4436	0Cr17Ni12Mo2	C: ≤ 0.08 Cr: 16.0-18.0 Mo:2.0-3.0
	304L	SUS304L	1.4036	00Cr19Ni10	C: ≤ 0.03 Cr: 18.0-20.0
	316L	SUS316L	1.4435 1.4404	00Cr17Ni14Mo2	C: ≤ 0.03 Cr: 2.0-3.0
	410	SUS410	1.4006	1Cr13	C: ≤ 0.15 Cr: 11.5-13.0
	416	SUS416	1.4005	Y1Cr13	C: ≤ 0.15 Cr: 12.0-14.0
	420	SUS420	1.4021	2Cr13	C:0.16-0.25 C:16.0-18.0
	440B	SUS440B	1.4112	9Cr18Mov	C:0.75-0.95 C:16.0-18.0
	440C	SUS440C	1.4125	9Cr18	C:0.75-0.95 C:16.0-18.0
	630	SUS630 SUS24 (铸 cast)	1.4542	0Cr17Ni4Cu4Nb (17-4PH)	Cr:16.5 Ni:4.0 Cu:3.5

阀门材料选用表
Valve material selection table

流体 Fluid	材料 Material													
	碳钢 Carbon steel	铸铁 Cast iro	302 或 304 不锈钢 302or 304S	316 不锈钢 316SS	青铜 Bronze	蒙乃尔 合金 Monel	哈氏 合金 B Haste lloy B	哈氏 合金 C Haste lloy C	不锈 钢 #20 SS#20	钛 Titanium	钴铬 合金 #6 Co-Cr alloy#6	416 不锈钢 416SS	440C 不锈钢 440CSS	17-4PH 不锈钢 17- 4PHSS
醋酸 (无气的)	A	A	A	A	A	A	I.L	A	A	I.L	I.L	A	A	A
醋酸 (无气的)	C	C	B	B	B	B	A	A	A	A	A	C	C	B
醋酸蒸汽	C	C	A	A	A	A	A	A	A	A	A	C	C	B
乙醛	C	C	A	A	B	B	I.L	A	A	A	A	C	C	B
丙酮	A	A	A	A	A	A	A	A	A	A	A	A	A	A
乙炔	A	A	A	A	I.L	A	A	A	A	I.L	A	A	A	A
乙醛	A	A	A	A	A	A	A	A	A	A	A	A	A	A
硫酸铝	C	C	A	A	A	A	A	A	A	I.L	A	C	C	I.L
氨	A	A	A	A	A	A	A	A	A	A	A	A	A	I.L
氯化铵	C	C	B	B	A	A	A	A	A	A	A	C	C	I.L
硝酸铵	A	A	A	A	C	C	A	A	A	A	A	C	C	I.L
磷酸铵 (一价的)	C	C	A	A	B	B	A	A	A	A	A	B	B	I.L
硫酸铵	C	C	B	A	B	B	A	A	A	A	A	C	C	I.L
亚硫酸铵	C	C	A	A	C	C	I.L	A	A	A	A	C	C	I.L
苯胺	A	A	A	A	A	A	A	A	A	A	A	C	C	I.L
沥青	A	A	A	A	C	C	A	A	A	I.L	A	A	A	A
啤酒	B	B	A	A	B	B	A	A	A	A	A	B	B	A
苯	A	A	A	A	A	A	B	A	A	A	A	A	A	A
苯甲酸	C	C	A	A	A	A	I.L	A	A	I.L	A	A	A	A
硼酸	C	C	A	A	A	A	B	A	A	A	B	B	B	I.L
丁烷	A	A	A	A	A	A	A	A	A	I.L	A	A	A	A
氧化钙	B	B	C	B	C	A	A	A	A	A	I.L	C	C	I.L
次氧化钙	C	C	B	B	B	B	C	A	A	A	I.L	C	C	I.L
石碳酸	B	B	A	A	A	A	A	A	A	A	I.L	I.L	I.L	I.L
二氧化碳 (干的)	A	A	A	A	A	A	A	A	A	A	A	A	A	A
二氧化碳 (湿的)	C	C	A	A	A	A	A	A	A	A	A	A	A	I.L
二硫化碳	A	A	A	A	C	B	A	A	A	A	A	B	B	A
化碳	B	B	B	B	A	A	B	A	A	I.L	C	C	C	C
碳酸	C	C	B	B	B	A	A	A	A	I.L	I.L	A	A	I.L
氮气体 (干的)	A	A	B	B	B	A	A	A	A	C	B	C	C	A
氮气体 (湿的)	C	C	C	C	C	C	C	B	C	A	B	C	C	C
液	C	C	C	C	C	C	A	C	A	A	B	C	C	C
铬酸	C	C	C	C	C	A	C	A	C	A	B	C	C	C
柠檬酸	I.L	C	B	B	A	B	A	A	A	I.L	B	B	B	B
焦炉气	A	A	A	A	B	B	A	A	A	A	A	A	A	A
硫酸铜	C	C	B	B	B	C	I.L	A	A	A	I.A	A	A	A
棉子油	A	A	A	A	A	A	A	A	A	A	A	A	A	A
杂酚油	A	A	A	A	A	A	A	A	A	I.L	A	A	A	A
乙烷	A	A	A	A	A	B	A	A	A	A	A	A	A	A
乙醚	B	B	A	A	B	A	A	A	A	I.L	A	A	A	A
氯乙烷	C	C	A	A	A	A	A	A	A	A	B	B	B	I.L
乙烯	A	A	A	A	A	A	A	A	A	A	A	A	A	A
乙二醇	A	A	A	A	A	A	I.L	I.L	A	I.L	A	A	A	A
氯化铁	C	C	C	C	C	C	C	B	A	A	B	C	C	A
甲醛	B	B	A	A	A	A	A	A	A	A	A	A	A	I.L
甲酸	A	A	A	A	A	A	A	A	A	A	A	A	A	I.L
氟利昂 (湿的)	I.L	C	B	B	A	A	A	A	A	C	B	C	C	B
氟利昂 (干的)	B	B	A	A	A	A	A	A	A	A	A	I.L	I.L	I.L
糖醛	A	A	A	A	A	A	A	A	A	A	A	B	B	I.L
汽油 (精致的)	A	A	A	A	A	A	A	A	A	A	A	A	A	A

葡萄糖	A	A	A	A	A	A	A	A	A	A	A	A	A	A
盐酸 (无气的)	C	C	C	C	C	C	C	C	C	C	C	C	C	C
盐酸 (无气的)	C	C	C	C	C	C	C	C	C	C	C	C	C	C
氢氟酸 (无气的)	A	C	C	B	C	A	A	A	A	B	A	A	A	I.L
氢氟酸 (无气的)	A	C	C	B	C	A	A	A	A	B	A	A	A	I.L
氢	A	A	A	A	A	A	A	A	A	A	A	A	A	A
过氧化氢	I.L	I.L	A	A	C	A	B	B	B	B	B	B	B	I.L
硫化氢 (液体)	C	C	A	A	C	C	A	A	A	A	A	A	A	I.L
氢氧化镁	A	A	A	A	A	A	A	A	A	B	A	A	A	I.L
汞	A	A	A	A	A	A	A	A	A	C	B	A	A	B
甲醇	A	A	A	A	A	A	A	A	A	A	A	A	A	A
甲乙酮	A	A	A	A	A	A	A	A	A	A	A	A	A	A
牛奶	C	C	A	A	A	A	A	A	A	A	A	A	A	C
天然气	A	A	A	A	A	A	A	A	A	A	A	A	A	A
硝酸	C	C	A	A	C	C	A	A	A	C	C	A	A	C
油酸	C	C	A	A	B	A	A	A	A	A	A	A	A	A
草酸	C	C	B	B	B	B	A	A	A	B	B	A	A	A
氧	A	A	A	A	A	A	A	A	A	A	A	A	A	A
石油 (精致的)	A	C	A	B	A	A	A	A	A	A	A	A	A	A
磷酸 (无气的)	C	C	A	A	C	B	A	A	A	C	B	A	A	A
磷酸蒸汽	C	C	A	A	C	C	A	A	A	C	C	A	A	A
苦味酸	C	C	A	A	C	C	A	A	A	C	C	A	A	A
氯化钾	B	B	B	B	B	B	B	B	B	B	B	A	A	A
氢氧化钾	B	B	A	A	B	A	A	A	A	A	A	A	A	A
丙烷	A	A	A	A	A	A	A	A	A	A	A	A	A	A
松香	B	B	A	A	A	A	A	A	A	A	A	A	A	A
硝酸银	C	C	A	A	C	C	A	A	A	C	C	A	A	A
醋酸钠	A	A	B	A	A	A	A	A	A	A	A	A	A	A
碳酸钠	A	A	A	A	A	A	A	A	A	A	A	A	A	A
氯化钠	C	C	B	B	A	A	A	A	A	A	A	A	A	A
铬酸	A	A	A	A	A	A	A	A	A	A	A	A	A	A
氢氧化钠	A	A	A	A	A	A	A	A	A	A	A	A	A	A
次氧化钠	C	C	C	C	C	C	C	C	C	C	C	C	C	C
硫代硝酸钠	C	C	A	A	B-C	B-C	C	C	C	C	C	C	C	C
氯化亚锡	B	B	C	A	C	B	A	A	A	A	A	A	A	A
硬脂酸	A	C	A	A	B	B	A	A	A	A	A	A	A	A
硫酸盐溶液 (黑的)	A	A	A	A	C	A	A	A	A	A	A	A	A	A
硫	A	A	A	A	C	A	A	A	A	A	A	A	A	A
二氧化硫 (干的)	A	A	A	A	A	A	A	A	A	A	B	A	A	A
二氧化碳 (干的)	A	A	A	A	A	A	A	A	A	A	A	B	A	A
硫酸 (无气的)	C	C	C	C	C	C	C	C	C	C	C	C	C	C
硫酸 (无气的)	C	C	C	C	C	C	C	C	C	C	C	C	C	C
亚硫酸	C	C	B	B	B	B	B	B	B	B	B	B	B	B
焦油	A	A	A	A	A	A	A	A	A	A	A	A	A	A
三氯乙烯	B	B	B	A	A	A	A	A	A	A	A	A	A	A
松节油	B	B	A	A	A	A	A	A	A	A	A	A	A	A
醋	C	C	A	A	C	A	A	A	A	A	A	A	A	A
水 (锅炉给水)	B	C	A	A	A	A	A	A	A	A	A	A	A	A
水 (蒸馏的)	A	A	A	A	A	A	A	A	A	A	A	A	A	A
海水	B	B	B	B	B	A	A	A	A	A	A	A	A	A
威士忌和葡萄酒	C	C	A	A	A	B	A	A	A	A	A	A	A	A
氯化锌	C	C	C	C	C	C	C	C	C	C	C	C	C	C
硫酸锌	C	C	A	A	A	A	A	A	A	A	A	A	A	A

符号 A- 能够或正被成功的应用; B- 应用过程应注意; C- 不能应用; I.L- 缺乏资料

摘自《调节阀手册》第二版 美国仪表协会 J.W. 哈奇森 主编 林秋鸿等译 1984 年 12 月

本表是用来大致指出与每种物体接触而发生反应时, 应如何选择适当的材料。表中的推荐不是绝对的, 因为材料的耐腐蚀性与流体的速度、温度、压力和杂质等因素有关。因此, 必须强调本表只能作为一个导航。

材料中 - 英文对照表: 蒙乃尔合金 -Monel; 哈氏合金 B(C)-Hastelloy" B" ("C"); 不锈钢 #20-Durimet20; 钴 - 铬合金 E#6-Alloy(Co-Cr)