

# NUTORK<sup>®</sup>

Actuators & Valves



## BALL VALVE 球阀

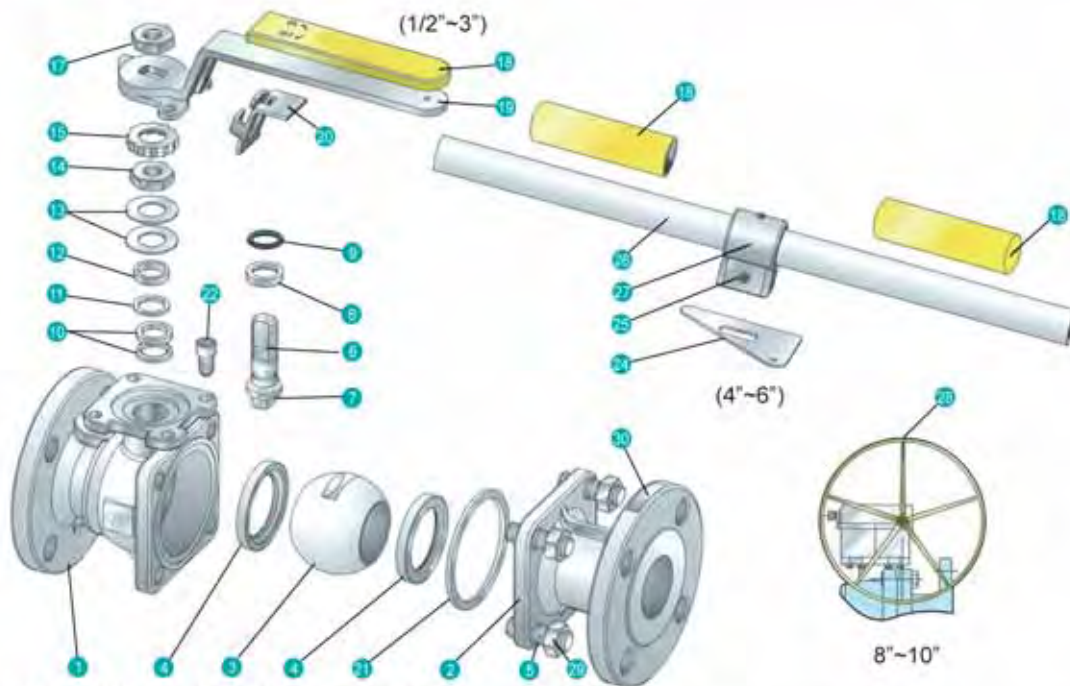


NUTORK CORPORATION

Standard / 标准	GB / 国标	ANSI / 美标	DIN / EN / 德标	JIS / 日标
Rating / 压力等级	GB / T12224 PN10-PN40 GB / T12237	B16.34 CLASS 150 (BS5351 CLASS 150) B16.34 CLASS 300 (BS5351 CLASS 300)	3357 PN10-PN40 EN 12516	B2001 10K B2001 20K
Face to Face / 结构长度	GB / T12221	B16.10 BS2080	3202 F4/F18 3202 F1/F17	B2002 10K Form 6 B2002 20K Form 10
Connection Facing / 连接端面	GB / T9113.1	B16.5RF serrated Finish (Ra3.2-Ra6.3) BS1560 Part 2 RF	2501/1 PN10-PN40 Facing DIN 2526 Form C	B2212 10K B2214 20K
Inspection & Testing / 检验&测试	GB / T13927	API 598 and API 6D	3230/3 EN 12266	JIS B2003
Fire Safe / 防火测试		API 607 4 <sup>th</sup> edition 1993		
Quality Assurance / 品保系统		ISO 9001 AD-W0 / TRD100 PED 97/23/EC. CE 0036		

### AVAILABLE OPTIONS / 选用

- Other Alloys Steel Upon Request.  
可选用其他合金钢
- Casting per NACE/MR-01-75 for Sour Gas Service.  
产品按美国国家腐蚀工程协会 NACE/MR-01-75



### MATERIAL OF CONSTRUCTION / 配件材质表

NO.	PART NAME / 零件名称	MATERIALS / 材质								
		ANSI / 美标			DIN / 德标			JIS / 日标		
1	Body / 阀体	CF8M	CF8	WCB	1.4408	1.4308	1.0619	SCS14A	SCS13A	SCPH2
2	End Cap / 阀盖	CF8M	CF8	WCB	1.4408	1.4308	1.0619	SCS14A	SCS13A	SCPH2
3	Ball / 球体	CF8M	CF8		1.4408		1.4308	SCS14A		SCS13A
4	Ball Seat / 阀座						1.4308			
5	Bolting / 螺栓	A193-B8		A193-B7	A193-B8		A193-B7	A193-B8		A193-B7
6	Stem / 阀杆	SUS316	SUS304		SUS316	SUS304		SUS316	SUS304	
7	Anti-Static / 防静电装置	SUS316	SUS304		SUS316	SUS304		SUS316	SUS304	
8	Stem Seal-Ring / 止推垫片				PTFE					
9	O-ring / O型密封圈				FKM(VITON)					
10	V-Ring Stem Packing / 阀杆填料				GRAFOIL					
11	Bushing / 密封衬套				SUS304					
12	Gland / 格南				SUS304					
13	Belleville Washer / 碟形弹片				SUS301					
14	Stem Nut / 阀杆螺母				A194-8					
15	Stop-lock-cap / 定位锁盖				SUS304					
16	Handle Gland / 手柄格南				SUS304(Black)					
17	Handle Nut / 手柄螺母				SUS304					
18	Handle Sleeve / 手柄胶套(1/2\"/>									

硬密封球阀 - 阀座材料: 316SS+Solder Stellite #6, 球体材料: 316SS+Hard Chrome Plated, 密封等级: ASME / PCI 70-2 Class V



### API607- 5th 防火设计球阀

Nutork soft-seated ball valves conform to Fire Tests of API 607 Fourth Edition and BS 6755 Part 2 (1987). Our products can seal properly during the fire and after the accident, reduce inside and outside leakage of pipeline fluids, and prevent environmental pollution (even the fire) resulted from flammable or other fluids in the pipeline.

Nutork软密封球阀，设计符合API607第五版和ISO 10497防火测试规范要求，并已取得认证。产品在火灾事故时能安全开断球阀，以防止在管道内易燃品或其他流体泄漏产生的环境污染或助燃。

#### Design Features / 设计特征:

1. During the fire, soft seats (such as PTFE, RTFE... etc) will burn up and lose supporting and sealing functions. Then, the Ball free moves downstream due to pressure from upstream, contacts secondary metal seats of Body or End Cap, and finally achieves to prevent leakage (see figures #1 & #2).

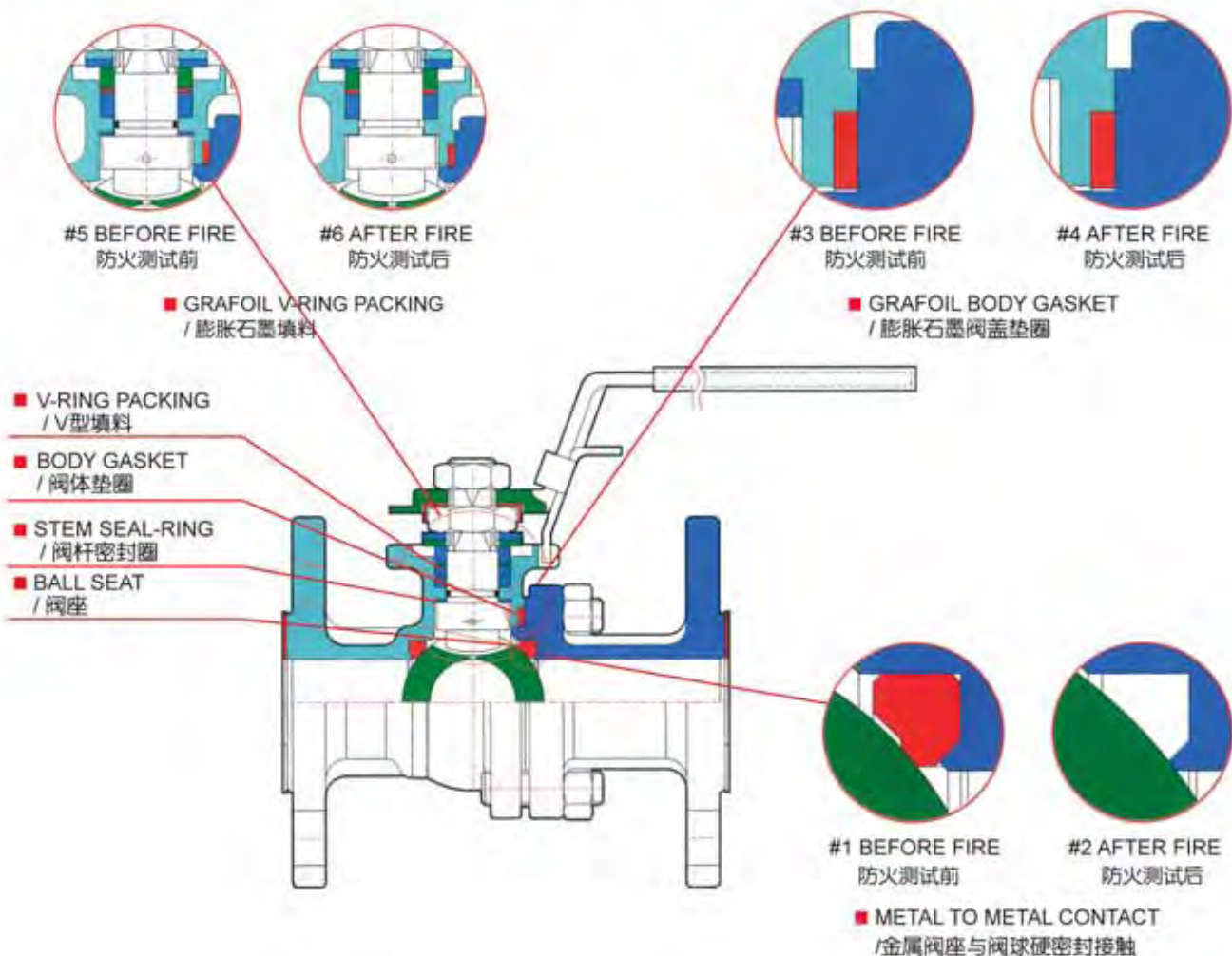
火灾发生时，软密封阀座（例如聚四氟乙烯、加固型聚四氟乙烯……等）将被燃烧汽化并失去支撑和密封性能，球阀由于压力的作用从上游移到下游，使之和下游的（体或盖）的第二个金属阀座直接接触，最终达到防止泄漏的作用（如图形 #1 和#2）。

2. Grafoil Body Gaskets can endure high temperature and remain unaffected during the fire, and eventually prevent fluid leakage to the exterior. Moreover, the connection of Body and End Cap Flange maintains metal to metal contact by Stud Bolts screwed into Body (see figures #3 & #4).

阀盖垫圈采用膨胀石墨可耐高温1200°，不受火灾影响并可防止外部流体泄漏。此外，阀体和端盖保留金属碰金属的设计并由螺栓锁紧到直接接触（如图形#3和#4）。

3. Grafoil Stem Seals can endure high temperature and remain unaffected during the fire and prevent fluid leakage to the exterior (see figures #5 & #6).

阀杆膨胀石墨填料耐高温1200°，不受火灾影响并可防止外部流体泄漏（如图形#5和#6）。



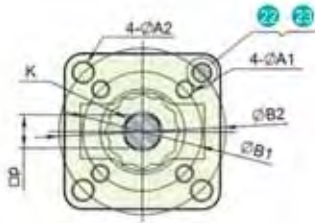


### DESIGN FEATURES / 设计特性

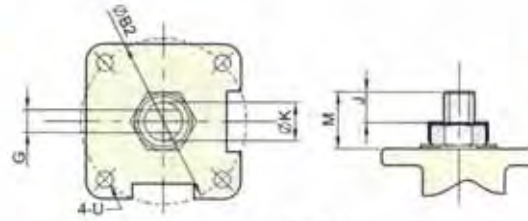
- Built-in ISO 5211 Direct Mounting Pad Easy Automation  
采用ISO 5211 平台设计便于安装执行器
- **Fire Safe** Design and Construction  
防火结构设计
- Anti-static Devices for Ball-stem-body  
阀杆与阀体之间带防静电装置
- Blow-out Proof Stem  
阀杆防爆出装置设计
- Pressure Balance Hole in Ball Slot  
钢球上有压力平衡孔

### APPLICABLE STANDARDS / 标准规范

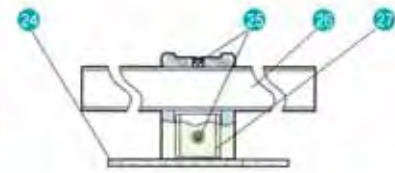
- Design / 设计标准: ASME B16.34, API 608
- Fire Safe / 防火测试: API 607 4<sup>th</sup> 1993, BS 6755 Part2
- Face to Face / 结构长度: ASME B16.10
- Wall Thickness / 壁厚: ASME B16.34
- End Flange / 法兰接管: ASME B16.5
- Inspection & Testing / 检验与测试: API 598, API 6D



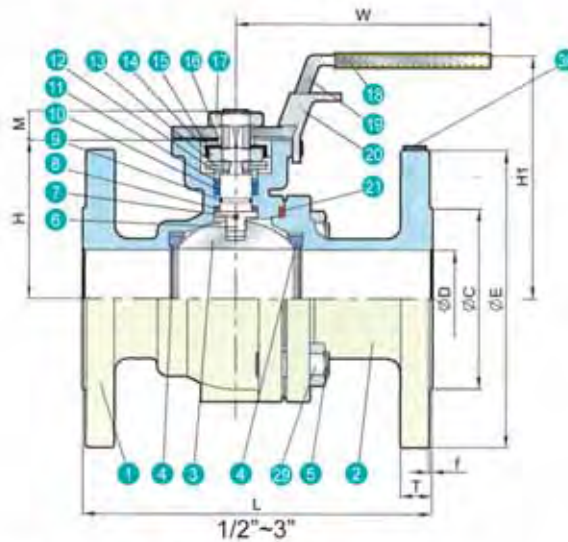
1/2"~10"  
(Direct Mount Type)



1/2"~4"



4"~6"



1/2"~3"



8"~10"  
W/Worm Gear

### ANSI CLASS 150 DIMENSION TABLE / ANSI CLASS 150尺寸表

Unit: mm

SIZE	ØD	L	ØC	ØE	ØB	T	f	N	Øn	H*	H	H1*	H1	M*	M	W*	W	K*	K	P*	G	A1*	A2*	B1*	B2	U	J
1/2"	15.0	108.0	35.0	89.0	60.5	9.7	1.6	4.0	16.0	48.0	37.0	78.0	86.0	9.0	20.0	145.0	135.0	7/16-20UNF	3/8-24UNF	9.0	6.3	6.0	6.0	36.0	42.0	M5	10.0
3/4"	20.0	117.0	43.0	98.6	70.0	10.5	1.6	4.0	16.0	53.0	40.5	84.0	90.0	9.0	20.0	145.0	135.0	7/16-20UNF	3/8-24UNF	9.0	6.3	6.0	7.0	36.0	50.0	M5	10.0
1"	25.0	127.0	51.0	108.0	79.2	11.2	1.6	4.0	16.0	58.5	45.5	90.5	96.0	11.0	24.0	175.0	170.0	9/16-18UNF	9/16-18UNF	11.0	9.0	6.0	7.0	42.0	50.0	M6	11.0
1-1/4"	32.0	140.0	63.5	117.0	88.9	12.7	1.6	4.0	16.0	71.0	50.0	103.0	102.0	11.0	24.0	175.0	170.0	9/16-18UNF	9/16-18UNF	11.0	9.0	6.0	9.0	42.0	70.0	M6	11.0
1-1/2"	38.0	165.0	73.2	127.0	98.6	14.2	1.6	4.0	16.0	76.0	61.0	111.0	114.0	14.0	27.0	194.0	200.0	3/4-16UNF	5/8-18UNF	14.0	9.6	7.0	9.0	50.0	70.0	M8	16.0
2"	50.0	178.0	92.0	152.5	120.7	15.9	1.6	4.0	16.0	81.0	71.0	116.0	127.0	14.0	27.0	194.0	200.0	3/4-16UNF	5/8-18UNF	14.0	9.6	7.0	9.0	50.0	70.0	M8	16.0
2-1/2"	64.0	190.0	104.7	177.8	139.7	17.5	1.6	4.0	16.0	101.5	89.0	150.0	177.0	17.0	42.5	265.0	250.0	7/8-14UNF	7/8-14UNF	17.0	16.0	9.0	11.0	70.0	102.0	M10	21.0
3"	76.0	203.0	127.0	190.5	152.4	19.1	1.6	4.0	16.0	111.5	100.0	160.0	183.0	17.0	42.5	265.0	250.0	7/8-14UNF	7/8-14UNF	17.0	16.0	9.0	11.0	70.0	102.0	M10	21.0
4"	100.0	229.0	157.2	228.6	190.5	23.9	1.6	4.0	16.0	140.0	121.0	182.0	214.0	22.0	47.5	400.0	400.0	1-1/8-12UNF	1-1/8-12UNF	22.0	18.0	-	11.0	-	102.0	M10	25.0
5"	125.0	356.0	186.0	254.0	216.0	24.0	1.6	4.0	16.0	183.0	-	260.0	-	27.0	-	600.0	-	1-3/8-12UNF	-	27.0	-	14.0	-	125.0	-	-	-
6"	150.0	394.0	216.0	279.4	241.3	25.4	1.6	4.0	16.0	204.0	-	280.0	-	27.0	-	800.0	-	1-3/8-12UNF	-	27.0	-	14.0	-	125.0	-	-	-
8"	200.0	457.0	270.0	342.9	298.5	28.5	1.6	4.0	16.0	252.0	-	370.0	-	27.0	-	305.0	-	1-3/8-12UNF	-	27.0	-	14.0	-	125.0	-	-	-
10"	250.0	533.0	324.0	406.4	362.0	30.3	1.6	4.0	16.0	310.0	-	430.0	-	36.0	-	305.0	-	2-12UNF	-	36.0	-	18.0	-	140.0	-	-	-

### ANSI CLASS 300 DIMENSION TABLE / ANSI CLASS 150尺寸表

Unit: mm

SIZE	ØD	L	ØC	ØE	ØB	T	f	N	Øn	H*	H	H1*	H1	M*	M	W*	W	K*	K	P*	G	A1*	A2*	B1*	B2	U	J
1/2"	15.0	140.0	35.0	95.3	66.5	14.3	1.6	4.0	16.0	-	37.0	-	86.0	-	20.0	-	135.0	-	3/8-24UNF	-	6.3	-	-	-	42.0	M5	10.0
3/4"	20.0	152.0	43.0	117.4	82.6	15.9	1.6	4.0	19.0	-	40.5	-	90.0	-	20.0	-	135.0	-	3/8-24UNF	-	6.3	-	-	-	42.0	M5	10.0
1"	25.0	165.0	51.0	124.0	88.9	17.5	1.6	4.0	19.0	-	45.5	-	96.0	-	24.0	-	170.0	-	9/16-18UNF	-	9.0	-	-	-	50.0	M6	11.0
1-1/4"	32.0	178.0	63.5	133.4	98.6	19.1	1.6	4.0	19.0	-	50.0	-	102.0	-	24.0	-	170.0	-	9/16-18UNF	-	9.0	-	-	-	50.0	M6	11.0
1-1/2"	38.0	190.0	73.0	155.5	114.3	20.7	1.6	4.0	22.3	-	62.0	-	114.0	-	27.0	-	200.0	-	5/8-18UNF	-	9.6	-	-	-	70.0	M8	16.0
2"	50.0	216.0	92.0	165.1	127.0	22.3	1.6	8.0	19.0	-	71.0	-	127.0	-	27.0	-	200.0	-	5/8-18UNF	-	9.6	-	-	-	70.0	M8	16.0
2-1/2"	64.0	241.0	104.7	190.5	149.4	25.4	1.6	8.0	22.3	-	89.0	-	177.0	-	42.5	-	250.0	-	7/8-14UNF	-	16.0	-	-	-	102.0	M10	21.0
3"	76.0	282.0	127.0	209.6	168.1	28.6	1.6	8.0	22.3	-	100.0	-	183.0	-	42.5	-	250.0	-	7/8-14UNF	-	16.0	-	-	-	102.0	M10	21.0
4"	100.0	305.0	157.2	254.0	200.2	31.8	1.6	8.0	22.3	-	123.0	-	214.0	-	47.5	-	400.0	-	1-1/8-12UNF	-	18.0	-	11.0	-	102.0	M10	25.0
5"	125.0	381.0	186.0	279.4	235.0	35.0	1.6	8.0	22.3	183.0	-	260.0	-	27.0	-	600.0	-	1-3/8-12UNF	-	27.0	-	14.0	-	125.0	-	-	-
6"	150.0	403.0	216.0	317.5	269.8	36.6	1.6	12.0	22.3	204.0	-	280.0	-	27.0	-	800.0	-	1-3/8-12UNF	-	27.0	-	14.0	-	125.0	-	-	-
8"	200.0	502.0	270.0	381.0	330.2	41.2	1.6	12.0	25.4	253.0	-	370.0	-	27.0	-	305.0	-	1-3/4-12UNF	-	27.0	-	14.0	-	125.0	-	-	-
10"	250.0	568.0	324.0	444.5	387.4	47.8	1.6	16.0	28.5	310.0	-	430.0	-	36.0	-	305.0	-	2-12UNF	-	36.0	-	18.0	-	140.0	-	-	-

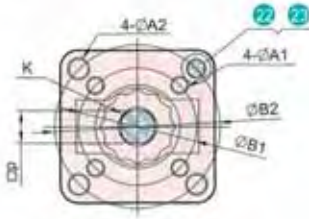


### DESIGN FEATURES / 设计特性

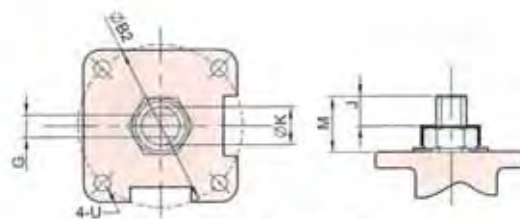
- Built-in ISO 5211 Direct Mounting Pad Easy Automation  
采用ISO 5211 平台设计便于安装执行器
- **Fire Safe** Design and Construction  
防火结构设计
- Anti-static Devices for Ball-stem-body  
阀杆与阀体之间带防静电装置
- Blow-out Proof Stem  
阀杆防爆出装置设计
- Pressure Balance Hole in Ball Slot  
钢球上有压力平衡孔

### APPLICABLE STANDARDS / 标准规范

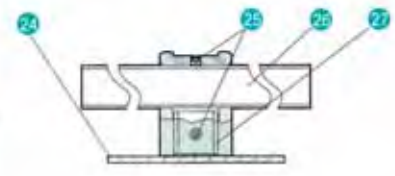
- Design Rating / 设计标准: EN 12516-1, ASME B16.34
- Fire Safe / 防火测试: API 607 4<sup>th</sup> 1993, BS 6755 Part2
- Face to Face / 结构长度: DIN 3202 F4/F17, F4/ F18, DIN 3357/2
- Wall Thickness / 壁厚: EN 12516-1
- End Flange / 法兰接端: EN 1092-1: 1999, DIN 2545
- Inspection & Testing / 检验与测试: EN 12266, API 6D



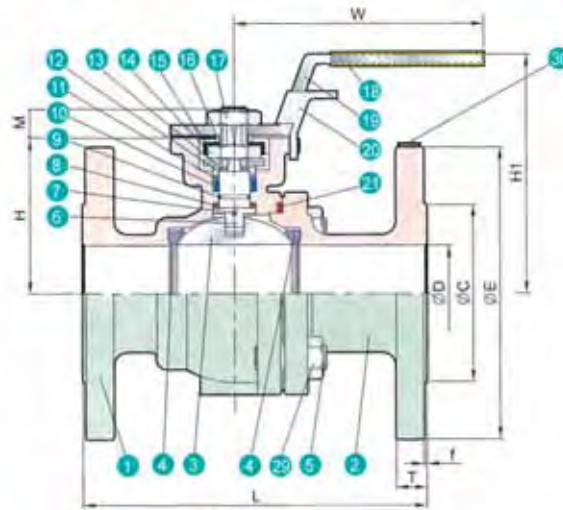
DN15 ~ DN250  
(Direct Mount Type)



DN15 ~ DN100



DN100 ~ DN150



DN15~DN80



DN200 ~ DN250  
W/Worm Gear

### ■ DIN PN10/16/25/40 DIMENSION TABLE (F1/F17, F4/F18)

Unit: mm

SIZE	PN	ØD	L	ℓ	ØC	ØE	ØB	f	T	N	Øn	H'	H	H1*	H1	M*	M	W*	W	K'	K	P*	G	A1*	A2*	B1*	B2	U	J
DN15	10	15.0	115.0	130.0	45.0	95.0	65.0	2.0	16.0	4.0	14.0	48.0	37.0	78.0	86.0	9.0	20.0	145.0	135.0	7/16-20UNF	3/8-24UNF	9.0	6.3	6.0	6.0	36.0	42.0	M5	10.0
DN20	10	20.0	120.0	150.0	58.0	105.0	75.0	2.0	18.0	4.0	14.0	53.0	40.0	84.0	90.0	9.0	20.0	145.0	135.0	7/16-20UNF	3/8-24UNF	9.0	6.3	6.0	6.0	36.0	42.0	M5	10.0
DN25	16	25.0	125.0	160.0	68.0	115.0	85.0	2.0	18.0	4.0	14.0	58.5	46.0	90.5	96.0	11.0	24.0	175.0	170.0	9/16-18UNF	3/8-24UNF	11.0	9.0	6.0	7.0	42.0	50.0	M6	11.0
DN32	25	32.0	130.0	180.0	78.0	140.0	100.0	2.0	18.0	4.0	18.0	71.0	50.0	103.0	102.0	11.0	24.0	175.0	170.0	9/16-18UNF	3/8-24UNF	11.0	9.0	6.0	7.0	42.0	50.0	M6	11.0
DN40	40	38.0	140.0	200.0	88.0	150.0	110.0	3.0	18.0	4.0	18.0	76.0	61.0	111.0	114.0	14.0	27.0	194.0	200.0	3/4-16UNF	5/8-18UNF	14.0	9.6	7.0	9.0	50.0	70.0	M8	16.0
DN50	40	50.0	150.0	230.0	102.0	165.0	125.0	3.0	20.0	4.0	18.0	85.0	71.0	120.0	127.0	14.0	27.0	194.0	200.0	3/4-16UNF	5/8-18UNF	14.0	9.6	7.0	9.0	50.0	70.0	M8	16.0
DN65	10/16	65.0	170.0	290.0	122.0	185.0	145.0	3.0	22.0	8.0	18.0	101.5	89.0	150.0	177.0	17.0	42.5	265.0	250.0	7/8-14UNF	3/8-24UNF	17.0	16.0	9.0	11.0	70.0	102.0	M10	21.0
DN80	25/40	76.0	180.0	310.0	138.0	200.0	160.0	3.0	24.0	8.0	18.0	111.5	100.0	160.0	183.0	17.0	42.5	265.0	250.0	7/8-14UNF	3/8-24UNF	17.0	16.0	9.0	11.0	70.0	102.0	M10	21.0
DN100	10/16	100.0	190.0	350.0	158.0	220.0	180.0	3.0	24.0	8.0	18.0	140.0	121.0	182.0	214.0	22.0	47.5	400.0	400.0	1-1/8-12UNF	3/8-24UNF	22.0	18.0	-	11.0	-	102.0	M10	25.0
DN125	25/40	125.0	325.0	400.0	188.0	250.0	210.0	3.0	26.0	26.0	8.0	183.0	-	260.0	-	27.0	-	600.0	-	1-3/8-12UNF	-	27.0	-	14.0	-	125.0	-	-	-
DN150	10/16	150.0	350.0	450.0	212.0	285.0	240.0	3.0	28.0	28.0	8.0	204.0	-	280.0	-	27.0	-	800.0	-	1-3/8-12UNF	-	27.0	-	14.0	-	125.0	-	-	-
DN200	10	200.0	400.0	550.0	268.0	340.0	295.0	3.0	30.0	26.0	12.0	252.0	-	370.0	-	27.0	-	305.0	-	1-3/4-12UNF	-	27.0	-	14.0	-	125.0	-	-	-
DN250	10	250.0	450.0	650.0	320.0	395.0	350.0	3.0	32.0	30.0	12.0	310.0	-	430.0	-	36.0	-	305.0	-	2-12UNF	-	36.0	-	14.0	-	140.0	-	-	-

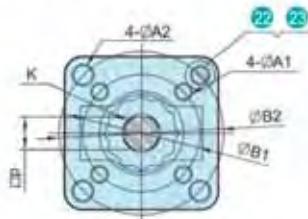


### DESIGN FEATURES / 设计特性

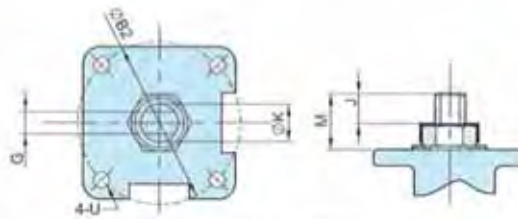
- Built-in ISO 5211 Direct Mounting Pad Easy Automation  
采用ISO 5211 平台设计便于安装执行器
- **Fire Safe** Design and Construction  
防火结构设计
- Anti-static Devices for Ball-stem-body  
阀杆与阀体之间带防静电装置
- Blow-out Proof Stem  
阀杆防爆出装置设计
- Pressure Balance Hole in Ball Slot  
钢球上有压力平衡孔

### APPLICABLE STANDARDS / 标准规范

- Design / 设计标准: ASME B16.34, API 608
- Fire Safe / 防火测试: API 607 4th 1993, BS 6755 Part2
- Face to Face / 结构长度: JIS B2002 (ASME B16.10)
- End Flange / 法兰连接: JIS B 2238
- Inspection & Testing / 检验与测试: JIS B2003, API 6D
- Wall Thickness / 壁厚: ASME B16.34



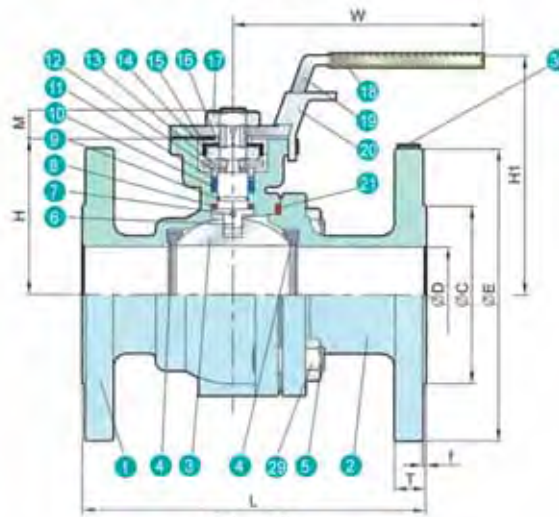
A15 ~ 250A  
(Direct Mount Type)



15A ~ 100A



100A ~ 150A



15A ~ 80A



200A ~ 250A  
W/Worm Gear

### ■ JIS 10K DIMENSION TABLE

Unit: mm

SIZE	ØD	L	ØC	ØE	ØB	T	f	N	Øn	H*	H	H*	H1	M*	M	W*	W	K*	K	P*	G	A1*	A2*	B1*	B2	U	J
15A	15.0	108.0	51.0	95.0	70.0	12.0	1.0	4.0	15.0	48.0	37.0	78.0	88.0	9.0	20.0	145.0	135.0	7/16-20UNF	3/8-24UNF	9.0	6.3	6.0	6.0	36.0	42.0	M5	10.0
20A	20.0	117.0	56.0	100.0	75.0	14.0	1.0	4.0	15.0	53.0	40.0	84.0	90.0	9.0	20.0	145.0	135.0	7/16-20UNF	3/8-24UNF	9.0	6.3	6.0	7.0	36.0	50.0	M5	10.0
25A	25.0	127.0	67.0	125.0	90.0	14.0	1.0	4.0	19.0	63.5	46.0	95.0	96.0	11.0	24.0	175.0	170.0	9/16-18UNF	5/8-18UNF	11.0	9.0	6.0	7.0	42.0	50.0	M5	11.0
32A	32.0	140.0	76.0	135.0	100.0	16.0	2.0	4.0	19.0	70.0	50.0	103.0	102.0	11.0	24.0	175.0	170.0	9/16-18UNF	5/8-18UNF	11.0	9.0	6.0	9.0	42.0	70.0	M6	11.0
40A	38.0	165.0	81.0	140.0	105.0	16.0	2.0	4.0	19.0	71.0	61.0	106.0	114.0	14.0	27.0	194.0	200.0	3/4-16UNF	5/8-18UNF	14.0	9.6	7.0	9.0	50.0	70.0	M8	16.0
50A	50.0	178.0	96.0	155.0	120.0	16.0	2.0	4.0	19.0	80.0	71.0	116.0	127.0	14.0	27.0	194.0	200.0	3/4-16UNF	5/8-18UNF	14.0	9.6	7.0	9.0	50.0	70.0	M8	16.0
65A	64.0	190.0	118.0	175.0	140.0	18.0	2.0	4.0	19.0	101.5	89.0	150.0	177.0	17.0	42.5	265.0	250.0	7/8-14UNF	5/8-18UNF	17.0	16.0	9.0	11.0	70.0	102.0	M10	21.0
80A	76.0	203.0	126.0	185.0	150.0	18.0	2.0	8.0	19.0	111.5	100.0	160.0	183.0	17.0	42.5	265.0	250.0	7/8-14UNF	5/8-18UNF	17.0	16.0	9.0	11.0	70.0	102.0	M10	21.0
100A	100.0	229.0	151.0	210.0	175.0	18.0	2.0	8.0	19.0	140.0	121.0	182.0	214.0	22.0	47.5	400.0	400.0	1-1/8-12UNF	5/8-18UNF	22.0	18.0	-	11.0	-	102.0	M10	25.0
125A	125.0	356.0	182.0	250.0	210.0	20.0	2.0	8.0	23.0	183.0	-	260.0	-	27.0	-	600.0	-	1-3/8-12UNF	-	27.0	-	14.0	-	125.0	-	-	-
150A	150.0	394.0	212.0	280.0	240.0	22.0	2.0	8.0	23.0	204.0	-	280.0	-	27.0	-	800.0	-	1-3/8-12UNF	-	27.0	-	14.0	-	125.0	-	-	-
200A	200.0	457.0	262.0	330.0	290.0	22.0	2.0	12.0	23.0	252.0	-	370.0	-	27.0	-	305.0	-	1-3/8-12UNF	-	27.0	-	14.0	-	125.0	-	-	-
250A	250.0	533.0	324.0	400.0	355.0	24.0	2.0	12.0	25.0	310.0	-	430.0	-	36.0	-	305.0	-	2-1/2UNF	-	36.0	-	18.0	-	140.0	-	-	-

### ■ JIS 20K DIMENSION TABLE

Unit: mm

SIZE	ØD	L	ØC	ØE	ØB	T	f	N	Øn	H*	H	H1*	H1	M*	M	W*	W	K*	K	P*	G	A1*	A2*	B1*	B2	U	J
15A	15.0	140.0	51.0	95.0	70.0	14.0	1.6	4.0	15.0	-	37.0	-	86.0	-	20.0	-	135.0	-	3/8-24UNF	-	6.3	-	-	-	42.0	M5	10.0
20A	20.0	152.0	56.0	100.0	75.0	16.0	1.6	4.0	15.0	-	40.5	-	90.0	-	20.0	-	135.0	-	3/8-24UNF	-	6.3	-	-	-	42.0	M5	10.0
25A	25.0	165.0	67.0	125.0	90.0	16.0	1.6	4.0	19.0	-	45.5	-	96.0	-	24.0	-	170.0	-	9/16-18UNF	-	9.0	-	-	-	50.0	M6	11.0
32A	32.0	178.0	76.0	135.0	100.0	18.0	2.0	4.0	19.0	-	50.0	-	102.0	-	24.0	-	170.0	-	9/16-18UNF	-	9.0	-	-	-	50.0	M6	11.0
40A	38.0	190.0	81.0	140.0	105.0	18.0	2.0	4.0	19.0	-	62.0	-	114.0	-	27.0	-	200.0	-	5/8-18UNF	-	9.6	-	-	-	70.0	M8	16.0
50A	50.0	216.0	96.0	155.0	120.0	18.0	2.0	8.0	19.0	-	71.0	-	127.0	-	27.0	-	200.0	-	5/8-18UNF	-	9.6	-	-	-	70.0	M8	16.0
65A	64.0	241.0	116.0	175.0	140.0	20.0	2.0	8.0	19.0	-	89.0	-	177.0	-	42.5	-	250.0	-	7/8-14UNF	-	16.0	-	-	-	102.0	M10	21.0
80A	76.0	282.0	132.0	200.0	160.0	22.0	2.0	8.0	23.0	-	100.0	-	183.0	-	42.5	-	250.0	-	7/8-14UNF	-	16.0	-	-	-	102.0	M10	21.0
100A	100.0	305.0	160.0	225.0	185.0	24.0	2.0	8.0	23.0	-	123.0	-	214.0	-	47.5	-	400.0	-	1-1/8-12UNF	-	18.0	-	-	-	102.0	M10	25.0
125A	125.0	381.0	195.0	270.0	225.0	26.0	2.0	8.0	25.0	183.0	-	260.0	-	27.0	-	800.0	-	1-3/8-12UNF	-	27.0	-	14.0	-	125.0	-	-	-
150A	150.0	403.0	230.0	305.0	260.0	28.0	2.0	12.0	25.0	204.0	-	280.0	-	27.0	-	800.0	-	1-3/8-12UNF	-	27.0	-	14.0	-	125.0	-	-	-
200A	200.0	502.0	275.0	350.0	305.0	30.0	2.0	12.0	25.0	252.0	-	370.0	-	27.0	-	305.0	-	1-3/4-12UNF	-	27.0	-	14.0	-	125.0	-	-	-
250A	250.0	588.0	345.0	430.0	380.0	34.0	2.0	12.0	27.0	310.0	-	430.0	-	36.0	-	305.0	-	2-1/2UNF	-	36.0	-	18.0	-	140.0	-	-	-

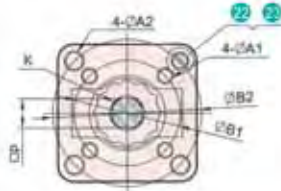


### DESIGN FEATURES / 设计特性

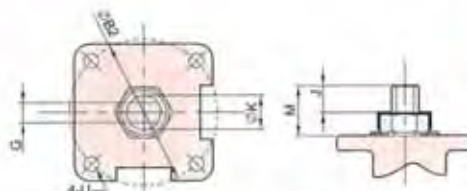
- Built-in ISO 5211 Direct Mounting Pad Easy Automation  
采用ISO 5211 平台设计便于安装执行器
- **Fire Safe** Design and Construction  
防火结构设计
- Anti-static Devices for Ball-stem-body  
阀杆与阀体之间带防静电装置
- Blow-out Proof Stem  
阀杆防爆出装置设计
- Pressure Balance Hole in Ball Slot  
钢球上有压力平衡孔

### APPLICABLE STANDARDS / 标准规范

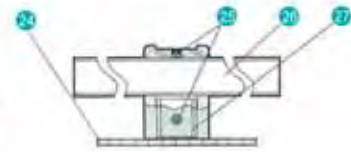
- Design Rating / 设计标准: GB / T12224 GB / T12237
- Fire Safe / 防火测试: API 607 4<sup>th</sup> 1993, BS 6755 Part2
- Face to Face / 结构长度: GB / T12221
- Wall Thickness / 壁厚: ASME B16.34
- End Flange / 法兰连接: GB TT9113.1
- Inspection & Testing / 检验与测试: GB / T13927, API 598



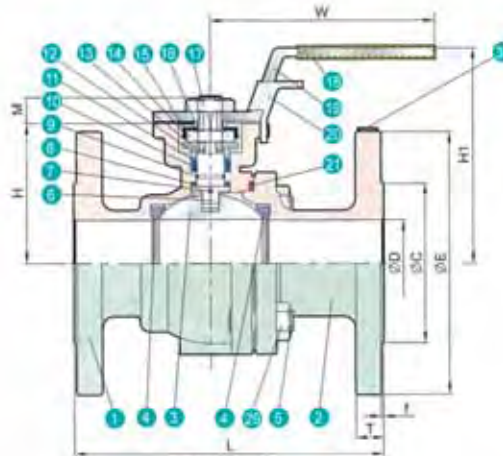
DN15 - DN250  
(Direct Mount Type)



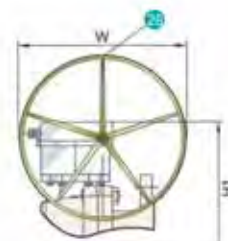
DN15 - DN100



DN100 - DN150



DN15-DN80



DN200 - DN250  
W/Worm Gear

### ■ GB-Q41F PN16 DIMENSION TABLE (F1/F17, F4/F18)

Unit: mm

SIZE	ØD	L	ØC	ØE	ØB	T	f	N	Øn	H	H1	M	W	K	P	G	A1	A2	B1	B2	U	J
DN15	15.0	130.0	45.0	95.0	65.0	14.0	2.0	4.0	14.0	37.0	86.0	20.0	135.0	3/8-24UNF	9.0	6.3	6.0	6.0	36.0	42.0	M5	10.0
DN20	20.0	140.0	58.0	105.0	75.0	16.0	2.0	4.0	14.0	40.0	90.0	20.0	135.0	3/8-24UNF	9.0	6.3	6.0	6.0	36.0	42.0	M5	10.0
DN25	25.0	150.0	68.0	115.0	85.0	16.0	3.0	4.0	14.0	46.0	96.0	24.0	170.0	9/16-18UNF	11.0	9.0	6.0	7.0	42.0	50.0	M6	11.0
DN32	32.0	165.0	78.0	140.0	100.0	16.0	3.0	4.0	18.0	50.0	102.0	24.0	170.0	9/16-18UNF	11.0	9.0	6.0	7.0	42.0	50.0	M6	11.0
DN40	40.0	180.0	84.0	150.0	110.0	18.0	3.0	4.0	18.0	61.0	114.0	27.0	200.0	5/8-18UNF	14.0	9.6	7.0	9.0	50.0	70.0	M8	16.0
DN50	50.0	200.0	99.0	165.0	125.0	20.0	3.0	4.0	18.0	71.0	127.0	27.0	200.0	5/8-18UNF	14.0	9.6	7.0	9.0	50.0	70.0	M8	16.0
DN65	65.0	220.0	118.0	185.0	145.0	20.0	3.0	4.0	18.0	89.0	177.0	42.5	250.0	7/8-14UNF	17.0	16.0	9.0	11.0	70.0	102.0	M10	21.0
DN80	80.0	250.0	132.0	200.0	160.0	20.0	3.0	8.0	18.0	100.0	183.0	42.5	250.0	7/8-14UNF	17.0	16.0	9.0	11.0	70.0	102.0	M10	21.0
DN100	100.0	280.0	156.0	220.0	180.0	22.0	3.0	8.0	18.0	121.0	214.0	47.5	400.0	1-1/8-12UNF	22.0	18.0	—	11.0	—	102.0	M10	25.0
DN125	125.0	320.0	184.0	250.0	210.0	22.0	3.0	8.0	18.0	183.0	260.0	27.0	600.0	1-3/8-12UNF	27.0	—	14.0	—	125.0	—	—	—
DN150	150.0	360.0	211.0	285.0	240.0	24.0	3.0	8.0	22.0	204.0	280.0	27.0	800.0	1-3/8-12UNF	27.0	—	14.0	—	125.0	—	—	—
DN200	200.0	457.0	266.0	340.0	295.0	24.0	3.0	12.0	22.0	252.0	370.0	27.0	305.0	1-3/4-12UNF	27.0	—	14.0	—	125.0	—	—	—
DN250	250.0	533.0	319.0	405.0	355.0	26.0	3.0	12.0	26.0	310.0	430.0	36.0	305.0	2-12UNF	36.0	—	14.0	—	140.0	—	—	—

### ■ GB-Q41F PN40 DIMENSION TABLE (F1/F17, F4/F18)

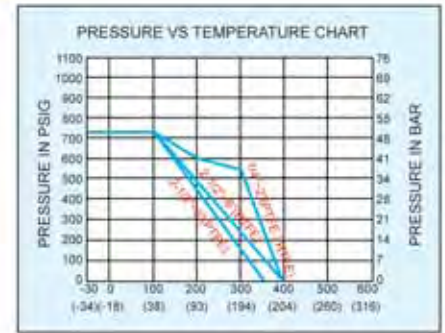
Unit: mm

SIZE	ØD	L	ØC	ØE	ØB	T	f	N	Øn	H	H1	M	W	K	P	G	A1	A2	B1	B2	U	J
DN15	15.0	140.0	45.0	95.0	65.0	14.0	2.0	4.0	14.0	37.0	86.0	20.0	135.0	3/8-24UNF	9.0	6.3	6.0	6.0	36.0	42.0	M5	10.0
DN20	20.0	152.0	58.0	105.0	75.0	16.0	2.0	4.0	14.0	40.0	90.0	20.0	135.0	3/8-24UNF	9.0	6.3	6.0	6.0	36.0	42.0	M5	10.0
DN25	25.0	165.0	68.0	115.0	85.0	16.0	3.0	4.0	14.0	46.0	96.0	24.0	170.0	9/16-18UNF	11.0	9.0	6.0	7.0	42.0	50.0	M6	11.0
DN32	32.0	178.0	78.0	140.0	100.0	16.0	3.0	4.0	18.0	50.0	102.0	24.0	170.0	9/16-18UNF	11.0	9.0	6.0	7.0	42.0	50.0	M6	11.0
DN40	40.0	190.0	84.0	150.0	110.0	18.0	3.0	4.0	18.0	61.0	114.0	27.0	200.0	5/8-18UNF	14.0	9.6	7.0	9.0	50.0	70.0	M8	16.0
DN50	50.0	216.0	99.0	165.0	125.0	20.0	3.0	4.0	18.0	71.0	127.0	27.0	200.0	5/8-18UNF	14.0	9.6	7.0	9.0	50.0	70.0	M8	16.0
DN65	65.0	241.0	118.0	185.0	145.0	22.0	3.0	4.0	18.0	89.0	177.0	42.5	250.0	7/8-14UNF	17.0	16.0	9.0	11.0	70.0	102.0	M10	21.0
DN80	80.0	283.0	132.0	200.0	160.0	24.0	3.0	8.0	18.0	100.0	183.0	42.5	250.0	7/8-14UNF	17.0	16.0	9.0	11.0	70.0	102.0	M10	21.0
DN100	100.0	305.0	156.0	235.0	190.0	24.0	3.0	8.0	22.0	121.0	214.0	47.5	400.0	1-1/8-12UNF	22.0	18.0	—	11.0	—	102.0	M10	25.0
DN125	125.0	381.0	184.0	270.0	220.0	26.0	3.0	8.0	26.0	183.0	260.0	27.0	600.0	1-3/8-12UNF	27.0	—	14.0	—	125.0	—	—	—
DN150	150.0	403.0	211.0	300.0	250.0	28.0	3.0	8.0	26.0	204.0	280.0	27.0	800.0	1-3/8-12UNF	27.0	—	14.0	—	125.0	—	—	—
DN200	200.0	502.0	284.0	375.0	320.0	34.0	3.0	12.0	30.0	252.0	370.0	27.0	305.0	1-3/4-12UNF	27.0	—	14.0	—	125.0	—	—	—
DN250	250.0	568.0	315.0	450.0	365.0	38.0	3.0	12.0	33.0	310.0	430.0	36.0	305.0	2-12UNF	36.0	—	14.0	—	140.0	—	—	—



### DESIGN FEATURES / 设计特性

- Built-in ISO 5211 Direct Mounting Pad Easy Automation  
采用ISO 5211 平台设计便于安装执行器
- **Fire Safe** Design and Construction  
防火结构设计
- Anti-static Devices for Ball-stem-body  
阀杆与阀体之间带防静电装置
- Blow-out Proof Stem  
阀杆防爆出装置设计
- Pressure Balance Hole in Ball Slot  
钢球上有压力平衡孔



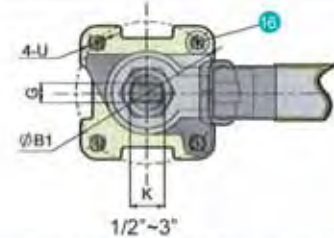
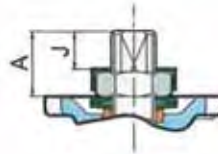
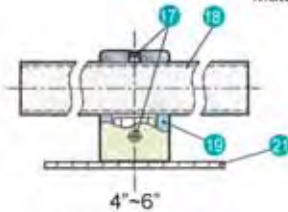
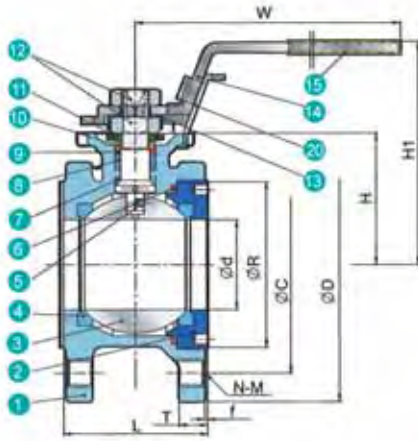
### APPLICABLE STANDARDS / 标准规范

- Design / 设计标准: ASME B16.34, API 608
- Fire Safe / 防火测试: API 607 4<sup>th</sup> 1993, BS 6755 Part2
- Wall Thickness / 壁厚: ASME B16.34
- End Flange / 法兰连接: ASME B16.5
- Inspection & Testing / 检验与测试: API 598, API 6D

### MATERIAL OF CONSTRUCTION / 配件材质表

NO.	PART / 零件名称	MATERIAL		
		CF8M	CF8	WCB
1	Body / 阀体	CF8M	CF8	WCB
2	End Cap / 阀盖	CF8M	CF8	WCB
3	Ball / 球体	CF8M	WCB	
4	Ball Seat / 阀座	PTFE		
5	Stem / 阀杆	SUS 316	SUS 304	
6	Body Gasket / 阀盖垫圈	PTFE / SUS 316 SPIRAL WOUND * / GRAFOIL*		
7	Stem Seal-Ring (+O-Ring *) / 止推垫圈	PTFE / PTFE (+FKM*)		
8	V-Ring Packing / 阀杆填料	PTFE / GRAFOIL *		
9	Bushing / 密封衬套	50%SS+50%PTFE / SUS 304 *		
10	Gland / 格南	SUS 316		
11	Bellville Washer / 碟型弹片	SUS 301		
12	Stem Nut / 阀杆螺母	SUS 304		
13	Stop-Lock-Cap / 定位锁盖	SUS 304		
14	Handle / 手柄 (1~3")	SUS 304		
15	Handle Sleeve / 手柄衬套 (1~3")	VINYL PLASTIC		
16	Set Bolt / 定位螺栓	SUS 304		
17	Set Screwed / 锁紧螺丝 (4~6")	SUS 304		
18	Handle / 手柄 (4~6")	A53-PLATED Zn		
19	Handle Adapter / 手柄接头 (4~6")	A351-CF8		
20	Lock Device / 挂锁装置 (1/2~3")	SUS 304		
21	Triangle Stopper / 定位片 (4~6")	SUS 304		

\* Materials For FIRE-SAFE Models / 防火设计材料



Unit: mm

### ANSI CLASS 150 DIMENSION TABLE

SIZE	Ød	L	ØR	ØD	ØC	T	f	H	H1	N	M	W	G	A	J	U	ØB1	K
1/2"	15.0	42.0	35.0	89.0	60.5	9.7	1.6	41.0	90.5	4	1/2"	135	6.3	17.0	8.1	M5	42	3/8-24UNF
3/4"	20.0	44.0	43.0	98.6	70.0	10.5	1.6	44.0	94.0	4	1/2"	135	6.3	17.0	8.1	M5	42	3/8-24UNF
1"	25.0	50.0	50.8	108.0	79.3	11.2	1.6	46.5	99.0	4	1/2"	170	9.0	22.7	10.2	M6	50	9/16-18UNF
1-1/4"	32.0	60.0	63.5	117.4	88.9	12.7	1.6	55.0	99.0	4	1/2"	170	9.0	24.0	11.0	M6	50	9/16-18UNF
1-1/2"	38.0	65.0	73.5	127.0	98.6	14.3	1.6	64.0	117.0	4	1/2"	200	9.6	25.8	13.9	M8	70	5/8-24UNF
2"	50.0	80.0	92.0	152.4	120.6	15.8	1.6	73.1	124.0	4	5/8"	200	9.6	23.9	13.9	M8	70	5/8-24UNF
2-1/2"	64.0	110.0	105.0	177.8	139.7	17.5	1.6	88.0	148.0	4	5/8"	250	16.0	42.5	24.0	M10	102	7/8-14UNF
3"	76.0	120.0	127.0	190.5	152.4	19.0	1.6	97.0	157.0	4	5/8"	250	16.0	42.6	22.5	M10	102	7/8-14UNF
4"	100.0	150.0	157.3	228.6	190.5	23.9	1.6	117.0	200.0	8	5/8"	280	18.0	51.4	24.5	M10	102	11/8-12UNF
5"	125.0	195.0	186.0	254.0	215.9	25.2	1.6	155.0	270.0	8	3/4"	600	23.0	76.5	36.0	M10	102	13/8-12UNF
6"	150.0	225.0	215.9	279.4	241.3	25.4	1.6	194.0	310.5	8	3/4"	800	23.0	76.5	36.0	M12	125	13/8-12UNF

### ANSI CLASS 300 DIMENSION TABLE

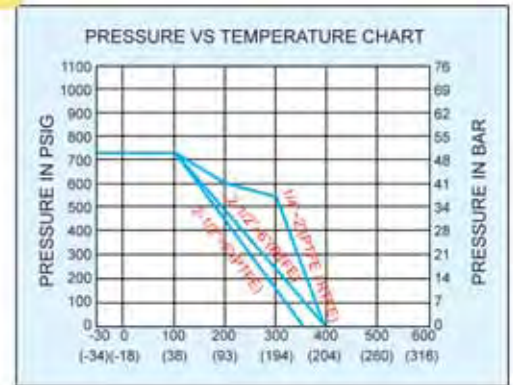
SIZE	Ød	L	ØR	ØD	ØC	T	f	H	H1	N	M	W	G	A	J	U	ØB1	K
1/2"	15.0	42.0	35.0	95.3	66.5	14.3	1.6	41.0	90.5	4	1/2"	135	6.3	17.0	8.1	M5	42	3/8-24UNF
3/4"	20.0	44.0	43.0	117.4	82.6	15.9	1.6	44.0	94.0	4	1/2"	135	6.3	17.0	8.1	M5	42	3/8-24UNF
1"	25.0	50.0	50.8	124.0	88.9	17.5	1.6	46.5	99.0	4	5/8"	170	9.0	22.7	10.2	M6	50	9/16-18UNF
1-1/4"	32.0	60.0	63.5	133.0	98.6	19.0	1.6	55.0	99.0	4	5/8"	170	9.0	24.0	11.0	M6	50	9/16-18UNF
1-1/2"	38.0	65.0	73.5	155.0	114.3	20.6	1.6	64.0	117.0	4	3/4"	200	9.6	25.8	13.9	M8	70	5/8-28UNF
2"	50.0	80.0	92.0	165.0	127.0	22.3	1.6	73.1	124.0	8	5/8"	200	9.6	27.0	13.9	M8	70	5/8-28UNF
2-1/2"	64.0	110.0	105.0	190.0	149.4	25.4	1.6	88.0	148.0	8	3/4"	250	16.0	42.5	24.0	M10	102	7/8-14UNF
3"	76.0	120.0	127.0	210.0	168.1	28.5	1.6	97.0	157.0	8	3/4"	250	16.0	42.5	22.5	M10	102	7/8-14UNF
4"	100.0	150.0	140.3	254.0	200.2	31.8	1.6	117.0	200.0	8	3/4"	400	18.0	47.5	24.5	M10	102	11/8-12UNF
5"	125.0	195.0	157.0	280.0	235.0	35.0	1.6	155.0	270.0	8	3/4"	600	23.0	76.5	36.0	M10	102	13/8-12UNF
6"	150.0	225.0	186.0	318.0	269.8	36.6	1.6	194.0	310.5	12	3/4"	800	23.0	76.5	36.0	M12	125	13/8-12UNF

Unit: mm



### DESIGN FEATURES / 设计特性

- Built-in ISO 5211 Direct Mounting Pad Easy Automation  
采用ISO 5211 平台设计便于安装执行器
- **Fire Safe** Design and Construction  
防火结构设计
- Anti-static Devices for Ball-stem-body  
阀杆与阀体之间带防静电装置
- Blow-out Proof Stem  
阀杆防爆出装置设计
- Pressure Balance Hole in Ball Slot  
钢球上有压力平衡孔



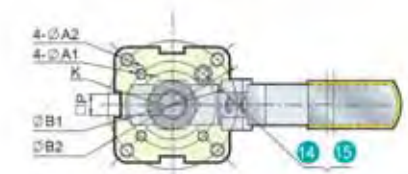
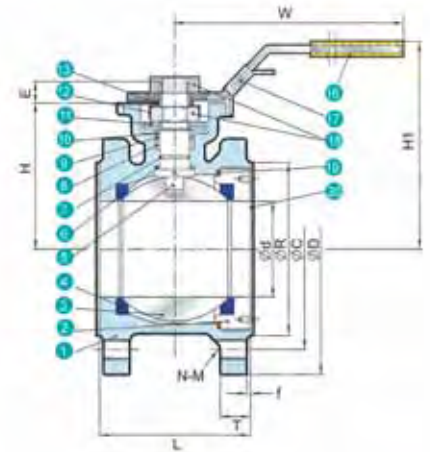
### APPLICABLE STANDARDS / 标准规范

- Design Rating / 设计标准: DIN 3375/1.2, EN 12516-1
- Fire Safe / 防火测试: API 607 4th 1993, BS 6755 Part 2.
- Wall Thickness / 壁厚: ASME B16.34, EN 12516-1
- End Flange / 法兰连接: DIN 2542-DIN 2545, EN 1092
- Inspection & Testing / 检验与测试: DIN3230/3, EN12266
- Connection / 连接: DIN2501/1 PN10-PN40
- Face 法兰端面: DIN2562 Form C

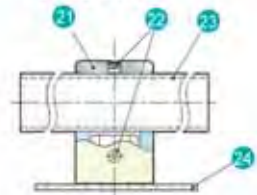
### MATERIAL OF CONSTRUCTION / 配件材质表

NO.	PART NAME / 零件名称	MATERIAL / 材质		
1	Body / 阀体	1.4408	1.4308	1.0619
2	End Cap / 阀盖	1.4408	1.4308	1.0619
3	Ball / 球体	1.4408	1.4308	1.0619
4	Ball Seat / 阀座		1.4308	
5	Stem / 阀杆	SUS 316	SUS 304	
6	Stem Seal-Ring / 止推垫圈		PTFE	
7	O-Ring / O型密封圈		FKM(VITON)	
8	V-Ring Packing / 阀杆填料		PTFE / GRAFOIL *	
9	Bushing / 密封衬套		50%SS+50%PTFE / SUS 304 *	
10	Gland / 格南		SUS 316	
11	Belleville Washer / 碟型弹片		SUS 301	
12	Stop-lock-Cap / 定位锁盖		SUS 304	
13	Handle Gland / 手柄格南		SUS 304	
14	Stop Bolt / 定位螺栓		A193-B8	
15	Nut / 螺母		A194-8	
16	Handle Sleeve / 手柄衬套(1/2~3")		VINYL PLASTIC	
17	Handle / 手柄(1/2~3")		SUS 304	
18	Stem Nut 阀杆螺母		A194-8	
19	Body Gasket / 阀盖垫圈		PTFE / SUS316 SPIRAL WOUND * / GRAFOIL *	
20	Flange Cover / 法兰盖片		PVC	
21	Handle Adapter / 手柄接头(4~6")		CF8	
22	Set Screwed / 锁紧螺丝(4~6")		SUS 304	
23	Handle / 手柄(4~6")		A53 + Zn Plated	
24	Triangle Stopper / 定位片(4~6")		SUS 304	

\* Materials For FIRE-SAFE Models / 防火设计材料



DN15-DN80



DN100-DN200

### ■ DIN PN10 / 16 / 25 / 40 DIMENSION TABLE

Unit: mm

SIZE	PN	Ød	ØR	ØC	ØD	f	T	L	H1	H	E	P	N	M	W	K	ØA1	ØA2	ØB1	ØB2	
DN15	1/2"	15	45	65	95	2	16	42	77	46	9.0	9	4	M12	145	7/16-20UNF	6	6	36	42	
DN20	3/4"	10	20	58	75	105	2	18	44	85	51	9.0	4	M12	145	7/16-20UNF	6	7	36	50	
DN25	1"	16	25	68	85	115	2	18	50	94	62	11.0	4	M12	175	9/16-18UNF	6	7	42	50	
DN32	1-1/4"	25	32	78	100	140	2	18	60	104	72	11.0	4	M16	175	9/16-18UNF	6	9	42	70	
DN40	1-1/2"	40	38	88	110	150	3	18	65	114	78	14.0	4	M16	194	3/4-16UNF	7	9	50	70	
DN50	2"	50	50	102	125	165	3	20	80	120	86	14.0	4	M16	194	3/4-16UNF	7	9	50	70	
DN65	2-1/2"	10/16	64	122	145	185	18	110	158	108	17.0	17	4	M16	265	7/8-14UNF	9	11	70	102	
		22																			
DN80	3"	10/16	76	138	160	200	20	120	165	116	17.0	17	8	M16	265	7/8-14UNF	9	11	70	102	
		24																			
DN100	4"	10/16	95	162	190	235	20	150	182	139	22.0	22	8	M16	NON	1-1/8-12UNF	NON	11	NON	102	
		M20																			
DN125	5"	10/16	118	188	210	250	22	180	224	176	27.0	27	8	M16	NON	1-3/8-12UNF	14	NON	125	NON	
		M24																			
DN150	6"	10/16	142	212	240	285	22	225	268	192	27.0	27	8	M20	NON	1-3/8-12UNF	14	NON	125	NON	
		M24																			
DN200	8"	10	190	268	295	340	24	310	300	240	27.0	27	12	8	M20	NON	1-3/4-12UNF	14	NON	125	NON
		16																			
		25																			
		30																			
		40		285	320	375	34														



### DESIGN FEATURES / 设计特性

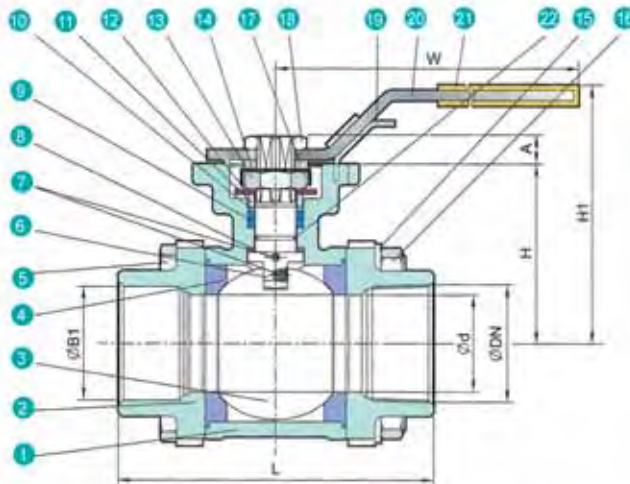
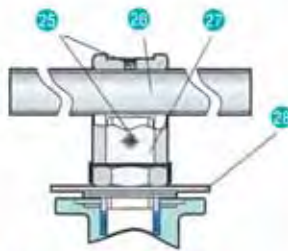
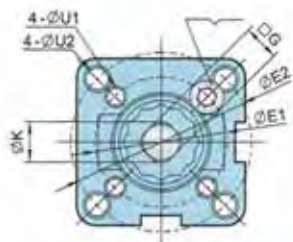
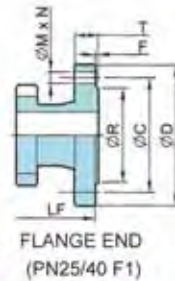
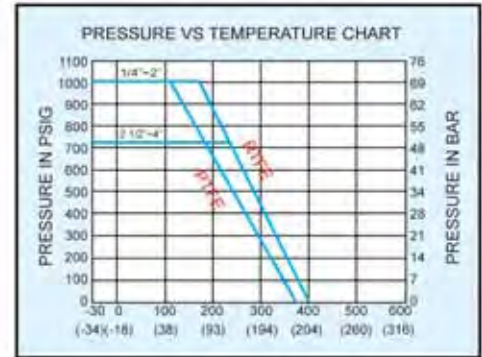
- Built-in ISO 5211 Direct Mounting Pad Easy Automation  
采用ISO 5211 平台设计便于安装执行器
- **Fire Safe** Design and Construction  
防火结构设计
- Anti-static Devices for Ball-stem-body  
阀杆与阀体之间带防静电装置
- Blow-out Proof Stem  
阀杆防爆出装置设计
- Pressure Balance Hole in Ball Slot  
钢球上有压力平衡孔

### STANDARDS / 标准规范:

- Design / 设计标准: ASME B16.34, API 608
- Wall Thickness / 壁厚: ASME B16.34 CLASS 400
- Pipe Thread / 螺纹接口: ASME B1.20.1, BS21  
DIN 2999/259, BSP  
ISO 7/1, ISO 228/1  
JIS B 0203
- Butt Weld / 对焊接口: ASME B16.25  
Ø B2 Available in Sch 10, 20 & 40
- Socket Weld / 承插焊接口: ASME B16.11
- Flange End / 法兰接口: ASME B16.5  
DIN2542~2545  
JISB2238
- Inspection & Testing / 检验及测试: API 598 EN 12266

### SPECIFICATIONS / 规范:

- Working Pressure / 工作压力: 1000 psig at 100°F (38°C)
- Temperature Range / 温度范围: -30°F to 350°F (-34°C to 177°C)



NO.	PART / 零件名称	MATERIAL / 材质
1	Body / 阀体	A351-CF8M(1.4408)
2	Cap (Thread) / 阀盖 (螺纹)	A351-CF8M(1.4408)
2	Cap (Welding) / 阀盖 (焊接)	A351-CF3M(1.4408)
3	Ball / 球体	A351-CF3M(1.4408)
4	Ball Seat / 阀座	PTFE
5	Bolt / 螺栓	A193-B8
6	Stem / 阀杆	A276-316
7	Anti-Static / 防静电装置	SUS 316
8	Stem Seal-Ring / 止推垫圈	PTFE
9	V-Ring Stem Packing / 阀杆填料	PTFE
10	Bushing / 密封衬套	50%SS+50%PTFE
11	Gland / 格南	SUS 316
12	Belleville Washer / 蝶形弹片	SUS 301
13	Stem Nut / 阀杆螺母	A194-8
14	Stop-Lock-Cap / 定位锁盖	SUS 304
15	Bolt Washer / 螺栓垫片	SUS 304
16	Bolt Nut / 螺母	A194-8
17	Handle Gland / 手柄格南	SUS 304
18	Handle Nut / 手柄螺母	SUS 304
19	Lock Device / 挂锁装置	SUS 304
20	Handle / 手柄	SUS 304
21	Handle Sleeve / 手柄衬套	Vinyl Plastic
22	O-Ring / O型密封圈	FKM(VITON)
23	Stop Bolt / 定位螺栓	A193-B8
24	Nut / 螺母	A194-8
25	Set Screwed / 锁紧螺栓	A193-B8
26	Handle / 手柄	SUS 304
27	Handle Adapter / 手柄接头	SUS 304
28	Triangle Stopper / 定位片	SUS 304



Unit: mm

SIZE	Ød	L	LE	LF	H	H1	ØE1	ØE2	G	ØU1	ØU2	A	W	ØD	ØC	ØR	T	F	N	ØM	ØB1	ØB2	ØB3	ØDN
1/4"	10.6	75.0	72	-	42.0	72.0	36.0	42.0	9.0	6.0	6.0	9.0	145.0	-	-	-	-	-	-	-	14.2	10.6	18.0	
3/8"	12.7	75.0	72	-	42.0	72.0	36.0	42.0	9.0	6.0	6.0	9.0	145.0	-	-	-	-	-	-	-	17.8	12.7	18.0	
1/2"	15.0	75.0	75	130.0	42.0	72.0	36.0	42.0	9.0	6.0	6.0	9.0	145.0	95.0	65.0	45.0	16.0	2.0	4.0	14.0	21.8	15.8	22.0	NPT
3/4"	20.0	80.0	90	150.0	49.0	80.0	36.0	50.0	9.0	6.0	6.0	9.0	145.0	105.0	75.0	58.0	18.0	2.0	4.0	14.0	27.3	20.9	28.0	BSP
1"	25.0	90.0	100	160.0	58.5	90.0	42.0	50.0	11.0	6.0	7.0	11.0	160.0	115.0	85.0	68.0	18.0	2.0	4.0	14.0	34.0	26.7	34.0	PT
1-1/4"	32.0	110.0	110	180.0	63.0	95.0	42.0	70.0	11.0	6.0	9.0	11.0	160.0	140.0	100.0	78.0	18.0	2.0	4.0	18.0	42.8	35.1	43.0	NIN
1-1/2"	38.0	120.0	125	200.0	71.0	106.0	50.0	70.0	14.0	7.0	9.0	14.0	190.0	150.0	110.0	88.0	18.0	3.0	4.0	18.0	48.9	40.9	50.0	etc.
2"	50.0	140.0	150	230.0	78.0	113.0	50.0	70.0	14.0	7.0	9.0	14.0	190.0	165.0	125.0	102.0	20.0	3.0	4.0	18.0	61.4	52.5	61.0	
2-1/2"	63.5	185.0	190	290.0	100.0	150.0	70.0	102.0	17.0	9.0	11.0	17.0	260.0	185.0	145.0	122.0	22.0	3.0	8.0	18.0	74.0	62.7	76.0	
3"	76.0	205.0	220	310.0	109.0	159.0	70.0	102.0	17.0	9.0	11.0	17.0	260.0	200.0	160.0	138.0	24.0	3.0	8.0	18.0	90.0	78.0	92.0	
4"	100.0	240.0	270	350.0	140.0	198.0	-	102.0	22.0	-	11.0	22.0	350.0	235.0	190.0	162.0	24.0	3.0	8.0	22.0	115.4	102.4	115.0	



### DESIGN FEATURES / 设计特性

- Built-in ISO 5211 Direct Mounting Pad Easy Automation  
采用ISO 5211 平台设计便于安装执行器
- **Fire Safe** Design and Construction  
防火结构设计
- Anti-static Devices for Ball-stem-body  
阀杆与阀体之间带防静电装置
- Blow-out Proof Stem  
阀杆防爆出装置设计
- Pressure Balance Hole in Ball Slot  
钢球上有压力平衡孔

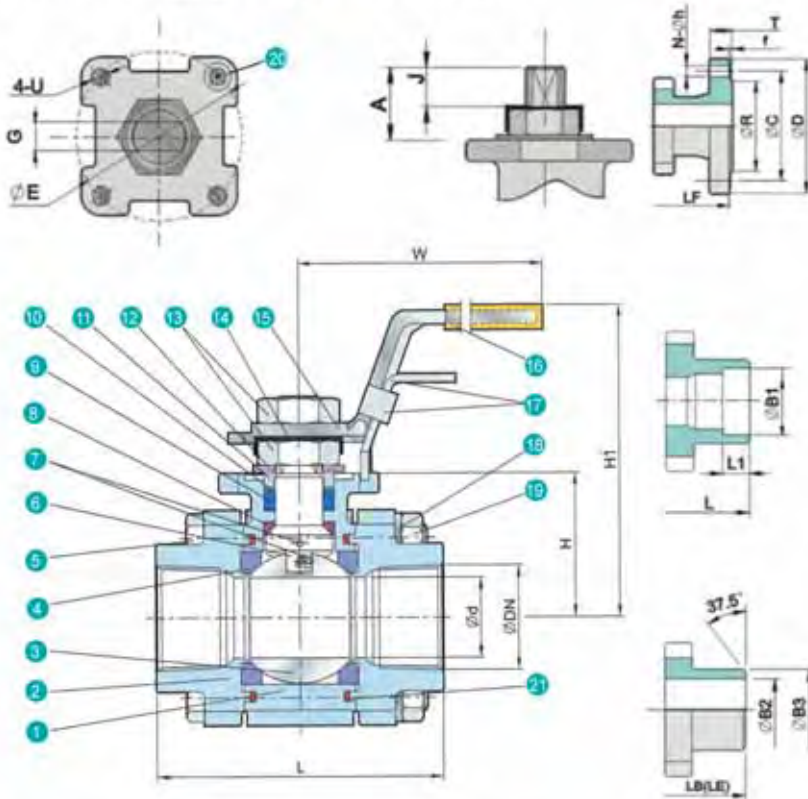
### STANDARDS / 标准规范:

- Design / 设计标准: ASME B16.34, API 608
- Wall Thickness / 壁厚: ASME B16.34 CLASS 800
- Pipe Thread / 螺纹接口: ASME B1.20.1, BS21  
DIN 2999/259, BSP  
ISO 7/1, ISO 228/1  
JIS B 0203
- Butt Weld / 对焊接口: ASME B16.25  
Ø B2 Available in Sch 10, 20 & 40
- Socket Weld / 承插焊接口: ASME B16.11
- Flange End / 法兰接口: ASME B16.5 CLASS 600  
DIN2542~2545 PN100  
JISB2238 40K
- Inspection & Testing / 检验及测试: API 598 EN 12266

NO.	PART / 零件名称	MATERIAL / 材质
1	Body / 阀盖	A351-CF8M(1.4408)
2	Thread Cap / 阀盖	A351-CF8M(1.4408)
3	Ball / 球体	A351-CF3M(1.4408)
4	Ball Seat / 阀座	TFM1600
5	Bolt / 螺栓	A193-B8
6	Stem / 阀杆	A276-316
7	Anti-Static / 防静电装置	SUS 316
8	Stem Seal-Ring / 阀杆密封圈	TFM1600
9	V-Ring Stem Packing / 阀杆填料	PTFE
10	Bushing / 密封衬套	50%SS+50%PTFE
11	Gland / 格南	SUS 316
12	Belleville Washer / 碟型弹片	SUS 301
13	Stem Nut / 阀杆螺母	A194-8
14	Stop-Lock-Cap / 定位锁盖	SUS 304
15	Handle / 手柄(1/4"~3")	SUS 304
16	Handle Sleeve / 手柄衬套(1/4"~3")	Vinyl Plastic
17	Lock Device / 挂锁装置(1/4"~3")	SUS 304
18	Bolt Washer / 弹黄垫片	SUS 304
19	Bolt Nut / 螺母	A194-8
20	Stop Bolt / 定位螺栓	A193-B8
21	Body Gasket / 阀体垫圈	PTFE

### SPECIFICATIONS / 规范:

- Working Pressure / 工作压力: 1500 psig at 100°F (38°C)
- Temperature Range / 温度范围: -30°F to 350°F (-34°C to 177°C)



Unit: mm

SIZE	Ød	L	LB	LE	LF	H	H1	W	ØE	G	ØD	ØC	ØR	T	f	N	h	U	A	J	L1	ØB1	ØB2	ØB3	DN
1/4"	10.6	70	70	225	-	30.0	76	135	42.0	6.3	-	-	-	-	-	-	-	M5	17.3	10.4	11	14.0	7.6	18.0	NPT
3/8"	12.7	70	70	225	-	30.0	76	135	42.0	6.3	-	-	-	-	-	-	-	M5	17.3	10.4	11	18.0	10.7	18.0	BSP
1/2"	15.0	75	75	225	130	36.0	83	135	42.0	6.3	95.3	66.6	35.0	20.7	6.35	4	15.8	M5	20.3	11.8	11	22.0	13.9	22.2	PT
3/4"	20.0	80	90	225	150	39.5	88	135	42.0	6.3	117.4	82.6	43.0	22.2	6.35	4	19.1	M5	20.3	11.8	13	27.5	18.8	28.0	PT
1"	25.0	90	100	245	160	45.5	98	170	50.0	9.0	124.0	88.9	51.0	23.9	6.35	4	19.1	M6	23.3	12.5	13	34.5	24.3	34.0	DIN
1-1/4"	31.8	110	110	255	180	50.0	103	175	50.0	9.0	133.4	98.6	63.5	27.0	6.35	4	19.1	M6	23.3	12.5	13	43.0	32.5	43.0	DIN
1-1/2"	38.1	120	125	260	200	60.0	110	200	70.0	9.6	155.5	114.3	73.2	28.8	6.35	4	22.4	M8	23.8	15.1	13	48.6	38.1	50.0	etc.
2"	50.0	140	150	275	230	68.0	119	200	70.0	9.6	165.1	127.0	92.0	31.8	6.35	8	19.1	M8	23.8	15.1	16	61.2	49.2	61.0	



### DESIGN FEATURES / 设计特性

- Built-in ISO 5211 Direct Mounting Pad Easy Automation  
采用ISO 5211 平台设计便于安装执行器
- **Fire Safe** Design and Construction  
防火结构设计
- Anti-static Devices for Ball-stem-body  
阀杆与阀体之间带防静电装置
- Blow-out Proof Stem  
阀杆防爆出装置设计
- Pressure Balance Hole in Ball Slot  
钢球上有压力平衡孔

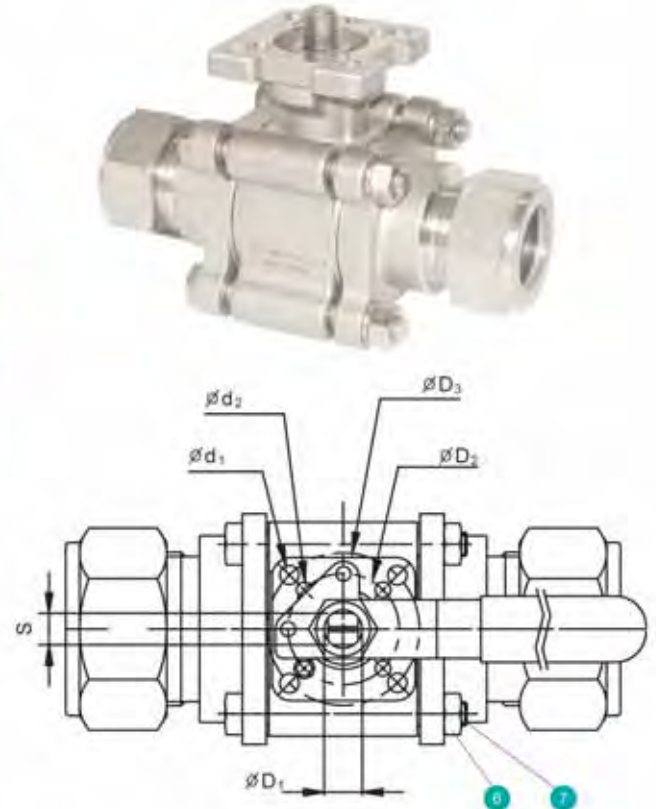
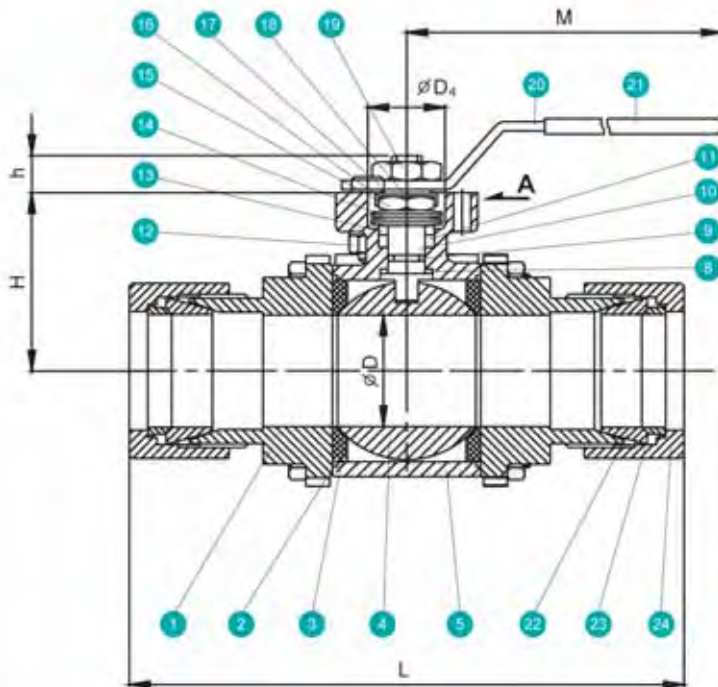
### STANDARDS / 标准规范:

- Design / 设计标准: ASME B16.34, API 608
- Wall Thickness / 壁厚: ASME B16.34 CLASS 800
- Tube End / 卡套接口: 1/4" - 2"
- Inspection & Testing / 检验及测试: API 598 EN 12266

### SPECIFICATIONS / 规范:

- Working Pressure / 工作压力: 1500 psig at 100°F (38°C)
- Temperature Range / 温度范围: -30°F to 350°F (-34°C to 177°C)

NO.	PART / 零件名称	MATERIAL / 材质
1	End Cap / 阀盖	A351 Gr. CF8M
2	Body Seal / 阀体垫圈	TFM
3	Seat / 阀座	TFM
4	Ball / 球体	316L SS
5	Body / 阀体	A351 Gr. CF3M
6	Body Nut / 阀体螺母	304SS
7	Body Bolt / 阀体螺栓	304SS
8	Thrust Washer / 止推垫片	PEEK
9	Stem O-Ring / 阀杆密封圈	Viton 90
10	Stem / 阀杆	316L SS
11	Stem Packing Set / 阀杆填料	TFM
12	Stop Pin Nut / 螺母	304SS
13	Packing Gland / 填料	304SS
14	Belleville Washer / 碟形弹片	301SS
15	Stem Nut / 阀杆螺母	304SS
16	Gland Nut / 填料螺母	304SS
17	Stop Pin Bolt / 螺栓	304SS
18	Space Washer / 垫片	304SS
19	Handle Nut / 手柄螺母	304SS
20	Handle / 手柄	304SS
21	Handle Cover / 手柄衬套	Vinyl
22	Front Ferrule / 前卡圈	316SS
23	Back Ferrule / 后卡圈	316SS
24	Locking Nut / 卡圈螺母	316SS



### DIMENSIONS / 尺寸表

Size	L	D	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	d <sub>1</sub>	d <sub>2</sub>	H	h	s
1/4	86	10	12	1.42	36	25	6	6	39	9	9
3/8	90	10	12	1.42	36	25	6	6	39	9	9
1/2	99	10	12	1.42	36	25	6	6	39	9	9
3/4	99	16	12	1.42	36	25	6	6	39	9	9
1	117	22	14	1.65	42	30	7	6	48	11	11



### DESIGN FEATURES / 设计特性

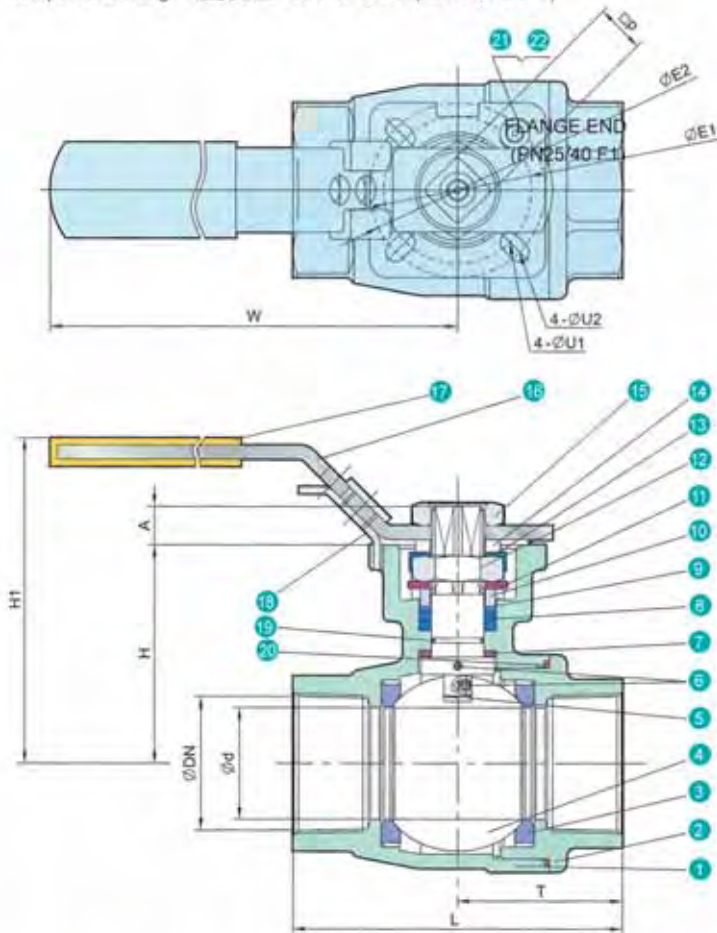
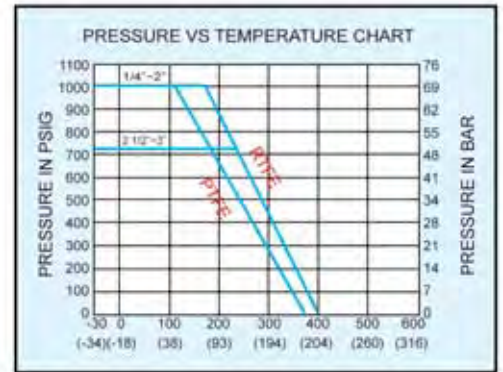
- Built-in ISO 5211 Direct Mounting Pad Easy Automation  
采用ISO 5211 平台设计便于安装执行器
- **Fire Safe** Design and Construction  
防火结构设计
- Anti-static Devices for Ball-stem-body  
阀杆与阀体之间带防静电装置
- Blow-out Proof Stem  
阀杆防爆出装置设计
- Pressure Balance Hole in Ball Slot  
钢球上有压力平衡孔

### STANDARDS / 标准规范:

- Design / 设计标准: ASME B16.34, API 608
- Wall Thickness / 壁厚: ASME B16.34 CLASS 400
- Pipe Thread / 螺纹接口: ASME B1.20.1, BS21  
DIN 2999/259, BSP  
ISO 7/1, ISO 228/1  
JIS B 0203
- Inspection & Testing / 检验及测试: API 598 EN 12266

### SPECIFICATIONS / 规范:

- Working Pressure / 工作压力: 1000 psig at 100°F (38°C)
- Temperature Range / 温度范围: -30°F to 350°F (-34°C to 177°C)



NO.	PART / 零件名称	MATERIAL / 材质
1	Body / 阀体	A351-CF8M(1.4408)
2	Cap / 阀盖	A351-CF8M(1.4408)
3	Ball Seat / 阀座	PTFE
4	Ball / 球体	A351-CF8M(1.4408)
5	Stem / 阀杆	A276-316
6	Anti-Static / 防静电装置	SUS 316
7	Stem Seal-Ring / 止推垫圈	PTFE
8	V-Ring Stem Packing / 阀杆填料	PTFE
9	Bushing / 密封衬套	50%SS+50%PTFE
10	Gland / 格南	SUS 316
11	Belleville Washer / 蝶型弹片	SUS 301
12	Stem Nut / 阀杆螺母	A194-8
13	Stop-Lock-Cap / 定位锁盖	SUS 304
14	Handle Gland / 手柄格南	SUS 304
15	Handle Nut / 手柄螺母	SUS 304
16	Handle / 手柄	SUS 304
17	Handle Sleeve / 手柄衬套	Vinyl Plastic
18	Lock Device / 挂锁装置	SUS 304
19	O-Ring / O型密封圈	FKM (VITON)
20	Body Gasket / 阀盖垫圈	PTFE
21	Stop Bolt / 定位螺栓	A193-B8
22	Nut / 螺母	A194-8

Unit: mm

SIZE	Ød	L	H	H1	ØE1	ØE2	T	ØU1	ØU2	A	W	P	ØDN
1/4"	10.6	75.0	42.0	72.0	36.0	42.0	32.0	6.0	6.0	9.0	145.0	9.0	
3/8"	12.7	75.0	42.0	72.0	36.0	42.0	32.0	6.0	6.0	9.0	145.0	9.0	NPT
1/2"	15.0	75.0	42.0	72.0	36.0	42.0	32.0	6.0	6.0	9.0	145.0	9.0	BSP
3/4"	20.0	80.0	49.0	80.0	36.0	50.0	35.2	6.0	6.0	9.0	145.0	9.0	PT
1"	25.0	90.0	58.5	90.0	42.0	50.0	42.5	6.0	7.0	11.0	160.0	11.0	DIN
1-1/4"	32.0	110.0	63.0	95.0	42.0	70.0	47.0	6.0	9.0	11.0	160.0	11.0	
1-1/2"	38.0	120.0	71.0	106.0	50.0	70.0	52.5	7.0	9.0	14.0	190.0	14.0	
2"	50.0	140.0	78.0	113.0	50.0	70.0	62.5	7.0	9.0	14.0	190.0	14.0	
2-1/2"	63.5	185.0	100.0	150.0	70.0	102.0	77.5	9.0	11.0	17.0	260.0	17.0	etc.
3"	76.0	205.0	109.0	159.0	70.0	102.0	86.5	9.0	11.0	17.0	260.0	17.0	



# NUTORK<sup>®</sup> BALL VALVES

## MULTI-WAY BALL VALVES / 多通径球阀



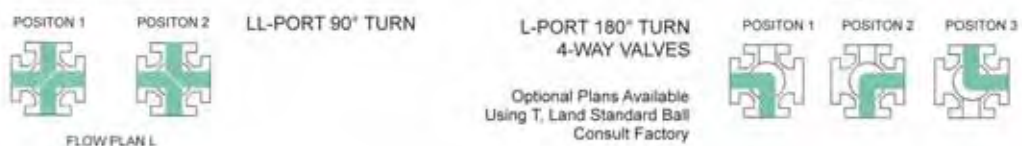
- Blow-out Proof and Anti-static Stem  
防爆出和防静电阀杆设计
- Pre-load 2 Belleville Washers to Self-adjust Packing  
双碟型弹片自动压紧填料结构设计
- Double Stem Sealing to Meet  
TUV TA-LUFT Requirements  
双层阀杆填料符合德TUV TA-LUFT标准

### FLOW PATTERNS FOR 3&4-WAY VALVES 3&4通球阀流向图

#### T-Port 90° TURN



#### T-Port 180° TURN



Optional Plans Available  
Using T, Land Standard Ball  
Consult Factory



### DESIGN FEATURES / 设计特性

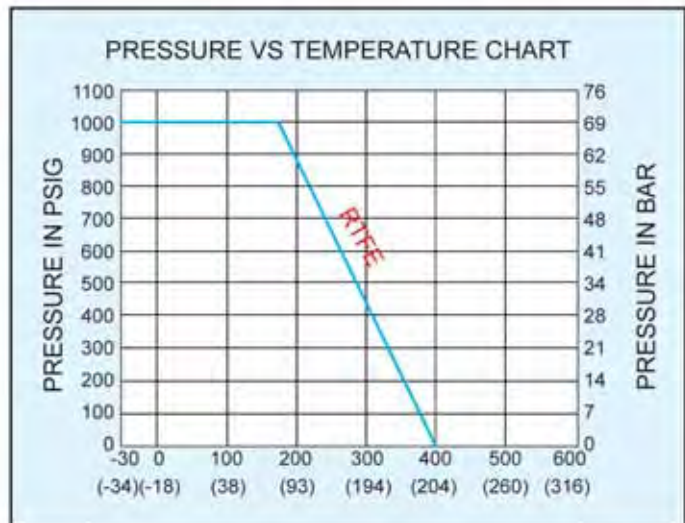
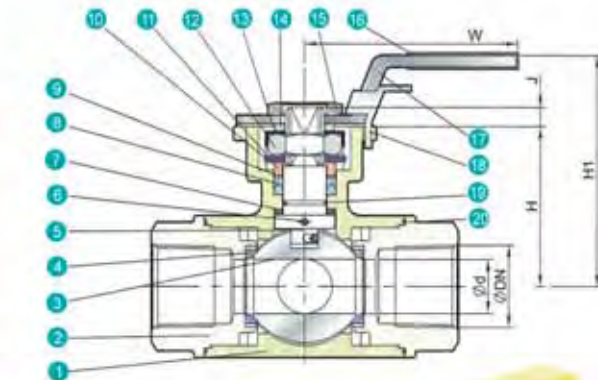
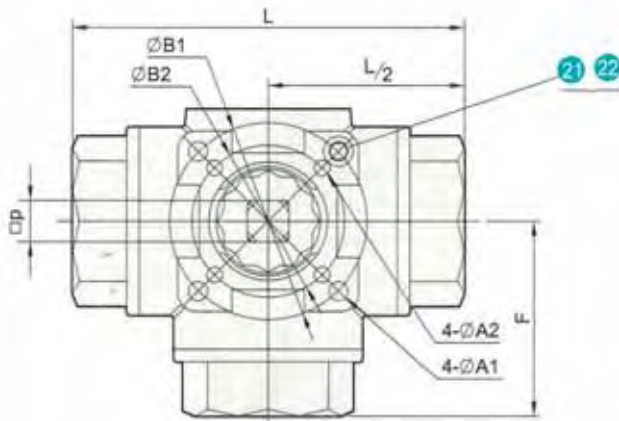
- Built-in ISO 5211 Direct Mounting Pad Easy Automation  
采用ISO 5211 平台设计便于安装执行器
- **Fire Safe** Design and Construction  
防火结构设计
- Anti-static Devices for Ball-stem-body  
阀杆与阀体之间带防静电装置
- Blow-out Proof Stem  
阀杆防爆出装置设计
- Pressure Balance Hole in Ball Slot  
钢球上有压力平衡孔
- Various Thread Standards are Available  
可选用不同螺纹标准

### STANDARDS / 标准规范:

- Design / 设计标准: ASME B16.34, API 608
- Wall Thickness / 壁厚: ASME B16.34 CLASS 400
- Pipe Thread / 螺纹接口: ASME B1.20.1, BS21  
DIN 2999/259, BSP  
ISO 7/1, ISO 228/1  
JIS B 0203
- Inspection & Testing / 检验及测试: API 598 EN 12266

### SPECIFICATIONS / 规范:

- Working Pressure / 工作压力: 1000 psig at 100°F (38°C)
- Temperature Range / 温度范围: -30°F to 350°F (-34°C to 177°C)



NO.	PART / 零件名称	MATERIAL / 材质
1	Body / 阀体	A351-CF8M
2	End Cap / 阀盖	A351-CF8M
3	Ball / 球体	A351-CF8M
4	Ball Seat / 阀座	RTFE / PTFE
5	Stem / 阀杆	A276-316
6	Anti-Static / 防静电装置	SUS 316
7	Stem Seal-Ring / 阀杆密封圈	PTFE
8	V-Ring Packing / 阀杆填料	PTFE
9	Bushing / 密封衬套	50%SS+50%PTFE
10	Gland / 格南	SUS 316
11	Belleville Washer / 蝶型弹片	SUS 301
12	Stem Nut / 阀杆螺母	A194-8
13	Stop-Lock-Cap / 定位锁盖	SUS 304
14	Handle Gland / 手柄格南	SUS 304
15	Handle Nut / 手柄螺母	SUS 304
16	Handle Sleeve / 手柄衬套	Vinyl plastic
17	Handle / 手柄	SUS 304
18	Lock Device / 挂锁装置	SUS 304
19	O-Ring / O型密封圈	FKM(VITON)
20	Body Gasket / 阀盖垫圈	PTFE
21	Stop Bolt / 定位螺栓	A193-B8
22	Nut / 螺母	A194-8

SIZE	Ød	L	H	H1	W	J	F	ØB1	ØB2	ØA1	ØA2	P	ØDN
1/4"	11.0	79.0	42.0	70.0	147.0	9.0	39.5	42.0	36.0	6.0	6.0	9.0	NPT
3/8"	11.0	79.0	42.0	70.0	147.0	9.0	39.5	42.0	36.0	6.0	6.0	9.0	NPT
1/2"	11.0	79.0	42.0	70.0	147.0	9.0	39.5	42.0	36.0	6.0	6.0	9.0	BSP
3/4"	15.0	88.0	49.0	77.0	147.0	9.0	44.0	50.0	36.0	7.0	6.0	9.0	PT
1"	20.0	108.0	59.0	87.0	176.5	11.0	54.0	50.0	42.0	7.0	6.0	11.0	NIN
1-1/4"	25.0	124.0	65.0	93.0	176.5	11.0	62.0	70.0	42.0	9.0	6.0	11.0	NIN
1-1/2"	32.0	135.0	73.2	103.0	215.0	14.0	67.5	70.0	50.0	9.0	7.0	14.0	etc.
2"	40.0	164.0	82.5	113.0	215.0	14.0	82.0	70.0	50.0	9.0	7.0	14.0	etc.

Unit: mm



### DESIGN FEATURES / 设计特性

- Built-in ISO 5211 Direct Mounting Pad Easy Automation  
采用ISO 5211 平台设计便于安装执行器
- **Fire Safe** Design and Construction  
防火结构设计
- Anti-static Devices for Ball-stem-body  
阀杆与阀体之间带防静电装置
- Blow-out Proof Stem  
阀杆防爆出装置设计
- Pressure Balance Hole in Ball Slot  
钢球上有压力平衡孔

### APPLICABLE STANDARDS / 标准规范:

- Design Rating / 设计标准: DIN 3357/1,2, EN 12516-1
- End Flange / 法兰端面: DIN 2542-DIN 2545, EN 1092
- Wall Thickness / 壁厚: ASME B16.34, EN 12516-1
- Inspection & Testing / 检验及测试:  
DIN 3203/3, EN 12266, API 598, API 6D
- Connection / 连接方式: DIN 2501/1 PN 10-40

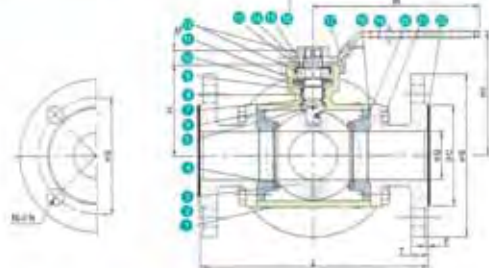
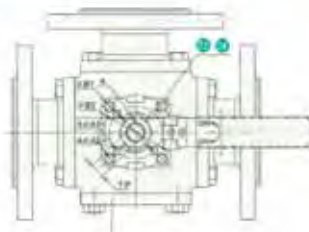
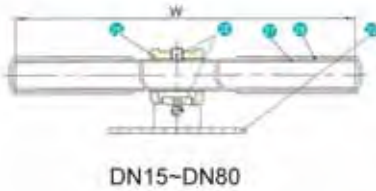


### SPECIFICATIONS / 规范:

- Working Pressure / 工作压力: 40 Bar at 38°C
- Temperature Range / 温度范围: -30°F to 350°F (-34°C to 177°C)

NO.	PART / 零件名称	MATERIAL / 材质		
1	Body / 阀体	1.4408	1.4308	1.0619
2	Cap / 阀盖	1.4408	1.4308	1.0619
3	Ball / 球体	1.4408	1.4308	
4	Ball Seat / 阀座	PTFE		
5	Bolting / 螺栓	A193-B8	A193-B7	
6	Stem Seal-Ring / 阀杆密封圈	PTFE		
7	O-Ring / O型密封圈	FKM(VITON)		
8	V-Ring Packing / 阀杆填料	PTFE		
9	Bushing / 密封衬套	50%SS+50%PTFE		
10	Gland / 格南	SUS 316		
11	Belleville Washer / 蝶型弹片	SUS 301		
12	Stem Nut / 阀杆螺母	A194-8		
13	Stop-Lock-Cap / 定位锁盖	SUS 304		
14	Handle Gland / 手柄格南	SUS 304		
15	Handle / 手柄 (1/2-3")	SUS 304		

NO.	PART / 零件名称	MATERIAL / 材质		
16	End Cap / 阀盖	1.4408	1.4308	1.0619
17	Lock Device / 挂锁装置(1/2-3")	SUS 304		
18	Body Gasket / 阀体垫圈	PTFE		
19	Handle Sleeve / 手柄衬套(1/2-3")	VINYL PLASTIC		
20	Seat Retainer / 阀座定位块	1.4408	1.4308	1.0619
21	Bolt / 螺栓	A193-B8	A193-B7	
22	Flange Cover / 法兰盖	PVC		
23	Stop Bolt / 定位螺栓	A193-B8		
24	Nut / 螺母	A194-8		
25	Handle Adapter / 手柄接头 (4")	1.4408		
26	Set Screwed / 锁紧螺丝	A193-B8		
27	Handle / 手柄 (4")	A53+Zn Plate		
28	Handle Sleeve / 手柄衬套	VINYL PLASTIC		
29	Triangle stopper / 定位片 (4")	SUS 304		



### ASME CLASS 150 DIMENSION TABLE

SIZE	Rating	ØD	L	ØC	ØE	ØB	F	T	H	H1	N	Øh	W	P	M	K	ØA1	ØA2	ØB1	ØB2
DN15	1/2"	15.0	150.0	35.0	89.0	65.0	1.6	9.7	53.0	83.0	4.0	16.0	144.5	9.0	9.0	7/16-24UNF	6.0	6.0	36.0	42.0
DN20	3/4"	20.0	160.0	43.0	98.6	70.0	1.6	10.5	58.5	88.5	4.0	16.0	144.5	9.0	9.0	7/16-24UNF	6.0	7.0	36.0	50.0
DN25	1"	25.0	180.0	51.0	108.0	79.2	1.6	11.2	70.0	104.0	4.0	16.0	175.0	11.0	11.0	9/16-18UNF	6.0	7.0	42.0	50.0
DN32	1-1/4"	32.0	190.0	63.5	117.0	88.9	1.6	12.7	77.5	111.5	4.0	16.0	175.0	11.0	11.0	9/16-18UNF	6.0	9.0	42.0	70.0
DN40	1-1/2"	38.0	212.0	73.2	127.0	98.6	1.6	14.2	86.5	120.5	4.0	16.0	200.0	14.0	14.0	3/4-18UNF	7.0	9.0	50.0	70.0
DN50	2"	49.0	235.0	92.0	152.2	120.7	1.6	15.9	92.0	126.0	4.0	19.0	200.0	14.0	14.0	3/4-18UNF	7.0	9.0	50.0	70.0
DN65	2-1/2"	63.0	300.0	104.7	177.8	139.7	1.6	17.5	107.0	155.0	4.0	19.0	350.0	17.0	17.0	7/8-14UNF	9.0	11.0	70.0	102.0
DN80	3"	75.0	330.0	127.0	190.5	125.4	1.6	19.1	119.0	167.0	4.0	19.0	350.0	17.0	17.0	7/8-14UNF	9.0	11.0	70.0	102.0
DN100	4"	99.0	380.0	157.2	228.6	190.5	1.6	23.9	150.0	214.0	8.0	19.0	400.0	22.0	22.0	1-1/8-12UNF	-	11.0	-	102.0

### ASME CLASS 300 DIMENSION TABLE

SIZE	Rating	ØD	L	ØC	ØE	ØB	F	T	H	H1	N	Øh	W	P	M	K	ØA1	ØA2	ØB1	ØB2
DN15	1/2"	15.0	150.0	35.0	89.3	66.5	1.6	14.3	53.0	83.0	4.0	16.0	144.5	9.0	9.0	7/16-24UNF	6.0	6.0	36.0	42.0
DN20	3/4"	20.0	160.0	43.0	117.4	82.6	1.6	15.9	58.5	88.5	4.0	16.0	144.5	9.0	9.0	7/16-24UNF	6.0	7.0	36.0	50.0
DN25	1"	25.0	180.0	51.0	124.0	88.9	1.6	17.5	70.0	104.0	4.0	16.0	175.0	11.0	11.0	9/16-18UNF	6.0	7.0	42.0	50.0
DN32	1-1/4"	32.0	195.0	63.5	133.4	98.6	1.6	19.1	77.5	111.5	4.0	16.0	175.0	11.0	11.0	9/16-18UNF	6.0	9.0	42.0	70.0
DN40	1-1/2"	38.0	215.0	73.2	155.5	114.3	1.6	20.7	86.5	120.5	4.0	16.0	200.0	14.0	14.0	3/4-18UNF	7.0	9.0	50.0	70.0
DN50	2"	49.0	235.0	92.0	165.1	127.0	1.6	22.3	92.0	126.0	8.0	19.0	200.0	14.0	14.0	3/4-18UNF	7.0	9.0	50.0	70.0
DN65	2-1/2"	63.0	300.0	104.7	190.5	149.4	1.6	25.4	107.0	155.0	8.0	22.3	350.0	17.0	17.0	7/8-14UNF	9.0	11.0	70.0	102.0
DN80	3"	75.0	330.0	127.0	209.6	168.1	1.6	28.6	119.0	167.0	8.0	22.3	350.0	17.0	17.0	7/8-14UNF	9.0	11.0	70.0	102.0
DN100	4"	99.0	380.0	157.2	254.0	200.2	1.6	31.8	150.0	214.0	8.0	22.3	400.0	22.0	22.0	1-1/8-12UNF	-	11.0	-	102.0

### DIN PN10/40 DIMENSION TABLE

SIZE	PN	ØD	L	ØC	ØE	ØB	F	T	H	H1	N	Øh	W	P	M	K	ØA1	ØA2	ØB1	ØB2
DN15	1/2"	15.0	150.0	45.0	95.0	65.0	2.0	16.0	53.0	83.0	4.0	14.0	144.5	9.0	9.0	7/16-20UNF	6.0	6.0	36.0	42.0
DN20	3/4"	20.0	160.0	58.0	105.0	75.0	2.0	18.0	58.5	88.5	4.0	14.0	144.5	9.0	9.0	7/16-20UNF	6.0	7.0	36.0	50.0
DN25	1"	25.0	180.0	68.0	115.0	85.0	2.0	18.0	70.0	104.0	4.0	14.0	175.0	11.0	11.0	9/16-18UNF	6.0	7.0	42.0	50.0
DN32	1-1/4"	32.0	190.0	78.0	140.0	100.0	2.0	18.0	77.5	111.5	4.0	18.0	175.0	11.0	11.0	9/16-18UNF	6.0	9.0	42.0	70.0
DN40	1-1/2"	38.0	212.0	88.0	150.0	110.0	3.0	18.0	86.5	120.5	4.0	18.0	200.0	14.0	14.0	9/4-18UNF	7.0	9.0	50.0	70.0
DN50	2"	49.0	230.0	102.0	165.0	125.0	3.0	20.0	92.0	126.0	4.0	18.0	200.0	14.0	14.0	9/4-18UNF	7.0	9.0	50.0	70.0
DN65	2-1/2"	63.0	290.0	122.0	185.0	145.0	3.0	22.0	107.0	155.0	8.0	18.0	265.0	17.0	17.0	7/8-14UNF	9.0	11.0	70.0	102.0
DN80	3"	75.0	310.0	138.0	200.0	160.0	3.0	24.0	119.0	167.0	8.0	18.0	265.0	17.0	17.0	7/8-14UNF	9.0	11.0	70.0	102.0
DN100	4"	99.0	350.0	158.0	220.0	180.0	3.0	24.0	150.0	214.0	8.0	18.0	400.0	22.0	22.0	1-1/8-12UNF	non	11.0	non	102.0



应用场合: 除HF (氢氟酸) 以外的任何介质, 温度最高500°C, 压力最大5.0MPa的高腐蚀、高磨损、高温中压场合 Applications: Applied to any media, but HF (Hydrofluoric Acid), with Max. Temperature 500°C and Max. Pressure 5.0Mpa.

This valve has incomparable advantages under using in high corrosion, and high attrition.

结构形式: 三片式法兰浮动球结构, 法兰标准可选: DIN/ANSI/API/JIS

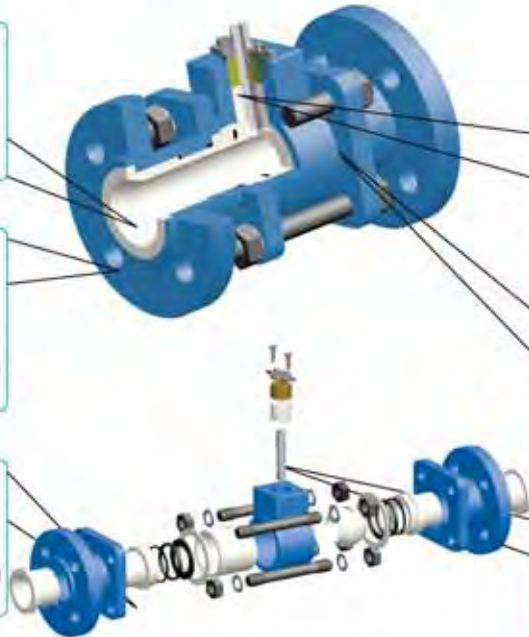
Structure: 3-part flange type flowing ball valve, Flange, According to DIN/ANSI/API/JIS



陶瓷良好的耐性, 让本阀经久耐用, 可靠性极高, 使用寿命长, 是钛合金阀和蒙乃尔阀的2-4倍。  
Excellent wearproof property of ceramic enables this valve have high reliability and prolonged lifespan, 2-4times of that of Titanium Alloy and Monel Metal valve

金属与陶瓷接触部分全部采用热配工艺, 结合牢固可靠, 增强了陶瓷的机械强度, 让结构陶瓷真正成为陶瓷钢。  
Interference fit between metal part and ceramic part makes the whole part stringer and more reliable, improves the mechanical properties of the ceramic, becoming real ceramic-steel

有弹性垫圈可以保证在任何时候都有良好的密封性并且在介质时不容易卡死, 或造成球的碎裂。  
Elastic washers can guarantee excellent leakproofness at any time and avoid blocking in media with impurities and cracking of balls



阀杆材料的选择有316/316L不锈钢, HC合金, 蒙乃尔合金, 结构陶瓷。  
A wide selection of stem material options available is 316/316L, Hastelloy-c Monel metal, structure ceramic

采用完全对称设计, 不但有双重密封, 而且没有流向限制, 可双向使用, 无形中寿命可提高一倍。  
Completely symmetric design can ensure dual leak-proofness and two-direction usage for double lifespan.

独特的填料设计, 让本阀的密封更加紧密, 增加了阀门的使用寿命。  
Unique packing design can ensure closer sealing and prolonged service life

所有与介质接触的部分均为结构陶瓷材料, 其化学稳定性及硬度极高 (洛氏硬度HRC90), 仅次于金刚石, 因此, 本阀具有极高的耐磨损、耐腐蚀、耐冲蚀性能、且隔热性能好、热膨胀小。

The valve has the exceedingly high wear-proof capability, corrosion resisting, enduring capability, good heat insulation, small thermal expansion. All parts that contact the media are made of structural ceramics with extremely high chemical stability and hardness (HRC90) only inferior to diamond.

球体采用先进研磨设备及工艺制造, 球圆度精度高, 表明质量好, 与阀座对研后利用ZrO<sub>2</sub>陶瓷的自润滑性, 可取得很好的密封性能, 彻底改变了金属硬密封球阀易泄漏, 扭矩大, 密封面不耐腐蚀的缺点。

The ball is processed by advanced polishing equipment that can ensure high circularity, accuracy, good surface quality. The self-lubricating capability of ZrO<sub>2</sub>e ensures the good sealing performance. Thoroughly free from the defects that metal hard sealing has such as big torque, on-corrosion-resistant sealing surface.

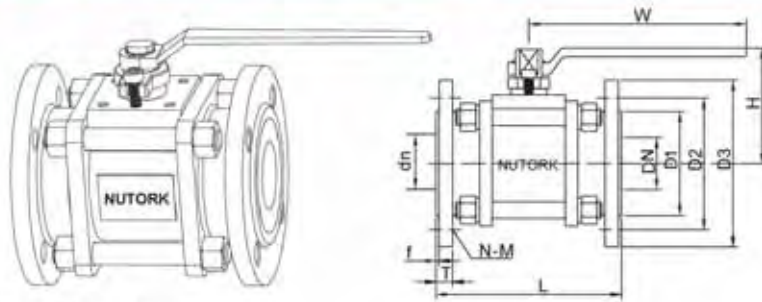
用于高硬度的颗粒介质, 或有软颗粒但又有腐蚀的介质中, 本阀门具有无可比拟的绝对优势, 也是唯一适合此类介质的阀门, 目前已广泛应用于电厂的烟气脱硫系统、除渣系统以及燃烧系统; 碱厂的盐水、蒸馏工序; 造纸厂的纸浆控制系统等。

The valve fits in granule medium of high hardness, or medium with erosive soft granule. It is also the only valve suitable for this type of medium. They are widely used in petrochemical industry, metallurgy, mining, power station, medicine and papermaking and so on.

### Part List / 零部件名称:

序号	部件名称 / Part Name	材料 / Material	序号	部件名称 / Part Name	材料 / Material
1	法兰 Flange	WCB, CF8, CF8M	12	填料压环 Ring	WCB, 304SS
2	阀座 Seat	Ceramic	13	垫圈 Washer	PTFE, RTFE, Graphite
3	外环 Socket	Ceramic	14	球体 Ball	Ceramic
4	阀杆 Stem	304Ss, 316SS, Hastelloy, Monel	15	内环 Inner Lined	Ceramic
5	填料压板 Gland	WCB, 304SS	16	O形圈 O Ring	Rubber
6	限位环 Space Ring	WCB, 304SS	17	弹簧 Spring	Inconel 750
7	手柄 Handle	WCB, 304SS	18	密封圈 Gasket	PTFE, RTFE, Graphite
8	弹性文件圈 Snap Ring	65Mn	19	阀体 Body	WCB, CF8, CF8M
9	弹性文件圈 Snap Ring	65Mn	20	弹簧垫圈 Spring Washer	65Mn
10	压盖螺栓 Gland Bolt	WCB, 304SS	21	螺母 Nut	WCB, 304SS
11	填料 Packing	PTFE, RTFE, Graphite	22	双头螺栓 Stud Bolt	WCB, 304SS





PN10 / JIS10K 尺寸表:

DN		Figure Size					DIN PN10 Flange Dia.					JIS 10K Flange Dia.					Kg	
Inch	mm	dn	L	W	H	D1	D2	D3	N-M	T	f	D1	D2	D3	N-M	T	f	
1/2"	15	15	108	160	85	45	65	95	4-M12	14	2	52	70	95	4-M12	12	1	2.9
3/4"	20	15	117	160	94	55	75	105	4-M12	14	2	58	75	100	4-M12	14	1	3.4
1"	25	20	127	230	100	65	85	115	4-M12	14	2	70	90	125	4-M16	14	1	4.3
1 1/4"	32	25	140	230	114	78	100	135	4-M16	16	2	80	100	135	4-M16	16	2	6.8
1 1/2"	40	32	165	320	121	85	110	145	4-M16	16	2	85	105	140	4-M16	16	2	9.3
2"	50	40	178	320	140	100	125	160	4-M16	16	3	100	120	155	4-M16	16	2	12.6
2 1/2"	65	50	190	320	158	120	145	180	4-M16	18	3	120	140	173	4-M16	18	2	14.9
3"	80	65	203	400	176	135	160	195	8-M16	20	3	130	150	185	8-M16	18	2	22.3
4"	100	80	229		202	155	180	215	8-M16	20	3	155	175	210	8-M16	18	2	30
5"	125	100	254		252	185	210	245	8-M16	22	3	185	210	250	8-M20	20	2	41
6"	150	100	267		276	210	240	280	8-M20	24	3	215	240	280	8-M20	22	2	54
8"	200	150	292		293	265	295	335	12-M20	26	3	265	290	330	12-M20	22	2	76

PN16 / ANSI150LB 尺寸表:

DN		Figure Size					DIN PN16 Flange Dia.					ANSI CLASS 150 Flange Dia.					Kg	
Inch	mm	dn	L	W	H	D1	D2	D3	N-M	T	f	D1	D2	D3	N-M	T	f	
1/2"	15	15	108	160	85	45	65	95	4-M12	14	2	35	60.5	89	4-M12	11	1.6	2.9
3/4"	20	15	117	160	94	55	75	105	4-M12	14	2	43	70	98	4-M12	11	1.6	3.4
1"	25	20	127	230	100	65	85	115	4-M12	14	2	51	79.5	108	4-M12	11	1.6	4.3
1 1/4"	32	25	140	230	114	78	100	135	4-M16	16	2	64	89	117	4-M12	13	1.6	6.8
1 1/2"	40	32	165	320	121	85	110	145	4-M16	16	3	73	98.5	127	4-M12	14	1.6	9.3
2"	50	40	178	320	140	100	125	160	4-M16	16	3	92	120.5	152	4-M16	16	1.6	12.6
2 1/2"	65	50	190	320	158	120	145	180	4-M16	18	3	105	139.5	178	4-M16	18	1.6	14.9
3"	80	65	203	400	176	135	160	195	8-M16	20	3	127	152.5	190	4-M16	19	1.6	22.3
4"	100	80	229		202	155	180	215	8-M16	20	3	157	190.5	229	8-M16	24	1.6	30
5"	125	100	254		252	185	210	245	8-M16	22	3	186	216	254	8-M20	24	1.6	41
6"	150	100	267		276	210	240	280	8-M20	24	3	216	241.5	279	8-M20	25	1.6	54
8"	200	150	292		293	265	295	335	12-M20	26	3	270	298.5	343	8-M20	29	1.6	76

PN25 / JIS20K 尺寸表:

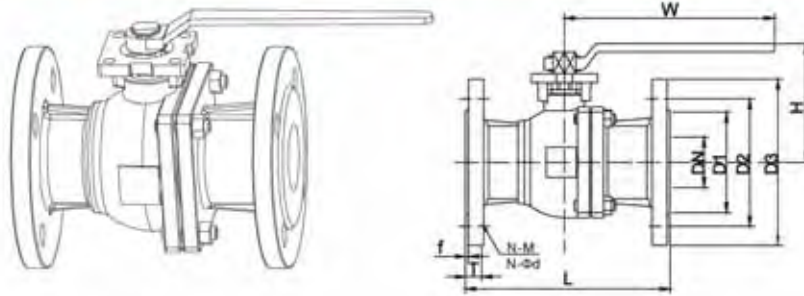
DN		Figure Size					DIN PN25 Flange Dia.					JIS 20K Flange Dia.					Kg	
Inch	mm	dn	L	W	H	D1	D2	D3	N-M	T	f	D1	D2	D3	N-M	T	f	
1/2"	15	15	108	160	85	45	65	95	4-M12	16	2	52	70	95	4-M12	14	1	2.9
3/4"	20	15	117	160	94	55	75	105	4-M12	16	2	58	75	100	4-M12	16	1	3.4
1"	25	20	127	230	100	65	85	115	4-M16	16	2	70	90	125	4-M16	16	1	4.3
1 1/4"	32	25	140	230	114	78	100	135	4-M16	18	2	80	100	135	4-M16	18	2	6.8
1 1/2"	40	32	165	320	121	85	110	145	4-M16	18	3	85	105	140	4-M16	18	2	9.3
2"	50	40	178	320	140	100	125	160	4-M16	20	3	100	120	155	8-M16	18	2	12.6
2 1/2"	65	50	190	320	158	120	145	180	8-M16	22	3	120	140	175	8-M16	20	2	14.9
3"	80	65	203	400	176	135	160	195	8-M16	22	3	135	160	200	8-M20	22	2	22.3
4"	100	80	229		202	160	190	230	8-M20	24	3	160	185	225	8-M20	24	2	30
5"	125	100	254		252	188	220	270	8-M24	28	3	195	225	270	8-M24	26	2	41
6"	150	100	267		276	218	250	300	8-M24	30	3	230	260	305	12-M24	28	2	54
8"	200	150	292		293	278	310	360	12-M24	34	3	275	305	350	12-M24	30	2	76

PN40 / ANIS300LB 尺寸表:

DN		Figure Size					DIN PN40 Flange Dia.					ANSI CLASS 300 Flange Dia.					Kg	
Inch	mm	dn	L	W	H	D1	D2	D3	N-M	T	f	D1	D2	D3	N-M	T	f	
1/2"	15	15	108	160	90	45	65	95	4-M12	16	2	35	66.5	95	4-M12	15	1.6	3.5
3/4"	20	15	117	160	100	55	75	105	4-M12	16	2	43	82.5	117	4-M16	16	1.6	4.1
1"	25	20	127	230	105	65	85	115	4-M16	16	2	51	89	124	4-M16	18	1.6	5.2
1 1/4"	32	25	140	230	120	78	100	135	4-M16	18	2	64	98.5	133	4-M16	19	1.6	8.2
1 1/2"	40	32	165	320	128	85	110	145	4-M16	18	3	73	114.5	156	4-M20	21	1.6	11.3
2"	50	40	178	320	146	100	125	160	4-M16	20	3	92	127	165	8-M16	22	1.6	15.1
2 1/2"	65	50	190	320	165	120	145	180	8-M16	22	3	105	149.5	190	8-M20	25	1.6	17.9
3"	80	65	203	400	185	135	160	195	8-M16	22	3	127	168	210	8-M20	29	1.6	26.8
4"	100	80	229		210	160	190	230	8-M20	24	3	157	200.5	254	8-M20	32	1.6	36
5"	125	100	254		265	188	220	270	8-M24	28	3	186	235	279	8-M20	35	1.6	49
6"	150	100	267		290	218	250	300	8-M24	30	3	216	270.5	318	12-M20	37	1.6	65
8"	200	150	292		308	282	320	375	12-M27	38	3	270	330	381	12-M24	41	1.6	93

Remarks: ceramic ball valve with nominal diameter larger than DN100 all matched with worm wheel manual operation





PN10 / JIS10K 尺寸表:

DN		DIN PN10 Figure Size & Flange Dia.										JIS 10K Figure Size & Flange Dia.						
Inch	mm	W	L	H	D1	D2	D3	N-Φd	T	f	L	H	D1	D2	D3	N-Φd	T	f
1/2"	15	130	130	84	45	65	95	4-Φ14	14	2	108	66	52	70	95	4-Φ15	12	1
3/4"	20	130	130	84	55	75	105	4-Φ14	14	2	117	69	58	75	100	4-Φ15	14	1
1"	25	160	140	95	65	85	115	4-Φ14	14	2	129	86	70	90	125	4-Φ19	14	1
1 1/4"	32	160	165	95	78	100	135	4-Φ18	16	2	140	97	80	100	135	4-Φ19	16	2
1 1/2"	40	250	165	138	85	110	145	4-Φ18	16	2	165	123	85	105	140	4-Φ19	16	2
2"	50	250	203	147	100	125	160	4-Φ18	16	3	180	130	100	120	155	4-Φ19	16	2
2 1/2"	65	400	222	185	120	145	180	4-Φ18	18	3	190	148	120	140	173	4-Φ19	18	2
3"	80	400	241	194	135	160	195	4-Φ18	20	3	200	174	130	150	185	8-Φ19	18	2
4"	100	700	305	210	155	180	215	8-Φ18	20	3	235	190	155	175	210	8-Φ19	18	2
5"	125	700	381	265	185	210	245	8-Φ18	22	3	300	230	185	210	250	8-Φ23	20	2
6"	150	1100	403	290	210	240	280	8-Φ23	24	3	340	252	215	240	280	8-Φ23	22	2
8"	200	1100	419	308	265	295	335	12-Φ23	26	3	350	278	265	290	330	12-Φ23	22	2

PN16 / ANSI150LB 尺寸表:

DN		DIN PN16 Figure Size & Flange Dia.										ANSI CLASS 150 Figure Size & Flange Dia.						
Inch	mm	W	L	H	D1	D2	D3	N-Φd	T	f	L	H	D1	D2	D3	N-Φd	T	f
1/2"	15	130	130	84	45	65	95	4-Φ14	14	2	108	66	35	60.5	89	4-Φ15	11	1.6
3/4"	20	130	130	84	55	75	105	4-Φ14	14	2	117	69	43	70	98	4-Φ15	11	1.6
1"	25	160	140	95	65	85	115	4-Φ14	14	2	127	91	51	79.5	108	4-Φ15	11	1.6
1 1/4"	32	160	165	95	78	100	135	4-Φ18	16	2	140	97	64	89	117	4-Φ15	13	1.6
1 1/2"	40	250	165	138	85	110	145	4-Φ18	16	2	165	123	73	98.5	127	4-Φ15	14	1.6
2"	50	250	203	147	100	125	160	4-Φ18	16	3	178	130	92	120.5	152	4-Φ19	16	1.6
2 1/2"	65	400	222	185	120	145	180	4-Φ18	18	3	190	143	105	139.5	178	4-Φ19	18	1.6
3"	80	400	241	194	135	160	195	4-Φ18	20	3	203	176	127	152.5	190	8-Φ19	19	1.6
4"	100	700	305	210	155	180	215	8-Φ18	20	3	229	192	157	190.5	229	8-Φ19	24	1.6
5"	125	700	381	265	185	210	245	8-Φ18	22	3	356	230	186	216	254	8-Φ22	24	1.6
6"	150	1100	403	290	210	240	280	8-Φ23	24	3	394	252	216	241.5	279	8-Φ22	25	1.6
8"	200	1100	419	308	265	295	335	12-Φ23	26	3	457	278	270	298.5	343	8-Φ22	29	1.6

PN25 / JIS20K 尺寸表:

DN		DIN PN25 Figure Size & Flange Dia.										JIS 20K Figure Size & Flange Dia.						
Inch	mm	W	L	H	D1	D2	D3	N-Φd	T	f	L	H	D1	D2	D3	N-Φd	T	f
1/2"	15	160	130	84	45	65	95	4-Φ14	16	2	108	66	52	70	95	4-Φ15	14	1
3/4"	20	160	130	84	55	75	105	4-Φ14	16	2	117	69	58	75	100	4-Φ15	16	1
1"	25	230	140	95	65	85	115	4-Φ14	16	2	129	91	70	90	125	4-Φ19	16	1
1 1/4"	32	230	165	95	78	100	135	4-Φ18	18	2	140	97	80	100	135	4-Φ19	18	2
1 1/2"	40	320	165	138	85	110	145	4-Φ18	18	3	165	123	85	105	140	4-Φ19	18	2
2"	50	320	203	147	100	125	160	4-Φ18	20	3	180	130	100	120	155	4-Φ19	18	2
2 1/2"	65	400	222	185	120	145	180	4-Φ18	22	3	190	143	120	140	175	8-Φ19	20	2
3"	80	400	241	194	135	160	195	8-Φ18	22	3	200	176	135	160	200	8-Φ23	22	2
4"	100	700	305	210	160	190	230	8-Φ23	24	3	235	192	160	185	225	8-Φ23	24	2
5"	125	700	381	265	188	220	270	8-Φ25	28	3	300	230	195	225	270	8-Φ25	26	2
6"	150	1100	403	290	218	250	300	8-Φ25	30	3	340	252	230	260	305	12-Φ25	28	2
8"	200	1100	419	308	278	310	360	12-Φ25	34	3	350	278	275	305	350	12-Φ25	30	2

PN40 / ANIS300LB 尺寸表:

DN		DIN PN40 Figure Size & Flange Dia.										ANSI CLASS 300 Figure Size & Flange Dia.						
Inch	mm	W	L	H	D1	D2	D3	N-Φd	T	f	L	H	D1	D2	D3	N-Φd	T	f
1/2"	15	160	140	67	45	65	95	4-Φ14	16	2	108	66	35	66.5	95	4-Φ15	15	1.6
3/4"	20	160	152	70	55	75	105	4-Φ14	16	2	117	69	43	82.5	117	4-Φ19	16	1.6
1"	25	230	165	89	65	85	115	4-Φ14	16	2	127	91	51	89	124	4-Φ19	18	1.6
1 1/4"	32	230	180	95	78	100	135	4-Φ18	18	2	140	97	64	98.5	133	4-Φ19	19	1.6
1 1/2"	40	320	200	122	85	110	145	4-Φ18	18	2	165	123	73	114.5	156	4-Φ22	21	1.6
2"	50	320	230	130	100	125	160	4-Φ18	20	3	178	130	92	127	165	8-Φ19	22	1.6
2 1/2"	65	400	290	157	120	145	180	4-Φ18	22	3	190	143	105	149.5	190	8-Φ22	25	1.6
3"	80	400	310	186	135	160	195	4-Φ18	22	3	203	176	127	168	210	8-Φ22	29	1.6
4"	100	700	350	203	160	190	230	8-Φ23	24	3	229	192	157	200.5	254	8-Φ22	32	1.6
5"	125	700	356	252	188	220	270	8-Φ25	28	3	350	230	186	235	279	8-Φ22	35	1.6
6"	150	1100	394	276	218	250	300	8-Φ25	30	3	414	252	216	270.5	318	12-Φ22	37	1.6
8"	200	1100	457	293	282	320	375	12-Φ30	38	3	439	278	270	330	381	12-Φ25	41	1.6



## 订购选型 - Order Information

1P ↓ Body Type 阀体类型 1	O ↓ Ball Type 球体类型 2	PTFE ↓ Liner Material 内衬材质 3	0100 ↓ Size 阀门口径 4	PN10 ↓ Pressure Rating 压力等级 5	FL ↓ End Coonectio 连接方式 6	CS ↓ Body 阀体材质 7	13 ↓ Ball 球体材质 8	PTFE ↓ Seat 阀座材质 9	NTE ↓ Operation 操作方式 10
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### 1. Body Type - 阀体类型

Code	Description - 说明
1P	一片式阀体(1-Piece Body)
2P	二片式阀体(2-Piece Body)
3P	三片式阀体(3-Piece Body)

### 2. Ball Type - 球体类型

Code	Description - 说明
V	V型球体
R	缩径(减流量)球体
O	全通径(全流量)球体

### 3. Liner Material - 内衬材质

Code	Description - 说明
00	NONE - 无
PTFE	PTFE
PFA	PFA
CR	Ceramic

### 4. Valve Size - 阀门口径

Code	Description - 说明
0100	以4位数代表阀门口径 例如: DN100(4") 以0100表示

### 5. Pressure Rating - 压力等级

Code	国标	Code	美标	Code	德标	Code	日标
PN10	PN10	150LB	ANSI150LB	DPN10	DIN PN10	10K	JIS10K
PN16	PN16	300LB	ANSI300LB	DPN16	DIN PN16	20K	JIS20K
PN25	PN25	600LB	ANSI600LB	DPN25	DIN PN25		
PN40	PN40	900LB	ANSI900LB	DPN40	DIN PN40		

### 6. End Coonection - 连接方式

Code	Description - 说明
PT	螺纹 - PT
NPT	螺纹 - NPT
BW	对焊 - Butt Weld
SW	承插焊 - Skolet Weld
CL	管夹式 - Clamp Type
TU	卡套式 - Tube End
FL	法兰 - Flanged End

### 7. Body Material - 阀体材质

Code	Description - 说明
CS	碳钢 - Carbon Steel
13	304SS不锈钢
14	316SS不锈钢
MN	蒙镍合金 - Monel
HC	哈式合金 - Hastelloy C
XX	其他 - XX

### 8. Ball Material - 球体材质

Code	Description - 说明
13	304SS不锈钢
14	316SS不锈钢
MN	蒙镍合金 - Monel
HC	哈式合金 - Hastelloy C
XX	其他 - XX

### 9. Seat Material - 阀座材质

Code	Description - 说明
PTFE	PTFE
PFA	PFA
CR	Ceramic
S6	Stellite #6(硬密封阀座)
XX	其他 - XX

### 10. Operation - 操作方式

Code	Description - 说明
M	手动 - Manual
NK	气动 - Pneumatic Actuator/齿条齿轮式NK(052~270)
NSF	气动 - Pneumatic Actuator/拨叉式NSF(16~60)
NTE	电动 - Electric Actuator/NTE系列(02~200)
NTQ	电动 - Electric Actuator/NTQ系列(100~3000)