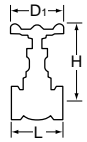
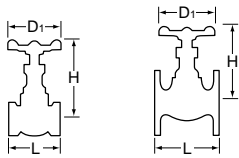


# Bronze & Brass Valves



Design	TOYO Standard									MSS SP-80			
Type	Gate Valves												
Class	125												
Fig.	275A/272			206A			272A			280A			
Size	L	H	D <sub>1</sub>	L	H	D <sub>1</sub>	L	H	D <sub>1</sub>	L	H	D <sub>1</sub>	
8 (mm) 1/4"				42	75	48							
10 3/8"	43	76	48	42	75	48	38	74	48	43	87	48	
15 1/2"	43	76	48	45	81	48	42	74	48	49	93	55	
20 3/4"	48	85	55	50	90	55	47	87	55	53	111	63	
25 1"	53	97	63	57	106	63	50	98	63	61	127	70	
32 1 1/4"	60	117	70	61	119	70	60	119	70	64	145	80	
40 1 1/2"	63	128	70	67	135	80	63	126	80	68	170	90	
50 2"	71	151	80	74	159	90	72	154	90	74	189	100	
65 2 1/2"	87	180	90	90	201	110	82	187	100				
80 3"	96	211	100	100	223	125	92	204	110				
100 4"				140	302	160							
Material	Body	Bronze			Bronze			Brass			Bronze		
	Stem	DZR Brass			DZR Brass			DZR Brass			Bronze		
	Disc	Bronze			Bronze			Brass			Bronze		
Service conditions	1.37MPa (200psi) WOG non-shock 0.86MPa (125psi) Saturated steam												
Remarks				Lead-washed surface treatment available upon request			BS/JIS taper threads only						

Design	MSS SP-80												
Type	Gate Valves												
Class	150			150			125			150			
Fig.	204A			204A			208			209			
Size	L	H	D <sub>1</sub>	L	H	D <sub>1</sub>	L	H	D <sub>1</sub>	L	H	D <sub>1</sub>	
8 (mm) 1/4"													
10 3/8"	43	87	48										
15 1/2"	48	96	55	49	98	55	51	129	55	51	137	55	
20 3/4"	53	112	63	53	115	70	56	156	63	56	157	63	
25 1"	62	123	70	61	127	70	66	181	70	66	180	70	
32 1 1/4"	69	141	80	68	145	80	68	216	80	68	216	80	
40 1 1/2"	75	164	90	74	176	90	74	257	90	74	257	90	
50 2"	86	197	100	84	201	100	84	296	100	84	296	100	
65 2 1/2"	105	224	110										
80 3"	116	261	125										
100 4"													
Material	Body	Bronze			Bronze			Bronze			Bronze		
	Stem	DZR Brass			Bronze			Bronze			Bronze		
	Disc	Bronze			Bronze			Bronze			Bronze		
Service conditions	2.06MPa (300psi) WOG non-shock 1.03MPa (150psi) Saturated steam			2.06MPa (300psi) WOG non-shock 1.03MPa (150psi) Saturated steam			1.37MPa (200psi) WOG non-shock 0.86MPa (125psi) Saturated steam			2.06MPa (300psi) WOG non-shock 1.03MPa (150psi) Saturated steam			
Remarks	BS/JIS taper threads only			ASME taper threads only									

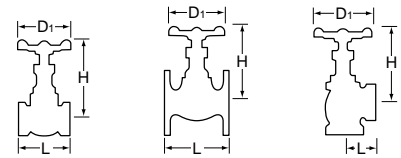






# Bronze Valves


Design		MSS SP-80											
Type		Gate Valves											
Class		125			150			300			150		
Fig.		293			298			318A			205A		
Size		L	H	D <sub>1</sub>	L	H	D <sub>1</sub>	L	H	D <sub>1</sub>	L	H	D <sub>1</sub>
8 (mm)	1/4"												
10	3/8"												
15	1/2"	51	137	55	51	137	55	51	150	70	75	96	55
20	3/4"	56	158	70	56	158	70	56	173	80	80	112	63
25	1"	66	181	70	66	181	70	66	194	80	95	123	70
32	1 1/4"	68	216	80	68	216	80	74	228	100	110	142	80
40	1 1/2"	74	257	90	74	257	90	84	273	110	120	165	90
50	2"	84	297	100	84	297	100	98	313	125	140	197	100
65	2 1/2"										165	225	110
80	3"										190	263	140
100	4"										230	309	225
Material	Body	Bronze			Bronze			Bronze			Bronze		
	Stem	Bronze			Bronze			Bronze			DZR Brass		
	Disc	Bronze			Bronze			Bronze			Bronze		
Service conditions		1.37MPa (200psi) WOG non-shock 0.86MPa (125psi) Saturated steam			2.06MPa (300psi) WOG non-shock 1.03MPa (150psi) Saturated steam			6.89MPa (1000psi) WOG non-shock 2.06MPa (300psi) Saturated steam			1.55MPa (225psi) WOG non-shock 1.03MPa (150psi) Saturated steam		
Remarks		JIS 10K flange available											

Design		TOYO Standard			MSS SP-80			TOYO Standard			MSS SP-80		
Type		Globe Valves											
Class		100			125			150			300		
Fig.		210A			211A			213A			335		
Size		L	H	D <sub>1</sub>	L	H	D <sub>1</sub>	L	H	D <sub>1</sub>	L	H	D <sub>1</sub>
8 (mm)	1/4"	40	67	48	44	67	48	44	67	48			
10	3/8"	42	68	48	44	69	48	44	69	48	55	114	63
15	1/2"	48	69	55	53	77	63	53	80	63	64	126	80
20	3/4"	53	81	63	65	99	70	65	94	70	78	139	90
25	1"	63	95	70	77	108	80	77	104	80	90	159	100
32	1 1/4"	73	104	80	85	137	90	85	127	90	105	186	110
40	1 1/2"	81	127	90	100	160	100	100	145	100	120	195	125
50	2"	94	147	100	119	179	110	119	173	110	145	223	140
65	2 1/2"	115	178	110	150	202	125	139	199	125			
80	3"	131	200	125	178	245	160	158	214	140			
100	4"												
Material	Body	Bronze			Bronze			Bronze			Bronze		
	Stem	DZR Brass			Bronze			DZR Brass			Bronze		
	Disc	Bronze			Bronze			Bronze			Bronze		
Service conditions		1.03MPa (150psi) WOG non-shock 0.68MPa (100psi) Saturated steam			1.37MPa (200psi) WOG non-shock 0.86MPa (125psi) Saturated steam			2.06MPa (300psi) WOG non-shock 1.03MPa (150psi) Saturated steam			4.18MPa (600psi) WOG non-shock 2.06MPa (300psi) Saturated steam		
Remarks													

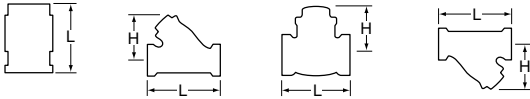
# Bronze Valves







Design	TOYO Standard						MSS SP-80						
Type	Globe Valves			Angle Valves			Globe Valves with PTFE seat						
Class	150						125			150			
													
Fig.	215			260A			220A			221			
Size	L	H	D <sub>1</sub>	L	H	D <sub>1</sub>	L	H	D <sub>1</sub>	L	H	D <sub>1</sub>	
8 (mm) 1/4"				21	67	48							
10 3/8"				24	69	48	53	88	55				
15 1/2"	83	80	63	28	80	63	57	101	63	64	117	70	
20 3/4"	88	95	70	34	94	70	66	111	70	78	136	90	
25 1"	100	105	80	40	104	80	76	120	80	90	149	100	
32 1 1/4"	113	127	90	47	127	90	88	140	90	105	172	110	
40 1 1/2"	120	145	100	52	145	100	100	156	100	120	181	110	
50 2"	145	173	110	61	173	110	120	184	110	145	209	125	
65 2 1/2"	165	198	125	74	199	125	147	210	125				
80 3"	177	214	140	85	214	140	162	228	140				
100 4"	220	259	160										
Material	Body	Bronze			Bronze			Bronze			Bronze		
	Stem	DZR Brass			DZR Brass			DZR Brass			DZR Brass		
	Disc	Bronze			Bronze			R-PTFE			R-PTFE		
Service conditions	1.55MPa (225psi) WOG non-shock 1.03MPa (150psi) Saturated steam			2.06MPa (300psi) WOG non-shock 1.03MPa (150psi) Saturated steam			1.37MPa (200psi) WOG non-shock 0.86MPa (125psi) Saturated steam			2.06MPa (300psi) WOG non-shock 1.03MPa (150psi) Saturated steam			
Remarks	JIS 10K flange available												




Design	MSS SP-80			
Type	Globe Valves with PTFE seat			
Class	150			
				
Fig.	223			
Size	L	H	D <sub>1</sub>	
8 (mm) 1/4"				
10 3/8"				
15 1/2"	82	114	63	
20 3/4"	95	138	90	
25 1"	108	156	100	
32 1 1/4"	120	183	110	
40 1 1/2"	140	186	110	
50 2"	165	212	125	
65 2 1/2"	190	243	140	
80 3"	220	290	160	
100 4"	270	321	225	
Material	Body	Bronze		
	Stem	DZR Brass		
	Disc	R-PTFE		
Service conditions	1.55MPa (225psi) WOG non-shock 1.03MPa (150psi) Saturated steam			
Remarks	JIS10K flange available			

- \* Standard color of handwheel on bronze/brass valve is as follows,
- BS21 or JIS B0203 taper threads and JIS B2240 10K flanged = Green color
  - ASME B1.20.1 threads and ASME B16.24 class 150 flanged = Red & White color



# Bronze Valves

Design	TOYO Standard	MSS SP-80								
Type	Lift Check Valve	Swing Check Valves						Lift Check Valve		
Class		125						150		
										
Fig.	231	236A		236T		234		230A		
Size	L	L	H	L	H	L	H	L	H	
8 (mm)	1/4"	54	40	54	40					
10	3/8"	54	40	54	40	53	39	44	26	
15	1/2"	53	56	40	56	40	60	39	53	
20	3/4"	59	70	49	70	49	70	45	65	
25	1"	67	80	58	80	58	80	52	77	
32	1 1/4"	78	95	71	95	71	92	62	85	
40	1 1/2"	84	110	80	110	80	102	67	100	
50	2"	98	128	95	128	95	122	79	119	
65	2 1/2"		156	119	156	114	150	91	139	
80	3"		184	139	184	131	165	102	158	
100	4"									
Material	Body	Bronze		Bronze		Bronze		Bronze		
	Pin	-		Brass		Brass		-		
	Disc	FKM		Brass or Bronze		PTFE		Brass		
Service conditions	1.37MPa (200psi) WOG non-shock 0.86MPa (125psi) Saturated steam						2.06MPa (300psi) WOG non-shock 1.03MPa (150psi) Saturated steam			
Remarks	ASME taper threads only, Spring loaded					PTFE seat		BS/JIS taper threads only		

Design	MSS SP-80	TOYO Standard					
Type	Swing Check Valve	Swing Check Valve				Strainer	
Class	150	300				150	
							
Fig.	238	360				380A	
Size	L	H	L	H	L	H	
8 (mm)	1/4"						
10	3/8"	54	39				
15	1/2"	60	39	60	42	80	
20	3/4"	72	49	72	51	100	
25	1"	84	58	84	61	115	
32	1 1/4"	99	70	99	74	135	
40	1 1/2"	113	79	113	83	160	
50	2"	131	95	131	98	195	
65	2 1/2"	162	114			230	
80	3"	186	132			240	
100	4"						
Material	Body	Bronze		Bronze		Bronze	
	Pin	Brass		Brass		Screen	SUS304
	Disc	Bronze		Bronze			
Service conditions	2.06MPa (300psi) WOG non-shock 1.03MPa (150psi) Saturated steam		4.13MPa (600psi) WOG non-shock 2.06MPa (300psi) Saturated steam		1.72MPa (250psi) WOG non-shock 1.03MPa (150psi) Saturated steam		
Remarks					Perforated screen equivalent to 14-16 meshes		