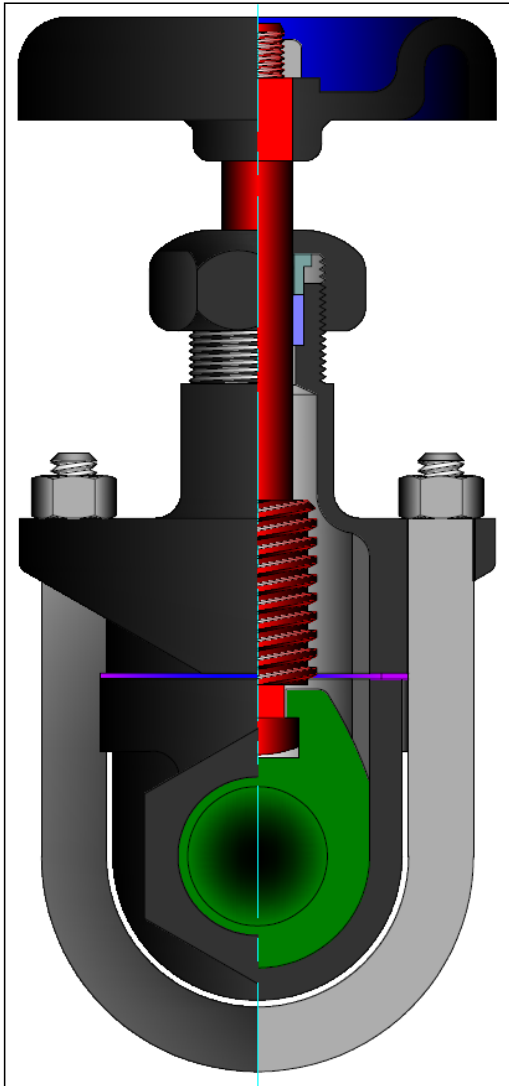


CLIP GATE VALVE

THREADED BONNET, THREADED ENDS
 1/4 - 4" (6 - 100 mm) CLASS 150
 CAST IRON



Class	Trim	Fig. No.
125	Bronze	3460
	Iron	3462

STANDARD MATERIALS

FIGURE		3460	3462
PART		MATERIALS	
Body	1/4" - 1"	A536	
	1 1/4" - 4"	A126-B	
Bonnet	1/4" - 1"	A536	
	1 1/4" - 4"	A126-B	
Wedge	B62	A536	
Stem	B16	A276-410	
Packing Nut	A536		
Gland	B16	A276-410	
Packing	Non-Asbestos		
Gasket	Non-Asbestos		
Hand Wheel	A126-B		
Hand Wheel Nut	A563-A		
U-Bolt	A307-A		
U-Bolt Nut	A563-A		
Name Plate	Aluminum		

Design Specifications

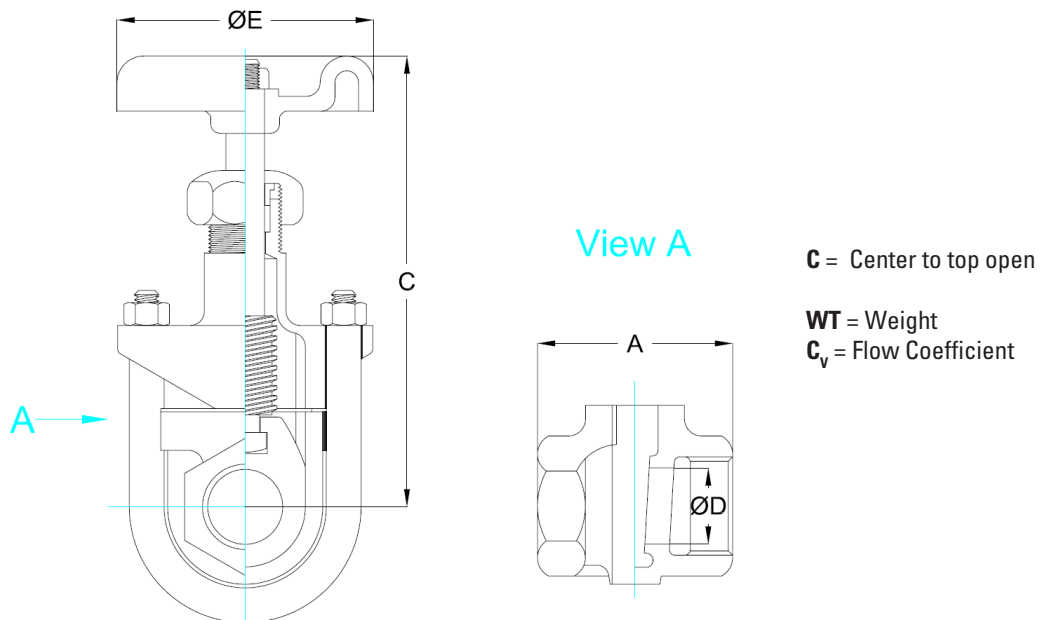
Item	Applicable Specification
Pressure-Temperature Ratings	MSS SP-70
Thread Design	ASME B1.20.1
Materials	ASTM

DESIGN FEATURES:

- Seat faces lapped for smooth finish and superior sealing.
- Each valve is shell and seat pressure tested per industry standard MSS SP-70.

GATE VALVE DIMENSIONS (CLASS 125)

SIZE	FIG 3460 & 3462					
	A	C	D	E	WT	CV
in						
mm						
¼	2.09	5.0	0.25	2.1	1.5	2.8
6	53	127	6	54	0.7	
3/8	2.09	5.0	0.38	2.1	1.5	7.8
10	53	127	10	54	0.7	
½	2.09	5.0	0.50	2.1	1.5	13.2
13	53	127	13	54	0.7	
¾	2.52	6.2	0.75	2.4	2	30
20	64	158	19	62	0.9	
1	2.63	7.5	1.00	3	3	55
25	67	191	25	75	1.4	
1¼	2.91	9.0	1.25	3	5	87
32	74	229	32	75	2.3	
1½	3.14	9.1	1.50	3.8	6.5	129
40	80	232	38	95	2.9	
2	3.89	11.6	2.00	4	10	240
50	99	294	51	101	4.5	
2½	4.59	12.9	2.50	4.8	16	385
65	117	327	64	121	7.3	
3	4.92	14.8	3.00	6	24	555
75	125	375	76	152	11	

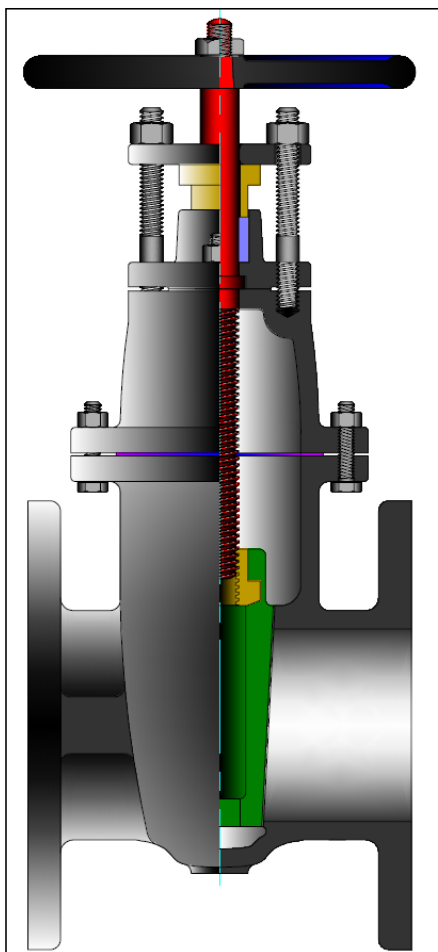


MSS SP-70 GATE VALVES

BOLTED BONNET, FLANGED ENDS

2 - 24" (50 - 600 mm) CLASS 125

CAST IRON NON-RISING STEM



STANDARD MATERIALS

PART	MATERIALS
Body	A126-B
Bonnet	A126-B
Stuffing Box	A126-B
Wedge	A126-B
Wedge Seat Ring	B62
Body Seat Ring	B62
Stem	B16
Gasket	Non-Asbestos
Wedge Nut	B62
Gland Flange	A536-A
Gland Flange Bolt	A307-A
Gland Flange Nut	A563-A
Gland	B62
Packing	Non-Asbestos
Stuffing Box / Bonnet Gasket	Non-Asbestos
Hand Wheel	A126-B
Hand Wheel Nut	A536-A
Body / Bonnet Stud	A307-A
Body / Bonnet Nut	A536-A

Class	Trim	Fig. No.
125	Bronze	1787

DESIGN FEATURES:

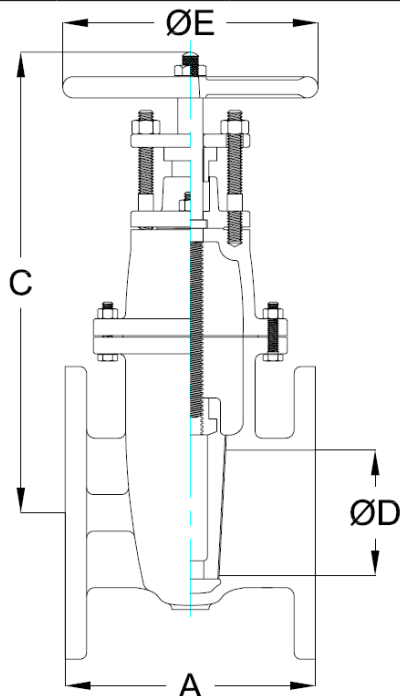
- Seat faces lapped for smooth finish and superior sealing.
- Renewable seat rings.
- Body has 5 tapping bosses.
- Each valve is shell and seat pressure tested per industry standard MSS SP-70.
- Gland is two piece gland / gland flange design for optimal alignment and uniform packing compression.

Design Specifications

Item	Applicable Specification
Wall thickness	ASME B16.1
Pressure - temperature ratings	MSS SP-70
General valve design	MSS SP-70 Type I
End to End dimensions	ASME B16.10
Flange design	ASME B16.1
Materials	ASTM

GATE VALVE DIMENSIONS (CLASS 125)

SIZE in mm	FIG 1787						
	A	C	D	E	WT	lb kg	CV
2	7.00	12.3	2.00	7.0	33		240
50	178	312	51	178	15		
2½	7.50	13.3	2.50	7.0	44		390
65	191	337	64	178	20		
3	8.00	15.0	3.00	8.0	55		560
80	203	381	76	203	25		
4	9.00	17.8	4.00	10.0	95		1000
100	229	451	102	254	43		
5	10.00	20.1	5.00	12.0	132		1600
125	254	511	127	305	60		
6	10.50	23.1	6.00	12.0	172		2400
150	267	587	152	305	78		
8	11.50	27.8	8.00	14.0	271		4500
200	292	705	203	356	123		
10	13.00	32.9	10.00	16.0	361		7000
250	330	836	254	406	164		
12	14.00	37.4	12.00	18.0	578		10500
300	356	949	305	457	262		
14	15.00	41.4	14.00	20.0	660		14300
350	381	1051	356	508	299		
16	16.00	46.9	16.00	22.0	1165		18600
400	406	1190	406	559	528		
18	17.00	49.8	18.00	24.0	1462		24500
450	432	1266	457	610	663		
20	18.00	54.9	20.00	24.0	1801		30300
500	457	1394	508	610	817		
24	20.00	64.3	24.00	30.0	2600		43600
600	508	1632	610	762	1179		



C = Center to top open and closed

WT = Weight

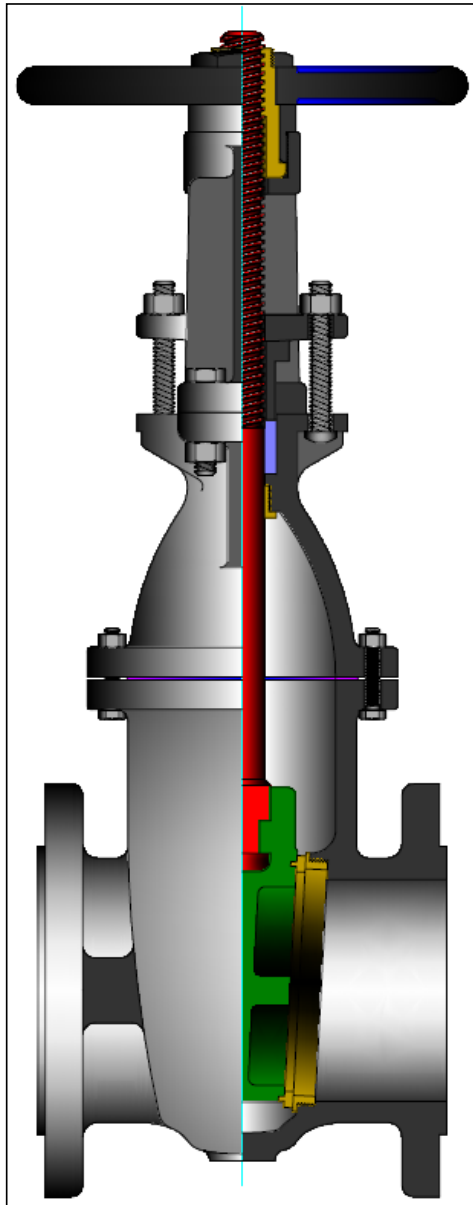
C_v = Flow Coefficient

MSS SP-70 GATE VALVE

BOLTED BONNET, FLANGED ENDS

2 - 24" (50 - 600 mm) CLASSES 125 - 250

CAST IRON OR 3% NICKEL IRON RISING STEM



STANDARD MATERIALS

FIGURE NUMBER	1793	1797	1816	1893
CLASS	125	250	125	125
PART	MATERIALS			
Body	A126-B		3% Nickel	
Bonnet	A126-B		3% Nickel	
Yoke	A126-B		A126-B	
Wedge	A126-B		3% Nickel	
Wedge Seat Ring	B62	-	A351-CF8M	
Body Seat Ring	B62	-	A351-CF8M	
Stem	B16	A276-410	A276-316	
Stem Bushing	B62			
Stem Bushing Lock Nut	A536			
Gland Flange	A536			
Gland Flange Bolt	A307-A			
Gland Flange Nut	A563-A			
Gland	B62	A126-B		
Packing	Non-Asbestos			
Gasket	Non-Asbestos			
Backseat Ring	2 - 12"	B62	A276-410	316 SST
	14 - 24"	B16		
Hand Wheel	A126-B or A536			
Hand Wheel Nut	A536			
Body / Bonnet Stud	A307-A			
Body / Bonnet Nut	A563-A			
Bonnet / Yoke Bolt	A307-A			
Bonnet / Yoke Nut	A563-A			

Design Specifications

Item	Applicable Specification
Wall thickness	ASME B16.1
Pressure - temperature ratings	MSS SP-70
General valve design	MSS SP-70 Type I
End to End dimensions	ASME B16.10
Flange design	ASME B16.1
Materials	ASTM

Class	Trim	Fig. No.
125	Bronze	1793
	Iron	1816
	T316 SS	1893
250	Bronze	1797

DESIGN FEATURES:

- Seat faces lapped for smooth finish and superior sealing.
- Stems are non-rotating with surface finish to optimize packing seal.
- Each valve is shell and seat pressure tested per industry standard MSS SP-70.
- Gland is two piece gland / gland flange design for optimal alignment and uniform packing compression.
- Renewable seat rings.
- Body has 5 tapping bosses.
- Solid wedge design.
- Class 125 have flat faced end flanges, class 250 has raised face end flanges.

GATE VALVE DIMENSIONS (CLASSES 125 & 250)

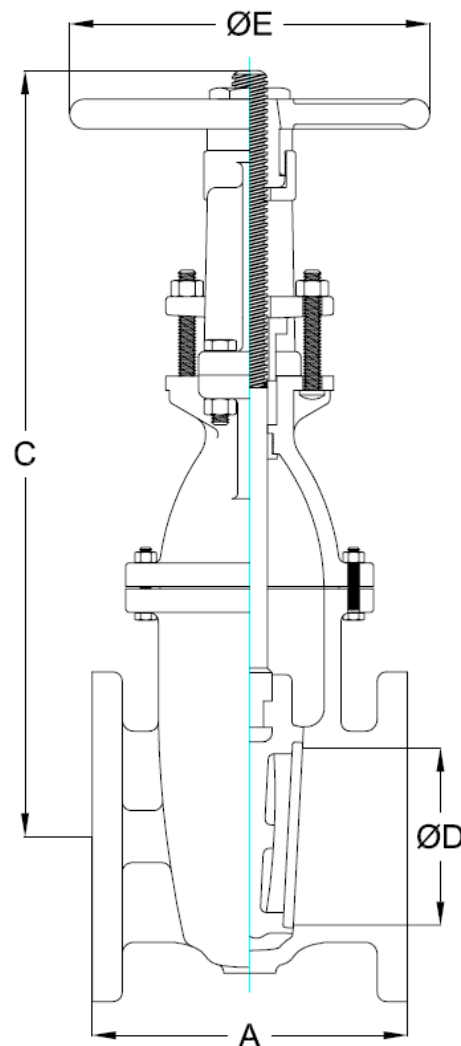
SIZE in mm	FIG 1793, 1816, & 1893				FIG 1797			
	A	C	D	E	A	C	D	E
2	7.00	14.7	2.00	7.0	8.50	15.0	2.00	7.0
50	178	374	51	178	216	382	51	178
2½	7.50	16.7	2.50	7.0	9.50	17.1	2.50	8.0
65	191	423	64	178	241	434	64	203
3	8.00	18.9	3.00	8.0	11.13	19.4	3.00	10.0
80	203	479	76	203	283	492	76	254
4	9.00	23.4	4.00	10.0	12.00	23.6	4.00	12.0
100	229	595	102	254	305	600	102	305
5	10.00	27.7	5.00	12.0	15.00	27.9	5.00	12.0
125	254	704	127	305	381	709	127	305
6	10.50	32.2	6.00	12.0	15.88	32.4	6.00	14.0
150	267	819	152	305	403	824	152	356
8	11.50	39.5	8.00	14.0	16.50	40.6	8.00	16.0
200	292	1002	203	356	419	1030	203	406
10	13.00	48.2	10.00	16.0	18.00	49.0	10.00	18.0
250	330	1223	254	406	457	1246	254	457
12	14.00	56.1	12.00	18.0	19.75	56.8	12.00	20.0
300	356	1424	305	457	502	1442	305	508
14	15.00	62.5	14.00	20.0				
350	381	1586	356	508				
16	16.00	71.1	16.00	22.0				
400	406	1805	406	559				
18	17.00	79	18.00	24.0				
450	432	2007	457	610				
20	18.00	87.1	20.00	24.0				
500	457	2213	508	610				
24	20.00	100.5	24.00	30.0				
600	508	2553	610	762				

SIZE in mm	FIG 1793, 1816, & 1893		FIG 1797			
	WT	lb kg	CV	WT	lb kg	CV
2	36		240	53		240
50	16			24		
2½	48		390	70		390
65	22			32		
3	60		560	102		560
80	27			46		
4	103		1000	157		1000
100	47			71		
5	143		1600	198		1600
125	65			90		
6	186		2400	259		2400
150	84			117		
8	298		4500	451		4500
200	135			205		
10	441		7000	649		7000
250	200			294		
12	628		10500	913		10500
300	285			414		
14	880		14300			
350	399					
16	1166		18600			
400	529					
18	1467		24500			
450	665					
20	1824		30300			
500	827					
24	2618		43600			
600	1188					

C = Center to top open

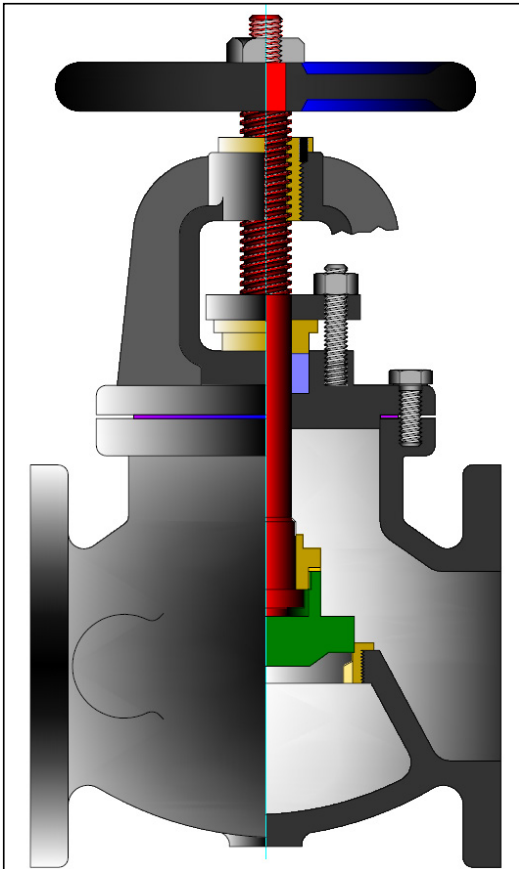
WT = Weight

C_v = Flow Coefficient

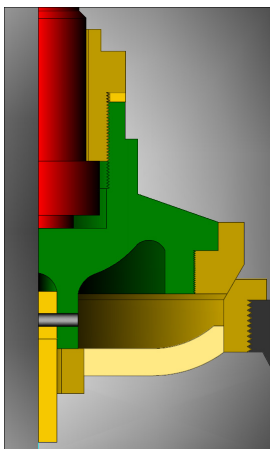


MSS SP-85 GLOBE VALVE

BOLTED BONNET, FLANGED ENDS
 2 - 12" (50 - 300 mm) CLASSES 125
 CAST IRON



Class	Trim	Fig. No.
125	Bronze	241



Disc design for valve sizes 5" to 12"

STANDARD MATERIALS

PART		MATERIALS
Body		A126-B
Bonnet		A126-B
Disc	2 - 4"	B62
	5 - 12"	A126-B
Disc Nut		B62
Body Seat Ring		B62
Disc Seat Ring (1)		B62
Stem		B16
Stem Bushing		B62
Stem Bushing Set Screw		A307-A
Gland Flange		A536
Gland Flange Bolt		A307-A
Gland Flange Nut		A563-A
Gland		B62
Packing		Non-Asbestos
Disc Nut Washer		B16
Gasket		Non-Asbestos
Hand Wheel		A126-B
Hand Wheel Nut		A563-A
Taper Pin (1)		Steel
Guide Pin (1)		B16
Body / Bonnet Stud		A307-A
Body / Bonnet Nut		A563-A

(1) For valve sizes 5" to 12"

Design Specifications

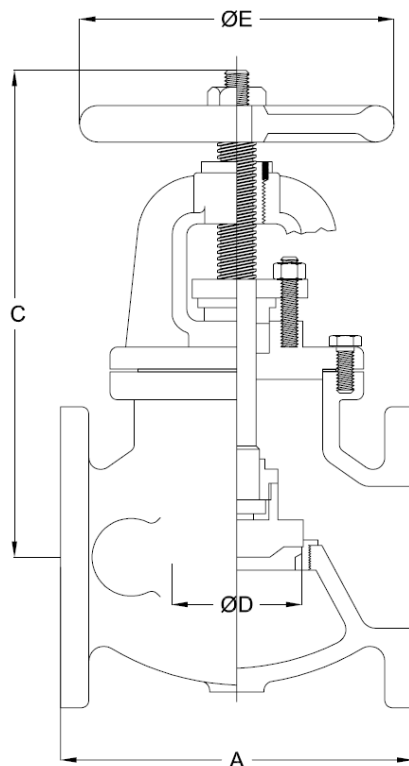
Item	Applicable Specification
Wall thickness	ASME B16.1
Pressure - temperature ratings	MSS SP-85
General valve design	MSS SP-85 Type I
End to End dimensions	ASME B16.10
Flange design	ASME B16.1
Materials	ASTM

DESIGN FEATURES:

- Seat faces lapped for smooth finish and superior sealing.
- Swivel disc for optimal seating and longer seat life.
- Stems are rotating / rising design.
- Each valve is shell and seat pressure tested per industry standard MSS SP-85.
- Gland is two piece gland / gland flange design for optimal alignment and uniform packing compression.

GLOBE VALVE DIMENSIONS (CLASS 125)

SIZE	FIG 241					
	A	C	D	E	WT	CV
in						
mm						
2	8.00	11.9	2.00	7.0	36	45
50	203	303	51	178	16	
2½	8.50	12.8	2.50	7.0	49	75
65	216	326	64	178	22	
3	9.50	13.6	3.00	8.0	57	110
80	241	346	76	203	26	
4	11.50	14.6	4.00	10.0	95	200
100	292	370	102	254	43	
5	13.00	17.7	5.00	12.0	139	320
125	330	450	127	305	63	
6	14.00	19.7	6.00	12.0	183	475
150	356	500	152	305	83	
8	19.50	22.7	8.00	14.0	378	875
200	495	576	203	356	172	
10	24.50	27.0	10.00	16.0	523	1370
250	622	686	254	406	237	
12	27.50	29.8	12.00	18.0	700	2050
300	699	757	305	457	318	



C = Center to top open

WT = Weight

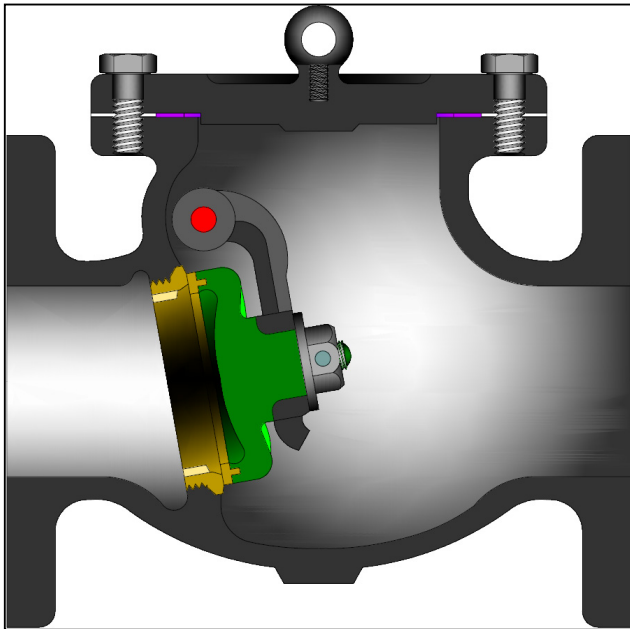
C_v = Flow Coefficient

MSS SP-71 SWING CHECK VALVES

BOLTED BONNET, FLANGED ENDS

2 - 24" (50 - 600 mm) CLASS 125

CAST IRON OR 3% NICKEL IRON



Class	Trim	Fig. No.
125	Bronze	559
	Iron	1259
	T316 SS	559P

DESIGN FEATURES:

- Seat faces lapped for smooth finish and superior sealing.
- Swivel disc for improved seat alignment and longer life.
- Each valve is shell and seat pressure tested per industry standard MSS SP-71.
- Check valve are suitable for service in horizontal line with cap vertical or in a vertical line with flow upward.

STANDARD MATERIALS

FIGURE NUMBER	559	1259	559P
CLASS	125	125	125
PART	MATERIALS		
Body	A126-B		3% Nickel
Cap	A126-B		3% Nickel
Disc	A126-B or A536		3% Nickel (1)
Disc Seat Ring	B62	-	A351 Gr. CF8M (1)
Seat Ring	B62	A536	A351 Gr. CF8M
Gasket	Non-Asbestos		
Carrier	A536		3% Nickel
Carrier Pin	B16	A276-410	A276-304
Disc Nut	A307-A		T304 SS
Split Pin	T304 SS	T410 SS	T304 SS
Washer	Steel		T304 SS
Body / Cap Stud	A307-A		
Body / Cap Nut	A563-A		
Side Plug	B16	A276-410	A276-304

(1) For sizes 2" and 3", the disc is solid A351 Gr. CF8M for figure 559P.

Design Specifications

Item	Applicable Specification
Wall thickness	ASME B16.1
Pressure - temperature ratings	MSS SP-71
General valve design	MSS SP-71 Type I
End to End dimensions	ASME B16.10
Flange design	ASME B16.1
Materials	ASTM

SWING CHECK VALVE DIMENSIONS (CLASS 125)

SIZE		FIG 559, 1259, & 559P				
in	A	B	D	WT	lb	CV
mm					kg	
2	8.00	4.7	2.00	25		45
50	203	118	50	11		
2½	8.50	5.4	2.50	36		75
65	216	136	64	16		
3	9.50	5.8	3.00	46		110
80	241	147	75	21		
4	11.50	6.7	3.94	81		210
100	292	169	100	37		
5	13.00	7.8	4.94	115		345
125	330	198	125	52		
6	14.00	8.5	5.94	150		530
150	356	215	150	68		
8	19.50	10.4	7.94	253		1010
200	495	264	200	115		
10	24.50	11.9	9.88	442		1580
250	622	303	250	200		
12	27.50	13.5	12.00	638		2460
300	699	343	305	289		
14	31.00	15.5	14.00	792		3340
350	787	394	356	359		
16	36.00	17.6	16.00	1020		4360
400	914	448	406	463		
18	36.00	19.3	18.00	1304		5980
450	914	490	457	591		
20	40.00	22.3	20.00	1771		7400
500	1016	565	508	803		
24	48.00	24.9	24.00	2630		10600
600	1219	632	610	1193		

