

## Engineering Specification

Job Name \_\_\_\_\_

Contractor \_\_\_\_\_

Job Location \_\_\_\_\_

Approval \_\_\_\_\_

Engineer \_\_\_\_\_

Contractor's P.O. No. \_\_\_\_\_

Approval \_\_\_\_\_

Representative \_\_\_\_\_

# Cast Carbon Steel Globe Body Silent Check Valves

Models: 105MDT, Class 150  
109MDT, Class 300  
113DT, Class 600  
117DT, Class 1500

Sizes: 2" – 30" (50 – 750mm)

### Typical Service

- Designed for liquids and gases where flow reversal can cause surge and water hammer.
- Used extensively in pump suction and discharge.

### Features

- Spring closes the disc before flow reversal, preventing surge and water hammer.
- Mating surfaces of the disc and seat are hand lapped for best possible sealing.
- Disc is fully guided at top and bottom to insure alignment and sealing at any installation angle.
- Disc begins to open at .5psi.
- Disc opens 1/3" per inch of line size, greater than similar competitive products, for enhanced flow.
- Bodies are designed to accommodate 110% flow of equivalent pipe size.

### Construction

- Globe body design for greatest flow capacity in a silent check valve.
- Integrally cast flanges for ease of installation, Class 150, 300, 600, and 1500 patterns.
- 302SS springs are standard. Many variations in material and weight are available on specification, consult factory.
- Variety of trim and seat materials are available.
  - See introductory pages of the Silent Check Valves section of the Mueller Steam Specialty Engineering binder for the Standard Materials and How To Order Instructions.
  - Stainless Steel guide pins and bushings.

Mueller Steam Specialty product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Mueller Steam Specialty Technical Service. Mueller Steam Specialty reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Mueller Steam Specialty products previously or subsequently sold.



Model 105M

### Pressure/Temperature-Non-Shock

Model	Material	Rating
105MDT	Carbon Steel	285psi @ 100° F
109MDT	Carbon Steel	740psi @ 100° F
113DT	Carbon Steel	1480psi @ 100° F
117DT	Carbon Steel	3705psi @ 100° F

Max. temp. can be limited by seat or spring material. Consult Factory.

Not Recommended for Steam Service.

### Installation

- Can be installed horizontally, vertically or at any angle.
  - Consult factory for downward vertical flow applications.
- Good piping practice recommends installing a distance of 5 to 10 pipe diameters from elbows, pumps, or other turbulence-creating devices.
- Mueller Steam Specialty strongly recommends the installation of a strainer ahead of the pump to ensure protection of both the pump and the valve from foreign particles.

### CAUTION

- Not for use with reciprocating compressors or pumps.
- Not for use in sewage ejector piping

### NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

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## Ordering Information

- All pertinent information relating to the operating conditions for which the valve is intended should be supplied. These include operating pressure, temperature, flow rates, velocity, pump type, conveyance of corrosive fluids, etc.
- For certain applications such as pump suction or handling of volatile liquids, lighter or heavier springs may be required, consult factory.
- Barring specific information, standard springs and materials will be supplied.

## Dimensions and Weights

SIZE		DIMENSIONS						WEIGHT	
in.	mm	A		B		C		lbs.	kgs.
		in.	mm	in.	mm	in.	mm		
<b>105MDT</b>									
2	50	6¼	159	6	152	4⅝	117	20	9
2½	65	7	178	7	178	5¾	146	26	11
3	80	7½	191	7½	191	6⅝	168	32	14
4	100	8½	216	9	229	8⅝	219	52	23
5	125	9½	241	10	254	9⅞	251	65	29
6	150	10½	267	11	279	11⅞	283	84	38
8	200	12	305	13½	343	14⅞	371	156	70
10	250	14	356	16	406	17⅞	449	250	113
12	300	18	457	19	483	21¼	540	400	181
14	350	19½	495	21	533	24	610	580	263
16	400	21	533	23½	597	26⅜	670	850	386
18	450	22½	572	25	635	30	762	1100	500
20	500	24	610	27½	699	32½	826	1450	659
24	600	24	610	32	813	36¼	921	–	–
30	750	30	762	38¾	984	42½	1080	–	–
<b>109MDT</b>									
2	50	6⅞	170	6½	165	4⅝	117	24	10
2½	65	7⅞	192	7½	191	5½	140	31	14
3	80	8¼	210	8¼	210	6¼	159	44	20
4	100	9⅞	231	10	254	8⅝	219	74	33
5	125	10⅝	264	11	279	10	254	105	47
6	150	11⅝	289	12½	318	11⅞	282	134	60
8	200	13	330	15	381	14⅞	371	230	104
10	250	15⅝	391	17½	445	17⅝	441	344	156
12	300	19½	495	20½	520	21¾	552	520	236
14	350	21	533	23	584	24	610	725	329
16	400	22⅝	575	25½	648	26⅝	670	1000	454
18	450	24⅞	613	28	711	29⅞	752	1350	613
20	500	25⅝	651	30½	775	32¾	832	1775	806
<b>113DT</b>									
2	50	6¾	171	6½	165	–	–	28	12
2½	65	7⅞	192	7½	190	–	–	37	16
3	80	8¼	210	8¼	210	–	–	50	22
4	100	9½	241	10¾	273	–	–	104	47
5	125	10¾	273	13	330	–	–	175	79
6	150	11¾	298	14	356	–	–	216	98
8	200	13⅝	340	16½	419	–	–	344	156
10	250	17	432	20	508	–	–	536	243

Apply For Certified Drawings.

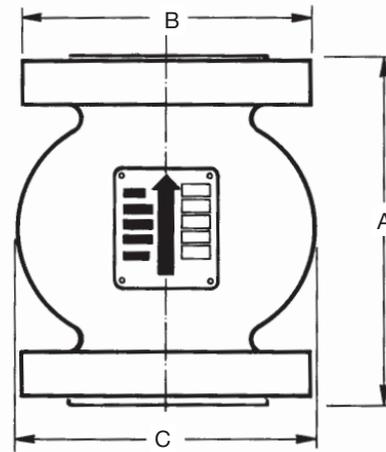
Model 117 available upon request. Consult factory for weights and dimensions.

**Limited Warranty:** Mueller Steam Specialty warrants each product to be free from defects in material and workmanship under normal usage for a period of one year from the date of original shipment. In the event of such defects within the warranty period, the Company will, at its option, replace or recondition the product without charge. This shall constitute the sole and exclusive remedy for breach of warranty, and the Company shall not be responsible for any incidental, special or consequential damages, including without limitation, lost profits or the cost of repairing or replacing other property which is damaged if this product does not work properly, other costs resulting from labor charges, delays, vandalism, negligence, fouling caused by foreign material, damage from adverse water conditions, chemical, or any other circumstances over which the Company has no control. This warranty shall be invalidated by any abuse, misuse, misapplication or improper installation of the product. **THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** Any implied warranties that are imposed by law are limited in duration to one year.

Some States do not allow limitations on how long an implied warranty lasts, and some States do not allow the exclusion or limitation of incidental or consequential damages. Therefore the above limitations may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights that vary from State to State. You should consult applicable state laws to determine your rights.



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**Model 105M**

## Materials

105MDT, 109MDT, 113DT, 117DT	
Body	Carbon Steel ASTM A216 WCB
Trim	Stainless Steel ASTM A351 CF8M
Spring	302 Stainless Steel, ASTM A276

## Pressure Drop

- See Technical Data Section of the Mueller Steam Specialty Engineering binder for Pressure Drop Charts and  $C_v$  values.
- Consult factory for other specific service conditions.