

## Engineering Specification

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

Contractor \_\_\_\_\_

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

Approval \_\_\_\_\_

Engineer \_\_\_\_\_

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

Approval \_\_\_\_\_

Representative \_\_\_\_\_

# LEAD FREE\*

## Cast Aluminum Bronze Globe Body Silent Check Valves

Models: 105MBT, Class 150  
109MBT, Class 300

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 and 300 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.
  - Silicon Bronze guide pins and bushings supplied with Bronze trim.
  - Stainless Steel guide pins and bushings supplied with Stainless Steel trim.

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,109M

### Pressure/Temperature-Non-Shock

Model	Material	Rating
105MBT	Al-Brz	225psi @ 150° F
109MBT	Al-Brz	500psi @ 150° F

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

### 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 others 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.

### NOTICE

- Not for use with reciprocating compressors or pumps.
- Not for use in sewage ejector piping.
- Not Recommended for Steam Service.
- Consult factory for other specific service conditions.

### 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.

\*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

**Mueller Steam Specialty™**

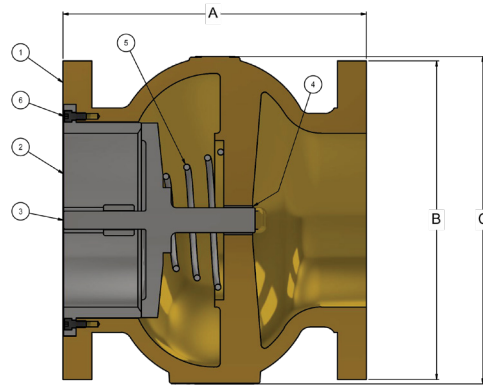
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## Ordering Information

- 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>105MBT</b>									
2	50	6¼	159	6	152	4⅝	117	22	10
2½	65	7	178	7	178	5½	140	29	13
3	80	7½	191	7½	191	6¼	159	36	16
4	100	8½	216	9	229	8⅝	219	58	26
5	125	9½	241	10	254	10	254	72	32
6	150	10½	267	11	279	11⅞	282	93	42
8	200	12	305	13½	343	14⅝	371	172	78
10	250	14	356	16	406	17⅞	441	275	125
12	300	18	457	19	483	21¾	552	440	200
14	350	19½	495	21	533	24	610	638	290
16	400	21	533	23½	597	26⅞	670	935	424
18	450	22½	572	25	635	29⅞	752	1210	550
20	500	24	610	27½	698	32¾	832	1600	727
24	600	24	610	32	813	37	940	–	–
30	750	–	–	–	–	–	–	–	–
<b>109MBT</b>									
2	50	6⅛	170	6½	165	4⅝	117	28	12
2½	65	7⅞	192	7½	191	5⅝	143	34	15
3	80	8¼	210	8¼	209	6¼	159	40	18
4	100	9⅞	232	10	254	8⅝	219	68	30
5	125	10⅝	264	11	279	10	254	92	41
6	150	11⅜	289	12½	318	11⅜	289	128	58
8	200	13	330	15	381	14½	368	210	95
10	250	15⅜	391	17½	445	17⅞	435	335	152
12	300	19½	495	20½	521	21¼	540	530	240
14	350	21	533	23	584	23⅝	594	810	368
16	400	22⅞	575	25½	678	25⅞	657	934	424
18	450	24⅞	613	28	711	30	762	1500	681
20	500	25⅝	651	30½	775	33¼	844	1754	797
24	600	–	–	–	–	–	–	–	–
30	750	–	–	–	–	–	–	–	–



**Model 105M, 109M**

## Materials

Item	Qty	Description	Material
1	1	Body	Aluminium Bronze B 148
2	1	Seat	Stainless Steel ASTM A351 CF8M
3	1	Disc	Stainless Steel ASTM A351 CF8M
4	1	Bushing	Stainless Steel ASTM A351 CF8M
5	1	Spring	302 SS
6	4	Shcs	18-8 SS

## Pressure Drop

- See Technical Data Section of the Mueller Steam Specialty Engineering binder for Pressure Drop Charts and C<sub>v</sub> values.

Apply For Certified Drawings.

**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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