

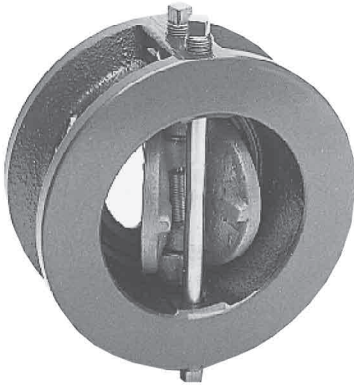
# Model: 78

## Carbon Steel or Stainless Steel SURE CHECK™ Valves, Class 1500 Sizes: 2"–12" (50 – 300mm)

Pressure / Temperature – Non-Shock		
Model	Material	Rating
78D	Carbon Steel	3705psi @ -20°F to 100°F
		255.45 bar @ 37.78°C
		1595psi @ 850°F
78H	Stainless Steel	109.97 bar @ 454.44°C
		3600psi @ -20°F to 100°F
		248.21 bar @ 37.78°C
		2090psi @ 850°F
		144.1 bar @ 454.44°C

\*Seat and/or Spring Materials may limit temperature.

**78** **Class 1500**



Model 78

### Typical Service

- Designed for liquids and gases where flow reversal can cause surge and water hammer.

### Features

- Compact design with short face-to-face dimensions for minimum space requirements.
- Dual shaft design allows interchangeability of shafts.
- Torsion springs close the valve prior to flow reversal.
- Torsion springs exert a lifting motion on the discs, enabling the center "heel" to open first. This prevents excessive wear of the seat in this area, and provides a consistent wear pattern and long sealing capability.
- Downstream stop shaft stabilizes the discs at high flow rates and prevents them from striking each other, which can cause premature wear, stress on the shaft, and chattering.

### Construction

- Robust cast body is wafer style, featuring compact face-to-face dimensions.
- Designed to fit within ANSI bolt circles.
- Variety of trim and seat materials are available.
- High pressure elastomer seats are available for sizes 4" and up.

### Installation

- Can be installed horizontally or vertically.
  - Consult factory for downward vertical flow applications.
  - In horizontal applications, shaft should be in vertical orientation.
- 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.
- Consult factory for applications such as pump suction and volatile liquids.

### Special Coatings or Treatments

- For Stainless Steel, pickling and passivation available on request, consult factory

### Approvals/Specifications

- Applicable ASTM, ANSI, and API standards

### Testing

- API 598

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

Contractor \_\_\_\_\_

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

Approval \_\_\_\_\_

Engineer \_\_\_\_\_

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

Approval \_\_\_\_\_

Representative \_\_\_\_\_

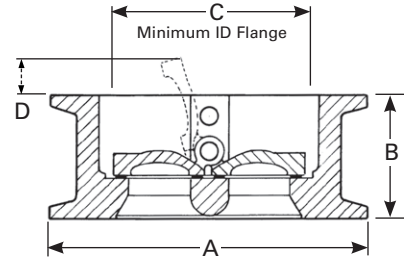
## Materials

	78D	78H
Body	Carbon Steel ASTM A216 Gr. WCB	Stainless Steel ASTM A351 Gr. CF8M
Disc	Carbon Steel ASTM A216 Gr. WCB	Stainless Steel ASTM A351 Gr. CF8M
Shaft/spring	316 SS	316 SS
Seat	Metal to Metal	Metal to Metal

See SURE CHECK™ Valves section of the Mueller Steam Specialty Engineering binder for alternate materials and How to Order options.

## Dimensions and Weights

SIZE		DIMENSIONS								WEIGHT	
in.	mm	A		B		C		D		lbs.	kg.
		in.	mm	in.	mm	in.	mm	in.	mm		
2	50	5 $\frac{5}{8}$	142.8	2 $\frac{3}{4}$	69.9	1 $\frac{11}{16}$	42.9	—	—	12	5.4
2 $\frac{1}{2}$	65	6 $\frac{1}{2}$	165.1	3 $\frac{3}{4}$	82.6	2 $\frac{1}{8}$	54.0	—	—	16	7.3
3	80	6 $\frac{5}{8}$	168.3	3 $\frac{3}{4}$	82.6	2 $\frac{5}{8}$	66.8	$\frac{3}{8}$	9.5	23	10.4
4	100	8 $\frac{1}{8}$	206.4	4	101.6	3 $\frac{3}{16}$	87.3	1 $\frac{11}{32}$	8.7	42	19.0
6	150	11 $\frac{1}{8}$	282.6	6 $\frac{1}{4}$	158.8	5 $\frac{3}{16}$	131.8	1 $\frac{11}{32}$	8.7	110	50.0
8	200	13 $\frac{3}{8}$	352.4	8 $\frac{1}{8}$	206.4	6 $\frac{13}{16}$	173	1 $\frac{7}{32}$	13.5	210	95.2
10	250	17 $\frac{1}{8}$	435	9 $\frac{3}{4}$	247.7	8 $\frac{1}{2}$	215.9	1 $\frac{1}{32}$	26.2	370	168
12	300	20 $\frac{1}{2}$	498.5	12	304.8	10 $\frac{1}{8}$	257.2	1 $\frac{1}{8}$	28.6	650	295
14	350	<b>Larger Sizes On Application</b>									
16	400										
18	450										
20	500										
24	600										
30	750										



Model 78

Apply for Certified Drawings.

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.



A Watts Water Technologies Company

ES-MS-78 1020



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