

# Model: 77

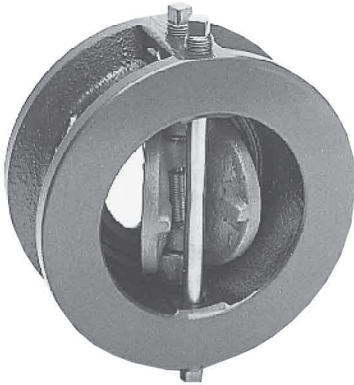
## Carbon Steel or Stainless Steel SURE CHECK™ Valves, Class 900 Sizes: 2"-12" (50 - 300mm)

Pressure / Temperature – Non-Shock		
Model	Material	Rating
77D	Carbon Steel	2220psi @ -20°F to 100°F
		153.06 bar @ 37.78°C
		955psi @ 850°F
77H	Stainless Steel	65.84 bar @ 454.44°C
		2160psi @ -20°F to 100°F
		148.93 bar @ 37.78°C
		1255psi @ 850°F
		86.53 bar @ 454.44°C

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

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Class 900



Model 77

### 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 \_\_\_\_\_

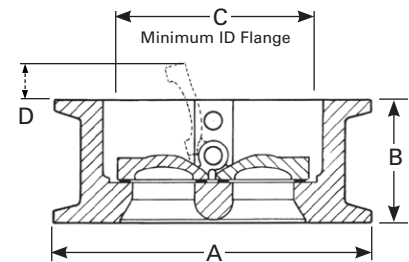
## Materials

	77D	77H
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.	kgs.
		in.	mm	in.	mm	in.	mm	in.	mm		
2	50	5 $\frac{5}{8}$	142.8	2 $\frac{3}{4}$	69.9	1 $\frac{15}{16}$	49.2	—	—	12	5.4
2 $\frac{1}{2}$	65	6 $\frac{1}{2}$	165.1	3 $\frac{1}{4}$	82.6	2 $\frac{5}{16}$	58.7	—	—	16	7.3
3	80	6 $\frac{5}{8}$	168.3	3 $\frac{1}{4}$	82.6	2 $\frac{29}{32}$	73.8	$\frac{3}{8}$	9.5	23	10.4
4	100	8 $\frac{1}{8}$	206.4	4	101.6	3 $\frac{13}{16}$	96.8	11 $\frac{1}{32}$	8.7	42	19.0
6	150	11 $\frac{1}{8}$	282.6	6 $\frac{1}{4}$	158.8	5 $\frac{3}{4}$	146.1	11 $\frac{1}{32}$	8.7	110	50.0
8	200	13 $\frac{1}{8}$	352.4	8 $\frac{1}{8}$	206.4	7 $\frac{5}{8}$	193.7	1 $\frac{7}{32}$	13.5	210	95.2
10	250	17 $\frac{1}{8}$	435	9 $\frac{1}{2}$	241.3	9 $\frac{9}{16}$	242.9	1 $\frac{5}{16}$	23.8	365	166
12	300	19 $\frac{5}{8}$	498.5	11 $\frac{1}{2}$	292.1	11 $\frac{3}{8}$	289.0	$\frac{7}{8}$	22.2	640	290
14	350	<b>Larger Sizes On Application</b>									
16	400										
18	450										
20	500										
24	600										
30	750										



Model 77

Apply for Certified Drawings

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A Watts Water Technologies Company

ES-MS-77 1020



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