

Engineering Specification

Job Name _____

Contractor _____

Job Location _____

Approval _____

Engineer _____

Contractor's P.O. No. _____

Approval _____

Representative _____

Aluminum Bronze, Ductile Iron, Carbon Steel or Stainless Steel SURE CHECK™ Valves

Models: 74, Class 300

Sizes: 2"– 48" (50 – 1200mm)

Typical Service

- Designed for liquids and gases where flow reversal can cause surge and water hammer.
- Elastomer seats provide bubble-tight shutoff.

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, including overlay and metal-to-metal.

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



Model 74

Pressure/Temperature–Non-Shock

Model	Material	Rating
74D	Carbon Steel	740psi @ -20°F to 100°F, 51.02 bar @ 37.78°C 320psi @ 850°F, 22.06 bar @ 454.44°C
74B	Al-Brz	500psi @ -20°F to 150°F, 34.47 bar @ 65.56°C 350psi @ 350°F, 24.13 bar @ 176.67°C
74H	Stainless Steel	720psi @ -20°F to 100°F, 49.64 bar @ 37.78°C 420psi @ 850°F, 28.96 bar @ 454.44°C
74I	Ductile Iron	640psi @ -20°F to 100°F, 44.13 bar @ 28°C to 37°C 450psi @ 650°F, 31 bar @ 343.3°C

*Max temp. depends on seat and spring material. See ordering code.

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.

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

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.

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.

Mueller Steam Specialty™

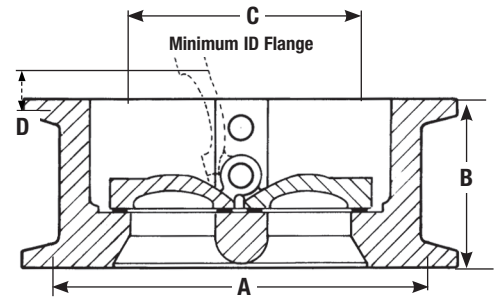
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Materials

	74B	74D
Body	Aluminum Bronze ASTM B148	Carbon Steel ASTM A216 Gr. WCB
Disc	Stainless Steel ASTM A351 Gr. CF8M	Carbon Steel ASTM A216 Gr. WCB
Shaft/spring	316 SS	316 SS
Seat	Buna-N	Buna-N

	74H	74I
Body	Stainless Steel ASTM A351 Gr. CF8M	Ductile Iron ASTM 536
Disc	Stainless Steel ASTM A351 Gr. CF8M	Ductile Iron ASTM 536
Shaft/spring	316 SS	316 SS
Seat	Buna-N	Buna-N

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



Model 74

Dimensions and Weights

SIZE		DIMENSIONS									
in.	mm	A		B		C		D		lbs.	kgs.
		in.	mm	in.	mm	in.	mm	in.	mm		
2	50	4 ³ / ₈	111.1	2 ³ / ₈	60.3	—	—	—	—	5 ¹ / ₂	2.5
2 ¹ / ₂	65	5 ¹ / ₈	130.2	2 ⁵ / ₈	66.7	—	—	—	—	8	3.6
3	80	5 ⁷ / ₈	149.2	2 ⁷ / ₈	73.0	2 ¹ / ₈	54.0	1/4	6.4	11 ¹ / ₂	5.2
4	100	7 ¹ / ₈	181.0	2 ⁷ / ₈	73.0	3 ¹¹ / ₁₆	93.7	7/8	22.2	16 ¹ / ₂	7.5
5	125	8 ¹ / ₂	215.9	3 ³ / ₈	85.7	4 ⁷ / ₁₆	112.7	1	25.4	28	12.7
6	150	9 ⁷ / ₈	250.8	3 ⁷ / ₈	98.4	5 ⁵ / ₈	142.9	1 ³ / ₈	34.9	35	15.9
8	200	12 ¹ / ₈	308.0	5	127	7 ¹ / ₄	184.2	1 ³ / ₄	44.5	73	33.1
10	250	14 ¹ / ₄	358.8	5 ³ / ₄	146.1	9 ⁹ / ₁₆	242.9	2 ³ / ₄	69.9	130	59.0
12	300	16 ⁵ / ₈	422.3	7 ¹ / ₈	181.0	11 ¹ / ₄	285.8	3	76.2	171	77.6
14	350	19 ¹ / ₈	485.8	8 ³ / ₄	222.3	9 ⁹ / ₈	244.5	2	50.8	228	103.4
16	400	21 ¹ / ₄	539.8	9 ¹ / ₈	231.8	12 ¹¹ / ₃₂	313.5	3 ³ / ₃₂	78.6	315	142.9
18	450	23 ¹ / ₂	596.9	10 ³ / ₈	263.5	13 ⁹ / ₃₂	337.3	3 ¹ / ₈	79.4	415	188.0
20	500	25 ³ / ₄	654.1	11 ¹ / ₂	292.1	14 ³¹ / ₃₂	380.2	3 ⁵ / ₈	92.1	570	258.6
24	600	30 ¹ / ₂	774.7	12 ¹ / ₂	317.5	19 ⁹ / ₃₂	486.6	5 ³ / ₁₆	131.8	780	353.8
30	750	37 ¹ / ₂	952.5	14 ¹ / ₂	368.3	26 ¹ / ₂	673.1	8 ²¹ / ₃₂	219.9	1400	635
36	900	44	1117.6	19 ¹ / ₄	489.0	30	762	7 ¹ / ₂	190.5	2600	1180
42	1050	45 ¹ / ₂ *	1155.7	22 ³ / ₈	568.3	41	1041.4	14 ³ / ₄	374.7	3500	1588
48	1200	52*	1320.8	24 ³ / ₄	628.7	40	1016	14 ¹ / ₂	368.3	4600	2087

*For SP-44 steel flanges. Also available for 250 iron flange bolting. 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.

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USA: T: (800) 334-6259 • F: (800) 421-6772 • MuellerSteam.com

Latin America: T: (52) 55-4122-0138 • MuellerSteam.com