

# Engineering Specification

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

Contractor \_\_\_\_\_

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

Approval \_\_\_\_\_

Engineer \_\_\_\_\_

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

Approval \_\_\_\_\_

Representative \_\_\_\_\_

## Cast Iron SURE CHECK™ Valves

**Models: 71, 71U Class 125**

**Sizes: 2"– 54" (50 – 1350mm)**

### 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

### 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.



Models 71U, 4", 6", 8", 10", and 12", 100mm – 300mm



Models 71, 2", 2 1/2", 3", 4", 6", 8", 10", 12", 14", and 16", 50mm – 400mm, Domestic Only

### Model 71, 71U

#### Pressure/Temperature-Non-Shock

Model	Material	Rating
71 2"-12"	Cast Iron	200psi @ -20°F to 150°F, 13.78 bar @ 65.56°C 150psi @ 353°F, 10.33 bar @ 178.33°C
71 14"-24"	Cast Iron	150psi @ -20°F to 150°F, 10.33 bar @ 65.56°C 105psi @ 325°F, 7.24 bar @ 162.78°C
71 30"-54"	Cast Iron	150psi @ -20°F to 150°F, 10.33 bar @ 65.56°C 100psi @ 225°F, 6.89 bar @ 107.22°C

\* Ratings are for Model 71 only. See limitations for UL model 71U, sizes 4" - 12"

- 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.

### Approvals/Specifications

- Applicable ASTM, ANSI, and API standards
- FM Approved
  - Model 71, sizes 2" – 16" - Domestic Only
- UL Listed / ULC Listed
  - Model 71U, sizes 4", 6", 8", 10", and 12"

### Testing

- API 598

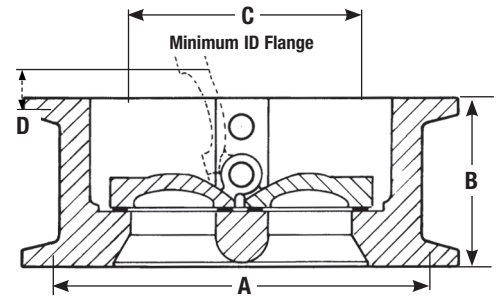
### NOTICE

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.

## Materials

	71	71U
Body	Cast Iron ASTM A126-B	ASTM A126-B
Disc	Bronze ASTM B62	Bronze ASTM B62
Shaft/spring	316 SS	316 SS
Seat	Buna-N	Buna-N

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



Model 71, 71U

## Dimensions and Weights

SIZE		DIMENSIONS								WEIGHT	
		A		B		C		D			
in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.
UL Model 71U Only – Pressure 175 CWP											
4	100	6⅞	174.6	3⅝	92.1	N/A	N/A	N/A	N/A	15	6.8
6	150	8¾	222.3	4⅛	104.8	4⅛	104.8	1⅞ <sub>32</sub>	15.1	33	15.0
8	200	11	279.4	4¾	120.7	6⅝	168.3	1½	38.1	58	26.3
10	250	13⅜	333.9	6	152.4	8¼	209.6	1⅝	41.3	89	40.4
12	300	16⅞	409.6	7⅜	187.3	9⅞	250.8	2	50.8	160	72.6

SIZE		DIMENSIONS						WEIGHT			
		A		B		C		D			
in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.
71 Only											
2	50	4⅞	104.8	2⅞	54.0	NA	NA	NA	NA	4	1.8
2½	65	4⅞	123.8	2⅞	54.0	1⅞	28.6	⅝	4.0	5½	2.5
3	80	5⅜	136.5	2¼	57.2	2½	63.5	⅝	15.9	7½	3.4
4	100	6⅞	174.6	2½	63.5	3⅞	87.3	1⅝	23.8	13½	6.2
5	125	7¾	196.9	2¾	69.9	4½	114.3	1⅞	34.1	17½	8.0
6	150	8¾	222.2	3	76.2	5⅜	136.5	12⅝	43.7	26½	12.0
8	200	11	279.4	3¾	95.3	7½	190.5	2½	63.5	50	22.7
10	250	13⅜	340	4¼	108	9½	241.3	3⅜	85.7	70	31.8
12	300	16⅞	409.6	5⅝	142.9	11¾	298.5	4⅞	105	108	49
14	350	17¾	450.9	7¼	184.2	12	304.8	3⅝	79.4	170	77.1
16	400	20¼	514.4	7½	190.5	14⅞	366.7	4⅜	111.1	225	102
18	450	21⅞	549.3	8	203.2	16⅝	414.3	5⅝	130.2	280	127
20	500	23⅞	606.4	8⅝	212.7	18¼	463.6	6	152.4	390	177
24	600	28¼	717.6	8¾	222.3	22⅞	576.3	8½	215.9	590	268
30	750	34¾	882.7	12	304.8	28⅝	729.5	11	279.4	1050	476
36	900	41¼	1048	15¼	387.8	33½	850.9	11⅝	288.9	1600	726
42	1050	48	1219.2	17	431.6	41	1041.4	15¼	387.4	2850	1293
48	1200	54½	1384.3	20⅝	523.9	47	1194	16¾	425.5	3400	1542
54	1350	61	1549.4	21¼	539.8	49	1244.6	16½	419.1	6050	2744

**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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