

# Flow Measurement / Balancing Valves

Used to measure and control the flow of water to individual heating units, assuring proper heat transfer. They are used on pipe risers and headers and at pumps to measure and control flow.

## Series LFCSM-61-S / CSM-61-T

Sizes: 1/2" – 3" (15 – 80mm)

Series LFCSM-61-S and CSM-61-T valves are specifically designed for application on low or medium flow rate HVAC units. Its compact size allows for easy installation and use on crowded piping compartments. Provides positive shut off, eliminating the need for a separate service valve.

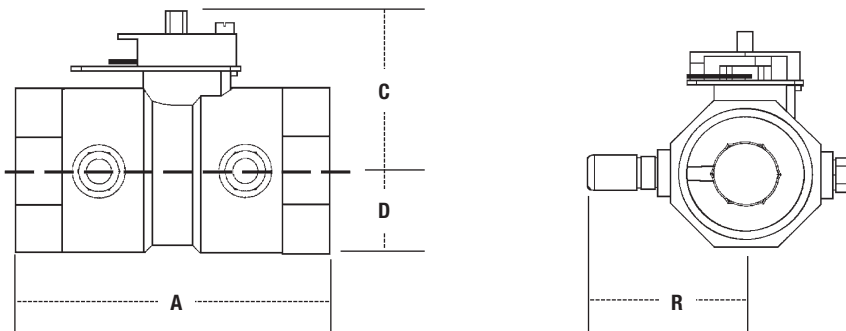
### Features

- Accurate flow measurement
- Easy-to-use memory stop
- Safe "blowout" proof design
- Bidirectional flow
- Positive shutoff
- Available with threaded and solder end connections
- Integral drain port

**LEAD FREE** Series LFCSM-61-S features Lead Free brass body and complies with Lead Free\* installation requirements. Solder ends.

Series CSM-61-T features bronze construction and are for use in non-potable applications. Threaded ends.

### Dimensions — Weights



LFCSM-61-M1-T  
1/2" – 1" (15 – 25mm)



CSM-61-M1-T  
1 1/4" – 3" (32 – 80mm)

### BAA/ARRA Compliant\*

\*This product complies with the Buy American Act and The American Recovery and Reinvestment Act. For more information, visit watts.com.

For additional information, reference literature ES-CSM-61-T or ES-LFCSM-61-S.

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

MODEL	SIZE (DN)		DIMENSIONS								WEIGHT	
	in.	mm	A		C		D		R		lbs.	kgs.
LFCSM-61-M1-S	1/2	15	2 1/16	68	1 5/8	41	1/2	13	1 3/4	45	1.0	0.45
LFCSM-61-M1-S	3/4	20	3 1/8	79	1 11/16	43	9/16	15	1 7/8	47	1.3	0.59
LFCSM-61-M1-S	1	25	3 3/16	97	1 7/8	47	1 3/16	20	2 1/16	52	1.8	0.82
LFCSM-61-M2-S	1 1/4	32	4 9/16	116	1 7/8	47	1 1/8	29	2 3/16	56	1.5	0.68
LFCSM-61-M2-S	1 1/2	40	4 7/8	123	2	50	1 9/16	33	2 5/16	59	1.9	0.86
LFCSM-61-M2-S	2	50	6	153	2 5/16	66	1 9/16	40	2 5/8	67	3.4	1.54
CSM-61-M1-T	1/2	15	2 3/8	60	1 5/8	41	1/2	13	1 3/4	45	1.0	0.45
CSM-61-M1-T	3/4	20	2 5/8	67	1 11/16	43	9/16	15	1 7/8	47	1.3	0.59
CSM-61-M1-T	1	25	3 1/8	80	1 7/8	47	1 3/16	20	2 1/16	52	1.9	0.86
CSM-61-M1-T	1 1/4	32	3 3/4	94	1 7/8	47	1	25	2 3/16	56	1.9	0.86
CSM-61-M1-T	1 1/2	40	3 9/16	100	2	50	1 1/16	27	2 3/16	59	2.3	1.04
CSM-61-M1-T	2	50	4 1/2	114	2 5/16	66	1 5/16	33	2 5/16	66	4.0	1.81
CSM-61-M1-T	2 1/2	65	6 1/2	165	4 1/8	104	2 3/16	55	3 1/8	80	13.0	5.90
CSM-61-M1-T	3	80	6 3/16	173	4 3/8	112	2 7/8	73	3 5/8	92	17.0	7.71

Suffix: S = Solder Ends, T = Threaded Ends

## Series CSM-81-F

Sizes: 2½" – 8" (65 – 200mm)

Series CSM-81-F valves are designed for application on medium to high volume flow rate HVAC units. The valve construction allows the flow measurement valve to function reliably both as a balancing valve and bubble-tight service valve, in closed hot or cold water service.

### Features

- Accurate flow measurement
- Flanged end connections
- Checked metering ports
- Low torque
- Positive shutoff
- Face to face dimensions to ANSI B16.10

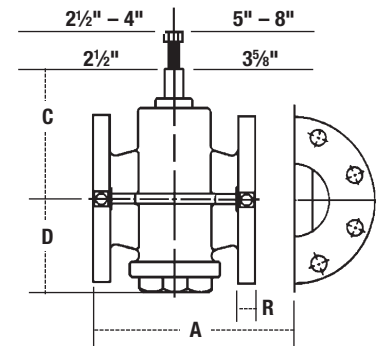
For additional information, reference literature ES-CSM-81.

### Dimensions – Weights

MODEL	SIZE (DN)		DIMENSIONS								WEIGHT	
	in.	mm	A		C		D		R		lbs.	kg.
CSM-81-F	2½	65	7½	191	5½	130	3 <sup>15</sup> / <sub>16</sub>	100	1 <sup>1</sup> / <sub>16</sub>	17	29.5	13.4
CSM-81-F	3	80	8	203	5 <sup>7</sup> / <sub>16</sub>	138	4 <sup>3</sup> / <sub>16</sub>	113	¾	19	39	17.7
CSM-81-F	4	100	9	229	6½	165	4 <sup>15</sup> / <sub>16</sub>	125	1 <sup>5</sup> / <sub>16</sub>	24	61.5	27.9
CSM-81-F	5	125	10½	267	7¾	197	6	152	1	25	88	39.9
CSM-81-F	6	150	10½	267	7¾	197	6	152	1	25	100	45.4
CSM-81-F	8	200	11½	292	9¾	233	6½	165	1½	29	172	78.0



CSM-81-F



CSM-81-F

### BAA/ARRA Compliant\*

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# Flow Measurement / Balancing Valves

## Series CSM-91

Sizes: 2½" – 10" (65 – 250mm)

For medium or large flow rate HVAC systems, pump packages, and cooling towers. They feature a multi-turn adjustment range for maximum control, pressure differential readout ports on both sides of the valve to allow for easier installation and positive shutoff for servicing equipment.

### Features

- Multi-turn adjustment
- Interchangeable metering and drain ports on both sides of valve
- Positive shutoff
- Tamper-proof memory stop
- Micrometer type handwheel adjustment - visually readable from a distance
- Field convertible for straight or angle pattern
- Grooved end connections with optional flange adapters

For additional information, reference literature ES-CSM-91.

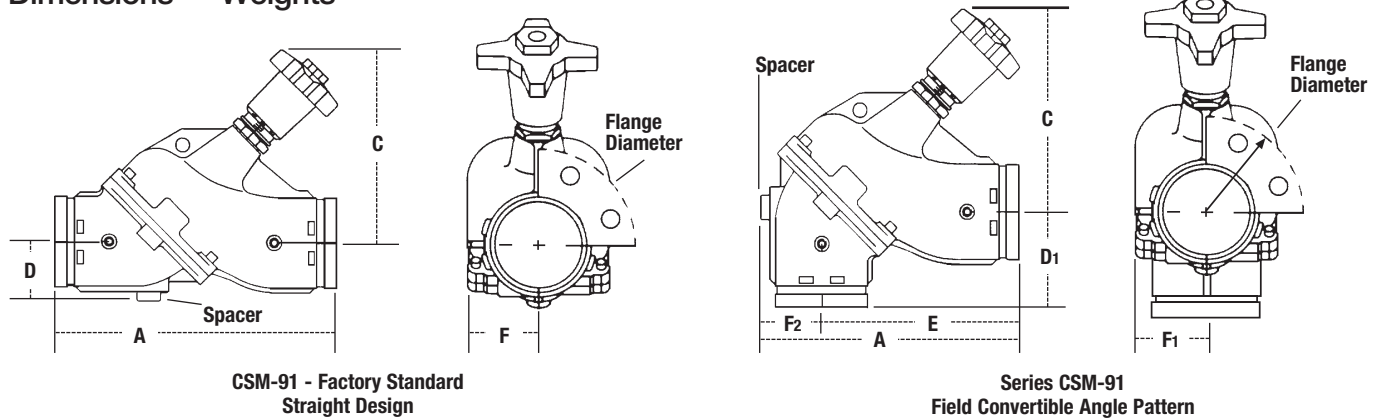


CSM-91  
Straight



CSM-91  
Angle

### Dimensions — Weights



CSM-91 - Factory Standard  
Straight Design

Series CSM-91  
Field Convertible Angle Pattern

### Series CSM-91 - Straight

SIZE (DN)		DIMENSIONS								FLANGED DIAMETER		SPACER		WEIGHT	
in.	mm.	A		C		D		F		125#		in.	mm	lbs.	kgs.
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		
2½	65	12	305	9⅝	245	2¾	70	2⅞	64	7	178	1	25	19	8.6
3	80	12	305	10½	267	2⅞	61	3	76	7½	191	1	25	24	10.9
4	100	14	356	10⅞	264	3	76	3¼	87	9¼	235	1¼	32	42	19.0
5	125	17½	445	13⅞	332	3⅝	92	4⅞	124	10	150	1¼	32	81	36.7
6	150	20⅞	526	13¾	349	4⅞	111	5⅞	149	11	279	2	50	120	54.4
8	200	28⅞	716	24⅝	626	5⅞	145	7⅞	200	13½	343	2¼	57	310	140.6
10	250	30	762	26½	673	6⅞	161	9⅞	240	16	406	2¼	57	460	208.6

### Series CSM-91 - Angle - Field Convertible\*

SIZE (DN)		DIMENSIONS								FLANGED DIAMETER		SPACER		WEIGHT					
in.	mm.	A		C		D1		E		F1		F2		125#		in.	mm	lbs.	kgs.
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		
2½	65	10⅞	257	9⅝	245	4⅞	117	7⅞	187	2⅞	64	2¾	70	7	178	1	25	19	8.6
3	80	10⅞	275	10½	267	3⅞	98	8⅞	213	3	76	2⅞	61	7½	191	1	25	24	10.9
4	100	12⅞	321	10⅞	264	4⅞	111	9⅞	245	3⅞	87	3	76	9¼	235	1¼	32	42	19.0
5	125	15⅞	397	13⅞	332	5½	140	12	305	4⅞	124	3⅞	92	10	150	1¼	32	81	36.7
6	150	18⅞	471	13¾	349	6⅞	168	14⅞	359	5⅞	149	4⅞	111	11	279	2	50	120	54.4
8	200	24⅞	625	24⅝	626	9⅞	234	18⅞	481	7⅞	200	5⅞	145	13½	343	2¼	57	310	140.6
10	250	26⅞	683	26½	673	9¼	248	20⅞	516	9⅞	240	6⅞	161	16	406	2¼	57	460	208.6

\*Series CSM-91 valves are shipped as straight pattern from factory. To convert to angle pattern refer to installation sheet shipped with valve.