

## Engineering Specification

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

Contractor \_\_\_\_\_

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

Approval \_\_\_\_\_

Engineer \_\_\_\_\_

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

Approval \_\_\_\_\_

Representative \_\_\_\_\_

# Series CSM-82-F

## Ductile Iron Static Balancing Valves

Sizes: 1¼" – 12"

Series CSM-82-F ductile iron static balancing valves are designed for application on medium to high volume flow rate HVAC units. The CSM-82-F's angled globe design allows for precise control of flow for effective system balancing.

CSM-82-F's unique cylindrical plug design provides full flow with minimal pressure drops and low operating torque. Ergonomically friendly handwheel makes setting or closing the valve simple.

Series CSM-82-F valves feature easily accessible pressure monitoring ports with drip caps to facilitate system balancing and flow measurement. These valves also provide positive shutoff, eliminating the need for a separate service valve.

### Features

- Accurate flow measurement
- ANSI Class 150 flanged end connections
- Positive shutoff
- Checked metering ports
- Low torque

### Specifications

A flow measurement valve shall be installed on each hot/chilled water unit or as otherwise shown on the plans. The valve shall be of flanged end connections, provide positive shutoff, angled globe design, with position indicator and checked metering ports. The valve shall be a Watts Series CSM-82-F.

### Applications

- Fan coil units
- Water source heat pumps
- Reheat coils
- Panel coils
- Branch lines
- Pumps

Call customer service if you need assistance with technical details.



2" CSM-82-F



4" CSM-82-F

#### 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.

#### NOTICE

Inquire with governing authorities for local installation requirements.

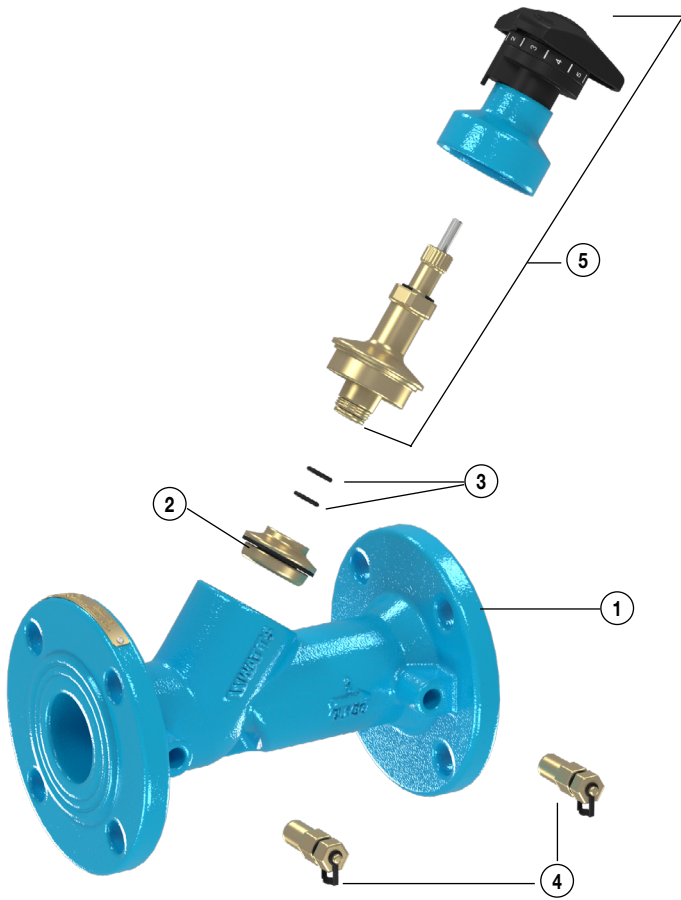
Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

# Materials

Call customer service if you need assistance with technical details.

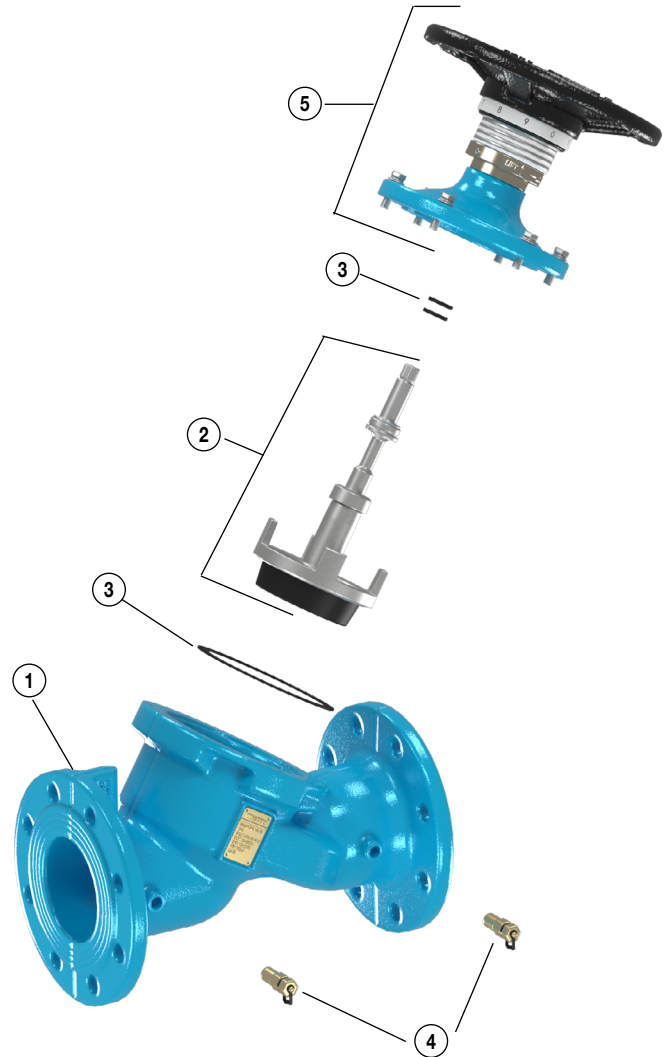
1 1/4" - 2" CSM-82-F		
ITEM	NAME	MATERIAL
1	Body	ASTM A536 65-45-12
2	Disc Assembly	C65100, PTFE
3	Seals	EPDM
4	Pressure Taps	C85700 (1/4" NPT into Body, 3/8"-24UNF Pressure Test Connection)
5	Bonnet Assembly (Including Handwheel)	St14(galvanize), C83600, Plastic
6	Square Plug	ASTM A276 S30400

2 1/2" - 12" CSM-82-F		
ITEM	NAME	MATERIAL
1	Body	ASTM A536 65-45-12
2	Disc Assembly	A536, KFM
3	Seals	KFM, PTFE
4	Pressure Taps	C85700 (1/4" NPT into Body, 3/8"-24UNF Pressure Test Connection)
5	Bonnet Assembly (Including Handwheel)	A536, Steel, C37700
6	Square Plug	ASTM A276 S30400



1 1/4" - 2" CSM-82-F

\* Square Plug not shown

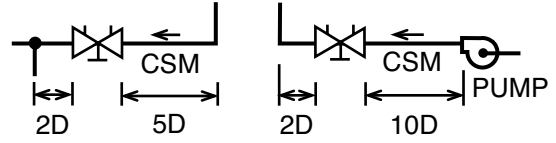


2 1/2" - 12" CSM-82-F

\* See Watts.com for available repair kits.

## Installations

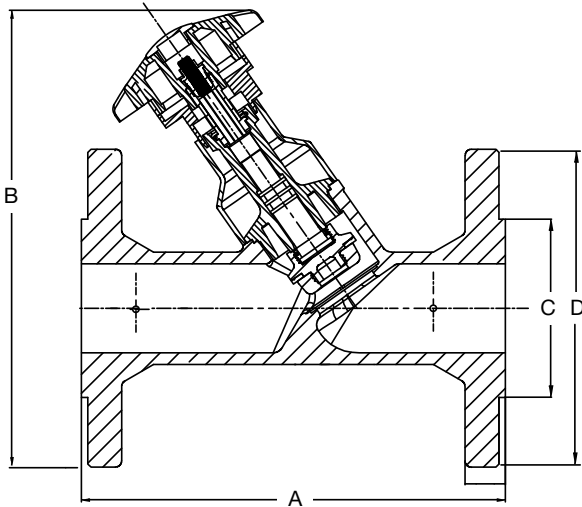
Generally locate the valve five pipe diameters downstream from a fitting with two diameters downstream from the balancing valve free from fittings. If a balancing valve is located downstream from a circulation pump, allow a distance of ten (10) diameters between the pump and balancing valves.



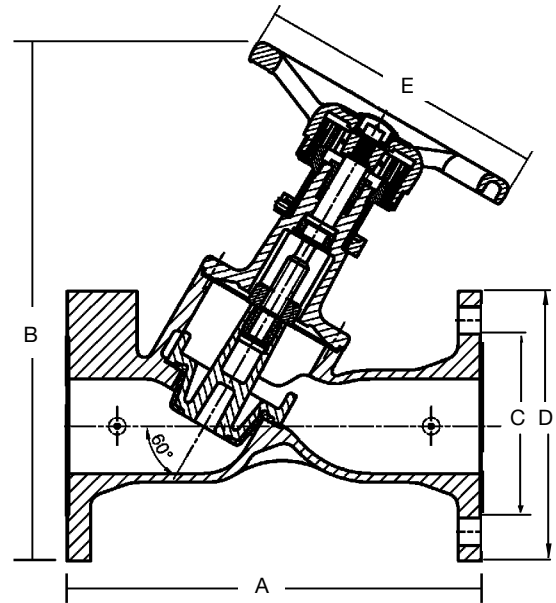
## Pressure – Temperature

SIZE	MIN. WORKING TEMP		MAX. WORKING TEMP		MAX. WORKING PRES.	
in.	°F	°C	°F	°C	psi	bar
1¼ - 12	14	-10	248	120	230	16

## Dimensions – Weights



1 1/4" - 2" CSM-82-F



2 1/2" - 12" CSM-82-F

MODEL	SIZE	DIMENSIONS										WEIGHT	
		A		B		C		D		E		lbs.	kgs.
	in.	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		
CSM-82-F	1¼	7 <sup>1</sup> / <sub>16</sub>	180	7¼	184.5	2½	64	4 <sup>5</sup> / <sub>8</sub>	117	-	-	10.0	4.5
	1½	7 <sup>7</sup> / <sub>8</sub>	200	2 <sup>15</sup> / <sub>16</sub>	74	2 <sup>7</sup> / <sub>8</sub>	73	5	127	-	-	12.4	5.6
	2	9 <sup>1</sup> / <sub>16</sub>	230	8 <sup>9</sup> / <sub>16</sub>	217	3 <sup>5</sup> / <sub>8</sub>	92	5 <sup>7</sup> / <sub>8</sub>	152	-	-	15.7	7.1
	2½	11 <sup>7</sup> / <sub>16</sub>	290	13 <sup>7</sup> / <sub>8</sub>	353	4 <sup>1</sup> / <sub>8</sub>	105	7 <sup>1</sup> / <sub>16</sub>	180	7 <sup>7</sup> / <sub>8</sub>	200	36.1	16.4
	3	12 <sup>3</sup> / <sub>16</sub>	310	14 <sup>5</sup> / <sub>16</sub>	363	5	127	7½	190	7 <sup>7</sup> / <sub>8</sub>	200	43.5	19.7
	4	13 <sup>3</sup> / <sub>4</sub>	350	16 <sup>5</sup> / <sub>16</sub>	415	6 <sup>3</sup> / <sub>16</sub>	157	10 <sup>1</sup> / <sub>16</sub>	255	9 <sup>7</sup> / <sub>16</sub>	240	59.4	27.0
	6	18 <sup>7</sup> / <sub>8</sub>	480	18 <sup>7</sup> / <sub>8</sub>	480	8½	216	11	280	11 <sup>7</sup> / <sub>16</sub>	290	98.9	44.8
	8	23 <sup>5</sup> / <sub>8</sub>	600	27 <sup>7</sup> / <sub>16</sub>	697.5	10 <sup>5</sup> / <sub>8</sub>	270	13 <sup>3</sup> / <sub>16</sub>	345	13 <sup>3</sup> / <sub>4</sub>	350	209.0	94.8
	10	28 <sup>3</sup> / <sub>4</sub>	730	30½	774.5	12 <sup>3</sup> / <sub>4</sub>	324	15 <sup>15</sup> / <sub>16</sub>	405	16 <sup>9</sup> / <sub>16</sub>	420	40.6	182.6
12	33 <sup>7</sup> / <sub>16</sub>	850	36 <sup>9</sup> / <sub>16</sub>	928.5	15	381	19 <sup>1</sup> / <sub>8</sub>	485	16 <sup>9</sup> / <sub>16</sub>	420	534.6	242.5	

Suffix: F = Flanged Ends



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