Job Name _____ Contractor _____

Job Location _____ Approval _____

Engineer _____ Contractor's P.O. No. _____

Approval _____ Representative _____

# Series CSM-81-F

## Flow Measurement Valves

### Sizes: 2½" – 8"

Series CSM-81-F Flow Measurement Valves are designed for application on medium to high volume flow rate HVAC units. The CSM-81-F's lubricated plug design, extended throttling range and large indicator plate provide accurate flow measurement and long service life.

CSM-81-F's unique cylindrical plug design provides full flow with minimal pressure drops and low operating torque. Large wrench flats on the external plug surface make setting or closing the valve simple.

Series CSM-81-F valves feature easily accessible checked metering 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.

CSM-81

### Features

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

### 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, low torque cylindrical plug design, with position indicator plate and checked metering ports. The valve shall be a Watts Series CSM-81-F.

### Applications

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

***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

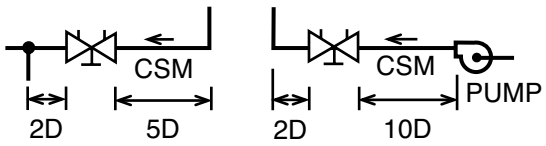
| | |
|---|---|
| Body | ASTM-A-126 Class B semi-steel |
| Plug | ASTM-A-126 Class B semi-steel |
| Stem Seal | PTFE |
| Pressure Taps | Brass ¼" SAE 45° Flare |

## Pressure – Temperature

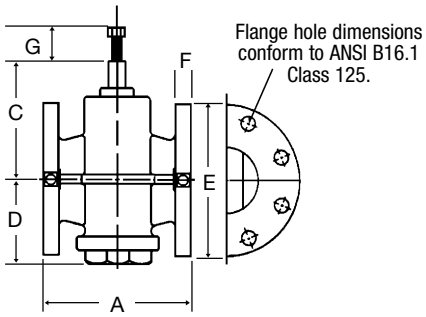
| | | Working Temp | | Max. Working Pres. | |
|---|---|---|---|---|---|
| **Pattern** | **Size** | **°F** | **°C** | **psi** | **bar** |
| Flange | 2½" – 8" | 250 | 121 | 175 | 12 |

## 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 blancing valve is located downstream from a circulation pump, allow a distance of ten (10) diameters between the pump and balancing valves.




## Dimensions – Weights




| MODEL | SIZE | DIMENSIONS | | | | | | | | | | | | WEIGHT | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | A | | C | | D | | E | | F | | G | | | |
| | *in.* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *in.* | *mm* | *lbs.* | *kgs.* |
| CSM-81-F | 2½ | 7½ | 191 | 5⅛ | 130 | 3 15/16 | 99 | 7 | 178 | 11/16 | 17 | 2½ | 64 | 29.5 | 13.38 |
| CSM-81-F | 3 | 8 | 203 | 5 7/16 | 137 | 4 3/16 | 106 | 7½ | 191 | ¾ | 19 | 2½ | 64 | 39.0 | 17.69 |
| CSM-81-F | 4 | 9 | 229 | 6½ | 165 | 4 15/16 | 124 | 9 | 229 | 15/16 | 24 | 2½ | 64 | 61.5 | 27.89 |
| CSM-81-F | 5 | 10½ | 267 | 7¾ | 197 | 6 | 153 | 10 | 254 | 1 | 25 | 3⅝ | 92 | 88.0 | 39.91 |
| CSM-81-F | 6 | 10½ | 267 | 7¾ | 197 | 6 | 153 | 11 | 279 | 1 | 25 | 3⅝ | 92 | 100.0 | 45.35 |
| CSM-81-F | 8 | 11½ | 292 | 9 9/16 | 233 | 6½ | 165 | 13½ | 343 | 1⅛ | 28 | 3⅝ | 92 | 172.0 | 78.00 |

Suffix: F = Flanged Ends.

**USA:** T: (978) 689-6066 • Watts.com
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**Latin America:** T: (52) 55-4122-0138 • Watts.com



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