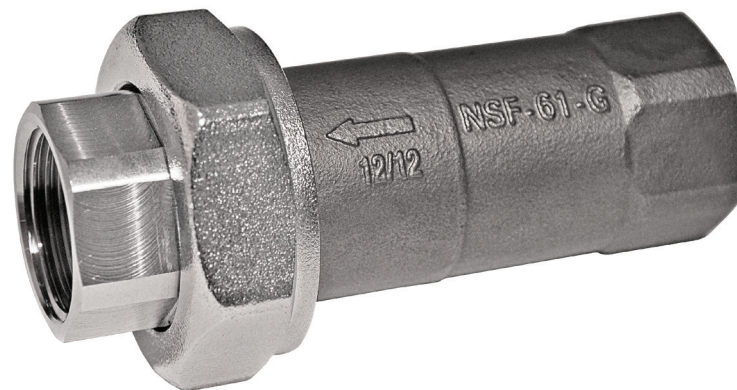


Climate  
Control



IMI FLOW DESIGN

# ICSS



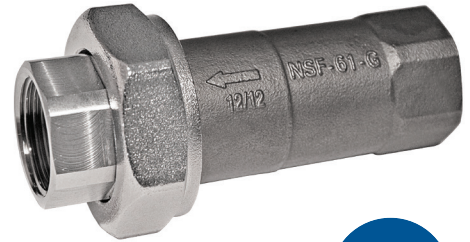
## **Inline flow controller**

NSF 61-G certified for potable water

Breakthrough  
engineering for  
a better world

# ICSS

Designed specially for hot water recirculation applications, the ICSS is an Automatic flow control valve that is NSF/ANSI 61-G Certified and approved directly by NSF for commercial hot water contact applications. All wetted parts in the ICSS valve are made from stainless steel. The flow cartridge is easily removable from the compact valve body to provide field access for inspection and cleaning. The ICSS comes factory set to automatically limit flow to within  $\pm 5\%$  of the specified amount over 95% of the control range.



Certified to  
NSF/ANSI/CAN 61-G

## Key features

- > **NSF-61-G certified**  
Meets the NSF/ANSI Standard 372 for minimal lead content.
- > **Precision machined stainless steel cartridge**  
For greater control accuracy and dependability. Factory adjustable.
- > **Compact inline design**  
Less than half the height of typical controllers, allowing the ICSS to fit easily into tight installations.

## Technical description

**Application:**  
Commercial hot water contact

**Pressure class:**  
400 psi

**Accuracy:**  
 $\pm 5\%$  over 95% of the working range

**Functions:**  
Automatic flow control  
Hot water recirculation

**Temperature rating:**  
Max. working temperature: 180°F

**Material:**  
Body: Series 300 stainless steel  
Union nut: Nickel plated brass  
Flow cartridge: Series 300 stainless steel

**Dimensions:**  
1/2" - 2"

**Pressure range:**  
(L) 2-32 psi  
(H) 5-60 psi

**Marking:**  
NSF/ANSI 61-G  
mmyy (month and year of production)  
Flow direction arrow

**Approvals:**  
NSF/ANSI 61-G Certified and approved

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## Installation

### Straight Run Requirements

Model ICSS requires no straight runout downstream of the valve. Upstream, the only requirement is that there be 5 diameters after an increase in pipe size: for instance if a ¾" ICSS is installed on a ½" line, there should be a transition up to ¾" followed by 2 ½" of pipe entering the ICSS. There is no requirement for upstream straight runs after an elbow, tee, or line size control valve.

### Heat

Model ICSS has an o-ring on the union and around the cartridge. These are made of EPDM and are well suitable for hot water service.

They need to be protected, though, from the temperatures produced by brazing, soldering, or welding equipment.

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## Operation

### Pressure Range

The parameter listed as Y below indicates the range of differential pressures over which this particular device will control the flow rate. The first number indicates the pressure at which regulation begins, and the second indicates the pressure at which regulation ends.

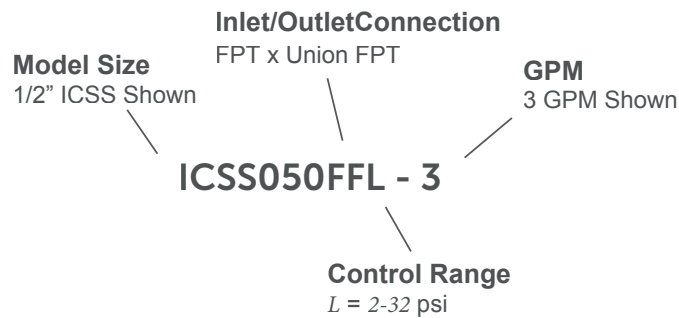
Y	Starting Pressure	Ending Pressure
L	2 PSID	32 PSID
H	5 PSID	60 PSID

Outside the control range, the device acts as a fixed orifice at the nearest regulated pressure. When the pressure is between the starting and ending pressure, the flow will be within ±5% of the specified value.

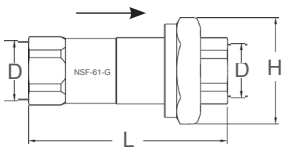
## Flow Rate

Size	PSID Range	Flow Rate [gpm]
1/2	2-32 (L)	0.33, 0.5, 0.67, 0.75, 0.88, 1.0, 1.1, 1.2, 1.5, 1.75, 2.0, 2.25, 2.5, 3.0
	5-60 (H)	1.0, 1.5, 2.0, 2.5, 3.0, 4.0, 5.0
3/4	2-32 (L)	0.33, 0.5, 0.67, 0.75, 0.88, 1.0, 1.1, 1.25, 1.5, 1.75, 2.0, 2.25, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 6.0, 7.0, 8.0
	5-60 (H)	1.0, 1.5, 2.0, 2.5, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 11.0, 12.0
1" - 1 1/4"	2 - 32 (L)	9.0, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19
	5 - 60 (H)	13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27
1 1/2" - 2"	2 - 32 (L)	20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, <b>48, 50</b>
	5 - 60 (H)	28, 30, 32, 34, 36, 38, 40, 42, 44, 46, <b>48, 50, 52, 54, 56, 58, 60, 62, 64, 68, 70</b>

## Model Order Designation



## Articles



→ = Flow direction arrow

### Dimensions

Size	Size	D	L [in]	H [in]	Max.Flow gpm Control Range (L) 2-32 (H) 5-60	Weight lb
ICSS050FF	1/2"	1/2 NPT	3.8	1.6	3.0	0.6
ICSS075FF	3/4"	3/4 NPT	3.8	2.1	8.0	0.9
ICSS100FF	1"	1 NPT	5.2	2.8	19.0	1.9
ICSS125SS	1 1/4"	1 1/4 NPT	5.4	2.8	19.0	2.1
ICSS150FF	1 1/2"	1 1/2 NPT	6.9	3.8	50	4.2
ICSS200FF	2"	2 NPT	7	3.8	50	4.2

### Female NPT

Inlet: Fixed connection

Outlet: Union connection