

# ICSS



## **Inline flow controllers**

NSF 61-G certified for potable water

# 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.



## Key features

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

## Technical description

### Application:

Commercial hot water contact

### Functions:

Automatic flow control  
Hot water recirculation

### Dimensions:

1/2" - 3/4"

### Pressure class:

400 psi

### Temperature rating:

Max. working temperature: 180°F

### Pressure range:

(L) 2-32 psi  
(H) 5-60 psi

### Accuracy:

$\pm 5\%$  over 95% of the working range

### Material:

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

### Marking:

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

### Approvals:

NSF/ANSI 61-G Certified and approved by NSF for commercial hot water contact applications.

## 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 3/4" ICSS is installed on a 1/2" line, there should be a transition up to 3/4" followed by 2 1/2" 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.

## 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.

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  $\pm 5\%$  of the specified value.

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

## Cartridge Codes

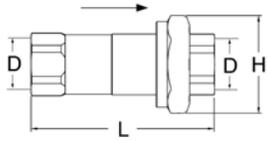
Flow [gpm]	Code	Pressure range
0.33	T	L
0.5	Y	L
0.67	U	L
0.75	Z	L
0.88	V	L
1.0	A	L
	A+	H
1.1	AW	L
1.25	AX	L
1.5	AY	L
	AY+	H
1.75	AZ	L
2.0	B	L
	B+	H
2.25	BX	L
2.5	BY	L
	BY+	H
3.0	C	L
	C+	H

Flow [gpm]	Code	Pressure range
3.5	CY	L
4.0	D	L
	D+	H
4.5	DY	L
5.0	E	L
	E+	H
6.0	F	L
	F+	H
7.0	G	L
	G+	H
8.0	H	L
	H+	H
9.0	I+	H
10.0	AO+	H
11.0	AA+	H
12.0	AB+	H

## 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, 1.25, 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
	5-32 (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

## Articles



### Female NPT

Inlet: Fixed connection

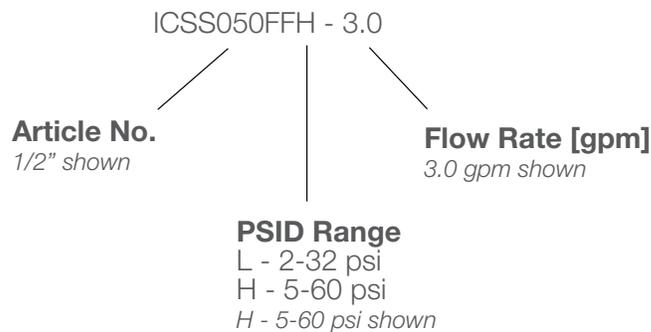
Outlet: Union connection

Size	D	L [in]	H [in]	Max. flow [gpm]		lb	Article No ** North America	Article No International
				(L) 2-32	(H) 5-60			
1/2"	1/2 NPT	3.8	1.6	3.0	5.0	0.6	ICSS050FF	-
3/4"	3/4 NPT	3.8	2.1	8.0	12.0	0.9	ICSS075FF	-

\*\*) Distributed by Victaulic.

→ = Flow direction

## Model designation



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