

Regulators

Pressure Regulating Valve

O-SS Series
Direct-Operated

Model	O-SS Series
Service	Steam, Air, Water & Other Liquids
Sizes	1/2", 3/4", 1", 1 1/4"
Connections	NPT
Body Material	Stainless Steel CF8M
Seat & Disc	Hardened 420 Stainless Steel
Diaphragm (for Steam)	Stainless Steel - Steam
Diaphragm (for Liquid or Air)	Viton - Water, Air & Oil (300°F max)
Max Inlet Pressure	250 PSIG
Min Inlet Pressure	15 PSIG
Max Differential Pressure	125 PSI
Min Differential Pressure	15 PSI

Design Pressure/Temperature Rating – PMA/TMA

NPT 250 PSIG @ 450°F



Typical Applications

The O-SS Series direct-operated pressure regulators with heavy duty stainless steel bodies are suitable for a wide range of applications in the low-to-moderate flow range. Applications include small heaters, humidifiers, various hospital equipment, fire molds, as well as many other general uses. The Stainless Steel Body & Trim also make this valve a consideration for potable water service.

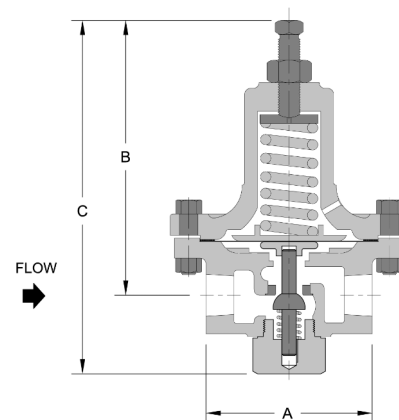
This style of regulator does not require an external sensing line. Set pressure is controlled by turning an adjustment screw with lock nut that increases or decreases spring force above the diaphragm. Several spring ranges are available, depending upon the downstream pressure that needs to be maintained. O-SS Series contains hardened stainless steel seat and disc for extended service life. Stainless Steel Diaphragms are offered for steam service. Viton diaphragms are specifically designed for water, air, gases and other liquid service and have a working temperature range up to 300°F.

Features & Options

- Hardened stainless steel seat and disc for extended service life (55 Rc)
- Stainless Steel diaphragm for Steam Service
- Viton diaphragm for up to 300°F for Water, Oil & Air Service
- Integral stainless steel strainer on 1" and 1 1/4" only

MATERIALS

Body	Stainless Steel CF8M
Cover	Stainless Steel CF8M
Gasket	Garlock (only with SST diaphragm)
Cover Screws	Stainless Steel
Cover Nuts	Stainless Steel
Adjusting Screw	Stainless Steel
Screen	Stainless Steel (1" only)
Valve Seat	Hardened 420 SST
Valve Disc	Hardened 420 SST
Diaphragm	Stainless Steel (standard) Viton (water, air, oil service)



DIMENSIONS & WEIGHTS – inches

Size	A	B	C	Weight (lbs)
1/2"	3 ⁵ / ₈	6 ¹ / ₂	8	8
3/4"	3 ⁵ / ₈	6 ¹ / ₂	8	8
1"	4 ¹ / ₂	8 ¹ / ₂	10 ¹ / ₂	18
1 1/4"	4 ¹ / ₂	8 ¹ / ₂	10 ¹ / ₂	18

Pressure Regulating Valves for

Steam: Stainless Steel Diaphragm

Water, Oil, Air: Viton Diaphragm

CAPACITIES — Steam (lbs/hr): *Air (SCFM): *Water (GPM)							
Inlet Press.	Outlet Press.	1/2", 3/4"			1", 1 1/4"		
		Steam	Air	Water	Steam	Air	Water
15	2	46	26	6	130	73	16
	5	38	21	4	106	59	13
20	5	65	36	8	184	102	22
	10	61	34	6	174	97	18
	15	45	25	4	128	72	13
30	5	83	46	10	236	131	28
	10	83	46	10	236	131	25
	20	71	40	6	201	112	18
50	5	121	67	13	342	190	38
	25	121	67	10	342	190	28
	40	87	49	6	247	138	18
100	30	214	119	17	607	337	47
	50	214	119	14	607	337	40
	70	195	109	11	390	218	25
125	30	261	145	19	739	410	55
	50	261	145	17	739	410	49
	70	261	145	15	739	410	42
	100	201	112	10	569	318	28
150	30	307	171	22	871	484	62
	50	307	171	20	871	484	57
	70	307	171	18	871	484	51
	100	298	166	14	844	471	40
	120	239	133	11	677	378	31
200	30	401	222	26	1135	630	74
	50	401	222	24	1135	630	69
	70	401	222	23	1135	630	65
	100	401	222	20	1135	630	57
250	50	494	274	28	1400	777	80
	70	494	274	27	1400	777	76
	125	494	274	22	1400	777	63

* Air and water capacities are based on using elastomeric diaphragms.

Note: For capacities of other gases multiply the air capacities by the following factors:

Argon-0.85 CO₂-0.81 Helium-2.69 Nitrogen-1.02

Size/ Connection NPT	Reduced Pressure Range (PSI)	STEAM	Water • Oil • Air	Weight lbs
		Model Code	Model Code	
		STEAM	Water • Oil • Air	
1/2"	0-10	O-SS-12-N-13-S	O-SS-12-N-13-V	10
	10-50	O-SS-12-N-14-S	O-SS-12-N-14-V	10
	40-100	O-SS-12-N-09-S	O-SS-12-N-09-V	10
	100-200	O-SS-12-N-10-S	O-SS-12-N-10-V	10
3/4"	0-10	O-SS-13-N-13-S	O-SS-13-N-13-V	10
	10-50	O-SS-13-N-14-S	O-SS-13-N-14-V	10
	40-100	O-SS-13-N-09-S	O-SS-13-N-09-V	10
	100-200	O-SS-13-N-10-S	O-SS-13-N-10-V	10
1"	0-10	O-SS-14-N-0007-S	O-SS-14-N-0007-V	19
	10-30	O-SS-14-N-0008-S	O-SS-14-N-0008-V	19
	30-50	O-SS-14-N-0009-S	O-SS-14-N-0009-V	19
	40-85	O-SS-14-N-0010-S	O-SS-14-N-0010-V	19
1 1/4"	0-10	O-SS-15-N-0007-S	O-SS-15-N-0007-V	19
	10-30	O-SS-15-N-0008-S	O-SS-15-N-0008-V	19
	30-50	O-SS-15-N-0009-S	O-SS-15-N-0009-V	19
	40-85	O-SS-15-N-0010-S	O-SS-15-N-0010-V	19

Important Application Note:

- Use Stainless Steel Diaphragms for Steam.
- Use Viton diaphragms for Water, Air and Oil Applications.

Stainless Steel Diaphragms may fracture if used on Liquid Service. Use for Steam Only.

Diaphragm Code:

S - Stainless Steel for Steam Service
V - Viton (300 °F Max) for Air & Other Liquids

Example Model Codes:

- 1) **O-SS-13-N-14-S**
(O-SS Series, 3/4" NPT, 10-50 PSI, Single Spring, **Stainless Steel Diaphragm**)
- 2) **O-SS-13-N-14-V**
(O-SS Series, 3/4" NPT, 10-50 PSI, Single Spring, **Viton Diaphragm**)