

# Stainless Steel Regulator Series NSR



NSR1000



NSR3000



NSR4000

*Manufactured to meet  
clean room specifications.*

Assembly is carried out in the clean room.  
(CLASS 100).

Double Packing is used to prevent  
contamination.

Test data available upon request.

## Specifications

Series	NSR 1000	NSR 3000	NSR 4000
Port size	10-32 Nom (M5)	1/8, 1/4 NPT	1/4, 3/8, 1/2 NPT
Max. operating pressure	150psig (9.9kgf/cm <sup>2</sup> ), Proof Pressure: 225psig (15kgf/cm <sup>2</sup> )		
Setting pressure	Low pressure model 1.5-30psig (0.1-2kgf/cm <sup>2</sup> ) High pressure model 7-100psig (0.5-7kgf/cm <sup>2</sup> )		
Ambient and fluid temperature	40 ~ 140°F (5 ~ 60°C)		
Construction*	Non relieving type (Standard), relieving type		

\*Relieving type (NSR1101, NSR1111, NSR3101, NSR3111, NSR4101, NSR4111) only applicable for N<sub>2</sub> gas or air.

## Fluid/Diaphragm Material

Series	Model	Fluid					Valve Diaphragm Material
		Deio- nized Water	Water	Air	N <sub>2</sub> gas	O <sub>2</sub> gas	
NSR1000	NSR1000	●	●	●	●	●	Fluoro rubber & Fluoro resin lining
	NSR1100	●	●	●	●	●	Fluoro rubber
NSR3000 NSR4000	NSR3000 NSR4000	●	●				Fluoro rubber & Fluoro resin lining
	NSR3100 NSR4100			●	●	●	Fluoro rubber
NSR3000 NSR4000	NSR3200 NSR4200			●	●	●	Fluoro rubber & Fluoro resin lining

Note: Consult factory for applications of other fluids.

## Gauge

Model	Port size	Max scale	Applicable Model
KS12B-D4	1/4 NPT	60psig	NSR3000
KS12B-D7	1/4 NPT	100psig	NSR4000
KS12B-D10	1/4 NPT	150psig	

Pressure gauge for NSR1000 is not available.  
Regulator and pressure gauge are packed separately.

NSR series is designed to regulate pressure of deionized water,  
N<sub>2</sub> gas, O<sub>2</sub> gas, or clean room air.

Applications: semiconductor manufacturing, explosive  
environments, medical industry, food industry, electronics, etc.

**Superior corrosion resistance.**

Materials in contact with fluid: 316 stainless steel and fluoro resin only.

Body: 316 stainless steel.

Other external metal surfaces: electroless nickel plated.

**Superior pressure characteristics.**

Panel mount type only.

Sliding parts which contact with fluid will not produce any  
abrasive powders.

## HOW TO ORDER

N SR 3 0 0 0 N 02

**Port thread**

Code	Thread	Applicable
N	NPT	USA
E	G(PF)	Europe
-	Rc(PT) Metric thread	Japan, Asia Australia

**Clean regulator**

**Body size**

1-10-32 UNF  
3-1/8  
4-1/2

**Fluid/Diaphragm Material**

(NSR1000)  
0-Deionized water, Water, Air, N<sub>2</sub> gas, O<sub>2</sub> gas  
Fluoro rubber & Fluoro resin lining  
1-Deionized water, Water, N<sub>2</sub> gas, O<sub>2</sub> gas  
Fluoro rubber

(NSR3000,4000)  
0-Pure water, Water/Fluoro rubber & Fluoro  
resin lining  
1-Air, N<sub>2</sub> gas, O<sub>2</sub> gas/Fluoro rubber  
2-Air, N<sub>2</sub> gas, O<sub>2</sub> gas/Fluoro rubber & Fluoro  
resin lining

**Port size**

M5-10-32Nom(M5)  
01-1/8NPT  
02-1/4NPT  
03-3/8NPT  
04-1/2NPT

**Port thread**

N-NPT  
F-PF\*  
-Rc(PT)\*  
\*Special order only.

**Construction**

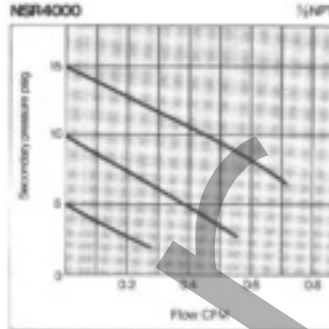
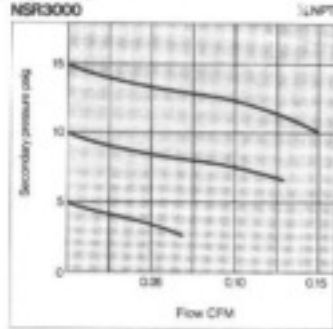
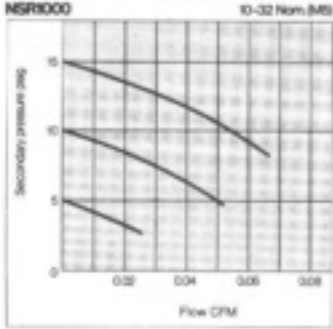
0-Non relieving (standard)  
1-Relieving (only applicable to  
Air or N<sub>2</sub> gas)

**Setting Pressure**

0-Low Pressure Model (1.5-30psig)  
1-High Pressure Model (7-100psig)

### Flow Characteristics

Fluid—Water/Supply pressure 30psig (2kgf/cm<sup>2</sup>)

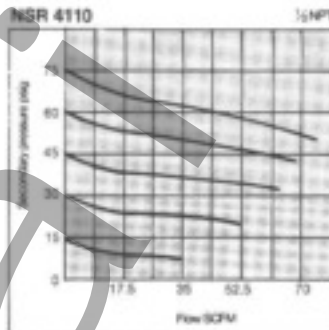
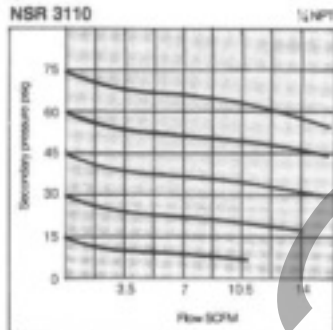
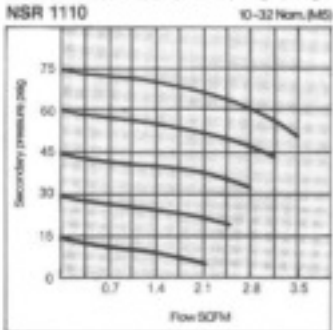


### Precautions

Since the regulator is packed in clean room atmosphere, please be careful not to contaminate it upon opening.

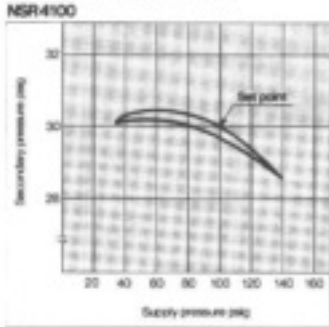
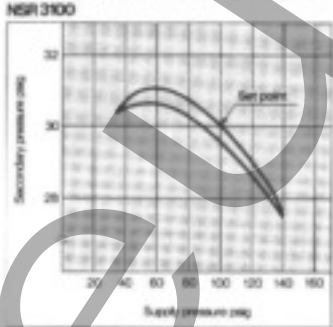
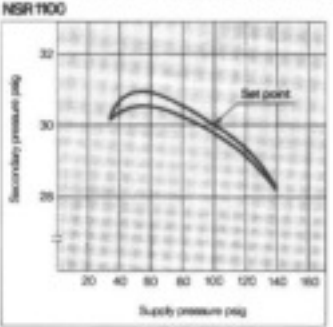
- Please unwrap in clean room.
- Don't overwrap sealing tape as it may enter the line.
- Be sure to connect the inlet piping to the side stamped "I". It will not work in reverse.
- Be sure to loosen the locknut before adjusting the knob by hand.
- After adjustment, tighten lock screw for tamper proof operation.

Fluid—Air/Supply pressure 105psig (7kgf/cm<sup>2</sup>)

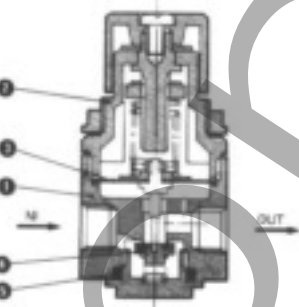


### Pressure Characteristics

Supply pressure 100psig (7kgf/cm<sup>2</sup>), Secondary pressure 30psig (2kgf/cm<sup>2</sup>), Flow 0.7 SCFM (20Nl/min)

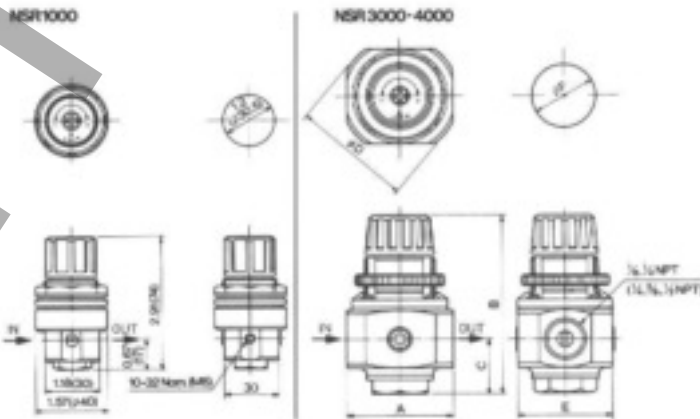


### Construction Parts Material



No.	Description	Material
1	Body	316 Stainless steel
2	Bonnet	Nylon 6
3	Diaphragm	Fluoro rubber & Fluoro resin lining or only Fluoro rubber
4	Valve	316 Stainless steel Rubber lining: Fluoro resin
5	O ring	Fluoro rubber

### Dimensions



Model	Port size (NPT)	A	B	C	D	E	F
NSR3000	1/8, 1/4	1.57 (40)	3.07 (78)	0.75 (19)	1.77 (45)	1.57 (40)	1.2 (30.5)
NSR4000	1/4, 3/8, 1/2	2.28 (58)	3.86 (98)	1.18 (30)	2.51 (64)	2.05 (52)	1.44 (36.5)

Millimeter in Parentheses