High-precision pressure settings inside clean rooms

PRECISION STAINLESS REGULATORS

- Allow high-precision (sensitivity of 0.001Mpa [0.15psi.]) settings for carrier gas pressure control in various kinds of solvents and pure water circuits, for blow pressure control, for clean air and gas pressure control used in liquid crystal or semiconductor-related processes.
- Contamination-controlled manufacturing process.

Clean room rating	Outside the clean room	Clean room		Outside the clean room
	———	10000 (Cleaning room)	10000 (Assembly room) 100 (Work bench)	———
Manufacturing process	Rough cleaning of parts → Pass box	Special detergent used to completely degrease the parts → Assembly → Inspection → Double packaging (Bracket supplied)		Pass box → Shipping & Packaging pressure gauge Note

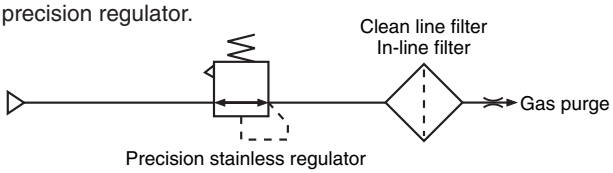
Note: The pressure gauge is just packed in single packaging at outside of the clean room.

- Use uniquely developed balance configuration for main valve.
- Normally bleed type, yet achieves low consumption flow rate, less than 2 ℓ /min [0.07ft³/min.] (ANR).
- A push-lock mechanism is used in the pressure regulating knob.
- The part that contacts gas uses SUS316 or fluoro rubber materials.
- An optional pressure gauge is available.

Application Example

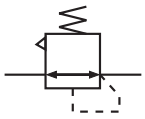
●Purged gas pressure control

Limits purged gas flow rate fluctuations arising due to the line pressure of purged gas supplied to the precision regulator.

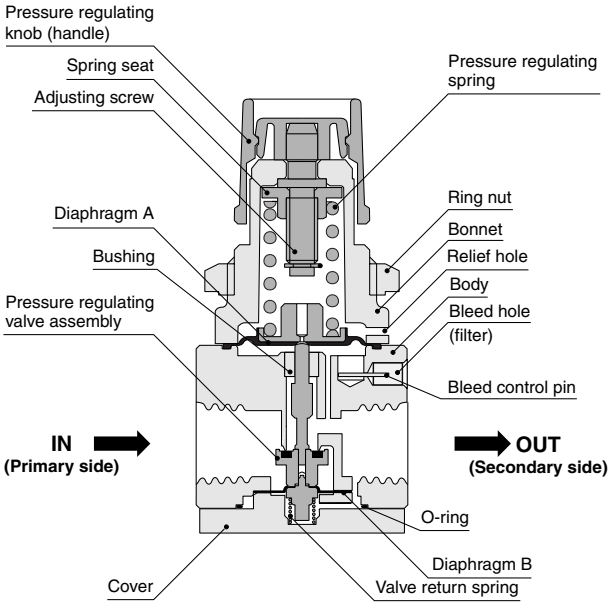


※ This circuit diagram shows the main theories of the circuit and is not the actual circuit. Moreover, the gas medium is not necessarily limited to N_2.
※ Precision stainless regulators can also be used for fluid surface control, including air blowing, for improvement of corrosion resistance on general circuits, and for circuits with non-grease type or non-oil type.

Symbol



Operation Principle and Inner Construction



Major Parts and Materials

Parts	Materials
Body	SUS316
Pressure regulating knob (handle)	Plastic (ABS)
Bonnet	Plastic (PBT)
Diaphragm A, B	Fluoro rubber (FKM)
Pressure regulating spring	Piano wire (zinc plated)
O-ring	Fluoro rubber (FKM)
Pressure regulating valve assembly	SUS316 + fluoro rubber (FKM)
Cover	SUS316
Bushing	Fluoro resin (PTFE)
Valve return spring	SUS316
Bleed control pin	SUS316
Filter	Plastic (PVA)
Adjusting screw	Brass (nickel plated)
Spring seat	Brass (nickel plated)
Ring nut	Steel (nickel plated)
Plug (supplied)	SUS316
Bracket (optional)	SPCC (nickel plated)