

148JA

Solenoid Control Valve



The 148JA Control Valve is an all-metal, normally closed solenoid valve that when supplied with a controlling current will modulate the flow of gas. The 148JA valve is available in Full Scale range from 100 sccm to 30,000 sccm of nitrogen. The 148JA valve can be used for either pressure or flow control when combined with a 1249 control valve driver to provide the drive signal required to operate the solenoid valve.

When used with an MKS controller and appropriate pressure or flow sensor, the 148JA valve modulates gas flow so that pressure or flow is precisely maintained. As increasing current is applied to the solenoid, the valve plug and armature is lifted from the orifice seat. Two spiral springs center the armature within the valve body and oppose the magnetic lifting force. These springs eliminate friction and hysteresis—both major causes of poor control performance.

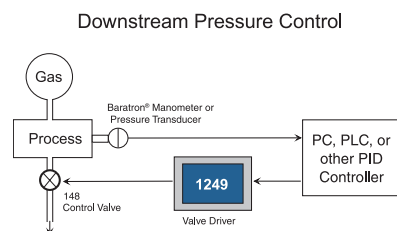
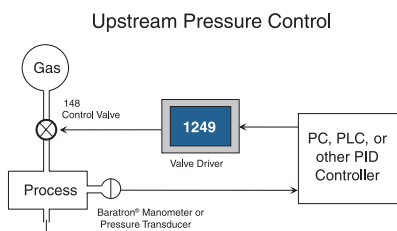
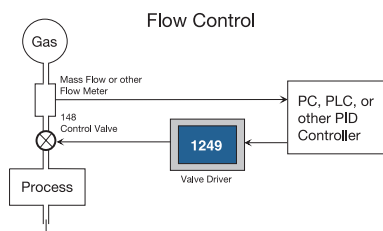
Product Features

- All metal seal
- Wide range of Full Scale flows



Key Benefits

- Minimizes particle generation and reduces outgassing of residual contaminants
- Modulates gas flow while maintaining precise pressure or flow



Specifications

Full Scale Flow Ranges	10 - 30,000 sccm
Minimum Controllable Flow	2% Full Scale
Leak Integrity	External (scc/sec/Helium) Through closed Valve
	<1 x 10⁻¹⁰ <1% of Full Scale (Orifice size) @ 15 psig inlet to atmosphere N₂
Wetted Materials (standard)	316 S.S, Nickel, Elgiloy®, KM45, Teflon®
Fitting	4 VCR® male compatible
Operating Temperature Range	10°C to 60°C
Compliance ¹	CE

¹For CE compliance an overall metal braided shielded cable, properly grounded at both ends, must be used.

Ordering Information

Ordering Code Example: 148JA11CR1M	Code	Configuration
148JA Control Valve	148JA	148JA
Pressure Range		
10 sccm	11C	11C
20 sccm	21C	
50 sccm	51C	
100 sccm	12C	
200 sccm	22C	
500 sccm	52C	
1000 sccm	13C	
2000 sccm	23C	
5000 sccm	53C	
10000 sccm	14C	
20000 sccm	24C	
30000 sccm	34C	
Fitting		
Swagelok 4 VCR	R	R
Valve		
Closed	1	1
Valve Seal Material		
Metal	M	M