

APTech

ADVANCED PRESSURE TECHNOLOGY

STERLING SL 5200 Springless Line Pressure Regulator

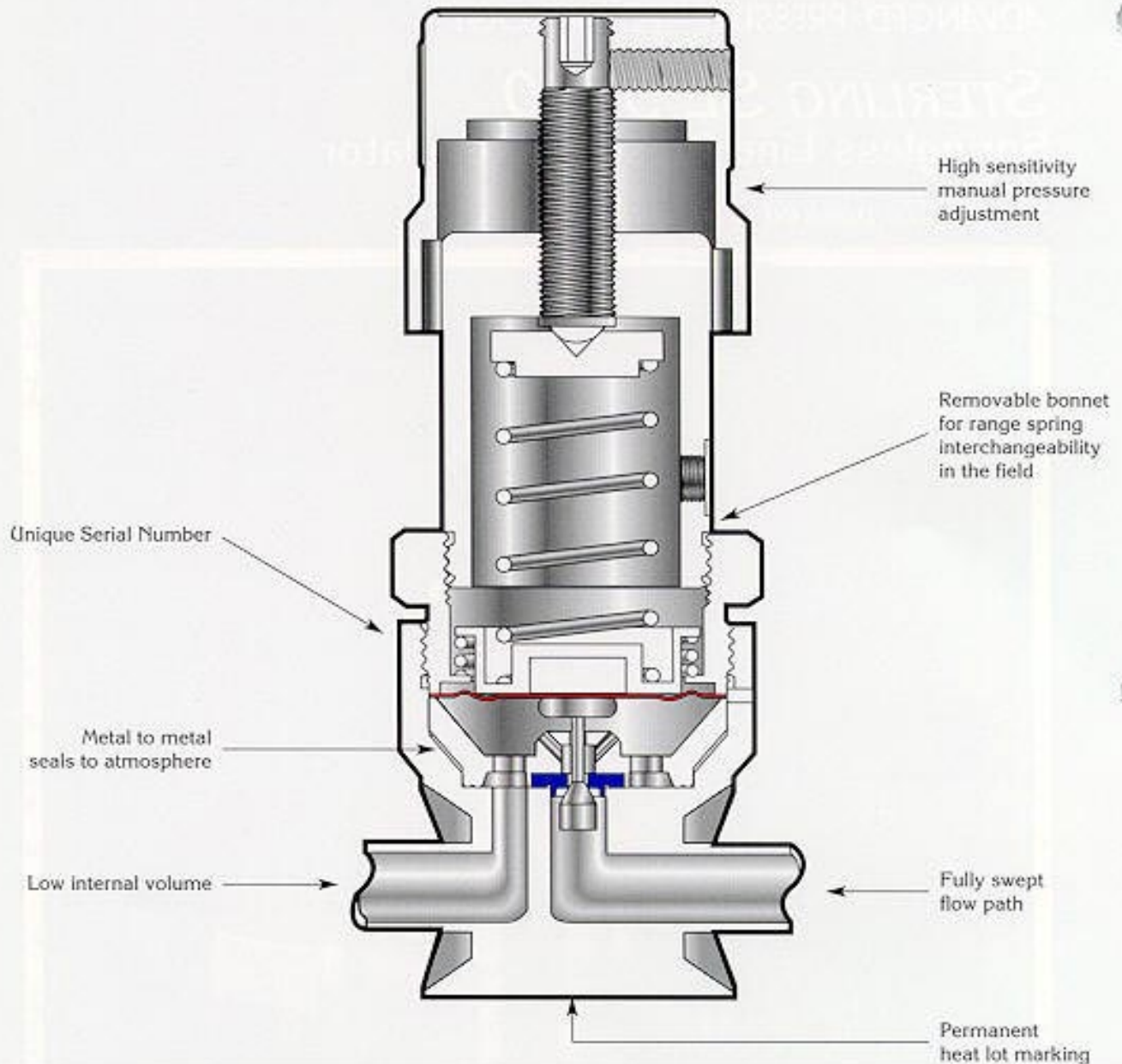
Small size packed with performance



- Stainless steel 316L secondary remelt construction
- 1 sccm to 30 slpm flow capacity
- Vacuum to 150 psig (10 bar) inlet
- Point of use regulation at its finest
- Designed and manufactured exclusively for UHP Semiconductor applications
- Surface mount and custom configurations available
- Ultraclean technology backed by service and support

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Ultraclean / Ultrasmall



The Sterling SL 5200 – the ultimate in ultraclean performance

The Sterling SL 5200 is a line pressure regulator designed for point of use applications requiring small size and moderate flow rates. It delivers outstanding pressure regulation with regard to stability, response and hysteresis with a flow capacity to 30 slpm of nitrogen at 30 psig (2 bar) supply pressure (flow rates exceed 50 slpm with 80 psig (5.5 bar)). It's compact size has the same footprint as a typical springless diaphragm valve. An absolute model, SL 5201 A, provides the same excellent performance from 100 mm Hg to 10 psig (0.7 bar), though with less flow capacity.

Available configurations include – surface mount, multi-port, block types with a variety of sealing mechanisms.

Naturally, this high performance product is built with the most advanced techniques available to meet the ultimate demands of ultraclean semiconductor applications.

Engineering data – Sterling Series SL 5200 Springless Pressure Regulators

Operating parameters

Source pressure	vacuum to 150 psig (10 bar)
Delivery pressure (SL 5201A)	100mm Hg absolute to 10 psig (0.7 bar)
Delivery pressure (SL 5202)	0.5 to 30 psig (0.035 to 2 bar)
Delivery pressure (SL 5210)	1 to 100 psig (0.07 to 7 bar)
Proof pressure	500 psig (35 bar)
Burst pressure	1,000 psig (70 bar)

Other parameters

Inlet and outlet connectors	¼ or ⅜ inch face-seal or tube weld
Flow coefficient (Cv)	0.07
Internal volume	0.15 in ³ (2.5 cm ³)
Operating temperature	-40° to +160°F (-40° to +71°C)
Surface finish	10µin. (0.25µm) standard 5µin (0.13µm) inch Ra optional
Inboard leakage	2 x 10 ⁻¹⁰ sccs
Outboard leakage	2 x 10 ⁻⁹ sccs He at 100 psig inlet
Leakage across seat	4 x 10 ⁻⁸ sccs He at 100 psig inlet
Delivery pressure rise	0.20 per 20 psig
Hysteresis	0.25 psig
Sensitivity	.15 psig

Materials

Type of Service	Series SL 5200 Noncorrosive	Series SL 5200 SH Corrosive
Wetted Parts		
Body	stainless steel 316L/AOD VAR	stainless steel 316L/AOD VAR
Poppet	stainless steel 316L/AOD VAR	Hastelloy® alloy C-22
Finish	electropolished and passivated	electropolished and passivated
Seat	PCTFE (Vespel® optional)	PCTFE
Non-wetted Parts		
Bonnet assembly	stainless steel	stainless steel

All specifications subject to change without notice.

Hastelloy® Haynes Corporation

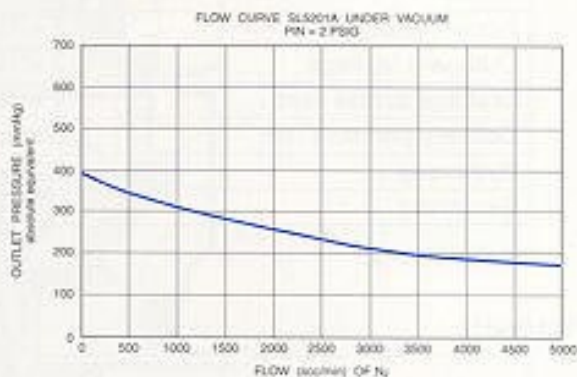
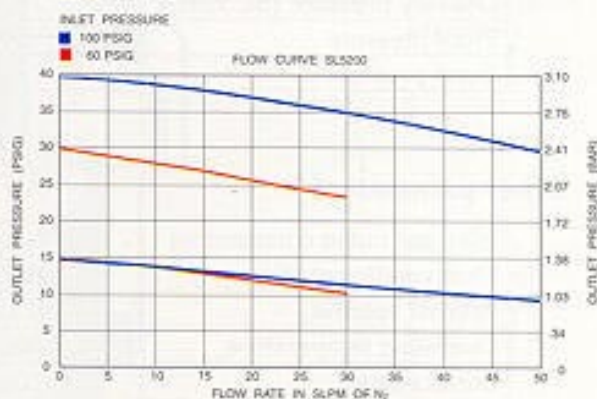
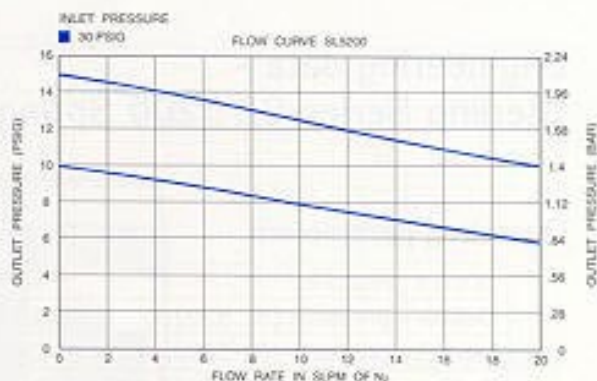
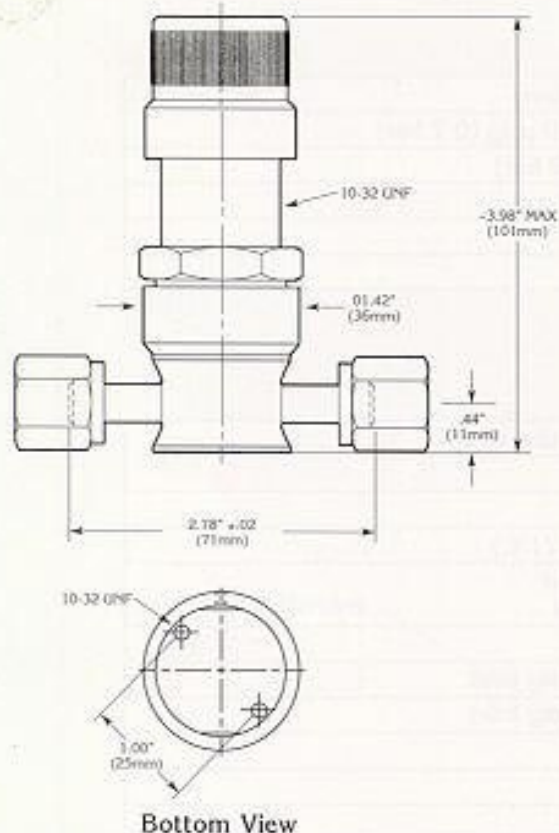
Vespel® DuPont

Cleaning and packaging

Cleaning is a multi-step process performed in a Class 100 clean room. Parts are ultrasonically cleaned with a wetting agent initially and then progressively with hot and cold DI water. Cleaned parts are then blown dry with ultra pure nitrogen prior to being baked completely dry in a nitrogen atmosphere.

Each regulator is then individually assembled, pressure tested, functionally tested and helium leak tested. Labels, including a unique serial number, are installed prior to products being double packaged under ultra pure nitrogen.

Uncompromising quality, performance and reliability from a company known for service and support.



- Please consult the factory or your local distributor for surface mount or custom configurations.
- Specifications subject to change without notice.

ORDERING INFORMATION

Series SL 5200	S Material	M Surface Finish Options	A Range Option	2PW Ports	Connections Inlet Port Outlet Port	VS Options
SL5201 = .5 - 10 psig (0.035 - 0.07 bar)	S = SS 316L AOD/VAR SH = SS / Hastelloy C-22	M = 10μ in. Ra (standard) X = 5μ in. Ra	A = 100mm Hg absolute to 10 psig (0.7 bar) (SL5201 only)	2PW = 2 ports 3PW = 3 ports 4PW = 4 ports	FV4 = 1/4 inch face seal female MV4 = 1/4 inch face seal male TW4 = 1/4 inch tube weld stub (3/8" connections optional)	VS = Vespel seat
SL5202 = .5 - 30 psig (0.035 - 2 bar)						
SL5210 = 1 - 100 psig (0.07 - 7 bar)						
Please refer to Valve Porting Guide for porting options.)						

Products by AP Tech

AP Tech manufactures a wide array of UHP gas handling products exclusively for the Semiconductor industry. Pressure regulators, manual or air actuated springless diaphragm valves and a variety of flow devices are available for applications ranging from the source cylinder cabinet, bulk gas systems, and point of use including process tool gas trays. Please consult your local representative, or the factory, for further information or support regarding our products.