

# 310 Silverline SERIES

## HIGH PURITY CORROSION RESISTANT STAINLESS STEEL SINGLE STAGE REGULATOR

### DESIGN FEATURES

- 316 Stainless steel filtered seat for added gas stream purity, and extended service life
- Convolutional stainless steel diaphragm for precise control of pressure
- Metal to metal diaphragm seal for maximum leak integrity
- 316 stainless steel bar stock body
- Large 2 - 1/2" easy to read single scale gauges
- Captured vent port in bonnet (1/16" FNPT) allows for safe venting of hazardous gases
- Bonnet is threaded for front panel mounting
- Body is tapped for rear panel mounting



P/N 310-70-24-00-00 SHOWN

**Sure-Seat™**  
technology for maximum  
life and gas purity

This single stage high purity regulator is designed to prevent contamination of high purity systems and provide accurate regulation of corrosive, non-corrosive or toxic gases. For corrosive applications, all parts in this regulator exposed to the flowing media are constructed of 316 PCTFE. The specially designed and convolutional stainless steel diaphragm gives maximum accuracy and provides stable regulation of delivery pressure. This regulator is capable of withstanding an internal vacuum and available with diffusion resistant, packless diaphragm outlet valve to maintain system purity. A capturable 1/16" FNPT port in the bonnet is provided to vent hazardous gases in the event of a diaphragm failure.

NOTE: A Cross Purge Assembly must be used with this series of regulators to ensure effective purging of hazardous gas traces during cylinder changes.

### SPECIFICATIONS

Maximum Inlet Pressure ..... 3500 PSIG  
 Outlet Pressure Ranges ..... 0-25, 0-50, 0-100, 0-250 PSIG  
 Temp. Operating Range ..... -40°F to +165°F  
 Ports (5) ..... 1/4" FNPT  
 Design Leak Rate ..... (2 x 10-8 ccs Helium)  
 Flow Coefficient Cv ..... 0.12  
 Flow Curve ..... Flow Chart #8  
 Inlet Decay Rate ..... 0.75/100 PSIG  
 Weight ..... 3.32 lbs.

### MATERIALS OF CONSTRUCTION

Body ..... 316 Stainless Steel, Bar Stock  
 Bonnet ..... Nickel Plated Brass, Bar Stock  
 Seat ..... PCTFE  
 Seat Retainer ..... 316 Stainless Steel  
 Diaphragm ..... Stainless Steel  
 Gauge ..... 2-1/2" Stainless Steel  
 Filter ..... 316 Stainless Steel  
 Valve Stem ..... 316 Stainless Steel  
 Valve Spring ..... 316 Stainless Steel  
 Outlet Valve ..... 316 Stainless Steel

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Option 1:		Option 2:		Option 3:		Option 4:		Option 5:	
Model Series & Outlet Pressure		Outlet Fittings		CGA Inlet Fittings		Accessories		Options	
310	25 PSIG	00	1/4" FNPT	00	1/4" FNPT	00	None	00	None
311	50 PSIG	66	1/4" MPT Stainless Steel Needle Valve	20	CGA SS 320	01	Panel Mount Kit	01	Captured Vent Fitting 1/16" MPT x 1/8" Tube
312	100 PSIG	67	1/4" MPT Stainless Steel Diaphragm Valve	21	CGA SS 326	02	Helium Leak Certification		
313	250 PSIG	68	1/4" FPT Stainless Steel Needle Valve with 1/8" Tube Fitting	22	CGA SS 330	03	Panel Mount Kit and Certification		
		69	1/4" FPT Stainless Steel Diaphragm Valve with 1/8" Tube Fitting	23	CGA SS 350				
		70	1/4" FNPT Stainless Steel Diaphragm Valve	24	CGA SS 580				
		81	1/4" MPT x 1/8" Stainless Steel Tube Fitting	25	CGA SS 660				
		83	1/4" MPT x 1/4" Stainless Steel Tube Fitting	30	CGA SS 240				
		85	1/4" FPT Stainless Steel Diaphragm Valve with 1/4" Tube Fitting	31	CGA SS 705				
				32	CGA SS 590				

### Ordering Information For 310 Series Regulators

Product Number	Max. Inlet Pressure PSIG	Max. Outlet Pressure PSIG	Inlet Gauge		Delivery Gauge	
			Range PSIG	Graduations PSIG	Range PSIG	Graduations PSIG
310	3500	25	0-4000	100	30° HG 0-30	1
311	3500	50	0-4000	100	0-100	2
312	3500	100	0-4000	100	0-200	5
313	3500	250	0-4000	100	0-400	10

**SMITH EQUIPMENT**  
Premium Products Built For a Lifetime