



High Vacuum Valves
Leader in Quality and Value

13000 Series Laminar Flow Valve

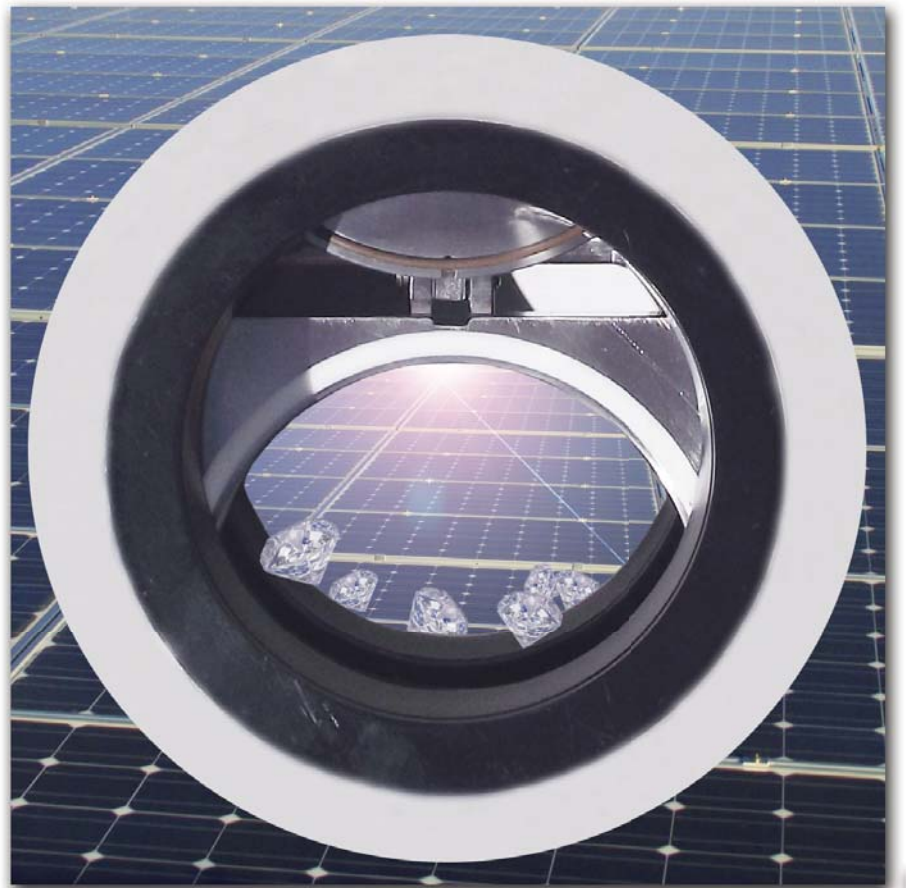
The HVA 13000 Series Laminar Flow Gate Valve features a laminar flow port orifice that effectively seals the valve mechanism from the gas stream. For additional protection, purge ports are installed in both the upper and lower body areas to allow an insert gas flow to prevent intrusion of the process gas into these areas. Extensive semiconductor applications have proven these valves to be a valuable asset in process systems. Laminar flow valves may be used in etching, CVD and any other process that uses highly corrosive gases which may be damaging to other valves.

Internal Isolation - Flow orifice isolates all internal parts from flow path

Positive Shutoff - Maintains sealing integrity upon pressure/power failure

Smooth Movement - PTFE material allows laminar port to glide with ease

Corrosion Resistant - Withstands constant infusion of process gases



Perfect for CVD applications like solar cell processing and synthetic diamond growing



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Ordering Guides

Pneumatic with Viton Bonnet

DN mm inch	Model number KF / ISO-K	Model number ISO-F	Model number CF-F*
40 1.5	13212-0153R	-	13212-0150R
50 2.0	13212-0203R	-	13212-0200R
63 2.5	13212-0256R	13212-0253R	13212-0250R
80 3.0	13212-0306R	13212-0303R	13212-0300R
100 4.0	1312-0406R	13212-0403R	13212-0400R
160 6.0	13212-0606R	13212-0603R	13212-0600R
200 8.0	13212-0806R	13212-0803R	13212-0800R
250 10.0	Recommend ISO-F	13212-1003R	13212-1000R
320 12.0	Recommend ISO-F	13212-1203R	13212-1200R

Includes 120V AC Solenoid. For 24V DC solenoid change to: 1321[1]-
*For Metric CF change last '0' to '4'



13000 Series Standard Technical Specifications

Materials	Valve body and gate Welded bellows shaft seal	304 stainless steel AM-350
Bonnet / gate seals	HV	Viton® elastomer
Vacuum	Pressure Range HV Helium leak rate Differential pressure closed Maximum Δ pressure before opening	1×10^{-9} mbar $< 2 \times 10^{-9}$ mbar l/s 1 bar in either direction ≤ 30 mbar
Bakeout Temperature	Standard Optional Actuator Pneumatic	without solenoid 150°C 250°C 60°C
Mechanism	Pneumatic air service Solenoid supplied voltage Position indicator, max	80 psig 4.0 Watts 120V AC, 50/60 Hz 115 VAC or 28 VDC, 20 mA
Mounting Position		any
Cycles Until Service		100,000 cycles dependent on process
Purge Port Fittings	Standard Optional	1/4-inch female VCR Swagelock, NW16 KF, Custom

