Nano Pure

DIAPHRAGM VALVE

UHP

經銷商
南宜國際材料有限公司

■ **總公司** TEL: 03-560-1270
新竹縣竹北市台元科技園區台元一街8號6樓之1
■ **台中** TEL: 03-560-1270 ■ **台南** TEL: 06-599-2080
service@cemabearing.com
www.sinmat.com.tw

昆山南宜喜玛商贸有限公司
■ TEL: 86-512-5527-6656
service@cemabearing.com.cn
www.cematechnology.com

Lion Hygienic Materials Co., Ltd

"*NanoPure*" is a brand of Gas Delivery Total Solution, belongs to King Lai Group, who was founded 1991 in Taiwan and expanded production facility in Kunshan, Jiangsu Province, China. Supplying tubing/piping and fitting materials service for Semiconductor, FPD, LED and Photovoltaic industries, the core idea of *"NanoPure"* is providing "High purity materials" with high quality components for gas delivery applications.

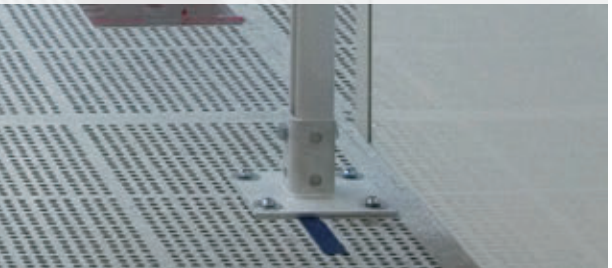
Gas supply and delivery is always the topic to study in Semiconductor processing. To ensure the accuracy of the processing, the purity of gas sources is the vital factors. Keeping the purity while the gas has been transferred into processing tools is highly monitored by process engineers.

"NanoPure" is composed of people who are specialist in stainless steels fabrication. By making sure the selection of finest materials, we provide finest products. The key point is how to control the quality of materials

Introduction

which makes big difference of welding quality while installing or welding assembly. There will be the potential impurity or inclusion in welding process. Therefore, electropolish is the solvable process for increasing reliability of stainless steel to against corrosion gases.

"NanoPure" aims to provide the highest quality products, so the quality control and uniformity are essential points to promise customers. In the meantime, we do put emphasis on the details of products such as dimension



and tolerance which are important for quality control and therefore remain the high yield rate for assembly. Operational packages can be followed according to the customer's instruction, the ranging from normal standard clean package to Ultra High Purity clean room package.

"NanoPure" In addition to UHP products, we also provide various products needed by various Industries, such as Oil & Gas Industries, Process Instrumentation, Power Generation, Pulp & Paper, Chemical, Analytical Instrumentation, Hydrogen Fuel Cells and Natural Gas.

"NanoPure" considers every single key processing during the fabrication.

Our goal is keeping
continually improvement to reach customers' satisfaction!

SD SERIES

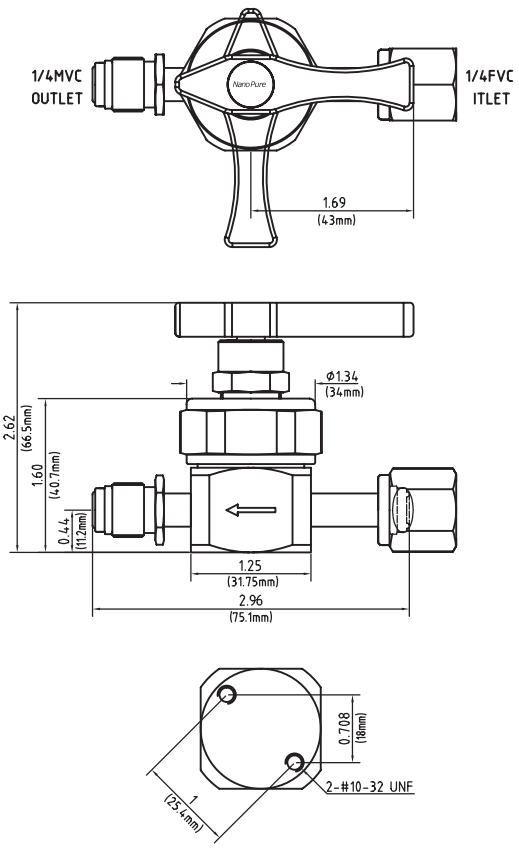
LEVER

WINDOW

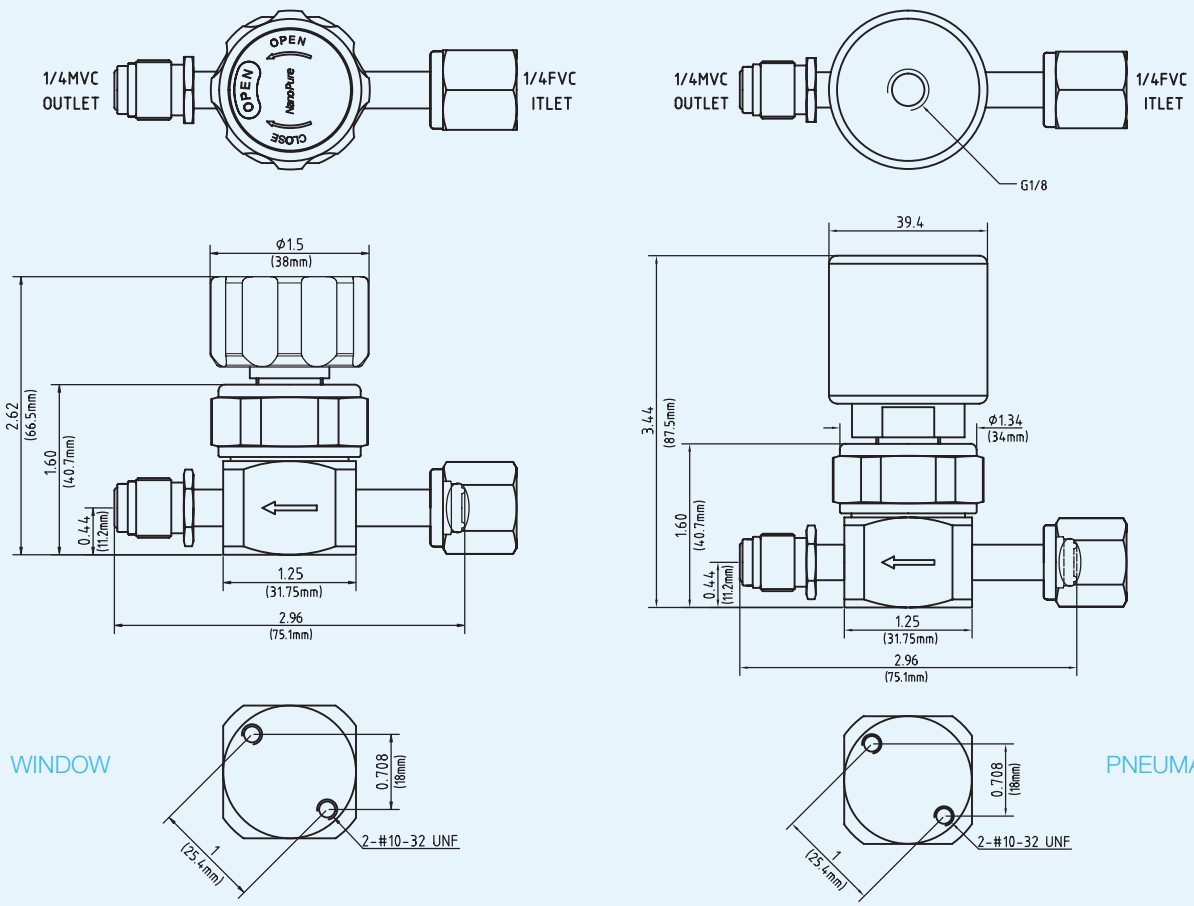
PNEUMATIC

Features

- 316L VAR enhances electropolishing, welding, and corrosion resistance.
- Internally thread less and spring less.
- No change in the lever actuating position over the life of the product.
- Fully field serviceable seat can be replaced without special tools.
- Minimum particle generation and particle entrapment areas.
- 100% Helium leak tested.
- Cleaning process, removes metallic ions, organic films and surface adhering particles.
- Diaphragm is sealed metal-to-metal to the body and is the only seal to atmosphere other than the inlet and outlet connections.
- Diaphragm Design for UHP Service and High Cycle Life.
- Minimal Dead Space for Faster Dry Down and Reduced Purge Times
- Actuator 60-100 psig (4-8.3 bar) nominal control pressure.



LEVER

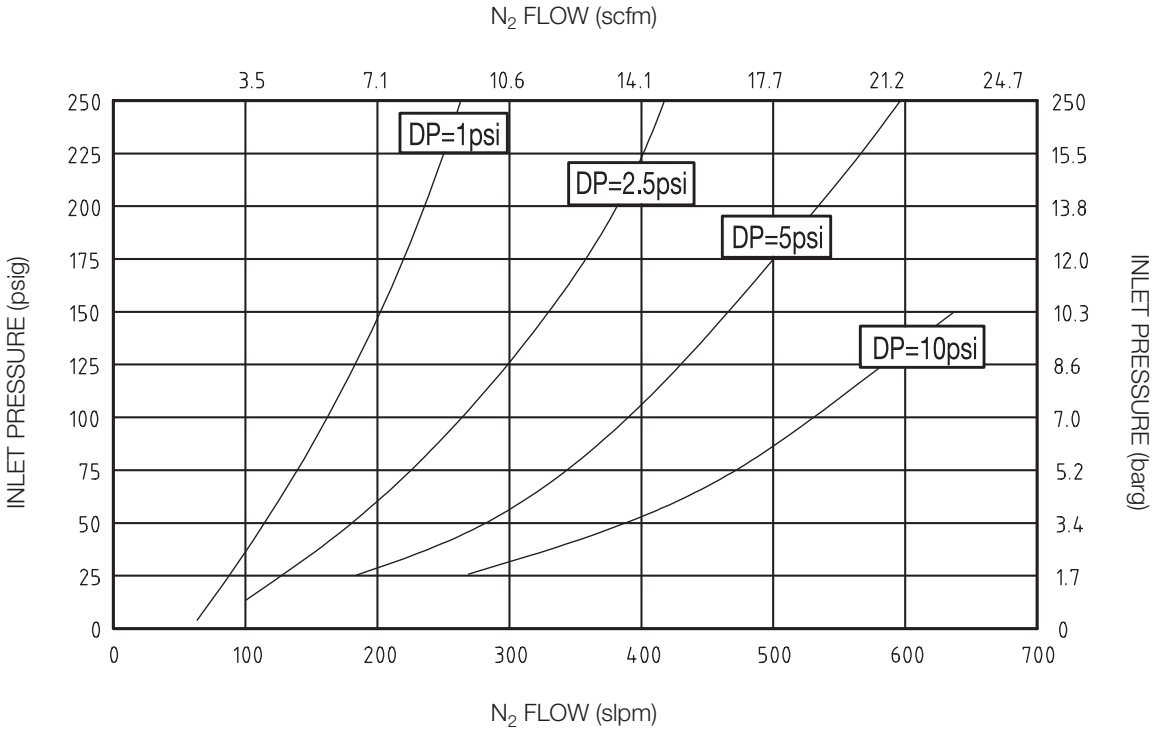


WINDOW

PNEUMATIC

Materials of construction

Project	Data
Wetted	Body: 316L VAR Seat: PCTFE, Optional Vespel® Diaphragm: Hastelloy C-22® or equivalent
Non-wetted	Nut: 300 Stainless Steel Cap: 300 Stainless Steel
Operating conditions	Maximum operating Pressure: 250 psig (17bar) Design Proof Pressure: 375 psig (26bar) Design Burst Pressure: 750 psig (52bar) Minimum operating pressure: Vacuum For oxygen: refer to CGA G-4.4 Industrial Practices for Gaseous Oxygen Temperature: 40°F to 150°F (-40°C to 65°C) Bake out: 250°F (121°C) in the open position
Functional performance	Flow capacity: C_v = 0.6 Design Leak Rate: Outboard: $1x10^{-9}$ scc/sec He Inboard: $2x10^{-10}$ scc/sec He Across the seat: $4x10^{-9}$ scc/sec He
Internal volume	3.20 cc
Surface finishes	10µinch (0.25µm) or less, (Optional surface finishes available)



Nitrogen gas was used for flow curves

1/4" VC	2.96" (75.1mm)
1/2"VC	4.20" (106.7mm)
1/4" Tube Stub	2.25" (57.1mm)
3/8" TubeStub	2.25" (57.1mm)
1/2" Tube Stub	2.25" (57.1mm)

SDH SERIES

LEVER

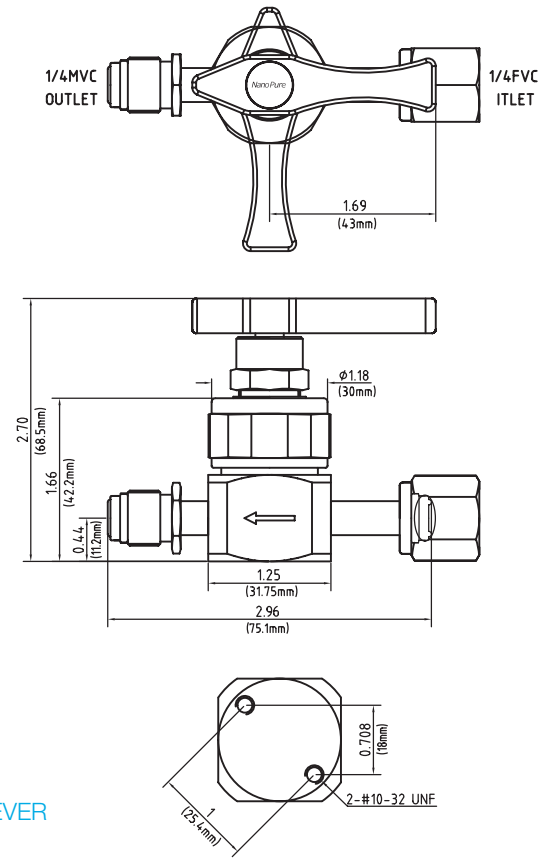
WINDOW

PNEUMATIC LOW PRESSURE

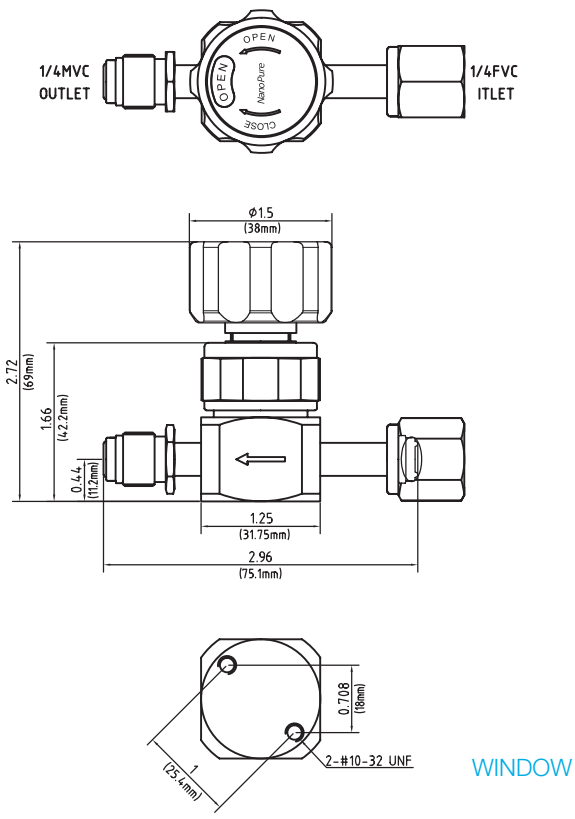
PNEUMATIC HIGH PRESSURE

Features

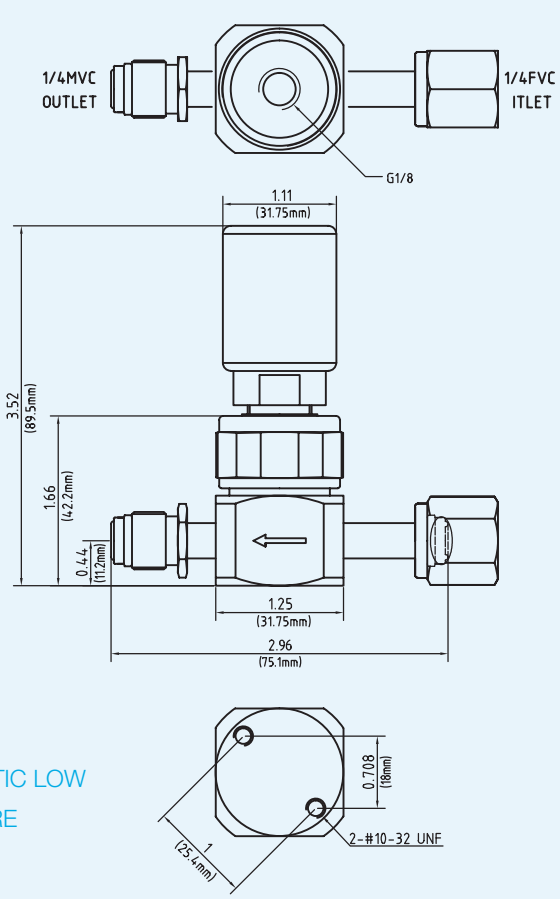
- 316L VAR enhances electropolishing, welding, and corrosion resistance.
- Internally thread less and spring less.
- No change in the lever actuating position over the life of the product.
- Fully field serviceable seat can be replaced without special tools.
- Fully functional from vacuum to 3,500 psig.
- Minimum particle generation and particle entrapment areas.
- 100% Helium leak tested.
- Cleaning process, removes metallic ions, organic films and surface adhering particles.
- Diaphragm is sealed metal-to-metal to the body and is the only seal to atmosphere other than the inlet and outlet connections.
- Diaphragm Design for UHP Service and High Cycle Life.
- Minimal Dead Space for Faster Dry Down and Reduced Purge Times.
- Actuator 60-100 psig (4-8.3 bar) nominal control pressure.



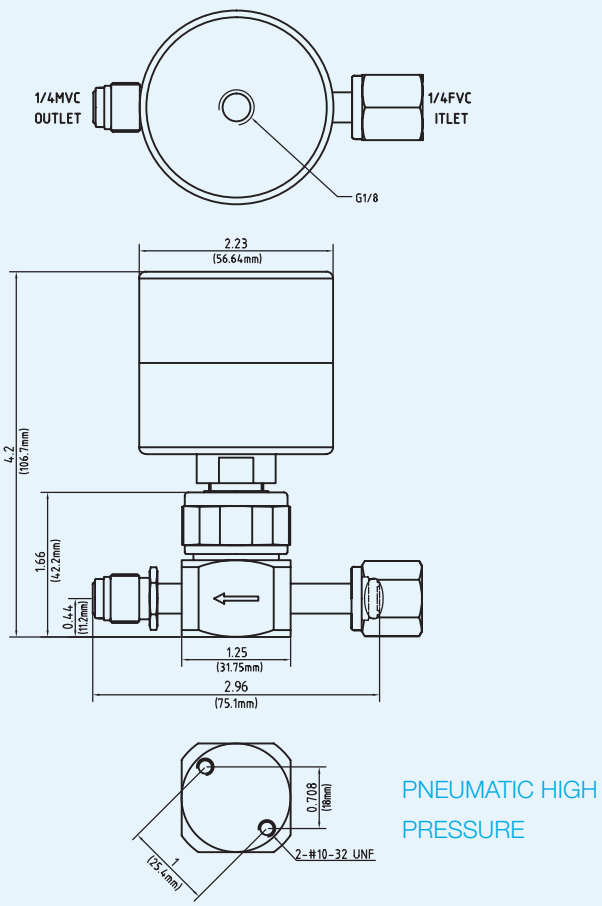
LEVER



WINDOW



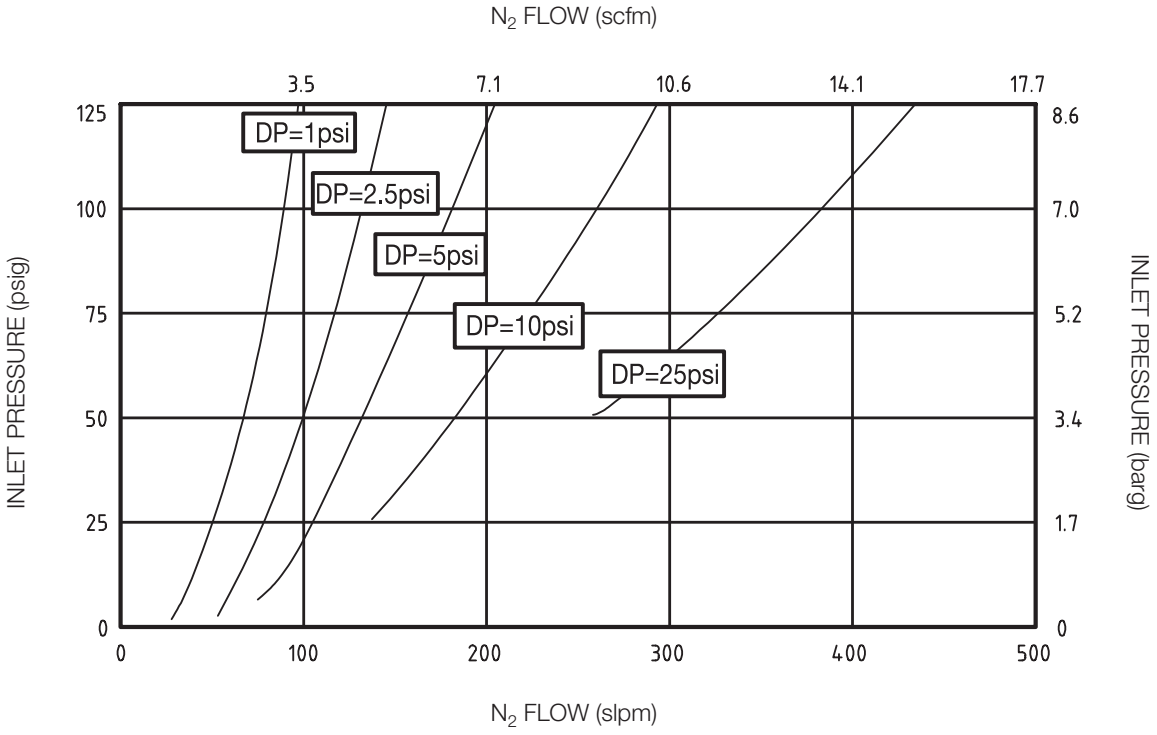
PNEUMATIC LOW PRESSURE



PNEUMATIC HIGH PRESSURE

Materials of construction

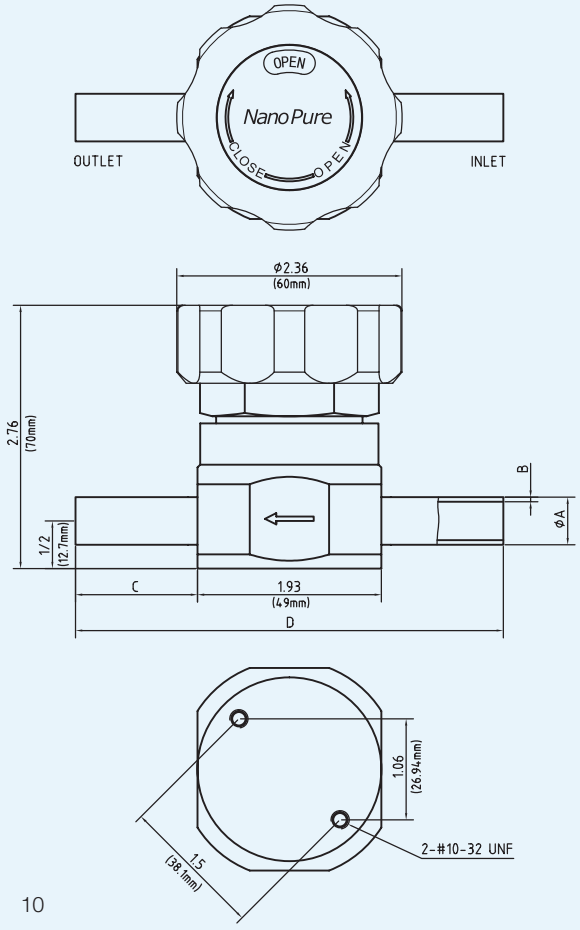
Project	Data
Wetted	Body: 316L VAR Seat: PCTFE, Optional Vespel® Diaphragm: Hastelloy C-22® or equivalent Holder Seat : 316L VAR
Non-wetted	Nut: 300 Stainless Steel Cap: 300 Stainless Steel
Operating conditions	Maximum operating Pressure: 3,500 psig (240bar) Minimum operating pressure: Vacuum For oxygen: refer to CGA G-4.4 Industrial Practices for Gaseous Oxygen Temperature: 40°F to 150°F (-40°C to 65°C) Bake out: 250°F (121°C) in the open position
Functional performance	Flow capacity: C_v = 0.3 Design Leak Rate: Outboard: $1x10^{-9}$ scc/sec He Inboard: $2x10^{-10}$ scc/sec He Across the seat: $4x10^{-9}$ scc/sec He
Internal volume	2.15 cc
Surface finishes	10µinch (0.25µm) or less, (Optional surface finishes available)



Nitrogen gas was used for flow curves

1/4"VC	2.96" (75.1mm)
1/2" VC	4.20" (106.7mm)
1/4" Tube Stub	2.25" (57.1mm)
3/8" Tube Stub	2.25" (57.1mm)
1/2" Tube Stub	2.25" (57.1mm)

SDL SERIES



Features

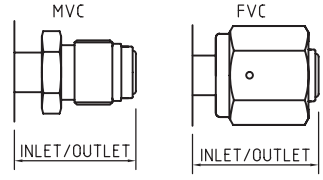
- 316L Stainless Steel enhances electropolishing, welding, and corrosion resistance.
- Internally thread less and spring less.
- No change in the lever actuating position over the life of the product.
- Fully field serviceable seat can be replaced without special tools.
- Minimum particle generation and particle entrapment areas.
- 100% Helium leak tested.
- Cleaning process, removes metallic ions, organic films and surface adhering particles.
- Diaphragm is sealed metal-to-metal to the body and is the only seal to atmosphere other than the inlet and outlet connections.
- Diaphragm Design for UHP Service and High Cycle Life
- Minimal Dead Space for Faster Dry Down and Reduced Purge Times

Materials of construction

Project	Data
Wetted	Body: 316L Stainless Steel Seat: PCTFE, Optional Vespel® Diaphragm: Hastelloy C-22® or equivalent Holder Seat : 316L Stainless Steel
Non-wetted	Nut: 300 Stainless Steel Cap: 300 Stainless Steel
Operating conditions	Maximum operating Pressure: 375 psig (25.8 bar) Minimum operating pressure: Vacuum For oxygen: refer to CGA G-4.4 Industrial Practices for Gaseous Oxygen Temperature: 40°F to 150°F (-40°C to 65°C) Bake out: 250°F (121°C) in the open position
Functional performance	Flow capacity: C_v = 2.9 Design Leak Rate: Outboard: $1x10^{-9}$ scc/sec He Inboard: $2x10^{-10}$ scc/sec He Across the seat: $4x10^{-9}$ scc/sec He
Internal volume	13.30 cc
Surface finishes	10µinch (0.25µm) or less, (Optional surface finishes available)

Size	A	B	C	D
1/2" Tube	0.5 (12.7mm)	0.049 (1.24mm)	1.28 (32.5mm)	4.49 (114mm)
3/4" Tube	0.75 (19.05mm)	0.049 (1.24mm)	1.67 (42.5mm)	5.28 (134mm)
3/4" Tube	0.75 (19.05mm)	0.065 (1.65mm)	1.67 (42.5mm)	5.28 (134mm)
1" Tube	1 (25.4mm)	0.065 (1.65mm)	1.87 (47.5mm)	5.67 (144mm)

Optional valve end connections a vaolable on SDL body sizes



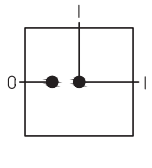
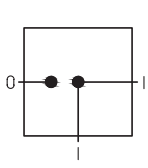
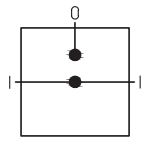
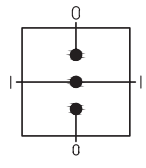
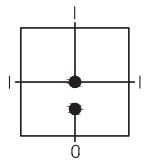
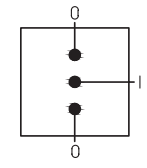
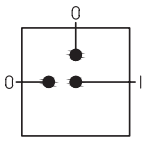
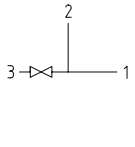
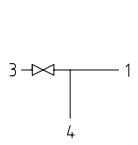
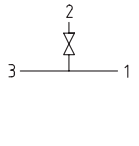
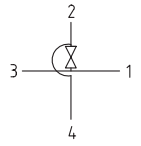
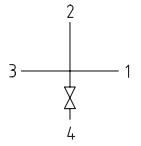
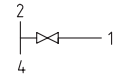
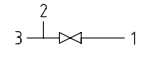
Size	1/2MVC	3/4MVC	1/2FVC	3/4FVC	1MVC	1FVC
Length	1.51 (38.31mm)	2.13 (54.06mm)	1.51 (38.31mm)	2.13 (54.06mm)	2.36 (59.9mm)	2.36 (59.9mm)

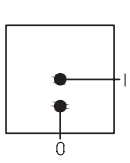
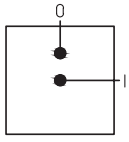
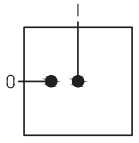
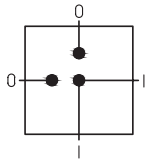
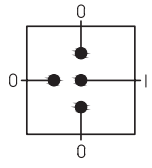
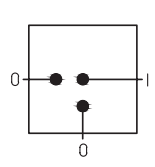
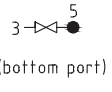
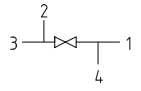
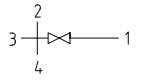
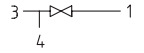
Diaphragm Valve
For example

SD – 6V – W – 4FF – E

Series		Materials		Handle		Connector		electropolishing
SD	250 Psig	6S	316L	W	Window	4MM	1/4" In & Out Male VC	E 5 µinch (0.13 µm) or less
SDH	3500 Psig (1/4" & 1/2" Only)	6V	316L VAR	L	Lever	4FF	1/4" In & Out Female VC	BA without EP 20 µinch (0.5 µm) or less
SDL	250 Psig			LS	Short Lever	4MF	1/4" In Male Out Female VC	
				AHNC	Air Pressure NC	4FM	1/4" In Female Out Male VC	
				AHNO	High Pressure NO	8MM	1/2" In & Out Male VC	
				ALNC	Low Pressure NC	8FF	1/2" In & Out Female VC	
				ALNO	Low Pressure NO	8MF	1/2" In Male Out Female VC	
						8FM	1/2" In Female Out Male VC	
						12MM	3/4" In & Out Male VC (SDL only)	
						12FF	3/4" In & Out Female VC (SDL only)	
						12MF	3/4" In Male Out Female VC (SDL only)	
						12FM	3/4" In Female Out Male VC (SDL only)	
						16MM	1" In & Out Male VC (SDL only)	
						16FF	1" In & Out Female VC (SDL only)	
						16MF	1" In Male Out Female VC (SDL only)	
						16FM	1" In Female Out Male VC (SDL only)	
						T4	1/4" Tube Stub	
						T6	3/8" Tube Stub	
						T8	1/2" Tube Stub	
						T12	3/4" Tube Stub (SDL only)	
						T16	1" Tube Stub (SDL only)	

SD & SDH Series Flow Path Designator

A (3 Port)	B (3 Port)	C (3 Port)	D (4 Port)	E (4 Port)	F (3 Port)	G (3 Port)
						
						

H (2 Port Elbow)	I (2 Port Elbow)	J (2 Port Elbow)	K (4 Port)	L (4 Port)	M (3 Port)
					
					

KL® GROUP

Stock Code 300260

Lion Hygienic Materials Co., Ltd

No.22 Lufeng west road, Kunshan,

Jiangsu, P. R. China

Tel: 86-512-5767 1815

Fax: 86-512-5787 1472

Email: info@kinglai.com.tw

www.kl-nanopure.com