Hy-Lok

www.hy-lok.com

Catalog No. H - HPGR800S
Jan. 2008

HPGR-800 Series

ULTRA-HIGH PURITY POINT-OF-USE REGULATOR

Features

- Single Stage
- Low Particle Entrapment
- True metal to metal body to diaphragm seal
- Long life cycle
- 10Ra or 5Ra microinch internal surface
- Free poppet type
- Internally Threadless
- Maximum inlet pressure range : 600, 1000 or 3500 psig (41, 69, or 24.1 MPa)
- Outlet pressure range : 3-30, 3-60, 3-100 & 4-150 psig (0.1-0.207, 0.1-0.414, 0.1-0.689, & 0.1-1.034MPa)

The HPGR-800 Series is a high purity gas regulator designed to provide the optimum in performance and cleanliness for high purity delivery systems in semiconductor applications.

The HPGR-800 Series regulators are a Point-Of-Use regulator designed to be used with corrosive and non-corrosive gases in process gas systems for Semiconductor manufacturing facilities and is a single stage regulator operated by the load spring which interacts with a main valve to control outlet pressure.

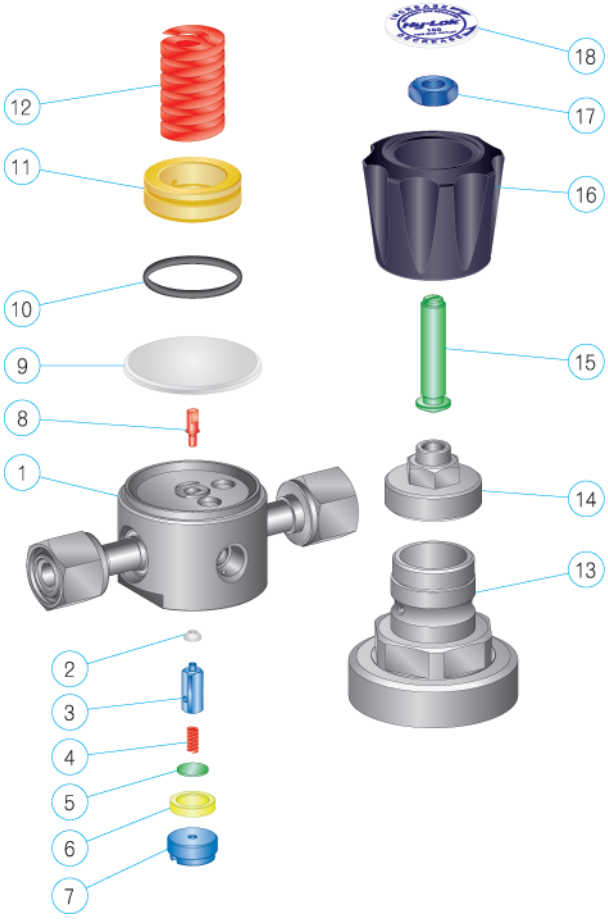
The regulators are metal-to-metal diaphragm to body seal provides enhanced leak integrity.

The wetted surface are finished to 10Ra or 5Ra microinch to minimize the generation of particles.

Assembly, testing and packing are performed in a class 10 cleanroom.

Hy-Lok HY-LOK CORPORATION

ISO 14001 OHSAS 18001



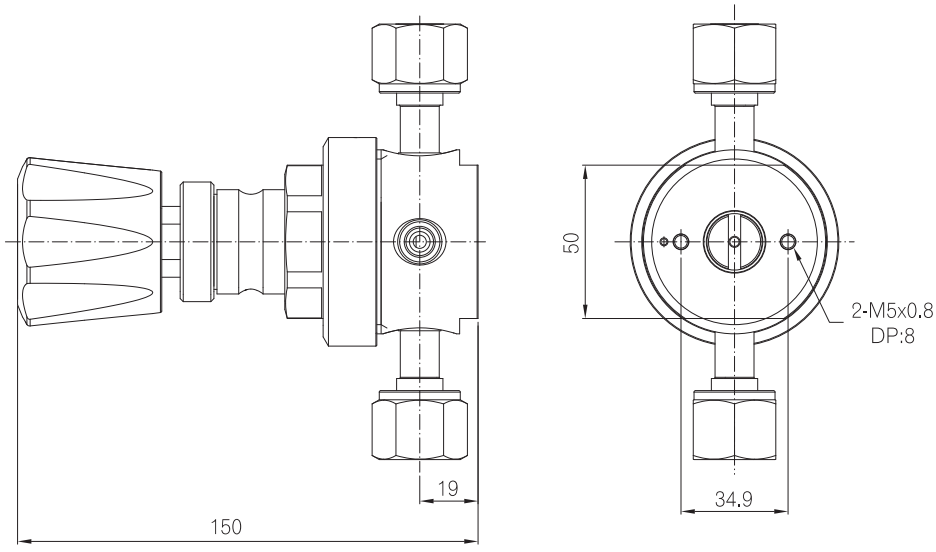
Materials of Construction

No.	Description	Material / ASTM Specification
* 1	Body	Single/Double Melting 316L / A479
* 2	Seat	PCTFE
* 3	Main Valve	Type 316L / A479
* 4	Valve Spring	Type 316L / A479
* 5	Gasket	Type 316L / A479
6	Gasket Hoder	Type 316L / A479
7	Push Bolt	Stainless Steel 304
* 8	Seat Holder	Type 316L / A479
* 9	Diaphragm	Elgiloy®
10	O-Ring	Viton®
11	Thrust Pad	Stainless Steel 304
12	Load Spring	Stainless Steel 304
13	Bonnet	Brass / B16
14	Bonnet Nut	Brass / B16
15	Adjust Screw	Stainless Steel 304
16	Hand Wheel	Plastic
17	Nut	Stainless Steel 304
18	Label	Plastic

* : Wetted Components

Dimension

- All dimensions are in millimeters and Subject to change.



HPGR - 800Series

Specification

FLUID MEDIA : All gases corrosive or non-corrosive for high purity system.
When using other media , Please Contact us.

PRESSURE RATING : Per criteria of ANSI/ASME B31.3

Maximum rated inlet pressure ---------- 600, 1000 or 3500 psig
(41, 69, or 24.1 MPa)
Outlet pressure range ---------- 3-30, 3-60, 3-100 & 4-150 psig
(0.1-0.207, 0.1-0.414, 0.1-0.689, & 0.1-1.034MPa)

DESIGN PROOF PRESSURE : 150% maximum operating pressure

MATERIALS IN CONTACT WITH MEDIA :

Body ---------- 316L SS VOD / AOD / VIM (BA),
316L SS VIM / VAR (EP)
Valve seat ---------- 1000psig - PCTFE, 3500psig - Vespel®
Diaphragm ---------- Hastelloy C-22 / Elgiloy
Main valve,Bush,Spring,Seat holder ------ 316L SS

OTHER PARAMETERS :

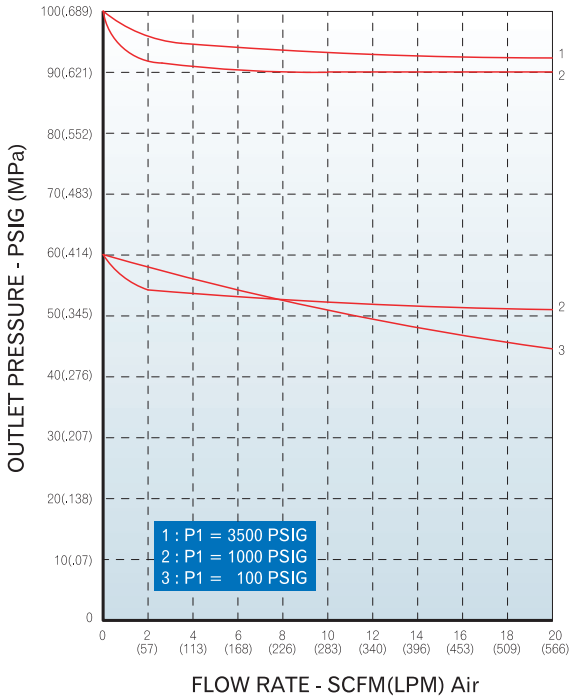
Flow capacity ---------- Cv = 0.5
Certified maximum inboard leak rate ----- $1x10^{-9}$ atm cc / sec He
Internal surface finish ---------- 10Ra or 5Ra microinch (0.25 or 0.13㎛)

OPERATING TEMPERATURE :

PCTFE Seat ---------- -40°F to +200°F (-40°C to +93°C)
Vespel ®Seat ---------- -40°F to +300°F (-40°C to +149°C)

WEIGHT : 3.2lbs (1.5Kg)

FLOW CHART
REGULATOR DISCHARGE CHARACTERISTICS CURVES
P1 : Inlet Pressure



This characteristics curve chart shows the change or drop in two Different pressure as the flow rate Increases and the inlet pressure Decreases.

HPGR - 800Series

Gauge Port Options

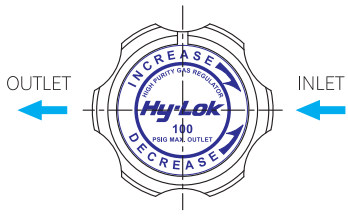


Fig.1(NO GAUGE)

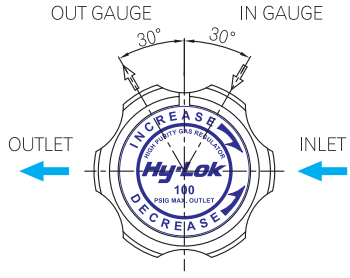


Fig.3(2 GAUGE)

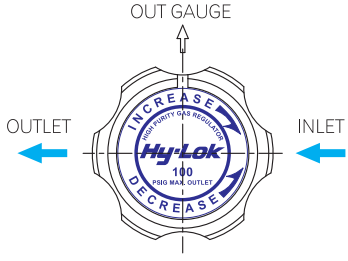


Fig.2(1 GAUGE)

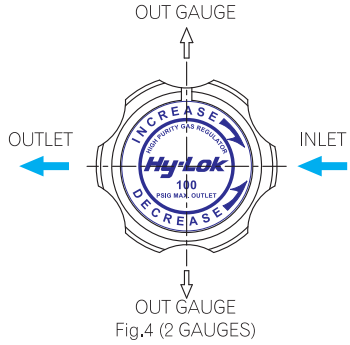


Fig.4 (2 GAUGES)

Ordering Infomation

HPGR - 800 | 2 | 2 | P | ZF | B | - | H | - | VV6L

SERIES
HPGR-801 : 3/8" Connection
HPGR-802 : 1/2" Connection

INLET PRESSURE
1 : 300 psig 2 : 600 psig
3 : 1000 psig 4 : 3500 psig

OUTLET PRESSURE
0 : 1-30 psig (0.1-0.207 MPa)
1 : 1-60 psig (0.1-0.414 MPa)
2 : 1-100 psig (0.1-0.689 MPa)
3 : 1-150 psig (0.1-1.034 MPa)

SEAL MATERIAL
P : PCTFE
V : Vespel©

INLET & OUTLET PORT
NF : Female NPT thread
TW : Tube Weld
ZM : ZCR male
ZF : ZCR female
HL : Hy-Lok
FM : Fixed male

BODY MATERIAL
SM6L : Single melting 316L SS(VOD/AOD)
VV6L : Double melting 316L SS(VIM-VAR)

GRADE
B : BA (Bright Anealing)
H : EP (Electropolish)
S : Super Electropolish

GAUGE PORT OPTION

A	: None	No gauge port (Fig.1)
B	: Internal Face Seal(1/4")	1 Gauge (Fig.2)
C	: Internal Face Seal(1/4")	2 Gauges (Fig.3)
D	: Internal Face Seal(1/4")	2 Gauges (Fig.4)
E	: ZCR male(1/4")	1 Gauge (Fig.2)
F	: ZCR male(1/4")	2 Gauges (Fig.3)
G	: ZCR male(1/4")	2 Gauges (Fig.4)
H	: ZCR Female(1/4")	1 Gauge (Fig.2)
I	: ZCR Female(1/4")	2 Gauges (Fig.3)
J	: ZCR Female(1/4")	2 Gauges (Fig.4)
K	: Fixed male(1/4")	1 Gauge (Fig.2)
L	: Fixed male(1/4")	2 Gauges (Fig.3)
M	: Fixed male(1/4")	2 Gauges (Fig.4)

■ QUALITY SYSTEM CERTIFICATES

ISO 9001
CERTIFICATE NO.GQC 212

ASME SECT Ⅲ (MO)
CERTIFICATE NO. QSC 584

■ TYPE APPROVALS (for Hy-Lok Tube Fittings)

American Bureau Shipping
CERTIFICATE NO.05-BK576227-X

Lloyd's Register
CERTIFICATE NO.01/10075

GERMANISCHER LLOYD
CERTIFICATE NO. 40297-01HH

DET NORSKE VERITAS
CERTIFICATE NO.P - 10432

SAFETY in VALVE SELECTION

Proper installation, material compatibility, operation and maintenance of the valve is the responsibility of the user. The total system design must be taken into consideration to ensure optimal performance and safety.