



Catalog No. H-HPGR  
Nov. 2023

## Ultra High Purity Regulator - Pressure Reducing

HPGR-400 & HPGR-800 Series



### HPGR-400 & HPGR-800 Series

- 100% DI Water Cleaning
- 100% Clean Room Assembly, Testing, Packing
- 100% Helium Leak Test
- Maximum Inlet Pressures up to 600 psig (41 bar)
- 1/4 & 1/2 in. End Connections

**HY-LOK CORPORATION**

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## HPGR-400 Series



| Series   | Size    | Pressure Rate |                           | Flow Rate | Leak Rate               | Cv  | Grade |
|----------|---------|---------------|---------------------------|-----------|-------------------------|-----|-------|
|          |         | Inlet (psig)  | Outlet (psig)             | LPM       | Std. cm <sup>3</sup> /s |     |       |
| HPGR-400 | 1/4 in. | 600           | 0-60, 0-100, 0-150, 0-250 | 200       | 1x10 <sup>-9</sup>      | 0.2 | EP    |

\* Flow rate : N2 gas, at inlet pressure 500psig and outlet pressure 100psig

## HPGR-800 Series



| Series   | Size    | Pressure Rate |                           | Flow Rate | Leak Rate               | Cv  | Grade |
|----------|---------|---------------|---------------------------|-----------|-------------------------|-----|-------|
|          |         | Inlet (psig)  | Outlet (psig)             | LPM       | Std. cm <sup>3</sup> /s |     |       |
| HPGR-800 | 1/2 in. | 600           | 0-60, 0-100, 0-150, 0-250 | 500       | 1x10 <sup>-9</sup>      | 0.5 | EP    |

\* Flow rate : N2 gas, at inlet pressure 500psig and outlet pressure 100psig

All dimensions are in millimeters(inches) reference only, subject to change.

## HPGR-400 Series

### ■ Regulator- Pressure Reducing

In Order to use at the Semiconductor all Internal Surface are Finished with 10 Ra, 5 Ra  $\mu$ in. Up to EP Grade to Ensure Minimize Particle Generation

Metal to Metal Diaphragm Seals Provide Enhanced Leak Tight Integrity

### ■ Specifications

#### Operations

- **Maximum Inlet Pressure**  
600 psig ( 41 bar)
- **Outlet Pressure Range**  
0-60 psig ( 0-4 bar )  
0-100 psig ( 0-7 bar )  
0-150 psig ( 0-10 bar )  
0-250 psig ( 0-17 bar )
- **Design Proof Pressure**  
150% maximum rated
- **Inboard Helium Leak Rate (ASME E498)**  
 $1 \times 10^{-9}$  std  $\text{cm}^3/\text{s}$
- **Operating and Fluid Media Temperature**  
-15°F to 176°F ( -26°C to 80°C )
- **Flow Capacity**  
 $C_v = 0.2$  (Non-Venting)
- **Flow Rates**  
200 LPM at 500 psig Inlet

#### Media Contact Materials

- **Body**  
316L Stainless Steel or VOD (Single Melting)
- **Valve Seat**  
PCTFE
- **Diaphragm**  
Elgiloy®
- **Main Valve, Valve Bush, Valve Spring**  
316L Stainless Steel

#### Other

- **Particle Count**  
 $0 \leq 0.1 \mu\text{m}$  Based on ASTM F1394
- **Internal Surface Finish**  
10 Ra or 5 Ra  $\mu$ in. (0.25 or 0.13  $\mu\text{m}$ )
- **Connections**  
1/4" Inlet and Outlet, Gauge Ports
- **Weight (without gauges)**  
2 lbs ( 0.9 kg )



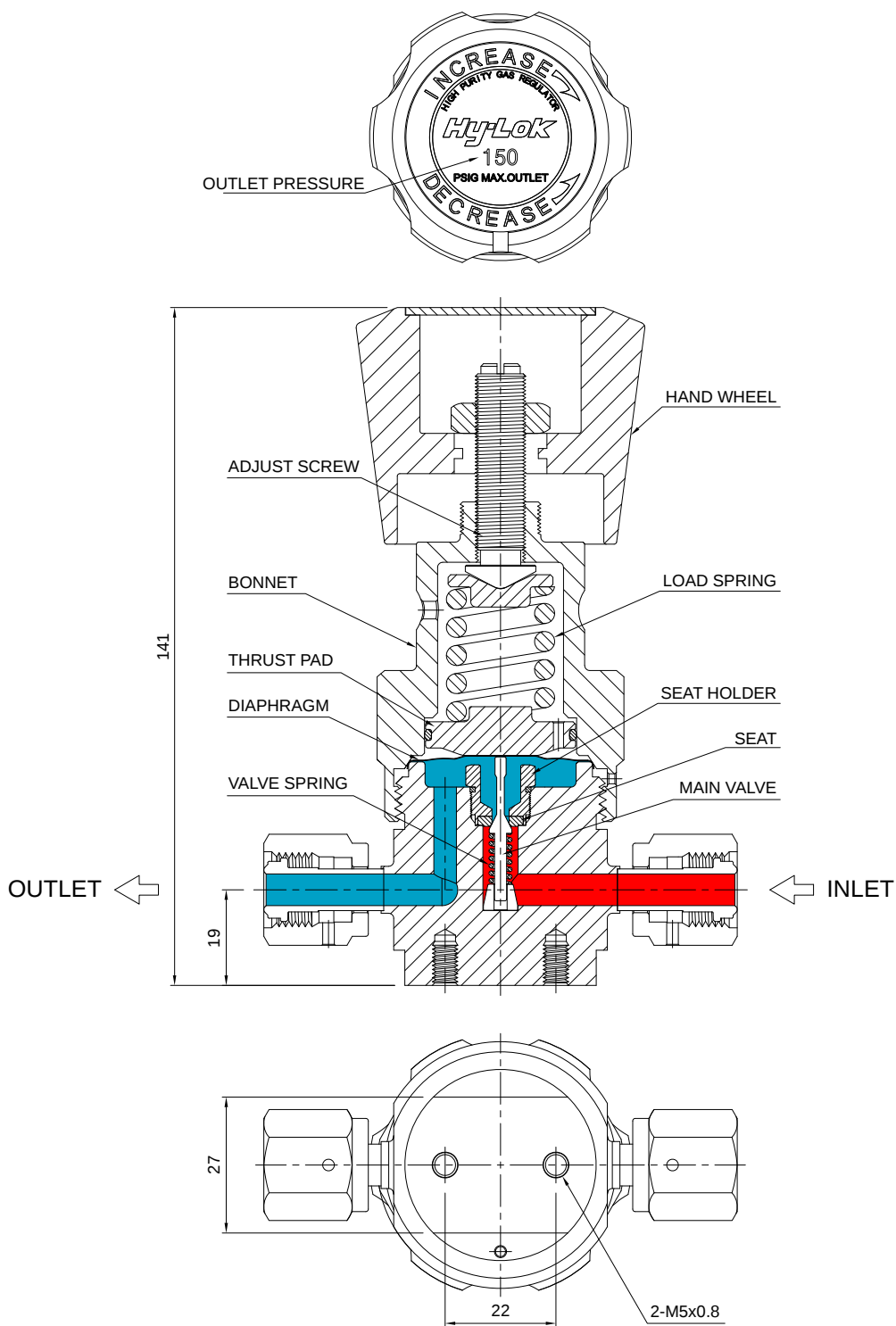
#### Applications

- Ultra High Pure Gas Lines
- Semiconductor Hook-up Line
- Bulk Gas Lines

#### Features and Benefits

- Metal to Metal Diaphragm Seals Leak Tight Integrity
- Internal Surface EP 10 Ra or 5 Ra  $\mu$ in.
- All Performed in Class 10 Clean Room
- Available for Semiconductor Applications

## HPGR-400 Series

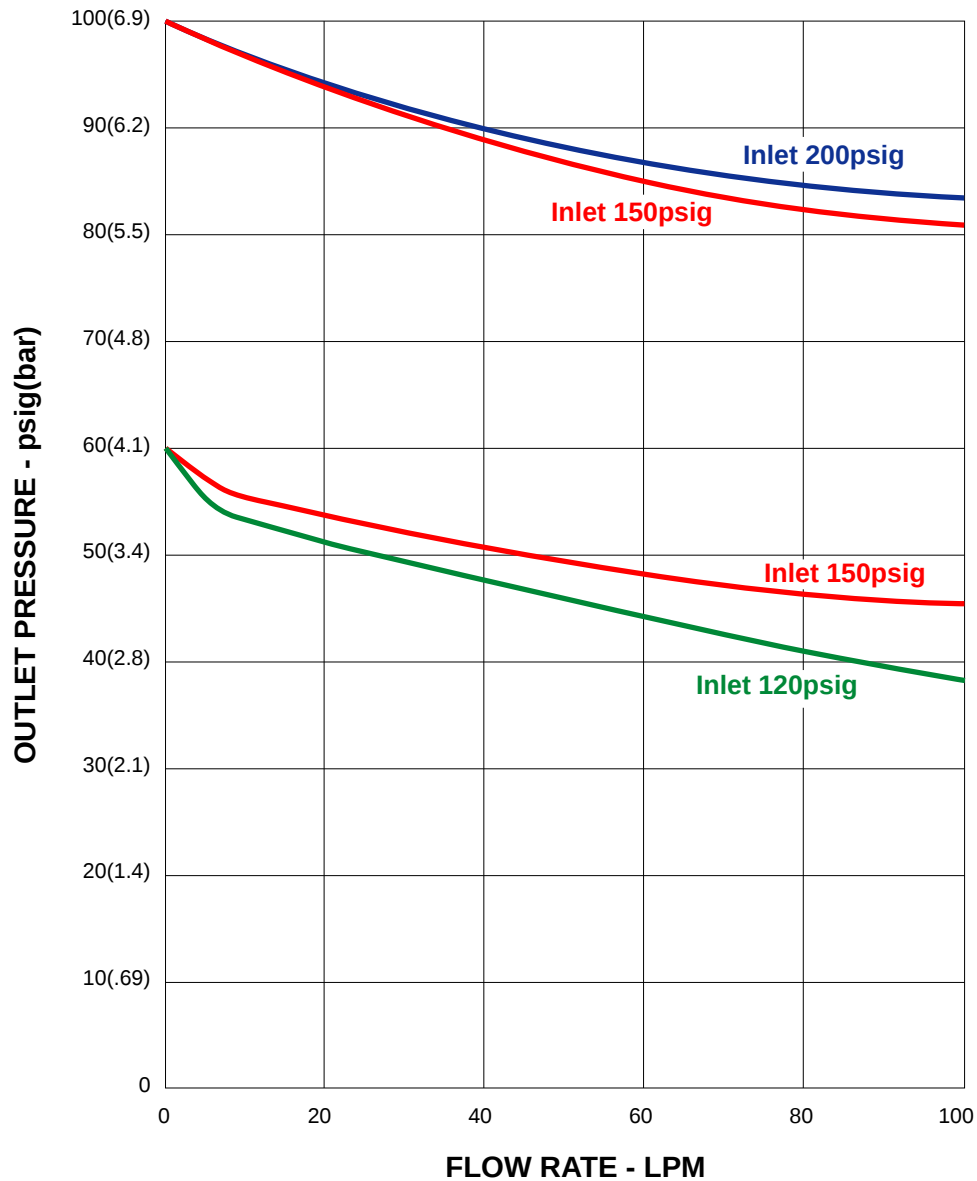
Regulator - Pressure Reducing  
Functional Schematic

All dimensions are in millimeters(inches) reference only, subject to change.

## HPGR-400 Series

### ■ Regulator- Pressure Reducing

#### Flow Chart



#### Ordering Information

| Series   | Inlet Pressure      | Outlet Pressure                                                     | Valve Seat Material | Inlet & Outlet Port Type                           | Gauge Port             | Grade            | Body Material                                          |
|----------|---------------------|---------------------------------------------------------------------|---------------------|----------------------------------------------------|------------------------|------------------|--------------------------------------------------------|
| HPGR-400 | <u>1 : 600 psig</u> | 1 : 0-60 psig<br>2 : 0-100 psig<br>3 : 0-150 psig<br>4 : 0-250 psig | P : PCTFE           | HL : 1/4 in. Hy-Lok End<br>ZF : 1/4 in. ZCR Female | A : Non<br>B : 1 Gauge | B : BA<br>H : EP | 316L : SS 316L<br>SM6L : SS 316L VOD<br>Single Melting |

Example for Selecting a Part Number : **HPGR-400 1 3 P ZF B - H / SM6L**

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-15°F to 176°F ( -26°C to 80°C )
- **Flow Capacity**  
 $C_v = 0.5$  (Non-Venting)
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500 LPM at 500 psig Inlet

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316L Stainless Steel or VOD (Single Melting)
- **Valve Seat**  
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- **Internal Surface Finish**  
10 Ra or 5 Ra  $\mu$ in. (0.25 or 0.13  $\mu\text{m}$ )
- **Connections**  
3/8" & 1/2" Inlet and Outlet, Gauge Ports
- **Weight (without gauges)**  
3.2 lbs ( 1.5 kg )



#### Applications

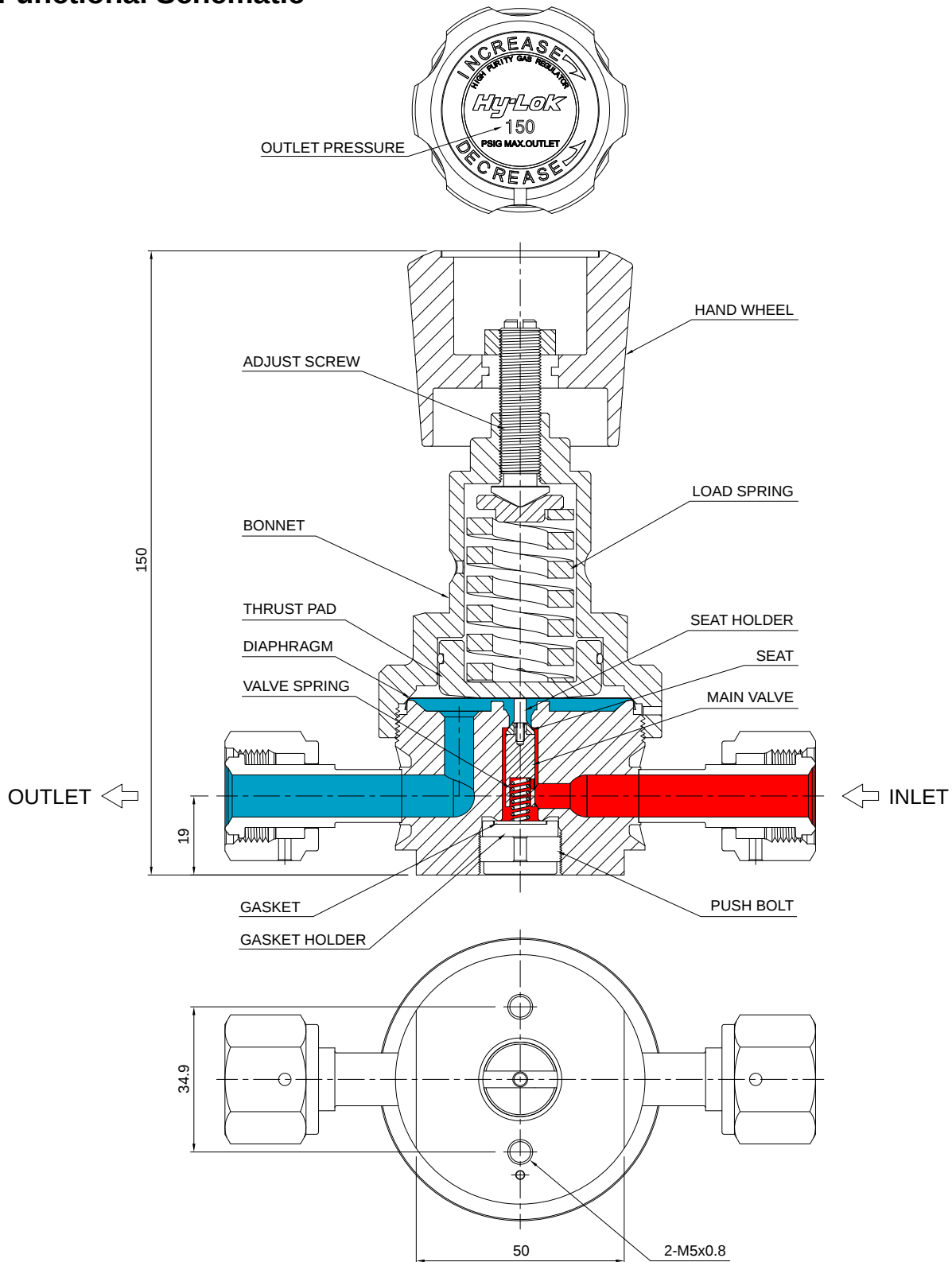
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## HPGR-800 Series

### Regulator- Pressure Reducing Functional Schematic

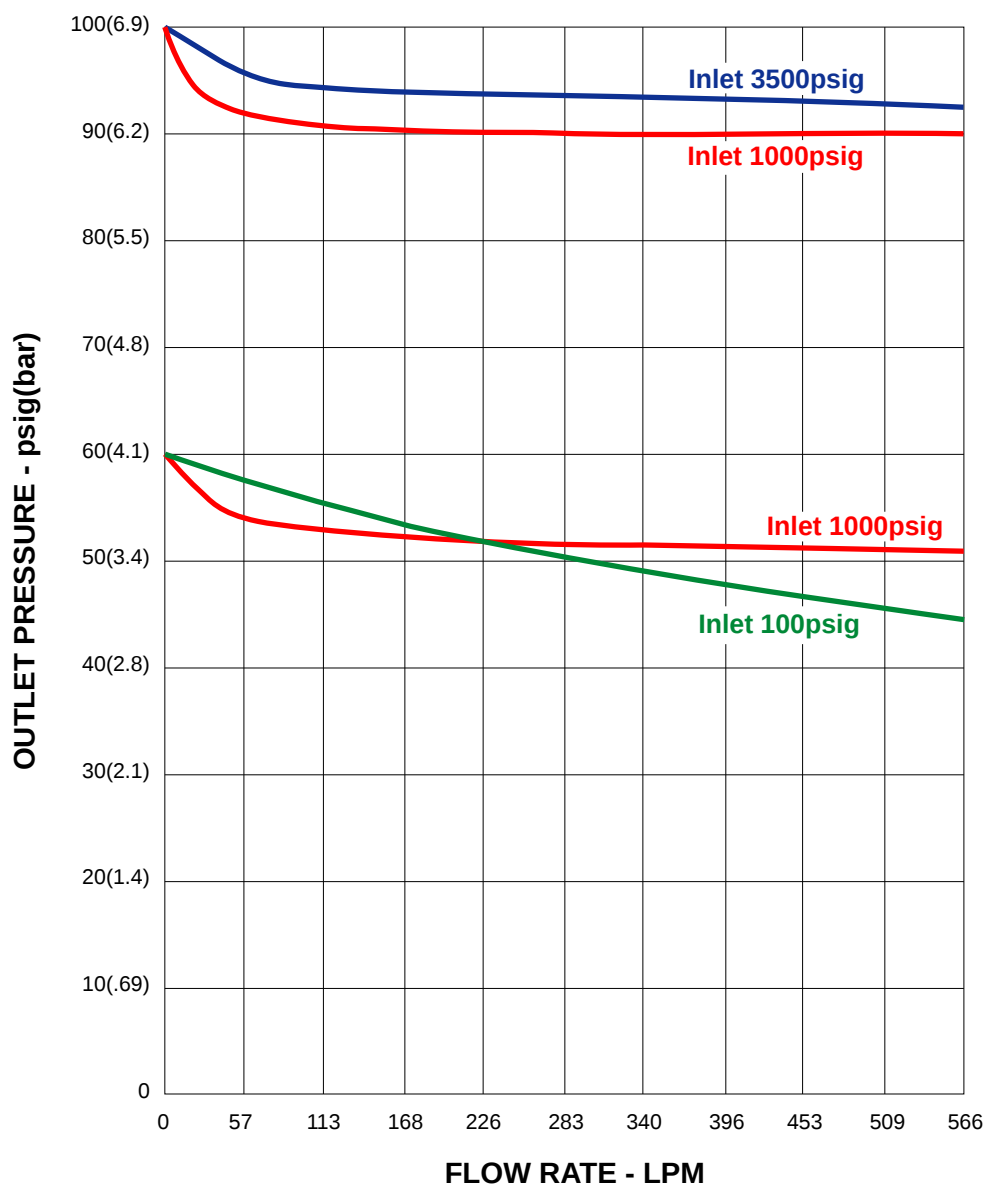


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### Regulator- Pressure Reducing

#### Flow Chart



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