

Models UPH, UPHS

High Flow, High Purity, Balanced Stem Regulators

These metal diaphragm, single-stage regulators are specially designed for applications requiring both high flow and diffusion resistance. The main valve is balanced to minimize the effect of inlet pressure fluctuations on outlet pressure settings. The Model UPH is for noncorrosive gases; Model UPHS is suitable for use with corrosive gases.



UPH Regulator

Standard Features

- High Flow Capacity capable of flow rates in excess of 60 scfm of air.
- Stainless Steel Diaphragm minimizes diffusion of air into regulator and eliminates "off gassing" associated with elastomeric diaphragms, thus maintaining gas purity.
- High Purity Regulator Design permits vacuum purging of regulator.
- Balanced Poppet (stem) minimizes effect of changes in inlet pressure on delivery pressure settings.
- Threaded Holes in Rear of Regulator permit front panel mounting.

Optional Features

- Mounting Ring permits regulator to be panel mounted.
- Internal (Inboard) Helium Leak Test and Test Report determines inboard leak rate; test report certifies leak rate of less than 2×10^{-8} sccs air equivalent.
- External (Outboard) Helium Leak Test and Test Report determines leak rate of gas from regulator to atmosphere; test report certifies leak rate of less than 5×10^{-7} sccs air equivalent.

Specifications

Maximum Inlet Pressure: See Table I

Inlet Pressure Gauge: See Table I

Delivery Pressure Range: See Table I

Delivery Pressure Gauge: See Table I

Gauge Size: 2½" Dial

Operating Temp. Range: -40°F to 140°F

Flow Coefficient: $C_v = 0.6$

Inlet Connection:

UPH: CGA 296, 320, 326, 346, 350, 510, 540, 580, 590, or 660 as ordered

UPHS: CGA 290, 320, 326, 330, 346, 350, 510, 580, 590, 660 or 705 as ordered

Outlet Connection: ¼" NPT female

Supply Pressure Effect:
<1.0 psi per 100 psi

Approximate Weight: 5 lbs

Materials of Construction

Body:

UPH: Brass Bar Stock

UPHS: Type 316 SS Bar Stock

Gauges:

UPH: Brass

UPHS: Type 316 Stainless Steel

Bonnet: Electroless Nickel-Plated Brass

Other Metal Parts Exposed to Gas:

Type 316 Stainless Steel

Seat: PCTFE

Diaphragm: Type 316L Stainless Steel

Seals: PTFE

Table I

| Part Number | | Inlet Pressure (psig) | | Delivery Pressure (psig) | |
|-----------------|------------------|-----------------------|--------|--------------------------|-------|
| | | Max. | Gauge | Range | Gauge |
| Brass | Stainless Steel | | | | |
| UPH-3-30-(CGA) | UPHS-3-30-(CGA) | 3000 | 0-4000 | 2-30 | 0-60 |
| UPH-3-75-(CGA) | UPHS-3-75-(CGA) | 3000 | 0-4000 | 4-75 | 0-100 |
| UPH-3-150-(CGA) | UPHS-3-150-(CGA) | 3000 | 0-4000 | 10-150 | 0-200 |
| UPH-3-250-(CGA) | UPHS-3-250-(CGA) | 3000 | 0-4000 | 20-250 | 0-400 |
| UPH-2-30-(CGA) | UPHS-2-30-(CGA) | 800 | 0-1000 | 2-30 | 0-60 |
| UPH-2-75-(CGA) | UPHS-2-75-(CGA) | 800 | 0-1000 | 4-75 | 0-100 |
| UPH-2-150-(CGA) | UPHS-2-150-(CGA) | 800 | 0-1000 | 10-150 | 0-200 |
| UPH-2-250-(CGA) | UPHS-2-250-(CGA) | 800 | 0-1000 | 20-250 | 0-400 |
| UPH-1-30-(CGA) | UPHS-1-30-(CGA) | 300 | 0-400 | 2-30 | 0-60 |
| UPH-1-75-(CGA) | UPHS-1-75-(CGA) | 300 | 0-400 | 4-75 | 0-100 |
| UPH-1-150-(CGA) | UPHS-1-150-(CGA) | 300 | 0-400 | 10-150 | 0-200 |
| UPH-1-250-(CGA) | UPHS-1-250-(CGA) | 300 | 0-400 | 20-250 | 0-400 |

Where "(CGA)" is indicated above, insert appropriate Compressed Gas Association connection number to complete the part number. Example: UPH-3-30-580. Order by complete part number.

Optional Equipment

| Equipment | Part No. |
|---|--------------|
| Inboard Helium Leak Test and Test Report | HT1000 |
| Outboard Helium Leak Test and Test Report | HT1001 |
| Panel Mounting Ring* | PM3803 |
| Check Valves* | See page 141 |

* If selected, these items are not installed on the regulator. They are shipped as separate items.