

Model HPE

Ultra High Purity, Two-Stage, Bar Stock Regulators

Model HPE brass bar stock regulators are designed to regulate ultra high purity non-corrosive gases commonly used in analytical instrument applications requiring both high reliability and diffusion resistance. The metal to metal diaphragm to body seal design assures maximum diffusion resistance. Convoluted stainless steel diaphragms provide enhanced performance and excellent accuracy. The two-stage design provides constant pressure control regardless of changes in cylinder (inlet) pressure.



HPE Regulator



HPE Regulator with Optional Quick Mount

Standard Features

- Metal to Metal Diaphragm to Body Seal (without back-up o-ring) assures maximum diffusion resistance.
- High Purity Regulator Design permits vacuum purging of regulator.
- Diaphragm Seal Outlet Valve maintains gas purity.
- Filter traps foreign matter, extends regulator life and reduces maintenance.
- 1/16" NPT Female Bonnet Vent Ports allow bonnets to be connected to a vent line or disposal system as a precaution in the unlikely event of a diaphragm failure.

Optional Features

- Mounting Ring permits regulator to be panel mounted.
- Quick Mount Assembly provides for convenient and safe wall-mounted installation.
- Internal (Inboard) Helium Leak Test and Test Report determines inboard leak rate of gas from regulator to atmosphere; test report certifies leak rate of less than 2×10^{-8} sccs air equivalent.
- External (Outboard) Helium Leak Test and Test Report determines outboard 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: 3000 psig
 Inlet Pressure Gauge (dual scale):
 0–4000 psig / 0–275 bar
 Delivery Pressure Range: See Table I
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 Filters: 40 micron
 Gauge Size: 2" Dial
 Operating Temperature Range:
 -40°F to 140°F
 Flow Coefficient:
 Regulator: Cv = 0.05
 Outlet Valve: Cv = 0.17
 Bonnet Vent Connection: 1/16" NPT female
 Inlet Connection: CGA 296, 320, 326,
 346, 350, 540, 580, 590, or 660
 as ordered
 Outlet Connection: 1/4" NPT female
 Supply Pressure Effect:
 0.04 psi per 100 psi
 Approximate Weight: 5 lbs.

Materials of Construction

Body, Bonnet and Outlet Valve:
 Brass Bar Stock
 Gauges: Brass
 Filter: Sintered Bronze
 Other Metal Parts Exposed to Gas:
 Brass and Stainless Steel
 Seats: PCTFE
 Friction Sleeves: PTFE
 Diaphragms: Type 316 Stainless Steel

Table I

Part No.	Delivery Pressure		
	Range (psig)	Gauge (dual scale) (psig)	(bar)
HPE-3-30-(CGA)	2–30	-30" Hg–0–60	-1–0–4
HPE-3-75-(CGA)	4–75	-30" Hg–0–100	-1–0–7
HPE-3-150-(CGA)	10–150	-30" Hg–0–200	-1–0–14
HPE-3-300-(CGA)	20–300	0–400	0–27
HPE-3-500-(CGA)	30–500	0–600	0–41

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

Optional Equipment (see Table on page 26)

To order regulator with optional quick mount assembly, suffix regulator part number with QM. Example: HPE-3-150-580-QM.

One 30" all stainless steel flexible hose with check valve – CGA connection will be included with each quick mount assembly.