Model AGD

Ultra High Purity, Positive Seal (Tied Seat), Two-Stage Regulators

The Model AGD regulator is designed for use with ultra high purity, corrosive gases, such as those used in semiconductor manufacturing. This regulator features convoluted stainless steel diaphragms and tied seats (tied diaphragms) in both stages providing for greater sensitivity and sealing integrity. The two-stage design provides constant outlet pressure regardless of changes in cylinder (inlet) pressure.

AGD Regulator

Standard Features

- Tied Seats in both stages ensure positive shutoff if particulate matter should lodge in the seat, a common problem with corrosive gases.
- 1/16" NPT Female Bonnet Vent Ports and Stem Packing allow for complete capturing of bonnets when connected to a vent line or disposal system.
- Two-Stage Regulator Design ensures constant delivery pressure over varying inlet pressures.
- Type 316 Stainless Steel Bar Stock Construction provides maximum corrosion resistance.
- 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.

Optional Features

- Mounting Ring permits regulator to be panel mounted.
- 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 x 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 x 10^{-7} sccs air equivalent.

Specifications

Maximum Inlet Pressure:
AGD-3: 3000 psig
AGD-2: 800 psig

Inlet Pressure Gauge: See Table I

Delivery Pressure Range: See Table I

Delivery Pressure Gauge: See Table I

Filter: 40 micron

Gauge Size: 2" Dial

Operating Temp. 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 320, 326, 330, 350, 580, 660 or 705 as ordered

Outlet Connection: 1/4" NPT female

Supply Pressure Effect:
0.06 psi per 100 psi

Approximate Weight: 4 lbs.

Materials of Construction

Body and Outlet Valve:
Type 316 Stainless Steel Bar Stock

Gauges: Type 316 Stainless Steel

Bonnet: 300 Series Stainless Steel

Other Metal Parts Exposed to Gas:
Type 316 Stainless Steel

Seats: PCTFE

Friction Sleeves: PTFE

Diaphragms: Type 316 Stainless Steel

Table I

	Inlet Pressure		Delivery Pressure		
	Gauge (dual scale)		Range	Gauge (dual scale)	
Part No.	(psig)	(bar)	(psig)	(psig)	(bar)
AGD-3-30-(CGA)	0–4000	0–275	2–30	-30" Hg–0–60	-1–0–4
AGD-3-75-(CGA)	0–4000	0–275	4–75	-30" Hg–0–100	-1–0–7
AGD-3-150-(CGA)	0–4000	0–275	10–150	-30" Hg–0–200	-1–0–14
AGD-2-30-(CGA)	0–1000	0–69	2–30	-30" Hg–0–60	-1–0–4
AGD-2-75-(CGA)	0–1000	0–69	4–75	-30" Hg–0–100	-1–0–7
AGD-2-150-(CGA)	0–1000	0–69	10–150	-30" Hg–0–200	-1–0–14

Where "(CGA)" is indicated above, insert appropriate Compressed Gas Association connection number to complete the part number. Example: AGD-3-30-330. Order by complete part number.

Optional Equipment (see Table on page 30)

To order regulator with optional quick mount assembly, suffix regulator part number with QM. Example: AGD-3-75-330-QM.

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