

AERD1G Pilot-Domeload

Hybrid Regulator



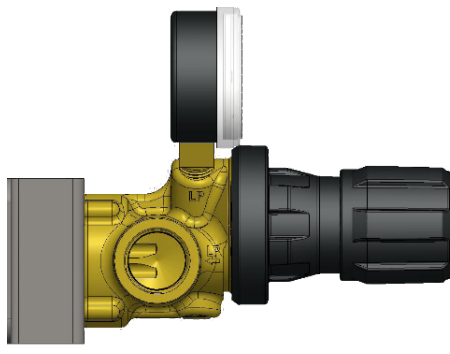
The AERD1G Pilot-Domeload Hybrid Regulator is the second generation of the AERD1 Regulator, which combined both the dome and pilot regulator into a single unit. The new AERD1G offers an updated look, improved performance and new features in a lighter, more compact package.

Engineered to deliver constant output pressure supporting very high flow demand.

- Larger 3/4" NPT Inlet and Outlet ports
- Lighter, more compact design for maximum versatility
- Large, replaceable 50 micron inlet filter for enhanced protection of internal components
- 30,000+ SCFH flow capacity (840 m3/h)
- Includes mounting bracket

Industry

- Laser
- Industrial applications requiring large gas supplies such as cylinder bundles, tube trailers and gas transports



Design

Regulator Type	Pilot-Domeload Hybrid Regulator, Single Stage
Delivery Range	50 - 550 psig (3.5 - 37 bar)
Max. Inlet Pressure	3000 psig (206 bar)
Inlet & Outlet Ports	3/4" NPT [F]
H.P. Gauge	2" 315 bar / 4568 psi ISO 5171 and UL Listed
L.P. Gauge	2" 46 bar / 667 psi ISO 5171 and UL Recognized
Standards Compliance	CGA E-4
Operating Temp. Range	0° - 140° F (60 °C)
Outlet Pressure Rise	1.0 psig per 100 psig Decay
Flow Coefficient (C _v)	1.02
Weight	4.5 lbs w/No Inlet or Outlet Connections

Construction

Body	Brass UNS 37700 (CDA377) per ASTM B-124 (Ref. HPb59-1 per GB/T 4423)
Bonnet	Die Casting Alloy No. 5, Conforming to ISO 301:1981 ZnAl4Cu1
Dome Cap	Brass CDA 360 (UNS C36000)
Pilot Diaphragm	Neoprene w/Nylon Fabric Reinforcement
Dome Piston	Brass CDA 360 (UNS C36000)
Nozzles/Seat Holders (Pilot & Dome)	Brass CDA 360 (UNS C36000)
Seat Stems (Pilot & Dome)	Stainless Steel Type 303
Seats	Dome Seat Viton®, Pilot Seat Urethane
Seals/Piston O-Ring	Viton®
Dome Seat Backup Ring	Teflon®
Inlet Filter	50 Micron Sintered Bronze, Electroless Nickel Plated
Seat Return Springs	Stainless Steel Type 302
Pressure Adjusting Spring	Music Wire per ASTM A228
Adjusting Knob	High Impact ABS (Acrylonitrile Butadiene Styrene)
Mounting Bracket	Stainless Steel Type 304

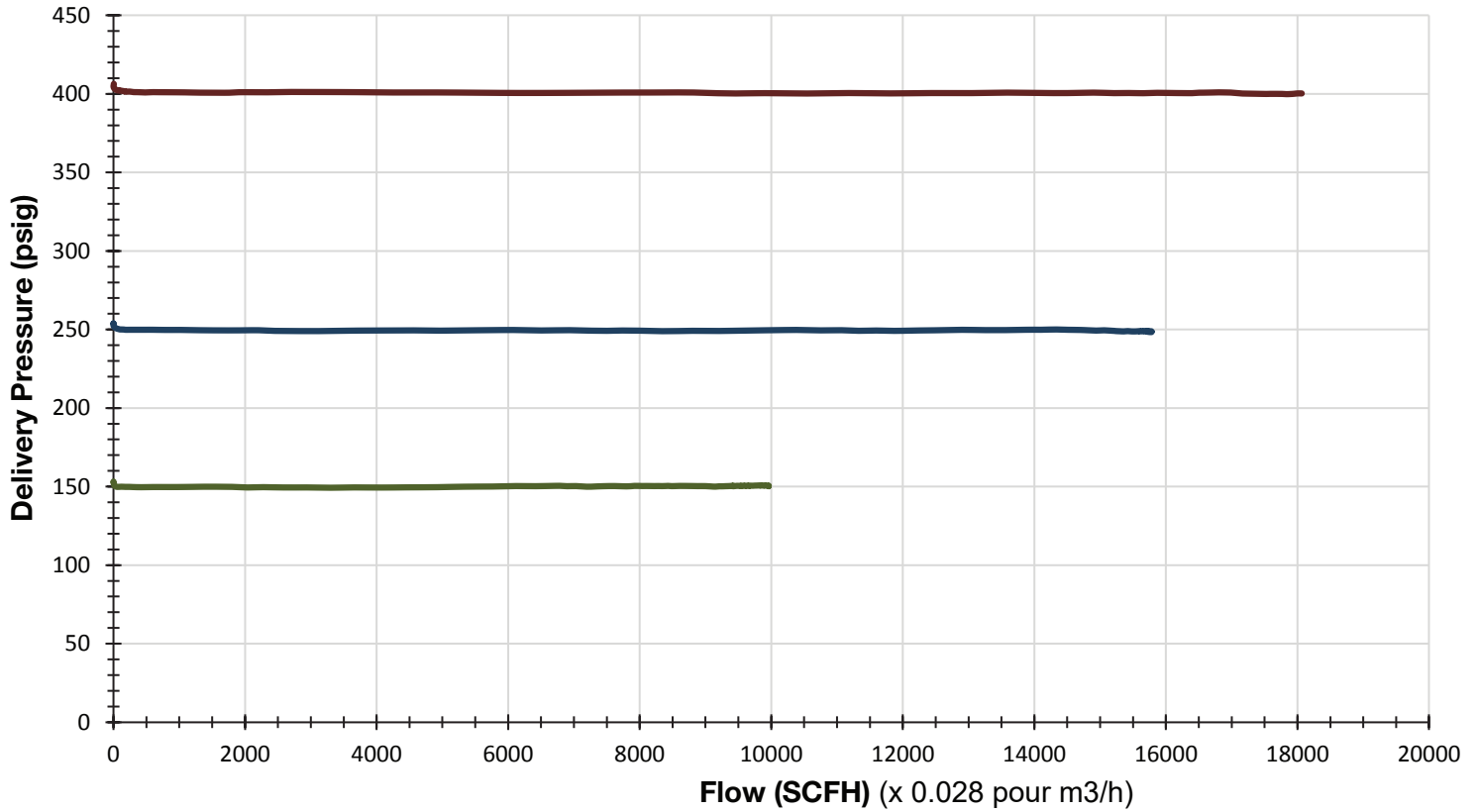
Manufacturing

- *Test Pressure: 2000±100 psig Inlet (Oil-free Air or Dry Nitrogen)*
- *Test Gun on Outlet With #52 [.0635"] Orifice Installed*

Max. Delivery Setting (Flowing)	550-600 psig
Drop Allowance	20 psig Max. with Regulator Set At 200 psig (During Full Open/Close of Test Gun)
Initial Shutoff Allowance	5 psig Creep Allowed in the First One (1) Minute, No Additional Creep Allowed in the Following Four (4) Minutes.

Flow Performance

450 psig (30 bar) Inlet Pressure (Air @ 70°F)



1000 psig (68 bar) Inlet Pressure (Air @ 70° F)

