

# Model CRH

## Type 316 Stainless Steel, Positive Seal (Tied Seat), High Flow Regulators

The special internal design makes these corrosive-resistant regulators extremely reliable for use with so-called "dirty gases such as Hydrogen Chloride, Sulfur Dioxide or Chlorine. It features a large seat and attached poppet (tied seat) design which reduces its susceptibility to logging from particulate matter. In the unlikely event that a seat leak occurs from contamination or other sources, the regulator provides for positive shut-off by pulling the poppet tighter against the seat as pressure rises. The large Cv factor on this regulator also makes it an excellent choice for corrosive gas applications requiring high flow rates.



CRH Regulator

### Standard Features

- Type 316 Stainless Steel Bar Stock Construction provides maximum corrosion resistance.
- High Purity Design assures maximum diffusion resistance and permits vacuum purging of regulator.
- Tied Seat (tied diaphragm) ensures positive shutoff if particulate matter should lodge in the seat, a common problem with corrosive gases.
- Diaphragm Seal Outlet Valve maintains gas purity.
- Unique Regulator Design allows regulator to be used at very low inlet pressures.
- 2½" Stainless Steel Gauges read easily for more precise settings.
- Threaded Holes in Rear of Regulator permit front panel mounting.

### Optional Features

- Bonnet Vent Connector provides a ½" NPT female port allowing bonnet to be connected to a vent line or disposal system as a precaution in the unlikely event of a diaphragm failure.
- Packed 316 SS Needle Valve in place of standard diaphragm seal valve, provides flow control at an economical price.
- Internal (Inboard) Helium Leak Test and Test Report determines inboard leak rate; test report certifies leak rate of less than  $2 \times 10^{-8}$  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  $5 \times 10^{-7}$  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

### Flow Coefficient:

Regulator:  $C_v = 0.624$   
 Outlet Valve:  $C_v = 0.17$   
 Inlet Connection: CGA 290, 330, 350, 510, 660 or 705 as ordered  
 Outlet Connection: ¼" NPT female  
 Supply Pressure Effect:  
 1 psi per 100 psi (approximate)  
 Approximate Weight: 7 lbs

### Materials of Construction

Body: Type 316 Stainless Steel Bar Stock  
 Outlet Valve and Gauges:  
 Type 316 Stainless Steel  
 Bonnet: Nickel-Chrome Plated Brass  
 Other Metal Parts Exposed to Gas:  
 Type 316 Stainless Steel  
 Seats (Regulator and Outlet Valve): PCTFE  
 Diaphragm: Type 316 Stainless Steel  
 Seals: PTFE

Table I

Part No.	Inlet Pressure (psig)		Delivery Pressure (psig)	
	Maximum	Gauge	Range	Gauge
CRH-3-75-(CGA)	3000	0-4000	3-75	0-100
CRH-3-150-(CGA)	3000	0-4000	10-150	0-200
CRH-2-75-(CGA)	800	0-1000	3-75	0-100
CRH-2-150-(CGA)	800	0-1000	10-150	0-200
CRH-1-75-(CGA)	300	0-400	3-75	0-100
CRH-1-150-(CGA)	300	0-400	10-150	0-200

Where "(CGA)" is indicated above, insert appropriate Compressed Gas Association connection number to complete the part number. Example: CRH-3-75-330. Order by complete part number.  
 To order regulator with optional packed needle valve, suffix regulator part number with PV. Example CRH-3-75-330-PV.

### Optional Equipment

Equipment	Part No.
Bonnet Vent Connector*	SG5647V
Inboard Helium Leak Test and Test Report	HT1000
Outboard Helium Leak Test and Test Report	HT1001
Outlet Fittings* (male connectors)	
¼" NPT male x ½" compression	SG6713
¼" NPT male x ¼" compression	SG6714
Check Valves*	See page 141
Safety Mounting Brackets*	See page 62
Packed Needle Valve	See Table I Footnote
Purge Assemblies* (Cross purge assemblies are recommended)	See page 134

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