

# Models 15 and 16 Series

## Corrosion Resistant Regulators

### DESCRIPTION

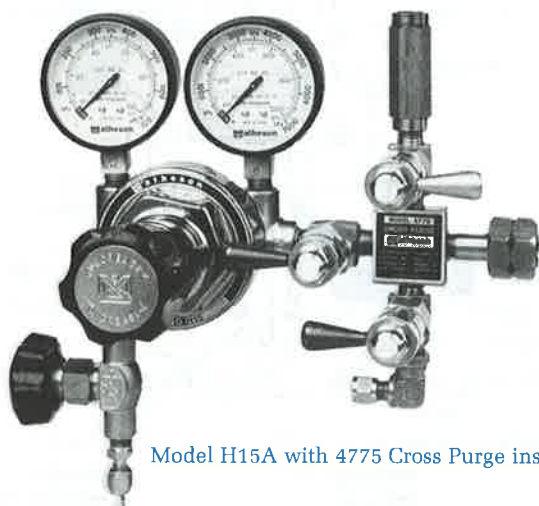
The Models 15 and 16 regulators are designed to resist attack from strongly acid forming gases such as the halogens. This regulator has a nickel plated brass body with internal parts constructed of Monel. Kel-F® and Teflon® are used for critical sealing and seating surfaces and as a protection barrier for the metal diaphragm. These regulators have an extra safety feature in that the internal construction provides for increased positive shut-off should regulator action become fouled because of sucked back materials or corrosive products. These regulators are represented by Series 15 and 16. Of all regulators tested, the Series 15 and 16 have delivered the best service record with the highly corrosive halogen gases.

To prevent suckback of foreign materials into the regulator, install a check valve in the outlet.

All Models 15 through 16 regulators have specially vented bonnets with hose or tubing connections available for venting hazardous materials safely in case of diaphragm failure.

### High Purity Models

The Model B15 is available in a high purity version. This is achieved by substituting an Aluminum-Silicon Bronze diaphragm packless outlet valve with a 1/4" Monel Gyrolok tube fitting instead of the standard Monel packed valve supplied with Series B15. The high purity version, called the H15, is capable of passing a helium leak test of  $2 \times 10^{-9}$  sccs while retaining its excellent corrosion resistance characteristics. Each high purity Model H15 regulator is helium leak tested at the factory.



Model H15A with 4775 Cross Purge installed

### SPECIFICATIONS

Maximum inlet pressure:	3000 psi (20,700 kPa)
Temperature range:	-40 to 150°F (-40 to 65°C)
Flow:	Model 15: 500 lpm (1060 cfh) Model 16: 2500 lpm (5200 cfh)
Inlet port in body:	1/4" NPT
Vent port in bonnet:	5/16"-32
Overall dimensions:	7" w x 7 1/4" h x 7" d (18 x 18.5 x 18 cm)
Shipping weight:	Model 15: 7 lb. 4 oz. (3.3 kg) Model 16: 8 lb. 8 oz. (3.9 kg)

### APPLICATIONS

Corrosive Gas Service	Normal Inlet Pressure (psig)	Model Recommendation
Boron Trifluoride	2000	B15B-330, H15B-330 B16B-330
Carbonyl Fluoride	800	B15-660
Chlorine	80	B15-660, H15-660 B15C-660, H15C-660
Fluorine	300	B15F-679
Hydrogen Bromide	320	B15-330, H15-330 B15A-330, H15A-330
Hydrogen Chloride	600	B15A-330, B16A-330
Silicon Tetrafluoride	1000	B15B-330, H15B-330

### DESIGN FEATURES

- Direct Connected Seat . . . Assures increased nozzle shut-off force should nozzle become fouled.
- Nickel Plated Brass Body . . . Excellent corrosion resistance in halogen gas service.
- Vented Bonnet Design . . . Allows the safe venting of hazardous material in the unlikely event of diaphragm failure.
- Kel-F® and Teflon® Seals . . . High quality seal materials assure high purity handling of corrosive gases.

### MATERIALS OF CONSTRUCTION

Body:	Chemically deposited pure nickel on brass
Diaphragm:	Chemically deposited pure nickel on nickel-silver alloy
Seat:	Kel-F® *
Nozzle:	Monel
Bonnet:	Chemically deposited pure nickel on brass
Inlet:	Monel
Gauge(s):	2 1/2" dial Monel, Bourdon tube
Outlet:	B15-Monel needle valve (104), 1/4" NPT male (except B15F). Hose connection supplied. B16-Monel needle valve (FF4345), 1/4" NPT male. H15, H16-Al-Si-Bronze Valve (FF4376P) with 1/4" flareless tubing connection.

### SPECIFICATIONS – Models 15 & 16

#### MODELS

Model No.	Delivery Pressure Range	Delivery	Inlet	Purge Assembly Recommendation
B15-CGA	4-50	0-100	None	4745
H15-CGA	4-50	0-100	None	4775-CGA
B15A-CGA	4-50	0-100	0-1000	4755-CGA
H15A-CGA	4-50	0-100	0-1000	4775-CGA
B15B-CGA	4-50	0-100	0-3000	4755-CGA
H15B-CGA	4-50	0-100	0-3000	4775-CGA
B15C-CGA	4-50	0-100	0-3000	4755-CGA
H15C-CGA	4-50	0-100	0-3000	4775-CGA
B15F-679	4-50	0-100	0-1000	***
B16-CGA	50-650	0-1000	None	4745
B16A-CGA	50-650	0-1000	0-1000	4755-CGA
B16B-CGA	50-650	0-1000	0-3000	4755-CGA

\*\*\*Unique Purge System for Fluorine Service. Please request Tech/Brief 115 for complete information.

### OPTIONS

Purge Assemblies (except for B15F-679)

Cross Purge Assembly — Model 4775

Tee Purge Assembly — Model 4755

Body Purge Assembly — Model 4745

Bonnet Venting Kit

Check Valve — Model 402V

Check Valve — Model 402E

For additional information on Models 15 & 16 regulators, request Tech/Brief-133.

For additional information on Fluorine systems, request Tech/Brief TB-115.