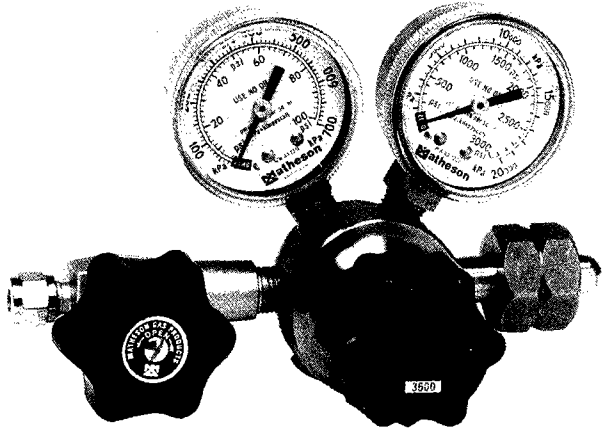


# Model 3600 Series

## Stainless Steel Tied-Seat Regulator

### DESCRIPTION

The Matheson Model 3600 Series single-stage regulators have been designed to fulfill the unique demands of the Electronics Industry. The regulator features a stainless steel 316 body, stainless steel 316 diaphragm, Monel seat, and Kel-F and Teflon seals to provide a high purity pressure regulating device. The Model 3600 Series regulator incorporates a "tied seat", directly connected seat, to assure positive shut-off in the event that particulate matter or corrosives find their way to the regulator nozzle area.



### APPLICATIONS

These regulators have been used successfully in such demanding services as:

Arsine	Silane Mixtures
Arsine Mixtures	Silicon Tetrafluoride
Hydrogen Chloride	Phosphine
Hydrogen Chloride Mixtures	Phosphine Mixtures
Silane	

### DESIGN FEATURES

- **Direct connected seat** . . . Assures positive nozzle shut-off even under adverse operating conditions.
- **Stainless Steel 316 body & diaphragm** . . . Assures high system purity . . . Allows high vacuum on regulator interior without diaphragm distortion to assure complete system purging.
- **Helium leak rate inboard less than  $2 \times 10^{-10}$  ccs\*** . . . Eliminates possible back diffusion of atmospheric contamination.
- **Bonnet Vent Port\*\*** . . . Allows safe venting of gases in the unlikely event of diaphragm failure.
- **Purge Port Internally Connected to inlet** . . . Allows permanent purge connection to assure system purity.

\*Optional Helium Leak Rate Certification.

\*\*Specify venting requirement at time of order

### SPECIFICATIONS

Maximum inlet pressure:	3000 psig (20,700 kPa)
Operating temperature range:	- 40°F to 150°F (- 40°C to 65°C)
Flow coefficient:	$C_V = 0.14$
Inlet port in body:	1/4" NPT
Outlet:	1/4" Flareless tube fitting (stainless steel 316)
Overall dimensions:	8" w x 9 1/2" h x 4" d (20 x 24 x 10 cm)
Shipping weight:	4 lbs. 2 oz.

NOTE: This regulator is assembled and tested in a class 100 clean room.

Please ask for Tech/Brief TB-176 for additional engineering data.

### MATERIALS OF CONSTRUCTION

Body:	Stainless steel 316
Diaphragm:	Stainless steel 316
Seals:	Kel-F and Teflon
Seat:	Monel
Bonnet:	Nickel Plated Brass
Gauges:	Stainless steel 316 Bourdon Tube Type
Outlet Valve:	4374 Stainless steel 316 Diaphragm Sealed Packless Valve

### MODELS

Model**	Delivery Pressure Range (psig)	Delivery Pressure Gauge (psig)	Cylinder Pressure Gauge (psig)
3600(CGA)	4-75	0-100	3000
3601(CGA)	0-25	30" vac-0-50	30" vac-0-300
3602(CGA)	0-25	30" vac-0-50	1000
3603(CGA)	0-25	30" vac-0-50	3000
3605(CGA)	4-75	0-100	1000

\*\*Specify CGA Connection when ordering.

### OPTIONS

Inboard Helium Leak Rate Certification

Combination Inboard/outboard Helium Leak Rate Certification

Model 4744 Body Purge Assembly\*\*

Model 4774 Cross Purge Assembly\*\*

Bonnet Vent Connection

Dome Loading for Remote Setting of Outlet Pressure

Swagelok® Outlet Connection

Model 6244 Relief Valve for Downstream Overpressure Protection

# Semiconductor Purity

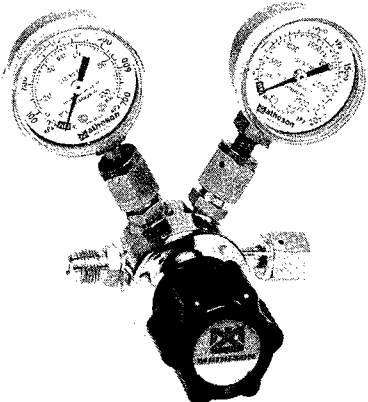
## Model 3600 Series Regulators

Matheson recognizes the need of the semiconductor industry for gas control equipment to keep pace with the high purity demands of device manufacturing as geometries are reduced.

If your application demands the highest performances and you are concerned about particulates and gaseous microcontamination, this regulator is a must for you.

### FEATURES

- All welded VCR® connections.
- Internal finish machined and electro polished to 15-20 microinch (RMS).
- Assembled in class 100 clean room.
- Helium leak tested to ensure integrity.

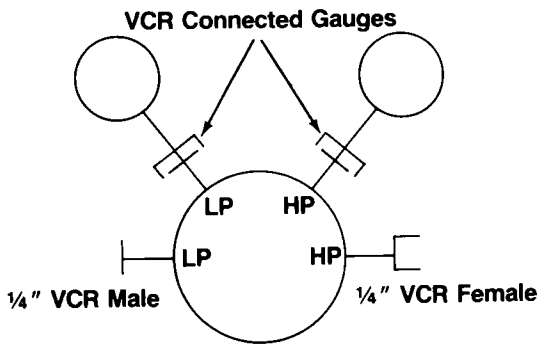


### MODELS AVAILABLE

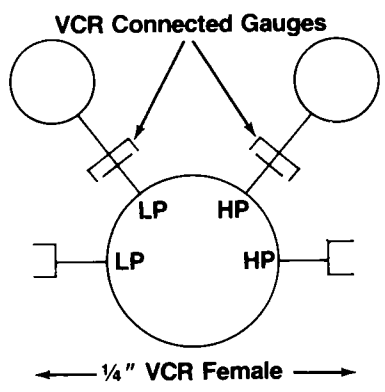
Model Number	Delivery Pressure Range (psig)	Delivery Pressure Gauge (psig)	Cylinder Pressure Gauge (psig)	1/4" VCR Inlet Connection	1/4" VCR Outlet Connection
3600 RVV	4-75	0-100	0-3000	Female	Male
3600 RVR	4-75	0-100	0-3000	Female	Female
3600 RV	4-75	No Gauge	No Gauge	Female	Male
3600 RR	4-75	No Gauge	No Gauge	Female	Female
3601 RVV	0-25	30"VAC -0-50	30"VAC -0-300	Female	Male
3601 RVR	0-25	30"VAC -0-50	30"VAC -0-300	Female	Female
3601 RV	0-25	No Gauge	No Gauge	Female	Male
3601 RR	0-25	No Gauge	No Gauge	Female	Female
3602 RVV	0-25	30"VAC -0-50	0-1000	Female	Male
3602 RVR	0-25	30"VAC -0-50	0-1000	Female	Female
3602 RV	0-25	No Gauge	No Gauge	Female	Male
3602 RR	0-25	No Gauge	No Gauge	Female	Female
3603 RVV	0-25	30"VAC -0-50	0-3000	Female	Male
3603 RVR	0-25	30"VAC -0-50	0-3000	Female	Female
3603 RV	0-25	No Gauge	No Gauge	Female	Male
3603 RR	0-25	No Gauge	No Gauge	Female	Female
3605 RVV	4-75	0-100	0-1000	Female	Male
3605 RVR	4-75	0-100	0-1000	Female	Female
3605 RV	4-75	No Gauge	No Gauge	Female	Male
3605 RR	4-75	No Gauge	No Gauge	Female	Female

NOTE: Other configurations are available. Contact Equipment Engineering in East Rutherford for details.

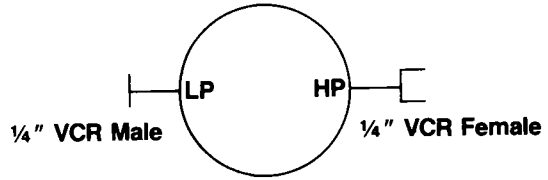
### Regulator Port Detail



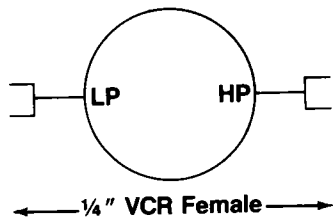
3600 RVV Series



3600 RVR Series



3600 RV Series  
Bodies with no Gauge Ports



3600 RR Series  
Bodies with no Gauge Ports