

# Pressure Control Solutions for Petrochemical and Analyzer Sampling Systems



Tescom can provide pressure control solutions for your gas or liquid sampling system applications.

We offer over 50 standard regulator and valve models that control

pressures from sub-atmospheric to 20,000 PSIG . . . and we have the modifications necessary to meet the toughest applications!

Low pressure/low flow models, as well as pressure reducing, back pressure, absolute pressure and two-stage styles are available. Most regulators may be dome loaded for lethal gas or hard to reach locations.

Steam or electrically heated vaporizing regulators provide rapid temperature conversion and a long service life without media buildup.

Further Tescom advantages:

- Teflon®, PCTFE, and Vespel® softgoods
- Brass, 316 SST, Monel®, Elgiloy®, or Hastelloy-C® construction
- Very low internal volume maintains sample accuracy
- Metal-to-metal diaphragm seals enhance leak integrity
- Inert construction materials keep media clear
- Efficient, compact design
- Long service life, easy repair

**TESCOM**  
CORPORATION

INDUSTRIAL CONTROLS DIVISION



# Standard Pressure Regulators for Sampling Systems

## 04 Analyzer /Lecture Bottle

- Compact, corrosion resistant and economical
- 316 SST construction
- 1/4" or 1/8" NPT porting
- Minimal internal volume allows rapid purging
- Inlet: 3500 PSIG maximum
- Outlet: 0-30, 0-60 or 0-100 PSIG



## 44-1100 High Pressure

- Excellent sensitivity through a wide range of pressure settings
- Unbalanced stem assists positive shut-off
- Standard 15 micron internal filter to protect seals
- Inlet pressure: 10,000 PSIG maximum
- Six outlet pressure ranges up to 6000 PSIG



## 44-2200 All Purpose

- Compact, economical, accurate
- 316 SST construction (Hastelloy® or Monel® optional)
- H<sub>2</sub>S modification available
- Metal-to-metal diaphragm seal
- Temperature compensated version also available
- Inlet: 400 or 3500 PSIG maximum
- Outlet: 1-25, 1-50, 1-100, 2-250, 3-500 PSIG



## 44-2300 Back Pressure

- Controls upstream pressure
- Compact, economical, accurate
- 316 SST construction
- Metal-to-metal diaphragm seal
- Control pressure ranges: 1-25, 1-50, 1-100, 2-250 PSIG



## 44-2600 'Carrier' Gas

- Inlet: 400 or 3500 PSIG maximum
- Carrier gas regulator
- Very sensitive
- Low flow available: C<sub>v</sub>=0.02 (30 to 100 SCCM)
- Metal-to-metal diaphragm seal
- Captured vent bonnet optional
- Outlet: 1-25, 1-50, 2-100, 2-150 PSIG
- Minimal droop, excellent repeatability



## 44-2800 Corrosive /'Dirty' Service

- Strong positive shutoff seal prevents pressure creep
- Hastelloy-C® trim available
- Captured vent bonnet
- Inlet: 3000 PSIG maximum
- Outlet: 2-25, 2-50, 2-100, 2-150 PSIG



## 44-3200 High Flow

- High flow facilities regulator
- Flow: C<sub>v</sub>=1.0 (C<sub>v</sub>=1.8 optional)
- Balanced main valve
- Inlet: 500 or 3000 PSIG maximum
- Outlet: 3-25, 5-50, 5-100, 5-150, 5-250 PSIG



## 44-3400 Two Stage

- Minimizes decaying inlet
- 316 SST construction
- Inlet: 3500 PSIG maximum (6000 optional)
- Outlet: 2-25, 2-50, 2-100, 2-150, 2-250 PSIG
- Flow capacity: C<sub>v</sub> = 0.05
- Interstage relief port standard



## 44-4600 Accurate / Low Outlet Pressure Reducing

- Controls vacuum to positive pressures
- Excellent sensitivity
- Metal-to-metal diaphragm seal
- Inlet: 120, 400 or 3000 PSIG maximum
- Outlet: 28" Hg vac.-15 PSIG



## 44-4700 Accurate /Low Outlet Back Pressure

- Controls upstream pressure
- Vacuum to positive pressure control
- Control ranges: 28" Hg Vac - 150 PSIG



## 44-4800 Vaporizing

- Steam or electric version
- Thermostatically controlled heating unit (meets NEC code Class 1, Division 1, Groups B, C and D)
- Construction materials resist corrosion, high temperature
- Large coils maximize heat transfer to provide rapid temperature conversion
- Designed to reduce clogging
- Media heated before and after pressure reduction (choice of inlet or outlet side only)
- Inlet: 3500 PSIG maximum
- Outlet: 1-25, 1-50, 1-100, 2-250 or 3-500 PSIG
- Flow: C<sub>v</sub>=0.06



44-4800 electric heated version shown

## Insulating Blanket for 44-4800 (above)

- Minimizes heat loss
- Re-usable design secures easily with velcro

## FL 7000 Flow Limit Valve

- Designed to shut off media flow automatically when flow exceeds a pre-set limit
- Flow range: 0-6 scfm (N<sub>2</sub> @ 1000 PSIG)
- Choice of field adjustable or factory pre-set limit
- Operating pressure range: 100-1000 PSIG
- Flow range is adjustable under pressure
- Protects downstream personnel and equipment from exposure to hazardous media
- Normally open. Closes to bubble tight
- Typical applications include gas control systems, purge systems, gas systems, gas analyzers, H<sub>2</sub> gas systems, sampling systems, research laboratories



## Automatic Changeover Regulators

- Provide continuous gas service so unscheduled downtime is eliminated
- Ideal for laboratory and production instrumentation requiring a continuous gas supply

### ACS012 Automatic Changeover System

- Delivers 10 SCFM at 100 PSIG outlet pressure
- Inlet: 400 or 3500 PSIG maximum
- Delivery ranges up to 250 PSIG



### CS-2200 Changeover System

- Combines a single body changeover regulator, three gauges, a bracket and line regulator
- Easy to operate
- Inlet: 3500 PSIG maximum
- Outlet: 0-25, 0-50, 0-100 & 0-150 PSIG



### CR441800 High Pressure Changeover Regulator

- Single body changeover design
- Easy to operate
- Inlet: 3500 PSIG maximum
- Outlet: 500 to 1000 PSIG
- Piston style sensor



### CC Metering Valve

- Wide pressure differential: 28" Hg Vac - 10,000 PSIG
- Maximum flow capacity of  $C_v = .00005$
- 316 Stainless Steel body construction
- Very precise flow control: 20 turns to full open



## ER3000E Explosion Proof Electropneumatic PID Controller

### Controller

- Improve accuracy, eliminate droop or automate your sampling system!
- Rugged FM approved enclosure for Class I, Division 1, Group B, C and D locations
- All ports are protected with flame arrestors
- The ER3000 can be used with a wide selection of pressure regulators for gas and liquid control from vacuum to 15,000 PSIG with flow rates from  $C_v = .02$  to 45



## Pressure Reducing Regulators

### H<sub>2</sub>S Sour Gas Applications

#### H<sub>2</sub>S Service-

- 44-226X-24X-092  
 $C_v = 0.06$  & 0.15

#### H<sub>2</sub>S Service/corrosive environment /high temperature-

- 44-226X-24X-115  
 $C_v = 0.06$  & 0.15  
Operating temperature: -40°F to +400°F

#### H<sub>2</sub>S service/corrosive environment-

- 44-226X-24X-229  
 $C_v = 0.06$  & 0.15

#### H<sub>2</sub>S service/high pressure/NACE compatible

- 44-116X-24-023  
 $C_v = 0.06$

### Corrosive Environments

- 44-226X-24X-034  
 $C_v = 0.06$  & 0.15
- 44-266X-24X-007  
 $C_v = 0.06$  & 0.15

### Corrosive & 'Dirty' Service

- 44-286X-241-135  
 $C_v = 0.16$

### Carrier Gas Applications (low flow: 30 cc to 100 cc/min)

- 44-226X-241-031  
 $C_v = 0.02$
- 44-226X-241-449  
 $C_v = 0.02$
- 44-266X-241-122  
 $C_v = 0.02$

### High Temperature

- 44-266X-241-115  
 $C_v = 0.02$   
Operating temperature: -40°F to +400°F
- 44-466XS24-112  
 $C_v = 0.24$   
Operating temperature: -40°F to +400°F

#### Temperature compensated—

- 44-266X-24X-348  
 $C_v = 0.06$  & 0.15  
Operating temperature: -30°F to +400°F

# High Temperature Pressure Reducing Vaporizing Regulators

*Steam or electrically heated (110 VAC or 230 VAC)*

## NACE Compatible

- 44-486X-241X001  
 $C_V = 0.02$

## 'Dirty' Gas Service

- 44-486X-241X010  
 $C_V = 0.02$

## Special Service – Extremely Light Hydrocarbons

- 44-486X-241X002  
 $C_V = 0.02$

## Back Pressure Regulator Modifications

### Corrosive Service

- 44-236X-24-009  
 $C_V = 0.08$

### Corrosive Environment

- 44-236X-24-013  
 $C_V = 0.08$

### H<sub>2</sub>S Service/Corrosive Environment

- 44-236X-24-014  
 $C_V = 0.08$

### High Temperature/Low Pressure

- 44-476X-24-003  
 $C_V = 0.04$   
Operating temperature: -40°F to +400°F

### Low Pressure/Corrosive Environment

- 44-476X-241-001  
 $C_V = 0.04$

### Low Pressure/High Flow

- 44-476X-24-010  
 $C_V = 0.40$

## Two Stage Regulator Modifications

### Corrosive Environment

- 44-346XS24-010  
 $C_V = 0.05$

### Low Flow Applications

- 44-346S24-057  
 $C_V = 0.02$

## Metering Valve Modification

### Capillary Columns

- CC-A16A21APK  
 $C_V = 0.00005$  &  $0.00125$   
300°F maximum temperature rating  
20 turns to full open  
Vacuum to 10,000 PSI

An ISO 9001 Quality System Certified Company



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