

Petro-Chemical & Analyzer Sampling Systems



Pressure control solutions for your industry.

TESCOM


EMERSON[™]
Process Management

D760050X012

TESCOM offers over 50 standard regulator and valve models that control pressure from **sub-atmospheric to 20,000 PSIG**. Our 89 years in business has produced an impressive stock of modifications that satisfy most every pressure control need and can be delivered to your doorstep in a **matter of days**. To fulfill your most demanding application needs, TESCO offers **knowledgeable** engineering/tech support and **custom** capabilities second to none.

When choosing a regulator...

Major considerations in the selection of a regulator are listed here. Within the requirements of your specific application, use this diagram as a guide to find the regulator that matches your parameters best. Remember, our standard products are only a starting point. TESCO will modify or custom create a component to meet or exceed your application needs and expectations. Detailed information is available through your local TESCO representative.

FLOW CAPACITY

C_v is a measurement of regulator flow capacity. The flow coefficient refers to the flow of one GPM of water at one PSI drop across the main valve. The coefficient for gaseous service must be determined from the ratio of inlet to outlet pressure.

MAIN VALVES - UNBALANCED

Unbalanced valve offers simplicity and economy.

INLET PRESSURE RANGES

Subatmospheric to 3500 PSIG.

OUTLET PRESSURE RANGES AVAILABLE

Starting at 28" Hg. Vac. to 15 PSIG, up to 500 PSIG.

ADDITIONAL CONSIDERATIONS

Gauge ports: 1/8" or 1/4"
 Temperature range
 Corrosion resistance
 Welded connections
 Soft goods: Buna-N, PCTFE, Teflon®, Viton-A®, Vespel® and EPDM.

LOADING - SPRING, DOME OR ELECTRONIC

Loading refers to the method used to adjust outlet pressure.

Spring loading is used with direct acting regulators with handknob adjustment.

Dome loading is most often used in high flow, quick response type applications.

Electronic controllers are another loading option - please contact your local representative for more information.

SENSING - DIAPHRAGM

Diaphragms provide sensitive and accurate regulation for outlet pressure ranges up to 500 PSIG.

BODY MATERIALS

316L Stainless Steel, Hastelloy® or Monel

PORTS

Sizes: 1/8" to 1/4"

Types: NPT (all models), welded fittings are also available.

VENTING

Non-venting is standard.



Corrosion and petro-chemical regulators

PRESSURE REDUCING



04 Miniature/
Lecture Bottle



44-2200 Compact



44-3400 Two Stage

PRODUCT SERIES/ FEATURES	INLET PRESSURE (MAXIMUM)	OUTLET PRESSURE RANGES	FLOW CAPACITY	BODY MATERIAL
04 Series: Miniature/Lecture Bottle				
<ul style="list-style-type: none"> Choice of 1/8" or 1/4" in & out ports Minimal internal volume 	3500 PSIG	0-30, 0-60, 0-100 PSIG	C _v = .06	Brass or 316L SST
44-2200 Series: Compact/General Purpose				
<ul style="list-style-type: none"> 1/4" inlet and outlet ports Diaphragm sensed - highly sensitive Various trim options available 	3500, 400 PSIG	1-25, 1-50, 1-100, 2-250, 2-500 PSIG	C _v = .02 C _v = .06 C _v = .15 C _v = .24	Brass, 316L SST, Hastelloy-C® or Monel
44-2600 Series: General Purpose/Large Diaphragm				
<ul style="list-style-type: none"> Increased sensitivity, minimal droop Repeatability: ±1/2% of outlet pressure range Accuracy: ±1% of outlet pressure 	3500, 400 PSIG	1-25, 1-50, 1-100, 1-150 PSIG	C _v = .02 C _v = .06 C _v = .15 C _v = .24	316L SST
44-2800 Series: Positive Seal				
<ul style="list-style-type: none"> Mechanical link between diaphragm & main valve prevents pressure creep Adjustable captured vent bonnet 	3000 PSIG	1-25, 1-50, 1-100, 1-150 PSIG	C _v = .16	316L SST
44-3400 Series: General Purpose/Two Stage				
<ul style="list-style-type: none"> Decaying inlet characteristic: .04 per 100 PSIG inlet pressure change Various trim options available 	3500 PSIG	2-25, 2-50, 3-100, 3-150, 3-250 PSIG	C _v = .05	Brass or 316L SST
44-4600 Series: Absolute Pressure				
<ul style="list-style-type: none"> Controlled pressure range: 28" to 15 PSIG Large Diaphragm - excellent sensitivity 	120, 3500 PSIG	28" Hg Vac - 15 PSIG	C _v = .06 C _v = .24	316L SST

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Corrosion and petro-chemical regulators

PRESSURE REDUCING



44-4800
Steam & Electric



44-5000
Absolute Pressure

PRODUCT SERIES/ FEATURES	INLET PRESSURE (MAXIMUM)	OUTLET PRESSURE RANGES	FLOW CAPACITY	BODY MATERIAL
44-4800 Series: Vaporizing Regulator/Steam or Electric				
<ul style="list-style-type: none"> • 120 & 240 VAC • 100 & 50 Watt available • 50W CSA Certificate available • Proven 44-2200 Series design 	3500 PSIG	0-25, 0-50 0-100, 0-250, 0-500 PSIG	C _v = .06	316L SST, Monel or Hastelloy®
44-5000 Series: Absolute Pressure				
<ul style="list-style-type: none"> • Control pressure range: vacuum to low positive pressures 	120, 400, 3500 PSIG	28" Hg Vac-15 PSIG 28" Hg Vac-25 PSIG 28" Hg Vac-50 PSIG 28" Hg Vac-100 PSIG	C _v = .06 C _v = .15 C _v = .24	316L SST

BACK PRESSURE



44-4700
Subatmospheric

PRODUCT SERIES/FEATURES	CONTROLLED PRESSURE RANGES	FLOW CAPACITY	BODY MATERIAL
44-2300 Series: Back Pressure			
<ul style="list-style-type: none"> • Economical, general purpose 	0-25, 0-50, 0-100, 0-250 PSIG	C _v = .08	Brass or 316L SST
44-4700 Series: Subatmospheric			
<ul style="list-style-type: none"> • Metal to metal diaphragm assures minimum inboard/outboard leakage • Controls subatmospheric to positive pressures • High flow capacity • Negative spring bias 	28" Hg Vac - 15 PSIG 28" Hg Vac - 50 PSIG 28" Hg Vac - 100 PSIG 28" Hg Vac - 150 PSIG	C _v = .04 C _v = .30	316L SST

Valves and special products



CC Metering Valve



VA & VG Air Operated ON/OFF Valves



VJ Bi-Directional Shut-off Valve



SJS Series Regulator

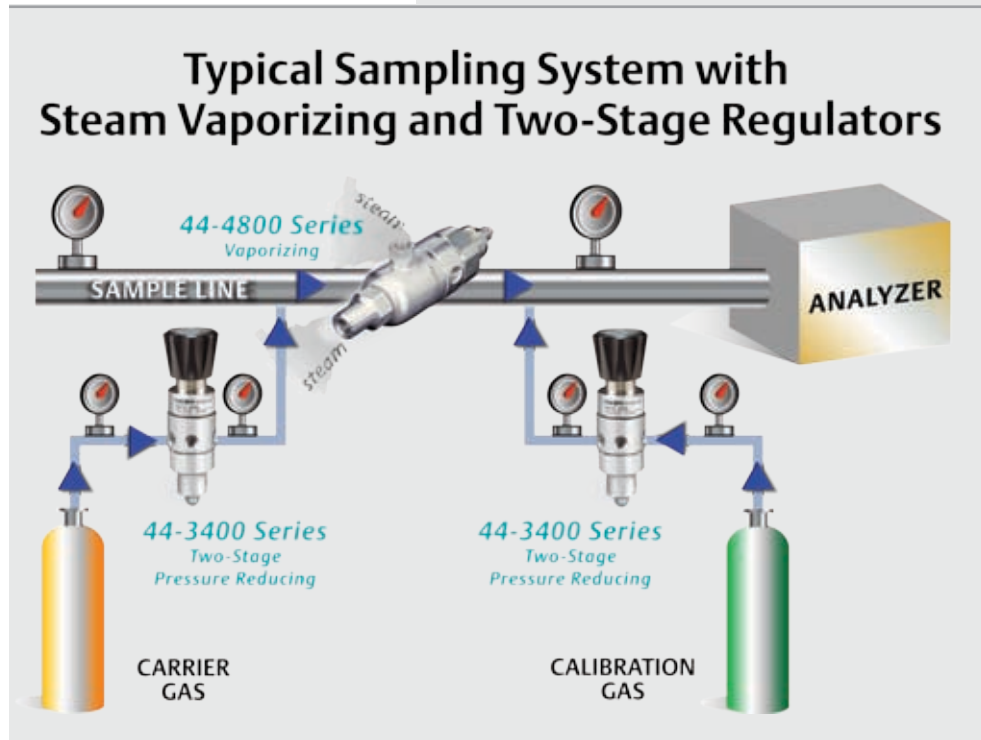
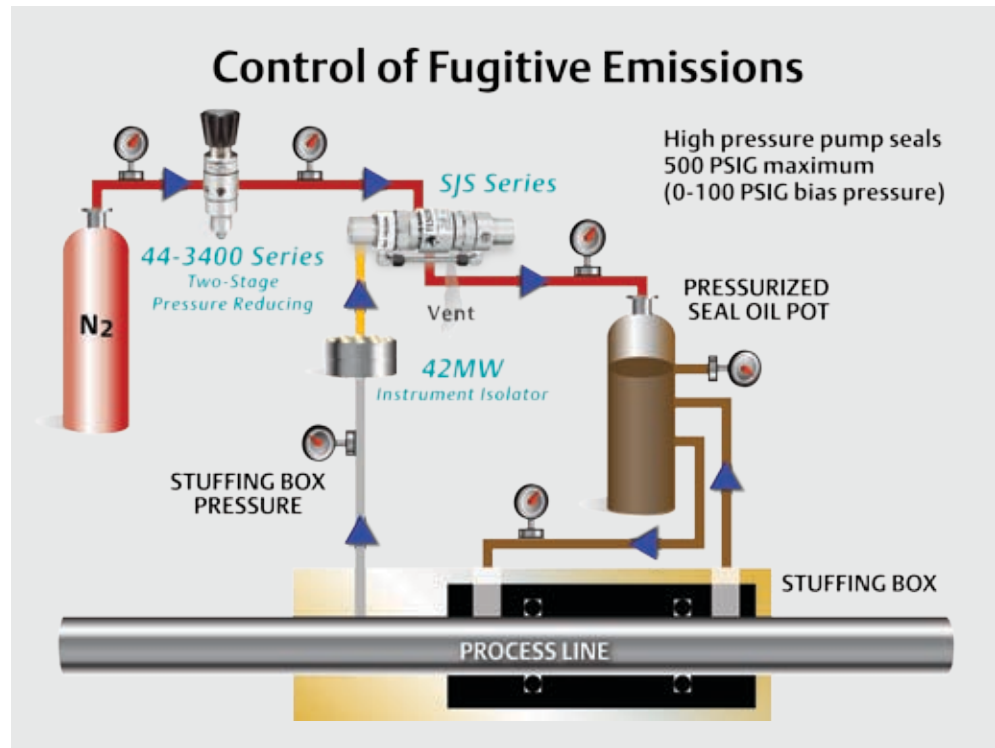


42MW Welded Diaphragm Instrument Isolator (shown with SJS Series regulator)

PRODUCT SERIES/FEATURES	OPERATING PRESSURE (MAXIMUM)	FLOW CAPACITY	BODY MATERIAL
CC Series: Metering Valve			
<ul style="list-style-type: none"> Precise control at very low flows For liquid or gas applications 20+ turns from shutoff to full open Non-rotating stem reduces seat wear 	Full vacuum to 10,000 PSIG	C _v = .00005 C _v = .00125	316 SST
FL7000 Series: Flow Limit Valve			
<ul style="list-style-type: none"> Designed to stop flow automatically when flow exceeds a preset limit Flow range: 0-6 SCFM (N₂ @ 1000 PSIG) Protects downstream personnel & equipment from exposure to hazardous media 	100-1000, 300-2500, 600-5000 PSIG	N/A	316 SST
VA & VG Series: Air Operated ON/OFF Valves			
<ul style="list-style-type: none"> Normally open or normally closed Balanced main valve - reduces required actuation pressure (30-60 PSIG) Compact package Toggle actuator optional 	6000, 10,000, 15,000, 20,000 PSIG	VA: C _v = .75 VG: C _v = 2.0	Brass or 316 SST
VJ Series: Cartridge Valves			
<ul style="list-style-type: none"> Bi-directional flow Built-in metallic stop Globe or angle pattern O₂ compatible design 	6000, 10,000 PSIG	angle: C _v = .49 globe: C _v = .28	Brass or 316 SST
SJS Series Regulator			
<ul style="list-style-type: none"> Maintains accurate differential pressure when incorporated into a double seal system Tracks upsets in system pressure and decreases downtime by increasing seal life 			
42MW Welded Diaphragm Instrument Isolator			
<ul style="list-style-type: none"> Designed to be used with Tescom's tracking regulators. Keeps corrosive media away from regulator. 			

Typical petro-chemical applications

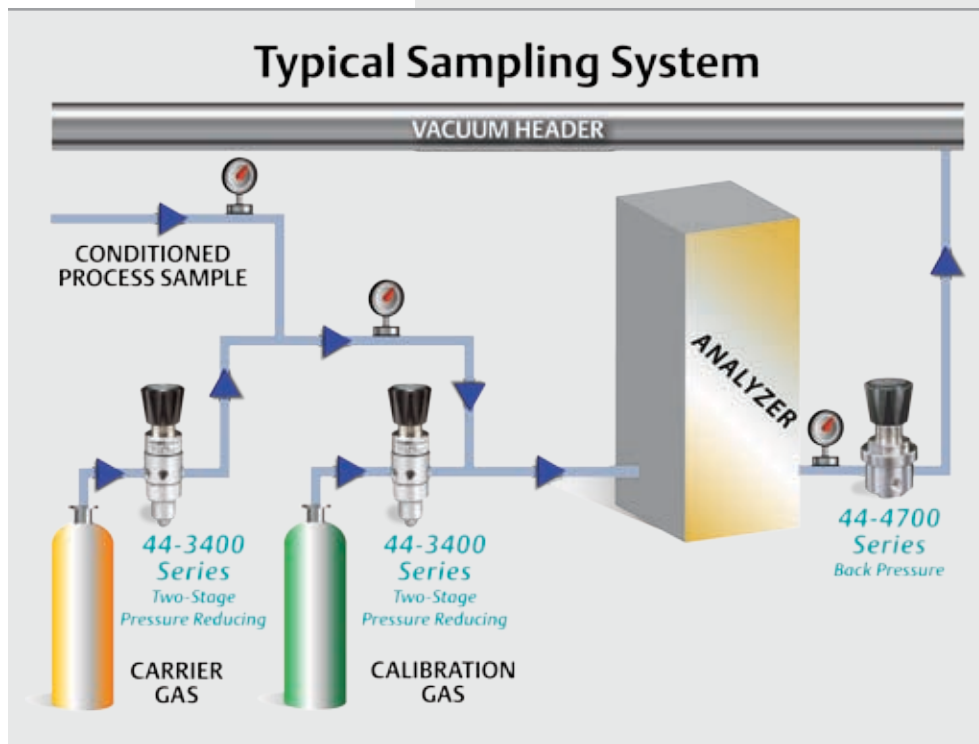
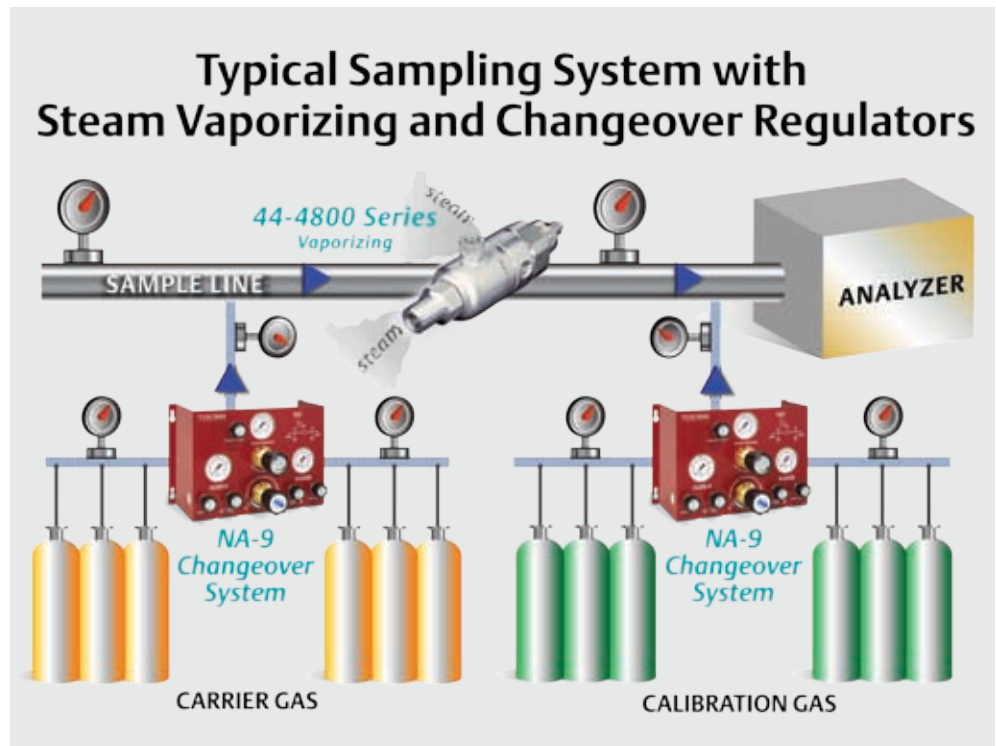
The SJS Series tracking regulator is used to apply blanketing pressure to seals. An inert gas (generally Nitrogen gas) is applied to the environment side of a seal, while the other side of the seal is exposed to a toxic gas or liquid. The SJS regulator tracks the toxic media line pressure and holds a higher blanketing pressure to the seal to ensure that any leakage across the seal will be inboard and not out to atmosphere. Maintaining a slightly higher pressure (positive differential pressure) to the seal also increases life of the seal and reduces system downtime. Typical bias pressure is 10-100 PSIG across the seal.



Process line samples need to be conditioned prior to being sent to the analyzer. The sample conditioning includes reducing the sample pressure and ensuring the sample is in a gas form. The 44-4800 Series vaporizing regulator accomplishes both of these requirements (electric and steam heated versions available). Two-stage 44-3400 Series regulators are used for pressure control of carrier and calibration gases.

Typical petro-chemical applications

Changeover systems can be used to ensure a continuous supply of carrier and calibration gases with no interruption due to supply depletion or change out. Complete systems can include CGA connections, hoses, check valves, purge valves, pressure switch, alarm, etc.



Back pressure regulators can be used to protect the analyzer from pressure fluctuations in the vacuum header. The 44-4700 Series can be used for vacuum set points and low positive pressure set points.

This is only a start! Call your local TESCO Representative for more application solutions.



We are your global partner in precision pressure control.

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