

Regulators - Relief/Backpressure



Regulators that maintain desired upstream pressure by varying the flow in response to changes in upstream pressure

Product Selection Guide

Don't know where to start? This guide lists TESCO pressure reducing regulators by control pressures, flow rates and loading and sensing types to help you find the right product in this catalog

431

Quick Find List

Know the model number? Here are TESCO pressure reducing regulators listed in numerical/alphabetical order

Model	Page	Model	Page	Model	Page
26-1700 Series	435	44-1700 Series	459	54-2100 Series	483
26-1700F Series	439	44-2300 Series	463	54-2300 Series	487
26-2300 Series	443	44-2500 Series	467	54-2700 Series	491
26-2500 Series	447	44-2900 Series	471	54-3500 Series	495
26-2700 Series	451	44-4700 Series	475	BB-3 Series	497
26-2900 Series	455	44-5500 Series	479	DV Series	501

Backpressure Selection Guide

CONTROL PRESSURE RATING	C _v	AVAILABLE LOADING TYPES	SENSING TYPE	NOTES	SERIES
15,000 psig / 1034 bar	0.08, 0.60	Spring, Dome, Air, Dome / Spring Biased	Piston	General purpose Hydraulic only	54-2100 Page 483
10,000 psig / 690 bar	0.02, 0.10, 0.14, 0.60	Spring, Dome, Air, Dome / Spring Biased	Piston	Versatile Up to 650°F / 343°C	26-1700 Page 435
10,000 psig / 690 bar (Air Only) 5000 psig / 345 bar (Spring and Dome)	1.6	Spring, Dome, Air, Dome / Spring Biased	Piston	High pressure, high flow Hydraulic only	54-2300 Page 487
10,000 psig / 690 bar	0.08	Spring, Dome, Air, Dome / Spring Biased	Piston	Two-stage, Gas and Hydraulic	54-3500 Page 495
5500 psig / 379 bar (Dome Only) 500 psig / 34.5 bar (Spring and Dome)	5.0	Spring, Dome, Air, Dome / Spring Biased	Piston	High flow	54-2700 Page 491
3000 psig / 207 bar (Dome Only) 1200 psig / 82.7 bar (Spring)	0.20	Spring, Dome	Piston	Compact	BB-3 Page 497

Backpressure Selection Guide

CONTROL PRESSURE RATING	C _v	AVAILABLE LOADING TYPES	SENSING TYPE	NOTES	SERIES
1000 psig / 69.0 bar (Dome Only) 450 psig / 31.0 bar (Air Only) 375 psig / 25.9 bar (Spring)	2.0	Spring, Dome, Air, Dome / Spring Biased	Diaphragm	Low pressure, high flow	26-2700 Page 451
1000 psig / 69.0 bar	2.0	Dome / Spring Biased, Air	Diaphragm	BIBS systems	26-2900 Page 455
800 psig / 55.2 bar	0.10	Spring, Dome	Piston	Economical	44-1700 Page 459
500 psig / 34.5 bar	0.14	Spring	Piston	Flanges according to DIN EN 1092-1	26-1700F Page 439
500 psig / 34.5 bar	0.06, 0.12, 0.60, 1.0	Spring, Dome, Air, Dome / Spring Biased	Diaphragm	Sensitive Versatile	26-2300 Page 443
500 psig / 34.5 bar	0.08	Spring, Dome, Dome / Spring Biased	Diaphragm	Low flow High temperature tolerance	44-2300 Page 463

Backpressure Selection Guide

CONTROL PRESSURE RATING	C _v	AVAILABLE LOADING TYPES	SENSING TYPE	NOTES	SERIES
500 psig / 34.5 bar	0.30	Spring, Dome	Piston	Economical	44-5500 Page 479
250 psig / 17.2 bar	0.30	Spring, Dome	Diaphragm	Economical	44-2500 Page 467
200 psig / 13.8 bar 300 psig / 20.7 bar (Air Only)	5.0	Spring, Dome, Air, Dome / Spring Biased	Diaphragm	Low pressure, high flow	26-2500 Page 447
150 psig / 10.3 bar	0.30	Spring, Dome	Diaphragm	Economical Sensitive	44-2900 Page 471
150 psig / 10.3 bar 450 psig / 31.0 bar (Air Only)	0.04, 0.30	Spring, Dome, Air, Dome / Spring Biased	Diaphragm	Sub-atmospheric	44-4700 Page 475
0-28 inch-Hg / 0-948 mbar	0.25	Spring, Dome	Diaphragm	Vacuum	DV Page 501

26-1700 Series

Regulators - Relief / Backpressure

D26170543X012

Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Maximum Inlet Pressure

10,000 psig / 689 bar

Controlled Pressure Ranges

5-500, 5-800, 10-1500, 15-2500, 25-4000, 50-6000,
and 200-10,000 psig

0.35-34.5, 0.35-55.2, 0.69-103, 1.03-172, 1.72-276, 3.45-414,
and 13.8-689 bar

Design Proof Pressure

150% maximum rated

Leakage

Bubble-tight

Operating Temperature

-40°F to 165°F / -40°C to 74°C

Flow Capacity

$C_v = 0.10$ (26-17X1 through 26-17X4)

$C_v = 0.14$ (26-17X5 through 26-17X7)

Maximum Operating Torque

40 in-lbs / 4.5 N•m



TESCOM 26-1700 Series regulator controls pressures up to 15,000 psig / 1034 bar and is suitable for gas or liquid service.

MEDIA CONTACT MATERIALS

Back-up Ring

Teflon®

Body

316 Stainless Steel

O-Rings

Buna-N

Seal

CTFE

Seat

CTFE (26-17X1 through 26-17X4)

Teflon® (26-17X5 through 26-17X7)

Trim

300 Series Stainless Steel

Remaining Parts

300 Series Stainless Steel

OTHER

Cleaning

CGA 4.1 and ASTM G93

Weight

5 lbs / 2.2 kg

Teflon® is a registered trademark of E.I. du Pont de Nemours and Company.

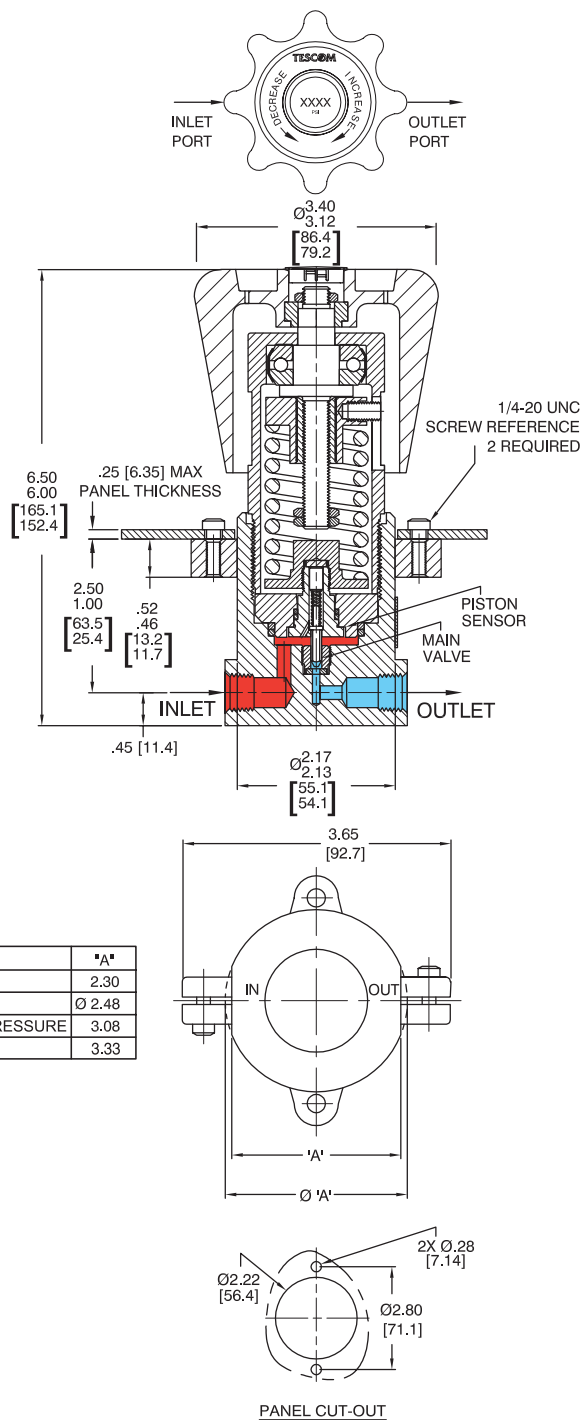
Applications

- Pump discharge pressure control
- Reactor pressure control
- Over-pressurization relief

Features and Benefits

- Accuracy: $\pm 1\%$ of central pressure range
- NACE Compatible design available
- Wide range of applications due to:
 - Seven different control pressure ranges
 - 200-15,000 psig / 13.8-1034 bar control is optional
 - High flow $C_v = 0.60$ and low flow $C_v = 0.02$ models are available
- Bubble-tight shut-off at all reseal pressures
- Safe and reliable piston-style sensor
- Panel mounting is standard
- Compatible with TESCOM Air Actuators and ER3000 Electropneumatic Controllers

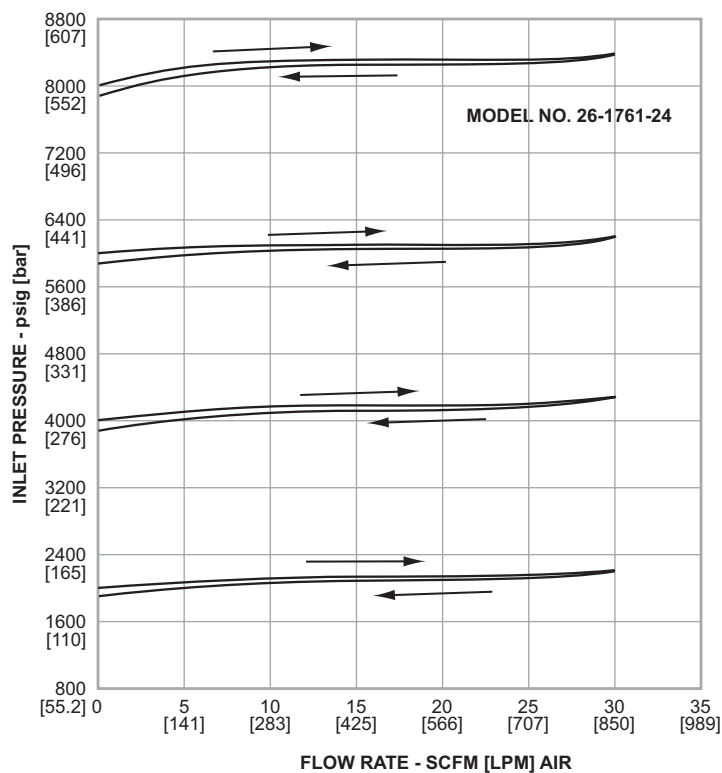
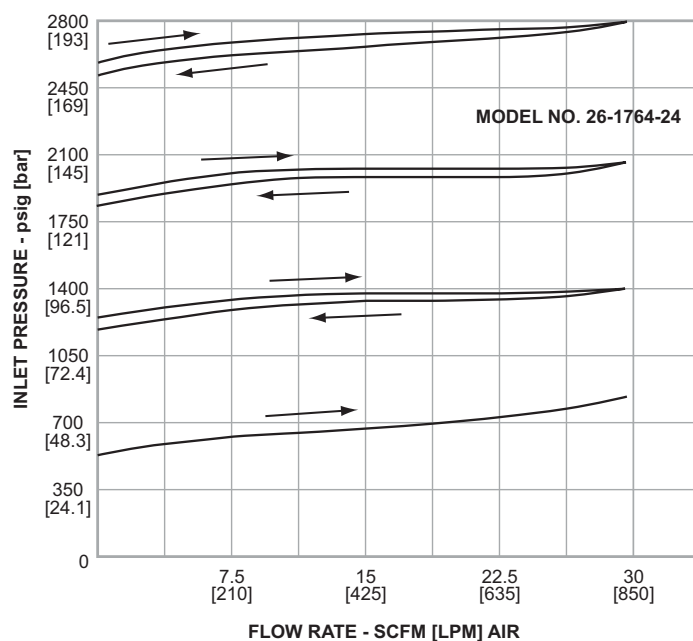
26-1700 Series Regulator Drawing



All dimensions are reference & nominal
Metric [millimeter] equivalents are in brackets

26-1700 Series Regulator Flow Charts

For more information on how to read flow curves, please refer to the Flow Curves and Calculations document (debul2007x012) in the TESCOM catalog or on www.tescom.com.



26-1700 Series Regulator Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number:

26-17 6 4 - 2 4 [BLANK]

BASIC SERIES	BODY AND BONNET MATERIAL	CONTROLLED PRESSURE RANGES	INLET AND OUTLET PORT TYPE	INLET AND OUTLET PORT SIZE	OPTIONS
26-17	6 – 316 Stainless Steel	1 – 200-10,000 psig 13.8-689 bar 2 – 50-6000 psig 3.45-414 bar 3 – 25-4000 psig 1.72-276 bar 4 – 15-2500 psig 1.03-172 bar 5 – 10-1500 psig 0.69-103 bar 6 – 5-800 psig 0.35-55.2 bar 7 – 5-500 psig 0.35-34.5 bar	1 – SAE 2 – NPTF 3 – MS33649 4 – High Pressure 6 – Medium Pressure	2 – 1/8" 4 – 1/4" 6 – 3/8" 8 – 1/2**	[BLANK] – None - 065 – 316 Stainless Steel Wetted - 099 – 200-15,000 psig / 13.8-1034 bar Control Range, C _v = 0.02 - 154 – C _v = 0.02 - 161 – Urethane O-Rings CO ₂ Service - 184 – C _v = 0.60, 5000 psig / 345 bar, 1/2" NPTF Ports

* Available for NPTF only.

26-1700F Series

Regulators - Relief / Backpressure

D2617FL10141XEN2

Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Controlled Pressure Range

5-500 psig / 0.34-34.5 bar

Design Proof Pressure

150% of rated pressure

Design Burst Pressure

400% of rated pressure

Leakage

Bubble-tight

Flow Capacity

$C_v = 0.14$

Operating Temperature

-15°F to 165°F / -26°C to 74°C

Maximum Operating Torque

40 in-lbs / 4.5 N•m

MEDIA CONTACT MATERIALS

Body

316L Stainless Steel

Main Valve Seat

Teflon®

Seal

CTFE

Back-up Rings

Teflon®

O-Ring

Buna-N

Remaining Parts

300 Series Stainless Steel

OTHER

Weight (approximate)

DN 15: 8 lbs / 3.6 kg

DN 20/25: 11 lbs / 5 kg

Teflon® is a registered trademark of E.I. du Pont de Nemours and Company.



TESCOM 26-1700F Series backpressure regulators provide welded flanges according to EN 1092 and are suitable for gas or liquid service.

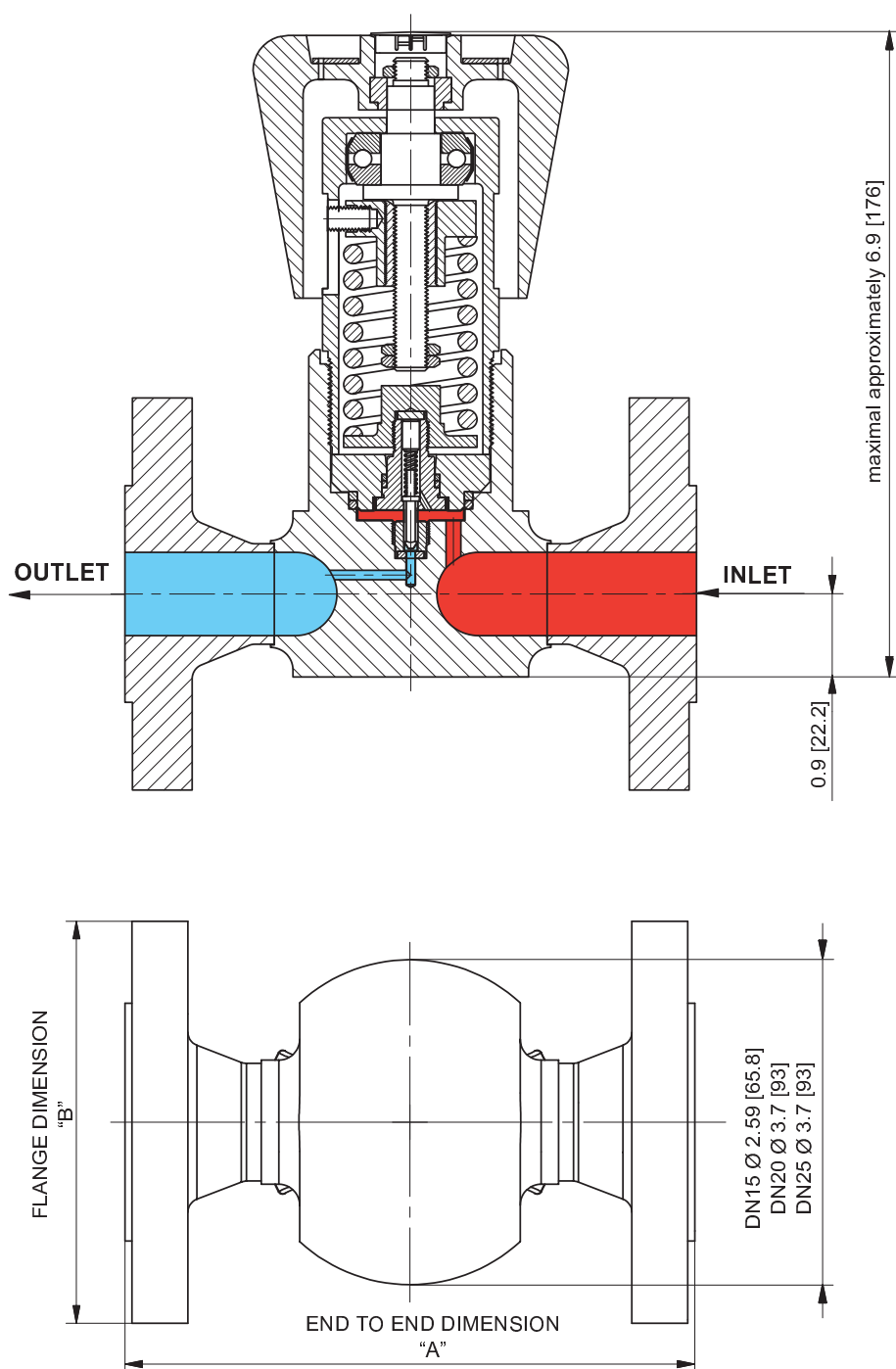
Applications

- Pilot plants (i.e. in the chemical industry)
- Pressure control of reactor or vessel applications

Features and Benefits

- Flange connections according to DIN EN 1092-1 Type 11 for easy line integration
- Face-to-face dimensions according to DIN EN 558, Row 1
- Connection up to DN 25
- Setpoint repeatability exceeds conventional relief valves
- Bubble-tight shutoff at all reseal pressures
- Safe and reliable piston-style sensor
- Compatible with the Tescom Air Actuator and ER3000 Electropneumatic Controller for remote control
- Other connection standards upon request

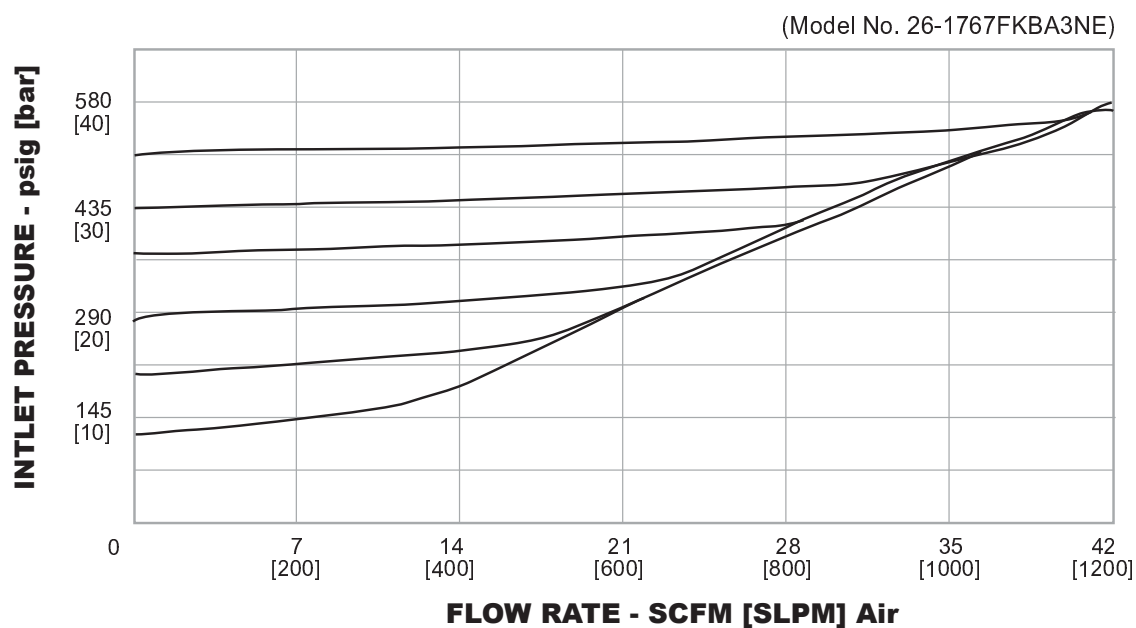
26-1700F Series Regulator Drawing



All dimensions are reference & nominal
Metric [millimeter] equivalents are in brackets

26-1700F Series Regulator Flow Chart





For more information on how to read flow curves, please refer to the Flow Curves and Calculations document (debul2007x012) in the TESCOM catalog or on www.tescom.com.



26-1700F Series Regulator Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number:

26-17	6	7	F	K	B	F	3	N	E
BASIC SERIES	BODY AND FLANGE MATERIAL	CONTROLLED PRESSURE RANGE	INLET AND OUTLET PORT TYPE	"A" ±.08" ±2 mm	"B" ±.08" ±2 mm	FLANGE TYPE	GAUGE PORT OPTIONS	FLOW CAPACITY	OPTIONAL ITEM
26-17	6 – 316L Stainless Steel	7 – 5-500 psig 0.34-34.5 bar	K – DN 15 L – DN 20 M – DN 25	5.12 130 5.90 150 6.30 160	3.74 95 4.13 105 4.53 115	B – Form B - raised face D – Form D - ring joint	A – None  F – 1/4" NPTF 1 x in  G – 1/4" NPTF 1 x in  L – 1/4" NPTF 1 x in, 1 x out 	3 – $C_v = 0.14$	N – None

Kits

	BASIC SERIES	PART NUMBER
NON METALLIC	26-17XXFXXXXXX	389-1268
REPAIR	26-17XXFXXXXXX	389-6574

26-2300 Series

Regulators - Relief / Backpressure

D26230694X012

Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Maximum Inlet Pressure

0-50, 0-150, 0-250 psig / 0-3.4, 0-10.3, 0-17.2 bar

Design Proof Pressure

150% maximum rated

Leakage

Bubble-tight

Operating Temperature¹

-40°F to 165°F / -40°C to 74°C

Flow Capacity $C_v = 0.60$ **Maximum Operating Torque**

25 in-lbs / 2.8 N•m

¹ For extended temperatures from -40°F to 400°F / -40°C to 204°C, please consult TESCOM.

MEDIA CONTACT MATERIALS

Body

303 Stainless Steel, 316 Stainless Steel, or Aluminum 2024-T351

Diaphragm

Buna-N

Main Valve Seat

Teflon®

O-Rings

Buna-N

Seals

Teflon®

Remaining Parts

300 Series Stainless Steel

OTHER

Cleaning

CGA 4.1 and ASTM G93

Weight**Stainless Model:** 2.25 lbs / 1.0 kg**Aluminum Model:** 1.25 lbs / 0.6 kg

Teflon® is a registered trademark of E.I. du Pont de Nemours and Company.

AIR LOAD



SPRING LOAD



DOME LOAD



TESCOM 26-2300 Series is a highly accurate, diaphragm sensed backpressure regulator. It controls pressures up to 500 psig / 34.5 bar and offers many C_v s from 0.02 up to 1.0. Air and dome loaded versions are available for remote operation or for use with the TESCOM ER3000 Electropneumatic Controller for automation.

Applications

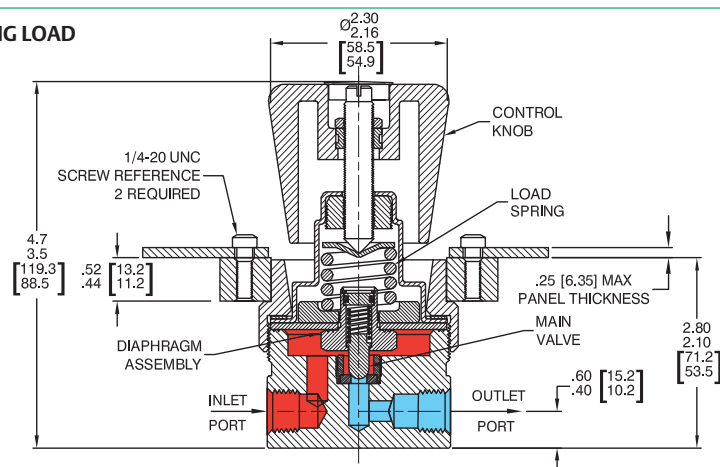
- Hydraulic or pneumatic testing
- Calibration
- Pump discharge pressure control

Features and Benefits

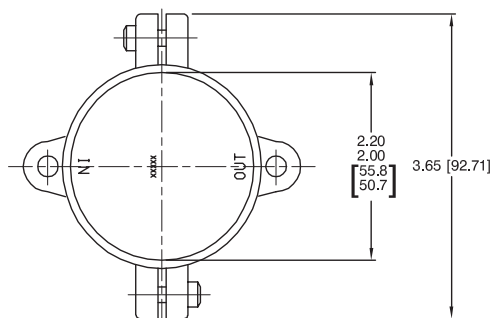
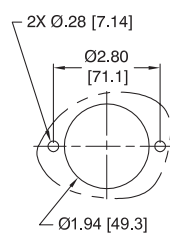
- Crack to reseal - 2% of set pressure
- Easily adjusted, low torque handknob control
- Bubble-tight shutoff at all reseal pressures
- Four flow capacities available:
 $C_v = 0.60$ standard
 $C_v = 0.06, 0.12, 1.0$ optional
- Spring, dome, and air loaded models are available
- Panel mounting is standard
- Compatible with TESCOM ER3000 Electropneumatic Controller

26-2300 Series Regulator Drawings

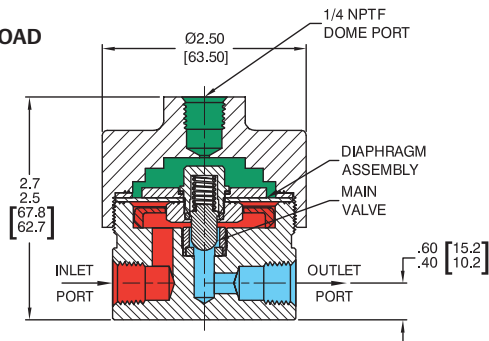
SPRING LOAD



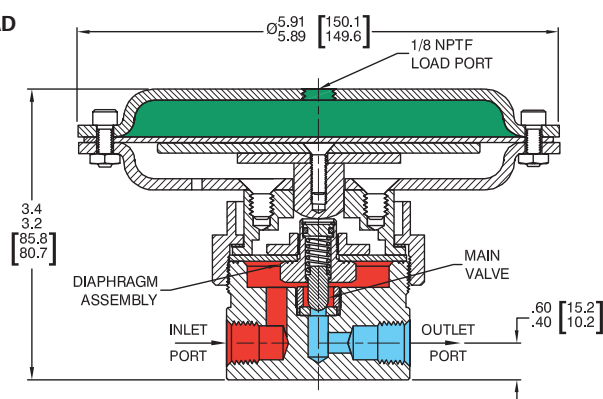
PANEL CUT-OUT



DOME LOAD



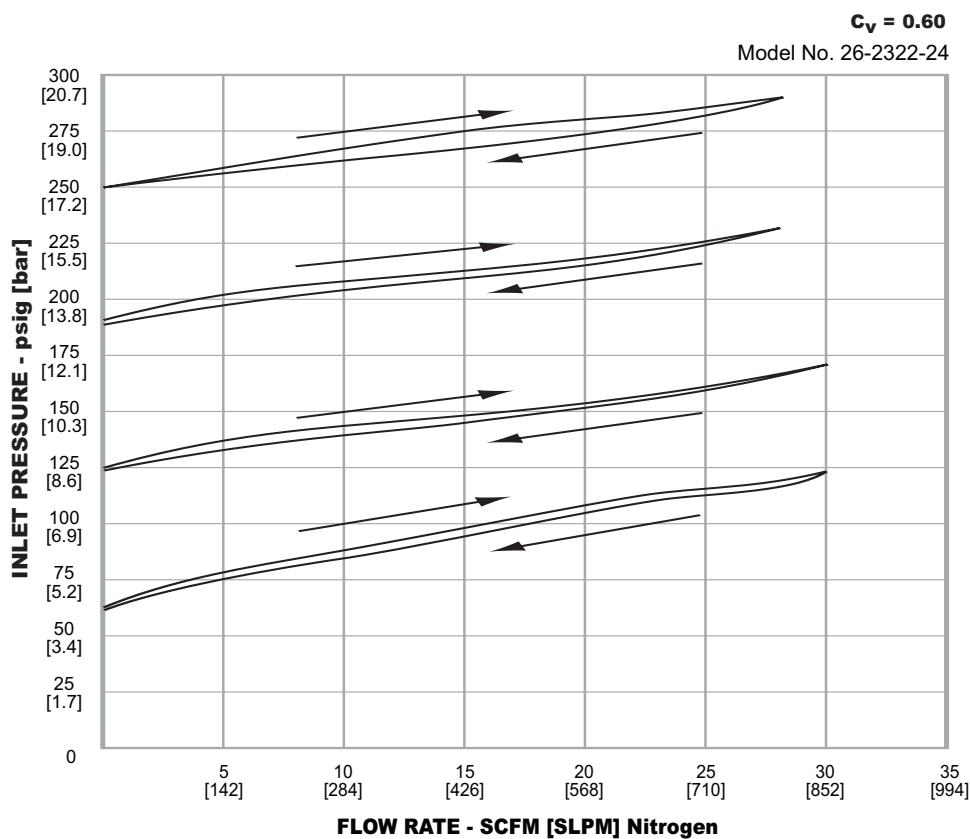
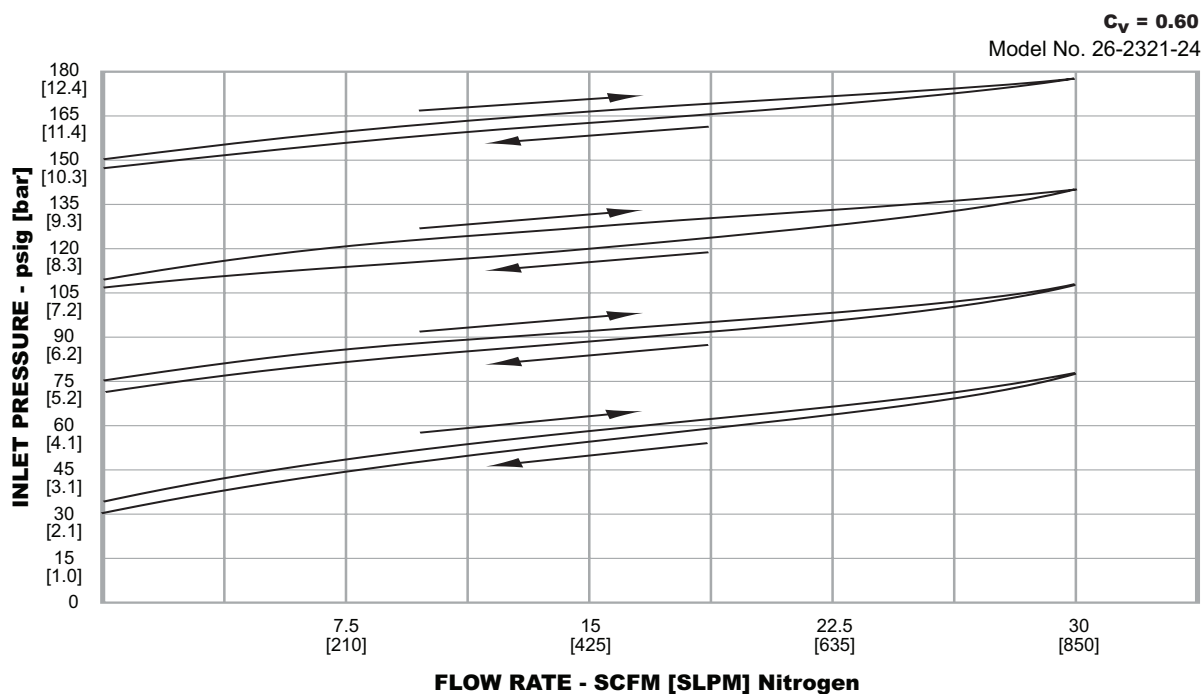
AIR LOAD



All dimensions are reference & nominal
Metric [millimeter] equivalents are in brackets

26-2300 Series Regulator Flow Charts

For more information on how to read flow curves, please refer to the Flow Curves and Calculations document (debul2007x012) in the TESCOM catalog or on www.tescom.com.



26-2300 Series Regulator Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number:

26-23	2	1	-	2	4
BASIC SERIES	BODY MATERIAL	CONTROL PRESSURE RANGE	INLET AND OUTLET PORT TYPE	INLET AND OUTLET PORT SIZE	
26-23	2 – 303 Stainless Steel	0 – 0-50 psig 0-3.4 bar	1 – SAE	4 – 1/4"	
	3 – 2024-T351 Aluminum	1 – 0-150 psig 0-10.3 bar	2 – NPTF	6 – 3/8"	
	6 – 316 Stainless Steel	2 – 0-250 psig 0-17.2 bar	3 – MS33649	8 – 1/2"	

26-2500 Series

Regulators - Relief / Backpressure

D26251944X012

Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Controlled Pressure Ranges

0-20, 0-50, 0-125, 0-200 psig
0-1.4, 0-3.4, 0-8.6, 0-13.8 bar
0-300 psig / 0-20.7 bar for Air Load

Design Proof Pressure

150% maximum rated

Leakage

Bubble-tight

Operating Temperature

-20°F to 165°F / -29°C to 74°C

Flow Capacity

$C_v = 5.0$

MEDIA CONTACT MATERIALS

Body, Bonnet, Back-cap

316 Stainless Steel or Brass

Main Valve Seat

Buna-N, Ethylene Propylene (E.P.), Chemraz®, or Viton®

Diaphragm

Gylon®, Viton®

O-Rings

Buna-N, Ethylene Propylene (E.P.), Chemraz®, or Viton®

Remaining Parts

300 Series Stainless Steel, Nitronic 60

OTHER

Cleaning

CGA 4.1 and ASTM G93

Weight

Stainless Steel: 15 lbs / 6.8 kg

Brass: 16 lbs / 7.3 kg

Viton® is a registered trademark of E.I. du Pont de Nemours and Company.

Gylon® is a registered trademark of Garlock, Inc.

Chemraz® is a registered trademark of Greentweed.



DOMES LOADED

SPRING LOADED



TESCOM 26-2500 Series has a $C_v = 5.0$ for high flow backpressure applications. Large diaphragm provides excellent sensitivity and minimal crack-to-reseat pressure differential.

Application

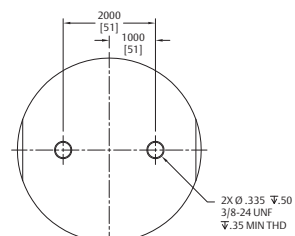
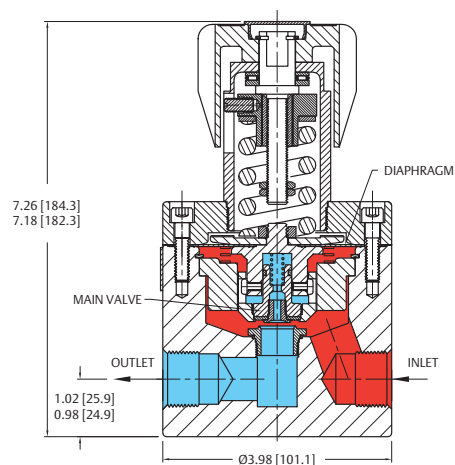
- Pump discharge pressure control

Features and Benefits

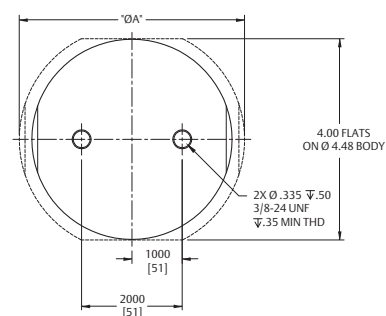
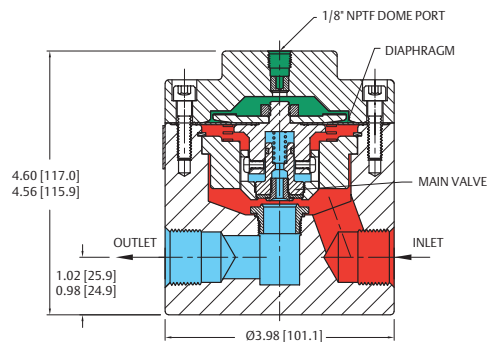
- High flow capacity
- Close pressure differential between crack and reseat
- Bubble-tight shutoff at all reseating pressures
- Large diaphragm provides maximum sensitivity
- Dome loaded and air actuated options are available
- Four control pressure ranges

26-2500 Series Regulator Drawings

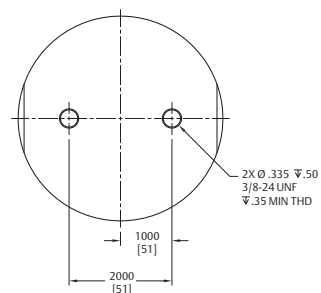
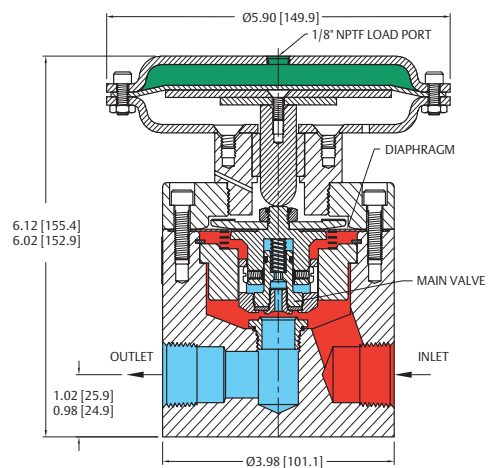
SPRING LOAD



DOME LOAD



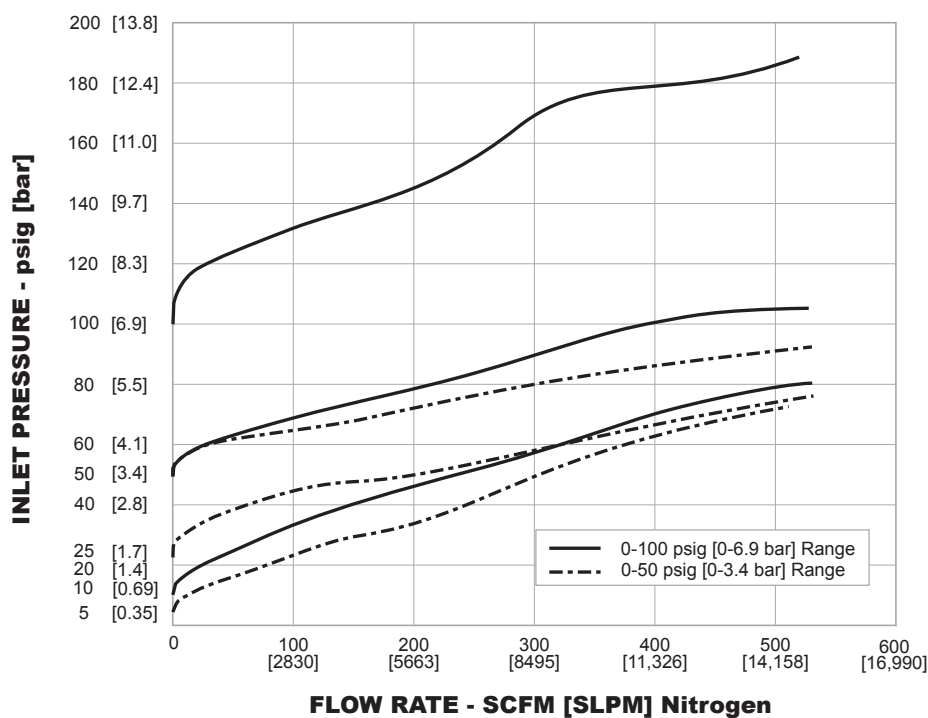
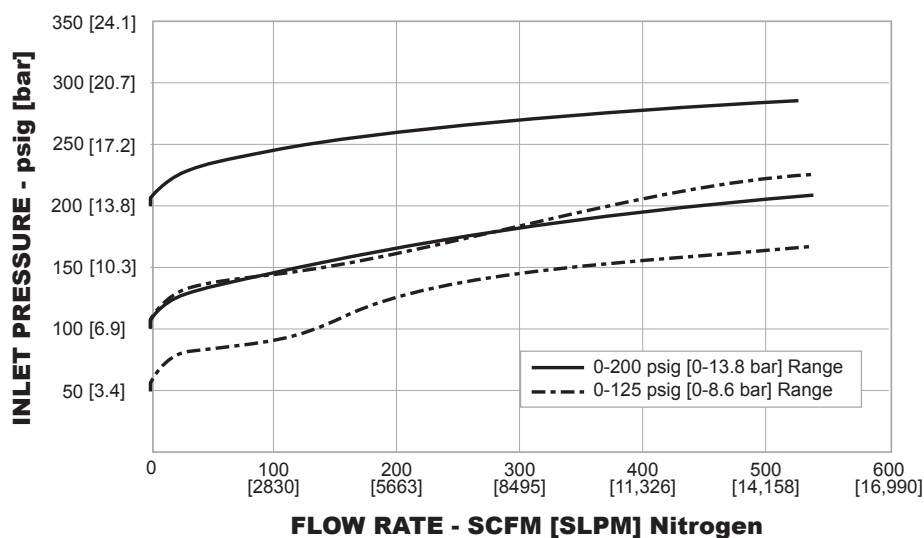
AIR LOAD



All dimensions are reference & nominal
Metric [millimeter] equivalents are in brackets

26-2500 Series Regulator Flow Charts

For more information on how to read flow curves, please refer to the Flow Curves and Calculations document (debul2007x012) in the TESCOM catalog or on www.tescom.com.



26-2500 Series Regulator Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number:

H – SPRING LOAD,
HANDKNOB ADJUST

D – DOME LOAD

A – AIR LOAD

26-25	6	1	E		2	08	H	G	A
BASIC SERIES	BODY, BONNET, BACK-CAP MATERIAL	INLET PRESSURE	O-RING AND VALVE SEAT MATERIAL		INLET AND OUTLET PORT TYPE	INLET AND OUTLET PORT SIZE	DIAPHRAGM MATERIAL	PORTING CONFIGURATION	
			O-Ring	Valve Seat					
26-25	1 – Brass	0 – 0-20 psig 0-1.4 bar	B – Buna-N	Buna-N 90	1 – SAE	08 – 1/2"	G – Gylon®	A – No gauge ports	
	6 – 316 Stainless Steel	1 – 0-50 psig 0-3.4 bar	E – Ethylene Propylene	Ethylene Propylene 80	2 – NPTF	12 – 3/4"	V – Viton® <i>(spring and dome load only)</i>	B – 2 gauge ports at 60°	
		2 – 0-125 psig 0-8.6 bar	M – Chemraz®	Chemraz® 75	3 – MS33649	16 – 1"		F – 1 inlet gauge port at 90°	
		3 – 0-200 psig 0-13.8 bar	V – Viton®	Viton®				L – 2 gauge ports at 90°	
		3 – 0-300 psig 0-20.7 bar <i>(air loaded only)</i>							
		D – 0-200 psig 0-13.8 bar <i>(dome loaded only)</i>							

26-2700 Series

Regulators - Relief / Backpressure

D26271957X012

Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Maximum Inlet Pressures

Air Loaded: 450 psig / 31.0 bar

Dome Loaded: 1000 psig / 68.9 bar

Spring Loaded: 0-30 psig / 0-2.1 bar

0-80 psig / 0-5.5 bar

0-185 psig / 0-12.8 bar

0-300 psig / 0-20.7 bar

0-375 psig / 0-25.9 bar

Reference Pressure

Air Loaded: 150 psig maximum (3.1 ratio) / 10.3 bar

Dome Loaded: 1000 psig maximum / 68.9 bar

Design Proof Pressure

150% rated pressure

Leakage

Bubble-tight

Operating Temperature

See Part Number Selector

Flow Capacity

$C_v = 2.0$

MEDIA CONTACT MATERIALS

Seat, Main Valve

CTFE, Vespel® SP21

Body, Bonnet, Back Cap

Brass, 303 Stainless Steel, 316 Stainless Steel

O-Rings

Buna-N, E.P., Viton®

Diaphragm

Gylon®

Remaining Parts

300 Series Stainless Steel, Nitronic 60

OTHER

Cleaning

CGA 4.1 and ASTM G93

Weight (approximate)

10.5 lbs / 4.8 kg

Vespel® and Viton® are registered trademarks of E.I. du Pont de Nemours and Company.

Gylon® is a registered trademark of Garlock, Inc.



DOMES



SPRING

TESCOM 26-2700 Series is a high flow, low pressure backpressure regulator with spring, dome and air loading options.

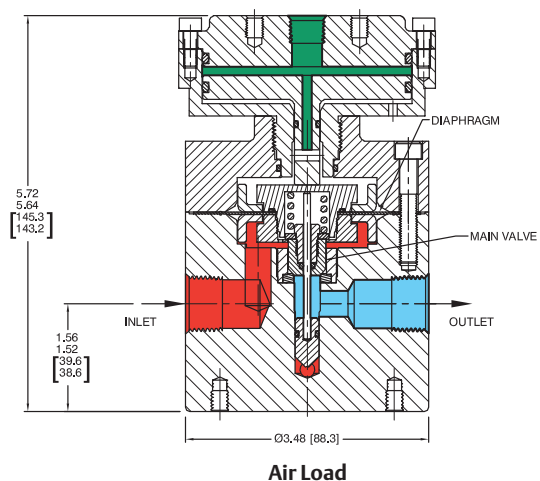
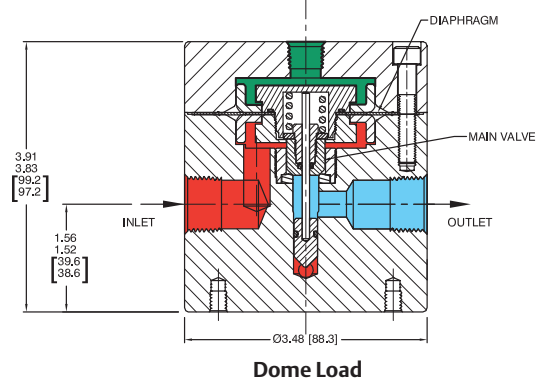
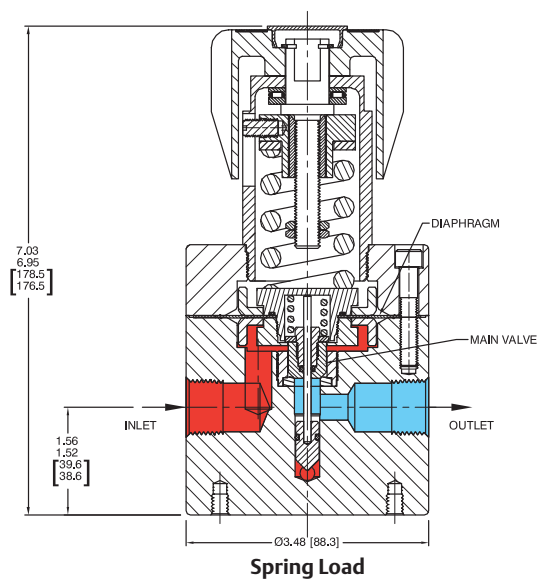
Applications

- Pump and compressor control
- Process pressure control
- High flow, low pressure chemical injection

Features and Benefits

- Gas or liquid service
- Dome and air actuated models are available
- Compatible with TESCOM ER3000 Electropneumatic Controllers
- High flow capabilities

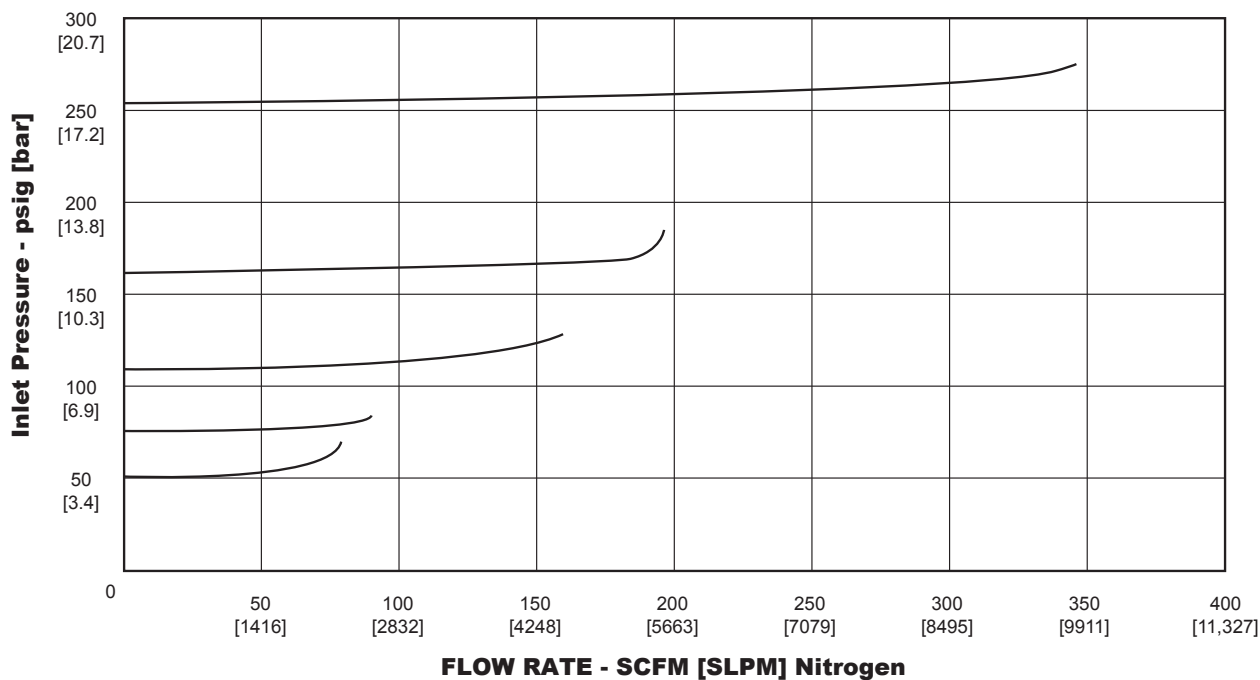
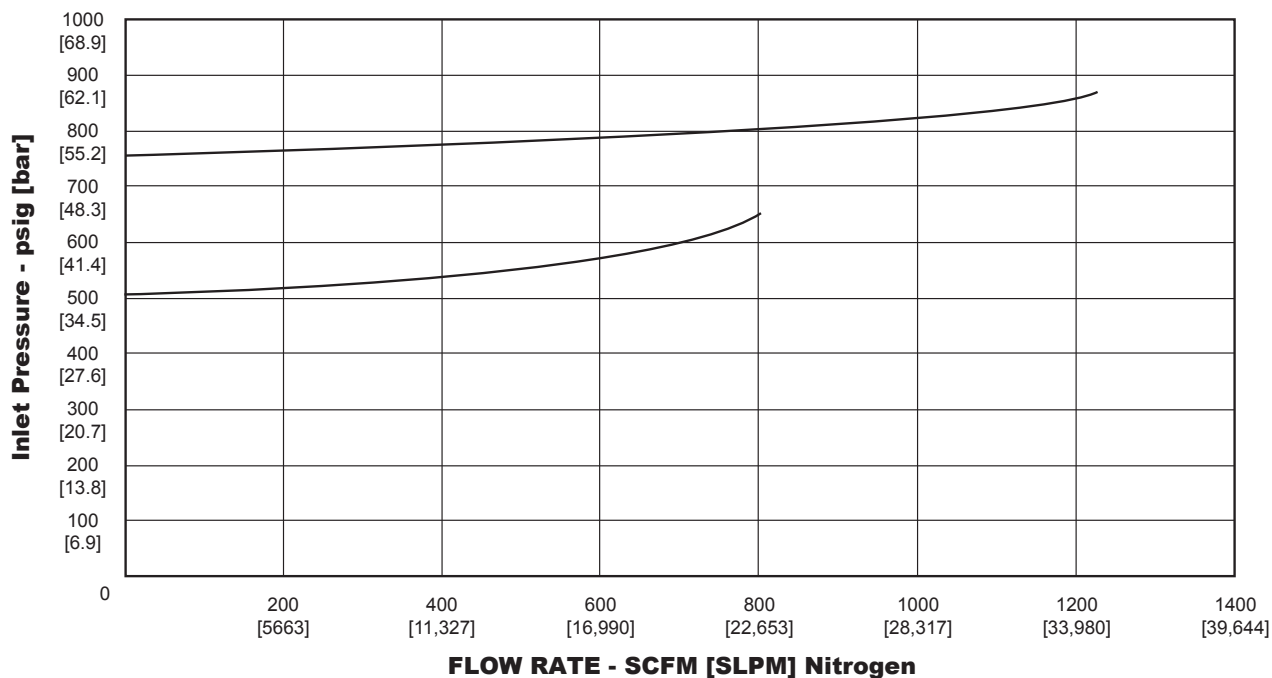
26-2700 Series Regulator Drawing



All dimensions are reference & nominal
Metric [millimeter] equivalents are in brackets

26-2700 Series Regulator Flow Charts

For more information on how to read flow curves, please refer to the Flow Curves and Calculations document (debul2007x012) in the TESCOM catalog or on www.tescom.com.



26-2700 Series Regulator Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number:

Air Loaded

26-27 2 0 - V 2 08A

BASIC SERIES	BODY MATERIAL	MAXIMUM INLET PRESSURE	MATERIALS		OPERATING TEMPERATURE	INLET AND OUTLET PORT TYPE	INLET AND OUTLET PORT SIZE	
			O-RING	VALVE SEAT				
26-27	1 – Brass	0 – 450 psig 31.0 bar	B – BUNA-N	CTFE	-40°F to 165°F / -40°C to 74°C	1 – SAE	08 – 1/2"	
	2 – 303 Stainless Steel		E – E.P.	Vespel® SP21	-40°F to 165°F / -40°C to 74°C	2 – NPTF	12 – 3/4"	
			M – E.P.	CTFE	-40°F to 165°F / -40°C to 74°C			
			V – Viton®	CTFE	0°F to 165°F / -18°C to 74°C			
			W – Viton®	Vespel® SP21	0°F to 300°F / -18°C to 149°C			

Dome Loaded

26-27 2 0 - V 2 08D

BASIC SERIES	BODY MATERIAL	MAXIMUM INLET PRESSURE	MATERIALS		OPERATING TEMPERATURE	INLET AND OUTLET PORT TYPE	INLET AND OUTLET PORT SIZE
			O-RING	VALVE SEAT			
26-27	1 – Brass	0 – 1000 psig 68.9 bar	E – E.P.	Vespel® SP21	-40°F to 165°F / -40°C to 74°C	1 – SAE	08 – 1/2"
	2 – 303 Stainless Steel		M – E.P.	CTFE	-40°F to 165°F / -40°C to 74°C	2 – NPTF	12 – 3/4"
	6 – 316 Stainless Steel		V – Viton®	CTFE	0°F to 165°F / -18°C to 74°C		
			W – Viton®	Vespel® SP21	0°F to 300°F / -18°C to 149°C		

Spring Loaded

26-27 2 2 - V 2 08S

BASIC SERIES	BODY MATERIAL	MAXIMUM INLET PRESSURE	MATERIALS		OPERATING TEMPERATURE	INLET AND OUTLET PORT TYPE	INLET AND OUTLET PORT SIZE	
			O-RING	VALVE SEAT				
26-27	1 – Brass	0 – 0-30 psig 0-2.1 bar	E – E.P.	Vespel® SP21	-40°F to 165°F / -40°C to 74°C	1 – SAE	08 – 1/2"	
	2 – 303 Stainless Steel	1 – 0-80 psig 0-5.5 bar	M – E.P.	CTFE	-40°F to 165°F / -40°C to 74°C	2 – NPTF	12 – 3/4"	
	6 – 316 Stainless Steel	2 – 0-185 psig 0-12.8 bar	V – Viton®	CTFE	0°F to 165°F / -18°C to 74°C			
		3 – 0-300 psig 0-20.7 bar	W – Viton®	Vespel® SP21	0°F to 300°F / -18°C to 149°C			
		4 – 0-375 psig 0-25.9 bar						

26-2900 Series

Regulators - Relief / Backpressure

D26291387X012

Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Maximum Control Pressure

1000 psig / 69.0 bar

Maximum Reference Ranges

1000 psig / 69.0 bar

Bias Pressure Ranges

0, 0-15, 0-30, 0-45 psig / 0, 0-1.0, 0-2.1, 0-3.1 bar

Design Proof Pressure

150% maximum rated

Leakage

Bubble-tight

Operating Temperature

0°F to 165°F / -18°C to 74°C

Flow Capacity

$C_v = 2.0$

Crack-to-Reseat Differential

0-15 psig / 0-1.0 bar Range: 3 psid / 0.21 bar

0-30 psig / 0-2.1 bar Range: 5 psid / 0.34 bar



TESCOM 26-2900 Series is a dome loaded, negative bias, backpressure tracking regulator with a balanced main valve. This regulator controls upstream pressures up to 1000 psig / 69.0 bar with spring bias setting.

MEDIA CONTACT MATERIALS

Body

303 Stainless Steel or Brass

Seat

CTFE

Diaphragm

(Unreinforced) Viton-A®

O-Rings

Viton-A®

Back-up Rings

Teflon®

Remaining Parts

300 Series Stainless Steel and Brass

OTHER

Cleaning

CGA 4.1 and ASTM G93

Weight

10 lbs / 4.5 kg

Viton® and Teflon® are registered trademarks of E.I. du Pont de Nemours and Company.

Applications

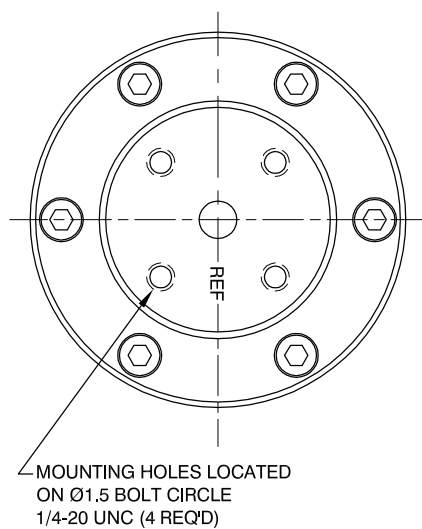
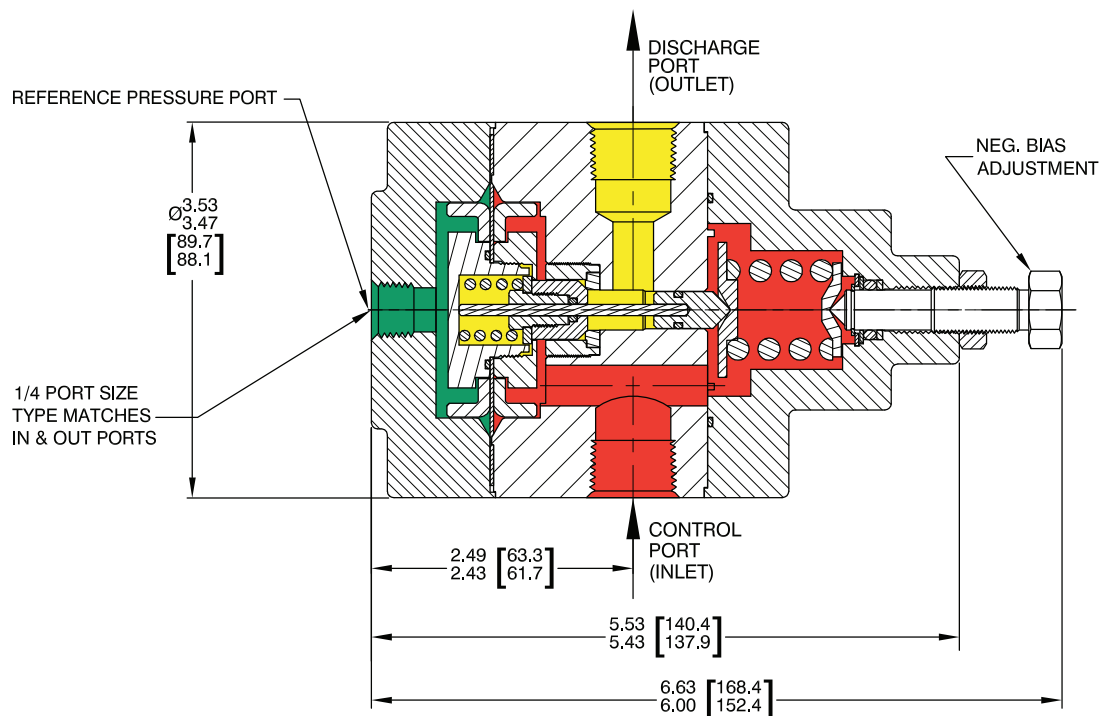
Constant bias applications:

- Offshore diving applications
- Dumping exhaled breath from pressure chamber (BIBS)
- Diving bell

Features and Benefits

- Balanced stem design eliminates the need to adjust bias over a wide range of operating pressures
- High flow capacity: $C_v = 2.0$
- Diaphragm sensed
- Low accumulation
- Mounts in any position
- Choice of Stainless Steel or Brass construction

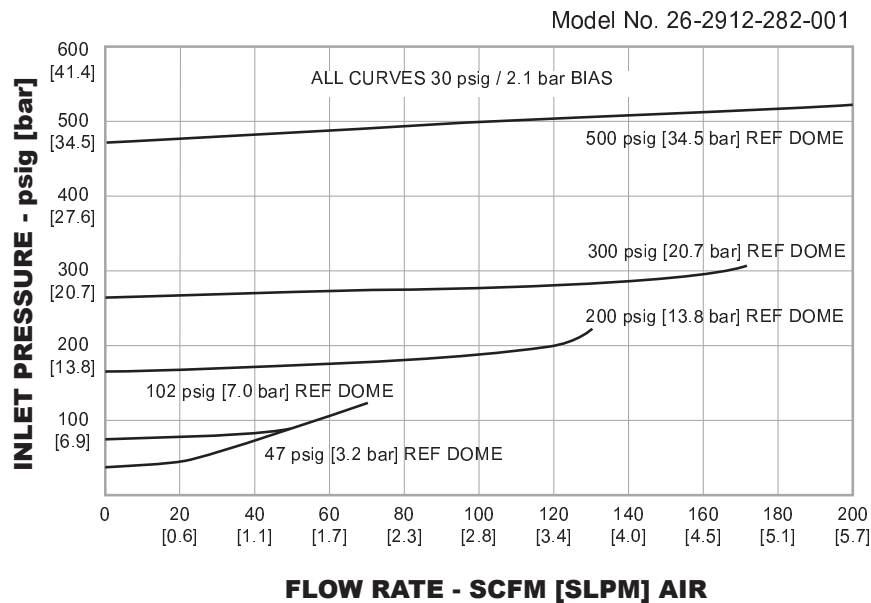
26-2900 Series Regulator Drawing



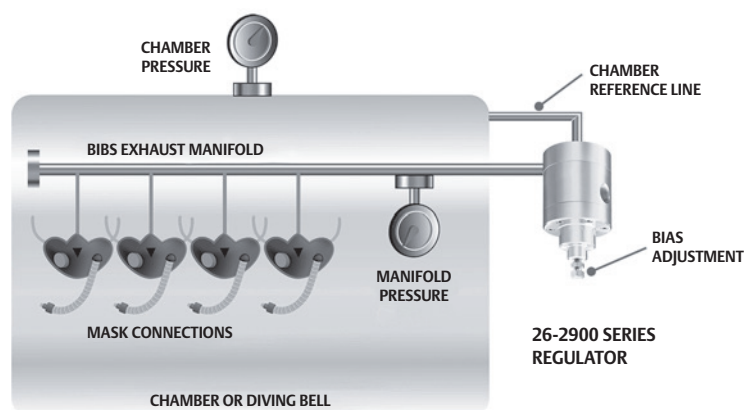
All dimensions are reference & nominal
Metric [millimeter] equivalents are in brackets

26-2900 Series Regulator Flow Chart

For more information on how to read flow curves, please refer to the Flow Curves and Calculations document (debul2007x012) in the TESCOM catalog or on www.tescom.com.



26-2900 Series Regulator Typical Installations



- Dumping exhaled breath out of a pressure chamber (BIBS)
- Constant bias applications such as offshore diving apparatus

26-2900 Series Regulator Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number:

26-29	1	2	-	2	8	2	A
BASIC SERIES	BODY MATERIAL	BIAS PRESSURE RANGE	INLET AND OUTLET PORT TYPE	INLET AND OUTLET PORT SIZE	BIAS MODE	FLOW CAPACITY	
26-29	1 – Brass 2 – 303 Stainless Steel	0 – Zero bias 1 – 0-15 psig / 0-1.0 bar 2 – 0-30 psig / 0-2.1 bar ¹ 0-25 psig / 0-1.7 bar ² 3 – 0-45 psig / 3.1 bar	1 – SAE 2 – NPTF 3 – MS33649 9 – BSP	8 – 1/2"	2 – Negative	A – C _v = 2.0	
		1. Inlet pressures 0-500 psig / 34.5 bar 2. Inlet pressures 500-1000 psig / 34.5-69.0 bar					

44-1700 Series

Regulators - Relief / Backpressure

D44171768X012

Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Maximum Inlet Pressure

800 psig / 55.2 bar

Controlled Pressure Ranges

40-150, 40-300, 100-700, 100-800 psig
2.8-10.3, 2.8-20.7, 6.9-48.3, 6.9-55.2 bar

Design Proof Pressure

150% maximum rated

Leakage

Bubble-tight

Operating Temperature

-15°F to 140°F / -26°C to 60°C

Flow Capacity

$C_v = 0.10$

MEDIA CONTACT MATERIALS

Body

316 Stainless Steel or Brass

Seat

CTFE

O-Ring

Viton®

Back-up Ring

Teflon®

Remaining Parts

Stainless Model: 316 Stainless Steel

Brass Model: Brass and 300 Series Stainless Steel

OTHER

Cleaning

CGA 4.1 and ASTM G93

Weight

2 lbs / 0.9 kg

Teflon® and Viton® are registered trademarks of E.I. du Pont de Nemours and Company.



TESCOM 44-1700 Series is a general purpose, compact backpressure regulator for control pressures up to 800 psig / 55.2 bar.

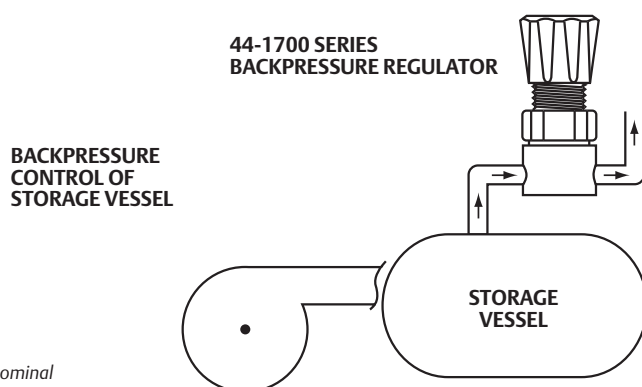
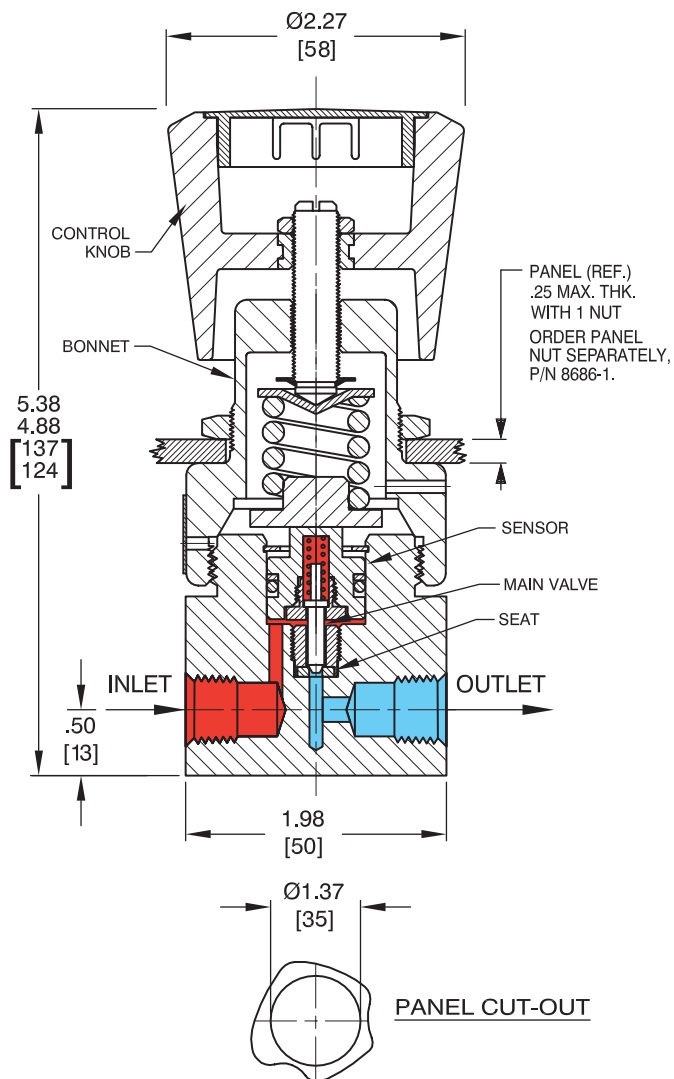
Application

- Industrial equipment for hydraulic or pneumatic service

Features and Benefits

- Economical, compact design
- Piston sensed design is safe and reliable
- Available in a Stainless Steel or Brass design
- Optional gauge ports and panel mounting
- Flow capacity $C_v = 0.10$
- Low handknob torque for easy operation
- Bubble-tight shutoff at all reseating pressures

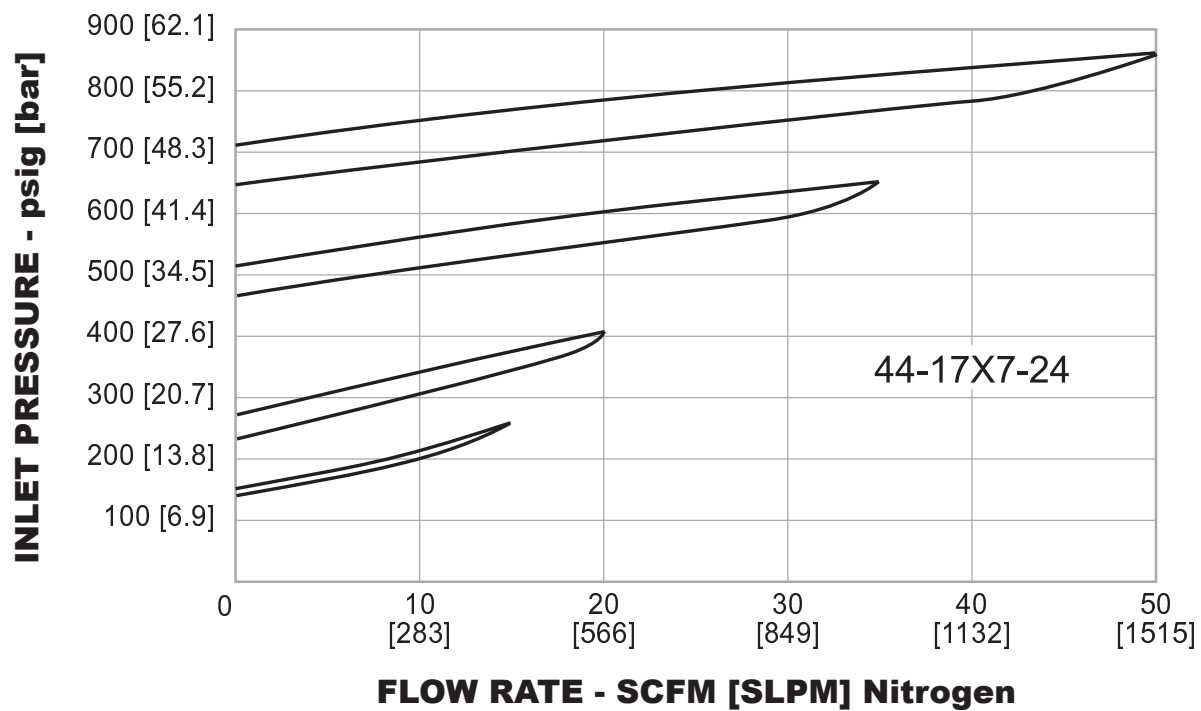
44-1700 Series Regulator Drawing



All dimensions are reference & nominal
Metric [millimeter] equivalents are in brackets

44-1700 Series Regulator Flow Chart

For more information on how to read flow curves, please refer to the Flow Curves and Calculations document (debul2007x012) in the TESCOM catalog or on www.tescom.com.



44-1700 Series Regulator Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number:

44-17

6

7

-

2

4

BASIC SERIES	BODY MATERIAL	INLET PRESSURE	INLET AND OUTLET PORT TYPE	INLET AND OUTLET PORT SIZE
44-17	1 – Brass 6 – 316 Stainless Steel	2 – 40-150 psig 2.8-10.3 bar 3 – 40-300 psig 2.8-20.7 bar 7 – 100-700 psig 6.9-48.3 bar 8 – 100-800 psig 6.9-55.2 bar	2 – NPTF	4 – 1/4"

44-2300 Series

Regulators - Relief / Backpressure

D44231774X012

Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Controlled Pressure Ranges

0-25, 0-50, 0-100, 0-250 psig
0-1.7, 0-3.4, 0-6.9, 0-17.2 bar

Design Proof Pressure

150% maximum rated

Leakage

Internal: Bubble-tight

External: Design to meet $< 2 \times 10^{-8}$ atm cc/sec He

Operating Temperature

-40°F to 140°F / -40°C to 60°C

Flow Capacity

$C_v = 0.08$

Maximum Operating Torque

30 in-lbs / 3.4 N•m

MEDIA CONTACT MATERIALS

Body

316 Stainless Steel, Brass, or Monel

Bonnet

300 Series Stainless Steel, Brass

Seat

CTFE

Diaphragm

316 Stainless Steel or Elgiloy®

Remaining Parts

316 Stainless Steel, Monel (for Monel body)

OTHER

Cleaning

CGA 4.1 and ASTM G93

Weight (without gauges)

2 lbs / 0.9 kg

Elgiloy® is a registered trademark of Elgiloy Corp.



TESCOM 44-2300 Series is a compact, lightweight, single-stage backpressure regulator for specialty, flammable, and industrial gas flows of less than 4 SCFM / 113 SLPM. Diffusion-resistant metal diaphragm seal ensures gas purity and integrity.

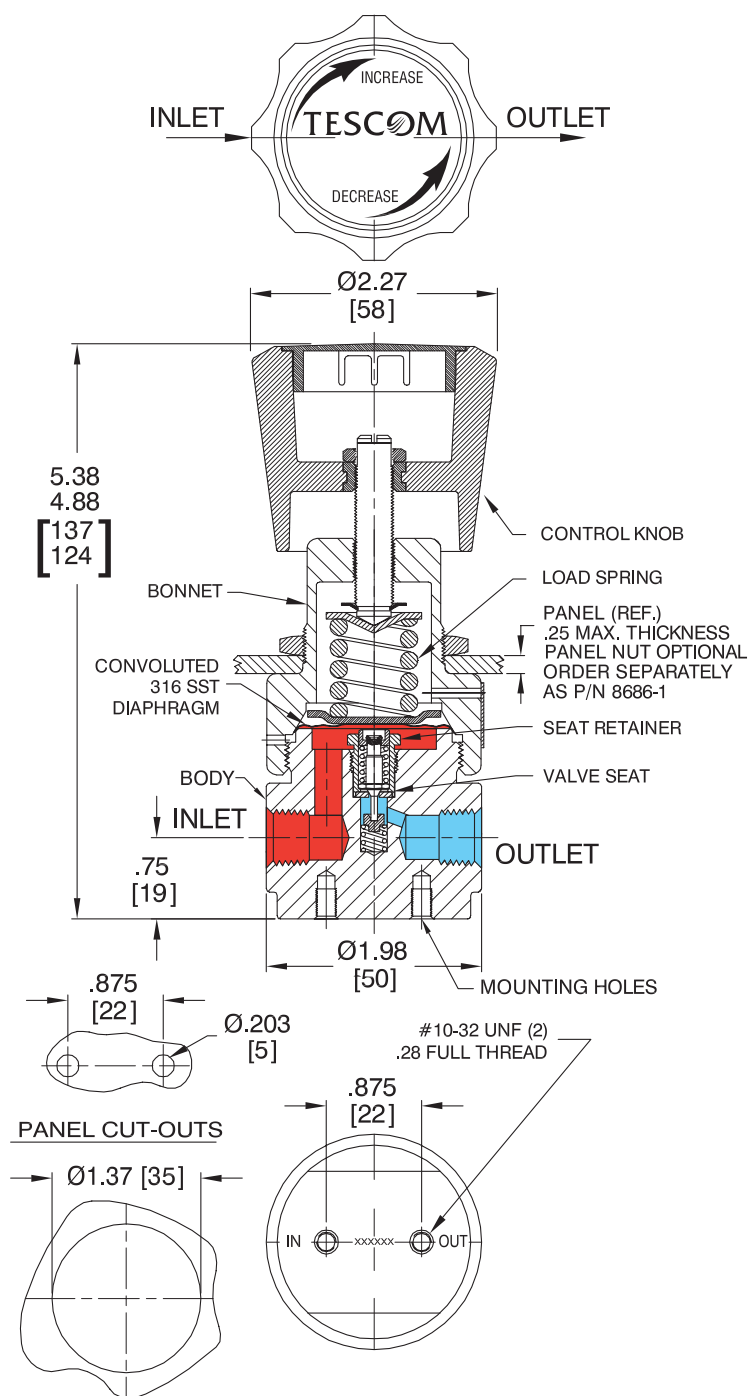
Applications

- Analytical systems
- Gas sampling
- Pilot plants
- OEM packages
- R & D laboratories

Features and Benefits

- Reduces contamination and provides accurate regulation of corrosive or non-corrosive gases
- Convuluted metal-to-metal sealed diaphragm
- Close pressure differential between crack and reseal
- Compact and economical
- Dome loading is optional
- Panel mounting is available

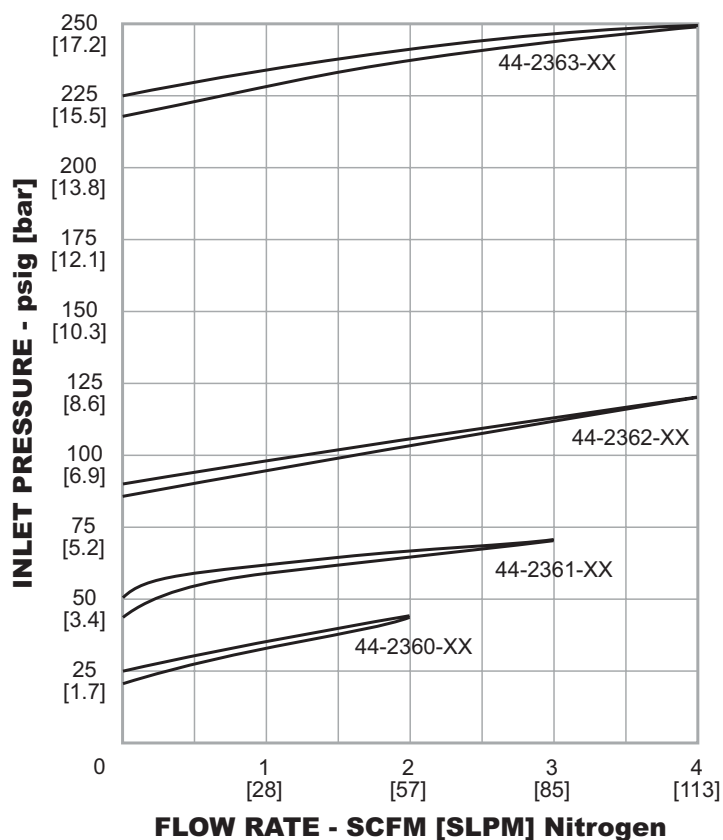
44-2300 Series Regulator Drawing



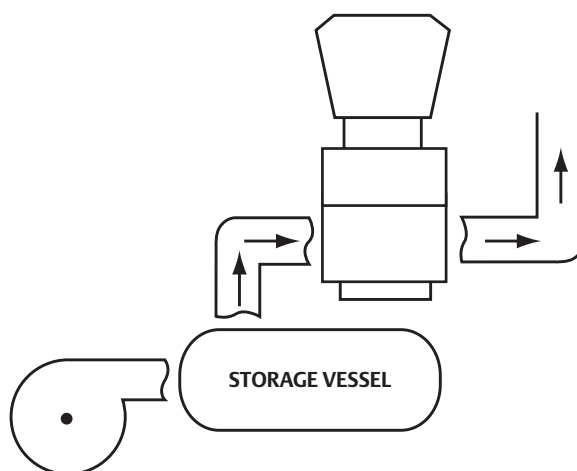
All dimensions are reference & nominal
Metric [millimeter] equivalents are in brackets

44-2300 Series Regulator Flow Chart

For more information on how to read flow curves, please refer to the Flow Curves and Calculations document (debul2007x012) in the TESCOM catalog or on www.tescom.com.



44-2300 Typical Application



44-2300 Series Regulator Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number:

44-23		6			3	-	2	4
BASIC SERIES	BODY MATERIAL	DIAPHRAGM	SPRING	REMAINING PARTS	CONTROLLED PRESSURE RANGES	INLET AND OUTLET PORT TYPE		INLET AND OUTLET PORT SIZE
44-23	1 – Brass	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel	0 – 0-25 psig 1.7 bar	2 – NPTF		4 – 1/4"
	6 – 316 Stainless Steel	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel	1 – 0-50 psig 3.4 bar			
	9 – Monel	Elgiloy®	Elgiloy®	Monel	2 – 0-100 psig 6.9 bar 3 – 0-250 psig 17.2 bar			

44-2500 Series

Regulators - Relief / Backpressure

D44251995X012

Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Controlled Pressure Ranges

0-25, 0-50, 0-100, 0-250 psig
0-1.7, 0-3.4, 0-6.9, 0-17.2 bar

Design Proof Pressure

150% maximum rated

Leakage

Internal: Bubble-tight

External: Design to meet $< 2 \times 10^{-8}$ atm cc/sec He

Operating Temperature

-15°F to 165°F / -26°C to 74°C

Flow Capacity

$C_v = 0.30$

Maximum Operating Torque

30 in-lbs / 3.4 N•m

MEDIA CONTACT MATERIALS

Body

316 Stainless Steel or Brass

Seat Retainer

PEEK

O-Ring

Viton®, Kalrez®

Diaphragm, Filter, Spring

316 Stainless Steel

Remaining Parts

316 Stainless Steel or Brass

OTHER

Cleaning

CGA 4.1 and ASTM G93

Weight (without gauges)

2 lbs / 0.9 kg

Viton® and Kalrez® are registered trademarks of E.I. du Pont de Nemours and Company.



TESCOM 44-2500 Series is a compact, lightweight, single-stage regulator for specialty, flammable, and industrial gases for flows up to 30 SCFM / 850 SLPM. Diffusion-resistant metal diaphragm seal ensures gas purity and integrity.

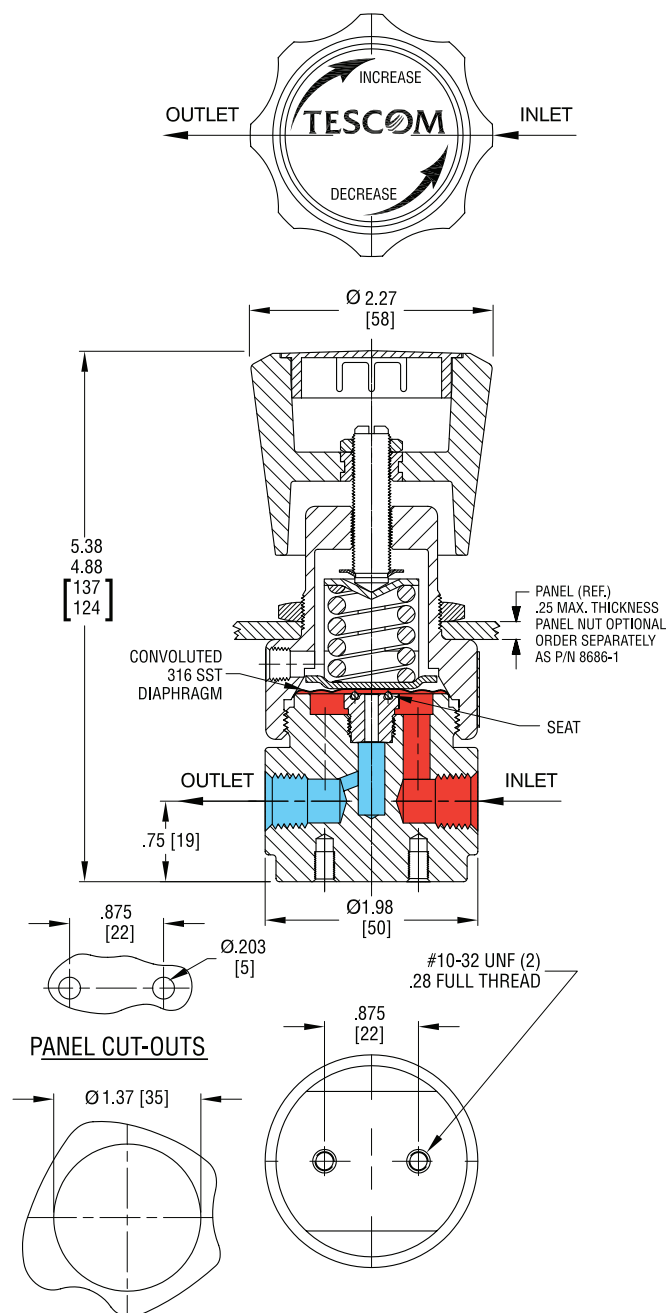
Application

- General purpose

Features and Benefits

- Reduces contamination and provides accurate regulation of non-corrosive and corrosive gases
- Convuluted metal-to-metal sealed diaphragm
- Close pressure differential between crack and reseal
- Economically priced
- Panel mounting is standard
- Bubble-tight shutoff at all reseating pressures
- Flow capacity $C_v = 0.30$

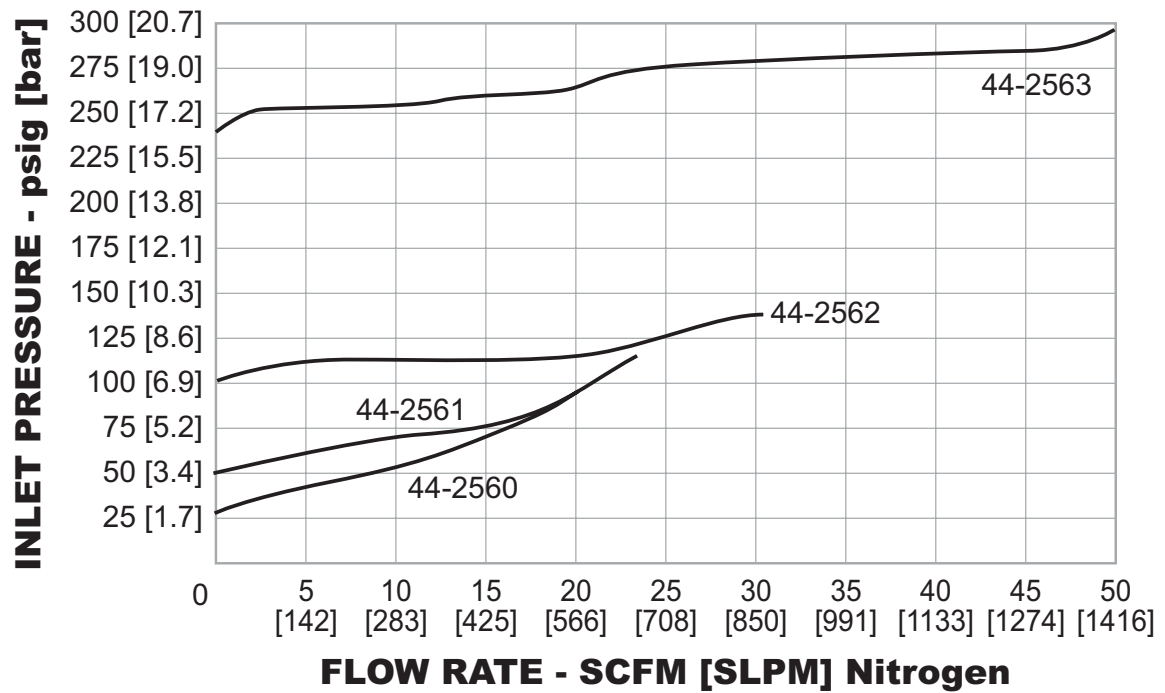
44-2500 Series Regulator Drawing



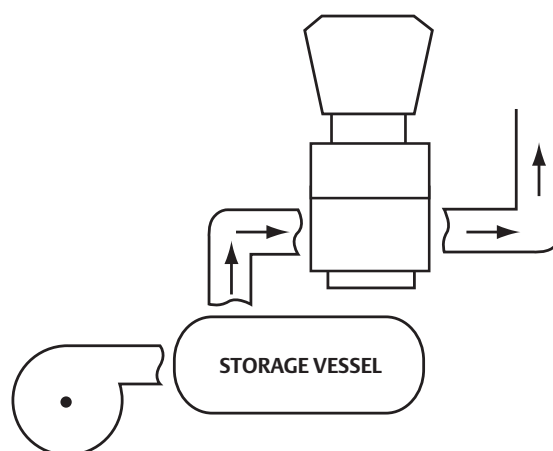
All dimensions are reference & nominal
Metric [millimeter] equivalents are in brackets

44-2500 Series Regulator Flow Chart

For more information on how to read flow curves, please refer to the Flow Curves and Calculations document (debul2007x012) in the TESCOM catalog or on www.tescom.com.




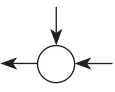
44-2500 Series Typical Application



44-2500 Series Regulator Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number:

44-25	6	2	T	2	4	A
BASIC SERIES	BODY MATERIAL	CONTROLLED PRESSURE RANGES	O-RING MATERIAL	INLET AND OUTLET PORT TYPE	INLET AND OUTLET PORT SIZE	GAUGE PORT OPTIONS
44-25	1 – Brass 6 – 316 Stainless Steel	0 – 0-25 psig 0-1.7 bar 1 – 0-50 psig 0-3.4 bar 2 – 0-100 psig 0-6.9 bar 3 – 0-250 psig 0-17.2 bar	T – Viton® K – Kalrez®	2 – NPTF	4 – 1/4"	A – No gauge ports  F – One inlet gauge at 90° 

44-2900 Series

Regulators - Relief / Backpressure

D44291996X012

Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Controlled Pressure Ranges

0-12, 0-25, 0-50, 0-100, 0-150 psig
0-0.83, 0-1.7, 0-3.4, 0-6.9, 0-10.3 bar

Design Proof Pressure

150% maximum rated

Leakage

Internal: Bubble-tight

External: Design to meet $< 2 \times 10^{-8}$ atm cc/sec He

Operating Temperature

-15°F to 165°F / -26°C to 74°C

Flow Capacity

$C_v = 0.3$

MEDIA CONTACT MATERIALS

Body

316 Stainless Steel

Seat Retainer

PEEK

O-Ring

Viton®, Kalrez®

Diaphragm, Spring

316 Stainless Steel

Remaining Parts

316 Stainless Steel

OTHER

Cleaning

CGA 4.1 and ASTM G93

Weight

3 lbs / 1.4 kg

Viton® and Kalrez® are registered trademarks of E.I. du Pont de Nemours and Company.



TESCOM 44-2900 Series backpressure regulator is designed to be compact, extremely sensitive and for industrial gases with flows up to 20 SCFM / 566 SLPM. The convoluted Stainless Steel diaphragm provides excellent sensitivity and repeatability; metal-to-metal diaphragm seal minimizes the potential for leakage.

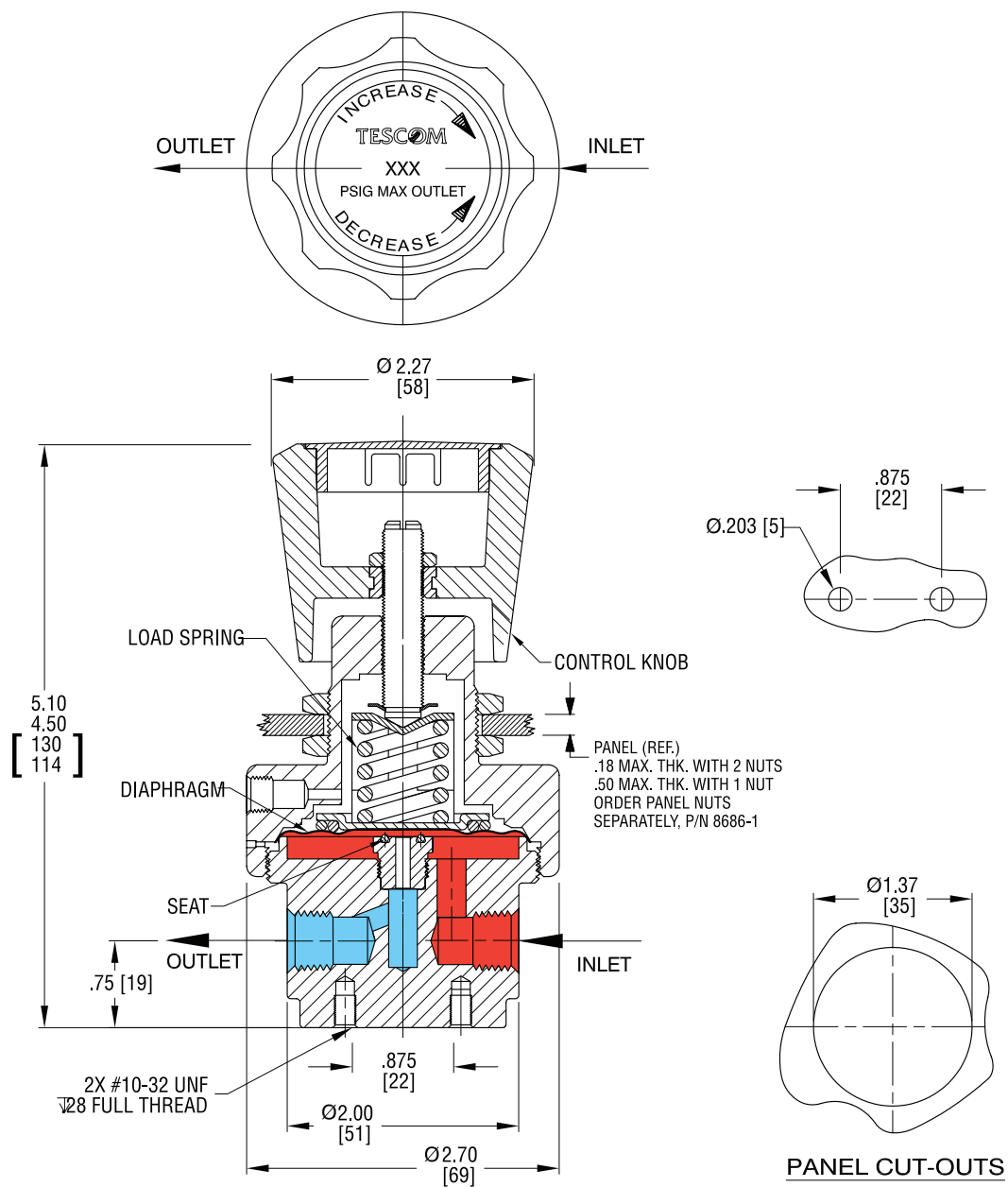
Applications

- R&D laboratories
- Process systems
- Pilot plants

Features and Benefits

- 316 Stainless Steel diaphragm provides metal-to-metal sealing integrity and good sensitivity
- Large sensing seat area ratio provides a low crack to reseal pressure differential and excellent repeatability
- Bubble-tight shutoff at all reseating pressures
- Flow capacity $C_v = 0.3$
- Panel mounting is standard
- Suitable for non-corrosive and corrosive gases

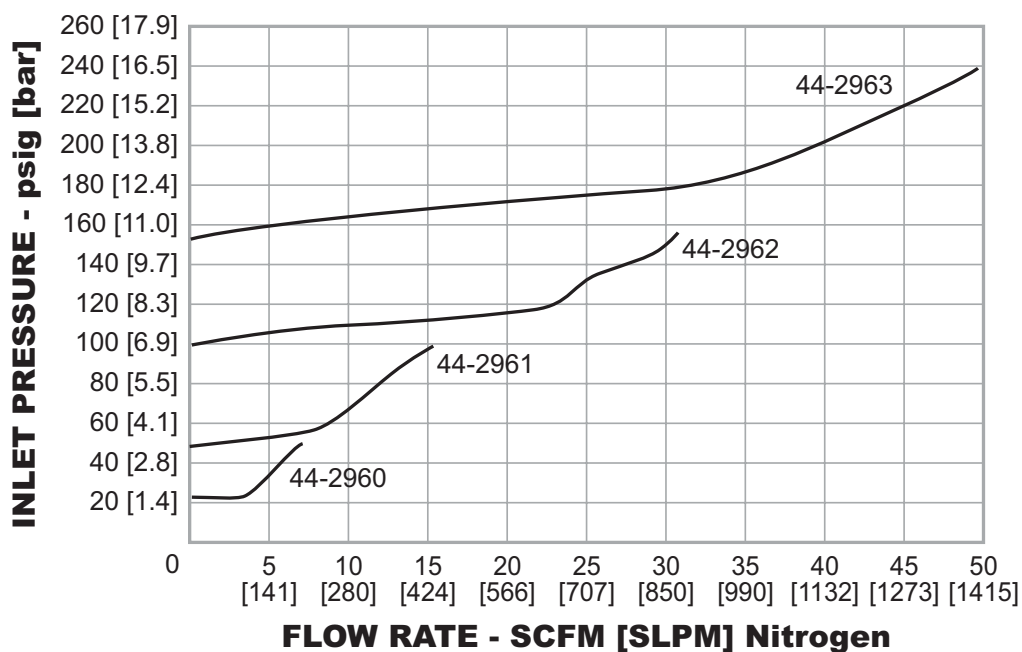
44-2900 Series Regulator Drawing



All dimensions are reference & nominal
Metric [millimeter] equivalents are in brackets

44-2900 Series Regulator Flow Chart



For more information on how to read flow curves, please refer to the Flow Curves and Calculations document (debul2007x012) in the TESCOM catalog or on www.tescom.com.



44-2900 Series Regulator Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number:

44-29	6	2	T	2	4	A
BASIC SERIES	BODY MATERIAL	CONTROLLED PRESSURE RANGES	O-RING MATERIAL	INLET AND OUTLET PORT TYPE	INLET AND OUTLET PORT SIZE	GAUGE PORT OPTIONS
44-29	6 – 316 Stainless Steel	0 – 0-25 psig 0-1.7 bar 1 – 0-50 psig 0-3.4 bar 2 – 0-100 psig 0-6.9bar 3 – 0-150 psig 0-10.3 bar L – 0-12 psig 0-0.83 bar	T – Viton® K – Kalrez®	2 –NPTF	4 – 1/4"	A – No gauge ports  F – 1 inlet gauge at 90° 

44-4700 Series

Regulators - Relief / Backpressure

D44471777X012

Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

*Pressure rating per criteria of ANSI/ASME B31.3***Maximum Inlet Pressure**

50 mm Hg absolute - 15 psig / 1 bar
 50 mm Hg absolute - 50 psig / 3.4 bar
 50 mm Hg absolute - 100 psig / 6.9 bar
 50 mm Hg absolute - 150 psig / 10.3 bar

Design Proof Pressure

150% maximum rated

Leakage**Internal:** Bubble-tight**External:** $\leq 2 \times 10^{-8}$ atm cc/sec He**Ambient Operating Temperature**

-40°F to 165°F / -40°C to 74°C

Flow Capacity $C_v = 0.04$ $C_v = 0.30$ (optional)**Maximum Operating Torque**

25 in-lbs / 2.8 N•m

MEDIA CONTACT MATERIALS

Body

316 Stainless Steel

Bonnet

Electroless Nickel Plated Brass

Seat

Teflon®

Spring Main Valve and Bias

316 Stainless Steel

Diaphragm

316 Stainless Steel

Remaining Parts

316 Stainless Steel

OTHER

Cleaning

CGA 4.1 and ASTM G93

Weight (without gauges)

2.75 lbs / 1.2 kg

Teflon® is a registered trademark of E.I du Pont de Nemours and Company.

TESCOM 44-4700 Series is an extremely sensitive, high purity, backpressure regulator for specialty, flammable and industrial gases for low pressure, and sub-atmospheric pressure control. Diffusion-resistant metal diaphragm seal ensures gas purity and leak integrity.

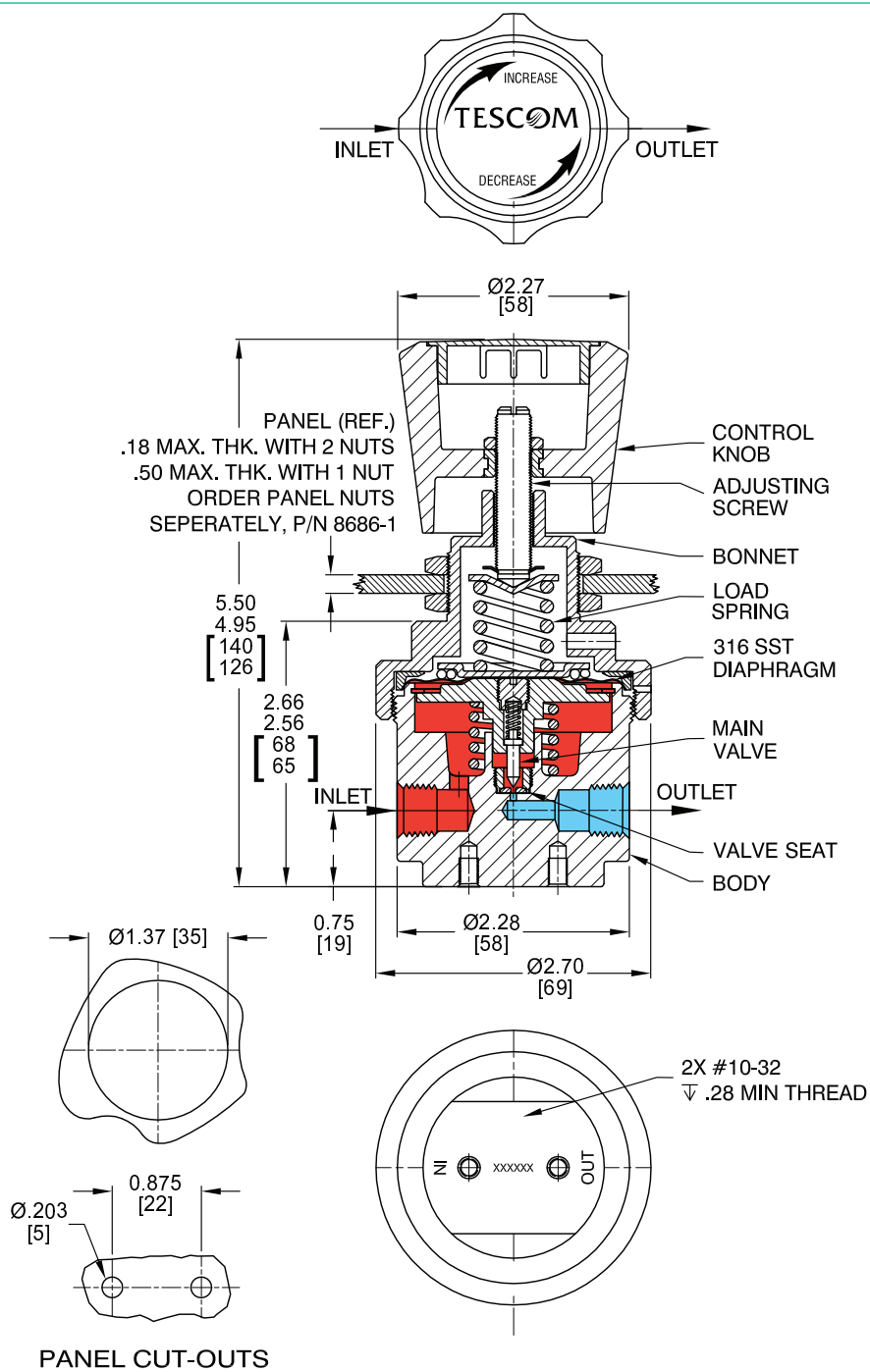
Applications

- Analytical systems
- Sample systems
- Pilot plants

Features and Benefits

- 316 Stainless Steel diaphragm provides metal-to-metal sealing integrity and good sensitivity
- Large sensing seat area ratio provides a low crack-to-reseat pressure differential and excellent repeatability
- Negative spring bias for vacuum systems
- Adjustable stop limits maximum outlet pressure
- NACE compliant designs are available

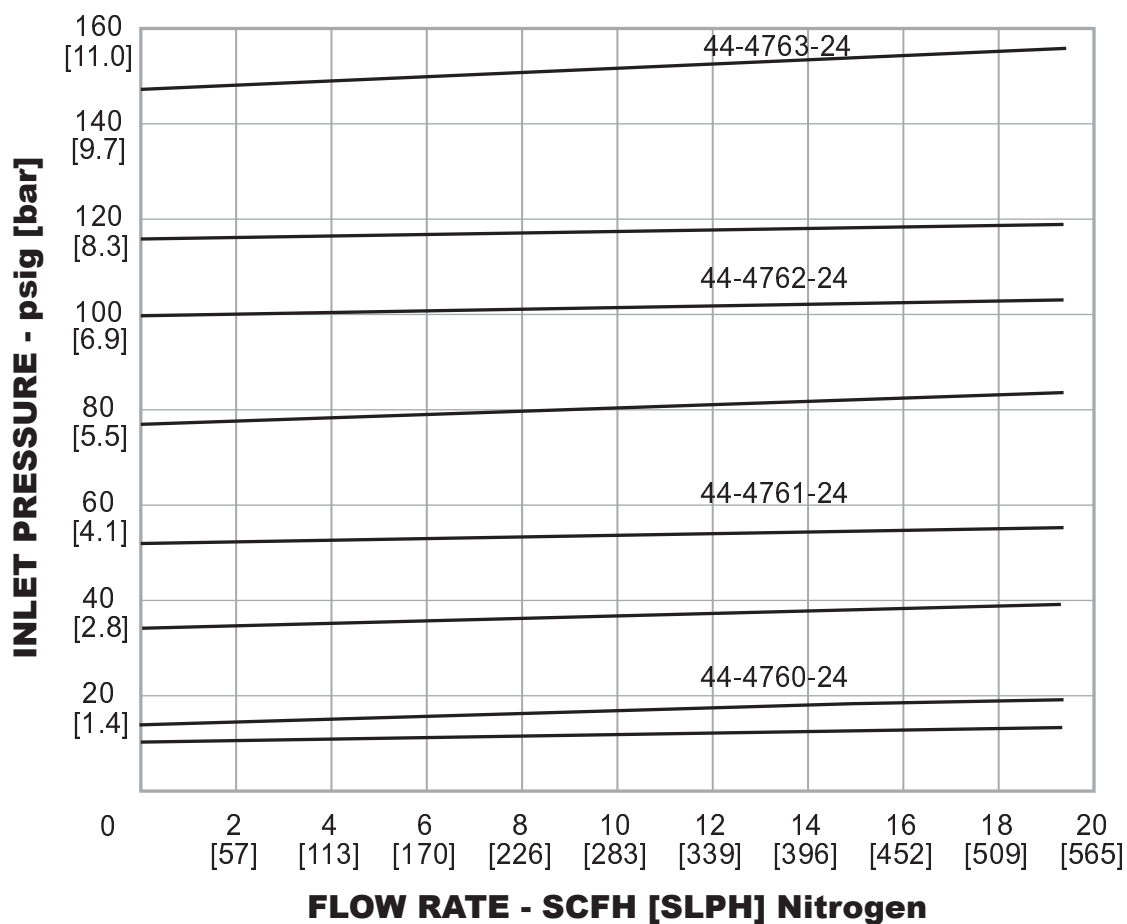
44-4700 Series Regulator Drawing



All dimensions are reference & nominal
Metric [millimeter] equivalents are in brackets

44-4700 Series Regulator Flow Chart

For more information on how to read flow curves, please refer to the Flow Curves and Calculations document (debul2007x012) in the TESCOM catalog or on www.tescom.com.



44-4700 Series Regulator Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number:

44-47	6	0	-	2	4
BASIC SERIES	BODY MATERIAL	INLET PRESSURE RANGES ¹	INLET AND OUTLET PORT TYPE	INLET AND OUTLET PORT SIZE	OPTIONS
44-47	6 – 316 Stainless Steel	0 – 50 mm Hg absolute - 15 psig / 1 bar 1 – 50 mm Hg absolute - 50 psig / 3.4 bar 2 – 50 mm Hg absolute - 100 psig / 6.9 bar 3 – 50 mm Hg absolute - 150 psig / 10.3 bar <div>1. 28" Hg = 50 mm Hg absolute</div>	1 – SAE 2 – NPTF 3 – MS33649 H – HPIC	4 – 1/4" 6 – 3/8"	-501 – $C_v = 0.30$

44-5500 Series

Regulators - Relief / Backpressure

D44551997X012

Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Controlled Pressure Ranges

0-50, 0-100, 0-300 psig
0-3.4, 0-6.9, 0-20.7 bar

Design Proof Pressure

150% maximum rated

Leakage

Bubble-tight

Ambient Operating Temperature

-15°F to 200°F / -26°C to 93°C

Flow Capacity

$C_v = 0.3$

MEDIA CONTACT MATERIALS

Body

316 Stainless Steel or Brass

Seat Retainer

PEEK

O-Ring

Viton®, Kalrez®

Remaining Parts

Stainless Model: Stainless Steel

Brass Model: Brass

OTHER

Cleaning

CGA 4.1 and ASTM G93

Weight (without gauges)

2 lbs / 0.9 kg

Viton® and Kalrez® are registered trademarks of E.I. du Pont Nemours and Company.



TESCOM 44-5500 Series general purpose, compact backpressure regulator controls pressures up to 300 psig / 20.7 bar and is suitable for gas or liquid service.

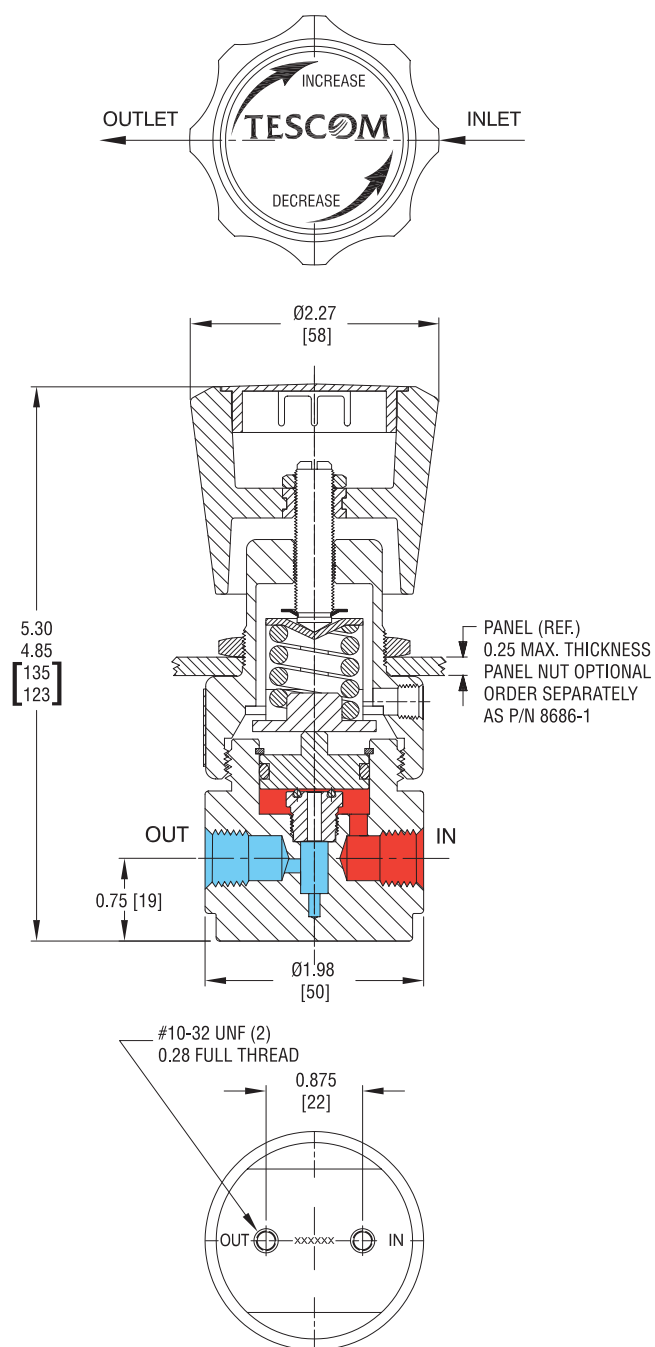
Applications

- General purpose
- Industrial equipment for hydraulic or pneumatic service
- Backpressure pump control

Features and Benefits

- Economical, compact design
- Piston sensed design is safe and reliable
- Choice of Stainless Steel or Brass construction
- $C_v = 0.3$
- Low handknob torque
- Bubble-tight shutoff at all reseating pressures
- Panel mounting is standard
- Optional gauge ports

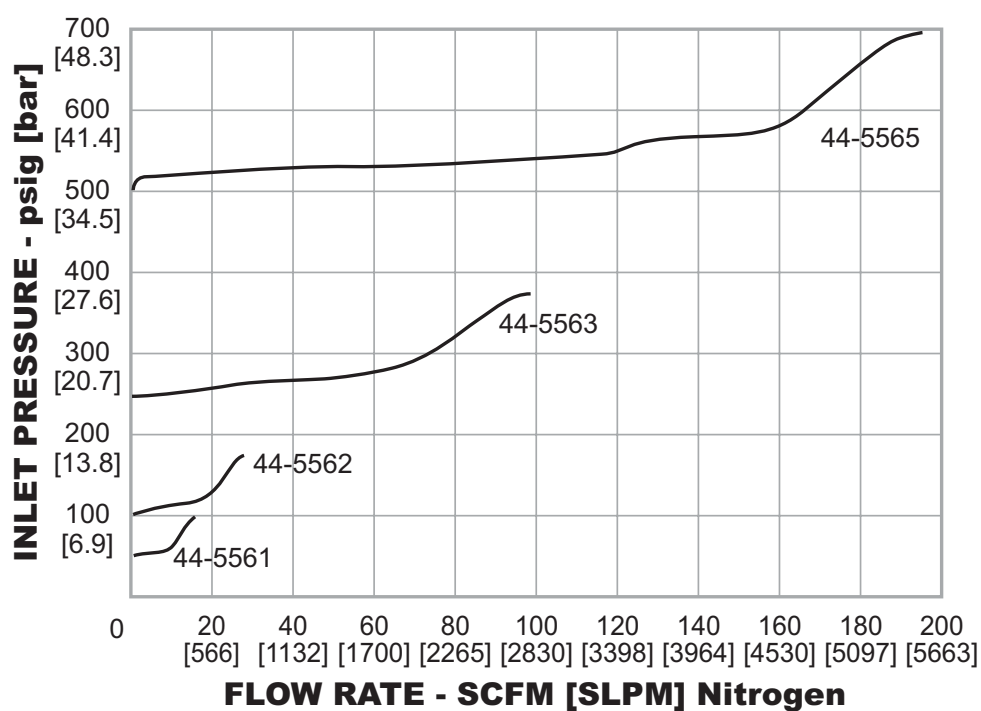
44-5500 Series Regulator Drawing



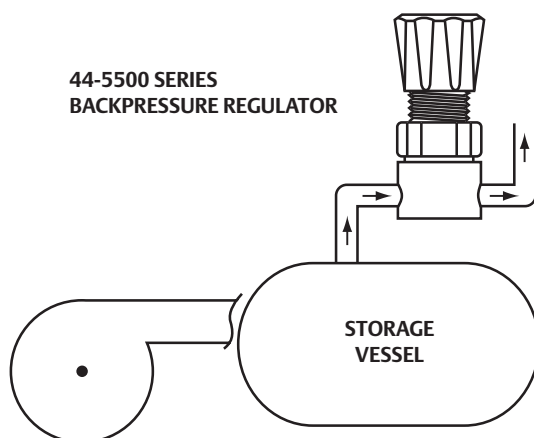
All dimensions are reference & nominal
Metric [millimeter] equivalents are in brackets

44-5500 Series Regulator Flow Chart

For more information on how to read flow curves, please refer to the Flow Curves and Calculations document (debul2007x012) in the TESCOM catalog or on www.tescom.com.




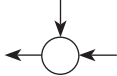
44-5500 Series Vessel Mounting



44-5500 Series Regulator Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number:

44-55	6	2	V	2	4	A
BASIC SERIES	BODY MATERIAL	CONTROLLED PRESSURE RANGES	O-RING MATERIAL	INLET AND OUTLET PORT TYPE	INLET AND OUTLET PORT SIZE	GAUGE PORT OPTIONS
44-55	1 – Brass 6 – 316 Stainless Steel	1 – 0-50 psig 0-3.4 bar 2 – 0-100 psig 0-6.9 bar 3 – 0-300 psig 0-20.7 bar	T – Viton® K – Kalrez®	2 – NPTF	4 – 1/4"	A – No gauge ports  F – 1 inlet gauge at 90° 

54-2100 Series

Regulators - Relief / Backpressure

D54211635X012

Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Maximum Inlet Pressure

15,000 psig / 1034 bar

Controlled Pressure Ranges

0-500, 0-800, 10-1500, 15-2500, 25-4000, 50-6000, 200-10,000,
300-15,000 psig
0-34.5, 0-55.2, 0.69-103, 1.0-172, 1.7-276, 3.4-414, 13.8-690,
20.7-1034 bar

Design Proof Pressure

150% maximum rated

Leakage

Maximum 2 drops/minute at 150 SUS at 2500 psig / 172 bar

Ambient Operating Temperature¹

-15°F to 165°F / -26°C to 74°C

Flow Capacity $C_v = 0.08$ **Maximum Operating Torque**

40 in-lbs / 4.5 N•m

MEDIA CONTACT MATERIALS

Body

316 Stainless Steel

Seat and Poppet

17-4 Stainless Steel

O-Ring

See Part Number Selector

Back-up Ring**Inlet Pressure Ranges**

2500-10,000 psig / 172-690 bar: Teflon®

15,000 psig / 1034 bar: CTFE

Valve Seal

Vespel®

Sensor Seal**Inlet Pressure Ranges**

500-10,000 psig / 34.5-690 bar: CTFE

15,000 psig / 1034 bar: Vespel®

Remaining Parts

300 Series Stainless Steel

OTHER

Cleaning

CGA 4.1 and ASTM G93

Weight

5 lbs / 2.3 kg

¹ For extended temperatures from -40°F to 400°F / -40°C to 204°C, consult TESCOM.

Teflon®, Viton®, Kalrez®, and Vespel® are registered trademarks of E.I. du Pont de Nemours and Company.



AIR LOADED



SPRING LOADED



DOME LOADED

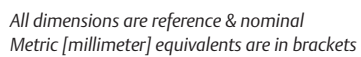
TESCOM 54-2100 Series backpressure regulator is suitable for 15,000 psig / 1034 bar liquid applications. Modifications are also available for 20,000 psig / 1379 bar and 30,000 psig / 2068 bar. Hardened Stainless Steel seat and stem provide excellent wear resistance in harsh applications.

Applications

- Pump discharge pressure control
- Chemical injection
- Burst testing

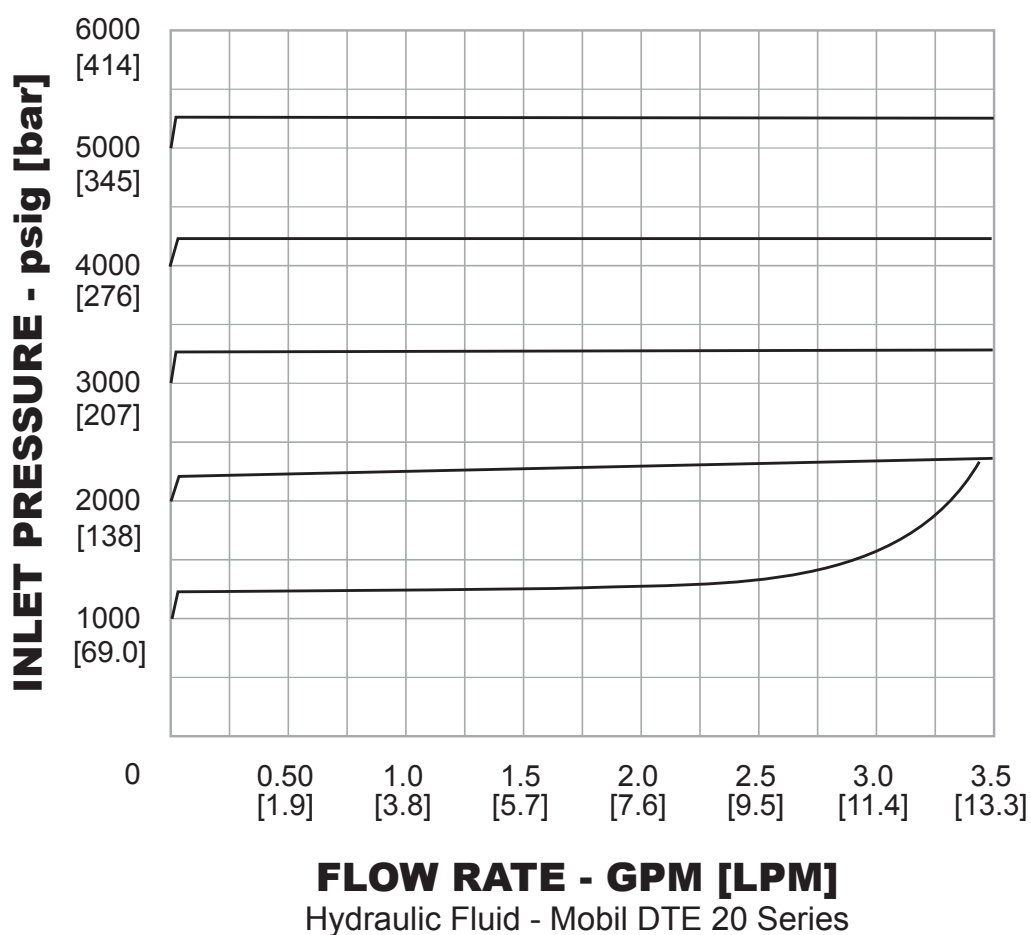
Features and Benefits

- Accuracy $\pm 1\%$ of control pressure range
- Easily adjusted, low torque handknob control, dome and air loaded versions are available
- Hardened Stainless Steel seats
- Safe and reliable piston-style sensor
- Panel mounting is standard
- Compatible with TESCOM's air actuator and ER3000 Electropneumatic Controllers



54-2100 Series Regulator Flow Chart

For more information on how to read flow curves, please refer to the Flow Curves and Calculations document (debul2007x012) in the TESCOM catalog or on www.tescom.com.



54-2100 Series Regulator Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number:

54-21	6	1	D			2	4	
BASIC SERIES	BODY MATERIAL	INLET PRESSURE	SOFT GOODS MATERIAL			INLET AND OUTLET PORT TYPE	INLET AND OUTLET PORT SIZE	LOADING
			DYNAMIC	STATIC	SEAT			
54-21	6 – 316 Stainless Steel	0 – 300-15,000 psig 20.7-1034 bar ¹ (Spring only) 1 – 200-10,000 psig 13.8-690 bar ² 2 – 50-6000 psig 3.4-414 bar (Spring and Air only) 3 – 25-4000 psig 1.7-276 bar (Spring only) 4 – 15-2500 psig 1.0-172 bar (Spring and Air only) 5 – 10-1500 psig 0.69-103 bar (Spring and Air only) 6 – 0-800 psig 0-55.2 bar (Spring only) 7 – 0-500 psig 0-34.5 bar (Spring and Dome only)	D – Buna-N T – Viton® V – Kalrez® Z – Ethylene Propylene	Buna-N Viton® Kalrez® Ethylene Propylene	17-4 Stainless Steel 17-4 Stainless Steel 17-4 Stainless Steel 17-4 Stainless Steel	1 – SAE 2 – NPTF 3 – MS33649 4 – High Pressure/Amico 6 – Medium Pressure/Slimline	4 – 1/4" 6 – 3/8" 8 – 1/2" (NPTF/SAE/MS33649 only) 9 – 9/16" (MP/HP only) 12 – 3/4" (MP only)	– Spring (no letter required) H – Dome A – Air ³
			For extended temperatures of soft goods material, please consult TESCOM.			1. Available with 1/4" and 3/8" high pressure, 1/4" and 3/8" medium pressure, 1/4" NPTF only 2. Not to be used with 3/8" SAE or 3/8" MS33649 ports 3. 80 psig / 5.5 bar minimum loading pressure needed		

54-2300 Series

Regulators - Relief / Backpressure

D54231641X012

Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Maximum Inlet Pressure

Spring and Dome Loaded: 5000 psig / 345 bar

Air Actuated: 10,000 psig / 690 bar

Control Pressure Ranges

1000, 1500, 2500, 3500, 5000 and 10,000 psig

69.0, 103, 172, 241, 345 and 690 bar

Design Proof Pressure

150% of maximum rated

Leakage

2 drops/min at 150 S.U.S. at 2500 psig / 172 bar

Operating Temperature (media)¹

-40°F to 165°F / -40°C to 74°C

Flow Capacity

$C_v = 1.6$

MEDIA CONTACT MATERIALS

Body

303 or 316 Stainless Steel

Seat, Poppet and Sensor

17-4 PH Stainless Steel

O-Rings

Buna-N, Viton®, Ethylene Propylene or Polyurethane

Back-up Rings

PTFE

Bonnet (Spring load only)

303 Stainless Steel

Remaining Parts

300 Stainless Steel

OTHER

Cleaning

CGA 4.1 and ASTM G93

Weight

Spring and Dome Loaded: 15 lbs / 6.8 kg

Air Actuated: 30 lbs / 13.6 kg

1. Operating temperature range dependent on o-ring material.

Teflon® and Viton® are registered trademarks of E.I. du Pont de Nemours and Company.



TESCOM 54-2300 Series backpressure hydraulic regulator is capable of flows from 5-50 GPM and is available in air load for use with the TESCOM ER3000 Electropneumatic Controller.

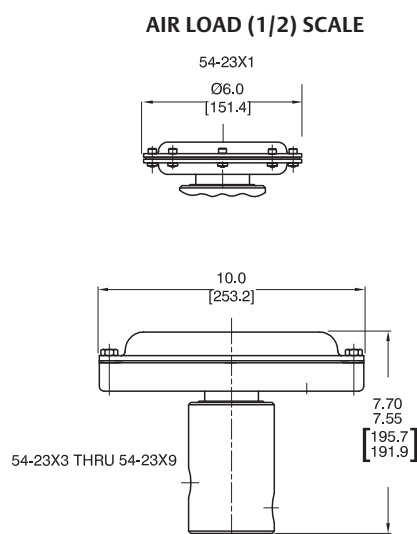
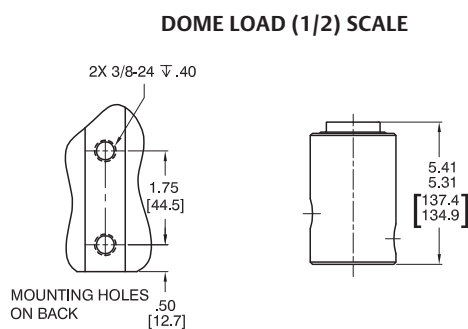
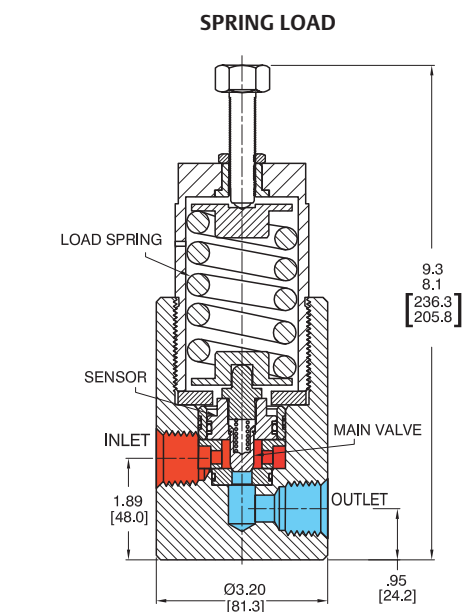
Applications

- Hydraulic test stands
- Process control

Features and Benefits

- Wear rings available for non-lubricating media
- Control pressure up to 10,000 psig / 690 bar
- Flow Capacity $C_v = 1.6$
- Excellent crack-to-reseat ratio
- Hardened metal-to-metal seats for heavy duty service
- Choice of spring, dome and air actuated loading
- Standard side mounting holes

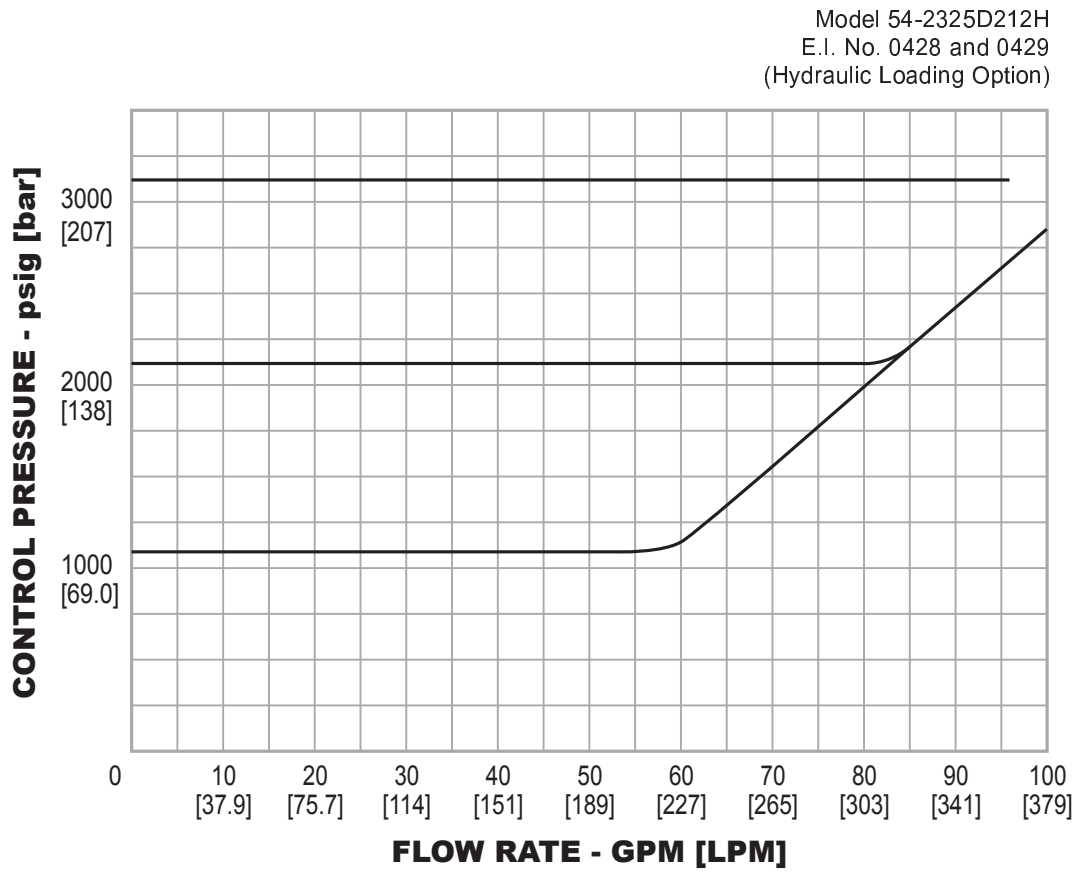
54-2300 Series Regulator Drawing



All dimensions are reference & nominal
Metric [millimeter] equivalents are in brackets

54-2300 Series Regulator Flow Chart

For more information on how to read flow curves, please refer to the Flow Curves and Calculations document (debul2007x012) in the TESCOM catalog or on www.tescom.com.



54-2300 Series Regulator Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number:

54-23	2	1	T				2	12	S
BASIC SERIES	BODY MATERIAL	CONTROL PRESSURE RANGES	SOFT GOODS MATERIAL				PORT TYPE	PORT SIZE	LOADING METHOD
			O-RINGS DYNAMIC	STATIC	SEAT	TEMPERATURE (MEDIA ONLY)			
54-23	2 – 303 Stainless Steel	0 – 20-1000 psig 1.4-69.0 bar (spring only)	D – Buna-N	Buna-N	17-4 Stainless Steel	-40°F to 165°F -40°C to 74°C	1 – SAE 2 – NPTF	8 – 1/2" 12 – 3/4"	S – Spring H – Dome A – Air
	6 – 316 Stainless Steel	1 – 20-1500 psig 1.4-103 bar (spring and air only)	T – Viton®	Viton®	17-4 Stainless Steel	-15°F to 300°F -26°C to 149°C			
		3 – 50-3500 psig 3.4-241 bar (spring only) 50-2500 psig 3.4-172 bar (air only 30:1*)	U – Polyurethane	Polyurethane	17-4 Stainless Steel	-15°F to 125°F -26°C to 52°C			
		5 – 200-5000 psig 13.8-345 bar (spring and dome 1:1 and air 75:1)	Z – Ethylene Propylene	Ethylene Propylene	17-4 Stainless Steel	-40°F to 225°F -40°C to 107°C			
		9 – 250-10,000 psig 17.2-690 bar (air only 125:1*)							
							*Ratio is for reference only.		

54-2700 Series

Regulators - Relief / Backpressure

D54271905X012

Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Maximum Inlet Pressure**Air Loaded:** 500 psig / 34.5 bar**Dome Loaded:** 5500 psig / 379 bar**Spring Loaded:** 500 psig / 34.5 bar**Design Proof Pressure**

150% of maximum operating

Maximum Air Operator Pressure

100 psig / 6.9 bar

Operating Temperature¹

-40°F to 165°F / -40°C to 74°C

Internal Leakage

Bubble-tight

Flow Capacity (main valve) $C_v = 5.0$

MEDIA CONTACT MATERIALS

Body

303 and 316 Stainless Steel

Seat

Glass Filled Peek, Vespel® SP1

O-Rings

Buna-N, Viton®, Ethylene Propylene

Back-up Rings

Teflon®

Remaining Parts

303 Stainless Steel

OTHER

Cleaning

CGA 4.1 and ASTM G93

Weight (approximately)

30 lbs / 13.6 kg

¹. Operating temperature range dependent on O-ring material.

Teflon®, Viton® and Vespel® are registered trademarks of E.I. du Pont de Nemours and Company.



SPRING LOADED

TESCOM 54-2700 Series high flow backpressure regulator. The soft seat allows for hydraulic or pneumatic service. Optional with air load for use with the TESCOM ER3000 Electropneumatic Controller.

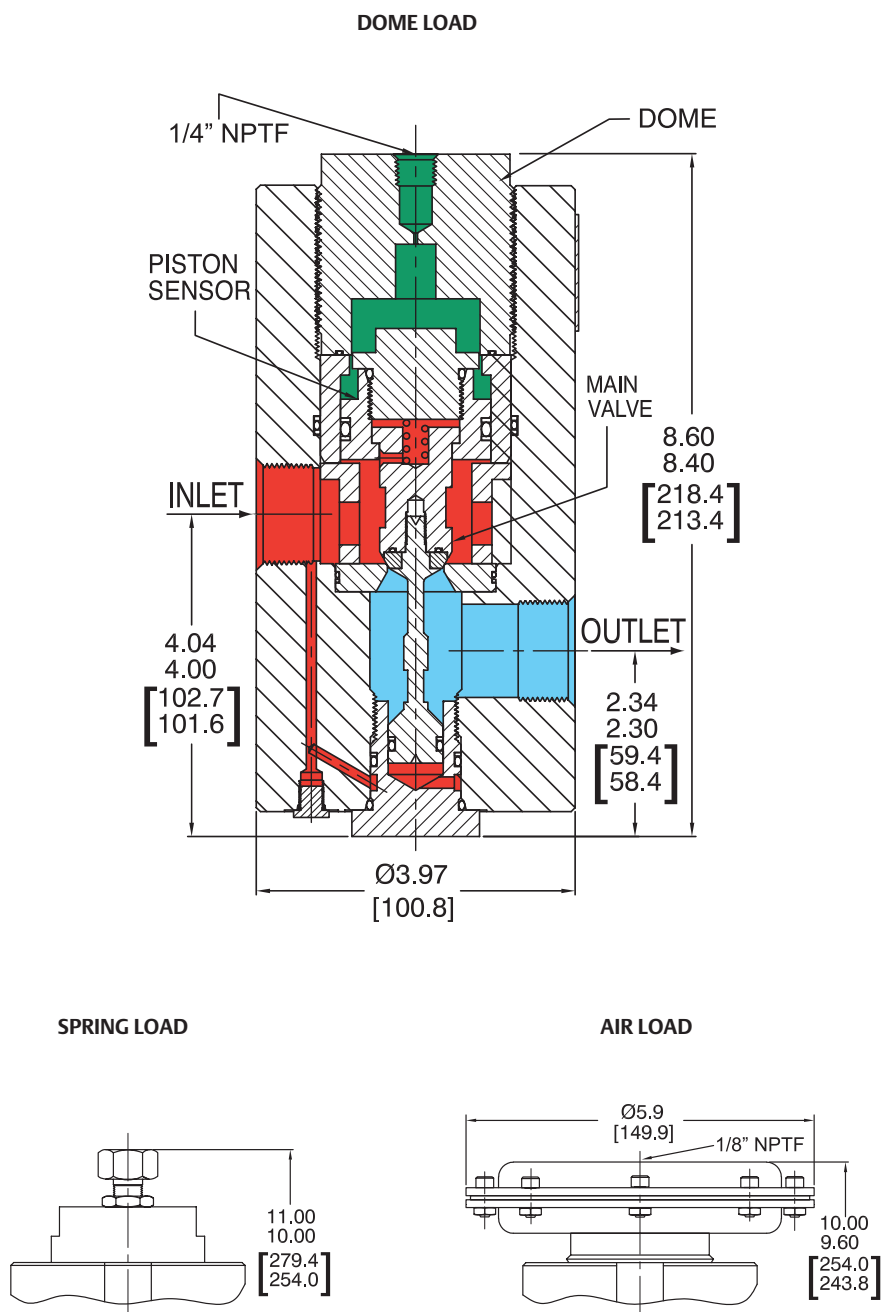
Applications

- Process control
- High flow pump discharge control
- Hydraulic test stands

Features and Benefits

- Available in air, dome, and spring loaded versions
- Compatible with TESCOM ER3000 Electropneumatic Controller (air load only)
- High flow: $C_v = 5.0$
- 500 or 5500 psig / 34.5 or 379 bar maximum controlled pressure range

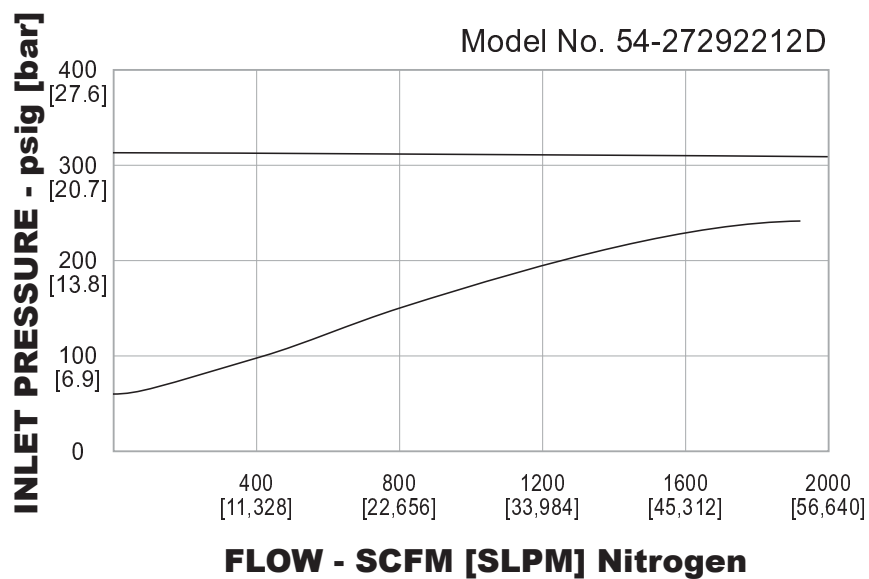
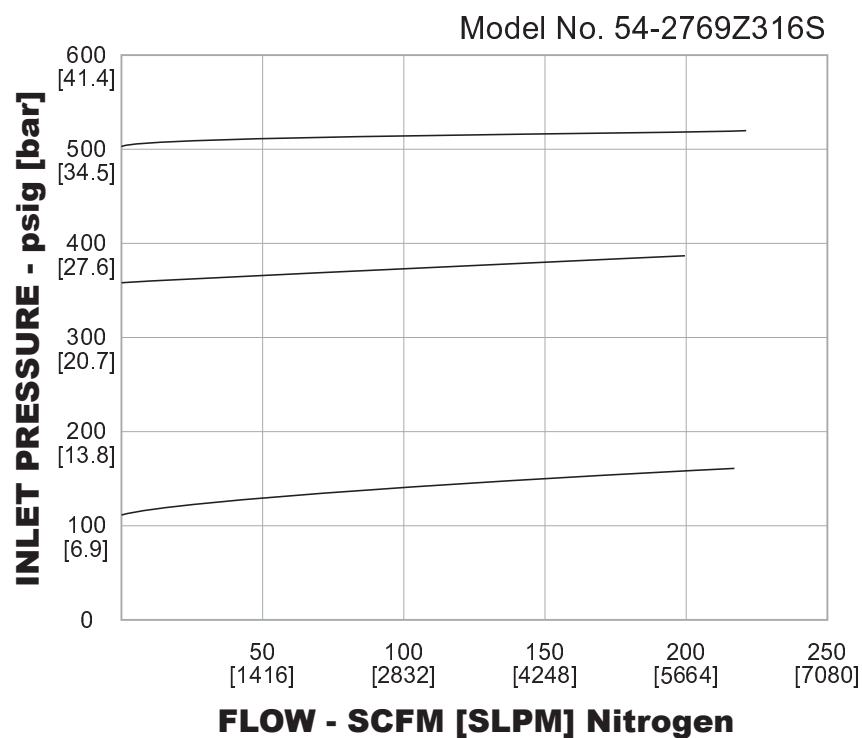
54-2700 Series Regulator Drawing



All dimensions are reference & nominal
Metric [millimeter] equivalents are in brackets

54-2700 Series Regulator Flow Charts

For more information on how to read flow curves, please refer to the Flow Curves and Calculations document (debul2007x012) in the TESCOM catalog or on www.tescom.com.



54-2700 Series Regulator Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number:

54-27	2	9	Z			2	16	A
BASIC SERIES	BODY MATERIAL	CONTROL PRESSURE	SOFT GOODS MATERIAL			INLET AND OUTLET PORT TYPE	PORT SIZE	LOADING OPTIONS
			O-RINGS	SEAT	TEMPERATURE			
54-27	2 – 303 Stainless Steel	9 – 500 psig / 34.5 bar (5500 psig / 379 bar for dome load only)	T – Viton®	Glass Filled Peek	-15°F to 300°F -26°C to 149°C	1 – SAE* 2 – NPTF 3 – MS33649	16 – 1"	A – Air D – Dome S – Spring
	6 – 316 Stainless Steel		Z – Ethylene Propylene	Glass Filled Peek	-40°F to 250°F -40°C to 121°C			
			D – Buna-N	Glass Filled Peek	-40°F to 165°F -40°C to 74°C			
			V – Viton®	Vespel® SP1	-15°F to 300°F -26°C to 149°C			

*Body diameter is 4.50"

54-3500 Series

Regulators - Relief / Backpressure

D543510148XEN2

Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

*Pressure rating per criteria of ANSI/ASME B31.3***Maximum Controllable Inlet Pressure**

10.000 psig / 690 bar

Design Proof Pressure

150% maximum rated

Leakage

Internal & external: Bubble-tight

Operating Temperature

-15°F to 140°F / -26 °C to 60 °C

Flow Capacity $C_v = 0.08$

MEDIA CONTACT MATERIALS

Body

316L Stainless Steel

Bonnet

300 Series Stainless Steel

Seat

CTFE, Vespel® SP-1, PEEK, 17-4 hardened Stainless Steel

Remaining Parts

300 Series Stainless Steel

Inlet & Outlet Port Type

NPTF and Medium Pressure

Inlet and Outlet Port Size

1/4", 3/8"

Weight

6 lbs / 2.7 kg

Teflon®, Kalrez®, Vespel® and Viton® are registered trademarks of E.I du Pont de Nemours and Company.

TESCOM 54-3500 two-stage hydraulic back pressure regulator reduces the controlled inlet pressure in 2 steps. The integrated second stage is self loading and adjusts itself to 50% of the inlet pressure, regardless if the unit is spring, air or dome loaded. This reduction of differential pressure per stage significantly reduces the destructive force of erosion and cavitation. A wide range of soft goods and valve trim materials, including ceramic option, allow for media specific regulator selection.

Applications

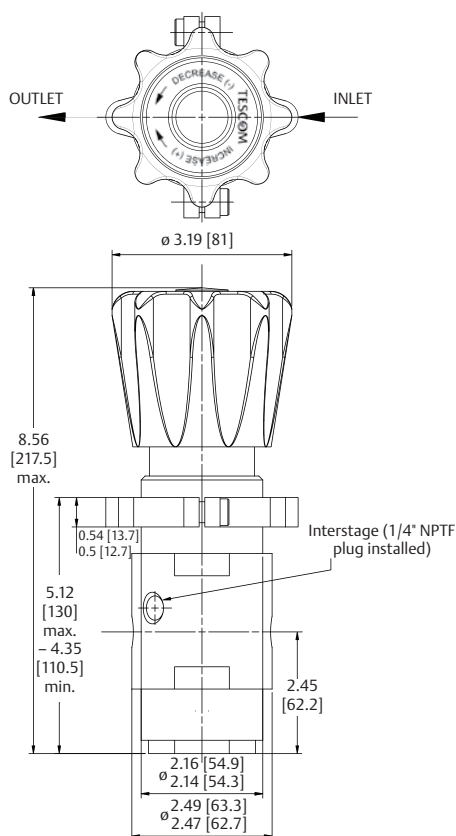
- High Pressure Hydraulic test benches
- Injection Valve Manufacturing & Testing
- Supercritical media applications
- Chemical injection

Features and Benefits

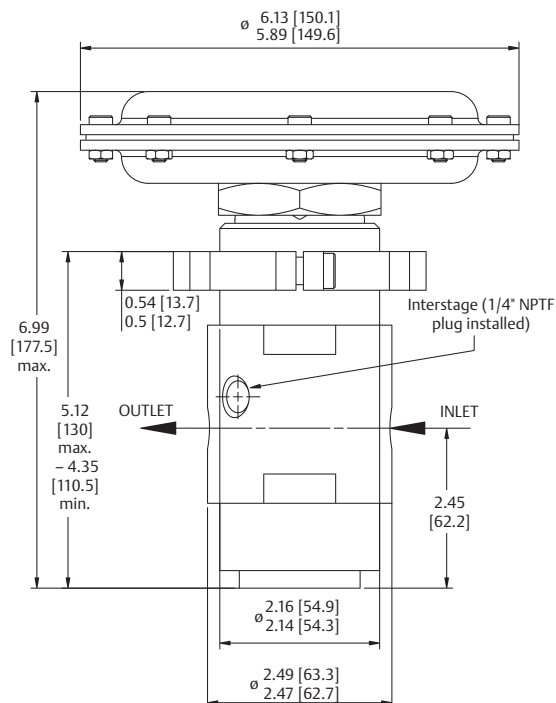
- Longer lifetime than single stage solutions by reduced erosion and cavitation
- Lower cost of ownership
- Proven Tescom valve trim modules with many options available

54-3500 Series Regulator Drawing

54-3500 Spring Loaded



54-3500 Air Loaded



All dimensions are reference & nominal
Metric [millimeter] equivalents are in brackets

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number :

A = Air Loaded
D = Dome Loaded
S = Spring Loaded

54-35 6 1 T 2 4 A 1 5 0

BASIC SERIES	MATERIAL	INLET PRESSURE	SOFT GOODS MATERIAL		INLET OUTLET PORT TYPE	INLET OUTLET PORT SIZE	FLOW CAPACITY	SEAT MATERIAL	GAUGE PORT OPTIONS	MOD
			O-RING	BACK-UP RING						
54-35	6 – Stainless Steel	1 – 200 - 10000 psig 14 - 690 bar 2 – 50 - 6000 psig 3.4 - 414 bar	B - BUNA-A T - Viton® U - Urethane V - Kalrez® Z - EP	Teflon® Teflon® Teflon® Teflon® Teflon®	2 – NPTF 6 – Medium Pressure	4 – 1/4" 6 – 3/8"	1 – Cv = 0.08	0 – CTFE 5 – 17-4 Stainless Steel 7 – Vespel® SP-1 8 – PEEK	0 – NONE 	001 – Ceramic Stem

BB-3 Series

Regulators - Relief / Backpressure

DBB031790X012

Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Inlet Pressure Ranges

See Part Number Selector

Design Proof Pressure

150% of maximum pressure

Operating Temperature¹

-15°F to 140°F / -26°C to 60°C

Flow Capacity

C_v = 0.2

Internal Leakage

Bubble-tight

MEDIA CONTACT MATERIALS

Body

Nickel-plated Aluminum or 316 Stainless Steel

Seat

Tefzel®, CTFE, PTFE or Vespel®

O-Rings

Ethylene Propylene, Buna-N, Viton® or Kalrez®

Remaining Parts

300 Series Stainless Steel or Aluminum

OTHER

Cleaning

CGA 4.1 and ASTM G93

Connections

1/4" NPTF or SAE inlet and outlet ports

Weight

Aluminum: 0.5 lbs / 0.2 kg

Stainless Steel: 1 lbs / 0.5 kg

1. For extended temperatures from -40°F to 204°F / -40°C to 96°C, consult TESCOM.

Viton®, Vespel®, Kalrez® and Tefzel® are registered trademarks of E.I. du Pont de Nemours and Company.



TESCOM BB-3 is a high pressure, low flow, miniature backpressure regulator. Six control pressure ranges are available up to 1200 psig / 83 bar outlet. This regulator can be used for hydraulic or pneumatic service and is small and compact, weighing approximately 4 oz / 0.11 kg in the standard Aluminum construction (316 Stainless Steel also available).

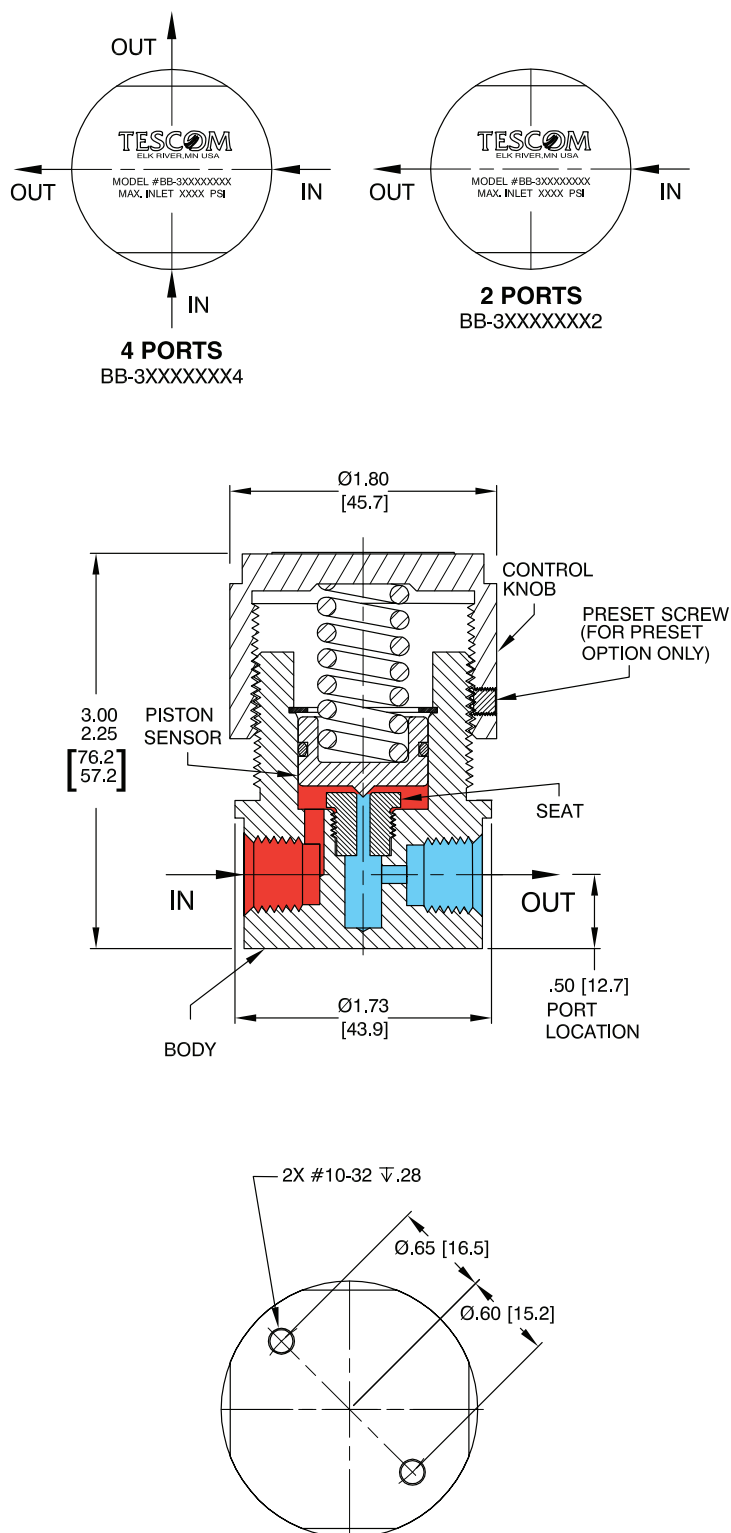
Applications

- Portable equipment
- OEM equipment

Features and Benefits

- Economical and extremely compact
- Durable piston sensor design
- High flow capacity
- High temperature version (up to 204°F / 96°C)
- Close pressure differential between crack and reseal
- Bubble-tight shutoff at all reseating pressures
- Six control pressure ranges

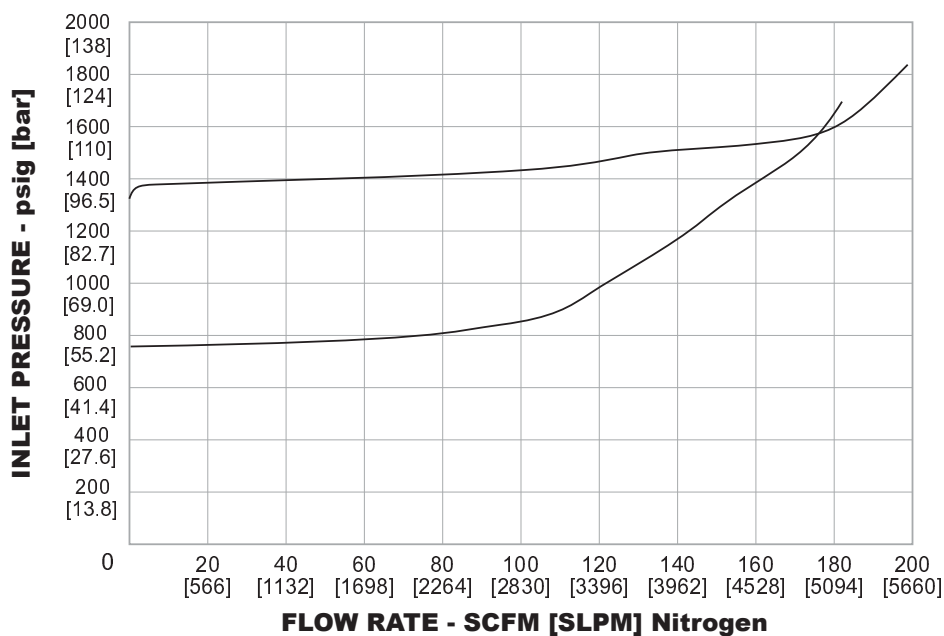
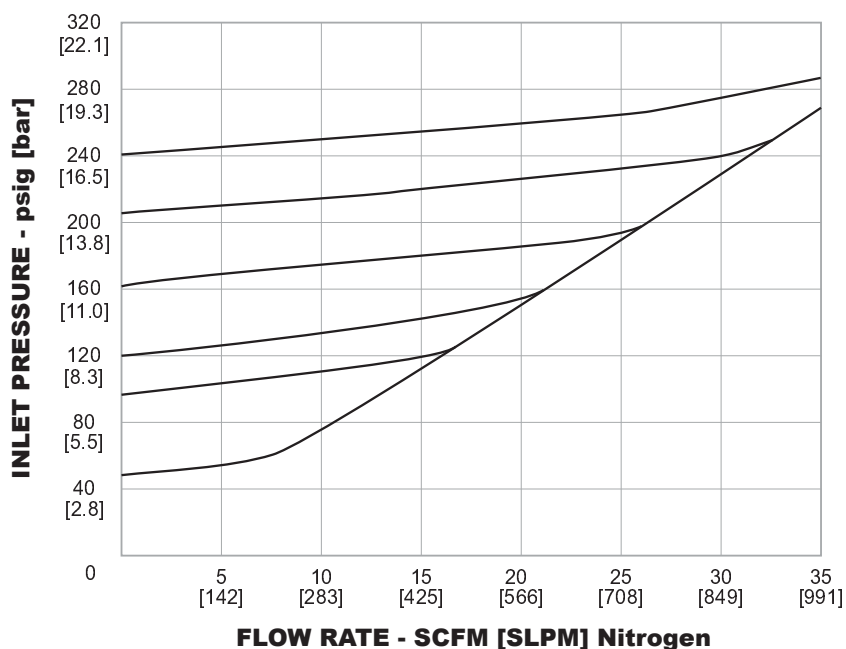
BB-3 Series Regulator Drawing



All dimensions are reference & nominal
Metric [millimeter] equivalents are in brackets

BB-3 Series Regulator Flow Charts

For more information on how to read flow curves, please refer to the Flow Curves and Calculations document (debul2007x012) in the TESCOM catalog or on www.tescom.com.



BB-3 Series Regulator Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number:

BB -	3	3	A	L1		K	E	A4	
BASIC SERIES	FUNCTION	BODY MATERIAL	LOAD TYPE	INLET PRESSURE RANGES		SEAT MATERIAL	O-RING SEAL	PORTING	NUMBER OF PORTS
				ADJUSTABLE	PRESET				
BB	3 – Backpressure	3 – Nickel-plated Aluminum (Spring Load only) 6 – 316 Stainless Steel	A – Adjustable P – Preset D – Dome Load (250 psig / 17.2 bar* maximum reference pressure)	L1 – 0-80 psig	0-80 psig	A – Tefzel® K – CTFE V – Vespel® T – PTFE (250 psig / 17.2 bar maximum inlet pressure)	E – Ethylene Propylene N – Buna-N S – Special V – Viton® K – Kalrez®	A4 – 1/4" NPTF B4 – 1/4" SAE B2 – 1/4" SAE A2 – 1/4" NPTF	4 4 2 2
				0-5.5 bar	0-5.5 bar				
				L2 – 0-140 psig	80-140 psig				
				0-9.7 bar	5.5-9.7 bar				
				L3 – 0-220 psig	140-220 psig				
				0-15.2 bar	9.7-15.2 bar				
				H1 – 0-700 psig	220-700 psig				
				0-48.3 bar	15.2-48.3 bar				
				H2 – 0-1200 psig	700-1200 psig				
				0-82.7 bar	48.3-82.7 bar				
				D1 – 0-250 psig	Dome Load Only				
				0-17.2 bar*					

*3000 psig / 207 bar available, please consult factory.

DV Series

Regulators - Relief / Backpressure

DDVXX1800X012

Specifications

For other materials or modifications, please consult TESCOM.

OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

Controlled Pressure Range

760 - 50 mm Hg absolute

Design Proof Pressure

150% of maximum operating

Leakage

Bubble-tight

Operating Temperatures¹**Buna-N:** -40°F to 165°F / -40°C to 74°C**Ethylene Propylene:** -40°F to 250°F / -40°C to 121°C**Viton®:** -15°F to 165°F / -26°C to 74°C**Flow Capacity** $C_v = 0.25$ **Maximum Operating Torque**

15 in-lbs / 1.7 N•m

MEDIA CONTACT MATERIALS

Body

Brass or Nickel-plated Aluminum

Diaphragm

Buna-N, Ethylene Propylene, Viton®

O-Ring

Buna-N, Ethylene Propylene, Viton®

Remaining Parts

300 Series Stainless Steel and Brass

OTHER

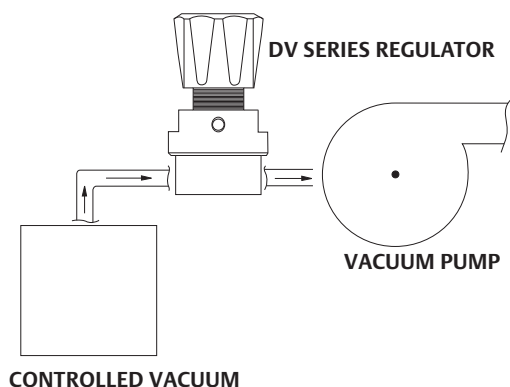
Cleaning

CGA 4.1 and ASTM G93

Weight (without gauges)**Brass:** 2.4 lbs / 1.1 kg**Aluminum:** 1 lb / 0.5 kg¹. For extended temperatures from -40°F to 400°F / -40°C to 204°C, consult Tescom.

Viton® is a registered trademark of E.I. du Pont de Nemours and Company.

DV Series Typical Application



TESCOM DV Series is a compact, lightweight, diaphragm regulator that offers vacuum control up to 0.1% accuracy. Optional constant bleed feature allows for pressure adjustment in both directions.

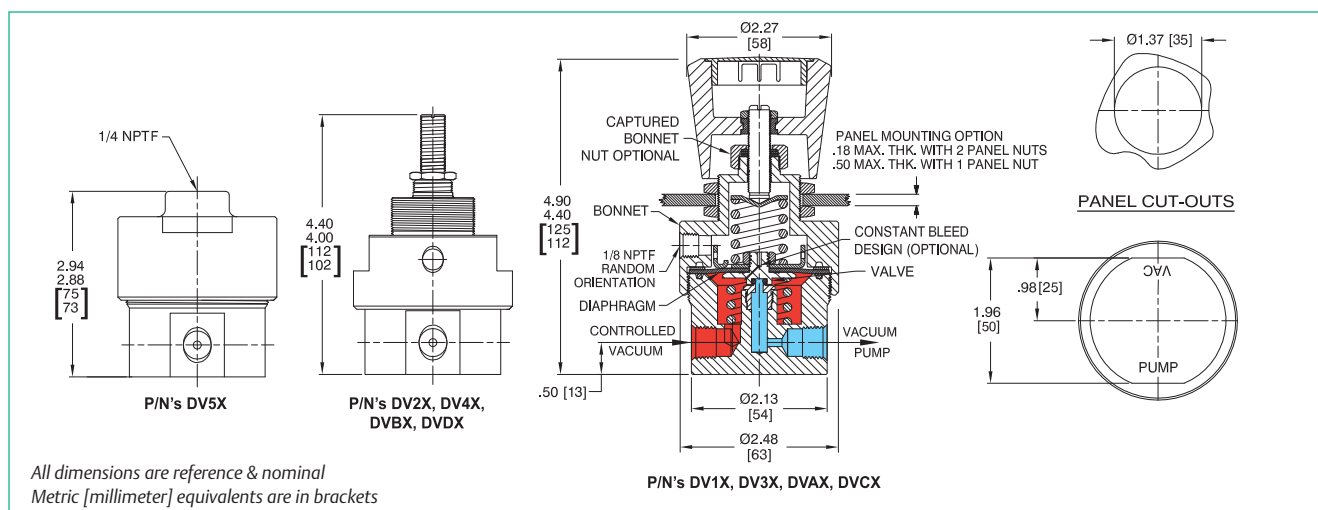
Applications

- Instrumentation testing
- Calibration equipment

Features and Benefits

- Controls sub-atmospheric pressure
- Excellent repeatability
- Accurate diaphragm-type regulation $\pm 0.1\%$ full scale accuracy
- High sensitivity of 10 mm Hg absolute achieved with constant bleed option
- Easy maintenance
- Low operating handknob torque
- Captured bonnet and panel mounting options are available

DV Series Regulator Drawing



DV Series Regulator Part Number Selector

Repair Kits, Accessories & Modifications may be available for this product. Please contact TESCOM for more information.

Example for selecting a part number:

BASIC SERIES	FUNCTION / LOAD TYPE	BODY MATERIAL	CONTROLLED VACUUM PRESSURE ¹	VALVE PARTS	DIAPHRAGM AND O-RING MATERIAL	MOUNTING	PORTING CONFIGURATION (1/4" NPTF GAUGE PORTS)	INLET AND OUTLET GAUGE PORTS TYPE AND SIZE
DV	Standard Vacuum NO BLEED 1 – Handknob adjust 2 – Screwdriver adjust 3 – Captured bonnet Hand adjust 4 – Captured bonnet Screw adjust 5 – Dome loaded Standard Vacuum CONSTANT BLEED A – Handknob adjust B – Screwdriver adjust C – Captured bonnet Hand adjust D – Captured bonnet Screw adjust	1 – Brass 3 – Aluminum	5 – 760 - 50 mm Hg absolute CONSTANT BLEED 5 – 760 - 100 mm Hg absolute	B – Brass	B – Buna-N E – Ethylene Propylene V – Viton®	9 – None P – Panel Mounting	A – No gauge ports PUMP VACUUM B – Gauge ports at 60° PUMP VACUUM F – In gauge at 90° PUMP VACUUM G – In gauge at 90° PUMP VACUUM L – Gauge ports at 90° PUMP VACUUM	B – 1/4" SAE E – 1/8" NPTF F – 1/4" NPTF J – 1/4" MS33649 9 – None
1. 28" Hg = 50 mm Hg absolute								