

# 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 Temperature<sup>1</sup>

-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



DOMES 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.

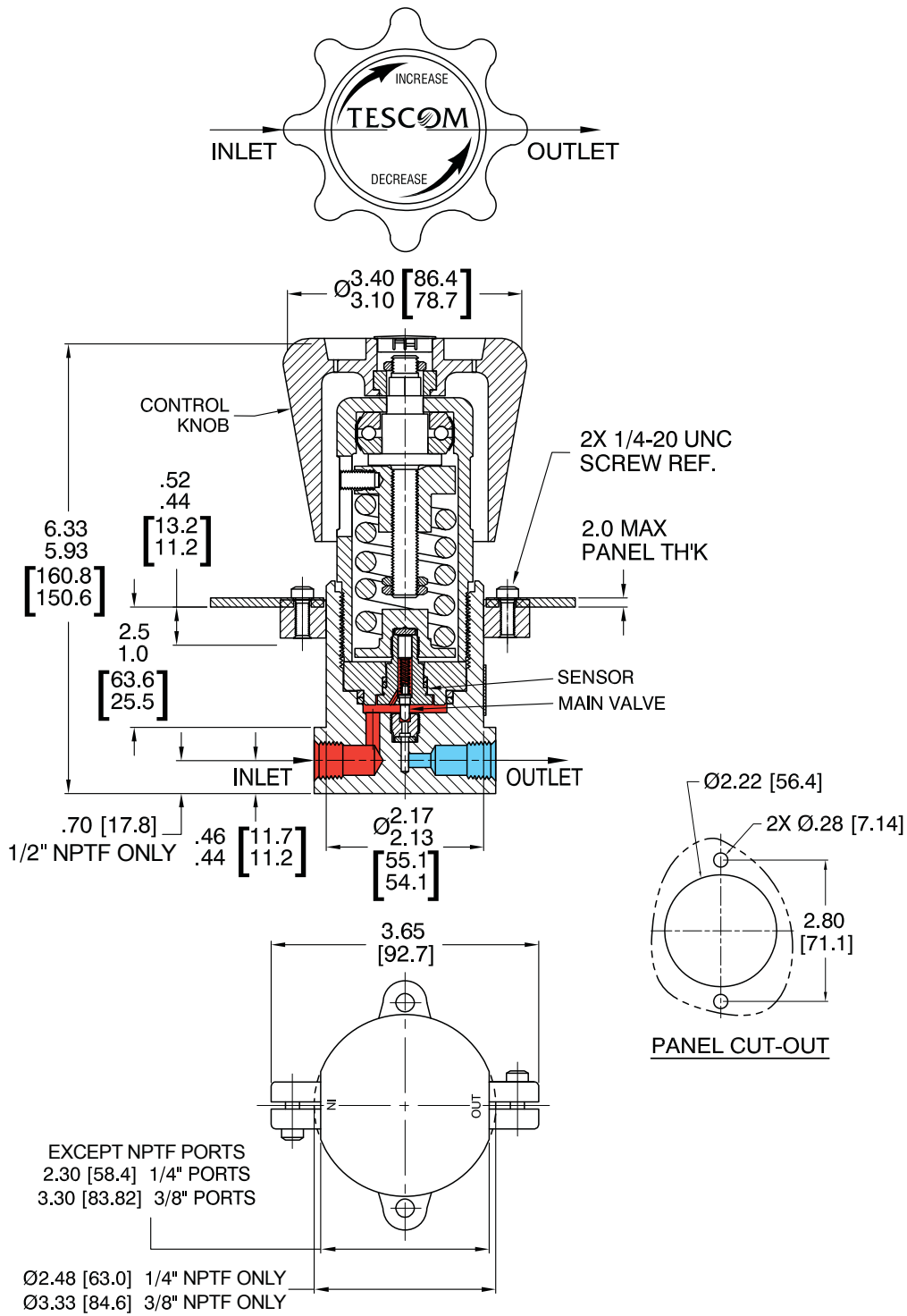
## Applications

- 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

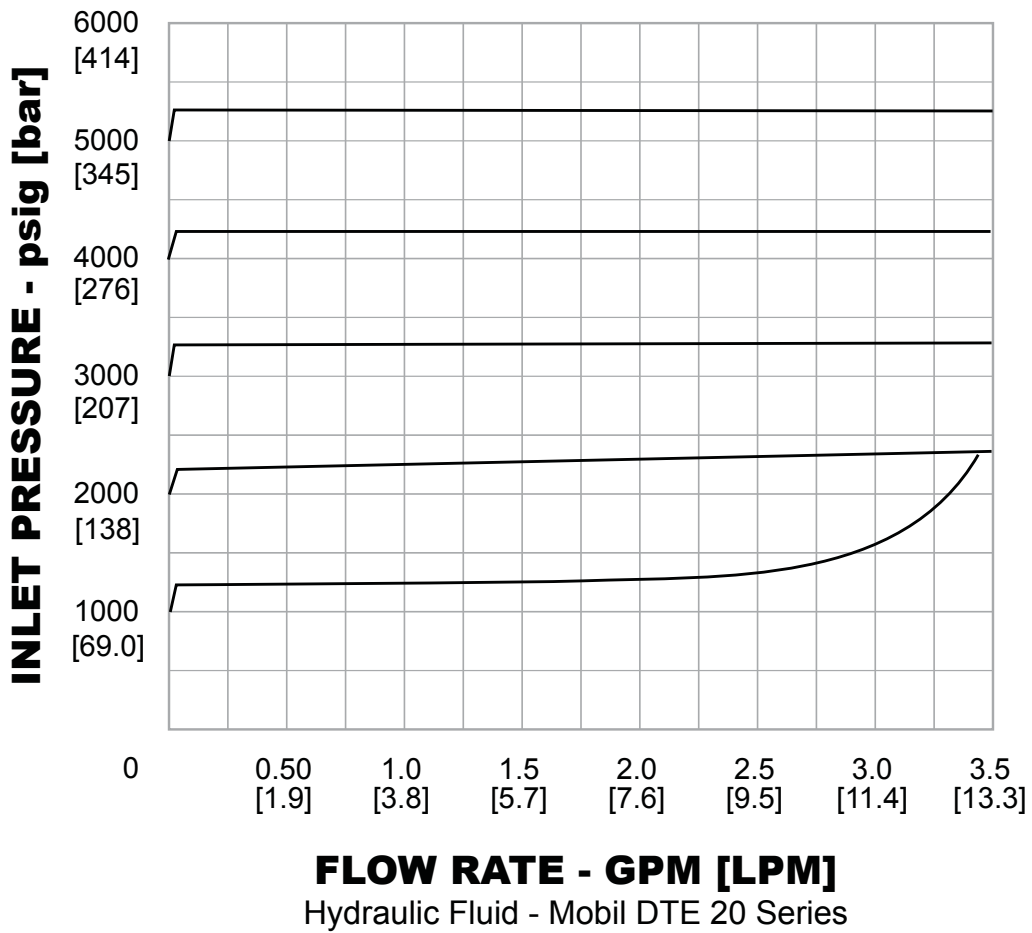
54-2100 Series Regulator Drawing



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

### 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](http://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	LOADING		
			SOFT GOODS MATERIAL						INLET AND OUTLET PORT TYPE	INLET AND OUTLET PORT SIZE
			DYNAMIC	STATIC	SEAT					
54-21	6 – 316 Stainless Steel	0 – 300-15,000 psig 20.7-1034 bar <sup>1</sup> (Spring only)	D – Buna-N	Buna-N	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 <sup>3</sup>		
		1 – 200-10,000 psig 13.8-690 bar <sup>2</sup>	T – Viton®	Viton®	17-4 Stainless Steel					
		2 – 50-6000 psig 3.4-414 bar (Spring and Air only)	V – Kalrez®	Kalrez®	17-4 Stainless Steel					
		3 – 25-4000 psig 1.7-276 bar (Spring only)	Z – Ethylene Propylene	Ethylene Propylene	17-4 Stainless Steel					
		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)										

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