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 Stainless Steel or 316 Stainless Steel

**Seat, Poppet and Sensor**
17-4 PH Stainless Steel

**O-Rings**
Nitrile, Buna-N, FKM (Viton®-A), Ethylene Propylene or Polyurethane

**Back-up Rings**
PTFE

**Bonnet (Spring load only)**
303 Stainless Steel, 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.*

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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 ER5000 Electropneumatic Controller.

## Applications

- Hydraulic test stands
- Process control

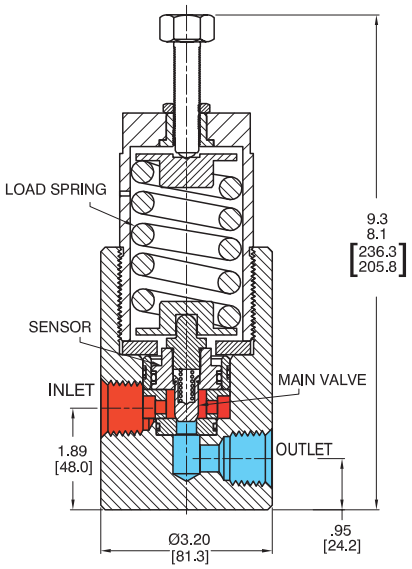
## Features and Benefits

- 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
- Flanged end connections available

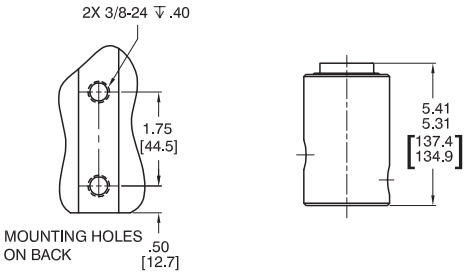
# 54-2300 SERIES

## 54-2300 Series Regulator Drawing

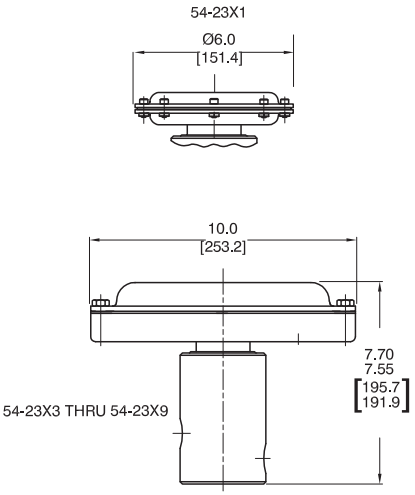
**SPRING LOAD**




**DOME LOAD (1/2) SCALE**

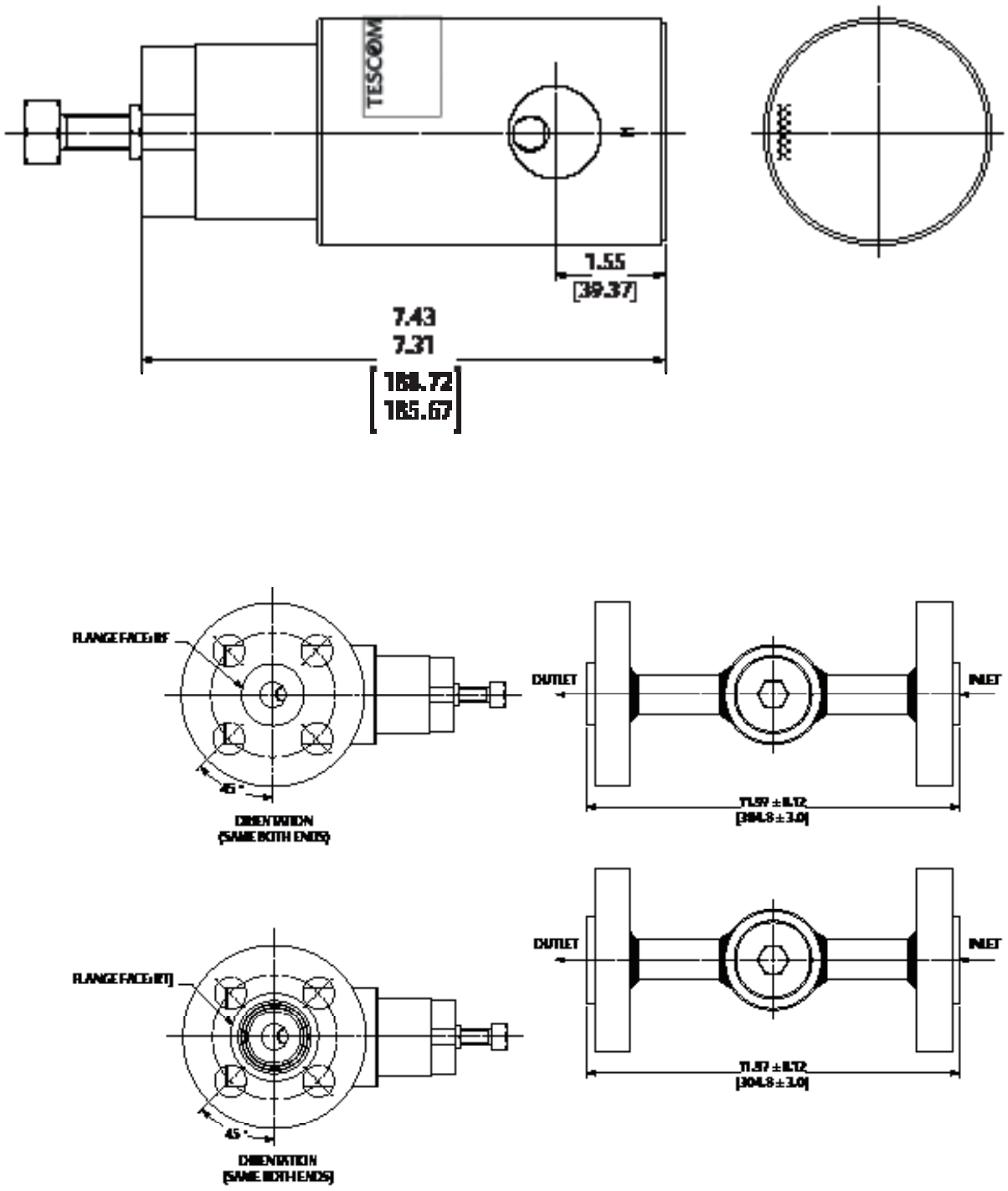



**AIR LOAD (1/2) SCALE**




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

## 54-2300 Series Regulator with Flanges Drawing

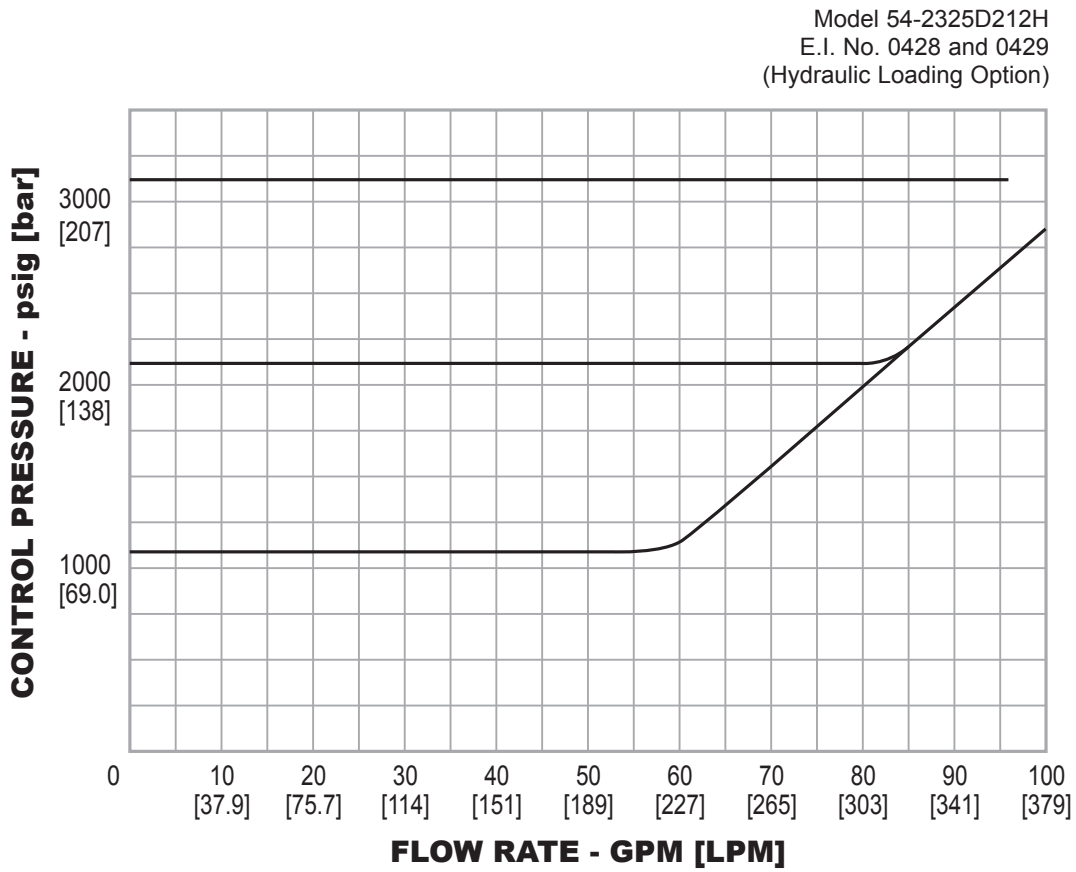



*All dimensions are reference & nominal*
*Metric [millimeter] equivalents are in brackets*

# 54-2300 SERIES

## 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

**Learn more about common options.**
For modifications, repair kits and accessories, contact factory.

*Threaded End Connector Part Number Selection:*

| 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 | O-RINGS STATIC | SEAT | TEMPERATURE (MEDIA ONLY) | | | |
| 54-23 | **2** – 303 Stainless Steel<br>**6** – 316 Stainless Steel | **0** – 20-1000 psig 1.4-69.0 bar (spring only)<br>**1** – 20-1500 psig 1.4-103 bar (spring and air only)<br>**3** – 50-3500 psig 3.4-241 bar (spring only) 50-2500 psig 3.4-172 bar (air only 30:1*)<br>**5** – 200-5000 psig 13.8-345 bar (spring and dome 1:1 and air 75:1)<br>**9** – 250-10,000 psig 17.2-690 bar (air only 125:1*) | **D** – Buna-N | Buna-N | 17-4 Stainless Steel | -40°F to 165°F<br>-40°C to 74°C | **1** – SAE<br>**2** – NPTF | **08** – 1/2"<br>**12** – 3/4" | **S** – Spring<br>**H** – Dome<br>**A** – Air |
| | | | **T** – Viton® | Viton® | 17-4 Stainless Steel | -15°F to 300°F<br>-26°C to 149°C | | | |
| | | | **U** – Polyurethane | Polyurethane | 17-4 Stainless Steel | -15°F to 125°F<br>-26°C to 52°C | | | |
| | | | **Z** – Ethylene Propylene | Ethylene Propylene | 17-4 Stainless Steel | -40°F to 225°F<br>-40°C to 107°C | | | |

**Ratio is for reference only.*

# 54-2300 SERIES

## 54-2300 Series Regulator Part Number Selector

*Flanged End Connector Part Number Selection:*

**54-23W 6 1 A 1 52 1**

| BASIC SERIES | BODY, PIPE & FLANGE MATERIAL | INLET PRESSURE | SOFT GOOD MATERIAL | | | | | FLANGE SIZE | FLANGE CLASS | FLANGE FACE |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Dash No. | O-Rings | | SEAT | Operating Temperature | | | |
| | | | | Dynamic | Static | | | | | |
| 54-23W | **6 –** 316 Stainless steel | **0 –** 20-600 psig 1.4-41.4 bar<br>**1 –** 20-1000 psig 1.4-69.0 bar<br>**2 –** 20-1500 psig 1.4-103.0 bar<br>**3 –** 50-3500 psig 3.4-172.0 bar<br>**4 –** 200-5000 psig 13.8-344.0 bar | A | Nitrile, Buna-N | Nitrile, Buna-N | 17-4 SST | -20 to 165°F / -29 to 74°C | **3 –** 1" | **21 –** 300#<br>**41 –** 600#<br>**52 –** 900# /1500#<br>**63 –** 2500# | **1 –** RF<br>**2 –** RTJ |
| | | | B | FKM | FKM | 17-4 SST | -10 to 200°F / -23 to 93°C | | | |
| | | | C | | | Polyimide (Vespel® SP21) | | | | |
| | | | D | | | Polyimide (Vespel® SP21) | | | | |
| | | | E | EP | EP | 17-4 SST | -20 to 200°F / -29 to 93°C | | | |
| | | | F | | | Polyimide (Vespel® SP21) | | | | |
| | | | G | PTFE | PTFE | 17-4 SST | -20 to 200°F / -29 to 93°C | | | |