

# 44-5800 Series

## Regulators - Pressure Reducing

D44582012X012

### Specifications

For other materials or modifications, please consult TESCO M.

#### OPERATING PARAMETERS

Pressure rating per criteria of ANSI/ASME B31.3

<b>Maximum Inlet Pressure</b> 6000 psig / 414 bar / 41,370 kPa		
<b>Maximum Outlet Pressure</b> 0-25, 0-50, 0-100, 0-250, 0-500 psig 0-1.7, 0-3.4, 0-6.9, 0-17.2, 0-34.5 bar 0-172, 0-345, 0-690, 0-1724, 0-3448 kPa		
<b>Design Proof Pressure</b> 150% maximum rated		
<b>Operating Steam Pressure</b> 650 psig / 44.8 bar		
<b>Inlet Proof Pressure</b> 9000 psig / 620 bar		
<b>Leakage</b> Bubble-tight Diaphragm 2x10 <sup>-8</sup> atm cc/sec He		
<b>Ambient Temperatures for Section A and B</b>		
Supply Voltage (VAC)	Heater Watts (W)	Max Ambient Temperature
115	12.5	149 °F / 65 °C
	25	
	50	
	100	
	200	
230	50	149 °F / 65 °C
	100	
	200	
	400	

**Important!**  
Product approvals and maximum ambient temperature ratings are based on both the electrical housing and the regulator body being in the same ambient environment not exceeding the maximum temperatures in the table above. For additional information, please reference the manual.

**Heater Temperature Analog Output**  
4-20 mA signal for monitoring heater coil temperature

**Flow Capacity**  
C<sub>v</sub> = 0.02

#### MEDIA CONTACT MATERIALS

<b>Body</b> 316 Stainless Steel, Monel, or Nickel Alloy (Hastelloy®)
<b>Seat</b> Polyimide (Vespel®) SP1®
<b>Diaphragm and Spring</b> Cobalt Chrome Nickel Alloy (Elgiloy®), Nickel Alloy (Hastelloy®)
<b>Remaining Parts</b> 316 Stainless Steel, Monel, or Nickel Alloy (Hastelloy®)

#### OTHER

<b>Connections</b> NPTF
<b>Cleaning</b> CGA 4.1 and ASTM G93
<b>Weight</b> <b>Electric:</b> 6.3 lbs / 2.9 kg <b>Steam:</b> 3.1 lbs / 1.4 kg



TESCOM 44-5800 Series offers superior heat transfer technology. With a high tolerance to voltage spikes and high ambient temperatures, this regulator is designed for worldwide applications.

### Applications

- Liquid petroleum analyzer
- Petrochemical / refinery analyzer
- Sampling systems

### Features and Benefits

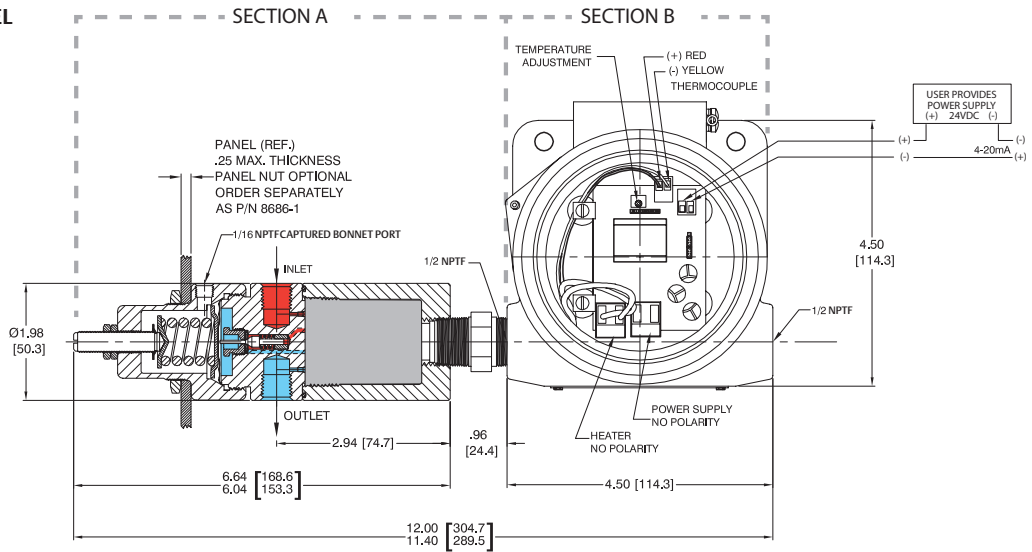
- For worldwide use: Designed for 115/230V VAC, 50/60 Hz
- 4-20 mA analog output for remote temperature monitoring and data acquisition
- Optional LCD temperature display
- Optional panel mounting
- Advanced heat transfer technology
- Single turn heater temperature control dial
- CSA, ATEX and IECEx Certification to T3 (200°C) Rating (Ratings are not applicable to steam version)
- NACE MR0175/ISO 15156

Vespel® is a registered trademark of E.I. du Pont de Nemours and Company.  
Elgiloy® is a registered trademark of Elgiloy Corp.  
Hastelloy® is a registered trademark of Haynes International, Inc.  
Monel® is a registered trademark of Special Metals Corporation.

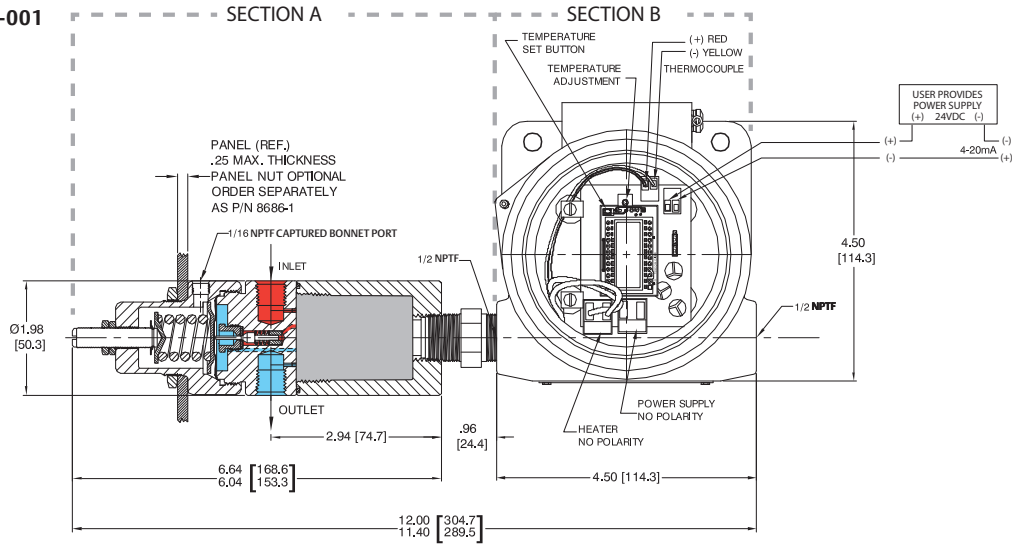
# 44-5800 SERIES

## 44-5800 Series Regulator Drawing

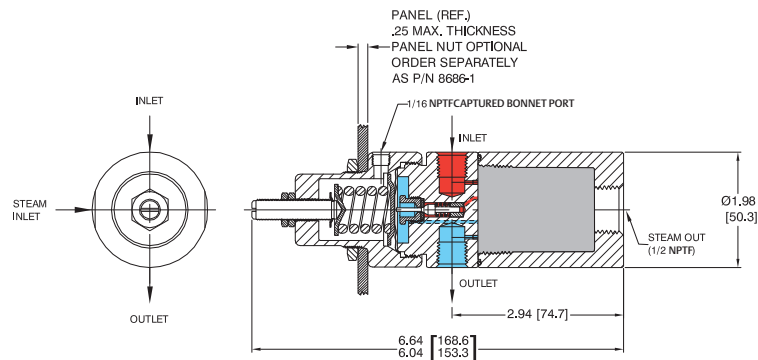
### ELECTRIC MODEL



### ELECTRIC MODEL-001 LCD DISPLAY



### STEAM MODEL

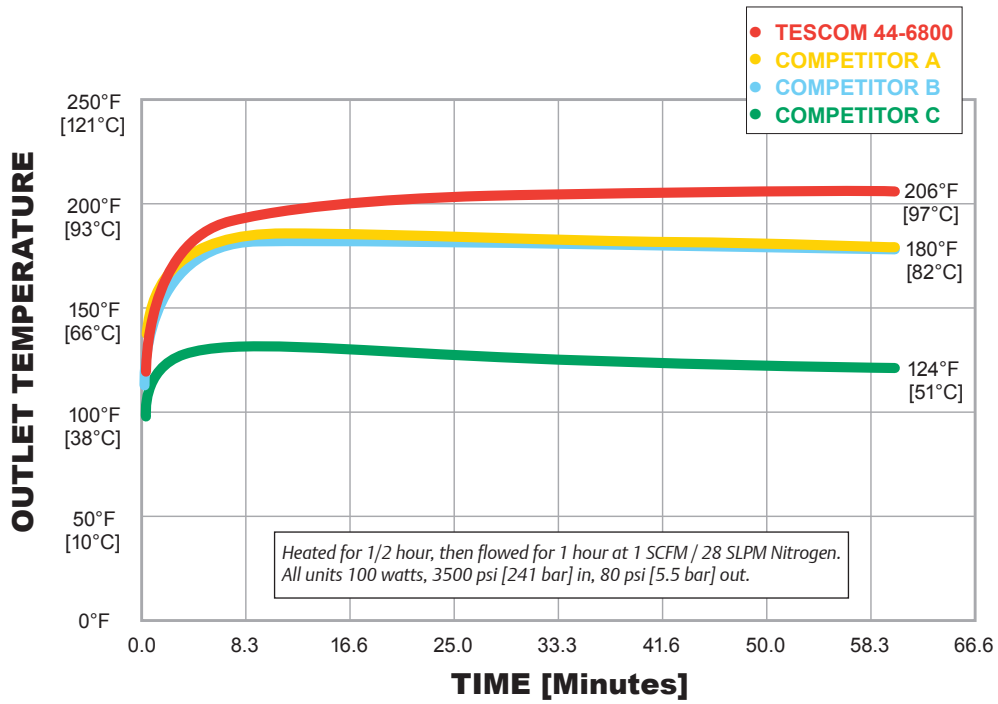


Note: Steam in at 90° to process connections (same *plane*).

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

## 44-5800 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 TESCO catalog or on [www.tescom.com](http://www.tescom.com).



# 44-5800 SERIES

## 44-5800 Series Regulator Part Number Selector



**Learn more about common options.**

For modifications, repair kits and accessories, contact factory.

Example for selecting a part number:

### ELECTRIC MODEL

BASIC SERIES	MATERIAL				OUTLET PRESSURE RANGE	HEATER <sup>1</sup>		INLET AND OUTLET PORT TYPE	INLET AND OUTLET PORT SIZE	INLET PRESSURE	VOLTAGE
	BODY	DIAPHRAGM	SPRING	REMAINING PARTS		115 VAC	230 VAC				
44-58	5 – Nickel Alloy (Hastelloy®)	Nickel Alloy (Hastelloy®)	Cobalt Chrome	Nickel Alloy (Hastelloy®)	0 – 0-25 psig 0-1.7 bar 0-172 kPa	A – 12.5 WATTS 0.10 amps	50 WATTS 0.21 amps	2 – NPTF	4 – 1/4"	1 – 6000 psig 414 bar 41,370 kPa	E – 115 VAC E1 – 230 VAC
	6 – 316 Stainless Steel	Chrome Nickel Alloy (Eligiloy®)	Cobalt Chrome	Stainless Steel	1 – 0-50 psig 0-3.4 bar 0-345 kPa	B – 25 WATTS 0.21 amps	100 WATTS 0.42 amps				
	9 – Nickel Alloy (Monel®)	Cobalt Chrome Nickel Alloy (Eligiloy®)	Cobalt Chrome	Nickel Alloy (Monel®)	2 – 0-100 psig 0-6.9 bar 0-690 kPa	C – 50 WATTS 0.42 amps	200 WATTS 0.83 amps				
					3 – 0-250 psig 0-17.2 bar 0-1724 kPa	D – 100 WATTS 0.83 amps	400 WATTS 1.67 amps				
					4 – 0-500 psig 0-34.5 bar 0-3448 kPa	E – 200 WATTS 1.67 amps					

- 001  
LCD DISPLAY

### STEAM MODEL

BASIC SERIES	MATERIAL				OUTLET PRESSURE RANGE	INLET AND OUTLET PORT TYPE	INLET AND OUTLET PORT SIZE	INLET PRESSURE
	BODY	DIAPHRAGM	SPRING	REMAINING PARTS				
44-58	5 – Nickel Alloy (Hastelloy®)	Nickel Alloy (Hastelloy®)	Cobalt Chrome Nickel Alloy (Eligiloy®)	Nickel Alloy (Hastelloy®)	0 – 0-25 psig 0-1.7 bar 0-172 kPa	2 – NPTF	4 – 1/4"	1 – 6000 psig 414 bar 41,370 kPa
	6 – 316 Stainless Steel	Cobalt Chrome Nickel Alloy (Eligiloy®)	Cobalt Chrome Nickel Alloy (Eligiloy®)	Stainless Steel	1 – 0-50 psig 0-3.4 bar 0-345 kPa			
					2 – 0-100 psig 0-6.9 bar 0-690 kPa			
	9 – Nickel Alloy (Monel®)		Cobalt Chrome Nickel Alloy (Eligiloy)	Nickel Alloy (Monel®)	3 – 0-250 psig 0-17.2 bar 0-1724 kPa			
					4 – 0-500 psig 0-34.5 bar 0-3448 kPa			

STEAM

### WARNING

Although the 44-5800 Series product design meets the design standards required by the approval agencies, a circuit board failure could occur during the life of the product potentially causing the regulator's surface temperature to exceed the ATEX T1 temperature class limit of 450°C. As a result, 44-5800 Series regulators should not be used in an enclosed environment without an external temperature control device to interrupt power to the regulator. Redundant safety and monitoring devices are recommended for safe system use in any application environment to protect against the risk of fire or explosion in the event of overheating of the regulator due to circuit board failure.