

Model TSD

General Purpose, Two-Stage Regulators

General purpose two-stage regulators are designed for use with noncorrosive gases or gas mixtures. They are recommended for general laboratory use where high purity is not a consideration, and where constant delivery pressure is desired.

Standard Features

- Two-Stage Regulator Design ensures constant delivery pressure over varying inlet pressures.
- Filter in Each Seat Assembly traps foreign matter, extends regulator life and reduces maintenance.
- Neoprene Diaphragm in Second Stage permits accurate delivery pressure settings.
- Outlet metering valve provides flow control.

Optional Features

- Relief Valve protects regulator components from the effects of overpressurization.

Specifications

Maximum Inlet Pressure: 3000 psig

Inlet Pressure Gauge (dual scale):
0–4000 psig/0–275 bar

Delivery Pressure Range: See Tables

Delivery Pressure Gauge: See Tables

Gauge Size: 2" Dial

Operating Temperature Range:

Regulators with Flowmeters:
32°F to 165°F

Regulators without Flowmeters:
-40°F to 165°F

Flow Coefficient:

Regulator: Cv = 0.15

Outlet Valve: Cv = 0.4

Inlet Connection: CGA 296, 320, 326, 346,
350, 540, 580, 590 or 660 as ordered

Outlet Connection:

1/4" NPT male (on outlet valve)

1/8" NPT female (on flowmeter)

Optional Equipment

Equipment	Part No.
Relief Valves:	
for TSD-15	RV5572-25i
for TSD-50 and TSD-750 Series	RV5572-60i
for TSD-125	RV5572-140i
for TSD-250	RV5572-300i

Optional Relief Valve Vent Connection:
1/4" NPT male

Supply Pressure Effect: 0.04 psi per 100 psi

Approximate Weight: 5 lbs

Materials of Construction

Body: Brass Forging

Outlet Valve and Gauges: Brass

Bonnet: Painted Zinc

Other Metal Parts Exposed to Gas:
Brass and Stainless Steel

Seat and Seals: PTFE

Diaphragms: Neoprene

Flowmeter: See Series 50 Flowmeter,
Model FM4350 (page 112)



TSD Regulator



TSD Regulator with Flowmeter

Table I, Regulators with Metering Valves

Part No. Model SSD	Delivery Pressure		
	Range (psig)	Gauge (dual scale) (psig)	(bar)
TSD-15-(CGA)	2–15	0–30	0–2
TSD-50-(CGA)	4–50	0–60	0–4
TSD-125-(CGA)	10–125	0–150	0–10
TSD-250-(CGA)	20–250	0–400	0–27

Table II, Regulators with Flowmeters

All regulators with flowmeters have a delivery pressure range of 4–50 psig and are equipped with 0–100 psig pressure gauge on the delivery side.

Part No.	Flowmeter Range, Air at 70°F and 14.7 psia
TSD-750-(CGA)	8–50 sccm
TSD-751-(CGA)	5–85 sccm
TSD-752-(CGA)	40–440 sccm
TSD-753-(CGA)	100–950 sccm
TSD-754-(CGA)	0.2–1.8 slpm
TSD-755-(CGA)	0.4–3.6 slpm
TSD-756-(CGA)	0.5–7.0 slpm
TSD-757-(CGA)	1–13 slpm
TSD-758-(CGA)	6–24 slpm
TSD-759-(CGA)	4–44 slpm

Where “(CGA)” is indicated in Tables I and II, insert appropriate Compressed Gas Association connection number to complete the part number. Example: TSD-15-580 or TSD-750-580. Order by complete number.