

# Models THP, THPS

## Low Delivery Pressure, High Purity, Two-Stage Regulators

These metal diaphragm, cylinder regulators are specially designed to provide highly accurate pressure reduction of inlet pressures from a maximum of 3000 psig down to delivery pressures as low as 0.2 to 2 psig. The large effective diaphragm sensing area provides quick response, accurate and dependable regulation and long service life. The two-stage design provides constant outlet pressure regardless of changes in cylinder (inlet) pressures.

The Model THP is suitable for use with high purity non-corrosive gases, while Model THPS is designed for mildly corrosive gases that are compatible with the materials of construction.



THP Regulator

### Standard Features

- Type 304 Stainless Steel Diaphragms minimize diffusion of air into regulator and eliminate "off gassing" associated with elastomeric diaphragms, thus maintaining gas purity.
- Large 3 Inch Diaphragm in Second Stage, allows for accurate control of delivery pressures down to 0.2 psig.
- Two-Stage Design ensures constant delivery pressure over varying inlet pressures.
- Pressure Relief Valve protects regulator from overpressurization.
- Dual Scale 0.1 psi / 0.01 Bar Graduations on Outlet Gauge allow for enhanced readability at extremely low settings.
- Low Torque Multi-turn Handknob provides sensitive outlet pressure control.

### Specifications

Maximum Inlet Pressure: 3000 psig

Inlet Pressure Gauge (dual scale):  
0–4300 psig / 0–400 bar

Delivery Pressure Range: See Table I

Delivery Pressure Gauge: See Table I

Gauge Size: 1 3/4" Dial

Operating Temp. Range: -4°F to 122°F

Relief Valve Setting (interstage): 45 psig

Inlet Connection:

THP: CGA 296, 320, 326, 346, 350, 510, 580, 590 or 660 as ordered.

THPS: CGA 320, 326, 330, 346, 350, 510, 580, 590, 660 or 705 as ordered.

Outlet Connection: 1/4" NPT female

Maximum Flow Rate: 18 scfh N<sub>2</sub>  
at 2000 psig inlet pressure.

Approximate Weight: 5 lbs

### Materials of Construction

Body:

THP: Chrome Plated Brass

THPS: Type 316L SS

Gauges:

THP: Plated Brass

THPS: Type 316 SS

Bonnets: Black Anodized Aluminum

Other Metal Parts Exposed to Gas:

THP: Brass and Stainless Steel

THPS: Stainless Steel

Seats: PCTFE

Diaphragms: Type 304 Stainless Steel

Seals: EPDM

Table I

Part Number		Delivery Pressure			
Brass	Stainless Steel	Range (psig)	(bar)	Gauge (dual scale) (psig)	(bar)
THP-(CGA)	THPS-(CGA)	0.15–2.0	0.01–0.14	0–2.32	0–0.16

Where "(CGA)" is indicated above, insert appropriate Compressed Gas Association connection number to complete the part number. Example: THP-580. Order by complete part number.

### Optional Equipment

Equipment	Part No.
Compression Fittings* (male connectors)	
1/4" NPT male x 1/8" compression for Model THP	SG6703
1/4" NPT male x 1/4" compression for Model THP	SG6704
1/4" NPT male x 1/8" compression for Model THPS	SG6713
1/4" NPT male x 1/4" compression for Model THPS	SG6714
Check Valves*	See page 141

\* If selected, these items are not installed on the regulator. They are shipped as separate items.