High Pressure Generators

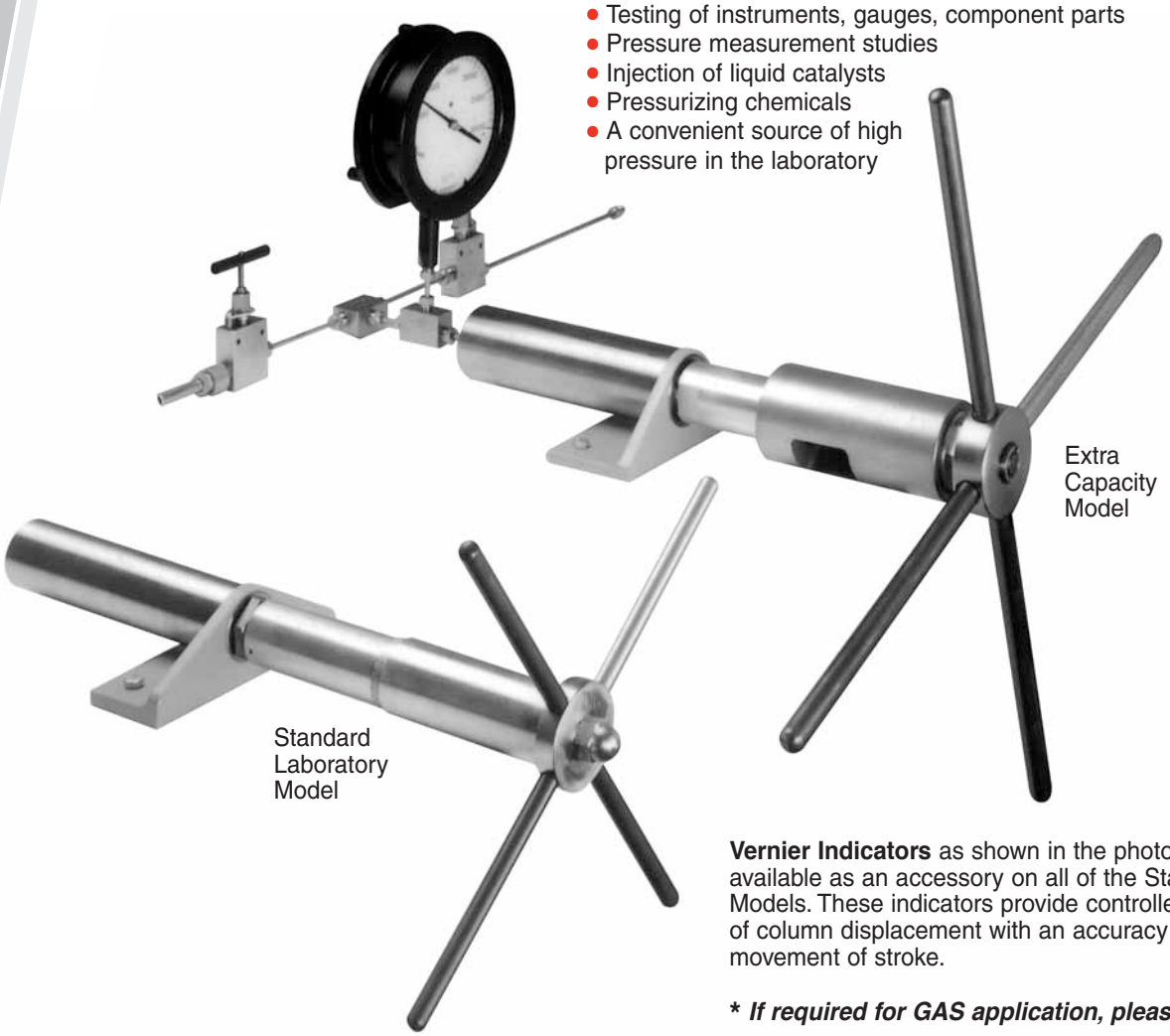
The HiP High Pressure Generator is a manually operated piston screw pump. It is designed for any application where a liquid* is to be compressed within a small volume to develop pressure.

Pressure Ranges:
- 0-5,000 psi
- 0-10,000 psi
- 0-15,000 psi
- 0-30,000 psi
- 0-60,000 psi
- 0-75,000 psi
- 0-100,000 psi

All wetted parts are of 316 stainless steel and 17-4PH stainless steel. Parker Poly Pak® is standard .

The High Pressure Generator is easily mounted to a work bench and maximum pressures may be obtained with a minimum amount of effort by the operator. The standard connection is a High Pressure coned-and-threaded (HF4) opening for ¼" O.D. tubing up to 60,000 psi and XF4 connections for pressures above 60,000 psi. Adapters are available with optional Teflon packing at no additional cost for other type connections including pipe.

Typical Applications:
- Testing of instruments, gauges, component parts
- Pressure measurement studies
- Injection of liquid catalysts
- Pressurizing chemicals
- A convenient source of high pressure in the laboratory



Extra Capacity Model

Standard Laboratory Model

Vernier Indicators as shown in the photo at left are available as an accessory on all of the Standard Laboratory Models. These indicators provide controlled measurement of column displacement with an accuracy of ± 0.003" movement of stroke.

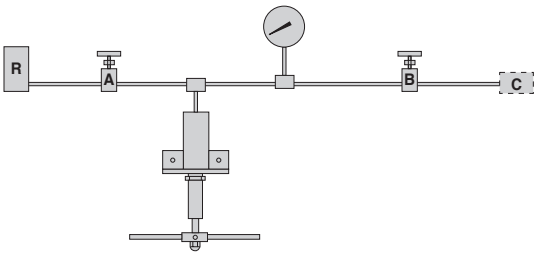
**** If required for GAS application, please consult factory.***

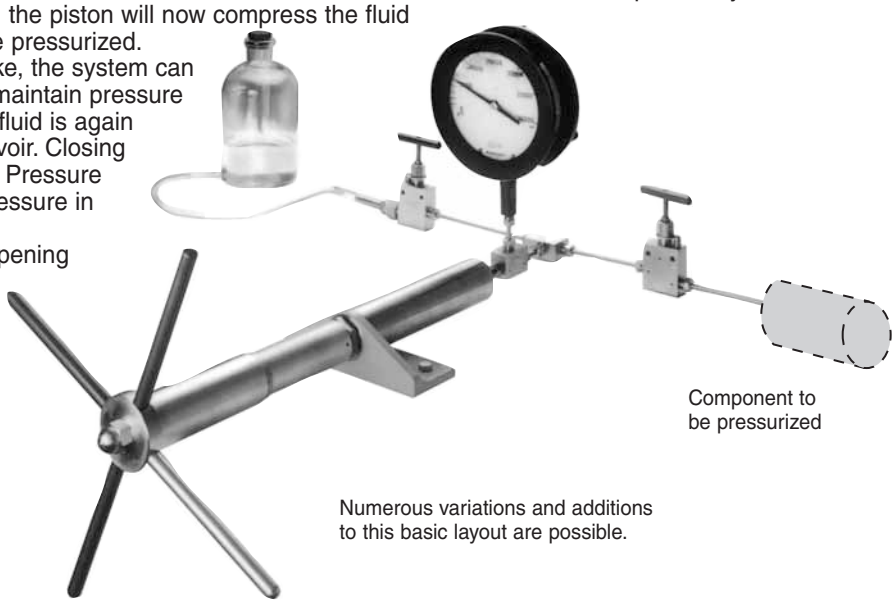
The schematic illustrates a very basic layout for using a Pressure Generator. A reservoir (R) is shown connected by means of valves and fittings to a component (C) that is to be pressurized. A gauge has been included for determining pressure.

With valve “B” closed and valve “A” open, the handle of the Pressure Generator is rotated counter-clockwise to draw fluid from the reservoir into the cylinder body of the Pressure Generator. Valve “A” is then closed and valve “B” is opened. By rotating the Pressure Generator handle clockwise, the piston will now compress the fluid to develop pressure in the component that is to be pressurized.

If sufficient pressure is not reached in one stroke, the system can be “recycled.” Valve “B” can be closed in order to maintain pressure in the components. Valve “A” is then opened, and fluid is again drawn into the Pressure Generator from the reservoir. Closing Valve “A” and opening Valve “B” will now allow the Pressure Generator to be operated to develop increased pressure in the component.

Pressure in the component can be vented by opening both valves.

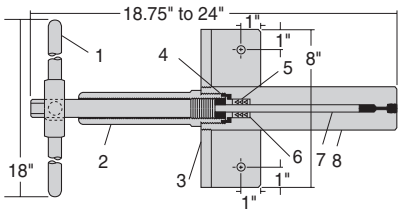




Component to be pressurized

Numerous variations and additions to this basic layout are possible.

Standard Laboratory Models



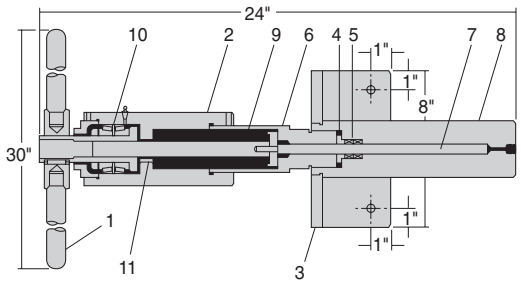
1. Handle
2. Gland Nut
3. Mounting Bracket
4. Top Packing Washer
5. Packing
* 6. Bottom Packing Washer
7. Shaft
8. Body

Model	Pressure Rating psi	Capacity per Stroke	Shaft Diameter
87-6-5	5,000	60 mL	$^{7}/_{8}$"
62-6-10	10,000	30 mL	$^{5}/_{8}$"
50-6-15	15,000	20 mL	$^{1}/_{2}$"
37-6-30	30,000	11 mL	$^{3}/_{8}$"

Length of stroke: 6 inches. 14 revolutions of handle produces one inch travel of shaft.

* Use item six only with optional Chevron Teflon packing.

Extra Capacity Models



1. Handle
2. Housing
3. Mounting Bracket
4. Packing Washer
5. Packing
6. Extension Gland
7. Shaft
8. Body
9. Stem Screw with Keyway
10. Bearing Assembly
11. Key

Model	Pressure Rating psi	Capacity per Stroke	Shaft Diameter
112-5.75-5	5,000	93 mL	$1^{1}/_{8}$"
81-5.75-10	10,000	48 mL	$^{13}/_{16}$"
68-5.75-15	15,000	35 mL	$^{11}/_{16}$"
50-5.75-30	30,000	18 mL	$^{1}/_{2}$"
37-5.75-60	60,000	10 mL	$^{3}/_{8}$"
31-5.75-75	75,000	7 mL	$^{5}/_{16}$"
25-5.75-100	100,000	4.5 mL	$^{1}/_{4}$"

Length of stroke: $5^{3}/_{4}$ inches. 14 revolutions of handle produces one inch travel of shaft.