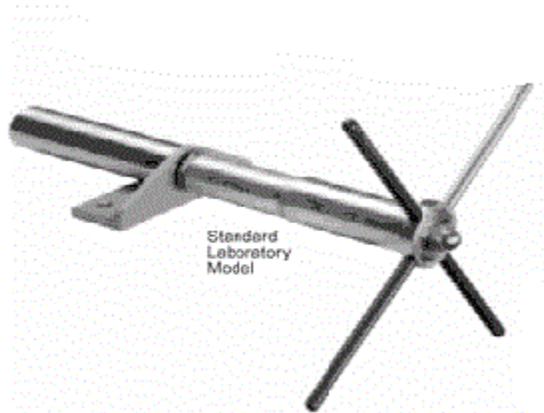




# High Pressure Equipment Company

## Manual Pressure Pump Generators Standard Laboratory Models Operation and Seal Packing Instructions



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# Manual Pressure Pump Generators Standard Laboratory Models

## Description:

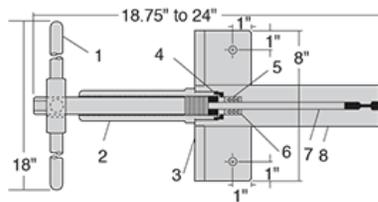
The HiP High Pressure Generator is a manually operated piston screw pump. It is designed for any application where a liquid is to be compressed within a small volume to develop pressure.

## Pressure Ranges:

- 0-5,000 psi
- 0-10,000 psi
- 0-15,000 psi
- 0-30,000 psi

All wetted parts are of 316 stainless steel or 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 1/4" 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.



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.

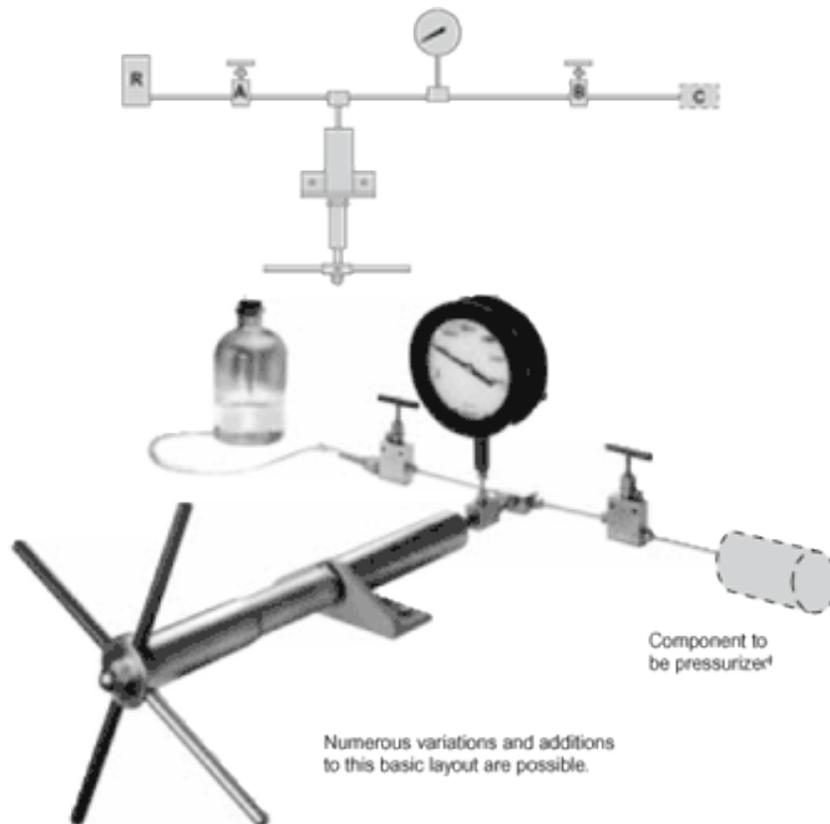
\* Use item six only with optional Chevron Teflon packing.

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.



## Pressure Generator Packing Instructions:

### General Information:

All pressure generators may be supplied with either Teflon Packing sets or Polypak packing sets. Use of the Polypak packing requires less operator torque for rotating the shaft in or out during use. The Polypak packing also provide considerably better sealing and longer life for fluids such as water, mercury, and most oils. Teflon packing should be used when corrosive conditions require.

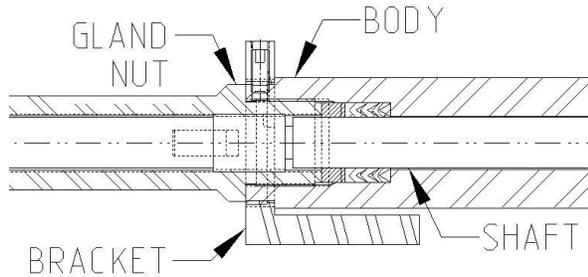
When changing packing follow the steps below:

1. Loosen the set screw by one or two turns only. The set screw is located under the mounting bracket.
2. Rotate gland nut counter-clockwise out of the body and pull the shaft outward.
3. Remove top packing washer from the stuffing box of the body.
4. Remove packing from the stuffing box.
5. Remove bottom packing washer from the stuffing box (used only with Teflon packing only).
6. Clean all parts as required and re-lubricate the threads of the shaft. Pelpro is used at the factory, but any good grade of thread lubrication is suitable.
7. Install bottom packing washer back into the stuffing box (Disregard this step if PolyPak packing is being used).
8. Install new Teflon or PolyPak packing set into the stuffing box. Turning the packing set at a slight angle may be helpful when inserting into position.
9. Install top packing washer into top of the stuffing box.
10. Push shaft carefully through packing back into the body and tighten gland nut, clockwise, into body.
  - a. The gland nut will bottom out against body when Polypak packing is installed.
  - b. Gland nut must be tightened to [provide compression on packing when Teflon packing is used. Fluids such as alcohols require more torque for proper sealing than more viscous fluids such as oil. Only sufficient torque to prevent leakage should be applied.
11. Retighten set screw under mounting bracket after assembly of the packing.

Pressure Generator with Teflon Packing:

Chevron style Teflon packing consists of 4 or 5 pieces, depending on the model, located between upper and bottom metal packing washers.

Torque is applied to packing for proper sealing by tightening the gland nut into the body.

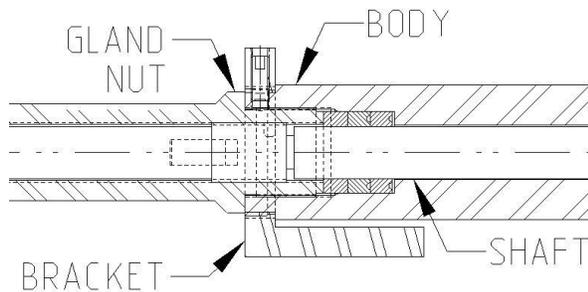


Teflon Packing	
Generator #	Packing #
87-6-5	B00208
62-6-10	B00201
50-6-15	B01066
37-6-30	B01142

Pressure Generator with PolyPak Packing:

Two PolyPak packings are located in stuffing box with top packing washer. No bottom packing washer is required.

No torque is applied to packing. The gland nut is screwed into the body until it bottoms out directly against the body. It doesn't need to be tightened further. Polypak packings are self sealing without applying torque for compression.



PolyPak Packing	
Generator #	Packing #
87-6-5	B01369
62-6-10	B01370
50-6-15	B01371
37-6-30	B01372