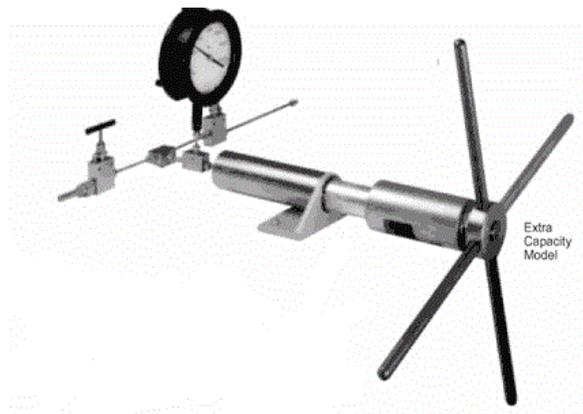




High Pressure Equipment Company

Manual Pressure Pump Generators Extra Capacity Models Operating and Seal Packing Instructions



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Manual Pressure Pump Generators Extra Capacity Models

Description:

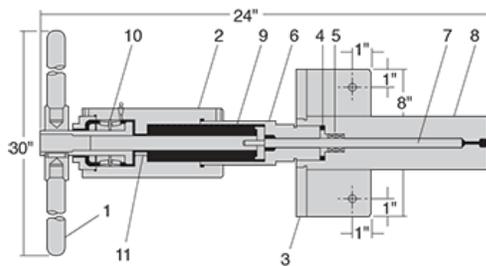
The HiP High Pressure Generator is a manually operated piston screw pump. It is designed for any application where a liquid is to be compressed within a small volume to develop pressure.

Pressure Ranges:

0-5,000 psi
 0-10,000 psi
 0-15,000 psi
 0-30,000 psi
 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. Standard seals are Parker Poly Pak®.

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. 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"

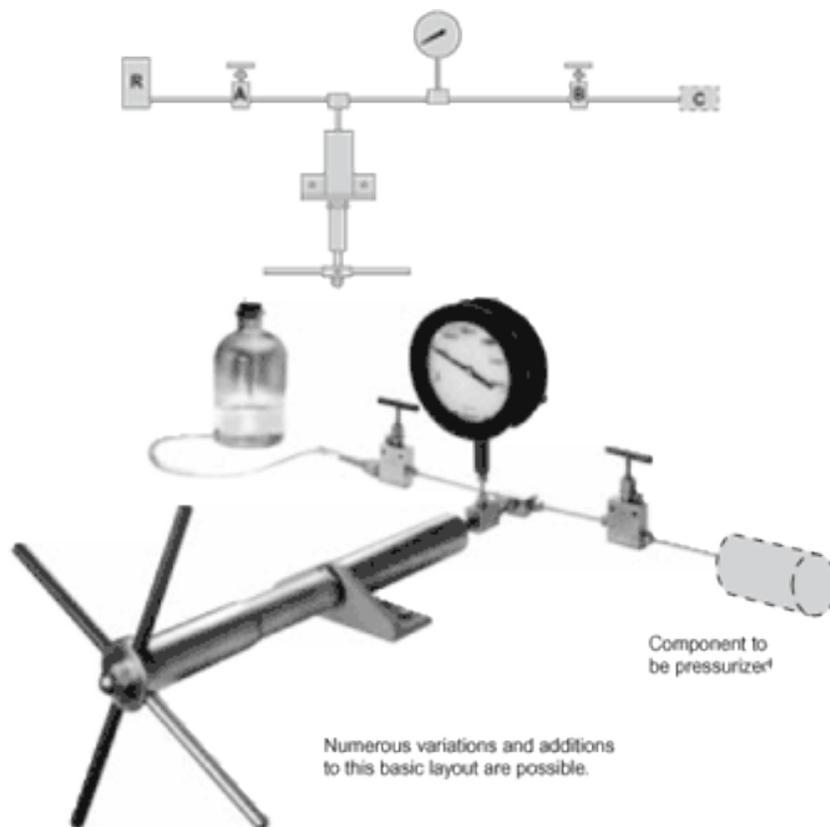
Length of stroke: 5 7/8 inches. 14 revolutions of handle produces one inch travel of shaft.

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. Remove the extension by turning it counter clockwise out of the body and pull the shaft outward.
3. Remove the packing washer from the stuffing box of the body.
4. Remove packing from the body.
5. Remove bottom packing washer from the body (used only with Teflon packing only).
6. Clean all parts as required and re-lubricate the threads of the shaft. Jet-Lube is used at the factory, but any good grade of thread lubrication is suitable.
7. Install bottom packing washer back into the body (Disregard this step if PolyPak packing is being used).
8. Install the new replacement packing set. Turning the packing set at a slight angle may be helpful when inserting into position.
9. Reinstall the top packing washer.
10. Push shaft carefully through packing back into the body and tighten the extension, clockwise, into body.
 - a. When installing Teflon packing, some torque must be applied to the packing for proper sealing by the gland extension into the body.
 - b. No torque needed when repacking with PolyPak packing. Screw the extension into the body until it bottoms directly against the body. It doesn't need to be tightened further. PolyPak is self-sealing without applying torque for compression.
11. Retighten the set screw under mounting bracket after assembly of the packing.