

PENGUIN

PUMPS AND FILTERING SYSTEMS



SERIES PGG PRESSURE GAUGE AND GUARDS

PGGA - CPVC
PGGB - Polypropylene
PGGC - PVDF



INTRODUCTION

The Penguin plastic gauge guard is a unique, compact, molded design consisting of two threaded fluid chambers. There is no possibility of leakage due to uneven screwed components. Each piece contains a matching groove which confines the true O-ring incorporated on the OD of the impermeable diaphragm. The internal parts in contact with the diaphragm have a large radius, thus preventing any damage or shearing off of the diaphragm. The choice of materials permits these gauge guards to be utilized on highly corrosive and ultra-pure solutions. Please follow all installation instructions for proper and dependable operation.

INSTALLATION

PLUMBING

Gauge guards with gauges - Series PGG gauge guards should be attached to the piping system using a $\frac{1}{2}$ " pipe nipple. Teflon tape or other acceptable pipe sealant should always be used on threads. The gauge guard should be tightened only slightly more than hand tight. Pipe wrenches should never be used. Series PGG gauge

guards should NEVER be attached to metal pipe threads. Sharp metal threads can scratch the plastic, leading to a possible rupture. It is recommended to use a T-connection with bleed valve at the bottom of the gauge assembly. This will bleed the lower side of the diaphragm.

Gauge guards without gauges - The above instructions are also applicable. When attaching a gauge or other instrument to the gauge guards, both gauge guard and instrument must be solidly filled; otherwise, a loss in accuracy will result.

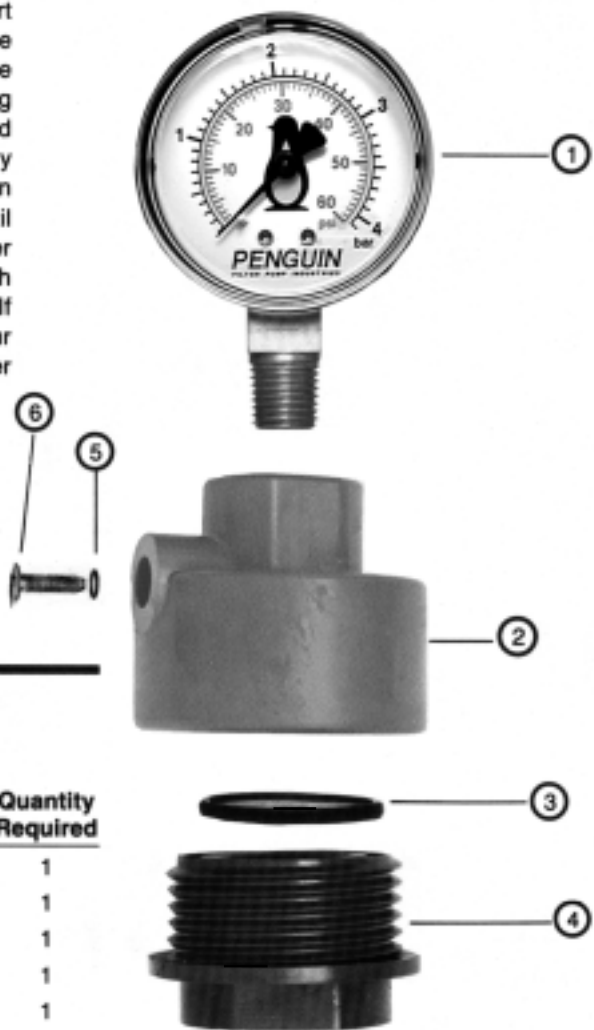
MAINTENANCE

ASSEMBLY

The gauge/instrument utilized must have a $\frac{1}{4}$ " MPT connection. Be sure the gauge has the proper pressure rating. Apply sealant, silicon rubber or teflon tape on threaded end of the gauge. Screw gauge in the top half of the guard assembly and line the gauge up with the filter/bleeder screw hole. With the upper body of the guard assembly upside down, place the diaphragm into the matching O-ring groove. Screw the lower body of the guard assembly into the upper body until it bottoms out. Tighten both halves with wrenches on the flats. Do not overtighten!

FILLING

The proper liquid to use in any gauge assembly is glycerine. Glycerine is a neutral, non-flammable liquid which is 99.5% incompressible and has a high viscosity. This will result in a very accurate gauge reading with no needle vibration. As an alternative, synthetic hydraulic oil can be used. With the assembled unit on a flat surface with the filler/bleeder hole and the gauge facing upward, start filling the guard assembly slowly by means of an injection needle or small tube with container. It is recommended to insert the needle or tube all the way into the guard assembly. This will start filling at the bottom while simultaneously pushing the air out of the bleed hole. When the guard is visibly filled, check to see if there are any airlocks by inserting a pin or needle into the liquid. Take the nylon screw with the O-ring and screw it into the filler/bleeder hole until it bottoms out. Test the gauge guard assembly by placing a finger into the 1/2" FPT threaded connection of the gauge guard and push against the diaphragm. Observe the movement of the needle. If the needle does not react immediately with the pushing of your finger, an airlock is entrapped in the liquid. Repeat the proper bleeding step.



SERIES PGG SPARE PARTS LIST

Item	Description	Part Number	Quantity Required
1-01	Pressure Gauge (0-30)	PGG-030-01	1
1-02	Pressure Gauge (0-60)	PGG-060-01	1
1-03	Pressure Gauge (0-100)	PGG-100-01	1
1-04	Pressure Gauge (0-160)	PGG-160-01	1
2A	Upper Guard Body-CPVC	PGG-200-02A	1
2B	Upper Guard Body-Polypro	PGG-200-02B	1
2C	Upper Guard Body-PVDF	PGG-200-02C	1
3V	Diaphragm-Viton	PGG-300-03V	1
4A	Lower Guard Body-CPVC	PGG-400-04A	1
4B	Lower Guard Body-Polypro	PGG-400-04B	1
4C	Lower Guard Body-PVDF	PGG-400-04C	1
5V	Bleed Plug O-ring-Viton	PGG-500-05V	1
6	Bleed Plug	PGG-600-06	1

FILTER PUMP INDUSTRIES

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Penguins Perform

7932 Ajay Drive, Sun Valley, CA 91352 • (818) 504-2391 • TELEX 674618 • FAX (818) 768-7590