



**PSG-7  
OIL/WATER SEPARATOR**

**INSTALLATION, OPERATION,  
MAINTENANCE MANUAL**

**PORTLAND  
COMPRESSOR**  
*Experience You Can Depend On*  
**800-542-8300**

**FAILURE TO READ AND UNDERSTAND THE FOLLOWING  
INSTRUCTIONS MAY CAUSE YOU UNNECESSARY  
COMPLICATIONS IN THE INSTALLATION OR OPERATION OF  
THIS EQUIPMENT.**

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PHONE: 1-800-526-3615

CCN: 38463311 Rev. B

SEPTEMBER 2009

## Limited One Year Warranty

The PSG Separators are warranted to be free from defects in material and workmanship, under proper use, installation, application, and maintenance in accordance with the manufacturer's written recommendations and specification for a period of 18 months from the date of shipment from the factory or 12 months from the date of installation, whichever comes first. The manufacturer's obligation under this warranty is limited to, and the sole remedy for any such defect shall be, the repair or replacement (at manufacturer's option) of unaltered products returned to manufacturer within stated period.

In order to process a claim, Ingersoll Rand must get from the customer a proof of purchase (date of purchase, invoice number). In no event, shall Ingersoll Rand be liable for business interruptions, loss of profits, personal injury, costs of delay or any other special, indirect, incidental, or consequential losses, cost, or damages.

NOTE - Routine maintenance and minor adjustments to the Ingersoll Rand oil/water separators are not covered under this warranty. Prior to performing any possible warranty service or replacing a possible warranted part, please contact your local Ingersoll Rand authorized representative. All warranty claims must be performed by an Ingersoll Rand certified technician. Failure to comply with this procedure will result in denial of warranty claim.

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## 1.0 HOW IT WORKS

The oil-contaminated water from the compressed air system is discharged from a condensate drain into the separator (1). The condensation is then depressurized in the first chamber (2). The compressed air is allowed to vent through the top while the liquid condensate falls to the lower chamber (3) and into the adsorption module.

The oil-contaminated water then moves through the adsorption module, where separation occurs (4).

The clean water then flows out of the exit to be drained directly to a collection point (5).

## 2.0 INSTALLATION

The separator should be placed in a leveled position. Remove the 3 knobs on the top of the unit and remove ring and foam pad. Remove the adsorption module. The module, should be hosed down to remove any dust, then soaked in water for 8 hours prior to installation. The module will be easier to install if it is laid in a horizontal position and rolled prior to inserting it into the chamber.

Once installed, pushdown on the module with your hands to ensure it is properly seated.

Connect a 1/4" valve to the service drain port (6). The water drain line must have a downward flow and the water can be drained directly to a collection point.

Connect the condensate line (not to exceed 150 psi) to the separator and fill with clean water until water begins to exit from the water outlet. Make sure the cover is in place. The separator is now ready to receive the condensate.

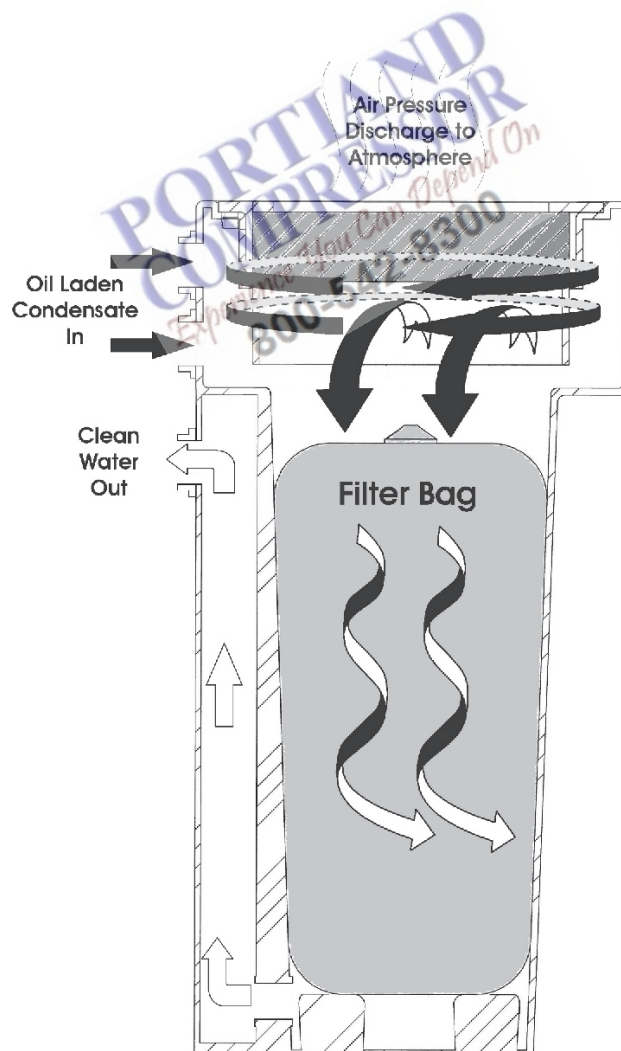


FIGURE 5-1 FLOW SCHEMATIC

### 3.0 OPERATION INSTRUCTIONS

Do not pour condensate, oil, or any other fluid directly into the oil/water separator.

Weekly, collect a sample of the discharge water in a clear glass vessel and, compare it to tap water, checking for cloudiness.

Replace the adsorption module when cloudiness appears in the discharge water sample.

For detailed fluid analysis, contact your local authority or an approved-testing laboratory. Ingersoll Rand provides fluid testing services. To learn more about these services, please contact your local Ingersoll Rand service provider.

### 4.0 SERVICE

In order to ensure that the adsorption module is effectively removing the residue oil, a water sample should periodically be taken from the sampling valve. If the water appears cloudy, then it is time for the adsorption module to be changed. It is recommended that only factory elements be used to ensure that proper flow and separation are maintained.

In order to replace the adsorption module, the cover must be removed. Remove the old module. The new module should be prepared as described in Section 2.0 Installation. The old module must be treated as hazardous waste and proper disposal is necessary.

The life of the adsorption module is dependent on several factors. First, the amount of condensate that must be processed during a period of time. It is better to have several short drain periods with small amounts of condensation over a set period of time versus a large amount of condensation over a long period of time; i.e.: better to drain 5 ounces ever 12 minutes than 60 ounces once every hour.

Second, the type of oil used to lubricate the compressor can decrease the life of the adsorption module. Soluble type oils are more difficult to separate and will require more frequent element changes.

Third, the type of compressor used can reduce the life of the adsorption module. Since two stage reciprocating type compressors produce higher temperatures, the condensate is more difficult to separate than from a single stage reciprocating or rotary screw type compressor.

#### NOTE:

1. The PSG-7 separator cannot be used with 100% food grade lubricants and/or silicon based lubricants.
2. CCN for the PSG-7 (38456992).
3. CCN for the replacement adsorption module (38457008).

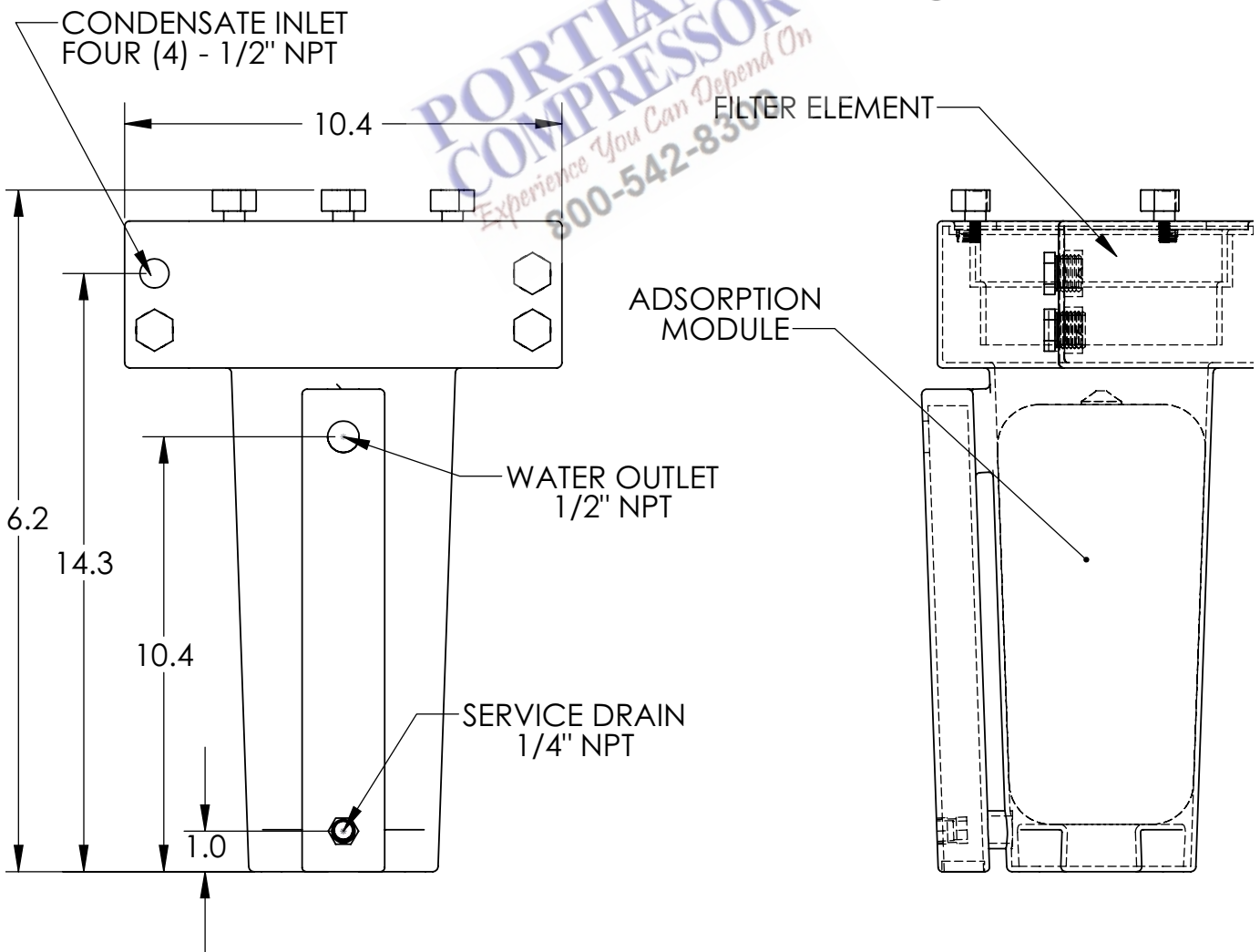
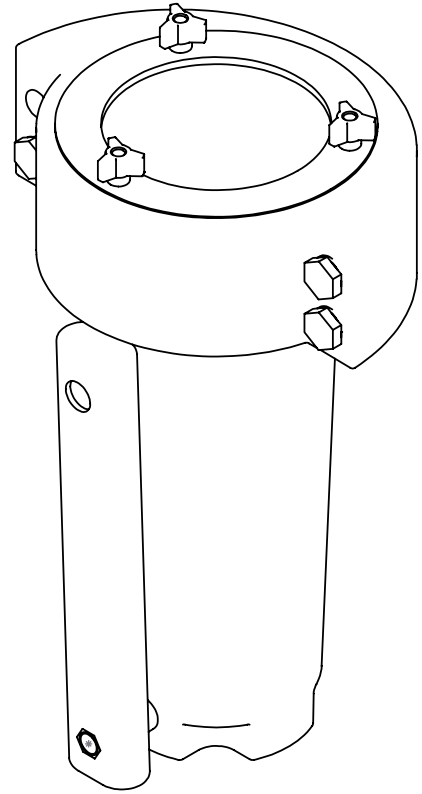
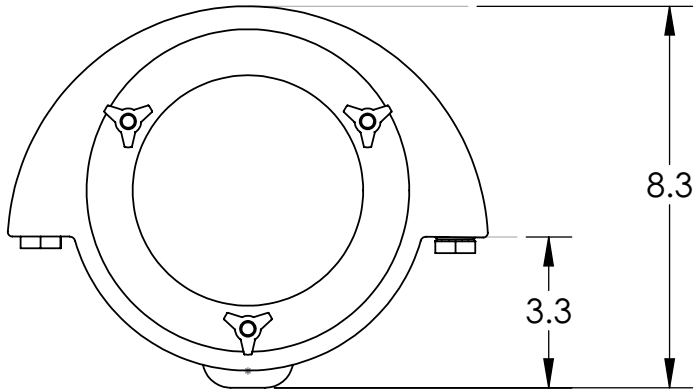
### 5.0 TROUBLE SHOOTINGS

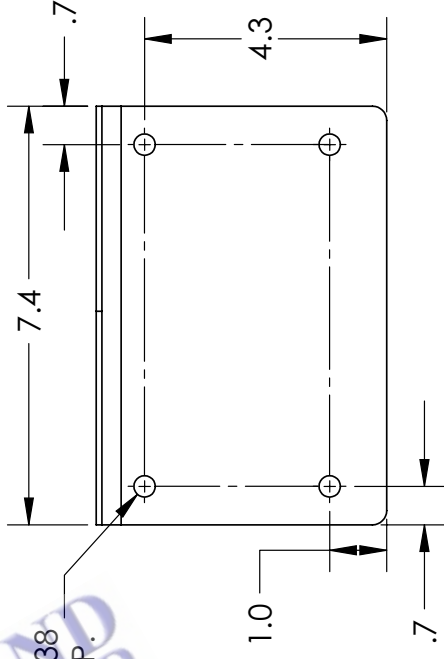
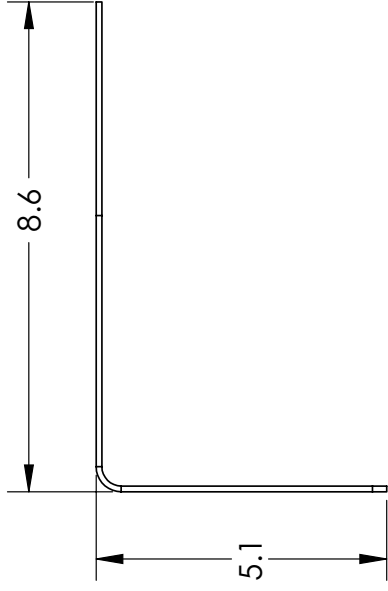
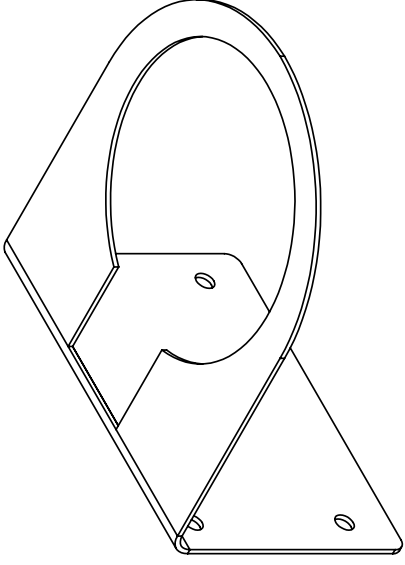
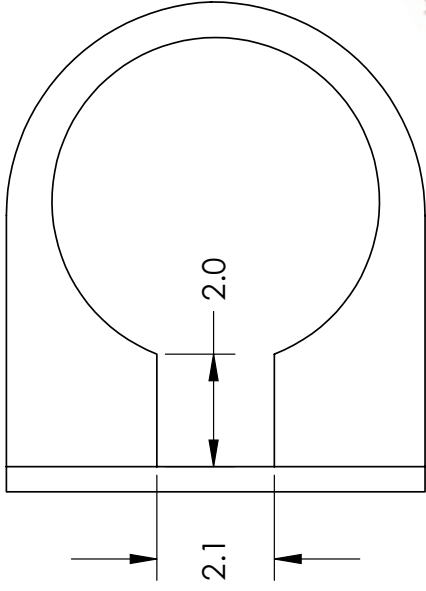
1. If the water that exits the separator appears cloudy, the adsorption module should be replaced.

If the cover comes off when condensate is entering the separator, then too much compressed air is being allowed to enter the separator. It is best to use a no loss drain such as the PNLD or ENL, that allows no compressed air to enter the separator. If a timer-operated drain must be used, it is best to use a small orifice (1/8") drain. The timer drain also should be set to cycle frequently for very short periods of time. This will help reduce the amount of air that enters the separator.

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## 6.0 GENERAL DATA





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PSG- 7 Mounting Bracket

## Mounting Instructions for PSG-7 Using Optional Mounting Bracket

1. Locate a mounting position that provides access to the separator.

NOTE: The bracket can be mounted in either position illustrated in Figure 1 or 2.

2. Make a copy of the attached template sheet.
3. Use the template copy to locate the position of the mounting screw holes.

NOTE: Ensure the bracket is mounted level to ensure proper operation of the separator.

4. Use bolting hardware appropriate for the attachment point. As a minimum, use 1/4" hexhead screws.
5. Once the bracket has been firmly attached, Figure 1 position the separator above the bracket with the connections facing the wall.

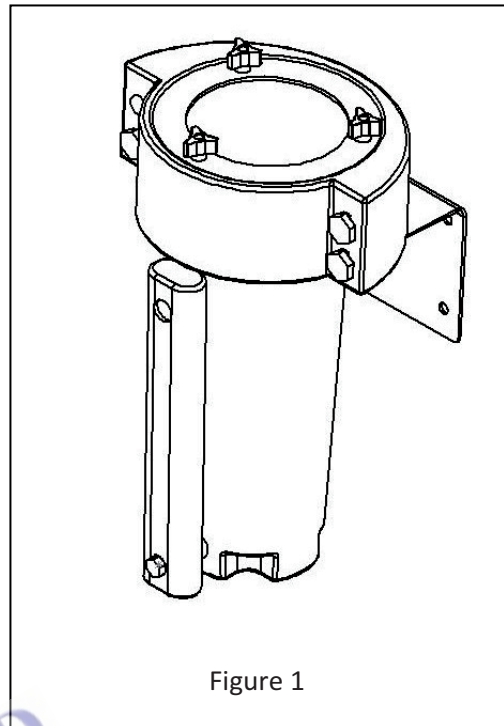


Figure 1

6. Slide the separator into the bracket.
7. Once the separator has been placed into the bracket, rotate 180 degrees so connections face outwards.
8. Proceed to make process connections

NOTE: The separator is designed to permit removal and replacement of the separator media without disconnecting or removing the separator from the bracket.

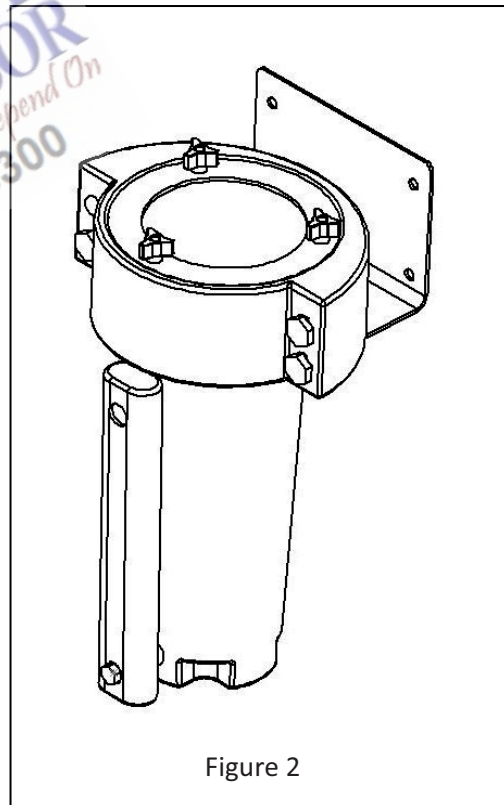
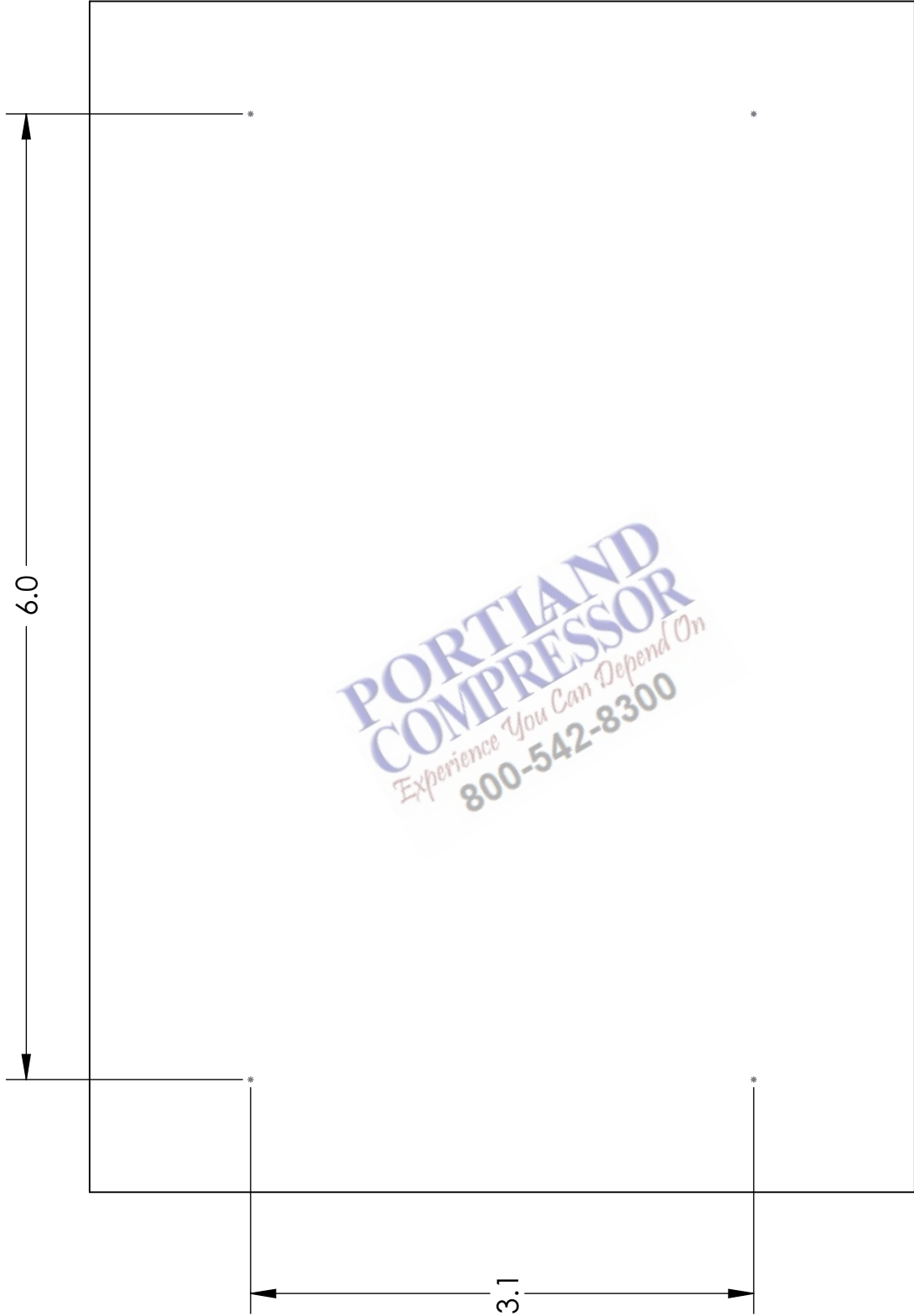


Figure 2

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NOTE: 1. Drill four (4) mounting holes using bracket or this drawing as the template.