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

The POLYSEP PS is 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 PolySep PS 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 GENERAL

Traditional gravity type separators do very well in separating oils that have good separation characteristics. However, many compressor oils do not fully separate. These types of oils, known as emulsions, tend to foul-up the carbon filters as well as the pre-adsorption and coalescing medias that are commonly installed in front of the carbon filters. Those filters have to be replaced before their capacity is fully used.

The PolySep PS was designed to effectively separate emulsified compressor condensate to levels of 15 PPM* or less without premature element failure and backup spillages. To do this, the PolySep PS uses two very unique features. First, the delivery system has a pneumatically operated pump that is used to feed the adsorption module. The use of pressure ensures the adsorption module will not clog. Second, the Adsorption Module contains a specially formulated zeolite adsorbent. The substrate is coated with a hydrophobic compound. This combination gives the media an ability to hold up to four times the amount of oil that standard activated carbon can hold.

2.0 HOW IT WORKS:

The condensate enters the (1) Diffuser Chamber where it is depressurized. As the condensate accumulates a Float (6) rises with the level of condensate. The float is connected to a (5) Ball Valve by a lever arm. The increased level of condensate causes the float to rise and open the ball valve. As the valve opens, the air-operated (4) Pump is allowed to push the condensate out to the (7) Adsorption Module. If the level of condensate continues to rise, the float also rises, further opening the ball valve. This results in additional condensate being pushed to the adsorption module. Thus, the system will self adjust to the quantity of condensate entering the system. This system ensures maximum contact time for the adsorption module. Clean water discharged (8) from the adsorption module can then be disposed directly into the facility’s sanitary sewer.

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*Based on modern piece of equipment Wi<3ppm carryover properly sized and installed. Polysep PS is not recommended for use with silicon based or food grade oils. Water discharge from the PolySep oil/water separator is not intended or approved for human consumption.
3.0 INSTALLATION INSTRUCTIONS

3.1 PLACEMENT

Position the POLYSEP PS DELIVERY SYSTEM, ADSORPTION MODULE and an Oil Collection Container (not supplied) in an easily accessible location near your Compressor Station. Unit must be positioned on a level floor.

The following Adsorption Module Backwash Procedure MUST be performed each time you install a new Adsorption Module. It will purge the Adsorption Module of air and clarify the water by removing the fine dust created during transportation.

3.2 ADSORPTION MODULE BACKWASH PROCEDURE

1. Remove the 2” npt plug from the Inlet Port on the Adsorption Module. Replace with the 2” npt (m) x 3/4” npt (f) reducing bushing and a 3/4” npt (m) x 3/4” hose barb elbow.

2. Supply your required length of 3/4” discharge tubing (clear is recommended) (not supplied) and secure it with a hose clamp (not supplied) to the 3/4” hose barb connection. Route this tubing to your Sanitary Sewer Floor Drain.

3. Remove the 3/4” npt plug from the Outlet Port on Filter Module AM250 and replace it with the 3/4” npt (m) x 3/4” garden hose adapter.

Note: The Plug is 2” on Modules AM-560 & AM-1125. Replace with a 2” npt (m) x 3/4” npt (f) reducing bushing. Then install the garden hose adapter.

4. Connect one end of a garden hose to your tap water valve. Next, connect the opposite end to the hose adapter on the Adsorption Module. Open the Tap Water Valve ONLY one-quarter (1/4) turn to purge the air and fill the Adsorption Module with clean water. Continue to backwash the Adsorption Module until the water exiting the discharge hose runs clear.

5. When water runs clear, shut off the tap water valve, disconnect the garden hose and, remove the garden hose adapter fitting from the outlet port. (Keep the garden hose adapter fitting for future use).

The Backwash Procedure is now complete. Prepare the Adsorption Module for Air Compressor Condensate Service as follows:

6. Remove the 3/4” npt (m) x 3/4” hose barb elbow and discharge hose from the inlet port and, reinstall them into the outlet port.

7. Install a 3/4” npt (m) x 3/8” npt (f) reducing bushing into the inlet port, then install a 3/8” npt (m) x 3/8” tubing adapter elbow. Next, fasten one end of the black 3/8” condensate delivery tubing to the tubing adapter.

3.3 DELIVERY SYSTEM INSTALLATION

1. Level the Delivery System.

2. Thread the 1/4” npt (m) in-line, sintered bronze, particulate Control Air Filter into the Control Line Air Inlet port. Connect a clean, dry, oil-free compressed air line to the Filter.

Note: PROPER OPERATION OF THE DELIVERY SYSTEM REQUIRES THAT CLEAN, DRY, OILFREE 30-150 PSI COMPRESSED AIR BE PIPED TO THE CONTROL AIR FILTER. FAILURE TO DO SO MAY DAMAGE THE PUMP AND VOID THE WARRANTY.

WE RECOMMEND INSTALLING A 1/4” NPT, .01 MICRON IRHE FILTER IF OIL IS PRESENT IN YOUR CONTROL AIR.

3. To connect the PolySep PS Delivery System to the Adsorption Module, first, install a 3/8” npt (m) x 3/8” tubing adapter into the 3/8” npt Condensate Discharge Port. Then, fasten the black 3/8” Condensate Delivery Tube (that you connected to the Filter Module in step #7) to the tubing adapter. Be careful not to kink the tubing.

3.4 SERVICE PREPARATION PROCEDURE

1. Remove the lid from the top of the Delivery System by grasping the sides of the Diffuser Chamber with both hands, and lifting the entire top straight-up. Carefully, set the lid aside.

2. Check the Internal Pressure Gauge. It should read 30 PSI. DO NOT ADJUST ANY HIGHER.

3. Slowly, fill the Main Reservoir with tap water. (Water will automatically exit though the pick-up tube and spill into the Delivery System Reservoir.)
5. The rising water level will open the discharge valve by lifting the ball float. This will cause the pump to start cycling and push the Water through the Adsorption Module.

6. Watch the discharge hose on the Adsorption Module to determine that water is being pumped through the system. If it is not, add about a half-a-gallon to the reservoir and check again. The Pump will continue to run until the receding water level lowers the ball float enough to close the valve. This will stop the Pump.

3.5 SYSTEM COMMISSIONING

1. Replace the Lid on the Delivery System.

2. Connect your Condensate Drain Lines to the 1/2” npt (F) inlet connections on the Diffuser Chamber.

   **Note:** The Diffuser Chamber can be rotated at 90 degree intervals to ease your piping restraints. Simply remove the four socket head capscrews, position as needed and replace the screws.

3. SAVE ALL PLUGS AND FITTINGS!!

4. The POLYSEP PS is ready for service.

4.0 OPERATION INSTRUCTIONS

The POLYSEP PS Delivery System will automatically start and stop as required by the condensate load.

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.

PolySep PS can not be used with 100% food grade lubricants and/or silicon base lubricants.

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

### Dimensions & Weights

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<th>B</th>
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<td>-</td>
<td>-</td>
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Notes: 1. All dimensions are in inches. 2. All dimensions are +/- .5 inches

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**FIGURE 5.1 OUTLINE DIMENSION DRAWING**

- **TOP VIEW (without Shroud)**
- **FRONT VIEW**
- **END VIEW**

**Notes:**
1. All dimensions are in inches.
2. All dimensions are +/- .5 inches.
FIGURE 6.1 REPLACEMENT PARTS LIST
## INSTALLATION PARTS LIST

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