

# Ingersoll-Rand®

## PS PolySep Oil/Water Separator

The Ingersoll-Rand PS Polysep Oil/Water Separator product offering is the most comprehensive environmental solution in the air compressor industry

### The Problem with Other Oil/Water Separators

Compressor oils that do not have good separation characteristics, 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. This is a result of oil binding off the pore area of the carbon where the condensate first comes in contact with the filter. The jelled oil clogs the filter, which then prevents the volume of condensate from properly flowing through the filter. This premature failure of the carbon filters most often results in the system backing up on the floor.



### The IR Environmental Solution

IR PolySep is designed to effectively separate emulsified compressor condensate, as well as oils that have better separation characteristics, to levels of 15 PPM or less without premature element failure and backup spillages. These systems are designed to cover compressor ranges from 5-4500 SCFM, and work effectively with Polyglycols, Mineral Oils, PAOs, Polysol Esters & Diesters.

### Benefits

- Non-corrosive materials
- No electricity
- Expandable system
- Permanently absorbs oils
- Only two moving parts
- Valuable for ISO 14001 Certified Companies
- Extended filter life
- Low maintenance cost
- Helps protect and maintain the environment

### Technical Specification Guide

| Model   | CCN#     | Max. SCFM | Max. HP | Absorption Module Volume (gal.) | Air Line NPT | Condensate Inlet NPT | Oil Outlet NPT | Water Outlet NPT | Replacement Adsorption Modules | Dimensions LxWxH (in.) | Weight (lbs.) |
|---------|----------|-----------|---------|---------------------------------|--------------|----------------------|----------------|------------------|--------------------------------|------------------------|---------------|
| PS-30   | 38041596 | 30        | 7.5     | 1                               | N/A          | 1/2"                 | 3/4"           | 3/4"             | 38041604                       | 11.5x11.5x27.5         | 15            |
| PS-60   | 42528455 | 60        | 15      | 2                               | N/A          | 1/2"                 | 3/4"           | 3/4"             | 42528505                       | 11.5x11.5x27.5         | 25            |
| PS-125  | 38339040 | 125       | 30      | 5                               | N/A          | 1/2"                 | 3/4"           | 3/4"             | 38339057                       | 28.5x19.5x30.8         | 100           |
| PS-250  | 42528463 | 250       | 50      | 15                              | 1/4"         | 1/2"                 | 3/4"           | 3/4"             | 42528513                       | 44.5x19.5x37.8         | 140           |
| PS-560  | 42528471 | 560       | 125     | 30                              | 1/4"         | 1/2"                 | 3/4"           | 3/4"             | 42528521                       | 45.5x19.5x37.8         | 140           |
| PS-1125 | 42528489 | 1125      | 300     | 55                              | 1/4"         | 1/2"                 | 3/4"           | 3/4"             | 42528539                       | 45.5x19.5x37.8         | 140           |

#### PolySep Accessories

Flow Divider 22204432

*Note: This component balances load between multiple PolySep units, maximizing element life and optimizing operation.*

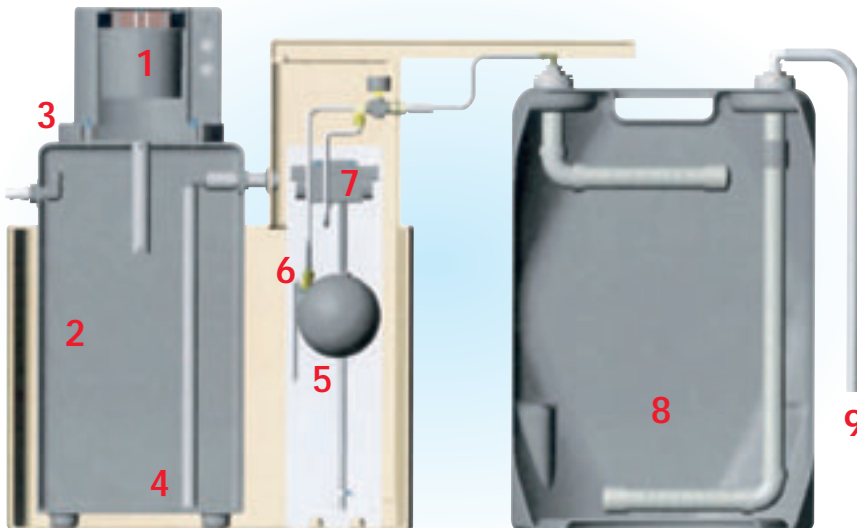
PolySep Installation Kit 38338273

*Note: Kit includes (2) 4-Way 1/4" Manifolds, (2) 1/2" x 3/8" Reducing Bushings and (8) 1/4 Plugs.*

2.5 Gallon Oil Container 38339081

*Note: 2.5 Gallon Oil Container comes standard with PS-125. Needs to be purchased separate with all other models.*

# PS PolySep Oil/Water Separator



- |                    |                 |
|--------------------|-----------------|
| 1 Diffuser Chamber | 6 Ball Valve    |
| 2 Main Reservoir   | 7 Pump          |
| 3 Oil Weir         | 8 Filter Module |
| 4 Pick-Up Tube     | 9 Discharge     |
| 5 Float            |                 |

## Operation

The condensate enters the diffuser chamber (1) when it is depressurized. The oily condensate then enters a main reservoir (2) where gravity separation occurs. Any oil that floats to the surface is skimmed off through an adjustable oil weir (3). The condensate then moves to a separate chamber through a pick-up tube (4). As the condensate accumulates in the next chamber, a float (5) rises with the level of condensate. The float is connected to a ball valve (6) 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 pump (7) is allowed to push the condensate out to the filter module (8). If the level of condensate continues to rise, the float also rises and further opens the ball valve. Cleaned water discharged (9) from the filter module can be disposed of directly into the facility's sanitary sewer. This system assures maximum contact time for the filter module.

The PolySep system only requires compressed air to operate the diaphragm pump and is only used when the level of condensate rises enough to operate the pump. This system is reliable because there are only two moving parts.

The PolySep filter modules are available in three separate sizes. The same delivery system is used for each filter module. Thus, an expanded system may only require a larger filter module. Once spent, there are no messy bags to dispose of. The containers are totally self-contained and easily transported by use of a forklift handle located at the top.

## More Than Air. Solutions.

Online solutions: <http://www.air.irco.com>

Water discharged from the PolySep oil/water separation system is not intended or approved for human consumption. Installation of PolySep oil/water separation system must be in accordance with all local and national regulations. Check with local municipality to determine permissible oil content in effluent. Regular monitoring of outlet water is required to ensure that permitted limits are not being exceeded.

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