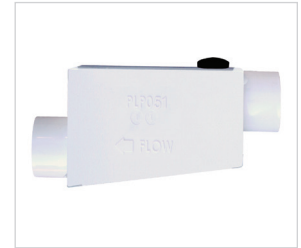


# PLP-051 Series: IOM

## Positive Pressures Ranging from 0 to 6" WC

Patented

These instructions are a guide to the user of a PLP-Series 051 *Air-Trap* during installation, commission into service, operation, or periodic maintenance.



### Product Description

The PLP Series *Air-Trap* allows water to drain from HVAC equipment and simultaneously prevents air from escaping from the equipment.

The PLP Series *Air-Trap* does not require standing water to prevent gas (typically air) from leaving the HVAC unit. With the occurrence of condensate, or other water sources within the unit, the water flows out of the HVAC unit but no gas escapes. When there is no production of condensate or water, there is no water in the trap and there is no gas leaving through the trap. Install the PLP Series *Air-Trap* in a horizontal position.



**DO NOT USE EXCESS CEMENT.** Too much cement could interfere with capsule movement and cause trap failure.

**NEVER CONNECT CONDENSATE DRAIN DIRECTLY TO A SANITARY DRAIN LINE.**

**DO NOT PUNCTURE FLOAT VALVE.**

**WARNING:** This product can cause expose you to chemicals including vinyl chloride, which is known to the State of California to cause cancer. For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

### Installation

Install the PLP Series *Air-Trap* horizontally with the plug facing upward and the embossed arrowhead, ►, labeled "FLOW" pointing in the direction of water flow. This is a requirement for proper movement of the internal float valve component. PLP Series *Air-Trap* unit requires no water head to cause the trap to operate. Simply come out of the plenum with the condensate line and directly into the PLP Series *Air-Trap*. Come out of the trap and go horizontally with your drain line. See **Figure 1**. If installing with a larger or smaller pipe use a connector or bushing respectively. See **Figure 3**. Use schedule 40 bushings to accommodate smaller pipe sizes than the connections on the *Air-Trap*.

Install the trap in accordance with manufacturer's instructions and with all applicable local or national plumbing, drainage, and mechanical codes.

### Operation

The PLP Series *Air-Trap* operates dry when no water removal is required and wet when it is required. When dry, essentially no air exits the HVAC unit. When removing water, the water exits the unit, but essentially no air exits the unit through the drain connection.

Install the PLP Series *Air-Trap* in a horizontal orientation. With no production of condensate within the AHU, the positive pressure that exists within the plenum that contains the drain line forces the internal mechanism downward onto the valve seat. With the production of water within the plenum, the capsule rises from the seat when the net buoyancy force upward equals or exceeds the net downward force created by air pressure. See cutaway view in **Figure 2**. Model PLP Series 051 operates as a positive trap up to 6 inches WG of positive pressure.

Figure 1



#### The PLP Series Air-Trap accomplishes the following:

- Eliminates sludge buildup that normally accumulates in standard "P" traps
- Prevents freezing of trap during cold periods since during periods of no water removal there is no water in the trap. If, for some reason, water is flowing from the unit during freezing temperatures, and the trap is located within this freezing temperature region, then the trap will require thermal protection.
- PLP Series Air-Trap requires no water head to cause the trap to operate.
- Eliminates air escaping from an HVAC unit that would result from a standard P-trap experiencing a "dry-out" condition.
- Reduces trap height from essentially 2 times the positive pressure (in inches WC) to 2 inches.

#### Maintenance and Techniques for Cleaning the PLP Series Air-Trap

In some operations, particulate matter can move from the HVAC unit through the drain line and into the PLP Series Air-Trap. The accumulation of particulate matter in the trap may cause the trap to operate less efficiently or fail. Therefore, a means to remove the accumulated debris is required.

To clean the Air-Trap use the 1/2 inch cleanout port in the trap housing. This will allow insertion of a water or air hose for washing or blowing away material that may be hampering operation of the trap.

Inspect the PLP Series Air-Trap on an annual basis; remove any foreign materials that might obstruct proper operation of the internal mechanism or general drainage of the drain line. Remove obstacles utilizing the clean out port located on the top of the Air-Trap. Caution – do not damage the internal mechanism inside the PLP Series Air-Trap. Properly dispose of any contaminated materials.

#### Limited Warranty

Des Champs Technologies warrants to the original consumer purchaser ("Purchaser") of its product, PLP Series Air-Trap, that it is free from defects in material or workmanship. If within the 12-month period from the date of the original consumer purchase this product shall prove to be defective, it shall be repaired or replaced at Des Champs Technologies option. Your original receipt of purchase is required to determine warranty eligibility. The warranty does not cover damage due to misuse, misapplication, lack of maintenance, or failure to comply with the manufacturer's installation instructions or recommendations or any other loss or damage exceeding the purchase price of the equipment purchased from Des Champs Technologies. Des Champs Technologies assumes no responsibility for damage or injury resulting from chemical incompatibility between its products and the process fluids to which they are subjected. This warranty is limited to repair or replacement of the PLP SERIES Air-Trap only and is the only warranty issued by Des Champs Technologies on its trap products.

This product design is Patented by Des Champs Technologies LLC, Natural Bridge Station, Virginia 24579.

Des Champs Technologies also has a full line of Commercial grade Negative Pressure Traps. Call 1-540-228-1967 or go to the following websites for more information:

[www.deschampstechnologies.com](http://www.deschampstechnologies.com) -or- [www.waterless-trap.com](http://www.waterless-trap.com)

Figure 2

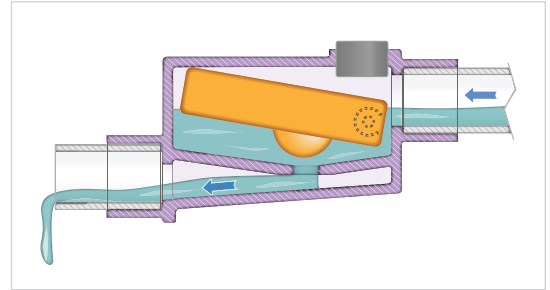
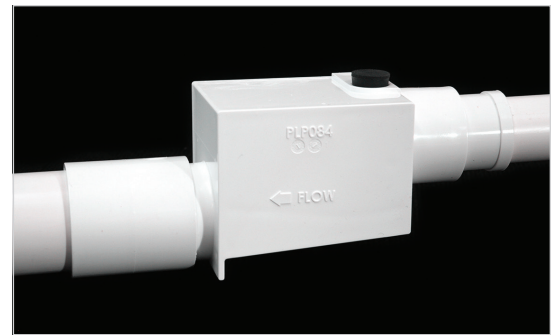


Figure 3



The Air-Trap™ concept has been incorporated into IAPMO IGC 196-2018 Standard for Condensate Traps and Overflow Switches for Air-Conditioning Systems.

Air-Traps meet  
IMC® Code Section M307.2.4.1

ICC-ES Evaluated

