

HVAC Air-Trap™ PLP-Series

These instructions are a guide to the user of a PLP Series 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.

Delivery Check

Upon receipt of the Air-Trap(s), inspect for damage that may have occurred during shipment and check to insure delivered items match purchased items.

Storage Considerations

Store the Air-Trap in a protected area prior to installation. **The warranty will not cover damage to the trap resulting from negligence.**



Figure 1

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

Installation

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

Install the PLP Series Air-Trap horizontally with the plug facing upward and the embossed arrowhead, ►, labeled "FLOW" pointing in the direction of waterflow. 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.

NEVER CONNECT CONDENSATE DRAIN DIRECTLY TO A SANITARY DRAIN LINE. Connect only to a storm drain or a condensate drain line.

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 084 and 051 operate as a positive trap up to 40 inches WG of positive pressure.

Installation, Operation, and Maintenance Manual

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)
PLP-084 - Trap height 2 7/8 inches (Connection Size: 1-1/2 inches)
PLP-051 Trap height 2 inches (Connection Size: 3/4 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.

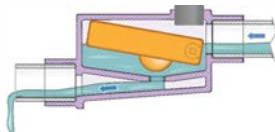


Figure 2



Figure 3



Made in USA