SEALED UNIT PARTS CO., INC.
PO Box 21, 2230 Landmark Place
Allenwood, NJ 08720 USA
800-333-9125 • www.supco.com

HVAC AIR-TRAP™
WATERLESS TRAPS

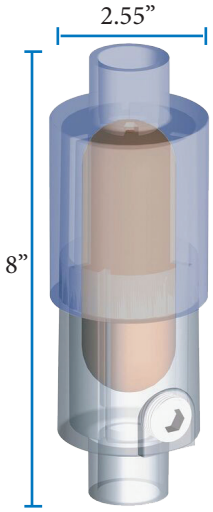
Typically, HVAC equipment is fitted with "P" traps that require water within a trap to prevent air from leaving or entering the unit. As a result, the "P" traps are susceptible to freezing. At other times, the traps dry out allowing air to escape or enter the HVAC equipment. In negative pressure systems this can result in condensate backing up in the equipment and spilling into ductwork or down into the building causing damage. In positive pressure systems, an ineffective trap results in conditioned air being expelled and loss of equipment capacity/efficiency. Des Champs Waterless Traps are available in N-Series for negative pressure and P Series for positive pressure applications. Both are available in 3/4", 1", 1-1/4", 1-1/2" line sizes and transparent or white PVC bodies.

Features / Benefits

- Prevent dry trap syndrome
- Prevent freezing-expansion-bursting
- No back up of condensate in drain pan
- Schedule 40 white or clear PVC
- Clean-out port for easy maintenance of the drain line per the 2015 Mechanical and Residential Codes
- Keep unconditioned air from entering air handler
- Reduce the trap height required by approximately 50%.
- Never requires the addition of water

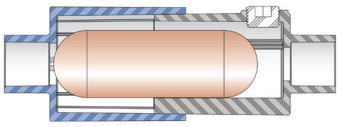
P Series

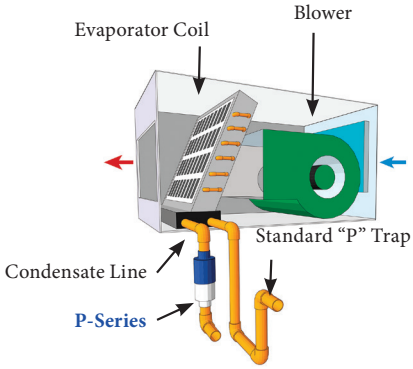
Scan for Video



Positive Pressure Waterless Traps

PART NO.	DESCRIPTION
PPC34V	3/4", Clear
PPC1V	1", Clear
PPC114V	1-1/4", Clear
PPC112V	1-1/2", Clear
PPW34V	3/4", White
PPW1V	1", White
PPW114V	1-1/4", White
PPW112V	1-1/2", White

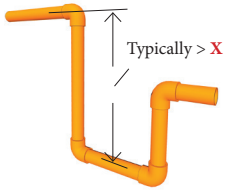




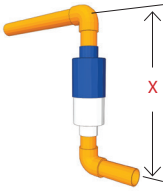
P-Series Trap Advantages

- When removing water, the water exits the unit but no air escapes the unit.
- Reduces sludge buildup that normally accumulates in standard "P" traps.
- Prevents problem with standard "P" trap never filing with water when condensate begins to form at the beginning of the cooling season.
- Prevents freezing of trap during cold periods since there is no water in the trap.
- P-Series Air-Trap requires no water head to cause the trap to operate. Simply come out of the plenum condensate line and go down into the P-Series Air-Trap. Come out of the trap and go horizontally with your drain line. The height requirement then becomes the height of the trap plus two elbows.

Standard "P" Trap



P-Series



Note: The attached drawings represent traps that operate under positive pressure. Never connect condensate drain directly to a sanitary drain line.

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Negative Pressure Waterless Traps

N Series

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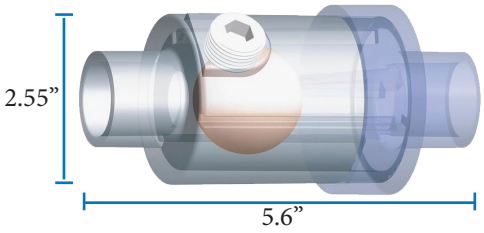

PART NO.	DESCRIPTION
NPC34H	3/4”, Clear
NPC1H	1”, Clear
NPC114H	1-1/4”, Clear
NPC112H	1-1/2”, Clear
NPW34H	3/4”, White
NPW1H	1”, White
NPW114H	1-1/4”, White
NPW112H	1-1/2”, White

For negative pressure, figure 1 shows that for a “P” trap the vertical distance required between the center line of unit connection and the center line of the bottom of the trap is 4 inches when there is a 2 inch negative plenum pressure. Not for the N-Series, it is only 2 inches, not the 4 inches required with the standard “P” trap.

When there is no water to remove the negative pressure, the plenum draws the internal mechanism against the valve seat and essentially no air enters the Air Handling Unit (AHU) through the drainpipe.

When condensate forms then water builds up in the vertical pipe. When the water level equals the negative air pressure, in inches of water column, the force of the water head becomes equal or greater than the negative pressure. The internal valve moves to the left and rests against the valve seat and water flows.

When there is no longer a requirement to remove water, the negative pressure returns the ball to the valve seat and prevents airflow to the unit plenum. The internal rails aid in returning the ball to the seat in case the variable speed fan is operating at a low flow and low negative pressure.

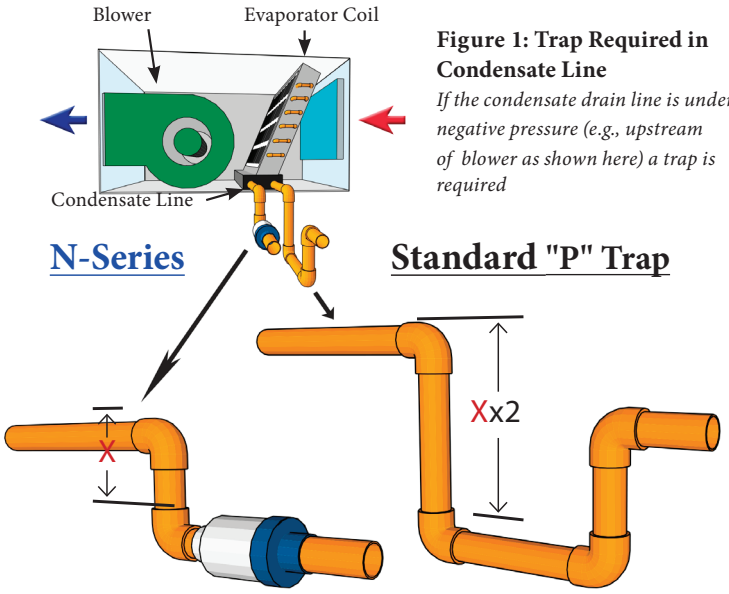

Figure 1: Trap Required in Condensate Line
If the condensate drain line is under negative pressure (e.g., upstream of blower as shown here) a trap is required