

# PRESSURE DROP TEST PROCEDURE



## TEST CONDITIONS

- ❑ The primary purpose of this test is to identify the amount of resistance to airflow that exists in an HVAC system component.
- ❑ The most common system components to measure the static pressure drop over are the coil and the filter. Both components are placed directly in the air stream and normally have the greatest resistance to airflow of any of the system components.
- ❑ Carefully select locations to install test ports. Inspect behind locations before drilling for anything that could be damaged by a drill bit. When drilling, be sure to always use a sheath over the drill bit.

## TEST PROCEDURE

- ❑ Install two 3/8" test ports, one on either side of the component being tested to identify its pressure drop.
- ❑ Attach the static pressure tip to the hose and attach the hose to the manometer on the appropriate pressure port. The positive pressure port is normally located on the right side or near the top of the manometer. The negative pressure port is measured at the bottom or left pressure port.
- ❑ Read and record the static pressure on each side of the component.
- ❑ Subtract the two static pressure readings from each other to find the static pressure drop over the system component. Example:  $-.41''$  before the coil minus  $-.11''$  after the coil =  $.30''$  pressure drop over the system component. (Or, 3/10 of an inch of water column.)
- ❑ Compare the pressure drop to the manufacturer's rated pressure drop for that component or to industry standards. Clean, repair, modify, re-engineer or replace the component if needed.

## PRESSURE TIPS

- ❑ A manometer is a pressure differential gauge. Two tubes can be used for taking this reading. The difference displayed on the manometer is the pressure drop.
- ❑ If the needle on a Magnehelic Gauge® moves to the pin or to the left of the zero, switch the position of the hose on the manometer. The gauge will then read correctly.
- ❑ Use NCI *Pressure Budget Tables* to help interpret the pressure drop over the components of the system.