Overview

The NSA-SPT Series Static Pitot Tubes are aluminum static pressure (aspiration) probes used to monitor the static pressure in an HVAC duct or equipment application. The static pressure probe should be mounted approximately 5 to 8 duct diameters downstream from elbows, obstructions, or large change in duct area to reduce the amount of turbulence that will affect your readings.

Applications: Used to monitor fan operation, filter blockage, or reduced air flow with little or no static pressure in non-critical applications

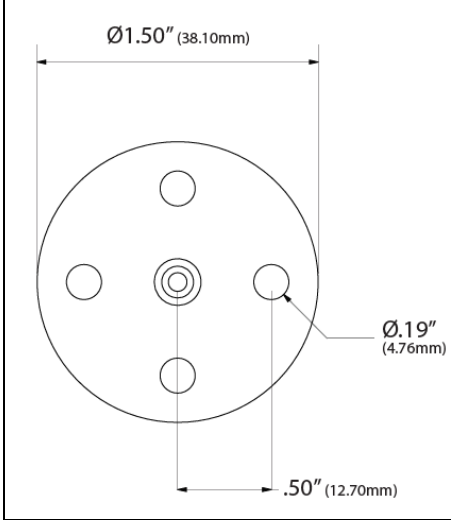
Part Numbers

NSA-SPT-3.5 **NSA-SPT-8.0**

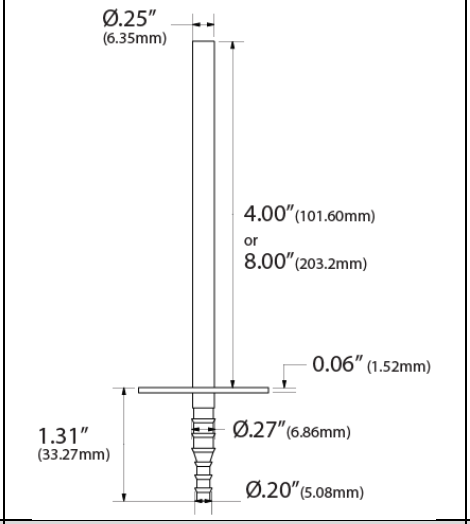
Specifications

Tubing Connection | Tubing Size:	45º Barbed Type (6 Places), accepts 1/8” through 1/4” ID flexible plastic tubing
Probe Insertion Length & Sensing Points:	**NSA-SPT-3.5**: (88.9 mm) | Single Point **NSA-SPT-8.0**: 8” (203.2 mm) | Single Point
Tube Mounting Direction:	Tip opens parallel to the air stream
Static Tube Mounting Angle:	Perpendicular to the duct (90 Degrees +/- 3 Degrees)
Mounting Flange (Diameter):	1.50” (38.1 mm)
Measurement Probe Hole Size (Diameter):	1/4" (6.35mm)
Mounting Holes (Diameter):	3/16” (4.76 mm)
Material:	Aluminum
Storage & Operating Temperature Range:	-40 to 185ºF (-40 to 85ºC)
Operating Humidity Range:	0 to 90% RH non-condensing
Weight:	**NSA-SPT-3.5**: 0.022 lbs (10g) | **NSA-SPT-8.0**: 0.034 lbs (15.4g)
Agency Approvals:	RoHS2, WEEE, Reach

Dimensional Drawing



Front View

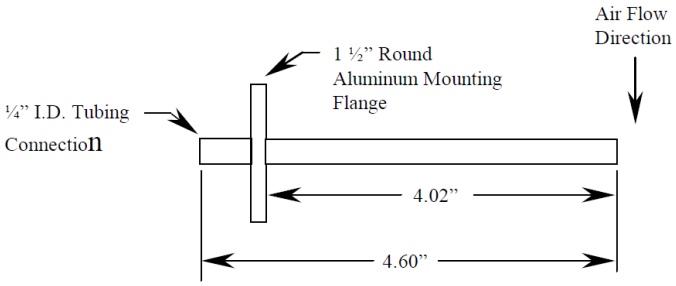


Right View

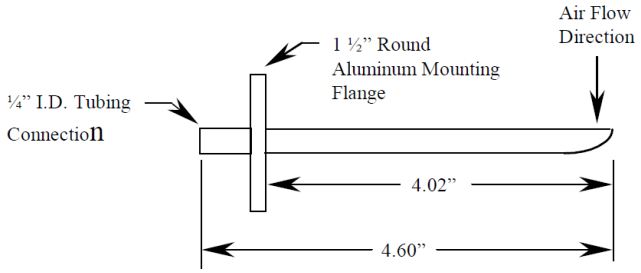
Top View

Installation

SPT (Static or Aspiration Pressure Probe)



VPT (Velocity or Impact Pressure Probe)



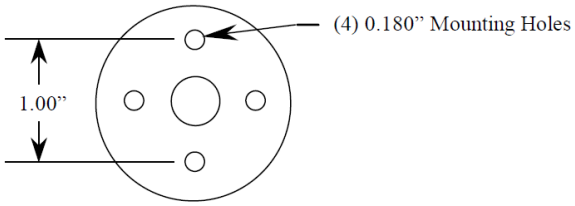
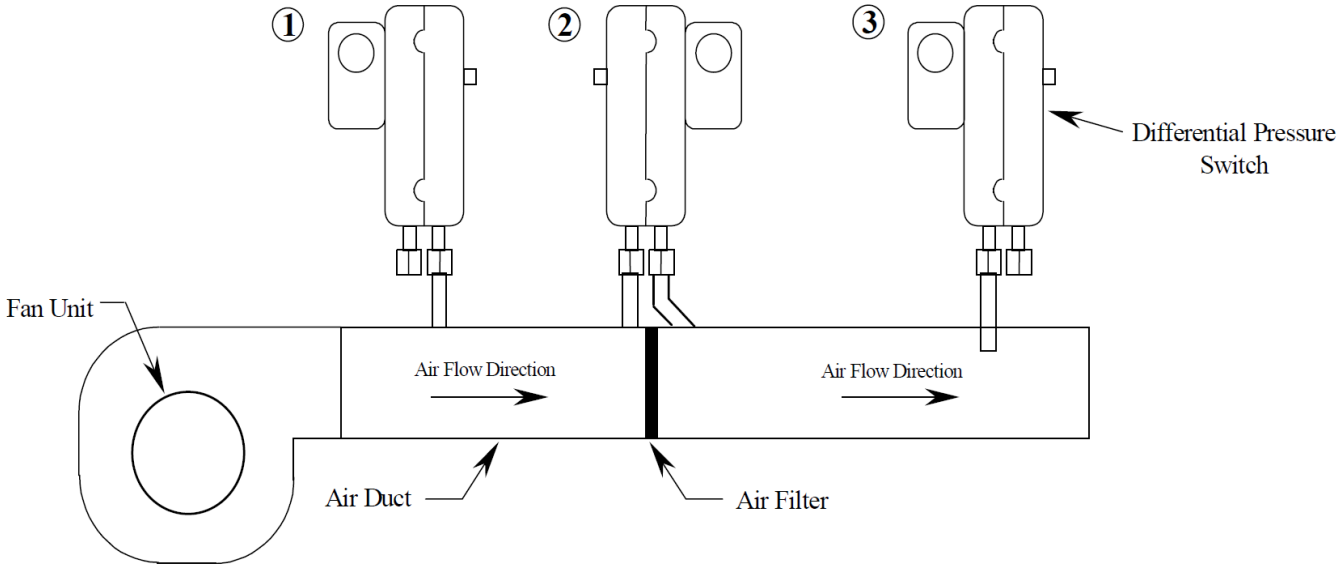


Figure 1

Mounting and Location Information

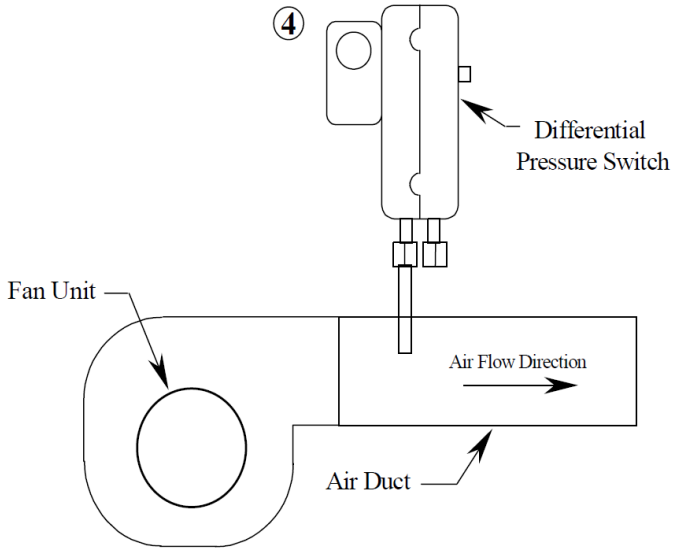
Select a position that is 5 to 8 diameters downstream from elbows, obstructions, or large changes in duct area. Insert the probe into the duct so that it is perpendicular to the airstream. The Aspiration or Static probe tip should open parallel with the airstream. The Impact or Total Pressure probe tip should open directly into the airstream. The following diagrams show some of the locations for the SPT and VPT. The numbers by each of the pressure switches correspond to the following notes below the picture. These drawings will show some of the most common applications for both the Differential Pressure Switches and the Pitot or Pick up Tubes.

Applications #1, #2, and #3



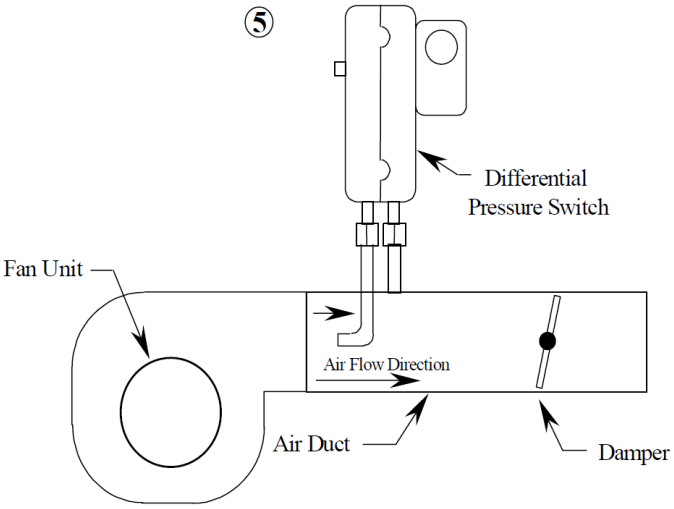
1. Positive static pressure increases as the filter gets dirty
2. Differential across filter changes as the filter gets dirty
3. Flow is reduced as the filter gets dirty.

Application #4



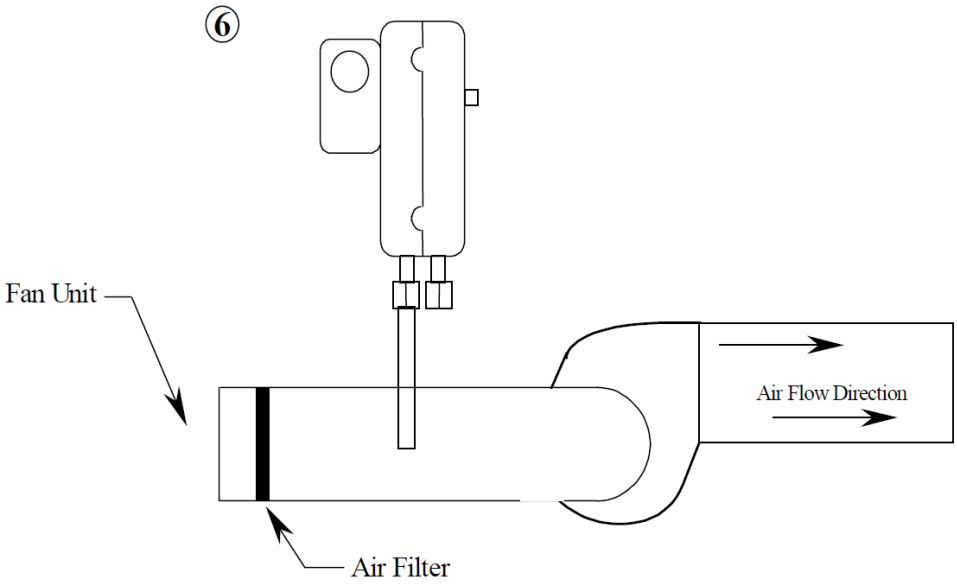
4. Fan Operation or True Air Flow with little or no Static Pressure

Application #5



5. Fan Operation and True Air Flow; Varying amounts of Pressure. Probe must be perpendicular to Air Flow

Application #6



6. Negative Pressure Increases as the Filter gets Dirty.

Pressure Conversion Table

1” w.c. = 0.0361 psi or 0.0735”gH

1” Hg. = 13.6” wc. or 0.491 psi

1 psi = 27.7”wc. or 2.036" Hg