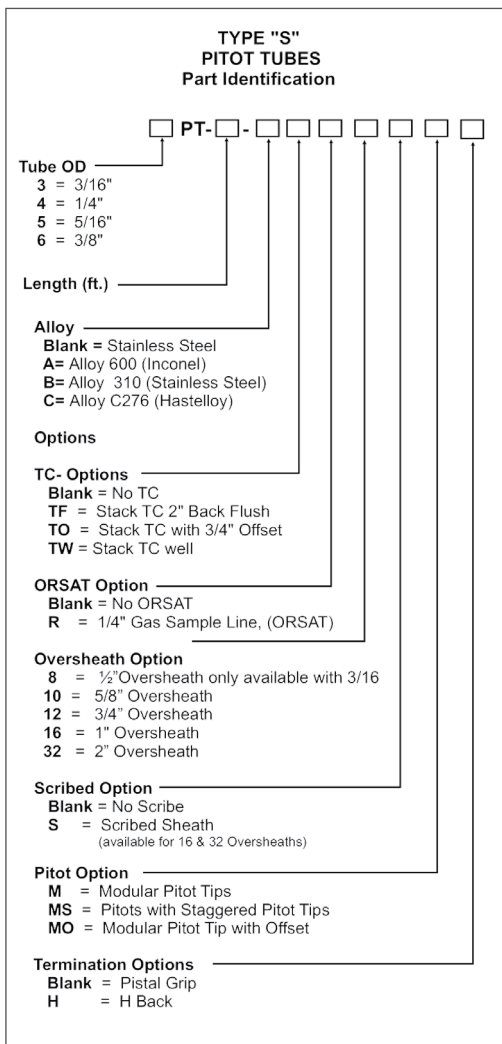
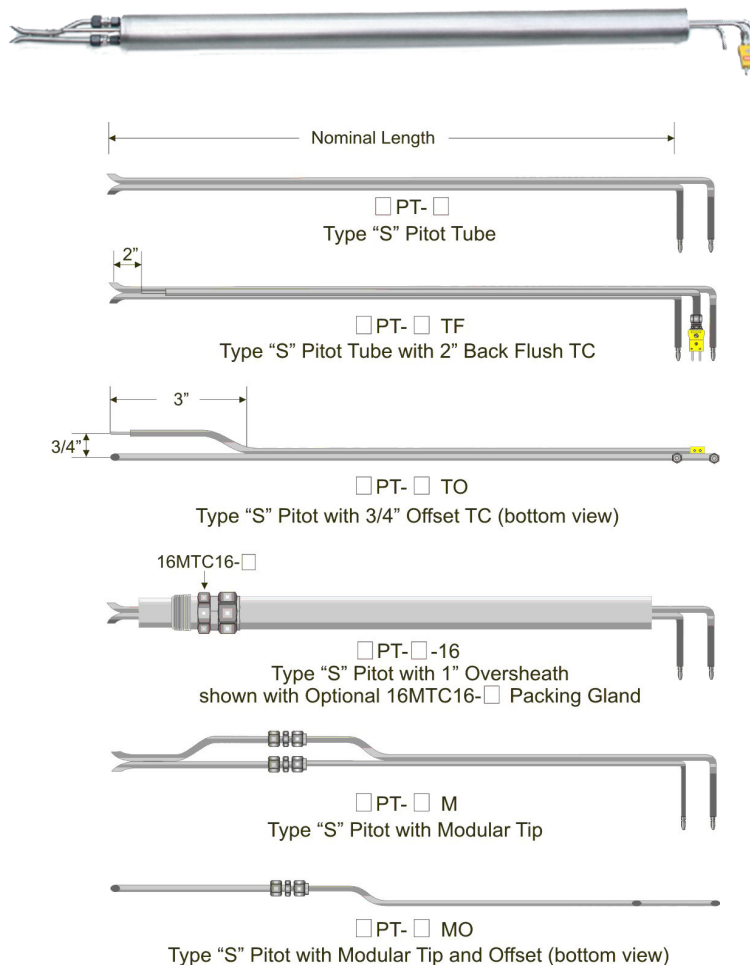


## PITOT TUBES

**Type-S Pitot Tubes** are used to measure gas velocities. When the pitot is faced into the gas stream, the pressure difference between the two ports can be used to calculate the velocity pressure. This differential velocity pressure is measured with liquid manometers or electronic pressure transducers.

**Baseline coefficient value is 0.84. Wind tunnel calibration services are available upon request.**

U.S. EPA Method 1 specifies appropriate sampling locations for conducting a velocity or particulate traverse. The sampling locations must meet certain criteria to be valid. (ie., duct diameter and the sampling location, relative to flow disturbance locations to ensure laminar, non-cyclonic, flow in the stack.) Apex Instruments manufactures Type-S pitot tubes in accordance with the Method 2 design specifications. A wide variety of materials, sizes and configurations are available. The most common are constructed from either 1/4" or 3/8" OD stainless steel or Alloy 600 tubing.



### Type-S Pitot Tube Design Advantages:

- Large openings resist plugging
- Compact design fits easily in sampling ports.
- Maintains calibration in harsh environments.
- Suitable for determining cyclonic flow
- Suitable for measuring yaw-angle of the velocity vector
- Economically priced

### Type-S Pitot Disadvantages:

- Reads high
- Potential for misalignment

For more information, contact us :

**Pacwill Environmental**

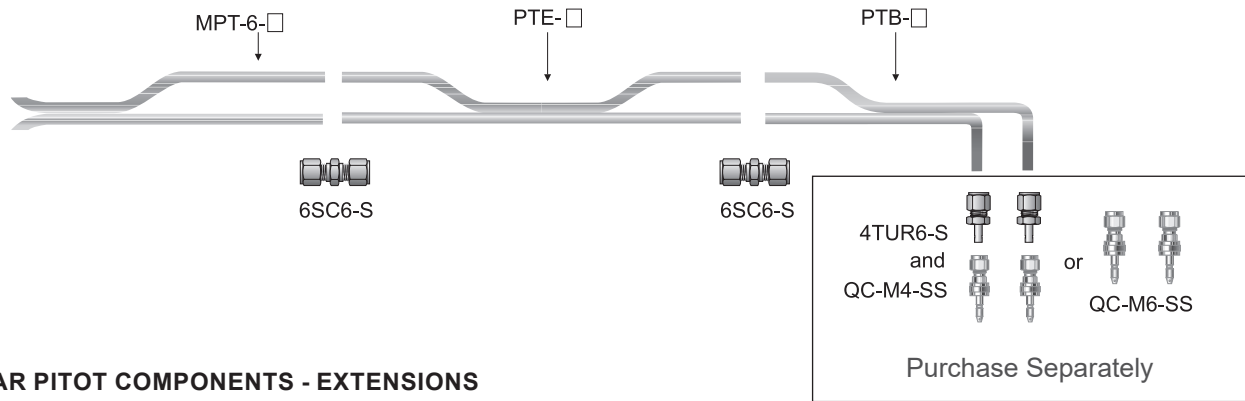
905.563.9097

Toll-Free (Canada): 1-866-840-0014

sales@pacwill.ca  
www.pacwill.ca



## MODULAR PITOTS



### MODULAR PITOT COMPONENTS - EXTENSIONS

Product	Description
MPT-6-181	181 mm Tip modified with TC Retainer
PTB-3	3' Body
PTE-2	2' Extension
PTE-3	3' Extension
PTE-4	4' Extension

### STAINLESS STEEL UNIONS AND QUICK CONNECTS

Product	Description
4SC4-S	Stainless Steel Tube Union, 1/4"
4TUR6-S	Stainless Steel tube end reducer; 3/8" tube union to 1/4" tube stub
6RU4-S	Stainless Steel reducing tube union; 3/8" to 1/4"
6SC6-S	Stainless Steel tube union, 3/8"
QC-M4-SS	1/4" Quick Connects
QC-M6-SS	3/8" Quick Connects

Order unions and quick connects separately

### MODULAR PITOT COMPONENTS - PITOT TIPS

Product	Description
MPT-6-181-OFF	Replacement Pitot Tip, 3/8", SS, Offset for use w/ 47mm Filter holder & PM2.5 Cyclone **
MPT-6-181-OFF-WC	Replacement Pitot Tip, 3/8", SS, Offset for use w/ 47mm Filter holder & PM2.5 Cyclone **
MPT-6-181	Replacement Pitot Tip for Standard Method 5 Probe Assemblies, 181 mm in length **
MPT-6-225-OFF	Offset Replacement Pitot Tip, 3/8", SS, Ext., for use w/ method 5 nozzle & SFA-47 in-stack filter **
MPT-6-255-OFF	Offset Extended Pitot Tip for PM10 Cyclone with 47 mm Filter Assembly **
MPT-6-255-OFF-WC	Offset Extended Pitot Tip for PM10 Cyclone with 47 mm Filter Assembly **
MPT-6-320	Replacement Pitot Tip, 3/8", S.S., Ext., for use w/ standard method 5 nozzle & SFA-190, SFA-300, or SFA-2590 In-Stack Filters **
MPT-6-320-OFF	Offset Replacement Pitot Tip, 3/8", S.S., Extended for use w/ standard method 5 nozzle and SFA-190, SFA-300, or SFA-2590 In-Stack F **
MPT-6-425	Replacement Pitot Tip, 3/8", SS, extended for use w/ PM10 Cyclone & 47mm In-Stack Filter **
MPT-6-425-OFF	Offset Replacement Pitot Tip, 3/8", SS, Offset for use with 47mm Filter holder and PM2.5-10 Cyclone Combo Kit **
MPT-6-425-OFF-WC	Offset Replacement Pitot Tip, 3/8", SS, Offset for use with 47mm Filter holder and PM2.5-10 Cyclone Combo Kit ***

\*\* Includes Geometric Pitot Calibrations

\*\* Includes Geometric Pitot Calibration and Wind Calibration

For more information, contact us :

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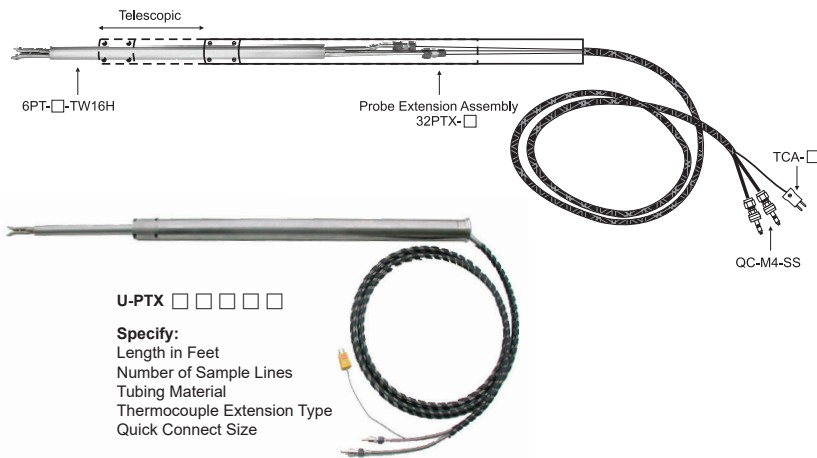
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## PITOT TUBE EXTENSIONS TELESCOPIC TYPE "S" PITOT

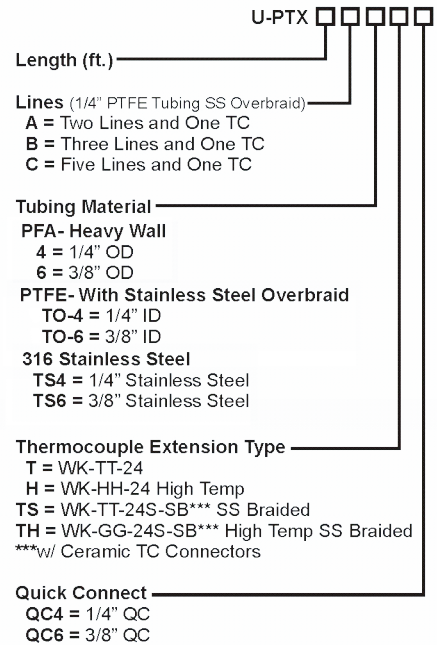
Apex Instruments **Telescoping Pitot Probe** allows the versatility of traversing larger stacks with optional telescoping ranges while providing the ability to package this probe in a more compact container. The design incorporates a pitot tube with 1" OD oversheath connected to a 2" OD extension with adjustable clamp. Rigid or flexible tubing connections are available. 1/4" ID PTFE with stainless steel overbraid is recommended. PFA or glass insulated Type-K thermocouples with overbraid are available.

Varying pitot tube lengths are available. Please call for details.



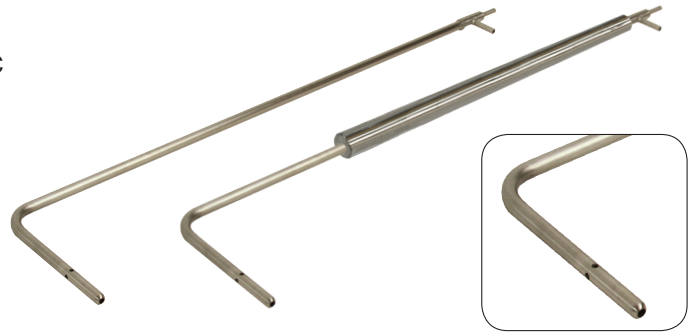
### TELESCOPIC PITOT CORD

#### Part Identification



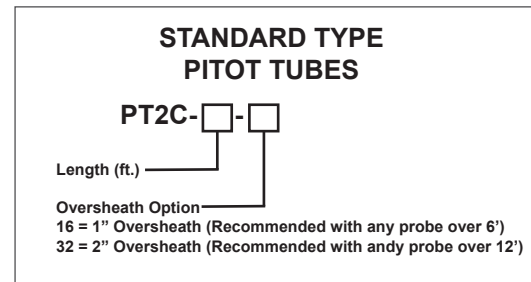
## STANDARD PITOT TUBE FOR METHOD 2C

This Pitot tube is custom made to specifications outlined in US EPA Method 2C. Modified hemispherical-nosed pitot of Method 2C features a shortened stem and enlarged impact and static pressure holes. This pitot is useful for saturated gas streams when "back-purging" is ineffective. Pitot coefficient: 0.99 unless wind tunnel calibrated.



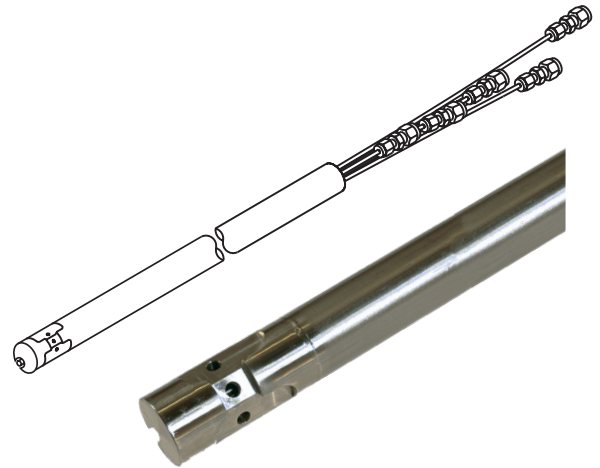
## STAINLESS STEEL PITOT

Product	Length
PT2C-24	24"
PT2C-36	36"
PT2C-48	48"
PT2C-60	60"



## 2-DIMENSIONAL PROBE (3-HOLE PITOT)

The Apex Instruments **2-Dimensional Probe** is used in Method 2G for measuring the velocity pressure and the yaw angle of the flow velocity vector in a stack or duct using measurements and a determination of the stack gas density, the average near-axial velocity of the stack gas is calculated. The rear-axial velocity of the stack gas accounts for the yaw, but not the pitch component of flow. The average gas volumetric flow rate in the stack or duct is then determined from the average near-axial velocity. The Inclinator is used for determination of the calibrated yaw offset. The pitot is designed to be inserted into our 2 inch diameter probe extension. The pitot tube must be calibrated in accordance with Method 2G prior to use.



### 2DPT2

## 3-D PITOT (5-HOLE PITOT)

The Apex Instruments 3-D Pitot is capable of measuring yaw and pitch of nonuniform flows. The yaw angle is determined directly by rotating the pitot to null the pressure across a pair of symmetrically placed ports on the pitot head. The yaw angle is measured with a remote inclinometer attached to the probe extension and digitally displayed on the console.

The pitch angle is calculated using probe specific calibration curves. The average gas volumetric flow rate in the stack or duct is then determined from the average axial velocity.

### 3DPT2



5 Hole Prism-Shaped Pitot

## 3-D PITOT CALIBRATION (PT-CAL-3D)

All 3-D pitot tubes must be calibrated before use. Re-calibration is also required either within 12 months of its first field use after its most recent calibration or after 10 field tests, whichever occurs later. In addition, whenever there is visible damage to the 3-D head, the pitot should be re-calibrated before it is used again.

For more information, contact us :

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