

Pitot tube S type



PRESENTATION

KIMO offers a large range of **Pitot tubes** of great quality and accuracy realised according to the ISO 10 780 norm.

The KIMO **Pitot tubes**, connected to a differential column of liquid manometer, with needle or electronic, enable to measure the dynamic pression of a fluid in movement in a pipe and determine its speed in m/s and its flow in m³/h.

The **Pitot tubes** are used in climatic engineering, ventilation, dust-removal and pneumatic transport. They are particularly adapted for measurement in warm air, charged with particles and for high speed.

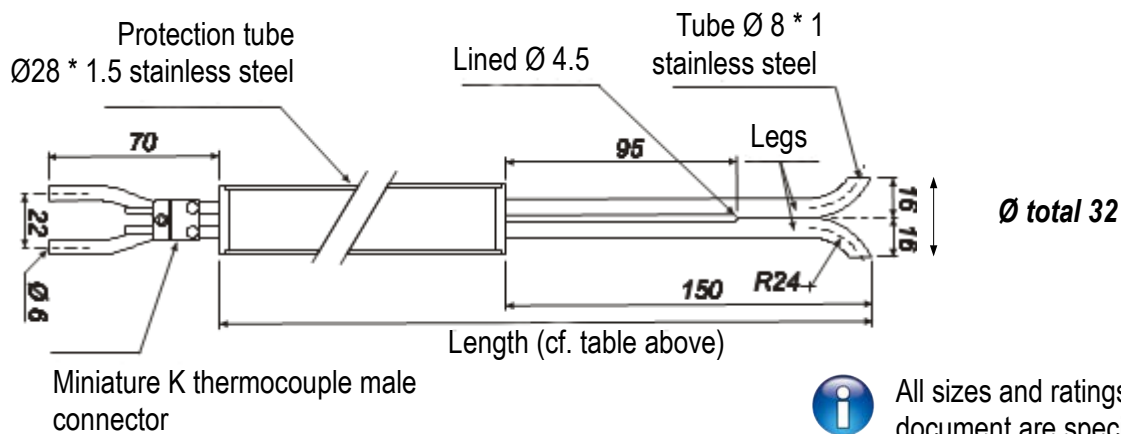


FEATURES

Model	Tube de Pitot type S
Coefficient	0,84±0,01
Material	Stainless steel 316 L
Measurement range	0 to 100 m/s
Temperature of use	from 0 to 1000 °C
Static pressure	Atmospheric
Global accuracy of the measurement system	1 % of measurement + accuracy of the pressure sensor
Norms	ISO 10 780



SIZES



PRESENTATION OF THE RANGE

Commercial reference	Length
TPS-08-500-T-	500 mm
TPS-08-1000-T	1000 mm
TPS-08-1500-T	1500 mm
TPS-08-2000-T	2000 mm
TPS-08-2500-T	2500 mm
TPS-08-3000-T	3000 mm

WORKING PRINCIPLE

The Pitot tube is introduced perpendicularly in the pipe by pre-determined points.

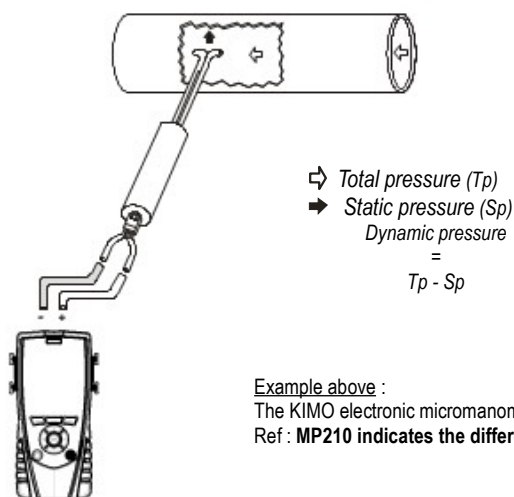
The holes must be perfectly aligned with the air or gas flow direction.

The **Pitot tube S** is more sensitive to alignment errors than the **Pitot tube L**.

Knowing that the Pitot tube is symmetrical, it is not necessary to identify the two legs, however the connecting to the measurement device must be carried out like following :

- The leg in front of the air flow is connected to the + signe of the micromanometer.
- The leg at the opposite of the air flow is connected to the – sign of the micromanometer.

APPLICATION





GTC Record



GTC Analyze

Transmitter sensor low differential pressure
CP210 and SQR/3



Alarm



Visualize



Operate



GTC Record



GTC Analyze

Trace in direct

Transmitter sensor low differential pressure with digital display
C310 or CA 310 with SPI 2 – 100,500,1000, 10000 and SQR/3



Alarm



Visualize



Record



Analyze

Trace in direct

Multifunction intelligent portable
AMI 310

MEASUREMENT

• Measurement of punctual speed S_A

$$S_A = C_F \sqrt{\frac{2 \Delta P}{\rho}} \quad \rho = \frac{P_o}{287.1 \times (\Theta + 273.15)}$$

• Flow measurement

Flow calculating :

$$\text{Flow} = \text{Speed}_A \times \text{surface} \times 3600$$

Surface : surface of the circular sheath or rectangular in m^2

N.B : in the electronic devices, the surface is automatically adjustable.

With

C_F : coefficient of the flow device element

Pitot tube S : $C_F = 0.84$

Θ : given temperature ($^{\circ}\text{C}$)

P_o : given atmospheric pressure (Pa)

With

Flow : in m^3/h

Surface : in m^2

S_A : in m/s

OPTIONS

- **Graduation** (mm) with red mark on the shaft, on request

ACCESSORIES

- **Extension cable** for K thermocouple class 1
- **Mounting flange** in cast iron 
- **Tubes** :
 - Black silicone (4 x 7 mm) REF SN-47-1
 - Transparent silicone (4 x 7mm) REF SB-47-1
 - Cristal tube (5 x 8 mm) REF C-58-1
- **Transport case VTP type for Pitot tubes** :
 - 1210 X 320 mm, length 1000mm, max. Ø8
 - 810 X 100mm, length 500mm, max. Ø6
- **555 F/F** : spherical ball valve female / female
- **J.Y.C** : junctions in Y for a tube Ø 5 x 8 mm (bag of 10)
- **J.T.C** : junctions in T for a tube Ø 5 x 8 mm (bag of 10)



For every other cases, KIMO offers special realisations. Consult us, we intervene on plans study, machining.

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