

# PAUL GOTHE BOCHUM

PAUL GOTHE – GmbH  
Manufacturer of Emissions Control Technology



## Product info Z: Cylindrical-Pitot-Tube (according to VDEh)

This cylindrical pitot-tube is suitable for measurements in tube-systems with small openings.

This pitot-tube has a factor of  $c = 0,79 \dots 0,83$  (see calibration certificate).  
The velocity can be calculated with a simple formula.

Advantage: fits through openings with  $\varnothing 15$  mm.

Disadvantage: Sensitivity when contorting over an axis vertically to the direction of the flow.  
In small tube-diameters ( $< 100$  mm) faulty-measurement through tube-wall-effects.  
An influence of the gas flow on the factor cannot be excluded.  
Accuracy below 5% only with corresponding factor at the corresponding flow velocity.

The static pressure is grasped at the top. The total-pressure (dynamic + static pressure) is grasped at a hole against the flow direction. The difference pressure can be measured with all manual gauges or digital difference-pressure-measuring instruments.

### Cylindrical Pitot Tube:

nominal length [mm]	$\varnothing$ -outer [mm]	Art.-No.	available material *1 A = 1.4541: $T_{\max} 500^{\circ}\text{C}$ C = 1.4841: $T_{\max} 1000^{\circ}\text{C}$
1000	15	53.15-3-	-A / -C
2000	20	53.20-5-	-A / -C

p: diff. pressure mbar  
 $\delta$ : density  
c: factor

$$v = C \cdot \sqrt{\frac{200 \cdot \Delta p}{\delta}}$$

\*1 material: stainless steel: 1.4541 up to  $500^{\circ}\text{C}$ , material: stainless steel: 1.4841 up to  $1000^{\circ}\text{C}$ ,

Exit of the pressure tube: hose-olive for hoses with inner- $\varnothing 6$  up to 10 mm tube 10 x 1 smooth.

Other lengths can be manufactured on inquiry.



### Mounting for Pitot-tubes

The mounting is used for solidly installing a pitot-tube at the pipeline. Through solving of the stuffing box, the pitot-tube can push easy into each position and can be fixed afterwards again.



Art.-No.: 47.5