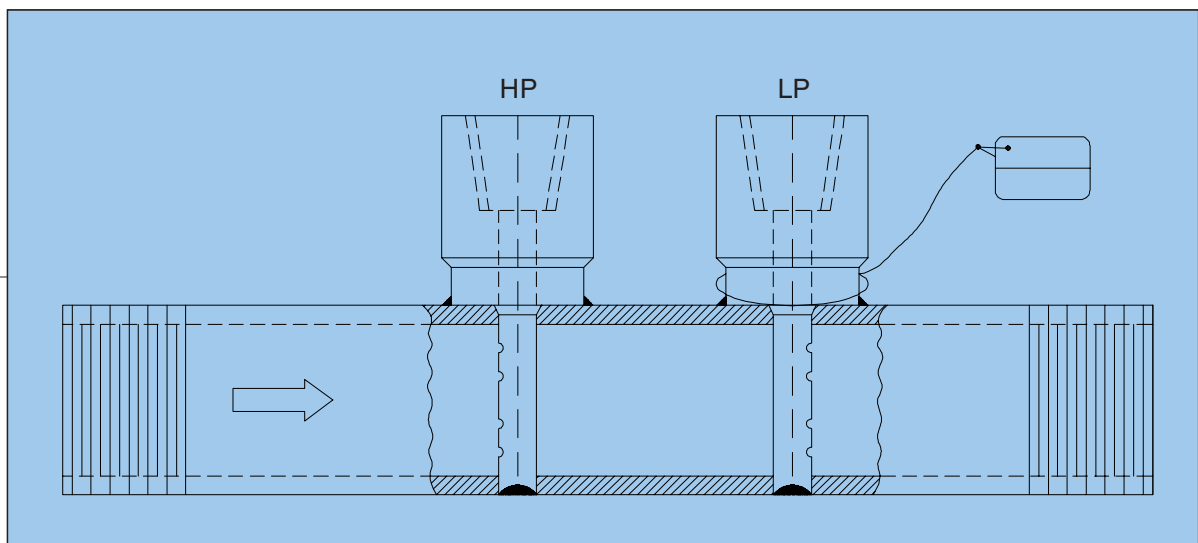




## DELTA TUBE — FLOW RATE SENSOR

300

- GAS, LIQUID AND STEAM APPLICATIONS ●
- IN-LINE INTEGRAL SENSOR ASSEMBLY FOR EASY INSTALLATION ●
- LOW PERMANENT PRESSURE LOSS ● HIGH ENERGY CONSERVATION ●



MODEL 300

The Delta tube® is a low cost, low maintenance, high accuracy flow sensor for use on steam, gas and liquid flow applications. Manufactured with technical know-how from Mid-West, USA, these are rugged in construction, and simple to install. The flow sensor is a multi-ported averaging pitot tube which spans the entire flow profile and produces differential pressure which has square root relationship with flow rate. Based on pipe or duct size the Delta tube is constructed so that strategically located sensing ports continually sample the impact and static pressures produced by the Delta tube's obstruction of the flow stream profile. Within the probe the impact pressures sensed by the upstream are continually averaged in an isolated plenum chamber. Similarly the static pressures sensed by the downstream ports are averaged in a second isolated plenum chamber.

All conventional secondary instruments can be used for direct measurement, or transmission of the differential

pressure produced by the Delta tube which is proportional to square of flow rate.

The model 300 is an in-line series with built-in Delta tubes which can be directly screwed, or welded or connected through flange to the existing flow line. These are suitable for line sizes ranging from ½" to a maximum of 3".

Many other versions of Delta Tubes are also available to suit various applications and higher line sizes such as direct insert type or duct mounted type or flange mounted type or wet tap type (with retractable facility to effect insertion and retraction of Delta tubes without system shutdown) vide models 301, 302, 307, 308, 341, 342, 343, 311, 321, 331, 312, 322, 332 and 323.

Delta Tubes offer excellent advantages compared to conventional primary flow elements — such as low installation cost, low permanent pressure loss and hence high energy conservation.

## GENERAL SPECIFICATIONS

<b>Basic Model No.</b>	300	<b>Pressure and Temperature Rating</b> }	For Delta tube with 316 SS body 910 PSIG at 430°C
<b>Design</b>	Mid-West, Michigan USA		For Delta tube with CS body 670 PSIG at 370°C
<b>Mounting Type</b>	In-line		For Delta tube with PVC body 30 PSIG at 80°C
<b>Probe Details</b>			
<b>Profile</b>	Circular	<b>Line Size Availability</b>	1/2" to 3"
<b>Size</b>	1/4" dia	<b>Process Connection</b>	1/2" to 3" BSPM (or) 1/2" to 3" plain end to effect welding (or)
<b>Material</b>	316 SS with CS or 316 SS body PVC only with PVC body		1/2" to 3" ANSI 150 RF flange connection depending on line size
<b>Head Material</b>	316 SS with CS or 316 SS body PVC only with PVC body	<b>Accuracy</b>	±1% of actual flow
<b>Support</b>	Double (Both ends welded)		
<b>Conn. for Secondary Instrument</b>	1/4" NPTF standard		

## ORDERING INFORMATION

<b>BASIC MODEL NO.</b>	300	A	A	0	1	H	A
<b>MATERIAL</b>		A	B	D			
Carbon Steel _____		A					
316 Stainless Steel _____		B					
PVC (available in Schedule 80 only) _____		D					
<b>PIPE SIZE</b>							
1/2" _____ A	2" _____ E						
3/4" _____ B	2½" _____ F						
1" _____ C	3" _____ G						
1½" _____ D							
<b>PIPE SCHEDULE</b>				0	1		
Schedule 40 _____				0			
Schedule 80 _____				1			
<b>CONSTRUCTION</b>						1	
Double support (both ends welded) _____						1	
<b>PROCESS PIPE ORIENTATION *</b>							H
Horizontal _____							H
Vertical _____							V
<b>END CONFIGURATION</b>							
Threaded BSPM / NPTM (Customer to specify) _____							A
Flanged (ANSI 150 RF — Standard) _____							F
Flanged ANSI 300, 600, 900, 1500 (optional) _____							G
Plain End _____							P

**Note :** \* Generally the Probe Orientation is Vertical in the process line. If it is different, customer to specify clearly with a sketch.

**For more technical information on theory, sizing, selection, installation, etc., please ask switzer brochure on "Delta Tube Flow Elements".**

**Prior notification of changes in specification is impracticable due to continuous development.**

FOR **SWITZER'S** OFFICES IN INDIA

CHECK AT:

<http://www.switzerinstrument.com/fices.htm>