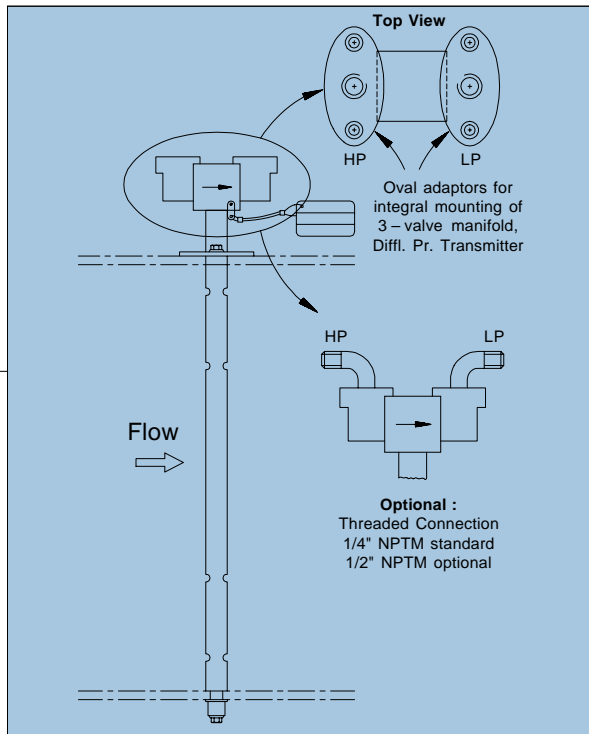




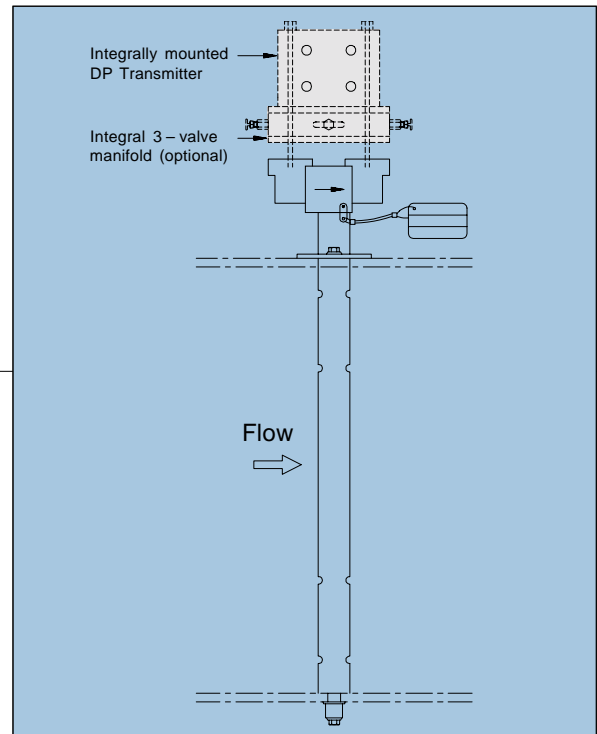
DELTA TUBE — FLOW RATE SENSOR

307
308

- AIR AND GAS APPLICATION ● DUCT MOUNTED TYPE FLOW SENSOR ●
- LOW PERMANENT PRESSURE LOSS ● HIGH ENERGY CONSERVATION ●



MODEL 307



MODEL 308

The Delta tube® is a low cost, low maintenance, high accuracy flow sensor for use on steam, gas and liquid flow applications. Manufactured based on proven design of 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 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 measurements, or transmission of the differential pressure produced by the Delta tube which is proportional to square of flow rate.

The models 307 and 308 are direct insert type suitable for mounting on square or rectangular or round ducts with duct size / pipe dia ranging from 6" to 72" as standard. Special Delta tube to suit higher sizes upto 144" are also available on request. Material of construction for probe, head and attaching hardwares is 316 SS on Models 307 and 308.

Many other versions of Delta Tubes are also available to suit various applications such as in-line series, direct insert type, flange mounted type or wet tap type (with retractable facility) vide models 300, 301, 302, 341, 342, 343, 311, 312, 321, 322, 331, 332 & 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.

The process connection head of the delta tube has been designed to facilitate integral mounting of a 3-valve manifold and so the transmitter as well. Please refer schematic diagram shown above.

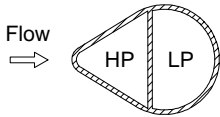
GENERAL SPECIFICATIONS

Basic Model No. 307 or 308
Design Mid-West, Michigan USA
Mounting Type Suitable for duct mounting
Probe Details
Profile Pear bar
Size 1/2" nominal dia for 307
 1" nominal dia for 308
Material 316 SS
Pr. and Temp. Rating 15 PSIG, 205°C maximum
Support Double (Both ends fixed)

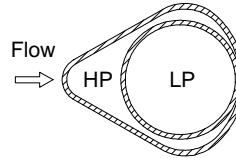
Process Connection
Standard : Oval adaptors for integral mounting of 3 – valve manifold and / or Diff. Pr. Transmitter.
Optional : Threaded connection 1/4" NPTM std; 1/2" NPTM optional.

Attaching Hardware Details
Top Fixing Plate & Screws 316 SS
Bottom Support Spacer 316 SS
Clamp screws 316 SS
Seal Compressed asbestos (or) Teflon®
Accuracy ± 1% of actual flow

PROBE CONSTRUCTION AND PROFILE



Pear Shaped Profile
 Delta Tube Size : 1/2"
 Applicable for Model : 307

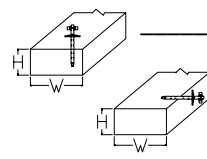


Pear Shaped Profile
 Delta Tube Size : 1"
 Applicable for Model : 308

* Teflon® is a registered trademark of E.I. DuPont de Nemours and Company

ORDERING INFORMATION

BASIC MODEL NO.	307	B	J	0	1	H	H	0
	308	B						
ATTACHING HARDWARE MATERIAL	316 Stainless Steel							
PROBE LENGTH	6" _____ J	42" _____ V						
	12" _____ M	48" _____ W						
	18" _____ Q	60" _____ X						
	24" _____ S	72" _____ Y						
	30" _____ T	Special _____ Z						
	36" _____ U							
DUCT SHAPE	Rectangular _____			0				
	Square _____			1				
	Circular _____			2				
CONSTRUCTION	Double support (Both ends fixed) _____				1			
DUCT ORIENTATION *	Horizontal _____					H		
	Vertical _____					V		
SENSOR MOUNTING ORIENTATION	Rectangular Duct (see sketch) Parallel to Height of the Duct _____						H	
	Rectangular Duct (see sketch) Parallel to Width of the Duct _____						W	
	Circular Duct _____						C	
	Square Duct _____						S	
SEAL MATERIAL	Compressed Asbestos (Standard) _____							0
	Teflon _____							A



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/offices.htm>

Manufactured with
 Know-how from
Mid-West®
 Instrument
 MICHIGAN, USA