Features

FMTA is a probe we insert into the duct (along with the whole diameter) to measure the flow. When the probe encounters the flow, several pressure detecting holes will sense and get the average total pressure P1 in windward side and static pressure P2 in leeward. FMTA then gets the flow velocity by measuring the difference between total pressure and static pressure (i.e. dynamic pressure). By Bernoulli theory, we can get the output dynamic pressure(ΔP) and flow average velocity(V).

Applications

FMTA and differential pressure transmitter are often being used in the measurement of flow. With several pressure detecting holes on the FMTA, we can get the average of the flow inside the duct and improve the problem happened in the flow measuring where disturbance occurs when there's no adequate space inside the straight inlet.

Basic Formula of Flow Velocity

$$V = K\sqrt{\frac{2}{\rho}\Delta P}$$

Basic Formula of Flow

$$qv = K\varepsilon A\sqrt{\frac{2}{\rho}\Delta P}$$

$$qm = qv \times \rho$$

V = Flow velocity of fluid, m/s
ΔP = Difference between total pressure and static pressure (dynamic pressure), Pa
ρ = Flow density, kg /m³
K = Flow coefficient
qv = Volume flow of liquid, m³/s
qm = Mass flow of liquid, kg /s
K = Flow coefficient of average flow measuring tube during operation
ε = Inflation coefficient of liquid going thru measuring tube during operation
A = Cross-sectional area of duct during operation, m²

Specifications

Media measured	: Gases
Operating pressure	: Max.16 bar
Operating temperature	: Max. 1000°C
Installation connection	: R3/4" < 12" pipe size R1" > 18" pipe size
Measuring Tap	: R1/8" < 12" : R1/4" > 18"
Measuring material	: Stainless steel 316

Ordering

FMTA.			Description
Pipe Type	P		Circular Pipe
	R		Rectangular Pipe
Tap Type		T	Threaded Connection
		M	Manifold Head
Size		0050	
		0080	
		0100	
		0125	
		0150	
		0200	
		0250	
		0300	
		0400	
		0500	
		0600	
		0700	
		0900	
		1000	

USKON AKIŞKAN KONTROL SİSTEMLERİ SANAYİ VE TİCARET LTD. ŞTİ.
Kemankeş Kara MustafaPaşa Mah. Ağaç Tulumba Sok. No: 4/A Karaköy / İstanbul Tel: +90 (212) 251 05 05 Fax: +90 (212) 251 05 79 info@us-kon.com.tr