

Алматы (7273)495-231	Иваново (4932)77-34-06	Магнитогорск (3519)55-03-13	Пермь (342)205-81-47	Тверь (4822)63-31-35
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Барнаул (3852)73-04-60	Калининград (4012)72-03-81	Нижний Новгород (831)429-08-12	Саранск (8342)22-96-24	Тюмень (3452)66-21-18
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Технические характеристики на диафрагмы, трубки Вентури и Пито DMSP900SH компании **Delta Mobrey**

Flow elements and Flow measurement set

Orifice plates, Meter Run, Venturi tubes, Pitot tubes

Key Features

- Manufactured according to ANSI B16.5/ISO 5167.
- Standard manufacturing materials: Carbon Steel, Stainless Steel. A wide range of exotic materials are available for specific application requirements
- Rating ANSI 300, 600, 900, 1500 or DIN starting from PN6
- Manufactured from a single forged piece and machined with a fine and uniform tool finish
- Standard 2+2 ½"NPTF pressure taps with plugs at 180° for universal applications on liquid or gasses
- Orifice plate with handle as standard
- Jack screw supplied as standard
- Calculation sheet, dimensional drawing and materials certificates are supplied with the elements as standard
- Flow direction marked when required

Series Overview

The calibrated orifice flange is the most simple and economic method for measuring the flow of liquids or gases.

Manufactured at our facilities within the EU, we can supply a wide range of different types of primary elements. From the basic simple orifice plate, to the complete measuring system with our D-SERIES digital SMART Hart differential pressure, pressure and temperature transmitters. These come with a base accuracy of 0.075% to provide an accurate and complete compensated gas flow measurement system.

We have the 2 valve manifold for the pressure transmitter, the 3 or 5 valve manifold for the differential pressure transmitter, directly mounted onto the instrument and the thermowell for the temperature transmitter, completing the measurement set.

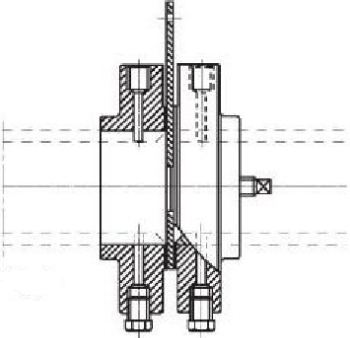
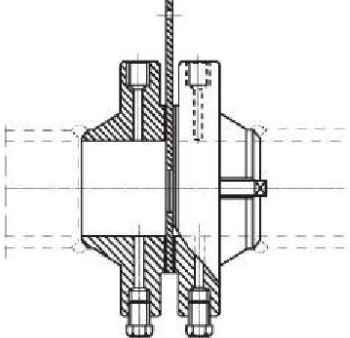
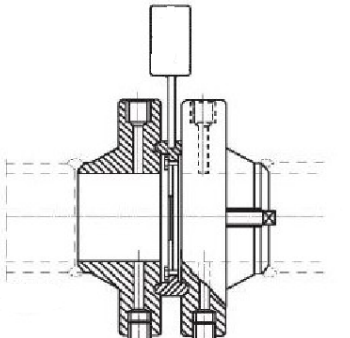
Other products we can offer:



Product applications

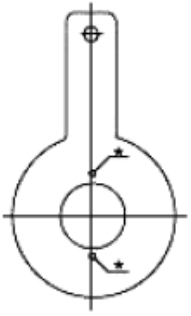

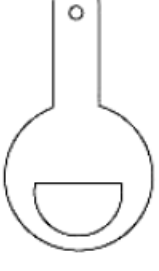

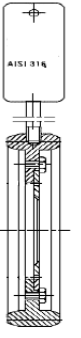
- Oil & Gas (production and refining)
- Power generation
- Gas processing
- Water Treatment
- Boilers & Combustion systems
- Chemical
- Petrochemical industry

FLOW ELEMENTS

		
SLIP ON FLANGES	RF WELDING NECK FLANGES	RJ WELDING NECK FLANGES

- Construction according to ASME B16.36 / ISO 5167-2
- Flanges material Carbon Steel, SS316 as standard made from forged piece and machined fine and uniform tool finish. Other materials are available
- Orifice plate in SS316 as standard
- Spiral wound metal gaskets, asbestos free,
- Pressure taps at 180° as standard. Other available according to the requirement and the application
- Bolting in high resistance steel completely threaded
- Please refer to the description in the quotation for full identification of the device proposed.

ORIFICE PLATES

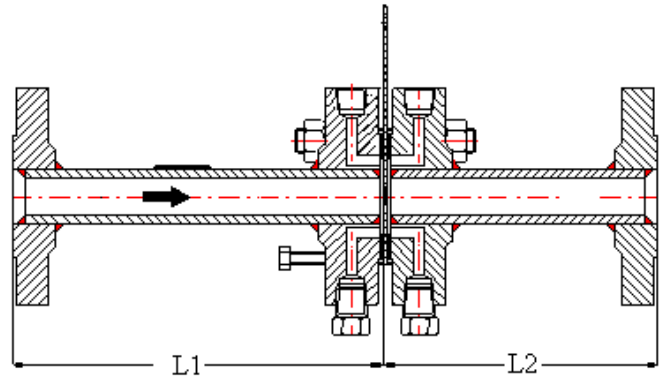
				
Concentric,	Eccentric	Segment type	Quarter circle	For Ring joint type

- Manufactured in different types : Concentric with sharp edge, Eccentric , segment type, quarter circle, Ring Joint type
- Manufactured according to ASME B16.36 / ISO 5167-2
- Standard material 316 Stainless Steel, exotic material available (Monel, Hastelloy, etc.),
- Thickness designed according to the operating conditions, starting from 3mm
- Handle with all data: tag number, rating, material diameter, flow direction
- Flow calculation sheet supplied as standard
- Please refer to the description in the quotation for full identification of the device proposed

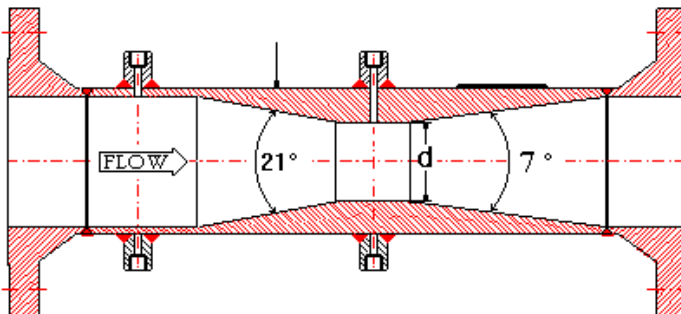
METER RUN

Suitable for small diameter (normally DN10 to DN50) pipes, in a straight line straight pipes for easy installation

- Manufactured according to ASME B16.36 / ISO 5167-2
- Standard material 316 stainless steel, exotic materials are available (Monel, Hastelloy, etc.)
- Thickness is manufactured according to the operating conditions, starting from 3mm. Handle with all data : tag number, rating, material diameter, flow direction
- Flow calculation sheet supplied as standard
- Please refer to the description in the quotation for the complete identification of the device suggested



VENTURI TUBES

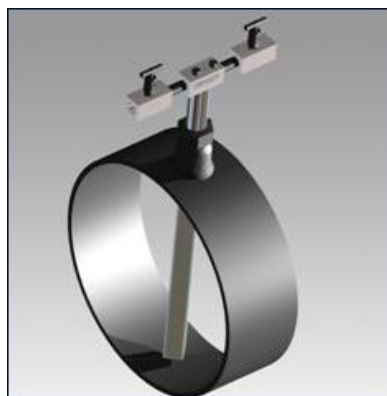
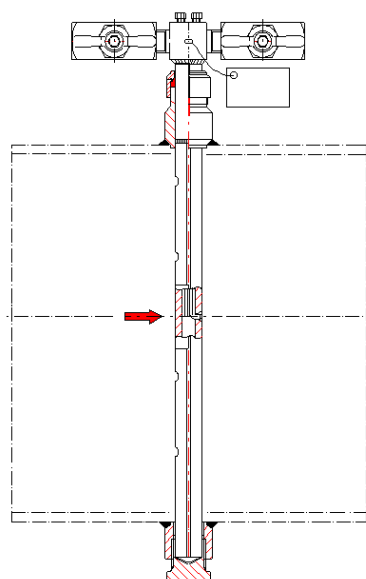


- To be used where low pressure drops are required
- Manufactured in sizes from 2" to 48" according to ASME/ISO 5167-4
- Wide range of applications at medium and high pressure and temperature
- Standard construction in carbon steel or SS316.
- Please refer to the description in the quotation for options of the device suggested

AVERAGE PITOT TUBES

For air or gasses with low pressure measurement and large pipes/ducts, from DN300 to DN12000, we can offer a standard accuracy 1% and 0.1% repeatability.

- Multi-Hole Averaging Pitot Tubes)
- Suitable for insertion in lines of any size
- Simple and fast installation
- Available as standard in SS316, but many different materials are available.
- Retractable option is available, allowing for the installation or removal of the equipment without system shutdown
- Root valves are supplied as standard
- Front supports are available for wide pipes and conduits.
- Nipples and adaptors, supplied as standard
- Please refer to the description in the quotation for the suggested device proposal



SPECIAL COMPACT CONSTRUCTION

Transmitter supporting Flow Element

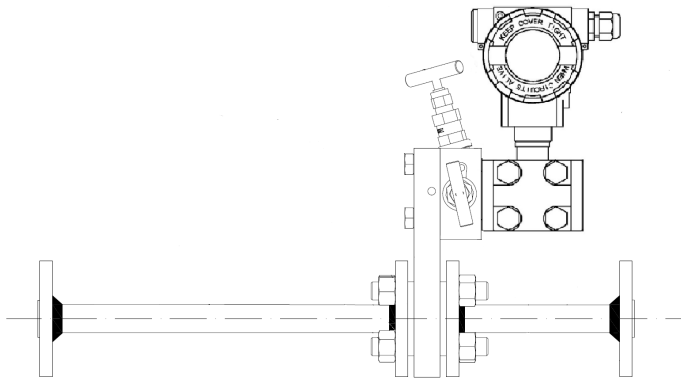
Compact construction designed for all flow measurement applications of **clean liquids** and **gasses** where space is limited.

Main advantages:

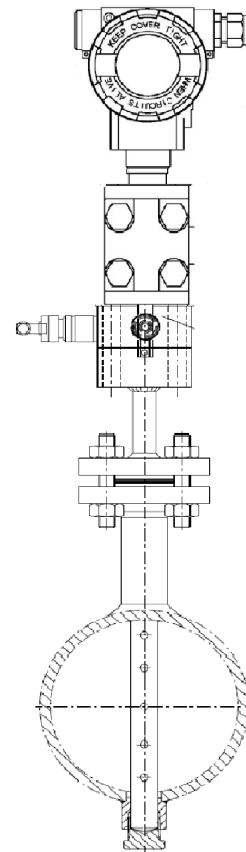
- no remote support for the transmitter required
- no tubing/capillary to connect the parts is needed
- reduced connections means less risk of leakage
- SQ root extraction directly on the transmitter
- Reduced installation costs
- Suitable for fluid temperature up to 120C

The manufacture of the calibrated disc or Pitot tube, is built with a thickness ratio sufficient to support the assembly manifold and transmitter, offering a viable flow measurement solution for those applications where space is limited, optimising the installation without affecting the performance of the system.

Compact meter run



Compact Pitot Tube



COMPLETE FLOW RATE MEASURING SYSTEM

Delta Mobrey can supply a complete range of equipment for the measurement of flow of liquids and gasses. For gasses, in particular, the complete measuring set with pressure and temperature measurement for flow compensation, is available:

- Flow element

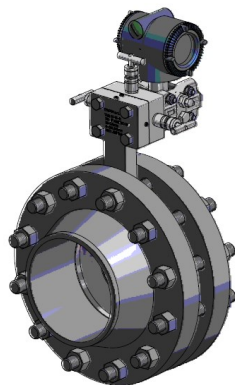
- D SERIES D-31 Differential Pressure Transmitters, with programmable display and square root function
- D SERIES D-21 Pressure transmitters
- D SERIES D-72 Temperature transmitters
- Different type of flow computer for the flow calculation are available upon request.
- Condensation pots for steam
- Valves, Manifolds, Thermowells

A set of instruments are available, suitable for use in safe or in hazardous areas, according to the ATEX directive and SIL 2 construction. This are available as options.

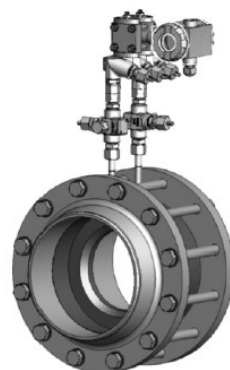
Each transmitter is supplied with a manifold and any accessory specifically for the correct installation.

The flow element is supplied with a drawing, calculation sheet and wetted parts material certification.

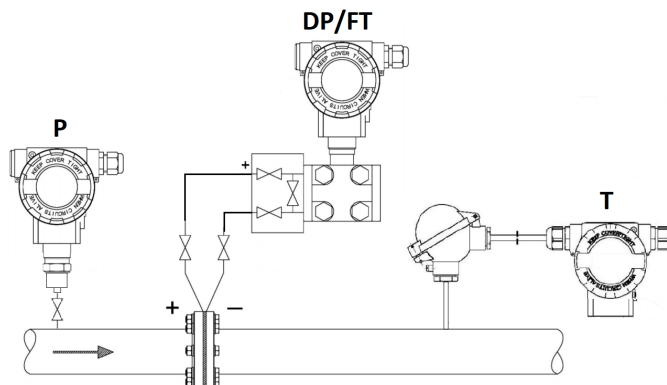
Compact



Standard



Complete system ready for flow measurement with Pressure and Temperature compensation



HOW TO ORDER:

To be able to proceed with the quotation, please confirm:

- Pipe size, thickness & Material
- Process media type & density
- Flow rate min, norm, max
- Pressure and temperature norm. and max

ISO9001



FM00720

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Ultrasonic Transmitters

Liquid Level & Flow Measurement

Series: DMSP900

Key Features

- Non-contacting measurement with no moving parts
- Continuous measurement of Level, Contents, or Open Channel Flow
- Simple to install and configure via Delta Mobrey's DMCU900 HART® controller or other HART master
- Loop powered 4-20mA and HART® output
- Configure to ignore disturbing object false echo
- Factory sealed IP68
- Rugged PVDF construction ideal for applications on exposed sites

Series Overview

The DMSP900SH for level, contents and open channel flow uses ultrasonic technology.

Ultrasonic pulses are transmitted to and reflected from the liquid surface. The transmitter measures the 'time-of-flight' and determines the distance to the surface. By configuring the distance to the bottom of a vessel, the transmitter can then calculate the liquid level and contents (volume) for linear or non-linear vessels (domed, spherical, etc). For open channel flow, the transmitter can calculate the flow rate from the level for a wide variety of flumes and weirs.

An internal temperature sensor compensates for temperature affects. The level, contents or flow measurement is transmitted through the 4–20 mA and HART output. If used with the DMCU900 HART® controller, this simplifies configuration and has local display

Other products

Other products we can offer :

- Ultrasonic level transmitters with display
- Control unit for configuration, display and pump control
- Submersible type level transmitters



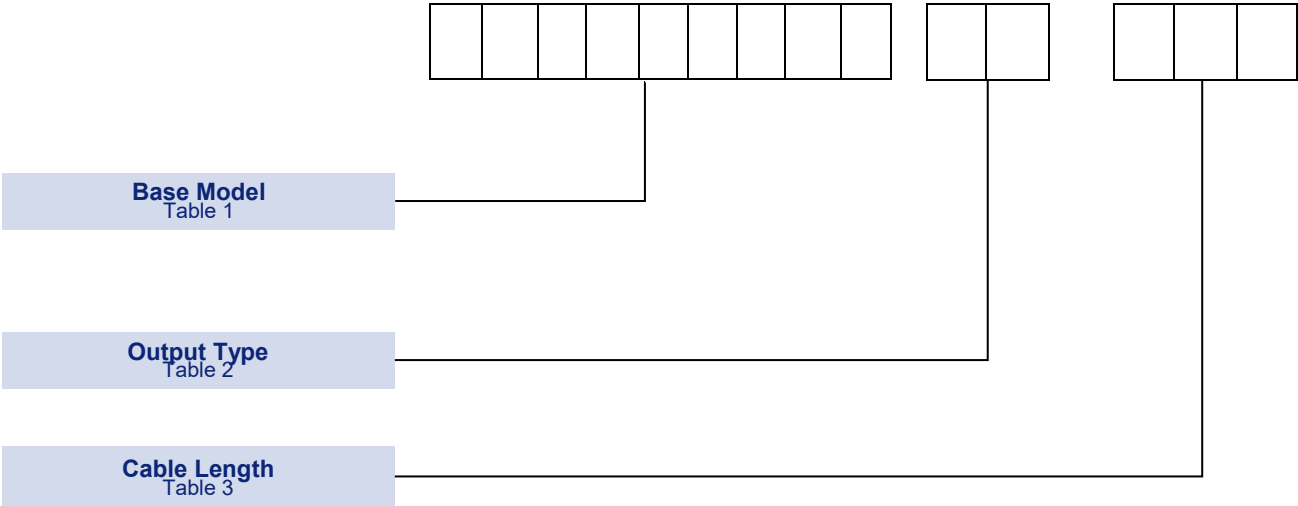
Product applications

- Level or contents measurement in storage tanks
- Level measurement and pump control for wet wells and pumping stations
- Pump control for feeder tanks
- High or low level alarms in storage tanks
- Small or thin wall tanks
- Bund level measurement
- Open channel flow
- Chemical or Hydrocarbon storage tanks
- Differential measurement by two transmitters for blocked filter detection

How to order

Transmitters can be configured by selecting codes representing the desired features from the tables that follow.

The chart below, describes how the model code is built up. For assistance in configuring a transmitter that best suits your needs, please contact your local sales office.



Models

Range up to 6m

Range up to 6m

Range up to 10m

Range up to 15m




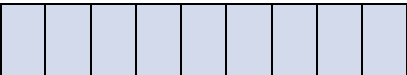

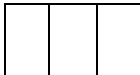
TABLE 1			
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TABLE 1			
All models are capable of giving Level, Contents and Open Channel Flow		Code	
Range 0.25 to 6 mt. Process connections 1" BSP upper, 2" BSP lower. PVDF, with weather protection IP68, cable length as required (see table 3).		DMSP900SH	
Range 0.25 to 6 mt. Process connections 1" BSP upper, 2" NPT lower. PVDF, with weather protection IP68, cable length as required (see table 3).		DMSP901SH	
Range 0.35 to 10 mt. Process connections 1" BSP upper. PVDF body with weather protection IP68, cable length as required (see table 3).		DMSP902SH	
Range 0.45 to 15 mt. Process connections 1" BSP upper. PVDF body with weather protection IP68, cable length as required (see table 3).		DMSP903SH	

Certification

[illegible]

Description	Code
No Ex approval.	N
ATEX Intrinsically Safe certification: Ex II 1 G Ex ia IIB T6...T5 Ga (in progress)	A
FM/CSA Intrinsically Safe certification (for future use):	U

Cable Length

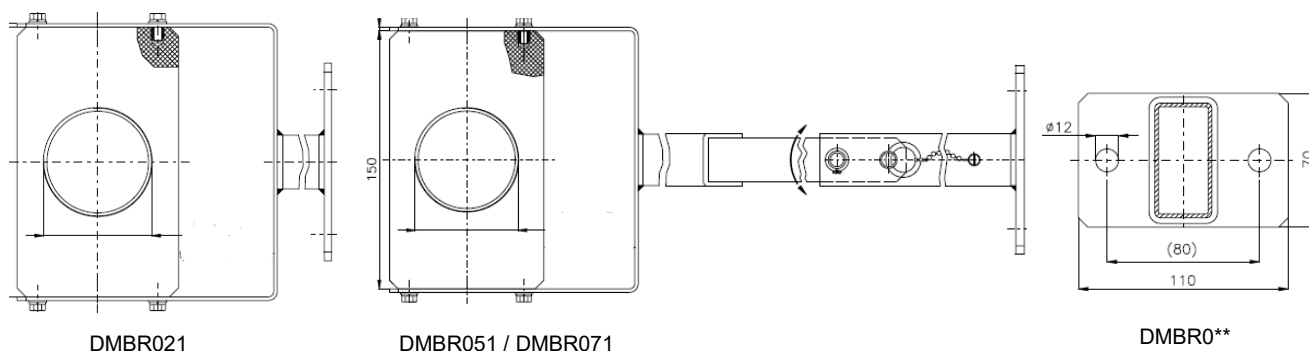
TABLE 3												
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Description	Code
2 x 0.5 mm ² shielded cable, Ø7.5 mm: standard length 5m	/5
2 x 0.5 mm ² shielded cable, □7.5 mm: 10m	/10
2 x 0.5 mm ² shielded cable, □7.5 mm: 20m	/20
2 x 0.5 mm ² shielded cable, □7.5 mm: 30m	/30

Installation

Installation Brackets: 1" BSP thread to fit all DMSP900 transmitters, for horizontal mounting off a supporting structure

Length: fixing point to transmitter	Model
200mm	DMBR021
500mm	DMBR051
700mm	DMBR071



A range of flange adaptors are also available on request

Technical Specification

DMSP90xSH			
ULTRASONIC LEVEL TRANSMITTERS	Ambient temperature	-30 to 80°C (-22 to 176°F)	Power Supply 13.4 to 36 V DC – 48 to 720 mW
	For Ex models	-20 to 70°C (-4 to 158°F)	
	Process temperature	-30 to 90°C (-22 to 194°F)	LED indication Red/Green on connector
	For Ex models	-20 to 80°C (-4 to 176°F)	
	Operating Pressure (absolute)	0.5 TO 3 Bar (4.3 TO 43.5 psi)	IP rating IP68
	RANGES	DMSP900SH = 0.25 to 6m (80kHz) DMSP901SH = 0.25 to 6m (80kHz) DMSP902SH = 0.35 to 10m (60kHz) DMSP903SH = 0.45 to 15m (40kHz) Beam angle: 5°	
	Accuracy	+/- (0.2% of distance + 0.05% of range)	Electric protection Class III
	Resolution (acc. to range)	<2 m: 1 mm, 2 to 5 m: 2 mm 5 to 10 m: 5 mm, >10m: 10mm	
			Cable 2 -core
			Process connections (refer dimensional drawings on p4) Range 6m: Upper: 1" BSP Lower: 2" BSP or NPT Range 10m: Upper 1" BSP Range 15m: Upper 1" BSP
			Programming HART protocol
			Weight (with 3m of Cable) 1.2 Kgs (with 3mt cable)

Approvals

EUROPEAN DIRECTIVES



Low voltage Directive (LVD) 2014/35/EU.
Compliant to LVD

Pressure Equipment Directive (PED) 2014/68/EU:
This product is outside the scope of the PED directive

Dimensions

GENERAL DIMENSIONS		
DSMP900SH & DMSP901SH Range up to 6m	DMSP902SH Range up to 10m	DMSP903SH Range up to 15m

Special Engineering

For these instruments, we have many other options already designed and configured, for example:

- PP body
- Alternative cables, including low smoke or halogen free.

Other options can also be designed to meet specific requirements of an application. Please contact us for further information.



FM00720

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Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97

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