

# Vortex Eggs Delta-Pulse Flowmeter

## Technical Specifications

### DESCRIPTION

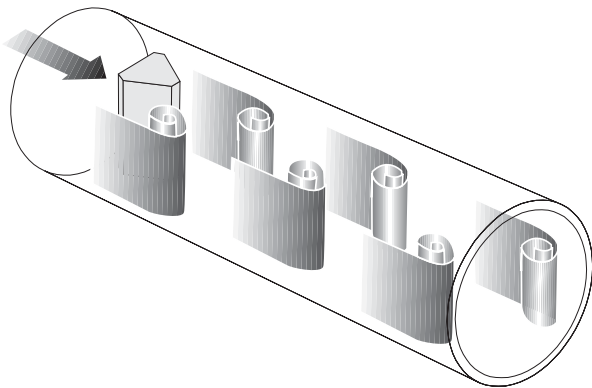
Eggs Delta-Pulse is a light weight, small, low cost flow monitoring vortex meter made out of PPS resin. Its simple design and material makes it suitable for a wide variety of flow applications. It has no moving parts and the injection molded design provides a smooth surface for cleanliness and better chemical compatibility.

### APPLICATIONS

(PPS) polyphenylene sulphide material is compatible with nearly all gases & liquids.

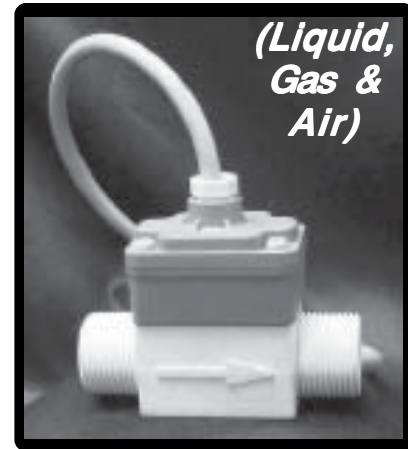
Common applications include:

- deionized water (RO/DI skids)
- ultra pure water distribution in medicare, biotech, semiconductor and
- pharmaceutical market segment
- cooling water
- chemical feed
- alcohol
- air consumption control in compressed air distribution systems
- gas flow (nitrogen, oxygen, argon, etc) measurements and monitoring.
- sanitary cleaning process flow



### PRINCIPLE OF OPERATION

The Eggs DELTA measures flow rate based on Karman's vortex shedding principle. The stationary trapezoidal object (bluff body) placed into the path of the flow stream sheds vortices downstream at a frequency proportional to the velocity of flowing media. A piezoelectric sensor detects the vortices and creates electrical impulse signals which is proportional to the fluid flow rate.



### STANDARD FEATURES

- Sizes include 1/8", 1/4", 1/2" and 1" with injection molded plastic construction.
- Single molded one-piece meter and bluff body construction with no moving parts.
- NEMA-4X enclosure.
- Open collector unsealed pulse output with 12-24 VDC loop power.
- NPT threaded connection for simple installation.

### GENERAL SPECIFICATIONS

<b>Accuracy:</b>	± 1% full scale on 1/2" & 1" (liquid only) ± 3% full scale
<b>Repeatability:</b>	+/- .5% full scale
<b>Process Fluid:</b>	-4°F to + 176°F
<b>Ambient Temp:</b>	-4°F to + 140°F
<b>Max. Operating Pressure:</b>	150 psi
<b>Flow Ranges:</b>	See Table
<b>Pressure Loss (PSI)</b>	Water: .05 - 4.56 (1/8"), .018 - 5.04 (1/4" - 1") Air: .02 - 0.103 (1/8"), .009 - 0.22 (1/4" - 1")

### Construction

<b>Material:</b>	PPS (Polyphenylene sulphide)
<b>Output:</b>	Open collector unsealed pulse Max 30 VDC, allowable current: 20mA Pulse width duty 1:1

### Cable:

3 cores shield cable (3 ft. std.)

**Transmission Length:** 3,280 feet

**Power Supply:** 12 - 24 VDC

**Enclosure rating:** NEMA-4X

### Process

<b>Connections:</b>	NPT threaded adapters:
	R 3/8 - 19..... 1/8" NPT female
	R 1/2 - 14..... 1/4" NPT female
	R 3/4 - 14..... 1/2" NPT female
	R 1 1/4 - 11..... 1 1/4" NPT female

## FLOW RANGES

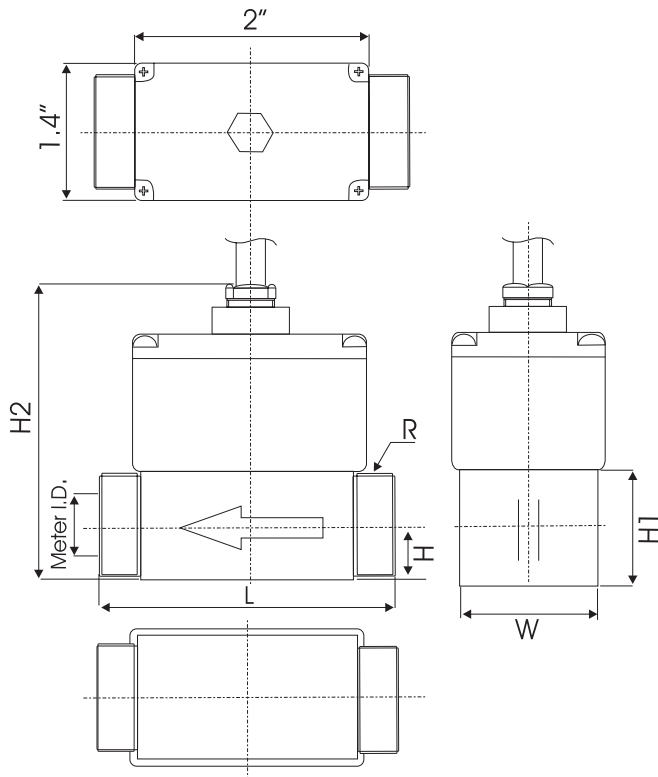
Size	Factored Pulse Units (ml/pulse)	Max Frequency pulse units (Hz)		Liquid Flow (gpm)		Gas Flow (scfm)	
		Liquid	Gas	Min.	Max.	Min.	Max.
1/8" (4mm)	0.0890	749	3180	.105	1.1	.254	.59
1/4" (8mm)	0.441	567	3400	.31	4.0	.65	3.2
1/2" (15mm)	2.36	306	2000	.75	11.4	1.9	8.9
1" (25mm)	12.7	175	1120	2.2	35.1	5.9	30.2

1 ml = 2.642 x 10<sup>-6</sup> gal.

*Above table is based on water measurements at 70°F measurement*

*Above table is based on air measurements at 68°F and atmospheric pressure (14.7 psia)*

Flow range may vary under different process conditions such as density and viscosity of the process fluid.



## HOW TO ORDER EGGS DELTA PULSE

### Base Model Number

FLP Eggs DELTA-Pulse

### Size

04 1/8" (4mm)  
08 1/4" (8mm)  
15 1/2" (15mm)  
25 1" (25mm)

### Applicable Fluids

G Gas  
L Liquid

### Frequency Division

1 1/1: Liquid (always "1")  
2 1/10: Gas (always "2")

### Material for Connection Adapters

P NPT Threaded Adapters (PPS)  
V NPT Threaded Adapters (PVC)

### Version

A Always "A"

FLP \_ \_ \_ \_ \_ A

Size	Meter I.D.	L in.	W in.	H1 in.	H2 in.	*L in.	H in.
1/8" (4mm)	4mm	3.15	1.26	1.14	2.7	5.12	.57
1/4" (8mm)	8mm	3.15	1.26	1.14	2.7	5.12	.57
1/2" (15mm)	15mm	3.35	1.26	1.14	2.7	5.12	.57
1" (25mm)	25mm	4.72	1.81	1.81	3.3	7.48	.906

\*L = with adapters



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