

# DulcoFlow® flow meter

## Precise measurement of pulsing liquids

The **DulcoFlow®** flow meter measures all liquid media with few exceptions. The rate of flow of non-continuous volume flows and the amount of liquid, which has passed through in pulsing flow regimes, are measured. The measuring instrument operates based on the ultrasonic measurement method. Media contacting parts are manufactured using chemically resistant PVDF/PTFE. This ensures that aggressive media can also be measured without problem. The instrument is installed directly in the pipe of the medium being measured.

Interfering influences, such as air bubbles, are identified by the **DulcoFlow®** as an error message. The instrument, which is designed for wall mounting, will accommodate a measurement range of **0.02-13 gph**.

## Application Specific Solutions

- Water treatment
- Paper industry
- Wastewater treatment
- Chemical industry
- Power industry



## Features & Benefits

- Compact universal housing
- Two-line display
- Frequency output for metering pump control
- Analog output 0/4-20 mA, can be configured as a recording or a control output
- Direct display of the current flow and cumulative flow in gallons
- Can be switched over to display the pulsing frequency of the liquid or pump
- Safety and reliability through display of the device operating status and measurement status using LEDs
- Use with Beta b®, gamma/ L, or delta® pump models

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## Measuring principle

The **DulcoFlow**® flow meter measures the volume flow of pulsing flows, using an ultrasonic, time of flight measurement. For the time of flight measurement, a sound signal is alternately transmitted in and against the direction of flow. The time difference is then a measure of the mean flow velocity.

Use of the ultrasound measurement method automatically compensates any temperature induced changes in the medium. Operation without moving parts guarantees a long service life and wear-free operation.

## Technical Data

<b>Measuring range:</b>	0.02-13 gph
<b>Accuracy:</b>	< 2% during calibrated
<b>Analog output:</b>	4-20 mA (recording or control)
<b>Frequency output:</b>	Configurable, max. 10 kHz
<b>Protection class:</b>	IP 65
<b>Power supply:</b>	100-230 V AC / 50/60 Hz
<b>Max. viscosity of fluid:</b>	2000 cP
<b>Dimensions:</b>	7.22" x 4.76" x 4.38" (HxWxD)
<b>Measurable volume:</b>	0.03 ml / stroke to approx. 1 ml / stroke
<b>Max. distance from pump discharge to DulcoFlow:</b>	12"

Models DFMa05 & DFMa08 can only be used with the following pumps:

### DFMa05:

Beta/Gala: 1000 - 0413 & 0713

delta: 1608 - 1612

### DFMa08:

Beta/Gala: 0220 & 0420 - 0232

delta: 1020 - 0450

## Media to be measured

<b>Connector:</b>	Hose connection with nominal width 1/4" x 3/16", 1/2" x 3/8", 3/8" x 1/4", 1/2" MNPT
<b>Medium pressure:</b>	44 - 232 psi *(minimum 44 psi needed for consistent measurement)
<b>Medium temperature:</b>	14 - 113 °F

**Note:** *Backpressure valve is recommended*

**ProMinent®**



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