## OTOOLKIT



## Cone Flow Meter

How do I measure flow? > Cone Flow Meter

## A Cone or V-Cone flow meter is a differential pressure device.

An obstruction in the pipe (i.e., a reduction in the cross-sectional area available to the flow) causes an increase in the velocity of the flowing fluid and a corresponding reduction in its pressure.

## How it Works

As the fluid approaches the V-Cone flow meter, it will have a pressure of P1.
As the fluid flows past the constricted area of the V-Cone its velocity increases and its pressure drops to P2.
Both P1 and P2 are measured at the V-Cone flow meter's taps using a differential pressure transducer.

The differential pressure（ Dp ）measured at the V－Cone flow meter will increase and decrease with the flow velocity．


Figure 1：Principles of a cone flow meter

## Advantages

Well proven，simple，and robust metering principle
Lower sensitivity than orifice plates and venturi tubes to installation effects

Does not require significant lengths of straight pipe to be installed upstream

Limitations

区
Not suited for low flow velocities

区
V－cone presents a significant restriction to flow in the flare system

区
Results in a high permanent pressure drop
x
Limited turndown ratio， typically 4：1
x
Lack of design standards

## To follow

## Case study

No case study available at this time.

## How do I measure flow?



Flow: Ultrasonic \& Sonar Clamp-on Flow Meters


Vortex Flow Meter


Flow: Coriolis Flow Meter


Flow: Ultrasonic Flow Meter


L2F Optical Flow Meter

