

Field Replaceable Cone/Beta Options

WHO WE ARE ?

The Tek-Trol /Tek-DPro Field Replaceable Cone Meter is an adjustable beta ratio Differential Pressure (DP) Flow Meter. The adjustable beta ratio allows the meter's flow velocity / flow rate to be correctly aligned throughout the flow meter's operational life. It features a unique ability to change-out the differential producer cone element to match future flow rate parameters offering flexibility and lower cost of ownership.

LIQUID AND GAS METERS

ROBUST DESIGN

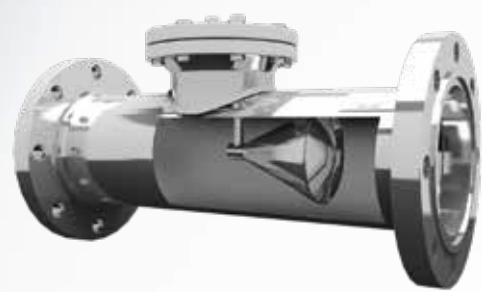
Highly accurate and reliable flow measurement. Due to its special design the ProCone™ DP Sensor element prevents debris, condensate, wax or small particles from the fluid to accumulate during normal flowing conditions, it also has no Stagnation Region as many other DP flow meters have!

HIGHLY REPEATABLE

The ProCone Flow Meter exhibits excellent repeatability up to $\pm 0.1\%$ or better. A flow meter is repeatable when it produces the same reading/performance when operated under the same flowing conditions!

HIGH RANGEABILITY

Turndown for a ProCone is 10:1 or greater, which is beyond the traditional DP Meters. Low Reynolds numbers are also measurable and repeatable by applying a curve-fit to the measured DP reading



Tek-DP 1620A PROCONE SMART FLOW METER

www.tek-trol.com

Flow | Level | Temperature | Pressure
Valves | Accessories | TekValSys

BENEFITS

Dual Phase Meter



ProCone Meter can produce a total mass flow with gas and liquid ratio prediction, which applies to saturated steam and wet gas applications.

No Upstream



There is no need for long straight runs since the ProCone™ act as its own flow conditioner to handle turbulent flows, providing more stability.

Minimum / no upstream and downstream pipe run required.

Small Footprint



The required installation for the ProCone is zero to 3D of straight run upstream and zero to 1D downstream.

Adjustable Beta



The Adjustable Beta Ratio allows flow generated DP's outside of normally available ranges to be re-adjusted to match the meters future flow-rate needs thus offering optimum flow measurement over the meter's life!

TEK-TROL LLC



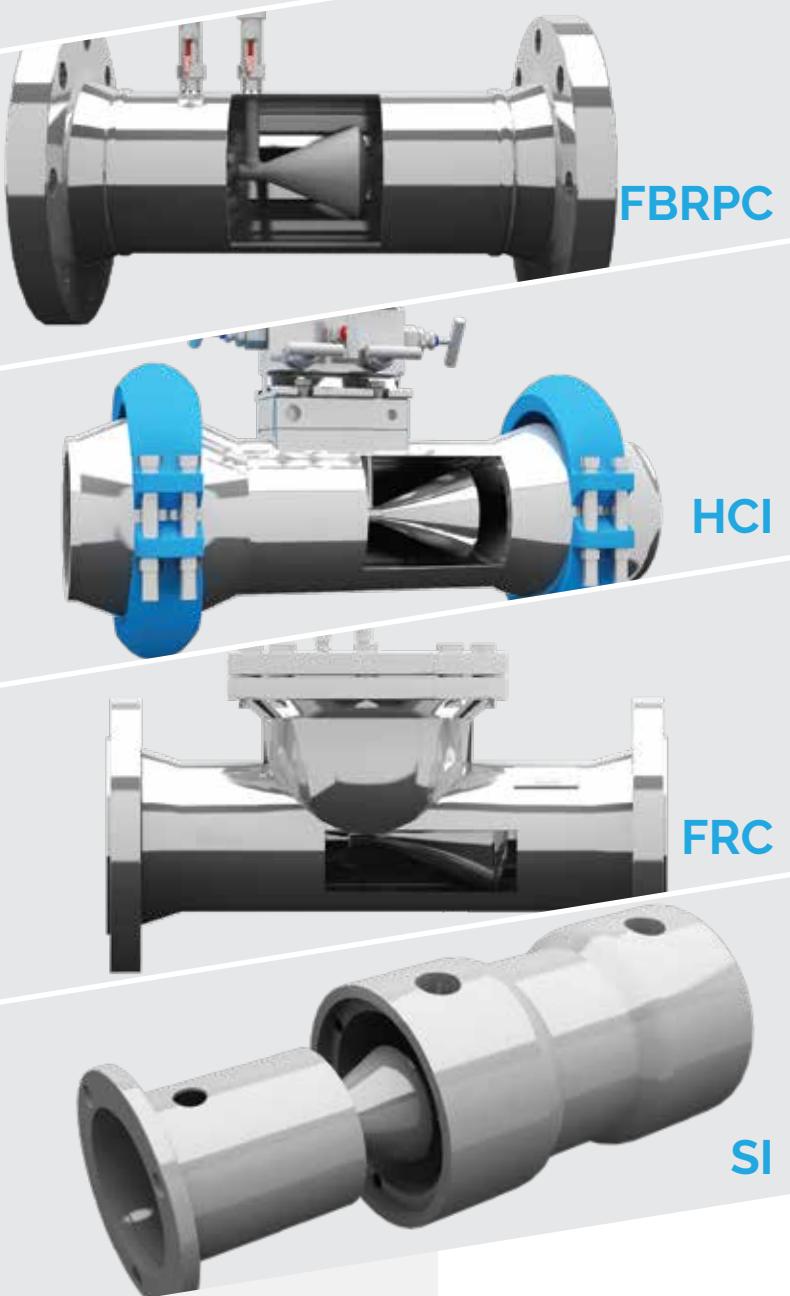
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SPECIFICATIONS

Accuracy
±0.5% or better of actual flow

Repeatability
±0.1% or better

Rangeability
10:1 and greater

Standard Beta Ratios
0.45 through 0.75. Special betas available

Installation
Typically, 0-3D upstream and 0-1D downstream of the cone

Line Size
2" to 48"

End Connection
Flanged, Threaded, Hub or weld-end standard

Pressure Tap Size
Direct Mount (Cone Tap), 1/4" to 1"

Downstream Taps
Temperature Tap (3D),
Validation/Diagnostic Tap (6D)

Approvals
ISO 5167-5 (custody transfer usage)

Tek-DP 1620A ProCone Flow Meter

CONE OPTIONS

The Tek-DP 1620A ProCone Flow Meter operation is based on Bernoulli's theorem for the conservation of energy of fluid flowing through a pipe.

The ProCone DP Flow Meter's Cone shape centered in the line creates improved velocity profiles which allows minimum up-downstream lengths and superior repeatable.

FIXED BETA RATIO PRECISION CONE

Fixed type with central cone conduct connected to a wall tap Tap! ISO 5167-5 Compliant, sizes: 2" to 40" with flanged ends, 1/2" to 6" wafer ends. Pressure class: ANSI 150 to API 15K#, with solid cone or fabricated cone element based on meter diameter, fixed beta ratios advanced applications for custody transfer and robust application off/onshore oil & Gas/refining etc.

HUB CLAMP INSERT (HCI) OR FIELD REPLACEABLE BODY OR BETA CONE (FRBC)

HCI or FRBC Type with Cone Taps, ISO 5167-5 Compliant, sizes: 2" to 40" flanged, Hub clamp mounted, 2" > size gussets, integrated meter run options, field-replaceable beta changer, meets the API Spec 16A and allows for API and other hub connection joints.

TOP INSERT (TI) OR FIELD REPLACEABLE TOP ENTRY CONE (FRC)

TI or FRC Type with Cone Taps, sizes: 4" to 6" flanged, 300 Class, top-mounted field-replaceable cone, 6" > top gussets, meter run options, allows for field replacement of Cones / beta change low flow conditions.

SIDE INSERT (SI) OR FIELD REPLACEABLE CONE (FRC)

SI or FRC Type with Cone Taps, side-mounted, sizes: 2" to 6" wafer, 600 Class, integrated meter run options, field-replaceable beta / area ratio charger (ARC), mono block wafer design with sleeve and integrated cone removable axially from the meter housing.

APPLICATIONS



Oil and Gas



Compressor Station



Waste Water



Boilers



Power Generation



Steam Monitoring



District Steam Heating



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