



The TORUS Primary Flow Element

Features and Benefits

Many Industries & Applications

INDUSTRIES

- Water
- Utilities
- Oil & Gas
- Chemical
- Refining

APPLICATIONS

- Water Management
- Drilling/ Production
- Multiphase, Slurries
- Gas / Wet Gas
- Desalination
- Produced/Tieback Water
- Plants
- Sanitary Service
- Steam
- Chemical Injection
- Fuel Measurement

SIZES

Up to 24" (larger, consult factory)

PRESSURE

: Vacuum to 20,000 psig

The TORUS

- Inherently bi-directional
- Design withstands high differential pressure without bending
- Self-centering and insertable between two flanges
- Self-cleaning design
- Available in any material compatible with process fluid
- Low cost of ownership
- In compliance with API 22.2 standard
- Relatively low permanent pressure loss
- Unlike the orifice plate, edge sharpness and surface roughness tolerances are not critical
- Design forces flow to be well-mixed downstream of the bore
- Less frequent inspection is required
- Handles pressures of vacuum to 20,000 psig
- No critical meter alignments required
- No moving parts

The TORUS CENTER-TAP

- All of the advantages of the **TORUS** are applicable
- It monitors pressure as the cross section of the pipe
- It is an averaging pressure port
- It offers low sensitivity to profile distortions
- Downstream obstruction in close proximity to the center port has negligible effect on measurement
- Very stable DP reading compared to an orifice plate
- TYPICAL higher dp reading over the orifice and other DP devices

The TORUS Carrier Plate

- All of the advantages of the **TORUS** are applicable
- Inexpensive replacement device overcomes difficulties associated with orifice plate measurement
- Easily retrofitted into an existing dual chamber or single chamber orifice meter-type differential pressure flow measurement system.