

- ❑ Pipe Sizes 2 - 24"
- ❑ Lifetime Warranty
- ❑ Industry's Highest Accuracy: $\pm 0.5\%$



ETFE Tefzel® Paddle

- ❑ Chemically Inert to Virtually All Chemicals
- ❑ Superior Anti-Stick and Low Frictional Properties
- ❑ Excellent Mechanical Properties
- ❑ Exceptional Impact Strength
- ❑ Superior Chemical and Wear Resistance vs PVDF

The TIR Digital Flow Meters are easy to install with exceptional guaranteed long-life performance. The TIR Series Paddle Wheel Flow Meters are highly repeatable, exceptionally accurate, extremely rugged and offer outstanding value and require no maintenance.

TIR Series has a process-ready output signal with a wide dynamic flow range of 0.3 to 33 ft/s | 0.1 to 10 m/s.

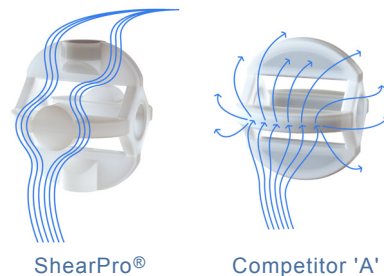
TIR Series sensors are offered in various materials and are available to measure 2 - 24" pipe sizes.

The many material choices, including PVC, PP and PVDF make this model highly adaptable and chemically resistant to many corrosive liquid process applications.

The TIR Flow Meters can be installed using Truflo's® extensive line of ANSI and DIN fittings. Truflo® offers SDR Pipe Saddles from DN50-DN600 in GFPP material.

New ShearPro® Design

- ❑ Superhydrophobic Design
- ❑ Contoured Flow Profile
- ❑ Reduced Friction
- ❑ Reduced Turbulence
- ❑ 78% Less Drag than Old Flat Paddle Design*



*Ref: NASA "Shape Effects on Drag" **

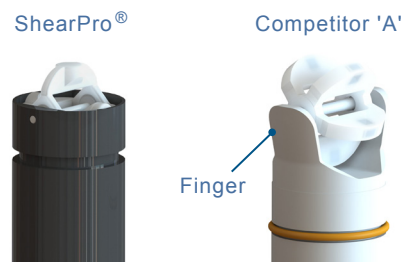
Zirconium Ceramic Rotor | Bushings

- ❑ Industry's Highest Impact and Chemical Resistant Properties
- ❑ Up to 15x the Wear Resistance vs. Regular Ceramic
- ❑ Nano-Polished Mirror Finished vs. Regular Ceramic - Less Friction
- ❑ Integral Rotor Bushings, Reduce Wear & Fatigue Stress



Through-Pin Design

- ❑ Eliminates Finger Spread
- ❑ No Lost Paddles
- ❑ Increased Temp. Rating
- ❑ 360° Housing | Protects Paddle from Particulate, Reducing Wear



Features

- ❑ 4-20mA + 1 Amp Relay Output
- ❑ Flow Range | 0.3 to 33 ft/s
- ❑ NEMA 4X | IP66 Protection
- ❑ Double O-Ring Seal
- ❑ Retrofits into Signet® Type Fitting
- ❑ PP Cord Grip Included



**<https://www.grc.nasa.gov/www/k-12/airplane/shaped.html>

General

| | | |
|-----------------|----------------------------|---------------|
| Operating Range | 0.3 to 33 ft/s | 0.1 to 10 m/s |
| Pipe Size Range | 2 to 24" | DN50 to DN600 |
| Linearity | ±0.5% of F.S @ 25°C 77°F | |
| Repeatability | ±0.5% of F.S @ 25°C 77°F | |

Wetted Materials

| | | |
|----------------------|----------------------------------------------|--|
| Sensor Body | PVC (Dark) PP (Pigmented) PVDF (Natural) | |
| O-Rings | FKM EPDM* FFKM* | |
| Rotor Pin Bushings | Zirconium Ceramic ZrO2 | |
| Paddle Rotor | ETFE Tefzel® | |

Optional*

Electrical

| | | |
|----------------|----------------------------|------------------------|
| Frequency | 49 Hz per m/s nominal | 15 Hz per ft/s nominal |
| Supply Voltage | 5 to 24 VDC ±10% regulated | |
| Supply Current | <1.5 mA @ 3.3 to 6 VDC | <20 mA @ 6 to 24 VDC |

Max. Temperature/Pressure Rating - Standard and Integral Sensor | Non-Shock

| | | |
|------|----------------|-----------------|
| PVC | 180 psi @ 68°F | 12.5 bar @ 20°C |
| | 40 psi @ 140°F | 2.7 bar @ 60°C |
| PP | 180 psi @ 68°F | 12.5 bar @ 20°C |
| | 40 psi @ 190°F | 2.7 bar @ 88°C |
| PVDF | 200 psi @ 68°F | 14 bar @ 20°C |
| | 40 psi @ 240°F | 2.7 bar @ 115°C |

Operating Temperature

| | | |
|------|----------------|----------------|
| PVC | 32°F to 140°F | 0°C to 60°C |
| PP | -4°F to 190°F | -20°C to 88°C |
| PVDF | -40°F to 240°F | -40°C to 115°C |

Standards and Approvals

| |
|----------------|
| CE FCC |
| RoHS Compliant |

See Temperature and Pressure Graphs for more information

Temperature | Pressure Graphs | Non-Shock

Note: The Pressure/Temperature graphs are specifically for the Truflo® Flow Sensors. During system design the specifications of all components must be considered.

Model Selection

TIR - PF - S

| Body Material | Signal Output Option | Body Length | Seals |
|---------------------------------|----------------------|-------------------------------------|----------------------------------|
| P - PVC PP - PP PF - PVDF | 4-20mA Output | S - 2"- 4" Pipe L - 6"- 24" Pipe | FKM (Std) Suffix 'E' For EPDM |

