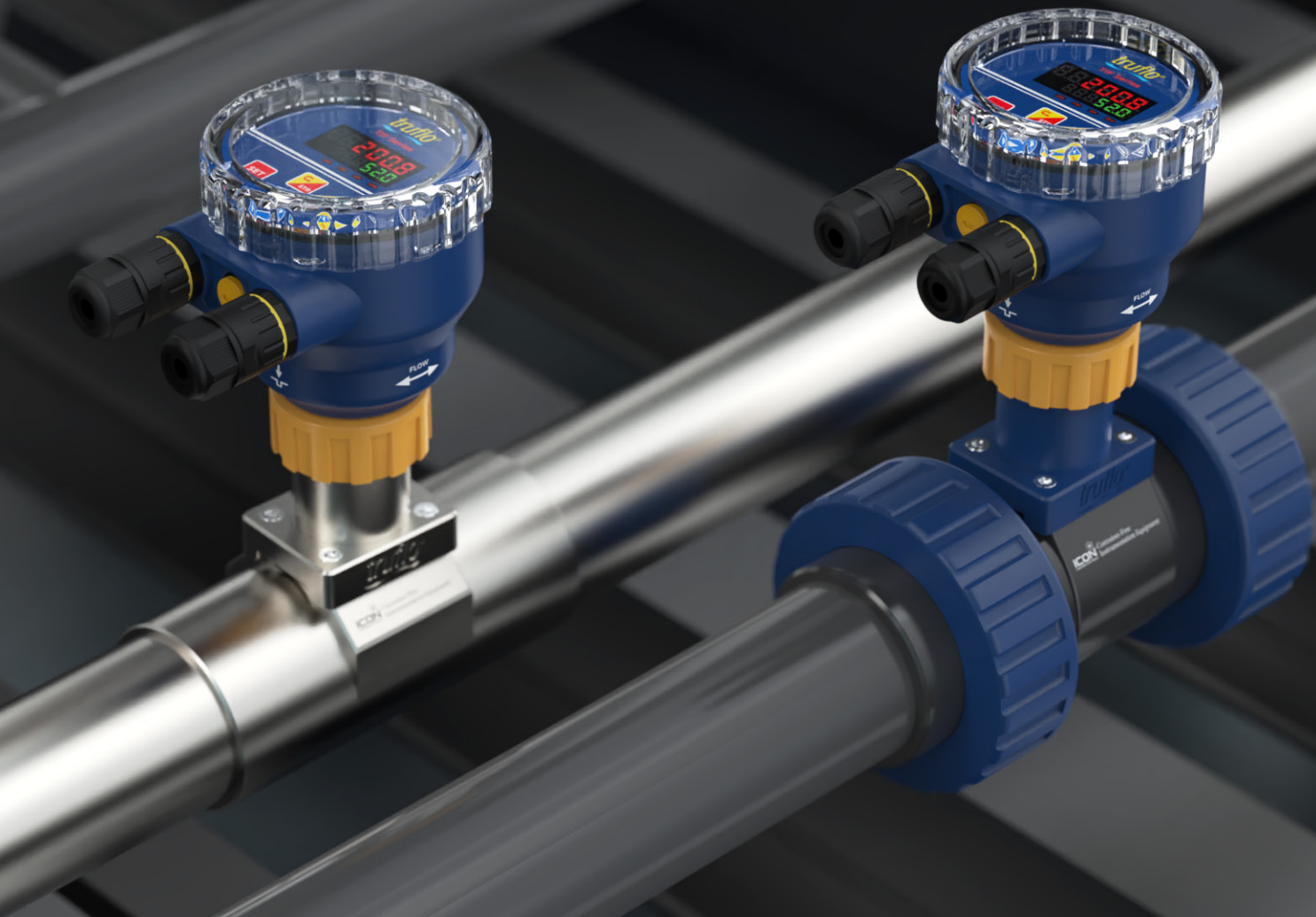


Truflo® — TIF | TI3F Series Insertion Paddle Wheel Flow Meter Sensor

ICON™ Corrosion-Free
PROCESS CONTROLS Instrumentation Equipment™

Flow | Total | Batching | 2 x Relay (10A)



Industry's **Longest Lasting** Paddle Wheel Flow Meter

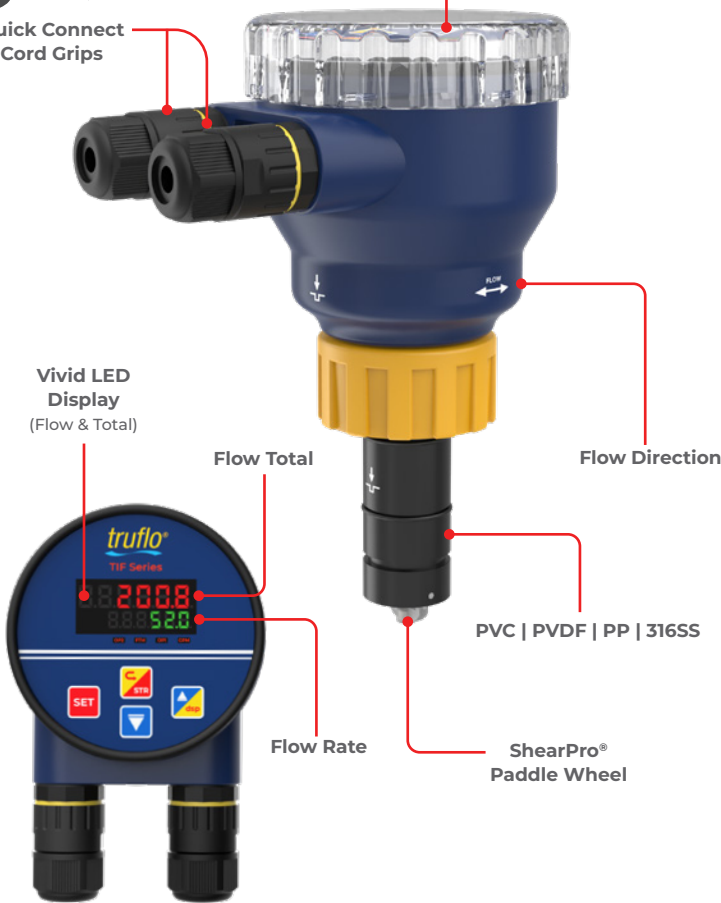
Truflo® — TIF | TI3F Series

Insertion Paddle Wheel Flow Meter Sensor



Quick Connect Cord Grips

High Impact NEMA 4X Enclosure



Features

- ✓ Vivid Dual LED Display
- ✓ 1/2" – 24" Line Sizes
- ✓ Industry's Highest Accuracy: $\pm 0.5\%$ F.S
- ✓ Batching | 2 x Relay (10A) Outputs

Industry's Most Accurate & Reliable Paddle Wheel Flow Meter Sensors

The TIF paddle wheel flow meter sensors are easy to install with exceptional guaranteed long-life performance and have been engineered to provide long-term accurate flow measurement in tough industrial applications.

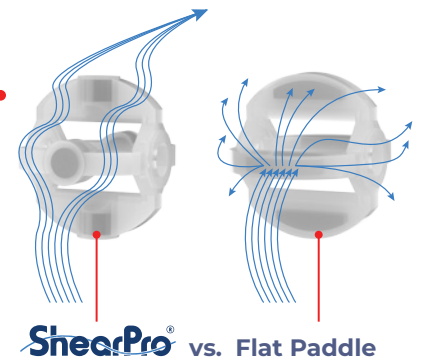
The paddle wheel assembly consists of an engineered high performance Tefzel® paddle and micro-polished zirconium ceramic rotor pin and bushings, providing excellent chemical and wear resistant properties.

The TIF Series paddle wheel flow meters are highly repeatable, exceptionally accurate, extremely rugged, offer outstanding value and require absolutely no maintenance.

The TIF flow meter sensors can be installed using Truflo's® extensive line of ANSI and DIN fittings. Truflo® offers SDR Pipe Saddles from DN15 - DN600 in GFPP material.

Revolutionary New ShearPro® Design

- ✓ Contoured Flow Profile
- ✓ Reduced Turbulence = Increased Longevity
- ✓ 78% Less Drag than Old Flat Paddle Design*
*Ref: NASA "Shape Effects on Drag"



Tefzel® Paddle Wheel

- ✓ Superior Chemical & Wear Resistance vs. PVDF

Zirconium Ceramic Rotor | Bushings

- ✓ Up to 15x the Wear Resistance
- ✓ Integral Rotor Bushings Reduce Wear and Fatigue Stress

360° Shielded Rotor Design

- ✓ Eliminates Finger Spread
- ✓ No Lost Paddles



On Paddle Wheel Assembly

Truflo® — TIF | TI3F Series

Insertion Paddle Wheel Flow Meter Sensor

Technical Specifications

| General | | |
|---|--|----------------------------------|
| Operating Range | 0.3 to 33 ft/s | 0.1 to 10 m/s |
| Pipe Size Range | ½ to 24" | DN15 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) 316SS | |
| O-Rings | FKM EPDM* FFKM* | |
| Rotor Pin Bushings | Zirconium Ceramic ZrO ₂ | |
| Paddle Rotor | ETFE Tefzel® | |
| Electrical | | |
| Frequency | 49 Hz per m/s nominal | 15 Hz per ft/s nominal |
| Supply Voltage | 10-30 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 40 Psi @ 140°F | 12.5 Bar @ 20°C 2.7 Bar @ 60°F |
| PP | 180 Psi @ 68°F 40 Psi @ 190°F | 12.5 Bar @ 20°C 2.7 Bar @ 88°F |
| PVDF | 200 Psi @ 68°F 40 Psi @ 240°F | 14 Bar @ 20°C 2.7 Bar @ 115°F |
| 316SS | Consult Factory | |
| 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 |
| 316SS | -40°F to 300°F | -40°C to 148°C |
| Output | | |
| 2 x Relay (10A) | | |
| Display | | |
| LED Flow Rate + Total + Batching | | |
| Standards and Approvals | | |
| CE FCC RoHS Compliant | | |

See Temperature and Pressure Graphs for more information

* Optional

Model Selection

| PVC PP PVDF | | |
|-----------------|-------------|----------|
| Size | Part Number | Material |
| ½" - 4" | TIF-P-S | PVC |
| 6" - 24" | TIF-P-L | PVC |
| 1" - 4" | TIF-PP-S | PP |
| 6" - 24" | TIF-PP-L | PP |
| 1" - 4" | TIF-PF-S | PVDF |
| 6" - 24" | TIF-PF-L | PVDF |

Add Suffix -
'E' - EPDM Seals

| 316 SS | | |
|----------|-------------|----------|
| Size | Part Number | Material |
| ½" - 4" | TI3F-SS-S | 316 SS |
| 6" - 24" | TI3F-SS-L | 316 SS |

Add Suffix -
'E' - EPDM Seals

Truflo® — TIF | TI3F Series

Insertion Paddle Wheel Flow Meter Sensor

Terminal Connections

| Power Supply | |
|--------------|-------------|
| Terminal | Description |
| 1 | +24VDC |
| 2 | -VDC |



| Relay | |
|----------|-------------|
| Terminal | Description |
| 1 | Relay 1 |
| 2 | Relay 2 |
| 3 | Com |

Fittings and K-Factor

TEE FITTINGS



| Tee Fitting | | K-Factor | | Sensor Length |
|-------------|-----|----------|--------|---------------|
| IN | DN | LPM | GPM | |
| ½" (V1) | 15 | 156.1 | 593.0 | S |
| ½" (V2) | 15 | 267.6 | 1013.0 | S |
| ¾" | 20 | 160.0 | 604.0 | S |
| 1" | 25 | 108.0 | 408.0 | S |
| 1½" | 40 | 37.0 | 140.0 | S |
| 2" | 50 | 21.6 | 81.7 | S |
| 2½" | 65 | 14.4 | 54.4 | S |
| 3" | 80 | 9.3 | 35.0 | S |
| 4" | 100 | 5.2 | 19.8 | S |

CLAMP-ON SADDLES



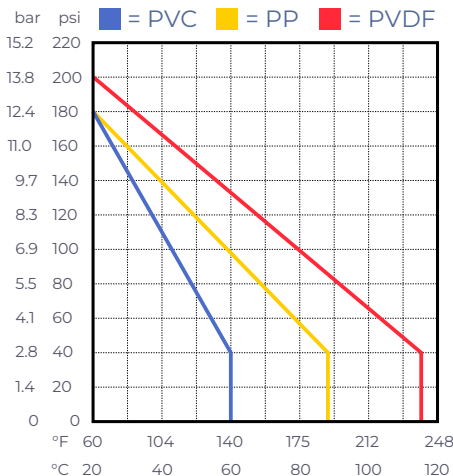
| Clamp Saddles | | K-Factor | | Sensor Length |
|---------------|-----|----------|------|---------------|
| IN | DN | LPM | GPM | |
| 2" | 50 | 21.6 | 81.7 | S |
| 3" | 80 | 9.3 | 35.0 | S |
| 4" | 100 | 5.2 | 19.8 | S |
| 6" | 150 | 2.4 | 9.2 | L |
| 8" | 200 | 1.4 | 5.2 | L |

CPVC SOCKET WELD-ON ADAPTERS



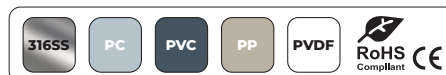
| Weld On Adapter | | K-Factor | | Sensor Length |
|-----------------|------|----------|------|---------------|
| IN | DN | LPM | GPM | |
| 2" | 50 | 14.4 | 54.4 | S |
| 2½" | 65 | 9.3 | 35.5 | S |
| 3" | 80 | 9.3 | 35.0 | S |
| 4" | 100 | 5.2 | 19.8 | S |
| 6" | 150 | 2.4 | 9.2 | L |
| 8" | 200 | 1.4 | 5.2 | L |
| 10" | 250 | 0.91 | 3.4 | L |
| 12" | 300 | 0.65 | 2.5 | L |
| 14" | 400 | 0.5 | 1.8 | L |
| 16" | 500 | 0.4 | 1.4 | L |
| 18" | 600 | 0.3 | 1.1 | L |
| 20" | 800 | 0.23 | 0.9 | L |
| 24" | 1000 | 0.16 | 0.6 | L |

Pressure vs. Temperature



Min/Max Flow Rates

| Pipe Size (O.D.) | LPM GPM | | LPM GPM | |
|------------------|-------------|------|-----------|--------|
| | 0.3m/s min. | | 10m/s max | |
| ½" DN15 | 3.5 | 1.0 | 120.0 | 32.0 |
| ¾" DN20 | 5.0 | 1.5 | 170.0 | 45.0 |
| 1" DN25 | 9.0 | 2.5 | 300.0 | 79.0 |
| 1 ½" DN40 | 25.0 | 6.5 | 850.0 | 225.0 |
| 2" DN50 | 40.0 | 10.5 | 1350.0 | 357.0 |
| 2 ½" DN60 | 60.0 | 16.0 | 1850.0 | 357.0 |
| 3" DN80 | 90.0 | 24.0 | 2800.0 | 739.0 |
| 4" DN100 | 125.0 | 33.0 | 4350.0 | 1149.0 |
| 6" DN150 | 230.0 | 60.0 | 7590.0 | 1997.0 |
| 8" DN200 | 315.0 | 82.0 | 10395.0 | 2735.0 |



Note: During system design the specifications of all components must be considered. | Non-Shock

Installation Fittings



SA Clamp-On Saddle Fittings

- PVC Material
- Viton® O-Rings
- Available in Metric DIN
- Will Accept Signet® Type Flow Meter

| PVC | |
|------|-------------|
| Size | Part Number |
| 2" | SA020 |
| 3" | SA030 |
| 4" | SA040 |
| 6" | SA060 |
| 8" | SA080 |



PT | PPT | PFT Installation Fittings

- PVC | PP | PVDF
- Socket End Connections
- Will Accept Signet® Type Flow Meter
- True-Union Design

| | PVDF | PVC | PP |
|------|-------------|-------------|-------------|
| Size | Part Number | Part Number | Part Number |
| ½" | PFT005 | PT005 | PPT005 |
| ¾" | PFT007 | PT007 | PPT007 |
| 1" | PFT010 | PT010 | PPT010 |
| 1½" | PFT015 | PT015 | PPT015 |
| 2" | PFT020 | PT020 | PPT020 |

Add Suffix -
 'E' - EPDM Seals
 'T' - NPT End Connectors
 'B' - Butt Fused End Connections for PP or PVDF



SAR Clamp-On Saddle Fittings (SDR Pipe)

- PVC Material
- Viton® O-Rings
- Available in Metric DIN
- Will Accept Signet® Type Flow Meter

| PVC | |
|------|-------------|
| Size | Part Number |
| 2" | SAR020 |
| 3" | SAR030 |
| 4" | SAR040 |
| 6" | SAR060 |
| 8" | SAR080 |
| 10" | SAR100 |
| 12" | SAR120 |
| 14" | SAR140 |
| 16" | SAR160 |



CT CPVC Tee Installation Fitting

- 1"-4" Pipe Sizes
- Easy to Install
- Will Accept Signet® Flow Meter

| CPVC | |
|------|-------------|
| Size | Part Number |
| 1" | CT010 |
| 1½" | CT015 |
| 2" | CT020 |
| 3" | CT030 |
| 4" | CT040 |

Add Suffix -
 'E' - EPDM Seals
 'T' - NPT End Connectors
 'B' - Butt Fused End Connections for PP or PVDF



SWOL Weld-On Adapter

- 2"-12" Pipe Sizes
- 316SS Weld-o-let with PVDF insert
- Easy to Install
- Will Accept Signet® Flow Meter

| Weld-On Adapter – 316 SS | |
|--------------------------|-------------|
| Size | Part Number |
| 3" | SWOL3 |
| 4" | SWOL4 |
| 6" | SWOL6 |
| 8" | SWOL8 |
| 10" | SWOL10 |
| 12" | SWOL12 |



| Glue-On Adapter – CPVC | |
|------------------------|-------------|
| Size | Part Number |
| 2" - 4" | PG4 |
| 6" - 24" | PG24 |

PG Glue-On Adapter

- 2"-24" Pipe Sizes
- Easy to Install
- Will Accept Signet® Flow Meter