

TKW SERIES

Paddle Wheel Flow Meter



- ❑ No Programming | Quick Installation
- ❑ 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 TKW Series Digital Flow Meters are easy to install with exceptional guaranteed long-life performance. TKW Series Paddle Wheel Flow Sensors are highly repeatable, extremely rugged sensors that offer outstanding value and require no scheduled maintenance.

The TKW 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. The sensor measures liquid flow rates in full pipes.

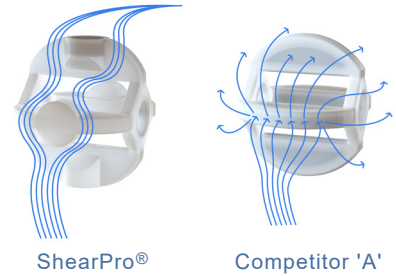
The Truflo® TKW Series sensors are offered in various materials and are available from 1/2 - 4" pipe sizes. The many material choices, including PVC, PP and PVDF make this model highly adaptable and chemically resistant to many corrosive liquid process applications.

The TKW Series flow meter bodies are true-union designed up to 4" just as any true-union ball valve is designed. All models come completely pre-programmed with a bright LED Flow Indicator.

The Truflo® TKW Series also comes equipped with a lifetime warranty on the paddle wheel assembly.

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" **

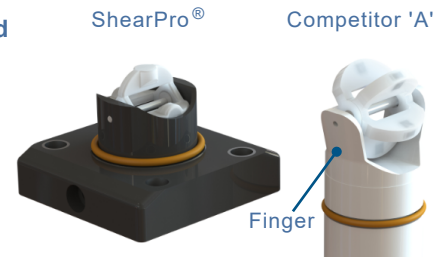
Zirconium Ceramic Rotor | Bushings

- ❑ 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

- ❑ Pulse | 4-20mA | Voltage Outputs
- ❑ LED Flow Indicator
- ❑ No Programming Required
- ❑ Low Pressure Drop
- ❑ NEMA 4X | IP 66 Protection
- ❑ True Union Design 1/2 - 4"



**<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 | ½ to 4" | DN15 to DN100 |
| 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 ZrO ₂ |
| 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

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

TKW - PF - 25

| Body Material | Pipe Size | Seals |
|---------------|---------------------|---------------------|
| P - PVC | 15 - ½" 50 - 2" | FKM (Std) |
| PP - PP | 20 - ¾" 80 - 3" | Suffix 'E' For EPDM |
| PF - PVDF | 25 - 1" 100 - 4" | |
| | 40 - 1 ½" | |

■ = PVC ■ = PP ■ = PVDF

