

TK SERIES

Paddle Wheel Flow Meter



- ❑ No Programming
- ❑ Lifetime Warranty
- ❑ Industry's Highest Accuracy: $\pm 0.5\%$



Bright LED
Display

Display Rotates 360°

True-Union Design

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

The TK 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.

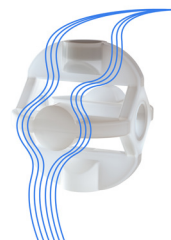
The TruFlo® TK Series sensors are offered in various materials and are available from ½ - 4" pipe sizes. The many material choices, including PVC, PP and PVDF make this model highly adaptable and chemically resistant to many corrosive liquid process applications.

The TK Series flow meter bodies are true-union designed up to 2" just as any true-union ball valve is designed. All models come completely pre-programmed with a bright LED Display that rotates 360°.

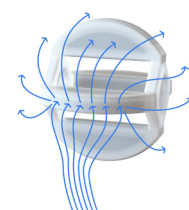
The TruFlo® TK Series also comes equipped with a lifetime warranty on the paddle wheel assembly.

New ShearPro® Design

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



ShearPro®



Competitor 'A'

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

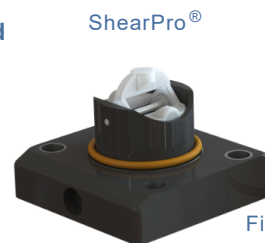
Zirconium Ceramic Rotor | Bushings

- ❑ 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 Rotor from Particulate Reducing Wear



Competitor 'A'

Finger

Features

- ❑ Display Rotates 360°
- ❑ Bright LED Display | Visible in the Dark
- ❑ No Programming
- ❑ Low Pressure Drop
- ❑ NEMA 4X | IP 66 Protection
- ❑ Password Protected Security
- ❑ True-Union Design ½ - 2" | Flanged 3 - 4"

PVC

PP

PVDF



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

TK SERIES

Paddle Wheel Flow Meter



Specifications

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 (std) 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 | 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

TK M - P - 25

| Series | Body Material | Pipe Size | Seals |
|--|---------------------------------|--|----------------------------------|
| S - Pulse + 1 Amp Relay P - Pulse RS485 (opt) M - Pulse 4-20mA | P - PVC PP - PP PF - PVDF | 15 - ½" 20 - ¾" 25 - 1" 40 - 1 ½" | FKM (Std) Suffix 'E' For EPDM |

