Truflo® — TKB | TK3B Series
In-Line Paddle Wheel Flow Meter Sensor

Battery Powered | Flow | Total

ICON PROCESS CONTROLS™

Corrosion-Free
Instrumentation Equipment™

UL®

GUARANTEE · LIFETIME WARRANTY

truflo®

Industry's Longest Lasting
Paddle Wheel Flow Meter

ICON PROCESS CONTROLS™ Corrosion-Free Instrumentation Equipment™

- ✓ No Programming | Quick Installation
- ✓ Industry's Highest Accuracy: ±0.5%
- ✓ Lifetime Warranty*

GUARANTEE LIFETIME WARRANTY

True Union Design

High Impact Enclosure

Bright LCD Display (Flow + Total)

Rotates 360°

TKB

- ✓ Battery Powered
- ✓ Flow | Total
- ✓ Revolutionary ShearPro® Paddle Wheel Design
- ✓ Low Pressure Drop
- ✓ NEMA 4X | IP 66 Protection
- ✓ Password Protected Security
- ✓ True Union Design ½ - 2"
- ✓ Flange Connection 3" - 4"

Flanged Connection

TK3B

316 Stainless Steel

Sanitary Connection

Engineered for accuracy, ruggedness, longevity, and battery powered convenience
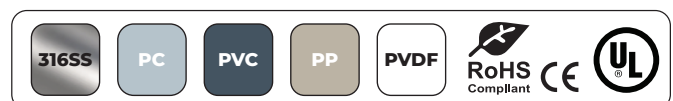
The Truflo® TKB Series digital in-line flow meter sensors are easy to install with exceptional guaranteed long-life performance. They are highly repeatable, extremely rugged sensors that offer outstanding value and require no scheduled maintenance.

The TKB 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.

TKB Series flow meters are offered in a variety of materials and are available from ¼" - 4" pipe sizes. The many material choices, including PVC, PP, PVDF and 316 SS make this model highly adaptable and chemically resistant to many corrosive liquid process applications.

The TKB Series flow meter bodies (PVC, PP, PVDF) are true-union designed up to 2" just as any true-union ball valve is designed. 3" - 4" versions are flanged. They come completely pre-programmed with a bright LCD Display that rotates 360°.

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

316SS | PC | PVC | PP | PVDF | RoHS Compliant | CE | UL

Truflo® — TKB | TK3B Series
In-Line Paddle Wheel Flow Meter Sensor

ICON™
PROCESS CONTROLS
Corrosion-Free
Instrumentation Equipment™

New ShearPro® Design

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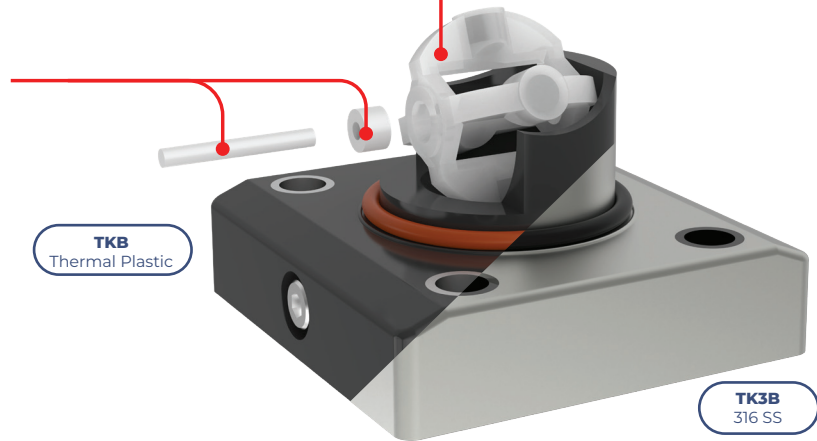 ‡Ref: NASA "Shape Effects on Drag"

ShearPro®
vs.
Flat Paddle

Tefzel® Paddle Wheel

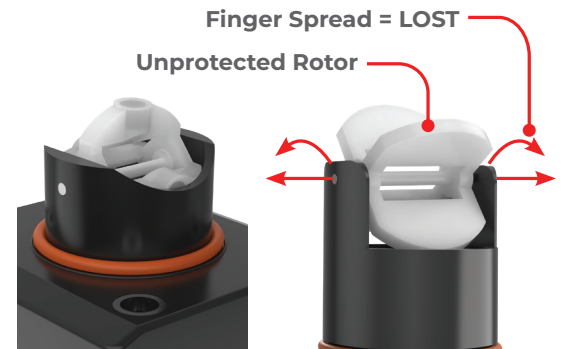- ✓ Superior Chemical And Wear Resistance vs PVDF

Zirconium Ceramic Rotor | Bushings

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

TKB
Thermal Plastic

TK3B
316 SS

ShearPro® Through-Pin Design

- ✓ Eliminates Finger Spread
- ✓ No Lost Paddles
- ✓ Increased Temp. Rating
- ✓ 360° Housing Protects Rotor

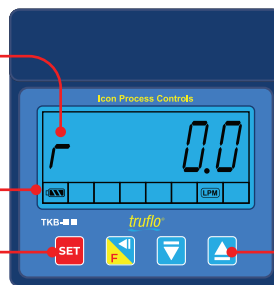Finger Spread = LOST
Unprotected Rotor

Displaying Flow Rate | Flow Totalizer

"r" indicates Default Flow Rate Mode

Press and hold **SET** for 3 sec to change unit of measure

Icon Process Controls

r   0.0

LPM

TKB-■■   truflo®

Press and hold ▲ for 3 sec to view 7 + 8 digits while in **Totalizer Screen**

ShearPro® vs. Competitor 'A'

Display Mode
(Eco) = Extended Battery Life

Highlighted to Indicate
Programmed Unit of Measurement

	ECO	GAL	LTR	K L	GPM	LPM	CMH

Battery Life

Flow Total

Flow Rate
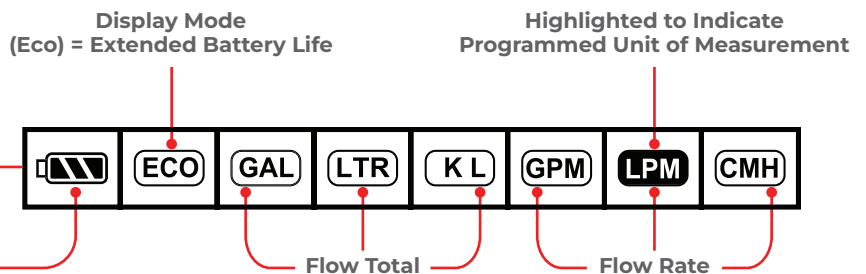
Technical Specifications

General		
Operating Range	0.3 to 33 ft/s	0.1 to 10 m/s
Pipe Size Range	¼" to 4" **	DN08 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) | 316SS	
O-Rings	FKM | EPDM* | FFKM*	
Rotor Pin | Bushings	Zirconium Ceramic | ZrO₂	
Paddle | Rotor	ETFE Tefzel®	
Electrical		
Operating Voltage Battery	3.0 VDC	
Battery	Lithium Battery (CR2477T)	
Life of Battery	> 1 Year Normal | > 2 Years Eco Mode	
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°C
PP	180 Psi @ 68°F | 40 Psi @ 190°F	12.5 Bar @ 20°C | 2.7 Bar @ 88°C
PVDF	200 Psi @ 68°F | 40 Psi @ 240°F	14 Bar @ 20°C | 2.7 Bar @ 115°C
316 SS	300 Psi @ 180°F | 40 Psi @ 300°F	21 Bar @ 82°C | 2.7 Bar @ 148°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
316 SS	-40°F to 300°F	-40°C to 148°C
Display		
LCD | Flow Rate + Flow Totalizer		
Standards and Approvals		
UL | CE | RoHS Compliant		

See Temperature and Pressure Graphs for more information

*Optional
** ¼" - ⅜" SS Only

K-Factors for TK Series

Size	K-Factor
¼"	547
⅜"	300
½"	124
¾"	72
1"	54
1½"	19
2"	10.3
3"	4.7
4"	2.1
⚠ K-Factor is Pre-Programmed	

Min/Max Flow Rates

| Pipe Size (O.D.)	LPM | GPM 0.3m/s min.	LPM | GPM 10m/s max.	
DN08 (¼")	0.6 | 0.16	12 | 3	◄ SS Only
DN10 (⅜")	1.8 | 0.48	50 | 13	◄ SS Only
DN15 (½")	3.5 | 1.0	120 | 32	
DN20 (¾")	5.0 | 1.5	170 | 45	
DN25 (1")	9.0 | 2.5	300 | 79	
DN40 (1½")	25.0 | 6.5	850 | 225	
DN50 (2")	40.0 | 10.5	1350 | 357	
DN65 (2½")	60.0 | 16.0	1850 | 357	
DN80 (3")	90.0 | 24.0	2800 | 739	
DN100 (4")	125.0 | 33.0	4350 | 1149	

Truflo® — TKB | TK3B Series
In-Line Paddle Wheel Flow Meter Sensor

Temperature | Pressure Graphs | Non-Shock

Note: The Pressure/Temperature graphs are specifically for the Truflo® Flow Meter Sensors.

During system design the specifications of all components must be considered.

■ = PVC   ■ = PP   ■ = PVDF
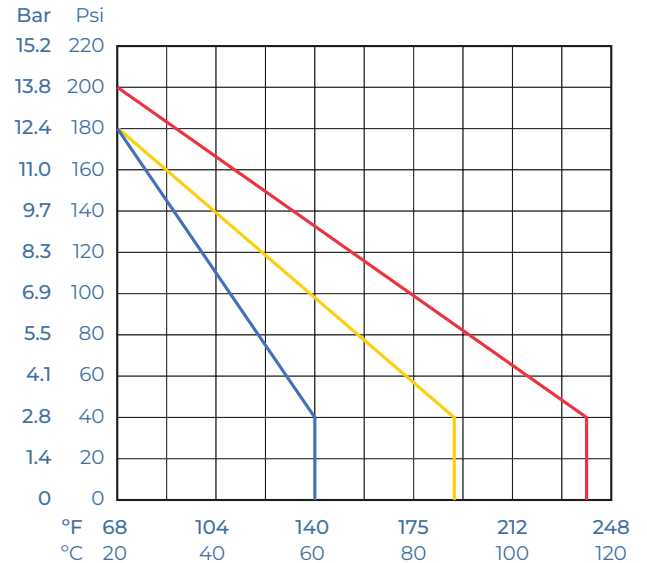
Model Selection

PVC

Size	End Connections	Part Number
½"	Sch 80 Soc	TKB-15-P
¾"	Sch 80 Soc	TKB-20-P
1"	Sch 80 Soc	TKB-25-P
1 ½"	Sch 80 Soc	TKB-40-P
2"	Sch 80 Soc	TKB-50-P
3"	Flanged	TKB-80-P
4"	Flanged	TKB-100-P

Add 1st Suffix (end connection):
- **-T** ▸ NPT End Connectors (on PVC)
- **-B** ▸ Butt Fused End Connections for PP or PVDF
- **-F** ▸ Flange ANSI 150lb - Consult Factory

PP

Size	End Connections	Part Number
½"	NPT	TKB-15-PP
¾"	NPT	TKB-20-PP
1"	NPT	TKB-25-PP
1 ½"	NPT	TKB-40-PP
2"	NPT	TKB-50-PP
3"	Flanged	TKB-80-PP
4"	Flanged	TKB-100-PP

Add 2nd Suffix (seals):
FKM (std, no suffix required)
- **-E** ▸ EPDM Seals
- **-K** ▸ FFKM | Kalrez® Seals

PVDF

Size	End Connections	Part Number
½"	NPT	TKB-15-PF
¾"	NPT	TKB-20-PF
1"	NPT	TKB-25-PF
1 ½"	NPT	TKB-40-PF
2"	NPT	TKB-50-PF

Note: PVC Socket Ends (Std)
PP/PVDF NPT Ends (Std)

316 SS

Size	End Connections	Part Number
¼"	NPT	TK3B-08-SS
⅜"	NPT	TK3B-10-SS
½"	NPT	TK3B-15-SS
¾"	NPT	TK3B-20-SS
1"	NPT	TK3B-25-SS
1 ½"	NPT	TK3B-40-SS
2"	NPT	TK3B-50-SS
3"	NPT	TK3B-80-SS
4"	NPT	TK3B-100-SS

Add 1st Suffix (end connection):
- **-T** ▸ NPT End Connectors
- **-SE** ▸ Sanitary - Consult Factory for Pricing
- **-F** ▸ Flange ANSI 150lb - Consult Factory

Add 2nd Suffix (seals):
FKM (std, no suffix required)
- **-E** ▸ EPDM Seals
- **-K** ▸ FFKM | Kalrez® Seals

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