

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

ICON™ Corrosion-Free
PROCESS CONTROLS Instrumentation Equipment

Battery Powered | Flow | Total



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

Truflo® — TKB Series

In-Line Paddle Wheel Flow Meter Sensor

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



- ✓ 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"

Engineered for accuracy, ruggedness, longevity, and battery powered convenience

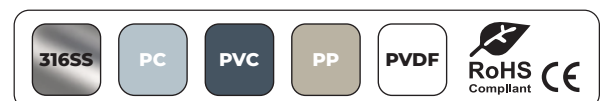
The Truflo® TKB Series digital in-line flow meter sensors are easy to install with exceptional guaranteed long-life performance. They are highly repeatable, extremely rugged sensors that offer outstanding value and require no scheduled maintenance.

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.



Truflo® — TKB Series

In-Line Paddle Wheel Flow Meter Sensor

New ShearPro® Design

- ✓ Contoured Flow Profile
- ✓ Reduced Turbulence = Increased Longevity
- ✓ 78% Less Drag than Old Flat Paddle Design†

†Ref: NASA "Shape Effects on Drag"

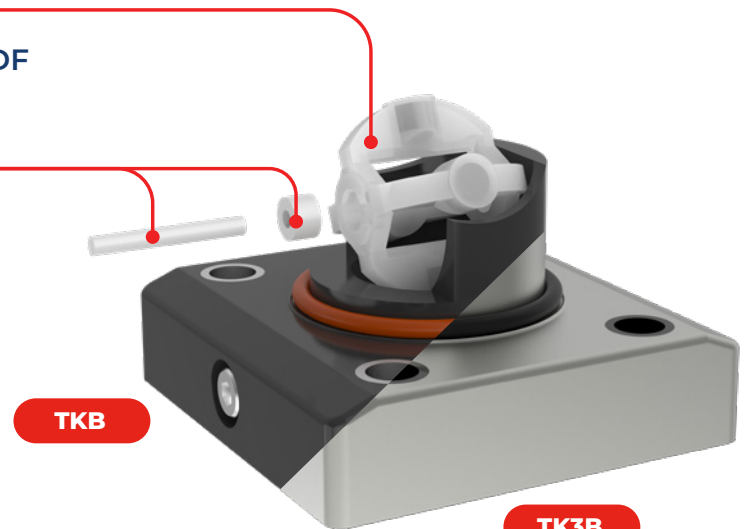


Tefzel® Paddle Wheel

- ✓ Superior Chemical And Wear Resistance vs PVDF

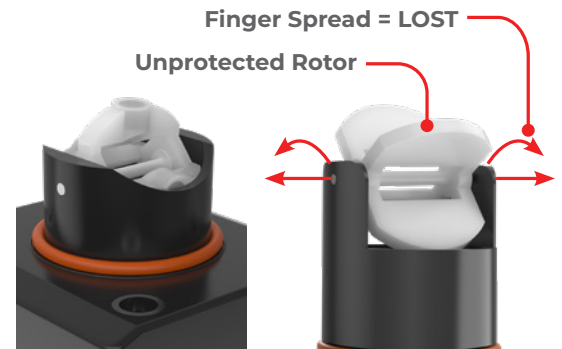
Zirconium Ceramic Rotor | Bushings

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



ShearPro® Through-Pin Design

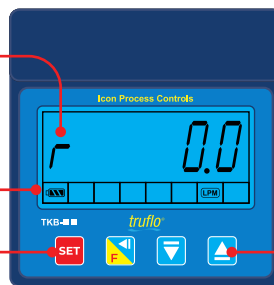
- ✓ Eliminates Finger Spread
- ✓ No Lost Paddles
- ✓ Increased Temp. Rating
- ✓ 360° Housing Protects Rotor



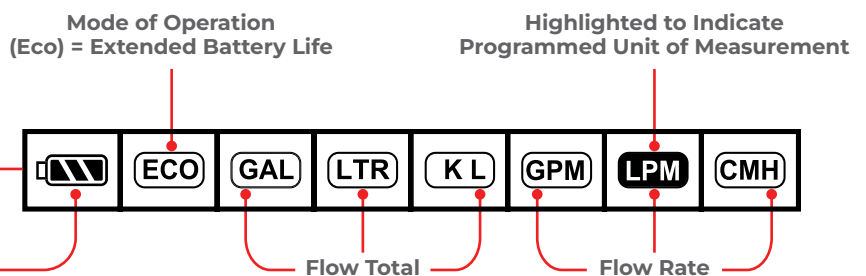
Displaying Flow Rate | Flow Totalizer

r indicates Default Flow Rate Mode

Press and hold **SET** for 3 sec to change from Flow Rate to Flow Total



Press and hold **▲** for 3 sec to view 8 + 9 digits while in Totalizer Screen



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In-Line Paddle Wheel Flow Meter Sensor

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 ZrO ₂	
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	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
316 SS	-40°F to 300°F	-40°C to 149°C
Standards and Approvals		
CE FCC RoHS Compliant		

See Temperature and Pressure Graphs for more information

*Optional

K-Factors for TK Series

Size	LPM	GPM
¼"	547	2079
⅜"	300	1140
½"	127.6	484.9
¾"	81.8	310.8
1"	55.1	209.4
1½"	18.8	71.4
2"	10.2	38.8
3"	4.7	18
4"	2.1	8
⚠ K-Factor is Pre-Programmed		

Min/Max Flow Rates

Pipe Size (O.D.)	LPM GPM		LPM GPM	
	0.3m/s min.		10m/s max.	
DN08 (¼")	0.04	0.16	12	3
DN10 (⅜")	1.0	3.8	50	13
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

◀ SS Only

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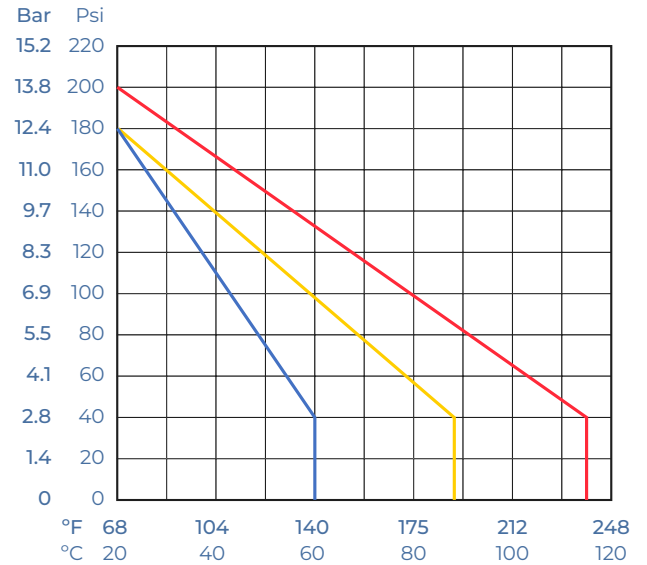
In-Line Paddle Wheel Flow Meter Sensor

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

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

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

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

Add 2nd Suffix (seals):

- FKM (std, no suffix required)
- E ▶ EPDM Seals
- K ▶ FFKM | Kalrez® Seals

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



by



Corrosion-Free
Instrumentation Equipment

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