

TIR Series

Multi-Function Insertion Paddle Wheel Flow Meter



- ✓ Lifetime Warranty
- ✓ ½" – 24" Line Sizes
- ✓ Pulse | 4-20mA + 1 Amp Relay Output

- ✓ M12 Quick Connection
- ✓ Industry's Highest Accuracy: ±0.5% F.S
- ✓ Retrofits into Signet® Type Fittings
- ✓ Double O-Ring Seal



Industry's Most Accurate & Reliable Paddle Wheel Flow Meters

The TIR digital flow meters are easy to install with exceptional guaranteed long-life performance and are 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.

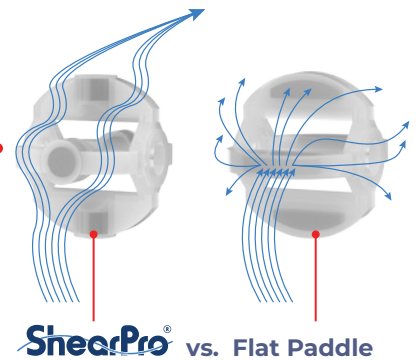
The TIR Series Paddle Wheel Flow Meters are highly repeatable, exceptionally accurate, extremely rugged, offer outstanding value and require absolutely no maintenance.

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

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

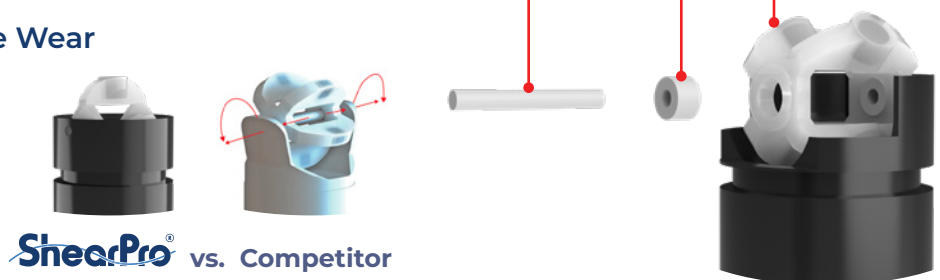
- ✓ Superior Chemical And Wear Resistance vs PVDF

Zirconium Ceramic Rotor | Bushings

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

360° Shielded Rotor Design

- ✓ Eliminates Finger Spread
- ✓ No Lost Paddles



TIR Series

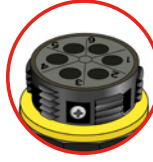
Multi-Function Insertion Paddle Wheel Flow Meter



Terminal Connections

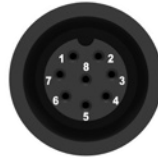


Cable Grip Wire Connector Combo
(no Internal wiring required)



Cable Grip Connection

Terminal	Description
1	+ 10-30VDC
2	OUT 2 (NPN)
3	- VDC
4	OUT 1 (NPN)
5	4-20mA -
6	4-20mA +



Min/Max Flow Rates

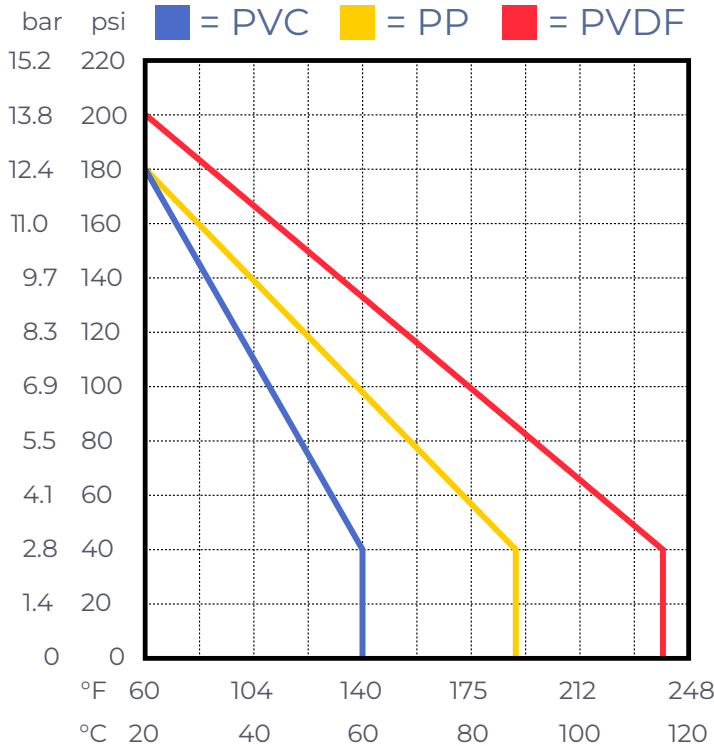
Pipe Size (O.D.)	LPM GPM	LPM GPM
	0.3m/s min.	10m/s max
½" DN15	3.5 1.0	120.0 32.0
¾" DN20	5.0 1.5	170.0 45.0
1" DN25	9.0 2.5	300.0 79.0
1 ½" DN40	25.0 6.5	850.0 225.0
2" DN50	40.0 10.5	1350.0 357.0
2 ½" DN60	60.0 16.0	1850.0 357.0
3" DN80	90.0 24.0	2800.0 739.0
4" DN100	125.0 33.0	4350.0 1149.0
6" DN150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

M12 Connection (no Internal wiring required)

Terminal	Description	Color
1	+ 10-30 VDC	Brown
2	Totalizer Pulse Output NPN	White
3	- VDC	Blue
4	Flow Rate Pulse Output NPN	Black
5	4-20mA +	Yellow
6	4-20mA -	Grey

Pressure vs. Temperature

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



EzVu[®]
Rotates 330°



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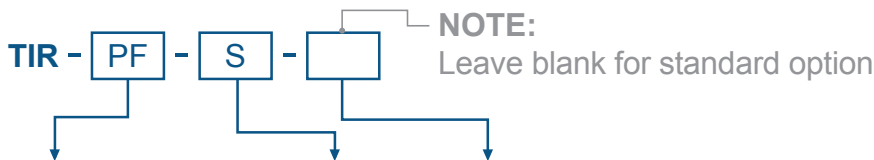
Technical Specifications

General		
Operating Range	0.3 to 33 ft/s	0.1 to 10 m/s
Pipe Size Range	½ to 4"	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)	
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
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

* Optional

Model Selection



Material	Pipe Size	Seals
P: PVC	S: ½"- 4" Pipe	FKM – Standard
PP: PP	L: 6"- 24" Pipe	E: EPDM
PF: PVDF		

