

# TN Series Turbine Flow Meter

## Common Uses

The TN Turbine Flow Meter is a cost effective turbine meter that can withstand the demands of the most rigorous flow measurement applications. It is ideal for light viscosity fluids like water, glycol, or solvents and can also provide liquid flow measurement on or off the oilfield. These meters offer many benefits, including:

- **Accuracy & Reliability:**  $\pm 1\%$  of reading
- **Electronic Integration:** This meter can accept a variety of existing electronics, including the EDGE sensor.
- **Simplified Maintenance:** Rotor replacement kit enables the rotor to be replaced in just 2-3 minutes.
- **Rugged & Cost Effective:** All stainless steel construction and tight machining tolerances make for excellent durability/long life.
- **Compatible with Current Systems:** Easy to install drop-in replacement of other brands of flow meters.



## Technical Specifications

General Meter Data	
13 Flow Ranges	0.3 to 5,500 gpm (across all meter sizes)
Measuring Accuracy	$\pm 1.0\%$ over full range with 1 cP fluid   $\pm 2.0\%$ for TN-0.5-3 and TN-103
Repeatability	$\pm 0.1\%$ over full range
Max. Operating Pressure	up to 5,000 psi (see chart next page for individual meter specs)
Calibration	Water (NIST traceable)
End Connections	NPT or Victaulic Groove (consult factory for other options)
Turndown	10:1
Operating Temperature Range	-100°F up to 250°F (up to 850°F with special coil)

## Meter Materials of Construction

Body	316 stainless steel
Rotor	416 stainless steel (CD4MCu)
Rotor Supports	316 stainless steel
Rotor Shaft	Tungsten carbide
Sleeve Bearings	Tungsten carbide



# TN Series Turbine Flow Meter

## Meter Data - Sizes

Part Number	Port Size & Type	Flow Range (GPM)	Flow Range (LPM)	K-Factor	Pressure Rating (PSI)	Filtration (Mesh)	Weight (Lbs)
TN-0.5-3	1/2" Male NPT	.3-3	1.14-11.36	18000	5000	60	2
TN-0.5-7.5	1/2" Male NPT	.75-7.5	2.84-28.39	13000	5000	60	2
TN-0.5-15	1/2" Male NPT	2-15	7.57-56.78	3300	5000	60	2
TN-0.75-7.5	3/4" Male NPT	.75-7.5	2.84-28.39	13000	5000	60	2
TN-0.75-15	3/4" Male NPT	2-15	7.57-56.78	3300	5000	60	2
TN-1-3	1" Male NPT	.3-3	1.14-11.36	18000	5000	60	2
TN-1-7.5	1" Male NPT	.75-7.5	2.84-28.39	13000	5000	60	2
TN-1-7.5-VIC	1" Victaulic	.75-7.5	2.84-28.39	13000	1000	60	2
TN-1-15	1" Male NPT	2-15	7.57-56.78	3300	500	60	2
TN-1-15-VIC	1" Victaulic	2-15	7.57-56.78	3300	1000	60	2
TN-1-30	1" Male NPT	3-30	11.36-113.6	3100	5000	60	2
TN-1-50	1" Male NPT	5-50	18.93-189.93	870	5000	40	2
TN-1-50-VIC	1" Victaulic	5-50	18.93-189.93	870	1000	40	2
TN-1.5-50	1 1/2" Male NPT	5-50	18.93-189.93	870	5000	20	7
TN-1.5-180	1 1/2" Male NPT	15-180	56.8-681.35	330	5000	20	5
TN-1.5-180-VIC	1 1/2" Victaulic	15-180	56.8-681.35	330	1000	20	5
TN-2-50	2" Male NPT	5-50	18.93-189.93	870	5000	20	8
TN-2-50-VIC	2" Victaulic	5-50	18.93-189.93	870	1000	20	6
TN-2-180	2" Male NPT	15-180	56.8-681.35	330	5000	20	6.5
TN-2-180-VIC	2" Victaulic	15-180	56.8-681.35	330	1000	20	6.5
TN-2-400	2" Female NPT	40-400	151-1514	52	5000	20	14
TN-2.5-400-VIC	2.5" Victaulic	40-400	151-1514	52	1000	20	11
TN-3-600	3" Male NPT	60-600	227-2270	57	2450	10	15
TN-3-600-VIC	3" Victaulic	60-600	227-2270	57	1000	10	15
TN-4-1200	4" Male NPT	120-1200	454-4542	29	1000	10	20
TN-4-1200-VIC	4" Victaulic	120-1200	454-4542	29	800	10	20
TN-6-2500-VIC	6" Victaulic	250-2500	946-9463	7	800	4	46
TN-8-3500-VIC	8" Victaulic	350-3500	1324-13248	2.7	800	4	61
TN-10-5500-VIC	10" Victaulic	550-5500	2081-20819	1.95	800	4	77

## Compatible Electronics

Standard (included)	Pulse output
EDGE Sensor	Pulse, analog, or Modbus outputs
Digital Display	EX rated, flow rate & total, analog and pulse outputs

Products may be subject to change without notice. Contact factory for the most up-to-date product information.

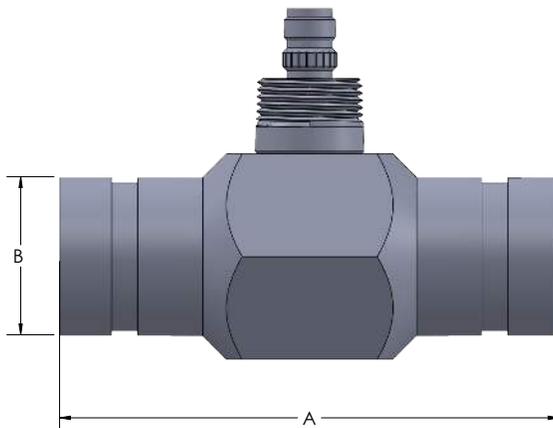
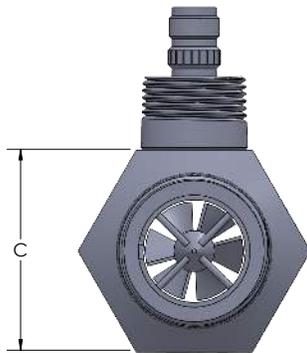
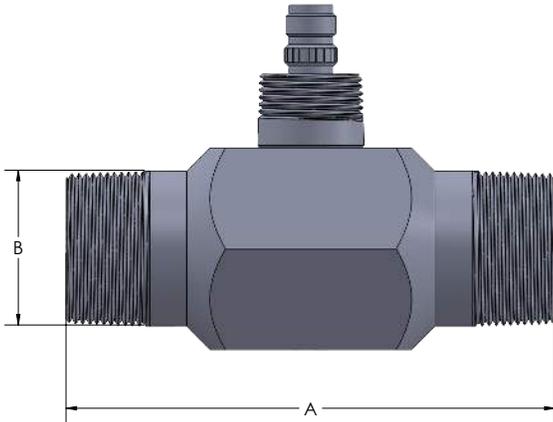


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# TN Series Turbine Flow Meter

## Meter / Sensor Dimensions



### Threaded:

Part Number	A (AOL)	B (Pipe OD)	C (Height)
TN-0.5-3	4"	0.84"	1.85" Hex
TN-0.5-7.5	4"	0.84"	1.85" Hex
TN-0.5-15	4"	0.84"	1.85" Hex
TN-0.75-7.5	4"	1.05"	1.85" Hex
TN-0.75-15	4"	1.05"	1.85" Hex
TN-1-3	4"	1.315"	1.85" Hex
TN-1-7.5	4"	1.315"	1.85" Hex
TN-1-15	4"	1.315"	1.85" Hex
TN-1-30	4"	1.315"	1.85" Hex
TN-1-50	4"	1.315"	1.85" Hex
TN-1.5-50	6"	1.9"	2.47" Hex
TN-2-50	6"	2.375"	2.47" Hex
TN-1.5-180	6"	1.9"	2.47" Hex
TN-2-180	6"	2.375"	2.47" Hex
TN-2-400	10"	3.15"	3.20" Dia.
TN-3-600	9.8"	3.5"	3.68" Dia.
TN-4-1200	11.5"	4.5"	4.65" Dia.

### Victaulic Groove:

Part Number	A (AOL)	B (Pipe OD)	C (Height)
TN-1-7.5-VIC	4"	1.32"	1.85" Hex
TN-1-15-VIC	4"	1.32"	1.85" Hex
TN-1-50-VIC	4"	1.32"	1.85" Hex
TN-1.5-180-VIC	6"	2.875"	2.47" Hex
TN-2-7.5-VIC	*	*	*
TN-2-15-VIC	*	*	*
TN-2-50-VIC	6"	2.38"	2.47" Hex
TN-2-180-VIC	6"	2.38"	2.47" Hex
TN-2.5-400-VIC	10"	2.875"	3.2" Dia.

Dimensions for part numbers not listed are available upon request.