

TRITON+® Flow Monitoring System **PARAFLOW™** Sensor

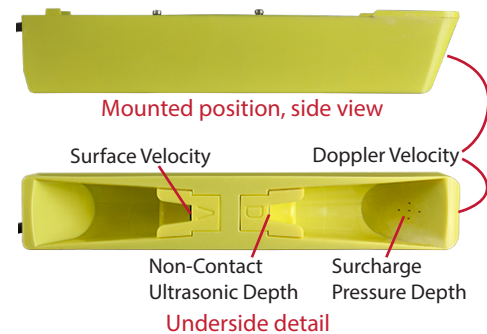
High-durability, Non-contact Area-velocity Sensor

PARAFLOW™ is a new non-contact area-velocity sensor used with the ADS® **TRITON+®** monitor. **PARAFLOW** measures five parameters including:

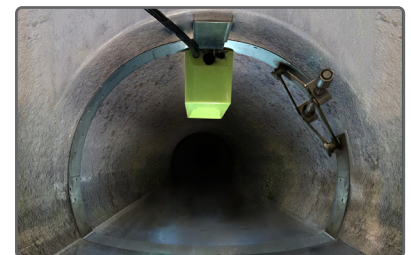
- Depth - non-contact ultrasonic depth
- Depth - surcharge pressure depth
- Velocity - non-contact surface velocity
- Velocity - surcharge Doppler velocity
- Air temperature (compensation)

PARAFLOW brings new capabilities alongside a new topside retrieval installation system. This installation system mitigates the need for regular confined space entry maintenance. Once installed, a specialized mounting bracket enables retrieval and placement of the sensor via the Topside Retrieval Tool. Depending on the application, the sensor can also be installed with a standard installation ring.

PARAFLOW uses a patented 'parabolic reflector' design that focuses the ultrasonic outputs to a targeted flow location to provide accurate readings. Additionally, it is designed with an impact-resistant, polycarbonate housing and nested sensors to protect from direct debris impact to withstand various sewer environments.



PARAFLOW installed in a manhole with Topside Retrieval System



PARAFLOW installed in a pipe with standard installation ring



Non-contact sensor measures depth and velocity in non-submerged and submerged (surcharged) conditions



Optional Topside Retrieval System reduces confined space entry and improves safety



Patented parabolic reflector focuses ultrasonic output



High-durability housing design and nested sensor transducers reduces maintenance and provides impact protection

TRITON+® Flow Monitor System with **PARAFLOW** is used to gather data for a variety of applications:

Infiltration and inflow (I/I) analysis

Model validation

Sanitary sewer overflows (SSOs)

Combined sewer overflows (CSOs)

Storm sewers

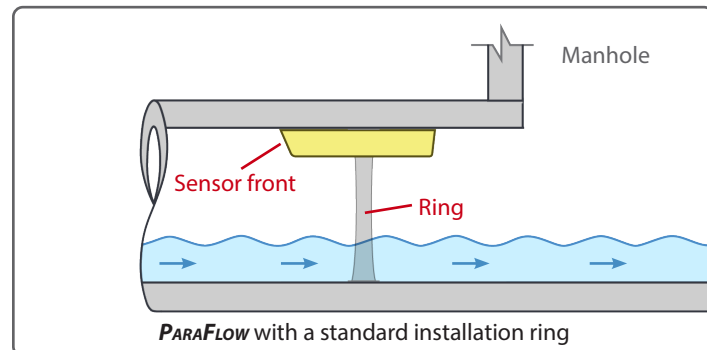


INFORMATION: Read the **ParaFlow Application Guidance** to learn more about flow conditions, locations, and installation types that may affect the performance of the **ParaFlow** sensor.

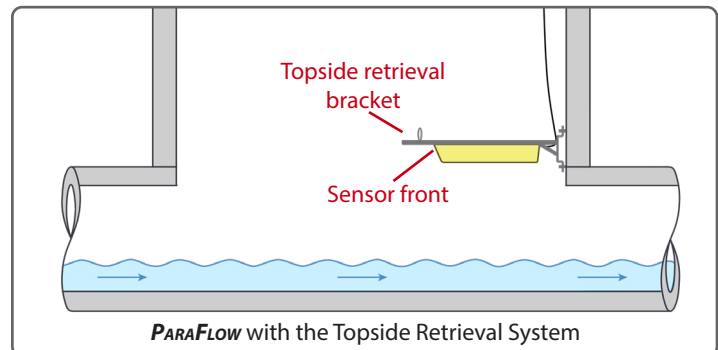
https://www.adsenv.com/sites/default/files/Application_Briefs/ParaFlow-Application-Guidance.pdf

PARAFLOW™ Sensor Specifications

Sensor Dimensions	Height: 2.58 in. (65.5 mm)
	Width: 2.20 in. (55.9 mm)
	Length: 13.91 in. (353.3 mm)
Sensor Housing	Material: Polycarbonate (PC)/PEEK
	Color: High-visibility yellow
Cable	Length: 30 ft (9.1 m)
	Diameter: 0.30 in. (7.6 mm)
	Jacket Material: Polyurethane
Weight	Sensor & Cable: 3.30 lb (1.49 kg)
Non-contact Ultrasonic Depth	Accuracy: ± 0.125 in. (3.17 mm) or $\pm 0.5\%$ of actual reading, whichever is greater
	Operating air range: 0 to 144 in. (0.0 cm to 3.7 m)
	Resolution: 0.01 in. (0.25 mm)
	Deadband: 0 in. (0 mm)
Non-contact Surface Velocity	Accuracy: ± 0.3 fps (0.09 m/s) or $\pm 5\%$ of actual reading, whichever is greater
	Surface velocity air range: 0 to 42 in. (0 cm to 106.7 cm)
	Surface velocity range: 1.0 to 15.0 fps (0.3 to 4.6 m/s)
	Resolution: 0.01 fps (0.003 m/s)
	Deadband: 0 in. (0 mm)
	<i>* Some flow conditions/hydraulics may negatively impact the ability of the Surface Velocity sensor to read accurately</i>
Surcharge Pressure Depth	Accuracy: $\pm 1\%$ of full range
	Range: 0-10 PSI; 0 to 277 in. (0 to 7.0 m)
	Resolution: 0.01 in. (0.25 mm)
Surcharge Doppler Velocity	Accuracy: ± 0.2 fps (0.06 m/s) or 4% of actual reading, whichever is greater
	Range: -30 to 30 fps (-9.14 to 9.14 m/s)
	Resolution: 0.01 fps (0.003 m/s)



Temperatures	Operating range: -4° to 140° F (-20° to 60° C)
	Storage: -4° to 167° F (-20° to 75° C)
Compatibility	The PARAFlow sensor is used with the ADS TRITON+ flow monitor
	Qstart™XML - setup and activation
	PRISM™ - data analysis
Mounting Method	ADS stainless steel mounting band/ring
	Topside Retrieval System
Certifications	The ParaFlow is developed and manufactured under the ISO 9001:2015 Quality Management Standard, and designed to meet the requirements for RoHS and IP68 standards.
	Certified under ATEX European Intrinsic Safety standards for Zone 0 rated hazardous areas
	Certified under IECEx (International Electrotechnical Commission) Intrinsic Safety Standards for use in Zone 0 rated hazardous areas (equivalent to Class I, Division 1, Groups C & D)
	CSA Certified to Class 225803 Process Control Equipment, Intrinsically Safe and Non-Incendive Systems – For Zone 0 Hazardous Locations, Ex ia IIB T3 Ga (152° C) in Canada
	CSA Certified to Class 225883 Process Control Equipment, Intrinsically Safe and Non-Incendive Systems – For Class I Zone 0 Hazardous Locations, AEx ia IIB T3 Ga (152° C) in the USA (equivalent to Class I, Division 1, Groups C & D)



Learn More About **ParaFlow**
www.adsenv.com/paraflow



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