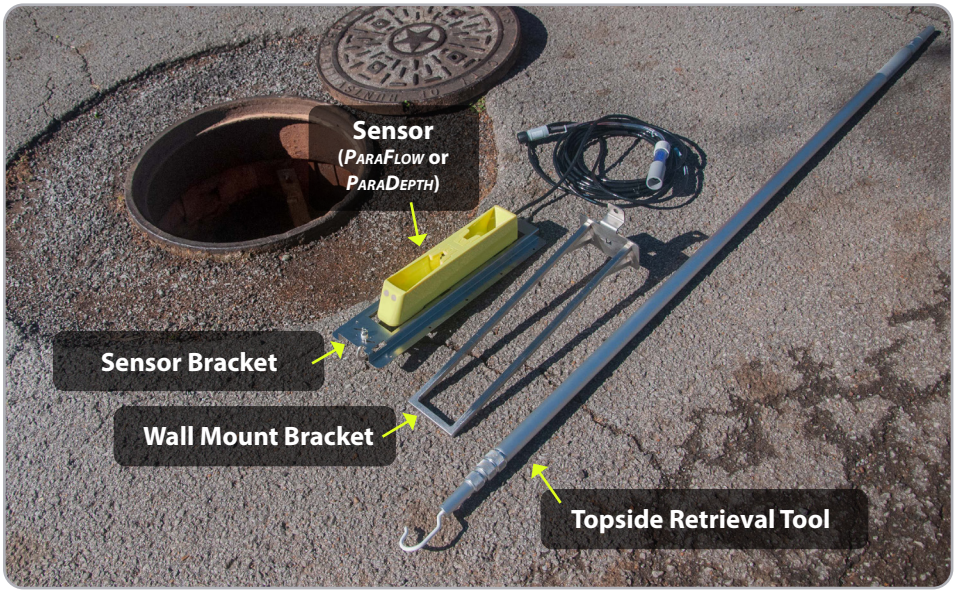
READ the ENTIRE Document and REVIEW ALL Links BEFORE Installing the Topside Retrieval System

TOPSIDE RETRIEVAL SYSTEM

QUICK INSTALLATION GUIDE



The **Topside Retrieval System (TRS)** is an alternative installation method that enables maintenance teams to remove and reinstall the ADS® ***ParaFlow***™ and ***ParaDepth***™ sensors from the street level. The ***ParaFlow*** and ***ParaDepth*** sensors are compatible with the ADS ***TRITON+***® flow monitor. After the initial installation that requires manhole entry, the Topside Retrieval System is used to complete routine maintenance without descending into the manhole. The Topside Retrieval Tool extends from 6 to 20 ft (1.8 to 6 m).

ADS Instructional Videos

Scan the QR code to watch:

Part 1: "How to Install the Topside Retrieval System"

Part 2: "How to Remove and Reinstall an ADS *ParaDepth* or *ParaFlow* Sensor Using the Topside Retrieval System"

Access all ADS instructional videos at
https://www.adsenv.com/video-library

Components Checklist: The ADS Topside Retrieval System consists of the following components that can be acquired via the ADS Storefront. *https://store.adsenv.com/*

- ☐ Mounting Bracket Kit. P/N: 8000-0655-A
  Includes Wall Mount Bracket, Sensor Bracket, and a Hardware Kit
- ☐ Topside Retrieval Tool. P/N: 8000-0654
  Use for removing and reinstalling the sensor on the Wall Mount Bracket from street-level
- ☐ Select an ADS non-contact sensor
  ParaFlow sensor. P/N: 8K-CS8-V2-10-30-IS
  ParaDepth sensor. P/N: 8K-CS8-D1-00-30-IS

Tools Checklist: The following parts and tools are needed to complete this installation.

** Tools are listed in standard (SAE) sizes. Select equivalent metric (SI) tools as needed.*
** All wedge anchors, nuts, and washers must be stainless steel.*

- ☐ Battery-powered hammer drill
- ☐ ⅜ in. Masonry bit
- ☐ 4 lb. Hammer
- ☐ 9⁄16 in. Nut driver or deep well socket & wrench
- ☐ 12 in. Carpenter's level
- ☐ Small Phillips-head screwdriver
- ☐ Diagonal wire cutters
- ☐ Folding carpenter's rule with brass slide

Follow the steps below to complete the Topside Retrieval System installation.

1. Installing the Wall Mount Bracket

1.1 Determine on which wall, upstream or downstream, to install the Wall Mount Bracket.

1.2 Make a mark 1 inch (25.4 mm) above the crown of the pipe and centered over the manhole invert (the closer to the crown of the pipe the better in manholes prone to surcharging). The lower tab of the Wall Mount Bracket will be placed here.

1.3-1.4 Drill a hole using a hammer drill and a ⅜ inch masonry bit. Hammer the wedge anchor into place.

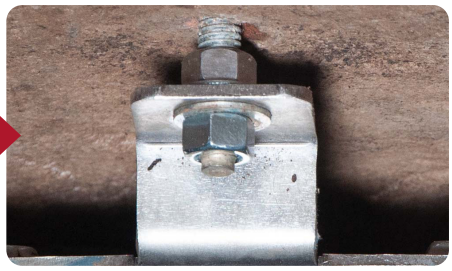
1.5 Place the lower tab of the Wall Mount Bracket on the wedge anchor and finger-tighten a washer and nut to loosely hold it in place.

1.6 Use the level to confirm that the bracket is level side to side.

1.7 Drill a hole through the upper tab using a hammer drill and hammer the wedge anchor into place. Place a washer and nut on the wedge anchor and finger-tighten.

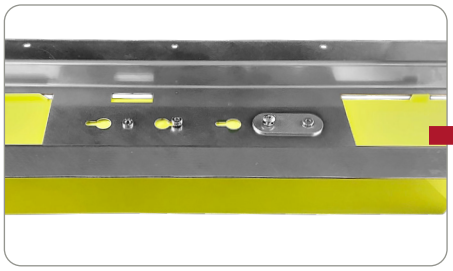
1.8 Re-confirm that the Wall Mount Bracket is level both front to back and side to side. Once confirmed, tighten nuts. The installation of the Wall Mount Bracket is now complete.

1.9 Installed ***ParaDepth/ParaFlow*** Wall Mount Bracket.

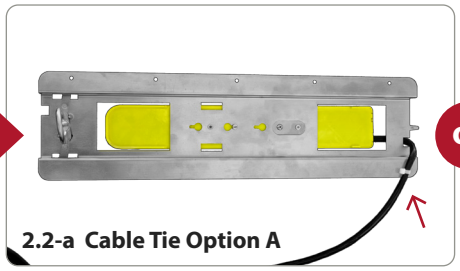


NOTE: If the manhole wall surface is inconsistent/uneven, run nuts, followed by washers, onto the top and bottom wedge anchors before placing the bracket on the bolts. Adjust the nuts behind the bracket to more easily level the bracket front to back.

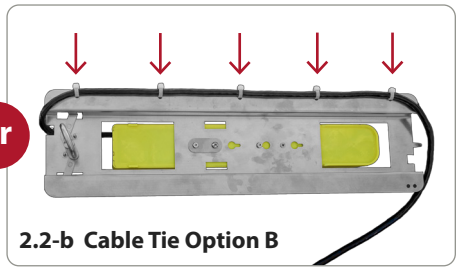
2. Attaching the *ParaDepth/ParaFlow* Sensor to the Sensor Bracket



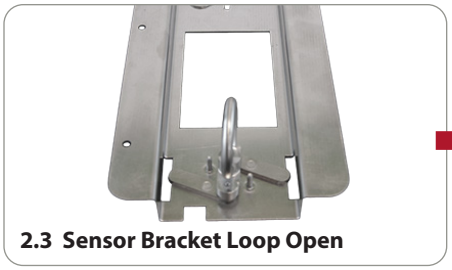
2.1 Attach the ***ParaDepth/ParaFlow*** sensor to the Sensor Bracket. Verify that the sensor and bracket are properly oriented for the position of the Wall Mount Bracket.



2.2-a *Installation Option A (Recommended):* If the Wall Mount Bracket is installed on the outgoing manhole with the sensor oriented to face the incoming flow, slide the sensor cable into the notch on the non-loop side of the Sensor Bracket. Then, thread a cable tie through the hole below the notch to secure the cable to the bracket.

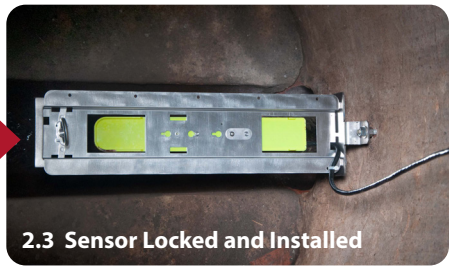


2.2-b *Installation Option B:* If the Wall Mount Bracket is installed on the incoming manhole wall with the sensor measuring the incoming flow, slide the sensor cable into the notch on the loop end of the Sensor Bracket. Then, thread cable ties through all 5 holes along the edge of the Sensor Bracket to secure the sensor cable to the bracket.



2.3 Sensor Bracket Loop Open

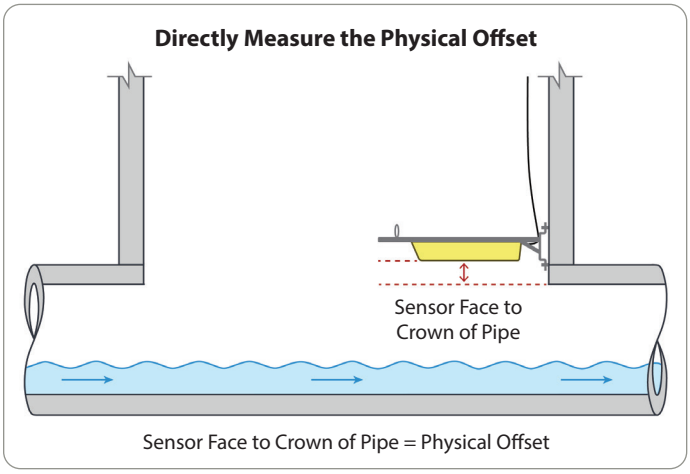
2.3 Sensor Bracket Loop Closed

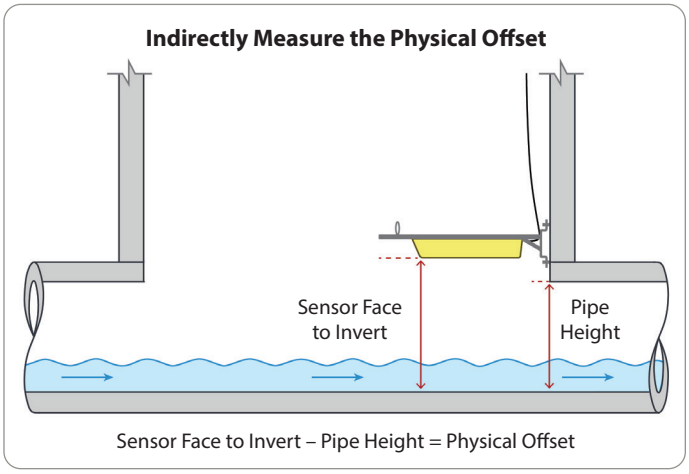


2.3 Sensor Locked and Installed

2.3 Lock the Sensor Bracket in place by turning the Sensor Bracket Loop clockwise.

3. Measuring the Physical Offset of the Sensor Prior to Exiting the Manhole





3.1 Once the sensor is positioned on the Wall Mount Bracket, measure the Physical Offset of the ***ParaDepth/ParaFlow*** sensor; the distance between the face (bottom) of the sensor and the crown of the pipe. Measure this distance directly or indirectly. An indirect measurement may be the easiest. To measure indirectly, measure the distance from the face of the sensor to the manhole invert below the front portion of the sensor and subtract the pipe height from this measured distance. The resulting value is the Physical Offset and will be input as a negative number when configuring the sensor in ***Qstart™XML***.

Refer to the **"*TRITON+* Installation, Operation, and Maintenance Manual"** Chapter 4 - Configuration and Activation for more information. https://www.adsenv.com/ads-product-manuals.

4. Sensor Cable

Install the cable so it is secure but can move freely should the sensor need to be retrieved. It is best practice to remove as much slack as possible with the sensor cable to prevent interference.

4.1 To prevent debris from collecting on the cable during a surcharge event, ensure the cable is relatively taut and that there is only a small amount of slack in the cable.

4.2 Coil any extra ***ParaDepth*** or ***ParaFlow*** cable and use a cable tie to secure it to the manhole rung or monitor handle.

5. Testing Removal and Reinstallation of Sensor Using Topside Retrieval Tool

WARNING! **When using the Retrieval Tool to either remove or reinstall the sensor, be careful to avoid any overhead obstructions. Be especially aware of any overhead power lines. The pole extends from 6 ft (1.8 m) to 20 ft (6 m).**

5.1 Using the Topside Retrieval Tool, unhook the cable from the hook mounted on the manhole wall.

5.2 Run the Topside Retrieval Tool down the manhole to the Sensor Bracket, extending the pole as necessary.

5.3 Position the hook through the loop on the Sensor Bracket and turn counter-clockwise, then slowly raise the sensor to the top of the manhole.

5.4 As a safeguard, when the sensor is being raised out of the manhole, simultaneously retrieve the sensor cable to minimize the distance the sensor could fall if it comes off the pole hook.

5.5 To reinstall, make sure the Sensor Bracket is securely looped on the pole hook, lower the Sensor Bracket down the manhole, and seat it on the Wall Mount Bracket. Twist the Sensor Bracket loop clockwise to lock the bracket back in place.

5.6 Again, use caution when raising the Topside Retrieval Tool after the sensor reinstallation.

Download these documents from https://www.adsenv.com/ads-product-manuals to help with installation.

DOWNLOAD

"Topside Retrieval Quick Installation Guide" to share this document with co-workers.
"TRITON+ Installation, Operation, and Maintenance Manual" for detailed information regarding installation, IS certifications, and maintenance restrictions.

IMPORTANT! **Manhole and sewer system work involves confined space entry and is inherently dangerous. Installers and technicians should comply with all federal, state, and municipal regulations concerning confined space entry.**

For Further Assistance Call 1-877-237-9585
or Email adssupportcenter@idexcorp.com

www.adsenv.com/triton