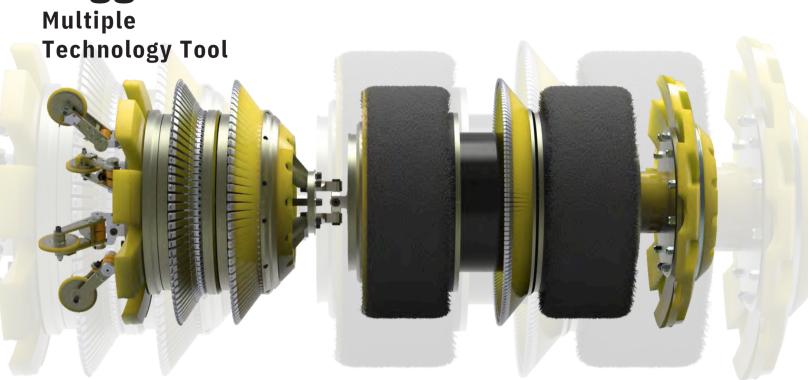




Our newly developed Digitel Data Logger DW2™ (DdL DW2™) ILI pig features advanced IMU navigation equipment that complements our PigProg software containing GIS tools connecting to a system utilizing ArcGIS. As the industry evolves, so do the regulations. Pipeline Operators are becoming very familiar with new regulations pertaining to CFR 192 and 195 compliance. Pipelines affected by these new regulations will need accurate mapping along with moderate consequence area (MCA) determination. Similarly, as the "Mega Rule" applies to natural gas gathering and transmission pipelines already under regulation, these lines also need to be updated. Moreover, urban sprawl and growing suburban neighborhoods are increasingly putting people and businesses into the 100-yard, 220-yard, and potential impact radius (PIR) extents of active pipelines.

With Enduro's advancements in GIS, Class location, HCA, and MCA determination for Natural Gas pipelines is now a service we are offering. We are not leaving out liquid lines, Enduro has the expertise and the tools to work with the pipeline operators for HCA determination using the Unusual Sensitive Area (USA) licensed datasets. As part of HCA determination for liquid pipelines, Enduro will provide overland spill analysis. With accurate up-to-date HCA, MCA, and Class location analysis we can better support our client's Integrity management plans (IMP). Regulatory analysis will be provided in the final report, and we are equipped to provide the Spatial deliverables for GIS Integration.

## Enduro Digitel Flux Logger



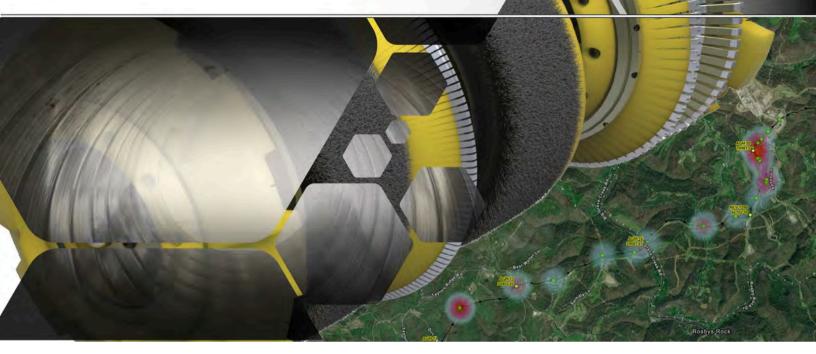
The Enduro DfL™ multiple technology utilizes the magnetic flux leakage technique, primarily to provide an assessment of metal loss occurring within a pipeline. Collecting metal loss, deformation, inertial, internal/external discrimination and residual field data sets concurrently greatly simplifies the process of identifying features and anomaly types. Processing and analyzing the closely coupled data allows the software users and analysts to more readily recognize pipeline features and conditions. Any areas indicating geometry and/or metal loss features may be simultaneously evaluated for deformation. strain, profile, and permeability variations.

While the combination of magnetic flux leakage, deformation, inertial and internal/external data sets provides an excellent synergy for classification, these features are enhanced by the addition of the residual magnetic field data set.

The extreme sensitivity of the residual field component provides a means to identify and locate any areas possessing minimal deformation which would otherwise not be identified by conventional techniques.

Enduro's multi tools utilize some of the most advanced design, data storage and packaging techniques available, as evidenced by the diverse data sets being taken and limited physical size and weight of the tools, typically less in length and weight than most presently being offered.

## **Geospatial Data Solutions**



**Dashboards** 



Web Applications



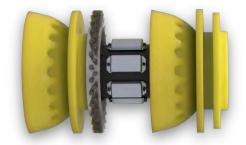
Spatial Analysis

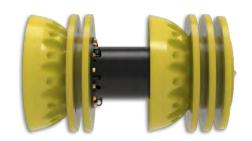


Enduro's GIS solutions offer a powerful tool for businesses looking to elevate their projects and make informed decisions. By providing access to all the GIS data needed to monitor day-to-day operations, Enduro ensures that colleagues are focused on the same goal and have access to the same information. Through cloud-based software, Enduro offers GIS and mapping solutions that allow users to create and share interactive maps, connecting people, locations, and data.

- AGM Data
- Asset Management
- Bend Strain Analysis
- Cathodic Protection
- Dig Data
- HCA/MCA/Class Data
- KMZ Data
- Lease Data
- Multi Vendor Runs
- · Pipeline Movement
- Previous Run Data
- Run Comparison
- Regulatory Data
- ROW Data
- Site Location Data
- Web Applications
- Web Mapping

# Advantage Cleaning and Batching Pigs Sizes 4" - 60"





The Enduro Advantage Pigs are steel-bodied pigs ruggedly constructed to stand up to a wide range of pipeline applications.

The Advantage Cup Pigs; Type ADV-2CC, ADV-3CC and ADV-4CC, are excellent batching pigs; used for condensation removal, purging and light cleaning. The Advantage Type ADV-3D-2CC and ADV-5D-2CC use a combination of cups and discs and are excellent for batching, removal of paraffin, and cleaning common debris found in pipelines.

Brushes, magnets and blades may also be added to enhance the cleaning effectiveness for those tough-to-clean pipelines. The Standard Advantage Pigs will traverse pipe reductions up to 25% with no damage to the equipment or the pipeline. Advantage Pigs can easily be fitted with a transmitter when pig location is critical.

#### STS Cleaning Pigs Various sizes and configuration available Sizes 4" - 48"





The Enduro STS (Smooth Transition Support) cup was designed to offer similar support as the HD Scraper cups but with a chamfer on the leading edge to allow for smooth(er) transitions through wall changes and fittings.

The STS & Advantage Pigs will traverse pipe reductions up to 25% with no damage to the equipment or the pipeline. STS & ADV Pigs can easily be fitted with a transmitter when pig location is critical.

Wrap around or spring loaded brushes, or blades and magnets may also be added to enhance the cleaning effectiveness for those tough-to-clean pipelines.

enduropls.com

# **Bi-Directional Cleaning Pigs Sizes 2" - 60"**



The Enduro Bi-Directional Pigs are primarily used as fill and displacement pigs during the hydrostatic phase of pipeline testing. They can also be used for unidirectional applications when necessary. These pigs come in a steel body design and are available in sizes ranging from 2" to 60". The steel-bodied Bi-Directional pigs are designed with replaceable components and are commonly available in either a 4-disc configuration or a 6-disc configuration. Additionally, Enduro transmitters can be installed in sizes 4" and larger, smaller sizes require a special body.

The steel-bodied pigs may also be equipped with optional gauging plates, and magnetic cleaners. Enduro also offers a urethane Bi-Directional UreFlex pig in sizes 2" to 12". These pigs are designed in a 6-disc configuration. Enduro tracking equipment may be installed in sizes 6" and larger. Wrap-around brushes are available for the metal pigs in sizes 3" and above and can be added to the UreFlex pigs in sizes 6" to 12". Both Bi-Directional pig options are designed to safely traverse pipe reductions up to 25% with no damage to the equipment or pipeline.





# Urecast Cleaning, Batching and Displacement Pigs Various sizes available



The Enduro UreCast is a unique and patented concept in conventional pigging. It combines the durability of a metal-bodied construction pig with the convenience of a throw-away foam pig. The design simplifies pig selection and operation for pipeline operators. The multi-featured Enduro UreCast includes a unique cup and disc combination that provides optimum sealing and scraping action. Additionally, it can be fitted with a brush kit.

The UreCast construction is completely maintenancefree. All cups and discs are formulated from 85 durometer shore A scale urethane. Other hardnesses are available for special applications

The Enduro UreCast and UreFlex urethane formulations are of the highest quality, providing maximum abrasion resistance. These products are designed to handle all pigging tasks including cleaning, batching, purging, and surveillance tracking.

#### Foam Pigs Sizes 2" - 60"



Silicon Carbide Grain



Scrub Brush



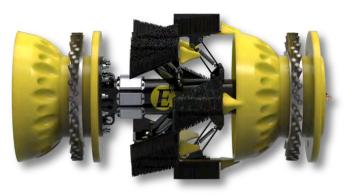
Criss-Cross Coated



Bare Swab

The Enduro Foam pigs come in a wide variety of configurations to suit different foam pig applications. They are available in sizes ranging from 2" to 60" for both steel and plastic pipes, with light, medium, or heavy-density foam options. Enduro foam pigs are offered in configurations such as Bare Swab, Criss-Cross Urethane Coated, Spiral-Wrapped Scrub Brush, Spiral-Wrapped Carbide, and Criss-Cross Silicon Carbide. Foam pigs can be made with transmitter cavities, ropes, and tow cables.

#### Custom Cleaning Pigs Sizes 4" - 60"



The Enduro ADV-Custom Pig is a heavy-duty tool used for cleaning purposes. It features a durable cup that offers extended wear life, effective sealing, and great scraping action.

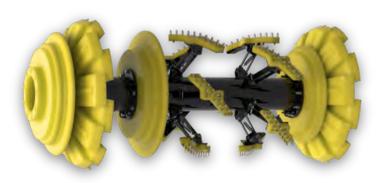
This custom pig has been equipped with brushes, blades, gauging plates, and magnets. Custom pigs can be designed in many configurations depending on the needs of the customer.

### **Dual Diameter and Mulitple Diameter Pigs**

Custom designs available for almost any size



Enduro has developed a slotted cup and slotted disc for pigging dual-diameter and multiple-diameter pipelines. These specially-sized cups and discs have been proven to minimize bypass and provide a near-constant seal in these types of pipelines. Enduro can also manufacture specially designed pigs to accommodate brushes and/or magnets for pipelines as small as 3" x 4" and as large as 36" x 48" with 1.5D bends.



#### Gauge Plate Pigs Sizes 3" - 60"



If determination of mechanical pig passage is required, Enduro can custom manufacture gauging pigs to indicate varying pipe transitions of anomalies or to determine the presence of varying bend radii. To determine the extent of the circumferential damage, the plate is sliced into segments so that individual quadrants may be sized.

Enduro gauging plate pigs can be custom-designed in any metal pig body configuration.

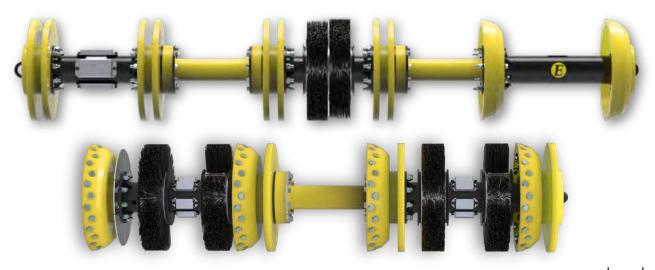
#### **Pig Link Cleaning Pigs**

Custom designs available for almost any size

Enduro's Pig Link Cleaning Pigs are both flexible and versatile, allowing for varied configurations and adaptations of cups, discs, and body links - most any design you may conceive, can be built with Pig Links. The flexibility of the polyurethane link allows the pig to pass bend radii as small as 1.5D.

#### Excellent for:

- Nitrogen Purges
- Line Cleaning and Scraping
- Batching
- Hydrostatic Fill and Displacement
- Custom Designs



### **Enduro Pig Popper**®

#### Manual Visual alert, Electric alert, Electrical/Manual Visual alert

Enduro's patented Pig Popper® is an intrusive pig signal that is made in the USA and has been trusted in the oil and gas industry for decades. The high contrast indicator is reset manually and has 360° visibility. reliably alerting operators of a pig passage. The lighted version comes with a high-power strobe for nighttime pigging operations. The Pig Popper® was designed with an omni-directional trigger, making installation simple and avoiding malfunction that can occur with bi-direction pig signals. The trigger mechanism is also pressure compensated, accommodating changes to operating pressures without the need for adjustment or changing springs. The Pig Popper's® electrical or manual/electrical options readily connect to your SCADA system. All options are available with a flexible extension system that allow subgrade installation in any depth of cover up to 18'. Need to replace a damaged pig sig? The Pig Popper® is compatible with most existing 2" pig signal fittings.



Want the mobility of a non-intrusive pig signal? Check out Enduro's N.I.P.S. unit.

## **Enduro Pig Popper**<sup>®</sup> Cable Extension



3 patents (US6357384B1, US8109162B2, US20220252201A1 (pending))

#### Pig Locating and Tracking Equipment







Standard Geophone

Wireless Geophone

Non-Intrusive Pig Sensor

Enduro offers a range of pig tracking equipment, including the Standard Geophone, Wireless Geophone, and Non-Intrusive Pig Sensor, to meet all your tracking needs. The Geophone unit detects pig movement by amplifying the normal noises made by pigs as they pass through. the pipeline. The unit can be placed on the ground or attached to exposed piping, such as valve settings and vent pipes.

Our Non-Intrusive Pig Sensor detects changes in the magnetic field as a pig travels through a pipeline underneath the unit. Each N.I.P.S is equipped with a strong rare earth magnet on the base that attaches directly to the pipe. It is a simple, lightweight, portable, and cost-effective unit that is designed to become your next standard tracking equipment.



Enduro's RX-102 Tracking Receiver is a complete 22 Hz and Acoustic tracking solution with a built-in geophone amplifier.

Transmitters



ET531X100





380-12-AT-111

380-12-SSC-110

Pig tracking services & AGM site documentation

- Pre-run site visits
- Consultation/Recommendations
- AGM site selection
- Survey location documentation
- GPS survey of AGM locations\*
- Pig Tracking and AGM placement
- Dig site staking and documentation



To learn more about any of our products or services please visit our website <u>enduropls.com</u> or contact one of our representatives.

#### **Authorized Area Reseller**

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ray.schnebelen@precisionpipeline.com

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