

boss

Your "Go To" Supplier for all things Piping!



Pigging Guide

PIPELINE PIGGING

WHAT IS A PIG?

A pig is defined as “A device that moves through a pipeline for the purpose of cleaning, dimensioning, or inspecting.” This definition covers more than 500 different designs and types of pigs.

WHY PIG A PIPELINE?

During commissioning of a newly built pipeline, it is necessary to run pigs to remove any debris left in the line (tools, welding rods, dead animals, etc.). Pigging will also assist with removal of mill scale and welding icicles in the line. Pigging is also used for cleaning, gauging, dewatering and drying of a pipeline.

ABOUT PIGGING

Since their conception, pigs have been cleaning pipelines in the oil and gas industry for well over one hundred years. Now, pigs have branched into other industries, such as municipalities, power plants, mining, refineries, chemical plants, pulp and paper mills, food and beverage, and cosmetic and pharmaceutical. Also, over the years pigs have evolved from basic “plugs” to being fairly sophisticated pipeline cleaning devices. Standard sizes range from 2” to 48” (but larger sizes can easily be designed and manufactured), and they can be manufactured in varying lengths, diameters, styles and configurations to best suit the customer’s application.

Looking for a custom pig or other cleaning equipment? Contact us today for any custom or specific pipeline cleaning requirements.



BARE FOAM PIGS / SWABS

Foam Pigs – A versatile cleaning device, used for drying, cleaning, batching and product removal operations. Common configurations include bare, criss-cross, wire-brush, plastic bristle, and silicon carbide. Pigs are also available with abrasive scourer ends, abrasive scourer wraps, abrasive grit coating, polyurethane coated and bevel tipped (for ease of launching). Foam pigs are also known as Swabs, ‘Foamies’ and Scrapers. PSSS supply foam Pig’s in 5 densities, light, low, intermediate, medium, and heavy density. Foam Pigs can also be completely customised so if you cant find what your looking for we can make it!

Foam Pellets – Used for cleaning and wiping pipe sizes 6mm–50mm. The foam projectiles used for cleaning will travel through 90-degree bends “T” joints, coils and straight valves. Cleaning of hose and tube has never been efficient or easy. Available in low density, high density and grit coated.

<p>LOW DENSITY 27KG/M3 (1.69LB/FT3)</p>	 LD - Plain	 LDB - Bevelled	 LDBS - Bevelled & Sealed
<p>INTERMEDIATE DENSITY 42KG/M3 (2.62LB/FT3)</p>	 IDB - Bevelled (Pink)	 Pellet Foam Pigs	
<p>MEDIUM DENSITY 80KG/M3 (4.99LB/FT3)</p>	 MD - Plain (White)	 MDS - Sealed (White)	 MDBS - Bevelled & Sealed (White)
<p>HIGH DENSITY 128KG/M3 (7.99LB/FT3)</p>	 HD - Plain (White)	 HDS - Sealed (White)	 HDBS - Bevelled & Sealed (White)

COATED, PLASTIC BRISTLE & WIRE PIGS

Coated - Durable polyurethane elastomer coating available in a criss-cross or spiral pattern. Used for wiping, batching, and product-removal applications.

Plastic Bristle - When wire brush is not suitable. Available in red plastic bristle or white plastic (less abrasive) bristle. Used for cleaning applications for build-up removal in internally coated or plastic pipe (PVC, fiberglass, HDPE).

Wire - Used for maximum cleaning applications for build-up removal. More abrasive types such as Hard Scale used for the heaviest types of cleaning applications, such as fly ash, encrusted salt crystals, and solidified sulfur.

Sphere - Available in various styles, bare, criss-cross, silicon-carbide, wire brush, and plastic bristle. Used for the same applications as standard foam pigs, however, are able to negotiate pipe configurations that standard foam pigs cannot.



Criss-Cross
Comes in Light, Medium, Heavy



Criss-Cross Wire Brush
Comes in Light, Medium, Heavy



Plastic Bristle
Comes in Light, Medium, Heavy



GHS - Hard Scale



TWP - Total-
Plastic Bristle



TW - Total Wire Brush

Sphere Foam Pigs



FOOD GRADE PIPELINE PIGS & PIGGING

Food Grade Solid Cast Pigs

✓ Item For Sale



Food-grade quality polyurethane is primarily used in the food and beverage and cosmetic and pharmaceutical industries. The multiple discs equate to exceptional sealing capabilities resulting in less bypass and more product displacement. The SWPF is capable of spanning full-branch tees and negotiating tight-radius bends as low as 1.5-diameter.

Solid Cast Pigs

✓ Item For Sale



Solid-cast pigs, which have the flexibility and easy handling of foam pigs, coupled with the ruggedness and excellent sealing capabilities of steel pigs, prove very efficient as general purpose pigs for batching, displacement and routine pigging applications. With the addition of brushes, they can also be used for cleaning operations. Various configurations are available, including spherical, cup-type and disc-type.

Square Edge Pigs

✓ Item For Sale



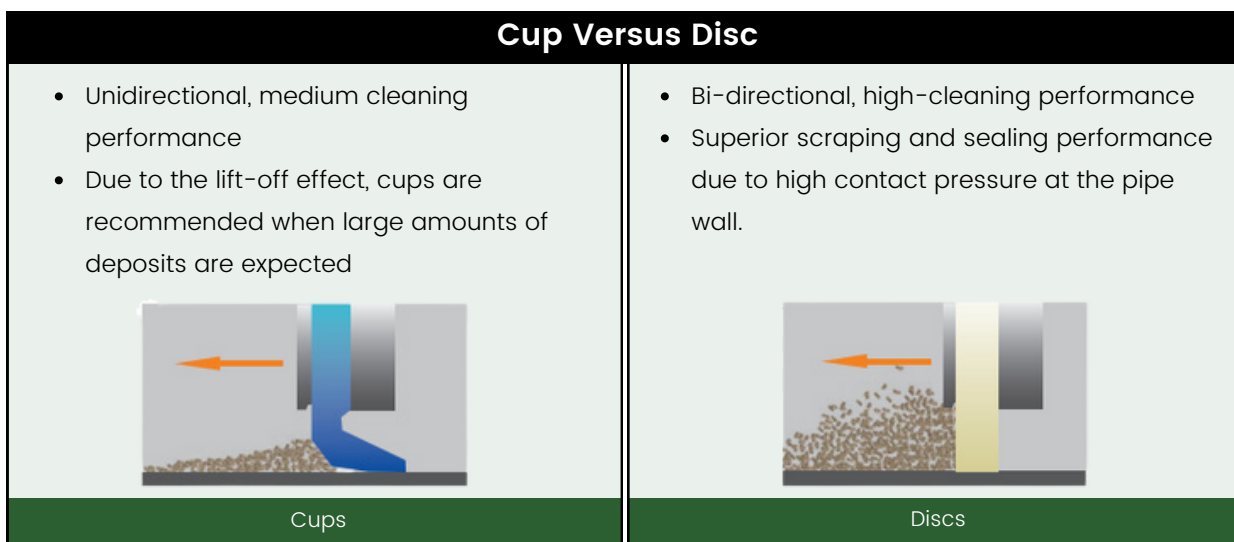
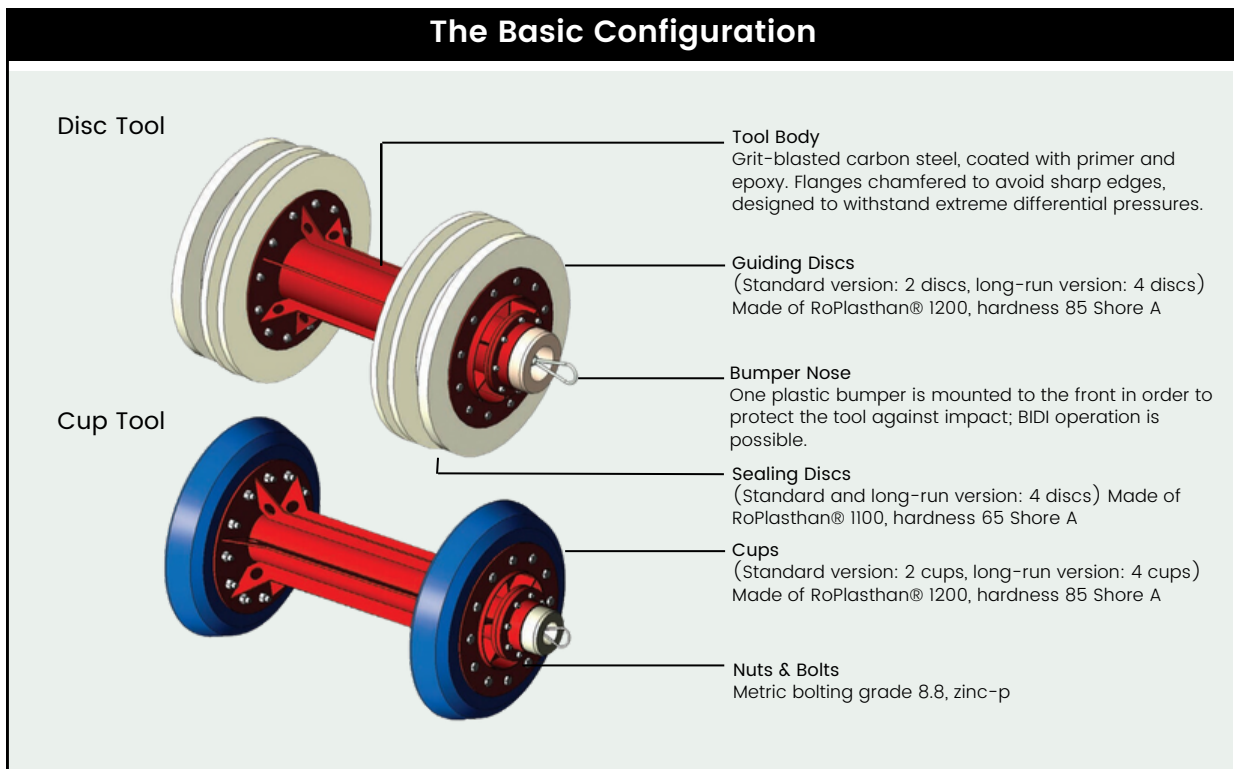
Designed to record within just a few milliseconds the GPS time of a passing. This precise time coupled with the physical pipeline location is correlated with the data recorded by the inspection tool. This correlated data provides a major increase in the accuracy of a smart pig's feature location callouts. Utilising precision time synchronisation provided by its on board Global Positioning System (GPS), the CD47-C is able to provide tool passage time accuracy that is guaranteed to be within 250 milliseconds over the 7 day battery life. With its ability to record passages of both transmitter-equipped and Rosen magnetic (MFL) inspection tools without transmitters, providing users with a comprehensive, well-tested and field hardened system for their benchmarking requirements

CUSTOMER BENEFITS

The Ultimate Clean™ series of tools provides the highest degree of flexibility for virtually all pipeline cleaning applications including general and heavy-duty cleaning, ferrous debris removal as well as gauging and batching tasks

THE ROSEN ADVANTAGE

With its slender multi-bolt design, the Ultimate Clean™ pipeline cleaning tool has excellent pipe passage properties. This series provides the highest degree of flexibility for virtually all applications such as general and heavy-duty cleaning, ferrous debris removal as well as gauging and batching tasks. Operating life is maximized through the use of highly wear-resistant RoPlasthan® polyurethane (PU) materials. Ultimate Clean™ tools can optionally be supplied in accordance with ATEX directive 94/9/EC. ROSEN pipeline cleaning tools are designed, engineered and manufactured in-house.



PIGGING ACCESSORIES & EQUIPMENT

Ultimate Clean Pigs

ULTIMATE CLEAN provides 4 basic series of tools:

- Basic (standard or long-run)
- Gauging (with gauge and/or bend plate)
- Brush (with spring-supported or circular brushes)
- Magnet (with standard or high-performance magnets)
- Combinations of above

With additional accessories, such as

- Spider nose for flow bypass
- Pressure bypass
- ITX Transmitter and EPD Electronic Tool Detector
- PDL Pipeline Data logger



Pigging Accessories



Bend-detection transmitter tool



Spring supported brushes



Pipeline Data Logger



Gauge and bend plate



Spider nose



Tool location transmitters



Item For Sale



Item For Hire

Additional Variations and sizes available on request *

PSSS Launcher / Receiver

Our Pig Test Headers are made for ease of operation and longevity of service. Built to accommodate multiple sizes and classes our Pig Test Headers supply the ultimate design that readily meets your technical and commercial requirements. Two sizes available, small (accommodates pipe 4", 6", 8") and large (accommodates pipe 10", 12", 14").

Test Header set suitable for:

- Small Pipe Sizes: 4", 6", 8" - Class: 150, 300, 600, 900lb
- Large Pipe Sizes: 10", 12", 14" - Class: 150, 300, 600lb

Key Features:

- Simple leg support for use in the field
- Designed to AS2885.1 and AS4041MDR
- MDR available



PIGGING ACCESSORIES & EQUIPMENT

Transmitters

✔ Item For Sale ✔ Item For Hire



The Traxall X Series transmitters are compatible electromagnetic transmitters and have both programmable frequency and power control through CDI's proprietary FieldLink.

These come in a range of sizes to suit various pipe sizes from the little X100-1N for 2-8" to the large X400-5D suited to pipelines 16" +. The size of the transmitter also determines the frequency range, again ranging from 6m on the little X100-1N up to a massive 23m with the X400-5D.

The transmitters are all battery powered with optional lithium batteries increasing the range further.

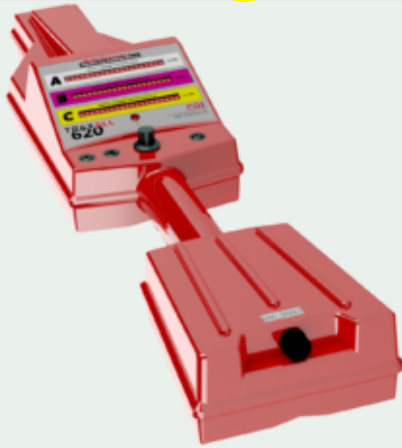
All are housed in Stainless Steel, making them compatible with hydrocarbons, ammonia and most cleaning chemicals.

Optional ATEX-IECEx certification available on larger sizes also.

Transmitters are easily tracked with the Traxall 620 hand wand or AGMs (Above Ground Markers)

Traxall 620 Pig Tracker

✔ Item For Sale ✔ Item For Hire



The TRAXALL 620 can monitor up to three transmitter frequencies. Signal strength of each transmitter is intuitively indicated on its own horizontal row of scrolling LEDs, while a single knob adjusts the reception sensitivity of each frequency. This intuitive user interface means that the TRAXALL 620 receiver requires very little training and support - if you have had any experience at all tracking with a CDI system (or one of our competitor's systems) you have nothing more to learn. It's that easy. The only other controls are LED brightness and audio mute buttons, and, of course, an ON/OFF switch. That's it! Eight sensitivity settings are neatly divided and labeled with their recommended use: PINPOINTING (low sensitivity), WALKING (medium sensitivity), and STATIONARY (high sensitivity). The system is fully functional from +85°C all the way down to -40°C limited only by the chemistry of the installed batteries.

Above Ground Marker (AGM)

✔ Item For Sale ✔ Item For Hire



Designed to record within just a few milliseconds the GPS time of a passing. This precise time coupled with the physical pipeline location is correlated with the data recorded by the inspection tool. This correlated data provides a major increase in the accuracy of a smart pig's feature location callouts. Utilising precision time synchronisation provided by its on board Global Positioning System (GPS), the CD47-C is able to provide tool passage time accuracy that is guaranteed to be within 250 milliseconds over the 7 day battery life. With its ability to record passages of both transmitter-equipped and Rosen magnetic (MFL) inspection tools without transmitters, providing users with a comprehensive, well-tested and field hardened system for their benchmarking requirements

PIGGING ACCESSORIES & EQUIPMENT

Pig Signalers (Intrusive)

✓ Item For Sale



The Intrusive Omni-Directional Pig Signaller is a tracking instrument fitted to pig launcher and receiver stations to confirm the launch or arrival of a pig. They can also be fitted at any location on a pipeline and will detect the passage of all types of pipeline pigs. Used to signal the passage of a pig through a specific section of a pipeline, an intrusive Pig signaller utilises a unique magnetic system to reduce the amount of moving parts, eliminating the risk of leakage, reducing maintenance costs and are easily fitted to pipelines.

CD52 Bandit Pig Passage Signaller - Non-Intrusive

✓ Item For Sale



Non-Intrusive Pig Signaler with UL/CSA Class 1 Division 1 Hazardous Location Certification. With thousands of systems sold around the world over the past 15 years, the CD52 pig signaller has developed a strong reputation in the industry for its reliability and durability in even the harshest environments. The CD52 Bandit is a non-intrusive pig signaller which uses either permanent magnets or active transmitters mounted onto the pig to detect passage from 0.022 to 45.73 mph (0.01m/s to 20 m/s). A relay closure on passage allows the Bandit to be interfaced to a wide variety of systems including SCADA, PLC's, lights, horns, etc.

Handheld Pellet Air Launcher Kit

✓ Item For Sale



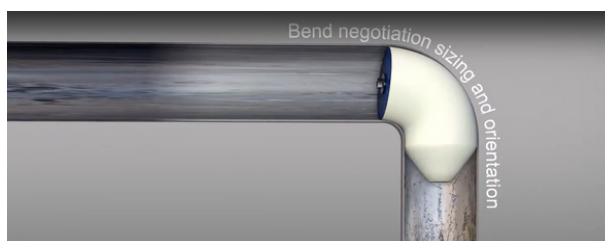
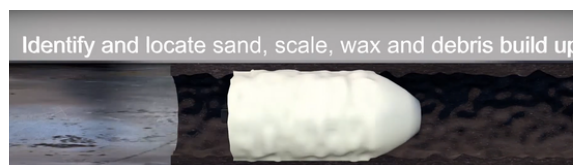
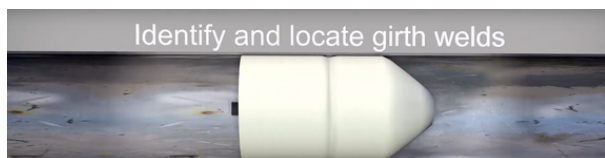
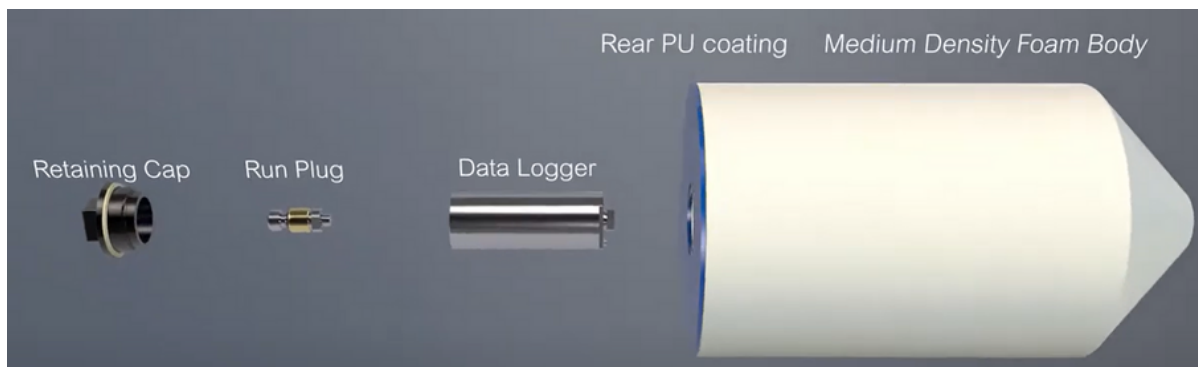
The Intrusive Omni-Directional Pig Signaller is a tracking instrument fitted to pig launcher and receiver stations to confirm the launch or arrival of a pig/scrapper. They can also be fitted at any location on a pipeline and will detect the passage of all types of pipeline pigs/scrapers. Used to signal the passage of a Pig/Scrapper through a specific section of a pipeline, an intrusive Pig signaller utilises a unique magnetic system to reduce the amount of moving parts, eliminating the risk of leakage, reducing maintenance costs and are easily fitted to pipelines.

PATHFINDER FOAM CALIPER TOOL

✔ Item For Sale

The Pathfinder Foam Calliper Tool is a pipeline inspection device with a high level of mechanical compliance, which is capable of negotiating severe restrictions in a pipeline with minimal risk of blockage or damage. Pathfinder has been developed for the first stage assessment of operational pipelines prior to the use of metal-bodied pigs. It can be used in conjunction with standard foam cleaning pigs to prove the bore of pipelines with unknown internal conditions, including:

- New and operational pipelines that have not previously been pigged
- Operational pipelines which have suffered damage due to external interference but are inaccessible for external inspection. Operational pipelines with unknown levels and distributions of wax or scale deposits
- Information from the tool is used to identify the location and the size of localised bore restrictions in the line, allowing informed decisions to be made on the appropriate types and configurations of pigs to be deployed to clean or gauge the line.



Learn more about
Pathfinder Foam
Caliper Tool



UNPIGGABLE

Deployed in the situation where it's not possible or too risky to deploy mechanical pigs. They are capable of extruding through bore restrictions and chokes down to half their diameter but will break up when the choke is more severe than this so the risk of gel pigs sticking in pipelines is near zero. They can also be chemically broken down if required.



FOULING REMOVAL

Fouling can cause a range of issues from corrosion which can cause a localised failure of a pipe wall to loss of flow from sea life completely blocking a cooling water flow path.

Fouling removal is needed to de-contaminate the affected system and allow a restart and the steps can vary depending on the fouling to be removed.



LUBRICATION

When pigging a very long pipeline or a pipeline that has scale or corrosion issues that can increase wear on discs there is always an elevated risk that the pig will get stuck in the pipeline due to disc abrasion and loss of differential pressure due to bypass. With range of water-based and glycol-based lubricating gels which when used in conjunction with mechanical pigs massively reduce this risk.



DEBRIS REMOVAL

The range of debris pick-up gels are designed with a specific rheology so that they are highly shear thinning meaning they do not generate a lot of back pressure when in motion but they have a very high static gel strength so if pumping ceases they will retain and suspend all the debris collected and hold onto it until pumping restarts.



DEGASSING

Range of glycol-based gels that provide that physical barrier required. Glycol-based gels are unique as they have an enormous amount of internal strength provided primarily by hydrogen bonding so unlike other linear gels and all crosslinked gels they will form a full 360° fill of the pipeline even under static conditions. If there is a pump breakdown and the gel slug stops moving it will remain as a full bore plug and greatly help to prevent gas flow back thereby removing the need to repeat the job.



CLEANING

When pigging a very long pipeline or a pipeline that has scale or corrosion issues that can increase wear on discs there is always an elevated risk that the pig will get stuck in the pipeline due to disc abrasion and loss of differential pressure due to bypass. With range of water-based and glycol-based lubricating gels which when used in conjunction with mechanical pigs massively reduce this risk.



DEWAXING & DEGREASING

The deposits of wax can and often do cause blockages whilst both wax and heavy crude can help shield bacteria and areas of corrosion. Removal of waxes and heavy crude deposits help reduce flow restrictions, reduce localised microbially induced corrosion and are essential to clean / treat the subsequent problems that the blockages or corrosion cause.



DEOILING

Deoiling is a very common operation and is typically performed during a change of service, maintenance and inspection or decommissioning. In all cases, the level of cleanliness is critical to prevent contamination of the aquatic environment.



Piping Specialty Supply Service Pty Ltd (PSSS), was established in 2012 by Managing Director John Wilton. With some 30+ years' experience servicing & supporting the Australian Pipeline & Construction sectors, John leads a dedicated & committed team, proud to be the 'Go-To' supplier for their clients.

Piping Specialty Supply Service Pty Ltd sells and hires an extensive range of equipment, tooling and consumables.

Equipment sold or hired can be used across the 'whole of life' of a pipeline. IE Through:

- Pipeline Construction
- Pipeline Maintenance
- Pipeline Preservation

If you need equipment, tooling or consumables for these segments, PSSS is your first point of call!

PSSS proudly represent their supply partners including:

Royal Poly Products, Rosen, CDI, DMI, Dyna Torque - Lone Star, Enerpac, SRJ, Guardian, Hy-Ram, Mirage, Pipeline Innovations, Sawyer Mfg, SPC, SPX and many more!

With an ongoing commitment to innovation and an ever-expanding product range, PSSS is a dedicated 'solutions' focused supplier of high-quality equipment and tooling combined with a top team dedicated to ensuring you get what you need, when you need it!



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