

### Your "Go To" Supplier for all things piping!

## Pigging Guide



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 small 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: CDI, CirCor, Enerpac, SRJ, Guardian, Hy-Ram, HTL, Mirage, Pipeline Innovations, Pigs Unlimited, Sawyer Mfg, SPC 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!

## 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**

Light Density: 15Kg/M3 (0.94lb/ft3)

Low Density: 27Kg/M3 (1.69lb/ft3)

Intermediate Density: 42Kg/M3 (2.62lb/ft3)

Medium Density: 80Kg/M3 (4.99lb/ft3)

Heavy Density: 128Kg/M3 (7.99lb/ft3)

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.



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## COATED, PLASTIC BRISTLE & WIRE PIGS

Light Density: 15Kg/M3 (0.94lb/ft3)

Low Density: 27Kg/M3 (1.69lb/ft3)

Intermediate Density: 42Kg/M3 (2.62lb/ft3)

Medium Density: 80Kg/M3 (4.99lb/ft3)

Heavy Density: 128Kg/M3 (7.99lb/ft3)

**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 abrassive types such as Hard Scale used for the heaviest types of cleaning applications, such as fly ash, encrusted salt crystals, and solidified sulfur.



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## SILICON CARBIDE & FOAM DISC

Silicon Carbide - When wire brush or plastic bristle is not suitable.

Foam Disc Pigs - The multiple sealing discs make it an excellent pig for regular wiping, batching, dewatering, product removal.



**Special Design Foam Pigs** 

Solid Cup - The SCFP Pig is Ideal for hydrostatic testing, routine batching, as well as build up and product removal

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



SCFP - Solid-Cup Foam

SPH - Foam Spheres

Solid Cast

Solid Cast - Have the flexibility and easy handling of foam pigs, coupled with the ruggedness and excellent sealing capabilities of cups and discs found on steel pigs, prove very efficient as general purpose pigs for batching, displacement, and routine pigging operations.



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## **STEEL PIGS**

Disc Displacement Pigs - used for standard pigging operations such as filling and dewatering during hydrostatic testing, routine batching operations, product removal, or any pigging operation requiring bidirectional use.

Batching / Cup-type - used for standard pigging operations such as filling and dewatering during hydrostatic testing, routine batching operations and product removal.

**Brush Cleaning** – used during pre-commission and on-stream cleaning where rust, mill scale, sand, wax, organic growth, mud, oxides, and other foreign matter exist. Sizes range from 2 through 48, with brush configurations including wire wheel, split-ring, wrap-around, and spring-loaded.

**Multi-Disc** - multi-disc series of pigs allow for excellent sealing capabilities for performing the duties of batching, gauging, product removal, pre-commission and on-stream cleaning, or any pigging operation requiring bidirectional use. MDB includes wire brushes and the option of adding magnets.

Pig Train - Custom made to your requirements with 2 or 3 links



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Looking for more in depth information about Steel Pigs? Head to our YouTube channel and take a look at our " Steel Mandrel Pigging Guide "



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## PIGGING ACCESSORIES & EQUIPMENT

#### **Steel Pigging Accessories**

Discs - Discs are used for sealing and guiding. Manufactured as 80D standard, with other harder and softer options available.

Cups - Cups are one of the types of sealing elements used by steel-mandrel pigs.

Brushes - Brushes, mounted on solid-cast and steel-mandrel pigs, are used for abrasive cleaning where mill scale, rust, sand, wax, paraffin, sludge, mud and debris exist.

**Gauging Plates** - Aluminium gauging plates are used in conjunction with steel pigs to prove pipe roundness and to ensure excessive weld penetration or debris does not exist in the line, as well as, proving minimum bend radius prior to intelligent pig runs. NB: Gauge plates are made to order usually at 95 - 97.5% of pipe I.D.

Magnets - Magnets are attached to pigs to operate valves, operate magnetic non-intrusive pig signaller detection debris and to remove ferrous debris from the pipeline. Often used in conjunction with wire brushes to collect ferrous debris removed from the line by brushes.

Blades - Blades are designed to be used with steel pigs to wipe soft and waxy deposits from internal pipe surface.



PSSS Launcher / Receiver

Our Pig Test Headers is made for ease of operation and longevity of service. Built to accommodate multiple sizes and classes our Pig Test Headers supply's 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:

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

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## **PIGGING ACCESSORIES & EQUIPMENT**

#### Transmitters



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



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° all the way down to -40°C limited only by the chemistry of the installed batteries.

#### Above Ground Maker (AGM)



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 transmitterequipped and magnetic (MFL) inspection tools without transmitters, providing users with a comprehensive, well-tested and field hardened system for their benchmarking requirements

#### Pathfinder Foam Caliper Tool



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 which 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.





## **PIGGING ACCESSORIES & EQUIPMENT**

#### Rapid Opening Closure (ROC) by Circor

#### 🗸 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





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 signaler 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 signaler 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

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/scraper. 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/Scraper 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.

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#### Rapid Opening Closure (ROC) by Circor



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## **PSSS PROUDLY REPRESENTS....**



## **Pigs Unlimited** International, Inc.

# CIRCOR CDI





### **Contact Information**

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