

PATHFINDER FOAM CALIPER

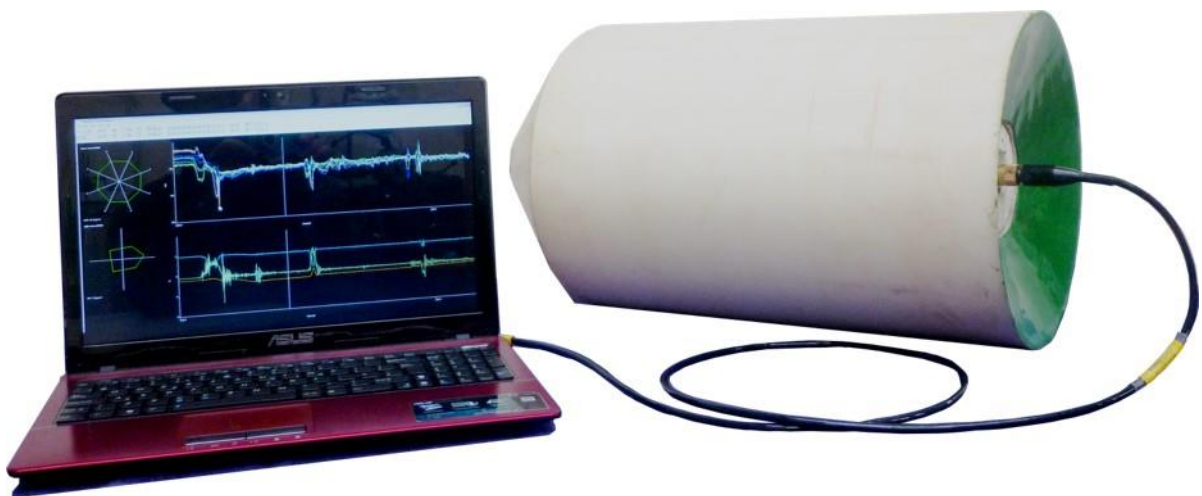
The Pathfinder was specifically designed for initial pipeline proving in lines with no pigging history and/or potential reductions in bore due to debris build up where an operator plans to initiate a pipeline pigging or ILI campaign.

The Pathfinder is currently available from 4" up to 30" nominal size with larger diameters in development. With a maximum operating temperature of 70°C and a standard pressure of 200bar it can be used in a wide range of applications and demanding environments.

Typical applications for Pathfinder include pipeline proving, measuring pipeline geometry and internal bore, detecting and measuring dents, ovality, buckles and wrinkles etc. Pathfinder can also be used for debris mapping and assessment for pipeline cleaning as part of an operator's flow assurance management strategy as part of an operation.

KEY BENEFITS

- Low risk, cost effective solution
- Growing track record
- Easy to handle and use – specialised technicians not required infield
- Fast track data analysis and reporting to support infield operations
- Allows informed decisions to be made on the appropriate type and configurations of pigs to be deployed to clear or inspect the line

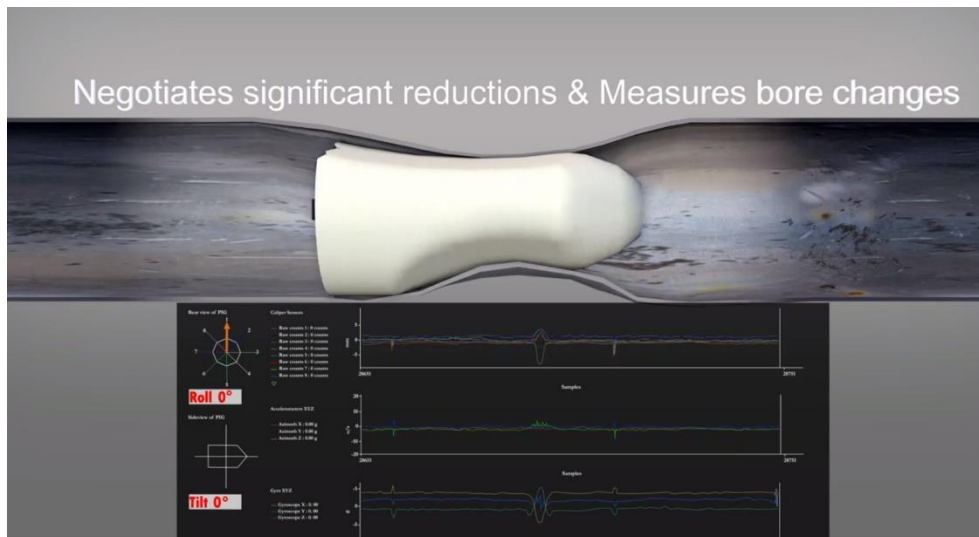


DESIGN FEATURES:

The Pathfinder pig comprises a polyurethane foam pig with a bore measurement sensing system integrally moulded into the foam matrix. Onboard sensor technology measures and records bore changes at multiple points around the circumference of the tool, allowing accurate measurement of changes to internal diameter such as ovality, dents, restrictions, reductions, debris, deposit build-up and other anomalies.

The electronics, battery, and data logging system are housed in a removable stainless-steel pressure vessel in the centre of the pig. On completion of an inspection run, the data logger is removed from the pig for data download and backloading to the PIL facility.

Sensor readings are sampled and stored on a real time basis. The data files are referenced to an onboard clock. Outputs from the caliper sensors, accelerometers and gyros are correlated to identify circumferential welds and known pipeline features such as bends. Comparison with pipe tallies or construction data books where available and flow measurement recorded during the run allows accurate distance measurement.



The Pathfinder foam caliper tool is simple to use. It is possible for the end user to power up, load, launch, run, receive and recover without the need for a dedicated inspection technician. Downloaded data is simply transferred via an internet connection to the UK facility for analysis and report preparation.

GENERAL DATA:

Size range Pipe diameters from 4" to 30"
Foam Carrier Pig Medium density polyurethane foam
Bore Passing Full circumferential bore restrictions up to 50% depending on nominal size
Bend Passing Minimum bend radius of less than 1D
Operating Pressure 200 bar
Operating Temperature 0°C to 70°C
Run Time..... 60 hours (single pack) 120 hours (dual pack)