COLTRACO
Ultrasonics | since 1987



INTRODUCING PORTAPIPE®

Ultrasonic Liquid Level Indicator for Pipes

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INTRODUCING THE PORTAPIPE®

Portapipe® is is a non-invasive, highly precise, multi-faceted pulse-echo **pipe liquid level indicator**.

What does it do? Specifically, it accurately **detects and measures liquid levels in horizontal or vertical pipes**, cylinders, or other containers from a minimum size of 25mm (1") to a maximum size of 331 mm (13") diameter.

How does it do it? It utilize both **time-of-flight** and **absence/presence detection** mechanisms for liquid level measurement and provides a precise reading of the liquid level in terms of percentage fullness. It is **accurate to ±1% of the true level**.

Who is it for? Being able to detect liquid levels in a pipe or indeed if there is any liquid at all is **vital for a variety of industries and applications.** *Page 5 shows a selection industries who require this technology.*

- **Type** – Ultrasonic Liquid Level Indicator for Pipes
- **Part Number** – 3174740-PIPE
- **Fluid Types** – It has a built-in database which includes commonly used fluids such as Water (at 10°C, 20°C or 30°C), Sea Water, Diesel, Petrol, Fuel Oil, LPG, Ethanol, FK-5-1-12, Freon R134A, Freon R22, HFC-227ea, Methanol, FM200™, NOVEC™ 1230 and many more. Add any fluid simply by inputting its speed of sound.
- **Pipe Materials** – Features a built-in database of commonly used pipe materials, including carbon steel, copper, PVC, and fibreglass, along with their respective sound speeds. Add any custom material type simply by inputting its speed of sound.



HOW DOES IT WORK

HORIZONTAL PIPES

- Horizontal pipes can be tested using the Time of Flight Method.
- The sensor is placed at the bottom of the pipe and the Portapipe® accurately measures the height of the liquid in the pipe.
- This measurement is displayed on the screen as a "percentage fullness" based on the diameter of the pipe.



VERTICAL PIPES

- Vertical pipes can be tested using the Absence/Presence Method.
- As the sensor is moved up and down the pipe, the Portapipe® indicates whether liquid is present or not.
- The presence of liquid is shown on the screen through a bar graph.



ADVANTAGES OF PORTAPIPE®

The **Portapipe®** features **two distinct mechanisms** for detecting liquid levels and measuring a wide variety of fluid types and pipe materials



CLEAR AND ACCURATE READINGS

Liquid levels are given as percentage fullness in horizontal pipes, providing independent units for measurement.

DUAL CAPABILITY

Providing both time-of-flight and absence/presence detection mechanisms for liquid level measurement.



PRECISION

Oscilloscope trace functionality allows for verifying correct return echo and observing material conditions, which in turn ensures precise measurements.

ADAPTABILITY

Offers both metric (millimeters) and imperial (inches) options for entering pipe dimensions.

APPLICATIONS

Portapipe® easy-to-use design and reliable performance makes it an essential tool for anyone working with fluids and pipes.

Please find a few indicative industries:

- **Semiconductor manufacturing plants:** Monitoring chemical levels is crucial for ensuring proper chemical usage and preventing environmental harm.
- **Chemical plants:** Ensuring the safety and control of pipes carrying chemicals is critical.
- **Oil and gas industry:** Preventing overfilling or underfilling in pipelines is crucial.
- **Food and beverage industry:** Monitoring ingredient and finished product levels is important.
- **Water treatment plants:** Properly monitoring pipes involved in the water treatment process is essential.
- **Pharmaceuticals:** Monitoring liquid levels in pipes during the manufacturing process is necessary.
- **Pulp and paper industry:** Monitoring liquid levels in pipes during paper-making is crucial.
- **Mining industry:** Monitoring liquid levels in pipes during ore processing and tailings disposal is important.
- **HVAC systems:** Preventing system overflow and damage is critical.
- **Power plants:** Monitoring liquid levels in cooling and fuel handling systems is necessary.







ABOUT COLTRACO ULTRASONICS

"To see the sounds that others cannot hear"

"To measure the hitherto unmeasurable"

Led by our Chairman, Dr Carl Hunter OBE, founder of Coltraco Ultrasonics.

Headquartered in **London**, we are a British high-exporting advanced manufacturer.

Operating in **120 countries**, with Distributors in **80 countries**.

Our technologies are used across a diverse array of **25 Market Sectors**, from shipping to safety engineering, from process control to mining, from offshore energy to renewables, from healthcare to the built environment, naval and space.

Proud winners of the Queen's Award for Enterprise in International Trade, in both 2019 and 2022.

Our organisation comprises of Manufacturing, Scientific, Research and Technological Development & Solutions:

- Our **Company:** COLTRACO ULTRASONICS
- Our **Laboratory**, co-located with the Centre for Advanced Instrumentation, part of the Department of Physics, Durham University
- Our **Research Organisations**, the Durham Institute of Research, Development & Invention (DIRDI)
- Our **Centre for Underwater Acoustic Analysis** (CUAA)

Delivering **Safesite™** on land in areas such as the airtightness of a building, data centre or ICU Hospital Ward and

Safeship™ at sea in the watertight integrity of a ship or offshore platform or the monitoring of the gaseous extinguishing system contents that protect them against fire.

BY BEING SCIENCE-LED:

We identify and nurture brilliant minds, creating a unique research environment at Durham University, a globally outstanding centre of teaching and research excellence.

In our research at DIRDI, we undertake fundamental research into the physical laws of the universe, alongside applied research in Physics, Mathematics, Engineering and Computer Science in acoustics, electromagnetism and information engineering.

It is our research and manufacturing excellence and our enduring commitment to the "through-life" sustainment of our technologies by aerospace standards of Maintenance, Repair, Overhaul, Calibration & Certification.

We deliver genuine value for our customers through our scientific and institutional values, and the global quality of our instrumentation, commercial and technical services.

OUR CUSTOMER CARE COMMITMENT

Global Support

120

Exporting 89% to 120+ countries

150

Exclusive Distributors in 80+ countries

3

Years warranty on the main unit and 1 Year on the sensor.

FREE

Lifetime Technical Support

You can receive worldwide support through our network of Global Partners, Distributors, and Service Centres (ODA's)
Service Stations worldwide including:

- Europe - UK, Turkey
- Middle East - UAE
- Asia - India, Singapore, Hong Kong
- Australia
- USA - Florida
- Central America - Trinidad
- South America - Brazil



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ISO 14001 REGISTERED FIRM