

PORTASONIC™ FLOW

PORTASONIC™ FLOW

TECHNICAL SPECIFICATIONS



COLTRACO

Ultrasonics | since 1987

+44 207 629 8475

info@coltraco.co.uk

www.coltraco.com

Coltraco Limited, 46 Mount Street, Mayfair,
London, W1K 2SA, United Kingdom

OUR MISSION: THE SAFESHIP™ & THE SAFESITE™

We welcome you to enter into our mission to create accurate, reliable and easy to use instrumentation, which enhance our customers' safety management.

The issue is not just about compliance with the regulations; it is about the safe ship offshore and the safe site onshore.

This helps our customers to ensure lower risk, higher protection and business continuity.

Safety for safety's sake.



CONTENTS

- 03** INTRODUCING THE PORTASONIC™ FLOW
- 04** KEY FEATURES & ADVANTAGES
- 05** APPLICATIONS
- 06** HOW PORTASONIC™ WORKS
- 07** KIT CONTENTS
- 08** TECHICAL SPECIFICATIONS
- 09** AFTER SALES
- 10** WHY BUY FROM COLTRACO?

INTRODUCING THE PORTASONIC™ FLOW

TYPE: Portable Non-Invasive Ultrasonic Flow Meter

FUNCTION: For monitoring flow rates and identifying obstructions within pipes of water sprinkler systems and other water or clean fluids

PART NUMBER: PSO12



KEY FEATURES:

- Accurate flow measurement from outside of a pipe with clamp-on sensor
- No pressure drop, no moving parts, no leaks and no contamination
- Simple set-up and ease of operation with digital processing
- Long term reliability and battery life, light weight, compact and reliable
- Suited for a wide range of industrial applications
- Large display with user-friendly calibration menu
- Measures, totalises and transmits flow in both directions



ADVANTAGES

We are proud to announce Coltraco now offers the Portasonic® to provide a new dimension to our range, especially catering for the sprinkler system maintenance in the fire industry amongst others.

State-of-the-art technology provides an effective means to enhance the management of your systems.

Accurate flow data provides the chance to make energy saving measures by fine tuning the systems. It does this through self-adapting proprietary signal quality tracking, allowing the system to automatically optimally adapt to the pipe material and flow profile in both directions.

Portasonic® offers sustained operation across a wide range of industrial applications and environments due to the non-invasive external clamp, requiring no mechanical parts to be inserted into the pipe wall or in any other way to effect the operation of the system.

The ultrasonic signal penetrates all common metal and plastic pipe materials containing clean, non-aerated fluids, most typically being water, water/glycol and oils.

APPLICATIONS

- Fire Sprinkler Systems
- HVAC & Energy Measurement
- Pump verification, Boiler testing
- Leak Detection, Filter sizing
- Heavy fuel oil metering
- Ultrapure water measurement
- Hydraulic system testing
- Condensate Measurement
- Balancing Systems
- Marine Operation & Maintenance

RECOMMENDED USES:

- Potable Water
- River Water
- Cooling Water
- Demineralised Water
- Water/Glycol solutions
- Hydraulic oil
- Diesel & Fuel Oils
- Chemicals
- Petroleum Products

INDUSTRIES

- Fire - Sprinkler Systems
- Water
- Building Services
- Energy Management
- Power Generation
- Chemical
- Pharmaceutical
- Petrochemical
- Food/Beverage



HOW PORTASONIC™ WORKS

HOW IT WORKS: transit time flow meters utilise two transducers that both function as ultrasonic transmitters and receivers

1. The transducers are clamped to the outside of a vertical or horizontal pipe at a specific calculated distance.
2. The elapsed time between transmitted and received signals varies very slightly.
3. This depends on whether the signal is travelling upstream or downstream and by comparing these time differences an accurate calculation of the flow rate is possible and is displayed via the chosen connected device.

METHODS / MODES:

- As the ultrasonic beam crosses the pipe, compensation for laminar or turbulent flow is automatic.
- Depending on the application and flow profile, the transducers can be mounted in the following ways:
 - i. **V-method:** the ultrasound transverses the pipe twice
 - ii. **W-method:** the ultrasounds transverse the pipe four times
 - iii. **Z-method:** transducers are mounted on opposite sides of the pipe and the ultrasound transverses only once
- The modes are automatically selected by the instrument and are also user selectable.
- Portasonic® can be used for spot checks (using an internal, rechargeable battery) or for extended continuous operation as a 4-20mA flow transmitter with AC power input.

HOW TO USE THE PORTASONIC®: program the unit by selecting the options displayed in the main menu

- i. Enter the pipe diameter, wall thickness, pipe material, liquid and temperature
- ii. The optimum mounting method and separation distance is automatically calculated
- iii. Apply gel between the transducers and pipe exterior to ensure a clean reading

KIT CONTENTS

READY-TO-GO PACKAGE



IN THE BOX:

Portasonic® comes in a ready-to-go-package complete with all items required to carry out flow rate measurement: carrying case, transducer set, mounting hardware, cables and accessories, instruction manual.

ACCESSORIES:

3 Transducer Types

TECHNICAL SPECIFICATIONS

TRANSMITTER

Power Supply	2 AAAA Ni-H built-in batteries. Charger 100V-240VAC
Battery Life	12 hours of operation
Velocity	0 ~ ±40ft/s (0 ~ ± 12 m/s), bi-directional
Display	Backlit LCD 4 linex16 character English menu: total flow, flow rate, velocity and meter running status etc. displayed
Units Rate Totalised	User Configured (imperial and metric) ;Rate & Velocity Display; (FWD, NET, REV or BATCH) gallons, ft3, barrels, lbs, litres, m3, kg
Output	OCT Pulse, Relay, RS232C or RS484 Hart +(4~20mA), Modbus
Accuracy	±1.0%-2.0% of reading at rates >0.5 m/s ±0.003 m/s of reading at rates <0.5 m/s
Sensitivity	Flow Rate: 0.001 ft/s (0.0003 m/s)
Repeatability	0.2% of reading
Security	Keypad lockout, password enabled
Dims & Weight	Enclosure: 100 x 204 x 35 mm and 0.6kg

TRANSDUCER

Liquid Types	Almost any liquid containing less than 2% total suspended solids or aeration
Liquid Temp.	Std. Temp. Transducer: -40C ~ 121C (-40F ~ 250F) High Temp. Transducer: -40C ~ 250C (-40F ~ 484F)
Cable Length	Std: 4m (12ft); option up to maximum 25m (75ft)
Pipe Size	Small: 12-50mm; Medium transducer: 40-1000 mm; Large: 1000-4570mm
Dims & Weight	Small: 42x25x25mm; Medium: 60x43x43 mm; Large: 80x53x53mm Small: <0.2kg; Medium: <0.2kg; Large: <0.2kg

ACCESSORIES

Portable Case	Dims: 445x290x130 mm; Weight: <3.5kg
Couplant	Dow Corning 111 (112 for high temp.)
Transducer	2 mounting straps supplied as standard according to transducer type
Datalogger & Software	Optional 512M to 8BG SD card Windows-based Software Utility, data logging, data report, data curve and analysis

AFTER SALES

COLTRACO CUSTOMER CARE

- 1 year warranty
- Guaranteed against defects in materials & workmanship
- Support for the life-time of the equipment
- With telephone/email technical or user advice
- See terms and conditions for details
- For your Technical Queries or Sales Enquiries and Quotations please email sales@coltraco.co.uk or call +44 207 629 8475



OPTIONAL: PORTACARE™

- Opt in package provides through-life maintenance support
- Enabling customers to cap the cost of ownership and optimise operational availability
- For one annual fee
- Coltraco will cover all repairs and calibration costs
- The customer is guaranteed priority assistance in spares and repairs.
- In the event of component obsolescence, Coltraco guarantees to exchange the unit for a like-for-like model type at no additional charge.
- The Portacare™ package does not cover customer-induced damage,
- But as a Portacare™ customer you have priority to repairs and spares with a 25% discount
- Upgrade to Portacare™ TMSS PREMIER which covers all repairs, calibration, and guarantees an advance exchanged unit is always ready-to-ship.

WHY BUY FROM COLTRACO?

STORY OF COLTRACO

Since 1987 Coltraco Ultrasonics have been designing and manufacturing ultrasonic instrumentation for safety and servicing.

READY-TO-GO PACKAGE

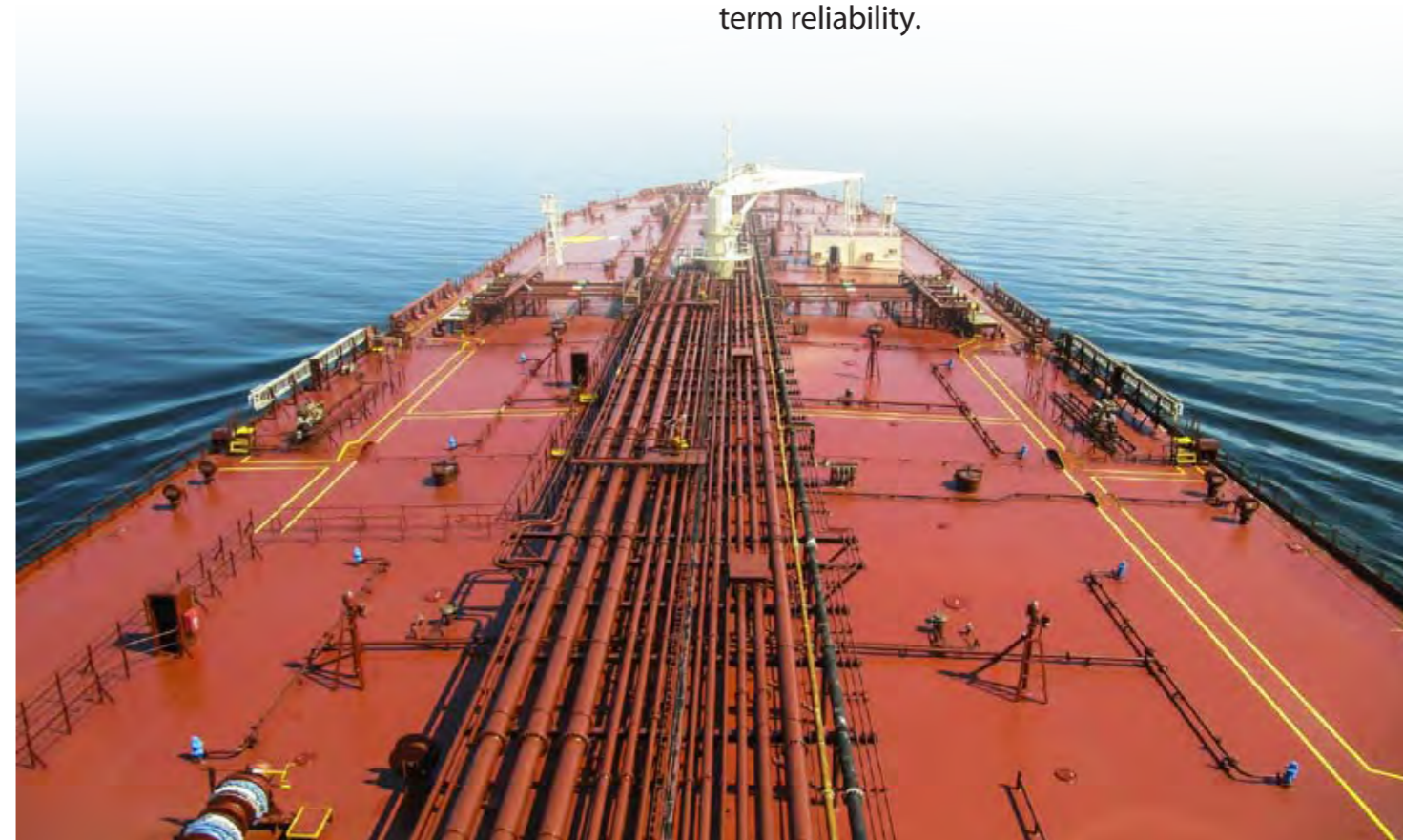
The Portasteel™ Calculator comes in a ready-to-go-package complete with all items required to carry out liquid level indication with recording capability: main unit, carrying case, sensor set, cables, accessories and instruction manual.

OUR COMMITMENT TO SAFETY

We are dedicated to being a Safeship™ and Safesite™ company, encouraging safety for safety's sake. Our Portalevel™ Datalogger is part of our range of products and systems which are all designed to offer alternative methods to traditional means of testing, for example fire suppression systems, watertight integrity, flow testing and more.

QUALITY

Coltraco equipment is carefully built and undergoes rigorous quality testing to ensure it meets the high standards expected by our customers, and to provide them with long-term reliability.



*Coltraco®, Coltraco North America®, Portamarine®, Portalevel®, Permlevel®, Portagauge®, Portasonic®, Portamonitor®, Portasteel™, Portascanner®, Permascanner® and others are trademarks or registered trademarks of Coltraco Limited, UK. DuPont™, FM-200®, FE-25™, FE-13™, and FE-241™ are trade-marks or registered trademarks of E.I. du Pont de Nemours and Company and its affiliates. Novac™ 1230 is a trademark owned by 3M.



WWW.COLTRACO.COM

COLTRACO
Ultrasonics | since 1987



Call: **+44 207 629 8475**



Email: **sales@coltraco.co.uk**