

COLTRACO
Ultrasonics | since 1987



INTRODUCING
PORTASONIC® 2.FLO
PORTABLE, CLAMP-ON, ULTRASONIC TRANSIT TIME FLOW
METER
FLOW



CALL +44 207 629 8475 | SALES@COLTRACO.CO.UK | WWW.COLTRACO.COM/PRODUCT/PORTASONIC-2-FLO/

PORTASONIC® 2.FLO

Portable, clamp-on ultrasonic transit time flow meter



PN: 2618949-PSO

Non-invasive for measuring the flow rates of most clean liquids in pipes with gas/solid content less than 10% of volume, built-in thickness gauge and ability to incorporate heat quantity measurements



FLUID TYPES

Built-in database of over 19 fluids, including water, sea water, kerosene, petrol, fuel oil, crude oil, Freon R134a, Freon R22, diesel oil, castor oil, F-76 fuel oil, Novec™ 1230, and glycol/water. To use a custom fluid, enter its speed of sound, which can be obtained from online databases.

MULTIPLE METRICS

Measure wall thickness (includes A-scan functionality), volumetric flow rate, mass flow rate, energy (heat quantity) flow rate all from one instrument

INTUITIVE

Unique Human Machine Interface (HMI) driven menu that emphasises intuitiveness and user-friendliness

PIPE MATERIAL

Built-in database with over 12 pipe materials available, including carbon steel, stainless steel 304, stainless steel 316, cast iron, ductile iron, copper, PVC, lead, nylon, PE, aluminium, asbestos, and fiberglass. To use a custom pipe materials, enter its speed of sound, which can be obtained from online databases.

TOTAL FLOW

All measured values can be totalised giving you the total flow rate that has been measured during a particular measurement session

APPLICATIONS

Commonly used for fire sprinkler systems, waste water, fuel monitoring, foam proportioner testing

PORTASONIC® 2.FLO



VERSATILE

Capable of working on pipes DN15 – DN 2500, across multiple different pipes/pipe sections.

Large internal database of pipe, fluid and lining materials (19+ for fluids, 23+ for pipe and lining materials)



DIAGNOSTICS

It has a built-in signal oscilloscope for sensor positioning and diagnostics to achieve maximum accuracy with the measurement while providing visibility of the potential issues with the installation for troubleshooting purposes.

ACCURATE

Accurate to +/- 0.5% under ideal conditions. Resolution of 0.25mm/s. Repeatability of 0.15% of measured value.

NO RISK

As there is no contact with the fluid being measured, there is no risk of pressure loss throughout your pipe network

CLAMP ON

Clamp-on therefore no installation costs such as drilling into pipes and no downtime to the pipe network is present



NON CONTACT

The fluid cannot damage the flowmeter, which could contribute to a longer lifespan and lower maintenance cost compared to inline flowmeters which are in contact with the fluid and risk being damaged by the pressurised flowing fluid

LONG-LIFE

IP65 main unit enclosure. Battery life up to 12 hours' continuous use, standard 9V PP3 battery

RELIABLE

Measures flow velocities between 0.01 m/s – 25m/s.

ROBUST

Sensors temperature range -20°C to +150°C. Sensors rated IP66

HOW TO TEST



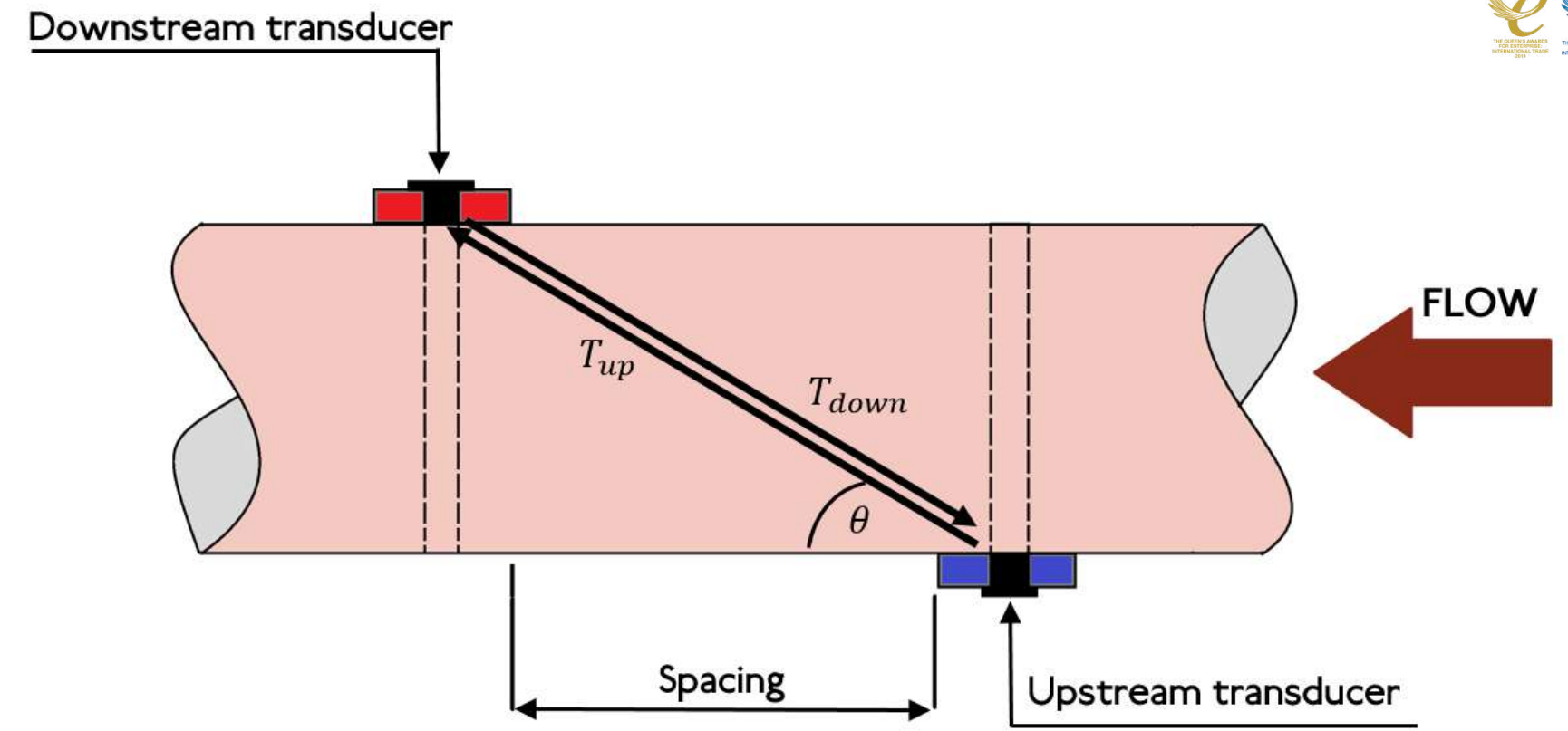
Portasonic® 2.FL0 is used to measure the flow rates of most clean liquids with gas/solid content less than 10% of volume in pipes.

The equipment comes with clamp on transducers for non-invasive measurement.

The unit uses two sensors, one that acts as ultrasonic transmitter and the other as a receiver.

The software calculates the time it takes for the ultrasonic pulse to pass from the transmitter to the receiver, which is dependent on the flow rate.

There are three methods of operation; V-method (2 passes), W-method (4 passes) or Z-method (1 pass) which refers to transducer positioning. Our recommendation is to choose the number of passes which will result in a pass length in the fluid of 100mm or greater.

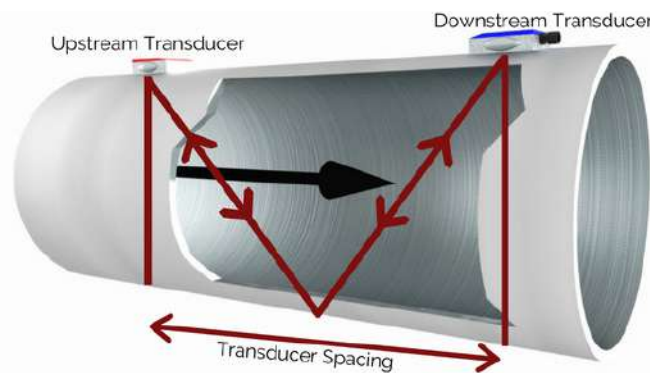


$$V = \frac{Dt}{\sin 2\theta} \frac{\Delta T}{T_{up} T_{down}}$$

- θ = the include angle to the flow direction
- t = the travel times of the ultrasonic beam
- D = the pipe diameter
- T_{up} = the time taken for the beam from the upstream transducer to reach the downstream transducer
- T_{down} = the time taken for the beam from the downstream transducer to reach the upstream transducer
- $\Delta T = T_{up} - T_{down}$

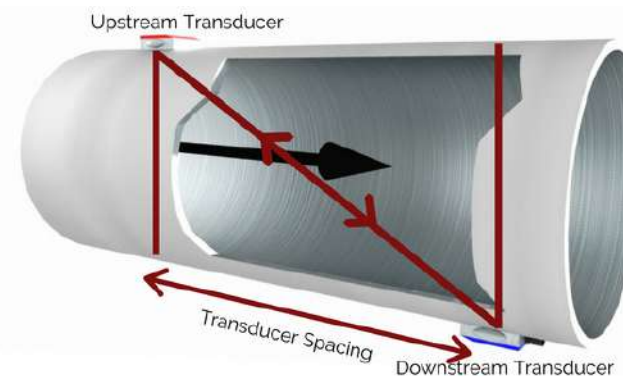
V Method

The most commonly used method.
Simplest to set up.
(2 passes)



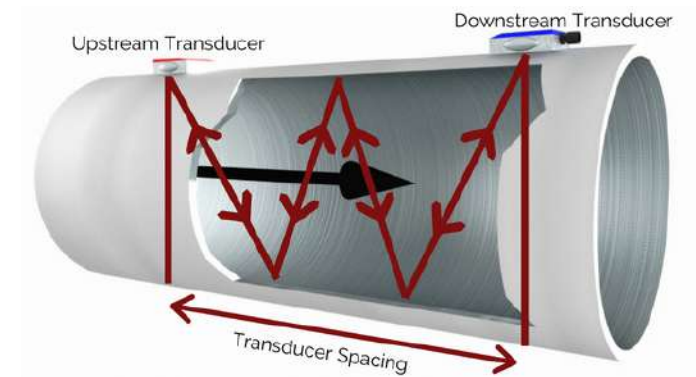
Z Method

Common for large diameter pipes. (1 pass)



W Method

Common for smallest diameter pipes. (4 passes)





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



Coltraco®, Coltraco North America®, Portamarine®, Portalevel®, Permalevel®, Portagauge®, Portasonic®, Portamonitor®, Portasteele®, Portascanner®, Permascanner®, Safesite®, Safeship® are trademarks or registered trademarks of Coltraco Limited, UK. DuPont™, FM-200®, FE-25™, FE-13™, and FE-241™ are trademarks or registered trademarks of E.I. du Pont de Nemours and Company and its affiliates. Novec™ 1230 is a trademark owned by 3M.

