

CLAMP ON ULTRASONIC Flow Meters

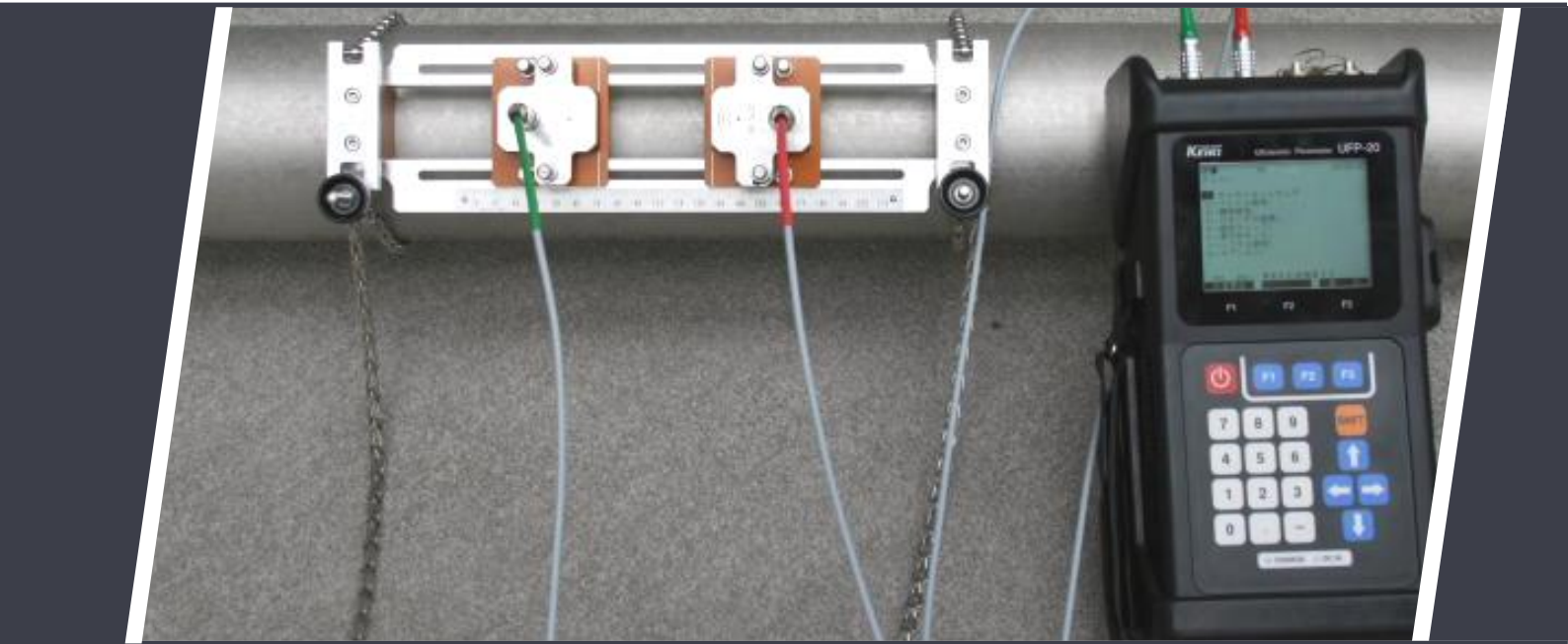


*Excellence in Calibration
40 years - Est. 1982*

NATA accredited ISO 17025 calibration laboratory, accreditation #20391
Be advised our flow meter calibrations are traceable to national standards, it is not covered within our NATA accreditation scope

Portable flow meter options

An overview of our portable flow meter range



Clamp-on ultrasonic flow meters are used to measure fluid velocity and to calculate the volume flow of a fluid in a pipe. They use ultrasonic transducers to measure sound waves in the pipework, which in turn indicates the rate of flow. Ultrasonic flow meters are generally straightforward to operate and maintain, and can be used to measure the flow of most types of liquids and fluids. Ultrasonic flow meters are versatile and adaptable, and are suitable for use in a wide range of applications. At Zedflo, we stock both portable and fixed installation meters, and these can be used without the need to cut into the pipe.



pFlow P117

While this flow meter is an economical option in terms of pricing, in our experience this pFlow P117 provides reliable, accurate and repeatable results that are comparable with some of the bigger brands available in the market. We typically have this in stock.

- Flow velocity range is 0.01—6m/s, a bit of a draw back compared with it's competitors but it's economically priced so if your required measurement range is less than 6m/s it's a good option.
- Best suits pipes DN40-DN1200, or as low as DN25 with 'Z method'
- A large 3.5" TFT backlit display, but be aware it's not waterproof.



pFlow P118i

A higher spec variant similar to the P117 but offering some key improvements;

- Flow velocity range is 0.01—12m/s, this is twice that of the P117 model, but it's still not bi-directional so won't read negative flows.
- Best suits pipes DN40-DN6000, or as low as DN25 with 'Z method', that's right: up to 6m diameter pipes on this model.
- Improved accuracy spec of 0.5% and repeatability of 0.15%
- Colour screen offering improved clarity and detail

Do I need a 'Transit time', or 'Doppler' meter?

There are two main technologies for Ultrasonic flow meters. Transit time is for measurement of clean and non aerated fluids, doppler flow meters are for measurement of dirty, solid bearing or aerated fluids.

Please be aware we currently only offer 'transit time' ultrasonic flow meters in our product range.

Transit time principle of measurement:

Transit time flow meter utilizes two transducers that function as both ultrasonic transmitters and receivers. The transducers are clamped on the outside of a closed pipe at a specific distance from each other. The two transducers transmit and receive ultrasonic signals which travels firstly downstream and then upstream. Because the sound wave travels faster downstream than upstream, there will be a time difference. When the flow is still, the time difference is zero. Therefore, if the transit time of both downstream and upstream is known, the flow meter can work out the time difference, then the flow velocity and flow volume via a formula which the flow meter self calculates in real time. Transit time flow meters work best on clean liquids (not clear so oil is ok) with little or no particles and entrained air bubbles. As a general rule, up to around 5% solids is usually the cut off but it will vary between applications.



Tokyo Keiki UFP-20

A high end Japanese made unit which has various transducer options, depending what transducers you select this flow meter could would on pipes DN13-5000.

- Flow velocity range: -30 to +30 m/s bidirectional
- Compact and easy to use with an intuitive 'installation wizard' to help you set the parameters.
- unique clamp-on fixture design makes installation very simple with no special skills or tools required.
- Ability to measure multi path with more sensors.



Popular Accessories

GM-100 ultrasonic thickness tester:

This is a material thickness tester, well suited for when you do not know the thickness of your pipework. It offers precise measurements with a measurement range of 1.20~225.00mm and velocity range of 1000~9999m/s. It can measure thickness of almost any material that conducts and reflects constant sonic velocity.

Coupling compound:

We use, recommend and stock 'Super Lube Multi Purpose Grease' as a suitable coupling compound.



Fixed wall mount meter options

An overview of our wall mountable flow meter range



Flow meters suitable for measurement of most clean liquids including water, sea water, petroleum products, chemicals, alcohol, acids, secondary sewage, waste treatment

Some suitable industries and uses include:

- Food and beverage industries, as well as pharmaceutical processors
- Mining industry and power plants
- Fire suppression system testing
- Pipeline leak detection and inspections
- Flow measurement surveys
- Verification of fixed inline flow meters



Tokyo Keiki UFW-100

A high end Japanese made unit with a large flow velocity range of -30 to +30 m/s bidirectional, and suits DN25-600 pipes

- Compact IP65 main unit.
- The unique clamp-on fixture design provides an excellent long term mounting solution.
- Only a small display and 4 keys, typically you set this up with included PC software (EZ-Wizard) which makes for setting of parameters a simple step by step process via USB, and the display is just used for switching between view modes.



pFlow D116

An economical IP65 'live view' (no data logging) wall mount flow meter, but it does have particular limitations to be aware of:

- It can only work on clean water (no other liquids)
- It can only work on these pipe materials: Carbon steel, SS, Iron, copper, PVC, aluminium, asbestos, fiberglass-epoxy; and the pipe work cannot have any liner.
- Flow velocity range is 0.01—5m/s, low range but it's low cost.
- Best suits pipes DN40-DN1200, or as low as DN25 with 'Z method'

Siemens FS230

A premium meter, highly configurable to suit any application.

- Clamp-on flow system for the measurement of liquids, oil or gas. Suits bidirectional velocities of: Liquids ± 12 m/s; gas ± 40 m/s;
- Ideal for measuring tasks that require maximum precision
- Many options; sensors to suit pipe sizes from DN10 to DN10,000
- Optional model for measuring up to 4 paths
- Optional model with EX approval for use in hazardous areas
- Various output options, including HART or Modbus RTU

Siemens FS220

A much more basic unit compared with the FS230, but still offering incredible customisation and usability.

- Many options; sensors to suit pipe sizes from DN10 to DN10,000
- Suits liquid measurement; bidirectional velocities of ± 12 m/s
- Accuracy of 1% of flow rate and repeatability of 0.25%
- Exceptional zero stability – minimal need to set a zero point
- Graphical display with simple menu navigation, multiple setup wizards, display up to 6 customizable parameters on the screen

pFlow D118

A feature packed wall mount unit at an economical price point

- Unlike the D116, this model is more versatile, offering suitability for more liquids & materials, and at higher velocities and accuracy.
- Flow velocity range is 0.01-12m/s, more than twice that of the D116 model, not bi-directional so won't read negative flows.
- Best suits pipes DN40-DN5000, or as low as DN25 with 'Z method'
- Improved accuracy spec of 0.5% and repeatability of 0.15%
- Compact IP65 main unit, with optional temperature measurement

pFlow F3, direct mount

Very quick installation, just supply power and clamp it on, it also has the option of cloud stored data accessible on your smartphone

- Several variants in similar models for different applications, including for energy measurement
- Only suits water measurement in common pipe materials
- Order the size specific for your pipe size, size options include: DN20, DN25, DN32, DN40, DN50, DN65, DN80
- Flow velocity range is 0.03—5m/s, low range but it's low cost.

Siemens inline Magflo meters

An overview of our inline flow meter options



If you are looking for a flow meter, an ultrasonic option is great for convenience and ease of installation. But if you are looking for a permanent long term solution you may consider an inline option. We offer the range of Siemens Magflo inline options suitable for all water applications such as ground water, drinking water, cooling water, waste water, sewage or sludge, used in conjunction with a transmitter which is engineered for high performance, easy installation, commissioning and maintenance. The transmitters are truly robust, cost-effective and suitable for all-round applications.



Mag 5100W, 5000 or 6000 magflo

- Order to suit your pipe size, models ranging from DN50-2000
- Electromagnetic technology, suitable for various liquids and fluids with a Modular design for various applications
- High-precision volume measurement with accuracy up to 0.2%
- Drinking water approvals
- Welded or flanged mounting options
- Direct or remote mount transmitter options, so you can have the display mounted in a cabinet with other equipment for example.



Mag8000 battery powered magflo








- Order to suit your pipe size, models ranging from DN50-2000
- Only suitable for water measurement
- Drinking water approvals (only for sizes DN50-1200 currently)
- Accuracy up to 0.2%
- No mains power needed - internal battery pack power operation for typical 6 years, or can also be mains powered
- All MAG8000 models are telemetry ready out of the box with programmable outputs

FLOW METER SELECTION GUIDE FOR POPULAR MODELS

Not sure what model to pick? We understand selecting a flow meter can be a bit

Below is a quick overview of our most popular models

overwhelming. Use the below break down of our most popular models to help with model selection to suit your needs and budget.

Model	UFP-20	UFW-100	P117	P118i	D116	D118	F3
Image							
Suitable flow range	-30 to +30 m/s bidirectional	-30 to +30 m/s bidirectional	0.01 to 6 m/s	0.01 to 12 m/s	0.01 to 5 m/s	0.01 to 12 m/s	0.03 to 5 m/s
Portable or fixed	Portable	Fixed	Portable	Portable	Fixed	Fixed	Fixed
Waterproof?	Yes, IP65	Yes, IP65	Splashes IP54	Splashes IP54	Yes, IP65	Yes, IP65	Splashes IP54
Pipe size range	DN13 - 5000	DN25 - 600	DN25 - 1200 (one set of transducers)	DN25 - 6000 (one set of transducers)	DN25 - 1200 (one set of transducers)	DN25 - 5000 (one set of transducers)	ORDER DN20, DN25, DN32, DN40, DN50, DN65, DN80
Transducer mounting method	An excellent mounting frame attached w/ chains, no tools needed	Mounting frames attached by straps	Magnetic mounting frames or mounted to plastic pipes with straps	Magnetic mounting frames or mounted to plastic pipes with straps	Mounted with straps only, basic tools required	Mounted with straps only, basic tools required	Self contained, just need an included Allen key
Accuracy	1% to 2%	1% to 2.5%	1%	0.5%	1%	0.5%	2%
Country of manufacture	Japan	Japan	China	China	China	China	China
Data logging?	Yes	Yes	Yes	Yes	No	Yes	Optional Cloud data storage
Stock/Lead time	Special order, ~8 week lead time	Special order, ~8 week lead time	Typically stocked, nil stock lead time is ~4 weeks	Special order, ~4 week lead time	Typically stocked, nil stock lead time is ~4 weeks	Typically stocked, nil stock lead time is ~4 weeks	Special order, ~4 week lead time

Zedflo 'Flow Calibration' Service

Re-calibration of your ultrasonic flow meter



Zedflo calibration service

Zedflo can perform calibration on most ultrasonic flow meters, our in house test flow rig has 33mm, 60mm, and 89mm OD pipes, in which we can use for calibration, so if your unit will measure on any of these pipe sizes we should be able to calibrate it here.

What is involved in instrument calibration?

Equipment calibration involves the scientific comparison of two instruments. One of these instruments must have a proven or known correctness so that the other may achieve similar quality. It utilises this information to establish a relation for obtaining a measurement result from an indication. The main objective of this measurement or comparison is to achieve unmatched precision or accuracy. Your flow meter will be calibrated against a NATA calibrated reference flow meter and adjusted if needed.

Why Zedflo for calibration?

Zedflo has years of experience in the calibration field, we can quickly and efficiently perform calibrations traceable to national standards, all of our calibration work broadly follows our ISO 17025 compliant quality management system. Be advised that our flow calibrations are not covered within our NATA accredited scope, however the price is accordingly low cost and we still use an accredited reference meter.

The benefits of calibration

Regular recalibration is recommended for test equipment to maintain accurate and reliable measurements. Within performing routine calibration we check the unit thoroughly where any issues can be identified before they become an issue.



Excellence in Calibration
40+ years - Est. 1982



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Subject to change without notice.

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