



Product Summary Guide



An overview of Dynasonics products
and intended applications



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Series TFXL Integral Mount Ultrasonic Transit Time Flow Meter

Designed to replace mechanical flow meters in applications where liquid conditions tend to damage or impede mechanical flow meter operation. A low cost non-invasive ultrasonic flow meter that clamps on to the outside of the pipe. Installation is cost effective and requires no maintenance. Available with or without a local display. All meters provide two flow rate outputs: 4-20mA analog and simulated turbine meter frequency, permitting it to interface with a variety of monitoring equipment. A Windows®-based software utility allows users to configure, calibrate and troubleshoot. Remote systems also available.

Applications: For permanent installations on virtually all non-aerated liquids in closed full pipes size ½" (12 mm) to 2" (50 mm) for integral mount and ½" (12 mm) and above for remote mount systems.



Series TFXD Dedicated Ultrasonic Transit Time Flow Meter

Features the most advanced non-invasive flow measurement technology available - providing a measuring system with superior accuracy, versatility, and low-cost installation. Available in both blind and displayed configurations. Display has an oversized LCD and an integral keypad that allows field configuration without the use of a computer. Both versions include an optical interface which can be used with the optional *UltraLink™* software utility. The software utility allows simple in-field programming, calibration and software upgrades. Several optional input/output modules are available.

Applications: For permanent installations on virtually all non-aerated liquids in closed full pipes size ½" (12 mm) and above.



Series TFXP Portable Ultrasonic Transit Time Flow Meter

Designed for flow measurement surveys on full-pipe liquid systems and ideal for verifying calibration of permanently mounted flow meters. Non-invasive clamp-on transducers are simple and cost efficient to install. Features a tactile keypad, 24-hour battery (rechargeable), removable 200,000-point data logger (optional) and a 64x128 pixel, back-lit graphics display integrated into a watertight enclosure. Provides an optical interface which is utilized with the *UltraLink™* software utility. The software utility allows simple in-field programming, calibration and software upgrades.

Applications: For portable flow measurements on virtually all non-aerated liquids in closed full pipes size ½" (12 mm) and above.



Series TFXM Multiple-Pipe, Multiple-Path Ultrasonic Transit Time Flow Meter

Mathematical formulas can be applied to discrete flow measurements, with up to eight channels, to display and output average flow, flow difference, proportions or sums for multiple-pipe applications. Multiple-path, single-pipe installations assure accurate flow measurements without the need for long runs of straight pipe. Provides an optical interface which is utilized with the *UltraLink™* software utility. The software utility allows simple in-field programming, calibration and software upgrades.

Applications: For permanent installations on virtually all non-aerated liquids in closed full pipes size ½" (12 mm) and above.



Series DTTS Clamp-on Ultrasonic Small Pipe Transit Time Transducer

Designed for small pipe flow measurements on full-pipe liquid systems and designed to replace mechanical flow meters in applications where liquid conditions tend to damage the operation. The clamp-on feature provides easy installation by clamping on the outside of existing pipe systems, and requires minimal, if any, maintenance. For use on fixed pipe and rigid tubing. The DTTS transducer can be ordered with any Dynasonics Transit Time flow meter.

Applications: For installations on virtually all non-aerated liquids in closed full pipes size ½" (12 mm) to 2" (50 mm) and mated with any Dynasonics Transit Time flow meter.



Fixed and Portable Flow Meters

► Series UFX Hand Held Ultrasonic Doppler Flow Meter

Small lightweight, battery-powered flow verification instrument. Utilizes the non-invasive single, hand-held transducer which is placed on the outside of metal or plastic pipes. The large LCD will provide a velocity reading in either FPS (feet per second) or MPS (meters per second). The UFX comes with a flow calculator/slide chart for conversion of velocity measurements to popular volumetric measurements. Also included are four AA batteries and a tube of Dow® III silicone couplant (for temporary mounting); all in an organized hard plastic carrying case.

Applications: For portable flow measurements on liquids containing a minimum of 100 PPM of 100 micron size suspended solids or aeration in closed full pipes size ¼" (6 mm) and above.



► Series DFX Doppler Ultrasonic Flow Meter

Utilizes non-intrusive, clamp-on design for easy installation and low maintenance, with no process shutdown. Relatively insensitive to VFDs and other electronic or ultrasonic noise. User-friendly, field programmable display with 8-digit resettable rate/total display. Accurate and reliable with a wide measuring range of 0.15 to 30 FPS. Hot-tappable insertion Doppler probe available for pipe systems that do not permit ultrasound penetration.

Applications: For permanent installations on liquids that contain useful suspended sonic reflectors in closed full pipes size ¼" (6 mm) and higher.



► Series 902 Portable Ultrasonic Enhanced Doppler Flow Meter

Features non-invasive, clamp-on dual transducers for reliable and cost effective flow measurement. Includes a 2-line LCD display of flow rate and totalizer with simple on-site programming via keypad. Internal, rechargeable battery and AC power adapter included, as well as a standard 4-20mA output. Available in metric or US engineering units. Virtually maintenance free non-fouling transducers are immune to build-up of grease and other coating materials.

Applications: For portable flow measurements on liquids containing a minimum of 25 PPM of 30 micron size suspended solids or aeration in closed full pipes size ¼" (6 mm) and above.



► Series MFX MagProbe™ Insertion Magnetic Flow Meter

Cost-effective solution for accurate measurement of conductive liquid flow in closed conduit, pressurized-pipe applications. Hot-tappable insertion-style sensor is universally applied to a large range of pipe sizes without hardware changes, compared to specific internal pipe dimension design of conventional magnetic meters. Programmable digital display with flow rate/totalizer values. Provides an optical interface which is utilized with the *UltraLink™* software utility. The software utility allows simple in-field programming, calibration and software upgrades.

Applications: For permanent installation on conductive fluids in closed full pipes with internal diameters of 4 to 120 inches (102 to 3048 mm) and adequate lengths of straight pipe.



Technology Selection Guide

Liquid Type (in order of increasing % of suspended solids)

- Ultrapure Liquids
- Deionized Water
- Water Filter-Bed Effluent
-
- Hydraulic Oil
-
- Refined Hydrocarbons
- Beverages
- Well Water
- Reclaimed Water
-
- Cooling Tower
- Ground Water
-
- Raw Sewage
- Gray Water
-
- Beverages - Carbonated
-
- Waste Activated Sludge
- Return Activated Sludge
-
- Mining Slurries
-
- Filter Backwash
-
- Paper Pulp Stock
-
- Dredging Applications
-
- Preprocessed Crude Oil
-
- Primary Sludge
- Lime Sludge
- Digested Sludge
-
- Concrete



Transit Time

Enhanced Doppler

Doppler

This guide provides general rules for the selection of an appropriate Dynasonics ultrasonic technology – it is neither exhaustive nor absolute. System factors such as temperature, pipe materials, suspended solid composition and liquid velocity can influence product selection. It is best to present application information to a Dynasonics Sales Representative or to the Dynasonics factory for evaluation.

Dynasonics offers the most comprehensive line of ultrasonic transit time and Doppler flow meters in the world. These meters are clamp-on, non-invasive flow meters that require a good acoustical path between the outside of the pipe and the liquid inside. In some instances, such as non-saturated concrete pressure pipe, ultrasonic energy will not readily pass. For these installations, Dynasonics offers the Series MFX MagProbe™.

Please consult a Dynasonics Sales Representative or the Dynasonics factory to discuss the use of these products in your flow measurement application.



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