

SDT[®]



The Precision of Ultrasonics

SDT 170 : RELIABILITY AND FLEXIBILITY



The most complete and reliable solution for the full spectrum of tightness testing, leak detection and predictive maintenance.

POWERFUL, ACCURATE AND TOTALLY FLEXIBLE

The SDT 170 offers industrial users one of the most powerful, accurate and flexible solutions for all sorts of tightness testing, leak detection and predictive maintenance.

All our vast experience in ultrasonic detection is embodied in this powerful unit. It is robust, lightweight, user friendly and ergonomically designed. It provides a totally efficient and simple response to proper and effective equipment maintenance and product quality.



Multifunctional

The SDT 170 is multifunctional. As user-friendly as a desktop PC. It is a single hardware configuration that transforms to your changing needs. It is capable of measuring several physical parameters (ultrasound, audible noise, temperature, linear or rotation speeds, flow of compressed air leak). All versions are built around our world famous ultrasonic detection capabilities and feature an internal airborne ultrasonic sensor. Upgraded versions can collect, store, and transfer data to and from a PC.

Money saving

The SDT 170 saves money. Regular use of the SDT 170 enables the efficient planning of machine downtime, which leads to better productivity. The ability to pinpoint leaks in systems can also lead to significant savings of up to 30% in energy costs.

Ergonomic

The SDT 170 is ergonomically designed and user-friendly. The SDT 170 is a comfortably designed hand-held instrument controlled by an eight key touch pad. A generous liquid crystal display, 3cm x 6cm, is protected by a Borosilicate glass and displays all parameters needed for its use in 8 or more different languages. The technical training requires about ten minutes. An extruded aluminum outer shell is protected by "anti-shock" insulation and the NMHD rechargeable battery block uses latest battery technology allowing more than eight hours of use and unrestricted charging practices.

Intelligent

The SDT 170 is intelligent. The SDT 170 automatically recognizes the sensors upon connection and switches to appropriate parameters and measuring mode accordingly. Some versions are equipped to accept user-defined parameters such as the measurement and collection of data at set intervals. The use of flash EEPROM technology allows us to transmit by Internet updates and improvements to our dealers and users worldwide.

Digital and versatile

The SDT 170 is digital and versatile. The advanced, state of the art, digital SMT electronics permits the use of other original accessories. The 170 processes data digitally, displays it digitally, and outputs it in standard digital protocol formats. As our customers develop new applications, we meet their requests by developing sensors to suit those needs. Whether the result of a request or as a perceived need for industry, over time the 170 will expand its functionality and versatility indefinitely.

MULTI-FUNCTIONAL FOR THE BEST RETURN



■ Battery charger



■ PC connection for logging and analysis (170 M+ and MD)



■ Headphone



■ Loudspeaker

■ Minidisc/signal analyser

External ultrasonic sensors for 170 S/S+/M/M+/MD

Contact probe



Open sensor



Closed sensor



Threaded sensor



Magnetic sensor



Flexible sensor



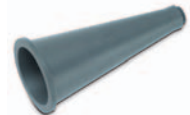
Parabolic sensor



Lube adapter



Extended distance sensor



External non-ultrasonic sensors for 170 M/M+/MD

Sound level meter (dBA)



Tachometer (RPM) with or without contact



Thermocouple interface (types J and K)



Non-contact infrared temperature sensor



Mass airflow sensor (-75 till +1000 SCCM)



The SDT 170 can be used in a variety of applications in factories, businesses and service companies. By using extra sensors, the SDT 170 can be put to a large number of different uses, which in turn enable significant cost savings.

THE LITTLE BLUE WONDER

SDT 170 S: The entry-level version

The SDT 170 S (Standard) is the entry-level point for the 170 platform and features standard airborne ultrasonic detection with the internal sensor or with all our external ultrasonic sensors.

It is primarily used for compressed air leak and vacuum leak detection, verifying the tightness in a car, plane, truck, train, clean rooms, vessels, etc...). It is a low cost solution for the detection of electrical problems (arcing, corona, tracking), inspection of steam traps, hydraulic and pneumatic circuits, cavitating pumps, and general mechanical inspections where trending and measured data is not critical.

All measured signals are displayed on a segmented analogue bar graph.

SDT 170 S+: The entry-level version with digital display of the measure

The equipment SDT 170 S+ has the same characteristics as the SDT 170 S, with moreover the digital display of the measure. This functionality is essential to quantify the leak rates and so have an accurate review of the measurements.

SDT 170 M: Multifunctional with storing of ultrasonic and non-ultrasonic measurements

The SDT 170 M (Multifunctional-Mechanic applications-Memory) is the multifunctional upgrade from the entry level SDT 170 S Standard. It is a robust instrument capable of detecting small or large pressure and vacuum leaks in high noise environments and trending the condition of rotating machinery components such as bearings, gears, couplings, motors, reducers, as well as the conditions of pumps, valves, steam traps, turbines and detecting of corona discharges, etc...

- Digital measurement and readout capabilities
- Contact Probe for contact acoustic vibration measurements
- 1000 measuring points memory storage with 4 time-dated points history in a rolling FIFO memory for recording measured data (up to 4000 measurements can be saved)
- External non-ultrasonic sensors connector: temperatures, rotation or linear speeds, flow of air leak (SCFM) and ambient noise (dBA)
- Compatible with all our external ultrasonic and non-ultrasonic sensors.

SDT 170 M+: Multifunctional with transfer of memorized data towards a PC

The 170 M+ has the same characteristics as the SDT 170 M, with moreover the possibility to transfer the memorized data towards a PC.

- RS232 or USB connection
- User-friendly software (Mplus.exe) provided with the equipment measurements
- Data can be integrated in an Excel, Word or other file.

SDT 170 MD: Add the power of data management

The SDT 170 MD (Multifunctional-Datalogger) is the complete ultrasonic inspection and predictive maintenance trending machine. With all the features of the SDT 170 M+ Multifunctional with data transfer, we've added a customizable data logger: the DataManager software.

This software is the bridge between your SDT 170 MD Ultrasonic Detector and your PC. Any and all data measured by the SDT 170 MD can be stored temporarily in the onboard data logger. DataManager allows this information to be downloaded via RS232 to a PC. Once inside the PC, DataManager organizes the measurements into a logical and easily retrievable filing system, which is built and customized by the individual user.

Customized routes can be created within the DataManager software and uploaded to the SDT 170 MD (up to 128 routes at a time). 1.000 independent storage locations area are available in each route and each memory location can store up to 4 measurements. Warning and alarm levels are set for individual assets and data can be presented in list or graphical form. All results can be exported to an ASCII format.

- Create and customize routes (128 routes of 1.000 locations)
- DataManager software: upload routes from PC to SDT 170MD and download measured data from SDT 170 MD to PC
- Organize data into graphical or report formats
- Alert when an alarm is exceeded
- Trend data and provide historical info on the health of plant machinery.

GROWS WITH YOUR NEEDS

The ability to add extra sensors means that the SDT 170 is future-proof, as it can grow with your requirements. Furthermore, the digital technology on which it is built can be updated or upgraded.

The versions SDT 170

	S	S+	M	M+	MD
Tunable frequency	■	■	■	■	■
LCD display on bargraph	■				
Digital LCD display		■	■	■	■
Built-in (internal) ultrasonic sensor	■	■	■	■	■
Audio output	■	■	■	■	■
Connect or for charging unit	■	■	■	■	■
Connector for PC	■	■	■	■	■
Data memorization			■	■	■
Route possibilities					■ ⁽³⁾
Data transfer software MPlus (1)				■	
Data transfer software DataManager (1)					■
External sensor connector	■	■	■	■	■
External ultrasonic sensors possibility (2)	■	■	■	■	■
External non-ultrasonic sensors possibility (2)			■	■	■

(1) Through the connector for PC.

(2) Sensors as option.

(3) 128 max.

The packages SDT 170

	S	S+	M	M+	MD
Storage case and foam	■	■	■	■	■
Unit with battery, rubber protection and user manual	■	■	■	■	■
Precision accessories (threaded tip, rubber precision cone and 2 plastic extensions)	■	■	■	■	■
Headphones 130 dB, noise isolating	■	■	■	■	■
Battery charger	■	■	■	■	■
Shoulder strap	■	■	■	■	■
Contact probe and needle			■	■	■
Center punch			■	■	■
MPlus software (1)				■	
DataManager software (2)					■
Cable RS232	■	■	■	■	■

(1) Data transfer from the unit to the PC. Delivered on a 3 1/2" floppy disk.

(2) Delivered on Cd-rom with user manual.

Options and accessories

- External ultrasonic sensors
- External non-ultrasonic sensors
- Ultrasonic transmitters
- Batteries and chargers
- Adapted belt
- Storage cases (3 models) and folding trolley

Upgrading

- Except the SDT 170 MD, any version can be upgraded to any higher version and gaining all its possibilities.



The Precision of Ultrasonics

SAVES TIME AND MONEY IN A NUMBER OF APPLICATIONS :

Tightness testing

The most efficient way to ensure tightness is to test for it using ultrasonics. The testing can be either fully integrated into the production process, or carried out later as a control. To ensure the most accurate results, SDT provides equipment that can detect naturally occurring ultrasounds and those produced by a transmitter.

SDT's experience covers the full spectrum, from large volumes such as buildings, cold and "white" rooms down to cockpits, vehicles and electrical cabinets. This is done using a transmitter and a detector.

Ultrasonics are also invaluable in establishing the tightness of reservoirs, covers and underground fuel tanks. Ultrasounds are detected by lowering the pressure within the tank.

Leak detection

In every sector, leaks mean loss. In water and fluid pipes, it can mean loss of product. In compressed air systems, steam pipes and heating installations, it means increased energy costs to generate lost pressure and heat.

SDT's solutions effectively pinpoint problems in:

- Oxygen, compressed air, steam and gaseous fluid circuits, in particular valves, electro-magnetic sluice gates, hydraulic and clack valves, jacks and turbines;
- Heat exchangers, gearboxes, pump cavitations, condensers, boilers, Manifold air distributors, etc.;
- Inflatables (rafts, evacuation slides, etc.);
- Pressure drops and vacuums;
- Coronas and arcs in electrical equipment (transformers, circuit-breakers, relays, etc.).

Predictive maintenance

SDT has developed ultrasound solutions for detecting wear and tear in mechanical appliances such as:

- Fast and slow ball-bearings, commutator brushes, gear pinions, clack-valves, injectors, springs and bearings.

Further applications can test

- Unusual and parasite vibrations in machines;
- The running of pumps, motors, turbines and gear-boxes.

Precise measurements can also be taken:

- Temperature control, with or without contact;
- Rotation or linear speeds, with or without contact;
- Sound levels;
- Air mass flow (flow measurements of compressed air leaks).



GENERAL TECHNICAL DATA

Function	Multifunction detector
Display	Extended temperature Graphic High contrast LCD with backlighting, 100 X 32 pixels
Keyboard	8 function key's
Measuring range	-10 dB μ V to +120 dB μ V
Accuracy	\pm 0,5 dB μ V
Measuring resolution	0,1 dB μ V
Noise level	-5 dB μ V typical
Bandwidth	(-3dB) 2 kHz
Battery pack	<ul style="list-style-type: none"> • Rechargeable NiMH (Nickel Metal Hydrate) • Autonomy of 8 to 10 hours without backlighting • Recharge time: 5 to 6 hours • Nominal Capacity: 1,5 Ah • Life span: 500 to 1000 charge/discharge cycles • Recharge only with appropriate charger
Auto power down	Auto power down after pre set time
Operating temperature	-15°C to +60°C / 5°F to 140°F
Housing	Extruded aluminum
Weight	750 g / 26,45 oz. (with battery and holster included)
Dimensions	225 x 90 x 40 mm 8,86 x 3,54 x 1,57 inches (L x H x W)
Holster	Rubber resistant to hydrocarbons (Fluor silicone)



The information herein is believed to be accurate to the best of our knowledge.
Due to continued research and development specifications of this product can change without prior notice.
- 2005 version -

SDT : WORLD LEADER IN ULTRASONIC DETECTION

SDT is recognized as the world leader in creating and providing measuring instruments for ultrasonic leak detection, tightness testing, quality control and predictive maintenance. The success of the company is based on the core philosophy of providing effective and money saving solutions to user problems.

SDT International developed a specific line of equipment and components for the marine industry. Particularly its SHERLOG TA, currently the only instrument formally Type Approved by Class, is dedicated to the weather tightness testing of hatch covers, doors, ramps, windows and bulkheads.

With this unique instrument the surveyed measurements in dB μ V can be memorized and safely logged as well as downloaded to a PC for appropriate reporting.



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