Time to enhance your maintenance programme

The SDT270 is WO2009/068052 patented for its combination of ultrasonic and vibration measurements in one device; it is designed to be used as a diagnostic tool to prevent failures. The SDT270, most sensors and accessories, are available in an ATEX version for use in potentially explosive environments.

Flexible and versatile, the device adapts to your requirements and maintenance programme by providing variability.

Remote support and training.

The SDT270, 270 SU used with Ultranalysis Suite software:

- 100 measurement nodes for a total capacity of 4,000 measurements
- Dynamic (data acquisition) in accelerometry (10Hz - 1kHz) or dynamic measurements: 6,675 seconds with US sensor
- Static (dBµV, g, mm/s, °C/F, RPM, SCCM, relative humidity) in accelerometry (10Hz - 10kHz)
- 1,668 seconds in accelerometry (10Hz - 10kHz) (8 kHz sampling rate)
- Charging time: 6 to 7 hours
- Autonomy: 8 hours without backlight
- Rechargeable battery: 8 elements, 4.8 V, 4,600 mAh, NiMH
- Battery pack
- USB Interface
- Protective holster
- Dimensions: Extruded aluminium
- Power down

The Ultranalysis® Suite is the most powerful ultrasonic measurement management software ever designed for maintenance programmes.

- Available in single user or network version.
- Seven-level tree structure to organise and manage your asset condition information.

SDT Ultrasound equipment is perhaps the most versatile tool that you have ever come across. Designed by and for those who need it for those who want it!

… whatever your business …

… and whatever your needs

… whatever your business …

We can contribute to your profitability …

SDT270 SU is designed for:

- Refining, chemistry, petrochemistry
- Aeronautical and military sector
- Maritime industry and transport
- Paper and textile industry
- Car production
- Metallurgy
- Food industry
- Real estate maintenance
- Cement
- Oil and gas processes
- Chemical processes
- Power generation
- Printing
- Plastic production
- Chemical plants
- Petrochemical plants
- Paper and pulp production
- Electrical systems
- Rotating machinery, valves, steam traps
- Metrology

Thanks to its expertise over 40 years, SDT has become the technology leader in its field. SDT designs and produces measuring instruments for asset condition monitoring. With an extensive knowledge of industrial maintenance requirements, SDT combines its intelligent and progressive instruments with powerful database management software and certified knowledge of industrial maintenance requirements, SDT

Our aim is to preserve the efficiency of your ultrasonic measurement equipment so that you can concentrate on the maintenance of your assets.

The effectiveness of your predictive maintenance programme requires timely, but not time-consuming, dynamic data analysis is particularly useful for identifying critical defects in machines.

With customised alarm levels, you can allow you to monitor the status of your assets at a glance.

Only UAS allows ultrasonic maintenance technicians to maintain their systems by creating their database and collecting, managing and signal analysis.

Alarms, trend graphs

Powerful software to manage intelligent hardware

www.sdt.eu
We can contribute to your profitability …

SDT’s goal is to provide ultrasound solutions that give its customers a greater understanding about the health of their factory.

SDT helps them predict failures, control energy costs and improve product quality while contributing to the overall uptime of their assets.

… whatever your business …

SDT Ultrasound equipment is perhaps the most versatile tool that you have ever come across. Designed by and for maintenance professionals, the SDT270 ultrasonic detector adapts to your specific requirements.

Whatever your business, it will contribute to the success of your energy conservation and predictive maintenance programmes.

- Mining industry
- Electricity, fuel and gas production
- Water production, treatment and distribution
- Refining, chemistry, petrochemistry
- Metallurgy
- Car production
- Paper and textile industry
- Maritime industry and transport
- Aeronautical and military sector
- Cement
- Food industry
- Pharmaceutical industry
- Real estate maintenance
- Etc.

… and whatever your needs

The SDT270, most sensors and accessories, are available in an ATEX version for use in potentially explosive environments. Directive ATEX 94/9/EG (II 1 G / Ex ia IIC T3/T2 Ga).

The SDT270 is WO2009/068052 patented for its combination of ultrasonic and vibration measurements in one device; an excellent predictive maintenance solution.

*Optional, depending on features enabled.
Ultranalysis® Suite
Powerful software to manage intelligent hardware

The Ultranalysis® Suite is the most powerful ultrasonic measurement management software ever designed for maintenance professionals. It’s a real revolution for those responsible for reliability.

Only UAS allows ultrasonic maintenance technicians to maintain their systems by creating their database and collecting, managing and analysing data with such ease and reliability.

UAS not only manages your ultrasound measurements but also vibration, temperature and rotational speeds.

- Seven-level tree structure to organise and manage your asset condition information.
- Available in single user or network version.

Alarms, trend graphs and signal analysis

The effectiveness of your predictive maintenance programme requires timely, but not time-consuming, analysis of your collected data. Ultranalysis Suite allows you to set benchmarks and alarms that will notify you of changes in your assets health giving you time to plan your maintenance strategy.

You will find all the features needed to organise your monitoring programmes and create your trend graphs as well as perform the most advanced signal analyses.

- With customised alarm levels, you can check the status of your assets at a glance.
- The static measurement trend graphs allow you to monitor the status of machines.
- Dynamic data analysis is particularly useful for identifying critical defects in rotating machinery, valves, steam traps and electrical systems.

Static measurements trend

Spectrum analysis
Sensors and accessories

Choose the equipment that perfectly suits your needs

In addition to the SDT270 measurement device’s versatility, its vast range of sensors and accessories means it suits all types of monitoring. SDT270 devices are designed to promote ease of use, ergonomics and safety for maintenance inspectors.

- The ultrasonic and vibration contact sensors with mounting options, contact probe, magnetic base and adaptor for acoustic lubrication inspection, vibration measurement and measurement-taking campaigns on rotating equipment, steam traps, valves and hydraulic systems.
- The non-contact sensors such as the flexible sensor, the parabolic sensor and the extended distance sensor for detecting steam, vacuum or compressed air leaks, locating electrical malfunctions and misaligned or worn couplings, and monitoring chain or belt systems.
- Built-in temperature and rotational speed sensors.
- Ultrasonic transmitters to fill a volume with artificial ultrasound to identify tightness integrity issues with vehicles, ships, buildings, clean rooms, vacuum chambers, etc.

SDT ultrasound training: The cornerstone of an effective ultrasound programme

SDT training programmes: a wise investment!

Companies that invest in training see significantly more “involvement” from their inspectors. Ultrasonic detection programmes are more efficient and the return on investment is much quicker. With over 30 years of experience in customer training worldwide, SDT knows just how specific each programme is to the company and that each inspector is unique.

Certification training

LEVEL 1 This “Air & structure borne ultrasound inspector” training has been certified Level 1 by the ASNT. It is a clever combination of theoretical and practical learning. Two full days of mixing the principles of ultrasonic detection with the many applications that the inspector might encounter in the field. This training concludes with a theoretical and practical exam, with the awarding of a certificate for all passes. Public courses are regularly organised by SDT. They include technicians from several companies, which offers a rewarding and productive exchange of experiences. Private, in-house, courses are conducted at the customer’s request and at the customer’s site to allow the trainer to emphasise the site’s special features in the maintenance programme.

LEVEL 2 The SDT Level 2 ASNT training looks at the use of advanced maintenance techniques. It is the next logical step for maintenance technicians who wish to get more out of their ultrasonic detection programme, benefiting from the latest developments in technology.

Implementation

The implementation training is an on-site service offered by an SDT specialist. This training teaches quick and optimal handling of the detector and its accessories. Its theoretical and practical programme is tailored to the customer’s requirements and objectives. Our experts can also assist in the development of an effective maintenance strategy including, amongst others, setting goals, developing procedures, mastering software and creating the database.

From the classroom...

...to the practice room,

...to the factory floor.
Compressed air leak detection

Compressed air is expensive. Leaking compressed air is a waste of energy and can be a sign of equipment failure. Ultrasonic leak detection is not only a cost-effective, fast and convenient method of finding leaks, it’s also a practical way to reduce the amount of energy lost through leaks. In many industries, the amount of energy lost through leaks can be considerable, with some plants losing up to 30% of their energy. Ultrasonic leak detection can help to reduce this waste, making it a cost-effective method of improving energy efficiency and reducing the environmental impact of leaks.

Ultrasonic monitoring of bearing and gear status

Ultrasonic monitoring is particularly effective for detecting early stage bearing failures. Unlike other monitoring technologies, which rely on mechanical vibrations, ultrasonic monitoring can detect defects in bearings before they become significant. This early detection allows for timely maintenance, reducing downtime and improving equipment longevity.

Monitoring slow speed bearings

Many of industrial processes use machines that rotate at low speeds. For these machines, ultrasonic monitoring becomes even more important. Ultrasonic monitoring can detect early stage bearing failures, allowing for timely maintenance and minimizing downtime.

Monitoring of rotating machinery by ultrasonic and vibration symbiosis

The SDT270 combines ultrasonic and vibration technologies. This integration allows for more accurate and reliable detection of defects. The combination of ultrasonic and vibration monitoring provides a comprehensive understanding of the condition of rotating machinery, enabling the identification of defects before they become significant.

Real-time lubrication control

Lubrication is crucial for the smooth operation of machinery. Real-time lubrication control can help to extend the life of machinery and reduce maintenance costs. Ultrasonic monitoring can be used to detect lubrication issues in real-time, allowing for timely maintenance and improving machinery performance.

Detection of electrical faults

Detection of electrical faults is crucial to ensuring the safe and efficient operation of machinery. Ultrasonic monitoring can detect electrical faults in real-time, allowing for timely maintenance and reducing the risk of accidents.

Reciprocating compressor monitoring

Reciprocating compressors are used in a wide range of industries, from healthcare to manufacturing. Ultrasonic monitoring can be used to detect defects in reciprocating compressors, allowing for timely maintenance and improving equipment longevity.

Steam trap inspection

Steam traps are used to prevent the return of condensate to the steam system. Ultrasonic monitoring can be used to inspect steam traps, detecting defects before they become significant and preventing costly downtime.

Pump cavitation detection

Pump cavitation is a phenomenon that can severely disrupt production and cause significant damage to the components of a pump. Ultrasonic monitoring can be used to detect cavitation early, allowing for timely maintenance and reducing the risk of damage.

Tightness testing

Tightness testing is a quality criterion of utmost importance in many domains, including automotive, aerospace, and other industries. Ultrasonic monitoring can be used to perform tightness testing, ensuring that components are securely fastened and reducing the risk of failures due to poor tightness.
SDT support

Our aim is to preserve the efficiency of your ultrasonic measurement equipment so that you can concentrate on the maintenance of your assets.

The SDT technical support services are there to ensure that your devices, accessories and software exactly meet your expectations and that you benefit from different versions of firmware and the latest software.

SDT270 technical specifications

<table>
<thead>
<tr>
<th>Built-in sensors</th>
<th>Ultrasonic sensor</th>
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<tbody>
<tr>
<td></td>
<td>Temperature sensor (optional)</td>
</tr>
<tr>
<td></td>
<td>Tachometer (optional)</td>
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<tr>
<td>Measurement channels</td>
<td>2 channels for external sensors via Lemo 7 pin connectors</td>
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<tr>
<td>Datenaufzeichnung</td>
<td>SDT270 SS and SD (comes with DataDump software):</td>
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<tr>
<td></td>
<td>- 100 measurement nodes for a total capacity of 4 000 measurements</td>
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<tr>
<td></td>
<td>SDT270 DD (comes with with DataDump software):</td>
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<tr>
<td></td>
<td>- 100 measurement nodes for a total capacity of 4 000 measurements</td>
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<td>- dynamic measurements: 6 675 seconds with US sensor</td>
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<td></td>
<td>(8 kHz sampling rate)</td>
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<td></td>
<td>SDT270 SU used with Ultranalysis Suite software:</td>
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<tr>
<td></td>
<td>- more than 10 000 measurement nodes with static data</td>
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<tr>
<td></td>
<td>Für SDT270 DU used with Ultranalysis Suite software:</td>
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<td>- 13 350 seconds in accelerometry (10Hz - 1kHz) or</td>
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<td></td>
<td>- 1 668 seconds in accelerometry (10Hz - 10kHz)</td>
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<tr>
<td>Communication</td>
<td>USB Interface</td>
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<td>Battery pack</td>
<td>Rechargeable battery: 8 elements, 4.8 V, 4600 mAh, NiMH</td>
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<tr>
<td></td>
<td>Nominal capacity: 4.6 Ah</td>
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<tr>
<td></td>
<td>Lifespan: 500 to 1 000 charge-discharge cycles</td>
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<td></td>
<td>Autonomy: 8 hours without backlight</td>
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<td></td>
<td>Charging time: 6 to 7 hours</td>
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<td></td>
<td>For optimum performance, this battery pack is equipped with an electronic management system (includes digital serial number, capacity and temperature management).</td>
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<tr>
<td>Power down</td>
<td>Auto power down after pre-set time</td>
</tr>
<tr>
<td>Housing</td>
<td>Extruded aluminium</td>
</tr>
<tr>
<td>Weight</td>
<td>830 g / 29.3 oz (with protective holster)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>226 x 90 x 40 mm (L x W x H) / 8.9 x 3.54 x 1.57 inches</td>
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<tr>
<td>Protective holster</td>
<td>Fluorosilicone, hydrocarbon-resistant</td>
</tr>
<tr>
<td>Headphones</td>
<td>Allows working with surrounding noise levels up to 130 dBA</td>
</tr>
<tr>
<td>ATEX-certification</td>
<td>The SDT270 and most sensors and accessories are available in an ATEX version for use in potentially explosive environments. Directive ATEX 94/9/EG (II 1 G / Ex ia IIC T3/T2 Ga).</td>
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SDT, leader in acoustic detection for industrial maintenance

Thanks to its expertise over 40 years, SDT has become the technology leader in its field. SDT designs and produces measuring instruments for asset condition monitoring. With an extensive knowledge of industrial maintenance requirements, SDT combines its intelligent and progressive instruments with powerful database management software and certified training. The company’s success lies in its commitment to providing effective solutions according to customer requirements whilst enabling customers to improve their profitability.