



Ultrasound
Solutions

SDT ULTRASOUND SOLUTIONS

PRODUCTS & SOLUTIONS

SDTULTRASOUND.COM



WHY ULTRASOUND?

For millennia, humans have relied on a keen sense of hearing to alert us of danger, and today that same attribute warns us when our assets are about to fail.

The earliest indication of a change in an asset's condition is discovered with ultrasound, no matter how subtle those changes might be, allowing us to anticipate failures and plan maintenance interventions.

At SDT Ultrasound Solutions, we enable our customers to achieve their operational objectives by improving the reliability of their assets.

We have empowered industry for nearly 50 years, promoting more reliable, sustainable, and safe manufacturing processes.

Foresee asset failures, eliminate energy waste, and improve profitability with SDT Ultrasound Solutions – The World's Favorite Ultrasound Company.





MECHANICAL



LEAKS



LUBRICATION



ELECTRICAL



VALVES



STEAM



HYDRAULICS



TIGHTNESS

ULTRASOUND IS RELIABILITY'S FIRST LINE OF DEFENSE

Ultrasound monitoring is hyper-sensitive towards friction, impacting and turbulence. This sensitivity not only gives it leading early-detection capabilities, but also allows for extreme versatility in detecting a wide range of asset defects.

The accuracy, reliability, and versatility of SDT's Ultrasound Data Collectors is why we're trusted by the world's most reliable companies.

Monitor all **8 - Pillars of Ultrasound**: Mechanical Condition Monitoring, Precision Lubrication, Compressed Air & Gas Leak Detection, Steam Trap & Valve Testing, Electrical System Inspection, Tightness Testing, and Hydraulic System Fault Detection.



SDT340

ULTRASOUND & VIBRATION DATA COLLECTOR

Reliability teams need an analytical yet simple solution for detecting asset failures early.

The SDT340 is a multi-functional data collector trusted by maintenance and reliability teams around the world for its accuracy and reliability.

By combining ultrasound and vibration analysis with temperature and tachometer measurements, the SDT340 delivers a comprehensive view of the health of many different production assets.

Invest in confidence, versatility, and early detection with the SDT340.



DETECT, MEASURE AND ANALYZE!



Collect ultrasound, vibration, temperature, and tachometer data.



A 10-minute measurement acquisition allows for slow-speed data collection.



View time signal & spectra data on your data collector in the field.



Simplified metrics provide immediate feedback with each measurement.



Deal with less cables while in proximity to rotating machinery with bluetooth headphones.



Build your database for seamless route-based monitoring.



See defects others simply cannot with a 256k sampling rate.



UAS3

ADVANCED ANALYTICS, AUTOMATED
DIAGNOSTICS, AND CONFIDENT CONCLUSIONS

TIME WAVEFORM:

Visualize friction and impacting events in real time.

MEASUREMENT MATRIX:

View a summary of the previous four recorded measurements.

INTUITIVE ALARMS:

Alarms warn us when our data indicates the need for action.

TREE STRUCTURED DATABASE:

Organize your asset database with UAS3's intuitive tree structure.

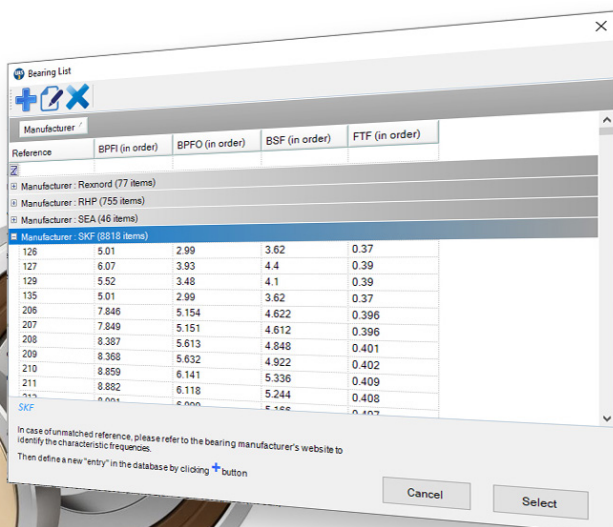
STATIC TREND:

Customizable indicators simplifies tracking the data you want to see.

DYNAMIC SPECTRUM:

Analyze your dynamic condition monitoring with sophisticated tools.

THE BEARING TOOLBOX



Reference	BPFI (in order)	BPFO (in order)	BSF (in order)	FTF (in order)
Manufacturer: Remord (77 items)				
Manufacturer: RHP (755 items)				
Manufacturer: SEA (46 items)				
Manufacturer: SKF (8818 items)				
126	5.01	2.99	3.62	0.37
127	6.07	3.93	4.4	0.39
129	5.52	3.48	4.1	0.39
135	5.01	2.99	3.62	0.37
206	7.848	5.154	4.622	0.396
207	7.849	5.151	4.612	0.396
208	8.387	5.613	4.848	0.401
209	8.368	5.632	4.922	0.402
210	8.859	6.141	5.336	0.409
211	8.882	6.118	5.244	0.408
SKF	6.004	6.000	6.102	0.407

Trending bearing data with ultrasound is essential for identifying early warning signs of wear and giving reliability teams time to take proactive action. However, most ultrasound analysis software falls short, offering only basic analysis tools that don't uncover the root causes of failure.

SDT's Bearing Toolbox forever changed ultrasound bearing analysis by adding a massive bearing database with over 50,000 references and corresponding fault frequency cursors.

This level of analysis was previously exclusive to high-end vibration analysis software, but the Bearing Toolbox levels the playing field for ultrasound inspectors.

UAS3

LUBExpert

A COMPLETE SOLUTION FOR MANAGING WORLD CLASS LUBRICATION PROGRAMS

Machinery lubrication remains the single biggest factor affecting asset reliability, and yet so many still get it wrong.

When bearings are greased right, asset stakeholders can expect long and trouble-free life from their bearings. But get it wrong, and the results can be devastating.

It's time for a better machinery lubrication solution... the LUBExpert.



ATEX VERSION
AVAILABLE

**STAY CONNECTED TO
YOUR LUBRICATION
TASKS WITH THE
ACOUSTIC LUBE
ADAPTER – AN
ACCESSORY THAT
MOUNTS YOUR
ULTRASOUND SENSOR
TO A GREASE FITTING DURING
LUBRICATION INJECTIONS.**

RMS, MAX RMS, PEAK
AND CREST FACTOR,
HELP USERS SEE
BEYOND THE SINGLE
DECIBEL

MONITOR THE 8 ULTRASOUND
APPLICATION PILLARS





SDT270

MONITOR THE 8 PILLARS OF ULTRASOUND

For nearly 15 years, the SDT270 has been helping organizations reduce energy waste, anticipate equipment failures, and increase total production hours.

Thanks to the availability of ATEX Designation and LUBExpert Firmware integration, the SDT270 remains a viable option in many industries.

Monitor your production equipment, manage your lubrication program, minimize your compressed air leaks, and mitigate safety risks with the SDT270.



HEAR MORE WITH SONAVU'S
HETERODYNED AUDIO
OUTPUT AND BLUETOOTH
HEADPHONE CONNECTIVITY

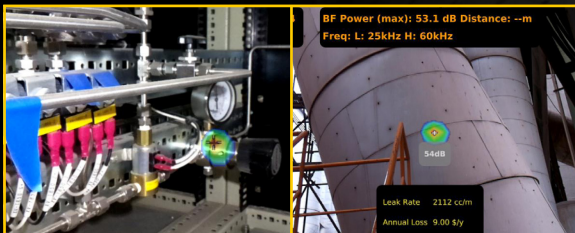
SONAVU +

BRING **RELIABILITY** INTO FOCUS

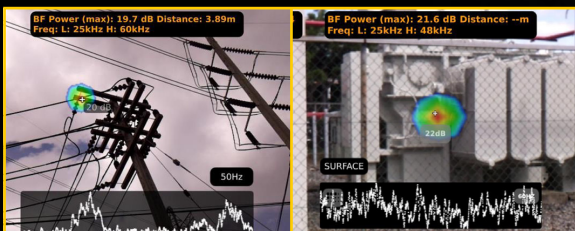
SonaVu+ brings new functionality to acoustic imaging technology. It blends auditory & visual senses like no camera before, bringing leaks, electrical defects, and mechanical anomalies into focus.

Boasting many improvements to sensitivity, detection distance, performance, and the user-interface, **SonaVu+** delivers a high-end acoustic imaging camera at an accessible price.

Next generation Digital MEMS Sensor technology combined with a long-distance optical camera and two-finger zoom help set a new standard for acoustic imaging reporting.



**ELIMINATE WASTEFUL,
INEFFICIENT, UNSUSTAINABLE,
& SOMETIMES HAZARDOUS
LEAKS FROM YOUR PROCESSES.**



**ON-BOARD PRPD ANALYZES
ULTRASOUND PATTERNS
PRODUCED BY ELECTRICAL
DEFECTS TO HELP IDENTIFY
ROOT CAUSE.**



IP40 RATED
COOLING PLATE

GIS INTEGRATION GIVES THE
OPTION TO TIE GPS LOCATION
TO REPORTS

MULTIPOINT DEFECT
DETECTION



VIEW THE ULTRASOUND
SPECTRUM IN REAL TIME

112 NEXT GENERATION
DIGITAL MEMS SENSORS EQUIP
THE SONAVU+ WITH BEST IN
CLASS DETECTION DISTANCE
- UP TO 220 METERS

LIGHTWEIGHT & COMPACT
ERGONOMIC DESIGN AND
A 5-HOUR BATTERY LIFE
SUITABLE FOR LONG SURVEYS



ULTRAChecker

VERSATILE, SIMPLE & AFFORDABLE



CHECK EVERYTHING

OPERATOR-DRIVEN RELIABILITY involves equipment operators utilizing straight-forward condition monitoring tools to enhance their equipment knowledge and identify potential faults as they occur.

But most condition monitoring solutions are far too complex and expensive for the simple requirements of operator-driver reliability. Therefore, equipment operators should seek a simple, affordable, yet still versatile condition monitoring tool. They should seek the ULTRAChecker from SDT Ultrasound Solutions

The ULTRAChecker combines airborne and structure-borne detection into a single, easy-to-use instrument. Designed for operations driven safety and reliability (ODSR), ULTRAChecker advances asset reliability by engaging more inspectors in the battle against unplanned downtime and energy waste.



ULTRASentry

A MULTI-CHANNEL ONLINE MONITORING SYSTEM

ULTRASentry is a wireless IoT ultrasound monitoring system that delivers real-time insights on your difficult to access, remote, and heavily guarded machinery.

Long range LTE & radio transmission communication capabilities and the ability to support up to 240 data collection points per system facilitates large scale, automated monitoring, enabling you to manage your assets with confidence and efficiency.

CONTINUOUS MONITORING & COMMUNICATIONS CAPABILITIES

High-quality commonsense 4-20MA ultrasound sensors deliver accurate and reliable condition monitoring data.

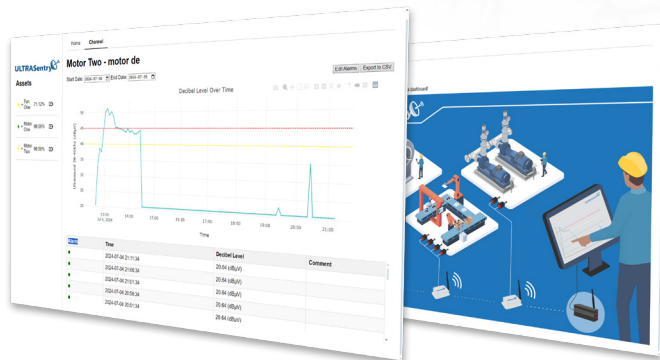
ULTRASentry transmitters use radio transmission to communicate with a cloud-connected gateway, efficiently managing up to 240 data collection points.

ULTRASentry gateways share data globally via wi-fi, ethernet, or an optional LTE cellular connection.

The standard 2-mile line-of-sight antenna can be upgraded to a high-gain model, extending data transmission capabilities to an impressive 28 miles.

Open communication protocol easily integrates with industrial maintenance software and supports custom gcc & python applications.

This turnkey solution is completed with it's built-in browser-based monitoring software that delivers real-time insights and an intuitive snapshot of asset health across all data collection points.



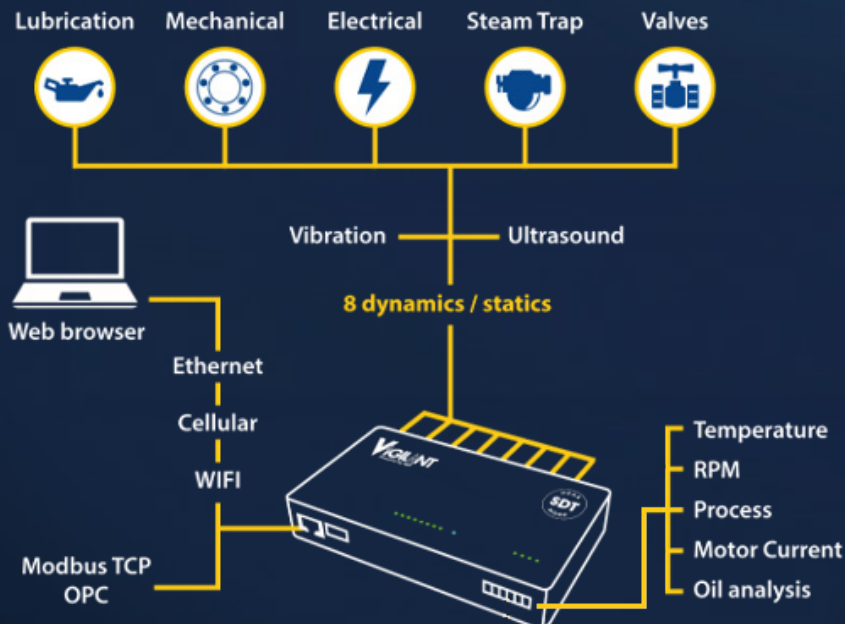
VIGILANT

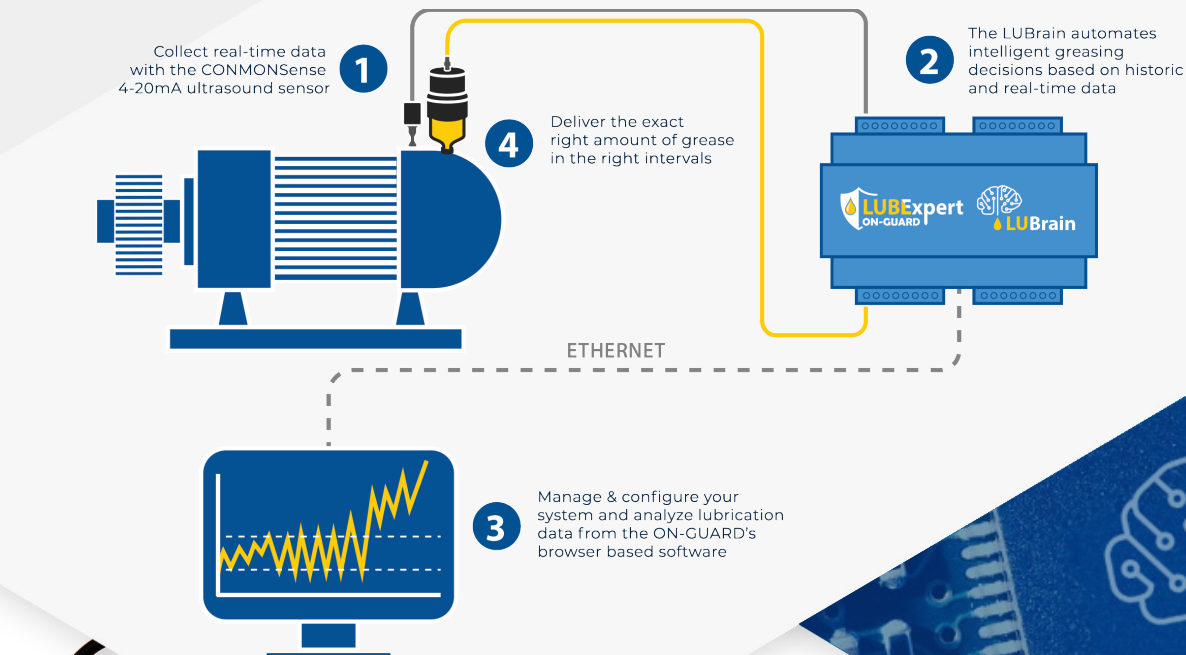
THE VERSATILITY OF ULTRASOUND & THE ANALYTICS OF VIBRATION IN ONE **PERMANENT MONITORING SOLUTION.**

Vigilant is an 8-Channel, turnkey condition monitoring solution with its own embedded software and long-range communications capability.

By combining airborne and contact ultrasound diagnostics with vibration analysis, temperature & tachometer monitoring, the Vigilant System is capable of fully capturing rotating asset condition.

Solve the accessibility dilemma caused by heavily guarded and inaccessible machinery. Collect, analyze, and share asset data with the Vigilant System.

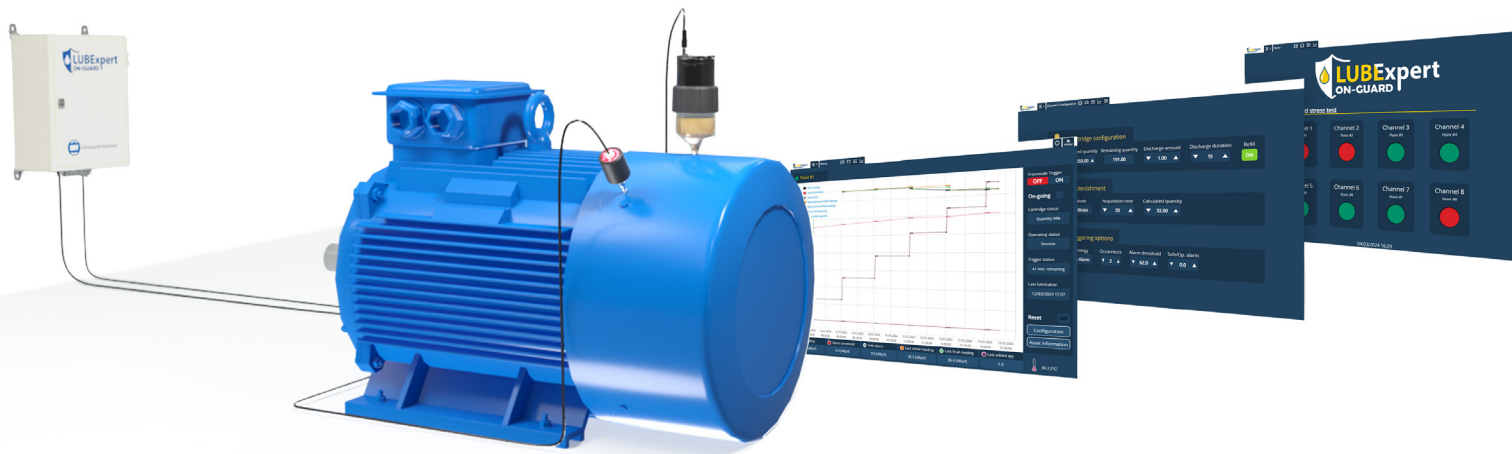




The LUBExpert ON-GUARD, is the smartest Multi-Point, Automated Lubrication System ever created. By blending the convenience of an auto lubricator with the precision of ultrasound, ON-GUARD ensures long-lasting, trouble-free operation of your rotating assets.

The ON-GUARD uses a combination of real-time & historic data to calculate optimal re-lubrication quantity & frequency. Thus, saving maintenance and reliability teams expensive grease and precious time, all while providing continuous feedback on the condition of your most critical rotating machinery.

Move beyond time-based calculations and embrace a maintenance strategy where precision and accuracy are paramount. This failureless approach acts as a nutritionist for your machines, preventing problems through a personalized, autonomous, and data-driven plan, thereby fortifying operations reliability.



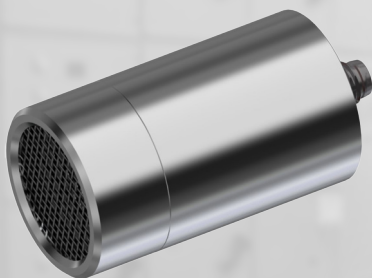
SENSOR TECHNOLOGY

TRUSTED GLOBALLY FOR ITS SENSITIVITY, ACCURACY, AND RELIABILITY.

COMMONSENSE RANGE

These rugged and durable permanently mounted sensors are designed to integrate with standard industrial measurement systems. They support the LUBExpert ON-GUARD, ULTRASentry, & Vigilant System.

AIRBORNE



With both IP40 & IP65 versions available, the COMMONSense Airborne is useful for continuously monitoring high-voltage electrical cabinets & systems.

CONTACT



An IP65 rated sensor designed to continuously monitor remote, heavily guarded, or otherwise inaccessible critical machinery.

AIRBORNE SENSORS



AIRSENSE

This airborne handle styled sensor with an integrated EDS (extended distance sensor) is an affordable option for medium to long-range detection.



ULTRASENSE

Designed to integrate with the SDT340 & ULTRAChecker for close range inspection of air lines, belts, chains, sheaves, couplings, and conveyor bearings.

CONTACT ULTRASOUND SENSORS

Structure-borne sensors measure sound pressure waves produced inside solid structures like in a bearing, valve body, steam trap, motor or gearbox.

RESONANT NEEDLE (RS2N)



Designed for general inspections on routine walkarounds, or collecting data on non-magnetic surfaces, the RS2N is sensitive to friction, impacting, and turbulence, enabling it to effectively assess mechanical components, valves, steam traps, and more.

RESONANT THREADED (RS2T)



A robust, mountable sensor ideal for long-duration data acquisition on assets like slow-speed bearings and gearboxes. It integrates with mounting pads or a magnetic mount which suits both route-based data collection and permanent installation.



PARABOLIC DISH

Designed for highly accurate long range detection (up to 60 meters), the Parabolic Dish creates a listening area proportionate to the diameter of the dish.



LUBESense

This sensor connects with the Acoustic Lube Adaptor for condition-based re-lubrication of motor bearings and integrates with mounting pads and a magnetic mount for when drilling and tapping is not desirable.



FLEXIBLE SENSOR

A bendable wand style sensor designed to contort into hard to scan areas such as the backs of piping, or through guarding.



ONLINE IMPLEMENTATION TRAINING

ULTRASOUND ESSENTIALS:

Ultrasound Essentials is the perfect kick-starter for any reliability team introducing ultrasound to their predictive maintenance program. Consisting of focussed and concise ultrasound condition monitoring training modules, Ultrasound Essentials prepares inspectors for safe and repeatable data acquisition on critical production assets.

ULTRASOUND ESSENTIALS

course one

UAS SOFTWARE TRAINING:

The UAS Course overviews the most advanced ultrasound analysis software ever written, UAS. Learn about setting up your asset database, route building, using alarms, backing up & restoring data, and utilizing the Bearing Toolbox; an add-on that enables users to diagnose rotating asset failures based on bearing type, rotational speed, and fault frequency.

UAS



LUBEXPERT ESSENTIALS:

A complete guide to precision lubrication with the LUBExpert System. LUBExpert Essentials is a 16-module, two part course broken up into theoretical and practical knowledge. With over 20 hours of mentor lead instruction, users will acquire all the necessary knowledge, and a certification to boot, to call themselves a LUBExpert.

LUBExpert



CERTIFICATION TRAINING

SDT Offers Level 1 & Level 2 Ultrasound Certification Courses, and CAT 1 & CAT 2 Vibration Analysis Courses Online and In-person. Visit SDT.

Training to view our upcoming training schedule.



LEVEL ONE ULTRASOUND

CERTIFICATION COURSE



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