LUBExpert ON-GUARD

PATENTED

Smart Ultrasound Condition-Based Lubrication

LUBrain
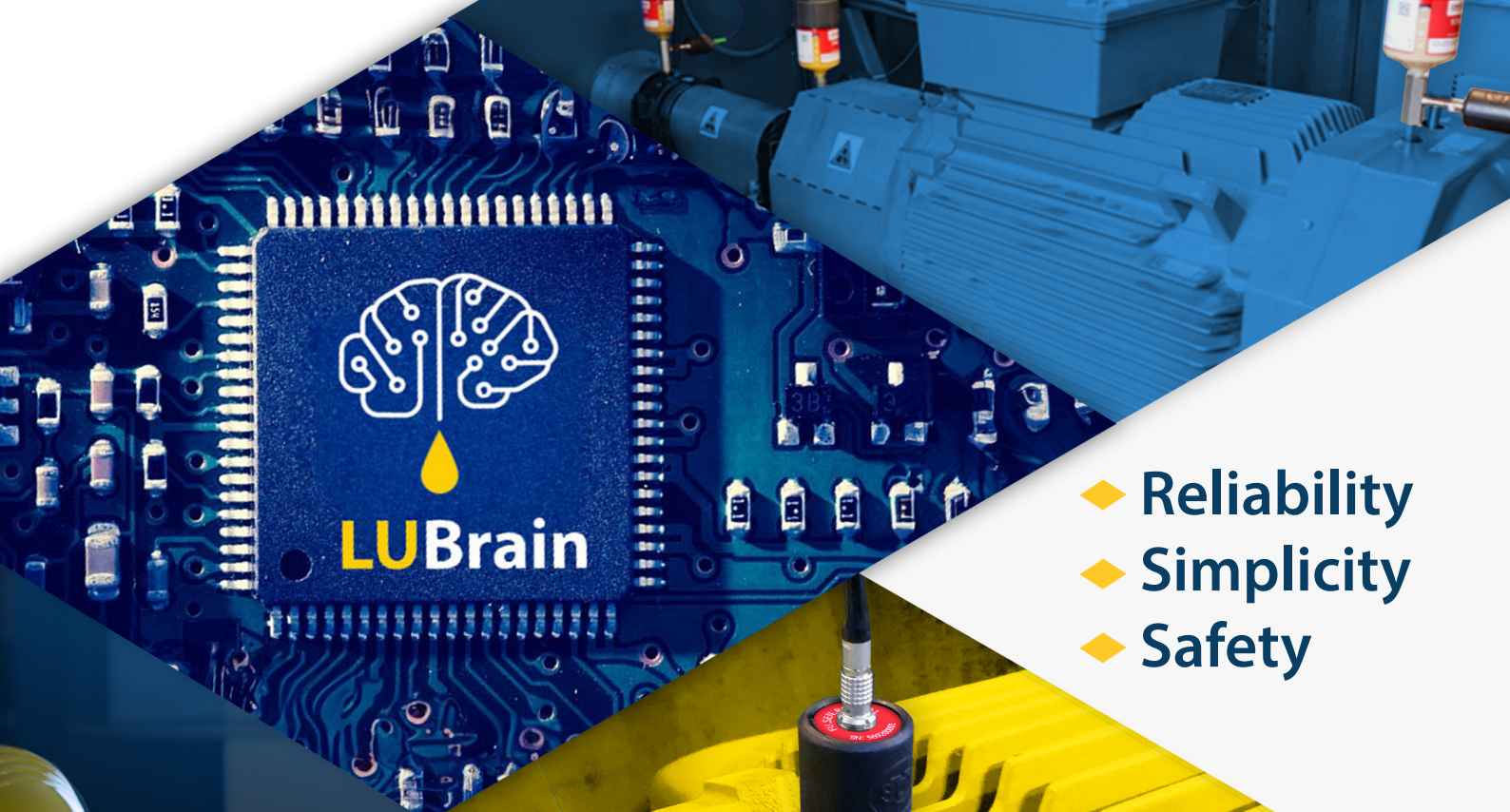
- ◆ **Reliability**
- ◆ **Simplicity**
- ◆ **Safety**

Elevate your machinery's performance through innovative ultrasound measurement technology and automatic bearing lubrication.

SDT HEAR MORE **Ultrasound Solutions**

The **LUBExpert ON-GUARD** marks a turning point in lubrication practices, bringing together reliability, simplicity, and safety in perfect harmony.

As industries face the complexities of modern machinery, trust the LUBExpert ON-GUARD as your rugged companion dedicated to ensuring the longevity of bearings and optimum performance of critical assets.

◆ Efficient

Move beyond traditional time-based calculations.
The LUBExpert ON-GUARD empowers you with data-driven decisions, ensuring a personalized, autonomous, and failureless maintenance plan. Your machines deserve the best nutrition, and the LUBExpert ON-GUARD delivers precisely that and just at the right time, thereby addressing the vulnerability of 80% of machine bearings.

◆ Automatic

Let the LUBExpert ON-GUARD handle the intricate task of bearing grease replenishment.
Enjoy reduced workload, minimized grease waste, and optimal machine performance.
Revolutionize your maintenance with ultrasound conditional lubrication.

◆ Safe

Prioritize safety with the LUBExpert ON-GUARD's remote grease replenishment, mitigating risks in hazardous environments.

◆ Green

Enjoy a sustainable future with precise control, preventing unnecessary depletion and oversupply.
Less over-lubrication reduces costs and environmental impact, extending bearing life. What's more, greater energy efficiency offers significant savings. A crucial step towards intelligent, environmentally-friendly maintenance for modern industries.
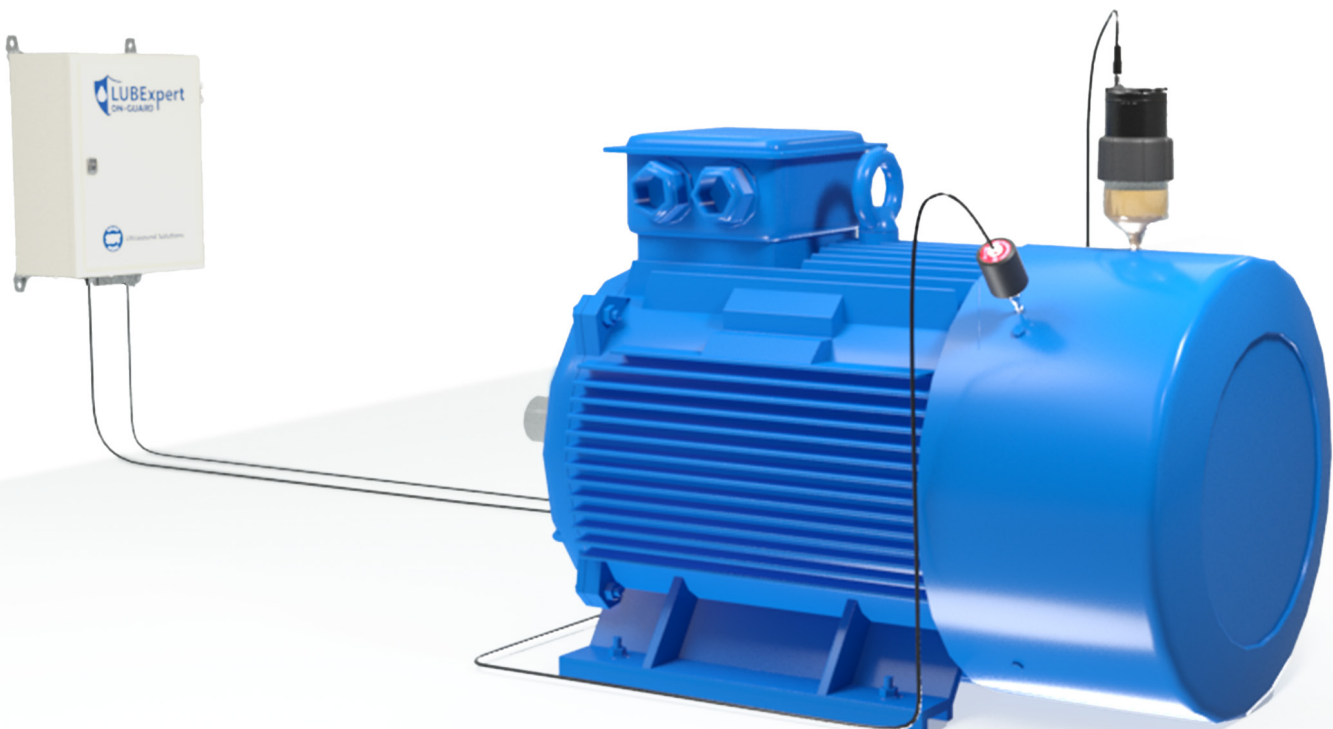
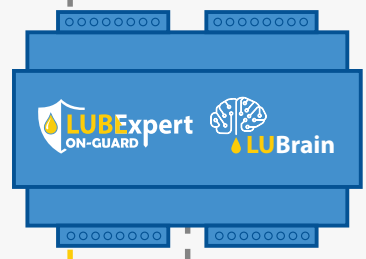The CONMONSense TRUE 4-20 mA plug-and-play sensor collects real-time data.

1
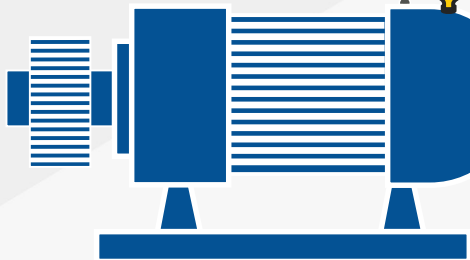
4

The strategy information is sent to the lubricator to deliver exactly the right amount of grease at exactly the right interval.
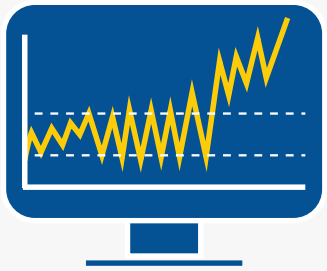
2

The LUBrain algorithm assimilates and processes this data.

LUBExpert ON-GUARD
LUBrain

ETHERNET

3

The data is present and accessible via the web server, accessible from the network, where the lubrication strategy can be adapted to the user's needs.

LUBrain

The SDT LUBrain algorithm automates lubrication, allowing to inject grease precisely when needed and in the right quantities.

◆ CONMONSense TRUE 4-20 mA

The CONMONSense sensor detects any change in RMS in the ultrasound domain and helps guide the lubrication replenishment process.
No configuration needed - just plug & play for a hassle-free experience.

◆ Web Server

Access and control your device effortlessly from any operating system, including tablets and smartphones with the built-in web server. No additional software or licenses needed.

The device's intelligence and automation simplify maintenance tasks, minimizing training requirements.

All-inclusive options let you tailor your lubrication strategy with various replenishment modes and triggering options via the user-friendly web interface.

Secure your data with internal storage accessible via MODBUS TCP, aligning with strict data security protocols.

Features

- Up to 8 Analog Inputs (AI) compatible with RSC.101 TRUE 4-20 mA;
- 8 configurable Relay Outputs (RO) to pilot electromechanical lubricators;
- 2 Relay Outputs (RO) for the alarms;
- Continuous monitoring of RMS Ultrasound and T° (Static measurements);
- Lubrication strategy based on multiple criteria (replenishment mode and triggering options);
- Intuitive LUBExpert ON-GUARD web server installed in a PLC;
- Data available in MODBUS TCP.

Technical Specifications

General

Function	Smart ultrasound assisted lubrication system
Operable with	• SDT CONMONSense RSC 101 TRUE 4-20mA Contact Sensor • Single point electromechanical lubricators
Number of lubrication channels	x8 (Analog Inputs + Relay Outputs)
USB port	4 Host 2.0 (debug or offline update)
Power supply	24 V DC

System features

Application installed	SDT LUBExpert ON-GUARD (WEB server)
CPU	Quad Core
Frequency clock	1.5 GHz
RAM	2 GB
Update mode	Via SDT ON-GUARD tool or USB
Memory Storage	32 GB (SD card)
Network interface	LAN 1 GB
Default IP address (static configuration)	10.8.2.150 (port 80)
Communication mode	Static/DHCP
Industrial communication	MODBUS server, TCP port 503 *see user manual for register map

Inputs/outputs

	Analog Inputs (sensors)		
Type of data	Static (RMS only)		
DC range	4 mA to 20 mA, converted in dB$[\mu V]RMS$		
ADC resolution	16 bits		
Monitoring period	• 1 ultrasound reading every second • 1 T° reading every minute		
Default status	Ultrasound reading		
Storage strategy	1 ultrasound value/hour + 1 T° reading/hour (averaged based on the acquisition time) + lubrication history (initial reading, final reading, last added qty, time, status)		
Lubrication strategy/ triggering options	• Free mode/Manual • Time based/Operating time • On Alarm + occurrences		
Replenishment modes	• Predefined amount of lubricant • SDT LUBrain		
	Relay Outputs (lubricators)		
Number of Relay Outputs	8 + 2 for warning and alarms		
Type of drive	Electromechanical (24 V)		
Mode	Impulse control required		
Operating principle	1 voltage impulse provided by the PLC (24 V DC + discharge duration) = X cm3 (cc)		
Data format (from the GUI)	csv file		
Default compatibility (recommended, Lubricant not supplied)	Model Perma STAR CONTROL (see specs) *Contact SDT for the validation of additional lubricators*		

SDT Mission

SDT provides ultrasound solutions that help our customers gain a better understanding about the health of their factory. We help them predict failures, control energy costs, and improve product quality while contributing to the overall reliability of their assets.

Your SDT Certified Partner

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