



**DIAGSOL**

**World-class  
vibration  
solutions  
that push the  
boundaries of  
value and innovation**



## Who We Are

**Diagnostic Solutions (DIAGSOL)** has been trading for 25 years within the Predictive Maintenance sector, focusing on the vibration-monitoring perspective.

We have a reputation based on high-end service, product development and PdM system implementation; most of our customers have been with us for more than ten years.





# What Makes Us Different?

We spend time **discussing and understanding your reliability pain points** and developing and piloting a solution to those issues based on our experience, PdM hardware and a variety of PdM software packages that will best fit your needs.

We don't buy in or badge hardware; we do, however, offer our hardware for PdM system solution providers/integrators. All of our measuring, monitoring and diagnostic systems have been engineered by us to ensure you get quality data at the best possible price point.

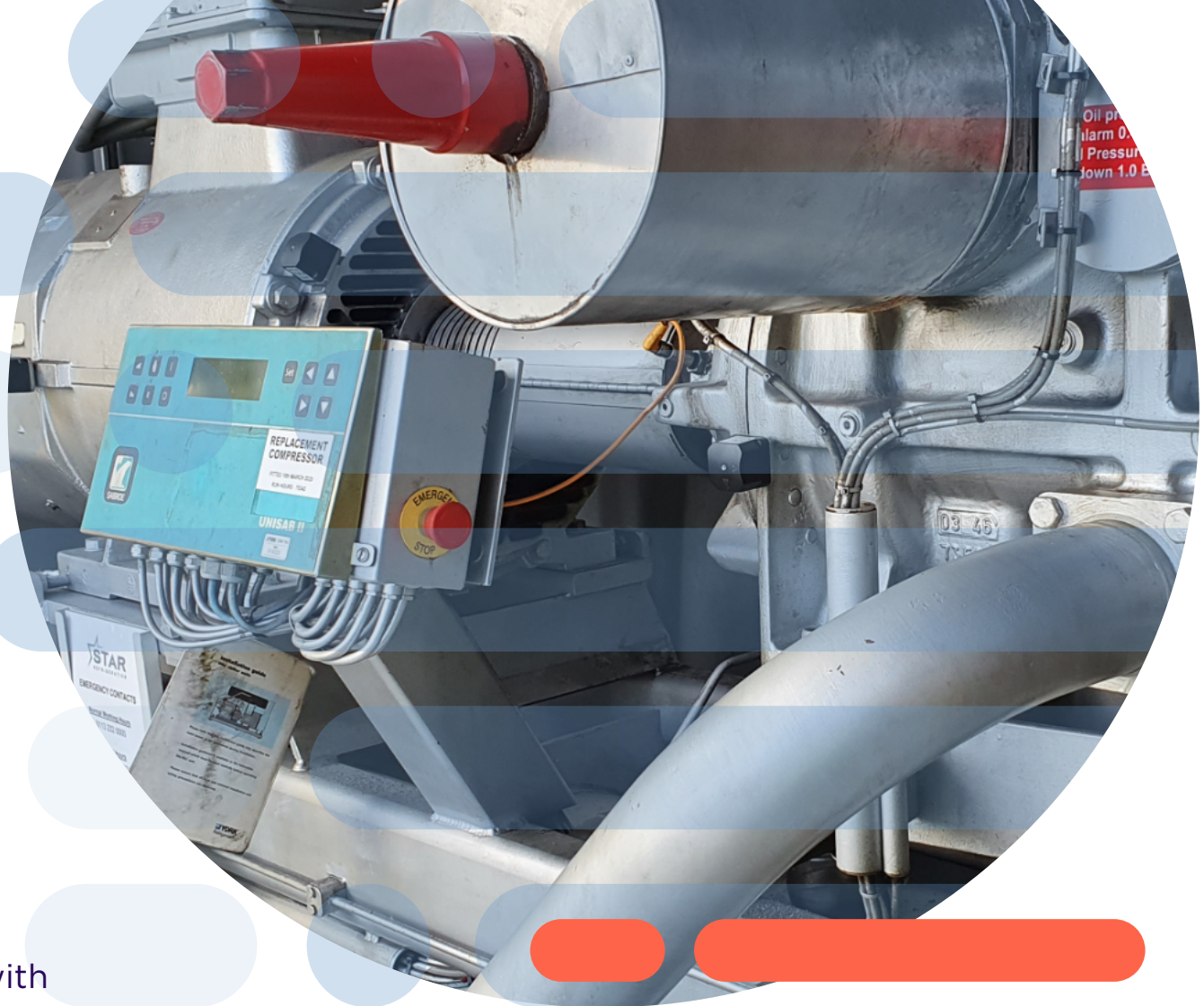
Our speciality is, of course, vibration, but we do also implement lubrication, inspection and TPM systems, and we are currently the UK distributors of the Dutch uWorks Reliability software suite, in addition to the highly customisable Vibra suite from Signalogic UK.



# Our Ethos

Assuming you already lubricate your assets well and inspect them at regular intervals, predictive techniques should be professionally implemented to ensure that critical assets do not fail in service and cause financial losses to the business.

A combination of **wired**, **IIOT**, **handheld vibration** and **temperature data** fused with Automation & Process parameters is the key to accurate, reliable and intelligence-leveraged fault detection and failure avoidance maintenance interventions.







DATA



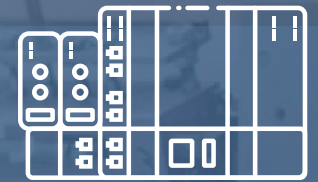
ANALYSIS/DASHBOARD  
INSPECTING



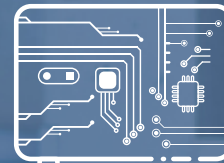
WALKAROUND  
HANDHELD  
VIBRATION



PLC/AUTOMATION

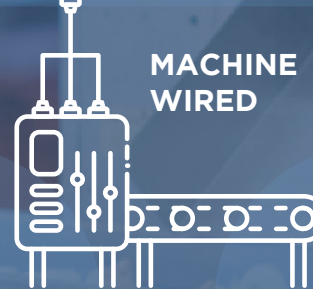


uBRIDGE

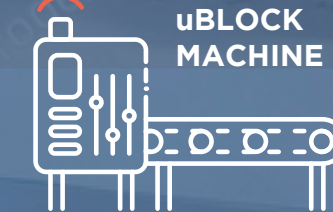


PC

MACHINE  
WIRED



IIOT  
uBLOCK  
MACHINE



IIOT GATEWAY



## Features

Quality Vibration as standard

Walkaround and Online Solutions

Remote and VPN (OPC/on prem) analysis

Designed by engineers for engineers

# uBlock

Battery powered Bluetooth 5.1  
Vibration & Temperature IIOT Sensor

The uBlock has been designed to ensure measurement quality, robust construction and maximum Bluetooth range capability. These devices are intelligent and designed to take at least 1 set of high-resolution readings per day for up to 5 years.



We have also recently integrated the collection of any process parameter using temperature, voltage or current utilising the Laird Sentrius BT610 Bluetooth Process Pod.

PHYSICAL		MEASUREMENT	API/SOFTWARE
44 x 44 x 47mm	3.6V Li- Li-SOCL <sub>2</sub>	32768 samples maximum	Handheld/ Android
Atex/ Pending	Battery 3-5 Years	+/- 16g Range (16 bit)	Linux Gateway/ OPC
160grams	M6 Thread	6.3kHz fMax (x, y & z)	ARM & Intel API's
IP68	-20°C - 85°C	Frequency accuracy 0.2%	Local & Cloud Apps

# uBridge

## Critical Asset Online Monitoring System

This smart asset-monitoring system will constantly monitor assets and save data in the event of an alarm/output to a local PLC with no additional software requirements.



### SPECIFICATION OVERVIEW

28.6 x 19 cm (OEM compatible)	2 x 8 Channel simultaneous @ 51.2kHz SR
8 x DC Input Voltage channels	2 x 4-20mA Input channels
2 x High-speed Tacho/ Speed References	4 x 4-20mA Outputs (programmed)
24V 0.5A power required	All Dynamic Channels 24-bit Sigma Delta
2kHz & 20kHz (4th order AA Filters)	2.5V and 10V input ranges (programmable)
Linux Opsys/ Image for ARM (Debian)	Stores Data Locally (Up to 128GB SD Card)
4G/ Wi-Fi or LAN comms options	Send data to Cloud (uWorks, Vibra, API)
Secure Services HTTPS/ Port 443 outgoing	40 minutes @ 51.2kHz/ 400mins @ 5.12kHz

**uBridge** can be supplied inside a custom panel or as a board to integrate within an existing control panel.

# uClip

Wearable | Clip-on  
walkaround Bluetooth  
Data Collection Device

The uClip comes with a  
belt-clip assembly or  
lanyard-mounting back  
face, accelerometer,  
cable, magnet, charger  
and carry case.



## SPECIFICATION OVERVIEW

Bluetooth 2.0 OTA Rate of 70kB/s	25.6kHz Sample Rate (24 bits)
IP65/ 180 grams	117 x 72 x 32mm
ICP & AC inputs	5V Pk.Pk input range
Embedded DSP/ Demodulation etc	Android App/ C# API
Battery Charge lasts > 8h	Standard USB recharge of Lithium Ion battery





# Your Product

DIAGSOL has developed bespoke vibration measuring devices for a number of companies over the years. Please contact us with an overview specification, and we will look at the project based on our schedule and available electronics and firmware building blocks.

DIAGSOL Hardware is also available for badge labelling and integration into your own PdM solution portfolio. We are experts in accelerated integration and have a number of code snips/APIs and apps for integration.

## DSL Software Solutions Offered

DIAGSOL does not create its own fully functional PdM / Reliability solutions; we do, however, partner with system and solution providers to offer world-class solutions, and we have a number of codeshare relationships with companies such as Signalogic (UK).

# Vibra Gateway

Embedded | Inside Firewall | Automation Solution

This Linux-based App/ Image allows data collection from Bluetooth uBlocks and Laird BT610 Automation elements within an enterprise Firewall (LAN).

Data are all stored locally and can be exported to the plant Automation system via OPC; Status and Action Tables available for plant HMIs.

Your DIAGSOL remote analyst can VPN into the analysis suite to advise you on any critical issues.



# uWorks

Fully Integrated Reliability Solution from Ijssel Technology (NL)

Lubrication Management

Handheld Vibration (uClip)

Online Vibration (uBridge)

IIoT Vibration (uBlock)

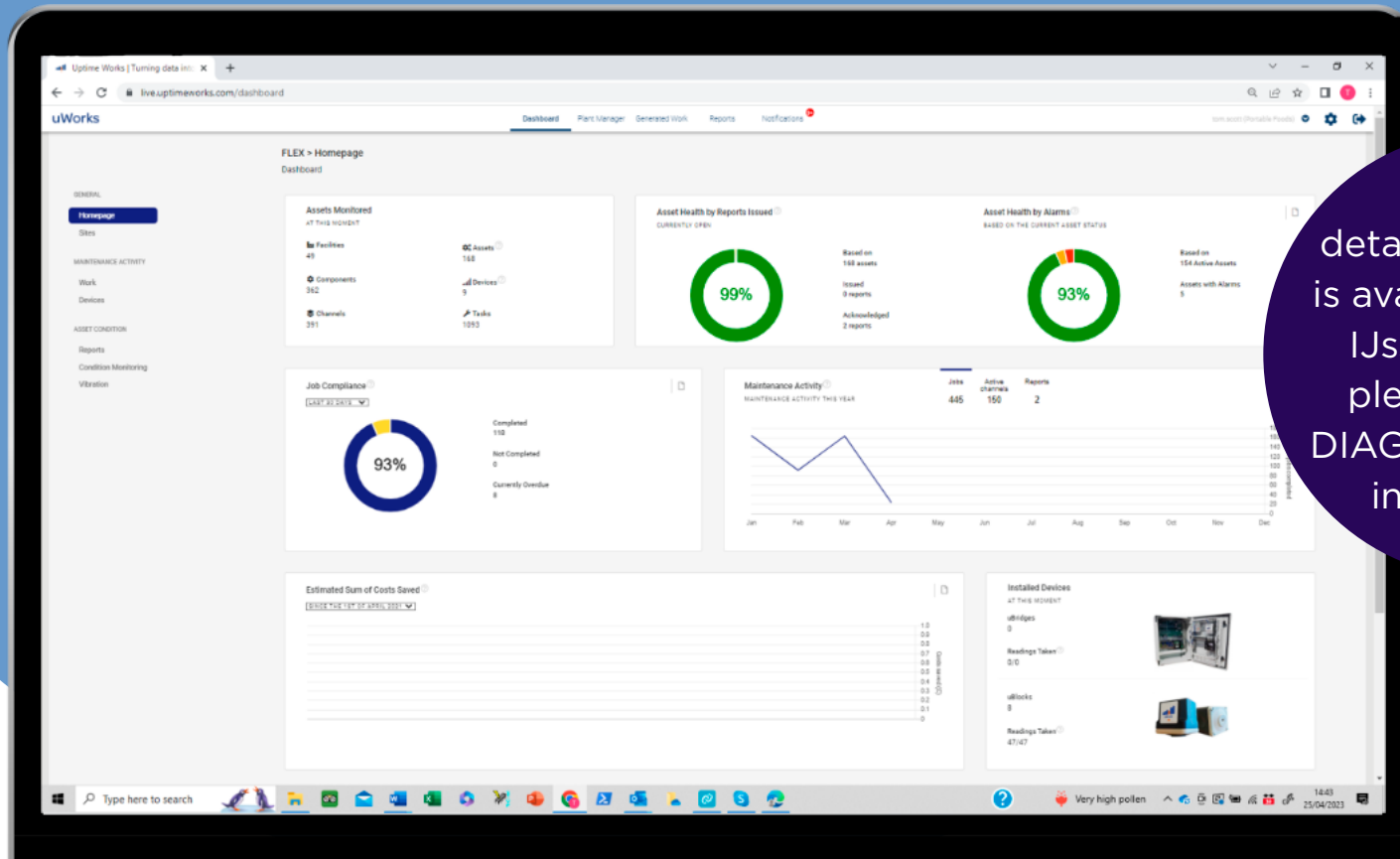
Handheld Inspections/ TPM

Oil Analysis API

Browser Cloud App

SAP Interface

OPC (coming soon)



A more detailed brochure is available for this Ijssel product; please contact DIAGSOL for more information.

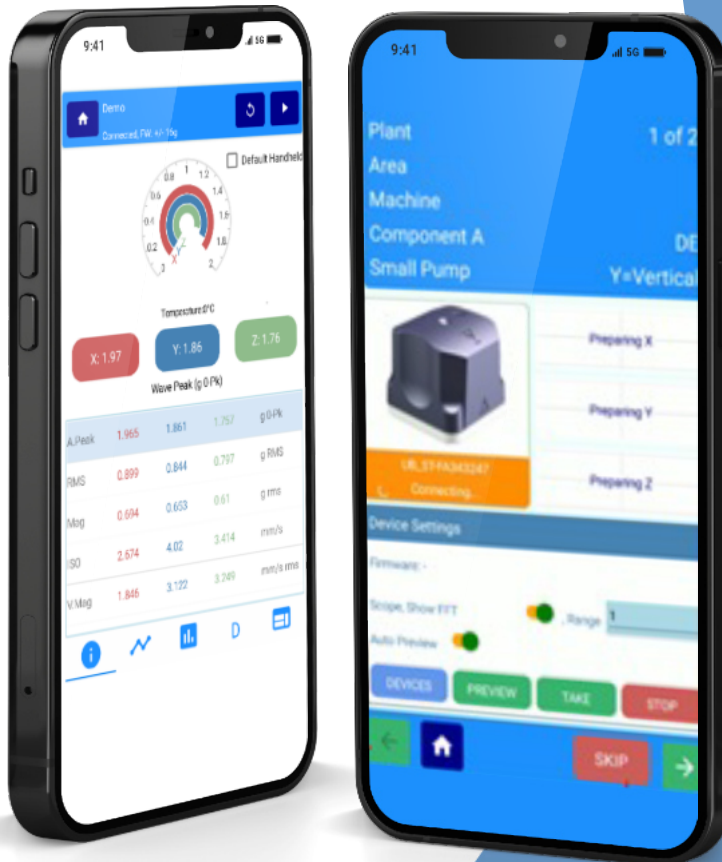


# Vibra Mobile

Vibration  
Monitoring  
Lite  
Solution

Runs on Android to allow the route/ and off-tour walk-up collection of data from uBlock devices.

Data are passed up to the Vibra Cloud Database via 4G or Wi-Fi, and data are analysed within the Vibra Desktop Application.

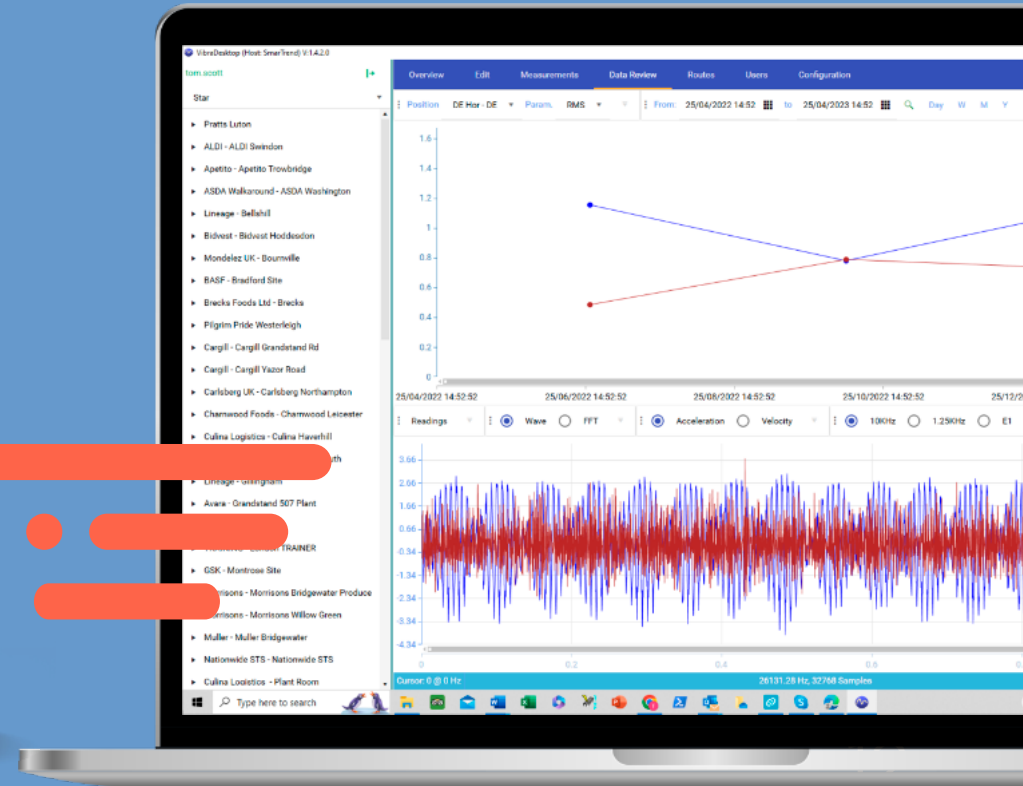


# Vibra Desktop

The application supports a number of functions; please note this application can also be run on the Vibra Gateway (see below).

Database Build/ Alarms  
Analysis of Data

Creation of Routes  
Alarm Review



# Consultancy and Services Solutions

## System Implementation and Training

Our team of industry experts is available to walk you through the process of integrating Predictive Maintenance practice and technologies within your asset base. Whether you only want to monitor a few items or would like to roll out a multi-disciplinary Reliability system, we are here to help at every stage.

Please just give us a call for an informal chat or site meeting.

## Site Vibration Survey and Reporting Services

In the event that you want us to collect site vibration and condition data, we have a number of site technicians who specialise in this area. All of our staff hold safety passports and comply with our ISO 9001 and ISO 45001 processes to ensure your assets are looked after both professionally and safely.

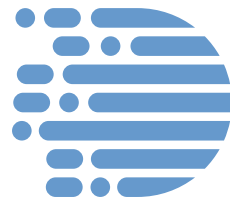
## Remote Analysis | Alarm Watch | Remote Report Provision

DSL pioneered one of the first implementations of remote online monitoring in 2012; since then, we have analysed and written several thousand PdM Action Reports for our growing customer base. Most of our product and software solutions are geared towards online or site-collected data and the provision of our guidance and technical oversight to represent the best possible value to your business.



## Footnote on Industry 4.0

Industry 4.0 and Smart Factory have become common talking points within the industrial reliability sector. Essentially, Industry 4.0 is about using available data in a smart way that helps you increase the visibility of issues such as machine health, quality and availability. Our IIOT solution options fit well within the smart sensor concept and leverage the advantages of battery power, wireless and local intelligence to help you meet your reliability goals.



# DIAGSOL

DIAGSOL • Unit 4C • Rossett Business Village • Rossett Nr Chester • LL12 0AY

Email: [office@diagsol.co.uk](mailto:office@diagsol.co.uk) • Telephone: **01244 571411** • [diagsol.co.uk](http://diagsol.co.uk)

