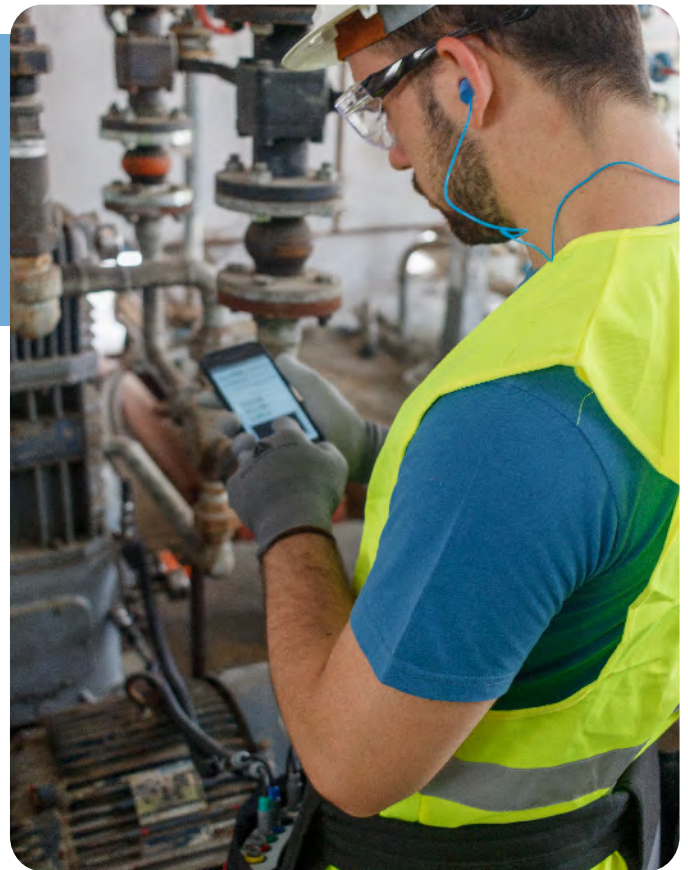


# WEARDC®

Assets diagnostic tests and supervision

## Use Wearable Data Collector (WEARDC®) in order to:

- (i) Acquire structured operating data from your plant and machinery, using commercial off-the-shelf sensors
- (ii) Implement **COMBINED** preventive maintenance technologies (vibration analysis, ultrasounds, electric measurements, thermodynamic diesel engine analysis)
- (iii) Manage energy inspections
- (iv) Organize your assets using international standards
- (v) Use the data on site or transfer it remotely for further processing
- (vi) Integrate directly with computer maintenance management systems (CMMS)
  - All in one portable device, one operating system
  - Simply, fast, innovatively
  - Compatible subsystems from leading manufacturers



## Operating with great ease of use

- Touch screen Technology
- Plan/review measurements on the device
- View alarms and export reports
- Store data, sounds and images
- View historical data
- Use it in **ALL** of your plant applications

Can be "carried" ergonomically on a holster around the user's waist, for easy transportation and use without fatigue.

When acquiring data, the user holds in his/her hands the lightweight sensors and one smartphone/tablet.

## References by industry

- Facilities & buildings
- Packaging, delivery & mail
- Transportation
- Water treatment
- Power generation & distribution
- Steel & heavy
- Pulp & paper
- Shipping
- Oil & gas
- Chemical & pharmaceutical
- Food & beverage

## WEARDC® applications

The system can be used in the following applications:

### General purpose data collection and inspections support device

Record, store and edit with the use of sensors:

- Pressure
- Temperature
- Thermography
- Flow
- Speed of revolution
- Asset status

### On-site machine check/monitoring

- Bearings status
- Wear check
- Cavitation
- Speed reducing gears/gearboxes
- Pumps/motors
- Lack of lubrication/over-lubrication

### On-site electrical inspection analysis

For detection and analysis of the following faults:

- Electric Arc
- Tracking
- Corona
- Voltage and current waveforms distortion

For use in these applications:

- Switchgears
- Transformers
- Insulators
- Relays
- Bus-bars
- Motors

### On-site leak detection/energy conservation analysis

- Valves
- Steam traps
- Compressed air
- Compressed gases

### Fault detection for industrial/marine Diesel engines

- Quality control of cylinder, fuel pump, injector, turbo compressor, air cooler
- Operation optimization

## Review measurements with ease

Once the device connects to a wireless local network, the data can be uploaded to the base station.

The DATARUNNER® software is being used so you can have reliable access from anywhere. It employs a powerful SQL database and modern application technologies.

The system allows for a **specialist (internal or external) partner to diagnose problems remotely.**

Operating or maintenance personnel can perform the inspection and a remote specialist advises. Quickly and wirelessly.

Findings are automatically uploaded to the computer maintenance management system (CMMS) if one is already in place, so that appropriate corrective actions can be scheduled.

### Automatic asset recognition

Using **QR code** labels on assets produced by the system, you can identify them and plan your actions.

Once the user is in front of an asset of interest, he/she can scan it and interact with the information automatically shown in our advanced user interface.



### Assets classification and hierarchy

A comprehensive set of classification and **hierarchy standards** are also included with categories of: business activities, assets, subsystems, failures, corrective actions.

It can be a powerful assisting tool in making decisions about the equipment state whether you are focusing on the component level or you want to concentrate on the overall condition of your enterprise assets status.

## Using Modern Human-Machine Interface

The device operates with what is most convenient for you: a smartphone or tablet; devices you use daily.

You can take advantage of all the excellent features the device can offer, regarding:

- Ease of use
- Bidirectional data transfer
- Continuous integration of new capabilities
- Easy replacement in case of a failure or loss

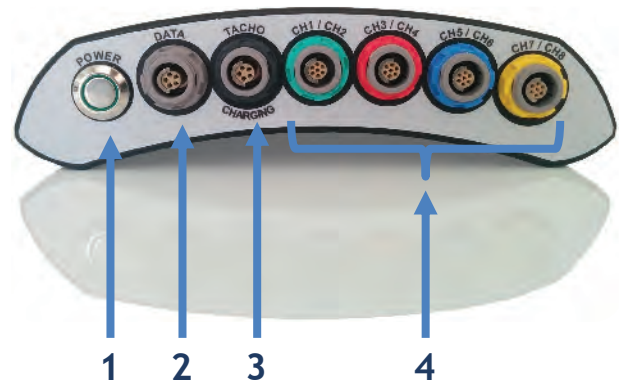


We listened to the needs of people operating and maintaining machinery, asking for simple devices, ease of data entry and continuous flow of instructions.

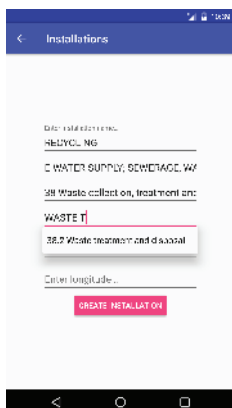
You can have such a device in your hands.

It allows for easy use from the operators or maintenance personnel.

## Main Unit Functions



1. Power switch with LED charging status
2. Data port USB 2.0
3. Charging port/speedometer
4. Data acquisition ports



# WEARDC® Specifications

## Data acquisition

Sampling rate	100 kHz / ch (max)
Channels	8 single ended with 16 bit resolution
Simultaneous sampling	8 channels
Event counter	Yes
Sensor supply capabilities	+22V, +12V, +5V
Maximum measurement range	+/- 10V
Input impedance	Greater than 100MΩ
Interface	USB 2.0

## Physical characteristics

Dimensions	150 x 200 x 54 mm (L x W x H)
Weight	330 g
Casing	ABS (UL 94 HB), IP54
Operating conditions	Temperature: 0 to 50 °C / 32 to 122 °F Humidity: 20 - 85% (non-condensing) Drop test: From 1.5 m on concrete (with use of protecting cover)
Storage conditions	Temperature: -20 to 60 °C / -4 to 140 °F Humidity: 20 - 85% (non-condensing)

## Power

Battery	3400 mAh Lithium Ion/3.6V
Operating time (typical)	8 hours
Battery charger	5V, 1A

## Human machine interface device

Type	Smart phone or tablet running Android™ 5.0 and above
Screen	Diagonal greater than or equal to 5 inch
Communication port	USB OTG

## Compatible items

Compatible sensors	Standard IEPE (IEEE 1451.4) industrial accelerometers (with warning capability for short circuit or no connection) Ultraprobes®/UE Systems Inc. ultrasound equipment Sensors 0-10V (revolution speed, static and dynamic pressure temperature, infrared radiation, humidity, voltage/current, force, torque, strain)
Accessories	Cables for connection to the sensors Magnetic bases Headphones with 3.5 mm jack for use with ultrasound equipment USB cable Holster

## Compliances

Regulatory compliance	EU Directives, RoHS, EN 61010-1:2010, EN61010-2-032:210 EN61010-2-033:2012, EN61010-031:2015, EN61326-1:2013 EN61326-2-2:2013, EN61326-2-3:2013
Classification and hierarchy standards	NACE Rev.2, ISO13373-2:2016 ISO14224:2006, MIMOSA™
Compatibility with CMMS software	AIMMS / Atlantis, Coswin 8i®/Siveco Group