



# Ronds Online Condition Monitoring System

Help You to Realize Predictive Maintenance

- Monitor machine real-time condition
- Predict machine failure to avoid unplanned downtime
- Reduce machine maintenance costs
- Provide data support for making maintenance plans
- Enhance machinery life and enhance machinery reliability

**RONDS Online  
Condition Monitoring**  
RH2000,  
RH1XX (T) series

**Make Industry Better**  
[www.ronds.com](http://www.ronds.com)

**DNV·GL**  
**CE**

# ENHANCE RELIABILITY OF YOUR MACHINES

## WHY RONDS

### STAYING AHEAD

The first listed company in Chinese industrial equipment intelligent O&M field

### COVERING END-TO-END SOLUTIONS

Independent research and development of hardware and software to build complete technology solutions for different application scenarios

### INTELLIGENT

Integrate edge computing modules to automatically define data processing strategies on demand

### HUGE LIBRARY OF FAILURE CASES

There are huge cases for accurate identification of equipment failures

### EFFICIENT DEPLOYMENT AND O&M

Fast installation without impacting production, and the sensors support the self-test function, grasping its own status in real time

### RONDS COMPLETE TECHNICAL LOOP



Bearing Failure

Imbalance

Resonance

Electrical Failure

Misalignment

Shaft Bending

Coupling Failure

Gear Failure

Bad Lubrication

Mechanical Looseness

Shaft/Bearing Wear

Others



# ADVANTAGES OF RONDS ONLINE MONITORING SOLUTION

## GOOD FREQUENCY RESPONSE & HIGH SAMPLING FREQUENCY

The tolerance of frequency response within 20KHz is 0.6dB. And the maximal sampling frequency could be 102.4KHz. It can detect the machine fault at early stage.

## ALL CHANNEL SYNCHRONOUS ACQUISITION

All 24 channels collect the data of vibration and temperature synchronously. Synchronous data is very helpful when detecting different machine faults.

## SUITABLE FOR VARIABLE SPEED MACHINES

With tachometer, customers are able to use order tracking analysis by both speed and vibration data. The system also support speed trigger collection, it can grasp machine operating status by obtaining vibration data under different working conditions.

## HIGH COMPATIBILITY

Integration with self-designed applications with free API, OPC, Modbus, RS485 etc.

## COMPATIBLE WITH PROCESSING DATA INPUT

The system has two channels for processing signal like pressure, temperature, flow, etc.

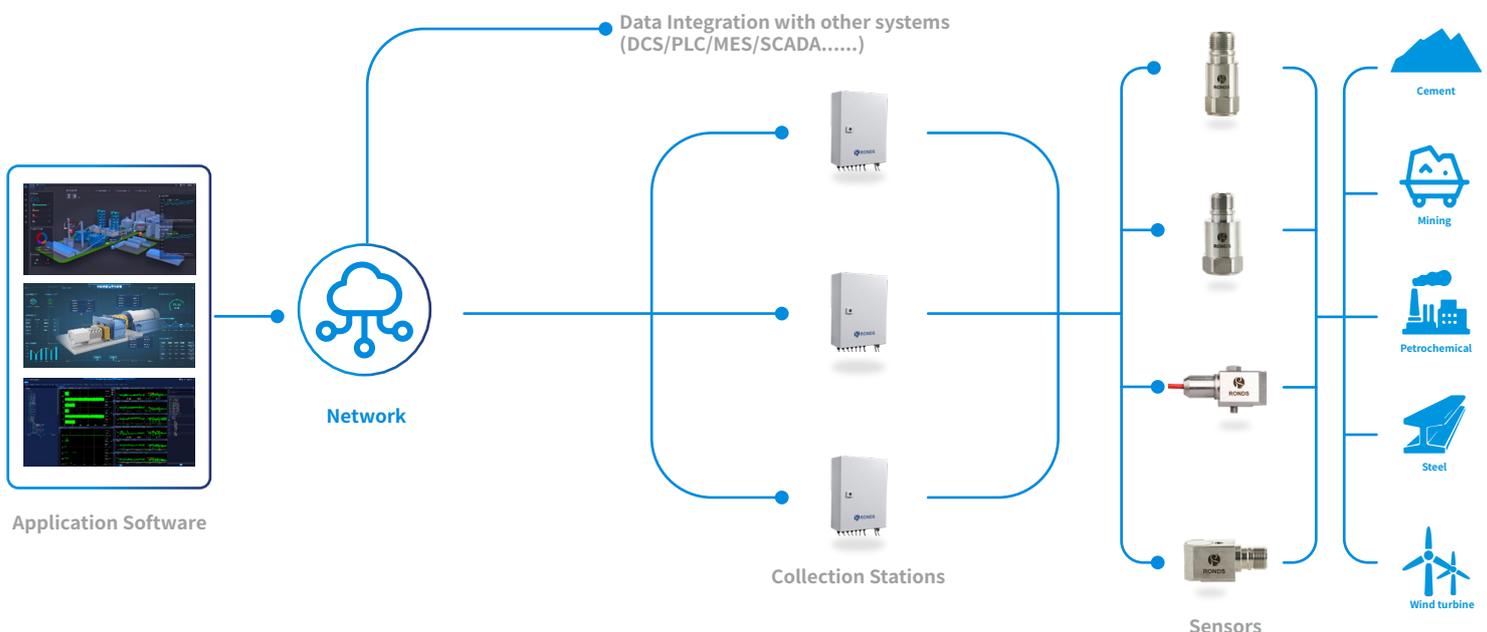
## LOW SPEED MACHIENS FAULT ANALYSIS

It can collect maximal 2048K time waveform, more than 40s data. It can give very good data resolution to analyze low speed machine fault.

## INTELLIGENT ALARM FOR ABNORMAL MACHINES

Adopting various kinds of intelligent alarm parameters like overall value, index, temperature, etc., ensure the accuracy and timeliness of alarm information.

# RONDS IOT Monitoring Topology



# SCENARIOS OF RONS ONLINE MONITORING SOLUTION

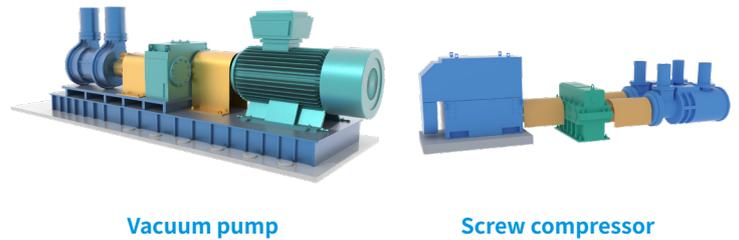
For equipment with complex working conditions in different industries, the wired monitoring solution can monitor the status of the equipment in real time and extract the whole process data, so as to effectively deal with the slow deterioration fault and the influence of working condition changes.

## STEEL



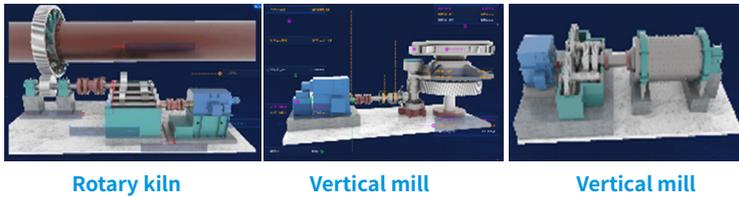
✓ Monitoring of equipment with complex working conditions such as hoist, rotary table, mill and crane.

## PETROCHEMICAL



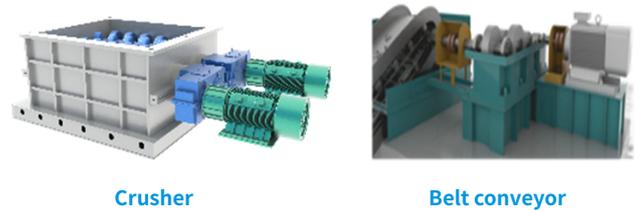
✓ Monitoring of large equipment in petrochemical such as Large unit equipment and Reciprocating machine

## CEMENT



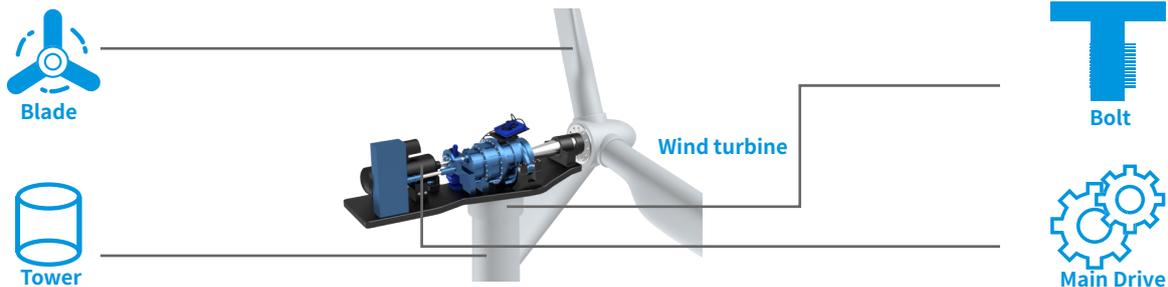
✓ Monitoring of overload and low speed equipment such as rotary kiln, vertical mill and cement mill

## MINING



✓ Monitoring of overload and low speed equipment such as crusher and belt conveyor

## WIND POWER



✓ Realize seamless monitoring of wind turbine drive structure

# SPECIFICATION



## RH2000 Online Condition Monitoring Station

- Full sampling patent technology.
- Designed for variable speed machines monitoring,
- Synchronization and real-time acquisition of 24 channels vibration & temperature signals.
- Support vibration, displacement, speed, temperature and working process signal acquisition.
- 24 bit A/D, The dynamic range of the system is above 100dB which ensures accurate acquisition of signal.
- The analysis frequency is up to 40kHz, can calculate 102400 lines FFT.
- Support for Ethernet and RS485 communications, can adapt to different industrial sites.



## RH103T wired vibration temperature sensor

- Frequency range: 0.4~15KHz( $\pm 3$ dB)
- Sensitivity: 100mv/g
- Measuring range:  $\pm 80$ g
- Temperature measuring range : -40~120°C
- IP grade : IP68



## RH113T wired vibration temperature sensor-low frequency

- Frequency range: 0.1Hz~10KHz( $\pm 3$ dB)
- Sensitivity : 500mv/g
- Measuring range :  $\pm 10$ g
- Temperature measuring range : -40~120°C
- IP grade : IP68



## RH104CT wired vibration temperature sensor-integrated cable

- Frequency range: 0.4~10KHz( $\pm 3$ dB)
- Sensitivity: 100mv/g
- Measuring range: +80g
- Temperature measuring range: -40~120°C
- IP grade: IP68



## RH104T wired vibration temperature sensor

- Frequency range: 0.4~10KHz( $\pm 3$ dB)
- Sensitivity: 100mv/g
- Measuring range:  $\pm 80$ g
- Temperature measuring range: -40~120°C
- IP grade: IP68

# RONDS



## ABOUT RONDS

Founded in 2007, Anhui Ronds Science & Technology Incorporated Company (RONDS, Stock Code: 688768.SH) is an AI-driven industrial services company dedicated to providing customers with the world's leading intelligent operation & maintenance solutions and subscription-based services for industrial equipment.

Ronds has always insisted on industrial innovation with scientific and technological innovation, combining cutting-edge artificial intelligence technology with real industry applications, and has completed the technical layout of sensor core components, wireless sensor systems, edge computing, industrial big data, intelligent algorithms, and industrial internet platforms, and formed diversified product systems, such as the scenario-based intelligent operation and maintenance solutions and PHMGPT industry big models, empowered the high-quality development of industrial enterprises with new productivity.

Ronds solutions has been successfully applied to wind power, petrochemical, metallurgy, mining, cement, and many other fields. It has linked more than 150,000 sets of key equipment, such as wind turbine, belt conveyor, compressor, rolling mill, mill, elevator, and various types of pumps, and has formed more than 20,000 closed-loop failure cases, Actively promote the transformation of equipment intelligent operation and maintenance industry.

Ronds is highly praised by customers and business partners, our business covered Europe, South America, North America, Southeast Asia and other regions.

In the future, Ronds will deeply cultivate intelligent operation and maintenance of equipment. Based on industrial big data, driven by artificial intelligence, Ronds will provide customers with globally leading products and services and embrace the new era of industry!



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