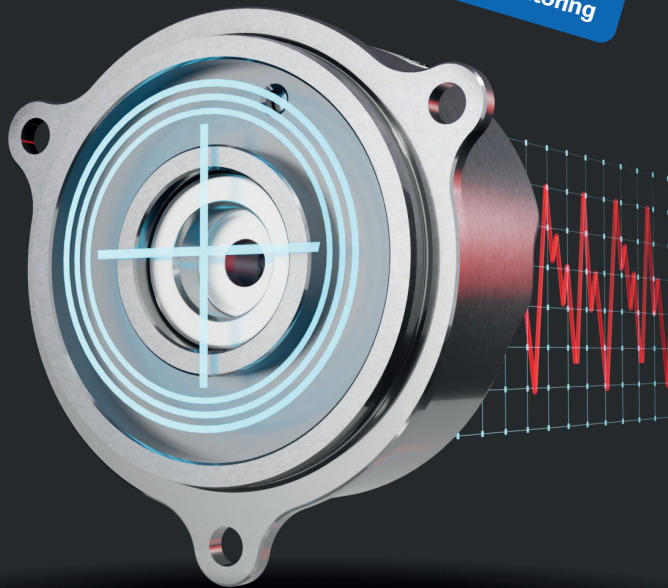


# HEIDENHAIN

Predictive  
condition monitoring

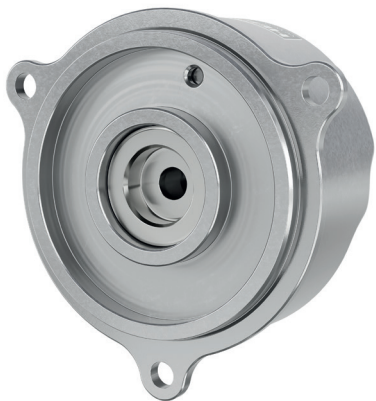


**Rotary Encoder  
with Accelerometer**

# ECI 1323 *Splus*

## EQI 1335 *Splus*

### Rotary encoder with vibration analysis



### Area of application

- Motion control and condition monitoring on rotating machine elements

### Characteristics

- Vibration measurement on rotary axes
- Integrated 3-axis accelerometer with microcontroller for evaluation
- Order analysis with output of up to 256 orders

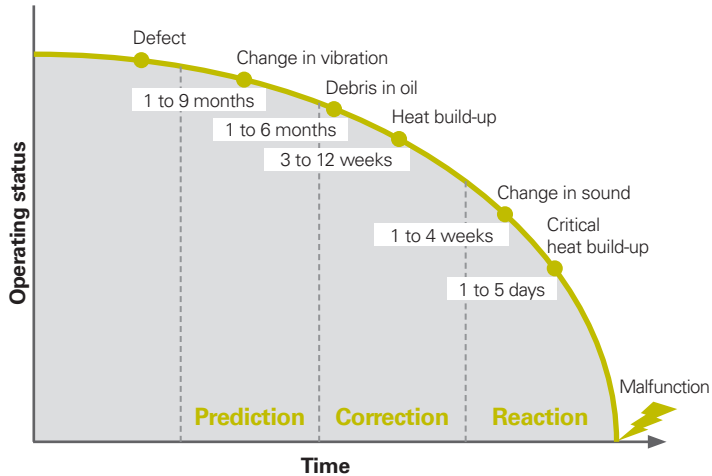
### Specifications

- Position values per rev. 23 bits
- Multiturn functionality Up to 65536 revolutions
- System accuracy  $\pm 40''$
- Blind hollow shaft 12.7 mm
- MEMS accelerometer
  - Four measurement ranges Up to  $\pm 60$  g
  - Bandwidth 6600 Hz

### Interface

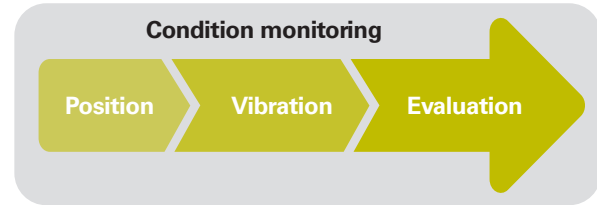
- EnDat 3

# Predictive maintenance



## The online condition monitoring of rotating machine elements enables:

- Minimal downtime
- Higher productivity
- Early detection of damage
- Exact failure analysis
- Reduction of servicing intervals
- Maintenance planning
- Remaining service-life estimation



# Vibration analysis

**The ECI 1323 *Plus* and EQI 1335 *Plus* offer versatile and extensive analysis capabilities:**

- Tracking and processing of vibration signals by position
- Automatic analysis at switch-on or any time during operation
- Selectable measurement axes, speed range and trigger conditions
- Different types of analysis: time-synchronous FFT, angle-synchronous order analysis, etc.
- Individualized order selection (up to 256)
- State-of-the-art EnDat 3 interface technology
- Configuration by the user

# Signal processing

**Signal processing via integrated microprocessor:**

- Acceleration signal
- With/without bandpass filter + envelope curve
- With/without transformation to the angular domain
- Calculation of the spectrum
- Calculation of spectrum values



**Alternative processing option:**

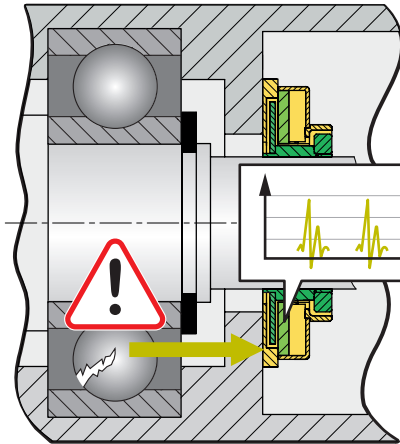
- Acceleration signal
- Calculation of signal values as times



**ECI 1323 *Splus*/EQI 1335 *Splus***  
on rotating machine element

**EnDat 3**  
2-wire

**Drive controller/NC**  
with EnDat 3 Master




**EnDat 3**

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