



**EHi**

**We ensure  
Quality**

# Who we are...

EHi is the synonym of a start up company with the order to find out pioneering new paths in the development of the acoustical signal processing.

In the serial production, unique solutions are already working in the field of the quality assessment of hermetic encapsulated Actuators with E-motor and Gear.

The sensation: We determine the drive speed without ever having access to the rotating electric motor.

:: and that is just one of our strengths ::

New approach in the signal processing enable  
to provide revolutionary solutions in EOL quality assessment



# The EOL-solution from EH*i*

## **EH*i*-EOL**

**FIRST** EOL system for fully enclosed actuators

All previous EOL-applications proved a unique level of quality

Signal acquisition with sensors from own development

Accurate detection of manufacturing defects on electric motors, helical, worm and planetary gear units

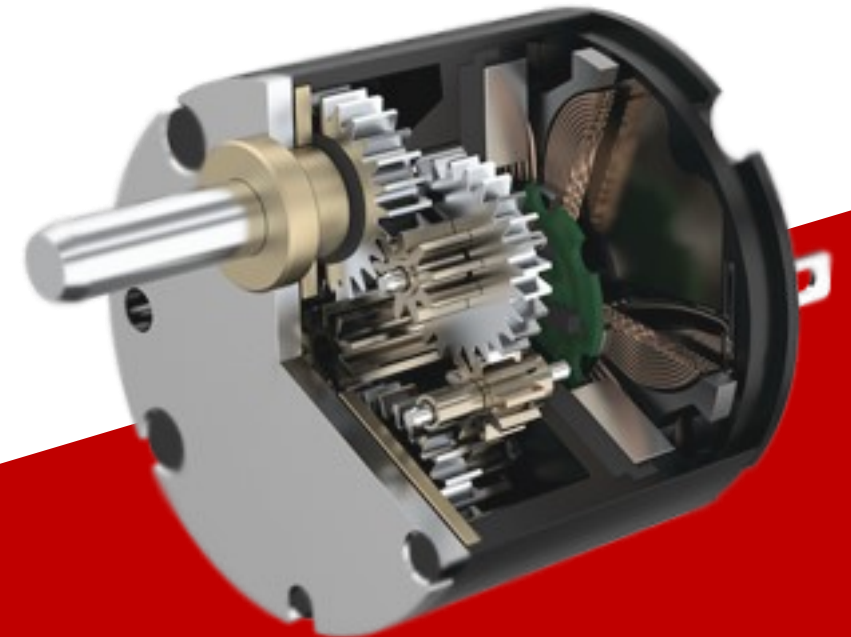
EOL (**E**nd-**o**f-**L**ine) are the initials for the quality control of series-produced components

# Profit by unique quality

We develop and build system solutions for previously undetectable noise phenomena that revolutionize the evaluation of component quality.

It's up to you: You can be a big step ahead of your competitors with a unique technology for quality assessment of mass-produced components.

Our unique strength is specifically in the quality evaluation of fully enclosed actuators.



# Profit by unique quality

## You benefit:

- **100% correctly assessed quality** of series components increases the reputation with the customer compared to the competition
- **Savings in personnel costs** from non-rational rechecks on series components

## You avoid:

- Proven **variation in scrap rates of up to 30%** according to comparative studies with competitor systems
- Defective parts go to sale and defect-free parts go to reinspection

**You benefit from higher quality and significant cost reduction**

# No component defect goes unnoticed

The evaluation algorithms of EHi-EOL are designed for the detection of production defects:

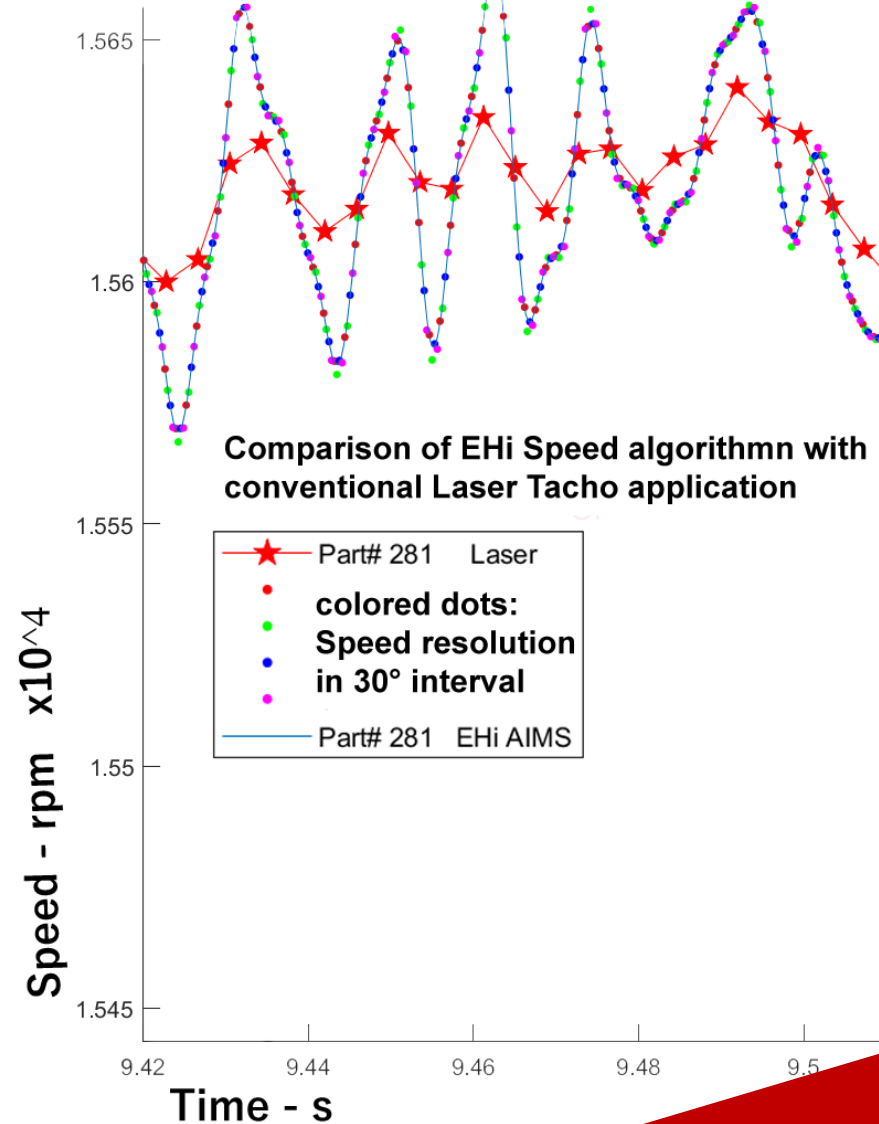
- **DC Motors:** Commutation error, winding error, unbalances, defects on bearings
- **Planetary gears:** Pittings on the sun wheel, planetary gear and ring gear
- **Spur and worm gears:** Error in the gearing, independent of the transmission ratio

Furthermore, EHi-EOL detects damage effects that cannot be assigned to any geometric relationship, as well as stochastic changes of state of the noise behavior.

i: 63  
t: 0.0 [s]  
S: 26.0  
R: 21.00 [T]  
dT: 0.333 [T]  
n\_M: 5500.000 [rpm]  
f\_M: 91.667 [Hz]

We build our evaluation algorithms  
for best effectiveness and optimal sensitivity

## Even with hermetic encapsulation ...



... speed determination  
in sensational accuracy,  
tested up to 22400rpm

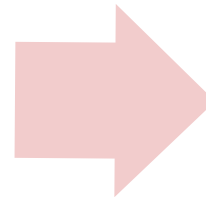
Non-measurable quantities get  
calculated by special algorithms of EHi

# Example for a situation at the state of technology

In a large-scale series production plant for automotive parts, 4200 components are manufactured and tested for quality per test station and working day.

## Previous situation:

Scrap rates varied between **3%** and **28%**.  
Investigations have shown that the majority of the rejects did not show any defect.  
It was also sobering to notice that there were isolated instances of defective parts in the good parts.



**With the introduction of EHi-EOL**, a constant scrap rate of between **0.6%** and **1.1%** has been achieved.  
Random sampling has shown that there are clearly defective parts throughout.  
So far, not a single conspicuous part has been found in the good parts.

**The savings with the conversion to EHi-EOL: per production station and production year € 67.800.-**

**Increase in customer confidence: priceless!**

**The required investment volume: Proportional to the number of units produced, the purchase of EHi-EOL costs as much as the sticker of the serial number.**



# Contact

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Get in touch with us.

We find the right approach for  
your EOL requirement.



**Your contact  
for more efficiency !**