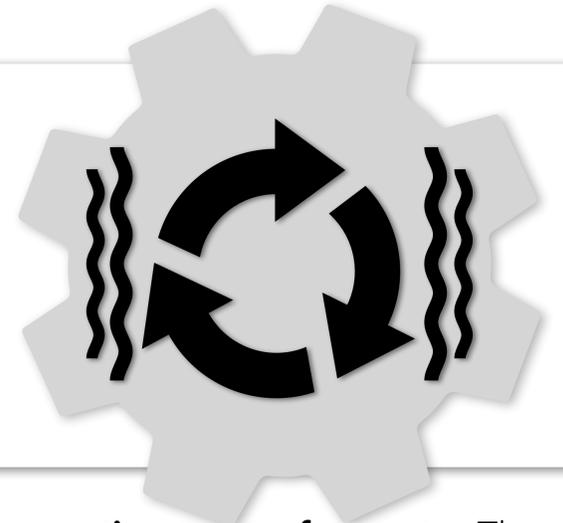


Torsional vibrations are irregularities in the rotational motion of a rotating asset. They arise from the slightest irregular load, and induce a twist on the shaft. All rotating machines experience inherent **torsional vibrations**. Undetected, these generate serious **performance issues** and can even lead to **critical failure**.

To understand and suppress these vibrations, computational models can be utilized and respective predictive actions can be taken. However, **wear and tear** on the system as well as **tolerances in the parts** can change these torsional vibrations, which can only be reliably detected using **real-time measuring**. But, the data generated by such systems alone are difficult to understand without knowing from which component they come from. Thus, a **root cause analysis** becomes crucial.

Torsional Vibration

The Silent Killer of Rotating Machinery



This is where *Dr.-Ing. Andreas Laschet* and *AlphaDiagnostics* come into play as a **cooperative team of experts**. The revolutionary AlphaTVA™ **combines simulated models** for machine understanding with the variables introduced by real world applications by **monitoring** the machine. With the combination of both worlds “*calculation and measurements*”, **actual and full understanding of the machine behaviour** can be achieved.



alphadiagnostics.ch | info@alphadiagnostics.ch

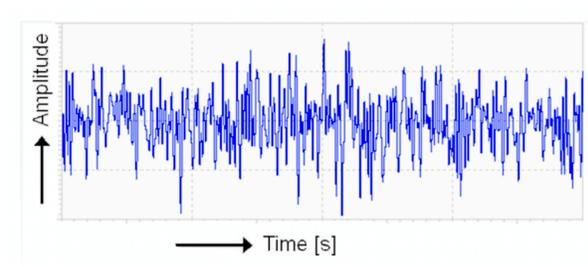
AlphaDiagnostics is a leading provider of condition monitoring systems for rotating machinery. Their unique approach of machine condition monitoring using maintenance free speed sensors enables quick and easy retrofitting of up to twelve sensors. Through its modular approach, additional other sensors can also be monitored.



Order analysis

Time analysis

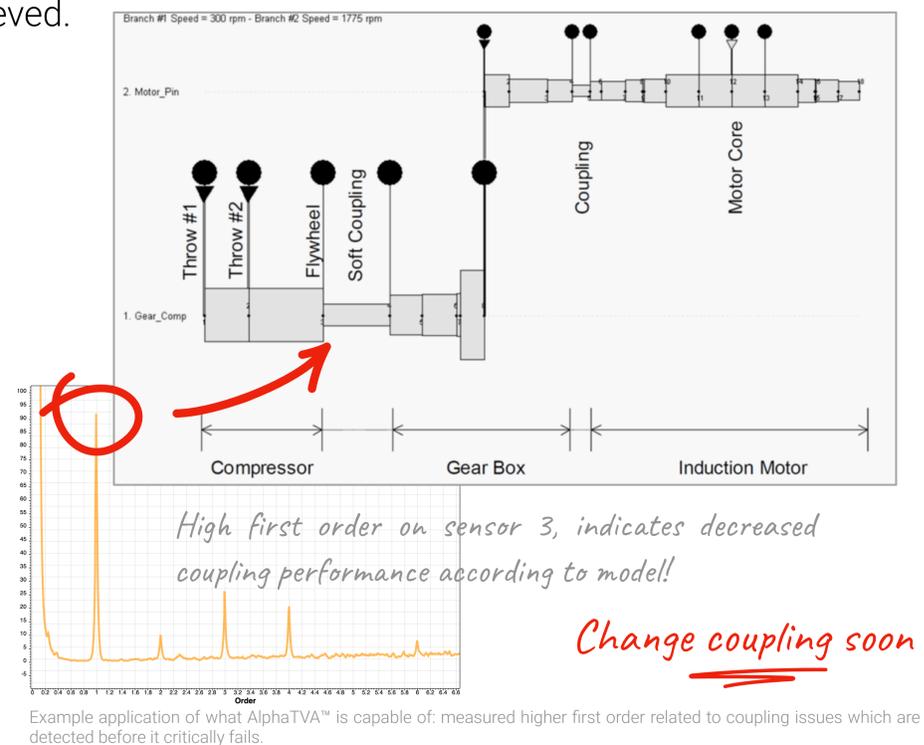
Dr.-Ing. Andreas Laschet is an expert in *Torsional Vibration Analysis (TVA)* of rotating machinery based on computer models. He has more than 40 years of professional experience and offers engineering services and technical consulting in numerous drive technology applications.



Simulation Torque vs. Time



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Tailored to your use-case

Because of its modularity, the system can be tailored to your exact use case. These include, but are not limited to:

- ⚙️ **Damage assessment** and exact fault localization in case of existing torsional vibration issues.
- ⚙️ **Current-state analysis** before or at commissioning, to ensure a fully working condition when shipping to the customer.
- ⚙️ **Continuous insight** into any rotating asset to detect impending failures early, reducing the risk of unaffordable downtime and subsequent damages – with an important feedback to the R&D process.

With this system, you don't just collect data, you **gain full and thorough understanding of your dynamic machine behavior including all drive elements, enabling you to take meaningful and efficient actions.**

And if you have any additional measurement requirements, AlphaTVA™ can easily be extended with more sensors to measure other specific parts of the machine.

