

## Application-Report - Visualisation of components on vibration test rigs



### Application:

The customer RMS uses the stroboscope for optical, qualitative analysis of movements with their systems that they – as a developer and manufacturer of dynamic testing systems – have in development or final inspection.

Furthermore, RMS operates a test laboratory for service tests in order to introduce interested customers to the complex subject of vibration testing and to develop test specifications with the customer that are customised to their needs.

The test centre is also used as a showroom for potential customers who are interested in buying a dynamic testing system and want relevant on-site advice with demonstration materials.

### Task:

The observed motion objects are either components of RMS' own systems or samples from customers. Customers are also frequently on site; through the use of the stroboscope, the behaviour of their samples in the desired test environment should be made clear and visible to them.



Source: RHEINTACHO RT STROBE qbLED

### Solution:

The portable stroboscope RT STROBE qbLED (A4-3500) in combination with the BNC adapter is the perfect solution for applications of this kind.

Vibration test rigs usually provide an analogue signal with a low signal level on a BNC connector. This signal is converted by the electronic of the adapter into a digital trigger signal that is suitable for the stroboscope.

The flash frequency is synchronised with the vibration frequency. Thus the vibrations of the test objects on the test rig are visible and interpretable by the human eye.

The customer RMS was particularly satisfied with the Pro mode with the slow motion function, which allows the observer to follow a sequence of movements in slow motion, as well as with the extremely high flash frequency (max. 5000 Hz) at high light intensity.

The RT STROBE qbLED stroboscope, which weighs just over 1 kg, is delivered in a functional and robust case. Handle, calibration certificate, battery charger with plugs, trigger plugs and reflective tapes are also included. As is the case with all RHEINTACHO stroboscopes, threaded holes for the attachment of a stand are found underneath. Thanks to the integrated lithium-ion batteries, the stroboscope can be operated for up to 7 hours without a break.



YouTube Tutorial: Overview



YouTube Tutorial: Slow Motion function

RHEINTACHO is a flexible, highly efficient partner- wherever speed must be measured, monitored or indicated. Innovation, the most modern production techniques and equipment, meticulous quality control along with a first-class workforce are the corner stones of our company. For the past 114 years, Rheintacho has used his extensive knowledge and experience to developed sensors, systems and customized solution to meet the customer's requirements.