

How is a Lineas WIM sensor manufactured?

A look behind the scenes at Kistler's sensor production facility

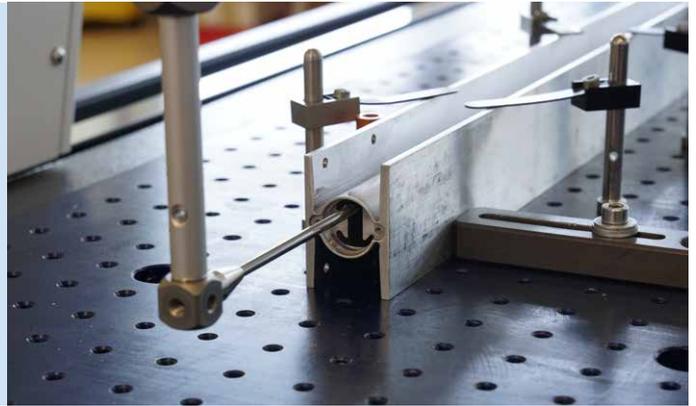
Over 50 000 Lineas sensors for Weigh In Motion (WIM) have already been manufactured and shipped from Kistler's headquarters at Winterthur, Switzerland. Stocks of these sensors are continuously replenished to ensure that all product versions are available at short notice for projects of any size, anywhere in the world.

- 1 Quartz crystals are at the heart of every Lineas sensor. Up to 50 disk-shaped crystals, the same size as a contact lens, are installed in one sensor. The quartz is processed on special machines at Kistler's headquarters in Switzerland.



- 2 The basic structure of a Lineas sensor consists of an extruded aluminum profile. This patented high-precision component is made of a superalloy to ensure maximum strength and a long service lifetime. A central tubular recess to accommodate the piezoelectric quartz crystals runs the entire length of the profile.

3 The dimensions and condition of the profile are checked with utmost precision. Tolerances are extremely tight because the sensor will be installed in an unusual position – flush with or under the road surface – and will operate for a long period. Potential fault sources must be excluded at the earliest possible stage.



4 Once the quartz crystals are installed, final assembly of the sensor can take place. This includes installing the cables and sealing the sensor to make it airtight and waterproof. Finally, the aluminum profile is enclosed in a foam casing that dampens lateral forces.

5 In-depth final inspection of the sensor includes a tightness check and various function tests. Uniform sensitivity throughout the sensor's entire length is verified on the calibration system.



6 The finished sensors are placed in temporary storage before they are shipped to destinations across the globe, where they provide the centerpiece for Weigh In Motion systems from Kistler. Stocks of these sensors are continuously replenished to ensure rapid availability, even for large-scale projects.

To learn more about Lineas sensors from Kistler, visit: www.kistler.com/wim

Kistler Group
Eulachstrasse 22
8408 Winterthur
Switzerland

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Tel. +41 52 224 11 11

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