

## Press Information

21 April 2004

### **Akebono Develops Accelerometer-equipped Digital Measuring Device for the Construction Industry**

Akebono Brake has turned to its sensor technology to develop a digital device for measuring the perpendicularity of pillars and walls. The device has been commercialized for use in the construction industry in cooperation with Sankyo Giken Co., Ltd., of Tokyo

Conventional techniques of measuring perpendicularity rely on the plumb line method of a weight hung from a thread, with the distance from the object surface to the top and bottom of the thread measured using a ruler. However, even if the thread, which sways and oscillates, is measured using this technique, the scale of the ruler cannot always be accurately read off, and erroneous measurements are common. It is also extremely inconvenient to read off the scale in conditions of poor light, such as after dusk. Moreover, even in devices where thread oscillation is reduced or the scale is built into the system, the degree of difficulty in reading off measurements remains just as problematic.

Akebono's newly developed device utilizes an electrostatic capacitive accelerometer for automobiles based on Akebono's micro-machining (semiconductor precision processing) technology to accurately gauge the degree of perpendicularity of constructions and fittings. The device works on the principle that any incline in the micro-machined sensor element due to gravity is detected as a difference in voltage and displayed as a numerical value. This system does not depend on guesswork, and facilitates easy measurement regardless of the user's level of skill. Furthermore, the time required to take a measurement is halved using the new device.

In addition to its staple brake products, Akebono, with its core technology "Friction and Vibration, their Control and Analysis," has for some years been expanding its activities in the sensor business. Sensors, with their considerable diversity, offer a broad range of uses, and this product, utilizing both sensor technology and the vibration analysis technology cultivated through the development of automotive brakes, is expected in the future to have new business applications in non-automotive fields.

Sales to house builders and others in the construction industry start from 2004, with Akebono Brake manufacturing the controller portion and Sankyo Giken manufacturing the controller support casing and handling sales.

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Overall view

Enlarged view of  
controller portion

