## Press release



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# SKF launches SKF Insight™, groundbreaking intelligent bearing technology

### Set to revolutionise the future of machine condition monitoring

Gothenburg, 8 April 2013: SKF launches SKF Insight™, a groundbreaking innovation in intelligent wireless technologies that are integrated into SKF bearings. SKF developments in various smart technologies now enable bearings to communicate their operating conditions continuously, with internally powered sensors and data acquisition electronics. Bearings have long been considered the heart of rotating machinery, now SKF makes them the brain as well.

"These innovations are set to revolutionise condition monitoring for bearings, especially in critical machinery and technically challenging applications. SKF Insight technology will make condition monitoring more widely available, especially in applications where it was previously impossible or impractical," says Tom Johnstone, SKF President and CEO. "With our integrated diagnostic technology, our customers can get even better control over the life cycle of their machinery, leading to lower total costs with higher reliability and machinery uptime."

SKF Senior Vice President, Group Technology Development, Alan Begg adds, "Three years ago we had a vision to create an integrated, self powered sensor package that could wirelessly communicate the condition of a bearing at any time — making a smart bearing capable of sending a message when something happens to it. Following extensive R&D work, including miniaturisation, solving power generation challenges and developing unique packaging of sensors and electronics, the introduction of SKF Insight technology makes this a reality. Making the bearing the brain, as well as the heart of rotating machinery has long been a dream of the engineering community, and I am proud that SKF, with our long tradition of innovation leadership, is the first to make this happen."

### Monitoring directly on the bearing

Prior to SKF Insight, condition monitoring techniques could only monitor damage after it has occurred. Now, by sensing directly on the bearing, SKF is able to monitor the damage from the first microscopic effect as it is happening, and with this information, customers can take remedial action to reduce the reason for damage in the bearing – adding lubricant, mitigating transient overloads, etc.

In addition, by monitoring the load directly on the bearing, SKF Insight makes it possible to measure the load the bearing actually experiences rather than what is was designed for. This valuable information can be routed back into the design phase to improve both the system and bearing design.



With SKF Insight<sup>™</sup> technology integrated into bearings, it is simpler and more convenient for customers to enter into condition monitoring activities. Better operational knowledge, better maintenance planning, optimized manpower and spare part management, will lead to lower cost of operations.

#### SKF Insight technology includes:

- Miniaturisation Packaging of sensor technologies enables measurement of critical parameters such as RPM, temperature, velocity, vibration, load and other features.
- Self-powered Using the application environment itself, smart bearings can generate their own power needed to operate.
- Simplicity Intelligent wireless communication technology packaged inside the bearing enables it to communicate within environments where traditional WiFi cannot operate.
- Smart networks Communicating through each other and via a wireless gateway, bearings with SKF Insight form a "mesh network" and can send information relevant to their condition for analysis.

SKF Insight application specific solutions are under trial with key customers in industries including wind energy, railways and metals, and SKF is actively developing more application trials in other industries.

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SKF is a leading global supplier of bearings, seals, mechatronics, lubrication systems, and services which include technical support, maintenance and reliability services, engineering consulting and training. SKF is represented in more than 130 countries and has around 15,000 distributor locations worldwide. Annual sales in 2012 were SEK 64,757 million and the number of employees was 46,775. <a href="https://www.skf.com">www.skf.com</a>

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