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Wireless QC20-W ballbar loses cable and gains support

Customer:
NC Service

Industry:
Precision manufacturing

Challenge:
Maintain a high level of support for critical machines in the field.

Solution:
Improved handling and machine diagnostics with QC20-W wireless ballbar system.

Peter Jönsson, Managing Director of NC Service, Gothenburg, Sweden, has used the Renishaw QC10 ballbar (and Renishaw laser calibration systems) for years, and is convinced of the benefits, but is delighted to take delivery of the new QC20-W wireless ballbar. As he comments, “QC10 has been one of our most important tools, and 100% reliable, since 2004 – we will continue to use it for some jobs. However, most machines must be run with the doors shut, and with large test radii on bridge machines the cable can become a problem – QC20 makes it much easier. I’m also looking forward to using the ‘volumetric analysis’ function.”

Mr Jönsson and his colleague Mikael Jortby, who deals with machine tool mechanical issues, both use ballbar systems daily to test a large variety of CNC machine tools, including small VMCs, 5-axis machines and large boring machines.

Their customers include machine tool manufacturers such as KMT, a leading manufacturer of waterjet machine tools and end users such as SKF (bearings), Scania (commercial trucks) and LKAB mining.

LKAB operates one of the worlds largest iron ore mines within the Arctic Circle and runs its own machine shop to provide support for its 24/7 operations, critical in such a remote location.

Despite only having QC20-W for a few weeks, Mr Jönsson explains his initial impressions, “We have used QC20 on customer machines for several jobs now and what might seem like a simple change over QC10, the move to wireless data transmission, makes a significant difference. Previously when we set-up a test on a machine with QC10 we often find problems routing the cable through the guarding - machines should always be run with the doors shut. QC20 has solved another problem we’ve always had with using QC10 on large bridge machines. In this case we use the largest diameter test, with a 600mm radius, and with QC10 it was very difficult to stop the cable tangling.”

The change to QC20-W has been seamless for NC Service, as Mr Jönsson adds, “QC20 uses new Ballbar 20 software, which accepts data captured using both QC20 and QC10, so we can continue to compare the latest test with historical data. We have also found that the support from the Renishaw engineers has been excellent ever since we first purchased QC10 and the XL-80 laser calibration system, now in setting up the new Bluetooth connection and training us in the new software.”

Mr Jönsson is keen to start using the new ‘volumetric diagnostics’ function, which can only be used with data gathered with Ballbar 20 software.

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Peter Jönsson receives a QC20-W kit from Ben Taylor, Assistant Chief Executive of Renishaw, at EMO 2009, Milan

The user selects 3 test files from the X-Y, X-Z and Y-Z planes, which are displayed on a single page. The new analysis finds overall maximum and minimum circularity values to give 'sphericity' and also shows individual test circularity results.

A typical annual CNC machine testing service would involve Mr Jortby checking and correcting for any major mechanical issues, then Mr Jönsson using the Renishaw XL-80 laser calibration system to comprehensively map and compensate for positioning errors, followed by benchmark tests with QC20-W ballbar in all 3 planes.

NC service supports LKAB mining at one of Europes largest and most important mines

For more information visit, **www.renishaw.com/ncservice**

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