

New wireless QC20-W ballbar cuts its ties with the past

NC Service, a Swedish calibration company serving Scania and LKAB mining, is one of the first to buy Renishaw's new QC20-W, eliminating QC10 cable problems through machine guarding and on large machines by using a new Bluetooth wireless link

Peter Jonsson, Managing Director of NC Service, Gothenburg, Sweden, has used Renishaw QC10 ballbar technology for years and is convinced of the benefits, but is delighted to take delivery of the new QC20-W. 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 becomes a problem – QC20-W makes it much easier. I’m also looking forward to using the ‘volumetric analysis’ function.”

Mr Jonsson 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 and suppliers like KMT, along with end users like SKF, Scania (chassis plant) and LKAB Mining.

Despite only having QC20 for a few weeks, Mr Jonsson 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 Jonsson adds, “QC20-W uses new Ballbar 20 software, which accepts data captured using both QC20-W 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 Jonsson is keen to start using the new ‘volumetric diagnostics’ function, which can only be used with data gathered with Ballbar 20 software. 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 Jonsson 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



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



NC Service calibrates machines at LKAB mining



Scania chassis parts are made on machines calibrated by NC Service