

**RENISHAW** 

**apply innovation™**

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**You asked for it . . .**

**. . . the QC20-W  
wireless ballbar**

- Wireless technology for easier and safer operation
- Quicker and easier to set up and use
- New software and hardware for rapid volumetric testing
- More durable design
- Backwards compatibility for QC10 ballbar users



**Upgrade to the new QC20-W wireless ballbar**

# We haven't changed the winning formula, just made it better

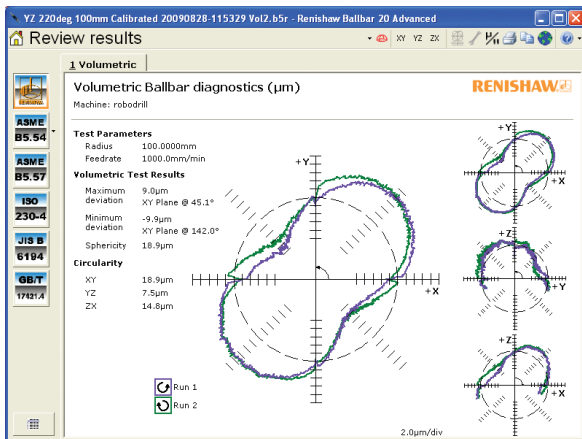
As an existing user you know that the QC10 ballbar gives you the information which allows you to be in charge of your machine tools' performance. We've kept the features that have made the QC10 ballbar the industry standard and responded to YOUR requests for:

- **Wireless communications:** *Bluetooth®* wireless technology ensures quicker set-up and an extended operating range greater than the cabled interface used with QC10. No wires means that enclosure doors can stay shut during testing, an added safety feature.



 **Bluetooth®** wireless technology

- **Quicker and better testing:** Revised hardware and unique analysis software enable comprehensive three plane testing using a single centre pivot set-up. A new 'volumetric diagnosis' enables you to present this data in a clear and understandable format.



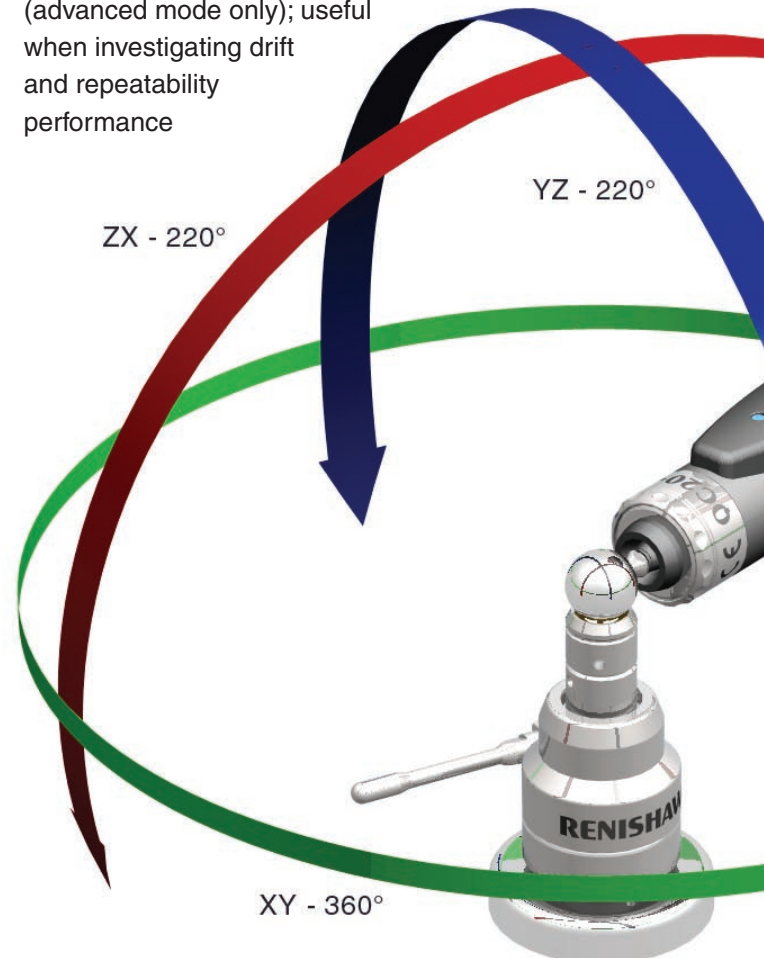
Three plane test sequence and resulting volumetric analysis

- **More durable design:** the new design of sensor is less prone to shock damage and of course no cables means no cable damage!

Updated analysis screens now show test standard and equipment details along with ballbar calibration status; giving you and your customers more confidence in the results presented.

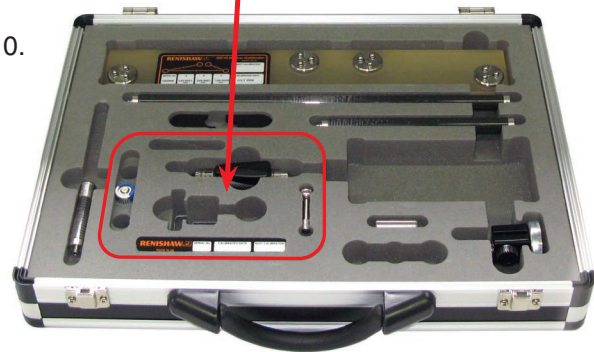
Several new features are also included in the software including

- Latest ISO and ASME test standards (and superceded versions) are now fully supported
- "Clone machines" function to replicate existing machine definitions
- Export and import files to central file location (allowing users to share data)
- Multiple/repeat tests option in test set-up (advanced mode only); useful when investigating drift and repeatability performance



## QC20-W has been designed from the start to appeal to existing QC10 users

- To maintain your existing QC10 test capability you need only replace your balbar/interface with the QC20-W. All other system components are compatible (with the exception of the small circle accessory kit).
- QC20-W is the same 100 mm length as your existing QC10 ballbar and uses the same extension bars. You can therefore use the same tests and test programs you've already developed for QC10.
- QC20-W uses the same data file format as QC10, so you can:
  - Review tests taken by QC10 using Ballbar 20 software
  - Use a single program on your PC whether you are using QC20-W or QC10.



Simple, cost effective basic upgrade kit, even allows fitment to recent QC10 system cases\*

### THE OFFER

Trade in your existing QC10 transducer unit and get the new QC20-W basic upgrade kit for less than half the price of the complete QC20-W kit. The kit structure and pricing is aimed to give you the lowest possible entry cost for QC20-W use. To enhance the functionality of your ballbar further, see over for additional accessories.

\* Compatible with metal framed QC10 system cases only  
Tool cup and centre cup should be replaced with new items supplied

## Upgrade kit options to meet your needs

There are three main changes between QC10 and QC20-W kits, with one change to the small circle accessory kit.

- Ballbar assembly
- Revised centre pivot and tool cup extension
- System carry case
- Small circle adaptor

These are all available to QC10 users as separate upgrade kits or parts so that you only have to pay for the functionality you need.

- **QC20-W basic upgrade kit.** The lowest cost entry to QC20-W use is with the QC20-W upgrade kit. This gives you a new ballbar, battery and BB20 software. The packaging even fits directly into your QC10 case\*. Kit contents:

- QC20-W wireless ballbar (and one CR2 battery)
- Tool cup
- System software (including manuals)
- Offset setting ball
- Machine validation cards
- Calibration certificate

- **QC20-W partial arc kit**

- Consists of a modified centre pivot assembly and tool cup extension. This allows you to carry out the 220° partial arc test. The ability to carry out tests in all three planes (XY, XZ and YZ) without moving the centre pivot greatly simplifies set-up for such testing and enables a true volumetric analysis for the first time.

- **QC20-W system carry case**

- Now you can carry your small circle accessory kit and VTL adaptor in the same case, with their own dedicated locations.

- **QC20-W small circle accessory kit**

- The existing QC10 small circle accessory kit (SCAK) cannot be used with the QC20-W. If you already use the QC10 SCAK, just purchase the new adaptor, which is a simple screw mount to the QC20-W body. You can retain your existing 50 mm calibrator.

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QC20-W basic upgrade kit



QC20-W partial arc kit



QC20-W system case



QC20-W small circle accessory kit