**NEWS RELEASE**

**COG gets in gear  
UK, April 2022**  
To address the key issues involved in the manufacture and build of a test rig, Compact Orbital Gears (COG) continues to work closely with HBK – a market leader in the field of test and measurement – to supply its range of high-speed torque meters.

Based in Powys, Mid Wales, COG is a world-class engineering business with over 50 years of experience in the design and manufacture of bespoke gearboxes and test rigs for various engineering sectors, such as aerospace, oil and gas, automotive and R&D.

Following a long and successful working relationship, spanning over 40 years, COG has been using the HBK range of torque sensors on a variety of customer rig projects, which typically include the development of electrical machines in aerospace or testing seals for the oil and gas industry and, more recently, a 125,000 rpm test rig, rated to 120 kW with a maximum output torque of 20 Nm, which was supplied to the automotive sector for the development of high-speed electrical machines.

During all stages of the manufacture and build of a test rig, balance and alignment are vital, as even the smallest deviation can result in excessive vibration at the component frequency and increased bearing load. As a result, torque sensing is an option frequently requested by many of COG’s customers, with the high-speed operating capability of HBM torque sensors driving selection.

Following prior issues with other manufacturers' torque sensors, COG has found HBK sensors to be both accurate and reliable at a cost that doesn’t compromise on quality or have a significant impact on the overall build cost of the test rig.

The High-Speed range from HBK is characterised by its short design and offers high stiffness and precision thus allowing for low measurement uncertainty when testing high-speed turbines and transmission test rigs. Due to its lightweight titanium body, the high-speed torque sensor has a low moment of inertia, which results in a lower torque during acceleration and reduced bearing load.

HBK's High-Speed range of torque meters is nominally rated to 45,000 rpm. However, COG has previously worked closely alongside the HBK technical team to increase this speed to 60,000 rpm, with options to even measure torque at speeds of up to 100,000 rpm, depending on the application!

Once the testbed is built, it undergoes a rigorous validation programme before despatch at COG’s fully equipped test facility. As part of this programme, a Condition Monitoring kit from HBK is used as part of its factory and on-site acceptance test procedures on all gearboxes and rigs.

“As a company with an investment in testing, we must choose the most reliable equipment for the job, and this is testimony to our long working relationship with HBK” states Tom Sharp, Head of Design, Compact Orbital Gears. “Since using HBK sensors, we’ve had no complaints from customers, many of which are already familiar with the company. For those who aren’t, we wouldn’t hesitate to recommend them. In addition to delivering an exceptional product that meets the needs of our customers, HBK delivers the backup and the support to match”.  
  
For more information on the HBK range of Torque Transducers visit: <https://www.hbm.com/en/0264/torque-transducers-torque-sensors-torque-meters/>   
  
**Ends**

**About Compact Orbital Gears (COG)**

COG is a world-class engineering business with over 50 years of experience in the design and manufacture of bespoke gearboxes and test rigs for various engineering sectors, such as aerospace, oil and gas, automotive, and R&D.

For more information, contact:

Telephone: +44 (0) 1597 811676

Web: www. <http://www.compactorbitalgears.com>

Email: [info@compactorbitalgears.com](mailto:info@compactorbitalgears.com)  
  
**About HBK – Hottinger Brüel & Kjær**

The two market leaders, HBM and Brüel & Kjær, have joined forces as HBK – Hottinger Brüel & Kjær – to form the world’s foremost provider of integrated test, measurement, control, and simulation solutions.   
  
HBK – Hottinger Brüel & Kjær – provides a complete portfolio of solutions across the test and measurement product life cycle, that unite the physical world of sensors, testing and measurement with the digital world of simulation, modelling software and analysis. By creating a scalable and open data acquisition hardware, software and simulation ecosystem, product developers can cut time-to-market, drive innovation and take the lead in a highly competitive global marketplace.  
  
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