CARTER
Revolutionary ideas in motion

Carter Manufacturing Chosen for **Ground Breaking Aviation Hydrogen Project**

Renowned for their technical ability to provide **bearing solutions** for the most **extreme environments** is one of the key factors why **CARTER MANUFACTURING** has been invited to participate in a ground breaking **aviation hydrogen project.** The **Future Engine Technology** for the **Control of Hydrogen (FETCH)** project is a collaboration of the University of Bath/IAAPS, Cranfield University, along with companies; Carter Manufacturing, Moog Inc., Baker Hughes Druck and Curtiss-Wright.

The collaboration is focused on the development of the key technologies required to exploit the benefits of future aircraft hydrogen fuel systems and has secured match funding from the Aerospace Technology Institute (ATI) program. This is a joint Government and industry investment initiative, one of a number of initiatives designed to maintain and grow the UK's competitive position in civil aerospace design and manufacture.

Carter Manufacturing's contribution to this innovative project is to develop bespoke bearing solutions for liquid

and gaseous hydrogen applications and is based on their unrivalled experience in developing bearings for cryogenic applications. These include; rocket propulsion, commercial industrial pump applications, along with scientific research.

By stocking high quality bearing brands, Carter, Silverthin, KMS, NMB, THK, IBC & UNASIS in global locations including the UK, Europe and USA, along with providing local engineering support, ensures that these products are optimized in application. Furthermore, Carter's engineering team can optimize bearing designs to give exceptional performance, life and consistency to suit customers' specific requirements.

Bearing material options include races in specialty materials including 440C stainless steel, Cronidur® 30, XD15NW, 52100, M50, M50, along with bearing cages in bronze, steel, silver-plated bronze or steel, Nylon 6/6, PEEK, Vespel, Torlon®, Phenolic and titanium.

Other examples of Carter's expertise include; Rolling elements in steel, ceramic, TiC-coated 440C stainless steel and dry film lubrication coatings including moly disulphide, tungsten disulphide, diamond like coating and gold plating.

Carter has recently invested in new UK manufacturing facilities for UNASIS, their sister company, which are now operational and enable advanced manufacturing of customised special application bearings, along with aerospace bearing installation, testing and removal tools. For example, they are utilizing the latest five axis CNC machinery combined with overhauled grinding and bearing manufacturing machines purchased from a key aerospace bearing manufacture. Product quality is maintained and improved using Mitutoyo CMM and inspection equipment and specific bearing inspection and testing machines.

Karl Brundell, Managing Director of Carter Manufacturing comments, "We are delighted to be part of this ground-breaking collaboration, driving the development and innovation of this important sustainable aviation initiative." He added, "The FETCH collaboration is an excellent example of our commitment to accelerate the development of hydrogen powered aircraft and underlines our expertise in developing bearings which excel in challenging and complex hydrogen applications."

More at: https://www.carterbearings.co.uk/bearings/cryogenic-bearings

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