BARDEN

Aerospace and Super Precision

Precision Bearing Solutions For Aerospace Applications

SCHAEFFLER GROUP

BARDEN
Aerospace and Super Precision

World Leaders in the design & manufacture of Super Precision Bearings

The Company

The Barden Corporation leads the world in the design and manufacture of super precision bearings and bearing assemblies. The company is a member of the multinational Schaeffler Group which specialises in bearing technology and precision products for a multitude of applications in aerospace, industrial plant and automotive. The Schaeffler Group has plants and offices in over 180 locations around the world including 30 R&D centres.

Barden Corporation - Danbury Connecticut

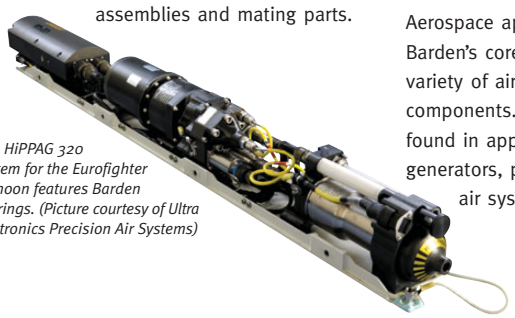
The Barden Corporation was founded over 60 years ago and now has state-of-the art bearing manufacturing facilities located in Plymouth UK and Danbury USA.

Barden Corporation (UK) Plymouth

Its activities are supported by its sister company, the Winsted Precision Ball Company, Connecticut USA, which manufactures super precision ceramic and steel balls.

The Products

Barden has an unrivalled reputation for designing customised bearing solutions. In addition to having a standard range of metric and inch size deep groove and angular contact bearings, Barden has developed a unique in-house capability to design and manufacture complex bearing assemblies and mating parts.



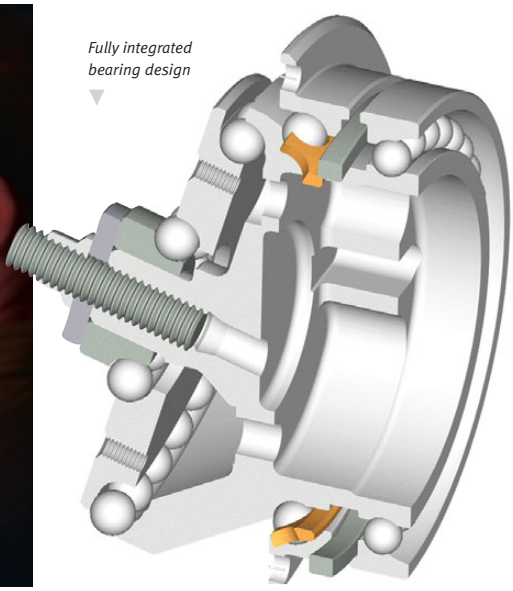
This HiPPAG 320 System for the Eurofighter Typhoon features Barden bearings. (Picture courtesy of Ultra Electronics Precision Air Systems)

Accessory gearbox bearing design with anti-rotational feature

Barden super precision bearings are manufactured to ISO P4/P2 (ABEC 7/9) standards to offer the very best in performance and reliability.

Aerospace applications form a large part of Barden's core business and include a wide variety of aircraft accessories and critical components. Barden bearings are typically found in applications such as APU generators, primary actuator motors, cabin air systems and military gyroscopes.

for the most demanding aerospace applications



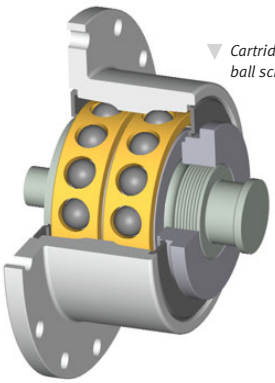
Fully integrated bearing design

Quality

Quality is paramount throughout the organisation and is applied to every aspect of design and manufacturing from raw materials through to the finished bearing. Final assembly and inspection of all Barden bearings takes place in a cleanroom environment. Barden facilities are certified to ISO 9001 and AS 9100, with full traceability, and are certified by the key aerospace companies.

Materials

Within the design process, Barden engineers use their extensive knowledge and experience to select the correct bearing materials to maximise bearing performance for a particular application.



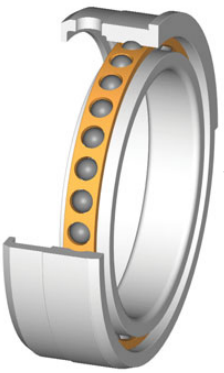
Cartridge design miniature ball screw bearing

This includes selection of ring material, ball type, cage material, type of seal and correct lubricant.

Ceramic balls are often used in extreme applications or hostile environments to improve lubricant life and reduce wear, whilst cages can be made from a range of materials such as phenolic, PEEK, steel or bronze. High performance materials are selected for the bearing rings such as SAE 52100, AISI 440C, M50 and Cronidur 30.

Customised Engineering Solutions

Using software specially developed for the Schaeffler Group, Barden products can incorporate design features such as flanges, shafts and housings which make fitting quicker, easier and more accurate.
This reduces assembly time and overall operating costs.



High speed generator bearing with extended outer ring

Performance Benefits

Barden super precision bearings remain at the forefront of bearing technology, offering end users high performance, long working life and reliable operation..... every time.

Thin section angular contact bearing for infrared imaging

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