World Class Bearings

C&U

C&U Bearings: World class quality. World class value.

The "C&U Group" is one of the world's eight largest manufacturers of high-precision bearing products. Founded in 1991, the C&U Group has shown continuous growth and achieved total sales of more than 1.2 billion euros in 2021 in the bearing sector. In addition, C&U has a strong global presence with offices in China, Germany, Japan and the United States, and employs a total of more than 10,000 people worldwide. As a globally operating automotive supplier and original equipment manufacturer in the industrial and mechanical engineering sector, we bear a special responsibility for our customers. That's why we provide sales and inventory support and offer individual service in application engineering as well as technical analysis and testing.

Our company produces over 1.2 billion high-quality rolling bearings annually in 8 major bearing manufacturing centers, 37 bearing plants and 18 vertically integrated component plants. This production and development capacity enables us to manufacture customized rolling bearings.

All of our manufacturing centers are independently certified to ISO 9001 Quality Management System, QS9000/VDA6.1 Quality Management System, ISO14001 Environmental Management System and ISO/TS 16949 Quality Management System.

We provide our customers with innovative bearing solutions through high quality products and precision components for industrial application and automotive OEM and aftermarket.

We also support you in different industries and sectors:

Automotive:

- Automotive OEM
- Automotive suppliers
- Aftermarket

Industrial:

- Agriculture and forestry
- Construction machinery
- Industrial gearboxes
- Motors/Generators
- Household appliances
- Automation technology
- Wind power
- Rail vehicles
- Fluid power
- Heavy engineering
- Machine tools

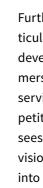
Our extensive product range includes more than 3,000 bearing types for large (up to 5000 mm outer diameter), medium and miniature sizes (from 1 mm inner diameter) with over 30,000 part numbers. This includes all standard bearing types, as well as specific developments for the customer such as wheel bearings. In addition to this complete portfolio of bearings, we also offer a wide range of forged, rolled and machined rings, as well as seals and steel cages.

Customer-oriented product solutions: C&U offers maximum flexibility on the products for our customers. The bearings are designed according to the needs of the customer's application. As our orientation is on each customer specific requirements we are able to offer taylormade products. Thereby we achieve the most effective economical solution for our customers.

New Technology Center in Schweinfurt, Germany

Currently one of C&U's biggest projects is building the new Technology Center Europe (TCE) in Schweinfurt, Germany. The TCE was established in late 2019 to provide technical support and customer-facing development capabilities. It offers our customers application engineering support with various calculation software, investigation capacities and, in the future, various bearing test rigs.

The technology center is able to perform comprehensive bearing analysis and help customers improve application performance or reduce overall costs with specialized solutions. They cover all different sectors in automotive and industrial companies. The new engineering center has an industrial hall of about 7000 sqm and an office building with a total area of about 2700 sqm,





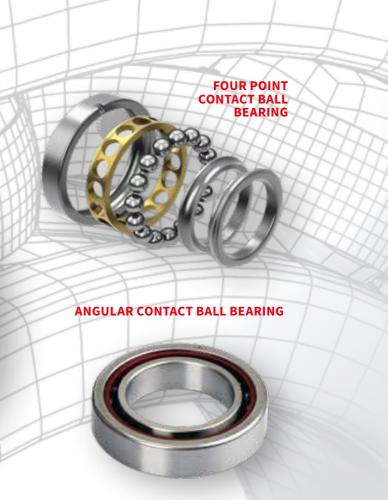


which can accommodate up to 120 employees and will be ready for occupancy by the end of 2023. Many of the engineers employed there have many years of rolling bearing experience in a wide variety of application areas.

Furthermore, we at C&U Europe are also placing a particularly strong emphasis on the area of research and development in order to continue to support our customers with high-quality as well as reliable products and services in the future and to further improve the competitiveness of our company. Our management team sees it as its special task to implement these goals and vision responsibly and sustainably to lead C&U Europe into a successful future.

Our Main Products A comprehensive range of world-class quality bearing solutions

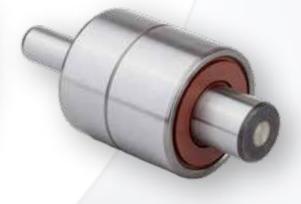




SPHERICAL ROLLER BEARING

SEALED BEARINGS

WATER PUMP BEARING



Heat treatment for highest demands



Ceramic coatings and rolling elements against current passage



For high loaded bearings like e.g. in car transmissions we offer solutions which are fulfilling target lifetimes.

Case hardening of bearing rings bring significant advantages to increase the requested bearing life time because of compressive stresses on the surface compared to through hardened rings. The soft core of the ring makes the bearing insensitive during shock

loads and interference fits. In addition the bearing is more powerful under poor lubrication conditions and high loads because the compressive stresses prevent material fatigue.

Carbonitriding of bearing rings we offer together with through hardened rings to prevent material damage under contaminated oil conditions.

Deep groove ball bearings and cylindrical roller bearings are mainly used in electric motors and generators. When using these bearings, it is particularly important to avoid the passage of current in order to reliably achieve the required system operating life.

Rolling bearings with ceramic coatings offer a costeffective solution even for large diameters.

In hybrid bearings, ceramic rolling elements are used to prevent the passage of current even at very high frequencies and at the same time significantly increase the bearing operating life.



C&U Wheel bearings

C&U is producing wheel bearing of all generations in a specific automotive plant and is delivering already several OEM customers in series. The C&U range of wheel bearings reaches from passenger car solutions with angular contact ball bearings up to maintenance free truck hub units with taper roller bearings.

C&U offers in a standard range active wheel speed encoder solutions, as well as self retaining wheel bearings with an orbital forming, in order to allow the usage of the unit without additional clamping.

In order to satisfy the increasing market requirements, C&U developed already several friction optimized solutions and successfully implemented them into the market.

C&U One way clutch bearings

The system is made of a two row bearing, in which a row can clamp the bearing and transmit a torque. A typical application is a freewheel on bicycles.







C&U bearings withstand the toughest conditions

Technology Center Europe, TCE



A wide variety of different machines are used in agriculture and forestry. Each machine and the associated application poses a challenge for all components.

Especially the moving and rotating components are exposed to extreme conditions. However, the biggest challenge is certainly the contamination sand, dirt, water and mud.

For this reason, we have a wide range of optimized solutions for applications with a high level of contamination in our portfolio.

Whether housing bearings or customized special bearings. Whether in tillage or harvesting machinery - our customers already rely on high-quality C&U bearings.



The application engineering in C&U Europe is divided into 2 areas in order to ensure industry-specific consulting for our customers.

The automotive area has several specialists with many years of experience in the different areas, such as wheel bearings or transmission mounts.

In the industrial area the specialists are set according to industry segments. This structure enables us to continuously develop our engineers and to provide our customers with the best possible application technology advice.

The core task of the application technology is the direct contact to the development departments of our customers in order to find together the optimal technical and competitive solution. Furthermore, the application technology internally also forms the bridge to our central R&D department, whereby the customers also benefit from the many years of experience from the other areas such as production and development.

In order to further optimize the development processes, C&U Europe has installed a bearing analysis laboratory in Schweinfurt. This enables a quick preliminary analysis of bearings from test rigs or other customerspecific tests.



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