

SPECIAL ISSUE 12/2010

Dear Customers,

Siemens AG has named its best suppliers worldwide for the 2010 financial year. Siemens chose Franke GmbH from Aalen as the winner in the „Global Added Value“ category. Franke had impressed with its successful transfer of main bearing production for a computer tomograph to a local partner in China – which lead to clear improvements in subcontracted supplies for Siemens production in Shanghai. „Siemens stands for innovation and sustainability – so outstanding performance from our suppliers in these categories is particularly important to us“, said Barbara Klux, member of the board at Siemens AG and responsible for global purchasing.

Our company also has more success to report. Extensive training measures for our staff during the reduced hours phase and diverse restructuring in individual departments are already paying off. New machinery with higher flow capacity and better energy efficiency are modernizing our production areas. In addition to increasing productivity, we are able to use energy and resources as effectively as possible.

By using light-weight bearings you too can make a contribution to energy saving. The current issue of our customer magazine is devoted to this topic. We are already preparing ourselves to meet our customers' future requirements with regard to quality, delivery periods and delivery reliability. All in all our company is well prepared for the recovering economy.

## The Bespoke Aluminum Bearing

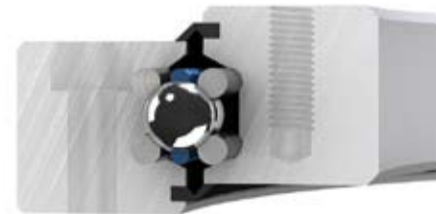
Franke Light-Weight Bearings save weight and operating power



**Franke aluminum Antifriction Bearings make things lighter for you. They are 65 percent lighter than comparable steel bearings. So they reduce the overall weight of your design and save valuable operating power.**

Thanks to the Franke principle of inlaid steel raceways, you get complete freedom with regard to the material and shape of your mating structure. In contrast to conventional

bearings, the rolling process does not occur directly between the rolling elements and mating structure, but rather smoothly on four open race rings. The raceways are matched to



the ball diameter using a special grinding process. This special construction principle produces an extremely compact bearing, which also suits very small spaces. Beyond this everything is open to you. You can choose the shape and material of the bearing assembly individually. This enables you to use light materials like aluminum, bronze, magnesium or plastic for the mating structure – without losing on load capacity, precision or service life.



Yours,  
Daniel Groz      Sascha Eberhard  
Managing Director    Managing Director



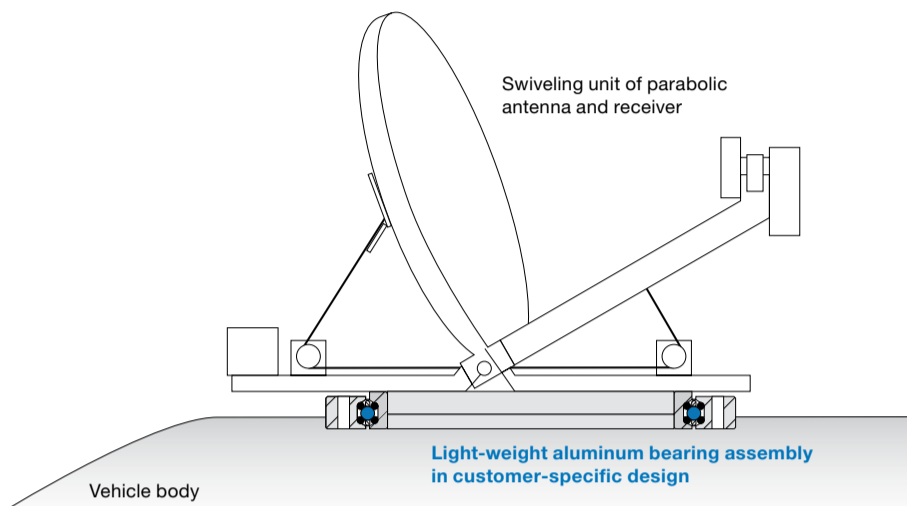
### The advantages of the Franke Light-Weight Bearing:

- Free choice of material for the mating structure
- Free choice of geometry (height, width, diameter, hole pattern)
- Suitable for special environmental conditions
- High load capacity and precision
- Long service life

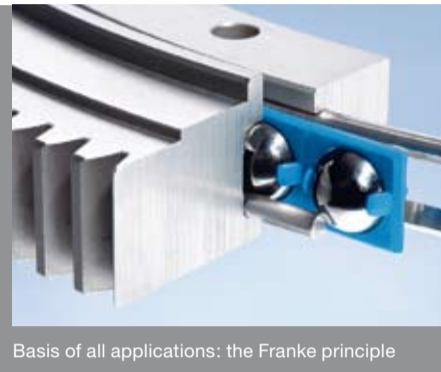
# Light-Weight Bearings Are Our Specialty

Arne Jankowski, Technical Advisor for Antifriction Bearings and Linear Systems, on the customer-specific design possibilities of Franke Antifriction Bearings

Example: mobile satellite receiver on vehicle roofs



Franke Light-Weight Bearing in mobile use



Basis of all applications: the Franke principle



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**Mr. Jankowski, what were the customer requirements for the „Mobile Satellite System“ project?**

The customer was looking for a swiveling unit for the parabolic antenna on vehicles that was both robust and light. The main bearing could not exceed a total weight on one kilogram. Additionally, we had to guarantee a lighter run with simultaneous high tilt resistance.

**How were you able to meet these requirements?**

Light-weight bearings are a specialty at Franke. The principle of inlaid raceways of spring steel or non-

corrosive facilitates free choice of materials for the mating bearing rings. The bearing used here was made from aluminum and easily satisfied the weight criteria.

**Were you able to realize the requested tilt resistance too?**

Yes. The bearing was integrated in the continuative design of the housing. Connection geometry and hole pattern were individually designed and the bearing became an integrated part of the whole system as a result. The loads were essentially borne by the bearing element, independently of the aluminum housing.

**Were there other issues that had to be considered?**

And how. As you would imagine, vehicle bodies twist when travelling, particularly on rough terrain. The bearing also had to withstand temperatures of up to 80 °C. Therefore, it was important that the rotating movement also functioned reliably under these influences.

**And you did this?**

Naturally. Franke Bearing Elements have an inner elasticity that can compensate effortlessly for such changes in the mating structure. Conventional antifriction bearings

in such situations often bend and block.

**Are there similar mounted applications in which Franke Light-Weight Bearings can show their advantages?**

Franke Light-Weight Bearings are in a class of their own in vehicle manufacturing and in flight technology where every gram counts and the environmental conditions are often very tough: low weight, insensitive to dirt and temperature fluctuations, corrosion-resistant.

**Thank you for talking to us.**

## From the Single Unit to the Large Series

All lot sizes are possible thanks to flexible production methods

Franke sees itself as a niche supplier that offers users additional benefits with customer-specific components that they cannot get anywhere else. Thanks to well-developed production methods we can produce single units just as individually as special bearings for large series.

Our customers come from medical technology, machine building, the textile industry and many other industries. Franke Antifriction Bearings enjoy a leading market position worldwide, particularly in computer tomography and circular knitting machines. Applications in the solar technology sector have been increasing

recently. The development and range of uses for the Franke Wire Antifriction Bearings are by no means exhausted. Light-weight design and reduced power become increasingly significant in times of dwindling raw materials and energy reserves.



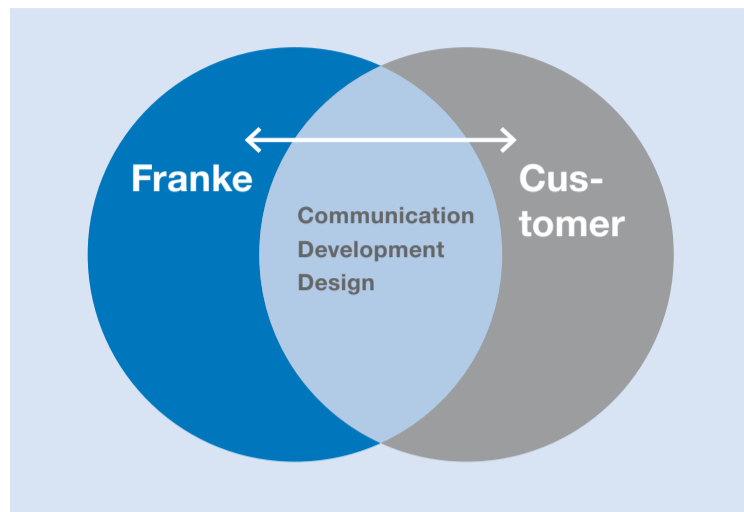
**Franke offers you many extras:**

- Multifunctional, compact bearing types
- Support from our technology team
- Energy-saving thanks to light-weight design
- Quality control and installation assistance
- Short delivery times



# Achieving the Best Together

Development partnerships bring advantages for both sides



## We offer you:

- Advice on site
- Analysis of the current situation
- Development of alternatives
- Use optimization
- Component production
- Technical workshops



Each customer has his individual requirements, each realization of movement functions has its peculiarities. With the experience of over 60 years of bearing production we see ourselves as your development partner for new innovative solutions.

Franke bearings give design engineers new design possibilities and huge freedom in the design of the mating structure with regard to the form and

material variations. Materials, for example steel, aluminum, non-corrosive, ceramic, Teflon, plastic or brass, can be combined on an application-specific basis. This enables us to fulfill future requirements with regard to environmental protection, clean room and foodstuff capability.

We orient our products technically to the individual application in close cooperation with our customers. From the conception to the construction of proto-

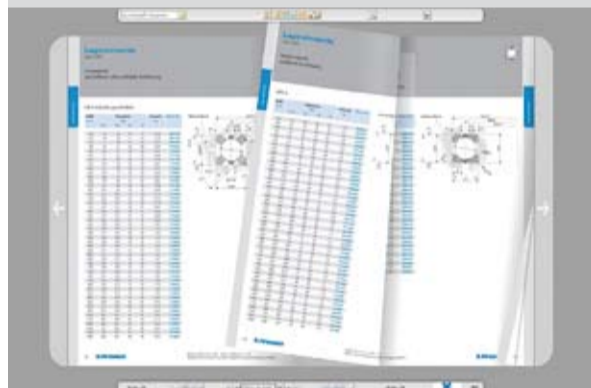
types to the extensive testing stages, we develop individual solutions that are sometimes produced on special machines we develop in-house.

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## Three Steps to the Optimum Antifriction Bearing

**1** You familiarize yourself with our product range.



Franke Antifriction Bearings and Linear Systems are available in many models and variations. Find out about the special advantages of our Bearing Elements, Bearing Assemblies, Slim Bearings and Aluminum Roller Guides. We also have a selection of motorized components like Rotary Tables, Linear Modules and Linear Motor Modules.

### We inform you

#### [www.franke-gmbh.com](http://www.franke-gmbh.com)

You will find product info, usage examples, CAD files, a convenient catalogue and the contact details for our team of advisors here.

#### In our company

Please come and visit our factory in Aalen and find out more about Franke on-site.

#### Locally to you

Our advisors and sales staff are happy to visit you and offer non-binding advice.

**2** We recommend you a solution that meets your requirements.



We develop the right solution for your application with you. This might be a standard component from the catalogue or a special production. Our design, production and assembly lines are equipped with the latest equipment to realize the right product quickly and efficiently.

### We offer extensive know-how

#### Design

Specialists in Antifriction Bearings and Linear Systems, calculation and design software, 3D designs, gear calculations, FEM analyses, screw calculation

#### Production

Modern machining centers, special machines developed in-house, competent external partners

#### Assembly

Experienced specialists, supply of prototypes in the shortest time, local assembly service worldwide

**3** You get a finished product from us of certified quality.



Franke Antifriction Bearings and Linear Systems are subject to strict production guidelines. Our quality management strictly adheres to the standards from DIN ISO 9001 and 14001.

### We focus on quality

#### Regular auditing

All internal company process are subject to regular internal and external audits.

#### Tests

Our test facilities enable 100-percent testing of the Antifriction Bearings if required.

#### Assembly help

Experienced specialists come to you if needed and train your staff to install the Antifriction Bearings.

# Impressive Multi-Talents

## Aluminum Linear Systems transfer the Franke principle to straight lines

The modular design of the Franke Aluminum Roller Guides enables us to fulfill the most diverse and unusual customer requests. Different profiles, roller shoes, special cassettes, variable track widths – all to your specifications. Franke combines the right guide with the right aluminum profile. The flexible modular system enables individual, quickly realized solutions with well-thought-out engineering.

Delivery within **5 days**

A further general trend in product development is the reduction of energy consumption. Franke Antifriction Bearings produce low friction with high load-bearing capacity and, thus, encourage energy saving.

### Economic, robust and field-proven, Aluminum Roller Guides have the following features:

- Low weight (aluminum body)
- Quiet and easy running
- Low-maintenance and clean
- High speed
- Economic price



The Franke principle defines linear movement sequences



Various aluminum profiles



The Aluminum Roller Guide Franke Dynamic



The high dynamic FTH Drive

## Franke Thinks Green

### Environmental protection is part of our company policy

As a future-oriented company, Franke GmbH integrates environmental protection in its overall company policy. Our corporate Environmental Management System is certified according to the internationally-recognised standard DIN ISO 14001:2004.

Environmental Management entails measures for the avoidance of environmental contamination. These include: reducing energy consumption, protecting bodies of water by implementing technical provisions in our production processes, as well as waste avoidance, eco-friendly procurement involving our suppliers and contractors, and the filtering of emissions along with preventive maintenance.

To implement these targets effectively, all Franke employees are urged to practise active environmental protection on their own initiative. Regular audits ensure compliance with the Environmental Management System.



## Franke worldwide

In addition to our branches in Germany, we have sales offices across Europe, the USA, the Middle East and in Asia. Thanks to our worldwide presence we are able to fulfil customer requests in the shortest way possible.

Our staff will happily come to you to discuss your needs locally and to present Franke Antifriction Bearings and Linear Systems to you in practice.

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