



Baltic Bearing Company

## Group of Companies **BALTIC BEARING COMPANY**



We are pleased to welcome our current and future partners and offer a wide range of bearings manufactured in Latvia under the proprietary brand of BBC-R



**Baltic Bearing Company**

[www.bbcr.eu](http://www.bbcr.eu)



## ABOUT THE COMPANY



The group of companies **BALTIC BEARING COMPANY (BBC Group)** unites enterprises in the territory of the European Union and the Customs Union, which have both production assets to manufacture bearings and big warehouse areas, and which ensure storage of ready products and provide a possibility to process customer orders fast, securing subsequently the required logistic operations. Distributor companies ensure promotion of the products on both Russian and world markets.

The **BBC Group** products are supplied for different industries: car, power, machine-building, metal, agricultural machinery, fuel and energy, etc.

STRATEGY,  
COMPETITIVENESS,  
FLEXIBILITY



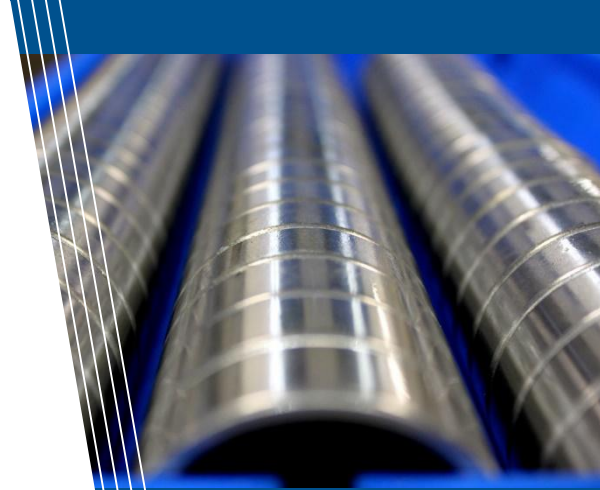
Baltic Bearing Company

## ABOUT THE PLANT

**SIA APP GRUPP** plant, which forms a part of the **BBC Group**, a manufacturing site built in Riga, Latvia, is a new enterprise equipped with modern production and measurement equipment, with quality management system in conformity with the requirements of ISO 9001:2015 and ISO 14001:2015 standards.

The plant specialises in manufacturing of ball and roller bearings of a wide product range of different design groups. The operation support facilities and the modern high-precision equipment allows the enterprise to release bearings of the accuracy grade 6 and above.

The production capacity of the plant allows manufacturing up to 11 million pieces of bearings per year and provides a possibility to master and release new types of bearing products as per order of the consumer.



**STRATEGY,  
COMPETITIVENESS,  
FLEXIBILITY**





# DISTRIBUTION



The exclusive distributor in Europe and worldwide (except for Russia and the Customs Union countries) is **SIA BBC-R**, with a product warehouse in Riga, Latvia. The exclusive distributor in the territory of Russia and the Customs Union countries is **ООО АВТОМОБИЛЬНЫЕ И ПРОМЫШЛЕННЫЕ ПОСТАВКИ** (LLC Automotive and Industrial Supplies), with a warehouse in Domodedovo, Moscow Region, Russia.

The total area of the **BBC Group** warehouses exceeds 15 000 sq.m, over 20 000 storage places (palette positions).

The registered Trade Marks are:



All products are supplied both in group (industrial) and individual packing:

STRATEGY,  
COMPETITIVENESS,  
FLEXIBILITY



Baltic Bearing Company

## DISTRIBUTION

When fulfilling orders of customers, the **SIA APP GRUPP** plant manufactures bearings of different Trade Marks, both proprietary and the ones which right of use is registered for the customers.



STRATEGY,  
COMPETITIVENESS,  
FLEXIBILITY



# DISTRIBUTION



Own sales offices of the **BBC Group**, located in: Riga, Latvia, Domodedovo, Russian Federation, and Lodz, Poland, offer the entire range of bearings manufactured by the plant. In 2019, it is planned to open an office in Berlin, Germany.

The distribution network is constantly expanding and now includes over 60 representatives. Now the **BBC** distributors represent the company in Latvia, Estonia, Lithuania, Turkey, Poland, Bulgaria, the Czech Republic, Ukraine, Belarus, Kazakhstan and the Russian Federation, where currently continuous cooperation has been established with over 40 distribution companies.

The manufactured bearings are also supplied to end users in Germany, Italy, Great Britain, Romania and other countries.



STRATEGY,  
COMPETITIVENESS,  
FLEXIBILITY





Baltic Bearing Company

## PRODUCTION

There are over 200 units of modern high-precision equipment installed in production shops, including:

machining centres, CNC machines, flat surface and centerless grinders, assembly lines of the leading manufacturers, having the EU certificates and widely used in Europe, Asia and the USA.

The technological route at our enterprise starts with the receipt from suppliers of a machined blank with standardised allowances for its further heat-treatment, grinding and assembly operations.

Heat-treatment provides parameters of the metal structure and hardness of the blank.

In the course of grinding treatment, work surfaces are formed at starting operations (edges of internal and external rings and an external cylindrical surface of the external rings). During the subsequent operations, work surfaces are formed that pass grinding and superfinishing treatment (bearing races, borders and fitment bores).

Precision of the equipment at all technological stages allows manufacturing rings to assemble bearings of the accuracy grade 6 and above.

Methods of statistical regulation of technological processes are introduced at all operations.



**STRATEGY,  
COMPETITIVENESS,  
FLEXIBILITY**

# PRODUCTION



Unit for heat treatment of blanks of bearing rings –  
electric furnace WD-HH-100x14



Electric furnace WD-HH-100x14, with a mesh belt  
and with flushing



Electric furnace WD-HH-100x14



Furnace KPM120/1200 for quenching and tempering of parts

**AUTOMATION,  
EFFICIENCY,  
RELIABILITY**



# PRODUCTION



The section of centerless and edge grinding includes 10 units of equipment:

- 5 machines for processing ring edges
- 5 machines for processing the outer cylindrical surfaces of the rings



**AUTOMATION,  
EFFICIENCY,  
RELIABILITY**

# PRODUCTION



The final grinding section includes:

- 18 automatic grinding lines and
- 15 special semi-automatic grinders



**AUTOMATION,  
EFFICIENCY,  
RELIABILITY**





**AUTOMATION,  
EFFICIENCY,  
RELIABILITY**

## PRODUCTION



The assembly floor is organised by applying both short semi-automatic aggregates for assembling cylindrical and tapered bearings, and fully automatic assembly lines for assembling ball bearings.

This equipment has devices for automated part delivery, accumulation of in-process stock, control, isolation of improper products, as well as washing and lubrication loading, thus minimising human influence on the process of assembling bearings.

In the course of assembling, all bearings are subjected to the 100% operational control of key parameters in the automatic mode.

Processes of marking and preparation for storage of bearings are also automated.



# PRODUCTION



The assembly site includes 63 units of equipment for assembling of 3 design groups of bearings



The following are used to assemble deep groove ball bearings:

- 4 automated assembly lines for bearings with the outer diameter of 40-125 mm
- 2 semi-automated assembly lines for bearings with the outer diameter of 30-140 mm



**AUTOMATION,  
EFFICIENCY,  
RELIABILITY**

# PRODUCTION



The assembly site includes 63 units of equipment for assembling of 3 design groups of bearings

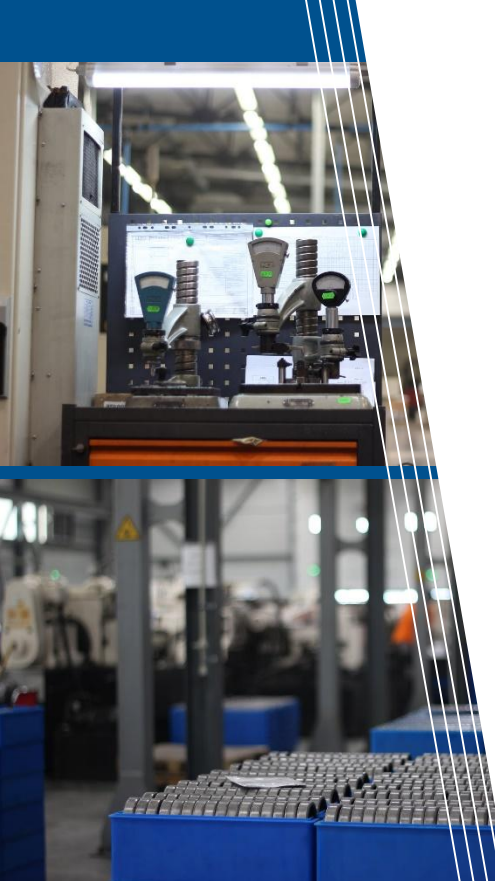


- The following are used to assemble tapered and straight roller bearings:
- 2 semi-automated assembly lines for bearings with the outer diameter of 70-200 mm.



**AUTOMATION,  
EFFICIENCY,  
RELIABILITY**





PRECISION,  
STANDARDS  
COMPLIANCE,  
STABILITY

## QUALITY CONTROL



Components for manufacturing bearings under the trade mark **BBC-R** are acquired only from certified suppliers and are made in strict compliance with the drawings developed by our company engineers.

Each batch of rings and components (rolling elements, cages, seals, bushes, washers, cases, etc.) pass acceptance by quality engineers prior to being dispatched to the plant.

In addition, control operations are performed at the enterprise, where a **three-stage control system** is organised:



# QUALITY CONTROL

## Initial Check

Each batch of components for manufacturing of bearings pass an initial check for compliance with the drawings according to the following parameters:

- Geometrical sizes;
- Hardness and structure of the metal (for rings after heat treatment and rolling elements);
- Steel grade (for all components);
- Visual inspection.



**PRECISION,  
STANDARDS  
COMPLIANCE,  
STABILITY**



**PRECISION,  
STANDARDS  
COMPLIANCE,  
STABILITY**

# QUALITY CONTROL



## In-process Control

Apart from the selective control by operators and controllers in the course of the production, most of the important parameters are controlled by 100%.

After grinding operations of mounting surfaces, every ring is checked automatically on a specialised equipment built-in the grinding line for compliance of the parameters of the treated surfaces with the requirements of the design documentation. The data are automatically entered in the database, statistics is kept for monitoring the stability of the equipment work and quality of the treatment.

At assembly operations, variability of external and internal diameter, radial clearance and vibration level are controlled for 100% of bearings automatically.



# QUALITY CONTROL

## Acceptance Control

**BBC-R** bearings are checked for compliance with the requirements of the standards in the plant laboratory, as well as in the main warehouse laboratory, immediately prior to their dispatch to the consumer.

The availability of our own metrology service allows performing metrological examination and maintenance of the entire park of measurement and control equipment.

Such operations allow for securing a stably high quality of the released products, including satisfying higher requirements declared by some consumers regarding special technical specifications for the specific types.



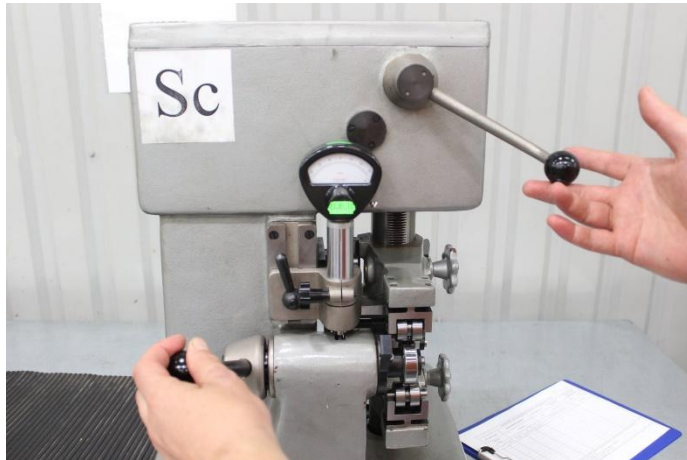
**PRECISION,  
STANDARDS  
COMPLIANCE,  
STABILITY**



# QUALITY CONTROL



Selective control of rings in the process of performing grinding operations



Checking of BBC-R bearings for compliance with the regulatory requirements

**PRECISION,  
STANDARDS  
COMPLIANCE,  
STABILITY**

# QUALITY CONTROL



**The BBC Group laboratories are unique in the degree of their material and technical resources.**

To create premises of the plant laboratory, modern non-dusting materials and technologies were used. Entry into the laboratory is equipped with an air lock chamber. Temperature and air purity are secured with an autonomous ventilation system. All these allow to create a microclimate that secures stability and quality of the performed measurement operations.

The laboratory is equipped with modern high-precision equipment of leading manufacturers, which allows to perform a wide spectrum of researches of bearings and their parts such as:

- measurement of micro- and macro-geometry parameters (degree of roughness, circular, cylindricity, flatness, straightness deviation, undulation, etc.);
- line and angle measurements;
- metallographic examinations;
- analysis of load at failure;
- vibration level control;
- examination of surface defects;
- analysis of contamination;
- analysis of magnetisation intensity

**PRECISION,  
STANDARDS  
COMPLIANCE,  
STABILITY**



# QUALITY CONTROL



The plant laboratory has the latest equipment



Extensometer LMI 01-400 PC-MA  
(EKM Jena GmbH, Germany)



Bore gauge Talyrond 585 RSU  
(TAYLOR HOBSON, Great Britain)



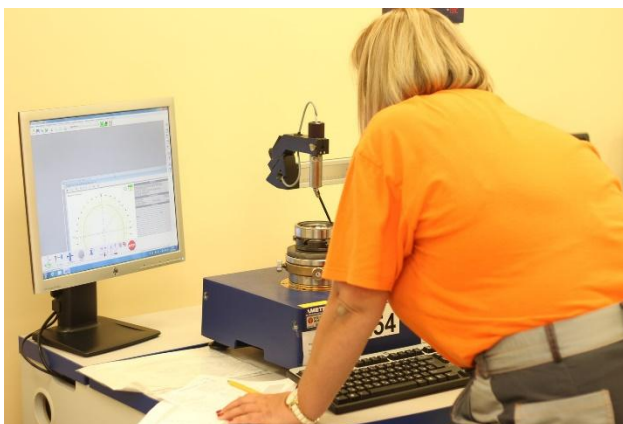
**PRECISION,  
STANDARDS  
COMPLIANCE,  
STABILITY**



# QUALITY CONTROL



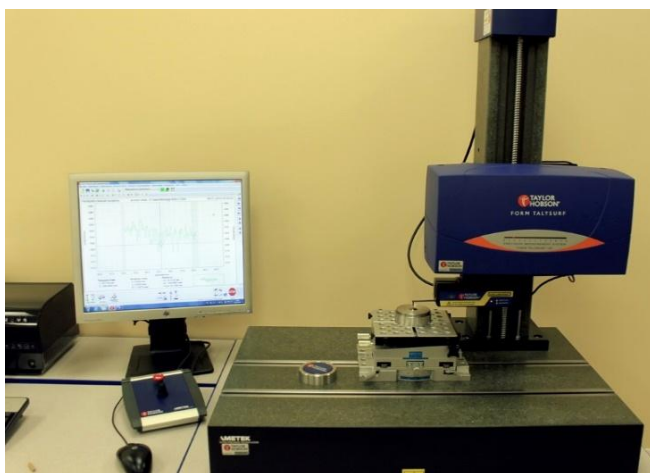
Spectrometer «SPECTROMAXx»  
(SPECTRO Analytical Instruments GmbH, Germany)



Bore gauge Talyrond 131 C  
(TAYLOR HOBSON, Great Britain)



Hardness meter INNOVATEST NEXUS 610 RSB  
(INNOVATEST Europe BV, Netherlands)



Profile recording instrument  
of the Talysurf PGI 800 series  
(TAYLOR HOBSON, Great Britain)

**PRECISION,  
STANDARDS  
COMPLIANCE,  
STABILITY**



# QUALITY CONTROL

One of the **BBC Group** laboratories, intended for ready products control, is certified by the international organisation ILAC for independency and compliance with the ISO/IEC 17025 standard "General Requirements for the Competence of Testing and Calibration Laboratories".



**PRECISION,  
STANDARDS  
COMPLIANCE,  
STABILITY**



## STAFF



The company employees have extensive experience in the industry of bearings. Many of them have a service record in the leading bearing companies of Russia and Europe. Their invaluable experience in manufacturing of bearings and rich engineering knowledge has allowed to make considerable contribution into the company development, which determines its success on the market.



EXPERIENCE,  
KNOWLEDGES,  
SUCCESS



# STAFF




Baltic Bearing Company

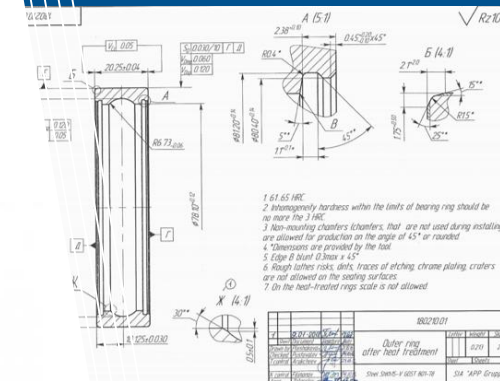
EXPERIENCE,  
KNOWLEDGES,  
SUCCESS



The staff of this department provide:

- selection of suppliers of bearing components for production;
  - technical inspection of the quality of supplies;
  - audits, point assessment and development of suppliers;
  - development and coordination of different technical documentation both with suppliers and consumers;
  - technical support of orders;
  - complaint management.
- 
- Two stainless steel ball bearings are shown in the bottom right corner. One is standing upright, showing its circular end face with a central hole. The other is lying horizontally next to it, showing its cylindrical side. Both have a highly reflective, polished metal finish.

The main goal of R&D is to increase satisfaction of the end user and competitiveness of the company.



**EXPERIENCE,  
KNOWLEDGES,  
SUCCESS**

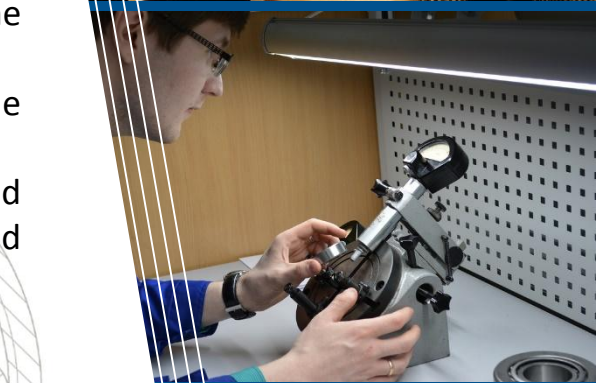


## BUREAU FOR DESIGN AND TECHNOLOGY

The availability of the company's own Bureau for Design and Technology allows to timely react to the market demands and to manufacture competitive products, continuously improving them and their quality. The main tasks of the Bureau for Design and Technology are:

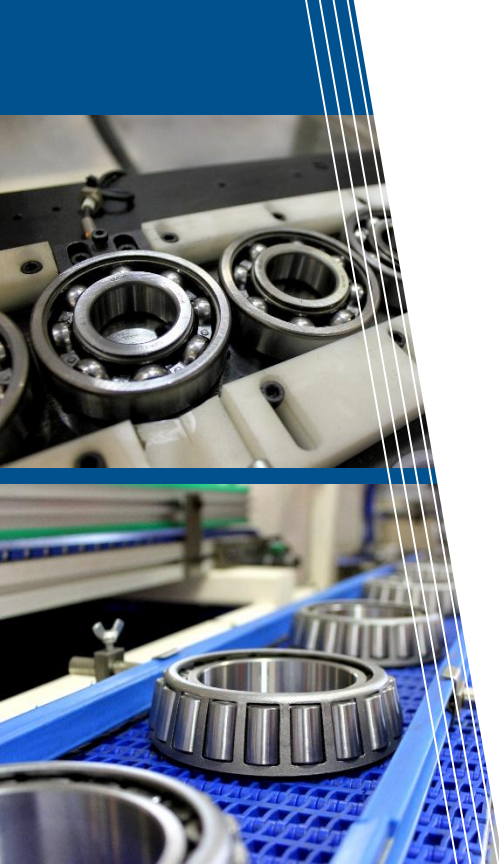
- development of design documentation that meets requirements of the consumer;
- improvement of design of the bearings, increase of their technical level and competitiveness, with account of the available world experience and demands of the market of bearings;
- introduction of the developed designs in production;
- provision of production units with the design documentation;
- conduction of required tests to determine the achieved technical level of the released bearings.

With the participation of the Bureau for Design and Technology, modern methods of failure mode and effects analysis (FMEA) have been introduced at the enterprise, due to which it is possible to obtain a more improved design, high reliability of the product, increased safety and reduction of general expenses for the release of the good quality products.



**EXPERIENCE,  
KNOWLEDGES,  
SUCCESS**





# PRODUCTS

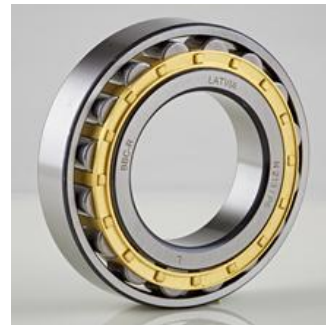


The group of companies "BALTIC BEARING COMPANY" manufactures a wide range of bearings of different design groups and sizes.

**Ball  
bearings**



**Cylindrical  
roller  
bearings**



**Tapered  
roller  
bearings**



**Spherical  
roller  
bearings**



**ASSORTMENT,  
QUALITY,  
RELIABILITY**

**Comprehensive information can be found on the website:  
[www.bbcr.eu](http://www.bbcr.eu)**

# PRODUCTS

Housing bearing units



Spherical plain bearings



Single row thrust ball bearings



Self-aligning double-row ball bearings



Comprehensive information can be found on the website:

[www.bbcr.eu](http://www.bbcr.eu)



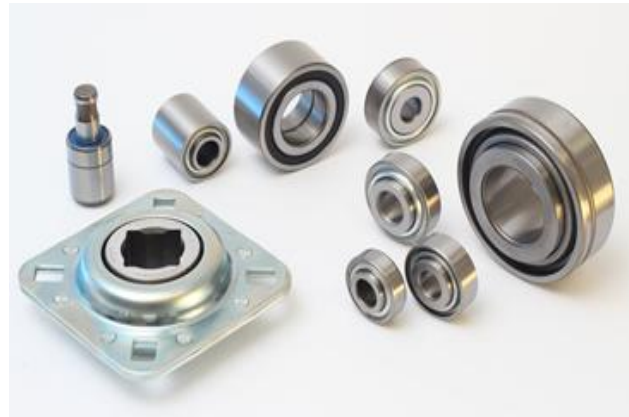
ASSORTMENT,  
QUALITY,  
RELIABILITY

# PRODUCTS

**Housing bearing units for  
agricultural machinery**



**Bearings and assemblies for harrows,  
seeders, cultivators, combines and balers**



**Ball bearings fixed in the housings**



**Comprehensive information can be found on the website:**

**[www.bbcr.eu](http://www.bbcr.eu)**



**ASSORTMENT,  
QUALITY,  
RELIABILITY**

**[www.bbcr.eu](http://www.bbcr.eu)**



# PRODUCTS



**ASSORTMENT,  
QUALITY,  
RELIABILITY**

## Environmental Policy

When performing manufacturing processes in full compliance with the environmental regulations and ISO 14001 standards, the company tries to minimise its impact on the environment and usage of harmful chemical substances.

A waste water treatment system is made and installed in the territory of the enterprise (the degree of purification is 99%). All equipment is provided with individual installations for withdrawal and treatment of emulsion vapours from the cutting area of the equipment.

The energy efficient system of illuminating production areas is based on application of LED lamps and allows to save a lot of energy.

Boiler equipment fuelled by pellets (specially-processed waste wood) secures environmental friendliness of exhaust gases.





# Integrated Management System



The Integrated Management System (IMS) of the production site of **(SIA APP GRUPP) BBC Group** complies with the requirements of the ISO 9001:2015 standard - "Quality Management Systems and the ISO 14001:2015 - Environmental Management Systems.





# Participation in International Exhibitions

## Exhibitions:

- HANNOVER MESSE 2015 / 2017 / 2018 (Hannover, Germany),
- MSV 2015 / 2016 / 2017 (Brno, Czech Republic),
- Z – 2017 (Zuliefermesse) (Leipzig, Germany),
- AGRITECHNICA 2017 (Hannover, Germany),
- ALIHANKINTA (Tampere, Finland),
- ELMIA SUBCONTRACTOR 2016 / 2017 (Jönköping, Sweden),
- Tech Industry 2016 / 2017 (Riga, Latvia),
- Metalwork (Moscow, Russia)
- Metal Expo 2015 / 2016 / 2017 (Moscow, Russia),
- Metalwork and Welding 2015 (Krasnoyarsk, Russia)
- Kama Industrial Forum 2016 (Naberezhnye Chelni, Russia),
- Metalwork and Welding 2016 (Perm, Russia),
- Belarus Industrial Forum 2016 (Minsk, Belarus)
- Gas. Oil. Technologies (Republic of Bashkortostan)
- XXII International Specialised Exhibition “Coal of Russia and Mining 2016” (Russia),
- “Machine-building. Metallurgy. Metalwork 2016 (Izhevsk, Russia) -

are an excellent opportunity for the group of companies **BALTIC BEARING COMPANY** to be presented on the market of bearings industry, as well as to demonstrate its production capacities for the purpose of establishing mutually beneficial business contacts.



**OVER 20  
EXHIBITIONS  
DURING  
THREE YEARS!**

# Participation in International Exhibitions



Baltic Bearing Company



TechIndustry 2016 (Riga, Latvia)



HANNOVER MESSE 2017 (Germany)



BearingNET User Meeting 2017 (Madrid, Spain)



HANNOVER MESSE 2018 (Germany)

RECOGNITION,  
REPUTATION,  
GUARANTEES





**You are kindly invited to become our  
partner and visit our plant in Riga, Latvia!**

SIA «BBC-R»  
Head office adrese: Uriekstes iela 18,  
Riga, LV-1005, Latvia  
Phone: + (371)660-525-25  
+ (371)660-525-20  
e-mail: [sales@bbcr.eu](mailto:sales@bbcr.eu)



# THANK YOU FOR YOUR ATTENTION!

® BBC is a trademark of BBC Group. © BBC Group 2018

The contents of this publication may not be reproduced (even extracts) unless permission is granted. Every care has been taken to ensure the accuracy of the information contained in this publication, but no liability can be accepted for any loss or damage whether direct, indirect or consequential arising out of the use of the information contained herein.