

KINEX BEARINGS
ENGINEERING TECHNOLOGIES



MORE THAN 100 YEARS
OF EXPERIENCE IN ENGINEERING



HEADQUARTERS AND PRODUCTION PLANTS



Slovakia, Bytča (HQ)
Slovakia, Kysucké Nové Mesto

ABOUT US

More than 100 years of experience in mechanical engineering, bearing manufacturing, precision component manufacturing, and high-end assembly.

With its portfolio, **KINEX BEARINGS** is one of the world's leading suppliers of standard and special rolling bearings, components and other mechanical engineering products. It offers series and piece production for a wide range of industrial applications.

In order to achieve maximum customer satisfaction and a flexible response to market requirements, **KINEX BEARINGS** integrates research and development, planning, production and comprehensive sales and after-sales service.

The required product properties are supported by our own R&D department, testing and material laboratory. We are also experienced in non-destructive quality control of individual parts in the production process.



PARTNERS

Our current customers also include major suppliers to the automotive, rail, textile and aerospace industries.

FROM IDEAS, THROUGH INNOVATIONS, TO PERFECTION ...

- World's No.1 supplier of special bearings for textile industry
- European leader in cylindrical roller bearings for railway vehicles
- One of the worlds suppliers of special bearings for water pumps for automotive
- Stable partner for customers all around the world
- Manufacturer of high precision engineering components for various industrial sectors

QUALITY

As an effective tool for the correct identification of clients' requirements and expectations as well as for monitoring and increasing their satisfaction, KINEX BEARINGS has a quality management system in place according to a number of standards:

QUALITY CERTIFICATES

- // ISO 9001
- // IATF 16949
- // AS 9100
- // ISO/TS 22163
- // ISO 14001
- // OHSAS 18001
- // Nadcap AC7102
- // Nadcap AC7108
- // Nadcap AC7114
- // GOST-R
- // DIN EN ISO 3834-2
- // EN 1090-1
- // EN 1090-2



RAILWAY INDUSTRY

The beginning of production of single row cylindrical roller bearings for railway axle-boxes dates back to 1959. Production of rolling bearings for railway vehicles is provided in accordance with requirements of European Standard EN 12080.

Single row cylindrical roller bearings used in railway industry have been tested according to European Standard EN 12080 or UIC 515-5. Development and manufacturing of bearings has established and maintains a quality management system according international railway industry standard (ISO/TS 22163-IRIS).

APPLICATION OF PRODUCTS

- axle seatings of freight wagons, passenger coaches, electric and diesel locomotives, diesel and electric motor train sets
- transmissions
- traction motors and generators
- compressor's motors, fans motors
- drive of blowers
- exciters and charging dynamos of electric and diesel locomotives



AUTOMOTIVE INDUSTRY

KINEX BEARINGS specializes in the production of water pump bearings of combustion engines for the automotive industry. The rolling bearings are assigned for OEM customers and reparation in passenger cars, trucks and tractors.

KINEX BEARINGS success is based on the superior quality of the products and production process, great innovative force and its ability to react quickly to customers special requirements. Method such as virtual simulation, production prototypes for functional test and own testing capacities reduce development times and ensure the highest possible quality products.

APPLICATION OF PRODUCTS

- in passenger cars, trucks and tractors
- arrangement of the shaft gearboxes
- gearboxes
- water pumps
- transmissions
- final drives
- engines
- accesories



TEXTILE INDUSTRY



APPLICATION OF PRODUCTS

- in non spindle spinning machines
- by housing a bearing of spinning chamber and of an opening roller bearings
- press pulley bearings
- in arrangements of textile spindles
- in texturing machines

The development of special bearings for textile industry hangs together with a solutions of arrangements of the most important parts in the textile machines.

Special double row ball bearing for textile machines are designed for high rotational speed and relatively light load. They are known for their high dimensional accuracy and smooth run warranting their high effectiveness.

These bearings are supplied according to demand of the customers complemented with some other component, e.g. resilient mounting serials. In some cases there are complete integrated bearing units which make from the technological and economical point of view possible the more effective production of textile machines.



OTHER INDUSTRIAL APPLICATIONS

KINEX BEARINGS supplies rolling bearings, necessary accessories and services to original equipment customers in machinery and plant constructions as well as to customers in the distribution and spare parts business.

In addition to the standardized types of rolling bearings in the basic and modified version, **KINEX BEARINGS** offers series of special rolling bearings, which are designed for arrangements of machines, instruments and equipments of the various industrial fields.



APPLICATION OF PRODUCTS

- engineering industry
- agriculture industry
- mining industry
- paper industry
- power industry
- food - processing industry

THE ENGINEERING TECHNOLOGIES

The Engineering Technologies division of the **KINEX BEARING** portfolio deals with the production of components for machines and technological units, as well as the manufacture of tools and machines.

On top of classic air furnaces for Heat Treatment we also have at our disposal technologies for Heat Treatment in protective atmosphere, in which we realize the heat treatment of special materials used mainly in the aerospace industry.

TECHNOLOGY

- › grinding
- › turning
- › boring
- › milling
- › shielded arc welding
- › pressing
- › spark machining
- › spark cutting
- › blacking (chemical)
- › heat treatment

We offer complete in-house services in the area of special processes certified by NADCAP.

The portfolio of Machinery division also includes service and repair of machinery as well as repair/refurbishment and sharpening of special tools.



TURNING

PROCESSED MATERIALS

- steel
- stainless steel
- brass
- bronze
- aluminium
- plastic

Operation		Minimum Width / Diameter /mm/	Maximal Width / Diameter /mm/	Maximum Length /mm/	Maximal Height /mm/	Maximálna Length of Raw Material /mm/
Turning	Classic Turning	3	ø 800	550		4 000
	CNC Turning	3	ø 500	300	300	
	Carousel Turning		ø 1 200	1 200	1 200	

MACHINE EQUIPMENT:

AN6/40A
 SAY 6/63
 MORI SAY TMZ642CNC
 SAY 8/32
 SAY 6/32
 S 50CNC
 MIYANO BNE 51SY5
 MIYANO BNA 42-DHY2
 CITIZEN CINCOM L32
 TAKISAWA TT-2100
 SV-18
 SVI-40
 SU50
 SU80
 CUTEX
 SPR100
 SBL500
 T10-TORNÁDO
 SK12 CNC
 SKIQ8 CNC



HEAT TREATMENT

PROCESSED MATERIALS

- Through hardening and Induction surface hardening of steel 52100
- Hardening by Gas quenching made from stainless steels and tool steels
- Homogenization annealing of castings and parts made from materials: Cr-Ni steels, 17-4PH and Ni alloys and special metal materials
- Solution annealing of castings and parts made from materials: Cr-Ni steels, 17-4PH and Ni alloys and special metal materials
- Stressreliving of weld parts made from steel Cr-Ni
- Vacuum brazing by Ni, Cu, Ag, stainless steels and tool steels based braze

Operation		Minimum Width / Diameter /mm/	Maximal Width / Diameter /mm/	Maximum Length /mm/	Maximal Height /mm/
Heat Treatment	Through Hardening		ø 700	1 000	
	Surface Induction hardening	ø 12	ø 25	200	
	Homogenization annealing		ø 700	1 000	
	Solution annealing		ø 700	1 000	
	Vacuum annealing		ø 700	1 000	
	Ageing		900	1 800	700
	Stressreliving		900	1 800	700
	Soft annealing		900	1 800	700
	Tempering		ø 440	500	
	Deep freezing	850	450	600	

MACHINE EQUIPMENT:

VSgr 70/100
VKQFgr 50/30/50
SDO
KPO 20/6
NP 400/80 VV
SAET
AICHELIN



GRINDING

PROCESSED MATERIALS

- steel
- stainless steel
- brass
- bronze

Operation		Maximal Width / Diameter /mm/	Maximum Length /mm/	Maximal Height /mm/
Grinding	Plain Grinding	400	1 000	1 000
	Grinding of Diameters	ø 630	2 300	
	Grinding of Threads	ø 30-254	850	850

MACHINE EQUIPMENT:

BBE 1A (sorted inline)	SASL 200x500
BBE 1A	SASL 125
BRD 60	BBE1
BB 10	MTE 350 DRD
BB 10 CNC	AGL 315
BB10 CNC – OD	SASL 400x500
Ghiringhelli	AGL 400 CNC
BDE CNC	MTI 250 SP
BDL 50	SIW5
Mecanicanova	SIW5B
BSBK	SIW5/1
BRD60	MTE 250DRD
MTE 250 SP	AGL 315 CNC
MTI 350 SP-OR	MTI 350 DRD
STANKO	SIW5UB
BRD 60 CNC	SIW5 NC
DDS 600	SIW5 CNC
SIP 315 WOTAN	MTI 360 DR-TS
IBD 250	MTD 250 SP
SASL 5D	MTD 350 SP



SUPERFINISHING

PROCESSED MATERIALS

- steel
- stainless steel
- brass
- bronze

Operation	Minimum Diameter /mm/	Maximum Diameter /mm/	Max. Product Length /mm/
Superfinishing	8	400	200

MACHINE EQUIPMENT:

KM 100
KM 40
DSY 15
DSYK
MFS 100 D
DSY 50
MTH 250
MTH 350-0
RM 360
RM 360 C1



DRILLING

PROCESSED MATERIALS

- steel
- stainless steel
- brass
- bronze
- aluminium
- plastic

Operation		Maximal Width / Diameter /mm/	Maximum Length /mm/	Maximal Height /mm/
Drilling	Classic Drilling	400	220	700
	Coordinate Drilling	2 000	3 500	1 250

MACHINE EQUIPMENT:

VR2
VS20
VH75
VH100
WKV100



MILLING

PROCESSED MATERIALS

- steel
- stainless steel
- brass
- bronze
- aluminium
- plastic

Operation		Maximal Width / Diameter /mm/	Maximum Length /mm/	Maximal Height /mm/
Milling	Classic Milling	500	1 500	600
	CNC Milling	700	700	400
	5-axis CNC machining	800	800	550

MACHINE EQUIPMENT:

FNGJ32
FA4V
WHN13CNC
HARDFORD PRO 1000AS
HERMLEC42U



ELECTRO DISCHARGE MACHINING

PROCESSED MATERIALS

➤ steel, class 11 to 19

Operation		Maximal Width / Diameter /mm/	Maximum Length /mm/	Maximal Height /mm/
Electro Discharge Machining	Electro Discharging Cutting	550	370	310
	Electro Discharging Excavation	450	400	400

MACHINE EQUIPMENT:

FANUC ROBOCUT α11C
HD8



OTHER TECHNOLOGIES

MATERIAL CUTTING

KASTOWA C7

LAPPING OF FOLLER FACES

SLZAZ 800

SCRUBBING FOR CLEANING SURFACE

B 7X7 R

WASHING

MRW 250R, MTW 320, BONETTO, DC3M 600ZA

LASER MARKING, 2D MATRIX AND QR CODE

ZANIBONI

INJECTION MOULDING OF PLASTIC

ENGEL

SHARPENING OF DIAMONDS

SHARPENING OF DISC KNIVES

PANTOGRAPH

PROTECTIVE ATMOSPHERE WELDING

ASSEMBLY OF HIGHER SETS

BALANCING



INTERNAL PRODUCTION CAPABILITIES

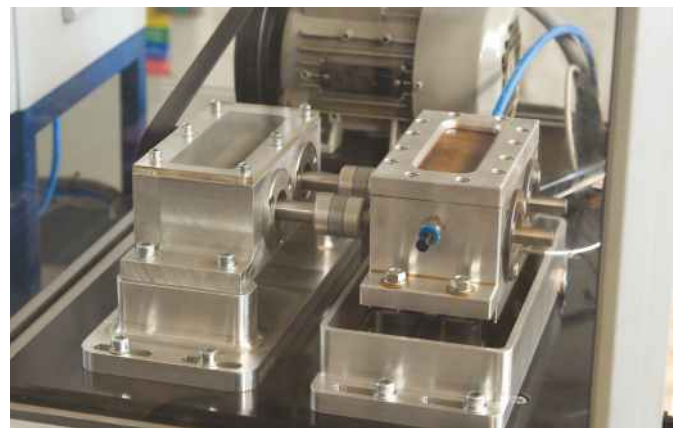
R&D

- › Concept
- › Lifetime Calculations
- › Simulations /ANSYS, MESYS/
- › Final Design



Testing Laboratory

- › Durability testing according to FORD methodology
- › Testing according to customer methodology requirements
- › Salt chamber



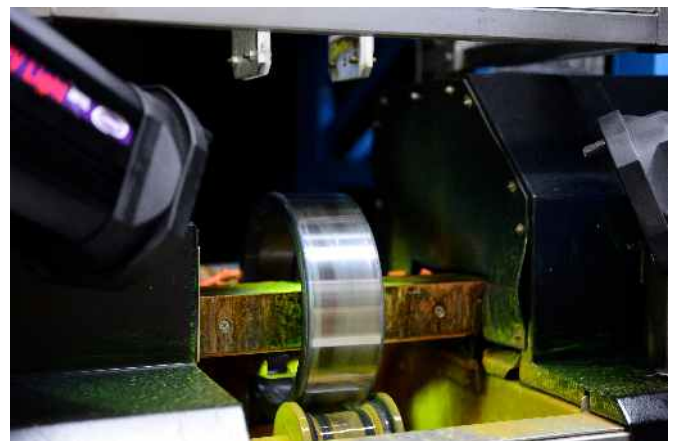
Metallurgical and Metrology Laboratory

- › Microstructure
- › Microhardness
- › Hardness
- › Chemical Composition
- › ZEISS length gauge
- › TAILOR HOBSON Circular Gauges
- › TAILOR HOBSON Profilometers
- › Measuring Microscopes KEYENCE, ZEISS
- › 3D CMM ZEISS, HEXAGON
- › Calibration Laboratory



Quality inspection

- › Dimensional checking
- › MPI – Magnetic Particle Inspection
- › TE - Temper Etch
- › UT – Ultrasonic testing
- › ET – Eddy Current Inspection





YOUR PARTNER FOR INDUSTRY



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