



Brand of **NTN** corporation

AEROSPACE

Premium bearings manufactured in France



FLYING FURTHER THROUGH AEROSPACE DREAMS AND ACHIEVEMENTS

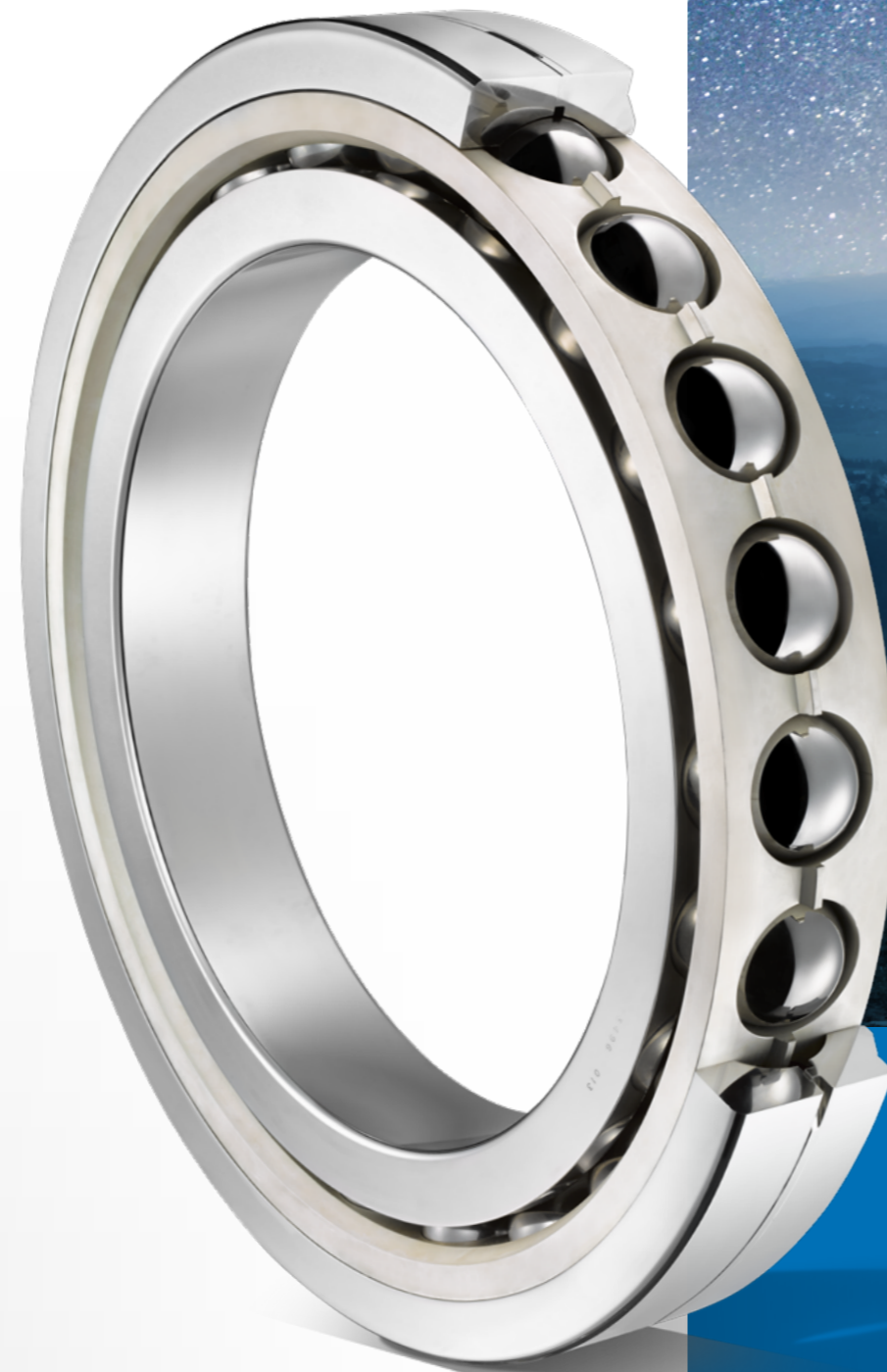
NTN aerospace teams design and manufacture customized high-performance bearings and services. Nurturing values of harmony and openness in our relations, we endeavor to establish ourselves as your preferred innovation partner for future developments. We achieve this through a comprehensive lifecycle management approach and in-house research and development, conducted with strong emphasis on collaboration.

This enables us to swiftly adapt to our clients' needs and offer premium products manufactured in France. Reliability and technical expertise are paramount in the aerospace industry, so we guarantee uncompromised rigor, product quality, and corporate social responsibility day after day.

At NTN, we strive for progress through collaborative efforts, from conception to customer satisfaction.

Reducing carbon footprint through weight reduction, high rotational speed, and longer component lifespan are critical goals. Hybrid bearings, featuring silicon nitride (Si₃N₄) rolling elements, are a solution offered by NTN that achieve all these improvements.

This bearing design is now a standard for electric vertical take-off and landing (eVTOL) aircraft equipped with aerospace electrical engines.



Make the world
a sharing
space

NTN, YOUR RELEVANT PARTNER

LIFTED BY AGILITY AND RELIABILITY

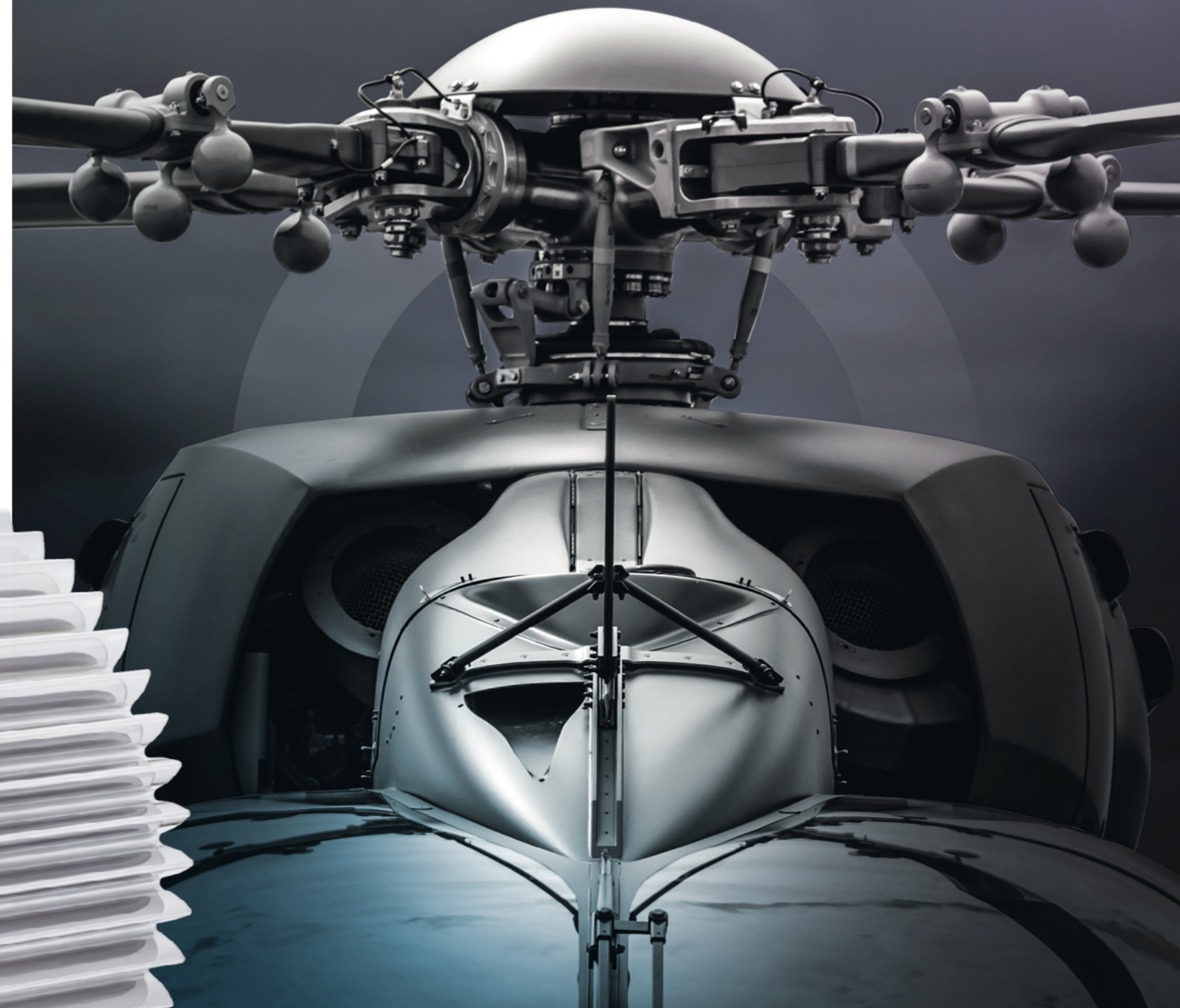
NTN is a leading provider of helicopter transmission bearings, recognized for its commitment to high standards of research, design, and development.

We take pride in being your preferred partner, ensuring uncompromised flight safety and swiftly responding to technical support and assistance needs.

At NTN, our passion for excellence drives us to continuously raise our level of expertise and support our clients for safer flight operations.

NTN is the world-renowned leader in satellite bearings for helicopters. These spherical bearings are the key components of planetary gear in the helicopter main gearbox.

The production of these bearings requires close collaboration with helicopter manufacturers who supply the naked pinion for the bearing.



Make the world
a safer space
to live

NTN, YOUR TECHNICAL ADVISOR

POWERING SYNERGIES, FROM CONCEPTION TO OPERATION

NTN bearings are a staple component in all new single-aisle aircraft engines due to their critical role in operating reliably under high speeds and temperatures.

Our close relationship with our clients is essential throughout the product development to ensure value and efficiency to bearings that meet future needs.

NTN, your technical advisor for today and tomorrow's engine bearings.



The mainshaft bearings, which are responsible for rotating and supporting the engine shaft, are among the most critical parts on a turbofan engine. They are essential for ensuring the engine's reliable operation and maintaining its longevity. NTN offers squirrel cage integrated on the outer ring.

This specific feature, with an elaborated design, provides significant benefits by enabling the engine shaft to withstand misalignments and distortions.

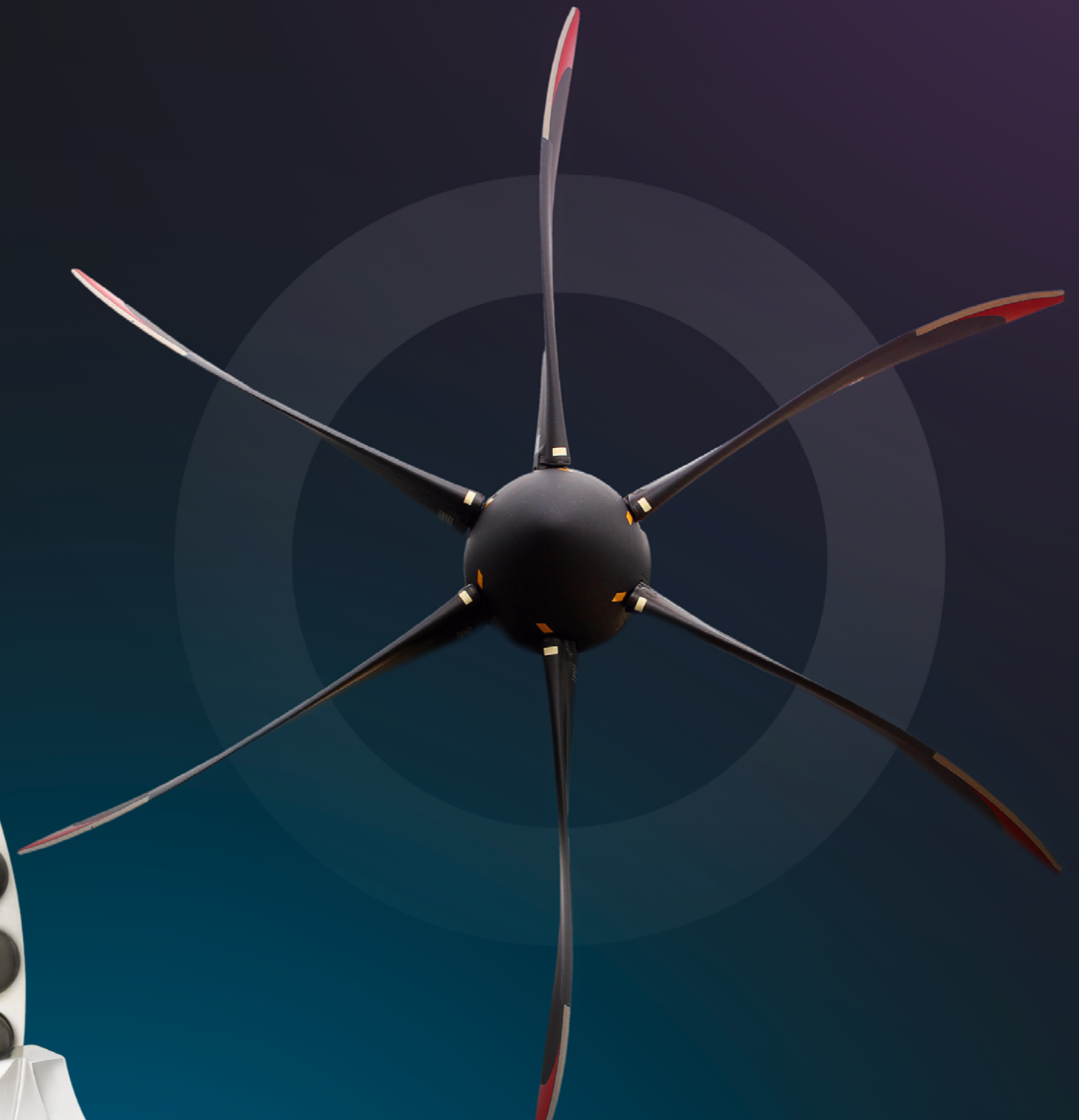
Make the world
a cleaner sky
to fly

NTN, YOUR QUALITY ALLY

PROPELLING QUALITY PRODUCTS TAILORED TO YOUR NEEDS

NTN develops bearings for numerous aircraft equipment such as propellers, electrical motors, and space applications. Our experienced engineers pay meticulous attention to each equipment design, ensuring that specifications are adjusted to provide the optimal balance between value, performance, and durability. This is achieved through close cooperation with our industrialization and production teams, who are committed to delivering unparalleled customer satisfaction at every stage.

At NTN, we care for our clients, with quality in focus from design to delivery.



This bearing is a key component of a Variable Frequency Generator. With a strong electrical insulation, ceramic balls prevent arcing without compromise to critical mechanical properties.

These balls also allow very high speed which increase generator efficiency. Reinforced with specific ring material, this bearing can work in a poor lubrication environment.

Make the world
a more reliable
space to travel

NTN, YOUR PRODUCT LIFETIME SUPPORTER

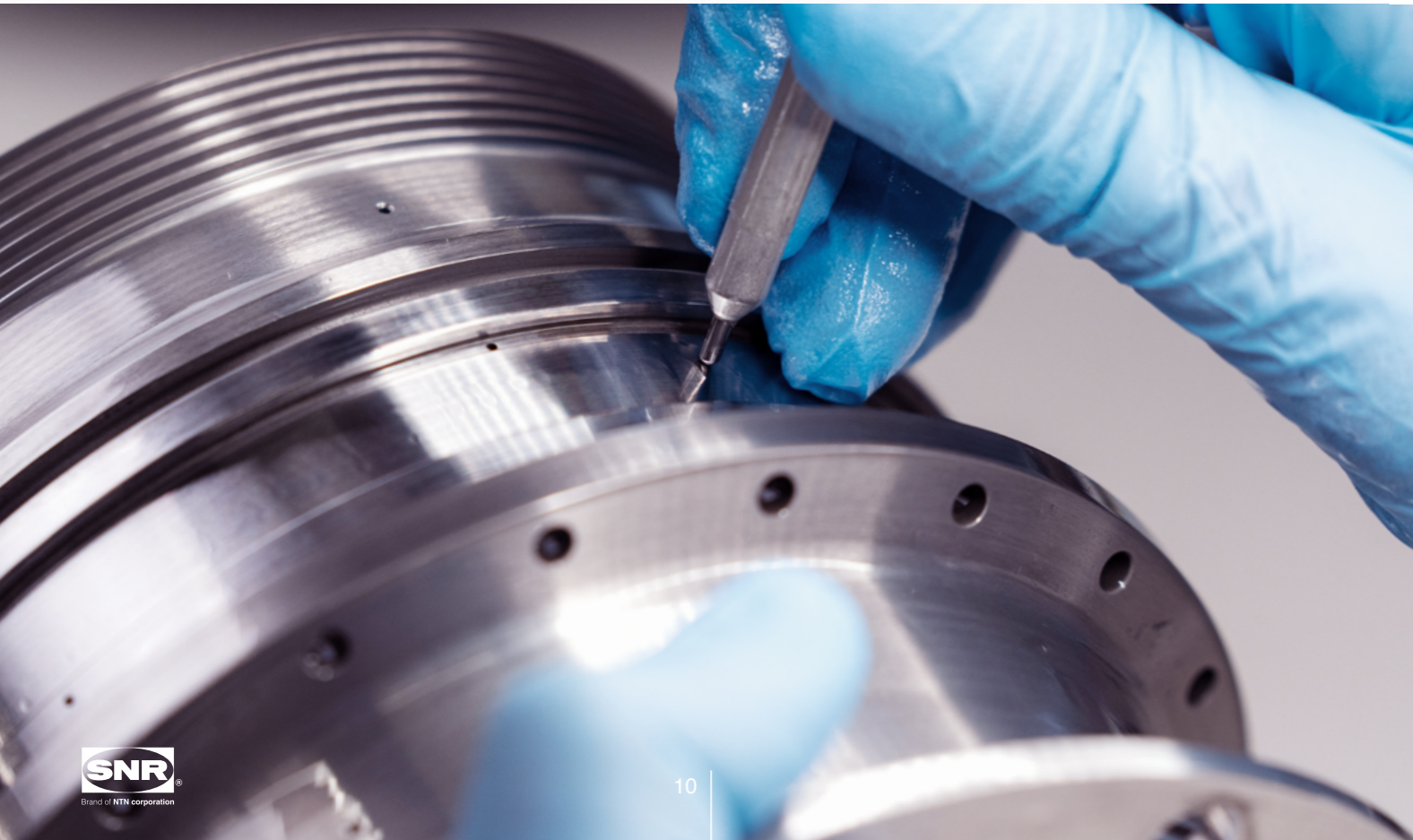
SUSTAINING YOUR OPERATIONS AND YOUR SATISFACTION

At NTN, producing components is just the starting point. Equally crucial to us is the maintenance and repair of these parts once they are in service. Our Maintenance, Repair, and Operations (MRO) staff are dedicated to restoring the original performance of your bearings while minimizing any potential aircraft or engine downtime.

We offer a vast array of personalized and certified solutions to our clients, leveraging NTN's extensive expertise, technical support, and services. Our aim is to extend the life of your bearings and maximize their performance.

Our services encompass the entire product lifecycle, ensuring comprehensive support at every stage.

At NTN, delivering quality bearings is merely the starting point. Equally crucial to us is the maintenance and repair of these parts once they are in service. Our Maintenance, Repair, and Overhaul (MRO) staff are dedicated to restoring the original performance of your bearings while minimizing any potential aircraft or engine downtime. We offer a vast array of personalized and certified solutions to our clients, leveraging NTN's extensive expertise, technical support, and MRO services. Our aim is to extend the life of your bearings and maximize their performance. Our services encompass the entire product lifecycle, ensuring comprehensive support at every stage.



Make the world
more durable through
our services

NTN, YOUR NEW MOBILITY PROVIDER

MOVING BOUNDARIES THROUGH INNOVATION

Since 1964, then "SNR High Precision" Argonay factory was driven by a relentless pursuit of progress and a commitment to exploring cutting-edge technologies. Innovation is at the core of our focus and we collaborate with partners to get there. In response to the constantly evolving aerospace market, we strive to stay ahead of the race and take on new challenges on board. NTN Crea Lab was born in 2018 to further accelerate innovation by boosting employee creativity. From workshops, prototypes, to demo sessions, our mission is to stay ahead of market needs and push further boundaries of powered flight. Our true ambition is to listen and support the birth of pioneering products and technologies.

At NTN, innovation is in the air.



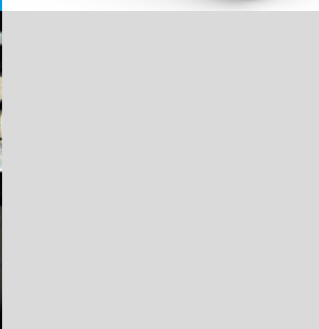
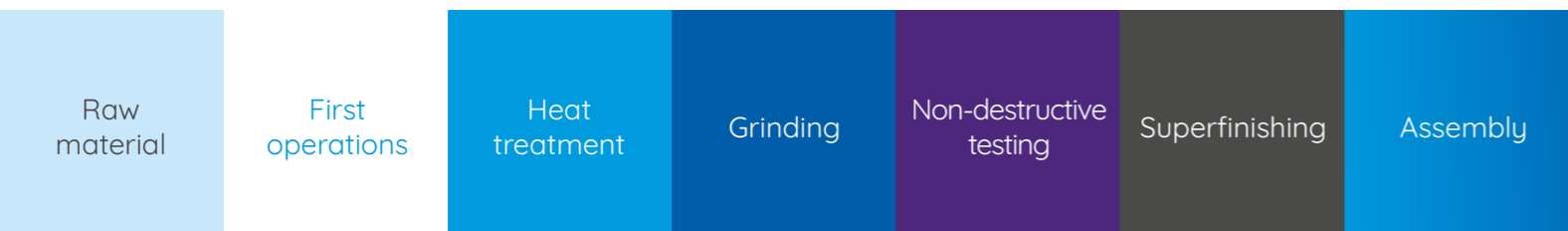
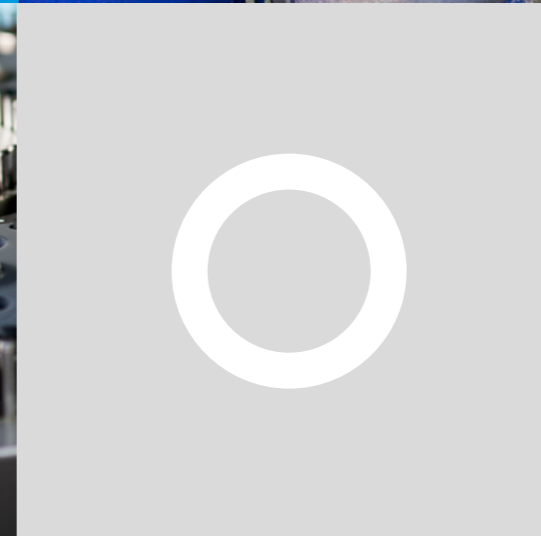
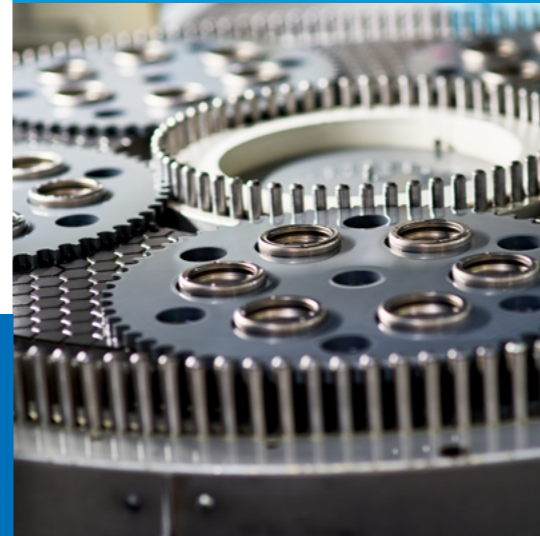
NTN has developed a unique design for a bearing able to rotate the blades of open rotor engines. Part of the challenge was to propose a sealing system and a specific complex tribological solution able to deal with the difficult lubrication conditions associated with high temperature and high centrifugal load environment.

NTN was acknowledged by the European Cleansky program for its remarkable innovation.

Make the world
a more sustainable
space to move

LIFE OF A PRODUCT

THE STAGES OF DEVELOPMENT



+ over 350
bearing ref.
per / year

+ more
than 1500
existing
bearing ref.

50 piece
average
batch size

NTN

Make the world **NAMERAKA**



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