

RELY ON EXCELLENCE

## Expertise in magnetic couplings

Products. Engineering. Service. For industrial applications.



Discover the impressive range of  
EagleBurgmann magnetic couplings



## Magnetic couplings from EagleBurgmann Hermetically sealed. Reliably safe.



When dangerous, aggressive or valuable media are processed by pumps, agitators and other machinery, leaks or reactions with air can have serious consequences. Magnetic couplings offer a wear-free, low-maintenance alternative to dynamic sealing systems for such applications.

EagleBurgmann's magnetic couplings are the top choice whenever a hermetic seal is essential and high demands are placed on reliability, safety and efficiency. This claim is backed up by years of expertise, specially designed materials and comprehensive services.

### From series production to custom manufacturing

Our product spectrum has a modular structure and ranges from standard couplings to individual, customer-specific solutions for high-performance applications. A supply system is not required. Specially manufactured ceramic sliding bearings round out the product range.

Prompt assistance is also guaranteed by our dense network of service and sales centers.

## Engineering and services – We are dedicated to finding the right solution for you engagement

Machine-specific factors, media properties, operating conditions – many parameters influence the operating efficiency of a magnetic coupling. Particularly in demanding applications, a design based on the individual operation is relevant for success.

Thanks to our in-depth knowledge of machines and processes, we can provide comprehensive support from the initial conception through to after sales service. We maintain two magnetic coupling centers for precisely this purpose: one in Halifax, Canada, and the other in Wolfratshausen, Germany.

### What to expect from EagleBurgmann:

- Top-notch seal expertise
- Excellent quality
- Solutions for every requirement
- Always close, always fast
- Reliable experts at your service

Do you have questions? Are you looking to improve the performance of your current sealing solution? Our engineers are ready to share their knowledge anywhere in the world.

**Expertise in research and development, engineering, design, production, and a wide range of services – our customers enjoy the benefits of this know-how on a daily basis.**

## Focus on operating efficiency: When design and function come together perfectly

### Good things come in threes

1

#### State-of-the-art high-performance magnets

Depending on the temperature range of the application, EagleBurgmann's magnetic couplings utilize high-performance neodymium-iron-boron (NdFeB) or samariumcobalt (SmCo) magnets. The magnets are hermetically sealed within the inner rotor and never come into contact with the product. Special geometries combined with individually calculated pole numbers are essential for ensuring high power transmission and efficiency.

2

#### Cans designed for minimal eddy current losses

Magnetic couplings with metallic cans experience eddy current losses. These increase with speed and magnetic field strength as well as the thickness and electrical conductivity of the material. We analyze the process parameters to select the right can material for optimal operating efficiency.

Our product range includes cans of stainless steel, Hastelloy®, Inconel® and titanium as well as ceramic and carbon fiber-reinforced PEEK. Other materials are also possible for special applications. Our experts would be happy to advise you.

3

#### Robust LMF sliding bearings for harsh conditions

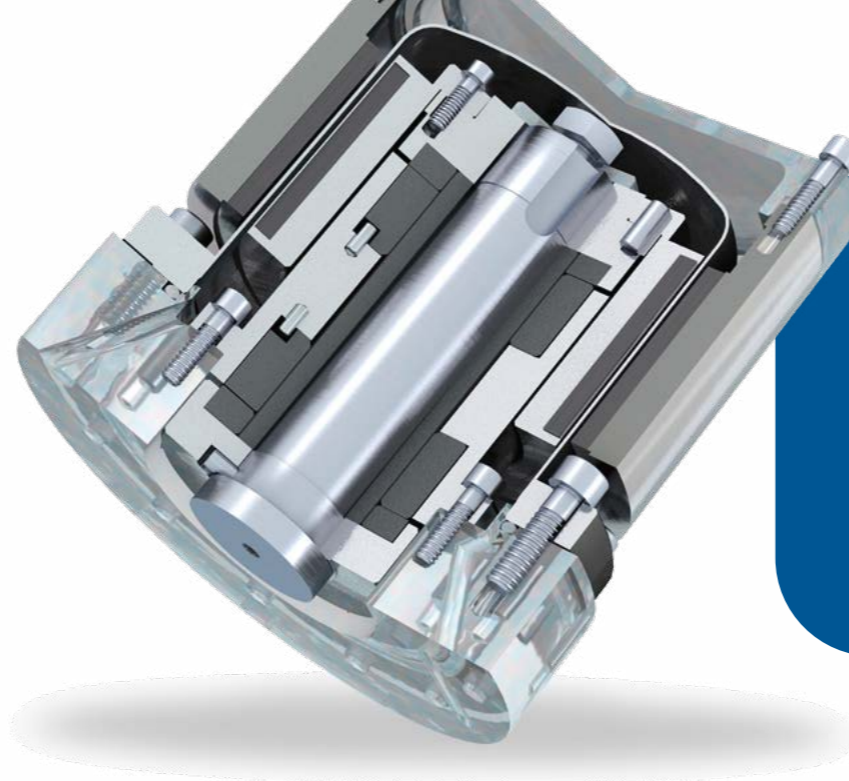
Sliding bearings from EagleBurgmann benefit from our many years of manufacturing experience as well as lessons learned from our broad range of mechanical seals. The result is a high-precision and high-performance sliding bearing that has proven itself for years in many applications around the world.



## The right product for every application: EagleBurgmann magnetic couplings

From small laboratory agitators and water pumps to multi-stage tanker ship discharge pumps and high-pressure reactors: EagleBurgmann offers the right magnetic coupling for almost any industrial application.

In addition to standard designs, we also deliver application-specific engineered solutions, such as for very high or low temperatures, integrated heating or cooling chambers, sterilizable designs or compliance with API 685. Sensor systems for temperature and speed monitoring are also available.



### eMAK

The new standard for efficiency in our magnetic coupling family. High-performance magnets of the newest generation combined with a single-walled Inconel® can make this magnetic coupling exceptionally capable and energy-efficient.

- For standard applications up to 25 bar
- In stock for quick delivery
- Enables more compact pump designs
- Fast and easy design with the configuration tool eMAKsel
- Simple switch from the MAK66 to the eMAK



### MAK66

This proven model is at home in diverse applications. Thanks to the modular design and wide range of possible materials, it can be adapted to almost any operating conditions.

- Modular system with many options for standard applications up to 25 bar
- For practically all industries
- Compact design
- Optional: Double-walled Hastelloy® can for efficient operation
- Optional: Non-metallic cans (ZrO; CF Peek)

### MAK685

This magnetic coupling is specially designed for the more demanding requirements of API 685 with regard to pressure, medium circulation, balance quality and design safety.

- For magnetically coupled pumps as per API 685
- For use in refineries, oil & gas and petrochemical industries
- Hastelloy® can for efficient operation



### MAKHE/NMB

This high-efficiency model combines many features into a single product: maximum efficiency at high pressure together with a wide range of applications. Thanks to lower eddy current losses, even large machines can be sealed with this magnetic coupling - including dry-running designs and sealing of gases.

- Broad range of industrial applications, including compliance with API 685
- High-performance can with segmented design for minimal eddy current losses (approx. 2% of the drive power)
- Transmits a wide range of torque values



### RMAK

The RMAK is a customer-specific solution for agitators in refineries and in the chemical, petrochemical and oil & gas industries. This magnetic coupling is highly customizable and can be designed for high temperature ranges, to name just one example.

- Modular system with many options for applications up to 25 bar
- Compact design
- Optional: Double-walled Hastelloy® can for efficient operation
- Optional: Non-metallic cans (ZrO; CF Peek)



### SMAK

The series for sterile agitator drives. The hygienic design with electropolished surfaces and no dead spaces makes this coupling ideal for use in the pharmaceutical, chemical and food industries.

- CIP-/SIP compatibility
- Comes ready to install and is easy to remove
- The materials, maximum pressure, transmissible torque, speed and temperature limits can all be individually specified
- FDA-, GMP-, QHD-compliant

### Looking for advice?

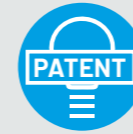
Don't hesitate to contact us - our experienced engineers will be happy to answer your specific questions.

# Specifications

	eMAK	MAK66	MAK685	MAKHE /NMB	RMAK	SMAK
Pumps	•	•	•	•	-	-
Agitators	•	•	-	•	•	•
Blowers, fans, autoclaves	•	•	-	•	-	-
Top entry drive	•	•	•	•	•	•
Bottom entry drive	-	-	-	-	•	•
Side entry drive	•	•	•	•	•	•
API 685	-	-	•	•	-	-
ATEX - on request	• (TE*)	•	•	•	•	•
FDA-compliant materials	optional	optional	-	-	optional	•
CIP- /SIP compatibility	-	-	-	-	-	•
Sliding bearing	optional	optional	optional	optional	optional	with bottom entry drive
Magnets SmCo	•	•	•	•	•	•
Magnets NdFeB	•	•	•	•	•	-
Can single walled	•	•	•	•	•	•
Can double walled	-	•	•	-	•	•
Inconel®	•	optional	optional	-	-	optional
Hastelloy®	-	•	•	optional - in combination with Teflon-GORE-TEX®	•	-
Stainless Steel	-	•	-	optional - in combination with Monel	•	optional
Ceramic	-	optional	-	-	optional	-
Peek carbon fibre	-	optional	optional	-	optional	-
Titanium	-	optional	optional	-	optional	optional
High-pressure can	-	optional	optional	optional	optional	optional
Product variants		Coolable/ heatable bearing arrangements Vertical drive with dry running roller bearing High temperature version	High temperature version	Dry running roller bearing High temperature version	Coolable/ heatable bearing arrangements Vertical drive with dry running roller bearing High temperature	Top entry drive with dry running roller bearing With weld-in/ screw-in flanges

\*Type examination

## A step ahead: Perfect for temperature-sensitive applications

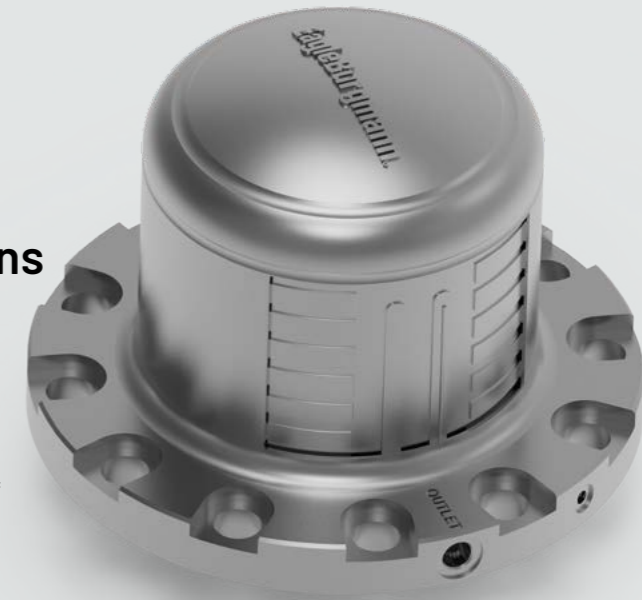


EagleBurgmann has always set the standard and is pushing the envelope once again: The new **additively manufactured titanium can SensoCan** is cleverly designed to ensure low operating costs, a high level of customization and short delivery times.

### Measuring, heating, cooling

Its biggest advantage is integrated into the wall: a specially designed and patented receiver for typical sensor systems. The temperature is measured right at the source. With the availability of direct measurement values, the interpolation of values measured at other locations is a thing of the past. This is particularly useful for applications that demand precise monitoring.

The innovative heating/cooling channels in double-walled cans are another great feature. These ensure that heating/cooling is optimally distributed throughout the can.



- Ready for condition monitoring temperature sensor
- Simple integration into existing measurement systems
- Optimized heating/cooling
- For pressures up to 40 bar
- No temperature limits
- Size can be scaled quickly and easily
- Simple break-even calculation

## Robust LMF sliding bearing suitable for pumps

Our high-performance bearing is also available in a design compatible with centrifugal or gear pumps. The pumped medium circulates through the sliding bearing to provide lubrication and dissipate heat.

- Lubricated by product medium
- Nearly wear-free with extremely long lifespan
- Radial grooves in the bearing sockets optimize the medium circulation
- Variants available for very high viscosity, high or low temperatures as well as with heating or cooling chamber



## EagleBurgmann – at the leading edge of industrial sealing technology

Our products are used wherever safety and reliability count: in the industries of oil & gas, refineries, petrochemicals, chemicals, pharmaceuticals, food, power, water and many more. About 6,000 employees contribute their ideas, solutions and dedication every day to ensure that customers around the globe can rely on our seals. With our modular TotalSealCare Service, we emphasize our strong customer orientation and offer custom-tailored services for every need. [Rely on excellence.](#)

### Wherever you need us

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