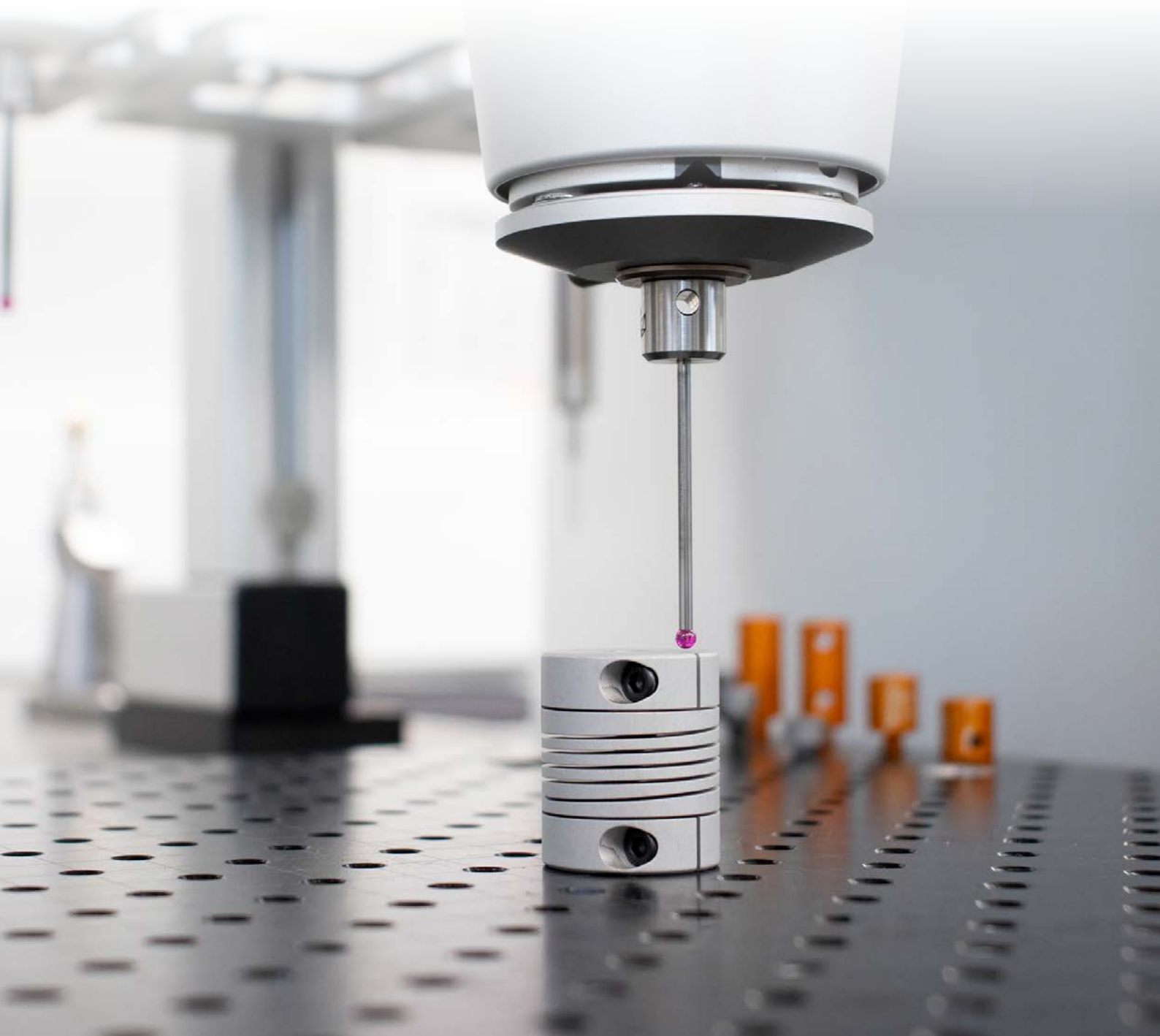
RINGSPANN®

2025

Press folder



Premium solution for 360° offset compensation

Immediately after the market launch, RINGSPANN has now expanded its range of beam couplings to seven versions made of steel and aluminium. They are now available on demand in the company's one-stop-shop. This offers drive technology designers a highly flexible premium solution for the backlash-free and angle-synchronous connection of drive and output shafts. The special advantage of is that they can simultaneously compensate for the angular and oblique misalignment as well as the radial and axial displacement of shafts in any direction.

Characteristic of the design of beam couplings is a cylindrical base body in which one or more helix-shaped grooves run. Their spiral shape gives this fastener one or more areas with a precisely calculable degree of elasticity. Another typical feature of beam couplings from RINGSPANN is that they are particularly high-quality machine elements that – apart from their adjusting screws – are implemented as a one-piece solution. This simplifies their installation and allows the integration of several properties. "Our beam couplings have no additional moving parts, are wear-free and score with a high dynamic stability. Even with large angular, oblique, radial and axial misalignments between the shafts, they ensure vibration-free, low-stress and silent concentric running, which significantly relieves all bearings located in the design periphery," explains Gerd Heumann, Account Manager at RINGSPANN.

Versions and materials

Within a few weeks and immediately after the market launch, RINGSPANN expanded the selection of its beam couplings to seven versions. They are now all available for direct ordering in the company's one-stop-shop. Basically, there are versions made of stainless steel and aluminium for fastening with set screws or clamping hubs. They differ in the number of circumferential grooves – the spirals – and their grouping. This results in a selection of single beam, double beam and cross-slotted versions, each in different sizes with different bore diameters. In addition to providing these standard solutions, RINGSPANN also offers the possibility of developing and manufacturing customer-specific beam couplings. This offer is currently mainly used by medical and food technology designers. "In the field of special solutions, we have already implemented micro couplings for micro apparatus construction or beam couplings with integrated pinions for direct connection to adjustment units and positioning systems," reports Gerd Heumann.

Torques and speeds

Depending on the design, the various beam couplings from RINGSPANN cover different areas of application. For example, the single-beam couplings made of aluminium are suitable for transmitting torques of up to 4.9 Nm, while the counterparts made of steel transmit torques of up to 8.9 Nm.

Their main area of application is the connection of shafts that rotate at up to 10,000 rpm. The double beam couplings offer higher torque capacities of up to 12 Nm (aluminium) and 23.5 Nm (steel). They are mainly used for slow-running shafts with speeds of up to 3,600 rpm, which are characteristic of drive systems in general mechanical and apparatus engineering. The cross-slotted version, on the other hand, is only available in aluminium and is suitable for speeds of up to 10,000 rpm and torques of up to 2.0 Nm.

In the case of special solutions, it is usually the specific requirements of the customers that determine the particular design and configuration of beam couplings from RINGSPANN. "This applies to both the choice of connections and the specification of the materials. We offer a lot of freedom here; the basic prerequisite is that the material can be machined with reasonable effort," says Gerd Heumann.

Offsets and displacements

Axial angular misalignments or displacements are by no means uncommon in the drive systems of mechanical and plant engineering. Beam couplings can compensate for them by minimizing their inner bars and maximizing their outer bars. If there is sufficient distance between the revolutions of the helical groove, axial displacements of up to 20° or more can be compensated for in this way. Loads caused by radial displacements place even higher demands on such couplings. Gerd Heumann explains: "If the shaft connection is not able to compensate for radial displacement, the resulting shear forces can cause considerable damage to the bearing points. The functional principle of our beam couplings counteracts this. Our standard solutions already allow a deviation of up to ±0.8 mm, and with customer-specific special solutions, the balancing capacity can be even higher." If the helix is sufficiently long, a RINGSPANN beam coupling can compensate for even a three-dimensional inclined displacement in which the drive shafts have no common plane.

Typical applications for the beam couplings from RINGSPANN are, for example, the assembly of encoders, tachometer generators or spindle drives, as well as the connection of the input and output shafts of servo and stepper motors in apparatus construction, positioning technology, automation and general mechanical and plant engineering.

Shaft couplings for all occasions

The beam couplings from RINGSPANN complement the extensive shaft coupling range of the German company. Designers of industrial drive technology will also find flange and compensating couplings, cone clamping couplings and gear couplings, steel belt couplings and pin couplings, as well as jaw couplings and disc couplings. "Our current product range covers almost all technically relevant types and offers numerous solutions for compensating axial, radial and angular displacements for nominal torques from 2.0 to 1,299,500 Nm. This opens up a great deal of freedom for engineers and designers to implement rigid, torsionally rigid or torsionally elastic connections between shafts, gearboxes, motors and machines," says Gerd Heumann. <<

Gerd Heumann
Product Account Manager
Shaft-Hub-Connections &
Couplings

RINGSPANN GmbH, Bad Homburg 16.01.2025

“From now on the entire product range”

With the establishment of its latest subsidiary in Brazil, RINGSPANN launched its 19th foreign location shortly before the turn of the year. The globally active company headquartered in Bad Homburg is thus moving to the next stage of its internationalization strategy. From the city of Vinhedo in the state of São Paolo, RINGSPANN do Brasil will supply the local mining, steel, paper and sugar industries and their machine suppliers in particular with components for the implementation of high-performance and safe drive systems.

Klaus Hepp
General Manager of
RINGSPANN do Brasil Ltda.

From its location near Santiago, RINGSPANN has been supplying the markets in Chile, Peru, Colombia and Ecuador for several years. Now the company is intensifying its presence in South America with the establishment of another foreign subsidiary in Brazil. "At present, there is no other local manufacturer that can offer such a wide range of highly available system components for industrial power transmission technology as RINGSPANN," says Managing Director Fabian Maurer, under whose direction the group of companies is pursuing a consistent expansion and internationalization course. RINGSPANN do Brasil was launched at the beginning of November 2024 and is headquartered in Vinhedo in the Campinas metropolitan region in the state of São Paolo.

The General Manager of the new subsidiary is Klaus Friedrich Hepp, who, as an experienced South America expert, sees the best opportunities for establishing RINGSPANN as a component supplier in Brazil. "Since we have been able to offer the entire portfolio of freewheels, brakes, overload clutches, couplings, drive shafts and shaft-hub connections right from the start, we are a highly attractive partner for local companies in the mining, steel, paper, sugar and bioethanol industries and their machine suppliers," emphasizes Klaus Friedrich Hepp.

Sales, engineering and maintenance

In the first stage, RINGSPANN do Brasil will initially enter the race as a sales location, but will then soon expand its range of services to include the areas of design, assembly and service. According to Klaus Friedrich Hepp, this is an important step towards gaining a foothold in the country's

key industries as quickly and solidly as possible. "In this way," he says, "we will also be available to Brazil's machine and plant manufacturers as a point of contact for all engineering and maintenance tasks in the course of this year. This includes the possibility of making customer-specific adaptations to the specific on-site conditions and providing pre-assembled smart solutions and spare parts at short notice."

Rapid growth and ambitious goals

As the General Manager reports further, RINGSPANN do Brasil has now received the first positive feedback from the market and has already been able to book the first orders from well-known players. This coincides with the expectations of Klaus Friedrich Hepp, who has a reputation as an extremely committed manager and who has ambitious goals in mind for the youngest subsidiary of the group. "I think a sales target of 10 million Euros by the end of 2027 is quite realistic," he says. The fact that plant manufacturers and gearbox manufacturers in Brazil can now quickly and easily access the steadily growing range of components in the company's one-stop-shop with RINGSPANN's market entry is also likely to prove to be an important driving force.

The launch of the second subsidiary in South America is by no means the end of RINGSPANN's international expansion. For Managing Director Fabian Maurer, this is merely a "further measure of the long-term internationalization strategy. We are constantly looking for meaningful opportunities with which we can further expand our international presence," he says. <<

RINGSPANN GmbH, Bad Homburg 27.01.2025

RINGSPANN®

Clamped, centred and aligned level

With the KFDF Flat Element Flange Mandrel, RINGSPANN offers an extremely compact precision clamping tool for optimising many turning, drilling, grinding, milling and balancing processes in gearbox construction, gear production and tool manufacturing. It scores with extremely precise concentricity, a short clamping length and a standard clamping diameter of up to 375 mm, which can be extended to up to 560 mm by using alternative clamping elements. Its flat clamping body centres the workpiece and aligns it level.

Turning and drilling of steel coupling elements, grinding carbide rolling rollers, milling aluminium gearbox covers or gear grinding of hollow shafts made of stainless steel are just a few examples of the wide range of applications of the KFDF Flat Element Flange Mandrel from RINGSPANN. They illustrate the versatility of this compact clamping fixture, whose domain is mechanical machining processes in particular, which place increased demands on precision. Apart from its concentricity of ≤ 0.01 mm, it ensures precise centring and a flat alignment of the clamped workpiece. "The uneven deformation of workpieces – a common problem, for example, when using three-jaw chucks – can be ruled out with our Flat Element Flange Mandrel thanks to complete 360° clamping," says Christoph Schulz, Product Manager Clamping Fixtures at RINGSPANN.

The KFDF is one of the group of purely mechanical precision clamping mandrels in the RINGSPANN portfolio and can be individually configured in the company's one-stop shop (web shop) in all standard variants for executable clamping diameters from 120 mm to 375 mm. In addition, the German manufacturer offers standardised Flat Elements that can be used to extend the clamping diameter up to 560 mm. Additional adaptations to different spindle connections, special workpieces or customer specifics can be realised by means of adapted holders, assembly rings, intermediate flanges or spring accumulators. "Within the framework of the geometry and the tolerance specifications of the workpieces, we can meet almost any customer request here," emphasises Christoph Schulz.

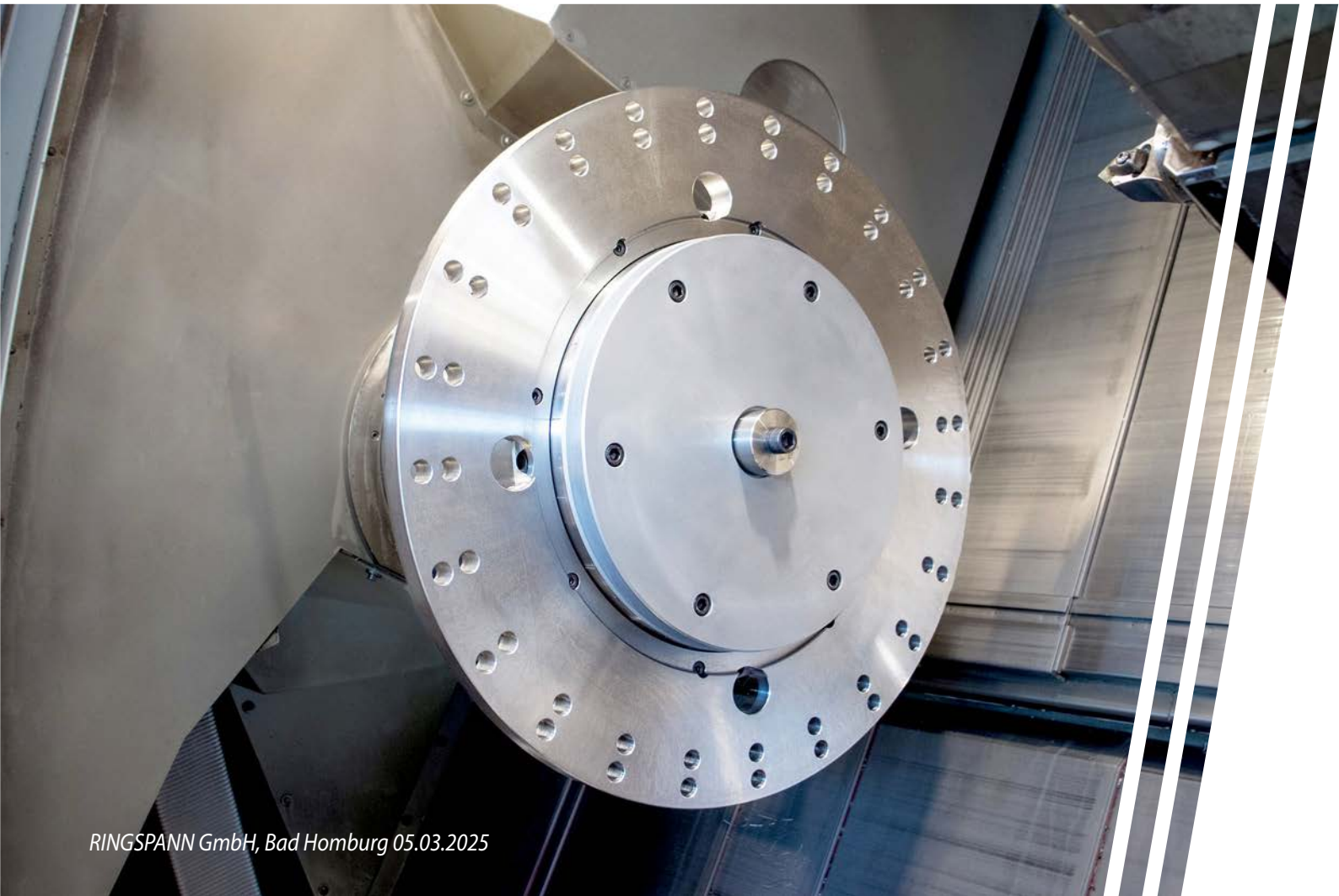
Powerful elasticity

The KFDF from RINGSPANN is a system of six main components, the functional power plant of which is a prestressed, fan-shaped, slotted, round steel disc. The clamping diameter of the elastic flat element expands due to the axial actuation force introduced, so that both a radial clamping force and an axial face tightening force act on the workpiece. The workpiece is centred and aligned level at the same time. "The face tightening is carried out against a contact surface on the outer surface or an individually designed backstop ring," explains Christoph Schulz. The pressure pin is either connected to the power clamping device of a machine tool or is operated manually. RINGSPANN offers an optional assembly for manual clamping.

Christoph Schulz
Product Manager
Clamping Fixtures

Versatile, efficient and safe

As with all clamping fixtures from RINGSPANN, the KFDF also focused on the factors of increasing flexibility and reducing set-up times in machining production. As a result, with this compact Flat Element Flange Mandrel, the company offers both manufacturers and users of machine tools a modern precision clamping system with which many turning, drilling, grinding and milling processes can be carried out extremely efficiently. Thanks to its high adaptability and easy handling, it is one of those clamping systems that can give the machining of annular and cylindrical workpieces, as well as housings with cylindrical bores, significant impetus in terms of process reliability and productivity. Since it works purely mechanically, it does not require a pneumatic or hydraulic energy supply. It is also suitable for both wet and dry processing. "And thanks to its high operational reliability and excellent concentricity, it is another clamping solution for many automated processes, especially in balancing technology," comments Christoph Schulz. <<



RINGSPANN GmbH, Bad Homburg 05.03.2025

Innovative braking technology for heavy-duty hoists

After their re-engineering, the electro-hydraulic disc brakes of the DX series from RINGSPANN are currently proving to be a trendsetter in the implementation of holding and emergency stop systems for the hoists of heavy-duty and container cranes. The first harbour crane builders decided to use these innovative industrial brakes shortly after the rollout at the end of 2024. Designed for a high number of switching cycles on fast-rotating discs, and equipped with new angle levers and energy-efficient electrohydraulic thrusters, they offer a lot of added value – both in the design of the hoists and in their operation and maintenance.

"The last few weeks have shown us that we are on the right track with the re-engineering of our DX disc brakes. Because we already received the first orders from the circle of manufacturers and operators of harbour cranes during the market launch in autumn 2024," reports Martin Ohler, Business Developer Brakes at RINGSPANN. One important reason for the high acceptance of these electrohydraulic brakes of the new DX generation is likely to be that they embody a convincing solution in every respect for the implementation of assembly-friendly, user-friendly and service-friendly holding and emergency stop systems for the hoists of heavy-duty and container cranes. There are primarily three factors that make these disc brakes an innovative solution: the substitution of numerous cast components with components made of flame-cut steel, the redesign of the angle lever and the use of a new type of electrohydraulic thruster. The small envelope dimensions of the new DX brakes are also striking. Martin Ohler explains, "Thanks to their compact design and the mounting dimensions of the base plate, they can be easily integrated into existing environments and can replace other models without modifications".

Courage to innovate demonstrated

These are extremely innovative steps that the RINGSPANN engineers have implemented in the fundamental revision of the DX disc brakes. The design of important components (e.g. the brake lever) in steel alone results in a whole bundle of advantages: the brake is slimmer, achieves a low unit price and the expense of maintenance, servicing and general overhaul is significantly reduced. The new design of the angle lever also offers decisive advantages. As Martin Ohler explains, "As a functional connection between the

Martin Ohler
RINGSPANN-
Business Developer
Brakes

electrohydraulic thruster, brake spring and brake levers, the angle lever must absorb both bending and torsional forces. However, to ensure that these forces do not have a negative effect on the brake levers and bushings, we have recalculated the angle lever and designed it to have the same high torsional rigidity as a traditional cast iron solution. In addition, the new angle lever consists of only a few parts, which is why it is easy to install and replace."

Designed for fast closing times

RINGSPANN has also achieved great success with the addition of new electrohydraulic thrusters to its portfolio. They are tailor-made for use in demanding crane technology applications such as main hoists and trolleys, generate lifting forces of up to 8 kN and score with very short closing times of <80 ms. They use a gear pump to generate pressure and the layout is 100 percent analogue – so no circuit board is required. As usual, they have a 3-phase connection. In addition, they impress with their high energy efficiency, because when the brake is open power consumption is very low thanks to pressureless circulation operation. The installation of the electrohydraulic thrusters contributes to the compact design of the brake, and its easy maintenance should please every crane operator. As Martin Ohler points out, "Wearing parts, such as solenoids, can be replaced while the thruster is installed in the brake".

Self-centring and automatic wear compensation

Apart from all this, in the course of re-engineering RINGSPANN equipped the DX brakes with a functionality that makes it easier for the OEM designer to integrate the brake into their drive system and makes life easier for crane operators and MRO personnel. For example, a standard, maintenance-free self-centring system ensures that the brake levers open synchronously, which means that the air gap on both sides of the brake disc always remains the same – even if the brake pads suffer wear and tear due to operation. A different compensation mechanism ensures that the brake pads are always parallel when released. "The distance between the pads and the brake disc is therefore decoupled from the V-position of the brake levers and is the same everywhere. This mechanism can be easily adjusted with adjusting screws," explains Martin Ohler. Another great advantage: the wear compensation of the brake pads can be readjusted not only manually, but also automatically. This is done by a maintenance-free freewheel mechanism. Since the wear compensation compensates for the increasing distance between the brake pad and the brake disc due to operational reasons, the brake can always develop the same, high clamping force.

The electro-hydraulic DX hoist brakes from RINGSPANN are spring-operated service brakes that close in the event of a power interruption and open by means of a an electrohydraulic thruster. They are designed for a high number of switching cycles on high-speed discs with diameters of 355 to 1,000 mm and provide clamping forces of up to 80 kN, depending on the design. At 230 mm and 280 mm, their brake center heights are in line with the market standard. In addition, these disc brakes from RINGSPANN are available in special versions for maritime, very cold and very warm environments as well as explosion-proof models. <<

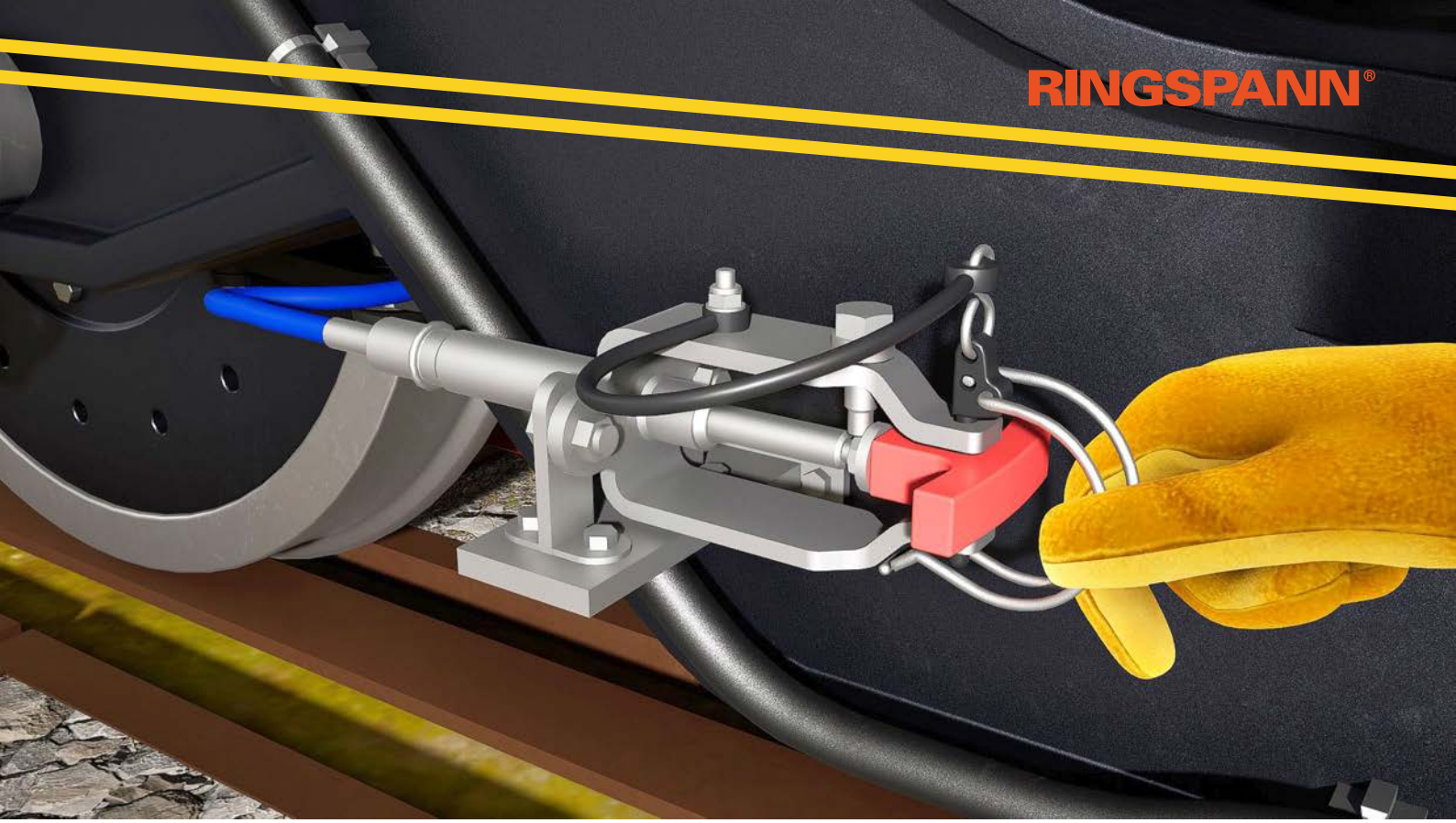
RINGSPANN GmbH, Bad Homburg 25.09.2023

Ventilation device alternatives and sensory intelligence

The DX brakes can be equipped with various ventilation devices manufactured by RINGSPANN. They are suitable for braking torques from 1,700 to 28,100 Nm and clamping forces from 9.5 to 80 kN. Their function is to release the brake via an electrohydraulically generated counterforce to the brake spring. To do this, an electric motor, an impeller or gear pump and a piston cylinder interact inside them. Also important: RINGSPANN offers a large selection of sensors for DX brakes. Inductive sensors are standard for monitoring brake release, brake locking, pad wear and manual unlocking. Sensors of other types are optionally available, measuring probes with ATEX certificate and SIL approval, load measuring pins for measuring contact force, analogue sensors for checking reserve stroke as well as wear and temperature of the brake pad.

Innovations for harbour crane hoists

In a new brochure, RINGSPANN has clearly summarised its drive solutions for main and boom hoists and trolleys of harbour cranes. Designers, operators and maintenance staff of harbour and container cranes will find valuable information here on electro-hydraulic disc and drum brakes, pin and jaw couplings with brake discs, emergency stop and storm brakes, hydraulic power units and systems for efficient brake control and operating status monitoring. In addition, RINGSPANN describes how intelligent braking technology can be used to eliminate harmful flank changes in the gearbox and minimise the risk of overspeed and gearbox failure. Last but not least, the reader learns how to achieve gentle, safe and low-wear hoist operations with adaptive braking technology.



Mechanical remote controls for railway technology

As purely mechanical remote controls, bidirectional push/pull cables from RINGSPANN RCS have proven themselves in many emergency and safety systems worldwide. In international railway technology, these control elements can be found, for example, in maintenance and parking brakes, door releases or devices for switch disconnection of overhead lines. Their application does not require mains power or the use of hydraulic or pneumatic units. Compared to rigid rod constructions, they usually prove to be more space-saving and easier to install.

Unlike traditional Bowden cables, push/pull cables from RINGSPANN RCS have a bidirectional effect. This means that they can transmit both pulling and pushing forces and movements. This is particularly important in emergency, maintenance and safety systems, which require a high level of functional-kinematic reliability when manually triggering, locking, setting and operating. No less relevant is the fact that, as purely mechanical remote controls, they are completely independent of any power or media supply. In addition to many other market segments, the company's push/pull cables are therefore also used in railway technology, in the field of wagon construction and in the area of tensioning technology. Internationally widespread applications include venting systems for parking brakes, emergency locks and releases for automatic doors, and switch disconnectors on overhead lines.

Safe switching over 100,000 times

In overhead and power line technology, push/pull cables from RINGSPANN RCS are entirely in the service of occupational safety. As a central component of the disconnecting system, they ensure that all maintenance work on the overhead lines of the traction power systems and on the tracks can be carried out without any health risk to MRO personnel. A push/pull cable that is now often used for this purpose is a special version of the type 284-H from RINGSPANN RCS. This is a high-quality cable system with stainless steel end parts and PTFE-coated core, which proves to be extremely smooth and permanently functional at temperatures from -50° C to +90° C. Its sheath is made of a material with above-average UV resistance. "Like other variants, this push/pull cable has passed extremely demanding field tests. It completed over

100,000 switching cycles without any problems," reports Robert Lacko, Sales Manager of RINGSPANN RCS. Operators of traction power systems benefit from the use of this mechanical remote control system in other areas as well: in contrast to the rigid, assembly- and maintenance-intensive hinged rods previously used primarily for disconnectors, the push/pull cable proves to be the much more flexible alternative. It is easy to install, easy to lay and requires no maintenance.

Safe and easy release

Another area of application for power-transmitting cable systems from RINGSPANN RCS is the routine repair and safety inspection of wagon bogies. In this case, it is a 278-V type remote control that acts as a mechanical emergency release cable for the parking brakes. It is needed so that the parking brakes, which work automatically in normal operation, can be opened manually for service purposes and shunting in workshop mode. "To ensure that this is done safely and easily, the pull cable can be equipped optionally with an integrated spring reset and a matching T-handle," explains Robert Lacko. Thanks to its high flexibility, the 278-V remote control system was also very easy to integrate into the existing disc brake design of the bogie. The short idle stroke also proved to be an advantage.

Integrated emergency solution

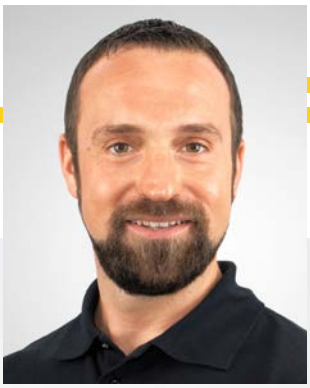
Mechanical cable systems from RINGSPANN RCS have almost established themselves as a standard solution in the emergency releases of automatic wagon doors. In many places, it is a high-quality Bowden cable that is installed directly in the door mechanism. This ensures that the door can be locked or unlocked in an emergency or in the event of technical malfunctions. "In this railway application as well, our cable systems are able to impress with very low friction coefficients, maintenance-free operation and a long service life," says Robert Lacko.

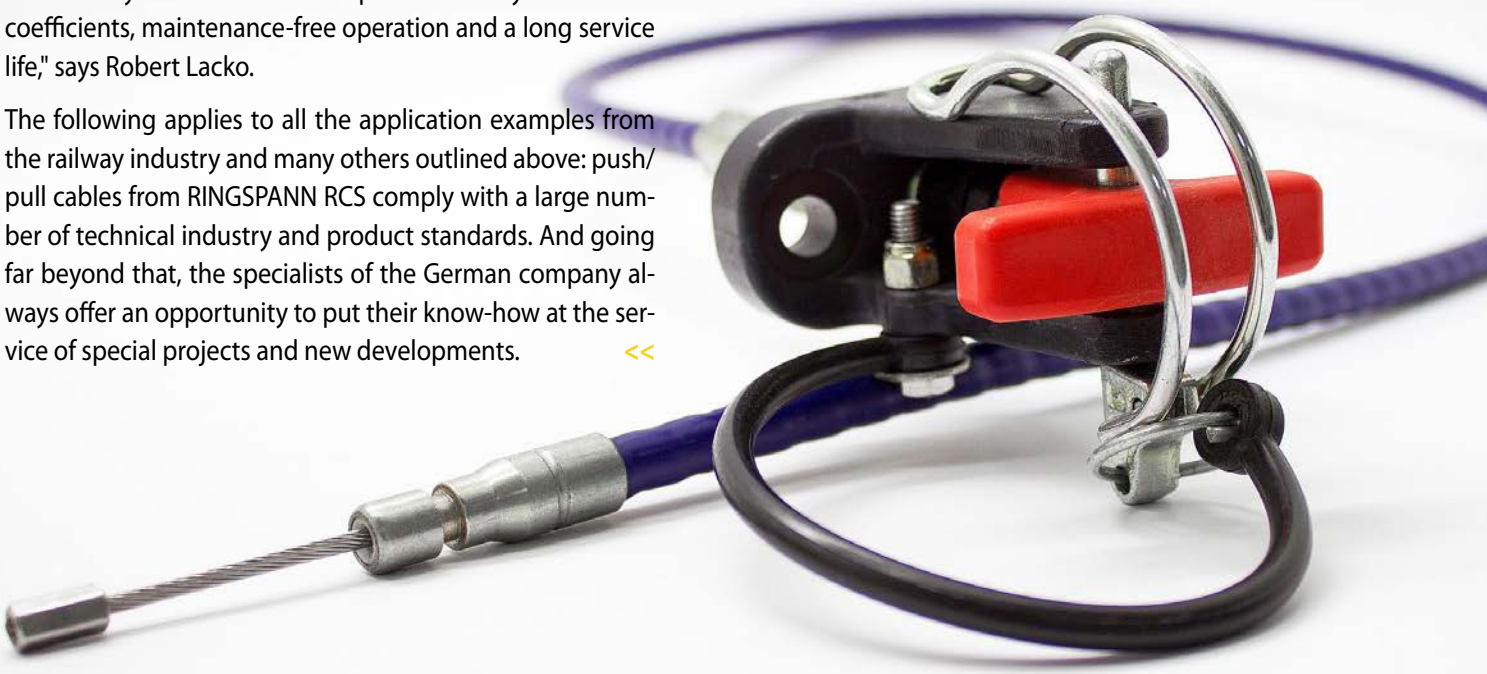
The following applies to all the application examples from the railway industry and many others outlined above: push/pull cables from RINGSPANN RCS comply with a large number of technical industry and product standards. And going far beyond that, the specialists of the German company always offer an opportunity to put their know-how at the service of special projects and new developments. <<

Bidirectional and flexible

Basically, push/pull cables from RINGSPANN RCS are flexible mechanical transmission elements that are characterised by high-quality workmanship, excellent sliding properties and long service lives. In their function as currentless, maintenance-free remote controls, they are used in kinematic-constructive environments in which it must be possible to transmit forces and movements between two distant locations in both the direction of pressure and tension. Under these conditions, cable systems from RINGSPANN RCS prove to be extremely functionally reliable operating elements – not least thanks to their fidelity to length. They meet high demands on accuracy and can also be installed in tight radii.

Robert Lacko
Head of Sales of
RINGSPANN RCS GmbH

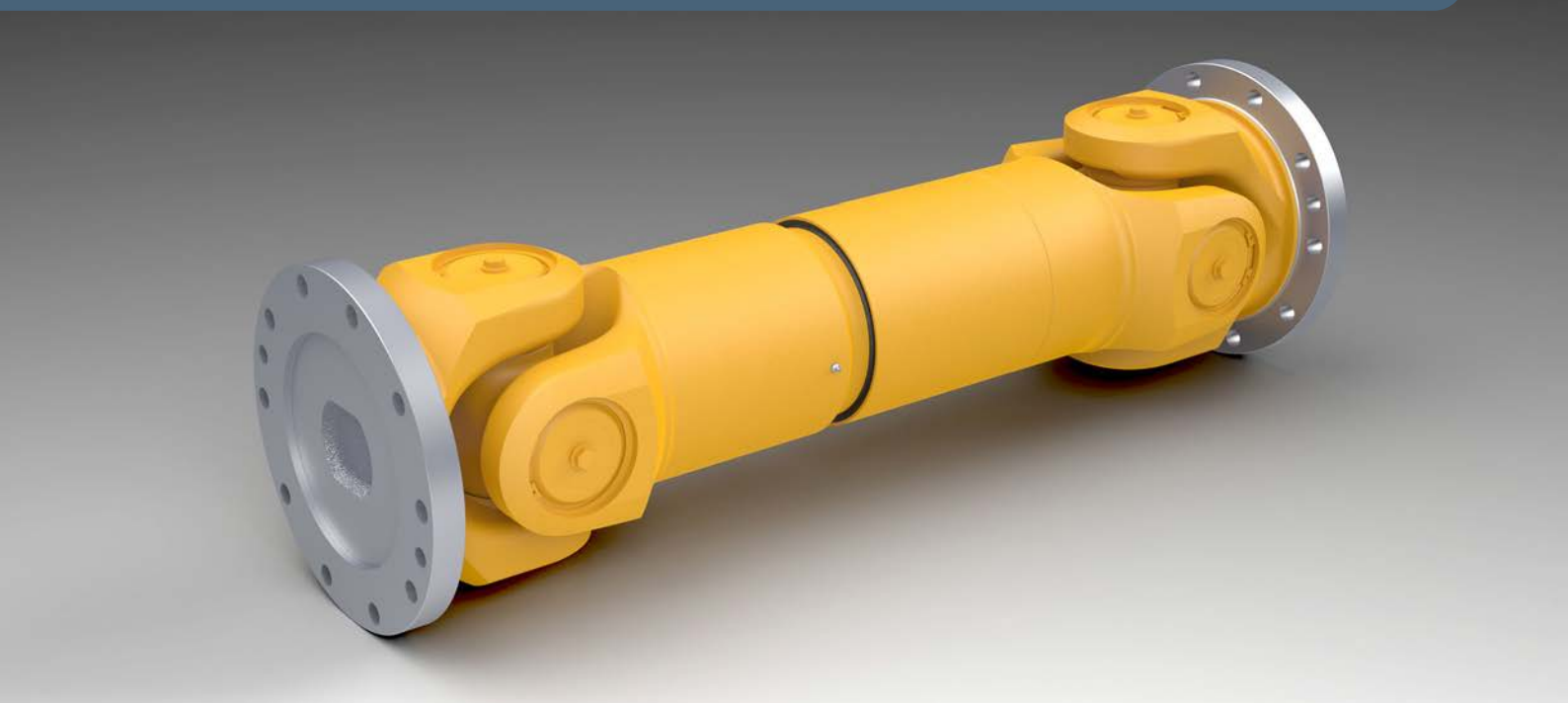




RINGSPANN GmbH, Bad Homburg 24.04.2025

RINGSPANN®

With closed eyes to peak performance



RINGSPANN Kempf has launched a new cardan shaft series as the first milestone in its latest product offensive. The company offers cardan shafts for torques of up to 290000 Nm (catalogue torque Mk) and thus now represents the upper performance peak in the current portfolio of the renowned manufacturer. This premium product Made in Germany opens up further optimization potential in particular for drive technicians in the paper processing and packaging machine industries, as well as plant manufacturers in the international steel, oil and gas industries.

Jochen Helfrich
General Manager of
RINGSPANN Kempf GmbH

The integration of Kempf Universal Cardan Shafts into the RINGSPANN Group at the end of 2024 provides the traditional German cardan shaft manufacturer with new, far-reaching development and sales prospects. This is being expressed at present, among other things, in the current product and image offensive, in the course of which RINGSPANN Kempf is expanding its range of gimballed cardan shafts with an additional series. "With a torque capacity of up to 290000 Nm (MK), the new 160 series now marks the upper performance peak of our broad-based cardan shaft range," says Jochen Helfrich, Managing Director of the company. Cardan shafts with such above-average catalogue torques are of particular interest to manufacturers of drive systems for heavy-duty systems – for example, for steel production or oil and gas extraction. For many other areas of mechanical engineering, plant engineering and vehicle construction, on the other hand, it is important that RINGSPANN Kempf is now able to offer an extraordinarily large and finely graded selection of cardan shafts, which is now provisionally at the peak with the new 160 series. In concrete terms, this means that the company now provides small, medium and large cardan shafts with torque capacities from 3200 Nm to 290000 Nm ready for installation in 19 series. With this enormous range, it is just as attractive a supplier for manufacturers of paper

processing and shredders, for example, as it is for developers of drive units for railway technology, shipbuilding and energy technology. "Currently, it is the paper and packaging machine industry in particular that is increasingly perceiving us as a premium partner for high-quality cardan shafts," reports Jochen Helfrich.

Added value through closed-eye design

The new cardan shafts of the 160 series are high-quality top products Made in Germany. Both their design and their production are based on an expertise that is the result of many decades of experience in the field of cardan shaft production. This is reflected in various technical features that are typical of RINGSPANN Kempf products. "For example, we rely uncompromisingly on the closed-eye design. This means that the new 160 cardan shafts also have closed bearing eyes. Especially in demanding, critical applications, this design detail offers considerable advantages over a split-eye design," emphasizes Jochen Helfrich. In the closed-eye design, the clevis and bearing housing are made of one piece, which ensures ideal load distribution between journal, bearing and clevis. There are no screws or gears in the clevis that require additional maintenance or could cause premature wear or corrosion. Since there is no installation space for screws and gears to consider, the bearings can be dimensioned as large as possible. For heavy-duty applications, it is also highly relevant that the one-piece clevis bearing bore significantly increases the service life of the bearings. A further contribution to reduced MRO expenditure is the fact that all clevis parts at RINGSPANN Kempf are compatible across all assemblies. For the production of the cardan shaft components, high-quality quenched and tempered, case-hardened and structural steels are used without exception.

Flexibility through length compensation

The new cardan shafts have rotation diameters of 390 mm, and their connection diameters range from 390 to 480 mm. They have a proven radial-axial combination seal system, and their high-quality bearings are the result of close cooperation between RINGSPANN Kempf and well-known German rolling bearing manufacturers. The length compensation (DIN-5480-200x3), which is manufactured with a high-precision elvolvente profile, opens new wide areas of application and offers flexibility in installation. The cardan shafts can be pushed together to an assembly length of up to 1200 mm. Their maximum diffraction angle is 18°. They are delivered in a low-maintenance or – depending on the customer's requirements – maintenance-free version. The balancing of the cardan shafts is also customer oriented. It complies with the DIN ISO 1940-1 standard (formerly VDI 2060) using the G16 or G40 balancing quality levels. "As with all our cardan shafts, the new series 160 is custom-made according to the customer's specifications or application-specific requirements," says Jochen Helfrich. <<

After-sales service for cardan shafts

The journal cross and bearing bush as well as the profile pin and profile sleeve are among the components whose careful observation, maintenance and, if necessary, repair can significantly extend the service life of a cardan shaft. RINGSPANN Kempf therefore offers its customers a comprehensive after-sales service that goes beyond the usual industry standards. The focus is on mobile maintenance teams that specialize in inspections at short notice at the customer's site. Their range of services ranges from the initial on-site inventory to repair and parts replacement, to the creation of individual maintenance plans and detailed service reports. At present, operators of paper processing and packaging machines in particular are taking advantage of this offer to avoid system failures from the outset and reduce downtimes.

RINGSPANN GmbH, Bad Homburg 26.05.2025

Identical twin for industrial drives

Gone are the days of unbridled mass production of automotive cage freewheels that could also cover the needs of other industries. To ensure that the technological change in automotive transmission construction does not lead to procurement bottlenecks for manufacturers of industrial drive systems, RINGSPANN has developed the SFB cage freewheels. They are available to machine and plant manufacturers in all branches of industry as a high-quality equivalent to the former BWX and BWC freewheels from the automotive world.

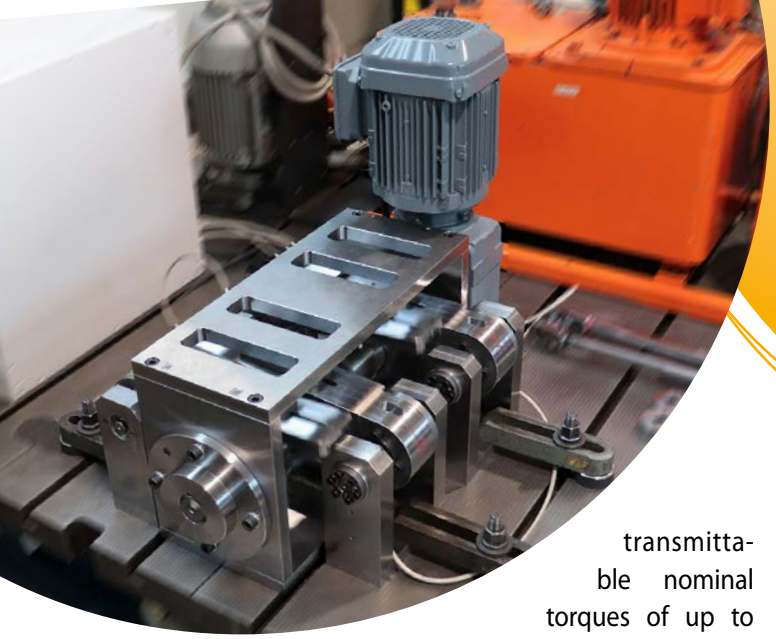
Some major automotive suppliers have now significantly reduced their freewheel range or even discontinued it altogether. This forces manufacturers in other industries to look for replacements for all those cage freewheels, whose procurement was considered secure for many years via automotive mass production. RINGSPANN reacted to this development at an early stage and now offers a high-quality substitute with the cage freewheels of its SFB series. For many manufacturers of hoists, conveyor systems, packaging machines, pumps, as well as textile and printing machines, it is currently proving to be the design equivalent for the new design or repair of their drive systems. "By making our SFB cage freewheels available in our one-stop shop, we are both responding to the increasing demand for alternative sources of supply in the field of free-range technology, and we are also underpinning our quality promise to go beyond the supply of replacement solutions to offer technical optimizations and innovative further developments, whose performance exceeds that of established designs," says Louis Geiger, Product Account Manager at RINGSPANN.

Versatile premium replacement

The cage freewheels of the SFB series were specially developed for use in industrial powertrains. They can be used as backstops, as well as overrunning clutch indexing freewheels, and prove to be a highly versatile solution for many different applications. Their typical areas of application include brake adjusters in commercial and rail vehicles, torque converter transmissions in hoists, forklifts and storage and retrieval machines, or the starters of motorcycles. In conveyor and packaging systems, they are installed as overtaking couplings or return valves. They are also used in the drive trains of pumps, safety winches of offshore and mobile cranes, roller drives of forging plants as well as in plastic winding machines, textile and paper processing machines – sometimes also in combination with industrial brakes from RINGSPANN.

The cage freewheels of the SFB series from RINGSPANN are dimensionally identical to the BWX and BWC freewheels from the automotive industry, which are no longer available. These are freewheels with clamping pieces with a height of 8.33 mm, which are designed for installation between the customer's own inner and outer rings. Due to their high-quality design and their design for

Louis Geiger
Product Account
Manager Freewheels



transmittable nominal torques of up to 2070 Nm, they are suitable not only for many standard industrial applications, but also for use in heavily loaded drive trains.

Quick 1:1 comparison

RINGSPANN currently offers the SFB freewheels as standard in 16 different sizes. In the event of repair and replacement, a table allows quick selection; the user can compare the twins with the former BWX types at a glance. Important to know for designers and product developers: the lateral guidance of the SFB cage freewheels can be achieved either by a shoulder on the outer ring or by retaining rings or washers attached to the outer ring. Freewheel specialist Louis Geiger also points out that "torque transmission can be significantly increased if necessary by several SFB cage freewheels arranged next to each other."

In principle, the production of the cage freewheels of the SFB series is subject to the company's own strict quality standards, which RINGSPANN guarantees at its headquarters in Bad Homburg. It also ensures the long-term availability that is an indispensable basis for maintaining the competitiveness of existing and future drive concepts in mechanical and plant engineering. <<

Online configurator simplifies selection

As the world market leader in freewheel technology, RINGSPANN offers a wide range of freewheels of all relevant designs. An online configurator is available to make it easier for designers, product developers and technical buyers to select and design in its one-stop shop. It guides you through all data and selection options and features a torque calculation that takes into account all entered performance data and automatically determines the torque using a safety factor. After the calculation, the specified values are included in the product selection and result in a proposal for the appropriate housing freewheel. An inquiry can then be sent to RINGSPANN from the tool.

RINGSPANN GmbH, Bad Homburg 23.06.2025

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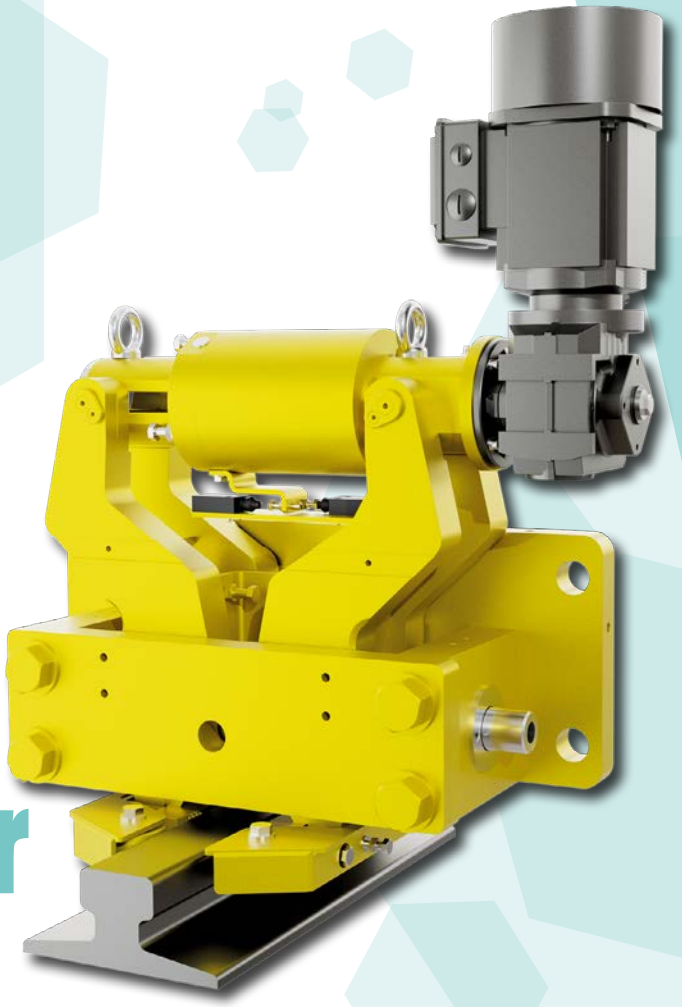


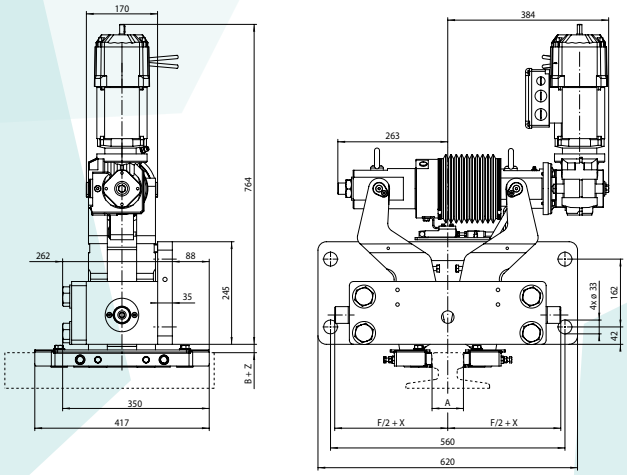
Electric alternative for water-related heavy-duty technology

Hydraulic heavy-duty brakes have been part of the RINGSPANN portfolio for a long time. Now, however, the company is presenting a real novelty: DR085 FEK 200 spring-operated and electrically opening rail clamps. Manufacturers of port and container cranes in particular, as well as conveying, handling and shipyard facilities for use in areas close to water and offshore are thus offered a brake technology alternative for the implementation of environmentally friendly drive systems. Since the design of the new storm brake is similar to its hydraulic sister models, it is also suitable for modernisation and retrofitting.

In many port, dock and shipyard facilities around the globe, rail brakes and rail clamps from RINGSPANN make their contribution to safety to ensure that cranes and conveyor systems operating here cannot start up unchecked during strong storms. However, while manufacturers of these heavy-duty systems, which are mostly used near water or offshore, as well as plant manufacturers in the steel industry, used hydraulic brakes for storm protection almost without exception for decades, today they are increasingly looking for environmentally friendly alternatives that can be operated without the latent risk of oil leakage. "We recognised this need early on and worked intensively on the development of rail clamps for heavy-duty applications in maritime environments that can be closed mechanically – i.e. by spring force – and released electrically. This work was successfully completed with the delivery of our new DR085 FEK 200 to the first customers about a year ago. We recently presented this innovation in the field of storm brakes for the first time to a large audience at the container handling trade fair TOC Europe 2025 in Rotterdam," reports Martin Ohler, Business Developer Brakes at RINGSPANN. In the meantime, it has become clear that the new electromechanical DR085 FEK 200 is attracting growing interest not only from manufacturers of rail-guided port, dock and shipyard equipment, but also from designers of drive systems for tower cranes, bucket wheel excavators, steel mill cranes and power plants.

All major industrial brake types

Industrial brakes from RINGSPANN serve as stopping, controlling and holding systems in crane and conveyor systems, handling and lifting systems, construction and mining machinery, as well as in marine, port, recycling and metallurgical technology. In its one-stop shop, the company offers its customers an almost complete range of brakes that covers all important types of construction and functions. To make it easier for engineers and designers to select the optimal brake, RINGSPANN also provides a free calculation tool on www.ringspann.de. It allows the determination of braking torques and braking forces. Among other things, it can be used to calculate: the braking of rotating masses, on vertical and horizontal rails, as well as of winches, conveyor belts, landing gears, wind turbines and via the drive power. The tool also records the holding and controlling of coiling processes.



Intelligent design

Heavy-duty rail clamps, which close and open electrically by spring force, have so far been a rarity in the storm brake market. Their development requires a good deal of experience and know-how, and their design is particularly challenging. However, RINGSPANN engineers have mastered this task with flying colours, because, as Martin Ohler emphasises, "all DR085 FEK 200s delivered to date are working to the complete satisfaction of the customers". Since the company's brake experts also based the design of the new rail clamps on the design of the hydraulic sister models and made a number of components – such as levers and frames – identical, this also offers maintenance technicians, modernisers and retrofitting specialists an innovative replacement component. Wherever the threat to groundwater, coastal or inland waters calls the use of hydraulic systems into question, the oil-free DR085 FEK 200 from RINGSPANN should prove to be a welcome solution to the problem. In addition, these rail clamps can be used not only as storm protection, but also as a holding, positioning and parking brake for rail-guided crane, container, bulk material or conveyor systems during loading and unloading.

Space-saving design

RINGSPANN currently offers its new electromechanical storm brake with holding forces of up to 200 kN. As with its spring-operated and hydraulically released rail brakes and rail clamps, the company's technicians have also achieved a very advantageous force-to-size ratio in the DR085 FEK 200, resulting in a space-saving design. "This gives the designers

Martin Ohler
RINGSPANN-
Business Developer
Brakes

of the drive and safety systems a lot of leeway in the concrete design of the installation or mounting situation," states Martin Ohler.

Storm and holding brakes from RINGSPANN have proven their worth for decades in ports, shipyards, mining facilities, as well as in steel and power plants, as a contribution to the realisation of high safety standards. There are probably only a few manufacturers who can boast comparable expertise in the field of industrial brakes for heavy-duty applications. Especially since the company ensures a high level of availability of its industrial brakes by keeping all technically relevant components available at its European locations. A large proportion of spare and wear parts are available on demand, and it is also possible to integrate brake assembly into just-in-time scenarios. Last but not least, RINGSPANN offers its customers a high degree of planning and investment security on the basis of the extensive range of products offered by its one-stop shop and its in-house test bench technology.

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RINGSPANN GmbH, Bad Homburg 11.07.2025

RINGSPANN®

Compact and economical

high-speed circuit breaker

The spring-activated and electromagnetically released MV … FEM series brake calipers from RINGSPANN set standards in terms of switching performance, design and energy efficiency. They offer designers in many key industries a modern disc brake solution for a wide range of industrial applications. They are available in three variants with clamping forces of up to 25,000 N, have an innovative closing mechanism and can compensate for axial asymmetries of the brake disc.

MV … FEM series brake calipers are among the latest innovations in RINGSPANN's disc brake portfolio. They are spring-actuated and electromagnetically released industrial brakes which, due to their compact design and technical properties, are suitable for a variety of different holding, emergency stop and deceleration applications in mechanical and plant engineering, automation technology and intralogistics. They are now even used in railway and airport technology. "They show their particular strengths above all where fast switching in short cycles is required and integration into the drive technology environment places increased demands," says Leon Friebe, brake specialist at RINGSPANN. Among other things, this is a reference to two quality features of the MV series: electromagnetic release, which gives the brake an hourly output of up to 360 switching operations, and the floating bearing, which is able to compensate for axial tolerances of the brake disc. Apart from the already very compact design, this offers the designer considerable freedom – even if only limited installation space is available. Another factor that reduces the design expense is the integrated and preconfigured electronics for automatic power reduction. "This makes a decisive contribution to the high energy efficiency of the brake, as it reduces the power requirement to up to 20 watts when open. This energy advantage is particularly evident if the brake is mainly operated in an open state," emphasises Leon Friebe.

Wear-optimised and closed

Currently, the MV brake calipers from RINGSPANN are probably among the most agile and economical electric disc brakes to be found on the world market. Since they are also available in three frame sizes, for different supply voltages (220 to 480 VAC) and as standard for disc diameters from 200 mm, they prove to be an extremely versatile brake solution. "Their robust construction and wear-optimised, closed design make them interesting not least for challenging environments with regard to thermal, mechanical and moist conditions, and give them a long service life," explains Leon Friebe. Also worth mentioning: a patented locking mechanism gives the brakes an above-average air gap with only minimal loss of spring force during bridging.

All three variants of the MV brakes are mounted parallel to the brake disc on the machine or system. To compensate for operational friction block wear, all three versions offer the option of manual adjustment. As an option, RINGSPANN also offers an inductive encoder for sensor monitoring of the wear level as well as another sensor that detects the status "brake open/brake closed". Keyword Industry 4.0: this sensor technology can be connected to higher-level safety and control systems. Maintenance work is facilitated by the fact that the brake is subject to only a low mechanical load when open. Thanks to its compact dimensions and the use of standard fasteners, it is also very easy to retrofit, and the low own weight of RINGSPANN's MV brakes proves to be advantageous when integrated into moving units.

Attractive alternative

The brake calipers of the MV … FEM series are an innovative addition to the RINGSPANN portfolio of electric disc brakes. They open up new perspectives for designers of drive systems and are particularly attractive when users and operators shy away from the high installation and maintenance costs of hydraulic and pneumatic brake systems. In addition to the areas of application mentioned at the beginning, the typical areas of application for MV brakes from RINGSPANN also include machine tool construction, turbine, fan and ventilation technology, winch and winding technology and the wind power industry. <<

Leon Friebe
Technical Sales Brakes
at RINGSPANN GmbH

Redundantly secured and energy-efficient

The electronics of the electric disc brakes from RINGSPANN work extremely reliably and ensure the functional operation of the brake. They are redundantly protected against voltage peaks and in the event of a mains fault, the functionality of the generously dimensioned switching transistors is guaranteed at all times. In addition, RINGSPANN has been able to reduce the required tightening performance of the latest brake generation by up to 20 percent. The magnetic circuit was optimised with the help of modern FEM calculations. The result is very compact magnets and an optimal interaction of magnet and electronics.

RINGSPANN GmbH, Bad Homburg 27.08.2025

RINGSPANN®

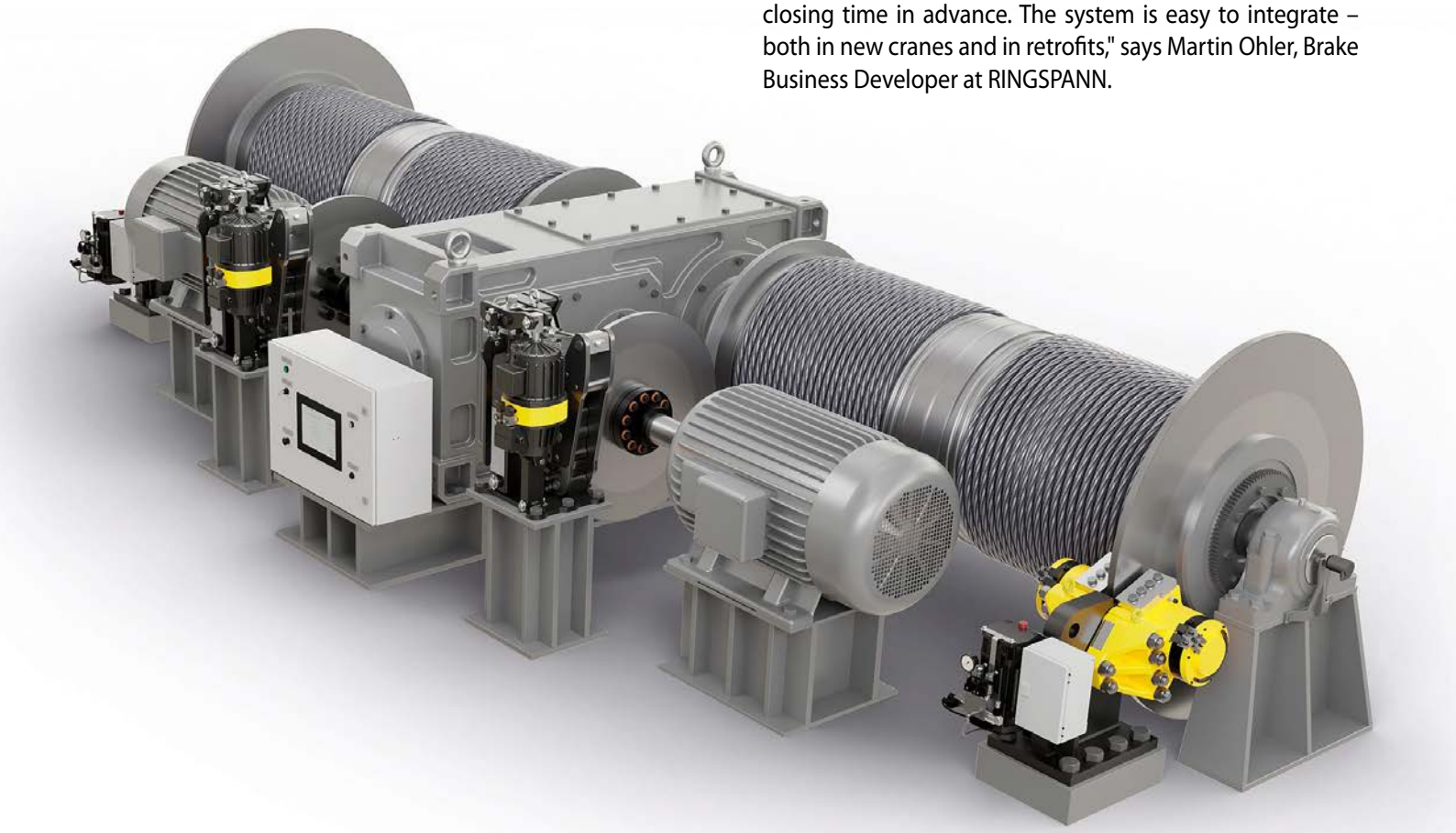
Longer service life for heavy-duty hoists

A few months ago, RINGSPANN introduced its new electro-hydraulic DX disc brakes, which are now used by a number of crane builders when designing holding and emergency stop systems for the hoists of harbour and container cranes. As a further result of its brake development, the company is now presenting three technological solutions that can significantly improve the performance and service life of heavy-duty hoists. Read here about the drive problems that can be eliminated.

The electro-hydraulic DX series disc brakes of the from RINGSPANN are designed for a high shifting frequency on high-speed discs and feature new, energy-efficient thrusters. They offer operators numerous advantages both in the design of heavy-duty hoists and during their operation and service. The first harbour crane builders therefore decided to use these brakes immediately after the market launch at the end of 2024. However, in order to offer hoist manufacturers access to its technological know-how in the field of industrial brakes in addition to providing innovative disc brakes, RINGSPANN has developed several system solutions that improve the performance of the hoists and increase their service life. They start at four neuralgic points in hoist and gearbox technology.

Avoiding harmful flank changes in the gearbox

The flank change of the transmission gears of the main hoist is a negative effect that occurs during emergency stops. First of all, it should be noted that the driving lifting force is the motor, but when lowering, the load acts as the driving force (the motor then only controls the movement and prevents free fall). To eliminate the change of flanks, it must now be ensured that the emergency stop brakes of the rope drum close first when lifting, while the electro-hydraulic service brakes on the output shaft of the motor have priority when lowering. "To achieve this, we have developed a stand-alone solution where the crane's control system only needs to provide the information on whether the crane is operating in lifting or lowering mode. Everything else is taken care of by an electrohydraulic thruster that closes with two preset closing times, and a control unit that selects the respective closing time in advance. The system is easy to integrate – both in new cranes and in retrofits," says Martin Ohler, Brake Business Developer at RINGSPANN.



Adaptive and gentle braking

The second system solution from RINGSPANN addresses the problem of the harmful effects of torque peaks. It should be noted that when selecting hoist brakes it is usually assumed that maximum lifting speed and maximum lifting load are simultaneous. Under these conditions, the braking force of all brakes offers sufficient counterforce in the event of an emergency stop, but these extremes are not a normal scenario. If, for example, the crane only has to convey half of the maximum payload at a reduced speed, the braking force proves to be too great. "As a result, high peak torques occur in the gearbox, the steel structure has to withstand strong shocks and all load-bearing bearings are under high loads," reports Martin Ohler.

To prevent all this, RINGSPANN has developed an adaptive braking system consisting of three components: a control unit that selects valve configurations for different incidence times; a hydraulic power unit that can be used to control the incidence time of each emergency stop brake individually; and several brakes on the rope drum, which allow different braking force variants. The control system receives information from the crane management system on the mode in which the crane is working. It distinguishes between several load cases – such as fast coasting – and triggers a predefined valve configuration on the hydraulic power unit. "A specific brake configuration is then activated for coasting, which provides a sufficient – but not oversized – braking force with which the hoist is stopped safely. All other brakes are automatically activated with a short delay, and the crane is secured at a standstill at full braking power. The system can be expanded with any number of brakes and load cases," explains Martin Ohler.

Adaptive braking of the boom hoist

The third technology solution from RINGSPANN is also an adaptive braking system and focuses on a routine case: the container crane is out of operation, its water-side boom is raised and is set vertically for reasons of traffic safety and weather protection. If an emergency stop occurs when the boom is raised or lowered, all brakes are applied with maximum force. If the boom is close to the vertical resting position at this moment, harmful torque peaks occur in the gearbox, bearing and steel construction. The load torque also increases when the boom is lowered – increasing the closer it gets to its horizontal working position. The maximum braking force is usually selected so that the boom can be stopped and held even near the working position.

In both cases, the adaptive braking system from RINGSPANN protects the transmission, bearing and steel structure from stress and prevents their premature wear. It consists of four components and allows the braking force to be specifically adjusted: an absolute rotary encoder attached to the bearing of the rope drum provides information about the current boom position via crane management. A control unit picks up the signal from the encoder and switches different valve states in the hydraulic power unit of the emergency stop brakes based on it. By combining special locking valves, the hydraulic power unit enables both immediate braking and braking with initially reduced, then increasing starting braking force. In conjunction with the hydraulic power unit and control unit, one or more emergency stopping brakes finally initiate a braking process with different braking forces.

What all three RINGSPANN technology solutions have in common is that they can be adapted to the customer's needs and always dock directly onto the crane's management system. <<

Ventilation devices and sensor technology individually selectable

The new DX brakes from RINGSPANN can be equipped with various thrusters from the company's production. They are suitable for braking torques from 1,700 to 28,100 Nm and clamping forces from 9.5 to 80 kN. Their function is to release the brake via an electro-hydraulically generated counterforce to the brake spring. To do this, an electric motor, an impeller or gear pump and a piston cylinder interact inside them. In addition, RINGSPANN offers a large selection of sensors for DX brakes. Inductive sensors are standard for monitoring brake release, brake locking, pad wear and manual unlocking. Sensors of other types are optionally available, measuring probes with ATEX certificate and SIL approval, load measuring pins for measuring contact force, analogue sensors for checking reserve stroke as well as wear and temperature of the brake pad.

Martin Ohler
RINGSPANN-
Business Developer Brakes

RINGSPANN GmbH, Bad Homburg 30.09.2025

RINGSPANN®

Baring teeth to unavoidable misalignment

In heavy-duty installations in particular even slight radial, axial and angular misalignments in shaft connections can lead to considerable losses of performance and damage to the powertrain. Experience shows, however, that even the use of modern measurement technology to align the shafts is unable to ensure their error-free alignment permanently. This is why the couplings used to connect the shafts have to take over the skew compensation. With its new type GH gear couplings RINGSPANN provides designers with an innovative solution. Designed for high torques and compensation of greater shaft misalignments they are tailored for heavy-duty applications.

Misalignment of two shafts can lead to considerable damage in the long run. No matter if they are individual or occur at the same time as radial, axial and angular misalignment – if there is no compensation, they can for example cause hazardous shaft deflections, uneven bearing wear, unintentional settling or thermal changes in length. Misalignment remains undetected in particular if sets in slowly, it reduces performance and in in the worst case even causes a breakdown of the drive systems. This can be really expensive in heavy-duty engineering plant in particular, for example in roller conveyors, grinding mills or hoists in marine and assembly engineering. Designers of drive technology can prevent damage if they use modern shaft connections at critical points, such as the new type GH torsionally rigid gear couplings, which RINGSPANN has developed specially for heavy-duty use. They are designed explicitly for transmission of higher torques and are able to compensate radial, axial and angular displacements especially well, even if they occur at the same time. While the GHF version with double engagement gearing is suitable for nominal torques of up to 304,538 Nm (2,695,380 lb-inch) and allows angular displacements of up to 3.50°, the single-sided gearing GHR variant can transmit up to 116,750 Nm (1,033,200 lb-inch) and compensate for angular displacements of up to 1.75°. These are excellent performance values, such as those required for example for roller drives in the steel and paper industry, high-performance pumps or the drive trains of large bulk material conveyor systems, among other things.

Best performance thanks to crowned teeth

A significant quality feature of the new GH-shaft couplings from RINGSPANN is the special geometry of the engagement gearing. Because contrary to what you might expect, it is fully crowned. This means that the tooth tips are rounded and the tooth flanks are chamfered at the upper edge and spherical over their entire surface. This special design gives the GH engagement gearing a high torque capacity and extends its service life. RINGSPANN product manager Martin Schneweis goes into detail here: "The rounded tooth tips avoid edge pressures, which are typical in radial and angular misalignments, but allow the coupling sleeve to be guided radially with high precision. The completely spherical tooth flank surface also prevents such edge pressures at the tooth ends, which offers more leeway in compensating for larger radial and angular misalignments. The crowned flanks also

Martin Schneweis
RINGSPANN-
Product Manager
Couplings

improve the contact between the gearing of the hub and the sleeve of the coupling, which increases the load-bearing capacity of the shaft coupling and reduces wear due to the possibility of better lubrication in the tooth contact. Finally, the chamfered tooth flanks at the transition to the tooth tips prevent undercuts at the tooth feet of the sleeve toothing."

A further indication that the RINGSPANN engineers have taken all the important practical scenarios into account when developing the new GH couplings is the longer internal gearing of the sleeves compared to conventional gear couplings. It allows the coupling to compensate for even larger axial misalignments and thermally induced changes in the length of the shafts. In this context, Martin Schneweis emphasizes: "At our production site in the USA, we have a modern gear production facility that offers us many possibilities for design optimizations and customer-specific modifications. Here, for example, we can also reduce the tooth flank clearance of the couplings to such an extent that the reverse backlash is minimized when the direction of rotation of the shaft changes. Couplings for shaft displacements of up to 6.0°, as well as special sizes and special designs made of heat-treated and alloyed steels can also be implemented here."

Stronger, more flexible, better

With the new RINGSPANN gear couplings of the GHF and GHR series, drive technology designers have an innovative shaft connection that offers them numerous advantages. They are able not only to improve the performance and operational reliability of the powertrains, but also to reduce the repair and maintenance costs of their customers. The standard range already offers them a choice between twelve different sizes. Both the double engagement gearing GHF and the single engagement gearing GHR are available for bores from 41 mm to 276 mm and for torques from 2,660 Nm. Both versions also have in common that their nitrided teeth are made of high-strength quality steel and that they have an O-ring seal that keeps grease back and dirt particles away. <<

RINGSPANN GmbH, Bad Homburg 30.09.2025

HIGH SPEEDS WITH A NEW TEST BENCH

With the new FHHS series, RINGSPANN is expanding its range of housing freewheels with a further solution for the implementation of overrun functions in stationary multi-engine drives and turbines. The special thing about it is these housing freewheels are designed for very high speeds of up to 12,000 rpm. Wherever multi-stage drive systems with high-speed shafts are to be designed in plant engineering, they can be used as automatically operating and wear-free couplings. The technological prerequisite for the realisation of this innovative high-speed series was the development and commissioning of a unique freewheel test bench at RINGSPANN's main plant in Bad Homburg.

They do not require switchgear, transmit nominal torques from 1,356 Nm to 24,405 Nm, operate wear-free and take over the demand-based engagement and disengagement of various motors of the same drive train in high-speed operation: With the housing freewheels of its new FHHS series, RINGSPANN offers all designers of drive systems for refinery, chemical process engineering or the natural gas and petroleum industry an innovative coupling solution for the realisation of flexibly switchable and energy-efficient multi-motor drives. These are fully enclosed overrun freewheels with input and output shafts that are intended for stationary installation and can be driven at up to 12,000 rpm. The speeds in freewheeling and driving operation may be at the same or similar level.

Thomas Heubach
Head of Division Freewheels
at RINGSPANN GmbH

HIGH-SPEED EXPERTISE THANKS TO HYDRODYNAMICS

The key design factor for the high-speed competence of the new FHHS housing freewheels is the use of the hydrodynamic clamping roller lift-off. The lifting force is generated by an oil jet guided in the bearing of the freewheel, which allows both high speeds and wear-free freewheeling operation. Thomas Heubach, Head of the Freewheel Division at RINGSPANN, explains: "The relative speed between the inner and outer ring is decisive for the effect of the hydrodynamic lifting of the clamping rollers. If it decreases, the lifting force is also reduced. Even before synchronous running is reached, the clamping rollers, which are guided in a cage, attach themselves to the outer ring race of the freewheel via the central spring and are ready for locking. This ensures immediate load transfer when the synchronous

speed is reached." Housing freewheels with hydrodynamic clamping roller lift-off are always an ideal solution when a unit is driven by two or more motors or turbines with the same or similarly high speed. The plant operator benefits from this in three ways: firstly, it can engage or disengage individual powertrain units as required without complex control technology; secondly, it enables process operation without interruption even in the event of a failure of an energy source or a drive unit. And thirdly, it opens up significant energy savings – especially in partial load operation.

THE HYDRODYNAMIC CLAMPING ROLLER LIFT

Housing freewheels are primarily used as automatically operating overrunning clutches in multi-motor drives. They are considered an alternative to complex switching devices. A technical highlight of the housing freewheels from RINGSPANN is the hydrodynamic clamping roller lift-off. In this case, the lifting force of the clamping rollers is generated by an oil film, which is applied to the raceway of the outer ring with centrifugal force during idle operation. This enables virtually wear-free idle operation.

THE WORLD'S FIRST

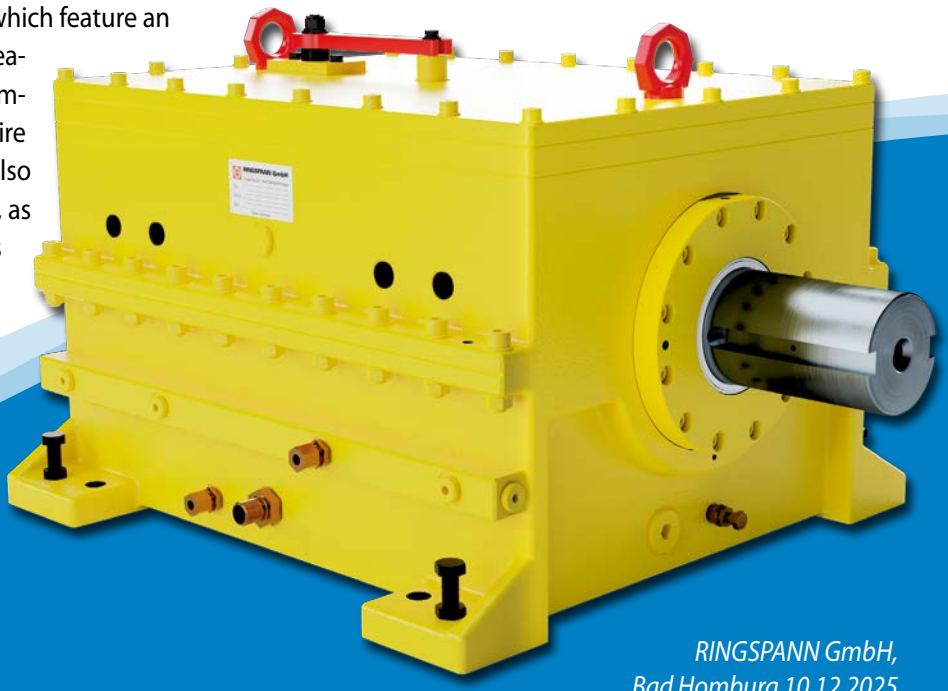
In order to be able to provide reliable proof that the new FHHS housing freewheels are suitable as overrunning freewheels for high speeds, RINGSPANN developed a new test bench especially for this purpose. It was put into operation a few weeks ago at the company's main plant in Bad Homburg and is likely to be the most modern test bench for housing freewheels currently available on the world market. "For the first time, we can generate speeds of up to 12,000 rpm and validate and document the performance of our housing freewheels. Currently is unique in this segment," reports Thomas Heubach. For the plant manufacturers and the designers of the drive systems, this also means that they can incorporate the measurement and test results from RINGSPANN into their own quality assurance.

COMPLETION AND CONNECTION

With the new FHHS series, RINGSPANN is once again underlining its market and technology leadership in the field of freewheel technology. The company now offers a third alternative for high-speed applications via the standard FH Series housing freewheels and the FHD series with mechanically separable housing freewheels – which feature an OSHA-compliant lockout-tagout safety feature with customer oil supply. With the commissioning of the new test bench, the entire RINGSPANN housing freewheel range is also experiencing a significant innovation boost, as the performance of the models of all series can be proven and verified under practical conditions. The development engineers at RINGSPANN are likely to draw important impulses for their work from this.

As part of its one-stop-shop offer, RINGSPANN also provides its customers with a wide range of different shaft connections that are tailored to the design connection of the input and output shafts of the housing freewheels. These include, for example, the company's latest claw, multi-plate and bolt couplings. The designer of a multi-motor drive therefore obtains the shaft connections from the same source as the housing freewheels and can be sure that all components fit together exactly.

By the way: the FHHS already comes with wired sensor monitoring of storage temperatures as standard. As an option, the new housing freewheels can also be equipped with the sensor and telematics modules of the condition monitoring system from RINGSPANN. This solution includes data analysis, remote maintenance and integration into higher-level control systems. In this way, the operators and maintainers of complex drive systems can monitor all relevant performance and MRO parameters of the installed freewheels in real time. <<



RINGSPANN GmbH,
Bad Homburg 10.12.2025

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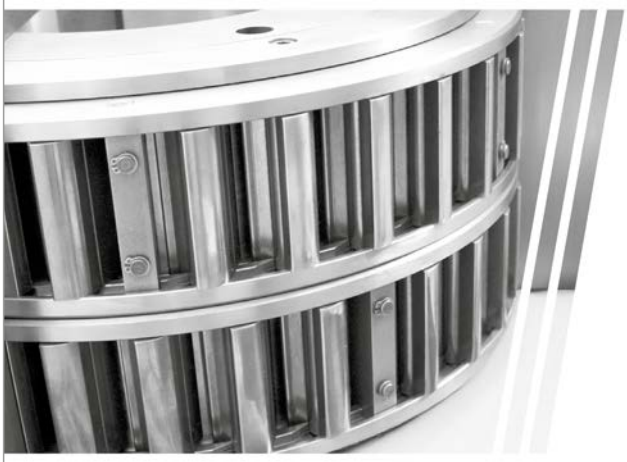

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