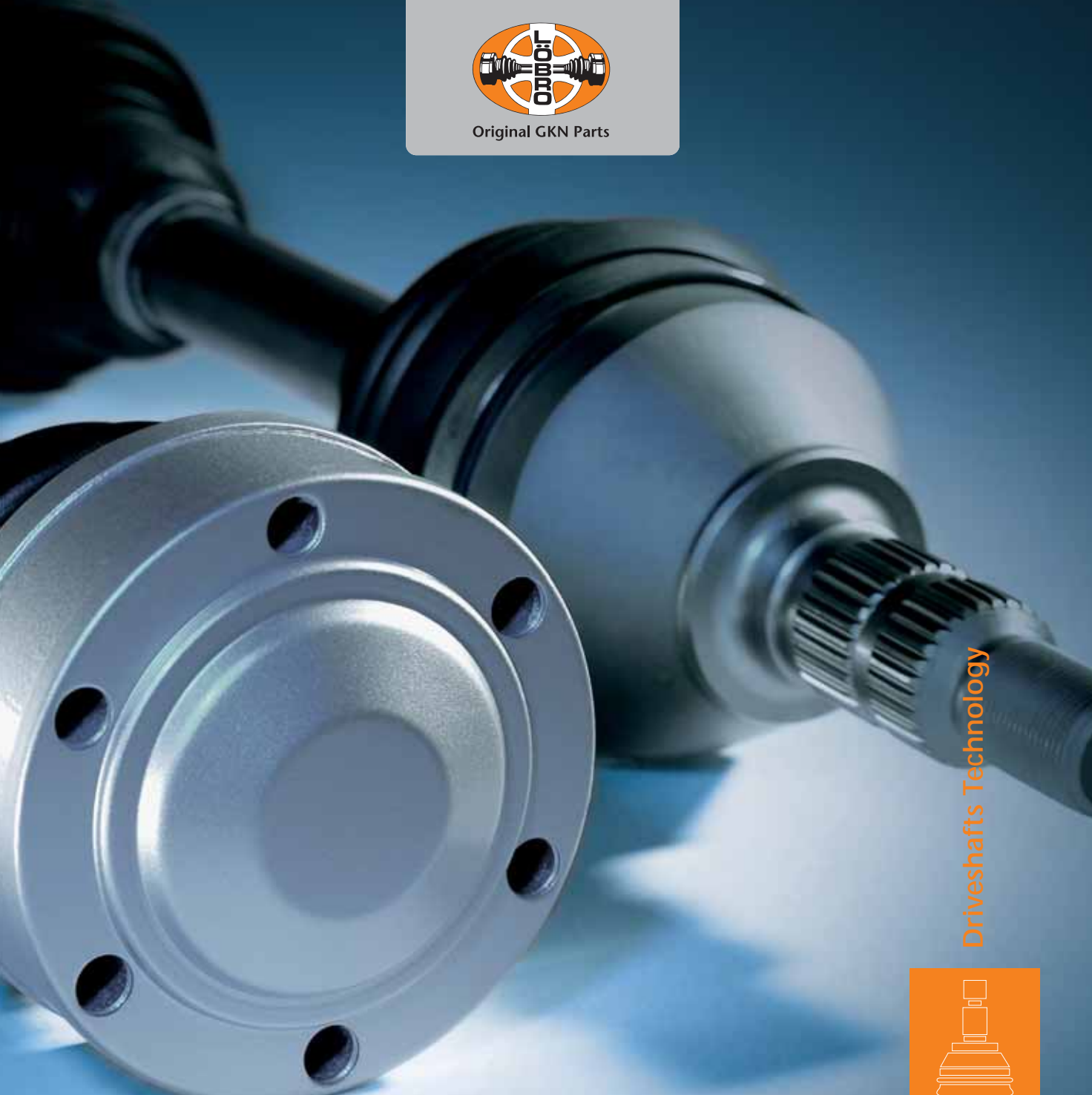
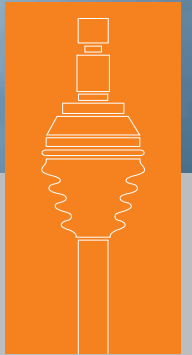




Original GKN Parts



Driveshafts Technology





Competence from the Original Equipment Supplier

GKN Driveline is the world's leading supplier of automotive driveline components and systems. Our global market leadership is based on a strong engineering heritage and 21,000 people at more than 40 locations in over 30 countries.

GKN Driveline supplies constant velocity (CV) sideshafts and premium propshafts for all kinds of passenger cars and light commercial vehicles. Our reputation for delivering unique driveshaft systems is built on our innovative approach to designing, developing and refining solutions which meet and exceed performance targets to transmit power safely, reliably and with a high degree of comfort.

GKN Driveline Industrial & Distribution Services provides original GKN parts to the worldwide automotive aftermarket. With its brand LÖBRO GKN supplies the widest range of driveshafts, joint kits, boot kits and additional components via distributors and local parts dealers.





Products and Services

Sideshafts, Joint Kits and Boot Kits

Our sideshafts are the first choice of leading vehicle manufacturers around the world for all kinds of front-wheel, rear-wheel and all-wheel drive applications.

LÖBRO joint kits and boot kits contain all the individual parts needed for professional repairs: joint, boot, circlips, tightening straps, bolts, nuts, spacers, etc.

- > The LÖBRO catalogue covers the widest range of CV shafts, joint and boot kits
- > Supply of parts for almost all European and Asian passenger car applications
- > LÖBRO axle boots are specifically developed for the various joints. Their accurate fit guarantees optimum sealing and maximum wear resistance.



Premium propshafts

Each GKN Driveline premium propshaft is unique in its use, tailored, tuned and harmonised to match the precise demands of its application. Replacement propshafts are available for a wide range of 4x4 and light commercial vehicles.



Workshop tools

For a professional and accurate exchange of CV joints GKN Industrial & Distribution Services provide a range of special, high-quality tools for disassembly and assembly.



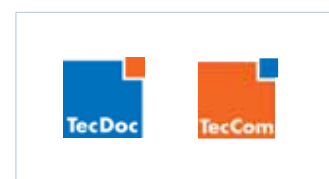
eXpress repair service

Our offer for immediate and individual repair of driveshafts for which spare parts are not available on the market. A special service by GKN Driveline – provided in many European countries. This service enables the workshop to offer a solution rather than sending the customer away.



TecDoc / TecCom

Being one of the founders of TecDoc, GKN Driveline Industrial & Distribution Services delivers all required product data to its partners and workshops through the TecDoc data supply system. GKN Driveline has been awarded TecDoc Certified Data Supplier. Communication with our partners via TecCom with regard to ordering, availability checks, delivery and documentation enables the quickest possible supply system.





A sideshaft for every application

The sideshaft provides the dynamic connection between engine and driving wheels, transmitting power and allowing steering angles whilst accommodating suspension movements and isolating vibrations. Each sideshaft has two constant velocity joints – a fixed joint at the wheel end and a plunging joint at the gearbox end, connected by an interconnecting shaft. At GKN Driveline we appreciate the impact of these critical components on a vehicle's dynamic performance, noise, vibration, durability, efficiency and weight saving, and their key role in enhancing power delivery, handling and comfort. Our advanced sideshafts are the result of a continuing commitment to researching and developing new means to optimise and improve total sideshaft performance, each fully supported by our long experience from the very first days of sideshaft application.

Key features

- > More than forty years of leadership in sideshafts development and innovation
- > Unrivalled global expertise in sideshaft design for front-wheel, rear-wheel and all-wheel drive vehicles
- > Applications in all kinds of vehicles: electrically-operated, light trucks, sports cars, luxury cars, 4x4 vehicles
- > Over 44 million sideshafts produced yearly
- > Comprehensive portfolio of fixed ball, tripod plunging and ball plunging joints

Key benefits

- > Improved space utilisation through power unit and gearbox repackaging potential
- > Lighter weight provides improved fuel efficiency
- > Better driving characteristics and comfort
- > Optimum power delivery for peak vehicles







GKN Driveline's Sideshaft range



Fixed Ball (AC) Joint

The AC joint is suitable for passenger cars and light vehicles. Providing a maximum articulation angle of 47 degrees to meet the criteria for steering and suspension movement, it is the most popular choice for the wheelside of a constant velocity sideshaft.



Fixed Ball (UF) Joint

Offering the same strength and durability as the AC joint, the UF joint provides the maximum 50 degrees articulation angle, so affording greater latitude in the design of the steering geometry and facilitating smaller turning circles.



Fixed Ball (SX) Joint - Countertrack

The new SC countertrack joint uses the principle of "opposed" tracks for significant packaging reduction and efficiency improvement and combines this with a specific track shape profile in longitudinal direction to allow angles of 50 degrees and more. This breakthrough technology sets the new benchmark for constant velocity joints on the outboard side.



Tripod Plunging (GI) Joint

The standard tripod joint GI is suitable for the inboard gearbox joint of a constant velocity sideshaft for most vehicles. It has a maximum articulation angle of 23 degrees and has a plunge length of 50mm. It is ideal for medium working angles and its low plunge resistance aids good NVH characteristics.



Tripod Plunging (AAR) Joint

In addition to the properties of the GI joint, the low plunging resistance and low axial forces of the AAR joint deliver additional NVH refinement, making it appropriate for high working angles. It has a maximum articulation angle of 26 degrees and 50mm plunge.



Ball Plunging (VL) Joint

The VL ball plunging joint is a popular choice for the inboard joint of the rear-wheel drive CVJ sideshafts. With maximum 22 degrees articulation and a plunge of 50mm it is ideal for high working angles with low axial forces. The VL joint is also available as monobloc or disc version.



Ball Plunging (DO) Joint

The DO joint is similar to the VL. It is available in two versions with 50mm plunge for a maximum articulation of 26 degrees or 31 degrees. The DO joint is also suitable for high working angles on account of the low axial vibration.



Ball Plunging (SC) Joint – Crosstrack

The SC crosstrack joint, a new addition to the plunging joint portfolio, was developed for improved NVH. This shudderless joint combines the premium performance of tripod plunging joints in terms of small plunging force with the premium performance of ball plunging joints in terms of reduced backlash.





Each propshaft – a unique, engineered product

Strength, stiffness, precision balance and low mass are the essential properties of propshafts in ensuring durability and minimum levels of Noise Vibration Harshness (NVH). Shaft joints and couplings also have to accommodate severe service loads, high angles and apparent changes in path length, due to relative displacement between axles and the gearbox in passenger cars, and the high 'shock' loads commonplace in all-terrain vehicles.

GKN Driveline's unique capability and innovative lead in crash optimised shafts ensures a safer and more comfortable driving experience.

Key features

- > One, two and three piece configurations
- > Single and double Cardan joints
- > Range of fixed ball joints, plunging ball joints and tripod CV joints
- > Range of crash features
- > Range of NVH damping systems
- > High precision balancing capability
- > Friction, Mag-arc, laser and plasma weld technologies
- > High and low angle solutions
- > Flexible rubber couplings
- > Custom-designed brackets

Key benefits

- > Weight reduction through optimised material and joint selection
- > NVH analysis and tuning
- > Optimised high speed durability
- > Torsional stiffness
- > Crash compliance



- 1 Single piece propshaft with composite tube
- 2 Three piece steel propshaft
- 3 Two piece steel propshaft
- 4 Two piece propshaft with aluminium tube
- 5 Single piece aluminium propshaft



GKN Driveline's Propshaft range

High speed joints

High Speed Fixed Joint – HSAC

The high-speed AC (HSAC) joint is a six ball joint. It can be used to replace cardan joint operating angles up to 15 degrees, without the noise issues of non-CV cardan joints. The HSAC operates well in all vehicle types.

High Speed Fixed Joint – PX



The high speed PX countertrack joint is the next generation of the HSAC joint. The PX is an opposed track 4+4 design fixed ball joint. It is highly efficient compared to all other joint types and allows operating angles up to 15 degrees.

High Speed Fixed Joint – PXS



The high speed PXS joint is an opposed track 5+5 design fixed ball joint. The PXS has an extremely narrow package. It can be used in operating angles up to 3 degrees and due to the opposed track design it has very high efficiency.

High speed Tripod Plunge Joint – HSGI

High speed tripod joints are used where installed angles are low, but axial (plunging) motion is needed. This type of joint is often used in all-wheel drive vehicles to prevent engine movements or vibrations from being transmitted into the passenger compartment. The high speed GI (HSGI) joint requires a very low dynamic plunge force and can be used in operating angles up to 2 degrees.

High Speed Plunge Joint – PDO

The High Speed PDO joint is a plunging ball joint with similar benefits to the tripod joint, and is used in similar applications. The PDO joint also exhibits low rotational lash, which helps improve driveline NVH (Noise Vibration Harshness) characteristics. It can be used in operating angles up to 3 degrees.

High Speed Plunge Joint – HSVL

The High Speed VL (HSVL) joint is capable of running at high installed angles, and its plunging properties allow for dynamic driveline motion or variations in vehicle build tolerance. HSVL joints are capable of plunging up to 60mm, running at high installed angles and high rotational speeds.

High Speed Plunge Joint – PC



The high speed PC joint combines features from the DO and VL joints, which gives it excellent performance in dynamic plunge and backlash. It is especially suited to hang-on all-wheels drive systems with transverse engines. It can be used in operating angles up to 7.5 degrees.





What is as good as original GKN parts? – Remanufactured parts by GKN



GKN has long-standing experience in the industrial remanufacturing of driveshafts. All cores are remanufactured in our own, specialised premises.

The cores are carefully checked, assorted, dismantled, cleaned and remanufactured in accordance with the OE specifications. GKN has developed specific machines for almost all remanufacturing steps which guarantee maximum quality in the remanufacturing process.

Intensive tests of the hardening have proven that SPIDAN branded, remanufactured driveshafts and joints demonstrate the same high quality and durability as new parts, and thus provide the same level of safety.

Key features and benefits

Competence

GKN has the competence of the leading OE supplier

Quality

GKN remanufactured driveshafts are produced in fully accredited remanufacturing sites with the same machines and standards as OE production

Safety

GKN remanufactured driveshafts supply safety standards according to OES requirements

Performance

GKN remanufactured driveshafts guarantee the original performance of the car: joint angle to original standard, original performance with regard to noise and vibration.

Warranty

For remanufactured driveshafts we offer the same warranty as for new parts.

Program

GKN supplies non-OE references to extend the product range.

Economy

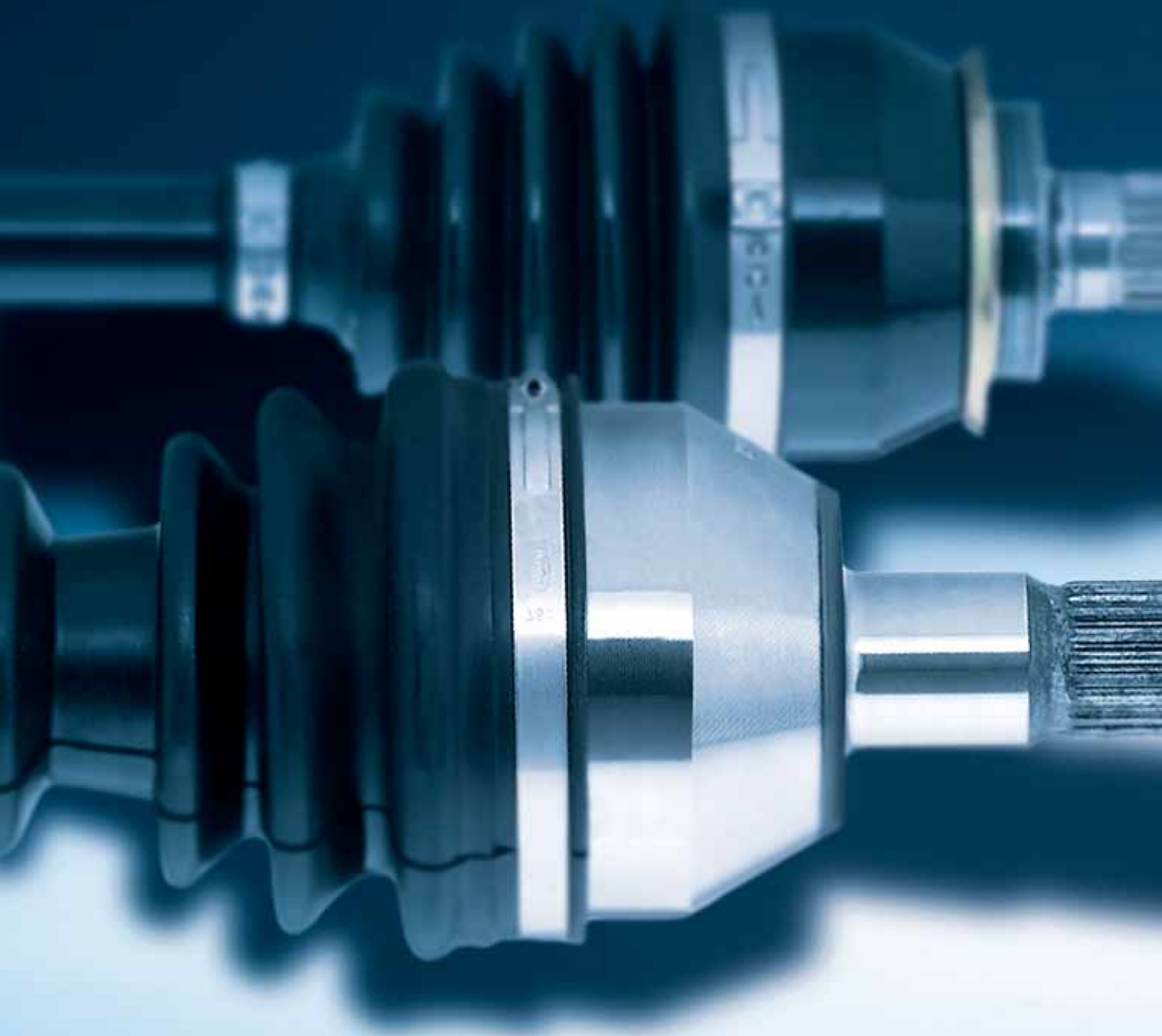
GKN provides driveshafts even for older cars for which driveshafts can't be produced economically for a reasonable price.

Ecology

GKN saves raw materials and energy and minimizes the waste that old parts would produce

Waste disposal

GKN takes care of the waste management for used parts and residual materials (i.e. used oil and swarf).



We understand the requirements and characteristics of front-wheel, rear-wheel and four-wheel drives, we design to meet the varying needs of all types of vehicles from the electrically-operated through to light trucks, sports cars, luxury cars and 4x4 vehicles.

GKN Driveline Industrial & Distribution Services

Headquarters:
GKN Service International GmbH
Nussbaumweg 19-21
D-51503 Rösrath / Germany

www.gknservice.com

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