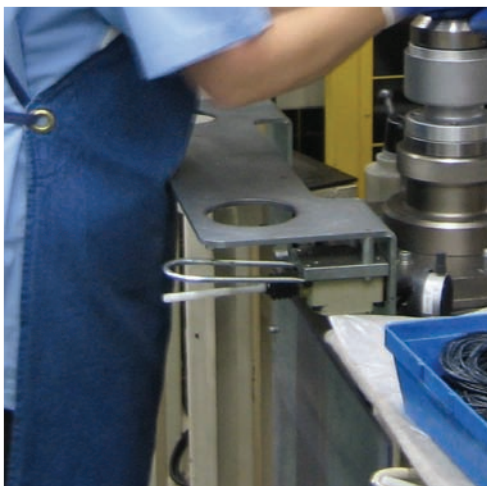
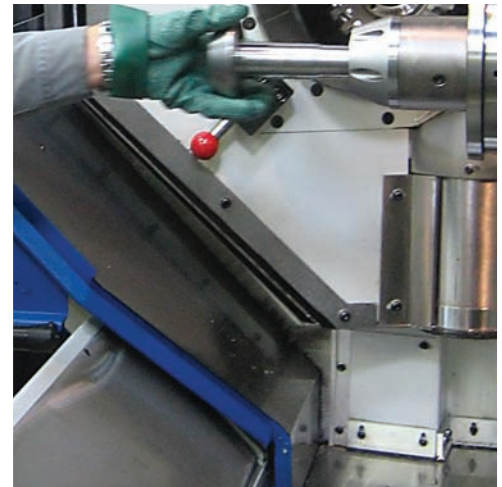
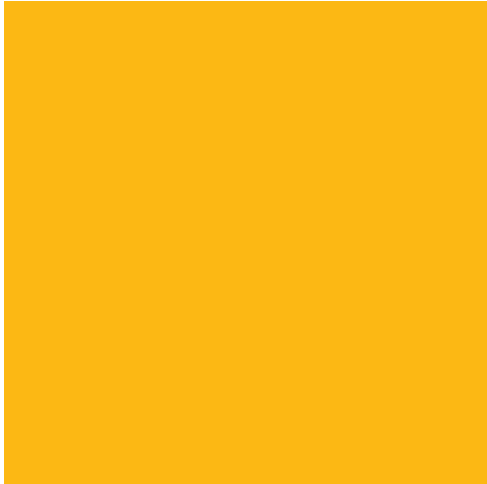




GKN Driveline Torque Technology



GKN Driveline Torque Technology

GKN Driveline is the world's leading supplier of automotive driveline components, delivering total systems that add value through increased vehicle efficiency.

GKN Driveline Torque Technology develops and manufactures a broad range of driveline products which deliver **Power** to a vehicle's wheels and manage that power to **Control** the dynamic performance of the vehicle. Our range of geared power transmission products includes final drive units, which transfer torque from the propshaft to the wheels in rear- and all-wheel drive (AWD) vehicles, and power transfer units, which distribute torque between front and rear axles in AWD configurations. Our range of torque management devices is designed to improve vehicle traction and handling performance, on all surfaces and under all driving conditions.

They ensure that driving and braking torques are effectively distributed to the axles and wheels, to provide unsurpassed levels of stability, handling, traction and overall vehicle **Control**.

Together, our power transmission products combined with our torque management devices provide total system solutions - for **Power** and **Control**.

GKN Driveline engineers are ready to meet and exceed your specific driveline performance needs.



Test Facilities

GKN Driveline has world-leading Research and Product Development resources in automotive torque management and geared products. Of key importance are test rigs and proving grounds, where the performance of individual systems can be validated under the most demanding in-service conditions.

These include:

A complete vehicle proving ground at Tochigi in Japan.

Test rigs at Lohmar, Germany; Tochigi, Japan; Bruneck, Italy and Auburn Hills, Michigan, USA.

Winter test tracks in Arjeplog, Sweden; Michigan, USA and Shibetsu (Hokkaido), Japan.



Power Transmissions

Power Transfer Unit

The robust and versatile Power Transfer Units (PTU) provide part-time, full-time or on-demand AWD torque distribution for front-wheel-drive based AWD systems with transverse engine mount. Tailored designs provide compact and cost effective AWD driveline solutions.



Final Drive Unit

The proven and reliable Final Drive Units (FDU) for front and rear independent axle applications, offer robust performance and versatility for all-wheel-drive and rear-wheel-drive drivelines. They are available as electronic 'shift on the move' driveline disconnect systems including a Free Running Rear Differential (FRRD®) or as an integrated rear-drive unit with an on-demand coupling.



Differential

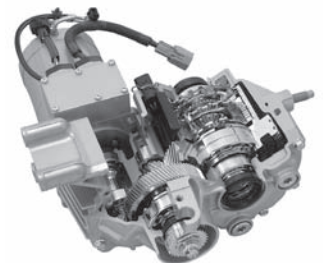
For the use in passenger cars, sport utility vehicles (SUV) and light truck transmissions or final drive units a large diversity of open bevel gear differentials is available. Configurations with two, three or four pinion gears can be provided depending on torque and packaging requirements.



Rear Drive Unit for Motor Assisted 4 Wheel Drive (M-4WD)

The Rear Drive Unit (M-4WD) is a compact, lightweight gearbox with an actively controlled clutch for electric motor assisted AWD solutions.

The simple interface allows to combine the gearbox with various E-motor technologies (no power transfer unit or propshaft needed).



Torque-Sensing Devices

Helical LSD

The high performance torque-sensing Helical Limited Slip Differential (LSD) is proven in front and rear axle/transaxle applications and is available as center differential in full-time all-wheel-drive applications. The Helical LSD is highly reliable and can typically package in place of an open differential. It is also available with electronic lock-up feature.



Multi-Plate LSD

The highly adaptable torque-sensing Multi-Plate Limited Slip Differential (LSD) is proven in a wide range of axle applications for rear-wheel-drive and all-wheel-drive drivelines.

The Multi-Plate LSD offers the widest range of torque bias ratios to meet demanding on- and off-road performance needs. It easily packages in place of an existing LSD.



Super LSD

The innovative torque-sensing Super Limited Slip Differential (LSD) is proven in front and rear axle/transaxle applications, offering robust performance and versatility for front-wheel-drive, all-wheel-drive and rear-wheel-drive drivelines.

The Super LSD is a cost effective compact torque sensing limited slip differential offering improved vehicle traction and handling.

It easily packages in place of an open differential and is compatible with ATF (automatic transmission fluid) and gear oils.



Speed-Sensing Devices

Viscous Coupling

The speed-sensing Viscous Coupling and Viscous Limited Slip Differential (LSD) have unsurpassed reliability and are proven in front and rear axle/transaxle applications as well as in on-demand and full-time all-wheel-drive drivelines.

Viscous Coupling and Viscous LSD are cost effective and significantly improve vehicle handling, stability and traction.



Visco Lok® LSD

The advanced locking speed-sensing Visco Lok® Limited Slip Differential (LSD) is proven in front and rear axle applications.

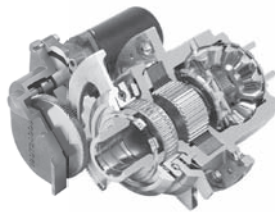
The Visco Lok® LSD provides maximum torque transfer in excess of skid torque and is self-actuating with no external controls required.



Electronic Controlled Devices

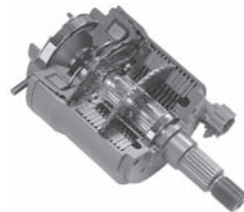
Electronic Torque Manager (ETM®)

The innovative Electronic Controlled Torque Manager (ETM®) is an actively controlled coupling in on-demand and full-time all-wheel-drive drivelines as well as in axle applications. ETM's direct actuation method provides an excellent release response time and highly controllable accuracy in the driveline and axle coupling.



Electro-Magnetic Control Device (EMCD®)

The Electro-Magnetic Control Device (EMCD®) is an actively controlled coupling in on-demand and full-time all-wheel-drive drivelines as well as in axle applications. The EMCD® is a very compact and versatile electronically controlled driveline and axle coupling.



Torque Vectoring Unit (ETV)

The Electronic Torque Vectoring (ETV) module provides unmatched driving experience. Driving and traction performance can be pushed to new limits while improving safety and stability at the same time. It provides higher lateral acceleration, reduced brake interventions and improved traction → "Fun to drive".



Selectable Locking Devices

Lock-Up Differential

The robust Electronic Lock-Up Differential is proven in front and rear axle applications, offering unsurpassed off-road traction performance. The Lock-Up Differential is the most capable and packageable selectable locking axle differential. No special oil or friction modifier is required. It can be combined with any limited slip differential.



Free Running Rear Differential (FRRD®)

The compact Free Running Rear Differential (FRRD®) is proven as a disconnect system offering significant fuel economy benefits in four-wheel-drive applications. The FRRD® is the most reliable and packageable selectable driveline disconnect system. There is no NVH or differential gear wear since no speed difference occurs across the gear set.





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