GKN MOTORSPORT

CATALOGUE

SUPREME ENGINEERING COMPETENCE

GKN Driveline is the leading automotive driveline technology and systems engineer. With a comprehensive global footprint, we design, develop, manufacture and integrate an extensive range of driveline technologies for over 90% of the world's car manufacturers.

A market leader in CV Joint Systems, all-wheel drive and electric mobility, our technologies feature in everything from the smallest ultra low-cost car to the most sophisticated and dynamic premium vehicle.

Our capabilities span two-wheel drive, all-wheel drive, hybrid or pure electric vehicle architectures.

GKN Motorsport specialise in the design and manufacture of driveline products for all areas of motorsport, from clubman through to professional teams.

STRENGTH, ENDURANCE AND PERFORMANCE

decide upon who wins the race. This is true not only for the driver but also for the driveline components.

ROLLED SPLINE BARSHAFTS

GKN's super lightweight barshafts are individually designed and manufactured to suit each customer's requirements, from Formula Ford and Clubman Racing right through to WRC and beyond.

Our designs are complemented by the extensive use of certified aerospace materials and incorporate hollow, shot peened shafts offering the ultimate in strength and weight and are available in a range of finishes.

Splines are rolled up to a shoulder, which the CV joint can be pushed up to, eliminating the need for spacers. This process of cold rolling helps reduce the stress induced during manufacture in the critical area of spline run out, therefore increasing strength/fatigue resistance.

GKN barshafts can be manufactured as a solid barshaft or a gun drilled hollow barshaft, with bore diameters ranging from 12.5mm to 20mm.

CONSTANT VELOCITY SIDESHAFTS

GKN CV sideshafts are manufactured to the highest quality, they are lightweighted and feature the latest GKN CV joint technology.

On the back of over 30 years of continuous development of GKN Driveline products, GKN Motorsport CV joints provide significant weight reduction, cooler running temperatures and enhanced joint life and performance.

PROPSHAFTS

GKN's unique experience in the design, manufacture and service of propshafts has been fully exploited to produce high performance motorsport shafts. All of them are tested on our own test rigs.

By using titanium instead of steel a significant weight reduction can be achieved. Sophisticated diaphragm centre bearings and specialised torsional couplings minimalise the transmission of vibration.

High performance universal joints are upgraded with special close tolerance bearing designs, combined with advanced thrust bearings and multi-lip seals. High-speed GKN constant velocity joints are developed to overcome highest installation angles.

At rally and endurance events GKN high performance propshafts permit higher speeds and more power without weight penalties.


MITSUBISHI MOTORS
REPSOL
LANCER
DHD
DHD
BFGoodrich

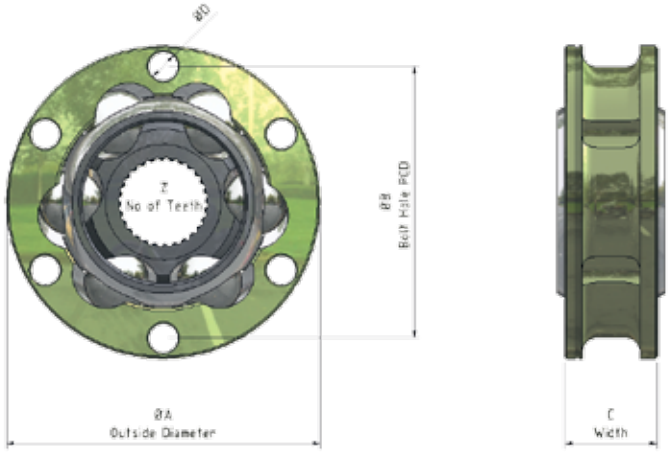
CONSTANT VELOCITY JOINTS

GKN is the largest designer and manufacturer of driveline solutions in the world, which enables GKN Motorsport to offer an unsurpassed range of standard, lightened and easy motion constant velocity joints able to cope with the most demanding applications.

Constant velocity plunging joints developed by GKN permit easy motion on both wheel and differential applications.

Plunging joints are most often used as the inboard joint (transmission side) on FWD vehicles and on the inboard and outboard of RWD and AWD applications with independent suspension.

Some of the most popular CV joint sizes available are listed on the right hand side. If the part you need is not listed please contact one of the GKN Motorsport facilities who will be happy to discuss your requirements.



Part Number	Dimension "A" mm	Dimension "B" mm	Dimension "D" mm	Dimension "C" mm	Plunge Movement mm	Number of Teeth "Z"	Comments
MS3J001	94 & 90	78	8	32	+/- 8	33	Standard, unmodified joint, Formula Ford
MS3J003	94 & 90	78	8	32	+/- 8	33	Lightweight & easy motion to suit Formula Ford
MS3K001	100	86	10	32	+/- 14	25	Lightweight & easy motion, WRC, Cosworth, front inner
MS3K002	100	86	10	32	+/- 20	25	Lightweight & easy motion, WRC, Cosworth, front inner
MS3K008	100	86	10	32	+/- 14	28	Lightweight & easy motion, WRC, Cosworth, front inner
MS3K020	100	86	8	32	+/- 8	25	Lightweight & easy motion, standard duty applications
MS3K023	100	86	8	32	+/- 8	25	Standard, unmodified joint, standard duty applications
MS3K025	100	86	10	32	+/- 8	25	Lightweight & easy motion, standard duty applications
MS3K031	100	86	8	32	+/- 8	33	Lightweight & easy motion. standard duty applications
MS3K032	100	86	10	32	+/- 8	28	Heavy duty joint with bespoke ball hub
MS3K036	100	86	10	32	+/- 8	25	Lightweight & easy motion, standard duty applications
MS3K037	100	86	10	32	+/- 8	25	Lightweight & easy motion, heavy duty applications
MS3K038	100	86	8	32	+/- 8	25	Lightweight & easy motion, heavy duty applications
MS3N014	108	94	10	40	+/- 14	28	Lightweight & easy motion, deep plunge
MS3N020	108	94	10	32	+/- 8	28	Endurance joint, 32mm wide body
MS3N021	108	94	10	40	+/- 8	28	Endurance joint, 40mm wide body
MS3N042	108	94	10	32	+26 -22	28	Standard unmodified joint, extra deep plunge, wide ball hub*
MS3N044	108	94	10	32	+/- 13	28	Lightweight & easy motion, deep plunge
MS3N045	108	94	10	32	+/- 20	28	Lightweight & easy motion, deep plunge, wide ball hub*
MS3N048	108	94	10	32	+/- 14	28	Contoured outer profile for heat reduction, easy motion
MS3S001	115	100	12	32	+/- 8	30	Standard unmodified joint
MS3S002	115	100	12	32	+/- 8	30	Contoured outer profile for heat reduction, Porsche GT 2/3
MS3S011	115	100	12	32	+/- 8	30	Easy motion joint
MS3S024	128	108	12	46	+/- 12	33	Contoured outer profile for heat reduction

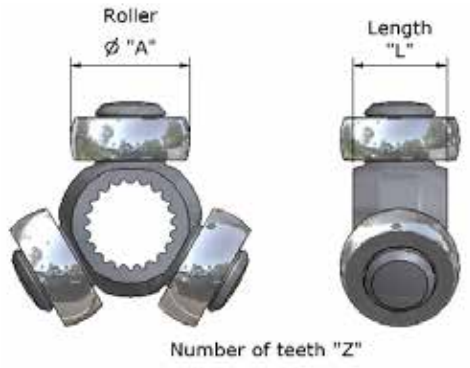
* Increased spline length of barshaft required.

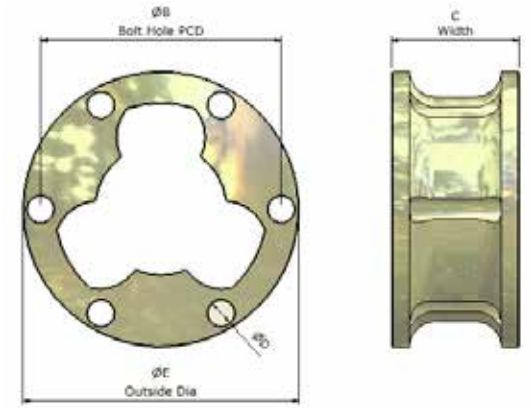
TRIPODE JOURNALS & HOUSINGS

Using the vast experience GKN have gained developing and manufacturing tripode applications for OEM customers around the world, GKN Motorsport can offer a wide range of tripode journals and bespoke tripode housings to suit almost every situation.

Tripode joints offer extremely low plunging forces and greater efficiency while operating at higher angles. Housings can be produced from forgings or from solid material and can be designed to utilise a LÖBRO style bolt pattern making CV to tripode switch simple, or alternatively a “plug in” variant.

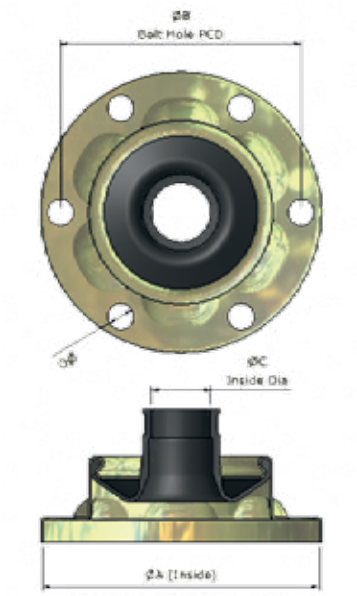
Part Number	Dimension "A" mm	Dimension "B" mm	Dimension "C" mm	Dimension "D" mm	Dimension "E" mm	Dimension "L" mm	Number of Teeth "Z"	Comments
MS3H001	29.95					23.5	22	GI69 tripode
MS3H002	29.95					23.5	30	GI69 tripode
MS3H005	35.50					27	24	GI2600i tripode
MS3H006	30.42					24	21	GI1700i tripode
MS3H007	33.90					26.6	23	GI2300i tripode
MS3M001	33.90					30	27	GI82 tripode
MS3M002	33.90					30	27	GI82 tripode – shot peened
MS3M005	33.90					30	28	GI82 tripode – up-rated bespoke body
MS3M007	38.00					29.2	28	GI3300i tripode – up-rated bespoke body
MS3M008	38.00					29.2	26	GI3300i tripode
MS3M009	46.65						27	AAR4100i tripode
MS3S018	42.10						35	GI6000 tripode, up-rated bespoke body
MS3S021	42.10						29	GI4600i tripode
MS3S023	42.10						28	AAR4100i tripode, up-rated bespoke body
MS9H009		78	40	8	90/94		n/a	6 holes unequally spaced in pairs
MS9H010		78	32	8	90/94		n/a	To suit GI69 tripodes, other widths available
MS9M01-040		94	40	10	108		n/a	To suit GI82 tripodes, other widths available





TRIPODE BOOTS

The correct type and size of boot is a vital part of the driveline assembly. GKN Motorsport boots are maximised for performance and durability. Please contact one of the GKN Motorsport facilities for more information on boots for fixed joints and boots utilising other materials. Our most popular part numbers are listed below.



Part Number	Dimension "A" mm	Dimension "B" mm	Dimension "C" mm	Dimension "D" mm	Comments
MS6J002	93	80	22	8.2	"Fast" boot & plate to suit Ø94mm CV joints and tripode housings
MS6K023	99	86	22	8.2	"Fast" boot & plate to suit Ø100mm CV joints & tripode housings (no indents)
MS6K012	99	86	22	8.2	"Slow" boot & plate to suit Ø100mm CV joints & tripode housings
MS6K024	99	86	22	8.2	"Fast" boot & plate to suit Ø100mm CV joints & tripode housings (with indents)
MS6K032	99	86	22	10.2	"Fast" boot & plate to suit Ø100mm CV joints & tripode housings (with indents)
MS6N001	107	94	22	10.2	"Fast" boot & plate to suit Ø108mm CV joints & tripode housings
MS6N003	107	94	25	10.2	"Slow" boot & plate to suit Ø108mm CV joints & tripode housings
MS6N011	107	94	22	10.2	"Fast" boot & plate to suit Ø108mm CV joints & tripode housings (high angle)
MS6S008	115	100	25	10.5	"Slow" boot & plate to suit Ø115mm CV joints
MS6S009	114	100	25	10.5	"Slow" boot & plate to suit Ø115mm CV joints
MS6S010	115	100	31.5	10.5	"Slow" boot variant, TPE plastic with reduced profile

GREASES

Especially developed for use with GKN CV and tripode joints GKN Motorsport greases help reduce power losses and increase durability, while offering low friction and wear properties and a wide thermal operating range.

GKN Motorsport ball joint grease has ultra high load carrying capacity and optimised viscosity and is suitable for all fixed and plunging (LÖBRO) CV joints.

The tripode grease is optimised for tripode lubrication, has high scuffing resistance but does not contain any solid additives (which can reduce life by jamming the needle bearings).

Part Number	Comments
MS9U024	Ball joint grease, 350g tube
MS9U025	Tripode joint grease, 350g tube

GKN'S MOTORSPORT HERITAGE

GKN has a rich history of involvement in motorsport stretching back nearly 75 years.

The story begins in the 1930's with conventional driveline applications, through racing in ever-more demanding environments such as rally and off-road endurance racing, to the birth of the electric motorsport era.

1950

A partnership is born

In 1950, Ian Appleyard won the prestigious Alpine Rally in the Jaguar XK120, featuring GKN drivetrain components, with his wife as his navigator.

1967

Iconic cars

The iconic Ford GT40 Mk. IV won the 24 hours of Le Mans race in 1967, using GKN driveshafts for their high performance and durability in this demanding endurance race. Half a century later, the new 2017 Ford GT super car once again uses GKN driveshafts.

1972

Capturing a world record

In 1972, GKN built a development car as a test bed for high-performance automotive components. The 600 bhp GKN FFF100 broke the 0-100-0mph world record for a road legal car with a time of 11.5 seconds, a full 8 seconds faster than the previous record!

1983

Breaking the land speed record

Richard Noble broke the land speed record in 1983 with a jet-propelled car known as Thrust 2, sponsored by GKN.

1988
1990

A cut above

Fourty years after the classic XK120's success in the alpine rally, GKN supplied the 1988 and 1990 Le Mans winning XJR9 and XJR12 silk cut race cars with S155/300M sideshafts. They were among the first to use this special material.

1995

Pushing the limits: World Rally Championship

Colin McRae, one of the greatest rally drivers of all time, won the drivers World Rally Championship in the final intense race of the season in the Subaru Impreza 555, which contained GKN sideshafts, propshafts and driveline joints.

2004

Succeeding in extreme environments

Stephane Peterhansel won the Dakar Rally in a Mitsubishi Pajero, in 2004 and 2005. The GKN sideshaft specification proved to have the durability to maintain performance at the extreme end of speed and articulation over thousands of miles of off-road sand, mud and rock.

2012

New beginnings: early electric motorsport success

GKN marked its first major success in the world of electric motorsport at the Pikes Peak International Hill Climb in 2012, where the TMG P002 racer won the EV class, powered by two GKN EVO axial flux eMotors.

2014

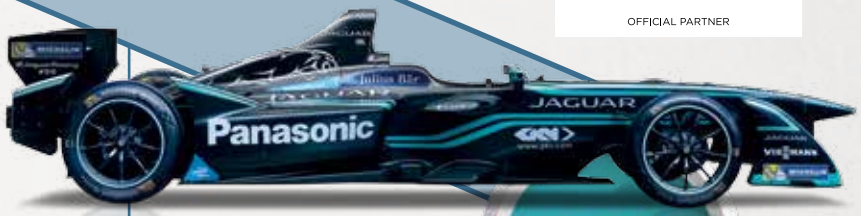
eDrive technology powers Le Mans victory

GKNs electric flywheel was at the heart of the Le Mans 2014 winning Audi R18 e-tron Quattro, providing a highly efficient and durable kinetic energy recovery system.

2015

Sustained success in endurance racing

The top 13 teams entered in the Dakar Rally in 2015 used GKN driveshaft and propshaft solutions along with 70% of all entrants.



2017

The future: GKN in Formula E

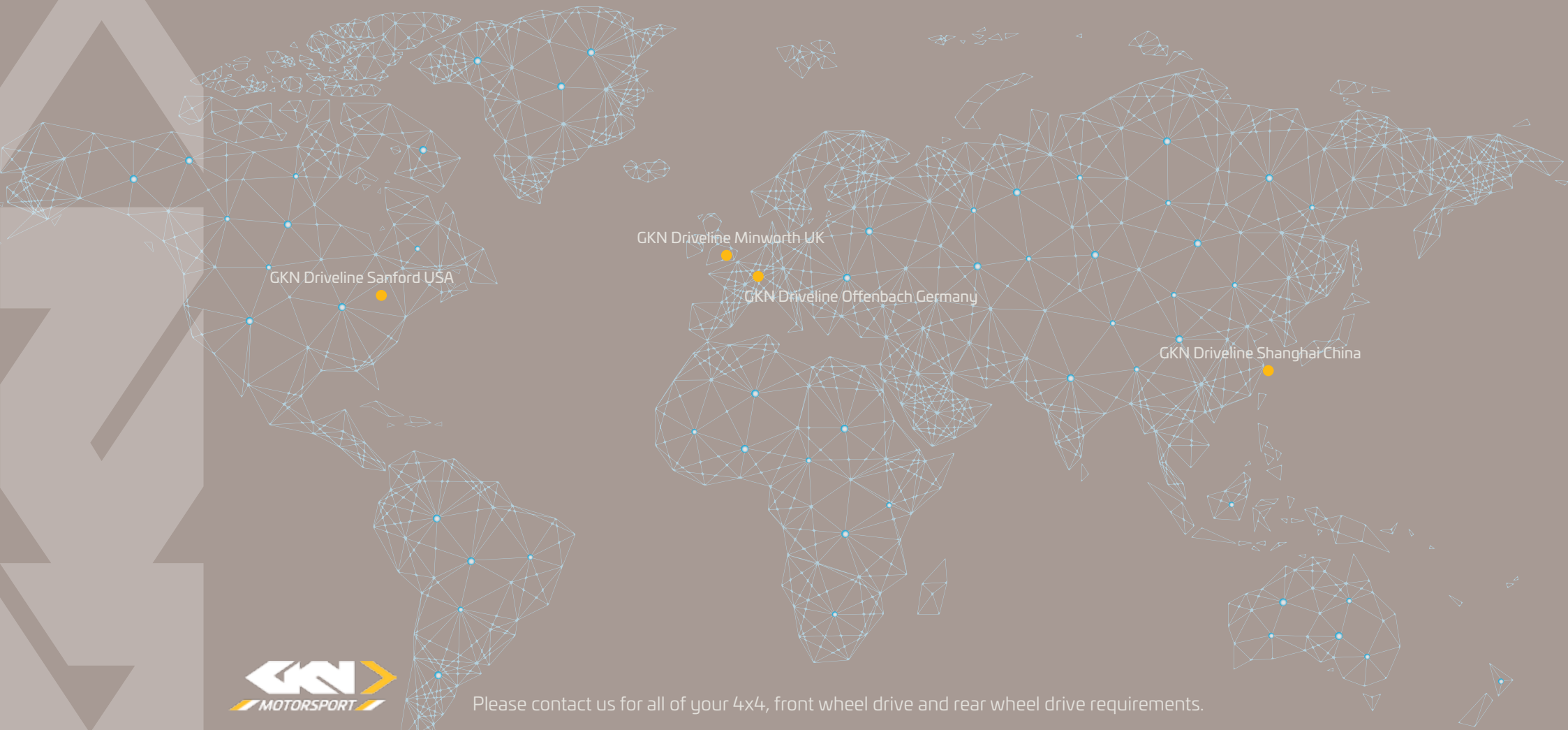
GKN is now once again taking to the track as an Official Partner of Panasonic Jaguar Racing in Formula E - the next generation of motorsport.

GKN MOTORSPORT

Panasonic JAGUAR RACING FORMULA-E TEAM

www.gkn.com

OFFICIAL PARTNER



MOTORSPORT

Please contact us for all of your 4x4, front wheel drive and rear wheel drive requirements.

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