

Driveline. The drivetrain specialists.

We develop and supply complex driveline components, such as CV joint housings, inner races, tripod housings, shaft studs, wheel hubs and studs, as well as fully assembled knuckle modules.

Due to our optimized manufacturing process and a combination of sheet metal and forming technologies, we are now successfully mass-producing joints, notable for their small size as well as their low weight and noise-optimized design features.

Thanks to our exclusive design know-how and expertise in combined hot, warm and cold forming processes, we are one of the leading solutions providers in the drivetrain segment.



Components for side shafts

- Formed blanks worked with near net shape geometries, eliminating the need for soft milling
- Reduced material costs
- Ready-to-install, cold-formed bearing tracks



Drive shaft joints

- By combining forged parts with sheet metal and the principle of a plug-in connection, the weight is reduced by up to 55 %
- Joints with integrated vibration isolation
- Plunging joints that operate with practically zero axial force even under full engine torque



Wheel hubs

- Lightweight design with approx. 15 % weight reduction
- Full development and manufacturing expertise as a tier 1 supplier
- Near net shape forming for generations 1 – 3
- Wheel hubs with spoke design to further reduce weight are currently being tested



Double nuts

- Substitution of the previous flange solution with an optimized plug-in system
- Smaller component size and lower weight, minimal imbalance and simplified assembly

Engine. Precision in motion.

Our high-precision, ready-to-use camshafts (NT®CamShaft) are manufactured on automatic assembly machines developed in-house. Thanks to our sophisticated, well-engineered production technology, our fully ground cam lobes and other components can be assembled on the shaft precisely and without any need for final machining.

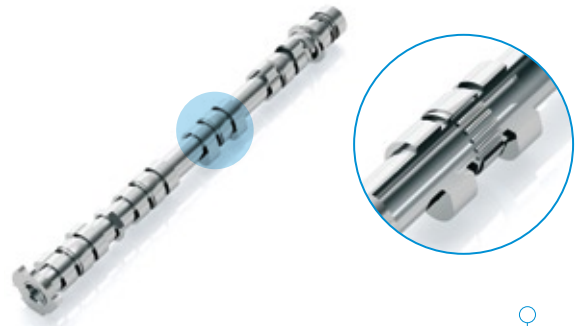
We also manufacture the following:

- Ready-to-use cam lobes and valve train components
- State-of-the-art, ready-to-use conrods with tight tolerances and superior performance characteristics
- Ready-to-use valve spring retainers (manufactured with a combined hot/cold forming production process)



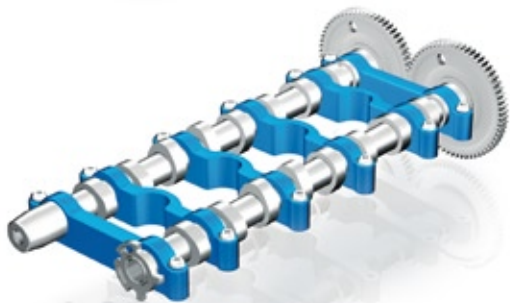
NT®CamShaft

- Weight reduction of up to 45 % thanks to hollow design and optimized assembly of the end fitting
- Secure and calculable interference fit assembly
- All materials can be combined, even high-strength tube materials are possible
- Tube wall thickness reduced to 2 – 2.5 mm
- No grinding necessary following assembly
- Cost benefits through grinding the cam lobes in a stack
- Practically any geometry can be produced, including very small negative radii
- High surface pressure can be transferred thanks to cam lobes made of high-tensile bearing steel
- Different coatings can be applied to individual lobes



NT®CamShaft with integrated needle bearings

- One-piece needle bearings integrated
- Reduced friction by up to 20 %, especially at low revs (hybrid:start/stop function)
- No machining necessary following assembly: No danger of needle bearings becoming soiled
- Cost reduction through elimination of the complex cylinder head oil supply system
- Minimal oil supply means a considerably smaller oil pump
- Important contribution to CO₂ reduction



NT®ModulCam camshaft module

- Integration of ready-to-use, one-piece bearing bridges
- Less production and assembly work thanks to fewer interfaces
- No danger of needle bearings becoming soiled by grinding prior to assembly
- Easier to handle in the engine assembly process
- Cost benefits
- One-piece needle bearings can be integrated



Conrods

- Reduced weight thanks to topology-optimized geometries and the use of high-strength materials
- Development of conrods made of lightweight materials such as ceramics and high-tensile steels

Fasteners. Leading connections.

This is what you can expect from us:

- A complete product portfolio
- Competent support services for the use of safety-critical axle, transmission and wheel applications
- Known as the inventor of the two-piece wheel nut (NT®WheelNut), we are a global leader in the field of wheel mounting technology for trucks
- Global manufacture of nuts (safety-relevant applications as well as specialized spindle nuts and transmission nuts)

Threads

- M 6 – M 100
- Up to property class 12
- Various surface coatings
- Various types of force applications

Special nuts

Flange nuts, weld nuts, cap nuts, threaded plugs



NT®WheelNut

- Wheel nuts for trucks
- For steel and alloy wheels



ENKO® all-metal lock nut

- Maximum safety
- Precise axial run-out
- Tight tolerances
- Uniform prevailing torque
- Reusable

Special Applications. Focus on safety.

When it comes to safety issues, such as steering, brakes, airbags, etc., the specialized know-how of our engineers makes a convincing case, covering everything from state-of-the-art assembly processes through optimum connecting techniques to cold extrusion parts made of special materials. We manufacture ready-to-use, individual components and assemblies with a high degree of precision and in large quantities.



Bushing for rear axle mounting

- Combination of various manufacturing processes
- Intelligent mold systems
- Diverse range of geometries
- Special features: Good mechanical properties by utilizing work hardening and the optimum grain flow
- Special processes for this product: The “spade” is manufactured by means of lateral extrusion



Steering wheel hub

- Targeted utilization of work hardening
- Specific properties for crash components, very thin material thicknesses and uninterrupted grain flow result in defined strength characteristics (crash behaviour)



Freewheel hub for commercial vehicle disk brakes

- Combination of hot and cold forming
- Complex geometry can be produced
- Effective use of materials
- Perfect precision machining



Pressure container for airbags

- One-piece solution made as a cup-type cold extrusion with a base
- Special alloys and specifically applied deformation ratios/ grain flows provide outstanding properties and, in particular, pressure resistance even at low temperatures
- Different wall thicknesses (inside not perfectly round) facilitate ideal coordination of strength and material usage
- Previously, a complex two-piece solution involved welding a tube and plate has now been discontinued

Transmission. Powertrain efficiency.

Our manufacturing processes for shafts used in manual and automatic transmissions are based on state-of-the-art forming and machining technologies. We also use well tested friction welding, cross wedge rolling and assembly procedures. The precision forming of teeth increases their mechanical strength and reduces the amount of space they require and their weight. The Neumayer Tekfor Group is constantly endeavoring to stretch the limits of technical feasibility.

- Special features:
- Lightweight gears in various versions
 - Ready-to-use bevel gears and all types of finished splines
 - Ready-to-use internal synchronizer rings



[Steel synchronizer ring](#)

- For high loads in today's transmissions
- Very high transmissible torques within a small space
- Economical alternative



[Lightweight gear](#)

- Cost efficiency and lightweight construction
- Topological design and selection of the optimum manufacturing process
- Up to 20 % weight reduction
- Patented manufacturing process
- Reduced costs compared with machined lightweight gears



[Assembled hollow shaft](#)

- Formed hollow shafts with reduced use of materials and increased strength
- Modular design – shaft and gear made of different materials matched to their function
- Assembly using patented TEK MOUNT® technology
- Gears machined ready to use prior to assembly
 - > Great flexibility for component design (e.g. minimal spacing between the gears)



[Lightweight differential](#)

- Case-less differential suitable for engine torques < 250 Nm
 - Rolled ring gear with a reduction in the amount of machining involved
- Two-piece formed housing for applications involving high torque levels
 - Optimized wall thickness thanks to forming technology used
 - Simplified machining thanks to two-piece design
- Up to 25 % weight reduction
- Up to 20 % spatial reduction