

## Moving the World by Driving it Forward

We are working on it. Every day.

www.imsgear.com



## **Our Competences**

We don't mean to sound pretentious, but some confidence should do no harm, don't you think so? At least, we from IMS Gear can be convinced of what we have achieved: Over a period of more than 160 years, we have evolved into one of the most popular companies for planetary gears and gearing technology worldwide. But you know what? To be honest, what's behind us is not even that decisive to us. What is yet to come is way more exciting.

With IMS Gear, you count on a global player that has never forgotten its roots in the Black Forest. On highest development competence from A to Z, the optimum gearing of proven technologies with customer-specific requirements, proven and powerful processes and a maximum manufacturing depth. And not at least on a partner that supports you personally with your individual projects. We are ready for you. Always. Worldwide. Sounds great? We think so, too.





Innovation, precision, and reliability – these properties define the PLGs of IMS Gear. As a leading supplier of drive solutions, we offer you customized gear solutions for a variety of industrial applications that meet highest requirements to efficiency and performance.

(Almost) everything is possible. What is important for you? We have the solution.

- Performance
- · Service life
- · Noise and weight optimization
- · Perfect interface design
- Free motor selection
- · Optimum price-performance ratio

And this is only a selection from the manifold options that are available for you with IMS Gear as a partner. With our three product lines IMS.Pro, IMS.Eco and IMS.Drive, your applications can come true - worldwide, quick, in large and small quantities, cost-efficient and with the added benefit of personalized service.

Apart from industrial applications such as turnstiles, lawn robots or conveyor belts, our planetary gears are also installed in automotive applications such as electric tailgate drives, spoiler adjustments and electric door openings or exhaust recirculation systems.

**Everything under Control** 

## **Steering Systems**



You can't imagine cars without electric power steering systems (EPS) anymore. Considering vehicle size and performance range, the different EPS variants can be distinguished among other things, by the installation space of the servo unit inside the vehicle.

In a compact car, the EPS is attached to the steering column. In medium or luxury class vehicles, the servo unit is typically mounted to the pinion or dual pinion. For luxury cars SUVs and vans a position parallel to the axis is used. IMS Gear develops and produces components and assemblies which meet the specific requirements on all three types of EPS systems.

Furthermore, we develop and manufacture plastic worm gears both in dampened and rigid design to be used in column and dual pinion applications.

By the use of plastic injection molding processes we manufacture highly precise gear wheels that require no post-processing of the gearing.

EPS steering systems make high demands to the service life, efficiency and wear properties of worm gears. For this reason, we have developed our own plastic (IMSamid®, an unreinforced polyamide) which fulfills the special requirements on gearings in EPS systems. Our in-house development expertise further allows us to design and optimize the gearing and functionality between steering worm and worm gear in the view of the specific requirements.

When it comes to the development of new applications such as steer-by-wire products, we also see ourselves as our customers' partner.



The technological change towards electric and hybrid drives, the increasingly strict emission standards and the resulting trend towards the downsizing of combustion engines result in steadily increasing requirements to the performance of gear drives and actuators in the field of powertrain.

For many years, IMS Gear has been developing and producing gear components and complete gears for a variety of applications within the powertrain. To give an example our solutions for throttle controls, exhaust recirculation, secondary air pumps or variable valve adjustments have proven themselves millions of times.

Light-weigth, temperature-resistant and high-strength plastic gearwheels for a wheel drive of the balance shafts are the latest development by IMS Gear. They can noticeably help to improve the efficiency, dynamics and smooth running of downsized engines. Plastic gearwheels are far superior to conventional metal solutions with respect to weight and mass inertia, along with significantly improved noise behavior and perceptibly reduced costs.

The only Stop, we allow

## **Brakes**



The electric parking brake (EPB) and the electromechanical brake booster are two examples of sophisticated and pioneering solutions in the automotive area where the technological expertise of IMS Gear comes into play.

IMS Gear has developed the EPB in close cooperation with our customer and based on specific performance specifications from the concept phase to maturity and series production. In this project, it has been possible to realize the required clamping force in a minimum installation space by using suitable material combinations of plastic and metal as well as specific gear design.

IMS Gear produces and assembles these components at its international locations.

As a safety-relevant component it goes through a 100 % final inspection in the assembly process in which the performance of the gear drive is tested and documented.

Together with the customer, IMS Gear has developed and industrialized different metal and plastic components for the brake booster at an international level. In this process, high requirements to the control performance and noise behavior had to be realized in a demanding temperature environment.

The development and industrialization of future brake-by-wire solutions by IMS Gear is based on integrating the expertise of the EPB and the brake booster.



Electrically adjustable car seats are increasingly gaining importance as comfort features, with our electromechanical horizontal seat adjusters (HSAs) providing the technological basis. They meet high demands to long-term running behavior at different temperatures as well as to crash resistance and wear behavior. Furthermore, their mounting position inside the vehicle involves high expectations with respect to noise and vibration behavior.

Due to their small size, HSAs from IMS Gear can be installed into most seat rails available on the market and offer a comparatively long adjustment path. Optimized gearings in combination with minimized free play affect the acoustic behavior in a positive way.

As a modular system, our solution for HSAs combines the benefits of standardization such as quick availability of sophisticated technology for worldwide series production an attractive price-performance ratio and an extremely high degree of individualization at the customer-specific interfaces.



Innovative locking systems are gaining ground in the automotive industry. While a few years ago basic functions with respect to theft protection and emergency mechanisms were paramount, today convenience and increased security determine the requirement profile. This ranges from the classic locking of vehicle doors, the control of electric windows and sunroofs to the convenient opening and closing of doors as well as tailgates and loading flaps.

IMS Gear ranks among the technology leaders of automotive locking systems. We are continuously investing in the further development of our innovative system solutions around window, door and flap control and into the respective manufacturing capacities. From the gearwheel to housings and complete gear assemblies: Our solutions consider the high requirements to performance, weight, and noise. Beyond this, they ensure security and convenience at the highest level.

Our innovative products are used, among other things, in the field of vehicle access and with automatic door drives, electric locks and door stops. Our components and drives enable the automatic opening and closing of tailgates, front and loading flaps. In combination with e.g. automatic closing aids, our product range widens the horizon for new dimensions of convenience. Thanks to our convincing expertise, we rank among the leading suppliers of window lifter components worldwide.

There is also great demand for our locking systems in the field of e-mobility: Among other things, our gearing parts are used to lock the charging infrastructure during the charging process.

With our tool and system concepts as well as our expertise in materials we manufacture our innovative solutions in a competitive and sustainable way.