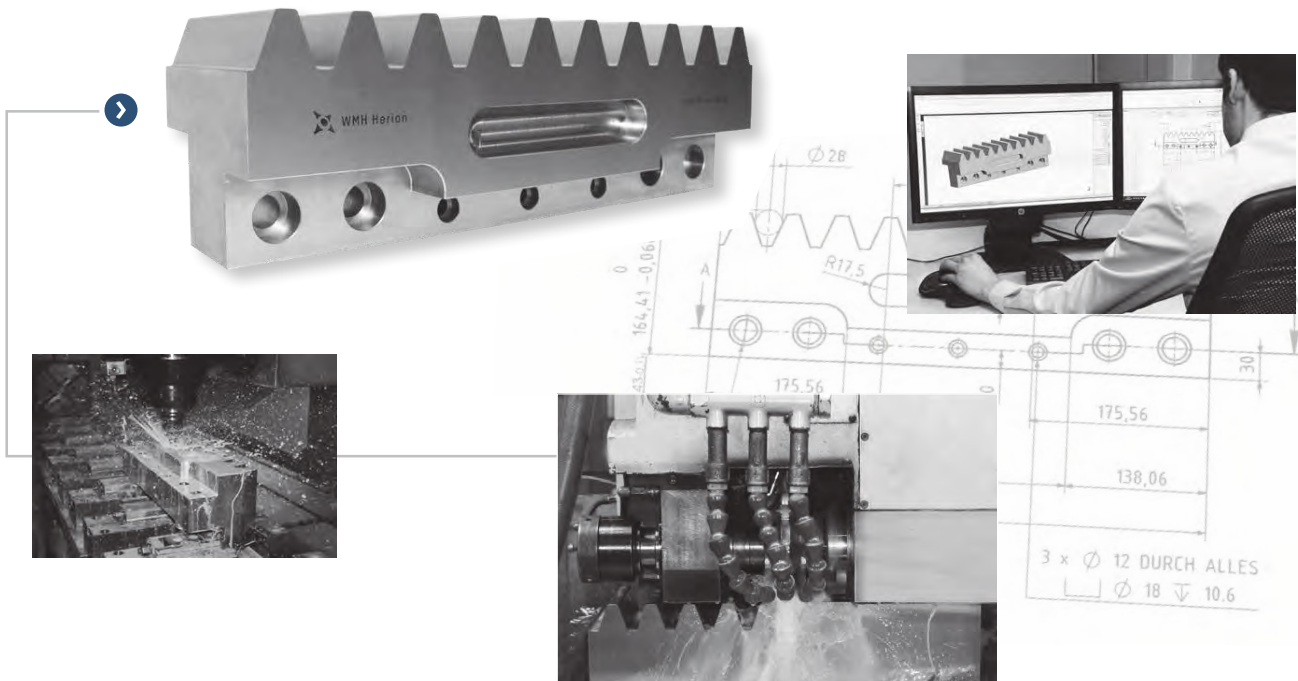


## Made by WMH Herion ...

### Drive Systems and Components - ranging from Standard Parts to Customized Solutions

From the initial product idea to design and dimensioning on to construction and manufacturing - for more than 70 years now, WMH Herion is your partner for drive technology and system solutions. As a gearing specialist, we design and manufacture customized solutions, standard components and complete systems in a comprehensive process.



Know how with precise engineering coming along with high stock capacity.

- Individual development and manufacturing of components and complete assemblies according to customer specification
- Extensive range of standard part programme manufactured in-house
- 12,000 different drive components always available in stock
- Fast and high-quality customization of standard parts
- 3D-CAD design, prototype construction and test bed
- Detailed counseling and fast, straightforward service

More information about our full range of products and services can be found on the following pages of this chapter and at [www.wmh-herion.de](http://www.wmh-herion.de). Also, we are pleased to answer your questions personally - please contact us! Our contact information can be found on page 12 of this chapter. We look forward to it!



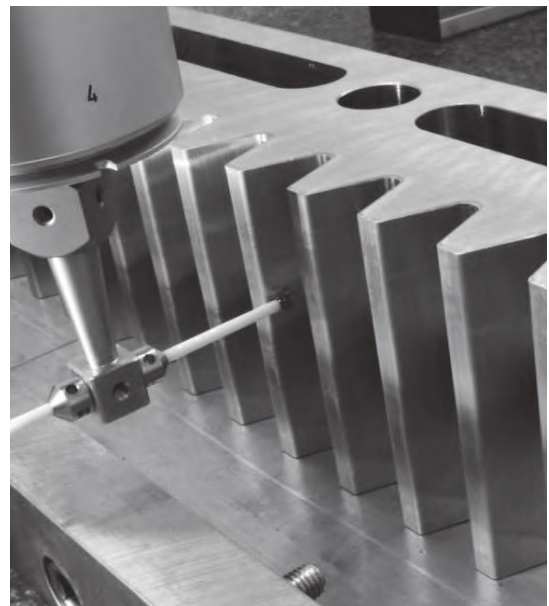


## ➤ Always the Main Focus: highest Product and Process Quality

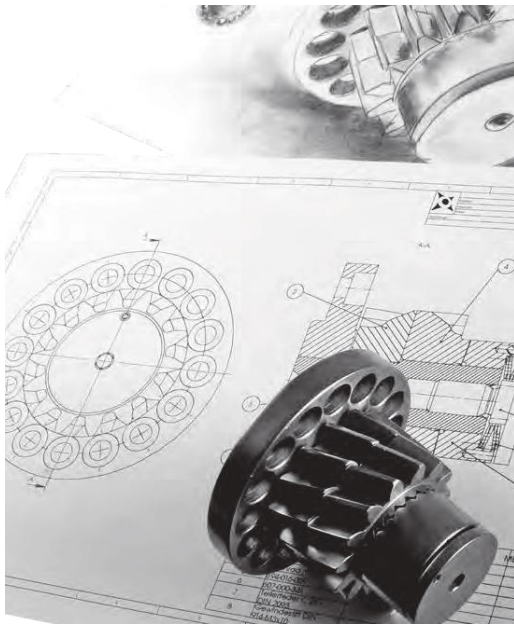
We are constantly working on the quality of our products, processes and services. This idea accompanies all design and development projects as well as our standard and ISO 9001:2015 certified engineering and manufacturing processes, as well as all other processes in the company. In addition, we are working with efficient processes to improve the price-performance ratio of our offers - our customers in particular should benefit hereof.

The focus of all quality efforts lays on our products: proven as well as newly developed components are produced in a consistently high quality; complete control ensures that only products leave our company that meet your and our high quality standards, to ensure that only the best products are part of your drive.

Thus, our products and assemblies secure the reliability of your constructions and machines in the world - today and in the future. This is our driving force.



## ➤ Drive Systems - Development from Draft to Series Production



For WMH Herion, first-class drive components are not only an all end product; they also form the basis for assemblies and complete system solutions. We at WMH Herion see ourselves not only as a component manufacturer, but rather as a general problem solver in all areas of drive technology and are available to our customers as a competent and reliable contact.

In the context of a comprehensive approach, we design and manufacture application-specific drive solutions. Besides, we support our customers on request during individual development phases.

- Problem analysis
- Technical conception
- Design & Dimensioning
- Selection of suitable materials
- Prototypes
- Testing & Quality Assurance with test beds & 3D measuring technology
- Series production
- After-sales service

Of course, our sales and development team offers project-related customer consulting during all phases.

## ➤ Flexibility - Our Focal Point in Fulfilling Your Requirements

To our customers, flexible response is a promise that we at WMH Herion want to give in several ways:

As an experienced manufacturer of components and systems for power transmission and linear technology, we have the necessary know-how, flexible structures and vertical integration that allows us to respond quickly and straightforwardly to individual customer needs. In particular, the production of customized drive solutions from prototype to series production forms a focal point at WMH Herion.

Besides, it is equally important to us to support our customers in the best possible way with time-critical requirements (rush orders, production of spare parts for broken machinery, ...).



## ➤ Innovations - Converting Theory into Practice

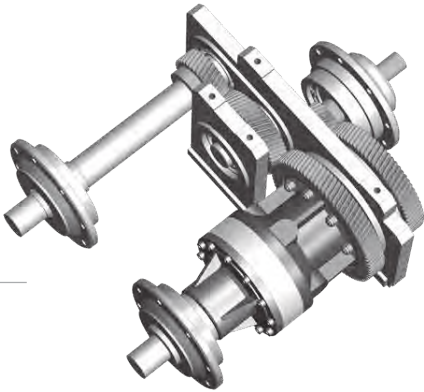
For WMH Herion, innovation is nothing new. We consider the adaptation of our products, production processes and services to the needs of our customers, but also the forward-looking addressing of future-oriented trends in drive technology and new needs of the markets as a core task of our company.

The optimization of our product portfolio and introducing new products, the continuous work on improving quality standards and a sound education and advanced training of our employees as well as the implementation of new production methods and investment in state-of-the-art production facilities is therefore only logical.

All these elements form a solid foundation that ensures an up-to-date and innovative product and service programme with excellent quality both for now and in the future.



## ➤ R&D - Drive Solutions for Tomorrow



Since many years, the in-house research and development department contributes significantly to the innovative capacity of our company. New products such as the Flange Pinion and the Rack & Pinion Drive, but also the enhancement of our Preloaded Double Pinion as well as many customized product solutions are amongst the projects already implemented by our R&D department.

In addition, the team of R&D is working on new and complex concepts for drive solutions and accompanies their implementation by our experienced staff from the construction of the first prototype to series production and market launch. Here, the close cooperation with universities and university-related institutions and the associated sharing of experience and knowledge enriches working on several completed and ongoing projects.

Our customers benefit from the established processes of our R&D: proceeding from the first basic idea to the technical consultation and design of components and assemblies, we develop custom made, reliably tested drive solutions in excellent quality for individual customer applications.



## Customized Solutions

For more than 70 years, the name of WMH Herion is not only linked to a high-quality and extensive standard part programme, but also to the design and conception, construction and manufacturing of customer-specific parts and assemblies.

We will be pleased to support you in realizing your application: our highly qualified and experienced engineers and technicians will advise you personally and competently in all matters, in order to develop a solution with you that is both customized and optimized for your application.

### ▶ Parts & Components - Custom Made & acc. to Drawing



For this, we use the latest technology and are also linked to highly competent professionals and research partners to guarantee the quality, reliability and durability of our products:

- Design/Calculation Programme
- 3D-CAD System
- Collaboration with Universities
- Cooperation partners
- Test bed

#### **Production capabilities:**

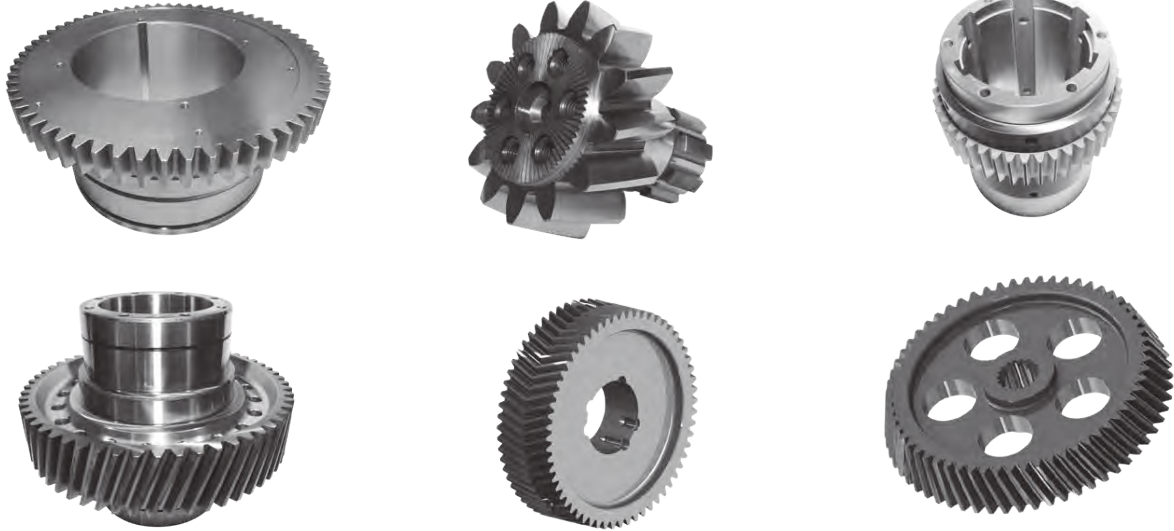
To our customers we offer the option to commission parts and components, both custom made and according to drawing, in all product groups. We manufacture individual parts as well as small and larger scale series.



## WMH Herion - the Gearing Specialist

With our many years of experience and solid, comprehensive know-how in the fields of gear technology and drive components, we want to support our customers in particular where complex gearing components for customer-specific applications are needed.

These are manufactured according to customer drawing on the one hand. On the other, there is of course also the possibility to develop components and assemblies. Here we take over the entire process, beginning with an analysis of your application and the preparation of a suitable concept, continuing with design and construction and through to the manufacturing of prototypes and serial products.



## Extended Product Range of Special Gearing Parts

Following extensive investments in state-of-the-art, highly flexible production facilities we provide our customers with immediate effect an even wider range of products for large-sized special gearing parts in the following product groups:

- Spur gears
- Gear rims
- Bevel gears
- Worm gears
- Sprockets

To our customers, we'd like to ensure component manufacturing in the known, high quality and an excellent price-performance ratio.

More information about our advanced manufacturing capabilities in the product groups mentioned above, can be found on the info pages of each catalogue section. For further consultation contact our engineers and sales department, too!



## › Customization of Standard Parts

The customization of our standard parts according to drawing and customer requirements has been for many years one of the services offered by our company.



The combination of standard parts and customization, our experienced staff in order processing, design and production, as well as our extensive and flexible machinery ensures that our customers benefit in many ways:

- Expert consultation
- Shortest delivery times
- Manufacturing of high quality single and production items

We are available for you any time as a competent partner - both for advice regarding the application and customization options of our standard parts as well as the actual customization of our products.

### Sample applications

- Drilling, turning, milling, grooving, threads
- Heat treatments
- Surface treatments



## ▶ Manufacturing Capabilities - Contract Manufacturing

WMH Herion offers you the possibility of carrying out all major production steps which are used in our product manufacturing processes. Therefore, we work with state-of-the-art machinery. For all questions regarding technical details or organization, our team will be at your disposal.

### Manufacturing Capabilities

Lathing:	Diameter max. 2,000 mm
Milling:	Length 5,000 mm x Width 400 mm
Grinding:	• External cylindrical
	• Internal cylindrical
	• Surface grinding
	• Racks
	• Gear wheels
	• Worms
Gear cutting:	<b>Gear Milling</b>
	• Round parts - Module gear cutting - Gear cutting of worm gears - Sprocket gearing (DIN / ASA / Extended pitch roller chains)
	- Bevel gearing (Straigh / Helical / Spiral)
	- Special gearing (free choice of module / pitch)
	• Gear cutting of racks
	• Milling of Hirth serration • Milling of Herringbone gears
More production possibilities:	<b>Broaching, Shaping, Keyseating</b>
	• Keyways from 3 mm
	• Splined shafts up to max. 72 mm diameter
	• Shaping of keyways in blind holes
	• Broaching of numerous other profiles - Splines acc. to DIN 5480 & 5482 - Serrations acc. to DIN 5481 - Square and hexagonal profiles
	<b>Straightening</b>
	• 8-100 Tons • Stroke max. 800 mm





## Spur Gears

Sonderanfertigungen

Custom Made Parts

### Content

Acc. to drawing and customer requirement, we manufacture spur gears, pinion shafts and gear rims in numerous designs:

#### Spur Gears & Gear Rims

- Straight or helical teeth
- External and internal gear
- Parts in ground quality: tooting- $\varnothing$  up to 2 000 mm; tooting in any modules and special pitches
- Parts in milled quality: tooting- $\varnothing$  up to 5 000 mm; tooting up to module 24
- Materials, hardening or surface coating according to customer requirements

#### Gear Rim Segments

In addition to the manufacturing possibilities of gear rims (mentioned above), segments with larger pitch circle diameters are available on request.

#### Hirth Serration

- Milled and hardened design
- 45° or 60° profile angle
- Backlash-free, self-centering serration at the end face of cylindrical shafts for a rigid and central connection of shafts, discs and gears
- Highest indexing and repeat accuracy

#### Herringbone Gears

Gears with herringbone gearing are available on request; outer- $\varnothing$  up to 1 400 mm.



We offer more than competitive prices - contact our engineering department!



## NEW! Preloaded Double Pinion with Straight & Helical Teeth - Version 2013

Our new Preloaded Double Pinion enables a back-lash-free drive in connection with a rack. A β range acc. to ISO 9409-1 connects the Preloaded Double Pinion with a gearbox. The Preloaded Double Pinion is available as either helical or straight teeth type.




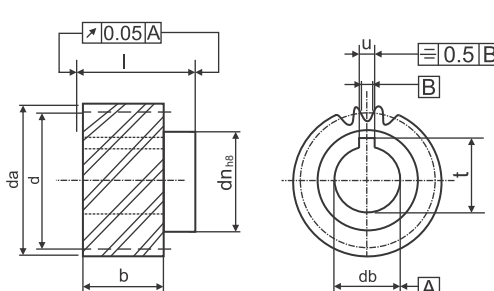
type	
material	Stahl   steel 1.7131 [16MnCr5]
case-hardened	58+4 HRC
ground teeth	
straight teeth or helical, left hand, helix angle	19° 31' 42''
pressure angle	20°
toothing quality	6 e25
module	2 - 5

In addition to our standard range shown on page A 2, we offer customized Preloaded Double Pinions as well. Parameters such as module or number of teeth can be chosen freely to suit customers' requirements. Please send us your specific configuration in order to receive an accordant offer.



## Spur Gears with Ground Teeth, Helical





module	2,0
toothing quality	7 e25
helical, left hand	
helix angle	19° 31' 42''
pressure angle	20°
case hardened	
material	1.7131 [16MnCr5]

No. teeth	$d_a$	$d$	$d_b$ H6	$d_n$	$b$	$l$	$u$	$t$	Part No.
20	46,4	42,44	20	30	28	30	6	22,8	123-220-020

