

INDUSTRY SOLUTIONS

AUTOMOTIVE



**OUR DRIVE –**  
**PRECISION & PROCESS RELIABILITY**

Clamping solutions for the automotive industry

[www.hainbuch.com](http://www.hainbuch.com)

**HAINBUCH**  
WORKHOLDING TECHNOLOGY



# AUTOMOTIVE – ENGINE OF INNOVATION

## Your requirements – our solutions

Manufacturers must be able to quickly react to customer requirements to compete effectively in today's automotive industry. Short lead times and varying product mixes and volumes necessitate workholding that can be quickly modified to your customer's needs today, all while maximizing the performance of your capital and perishable tooling investments. HAINBUCH has helped you meet these challenges over the past four decades with innovative solutions of precise modular workholding components and, when required, unique special designs tailored to your exact needs.

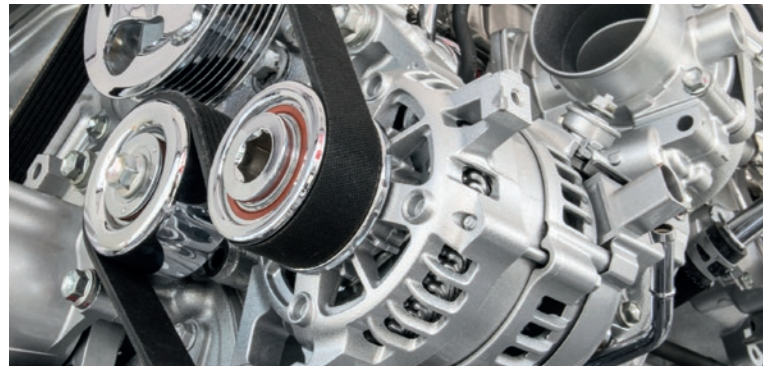
## HAINBUCH – the specialists in clamping devices

- Over 60 years of experience in the field of workholding technology
- More than 150 patents – creativity is part of our corporate philosophy
- Experts in the area of vulcanization; the combination of steel and rubber
- In-house production of composite components with mineral cast or also carbon fiber reinforced plastic [CFRP]
- Quick change-over systems for reduced set-up times
- Years of experience with engineering projects in the automotive industry

## Our expertise supports your competencies

With HAINBUCH solutions, many customers produce in a manner that is easier, faster, and more cost-effective. Do you want to retool faster and thus save time? If so, then you have come to the right place – drive with us and experience how HAINBUCH can rev up your productivity.

Contact us at [www.hainbuch.com](http://www.hainbuch.com) | [sales@hainbuch.de](mailto:sales@hainbuch.de)



# YOUR CHALLENGE – COMPLEX WORKPIECES



Camshaft bushing



Cylinder liner



Piston



Injector



Camshaft

## Combustion engine



Compressor wheel



Diffusor



Turbine shaft wheel

## Turbocharger



Switch cam



Gear



Sun shaft



Differential housing

## Transmission



Brake disc

## Braking system



Hitch

## Accessories



Inner race



Ball bearing



Ball cage



CV joint



Axle housing

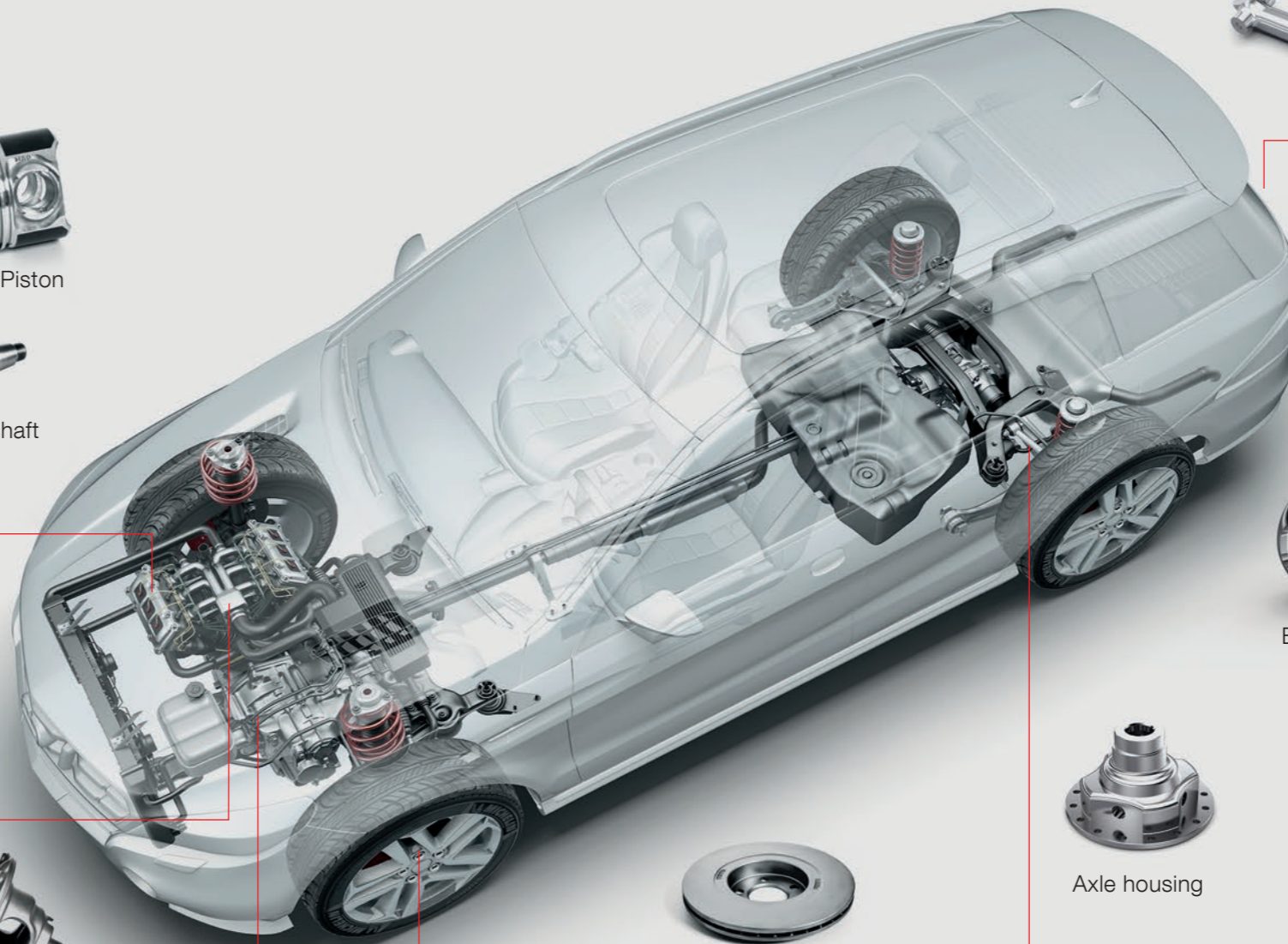


Bevel gear



Ball pivot

## Drivetrain





# HAINBUCH CLAMPING SOLUTIONS



**Workpiece**  
**Clamping task**  
**Machining**

Axle housing  
I.D. clamping  
Turning of the central bore and outer contour

**Solution:** TOPlus mandrel

### Workholding technology

- Hexagonal mandrel with pull-back effect for high torque transmission and for rigid, vibration-free clamping
- Vulcanized segmented clamping bushing and sealed workpiece end-stop for reduced chip contamination



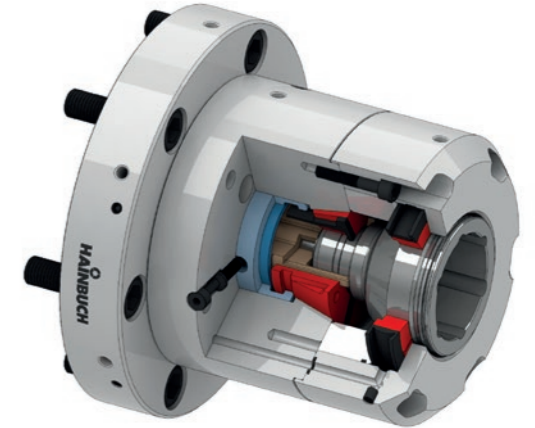
**Workpiece**  
**Clamping task**  
**Machining**

CV joint  
O.D. clamping and form-compensating support  
Hard machining of the ball hubs

**Solution:** SPANNTOP chuck with TALEMENT clamping cassette

### Workholding technology

- O.D. clamping on the workpiece shaft through a clamping head and additional form-compensating and position-compensating support in the front, unmachined bell area
- Complete solution with all required components [clamping cylinder, media supply, and control unit]



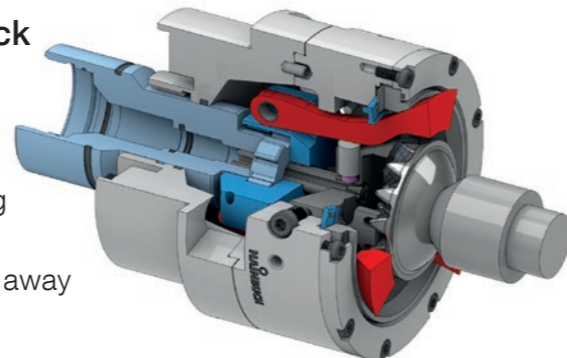
**Workpiece**  
**Clamping task**  
**Machining**

Bevel gear  
O.D. clamping and axial clamping on the fly in two machining steps on one multi-spindle automatic lathe  
Turning the bore and the ball surface, including the outside diameter

**Solution:** Position-compensating clamping lever chuck

### Workholding technology

- Workpiece positioning via toothed workpiece end-stop
- Floating clamping taper and convex bearing supported clamping lever ensure position-compensating outside diameter clamping
- By holding between centers, the clamping levers can be moved away and the outside diameter of the teeth can be finished



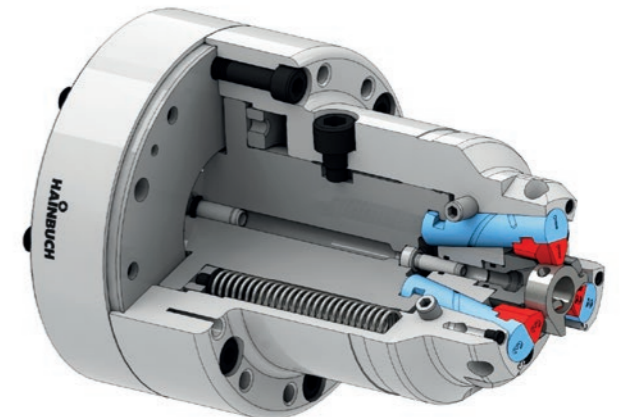
**Workpiece**  
**Clamping task**  
**Machining**

Switch cam  
O.D. clamping  
Turning and machining between the jaws

**Solution:** Bolt chuck

### Workholding technology

- Bolt chuck with pull-back effect and tool-optimized interference contour
- Spring activation for reduced clamping force
- Air sensing control for process reliability
- Integrated balancing system



# WE ARE AT YOUR SERVICE – WORLDWIDE

Headquarters in Germany | 11 international subsidiaries | more than 40 sales agencies



Find our global subsidiaries and sales agencies at [www.hainbuch.com](http://www.hainbuch.com)

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