



**SWS**  
SPANNWERKZEUGE – SEIT 1920



# SWS Spannwerkzeuge

Spannende Aufgaben - **Perfekte Lösungen**

# What we stand for



## Precision & Perfection

Perfection is the demand on our production, which enables us to manufacture clamping devices with concentricity accuracies of less than 3µm.



## Experience & know how

In the manufacture of our clamping devices, we rely on over 100 years of experience in design and our high-precision manufacturing expertise.

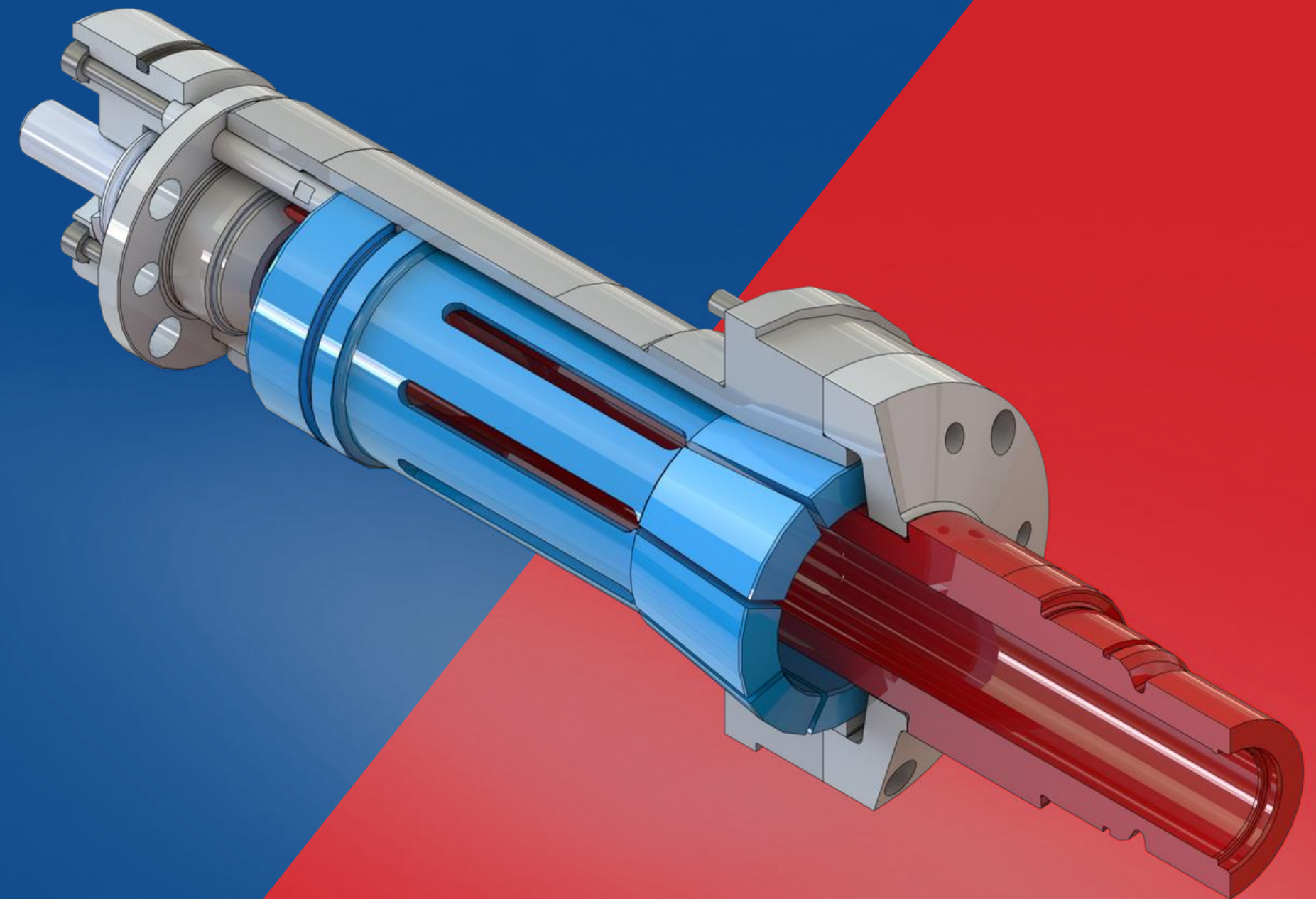


## Customer focus

On-site and remote first-class customer support from our technical sales, design and service engineers.

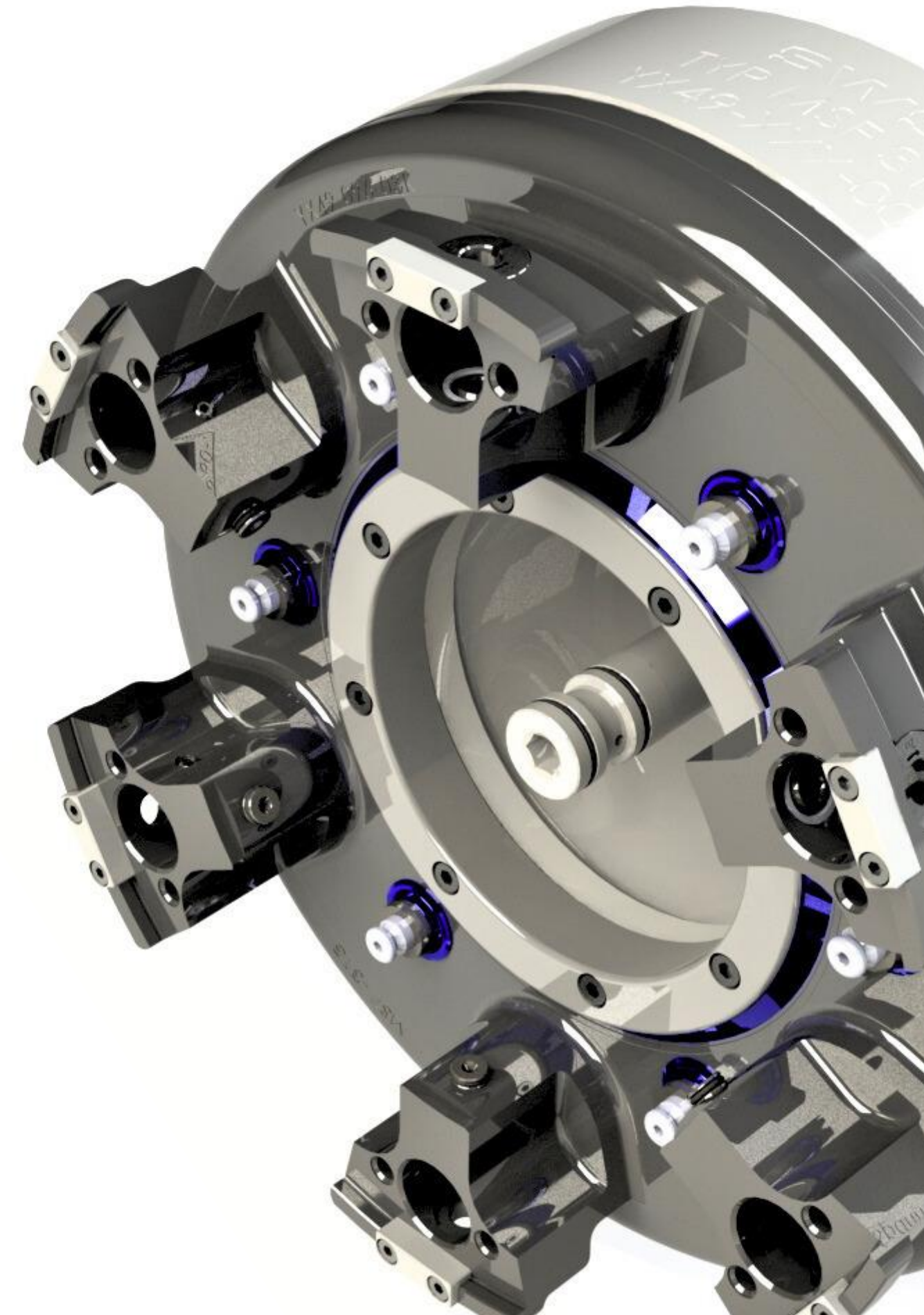
# Clamping solutions

- Diaphragm chucks
- Collets for skiving tools
- Inner & outer clamping
- Special solutions
- Standart collets and mandrels



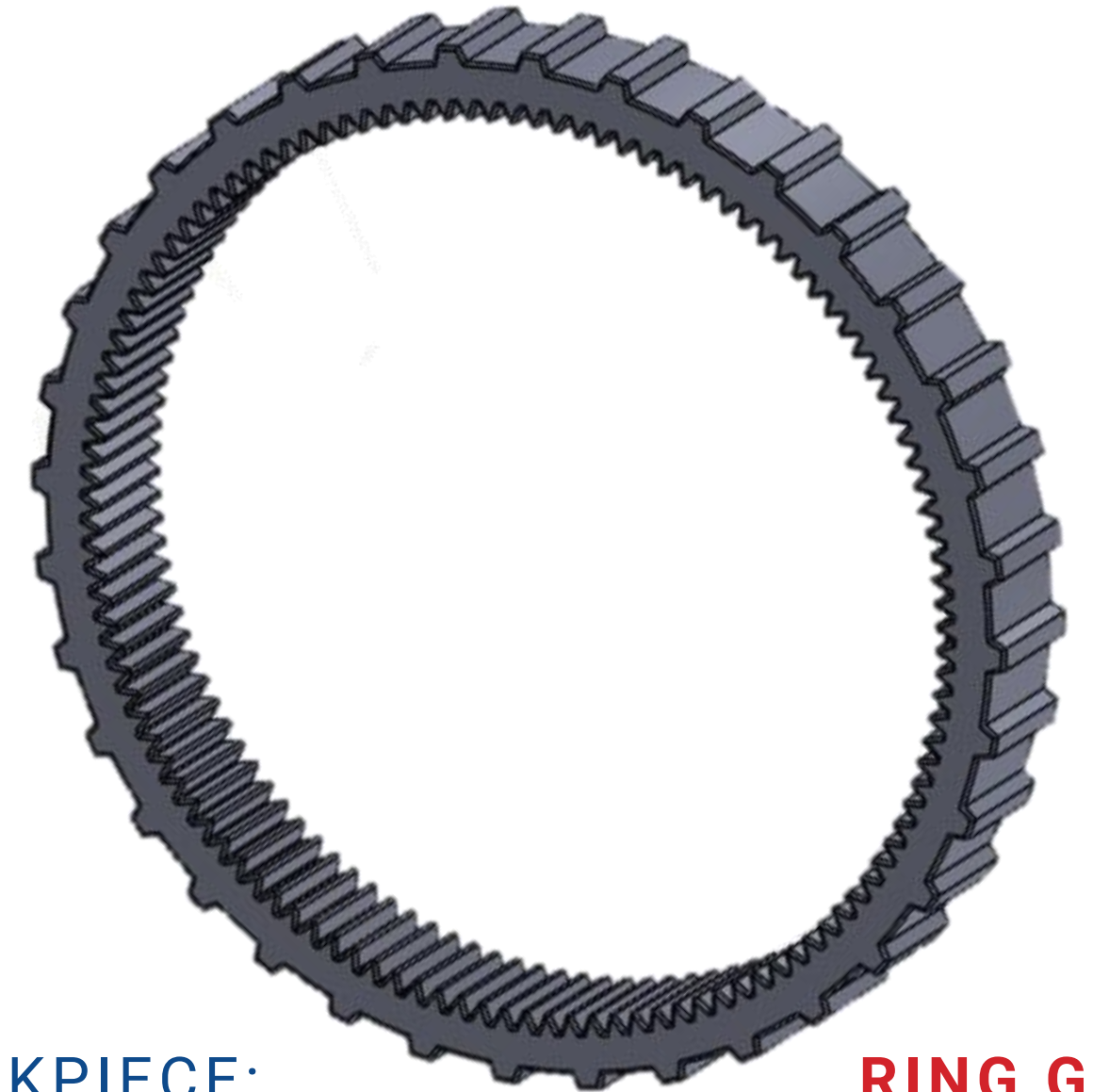
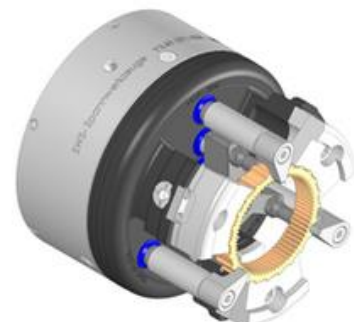
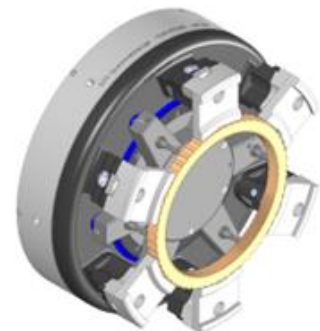
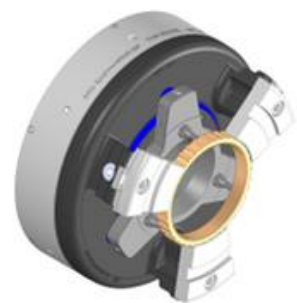
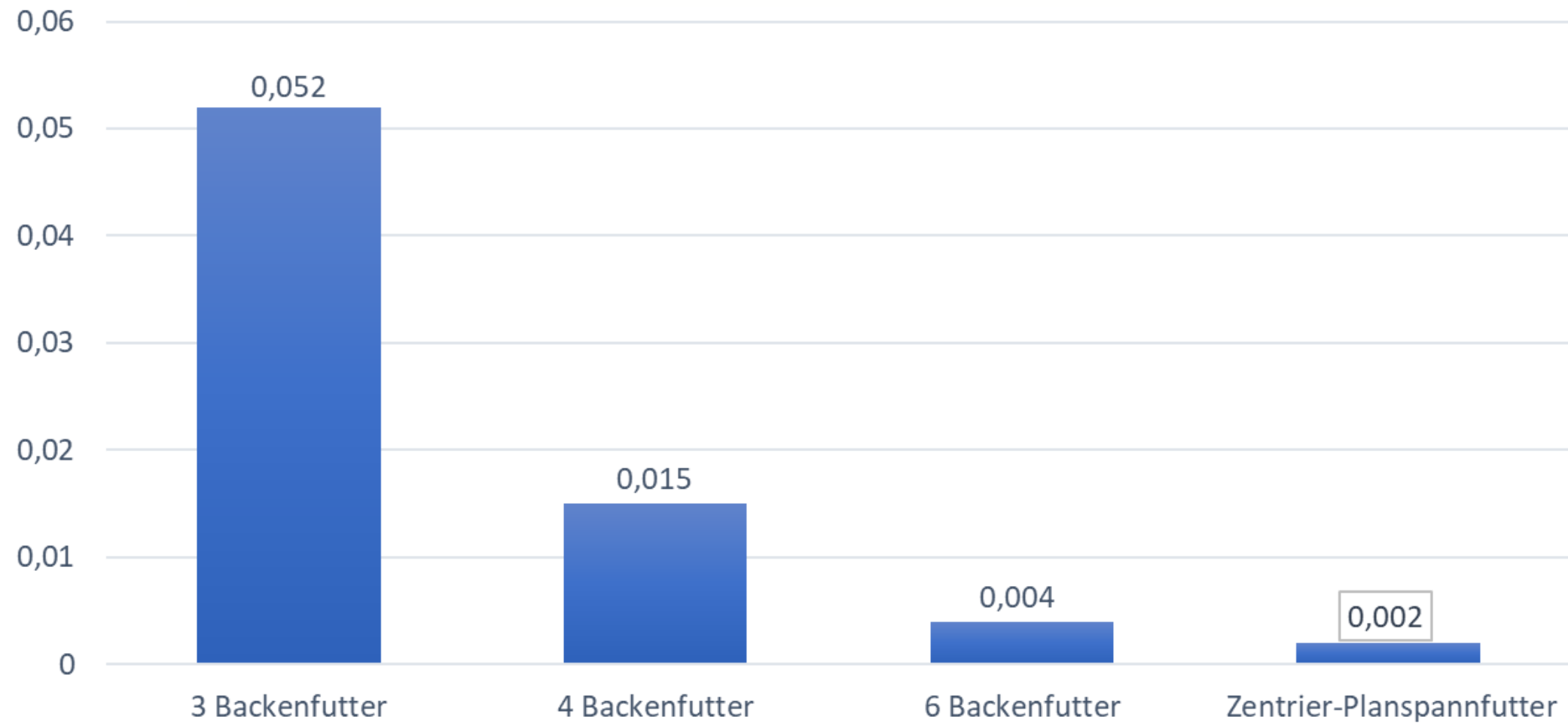
# Diaphragm chuck

Low-deformation clamping, external



# Diaphragm chuck

Low-deformation clamping, external



WORKPIECE:

**RING GEAR**

**DIAPHRAGM CHUCK:**

CLAMPING RADIAL:

**3000N**

**CENTERING AXIAL CHUCK:**

CENTERING RADIAL:

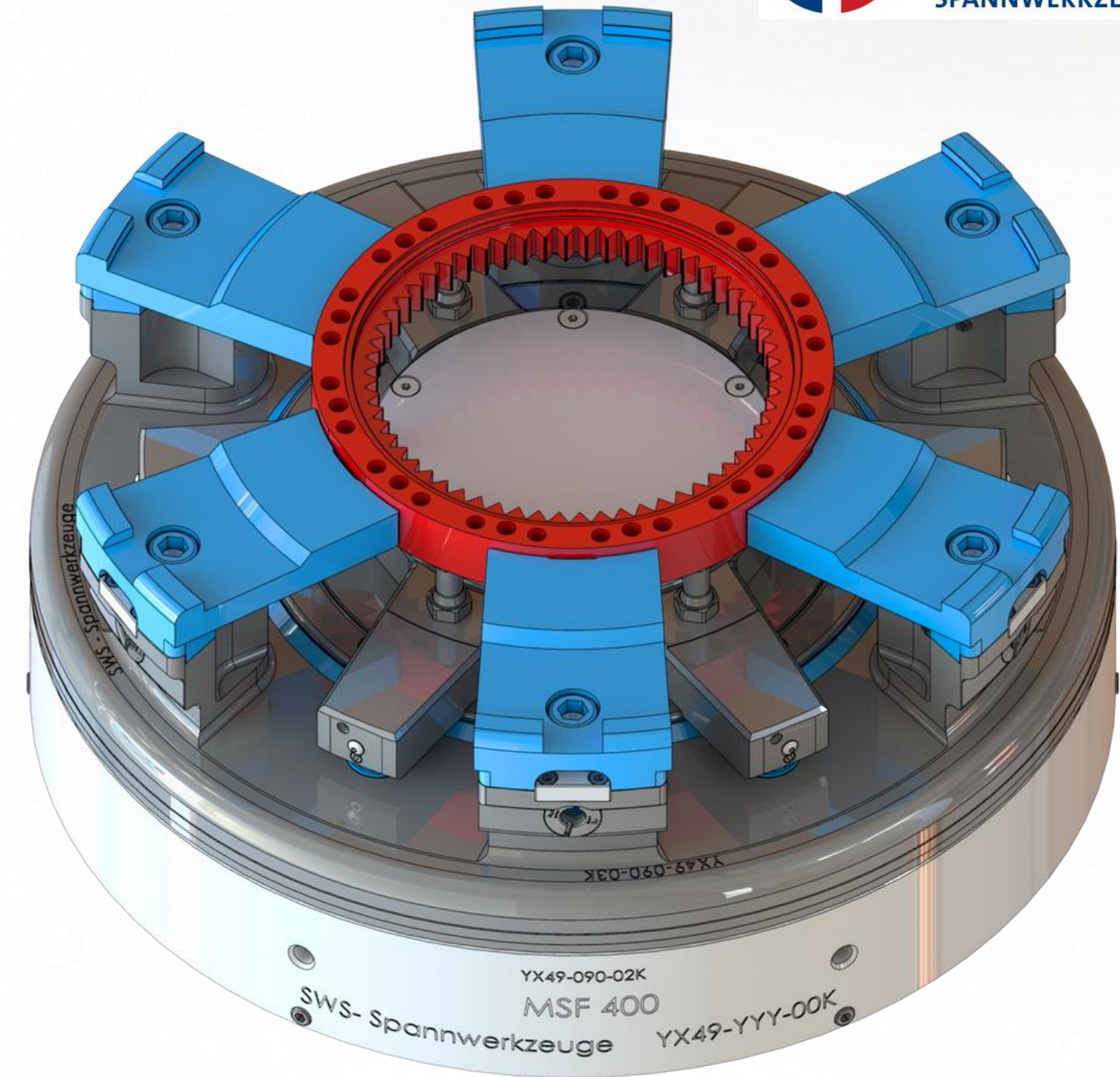
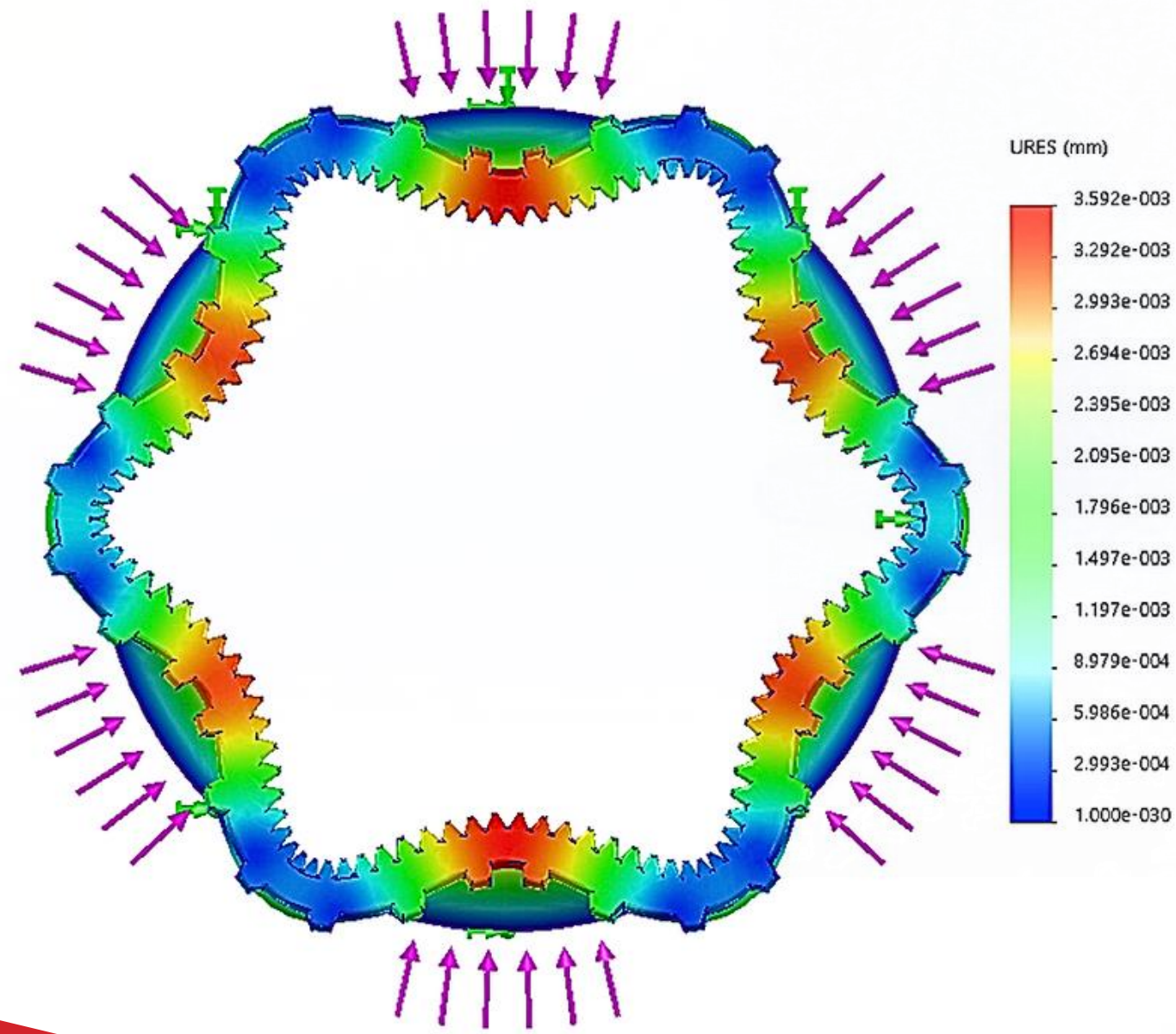
**300N**

CLAMPING AXIAL:

**3000N**

# Diaphragm chuck

Low-deformation clamping, external



**WORKPIECE: RING GEAR**

**CLAMPING FORCE: 3000N**

**DEFORMATION: 0,004MM**

# Diaphragm chuck

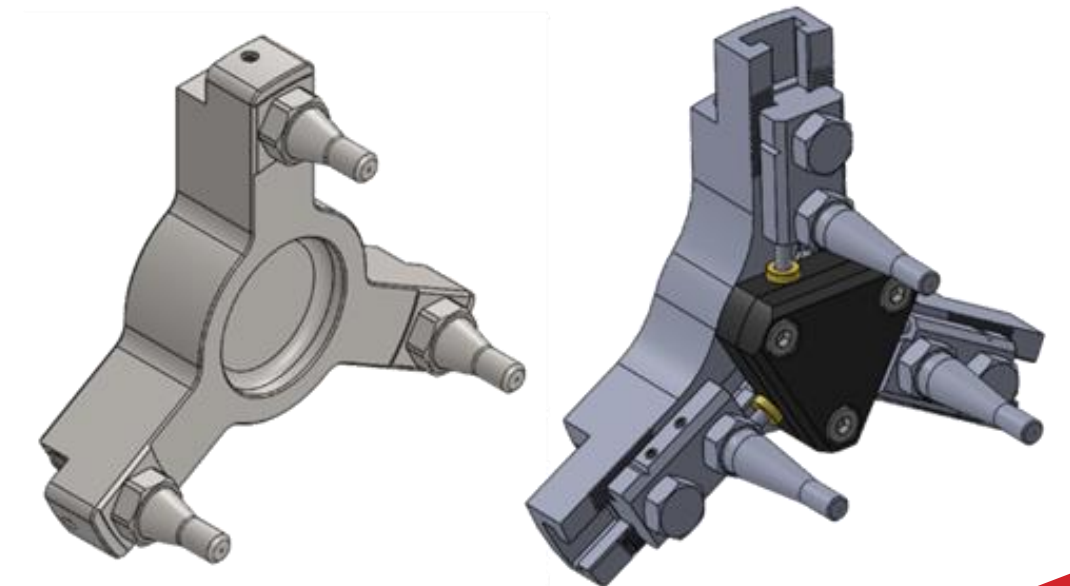
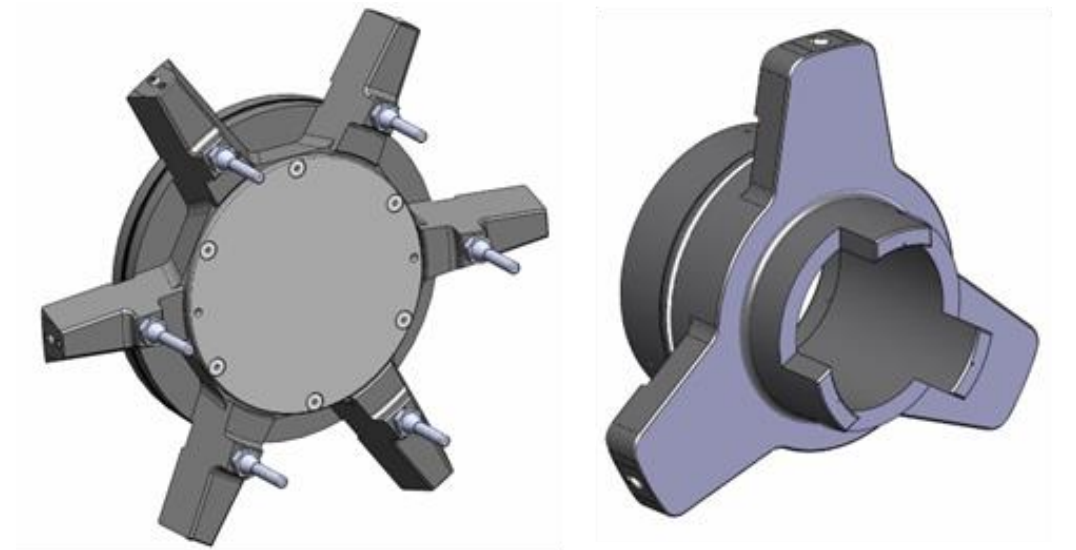
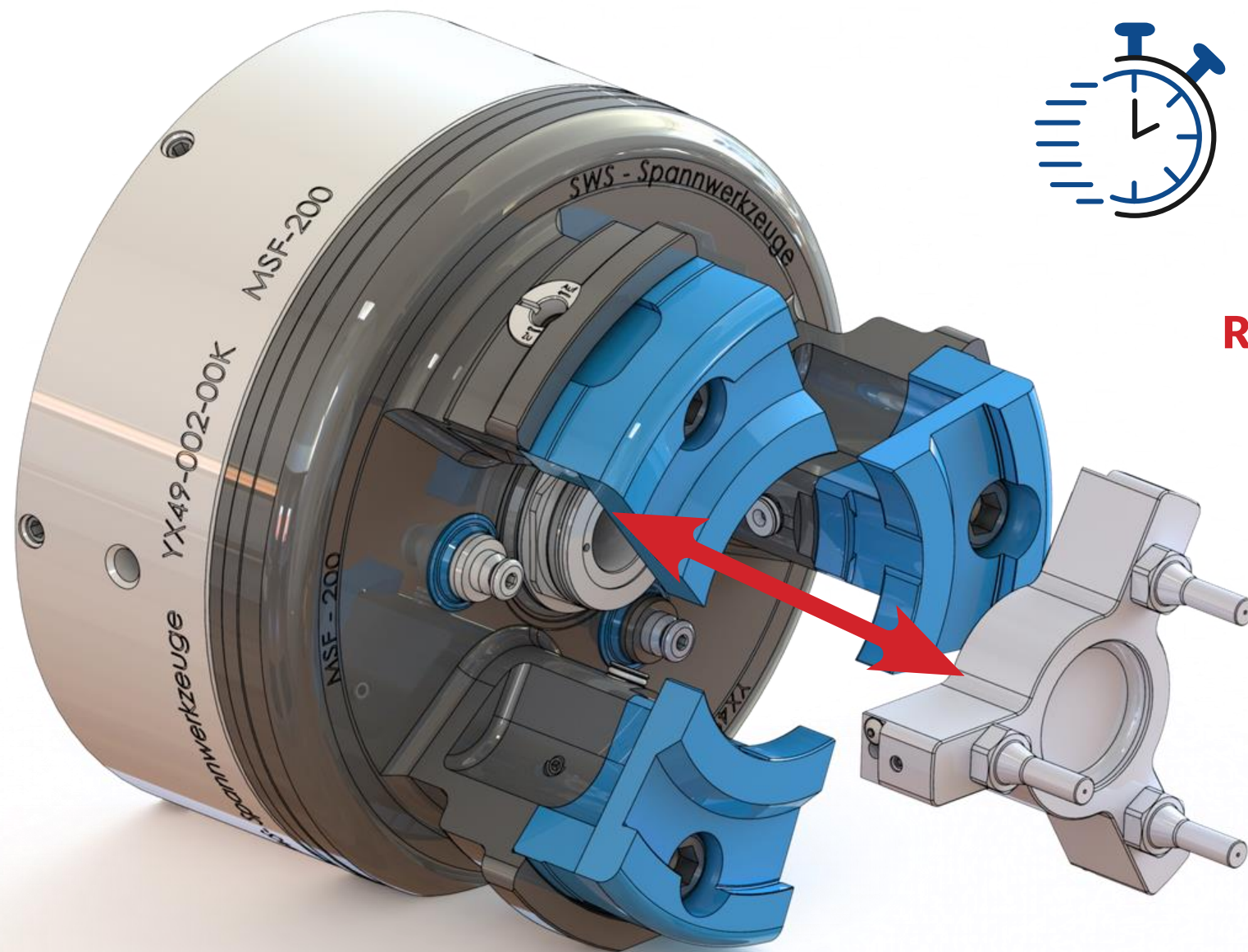
Planar stop - **QUICK CHANGE** -System

QUICK CHANGE **IN UNDER**



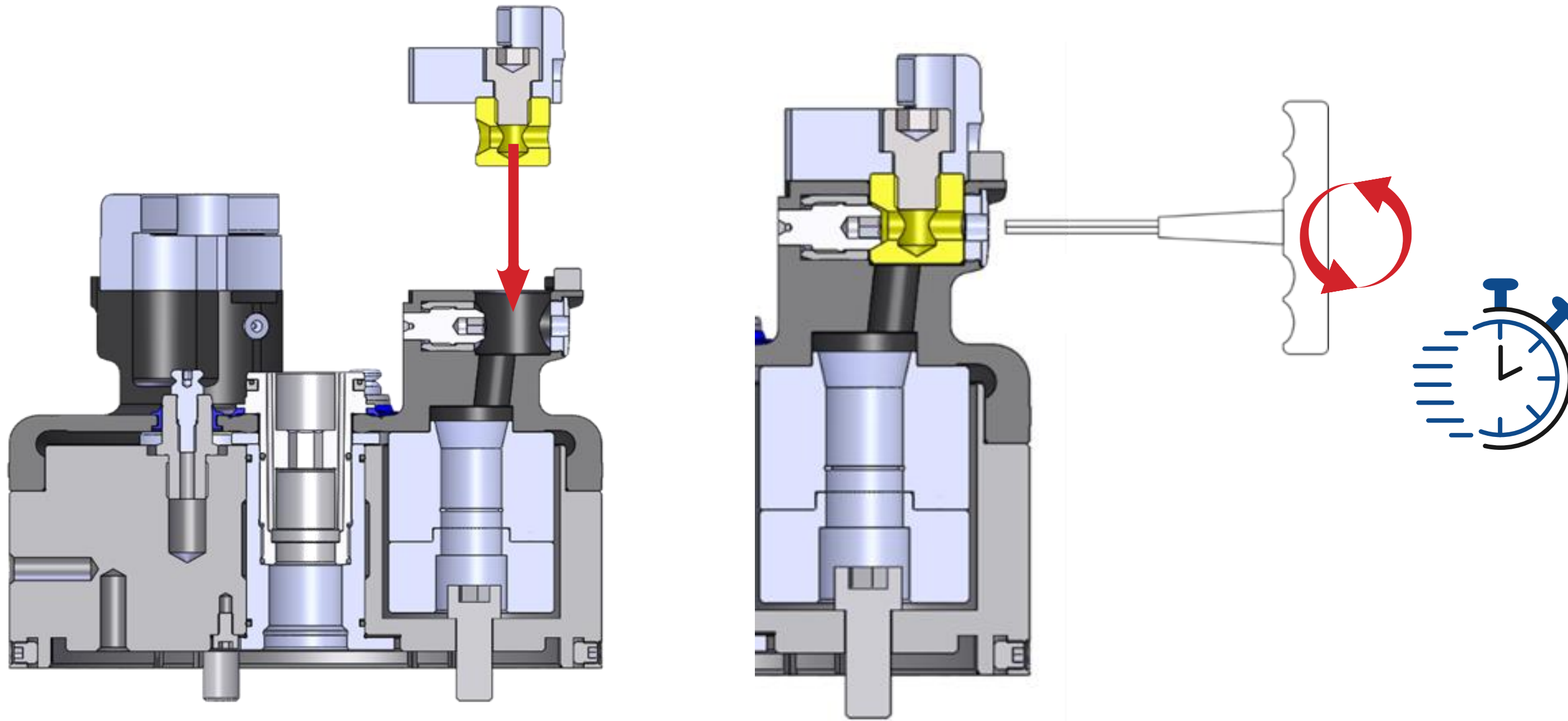
**2 Min.**

WITH A  
**REPEATABILITY OF UNDER**  
0,003MM



# Diaphragm chuck

Clamping jaws - **QUICK CHANGE**-System



QUICK CHANGE UNDER

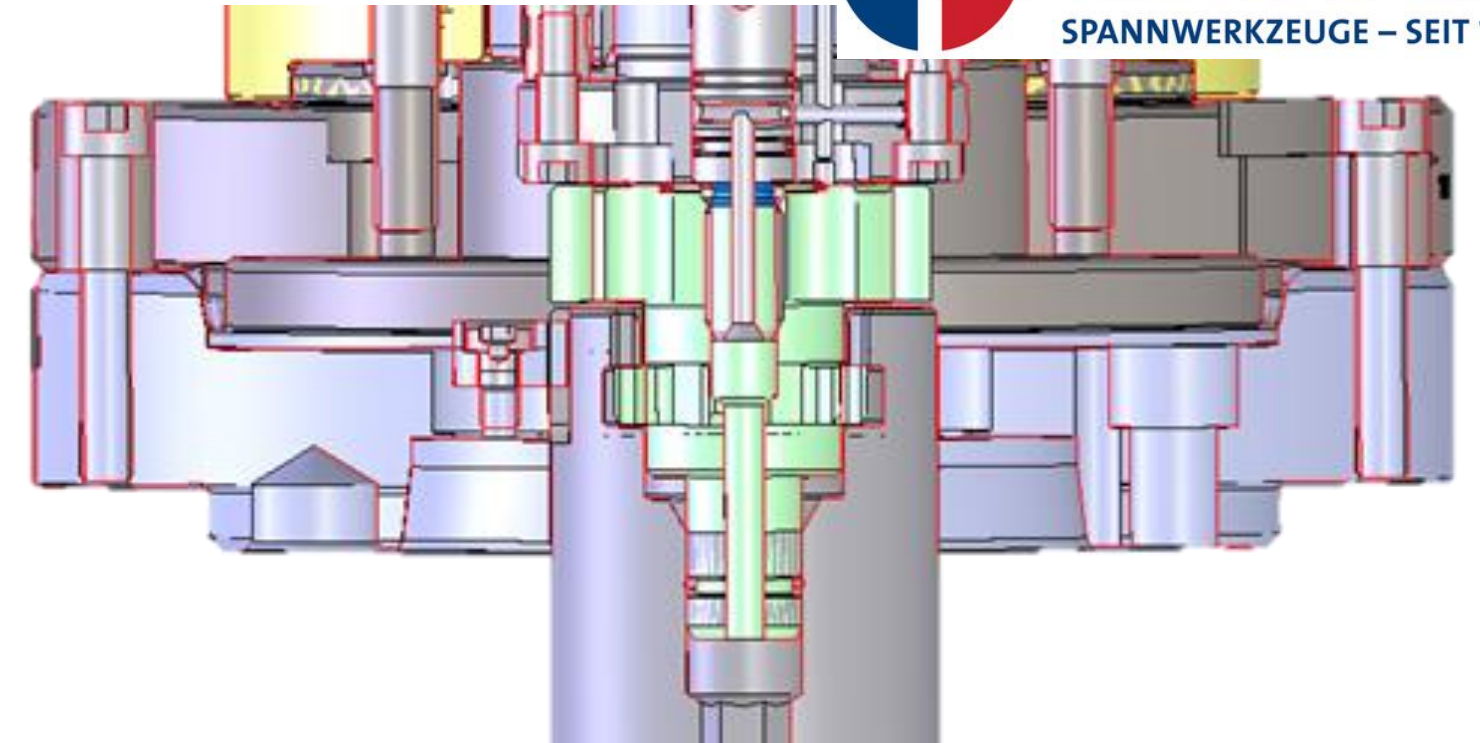
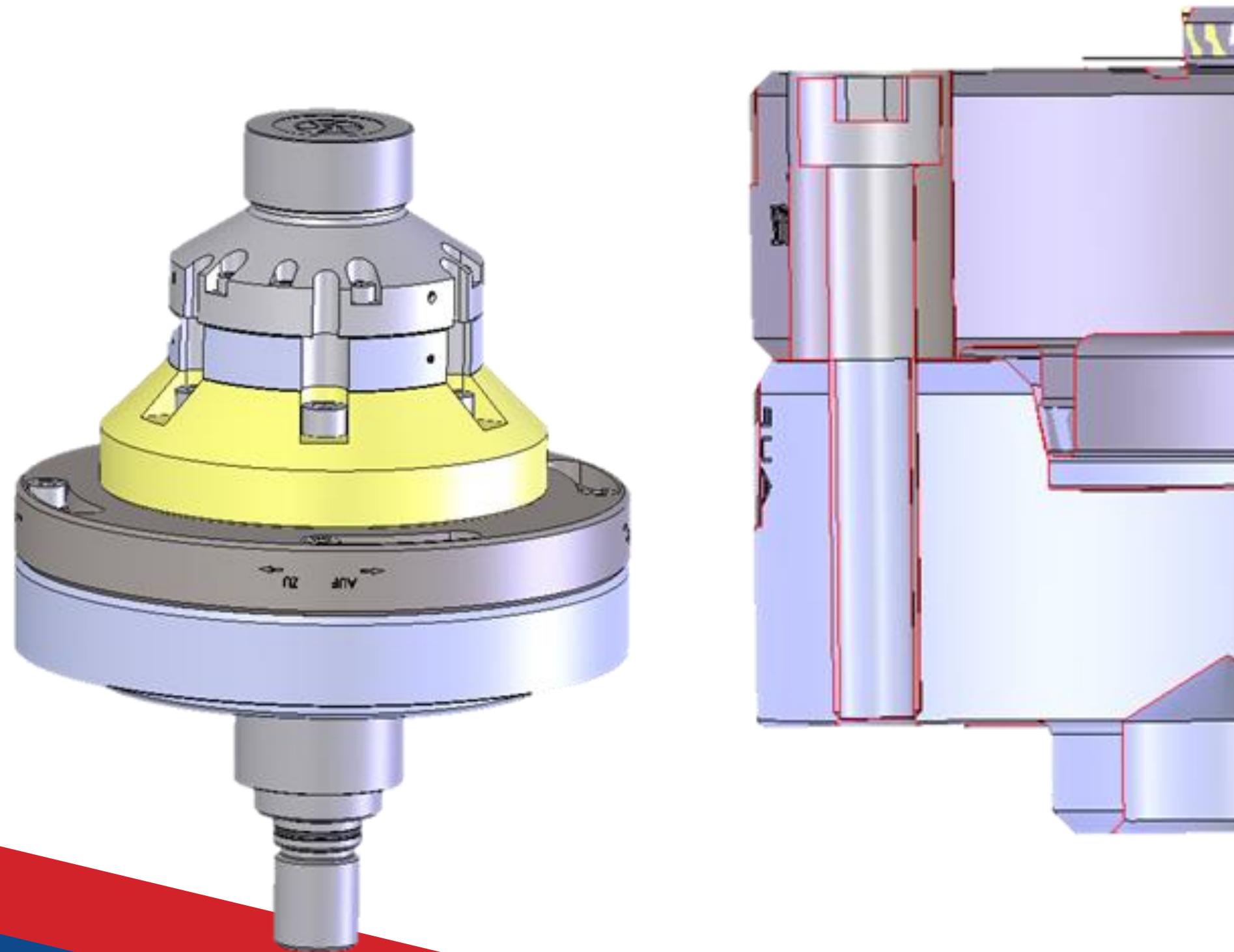
**2 Min.**

WITH A  
**REPEATABILITY**  
OF 0,010MM



# Developments

Clamping - **QUICK CHANGE** -System



QUICK CHANGE IN **UNDER**



**5 Min.**

WITH A  
**REPEATABILITY**  
OF UNDER 0,010MM

# Collets for skiving tools



# Collets for skiving tools

## Advantages for your process

- **Self centering** of the tool
- **Optimized roundness** <math><3\mu\text{m}</math>
- **Without the need** of manual tool alignment
- **Time saving** quick change system
- **Protection** of your tools



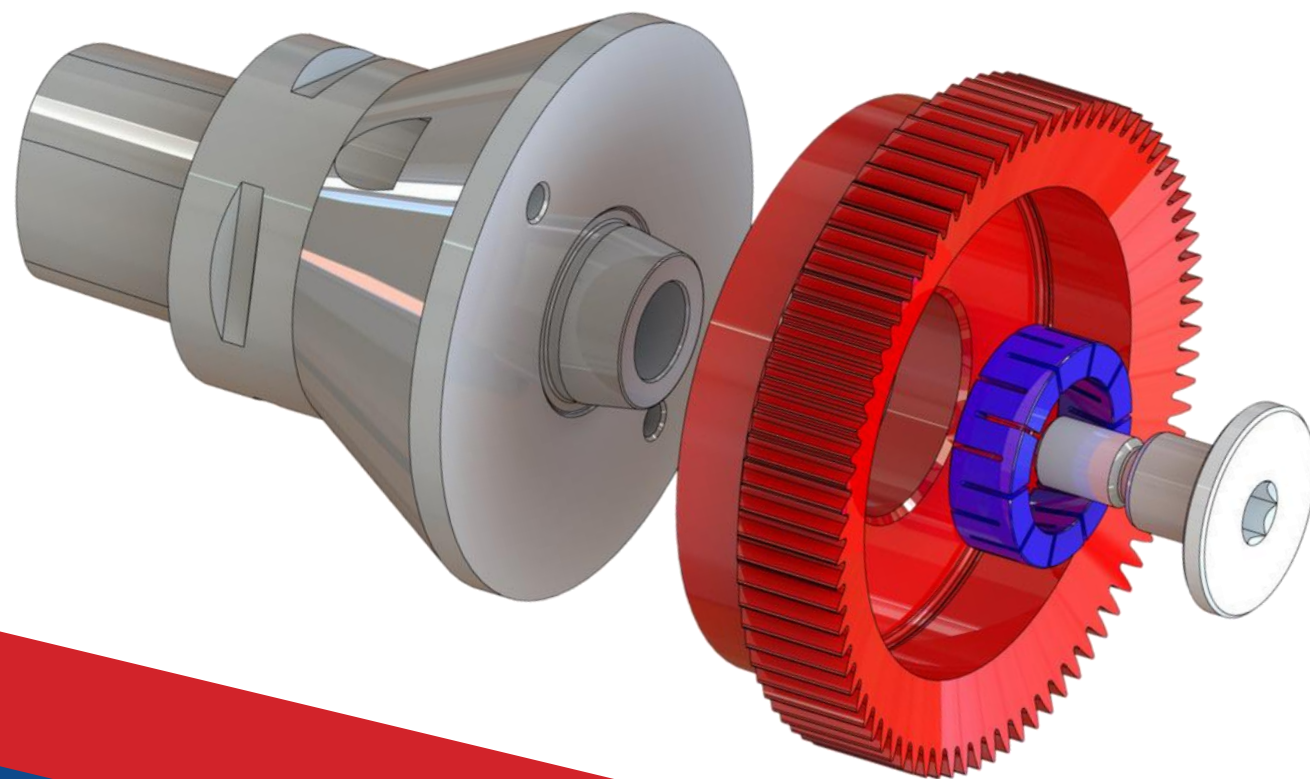
# Collets for skiving tools

QUICK CHANGE IN **UNDER**



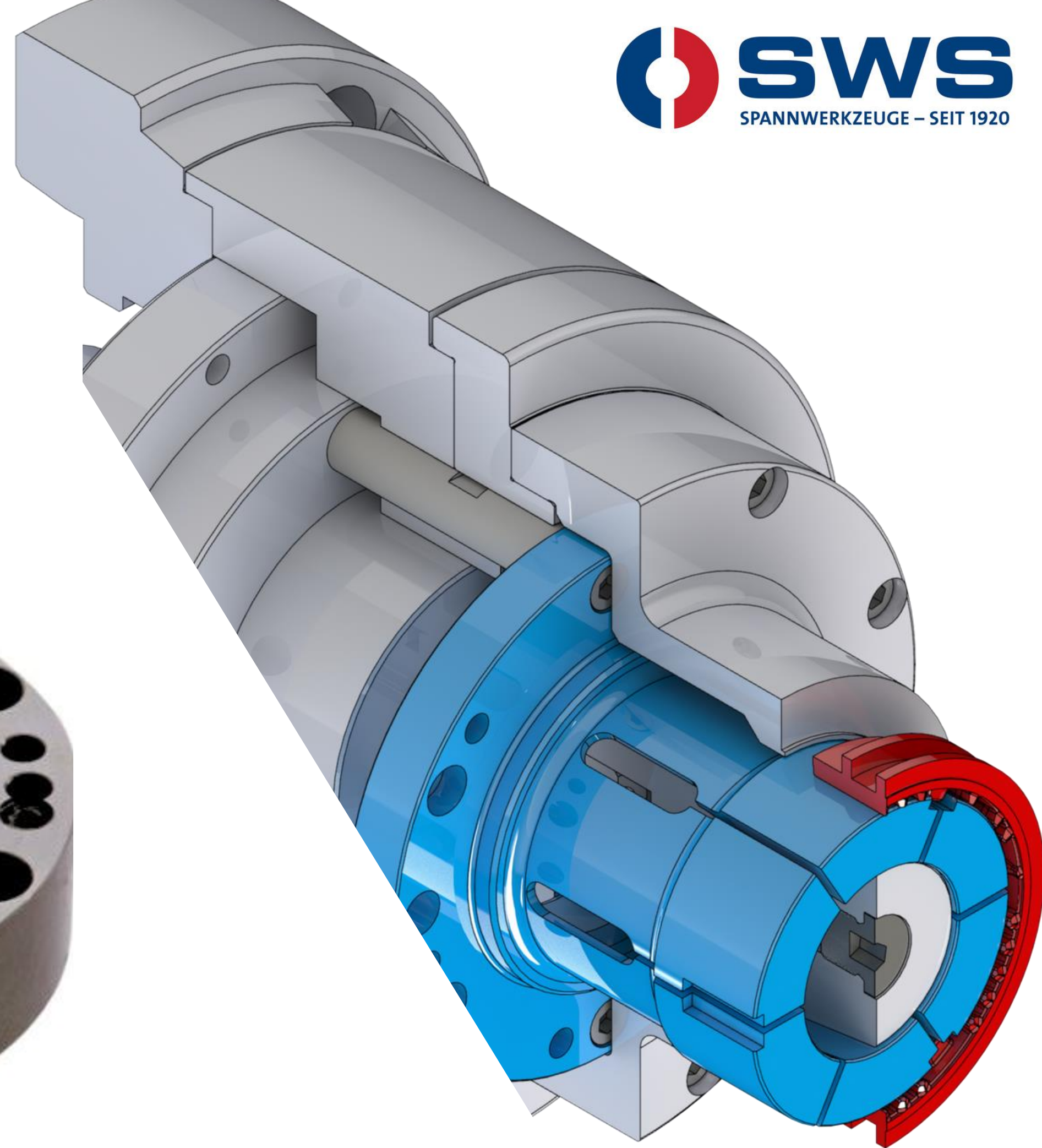
**2 Min.**

WITH A  
**REPEATABILITY**  
OF UNDER 0,005MM



# Clamping mandrels

Clamping with collets and sleeves

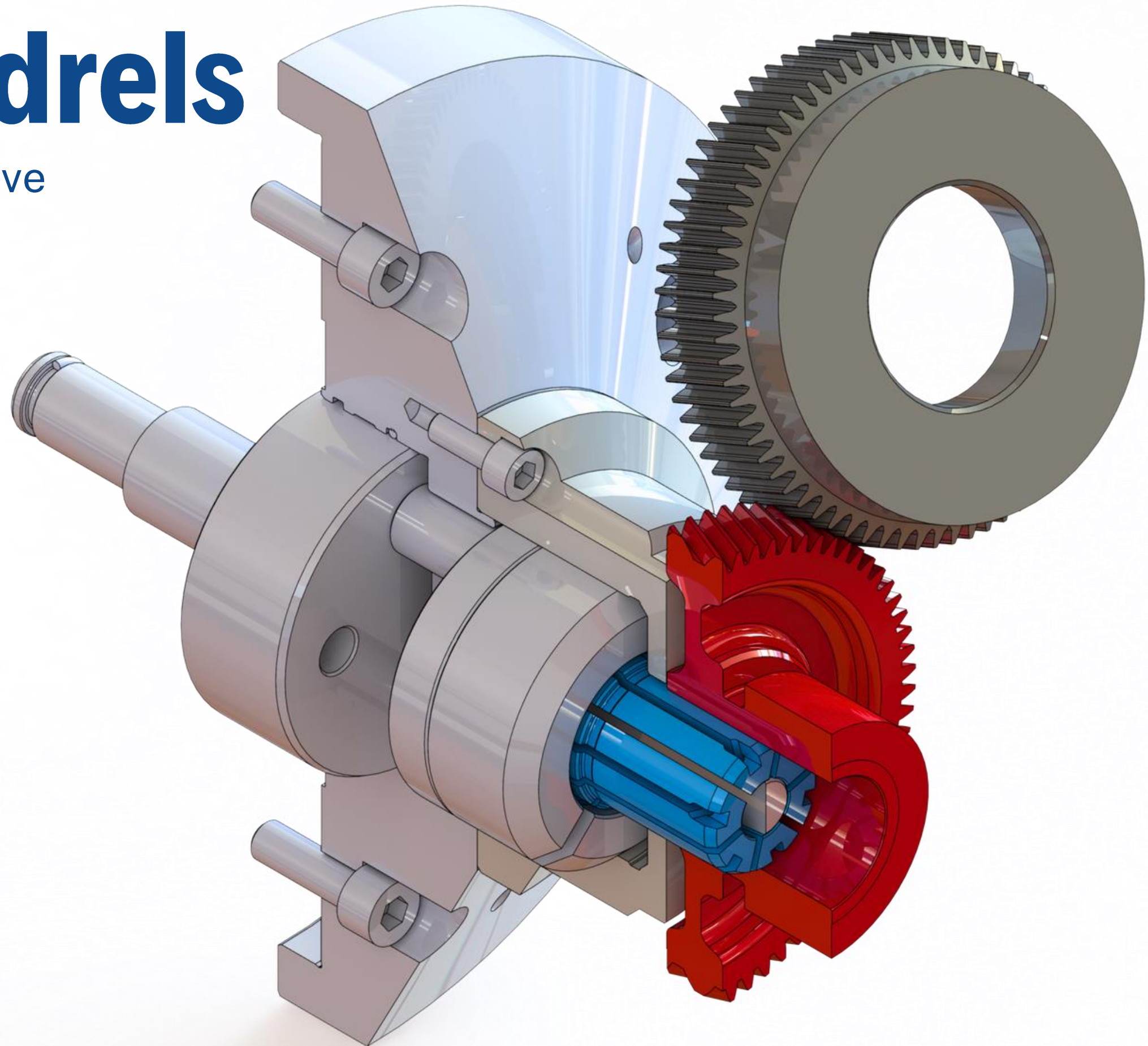


# Clamping mandrels

Clamping with segment clamping sleeve

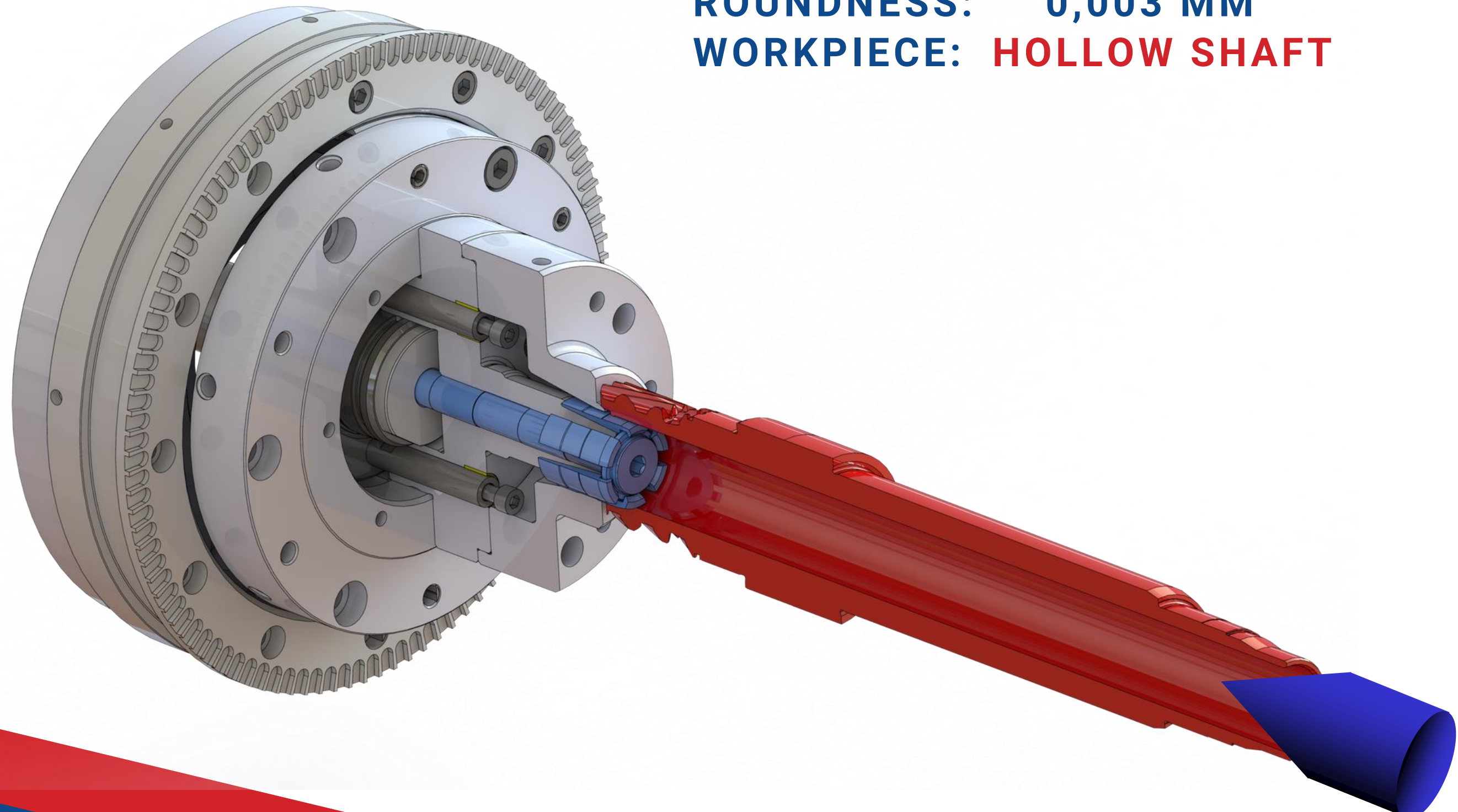
**ROUNDNESS: 0,003 MM**

**WORKPIECE: PLANETARY GEAR**



# Clamping mandrels

Clamping with segment clamping sleeve



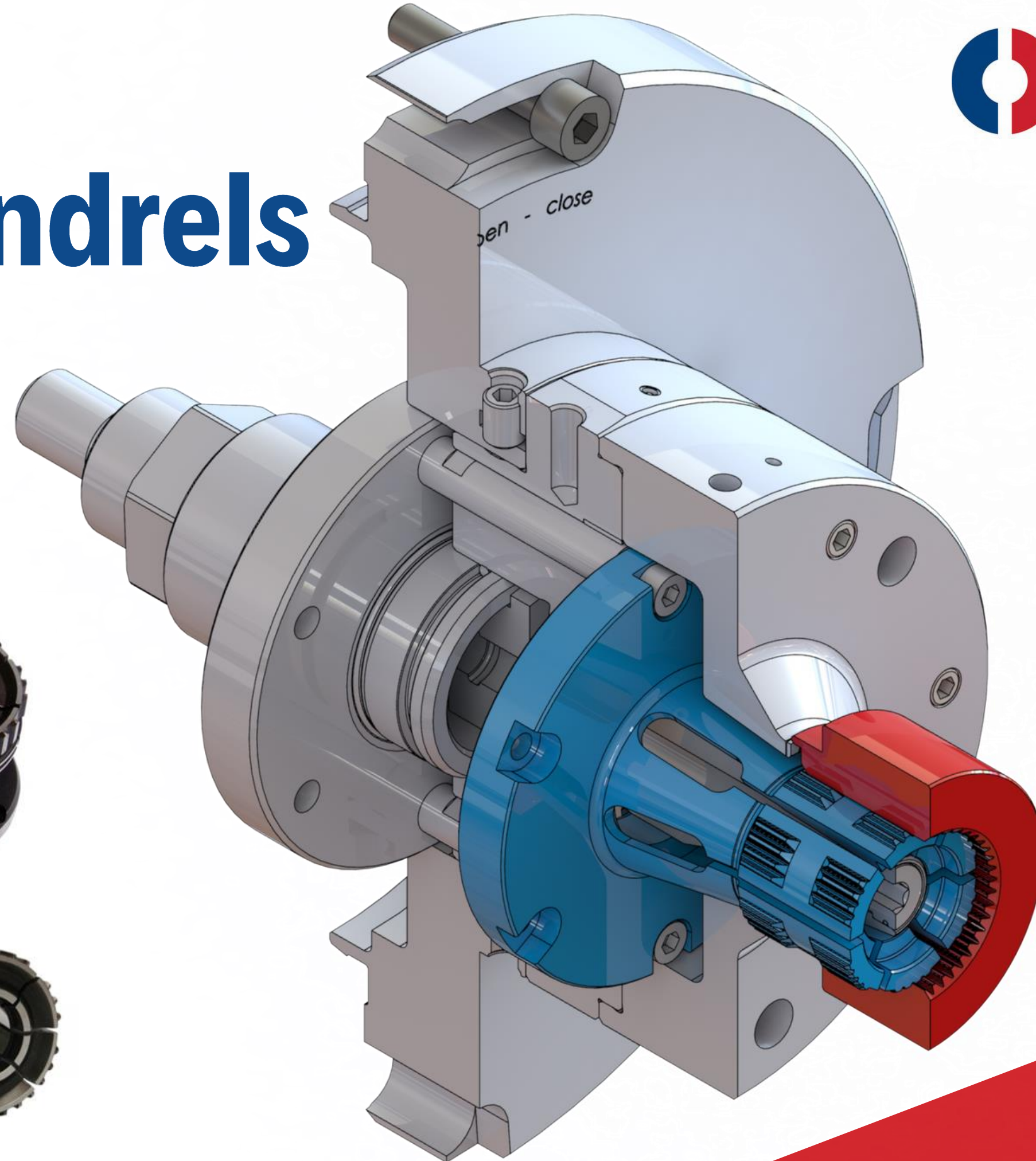
**ROUNDNESS: 0,003 MM**

**WORKPIECE: HOLLOW SHAFT**

# Clamping mandrels

Clamping with gearing collet chuck

**ROUNDNESS: 0,003 MM**  
**WERKSTÜCK: GEAR**





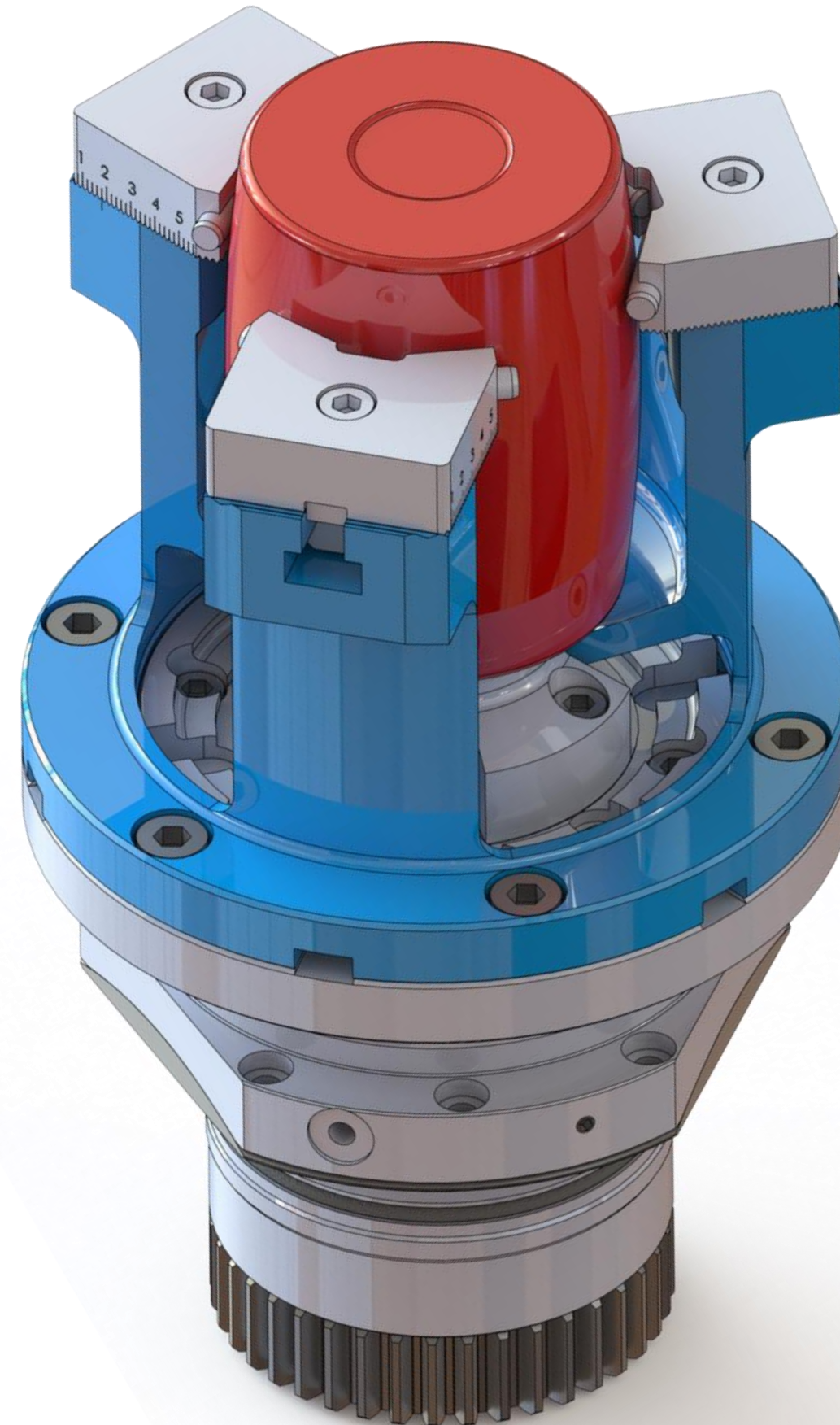
# Special solutions



# Special chuck

With adjustable jaws

**ROUNDNESS: 0,003 MM**  
**WORKPIECES: BARREL SHAPED  
CYLINDER**

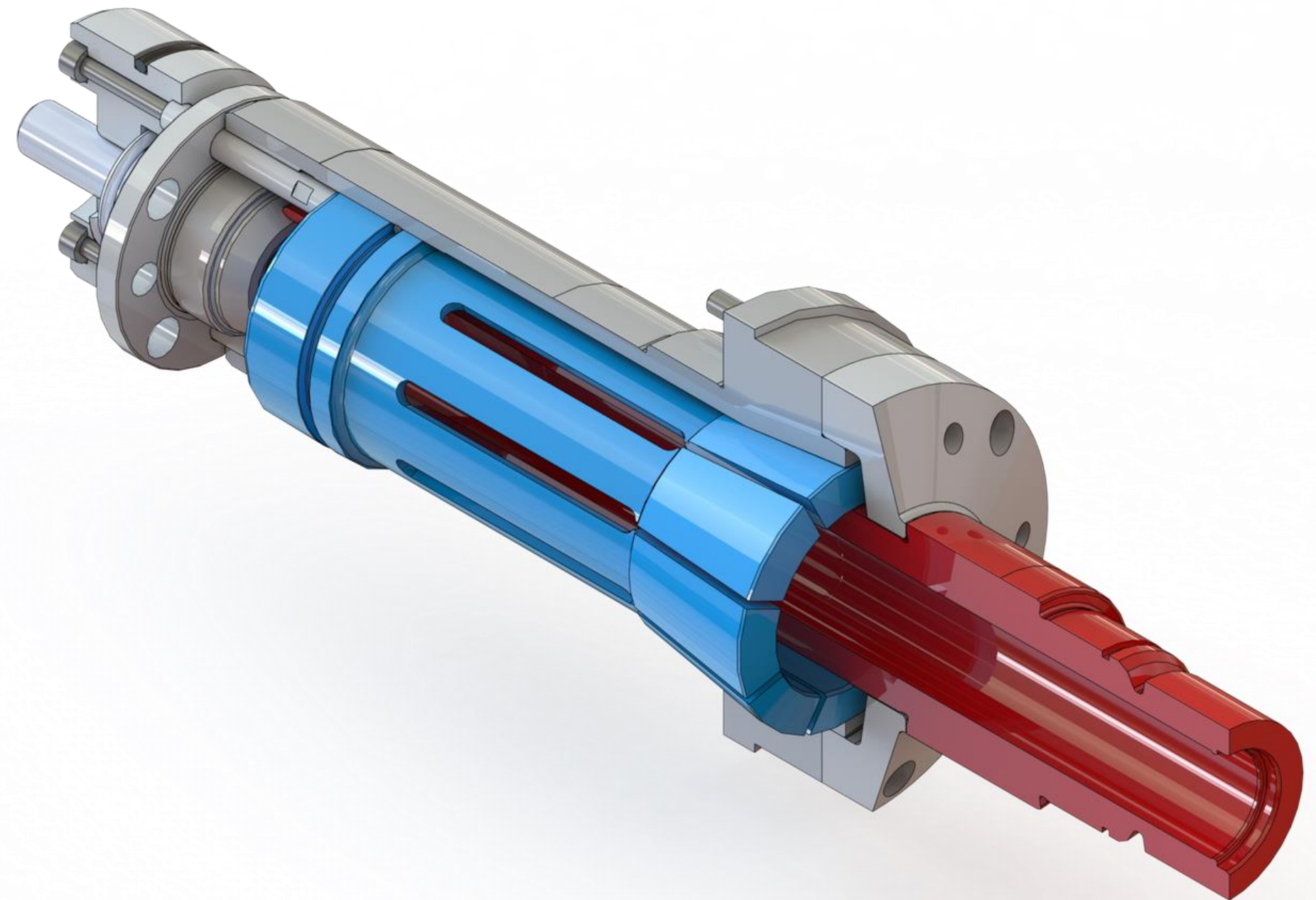


# Collet chucks

Clamping with collet  
chuck

**ROUNDNESS: 0,003 MM**

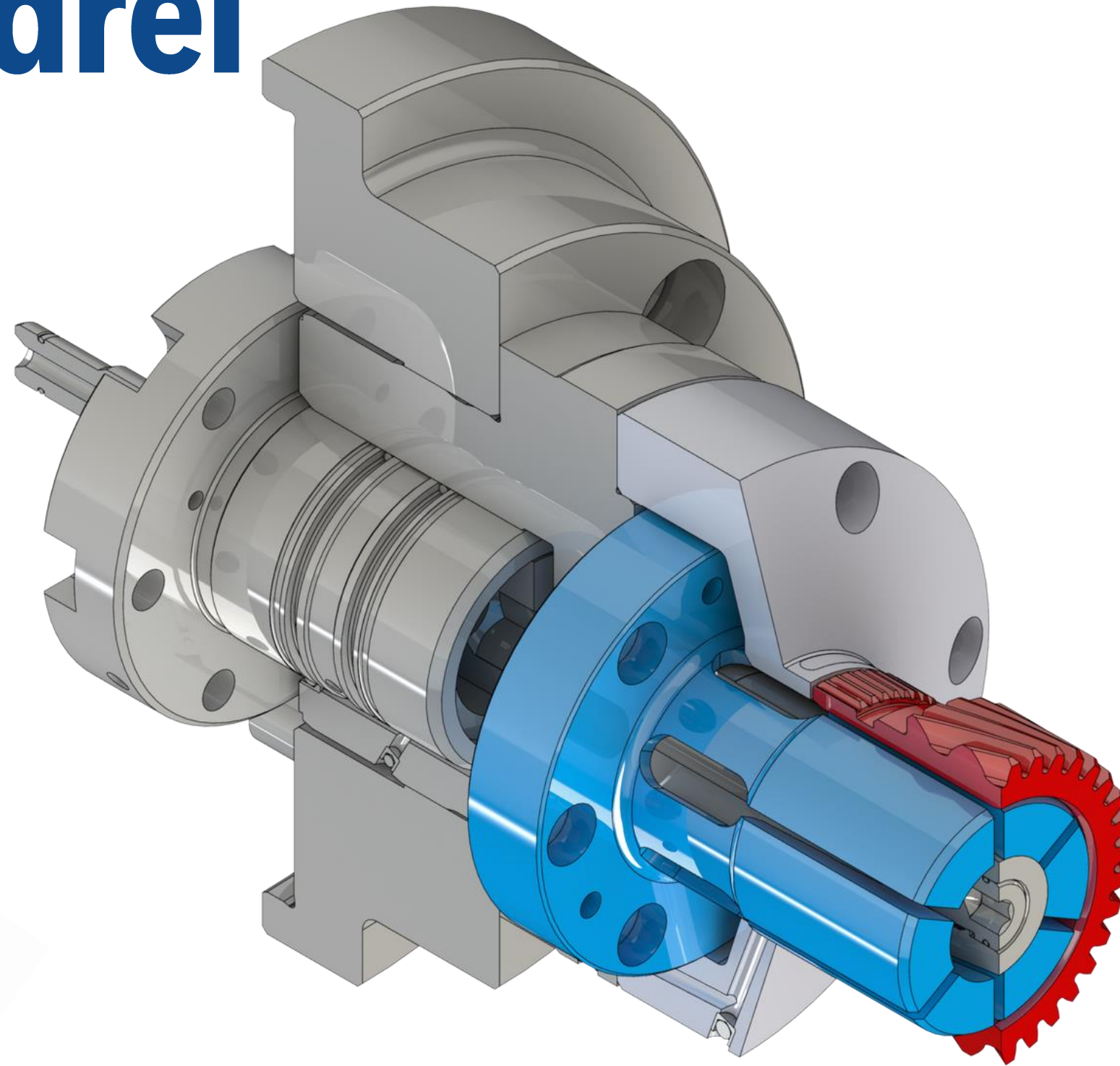
**WORK PIECES: SHAFTS**



# Clamping mandrel

According to customer drawing

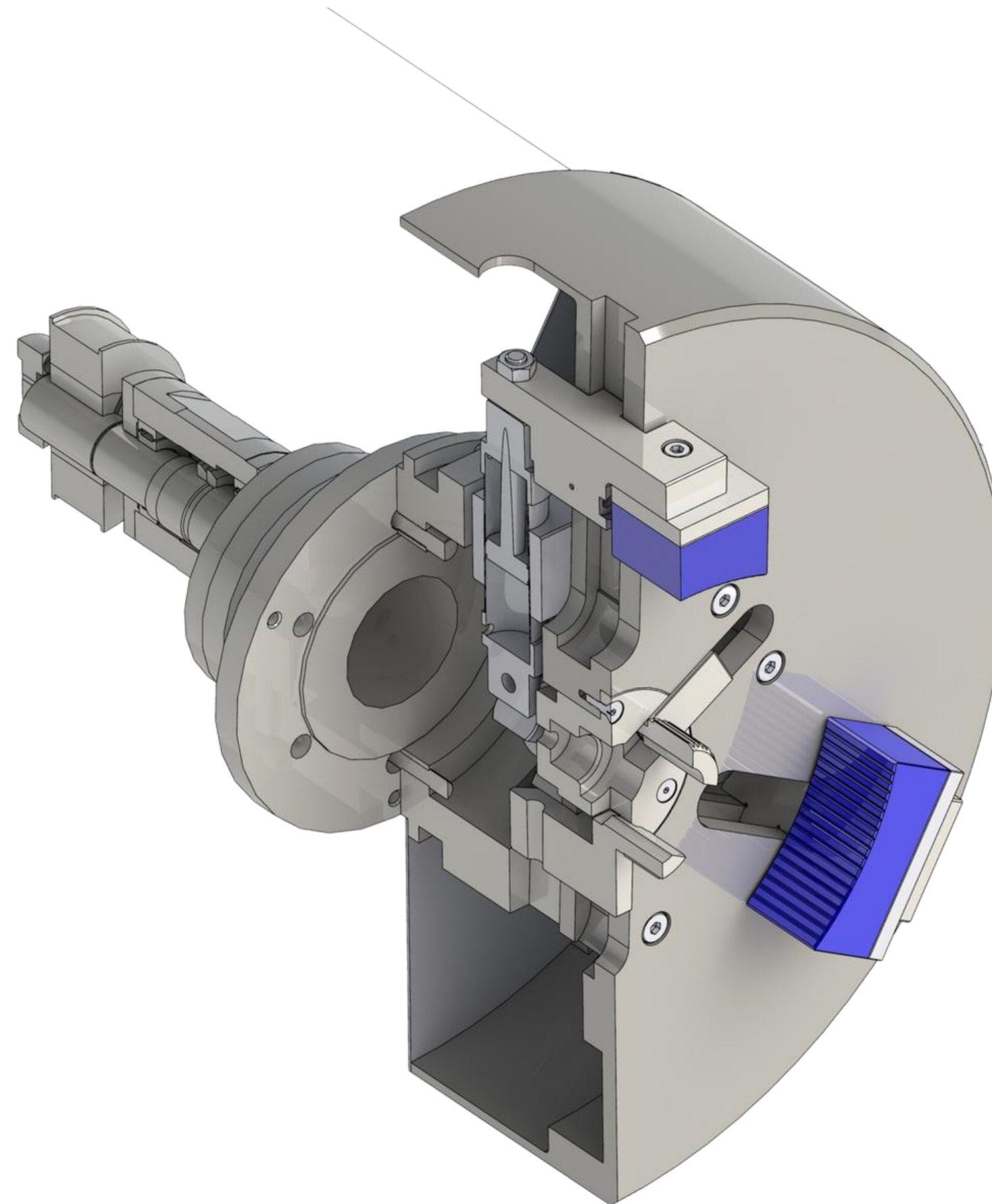
**ROUNDNESS:** 0,003 MM  
**WORKPIECE:** GEAR  
**LOADING:** AUTOMATIC



# Combi chuck

For simultaneous internal and external clamping

**WORKPIECES: THIN WALLED  
CYLINDRICAL WORKPIECES**

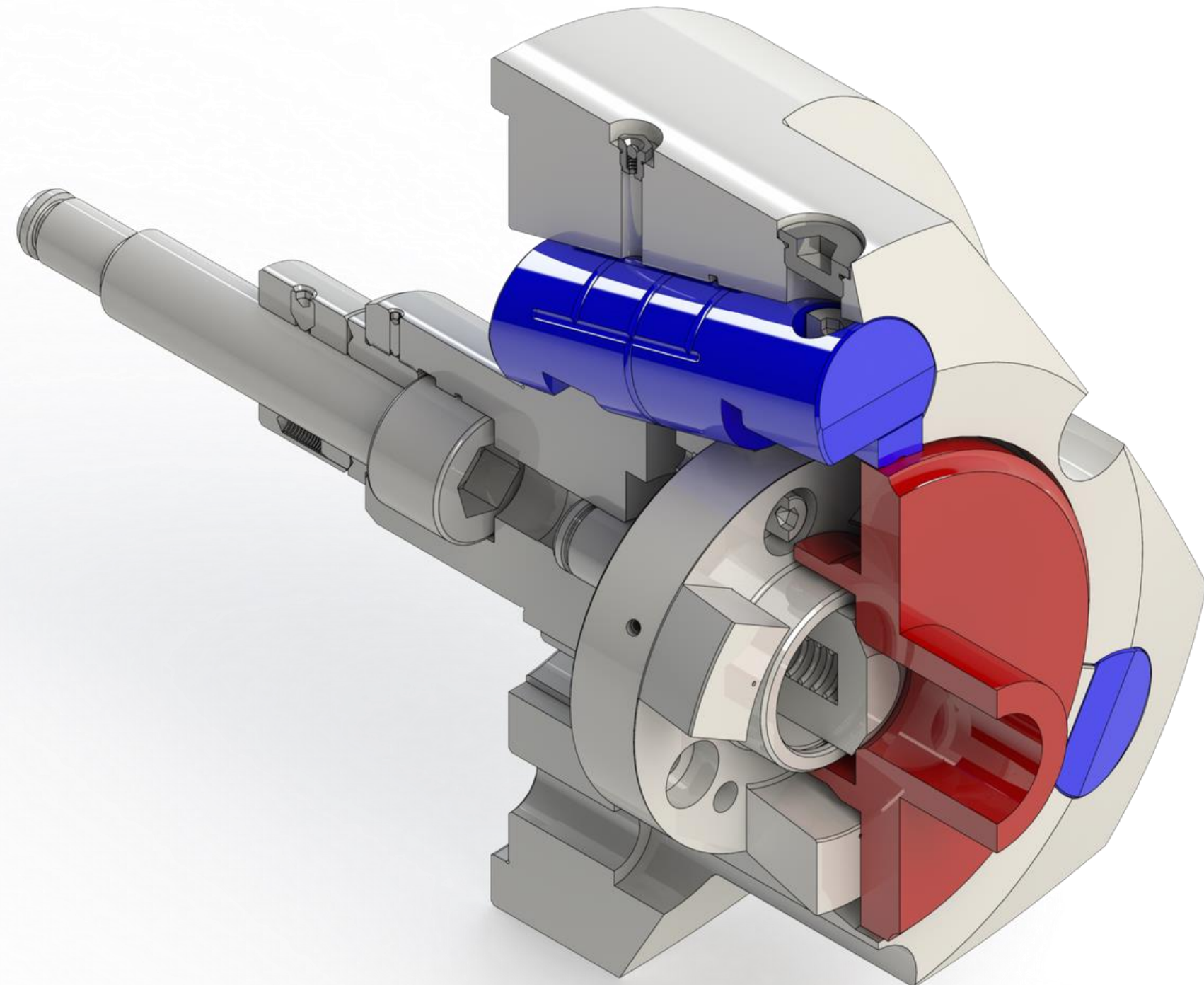


# Angled pin chuck

Clamping with inclined bolts

**ROUNDNESS: 0,005 MM**

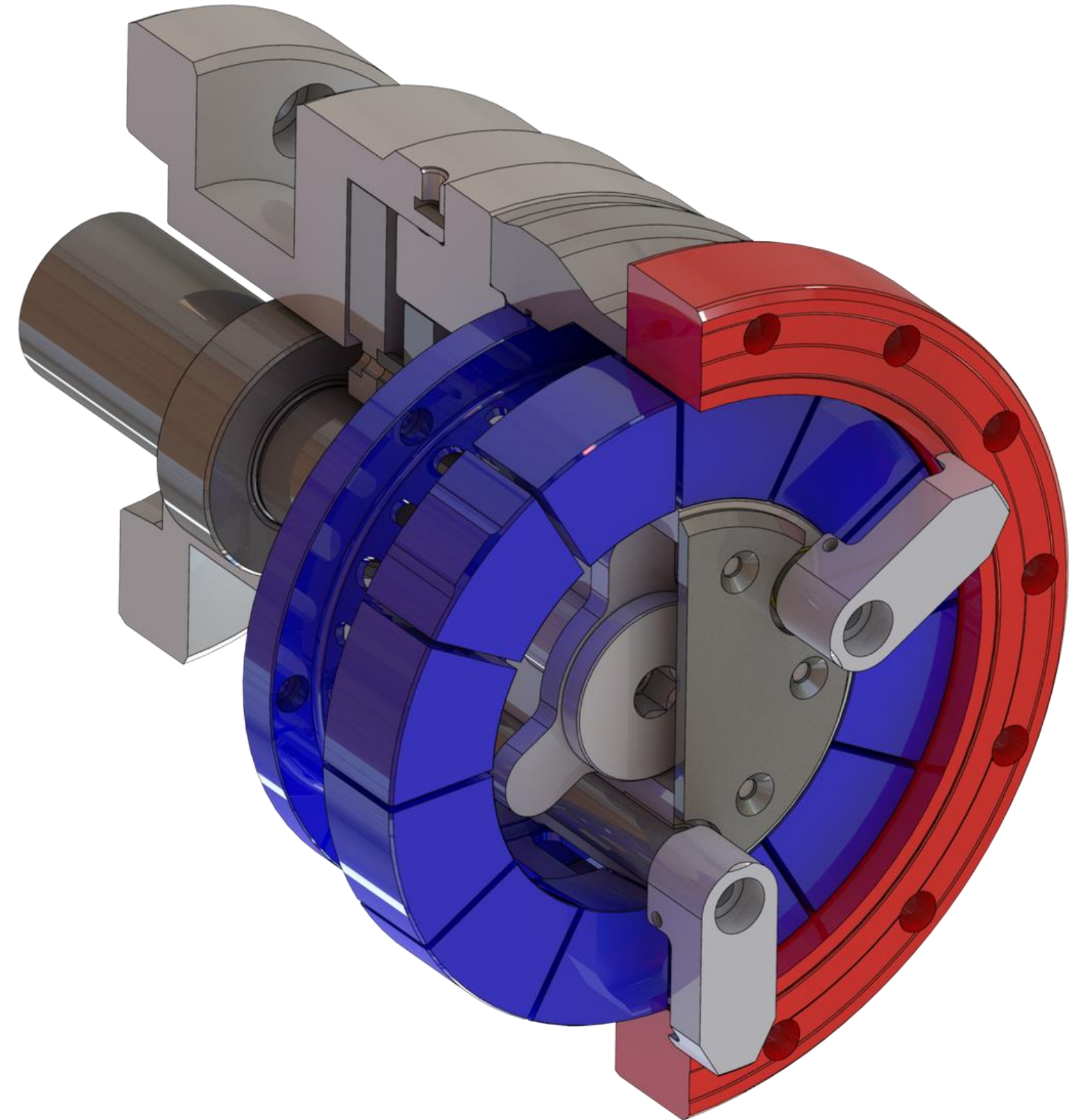
**WORKPIECES: CYLINDRICAL PARTS**



# Axial clamping chuck

Clamping of **ring gears**

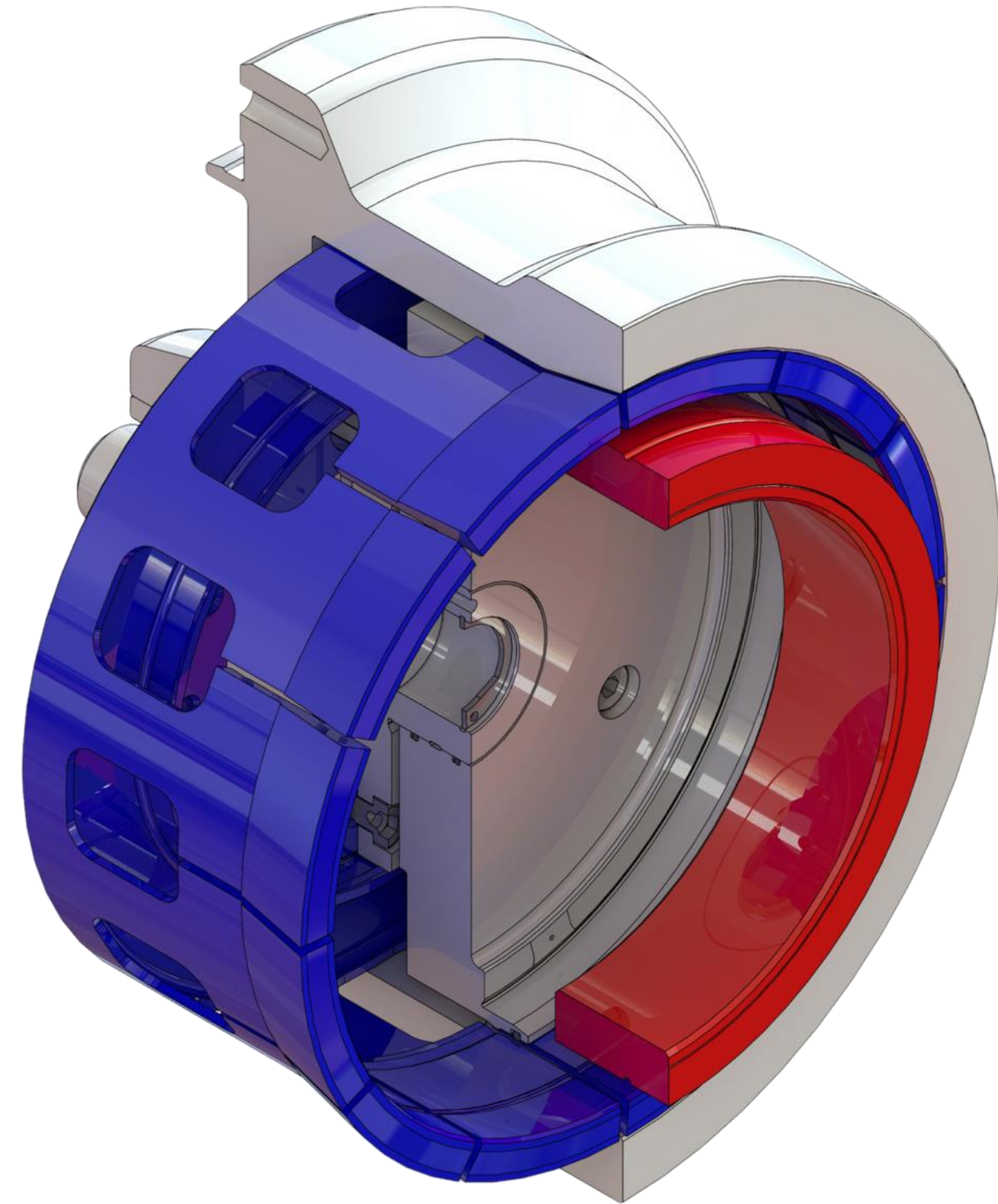
- Axial clamping mandrel
- Collet (inside) just for **centering**
- Front side **axial clamping** via separate moving clamping fingers



# Collet chuck

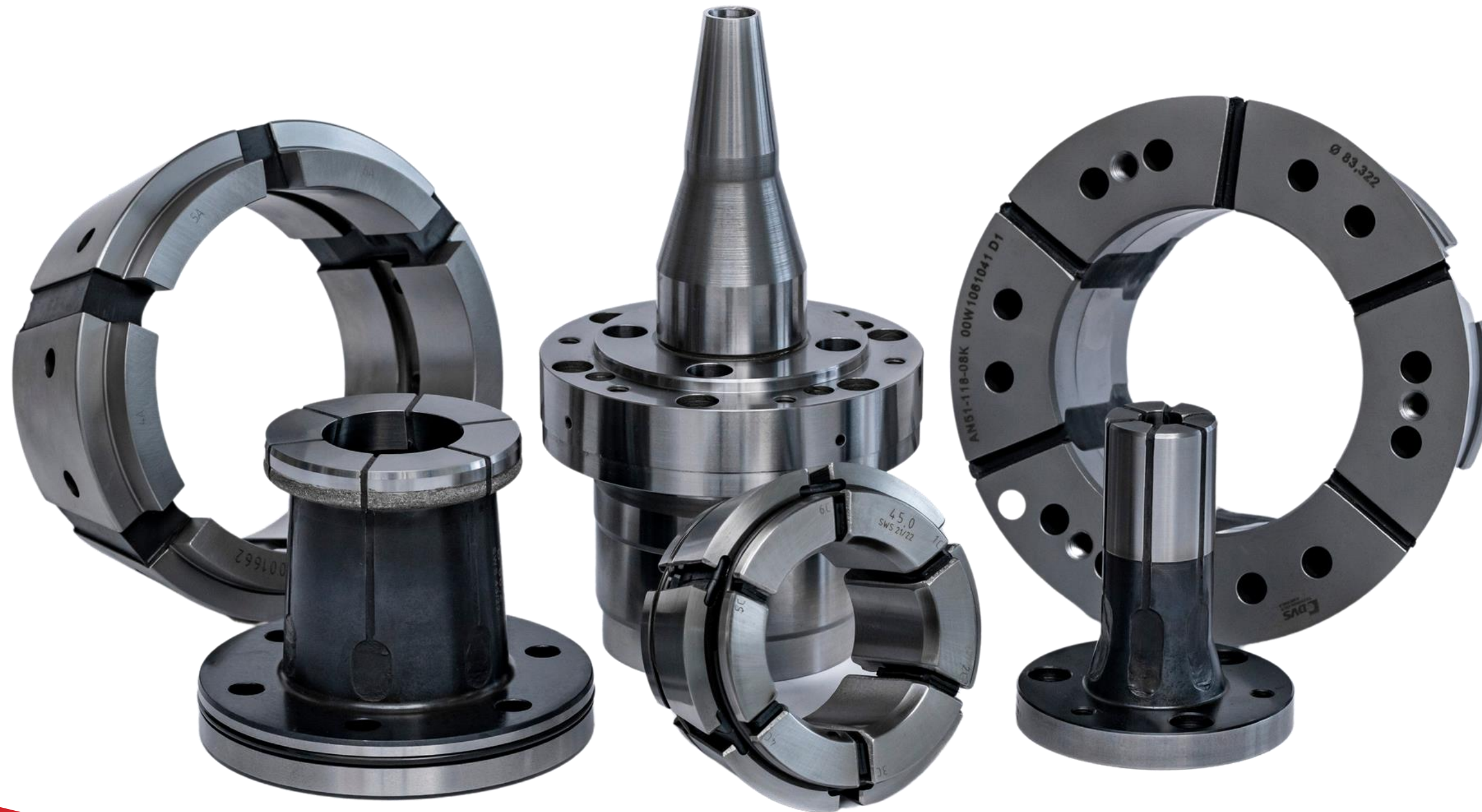
Clamping of **ring gears**

- Work piece stopper inside
- **Radial clamping** on gear teeth possible via collet





# Collets & Mandrels



# VULCANIZED COLLETS

FAST. EFFICIENT. LONG LIFE.

- complex geometries
- vulcanizing done hot & cold
- long life span
- single parts or series



# Collets

special collets



# Collets

Double cone collets



# Collets

Collets with carbide insert



# Our statisfied customers



**GUHRING**



**BOSCH**

**SKF**

**Continental**



**EATON**  
Automotive GmbH

**SIEMENS**



**GETRAG**

**MAHLE**

**TRW**

**botek**

**TEXTRON**



**LIEBHERR**

**KARL HAUX**  
MASCHINENBAU GMBH



**CAPSUGEL**



**HYDROPNEU**  
Partner für Hydraulik

*Johnson & Johnson*



**Profilator**

**STIEFELMAYER**



**HOFFMANN**  
ELEKTROKOHLE



**mall//herlan**



**SCHULER**



**JTEKT**  
Koyo

**ROEMHELD**  
HILMA + STARK

**HEIDELBERG**



**RÖHM**



**DAIMLER**  
Truck

