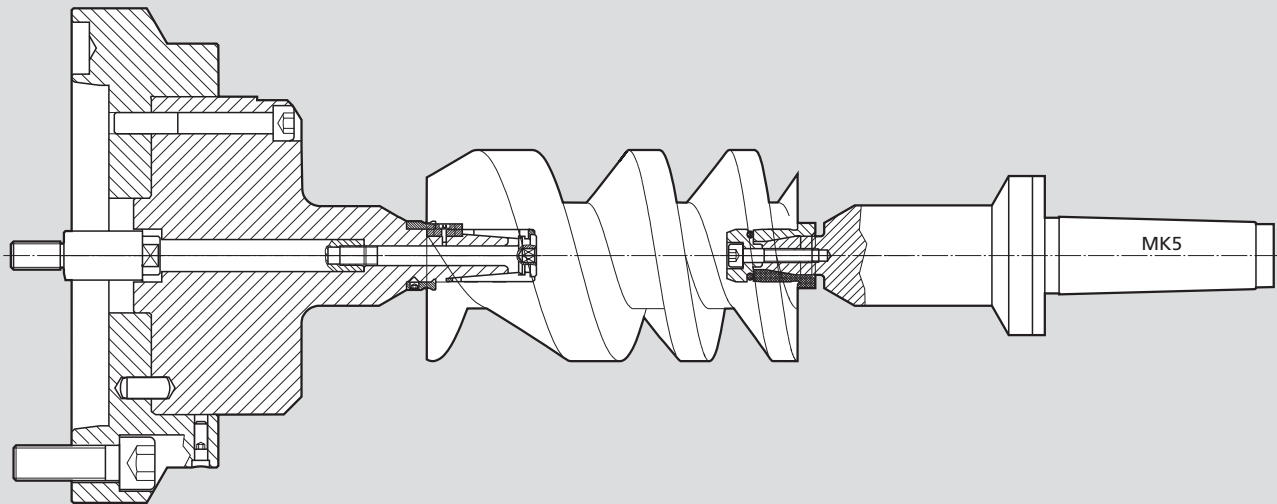


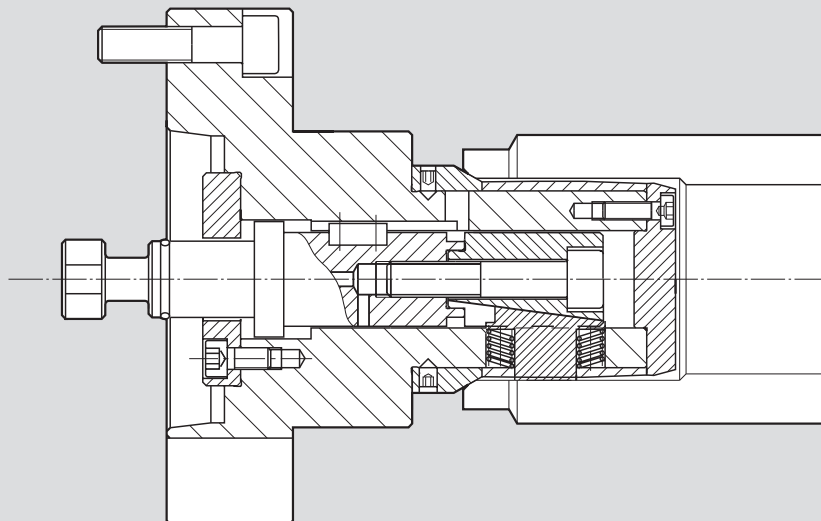
Special mandrels

Besides our standard range, we offer special solutions for your applications

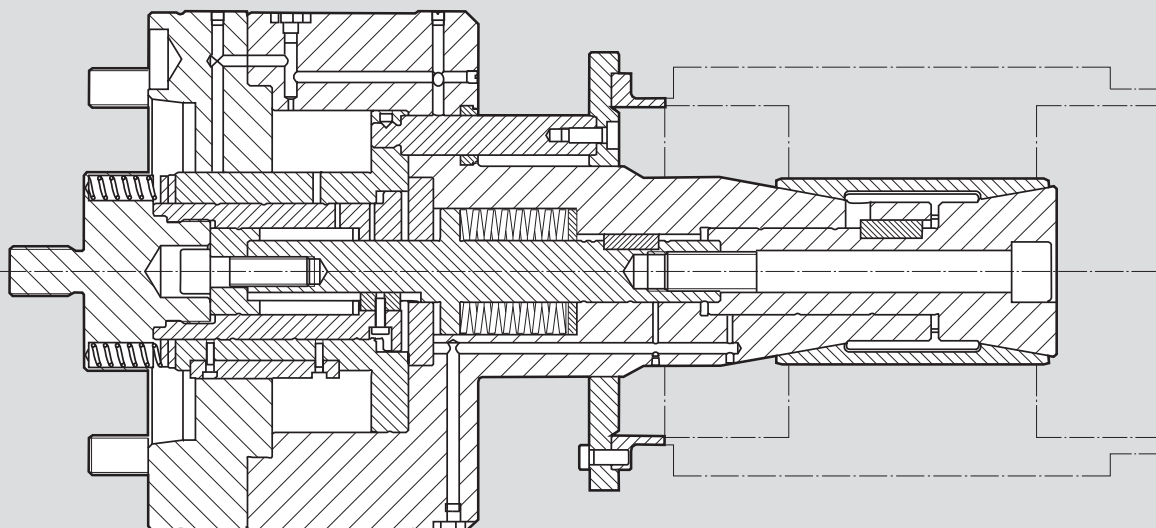
Example: Special expanding mandrel, sleeve design, on spindle and tailstock side for screw rotors



Example: Special mandrel segment design for tubes



Example: Special expanding mandrel, double taper design with retractable stop, for clamping of stators



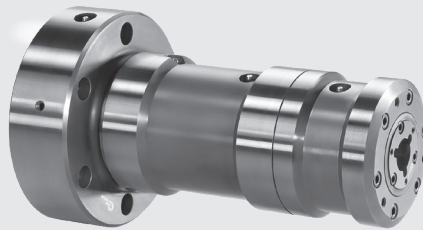
Special clamping solutions



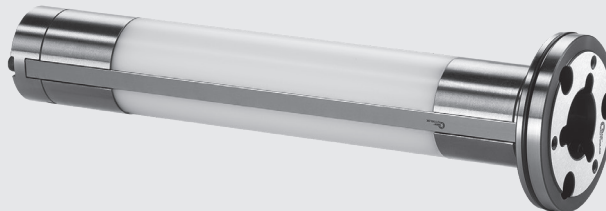
Application/customer benefits

- Power operated sliding jaw collet chuck
- 2 clamping areas
- Spring compensation
- For clamping of shafts on 2 clamping levels
- Preparation for air sensing
- Exchangeable cartridge with adapter sleeve

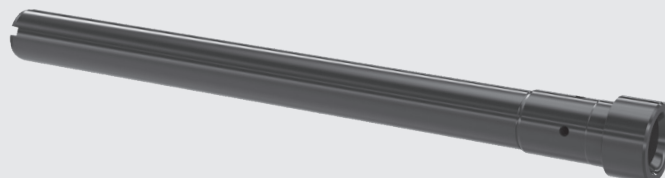
Sliding jaw collet chuck

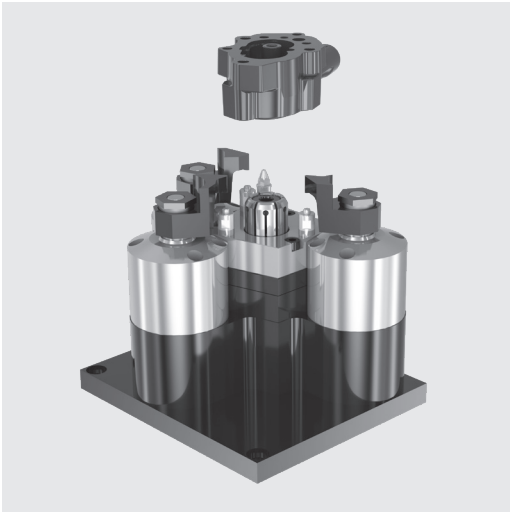


Exchangeable cartridge with adapter sleeve



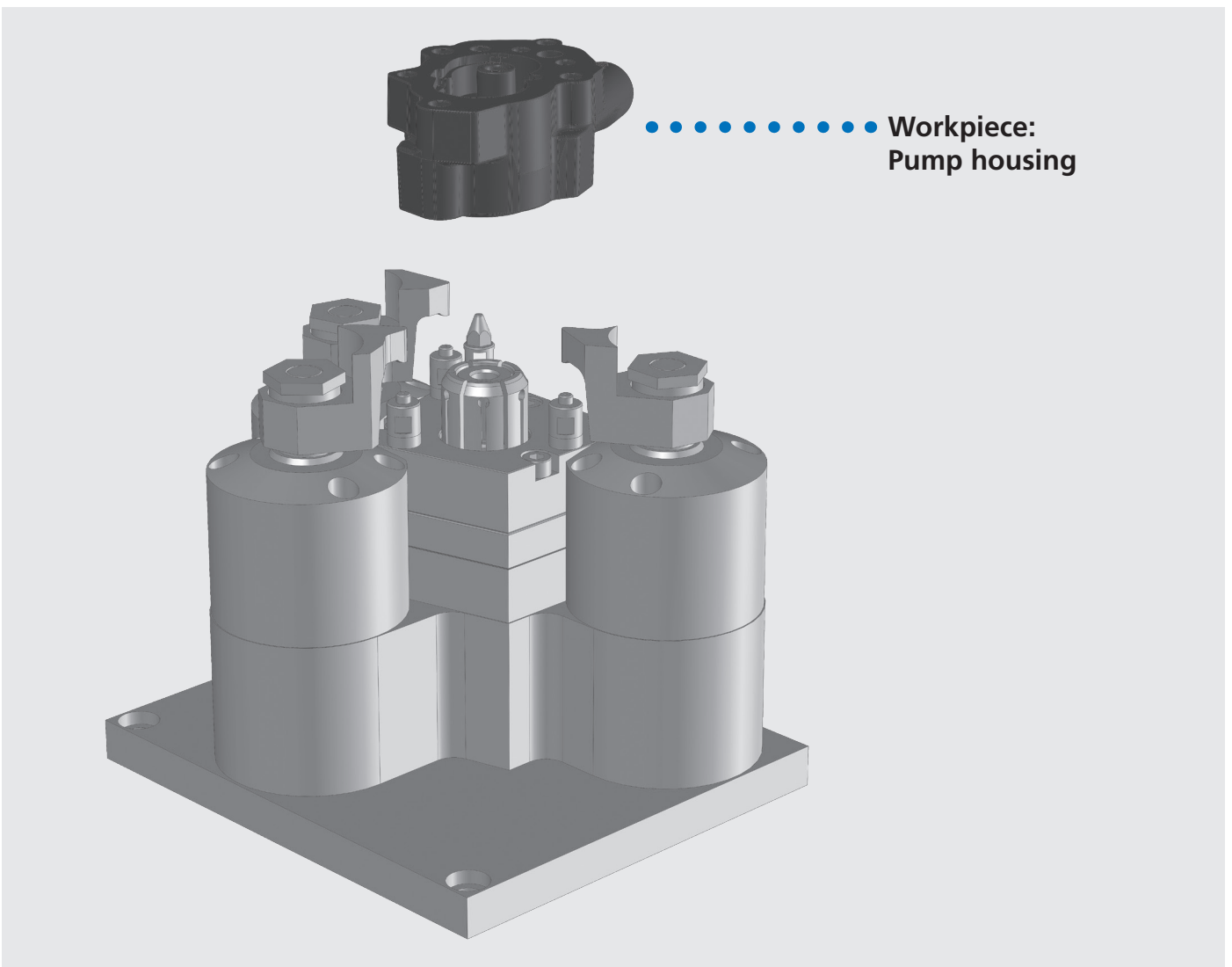
Work piece: Camshaft tube



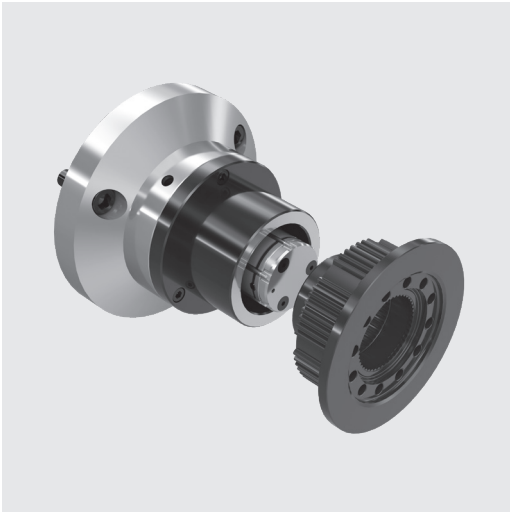


Application/customer benefits

- Hydraulic, power operated, stationary clamping via adapter sleeve in inner diameter (center of the case) without pull down with additional, hydraulic operated rotating collet fingers for pull down against 3-point-surface with position orientation and air sensing
- For drilling and milling at case

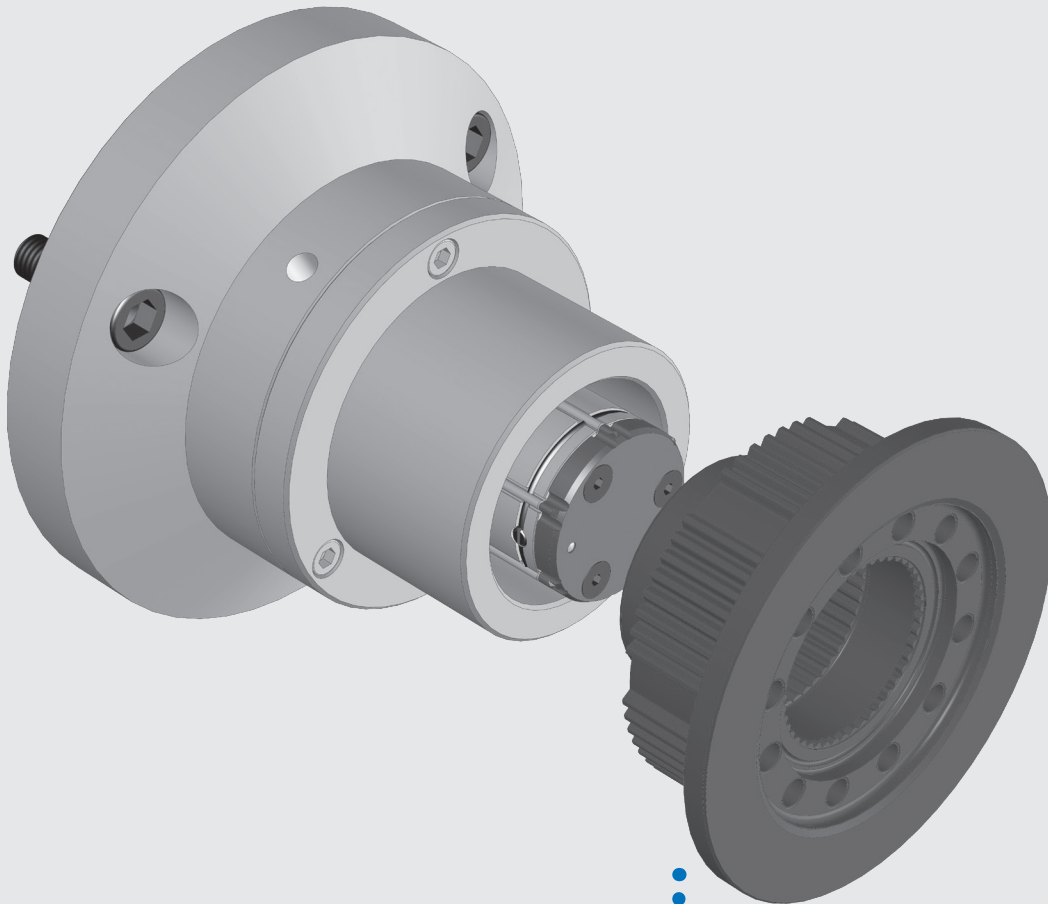


•••••••••• **Workpiece:
Pump housing**



Application/customer benefits

- Power operated, centric clamping via sliding jaws in the internal gearing without pull down
- For hard turning of the outer contour of a work piece with very high accuracy and repeatability
- Power operated clamping with profiled jaws
- High repeatability <math><0,005</math>
- Insensitive to contamination
- Low maintenance

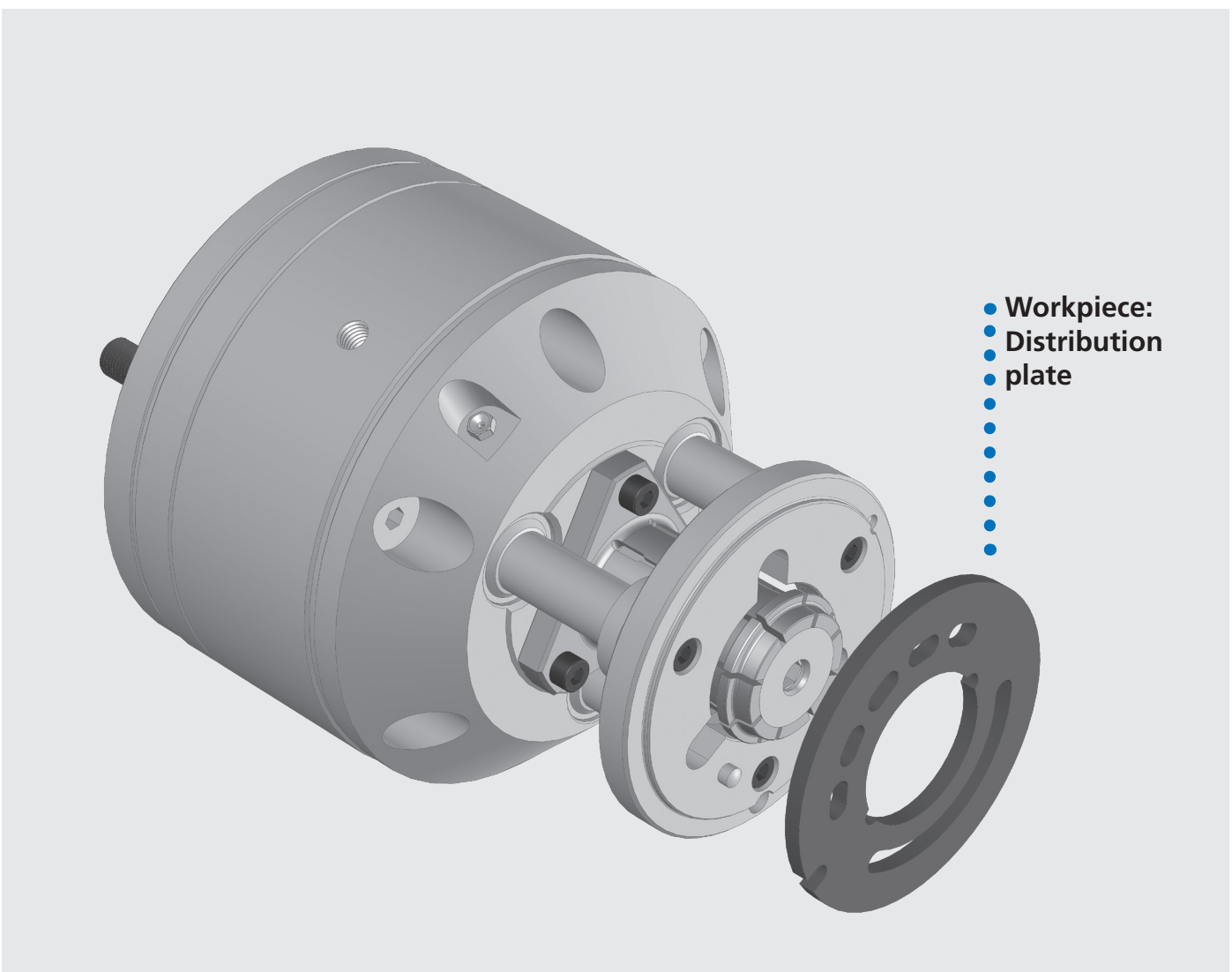


Workpiece:
Hub flange



Application/customer benefits

- Power operated, very short centric clamping via clamping sleeves in inner diameter without pull down with retractable stop and position orientation
- For rough cut turning of the frontside and outer diameter, plan sided drilling operations and following finish of the complete outer contour incl. both plan sides through retractable stop
- Power operated clamping with expanding sleeve
- Without pull down
- With retractable stop
- Two-sided plan processing possible

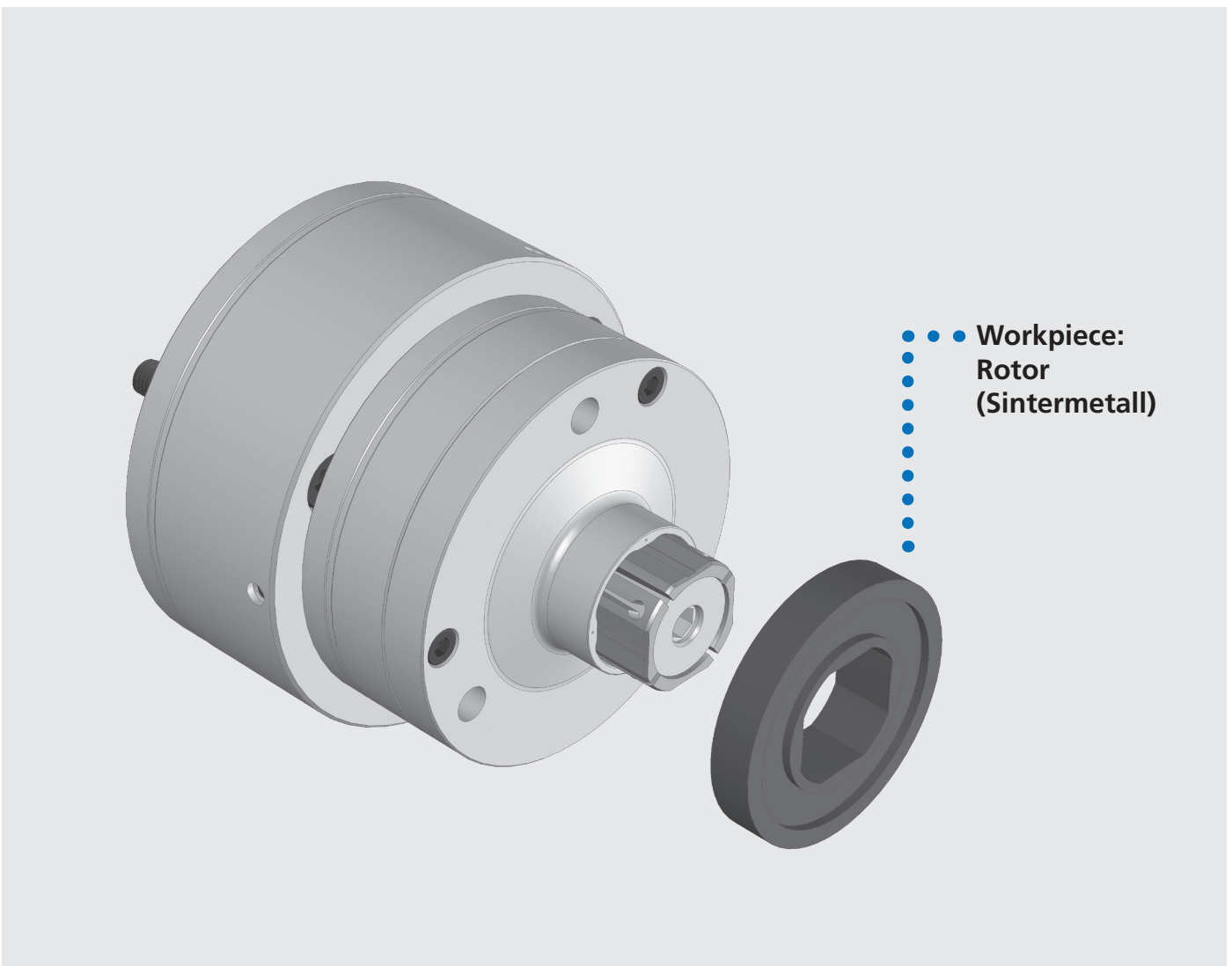


• Workpiece:
• Distribution
• plate

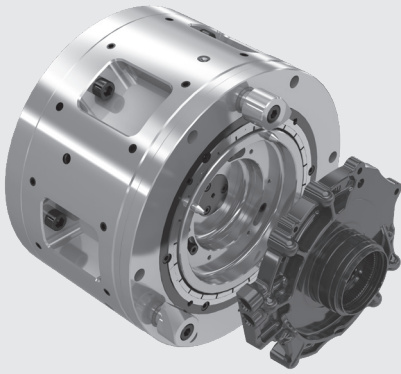


Application/customer benefits

- Power operated, centric clamping via clamping sleeve in a spherical 4-square inner contour with air sensing
- For processing of the outer contour of a Sintermetall workpiece with profiled inner contour
- Power operated clamping with profiled sleeve
- Without axial components
- Two-sided plan processing possible

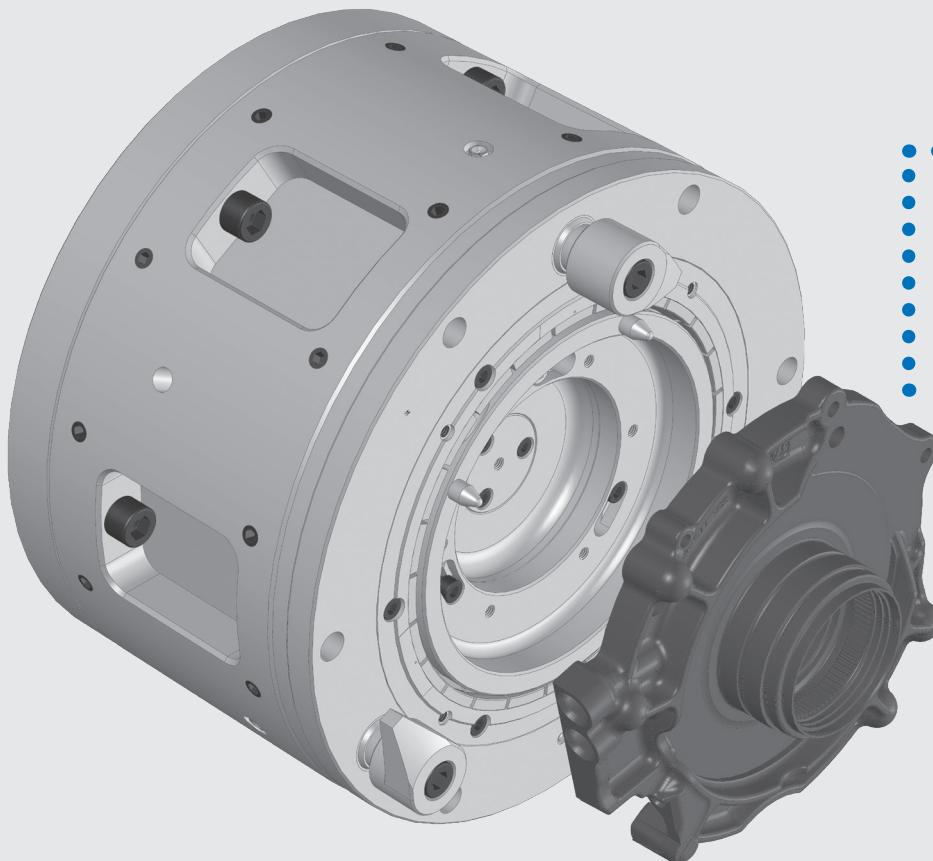


• • • Workpiece:
Rotor
(Sintermetall)



Application/customer benefits

- Pneumatic, power operated centering via collet chuck in outer diameter with pull down with additional, power operated pivot fingers with pull down against the stop, with position orientation, air purge and air sensing
- For central turning of non-symmetrical cases
- Position orientation without deforming the workpiece
- Pneumatic centering with collet chuck
- Power operated plan clamping with plan collet fingers
- Position orientation
- High repeatability
- Huge machining forces
- Insensitive to contamination



• • • Workpiece:
Bearing support