

Planetary carrier



GENERAL FUNCTION

Planetary transmissions offer many different ratio options, alongside the benefit of high torques where required, even if the installation space is limited. The planetary carrier is a functional component that is crucial for planetary transmissions in conventional powertrains and electric powertrains. It can be described as a cage into which the planetary gears are integrated. As opposed to the conventional manufacture of planetary carriers that use customary market solutions, ElringKlinger is taking a new approach in which the cage is configured as a solid, formed sheet-metal part. The technical benefits of this variant are its substantial weight saving, possible high torques, and high rotational speeds. The economic benefit is manifested, for example, in a considerable cost-saving potential.



TECHNOLOGY

FORMED SHEET-METAL PART → HIGH STRENGTH AND MAXIMUM PRECISION

HIGH TORQUE MECHANICAL CONNECTION (HTMC)

- Elimination of welding operation with HTMC1, HTMC2 & HTMC3
- No thermal effects on parts
- Transmission of high torques
- Commercial benefit due to elimination of additional machining after welding because no deformation / no thermal effect

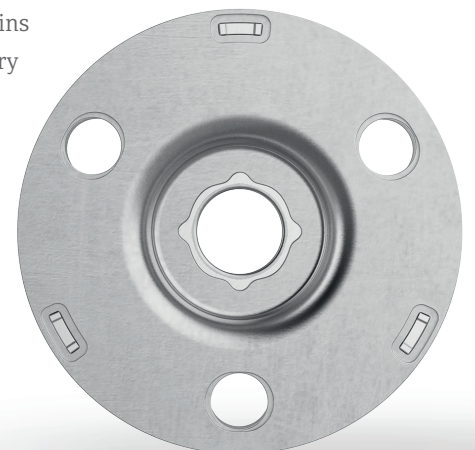


NEW CONCEPT

- Central, indirect torque tapping → Reduced displacement of planetary pins
- Formed metal parts → No casting and therefore less machining necessary
- Optimization of moment transmission due to innovative connection concept via hub



- Hole for planetary gear wheel in bridge plate
- Cut-out in cover-plate to equalize the displacement
- Planetary pin





PARAMETERS

- From standard to high wall thicknesses with >5 mm possible
- Platine sizes up to >600 x 600 mm possible
- Wide material range: S420, S355, DC04, ...



BENEFITS

- Central torque tapping enables high torques
- Increased gear lifetime due to reduced gear tilt
- Very low attrition
- High torque transmission possible
- Weight reduction up to 50%
- Commercial benefit compared to casting
- Less machining



ELRINGKLINGER – YOUR PARTNER FOR PLANETARY CARRIERS

Product Development (Design, Engineering and Simulation) – Process Development – Tool Shop
Tool Sampling/Prototyping – Testing – Change-Management – Series Production – Part Measurement

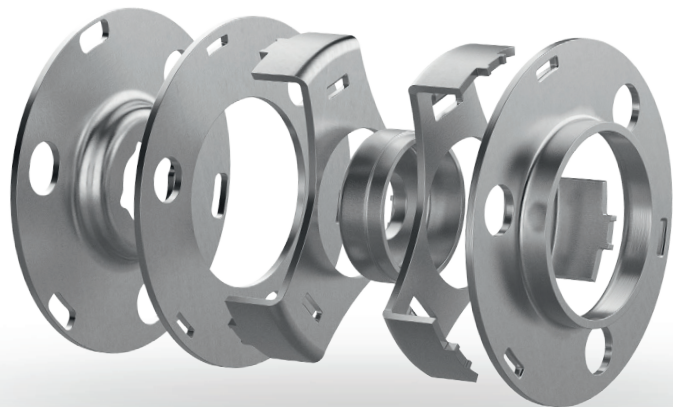


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