

HEADING GYRO SYSTEM

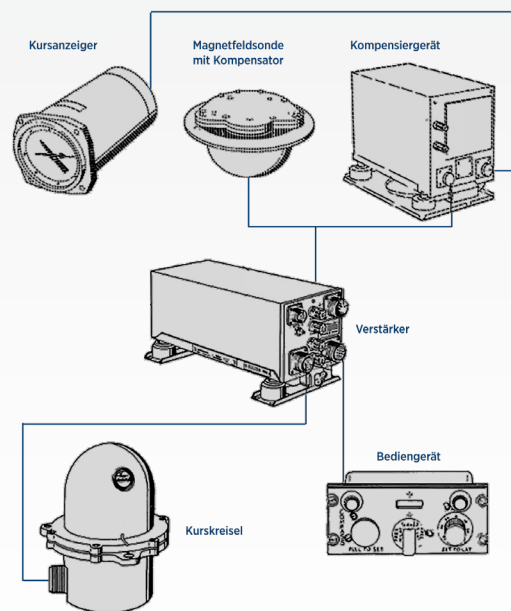
Intended purpose

The heading gyro system provides a precise, stabilized display of the aircraft heading over a 360° field. The line driver provides heading signals with the purpose of controlling either a heading gyro or a radio compass and an autopilot. The system is operated as either a compass-supported heading gyro system or free gyro with limited migration.

Configuration of the device and technical functionality

The heading gyro system consists of the heading gyro, the amplifier, the operating unit, the compensating device as well as the magnetic field probe and the compensator.

The heading gyro system provides gyro-stabilized magnetic heading information as well as directional information for the yaw channel of the autopilot system. The system functions in two operating modes: "Tracking" and "Heading gyro". With "Tracking", natural heading errors are rectified automatically. The sensor element of the magnetic field probe evaluates the direction of the horizontal part of the earth's magnetic field and displays the magnetic heading of the aircraft, thereby counteracting a long-term heading migration. The heading gyro stabilizes this display and balances the short-term instability of the magnetic field probe out. In the "Heading gyro" operation type, the gyro is prevented from aligning itself with an incor-



rect magnetic heading which results during extended turning maneuvers or if the aircraft is situated in Polar regions or within the proximity of large magnetic fields.

Services provided by AUTOFLUG

- Servicing and maintenance (cleaning and crack testing of the amplifier and checking the cabling and all electrical parts; replacement of faulty parts)
- Repair (determination and rectification of errors including replacement of parts)
- Testing of the drift, balance and precession speed, testing for minimum target values and troubleshooting (for example, straightening amplifier, tracking amplifier, trim circuit)
- Planning and purchasing of spare parts
- Obsolescence management

The verification of the device requires the availability of a variety of different testing instruments and equipment:

- Testing instrument
- Gyro rotary table and gyro tumbling table
- Transmitter synchro
- Rotary indicator
- Oscilloscope
- Anode-bend voltmeter