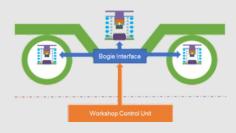


## **HEAS.** Auto-Shimming Unit

The HEAS (Hydraulic Auto-Shimming) system is a revolutionary solution designed to compensate for wheel wear in railway vehicle bogies. It is a spring-integrated autoshimming unit that can be used in either the primary or secondary suspension. With the HEAS system, the user can infinitely adjust the spring height, eliminating the need for manual shimming by sheet metal. The system is equipped with integrated sensor technology and an external automatic mobile filling unit, which greatly reduces the need for maintenance work. The HEAS Workshop control unit comprises a hydraulic valve and sensor block, including PLC control, that allows for automatic shimming during vehicle maintenance work. With the HEAS system, railway operators can enjoy improved performance and reliability, while reducing maintenance costs and the need for manual adjustments. Overall, the HEAS system represents a significant step forward in railway suspension technology and offers a compelling solution for railway operators seeking to improve their operations.



**HEAS.** Auto-Shimming working principle



**HEAS.** Workshop control unit function

## HEAS. Workshop Control Unit

- · Integrated pump and accumulator
- Manual or Automatic shimming mode
- · Adjustment of wheel load distribution
- · Wheel load check
- Shimming height check

## HEAS. Characteristics

- Force: 10–80kN
- Shimming stroke: 0-60mm
- Integrated displacement sensor
- Infinitely variable shimming
- Mechanical height clamping
- · No disassembly or bogie lift
- Maintenance free system

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