BODAS-drive DRC - Version 40
Control solution for hydrostatic drivetrains

Efficient and powerful hydrostatic drivetrains are a significant feature of any modern state-of-the-art mobile working machines. To implement an effective interaction between all drivetrain components a high level of professional expertise is needed. Especially due to the continuously increasing requirements for mobile machines like machine safety or the reduction of fuel consumption and noise emissions, there is a growing need of an integrated, highly developed drivetrain control solution. With BODAS-drive DRC, Bosch Rexroth bundles its long-term experience and offers an off-the-shelf drivetrain control software that covers a wide range of hydrostatic configurations. The basis of the hydrostatic drivetrain is always an engine with CAN-interface and a hydrostatic transmission. The gearbox type can vary.

**Function and benefits**
BODAS-drive DRC is a software solution embedded in Rexroth Controllers RC to handle hydrostatic drivetrains of wheeled vehicles. BODAS-drive covers a wide range of drivetrain types.

**Sophisticated bundle of functions**
The load sensitive travel behavior and features like automotive driving, hydrostatic braking and reversing enable a precise and comfortable handling of mobile equipment. Proportional driving at fixed engine speed can be the appropriate choice for work and handling operations. The integrated Diesel Hydraulic Control DHC, ECOdrive and ECOwork functions reduce fuel consumption and noise emissions by up to 20 percent lowering the diesel engine speed at reduced power requirements. Comfort functions like cruise control, hand throttle, speed limitation or the automatic parking brake also facilitate the daily work. The comprehensive diagnostics and well-defined limp home strategies ensure the availability of the machine. Also the integrated engine overspeed protection, component overheat protection and engine load limiting control function prevent damages of the drivetrain components and encourage a long-lasting lifetime of the vehicle.
**Technical data**

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**Integrated safety functions**

BODAS-drive DRC represents a so called “Safety Element out of Context” (SEooC). That means, the software is developed using a generic approach and ready-to-use safety functions according to the standards EN ISO 13849 (up to PLd) and ISO 25119 (up to AgPLc) are part of it. Thus BODAS-drive DRC makes an important contribution to ensuring the requirement of functional safety.

**Flexible interfaces and quick project start**

Each operating device can either be hard-wired to the Rexroth controller or it receives the signal via CAN. The BODAS-drive CAN protocol is based on J1939 standard. For using the standard functions of BODAS-drive DRC, no further programming and software engineering is necessary. Just by setting appropriate parameters with BODAS-service, the BODAS-drive DRC software can be configured and adapted to the specific machine requirements.

**Modular software architecture**

The software is based on a modular design which allows customer extensions if functions are demanded which exceed the serial functions of BODAS-drive DRC.

**Supported configurations**

- **Fixed gear ratio**
  - ET pump
  - EP motor

- **Standstill shifting gearbox, up to 3 gear ratios**
  - ET pump
  - EP motor

- **2+1 summation gearbox**
  - ET pump
  - EP motor