

## Multi-turn actuators for shaftless and wireless underground installation

*3S 300 D / 3S 500 D / 3S 1000 D / 3S 1300 D / 3S 2000 D*

### Standard design

- Earth placement without manhole
- Valve connection according to EN ISO 5210 or
- Valve connection via extension spindle for all types of valves and manufacturer
- Retrofit automation of valves without flange coupling by mounting on support plate in the ground
- Retrofit automation of valves without interruption of supply
- V2A stainless steel casing, powder-coated, IP68 2m, permanent
- Manual control via standard square-end on top of actuator
- Short-time duty S3 30min
- Intermittent duty S3 40%
- Grid connection 230 V AC
- Output speeds 2 – 60 UpM, variable speeds
- Output torque up to 450 Nm
- Limit and torque switches
- BLDC motor with thermal protection
- Electronic position and torque tracking
- Electronic actuator control built into the actuator casing supports
  - Continuous control commands via user-defined position-time profiles
  - Approaching intermediate positions
  - Electronic torque limiting
  - Feedback on torque at any point in time
  - Transmission of detailed actuator status data
  - Integration of external sensor data
- Profibus DP or Modbus RTU interface for control and feedback of actuating process and actuator status
- PC interface for analysing and setting actuator parameters
- Control room heating
- Permissible temperature range -25°C to +60°C

### Options

- Local control unit for installation on DIN rail
- Mechanical position indicator
- Electric decoupling of valve
- LWL connection
- Akkustromversorgung mit Batteriemangement zur autarken Energieversorgung
- Remote control using a mobile radio modem (2G, 3G, 4G) to integrate the actuator into the telecontrol technology via x-active server using an OPC interface
- Manhole cover monitoring
- External power supply through control lead (8-60 V DC), PV module, thermal generator or microturbine
- Evaluation of external sensor data in integrated computerised control, e.g. pressure and flow measurements
- Customer-specific connection types
- Enhanced protection from corrosion thanks to powder-coated V4A stainless steel casing
- Extended temperature range
- Extended operating depths IP68