The Drive & Control Company

Rexroth
Bosch Group

Service portfolio – Energy cylinder system for gas and steam turbines

Technical support throughout the lifecycle of the machine

Rexroth offers a complete range of drive and control solutions backed up by in-depth consultancy expertise and a best-in-class service portfolio ranging from conceptual development and commissioning through to modernization.

We deliver innovative solutions to meet current market demand for energy efficiency, safety and migration of functionality to software. Rexroth offers products and a service portfolio which reduce machine and plant operating costs.

We are at your side to provide support and advice in every phase of the product and machine lifecycle. Rexroth is the ideal solutions partner to help you take on current and future challenges.

- One point of contact for the entire system
- Worldwide service around the clock
- Technical support throughout the machine lifecycle

Energy cylinders for gas and steam turbines

Bosch Rexroth offers an entire range of hydraulic functions for gas and steam turbines with a power range spanning 25 to 1,600 MW. This is also where our energy cylinders for controlling the inflow of media to gas and steam turbines is used. The energy cylinders have a closing velocity of 1.3 m/s and a locking force of up to 350 kN.

Safety, availability and useful life

The most important customer requirements for gas and steam turbines encompass the safety, availability and useful life of the plants. Our service portfolio for energy cylinders allows you to operate generators safely and continuously, with almost no interruptions. Required inspections and maintenance can be carried out during scheduled downtime of the power plant to optimize availability.

- Safety for man and machine – avoiding impermissible operating states and machine damage through to accidents involving an explosion
- Availability and useful life – trouble-free power operation for maximum earnings

Service portfolio
Energy cylinder system

Performing routine inspection and maintenance on energy cylinders for gas and steam turbines ensures the safety, availability and useful life of these components.

Features

- Competent inspection and repair work carried out by trained service personnel and specially equipped service centers
- Qualified inspection and repairs thanks to standard guidelines and processes
- Optimal power and reliability ensured through the use of original spare parts
- Power data reset to OEM specifications

Advantages

- Early localization of sources of interference and defects
- Latest product modifications incorporated into repair work
- 12-month warranty following overhaul
- Power data reset to OEM specifications
- Planned downtime and costs thanks to defined standard overhaul procedure lasting 12 working days, with fixed pricing for services rendered
- Reduced downtime and maximum plant availability
- Optimized process sequences and improved productivity

Maintenance recommendations for energy cylinders

Maintenance recommendations based on the operating instructions provided by Rexroth for energy cylinders

The operating instructions are also available online at:
www.boschrexroth.com/Powerplanttechnology

Maintenance recommendations every 3 and 6 months

- Visually inspect all hydraulic components, lines, connections, plugs and cables for contamination, damage and leaks
- Visually inspect the clogging indicator

Maintenance recommendations every 6 months

- Clean all components (to better identify leaks)

Maintenance recommendations every 24 months (every 36 months at the latest)

- Replace filter elements
- Check all hydraulic components as well as the position transducer and end switches for proper functioning
- Take spring force measurements and check the cup-spring stack (spring replacement must be carried out by the manufacturer)

Maintenance recommendations every 5 years (every 6 years at the latest)

- Replace all seals (seal replacement must be carried out by the manufacturer)
- Identical scope as for every 24 months

Energy cylinder system On-site service

Visual inspection of cylinders

- Check hydraulic lines and fittings for leaks and damage
- Check hydraulic components for leaks, contamination and damage
- Check plugs, cables, and cable boxes for tightness, signs of aging and damage
- Visually inspect the clogging indicator and perform a functional test (if required)

Functional inspection of cylinders

- Perform manual function test
- Check thickness of chrome on cylinder rod
- Check cylinder movement
- Check end switches
- Check seals
- Check all time-based parameters
- Compare target with actual data
- Create an inspection report
- Make recommendations

Inspection of spring assembly

- Check for rust, grooves, damage, and grease
- Carry out spring force measurements
- Compare target with actual data
- Create an inspection report
- Make recommendations

Energy cylinder system Services from Rexroth

Perform standard cylinder overhaul

- Carry out visual inspection and produce documentation (photo)
- Disassemble all mechanicals
- Provide customer information*
- Inspect all parts and components
- Clean entire drive
- Replace all sealing and filter elements
- Perform a function test on individual valves or the control block
- Reassemble all mechanicals
- Perform a pressure and function test in accordance with test specifications
- Apply new coloring scheme
- Create a test report
- Provide quotation with fixed pricing
- Complete overhaul in 12 working days

*Should further work or components that fall outside the scope of performance for the standard overhaul procedure be required as a result of the findings, we will present you with a quotation that factors in this additional outlay.

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