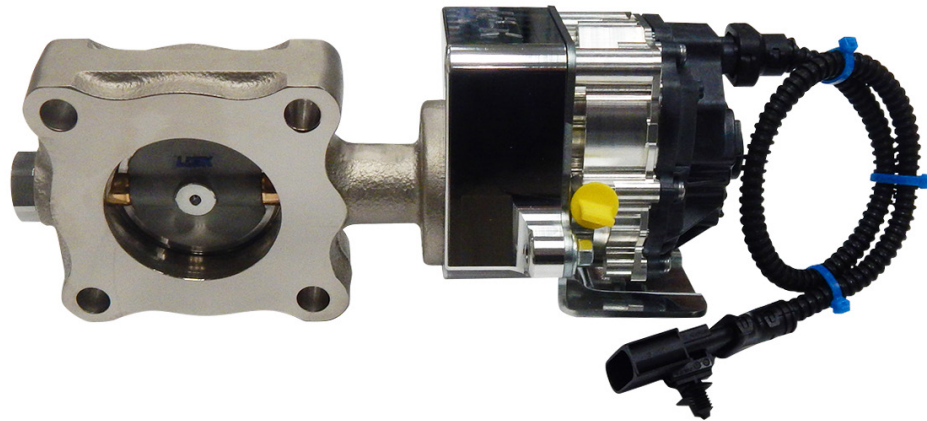


## On/Off Highway | Product Detail

### Electrically Actuated Exhaust Valves

LISK's electrically actuated exhaust valves provide engine OEMs with economic solutions to meet increasingly stringent regulatory emissions compliance and energy efficiency challenges. Electrically actuated exhaust valves reduce the number of control system components resulting in lower build costs, increased fuel economy and a more robust engine.

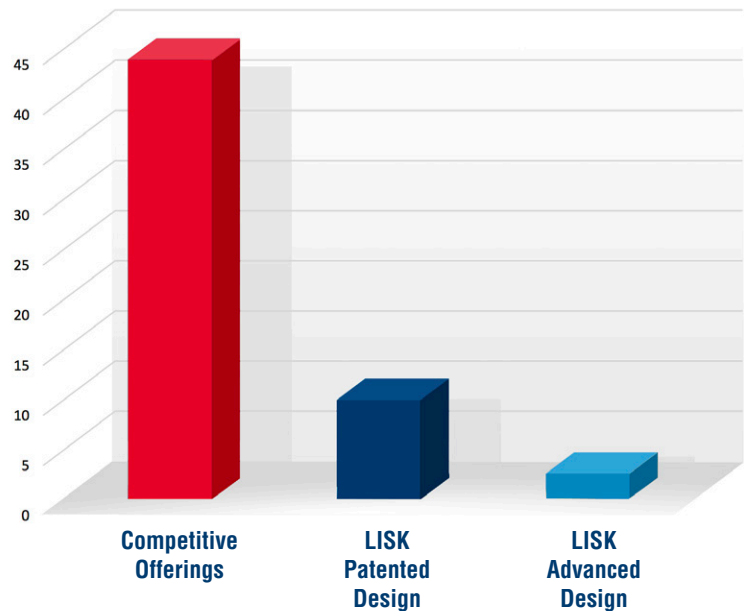
LISK has been designing and manufacturing custom-engineered exhaust valves for decades across numerous industries, including solutions for the largest global engine manufacturers. These valves are used across multiple On and Off Highway applications such as: Hot Side EGR, Exhaust Bypass, Exhaust Brake, Exhaust Backpressure, Waste Heat Recovery Bypass valves.



#### Features:

- Durable design capable of high temperature operations (up to 720°C)
- High soot tolerance
- Advanced, low internal leakage design
- High torque, smart and non-smart actuators
- Position feedback
- 12V/24V operating voltages
- CAN J1939 or PWM communication
- Custom designed solutions to meet challenging packaging needs

#### Industry Low Internal Valve Leakage Rates



Dual Butterfly EGR Valve Leakage Across Valve in Closed Position

GO TO [WWW.GWLISK.COM](http://WWW.GWLISK.COM) TO LEARN MORE ABOUT OUR CUSTOM SOLENOIDS, SOLENOID VALVES, SENSORS (LVDT) AND FLAME ARRESTOR PRODUCTS.

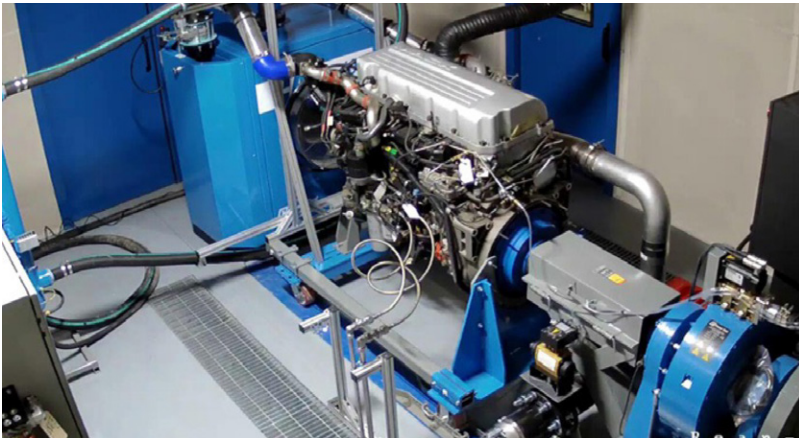
LISK provides control valve solutions for the medium and heavy duty engines of global OEMs. LISK emission control products allow our medium and heavy duty diesel engine customers meet EPA, Euro, and PNLT regulations. Our On/Off Highway Engine Valve Group includes:

- **Fuel Control:** Medium and Heavy Duty DPF hydrocarbon dosing, Natural Gas Fuel Control Valves, Fuel Shut-Off Valves, and Fuel Pressure Regulators.
- **Exhaust Valves:** Poppet, butterfly & advanced designs utilizing electric motor actuation. Hydraulic and pneumatic designs also available.
- **Turbo:** Variable Geometry Control (VGT) and Waste Gate control valves.

### TOTAL IN-HOUSE CAPABILITY FOR DESIGN, DEVELOPMENT & MANUFACTURE

Our philosophy of maintaining complete control of the design, manufacture, and quality of LISK products has led to a substantial investment in equipment, facilities, and training. This enables delivery of every order to specification, on time and on budget.

### FULL ENGINE TESTING



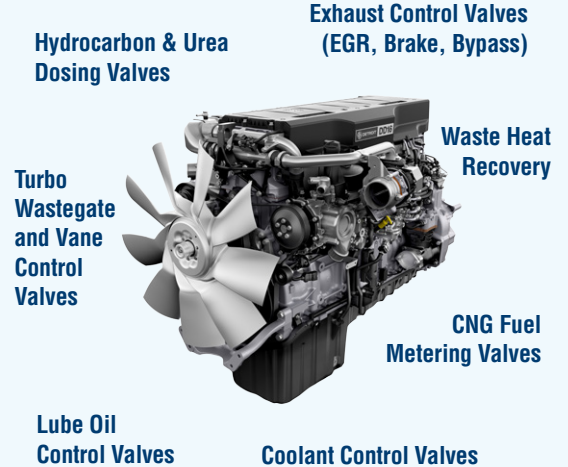
LISK has invested in test facilities and Dynamometer test cells to partner with our customers to optimize and co-develop solutions meeting new industry requirements and challenges.

- **Natural gas or diesel compatible**
- **Up to 3560 ft-lb, 6000 RPM, 1000 HP**
- **Up to 300 PSI inlet pressure on natural gas**

### PRODUCT TESTING

- **Environmental Testing:** Including, but not limited to shock, vibration, salt spray, humidity, high (1000F) and low (-150F) temps, altitude to 100,000 feet, as well as combined thermal cycling with vibration.
- **Hydraulic Testing:** Up to 75HP, 60,000 PSI
- **Pneumatic Testing:** Up to 6000 PSI, 750 SCFM. Air and nitrogen available.

### LISK ON-ENGINE ELECTRICALLY ACTUATED EXHAUST VALVE PRODUCTS



### About G.W. Lisk Company

LISK is a global leader in the design and manufacture of custom solenoids, solenoid valves, LVDTs, and flame arrestors, providing custom-engineered solutions to customers in diverse markets including military, aerospace, automotive, commercial, and medical. We provide custom-engineered products and solutions to help customers meet demanding operational and strict environmental requirements in the following areas:

- Application Solutions
- Hardware Engineering
- Mechanical Design & Development
- Rapid Prototyping
- Qualification Testing
- Vertical Integration (Manufacturing)
- Serial Production
- Industry Certifications
  - IATF16949
  - ISO 14001



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