LINEAR ACTUATORS

Our Core Markets

Automotive

- Electrical-servo changing switch in which 100% require long-lasting or
- Gasoline electronics, where have to be able to cope with all interior
- Ambient conditions and temperatures. That why for SICEI UNI certification,
- Which is our most important requirement in the design industrial product.
- Temperature: -40° / +135°C
- Vibration up to 40G
- PPM rate < 10

Building Automation & Security

- The long lives that support system quality manufacturing products
- Allow us to design and maintain high-quality lifetime or maintenance
- At once the Malawi is a 10 years, and the others are 5 years.

Motorcycles & Recreational Vehicles

- Linear actuators are also used in many sectors such as on an electric
- Two-wheeled vehicles, where extremes of environmental conditions. They therefore have to be highly
- Temperature: -40° / +100°C
- Vibration up to 30G
- PPM rate = 20,000 hours of operation

Medical Equipment

- Precision, reliability and lifetime are the key requirements in the medical
- Industry. SONCEBOZ actuators are designed and manufactured to meet these needs.
- Our products are两类 that have been certified to ISO 13485 which guarantees the reliability of these systems.
- Temperature: -40° / +70°C
- Vibration up to 2G
- 500,000 hours of operation
- PPM rate = 10,000 hours of operation

Agriculture & Construction

- Linear actuators are used in many sectors such as on an electric
- Two-wheeled vehicles, where extremes of environmental conditions. They therefore have to be highly
- Temperature: -40° / +100°C
- Vibration up to 30G
- PPM rate = 20,000 hours of operation

Case Studies

Antenna position adjustment

- Task: To adjust the beam in the whole area of an antenna
- Challenge: A linear positioner with the actuator mounted our antenna and high precision required from the linear motion.
- Solution: The linear actuator is made of a combination of a linear motor and a high precision linear guide rail. The solution provides a linear positioner with a linear motion. The system provides a linear positioner with a linear motion. The system provides a linear positioner with a linear motion. The system provides a linear positioner with a linear motion.
- The actuator also presents a very high precision which can reach a few mm.

Adaptive lighting

- Task: To adjust the light to the level of the headlight in order to avoid glare from the oncoming traffic.
- Challenge: A linear actuator with the actuator mounted on a car and a linear positioner.
- Solution: The linear actuator is made of a combination of a linear motor and a high precision linear guide rail. The solution provides a linear positioner with a linear motion. The system provides a linear positioner with a linear motion. The system provides a linear positioner with a linear motion.
- The actuator also presents a very high precision which can reach a few mm.

Idle air control

- Task: To adjust the airflow to the engine of a scooter or motorcycle
- Challenge: The actuator is mounted on the engine and must have a very high precision.
- Solution: The linear actuator is made of a combination of a linear motor and a high precision linear guide rail. The solution provides a linear positioner with a linear motion. The system provides a linear positioner with a linear motion. The system provides a linear positioner with a linear motion.
- The actuator also presents a very high precision which can reach a few mm.

Your contact for LINEAR ACTUATOR solutions

info@sonceboz.com

SONCEBOZ Motion systems

Our core competencies control of design, development and production of
- Mechatronic driveline systems and electric motors
- Precision, Reliability and Long-term operation
- Temperature: -40° / +135°C
- Vibration up to 40G
- PPM rate < 10

www.sonceboz.com

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Sonceboz has been active and recognized for years as an expert in advanced mechatronics systems. The competency and flexibility of our Engineering team is aimed at developing a win-win partnership with our customers. The foundation of our solutions is a solid and award-winning tin-can motor already produced in millions of pieces. Depending on the requirements of the application, additional features can be integrated without altering the whole compactness and precision of the system:

- Gear train
- Fail-safe
- Embedded drive electronics
- Sensor
- Customized interfaces

The choice of basic motor (technology, performance), screw and gear train allows an optimization of many parameters according to customer's specifications, like force, speed, stroke, resolution or reversibility. Linear actuators therefore constitute a simple, reliable and cost-effective solution for all positioning and flow regulating functions.

Some of our linear actuators are available as standard products and are designed to exceed your expectations. They offer great precision and high reliability, which allow performing under extreme conditions. Please refer to motor datasheets on www.sonceboz.com.

### Technology overview

The linear actuator has a stepper motor and a mechanical module for converting movement. It is made up of a screw-nut system and sometimes a gear train in the basic version, but some linear actuators are not even driven by a stepper motor. The screw can move up and down thanks to the application of a constant electric current alternately through each coil. The motor is driven by an electric signal that provides the movement of the shaft in a linear way. The modern trend is the use of linear motors, which are used without any intermediate inductive sensors to control their movement. This actuator is a kind of tin-can motor which integrates a special connector technology.

### Linear actuators

Cross section of a linear actuator with integrated rotor nut

With flexible PCB

With integrated return to 0

With special connector technology

Watertight stepper motor with integrated electronics

Linear mechatronic system with position sensor

Advanced mechatronic system with CAN electronics

### Performances

The range of the Sonceboz linear actuators extends up to 1 W of mechanical power. The performances depend on the operating environment and the driving mode.

### Custom solutions

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### Available standard products

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### Development & industrialization

Product design	Process & tool design	Validation

### Manufacturing process

Winding	Stator assembly	Final control

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