

HiMod

Precise in
continuous duty



General

SIPOS Aktorik GmbH



SIPOS Aktorik is the market leader among manufacturers of electric variable-speed actuators. More than 20 years ago, SIPOS was the first manufacturer to integrate the frequency converter technology into the electric actuator for industrial valve automation.

SIPOS emerged from the business segment »Electric Actuators« of SIEMENS AG, therefore we can draw on more than 100 years of valuable experience. This experience is an important factor in the development and success of marketable products.

Since 1999 we are member of the AUMA group. Through AUMA's worldwide sales and service network, our customers around the world can always the right contact person in their area.

The electric actuator „SEVEN HiMod“ has been developed specifically for use in an environment in which the highest control quality is essential. Thanks to a unique transmission concept in conjunction with the integrated frequency converter, these actuators are designed for maximum precision in continuous operation.

Applications



HiMod-applications

- + Feedwater flow control
- + Regulation feed water pump (scoop tube adjustment)
- + Turbo control (turbo control couplings)
- + Injection control
- + Condensate control
- + HP and LP diverter station
- + HP and IP bypass control
- + Reducing stations
- + ID/FD damper control
- + Burner control
- + Flue gas control
- + Dosing
- + Aeration control in wastewater treatment plants
- + Pressure and flow control for pump stations

Possible applications

for valve protection

- + Minimize water hammer
- + Prevent cavitation damage
- + Flow harmonization
- + Avoiding pressure surges
- + Protection of valve spindle and valve seat

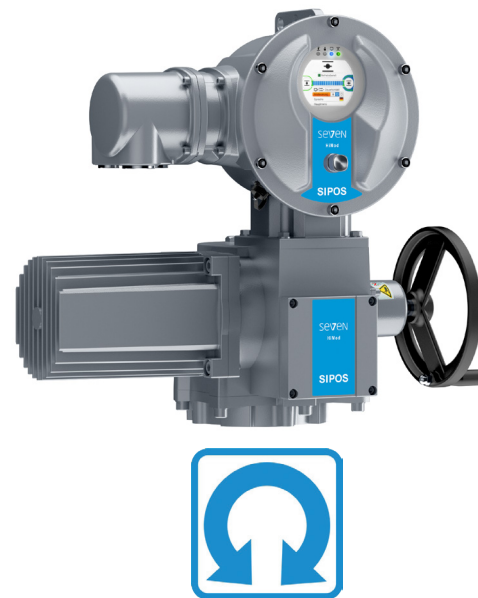
for control accuracy

- + Flow Control
- + Level control
- + Pressure Control
- + Scoop tube adjustment
- + Vane control
- + Fan control
- + Dosage
- + Distribution

Product combinations for different applications

HiMod precision in continuous duty

The electric actuator „SEVEN HiMod“ has been developed for use in an environment in which very high demands are made and highest control quality is essential. The HiMod precision actuator meets the highest standards.



Key Features

- ✚ Precision: max. 0.1% to 0.2% deviation based on the total stroke
- ✚ Continuous duty: Meets Class D requirements of DIN EN ISO 22153
- ✚ Double-sealed: Protection in tough environments
- ✚ Easy „non intrusive“ commissioning without tools
- ✚ Comprehensive software functions: Essential actuation for „smart“ solutions
- ✚ Compensation of voltage and frequency fluctuations (-30% to +15%)
- ✚ No starting current

The core of HiMod's performance are intelligent software solutions for a wide range of process requirements. These are matched to the high-quality components and round off the profile of the actuator as a high-end product.

- ✚ Valve protection: Gentle in the end positions without overtorque
- ✚ With force from end position or blockade
- ✚ Travel-dependent speed setting
- ✚ Travel-dependent freely adjustable positioning times
- ✚ Analog speed control



Precision for part-turn applications

In order to be able to meet the high requirements for these applications, specially designed gear units with extremely high positioning accuracy are used here. In combination with the HiMod rotary actuator, this combination forms an ideally coordinated unit.

Depending on the application, the HiMod rotary actuator is mounted to the valve via:

- ✚ Flange and coupling for direct mounting
- ✚ Base & lever combination



Precision for linear operation

For these applications, particularly high-quality and low-wear linear units are used.

The technical design feature of these linear units is the use of a very high quality and precise ball screw.

Robust

The double-sealed electrical connection compartment protects the electronic components against harmful environmental influences, especially in the often difficult phase of plant commissioning. The complete „non-intrusive“ commissioning makes it possible to set the end positions without opening the actuator compartment. Additionally the protection class IP 68 and the high corrosion resistance recommend the HiMod actuator also for use in extremely critical environment.

Precise

Highest precision in continuous operation, these are the demands made for the „SEVEN HiMod“. In addition to the virtually backlash-free precision gear, the high-resolution absolute position sensor also plays a key role. Via this encoder, the HiMod actuator registers the position of the output shaft, even in de-energized state, when e.g. the position of the output shaft is changed via the handwheel. Thus, changes in position that take place during a power failure are reliably detected and reported correctly to the control system after voltage return. A battery is not required for this!

Durable

High-quality components and a unique transmission concept, which has been optimally designed and tuned for operation with an integrated frequency converter, make the HiMod ideal for continuous operation, according to class D according to DIN EN ISO 22153.

To underline the quality of the high-end drive, we give a 5-year warranty, despite the high demands placed on the reliability of the actuator.

Variable and adaptable

Our HiMod has features that make it unique. Thus, the speed can be changed during the process, while maintaining the torque - for optimum processes in the plant. Another (unique) feature is the reliable operation with critical power supply: voltage fluctuations do not affect the control of the valve - the HiMod reliably maintains the required torque even during mains and frequency fluctuations.

Intuitive and communicative

The unique operating concept with large, high-resolution color display in conjunction with the Drive Controller (turn-push button) enables self-explanatory and intuitive operation for setting and parameterizing the actuator. The HiMod can also communicate via Bluetooth and the external USB interface (IP68). This allows easy upload / download of data or parameters as well as diagnostic capabilities or the cloning of a replacement device.

Intelligent and individual

An essential feature of the performance of our HiMod is the individual software configurability. The diverse and intelligent functions of our HiMod optimally cover even the most diverse process requirements. Many extensive functions can be realized by software, also individual customer wishes can be considered. With our knowledge and know-how, we help you to find the right solution and to realize it.

Rotary actuator

- Tripping torque range: 10 – 2800 Nm
- Infinitely variable speed ranges from 1.25 – 80 rpm depending on the actuator type
- Absolute position encoder, resolution 0.0005 %
- Highest precision: deviation max. 0.1 to 0.2 %
- Permanent modulation operation, class D according to DIN EN ISO 22153
- High corrosion resistance and IP68 protection
- No functional restrictions for the temperature range from -20 to +70 °C

Part-turn actuator

- Tripping torque range: 125 – 3920 Nm
- Modulating torque range: 125 – 1350 Nm
- Positioning time range: 10 - 150 sec/90°
- Valve connection: direct or base & lever
- Standard lever lengths: 100 – 400 mm
- Any mounting position
- Permanent modulation operation, class D according to DIN EN ISO 22153
- The gear units are lubricated and are maintenance-free for life
- No functional restrictions for the temperature range from -20 to +70 °C

Linear actuator

- Tripping force range: 9.5 – 165 kN
- Modulating force range: 9.5 – 119 kN
- Positioning speed range: 25 – 800 mm/min
- Stroke range: 100 – 300 mm (others on request)
- Permanent modulation operation, class D according to DIN EN ISO 22153
- No functional restrictions for the temperature range from -20 to +70 °C



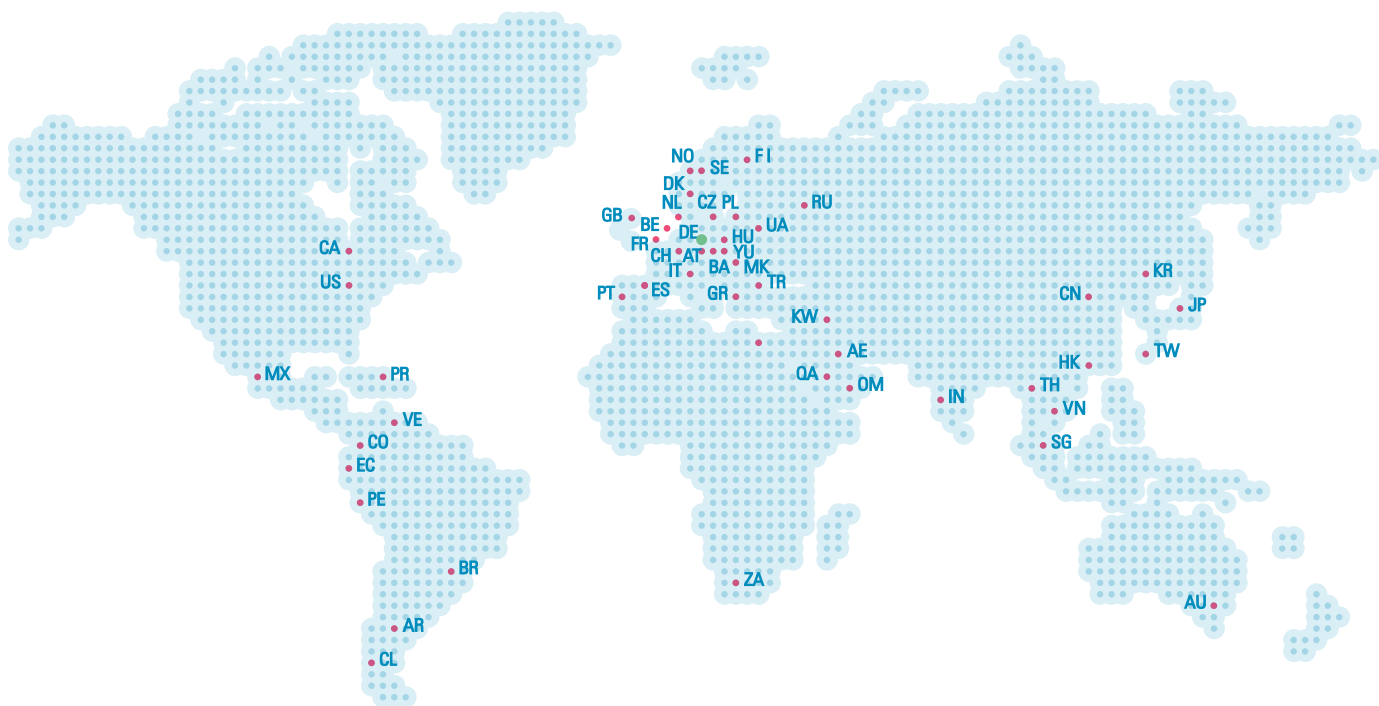
Product selection program

Menu-driven product configuration

A detailed product configuration is available on the Internet at www.sipos.de. Our product selection program can also be installed via a USB flash drive.

After product configuration

- the associated wiring diagram,
 - the dimensional drawing and
 - the technical data
- are available.



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