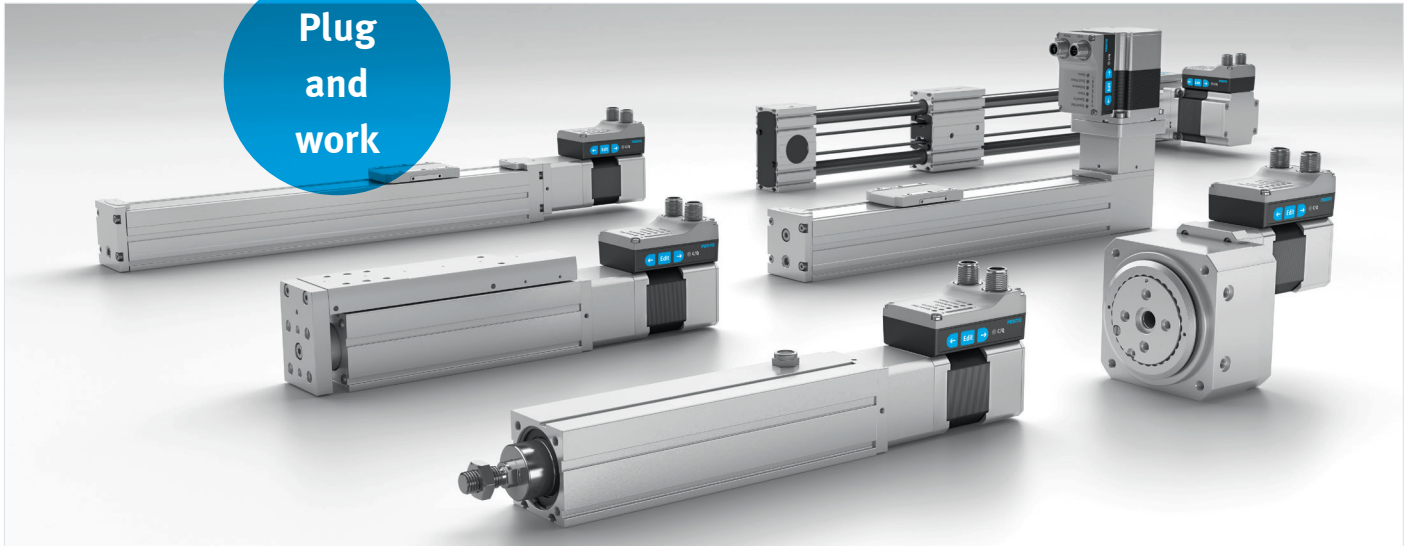


# Simplified Motion Series

FESTO

Plug  
and  
work



## Simple motion

### Highlights

- Simplified functionality for simple movements
- A variety of movements with different mechanical systems
- Integrated products eliminate the need for a control cabinet
- Quick and easy commissioning without software and special expertise
- Digital I/O and IO-Link integrated as standard

The simplicity of pneumatics is now combined for the first time with the advantages of electric automation thanks to the Simplified Motion Series. These integrated drives are the perfect solution for all users who are looking for an electric alternative for very simple movement and positioning tasks, but don't want the commissioning process for traditional electric drive systems that can often be quite complex. Operation is simply based on the "plug and work" principle, without the need for any software. Digital I/O (DIO) and IO-Link are always automatically included – a product with two types of control as standard.

### Integrated

Simplified Motion Series doesn't require any external servo drives, because all the necessary electronic components and modules are combined in the integrated drive. The complete solution is optimised for simple movements between two mechanical end positions without having to sacrifice optimised movement characteristics, gently cushioned retracting into the end position, or simplified press-fitting and clamping functions.

### Simple

This electric alternative for very simple movement and positioning tasks doesn't require the usual commissioning process for traditional electric drive systems that can often be quite complex. It can be done quickly and easily without software, computers or other accessories. All parameters can be manually adjusted directly on the drive.

 IO-Link

## Overview of the products in the Simplified Motion Series

Simplified Motion Series consists of different linear and rotary electromechanical components together with a simple and application-optimised combination of motor and servo drives, the so-called integrated drive. With this solution there is no need for external servo drives or for the installation of a control cabinet, because the Simplified Motion Series is mounted directly in the machine.

The electric alternative for very simple movement and positioning tasks doesn't require the usual commissioning process for traditional electric drive systems that can often be quite complex. It also offers special movement characteristics such as gently cushioned retracting into the end position, or simplified press-fitting and clamping functions. In addition, the end position feedback is integrated as standard, so that no external sensors are required.



### Spindle axis ELGS-BS

Extremely compact and cost-effective spindle axis with precise, resilient recirculating ball bearing guide for the slide and powerful ball screw drive.

- Three sizes for a payload of up to 20 kg at a max. stroke of 800 mm

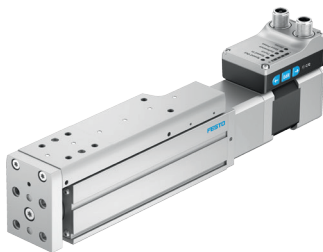
### Toothed belt axis ELGS-TB

Compact and extremely cost-effective toothed belt axis with durable toothed belt and precise, resilient recirculating ball bearing slide guide.

- Two sizes for up to 1.3 m/s at a max. stroke of 2,000 mm

### Common features

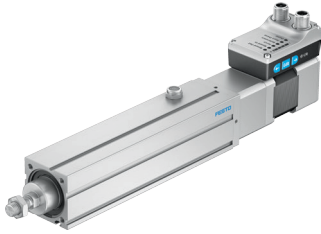
- Permanent stainless steel cover strip protects the internal guide and spindle or toothed belt
- Unique "one-size-down" assembly system for mounting with each other and with the mini slide EGSS
- Optional: vacuum connection to minimise particulate emissions from the axis
- The motor can be rotated by 4 x 90° and its position can be modified at any time



### Mini slide EGSS

Cost-effective and resilient EGSS with smooth spindle operation for vertical Z-movements or individual, guided linear movements in every mounting position. The internal linear guide absorbs lateral forces and provides very good resistance to torsion at high torques.

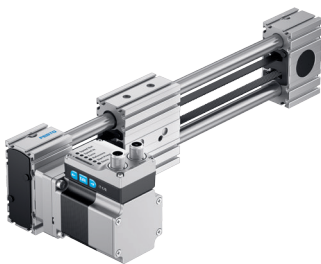
- Three sizes with a max. stroke of 200 mm
- The electric rotary drive ERMS can be mounted directly without the need for adapters
- Optional: ducted compressed air compensation prevents particles or moisture from entering and particles leaking into the environment
- Unique "one-size-down" assembly system in conjunction with ELGS-BS/-TB.
- The motor can be rotated by 4 x 90° and its position can be modified at any time



### Electric cylinder EPCS

The EPCS is suitable for linear single movements in every mounting position and its smoothly running ball screw drive allows precise and rapid movements. As an extremely cost-effective complete solution, the electric cylinder is perfect for applications such as clamping, distributing, sorting or ejecting and in handling systems as a simple Z-axis.

- Three sizes with a max. stroke of 500 mm
- Simple and cost-effective position sensing with proximity sensor
- Optional: ducted compressed air compensation prevents particles or moisture from entering and particles leaking into the environment
- Unique "one-size-down" assembly system in conjunction with the spindle and toothed belt axes ELGS-BS/-TB.
- The motor can be rotated by 4 x 90° and its position can be modified at any time



### Toothed belt axis ELGE

The toothed belt axis offers very good running performance thanks to its recirculating ball bearing guide. As an attractively priced complete solution with a cost-optimised design, it is ideal as an economical solution for very simple tasks with comparatively low requirements for mechanical load, dynamic response and precision, as well as for the environment.

- High running performance of 5,000 km
- Optional end-position sensing with proximity sensors
- The motor can be fitted on both sides, above or below, rotated by 4 x 90°, and its position can be modified at any time



### Rotary drive ERMS

As a cost-effective solution package, the rotary drive ERMS is ideal for simple swivel tasks as well as for increased mechanical loads. The rotary plate has sturdy, precise and backlash-free ball bearings so it can absorb transverse loads and torques.

- Two sizes, each with a swivel angle of 90° and 180°
- Sealed hollow shaft for integrated through-feed for cables or tubing
- The standardised mounting interface allows it to be connected directly to the electric mini slides EGSL, EGSC and EGSS.

# Simplified Motion Series

## Connecting and commissioning the integrated drive

Simplified Motion Series is directly connected to the controller and actuation is either via digital I/O (DIO) or IO-Link, because both types of control are integrated as standard. The control via digital I/O (DIO) is very easy and similar to controlling a pneumatic valve while the alternative connection via IO-Link provides highly flexible control as well as additional functions.

End position feedback is integrated as standard, with its functionality corresponding to that of a conventional proximity sensor. Commissioning is quick and easy without the need for any software, computers or other accessories, because all parameters can be manually adjusted directly on the drive.

For commissioning, simply adjust all relevant parameters directly on the drive:

- Speed for the "out" and "in" movement
- Force of the drive in the "out" position
- Setting the reference end position
- Setting the position "Start force-controlled movement"
- Manual start (similar to a manual override)



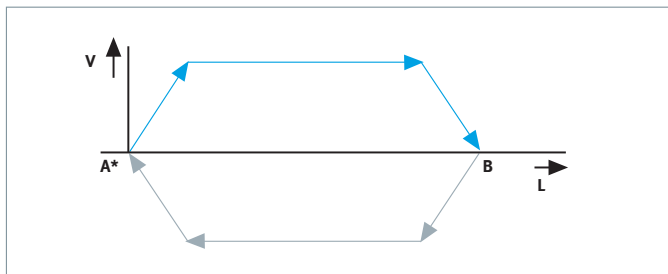
Simple electrical connection via M12 plug design

- Power (4-pin): power supply for the motor
- Logic (8-pin): control signal, sensor signal and current for the integrated electronics

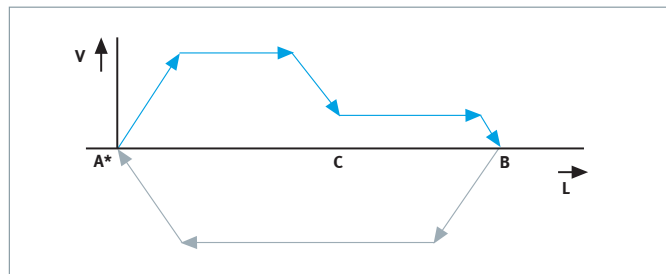
Expanded functions via IO-Link possible:  
Remote adjustments of the movement parameters, copy and backup functions for parameter transfer, read functions of essential process parameters.



## The functions of the Simplified Motion Series



Basic profile for movement between two end positions: with speed control



Expanded movement profile for simplified press-fitting and clamping functions: with speed and force control

- "Out" movement
- "In" movement
- A\* Reference end position
- B Operating position
- C Start position "press"