

# Stepper motor with controller SEC-ST

FESTO



**In a nutshell: cost-effective, step-accurate positioning.  
Stepper motors MTR-ST.**

Another step towards “systematic improvements in efficiency”: the new stepper motor range including controllers for low-cost positioning with toothed belt or spindle axes. Ideal for positioning axes DGE and DGEA.

#### **Quicker to install**

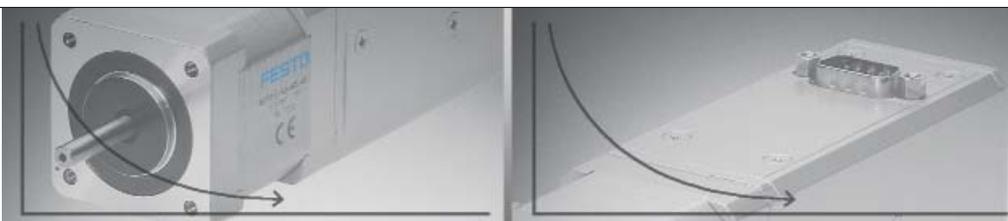
Inexpensive package solution combined with extremely straightforward commissioning. Simple control system via pulse/direction signals from a master Festo or external controller. The focal point: the MTR-ST-42 with integrated power section offers the most cost-effective drive solution whilst requiring minimal wiring.

#### **Systematic, reliable**

Maintenance-free motor operation, motor, optional gear unit and axes – thanks to lubrication for life.

#### **Systematically more flexible!**

Everything from a single source: Festo offers matching stepper motors and servo-motor drive unit packages for electrical positioning axes.



MTR-ST-42-... reduce costs, ...

save on installation time

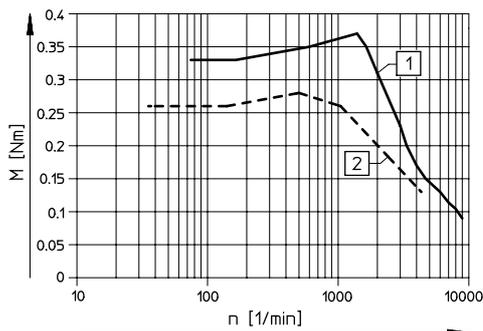
141.1.PSI →

Product Short Information

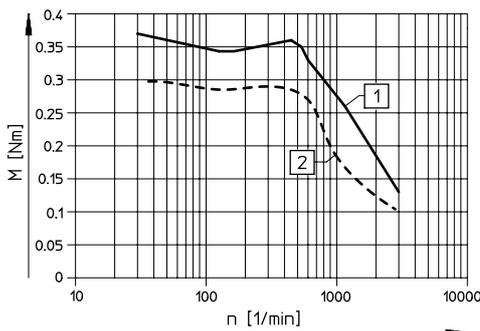
# Stepper motor with controller SEC-ST

## Torque M as a function of n (r.p.m.)

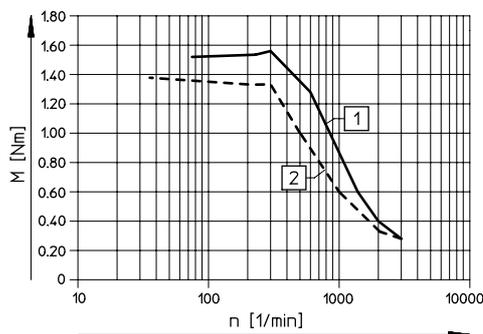
Motor: MTR-ST-42-48S...  
at nominal voltage 48 V



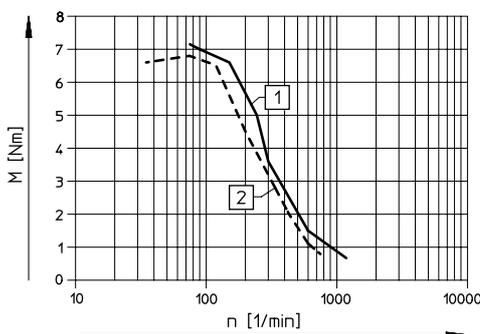
Motor: MTRE-ST-42-48S...  
at nominal voltage 48 V



Motor: MTR-ST-57-48S...  
at nominal voltage 48 V



Motor: MTR-ST-87-48S...  
at nominal voltage 48 V



1 full step    2 half-step

## The focal point – the MTRE-ST-42

Decentralised drive technology is used to realise this compact 2-phase stepper motor with integrated power electronics. The SEC-ST is already integrated in the motor to save on space. Stepper resolutions from full to tenth step and phase currents from 0.3 to 1.2 A with a 24 V DC to 48 V DC supply voltage can be set using a DIP switch. Compared with the package of “standard” motor plus the external power electronics, savings of ~30 % can be achieved.

This drive fully demonstrates its advantages wherever the additional weight of the integrated power electronics need not be moved (primarily X-axes). This is where its cost benefits and the minimal wiring requirement come to the fore.

## Series

- The motor is supplied in 3 sizes (MTR-AC-42/-57/-87),
- with or without gear unit (MTR-ST-87 only)
  - with or without brake

Technical data	MTR-ST-42-48S...	MTRE-ST-42-48S...	MTR-ST-57-48S...	MTR-ST-87-48S...
Nominal voltage [V]	48	48	48	48
Nominal current, motor [A]	1.8	1.2	3.1	4.7
Holding torque, motor [Nm]	0.34	0.34	1.27	6.47
Stepper angle (full step) [°]	1.8 ±5%	1.8 ±5%	1.8 ±5%	1.8 ±5%

SEC-ST the low-cost drive solution consisting of 2-phase stepper motors with controller SEC-ST can be supplied with the 24 V DC standard for control cabinets, or alternatively with 48 V DC. Stepper resolutions

from full to tenth step and phase currents of 1.25 to 6.0 A in addition to the current reduction and enable functions can be set using DIP switches. The controller SEC-ST is controlled by the standard pulse/direction signal (5 V or 24 V

level). The Festo SPC200 with stepper motor card or any commercially available PLC with stepper motor card can be used as a pulse/direction source.

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