



A.MANNESMANN
A member of
SCHNEEBERGER linear technology

4-Stage Telescopic Actuators

Linear Actuators with 4-Stage Telescopic Ball Screw



**Extremely compact solutions
for particularly large travel
ranges in mechanical engineering**

For Very Confined Spaces – Precision and High Performance

To meet the requirements of extremely long travel ranges combined with the smallest block dimensions, 4-stage telescopic actuators are the perfect solution for machine construction. The compact components offered by A.MANNESMANN combine the smallest possible dimensions with the highest possible performance precision.

A wide range of applications – between precision and high force transmission

Their compact construction makes them extremely versatile. They achieve precise travel movements with machine tool precision as well as the high force transmission required by press and fixture construction.

Extreme space gain through 4-stage design

While achieving a space gain of up to 386 %, the patented 4-stage telescopic actuators work with extreme precision and show great axial resilience. They convert the motor's central rotary motion into two counter-directional axial translatory motions by means of two telescopic ball screws.



Each of our telescopic ball screw drives consist of two inter-locked precision ball screws. The resulting partial movements are split according to the thread pitch and are perfectly synchronised.

Backlash-free, pre-loaded double nut systems in combination with precision-ground ball screw spindles in precision quality IT3 achieve the highest possible positioning accuracy and repeat accuracy.

At A.MANNESMANN perfect workmanship, the use of high-quality material and heat treatment for extreme hardness form the basis for high long-term durability.

The telescopic stages provide a constant torque and a very high efficiency rate of more than 80 %, which remain constant over the entire travel range. This means very low dissipation and stable low operating temperatures.

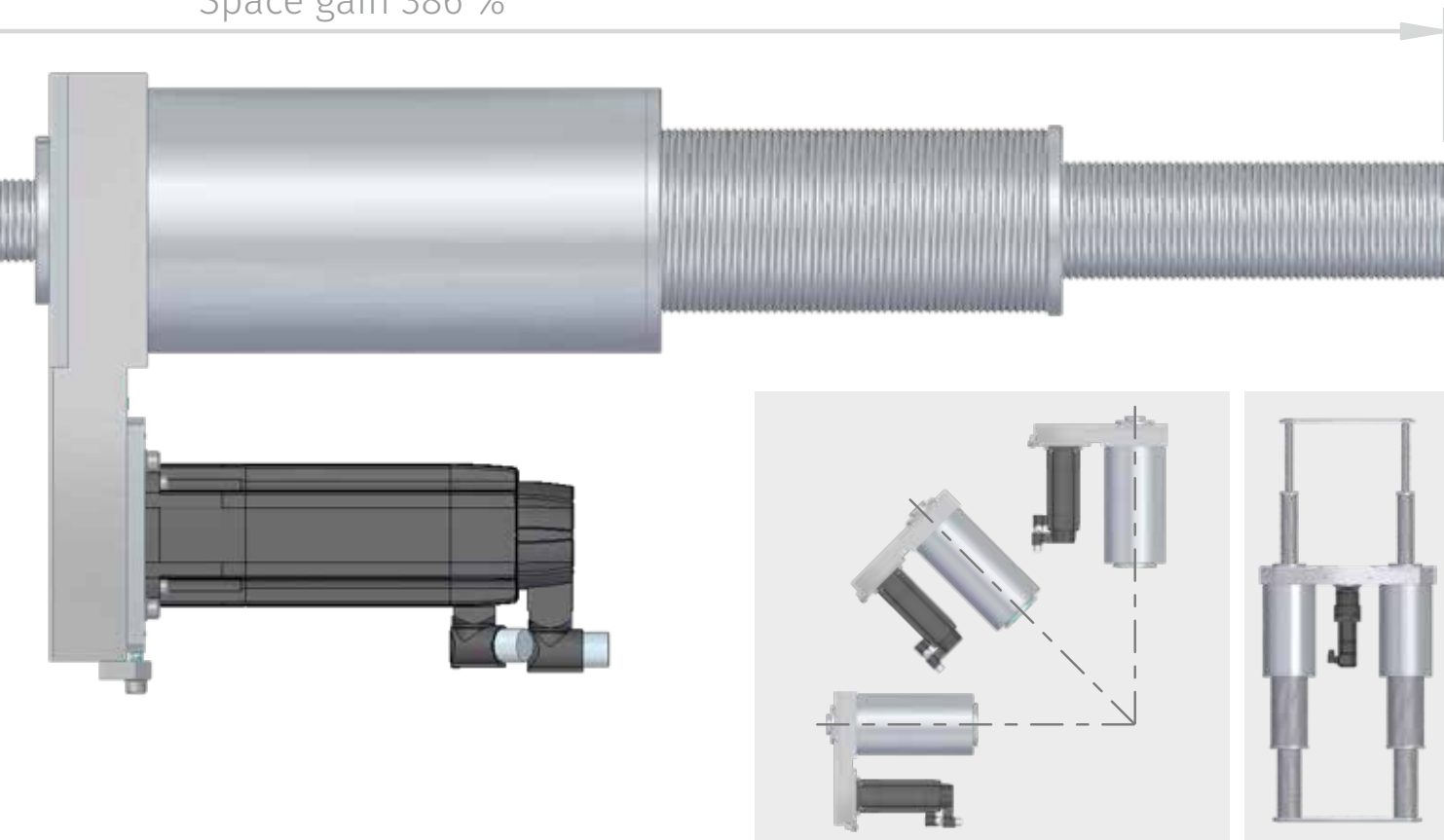
Economic Advantages

- Space gain through compacted construction
- High force transmission rates
- Very high efficiency (> 80 %)
- High durability/long service life
- Economical standard constructions or custom-made manufacturing
- Achieves compact engineering solutions for limited space
- Outstanding energy efficiency

Technical Advantages

- Smallest block dimensions
- Highly accurate positioning capability
- Accurate travel movements
- High rigidity
- Very long travel ranges (< 386 %)
- Backlash-free, preloaded double nuts
- Precision-ground ball screw spindles (precision IT3)
- Constant torque
- Very low dissipation
- Stable low operating temperatures
- Suitable for all mounting positions

Space gain 386 %



Telescopic actuators for all mounting positions

Customised manufacturing

Manufacturing and Sizes

We supply 4-stage telescopic actuators in 2 standard sizes with different travel ranges and different axial forces in both tensile and compression direction.

In addition, we produce individual special solutions for your specific requirements. We manufacture custom-made telescopic actuators with extensive accessories, tailored to suit your operating conditions perfectly.

For less compact spacial requirements see our specially designed 2-stage telescopic actuators.

Standard Sizes for 4-Stage Telescopic Actuators

Technical data	Type	Standard 1	Standard 2
Size	mm	25	40
Total pitch	mm	20	40
No. of stages		4	4
Pitch per stage	mm	5	10
Ball size	mm	3	6
Dynamic load rate	kN	22	59
Static load rate	kN	23	99
Max. dynamic axial load	kN	4.4	12.5
Max. static axial load	kN	9.3	30
Basic length	mm	200	500
Max. travel	mm	2000	2000
Min. length *	mm	700	1000
Max. length *	mm	2700	3000
Ratio *		3.86	3.00
Accuracy in positioning	µm	32	32
Max. operating speed	min ⁻¹	1500	1500
Max. linear speed	m/min	30	60

* In relation to maximum travel range

Please contact our
specialists directly
Tel. +49 2191 989-200



The A.MANNESMANN Service

For our telescopic actuators with ball screws we offer comprehensive service and support during construction, assembly and during their complete service time:

- Constructive advice
- Parameter calculation and evaluation
- Specification of optimum lubrication
- On-site support
- Support during assembly
- Damage analysis
- Overhaul and repair
- Training

We are happy to provide you personally with detailed information. You can find an overview on our website.

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