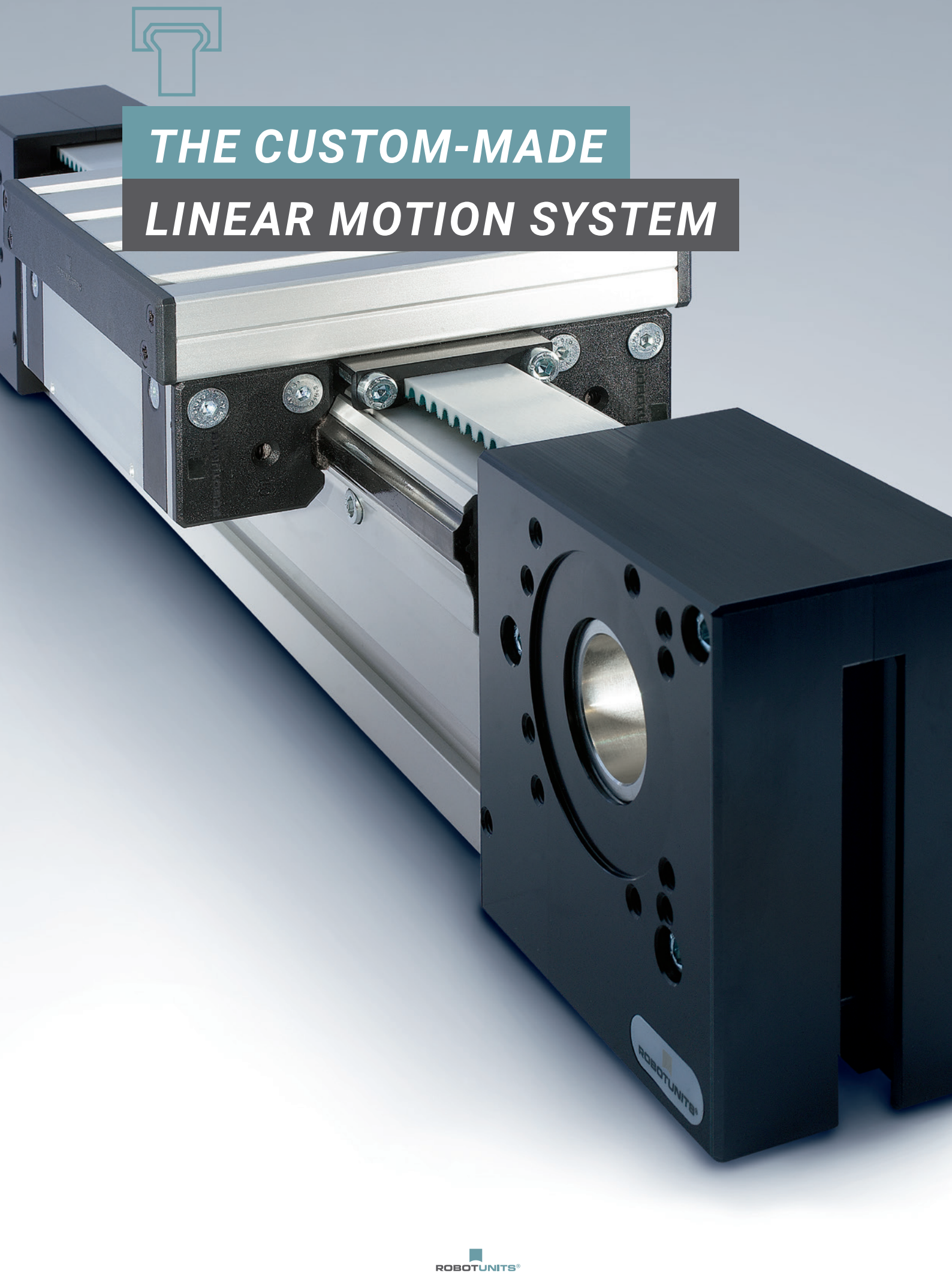


THE CUSTOM-MADE LINEAR MOTION SYSTEM

Customized linear motion technology. Based on our proven Extrusion and Fastening Technology, we have developed Linear Motion Units that meet the highest customer expectations in terms of versatility, stability and efficiency.

Robotunits offers a Linear Motion System of the highest quality and precision, with a maximum potential for cost and time savings in design and assembly.

Fully integrated Linear Motion System
- completely compatible with the entire Modular Automation System
- belt return inside the extrusion
- leaves 3 sides of the extrusion free for additional attachments
- available in 50 mm series

It runs and runs and runs ...
- single or double idlers can be used, depending on the load
- high strength due to special captive design of idler extrusion
- large rollers
- integrated fastening option for Flexible Energy Chain

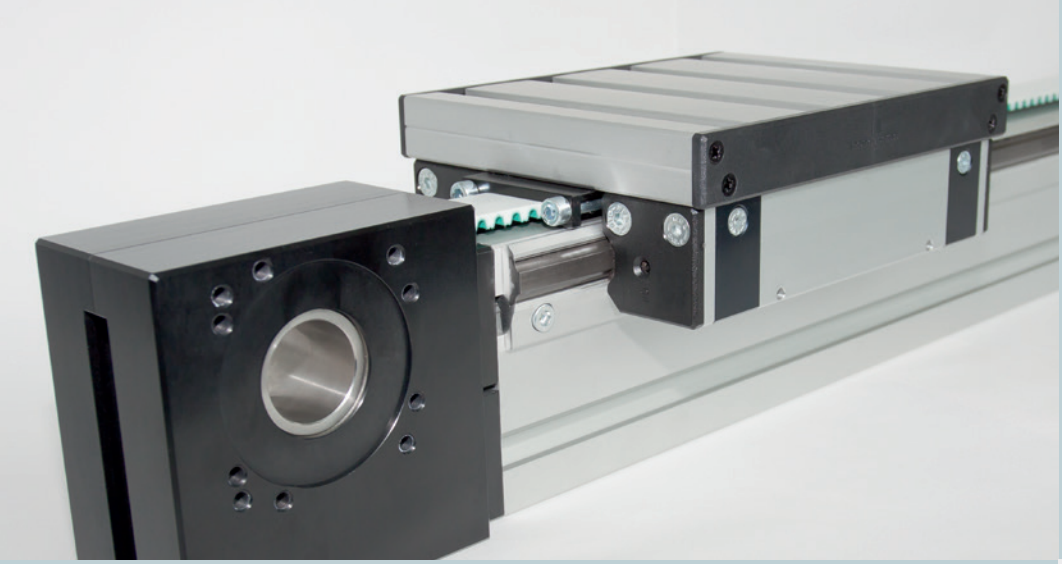
Guiderails instead of guide systems
- easily mounted guiderails eliminate the need for a separate guide system
- playfree datum edge positioning
- hardened, tempered steel guiderail allow heavier loads
- high wear resistance allows smooth and quiet operation
- quick and easy assembly

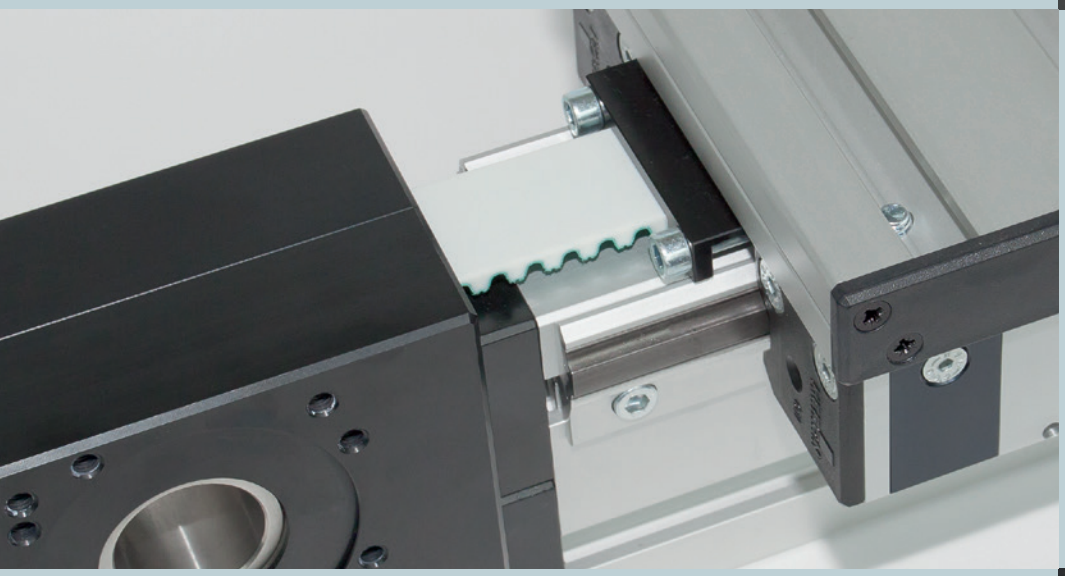
Modular design of linear motion units
- customized linear motion units, from single units to complex 3 axis gantry systems
- single and multiple guiderails available in one system
- X-,Y-,Z-combinations possible
- almost limitless combinations

Drive options
- motor selection tailored to performance requirements
- minimal design time through expansion coupling system
- one size pulley for all chassis sizes

Protection against damage
- integrated overrun protection prevents mechanical damage

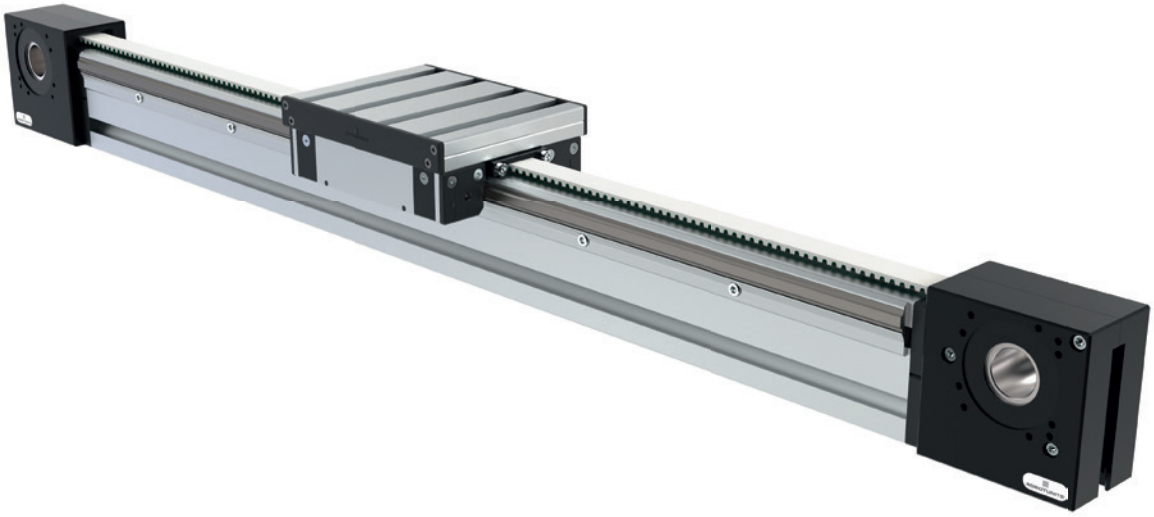
Save time, cut cost
- easy selection of components
- easy to order
- minimal design time required
- quick and easy attachment of accessories
- easy installation

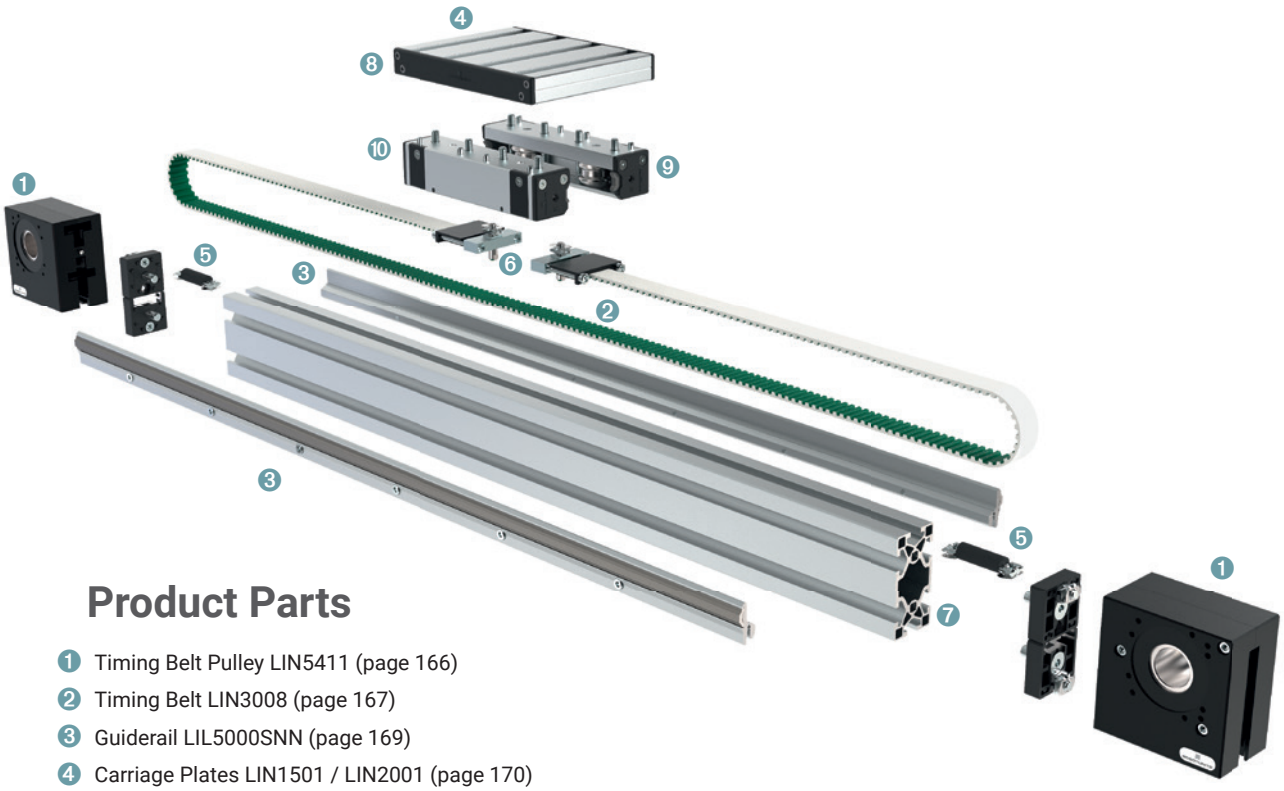




The Custom-Made Linear Motion System

Linear Motion Design

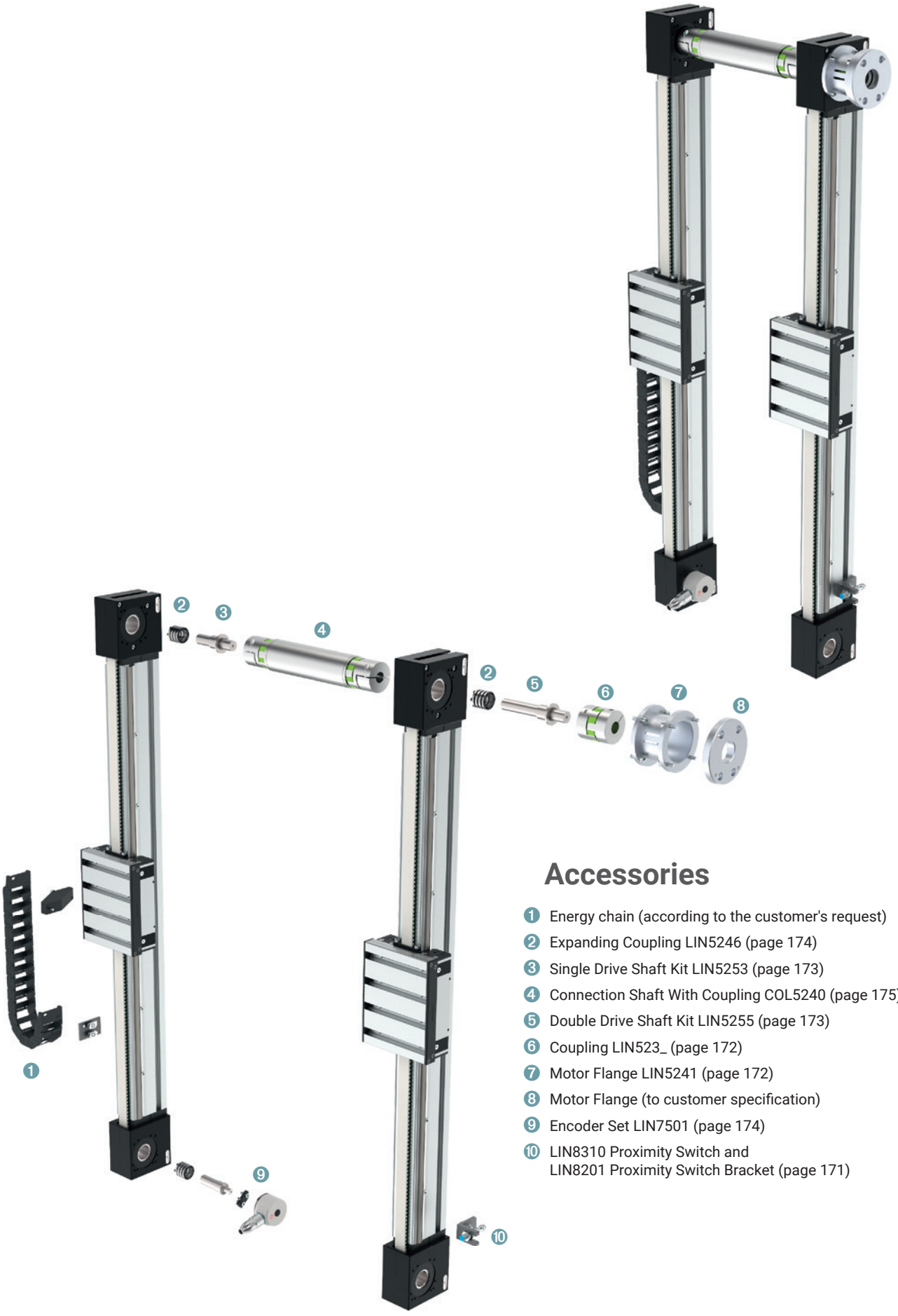




Product Parts

1. Timing Belt Pulley LIN5411 (page 166)
2. Timing Belt LIN3008 (page 167)
3. Guiderail LIL5000SNN (page 169)
4. Carriage Plates LIN1501 / LIN2001 (page 170)
5. Limit Stop LIN5191 (page 170)
6. Timing Belt Clamp LIN3221 (page 167)
7. Extrusions, 50x50, 50x100, 50x200, or 100x100 (starting page 70)
8. End Cap CAP2521 (page 177)
9. Single Idler Kit, concentric LIN5001 or Double Idler Kit, concentric LIN5011 (page 168)
10. Single Idler Kit, eccentric LIN5003 or Double Idler Kit, eccentric LIN5013 (page 168)

Linear Motion System



Accessories

1. Energy chain (according to the customer's request)
2. Expanding Coupling LIN5246 (page 174)
3. Single Drive Shaft Kit LIN5253 (page 173)
4. Connection Shaft With Coupling COL5240 (page 175)
5. Double Drive Shaft Kit LIN5255 (page 173)
6. Coupling LIN523_ (page 172)
7. Motor Flange LIN5241 (page 172)
8. Motor Flange (to customer specification)
9. Encoder Set LIN7501 (page 174)
10. LIN8310 Proximity Switch and LIN8201 Proximity Switch Bracket (page 171)

LIL5010 Linear Motion Unit 50

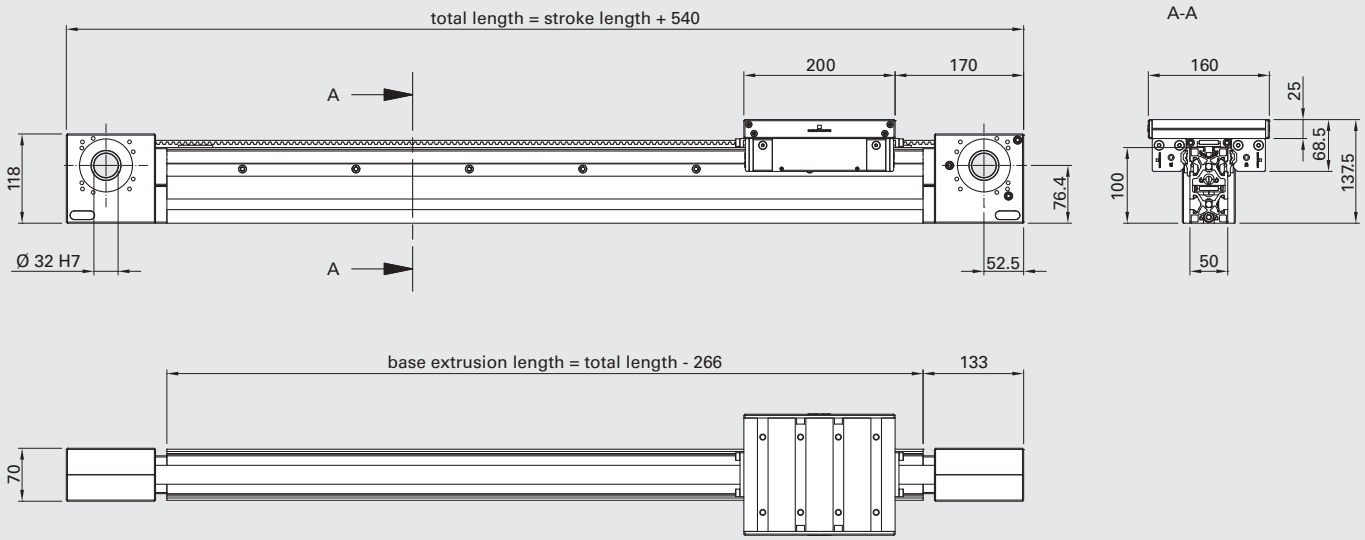
Application
For transportation and exact postitioning of parts.

Technical Data
Base extrusion 50x100 (PIL 5010)
Standard carriage plate: 200x150 mm
Md max.: 60 Nm (max. transmittable drive torque)
Carriage stroke per revolution: 200 mm
Pitch circle diameter: 63.66 mm
Idle torque: 1 Nm
Positioning accuracy: ± 0.2 mm (without drive backlash)
Weight of carriage: 2.66 kg

Assembly Instructions
See page 195

Eccentric Key LIN 9990 (page 169) is needed to adjust the eccentric roller

Dimensions



Order Code

	Order Code[1]			
Description		Base Extrusion	Type	Stroke Length
Linear Motion Unit 50	LIL	5010	SNN	____

1) Please complete the order by adding the corresponding parameters for order processing.
Drawing dimensions in mm

LIL1010 Linear Motion Unit 100

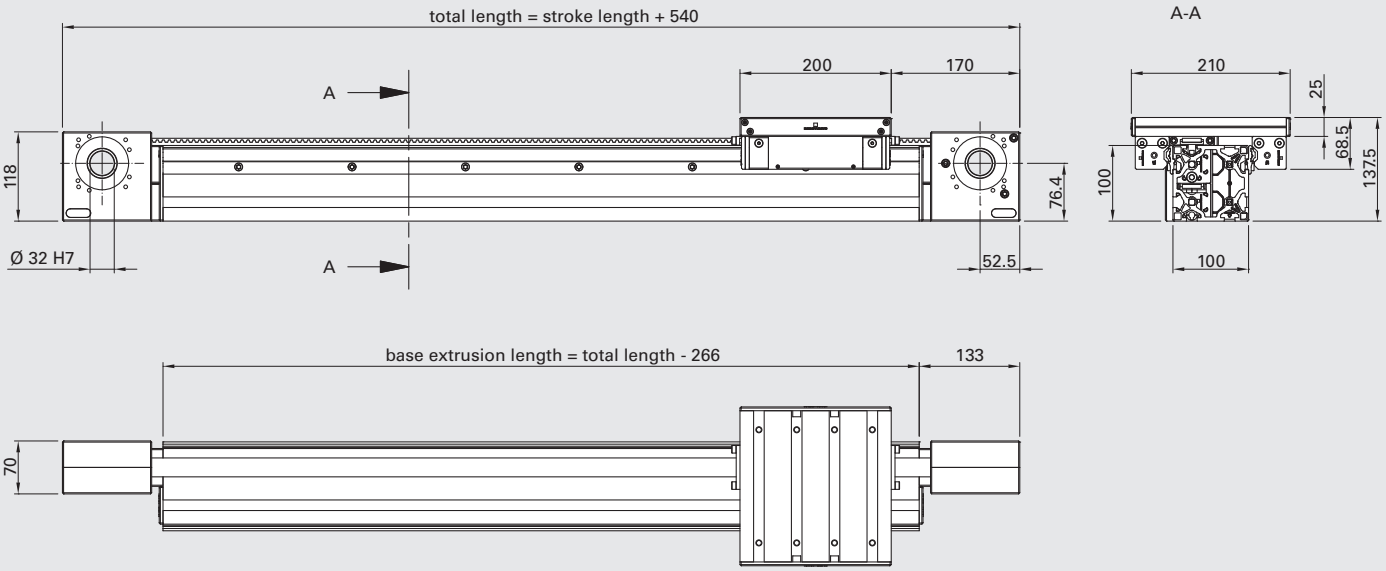
Application
For transportation and exact postitioning of parts.

Technical Data
Base extrusion 100x100 (PIL 1010)
Standard carriage plate: 200x200 mm
Md max.: 60 Nm (max. transmittable drive torque)
Carriage stroke per revolution: 200 mm
Pitch circle diameter: 63.66 mm
Idle torque: 1 Nm
Positioning accuracy: ± 0.2 mm (without drive backlash)
Weight of carriage: 3.04 kg

Assembly Instructions
See page 195

Eccentric Key LIN 9990 (page 169)
is needed to adjust the eccentric roller

Dimensions



Order Code

		Order Code[1]		
Description		Base Extrusion	Type	Stroke Length
Linear Motion Unit 100	LIL	1010	SNN	____

1) Please complete the order by adding the corresponding parameters for order processing.
Drawing dimensions in mm

LOL5010 Linear Motion Unit 50 With Omega Drive

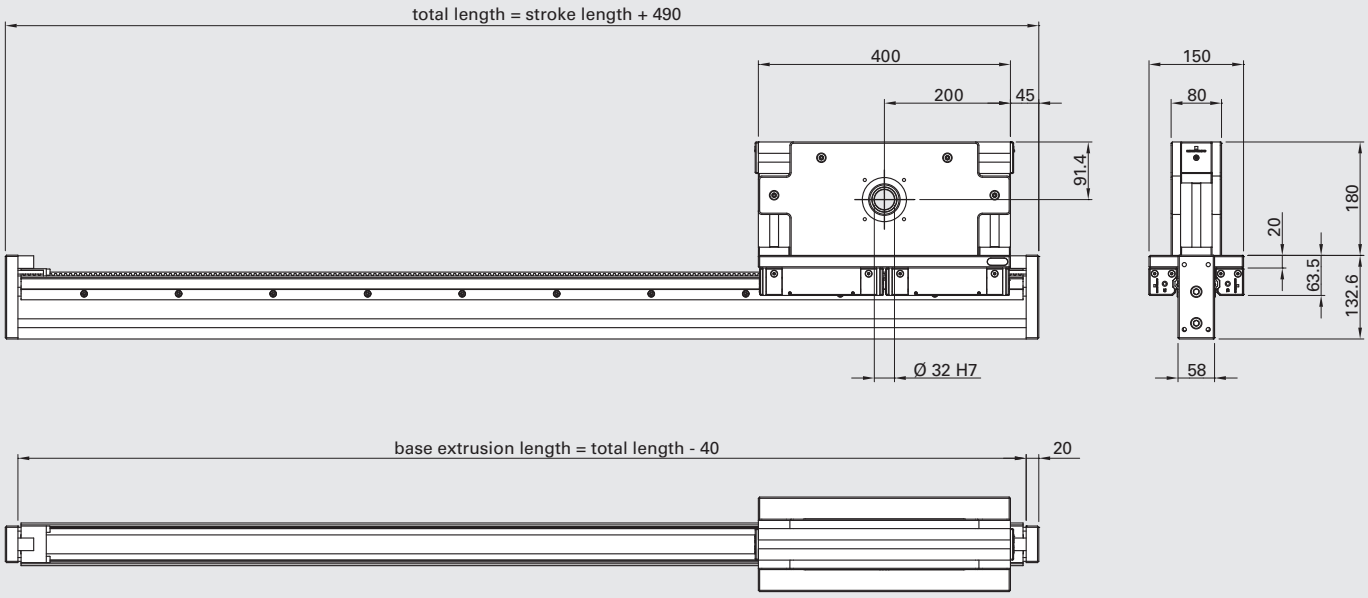
Application
For transportation and exact postitioning of parts.

Technical Data
Base extrusion: 50x100 PIL 5010
Carriage Plate: 400 x 150 mm
Md max.: 60 Nm (max. transmittable drive torque)
Carriage stroke per revolution: 200 mm
Pitch circle diameter: 63.66 mm
Idle torque: 1 Nm
Positioning accuracy: ± 0.2 mm (without drive backlash)
Weight of profile incl. guiderail: 5.4 kg/m
Weight of right and left end parts: 1.2 kg
Weight of drive unit without motor: 15.0 kg

Assembly Instructions
See page 195

Eccentric Key LIN 9990 (page 169)
is needed to adjust the eccentric roller

Dimensions



Order Code

Description	Order Code[1]			
		Base Extrusion	Type	Stroke Length
Linear Motion Unit 50 With Omega Drive	LOL	5010	SNN	____

1) Please complete the order by adding the corresponding parameters for order processing.
Drawing dimensions in mm

Linear Motion Unit and Lift Application Examples