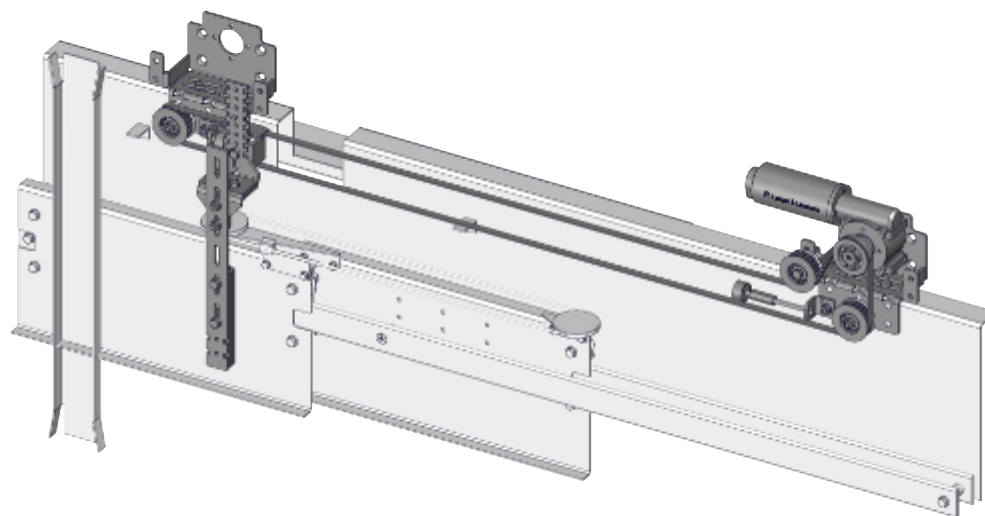




Conversion Instructions
Lynge & Jensen rigid skate
to TSG V4

Shows **TL**, **TR** mirror image, **CT** like **TL**.

Imprint

Manufacturer	Langer & Laumann Ing.-Büro GmbH
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Dokument **in Deutsch** durch Scannen des QR-Codes anfordern.



Obtenir le document **en français** en scannant le code QR.



1 About these instructions

1.1 Purpose

These conversion instructions contain important information and general mechanical assembly steps for the conversion of an existing system. These instructions must be observed to avoid hazards, repair costs and downtimes and increase the reliability and service life of the system.

1.2 Scope

These conversion instructions apply to the following conversion kit:

- Lynge & Jensen rigid skate to TSG V4

1.3 Version information

The version number of these conversion instructions is shown on the front page and footer of each page.

Always retain and use the latest version of all documents.

Using an outdated version of this and any required and supplementary documentation can lead to incorrect assembly.

1.4 Contact information

See page 2.

1.5 Customers for whom these instructions are intended

These conversion instructions are intended for end customers of Langer & Laumann Ing.-Büro GmbH.

To ensure correct operation of the system, in addition to reading these conversion instructions, personnel must have the following qualifications and relevant technical knowledge:

- Extensive technical knowledge of these systems
- Thorough knowledge of the operating instructions of these systems
- Recognised as a qualified specialist

1.6 Other applicable documents

The following documents are required for work not described in these conversion instructions:

- Fitting instructions for the door control unit with information on electrical connection, fitting and commissioning
- Information on components not manufactured and supplied by Langer & Laumann

2 Safety

2.1 General safety instructions

Personnel must have carefully read and understood these conversion instructions before starting the conversion work.

The safety instructions and guidelines specified in these conversion instructions must be observed.

The accident prevention regulations applicable at the place of use and general safety regulations must be observed.

2.2 Personnel requirements

2.2.1 Personnel qualification and scope of work

The tasks described in this manual set different requirements for the qualification of the assigned personnel. Inadequately qualified employees are not able to correctly assess the risks and expose themselves and others to the risk of injuries. It is prohibited for inadequately qualified personnel to be in the working/danger zone. Persons whose ability to respond is influenced, for example, by drugs, alcohol or medication may not work on the facility.

Skilled personnel Work on mechanical components may only be carried out by suitably qualified skilled personnel (lift installer for defined tasks in lift construction according to DGUV 303-001).

Electrically skilled personnel Work on electrical components may only be carried out by electrically skilled personnel or lift installers with further training as an electrically skilled person for defined tasks in lift construction according to DGUV 303-001.

2.2.2 Personal protective equipment

Personal protective equipment is used to protect people against health and safety impairments during their work. The specified protective equipment must be worn.

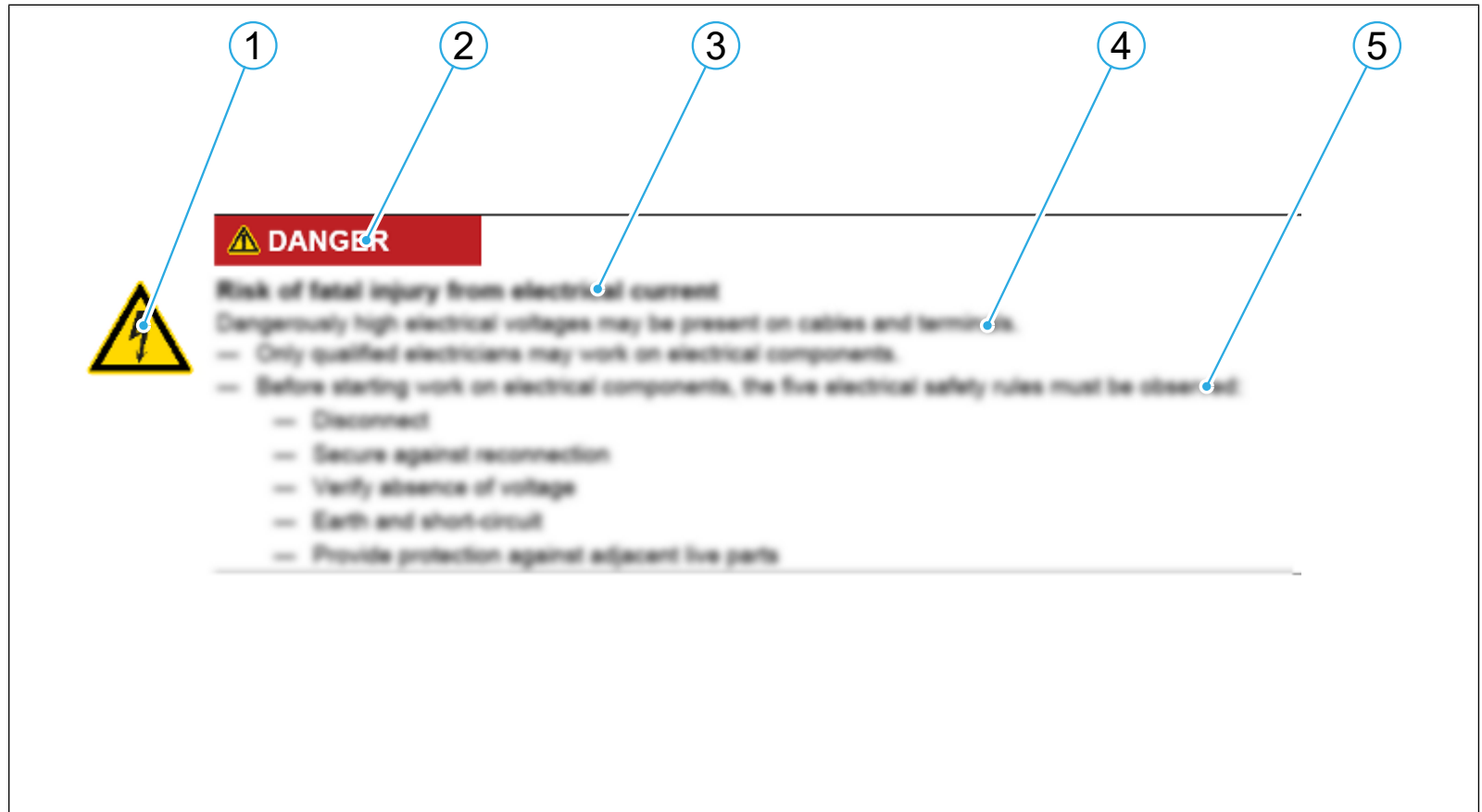
Symbol	Meaning
	Wearing protective work clothing protects against hazards in the workplace.
	Wearing slip-resistant safety footwear protects against injuries to the feet.
	Wearing cut and puncture-resistant protective gloves protects against injuries to the hands.
	Wearing a protective cap protects against head injuries.
	Wearing goggles protects against eye injuries.
	Wearing hearing protection protects against hearing damage.
	Wearing a fall arrest system protects against falls.

Table 1: Personal protective equipment

2.3 Warnings

2.3.1 Structure of warning notices

All warning notices in this document are structured as follows:



1	Hazard symbol	2	Signal word
3	Type and source of hazard	4	Possible consequences of non-observance
5	Procedure for hazard prevention		

2.3.2 Meaning of signal words and symbols

The following signal words are used in this document:

Signal word	Meaning, consequences if not prevented
DANGER	Warns of an imminent hazardous situation which results in death or serious injury.

Table 2: Meaning of signal words

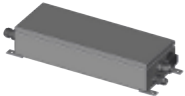
The following hazard symbols are used in this document:

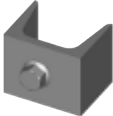
Symbol	Designation
	Automatic start-up
	Electrical hazard

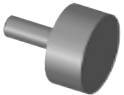
Table 3: Meaning of hazard symbols

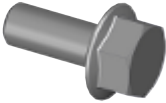
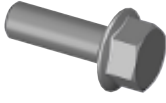
3 In the box

The conversion kit components are shown in the table. The position numbers are used in the following chapters to identify the individual components. For logistical reasons, the packaging can contain further components that are not required for actual use.

Pos.	Illustration	Item number	Description	Quantity
P001		8.20.xxxxx.04	TSG electronics	1
P002		8.20.400xx.xx	TSG motor	1

Pos.	Illustration	Item number	Description	Quantity
P003		8.20.60002.xx	Timing belt 8M	1
P004		1.20.59070	L-shaped bracket	3
P005		1.20.60003	Deflection pulley D = 56 mm, 8M	3
P006		1.20.60004	Rectangular plate	1
P007		1.20.60007	Timing belt lock	1
P008		1.20.60020	U-shaped bracket	1
P009		1.20.60046	Plate	3
P010		1.20.60075	L-shaped bracket	1

Pos.	Illustration	Item number	Description	Quantity
P011		1.20.60705	Motor bracket	2
P012		1.20.91120	Bumper D = 30 mm, round	2
P013		1.20.92020	L-shaped bracket	1
P014		1.36.00121	Spacer M8 x 40 mm	1
P015		1.36.00135	Locking screw M6 x 12 mm	5
P016		1.36.00380	Countersunk screw M8 x 20 mm	2
P017		1.36.00387	Countersunk screw M8 x 40 mm	2
P018		1.36.00501	Nut M8	16

Pos.	Illustration	Item number	Description	Quantity
P019		1.36.00720	Locking screw M8 × 20 mm	7
P020		1.36.00725	Locking screw M8 × 25 mm	2
P021		1.36.00730	Locking screw M8 × 30 mm	1
P022		1.36.00740	Locking screw M8 × 40 mm	2
P023		1.36.01035	Washer M8	3
P024		1.36.02124	Hexagon head screw M8 × 70 mm	1
P025		1.36.00710	Locking screw M8 × 16 mm	2
P026		1.36.00169	Spring washer M8	1

Pos.	Illustration	Item number	Description	Quantity
P027		1.36.00115	Hexagon head screw M8 × 40 mm	1

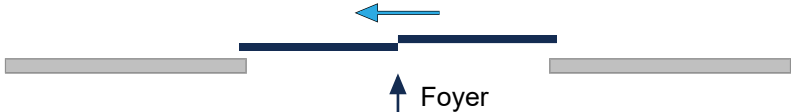
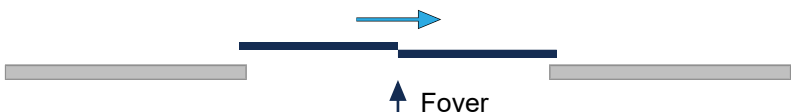
4 Required tools

The tools required for the conversion are shown in the table. The position numbers are used in the following chapters to identify the individual tools.

Pos.	Symbol	Description
T001		Soft face hammer
T002		Hammer
T003		Puller for bearings and pinions
T004		Pipe wrench
T005		Side cutters
T006		Circlip pliers
T007		Angle grinder
T008		Measuring tool (folding rule or measuring tape)
T009		Slotted screwdriver
T010		Phillips screwdriver
T110		Combination wrench, size 10
T113		Combination wrench, size 13
T205.0		Allen key, size 5
T608.5		Drill bit, Ø 8.5 mm

5 Definition of door opening directions

The possible door opening directions are shown in the following table in schematic form.

L: Left opening	
R: Right opening	
TL: Telescopic left opening	
TR: Telescopic right opening	
C: Center opening	
CT: Center telescoping opening	
FD: Folding door	

6 Disassembly of existing components

DANGER



Danger to life from rotating/moving system components

- Before starting work, switch off the system completely.
- Keep away from unsecured rotating/moving system components.

DANGER



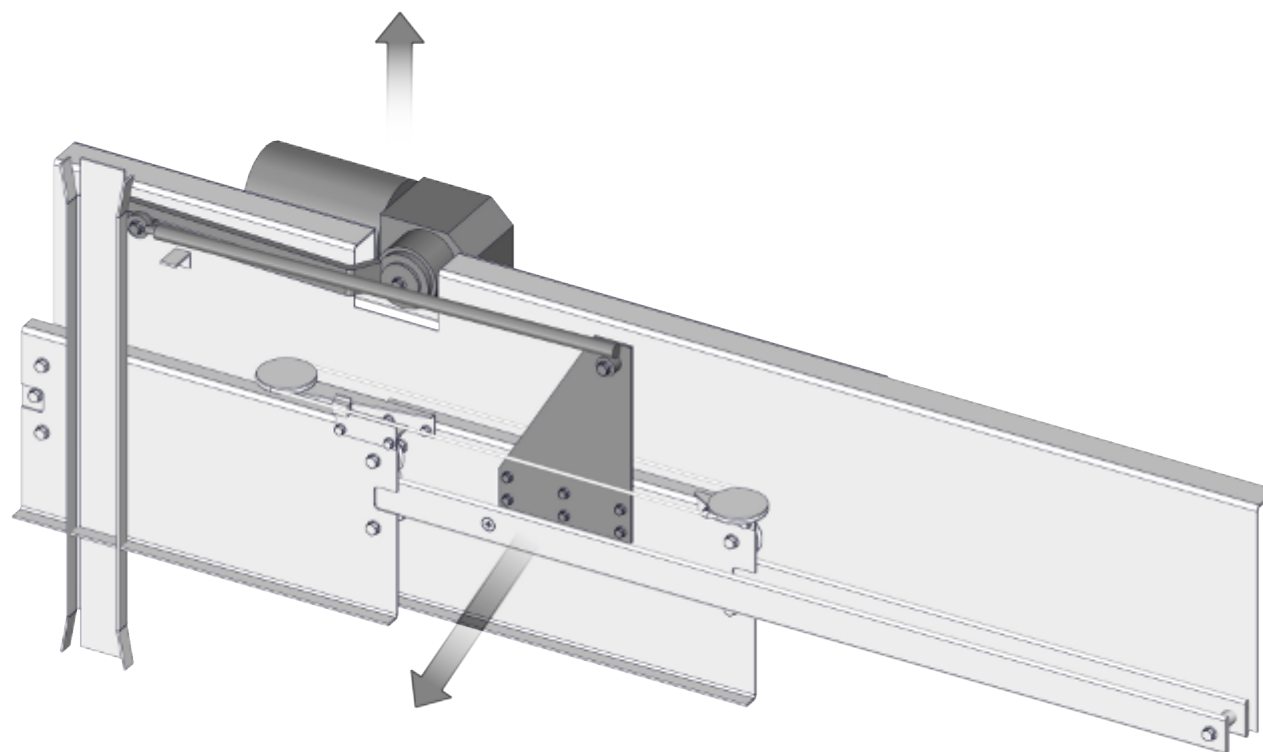
Risk of fatal injury from electrical current

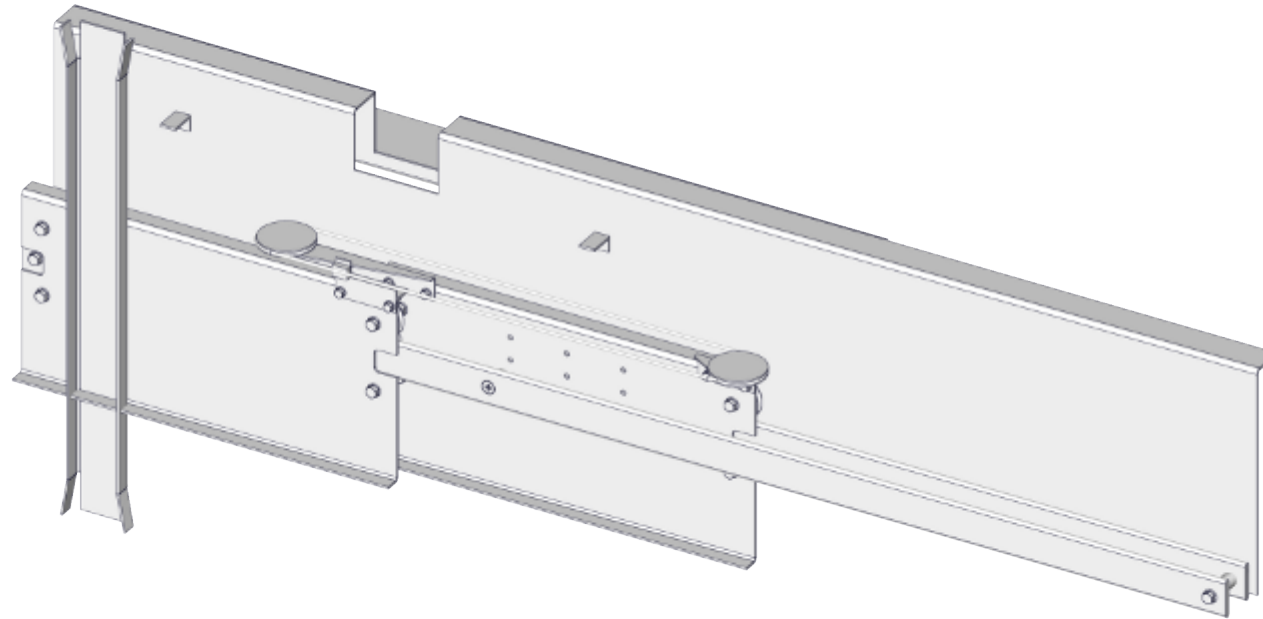
Dangerously high electrical voltages may be present on cables and terminals.

- Only qualified electricians may work on electrical components.
- Before starting work on electrical components, the five electrical safety rules must be observed:
 - Disconnect
 - Secure against reconnection
 - Verify absence of voltage
 - Earth and short-circuit
 - Provide protection against adjacent live parts

Tools

Pos.	Symbol	Description
T002		Hammer
T003		Puller for bearings and pinions
T004		Pipe wrench
T005		Side cutters
T006		Circlip pliers
T007		Angle grinder
T1xx		Combination spanners, as needed

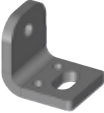
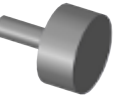


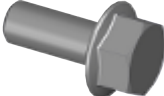


7 Installation

7.1 Mounting the deflection pulley and bracket on the door frame

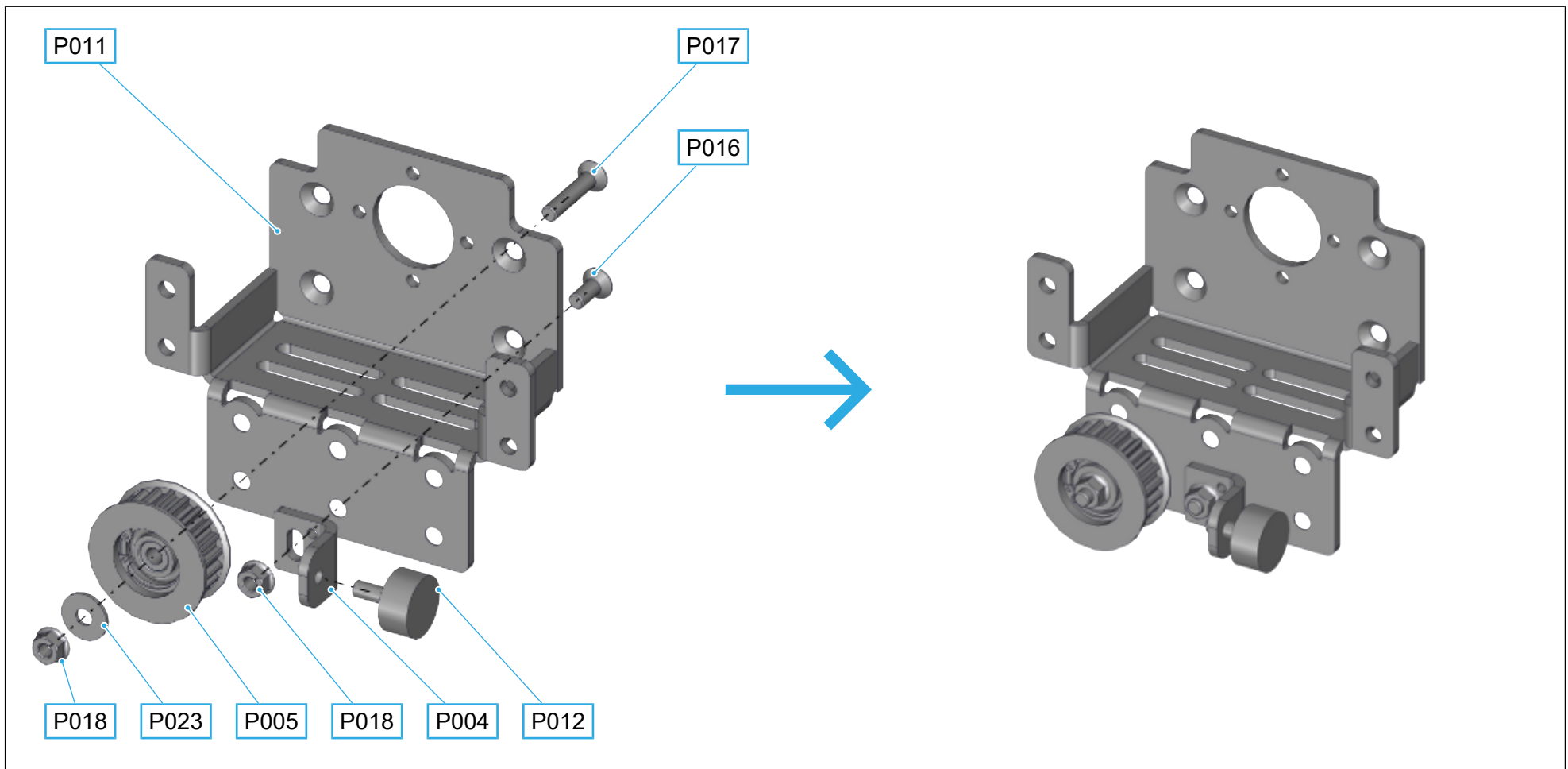
Components

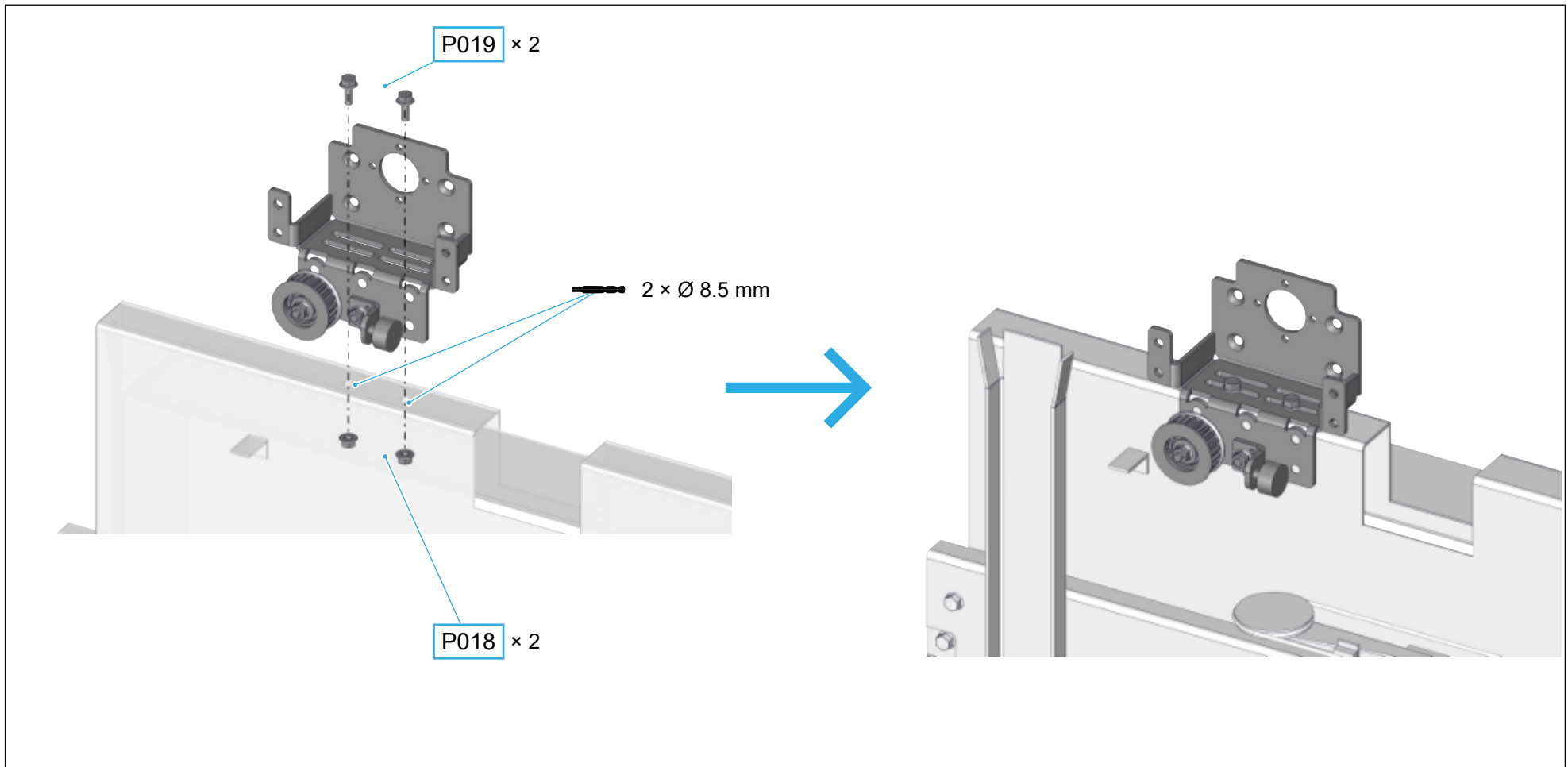
Pos.	Illustration	Item number	Description	Quantity
P004		1.20.59070	L-shaped bracket	1
P005		1.20.60003	Deflection pulley D = 56 mm, 8M	1
P011		1.20.60705	Motor bracket	1
P012		1.20.91120	Bumper D = 30 mm, round	1
P013		1.20.92020	L-shaped bracket	1
P016		1.36.00380	Countersunk screw M8 × 20 mm	1

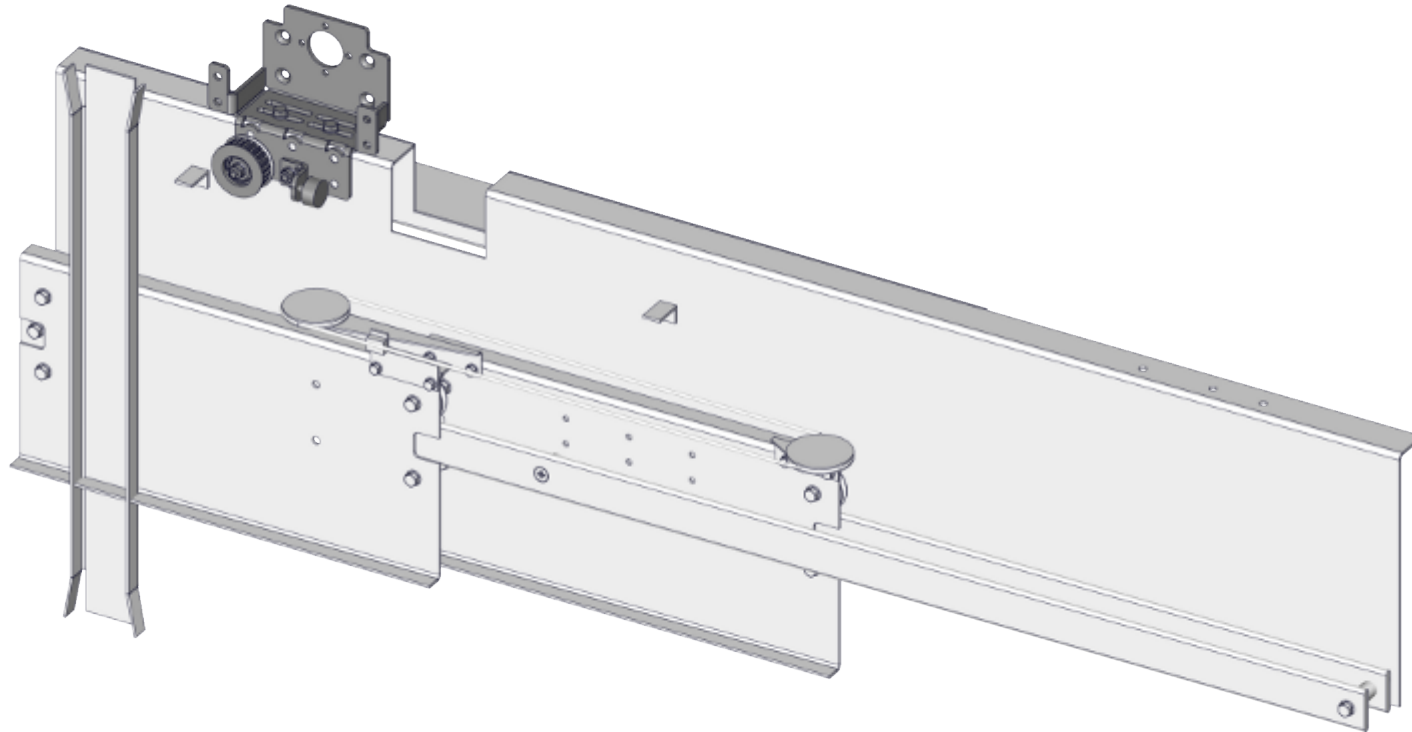
Pos.	Illustration	Item number	Description	Quantity
P017		1.36.00387	Countersunk screw M8 × 40 mm	1
P018		1.36.00501	Nut M8	4
P019		1.36.00720	Locking screw M8 × 20 mm	2
P023		1.36.01035	Washer M8	1

Tools

Pos.	Symbol	Description
T113		Combination wrench, size 13
T205.0		Allen key, size 5
T608.5		Drill bit, Ø 8.5 mm

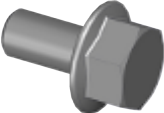


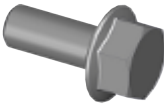




7.2 Mounting the motor and bracket on the door frame

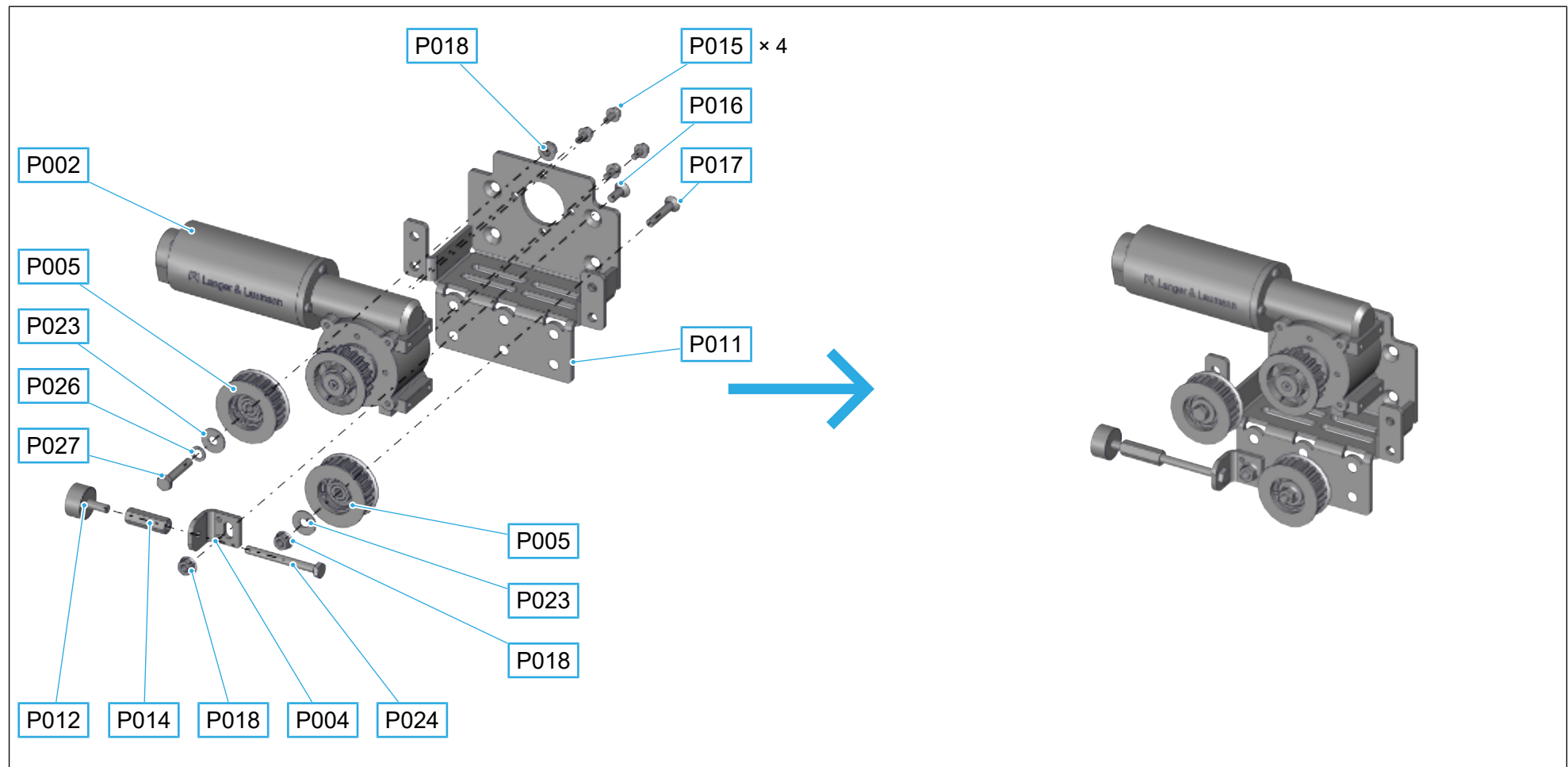
Components

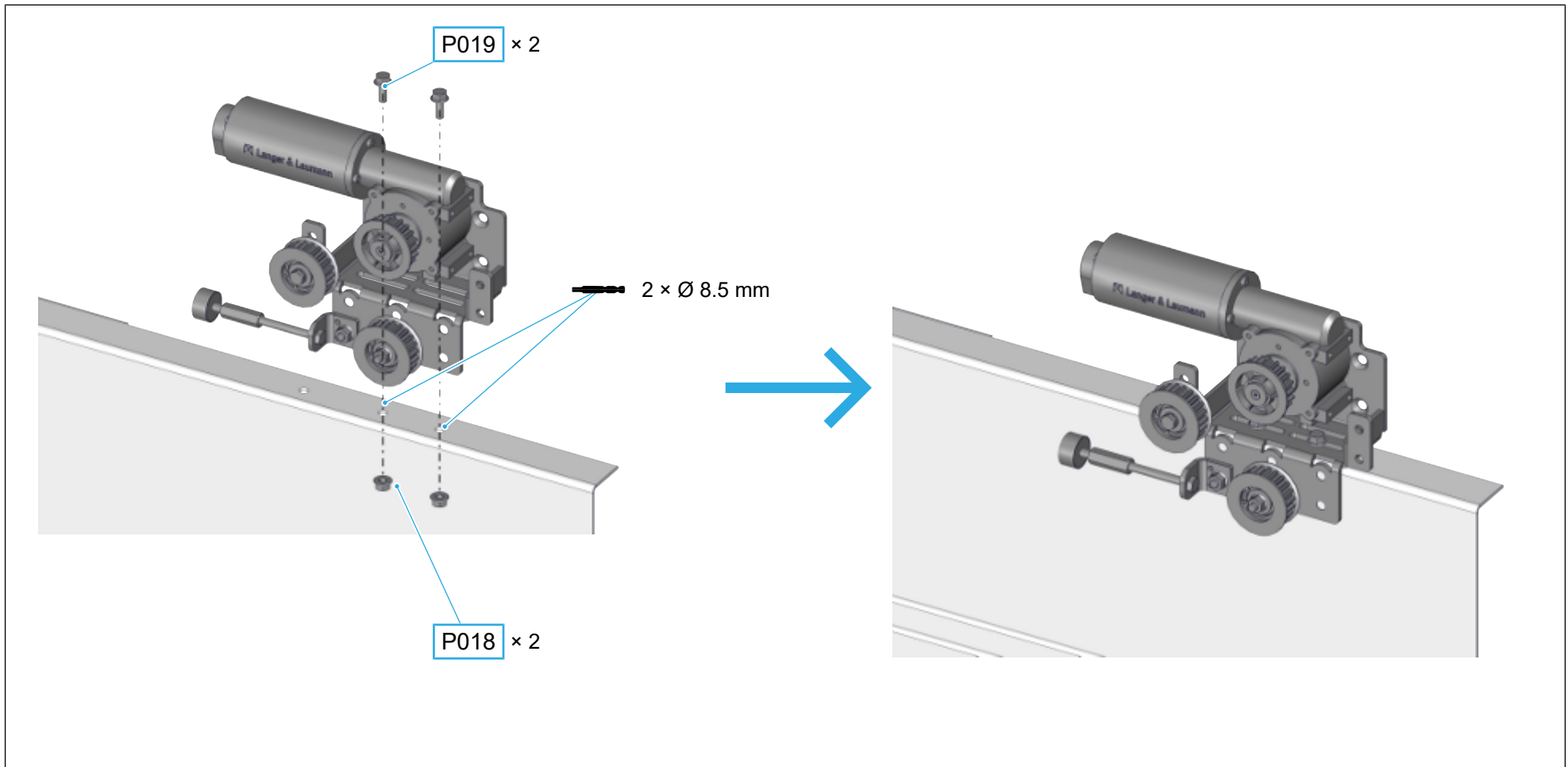
Pos.	Illustration	Item number	Description	Quantity
P002		8.20.400xx.xx	TSG motor	1
P004		1.20.59070	L-shaped bracket	1
P005		1.20.60003	Deflection pulley D = 56 mm, 8M	2
P011		1.20.60705	Motor bracket	1
P012		1.20.91120	Bumper D = 30 mm, round	1
P014		1.36.00121	Spacer M8 × 40 mm	1
P015		1.36.00135	Locking screw M6 × 12 mm	4

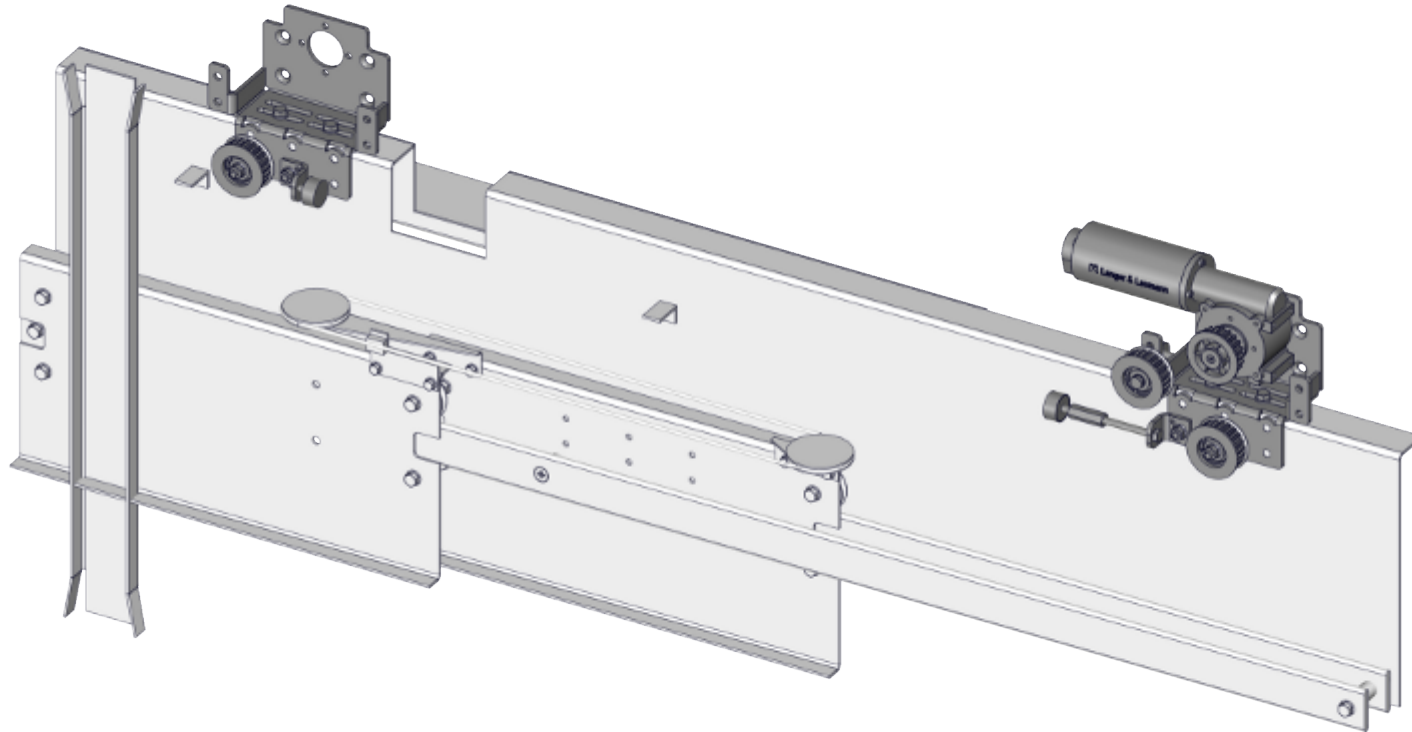
Pos.	Illustration	Item number	Description	Quantity
P016		1.36.00380	Countersunk screw M8 × 20 mm	1
P017		1.36.00387	Countersunk screw M8 × 40 mm	1
P018		1.36.00501	Nut M8	5
P019		1.36.00720	Locking screw M8 × 20 mm	4
P023		1.36.01035	Washer M8	2
P024		1.36.02124	Hexagon head screw M8 × 70 mm	1
P026		1.36.00169	Spring washer M8	1
P027		1.36.00115	Hexagon head screw M8 × 40 mm	1

Tools

Pos.	Symbol	Description
T110	⬢	Combination wrench, size 10
T113	⬢	Combination wrench, size 13
T205.0	⬢	Allen key, size 5
T608.5	—	Drill bit, Ø 8.5 mm

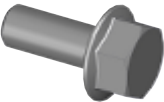






7.3 Mounting the door panel coupler

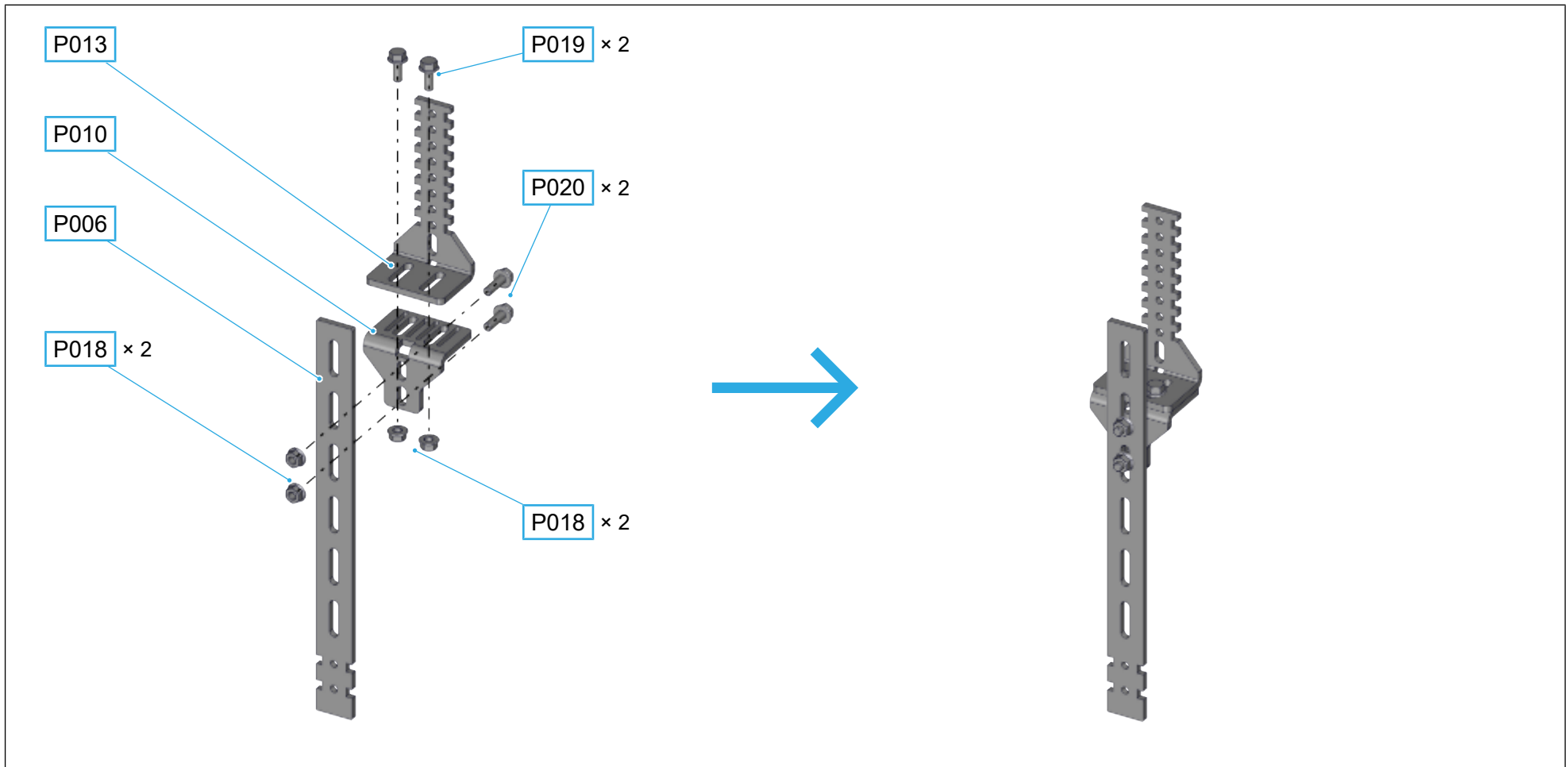
Components

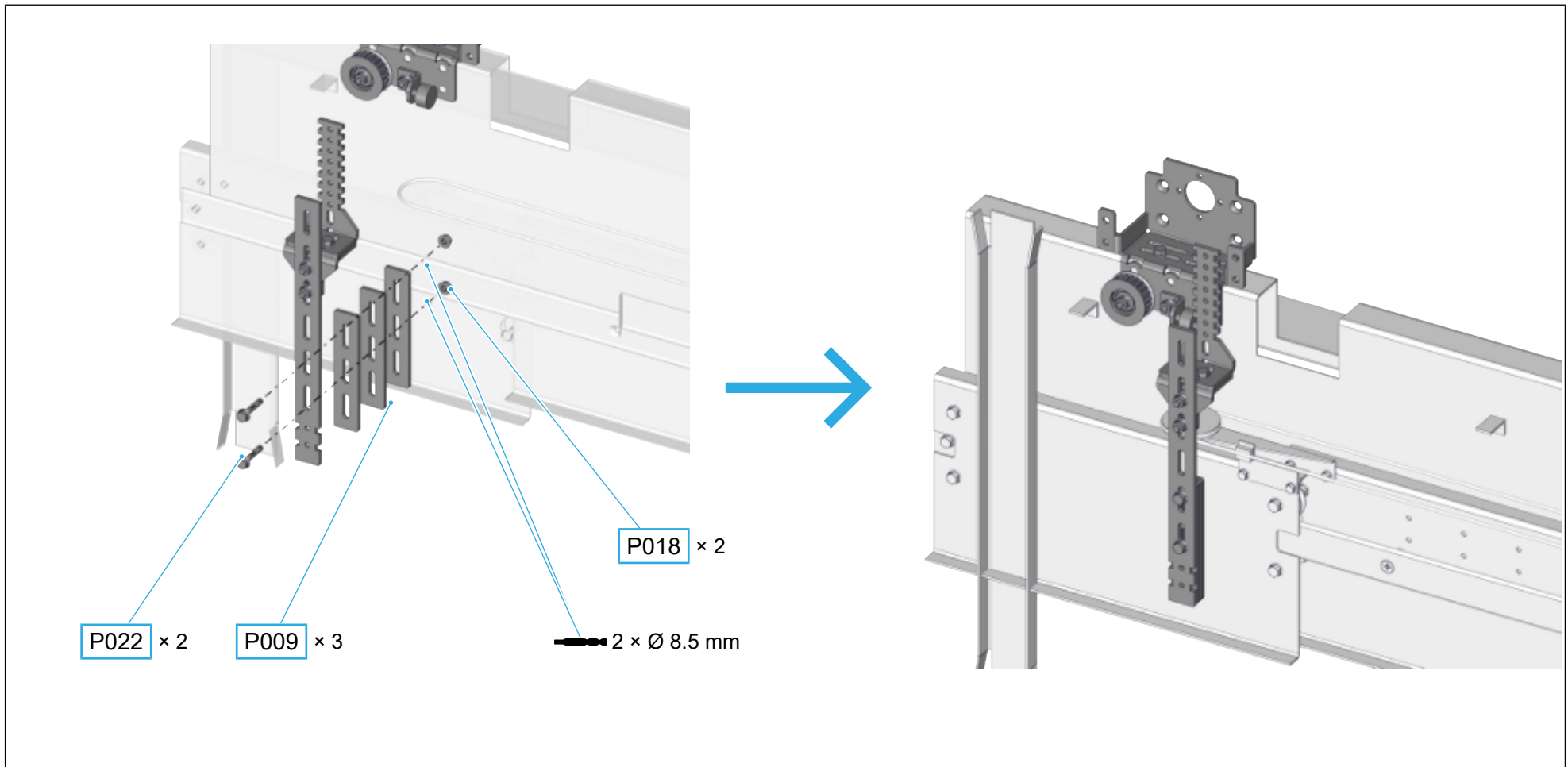
Pos.	Illustration	Item number	Description	Quantity
P006		1.20.60004	Rectangular plate	1
P009		1.20.60046	Plate	3
P010		1.20.60075	L-shaped bracket	1
P013		1.20.92020	L-shaped bracket	1
P018		1.36.00501	Nut M8	6
P019		1.36.00720	Locking screw M8 × 20 mm	2
P020		1.36.00725	Locking screw M8 × 25 mm	2

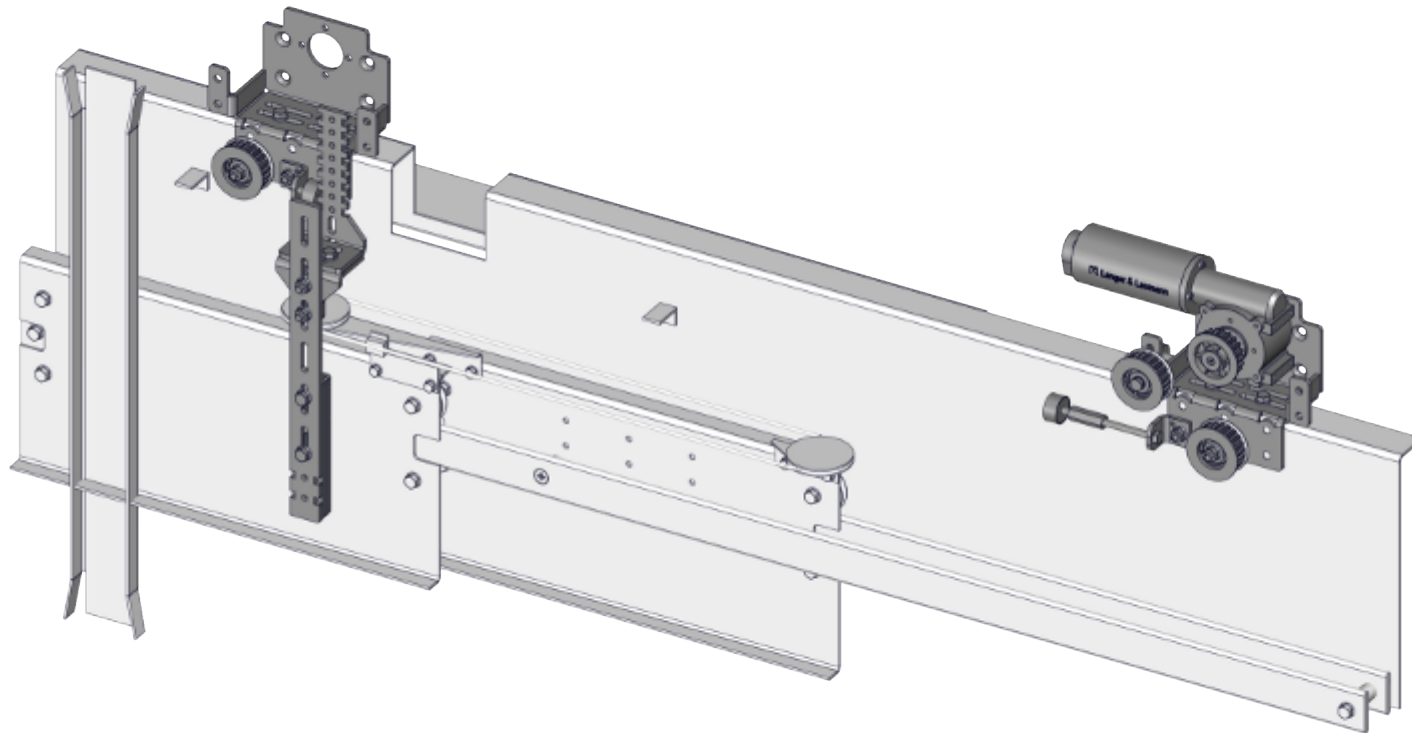
Pos.	Illustration	Item number	Description	Quantity
P022		1.36.00740	Locking screw M8 × 40 mm	2

Tools

Pos.	Symbol	Description
T113		Combination wrench, size 13
T608.5		Drill bit, Ø 8.5 mm

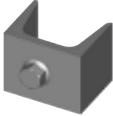
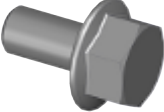
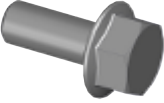






7.4 Mounting and tensioning the timing belt

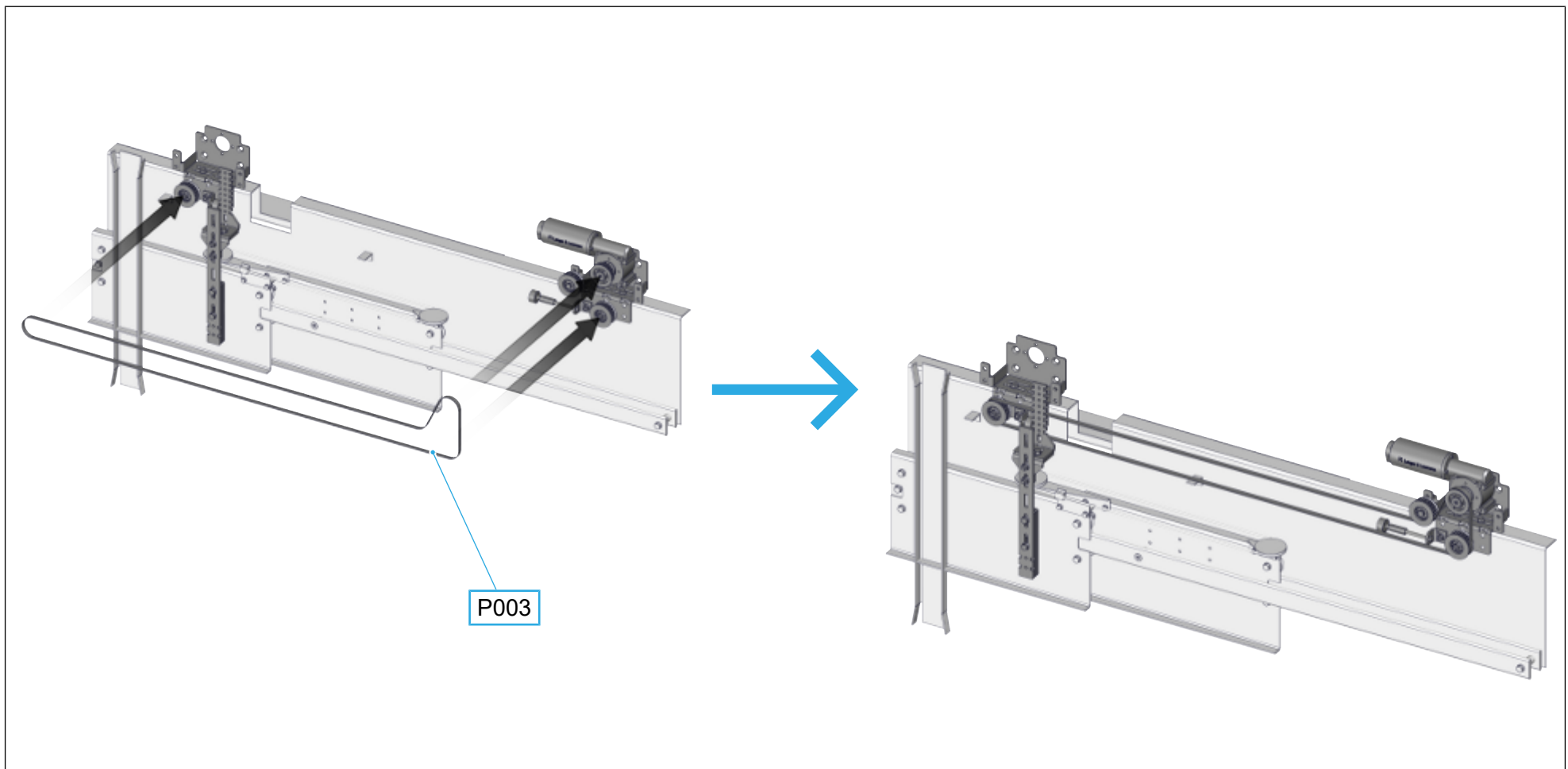
Components

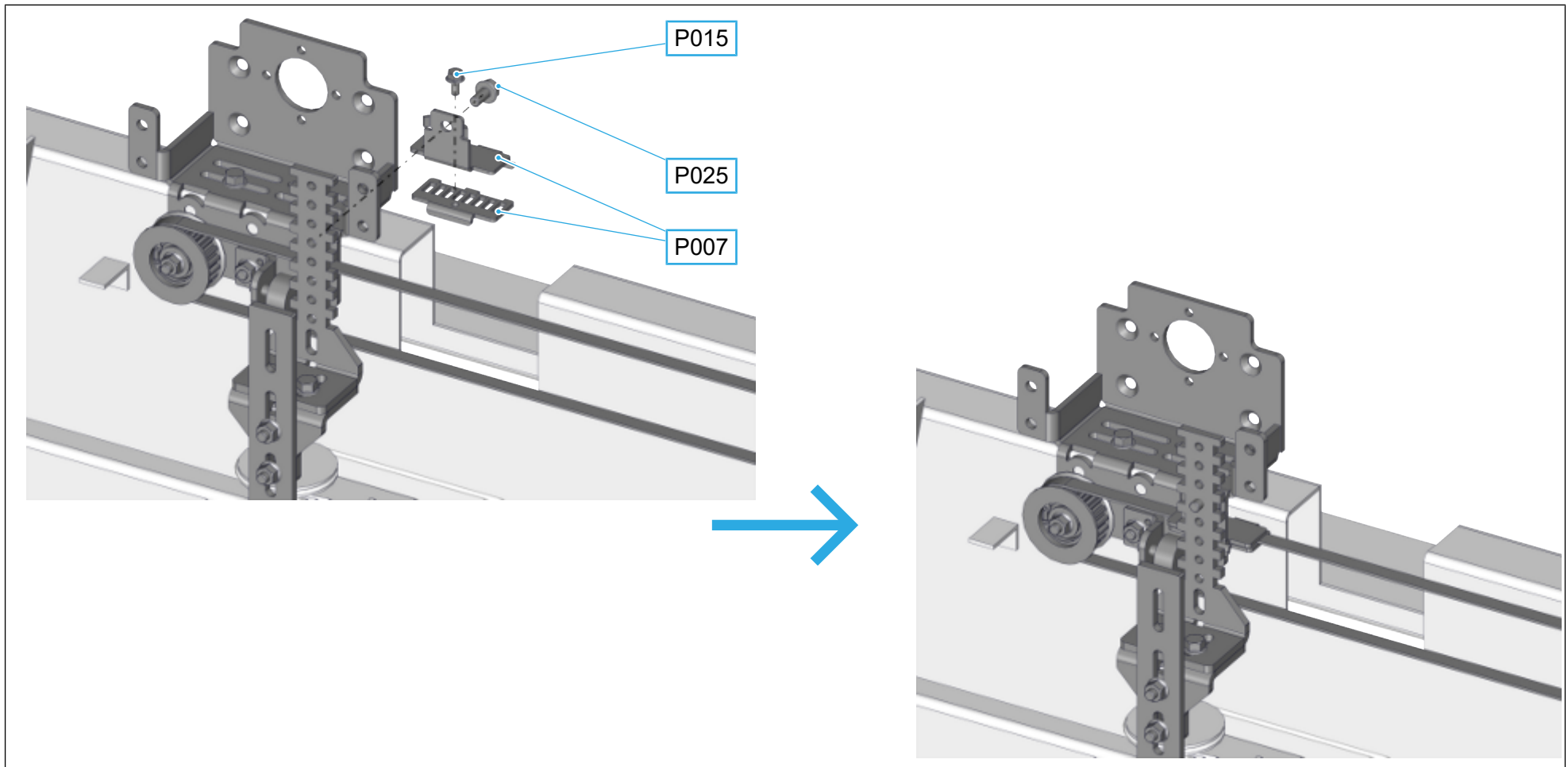
Pos.	Illustration	Item number	Description	Quantity
P003		8.20.60002.xx	Timing belt 8M	1
P004		1.20.59070	L-shaped bracket	1
P007		1.20.60007	Timing belt lock	1
P008		1.20.60020	U-shaped bracket	1
P015		1.36.00135	Locking screw M6 × 12 mm	1
P018		1.36.00501	Nut M8	1
P019		1.36.00720	Locking screw M8 × 20 mm	1

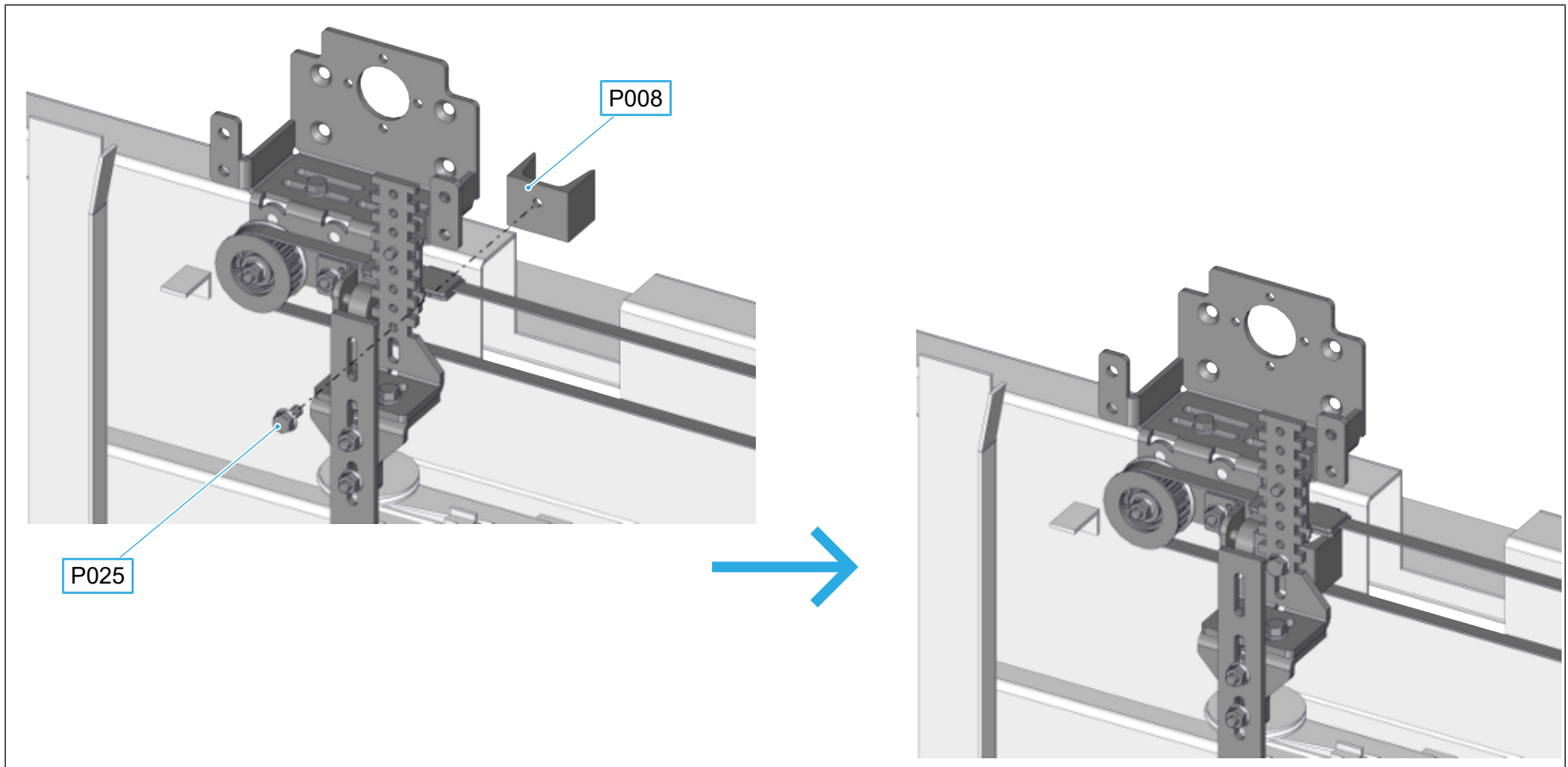
Pos.	Illustration	Item number	Description	Quantity
P021		1.36.00730	Locking screw M8 × 30 mm	1
P025		1.36.00710	Locking screw M8 × 16 mm	2

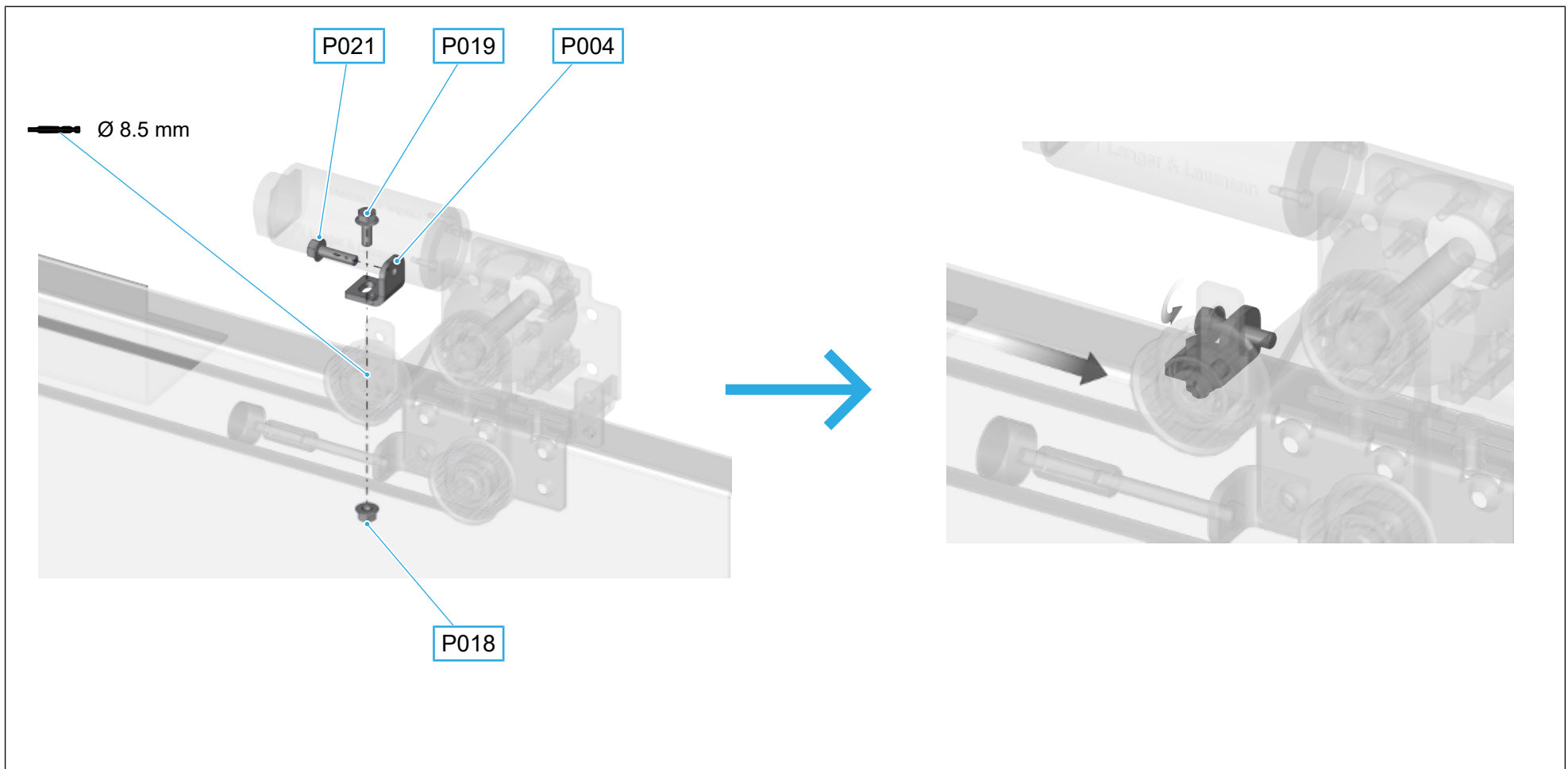
Tools

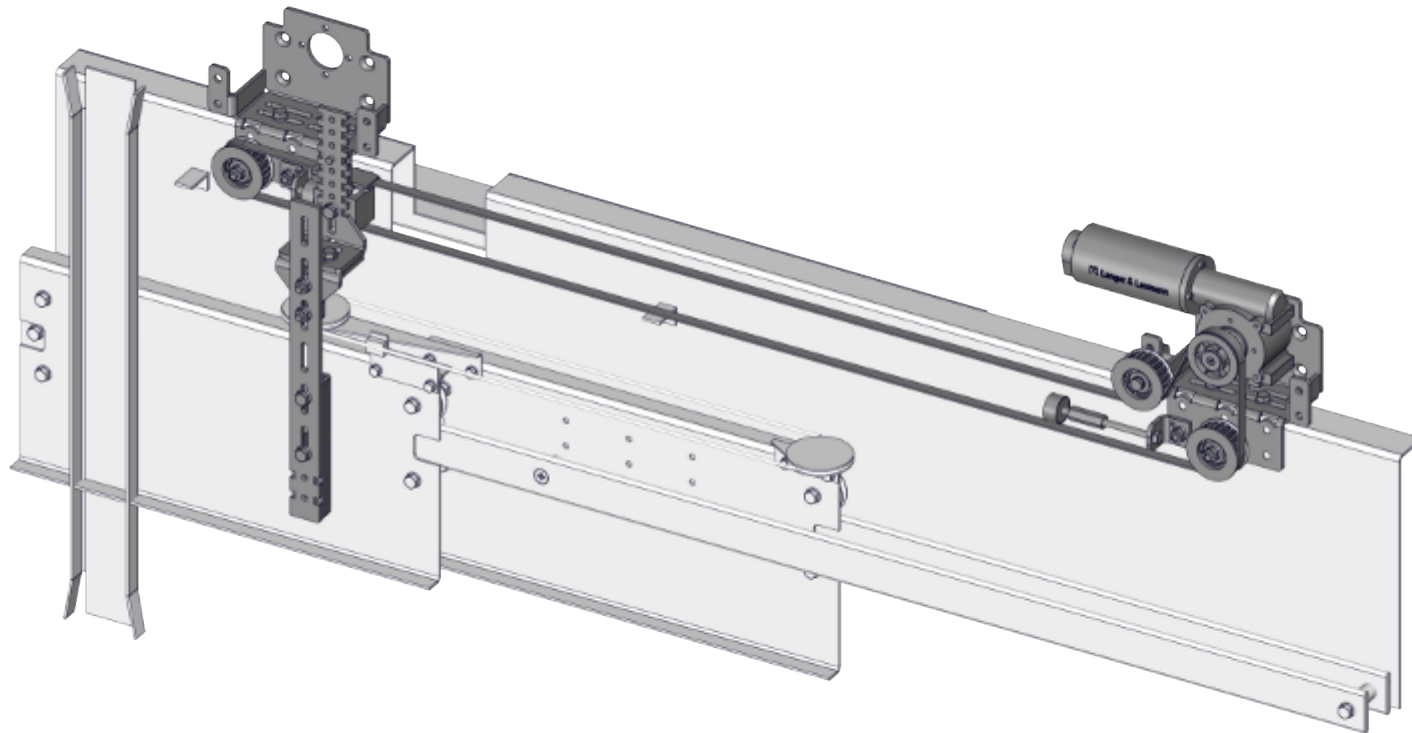
Pos.	Symbol	Description
T110		Combination wrench, size 10
T113		Combination wrench, size 13
T608.5		Drill bit, Ø 8.5 mm











8 Fitting, connecting and commissioning the door control unit

Fitting, connecting and commissioning the door control unit are described in detail in the **assembly instructions** supplied with the door control unit.



Innovation meets Technology

