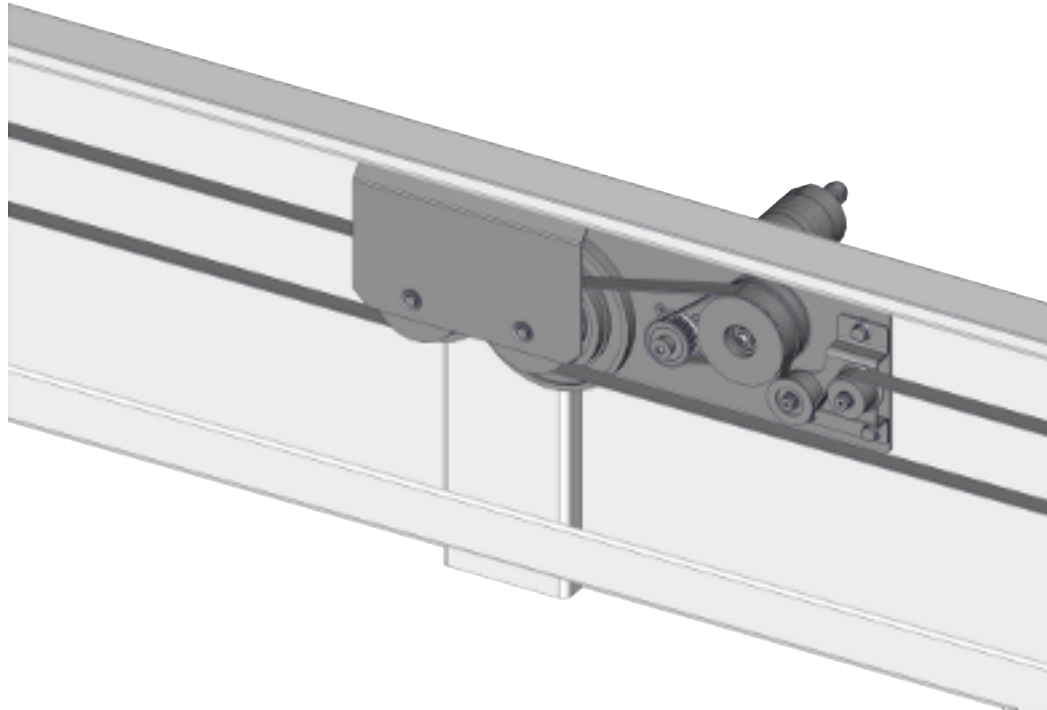




Conversion Instructions
Sematic 2000 ZMU
to TSG V4

Shows **Z**.

Imprint

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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:

- Sematic 2000 ZMU 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Using an outdated version of this and any required and supplementary documentation can lead to incorrect assembly.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 directed at end customers of Langer & Laumann Ing.-Büro GmbH.

In addition to reading these conversion instructions, the following requirements and previous technical knowledge of the user is required for correct operation of the device:

- comprehensive technical knowledge of the existing facilities
- knowledge of the operating manuals of these facilities
- Classification as skilled personal

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.

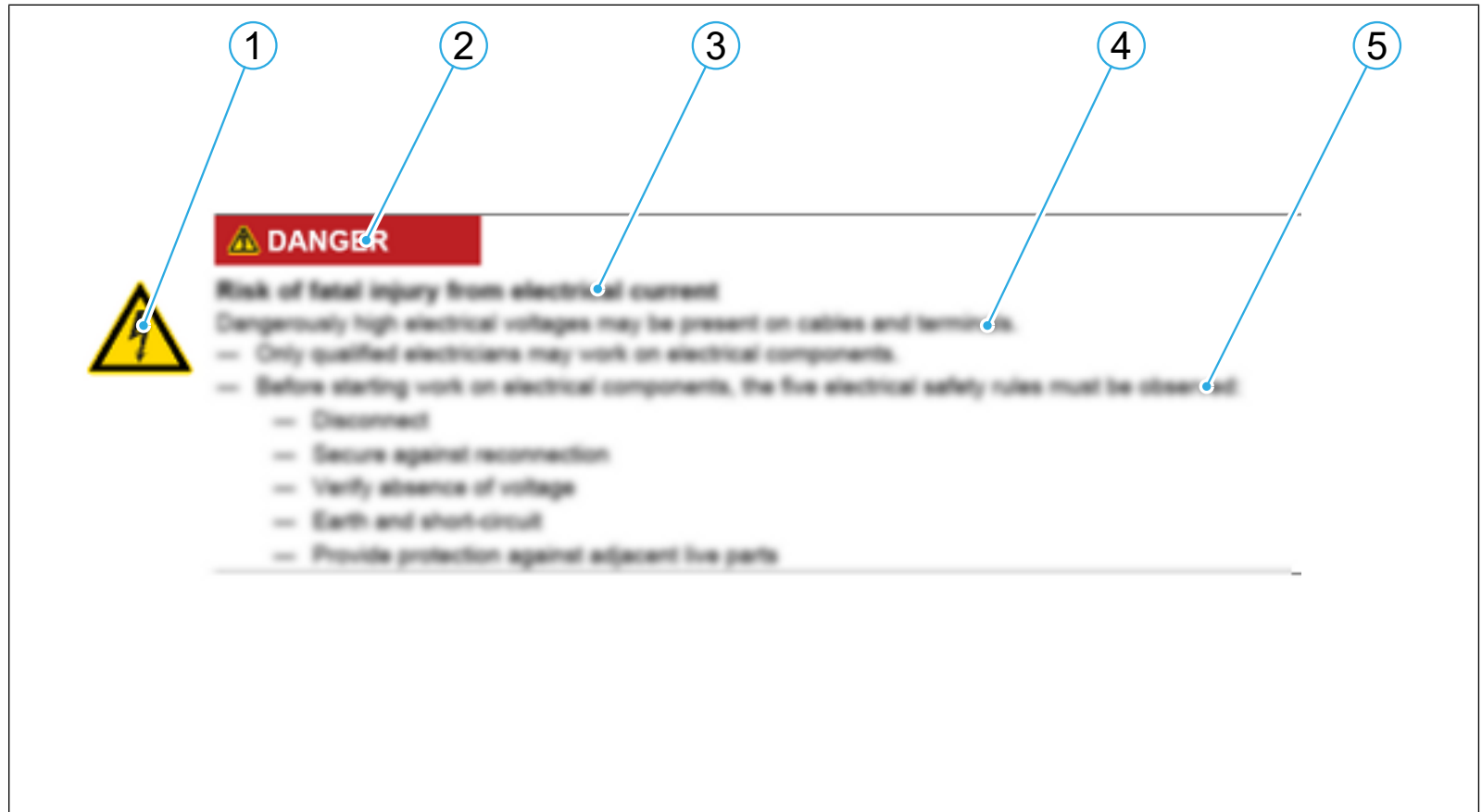
Symbol	Meaning
	Wearing protective work clothing protects against hazards in the workplace.
	Wearing slip-resistant safety footwear protects against injuries to the feet.
	Wearing cut and puncture-resistant protective gloves protects against injuries to the hands.
	Wearing a protective cap protects against 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

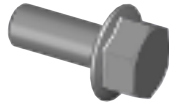
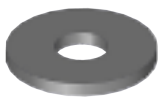
3 In the box

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		8.20.504xx.xx	TSG motor	1
P003		1.20.60230	Timing belt H	1
P004		1.20.61060	Endless timing belt 8m	1
P005		1.20.30890	Roller D = 46 mm, round	2
P006		1.20.35060	Plain bearing D = 12 mm, round	4
P007		1.20.60165	Timing belt pulley D = 39 mm, 8M	1

Pos.	Illustration	Item number	Description	Quantity
P008		1.20.60168	Spacer D = 14 mm	1
P009		1.20.90250	L-shaped bracket	1
P010		1.20.90260	Motor bracket, hat shaped	1
P011		1.20.90270	Shaft D = 12 mm	2
P012		1.20.92294	Shaft D = 12 mm	1
P013		1.20.92295	Double timing belt pulley 8M/H	1
P014		1.36.00014	Button head screw M4 x 12 mm	1
P015		1.36.00050	Shoulder screw M6 x 30 mm	2

Pos.	Illustration	Item number	Description	Quantity
P016		1.36.00111	Hexagon head screw M8 × 16 mm	2
P017		1.36.00138	Locking screw M6 × 16 mm	4
P018		1.36.00315	Button head screw M4 × 12 mm	1
P019		1.36.00375	Countersunk screw M8 × 16 mm	2
P020		1.36.00441	Washer M8	2
P021		1.36.00454	Washer M4	1
P022		1.36.00501	Nut M8	4
P023		1.36.00502	Nut M6	6

Pos.	Illustration	Item number	Description	Quantity
P024		1.36.00593	Countersunk screw M8 × 20 mm	4
P025		1.36.00720	Locking screw M8 × 20 mm	3
P026		1.36.01034	Washer M8	2
P027		1.36.01036	Washer M6	1

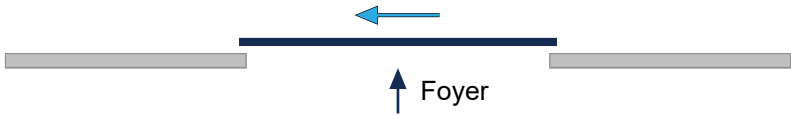
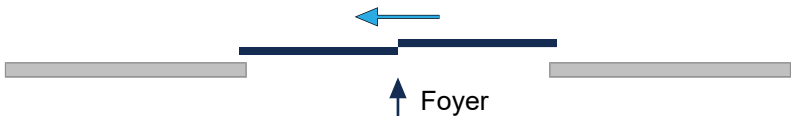
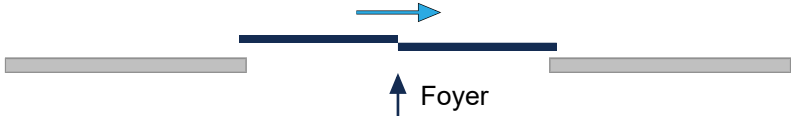
4 Required tools

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
T119		Combination spanner, size 19
T203.0		Allen key, size 3
T204.0		Allen key, size 4
T205.0		Allen key, size 5

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	
Z: Center opening	
ZT: 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



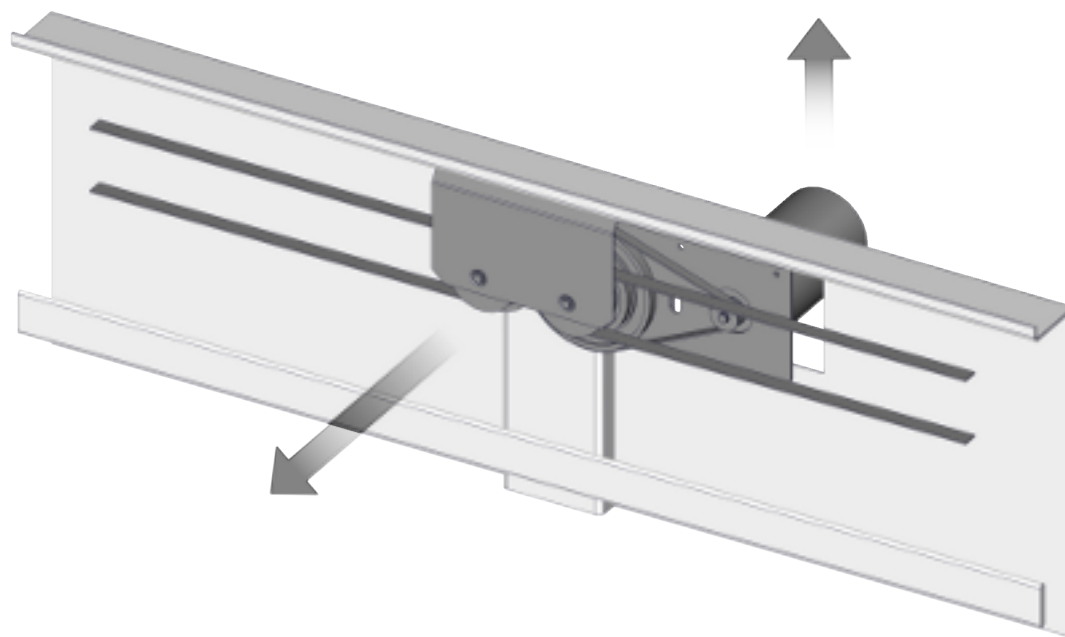
Risk of fatal injury from electrical current

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

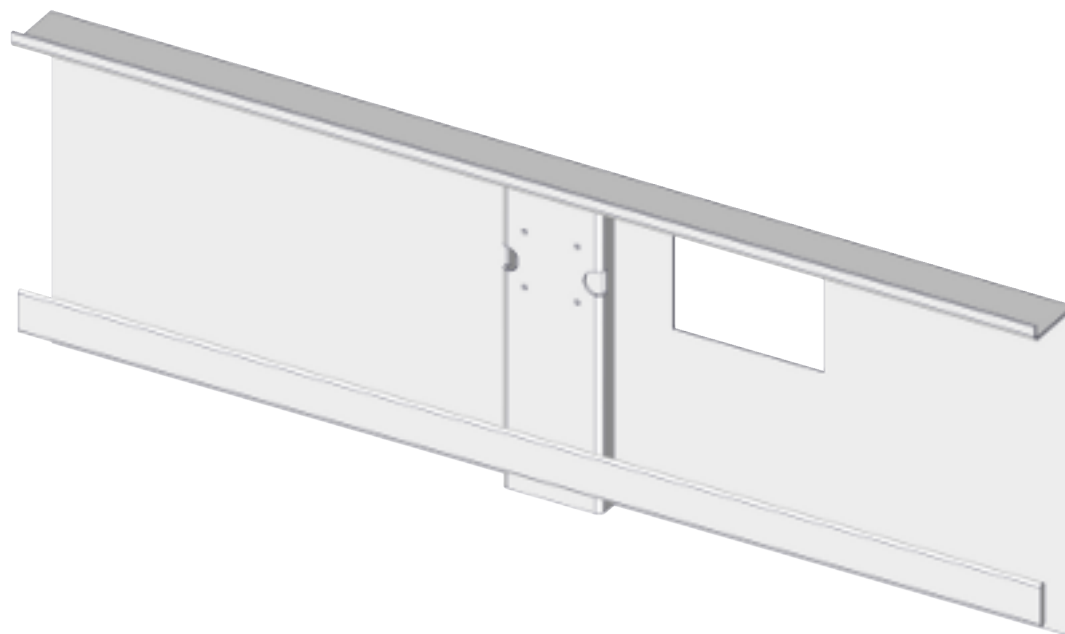
- Only qualified electricians may work on electrical components.
- Before starting work on electrical components, the five electrical safety rules must be observed:
 - Disconnect
 - Secure against reconnection
 - Verify absence of voltage
 - Earth and short-circuit
 - Provide protection against adjacent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



Shows the components to be dismantled.
The cover and the deflection pulleys under it are is reinstalled in a later step.

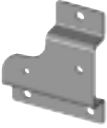


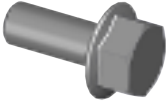
7 Installation

7.1 Mounting the bracket, motor and deflections

Components

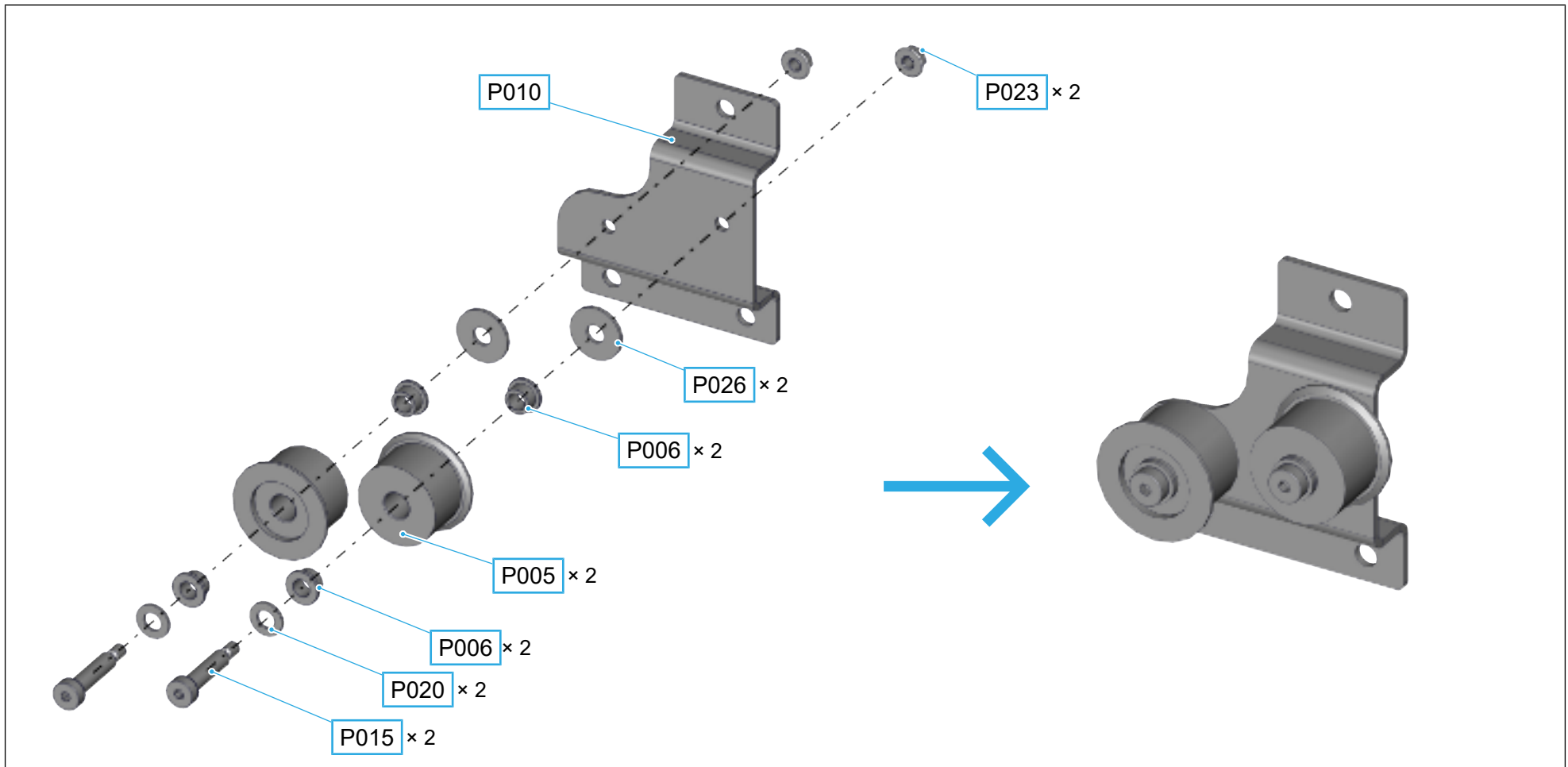
Pos.	Illustration	Item number	Description	Quantity
P002		8.20.400xx.xx	TSG motor	1
P005		1.20.30890	Roller D = 46 mm, round	2
P006		1.20.35060	Plain bearing D = 12 mm, round	4
P007		1.20.60165	Timing belt pulley D = 39 mm, 8M	1
P008		1.20.60168	Spacer D = 14 mm	1
P009		1.20.90250	L-shaped bracket	1

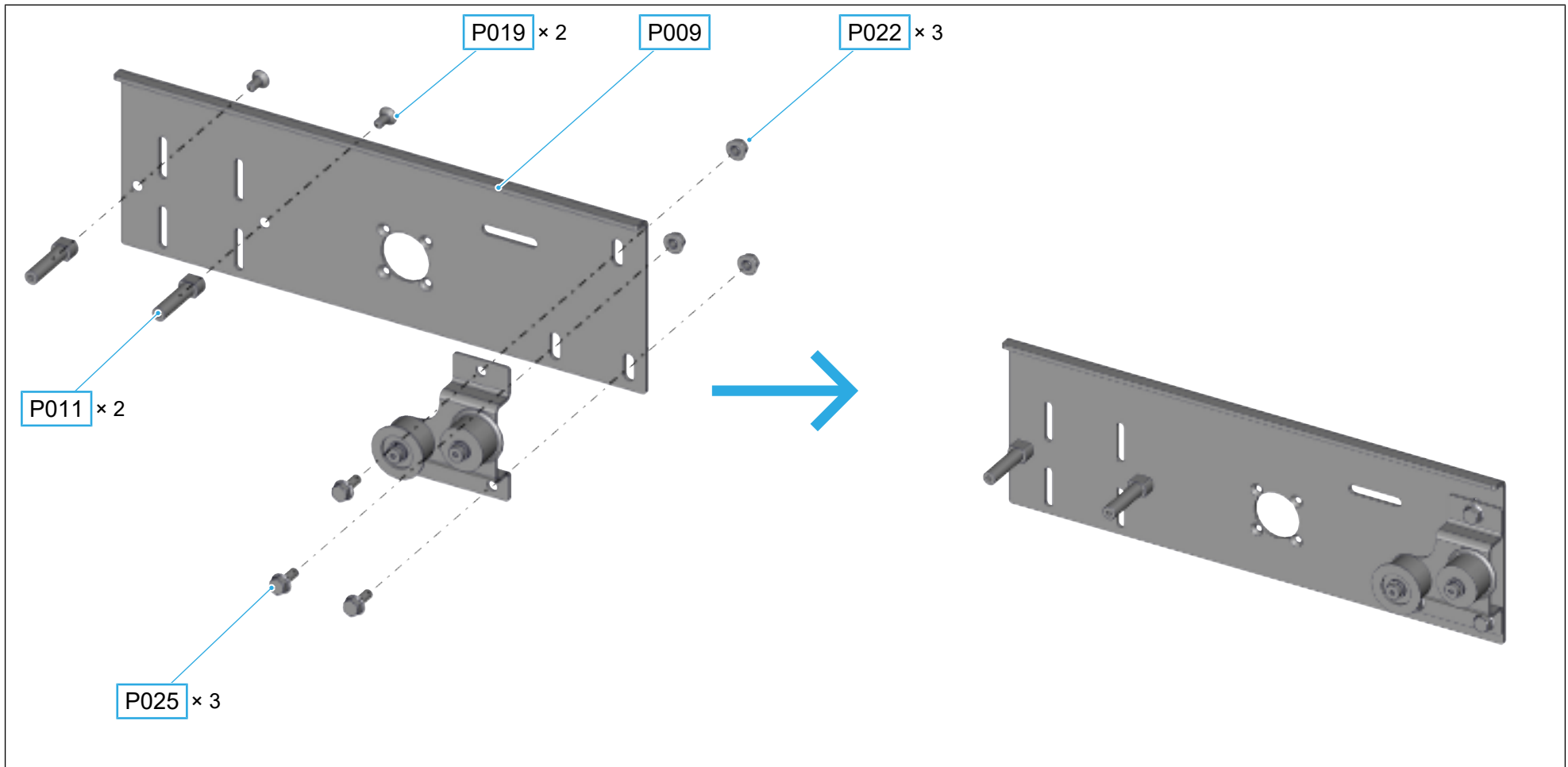
Pos.	Illustration	Item number	Description	Quantity
P010		1.20.90260	Motor bracket, hat shaped	1
P011		1.20.90270	Shaft D = 12 mm	2
P012		1.20.92294	Shaft D = 12 mm	1
P013		1.20.92295	Double timing belt pulley 8M/H	1
P014		1.36.00014	Button head screw M4 x 12 mm	1
P015		1.36.00050	Shoulder screw M6 x 30 mm	2
P018		1.36.00315	Button head screw M4 x 12 mm	1
P019		1.36.00375	Countersunk screw M8 x 16 mm	2

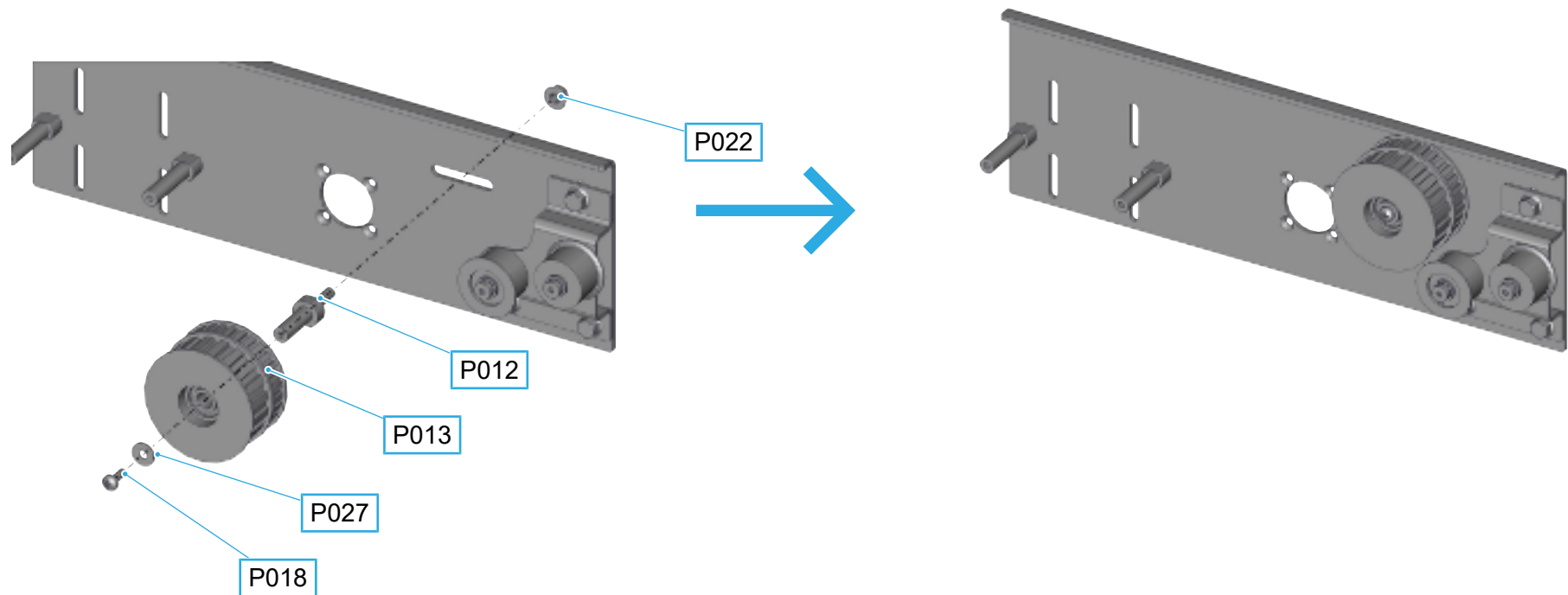
Pos.	Illustration	Item number	Description	Quantity
P020		1.36.00441	Washer M8	2
P021		1.36.00454	Washer M4	1
P022		1.36.00501	Nut M8	4
P023		1.36.00502	Nut M6	2
P024		1.36.00593	Countersunk screw M8 × 20 mm	4
P025		1.36.00720	Locking screw M8 × 20 mm	3
P026		1.36.01034	Washer M8	2
P027		1.36.01036	Washer M6	1

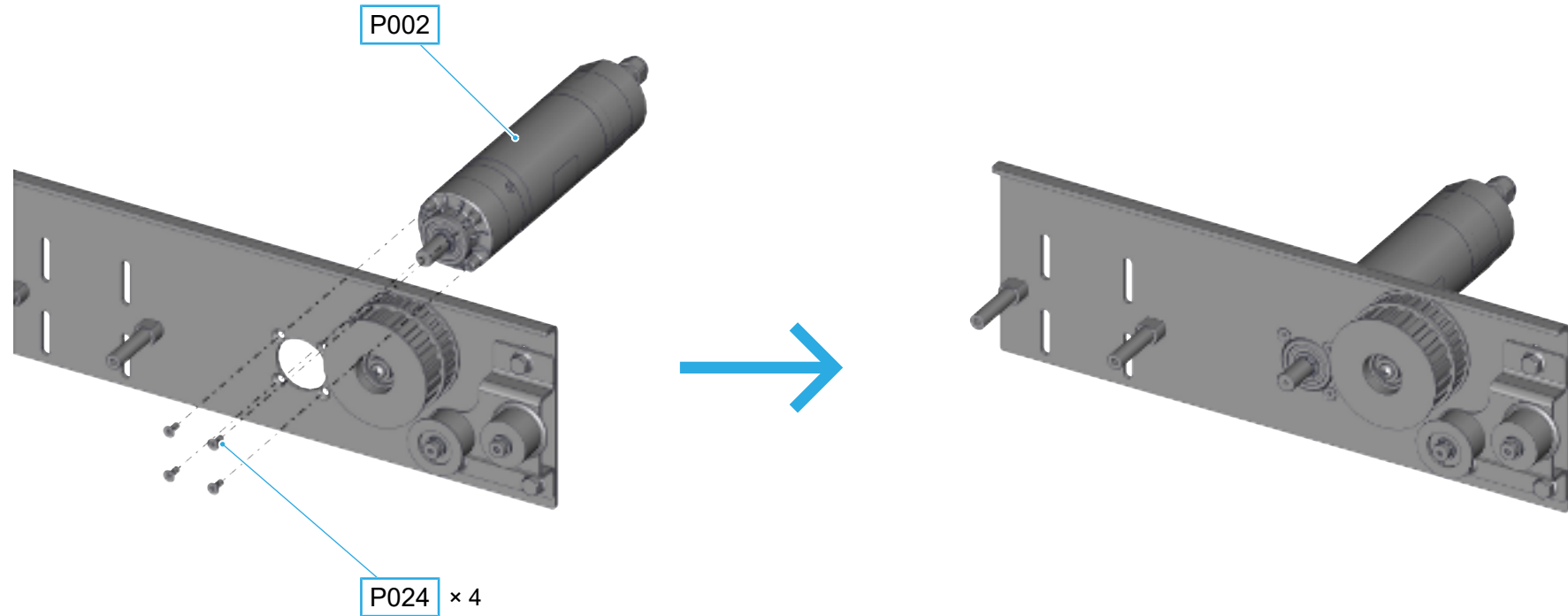
Tools

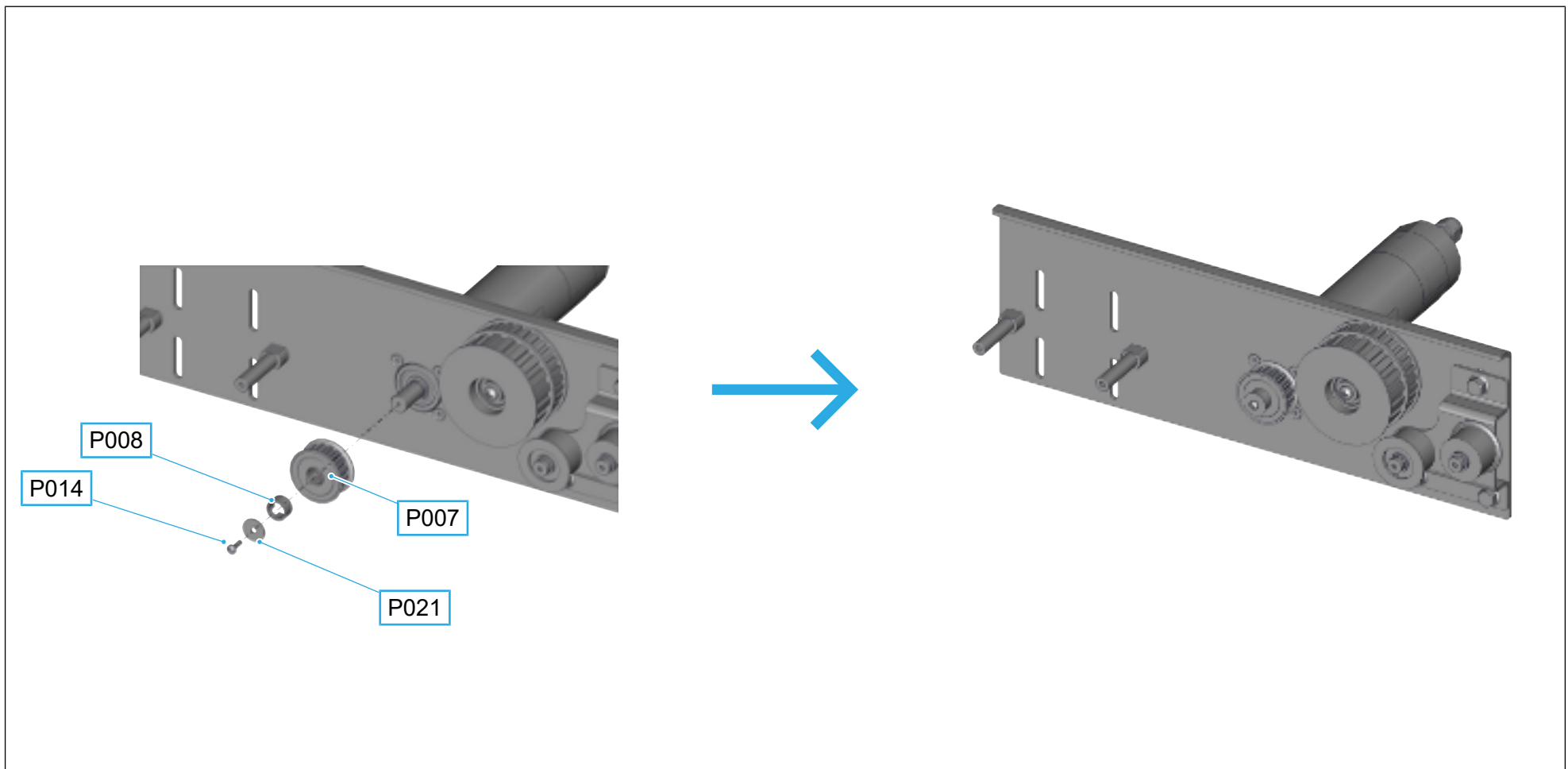
Pos.	Symbol	Description
T010		Phillips screwdriver
T110		Combination wrench, size 10
T113		Combination wrench, size 13
T119		Combination spanner, size 19
T203.0		Allen key, size 3
T204.0		Allen key, size 4
T205.0		Allen key, size 5







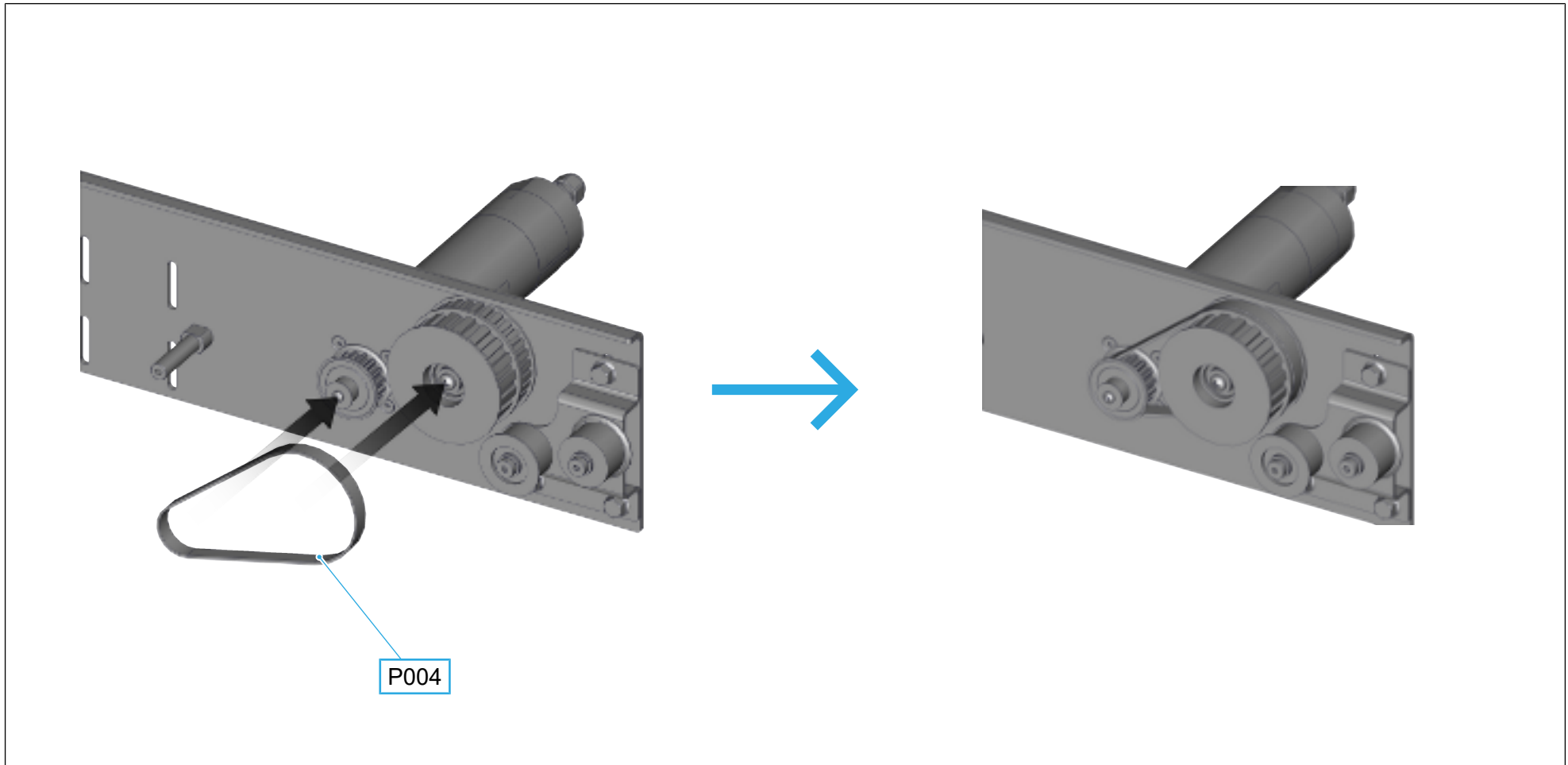


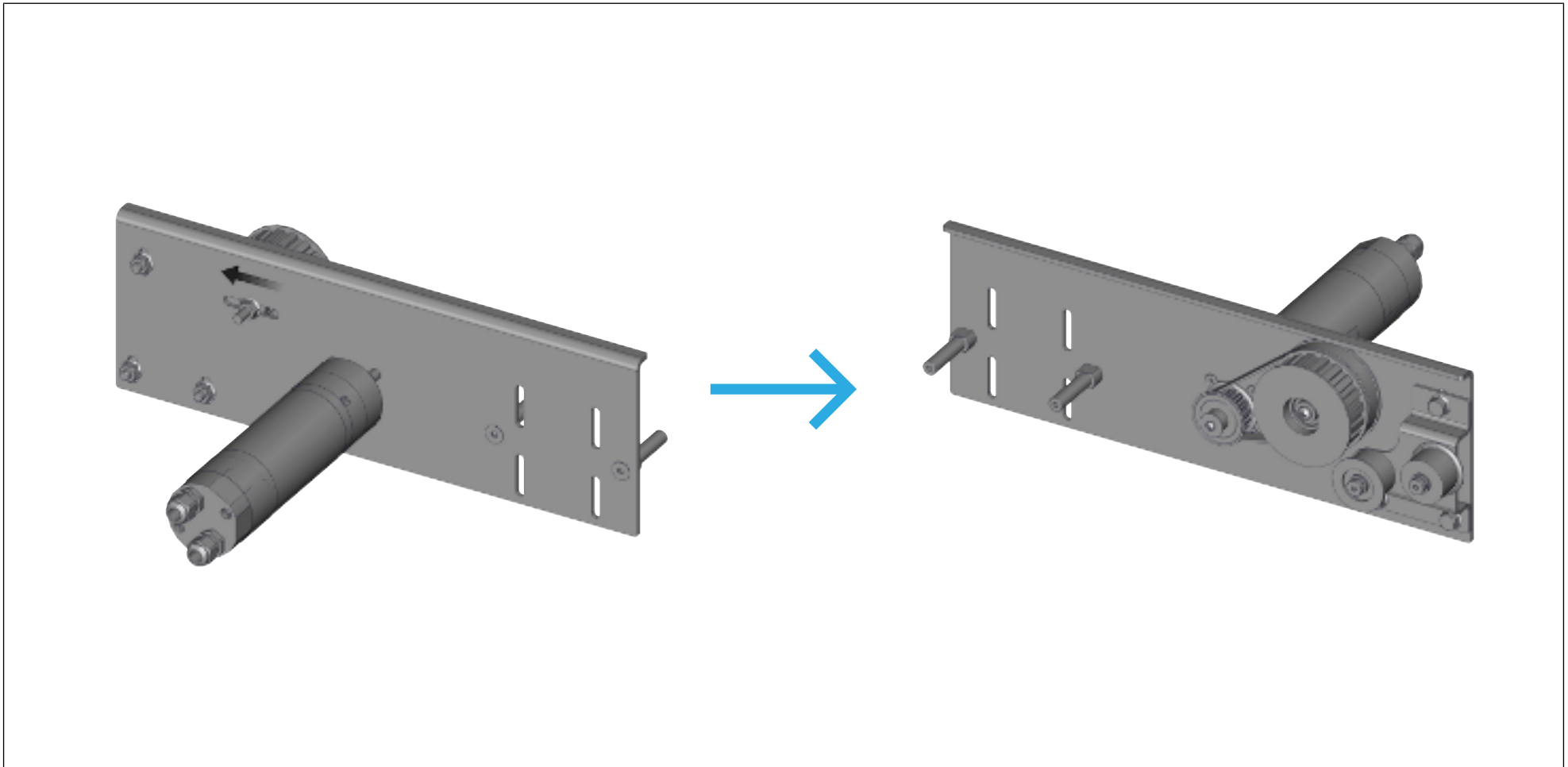


7.2 Mounting the timing belt on the motor unit

Components

Pos.	Illustration	Item number	Description	Quantity
P004		1.20.61060	Endless timing belt 8m	1





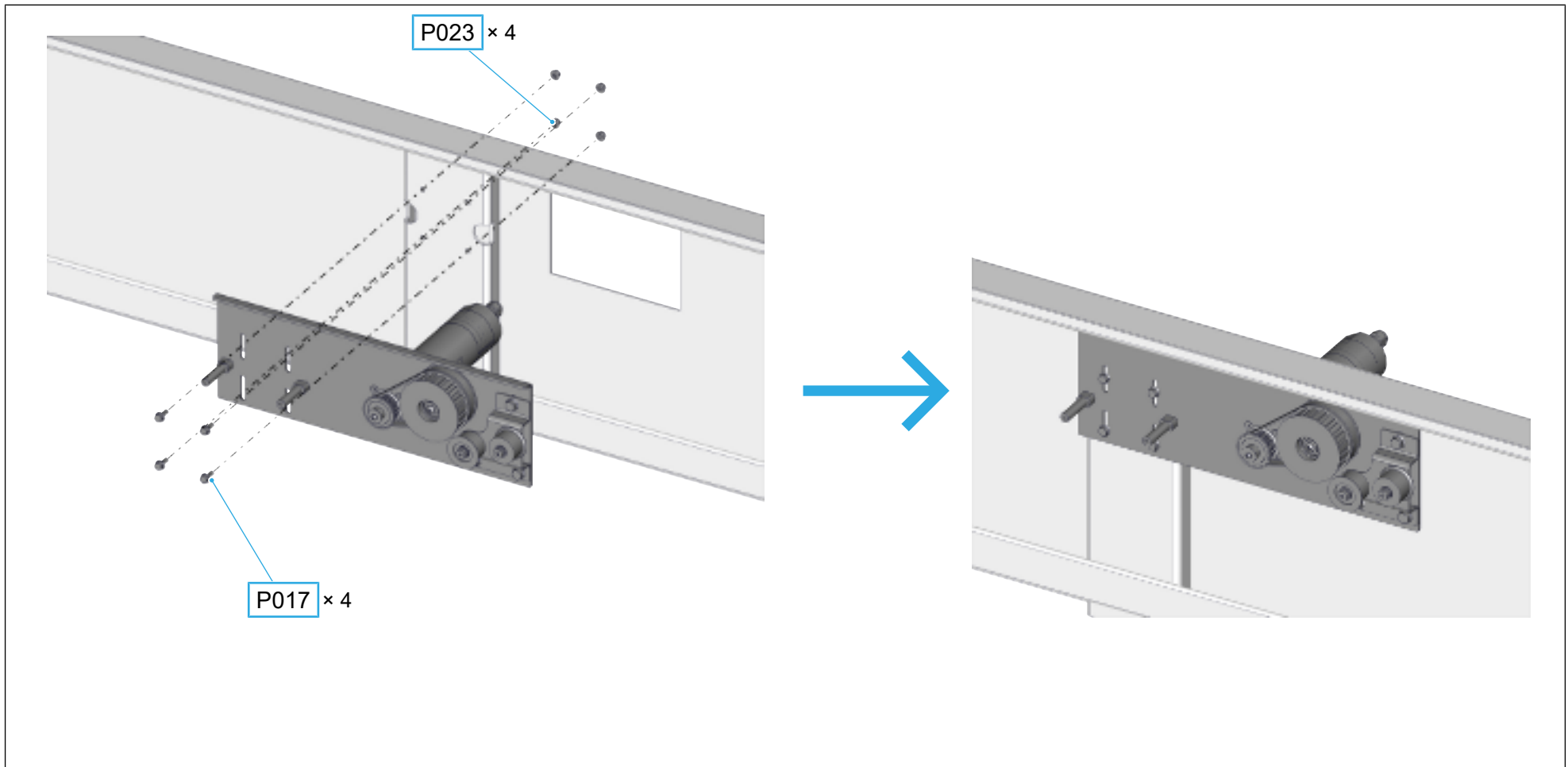
7.3 Mounting the motor unit on the door frame

Components

Pos.	Illustration	Item number	Description	Quantity
P017		1.36.00138	Locking screw M6 × 16 mm	4
P023		1.36.00502	Nut M6	4

Tools

Pos.	Symbol	Description
T110		Combination wrench, size 10



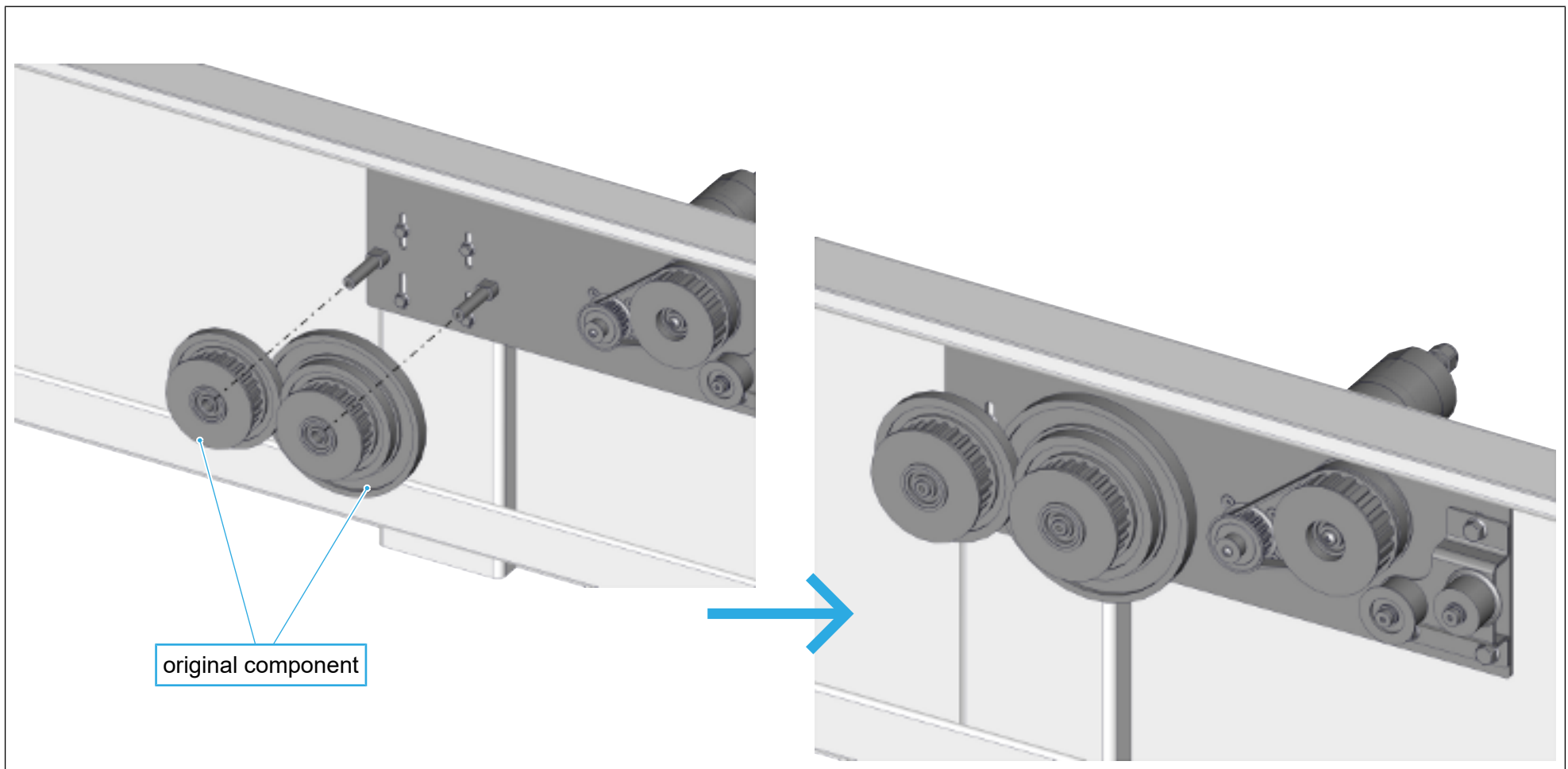
7.4 Mounting the original components and the timing belt

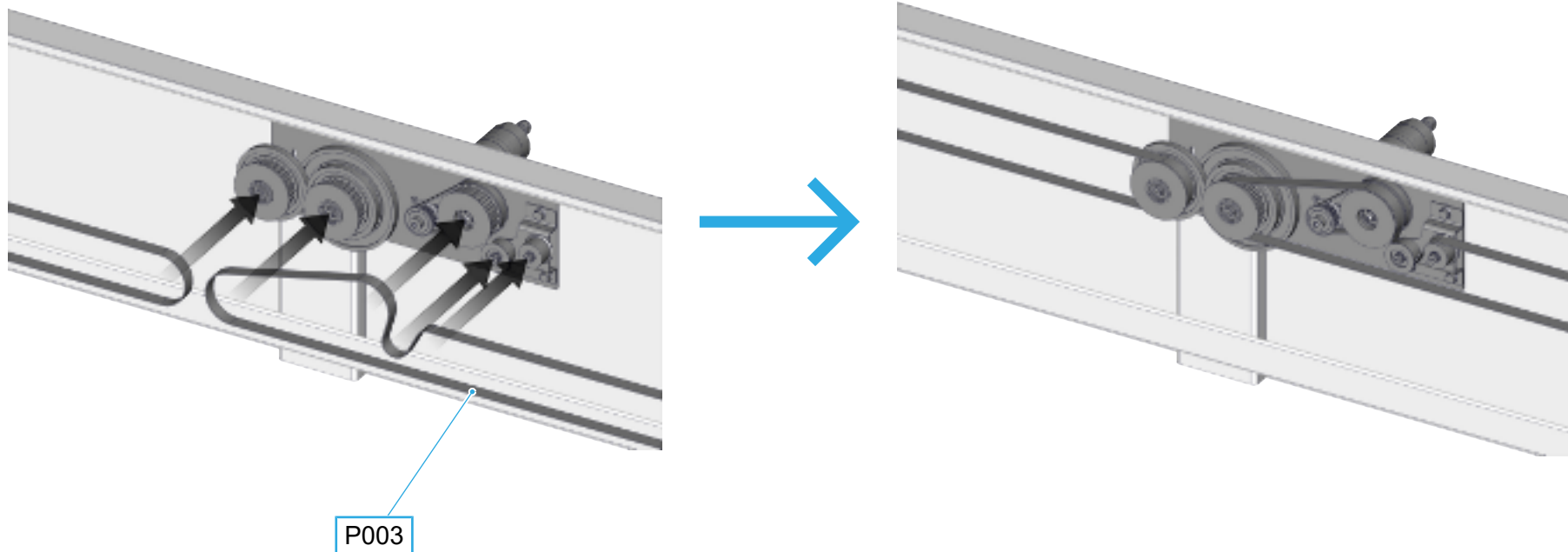
Components

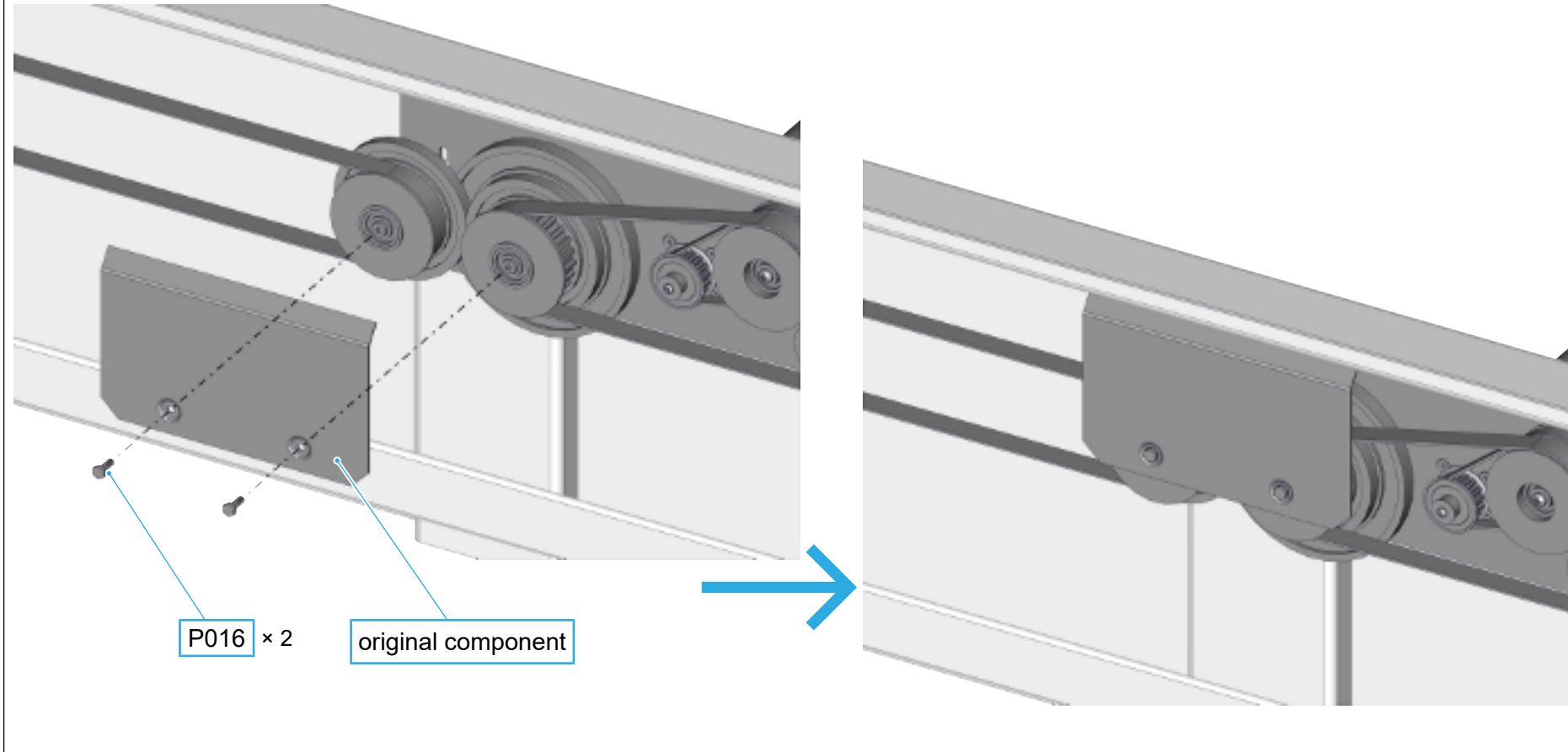
Pos.	Illustration	Item number	Description	Quantity
P003		1.20.60230	Timing belt H	1
P016		1.36.00111	Hexagon head screw M8 × 16 mm	2

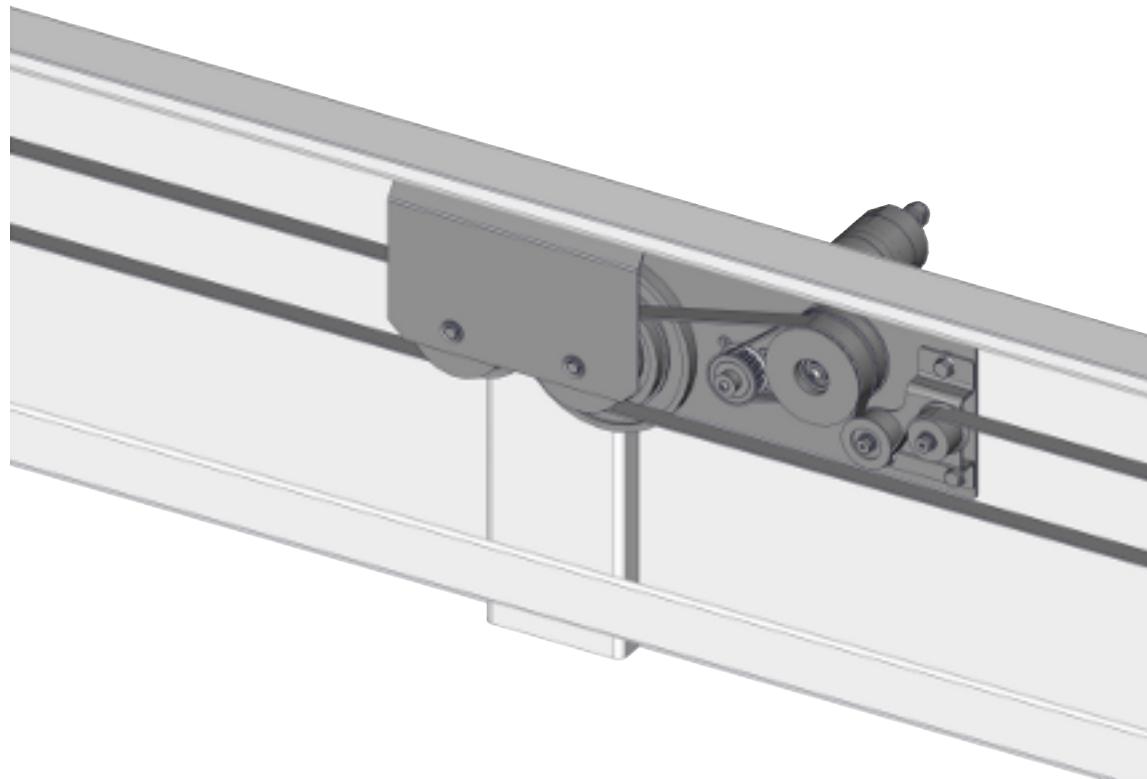
Tools

Pos.	Symbol	Description
T110		Combination wrench, size 10









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.



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