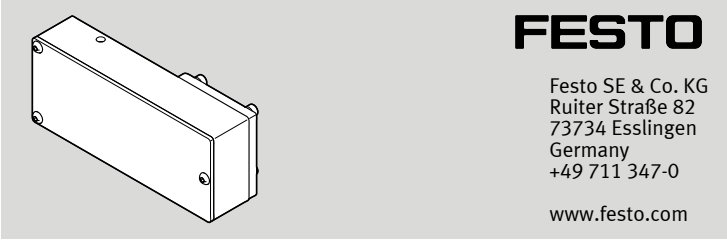


EAMM-U-...-V...-...A/P/R-3
Parallel kit



Instructions | Assembly

8096444
2019-01
[8096446]



Translation of the original instructions

1 Applicable documents

All available documents for the product → www.festo.com/pk.

- Observe further applicable documents:
- Motor instruction manual
 - Axis instruction manual

2 Safety

2.1 Safety instructions

- Only assemble the product on components that are in a condition to be safely operated.
- Clean shafts. The coupling hub [17] will grip without slipping only on a drive shaft which is dry and free of grease.
- Maintain the alignment of the coupling hub [17].
- Support the combination:
 - if there are protruding or heavy motor attachments
 - if there are severe vibrations or oscillation/shock loads
- Perform a homing procedure each time after disconnecting or turning the motor.
- Select required mounting components. The kit contains all the mounting components that may be required.
- Observe tightening torques. Unless otherwise specified, the tolerance is $\pm 20\%$.

2.2 Intended use

2.2.1 Usage

Connecting an axis to a motor in a parallel configuration.

2.2.2 Permissible axes and motors

NOTICE!

Overloading can cause malfunction and material damage.

The motor's output variables must not exceed the permissible values of the components used.

Permissible values → www.festo.com/catalogue.

- Limit the motor's output variables accordingly.

- Derive the axis and motor from the interface codes.

Example: EAMM-U-...-V25-40P

V25: axis interface

40P: motor interface

Axis interface	Axis ¹⁾
V20	EGSC-BS-25, EPCC-BS-25
V25	EGSC-BS-32, ELGC-BS-32, EPCC-BS-32
V32	EGSC-BS-45, ELGC-BS-45, EPCC-BS-45

1) mini slide EGSC-BS, spindle axis ELGC-BS, spindle axis ELGC-TB, electric drive EPCC-BS

Tab. 1

Motor interface	Motor ¹⁾
38AA	Third-party motor
40R	Third-party motor
40RA	Third-party motor

1) servo motor EMM...-AS

Tab. 2

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It is the responsibility of users to qualify third-party motors with the matching mechanical interface for the combination.
You can find out which third-party motors are suitable from your local Festo contact partner or from → www.festo.com/sp.

2.3 Qualification of specialized personnel

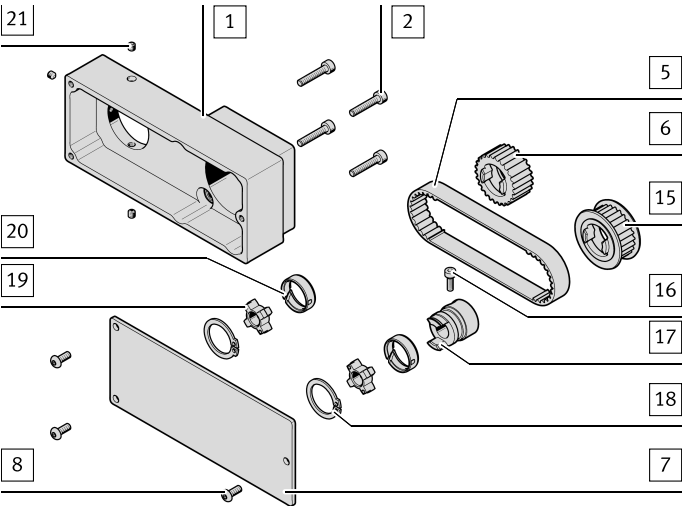
Mounting only by qualified personnel.

3 Additional information

- Accessories → www.festo.com/catalogue.

4 Product range overview

4.1 Scope of delivery



- | | |
|-----------------------------------|--------------------------|
| 1 Housing (1x) | 16 Locking screw (1x) |
| 2 Screw (4x) | 17 Coupling hub (1x) |
| 5 Toothed belt (1x) | 18 Retaining ring (2x) |
| 6 Toothed belt pulley axis (1x) | 19 Elastomer spider (2x) |
| 7 Cover (1x) | 20 Slip ring (2x) |
| 8 Screw (3x) | 21 Threaded pin (3x) |
| 15 Toothed belt pulley motor (1x) | |

Fig. 1 Scope of delivery

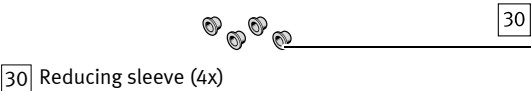


Fig. 2 Addendum with EAMM-U-...-40R/40RA

5 Mounting

5.1 Assembly

5.1.1 Coupling preassembly

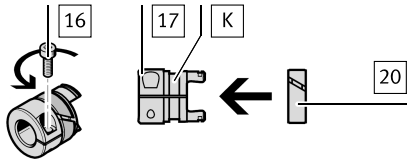


Fig. 3 Insert slip ring, motor side

1. Insert slip ring [20] into the slot [K] of the motor-side coupling hub [17].
2. Screw on locking screw [16].

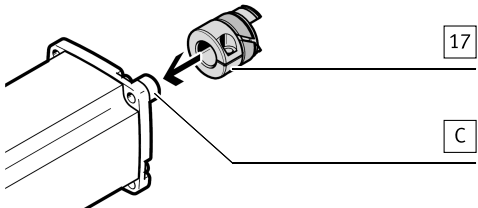


Fig. 4 Push on coupling hub

- Push coupling hub [17] with the matching drilled hole onto the drive shaft [C].

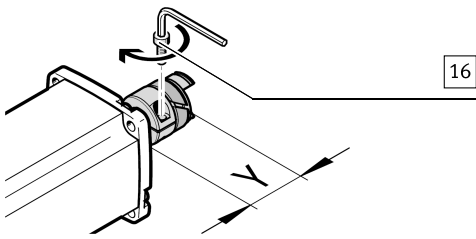


Fig. 5 Align coupling hub

1. Observe distance (Y).
2. Tighten motor-side locking screw [16].

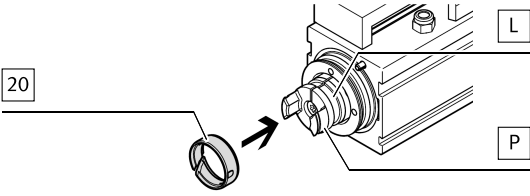


Fig. 6 Insert slip ring, axis side

- Insert slip ring [20] into the slot [L] of the axis-side coupling hub [P].

5.1.2 Coupling alignment

NOTICE!

Faulty coupling alignment

If dimension Y is incorrectly adjusted, this will cause increased wear of the toothed belt and may result in mechanical contact between the toothed belt pulley and the housing or cover.

- Observe distance.

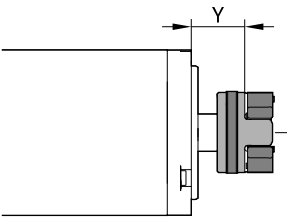


Fig. 7 Alignment coupling hub

EAMM-U-	Y±0.3 [mm]
45-V25-38AA	26
45-V25-40R	25.5
45-V25-40RA	18.5
45-V32-38AA	26
45-V32-40R	25.5
45-V32-40RA	18.5

Tab. 3

5.1.3 Motor and axis connection

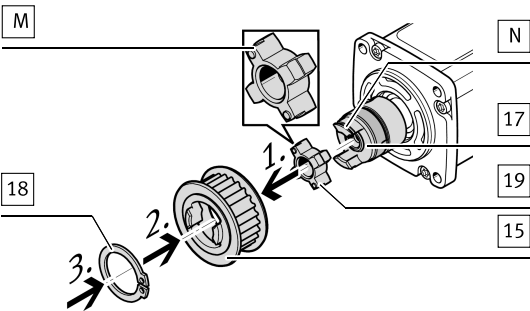


Fig. 8 Mount toothed belt pulley, motor-side

1. Place elastomer spider [19] with recess [M] outwards in the toothed belt pulley [15].
2. Push toothed belt pulley [15] with elastomer spider [19] onto the coupling hub [17] to the stop.
3. Insert retaining ring [18] into the slot [N] of the coupling hub [17].

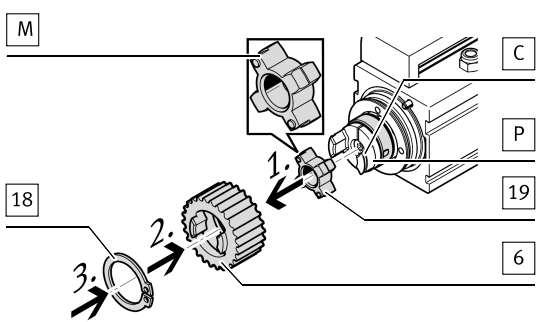


Fig. 9 Mount toothed belt pulley, axis-side

1. Place elastomer spider [19] with recess [M] outwards in the toothed belt pulley [6].
2. Push toothed belt pulley [6] with elastomer spider [19] onto the coupling hub [P] to the stop.
3. Insert retaining ring [18] into the slot [C] of the coupling hub [P].

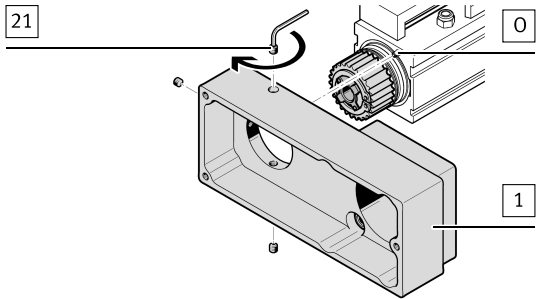


Fig. 10 Mount housing on axis

1. Place housing [1] onto the centring collar of the axis
 - ↳ The anti-twist pin [O] of the axis latches into the drilled hole of the housing [1].
2. Fasten housing [1] in the V-slot of the centring collar with the threaded pins [21].

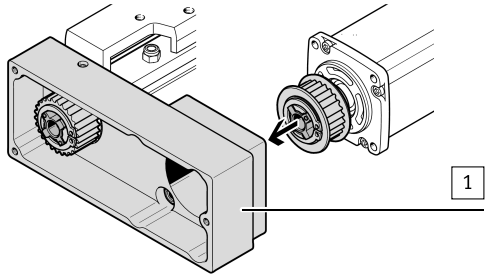


Fig. 11 Position motor

- Position motor on housing [1].
 - ↳ The motor is movable and can be easily tilted.

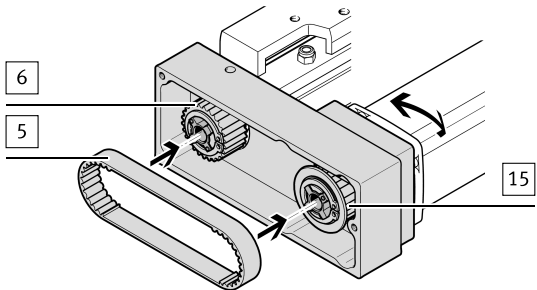


Fig. 12 Insert toothed belt

1. Move the motor in the direction of the axis up to the stop and tilt it slightly.
2. Place toothed belt [5] on the toothed belt pulley [15] first and then around the toothed belt pulley [6].

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The reducing sleeves [30] are required with EAMM-U-V...40R/40RA.

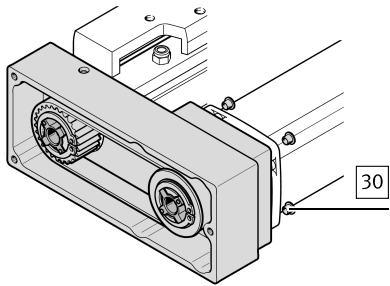


Fig. 13 Insert reducing sleeve

- Insert reducing sleeves [30] into the mounting holes of the motor.

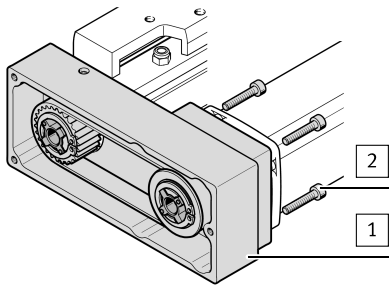


Fig. 14 Fasten motor

- Attach motor to the housing [2] with the screws [1].
⚠ The motor is movable, but it can no longer be tilted.

5.1.4 Tensioning the toothed belt

NOTICE!

Toothed belt pretensioning too high.
Impermissible radial loads or shaft break.
Increased wear of the toothed belt and the bearings of axis and motor.

- Avoid excessive toothed belt pretension.

A low toothed belt pretension is recommended.

The toothed belt [5] is tensioned when the strands [D] run approximately parallel:

- Untensioned: $y > x$
- Tensioned: $y \approx 1 \dots 1.05 x$

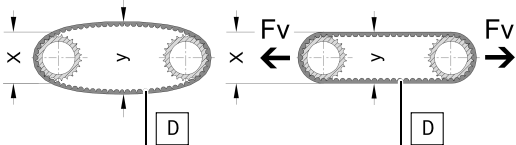


Fig. 15 Strands of the toothed belt

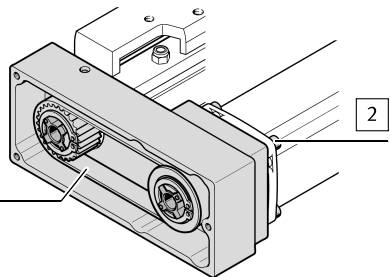


Fig. 16 Tension toothed belt

1. Move the motor until the clamping force F_v is exerted on the toothed belt [5].
2. Tighten screws [2].

EAMM-U	Clamping force F_v [N]
30	5 ... 15
38	17 ... 40
45	17 ... 40

Tab. 4 Permissible clamping force of the toothed belt

5.1.5 Mounting the cover

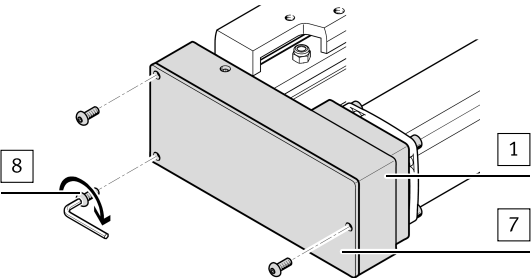


Fig. 17 Mount cover

- Before commissioning: fasten cover [7] to the housing [8] with the screws [1].

5.2 Installation

5.2.1 Supporting the axis-motor combination

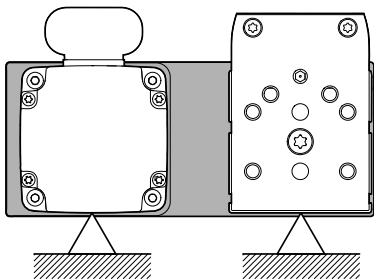


Fig. 18 Support the combination so it is free from tension

- Support the combination so it is free from tension to avoid damage.

6 In operation

CAUTION!

Risk of injury from touching hot surfaces.
The motor connecting kit becomes hot due to the heat dissipation of the motor.

- Do not touch the motor connecting kit during operation or immediately afterward.

WARNING!

Risk of injury due to unexpected movement of components if toothed belt fails.

- Take supplemental safeguarding measures.

7 Maintenance

7.1 Check the toothed belt

The toothed belt [5] is a wearing part → www.festo.com/spareparts.

1. Check toothed belt [5] regularly:
 - during maintenance of the machine
 - when replacing an axis
2. Replace the toothed belt [5] at the following indicators of wear:
 - excessive accumulation of wear particles in the housing
 - cracks on the back of the toothed belt
 - visible glass fibre cords in the tooth base

7.2 Replace the toothed belt

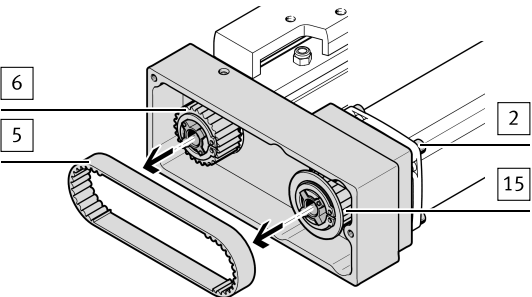


Fig. 19 Dismount toothed belt

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With vertical or diagonal mounting position of the axis:

- Observe applicable safety instructions in the instruction manual for the axis.

1. Remove screws [2].
⚠ The motor is movable and can be easily tilted.
2. Move the motor in the direction of the axis up to the stop and tilt it slightly.
3. Remove the toothed belt [5] from toothed belt pulleys [6] and [15].

8Technical data

8.1Screw sizes and tightening torques

EAMM-U-	[2]	[Nm]	[8]	[Nm]	[16]	[Nm]	[21]	[Nm]
45-V25-38AA	M3x24	1.2	M3x8	1.2	M2.5x8	1	M3x6	0.8
45-V25-40R	M3x20	1.2	M3x8	1.2	M2.5x8	1	M3x6	0.8
45-V25-40RA	M3x16	1.2	M3x8	1.2	M2.5x8	1	M3x6	0.8
45-V32-38AA	M3x24	1.2	M3x8	1.2	M2.5x8	1	M3x6	0.8
45-V32-40R	M3x20	1.2	M3x8	1.2	M2.5x8	1	M3x6	0.8
45-V32-40RA	M3x16	1.2	M3x8	1.2	M2.5x8	1	M3x6	0.8

Tab. 5