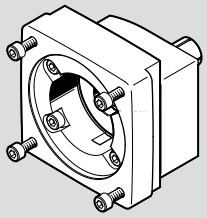
EAMM-A-L/N...-...A/P/R-1

Axial kit



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Assembly instructions

8226645
2024-11j
[8226647]

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Original instructions

1 Applicable documents

All available documents for the product ➔ www.festo.com/sp.

Document	Product	Table of contents
Operating instruction	Motor	–
Operating instruction	Axis	–

Tab. 1: Applicable documents

2 Safety

2.1 Safety instructions

- Only mount the product on components that are in a condition to be safely operated.
- Clean the shafts and hollow shafts. The coupling only grips without slipping on a dry and grease-free shaft surface.
- Clean the coupling hub [1]:
  - Degrease the clamping pivot [G] on the outside diameter. Do not degrease the expanding mandrel cone [H].
  - Degrease the clamping hole.
- Maintain the alignment of the coupling hub [1].
- Support the combination in the following cases:
  - If there are protruding or heavy motor attachments.
  - In the event of severe vibrations, vibration loads or shock loads.
- If the motor is loosened or turned, homing must be carried out on the axis.
- Select required mounting components. The kit contains all the mounting components that may be required.
- Observe the tightening torques. Unless otherwise specified, the tolerance is ± 20%.

2.2 Intended use

2.2.1 Use

The axial kit connects an axis to a motor configured axially to the driven shaft.

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.

- Take the axis and the motor from the interface codes.

Example: EAMM-A-L27-40R
L27: axis interface
40R: motor interface

Axis interface	Axis
L27	EGC-50-...-TB
L38	EGC-70-...-TB
L48	EGC-80-...-TB
L62	EGC-120-...-TB
N38	ELGA-TB-...-70
N48	ELGA-TB-...-80
N80	ELGA-TB-...-120, ELCC-TB-...-90

Tab. 2: Permissible axes

Motor interface	Motor
40A	EMMS-AS-40
40R	Third-party motor
40RA	Third-party motor
55A	EMMS-AS-55, third-party motor
57A	EMCS-/EMMS-ST-57, third-party motor
57AA	Third-party motor
57AB	Third-party motor
57AC	Third-party motor
58AA	Third-party motor
60P	EMMB-/EMME-/EMMT-AS-60, third-party motor
60PA	Third-party motor
60R	Third-party motor
60RA	Third-party motor
60RB	Third-party motor
67A	EMCA-EC-67
70A	EMMS-AS-70, third-party motor
70AA	Third-party motor
70AB	Third-party motor
80P	EMMB-/EMME-/EMMT-AS-80, third-party motor
80PB	Third-party motor
84AA	Third-party motor
87A	EMMB-/EMMS-/EMMT-ST-87
88A	Third-party motor
90R	Third-party motor
92RA	Third-party motor
100A	EMME-/EMMS-/EMMT-AS-100, third-party motor
150A	EMMS-AS-140, EMMT-AS-150

Tab. 3: Permissible motors

It is the responsibility of users to qualify third-party motors with the matching mechanical interface for the combination.
To find out which third-party motors are suitable, consult your regional Festo contact or ➔ www.festo.com/sp.

2.3 Training of qualified personnel

Work on the product may only be carried out by qualified personnel who can evaluate the work and detect dangers. Personnel must have the relevant mechanical training.

3 Additional information

- Contact the regional Festo contact if you have technical problems.
- Accessories ➔ www.festo.com/catalogue.

4 Scope of delivery

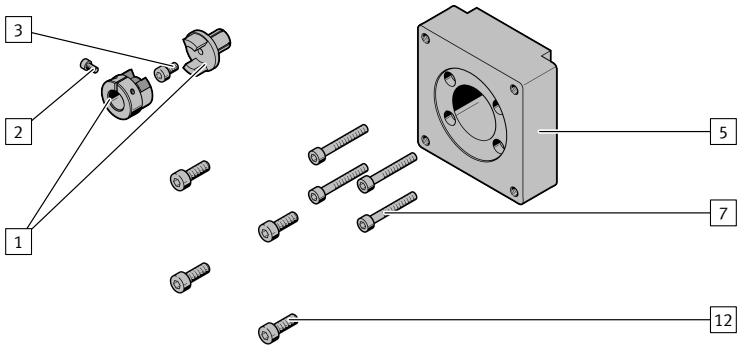

Fig. 1: Basic scope of delivery

1	Coupling hub (2x)	5	Coupling housing (1x)
2	Clamping screw (1x)	7	Screw (4x)
3	Clamping screw (1x)	12	Screw (4x)

Fig. 2: Supplement to reducing sleeve

30	Reducing sleeve (4x)

5 Mounting

5.1 Preparation

The motor can be mounted in 4 positions with these kits for the axis EGC-...-TB, ELGA.

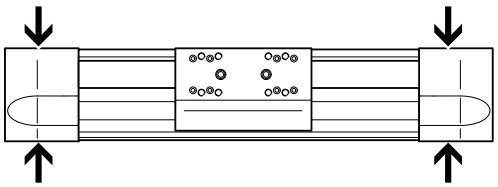

Fig. 3: Connection options

The motor can be mounted in 2 positions with these kits for the axis EGC-...-TB-KF-...-Z.

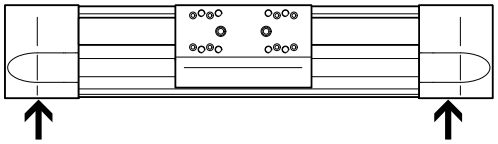

Fig. 4: Connection options

- Select one of the connection options.

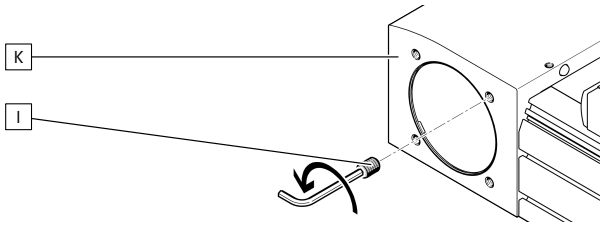

Fig. 5: Remove threaded pin

- Unscrew the existing threaded pins [I] from the drive cover [K].

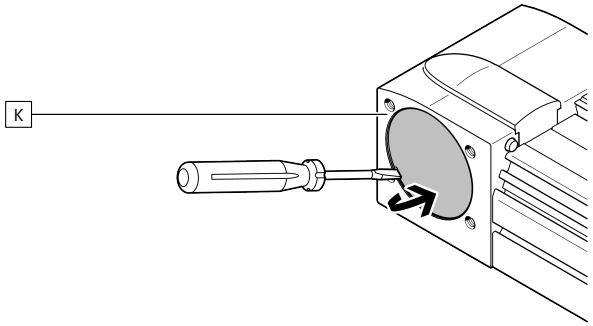

Fig. 6: Lever off the covering

1. Insert a screwdriver into the recess in the drive cover [K].
2. Lever off the covering.

5.2 Assembling

5.2.1 Preassembly of reducing sleeve

The reducing sleeves [30] are only required if the mounting holes on the output flange of the motor are too large for the supplied retaining screws.

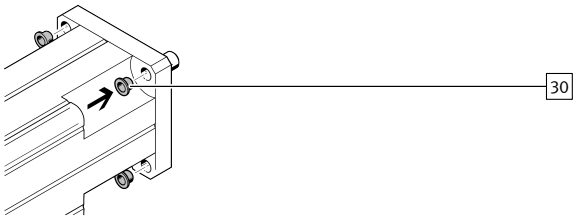

Fig. 7: Inserting reducing sleeves

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

5.2.2 Preassembly of coupling

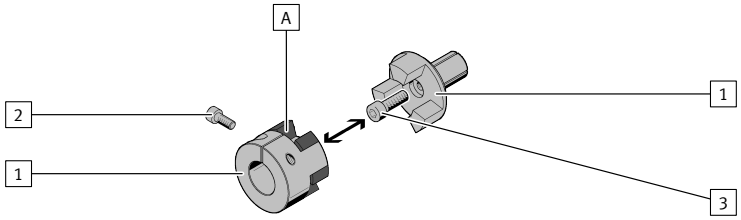

Fig. 8: Disconnecting coupling

1. Pull the coupling apart.
2. Place the elastomer spider [A] on one of the two coupling hubs [1].
3. Unscrew the clamping screws [2] and [3].

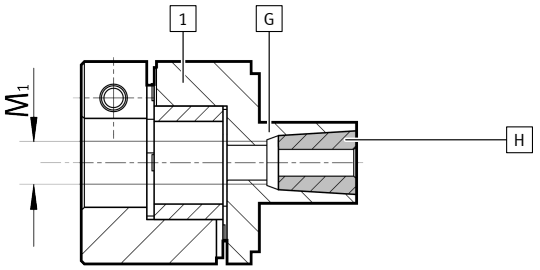

Fig. 9: Expanding mandrel cone in the clamping pivot

- Check the expanding mandrel cone [H].
  - The expanding mandrel cone [H] must sit loosely in the clamping pivot [G], otherwise it cannot be mounted.

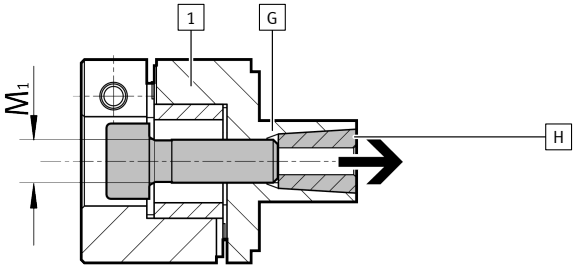

Fig. 10: Pressing out jammed expanding mandrel cone

The extraction thread M_1 is provided for loosening

- Screw a screw into the M_1 thread and press out the jammed expanding mandrel cone [H] ➔ 7 Technical data.

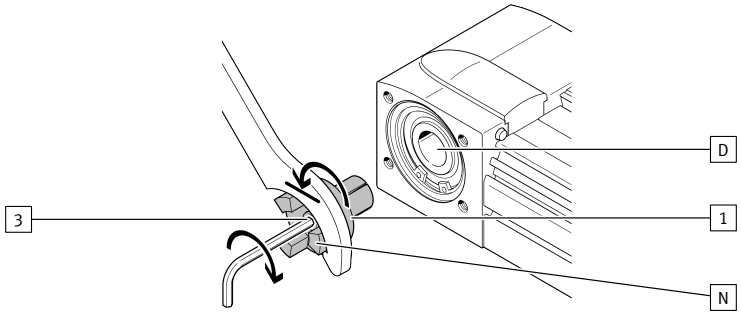

Fig. 11: Mounting coupling hub, axis side

1. Push the coupling hub [1] with the clamping pivot into the hollow shaft [D] up to the stop.
2. Counterhold the coupling hub [1] on the coupling cams [N] with a suitable tool. Tool: e.g. hook spanner
   - The counter holding prevents the hollow shaft [D] from rotating and exerting excessive tensile forces on the toothed belt of the axis.
3. Tighten the clamping screw [3].

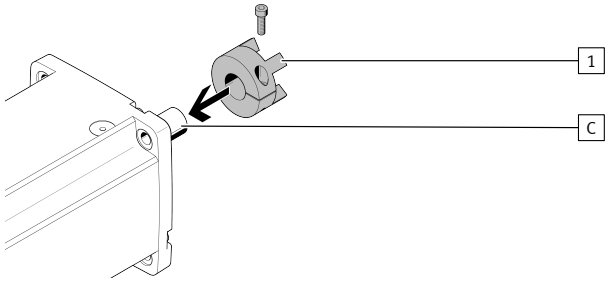

Fig. 12: Pushing on coupling hub, motor side

- Slide the coupling hub [1] with the appropriate hole onto the drive shaft adapter [C].

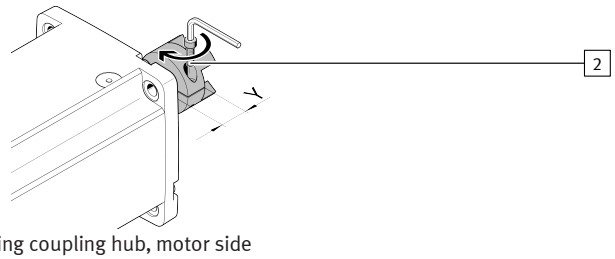

Fig. 13: Aligning coupling hub, motor side

1. Maintain distance (Y) ➔ 5.2.3 Alignment of coupling.
2. Tighten all clamping screws [2] on the motor side.

5.2.3 Alignment of coupling

NOTICE

Axial forces on the shafts of motor and axis.

Axial forces result in failure of the encoder/brake or increased wear.

- Maintain distances.

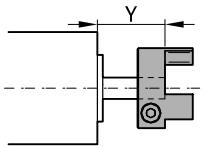

Fig. 14: Aligning coupling hub

EAMM-A-	Y ± 0.3 [mm]
L27-40A	15.5
L27-40R	24.5
L27-40RA	17.5
L27-55A	20.5
L27-57A	20.5
L27-57AA	20.5
L27-57AB	20.5
L27-57AC	20.5
L27-58AA	19.5
L27-60RA	29.5
L27-60RB	22.5
L27-67A	25.4
L38-57A-G2	19.3
L38-60P-G2	29.3
L38-60R-G2	29.3
L38-60RA	29.3
L38-87A-G2	26.3
L48-60P	23.3
L48-80P-G2	35
L48-80PB	35
L48-87A-G2	26.3
L48-100A-G2	40
L62-88A	29
L62-100A-G2	40
L62-150A	50
N38-60P	21.5
N38-60PA	29.9
N38-60RA	29.9
N38-70A	22.5
N38-70AA	22.5
N38-88A	29.9
N38-90R	34.9
N38-92RA	39.9
N48-60P	23.3
N48-60PA	29
N48-70AA	29
N48-80P	35
N48-80PB	35
N48-84AA	39
N48-87A	26.3
N48-88A	29
N48-100A-G2	40
N80-150A	50

Tab. 4: Coupling distance Y

5.2.4 Motor and axis connection

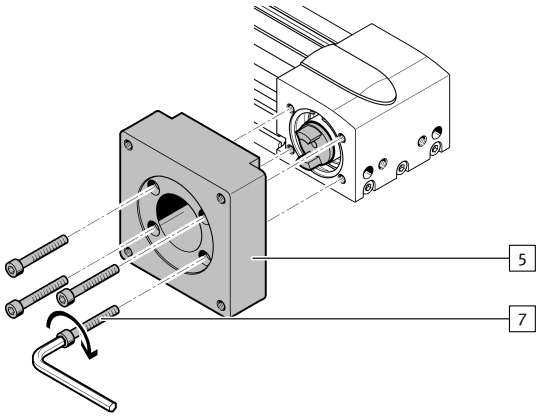

Fig. 15: Mounting coupling housing

- Mount the coupling housing [5] on the axis with the screws [7].

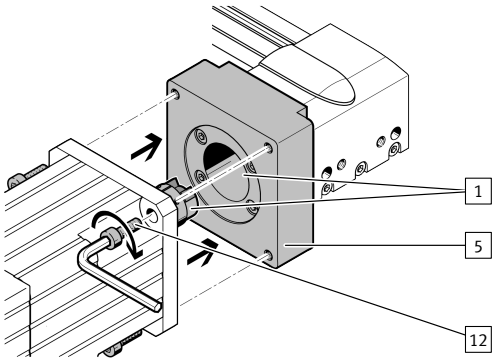

Fig. 16: Mounting motor

1. Push the motor and the axis together completely. Ensure that the coupling hubs [1] are in the correct relative position.
   - There is no gap between motor and coupling housing [5].
2. Mount the motor on the coupling housing [5] with the screws [12].

5.3 Supporting frame for the axis-motor combination

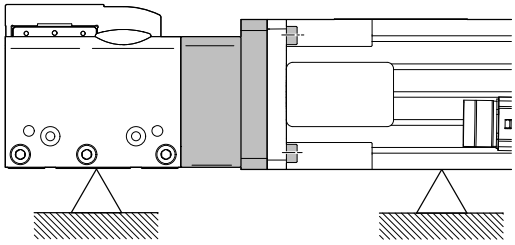

Fig. 17: Supporting frame for the axis-motor combination

- 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.

7 Technical data

7.1 Screw sizes and tightening torques

EAMM-A-	[2]	[Nm]	[3]	[Nm]	[7]	[Nm]	[12]	[Nm]
L27-40A	M2x6	0.5	M3x10	1	M3x20	1.2	M3x12	1.2
L27-40R	M2x6	0.5	M3x10	1	M3x25	1.2	M4x12	3
L27-40RA	M2x6	0.5	M3x10	1	M3x16	1.2	M4x12	3
L27-55A	M2x6	0.5	M3x10	1	M3x20	1.2	M5x16	6
L27-57A	M2x6	0.5	M3x10	1	M3x25	1.2	M4x12	3
L27-57AA	M2x6	0.5	M3x10	1	M3x25	1.2	M4x12	3
L27-57AB	M2x6	0.5	M3x10	1	M3x20	1.2	M5x16	6
L27-57AC	M2x6	0.5	M3x10	1	M3x20	1.2	M5x16	6
L27-58AA	M2x6	0.5	M3x10	1	M3x20	1.2	M4x16	3
L27-60RA	M2x6	0.5	M3x10	1	M3x25	1.2	M4x16	3
L27-60RB	M2x6	0.5	M3x10	1	M3x20	1.2	M5x16	6
L27-67A	M2x6	0.5	M3x10	1	M3x25	1.2	M6x16	10
L38-57A-G2	M3x12	2	M4x12	1.5	M5x25	6	M4x12	3
L38-60P-G2	M3x12	2	M4x12	1.5	M5x35	6	M4x18	3
L38-60RA	M3x12	2	M4x12	1.5	M5x35	6	M4x18	3

EAMM-A-	[2]	[Nm]	[3]	[Nm]	[7]	[Nm]	[12]	[Nm]
L38-60R-G2	M3x12	2	M4x12	1.5	M5x35	6	M4x18	3
L38-87A-G2	M3x12	2	M4x12	1.5	M5x30	6	M6x20	10
L48-60P	M4x12	4	M5x18	7	M5x35	6	M4x18	3
L48-80P-G2	M5x18	8	M6x20	8.5	M5x50	6	M5x20	6
L48-80PB	M5x18	8	M6x20	8.5	M5x50	6	M5x20	6
L48-87A-G2	M4x12	4	M5x18	7	M5x40	6	M6x20	10
L48-100A-G2	M5x18	8	M6x20	8.5	M5x55	6	M8x25	18
L62-88A	M6x20	12	M8x25	14	M6x50	10	M6x20	10
L62-100A-G2	M6x20	12	M8x25	14	M6x60	10	M8x25	18
L62-150A	M6x20	12	M8x25	14	M6x70	10	M10x30	30
N38-60P	M4x12	4	M5x18	7	M6x35	10	M4x18	3
N38-60PA	M4x12	4	M5x18	7	M6x25	10	M5x16	6
N38-60RA	M4x12	4	M5x18	7	M6x25	10	M4x16	3
N38-70A	M4x12	4	M5x18	7	M6x35	10	M5x18	6
N38-70AA	M4x12	4	M5x18	7	M6x35	10	M5x18	6
N38-88A	M4x12	4	M5x18	7	M6x25	10	M6x20	10
N38-90R	M4x12	4	M5x18	7	M6x25	10	M6x20	10
N38-92RA	M4x12	4	M5x18	7	M6x25	10	M6x20	10
N48-60P	M4x12	4	M5x18	7	M6x35	10	M4x18	3
N48-60PA	M5x18	8	M6x20	8.5	M6x40	10	M5x16	6
N48-70AA	M5x18	8	M6x20	8.5	M6x40	10	M5x20	6
N48-80P	M5x18	8	M6x20	8.5	M6x50	10	M5x20	6
N48-80PB	M5x18	8	M6x20	8.5	M6x50	10	M5x20	6
N48-84AA	M5x18	8	M6x20	8.5	M6x50	10	M6x20	10
N48-87A	M4x12	4	M5x18	7	M6x40	10	M6x20	10
N48-88A	M5x18	8	M6x20	8.5	M6x40	10	M6x20	10
N48-100A-G2	M5x18	8	M6x20	8.5	M6x50	10	M8x25	18
N80-150A	M6x20	12	M8x25	14	M8x70	18	M10x30	30

Tab. 5: Screws [2] ... [12]

The tightening torque of the clamping screw [3] specified here is sufficient for the maximum driving torque of the permissible axis. The required tightening torque is also specified on the coupling packaging.

7.2 Extraction thread M_1

EAMM-A-	M_1
L27	M4
L38	M5
L62	M10
N38	M6
N48	M8
N80	M10

Tab. 6: Extraction thread M_1