FESTO

Axial kit
EAMM-A-E...-...A

Festo AG & Co. KG

1. Intended usage

Axial kit EAMM-A-E...-...A:
Connecting an axis to a motor in axial configuration to the driven shaft
(➔ Section 9).

2. Safety instructions and notes on mounting

⚠ **Caution**

Unexpected movement of components.
Injury due to impact or pinching.
- Switch off power supply before mounting work.
- Observe the safety instructions (➔ applicable documents).

➔ **Note**

Incorrect mounting can cause malfunction and material damage.
- Observe tightening torques (➔ Section 7).
- Leave lubricant film on the screws.
- Clean shafts. The coupling 1 will only grip without slipping on a drive shaft which is dry and free of grease.
- Observe proper alignment of coupling 1 (➔ Section 6).
- Support the combination (➔ Section 8):
- if there are far-protruding or heavy motor attachments
- if there are severe vibrations or oscillation/shock loads
Each time after disconnecting or turning the motor:
- Perform a homing of the axis.

ℹ **Info**

Applicable documents
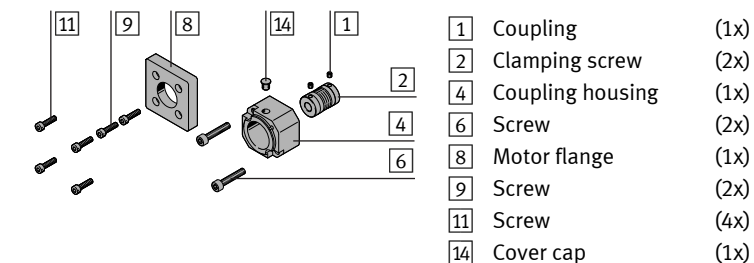➔ Motor operating instructions
➔ Axis operating instructions

The kit contains all the mounting components that may be required.
Select required mounting components (➔ Section 7).

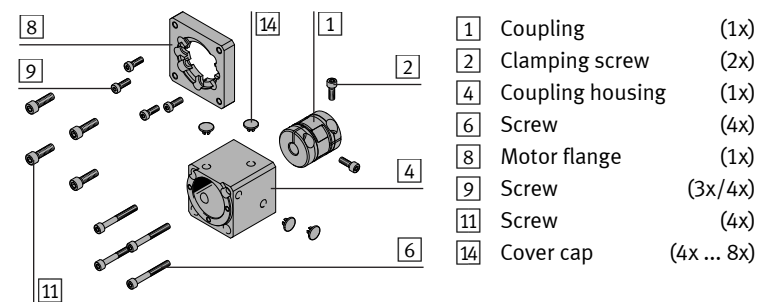There are two mounting variants (A/B).

EAMM-A-...	Mounting variants
E20-...A	A
E32/E48/E72-...A	B

3. Parts lists
3a. Mounting variant A parts list

1	Coupling	(1x)
2	Clamping screw	(2x)
4	Coupling housing	(1x)
6	Screw	(2x)
8	Motor flange	(1x)
9	Screw	(2x)
11	Screw	(4x)
14	Cover cap	(1x)

3b. Mounting variant B parts list

1	Coupling	(1x)
2	Clamping screw	(2x)
4	Coupling housing	(1x)
6	Screw	(4x)
8	Motor flange	(1x)
9	Screw	(3x/4x)
11	Screw	(4x)
14	Cover cap	(4x ... 8x)

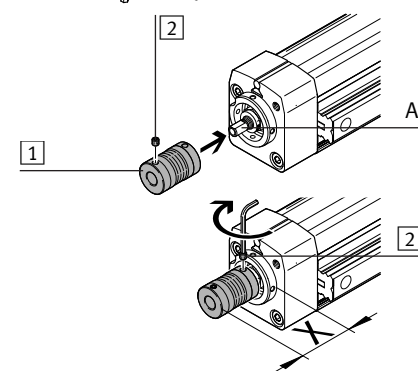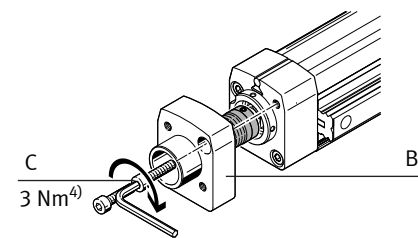## 4. Coupling preassembly
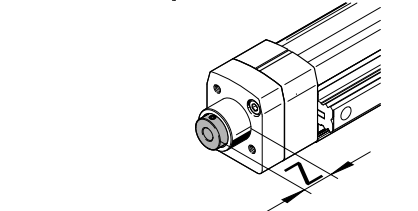### 4a. For mounting variant A (DMES-18)
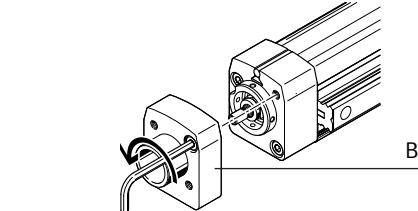
- Remove axis adapter (B).

- Slide coupling 1 with the matching drill hole onto the drive shaft (A).
- Lightly screw on motor-side clamping screw 2.

For accurate alignment:
- Observe distance (X) (➔ Section 6).
- Tighten axis-side clamping screw 2.

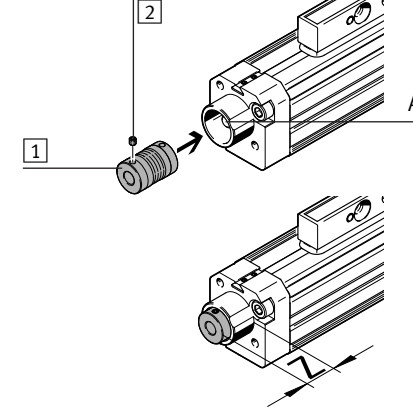- Fasten the axis adapter (B) on the axis's actuator end cap using the screws (C).

3 Nm[4]

For accurate alignment:
- Observe distance (Z) (➔ Section 6).

- Align the angular position of the coupling 1.
Check: the motor-side clamping screw 2 will be accessible later through a drill hole in the coupling housing 4.

4b. For mounting variant A (DGE-18-SP)

- Slide coupling 1 with the matching drill hole onto the drive shaft (A).
- Lightly screw on motor-side clamping screw 2.

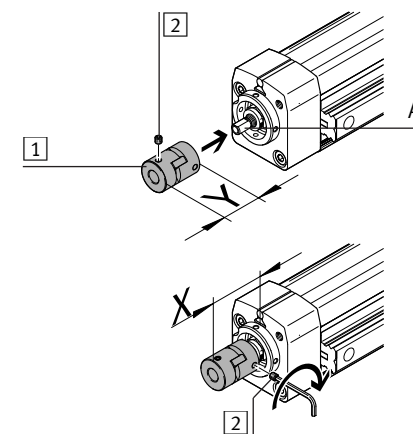For accurate alignment:
- Observe distance (Z) (➔ Section 6).
- Tighten axis-side clamping screw 2.
The axis-side clamping screw 2 is accessible through a drill hole in the actuator end cap.

- Align the angular position of the coupling 1.
Check: the motor-side clamping screw 2 will be accessible later through a drill hole in the coupling housing 4.

4c. For mounting variant B

- Slide coupling 1 with the matching drill hole onto the drive shaft (A).
- Lightly screw on motor-side clamping screw 2.

For accurate alignment:
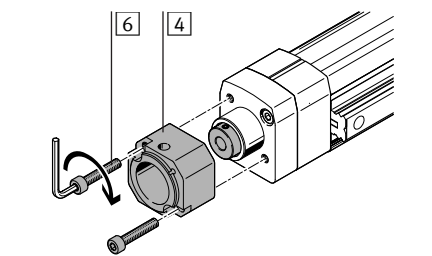- Observe distances (X and Y) (➔ Section 6).
- Tighten axis-side clamping screw 2.
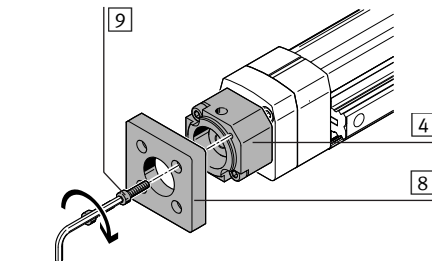
- Align the angular position of the coupling 1.
Check: the motor-side clamping screw 2 will be accessible later through a drill hole in the coupling housing 4.
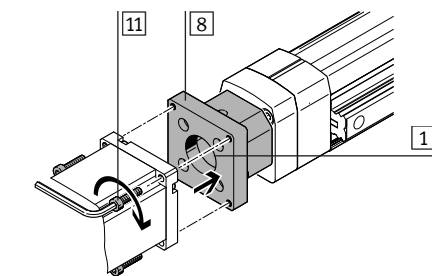
5. Mounting
5a. For mounting variant A

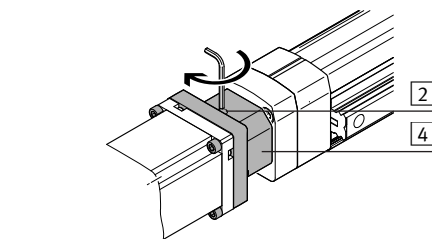- Fasten coupling housing 4 to the axis using the screws 6.

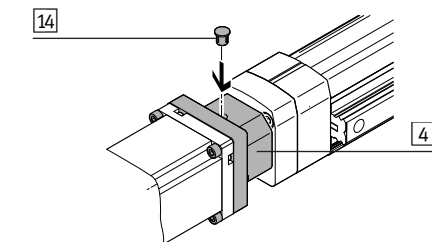- Fasten motor flange 8 to the coupling housing 4 using the screws 9.

- Connect motor to axis by pushing.
Check: the motor's drive shaft has been inserted into the coupling 1.
- Fasten motor to the motor flange 8 using the screws 11 [1].

- Tighten motor-side clamping screw 2 through a drill hole in the coupling housing 4.

- Push cover caps 14 into the drill holes in the coupling housing 4.

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[1] For the ...-42A kit, the motor flange 8 is fastened to the motor using the screws 11.

5b. For Mounting variant B

- Fasten coupling housing [4] to the axis using the screws [6].

- Fasten motor flange [8] to the coupling housing [4] using the screws [9].

- Connect motor to axis by pushing.
Check: the motor's drive shaft has been inserted into the coupling [1].
- Fasten motor to motor flange [8] using the screws [11].

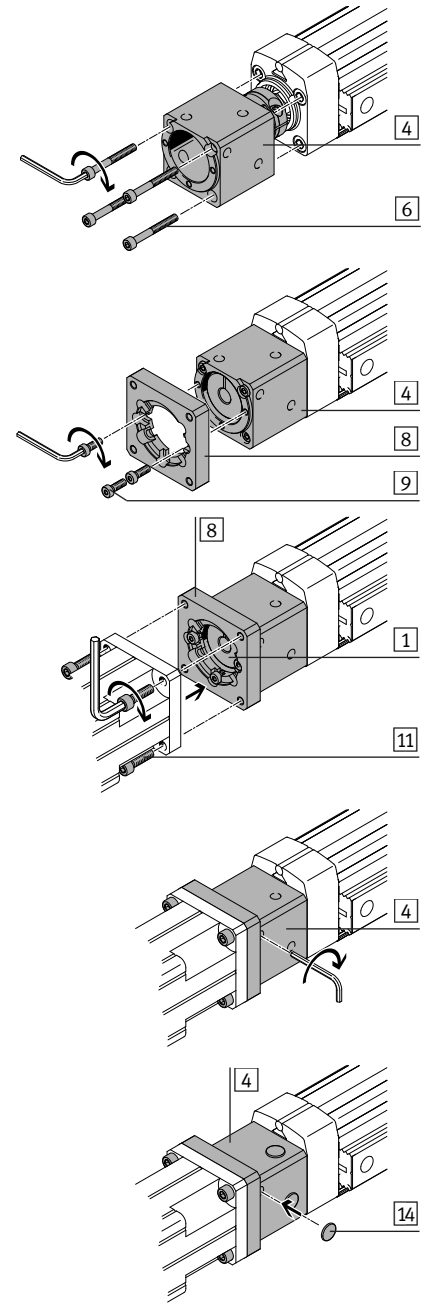- Tighten motor-side clamping screw [2] through a drill hole in the coupling housing [4].

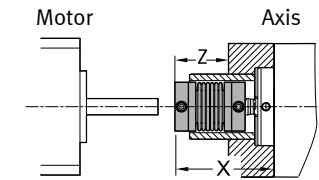- Push cover caps [14] into the drill holes in the coupling housing [4].
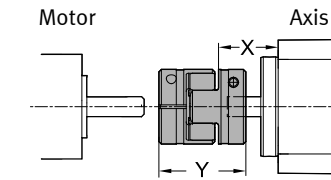
6. Coupling [1] alignment

→ **Note**

Axial forces on the shafts of motor and axis can result in failure of the encoder/brake or increased bearings wear.
- Observe distances X, Y and Z.

For mounting variant A:

For mounting variant B:

EAMM-A-	X ±0.5 [mm]	Y ±0.5 [mm]	Z ±0.5 [mm]
E20-40A	30	–	16
E20-42A			
E20-55A			
E32-40A	18.5	35	–
E32-55A			
E32-57A			
E32-67A			
E48-55A[2]	22	35	–
E48-57A[2]			
E48-44A-70A[2]			
E48-64A-70A[3]	36	66	–
E48-67A			
E48-87A			
E48-100A			
E72-70A	47.5	66	–
E72-87A			
E72-100A			

7. Screw sizes and tightening torques[4]

EAMM-A-	[2]	[Nm]	[6]	[Nm]	[9]	[Nm]	[11]	[Nm]
E20-40A	M3x4	1.5	M4x22	3	M3x10	1.2	M3x14	1.2
E20-42A					M3x20		M3x10	
E20-55A	M3x3				M3x16		M5x18	6
E32-40A	M4x12	3	M4x35	3	M4x12	3	M3x16	1.2
E32-55A						2.4	M5x18	6
E32-57A						3	M4x12	3
E32-67A							M6x16	8
E48-55A	M4x12	3	M5x50	6	M4x12	2.4	M5x18	6
E48-57A						3	M4x12	3
E48-44A-70A						2.4	M5x18	6
E48-64A-70A	M6x16	10.5	M5x70		M6x12	8	M5x20	
E48-67A					M6x16	10	M6x16	8
E48-87A							M6x22	10
E48-100A					M6x20		M8x25	18
E72-70A	M6x16	10.5	M8x90	18	M6x12	8	M5x20	6
E72-87A					M6x16	10	M6x22	10
E72-100A					M6x20		M8x25	18

8. Supporting the axis-motor combination
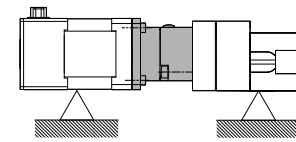
To avoid damage:
- Support the combination so it is free from tension.

9. Permissible axes and motors

→ **Note**

Malfunction and material damage due to overloading.
The output variables of the motor 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 shaft and motor from the interface codes.

Example: EAMM-A-**E20-40A**
- Axis interface   **E20**
- Motor interface   **40A**

Axis interface	Axis[5]
E20	DMES-18, DGE-18-SP
E32	DMES-25, DGE-25-SP
E48	DMES-40[2], DGE-40-SP[3]
E72	DMES-63, DGE-63-SP

Motor interface	Motor[6]
40O	EMMS-AS-40
42A	EMMS-ST-42
55A	EMMS-AS-55
57A	EMMS-ST-57
67A	EMCA-EC-67
70A	EMMS-AS-70
87A	EMMS-ST-87
100A	EMME-AS-100, EMMS-AS-100

[2] DMES-40 is not permissible for EAMM-A-E48-55A, E48-57A and E48-44A-70A.
[3] DGE-SP-40 is not permissible for EAMM-A-E48-64A-70A.
[4] Tolerance for M_A tightening torques with no indication of tolerance ± 20 %

[5] Spindle axis DGE-...-SP, positioning axis DMES
[6] Servo motor EMME-AS/EMMS-AS, stepper motor EMMS-ST, integrated drive EMCA-EC