

Rotary lifting modules EHMB, electric

FESTO



Characteristics

At a glance

The rotary lifting module EHMB combines rotary and linear motion in one compact unit. The rotation motion is always transferred via a toothed belt to a hollow shaft by an electric motor while the linear motion is generated either by a pneumatic cylinder DSBC or an electric cylinder ESBF. Both movements act on the output flange.

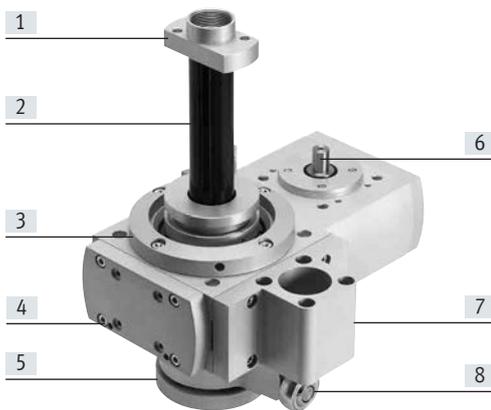
Cables and tubing can be easily routed to the front unit of the rotary lifting module through the large hollow shaft.

The movement range can also be sensed using proximity switches at the rotary unit and the cylinder.

Advantages:

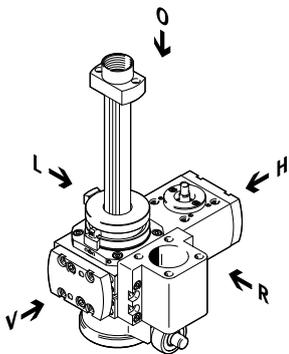
- Large hollow axis
- Stable bearing
- Various motors and cylinders enable the performance to be adapted easily to the application

The technology in detail



- [1] Stop nut
- [2] Grooved shaft guide
- [3] Through-hole for mounting
- [4] Mounting threads/mounting holes
- [5] Output flange with centring and threaded holes for payload
- [6] Drive shaft for rotation
- [7] Cylinder holder
- [8] Rod eye and connecting bolt for linear motion

Flexible connection



- O= top
- U= underneath
- R= right
- V= front
- L= left
- H= rear

- The rotary lifting module EHMB can be mounted on 4 sides:
 - On the right or left of the housing (L, R)
 - On the front cover (V)
 - Underneath the housing (U)
- The cylinder holder can be mounted on 3 sides:
 - On the right or left of the housing (L, R)
 - On the front, after removing the front cover (V)
- The side where the cylinder holder is mounted cannot be used for mounting the rotary lifting module
- A pneumatic standards-based cylinder DSBC or an electric cylinder ESBF can be attached to the cylinder holder. (These cylinders must be ordered separately)

Note

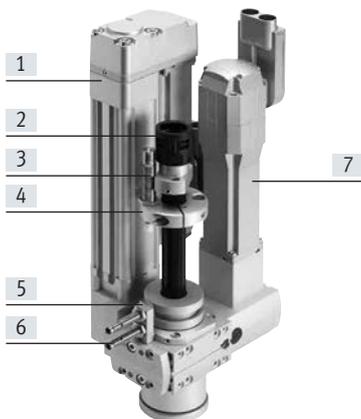
Eccentric loads can destroy the bearing.
The front side (V) may be used only to attach a symmetrical applied load.

Characteristics

Complete system consisting of rotary lifting module, motor and axial kit

Rotary lifting module

→ Page 6



- [1] Electric cylinder ESBF, alternatively standards-based cylinder DSBC¹⁾
- [2] Protective conduit fitting¹⁾
- [3] Shock absorber¹⁾
- [4] Shock absorber retainer¹⁾
- [5] Sensor bracket
- [6] Proximity switch SIEN¹⁾
- [8] Motor for rotation¹⁾

1) These parts must be ordered separately as accessories.

Motors

→ Page 17



- Servo motor EMME-AS, EMMT-AS
- Stepper motor EMMS-ST
- Integrated drive EMCA

Note

A range of specially matched complete solutions is available for the rotary lifting module EHMB and motors.

Motor controllers

Data sheets → Internet: motor controller



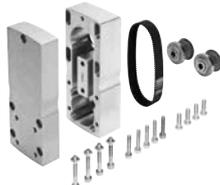
- Servo motor controller CMMP-AS
- Stepper motor controller CMMT-ST

Motor mounting kit

→ Page 17

Axial kit

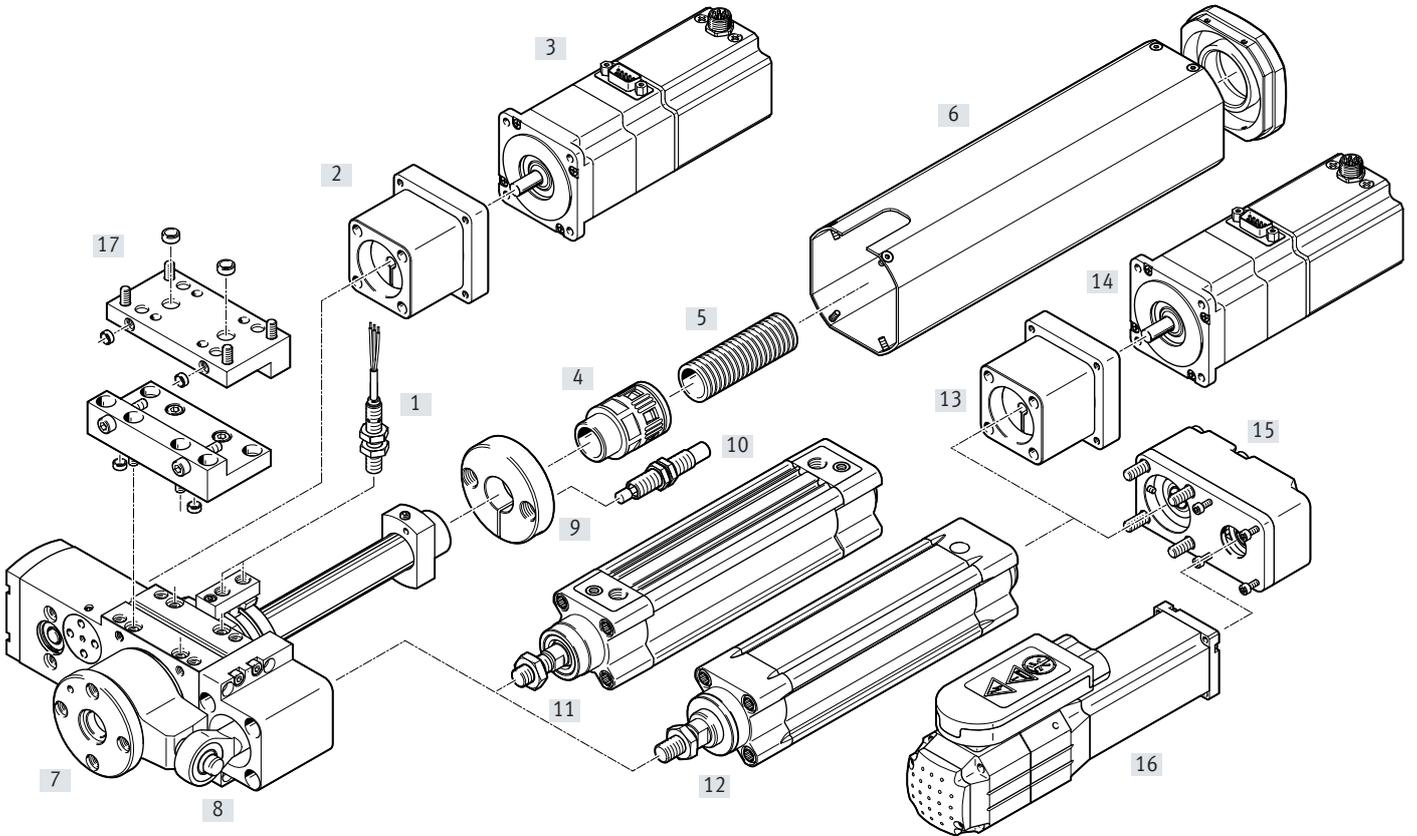
Parallel kit



Complete kits are available for both parallel and axial motor mounting.

Peripherals overview

Peripherals overview



| Accessories | | | |
|--|--|--|-----------------|
| Type | Description | | → Page/Internet |
| [1] Proximity switch SIEN | <ul style="list-style-type: none"> For use as a signal check or safety check The retaining bracket for the proximity switch SIEN is included in the scope of delivery of the rotary lifting module Two cams → page 23, for sensing positions, are included in the scope of delivery | | 23 |
| [2] Axial kit EAMM-A | <ul style="list-style-type: none"> For the rotation of the rotary lifting module For axial motor mounting (Consisting of: coupling, coupling housing and motor flange) | | 17 |
| [3] Motor EMMS, EMME, EMCA | <ul style="list-style-type: none"> For the rotation of the rotary lifting module Motors specially matched to the axis, with or without brake The motor can be turned 90° when mounting, depending on the requirement. This means the connection side can be freely selected | | 17 |
| [4] Protective conduit fitting EASA | For mounting the protective conduit | | 23 |
| [5] Protective conduit MKR | For protecting electrical cables and compressed air tubing | | 23 |
| [6] Covering EASC | <ul style="list-style-type: none"> For protecting the grooved shaft guide and the trip cams Cannot be used in combination with the parallel kit EAMM-U for size 20, 25 | | 22 |
| [7] Rotary lifting module EHMB | Combination of linear and rotary drive | | 6 |
| [8] Rod eye SGS | <ul style="list-style-type: none"> Connecting piece between rotary lifting module and standards-based/electric cylinder Included in the scope of delivery of the rotary lifting module | | 22 |
| [9] Shock absorber retainer EAYH | Retainer for the shock absorber DYSW | | 22 |

Peripherals overview and type codes

| Accessories | | | |
|---------------------------------------|---|--|-----------------|
| Type | Description | | → Page/Internet |
| [10] Shock absorber DYSW | <ul style="list-style-type: none"> Hydraulic shock absorber with path-controlled flow control function | | 22 |
| [11] Standards-based cylinder DSBC | <ul style="list-style-type: none"> Pneumatic drive for the linear motion of the rotary lifting module | | 16 |
| [12] Electric cylinder ESBF | <ul style="list-style-type: none"> Electric drive for the linear motion of the rotary lifting module | | 16 |
| [13] Axial kit EAMM-A | <ul style="list-style-type: none"> For the linear motion of the rotary lifting module For axial motor mounting Alternatively parallel kit [15] (Consisting of: coupling, coupling housing and motor flange) | | esbf |
| [14] Motor EMMS, EMME, EMCA | <ul style="list-style-type: none"> For the linear motion of the rotary lifting module Motors specially matched to the axis, with or without brake The motor can be turned 90° when mounting, depending on the requirement. This means the connection side can be freely selected | | esbf |
| [15] Parallel kit EAMM-U | <ul style="list-style-type: none"> For the linear motion of the rotary lifting module For parallel motor mounting Alternatively axial kit [13] (consisting of: housing, clamping part, clamping sleeve, toothed belt pulley, toothed belt) | | esbf |
| [16] Motor EMMS, EMME, EMCA | <ul style="list-style-type: none"> For the linear motion of the rotary lifting module Motors specially matched to the axis, with or without brake The motor can be turned 90° when mounting, depending on the requirement. This means the connection side can be freely selected | | esbf |
| [17] Adapter plate kit EHAM | <ul style="list-style-type: none"> For attaching the EHMB to the axes EGC and DGC Screws and centring sleeves are included in the scope of delivery of the adapter plate kit | | 22 |
| – Adapter | For drive/drive connections | | 24 |
| | For drive/gripper connections | | gripper |

 **Note**

When routing electrical cables or compressed air tubing through the hollow shaft of the grooved shaft guide, the rotation angle of the EHMB must be limited to a rotation angle appropriate to the cables or compressed air tubing.

Infinite rotation damages cables and tubing

Type codes

| 001 | Series | |
|-------------|-----------------------|--|
| EHMB | Rotary/lifting module | |

| 002 | Size | |
|-----------|------|--|
| 20 | 20 | |
| 25 | 25 | |
| 32 | 32 | |

| 003 | Stroke | |
|------------|--------|--|
| 100 | 100 | |
| 200 | 200 | |

Data sheet

⊗ Size
 20, 25, 32

⦿ **Note**
 All values are based on a room
 temperature of 23°C.



| General technical data | | | | |
|---|-------|---|-----|-----|
| Size | | 20 | 25 | 32 |
| Design | | Electromechanical rotary lifting module with toothed belt | | |
| Drive pinion diameter | [mm] | 6 | 8 | 12 |
| Rotation angle | | Infinite | | |
| Stroke, linear | [mm] | 100, 200 | | |
| Repetition accuracy, rotary ¹⁾ | | | | |
| with servo motor EMMT-AS/EMME-AS | [°] | ±0.03 | | |
| with stepper motor EMMS-ST ²⁾ | [°] | ±0.08 | | |
| with integrated drive EMCA | [°] | ±0.05 | | |
| Max. speeds, linear | | | | |
| with standards-based cylinder DSBC | [m/s] | → Page 10 | | |
| with electric cylinder ESBF | [m/s] | 1.1 | | 1.2 |
| Positioning times, rotary | | → Page 11 | | |
| Gear ratio | | 4.5:1 | 4:1 | 3:1 |
| Position sensing | | Via proximity switch | | |
| Mounting position | | Optional | | |

- 1) When the travel profile remains the same. The specifications apply only when the motor is directly mounted. If a gear unit is also installed, the repetition accuracy will be different
 2) Dependent on the encoder resolution

⦿ **Note**
 The connection between the drive for
 the linear motion and the EHMB is
 not backlash-free.

| Mechanical data | | | | |
|--|-------|--------|--------|------------------|
| Size | | 20 | 25 | 32 |
| Max. driving torque | [Nm] | 0.7 | 2.2 | 6.7 |
| Max. output torque ¹⁾ | [Nm] | 3.15 | 8.8 | 20 |
| Average no-load driving torque ²⁾ | [Nm] | < 0.07 | < 0.18 | < 0.5 |
| Max. input speed | [rpm] | 1350 | 1200 | 900 |
| Max. output speed | [rpm] | 300 | 300 | 300 |
| Max. payload, horizontal | [kg] | 3 | 5 | 8 |
| Max. payload, vertical | [kg] | 3 | 5 | 15 ³⁾ |
| Toothed belt pitch | | 2 | 3 | 5 |

- 1) Output torque minus friction is dependent on rotational speed
 2) At maximum rotational speed
 3) With symmetrical and non-eccentric configuration

Data sheet

| Mechanical data | | | | |
|---|----------------------|------|------|-------|
| Size | | 20 | 25 | 32 |
| Max. mass moment of inertia ¹⁾ | [kgcm ²] | 1000 | 5000 | 10000 |
| Max. inertia factor ²⁾ | | | | |
| for servo motor EMMT-AS/EMME-AS | | 45 | | |
| for stepper motor EMMS-ST | | 30 | | |
| for integrated drive EMCA | | 16 | | |

1) These values specify the upper limit independently of what is determined using the inertia factor.

2) The inertia factor represents the maximum controllable ratio between the inertia of the load and the intrinsic inertia of the motor with brake.

Example:

Rotary lifting module EHMB-20 → transmission ratio $i = 4.5$

Motor EMME-AS-40-S with brake → intrinsic inertia 0.055 kgcm^2

Gear unit EMGA-40-P-G3-40 → transmission ratio $i = 3$

Limit for inertia of the load (+ intrinsic inertia) on output side:

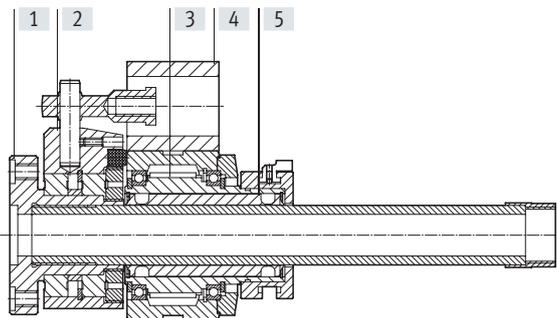
$$0.055 \text{ kgcm}^2 \times 45 \times 3^2 \times 4.5^2 = 451 \text{ kgcm}^2$$

| Operating and environmental conditions | | | | |
|--|----------|-------------|----|----|
| Size | | 20 | 25 | 32 |
| Ambient temperature | [°C] | -10 ... +60 | | |
| Sound pressure level with covering | [dB (A)] | 57 | 56 | 53 |
| Sound pressure level without covering | [dB (A)] | 54 | 51 | 51 |

| Weight [g] | | | | | | | |
|--|------|------|------|------|------|------|------|
| Size | | 20 | | 25 | | 32 | |
| Stroke | [mm] | 100 | 200 | 100 | 200 | 100 | 200 |
| Product weight | | | | | | | |
| Total | | 1716 | 1851 | 3347 | 3620 | 6112 | 6388 |
| Moving mass for linear motion | | | | | | | |
| Guide rod | | 501 | 681 | 1251 | 1651 | 1332 | 1732 |
| Stop nut | | 25 | 25 | 53 | 53 | 53 | 53 |
| Shock absorber retainer | | 64 | 64 | 99 | 99 | 99 | 99 |
| Shock absorber | | 42 | 42 | 66 | 66 | 66 | 66 |
| Rod eye | | 73 | 73 | 73 | 73 | 108 | 108 |
| Moving mass of standards-based cylinder DSBC | | 200 | 290 | 200 | 290 | 365 | 525 |

Materials

Sectional view

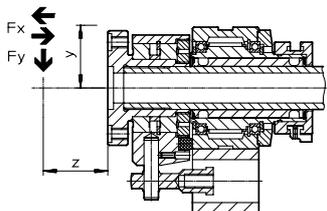


| Rotary lifting module | | |
|-----------------------|-------------------|--|
| [1] | Flange | Anodised aluminium |
| [2] | Holder | Anodised wrought aluminium alloy |
| [3] | Toothed belt | Polychloroprene with glass fibre |
| [4] | Retaining bracket | Anodised aluminium |
| [5] | Output shaft | Steel |
| - | Drive shaft | High-alloy stainless steel |
| - | Note on materials | RoHS-compliant |
| | | Contains paint-wetting impairment substances |

Data sheet

Maximum radial and axial force F_y/F_z at the output shaft as a function of distance x/z

If the rotary module is simultaneously subjected to several forces, the following equation must be satisfied in addition to the maximum loads indicated below.

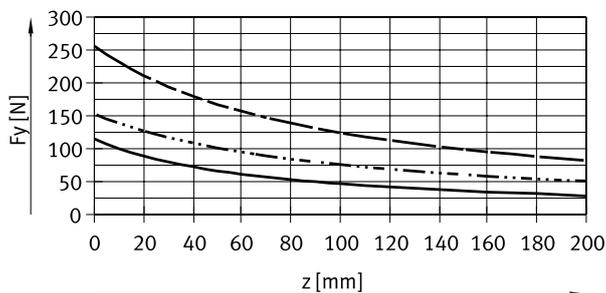


$$\frac{|F_{x1}|}{F_{x2}} + \frac{|F_{y1}|}{F_{y2}} + \frac{|F_{z1}|}{F_{z2}} \leq 1$$

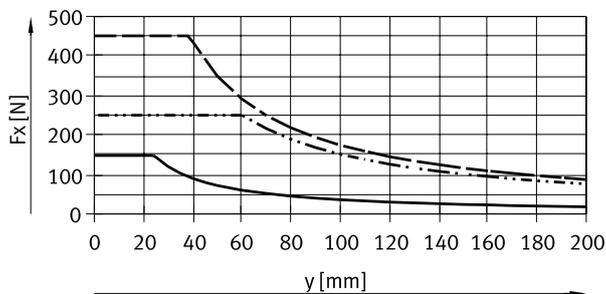
F_1 = dynamic value

F_2 = maximum value

Max. radial force F_y , dynamic



Max. axial force F_x , dynamic, pushing and pulling

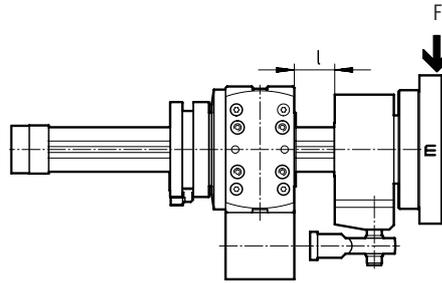


- EHMB-20
- EHMB-25
- - - EHMB-32

Data sheet

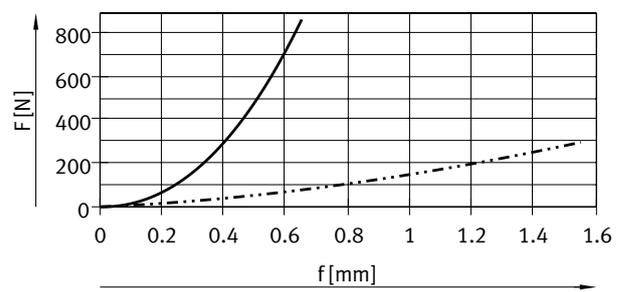
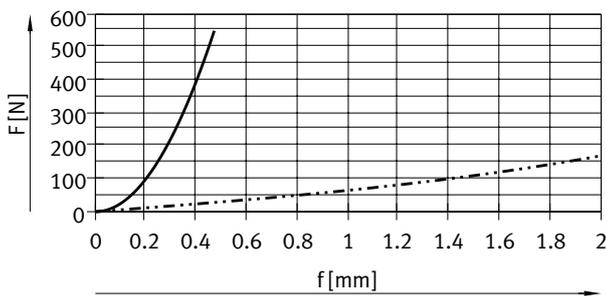
Deflection f as a function of transverse load F and stroke l

The following graphs show the deflection f of the rotary lifting module under radial forces and with two strokes.

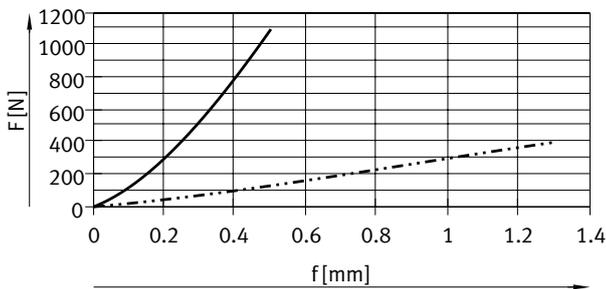


EHMB-20

EHMB-25



EHMB-32

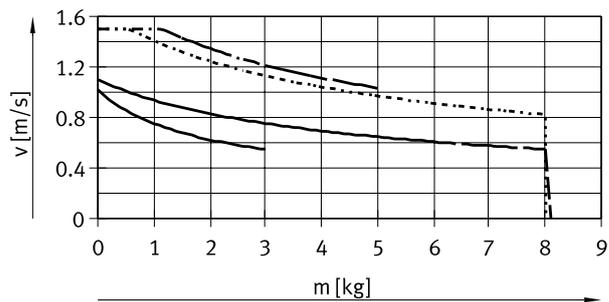
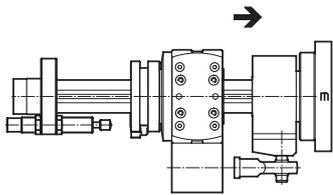
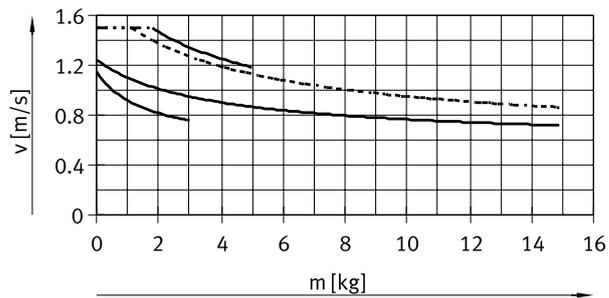
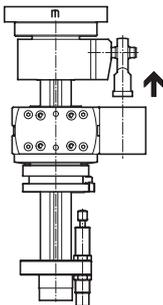
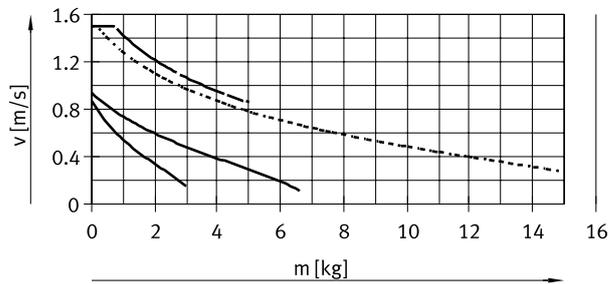
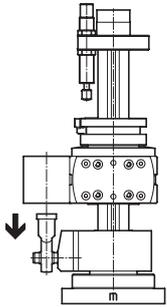


— $l = 10$ mm
 - - - $l = 200$ mm

Data sheet

Max. velocity v as a function of payload m , in combination with the pneumatic standards-based cylinder DSBC

Mounting position:



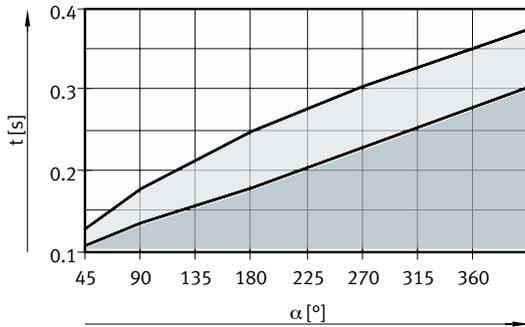
- EHMB-20
- - - EHMB-25
- - - EHMB-32, with one shock absorber
- EHMB-32, with two shock absorbers

Data sheet

Positioning time t as a function of the rotation angle α

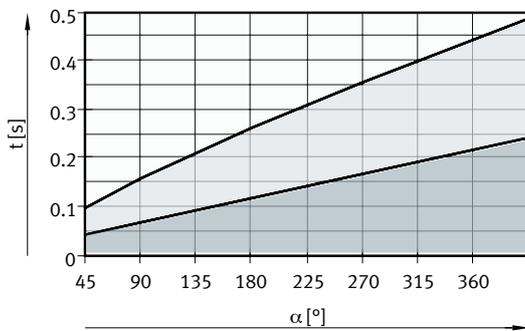
Size 20

Example with servo motor EMMS-AS



- Permissible range
- Typical operating range, depending on motor size and inertia of the load
- Non-viable range

Example with stepper motor EMMS-ST



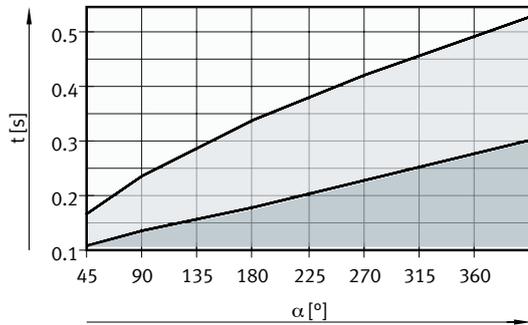
- Permissible range
- Typical operating range, depending on motor size and inertia of the load
- Non-viable range

Data sheet

Positioning time t as a function of the rotation angle α

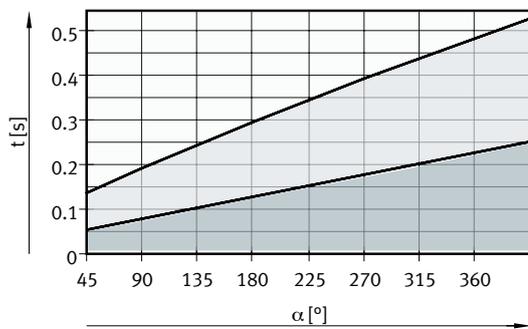
Size 25

Example with servo motor EMMS-AS



- Permissible range
- Typical operating range, depending on motor size and inertia of the load
- Non-viable range

Example with stepper motor EMMS-ST



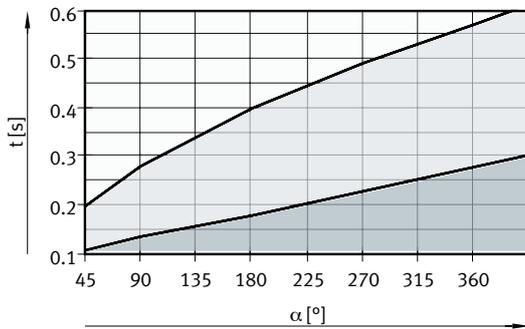
- Permissible range
- Typical operating range, depending on motor size and inertia of the load
- Non-viable range

Data sheet

Positioning time t as a function of the rotation angle α

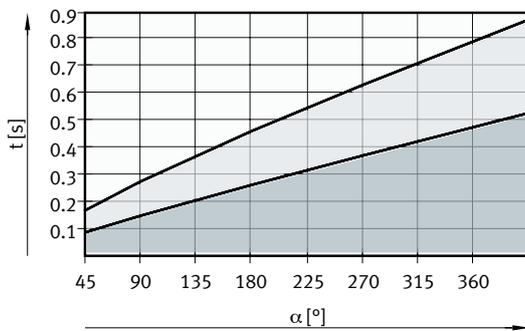
Size 32

Example with servo motor EMMS-AS



- Permissible range
- Typical operating range, depending on motor size and inertia of the load
- Non-viable range

Example with stepper motor EMMS-ST

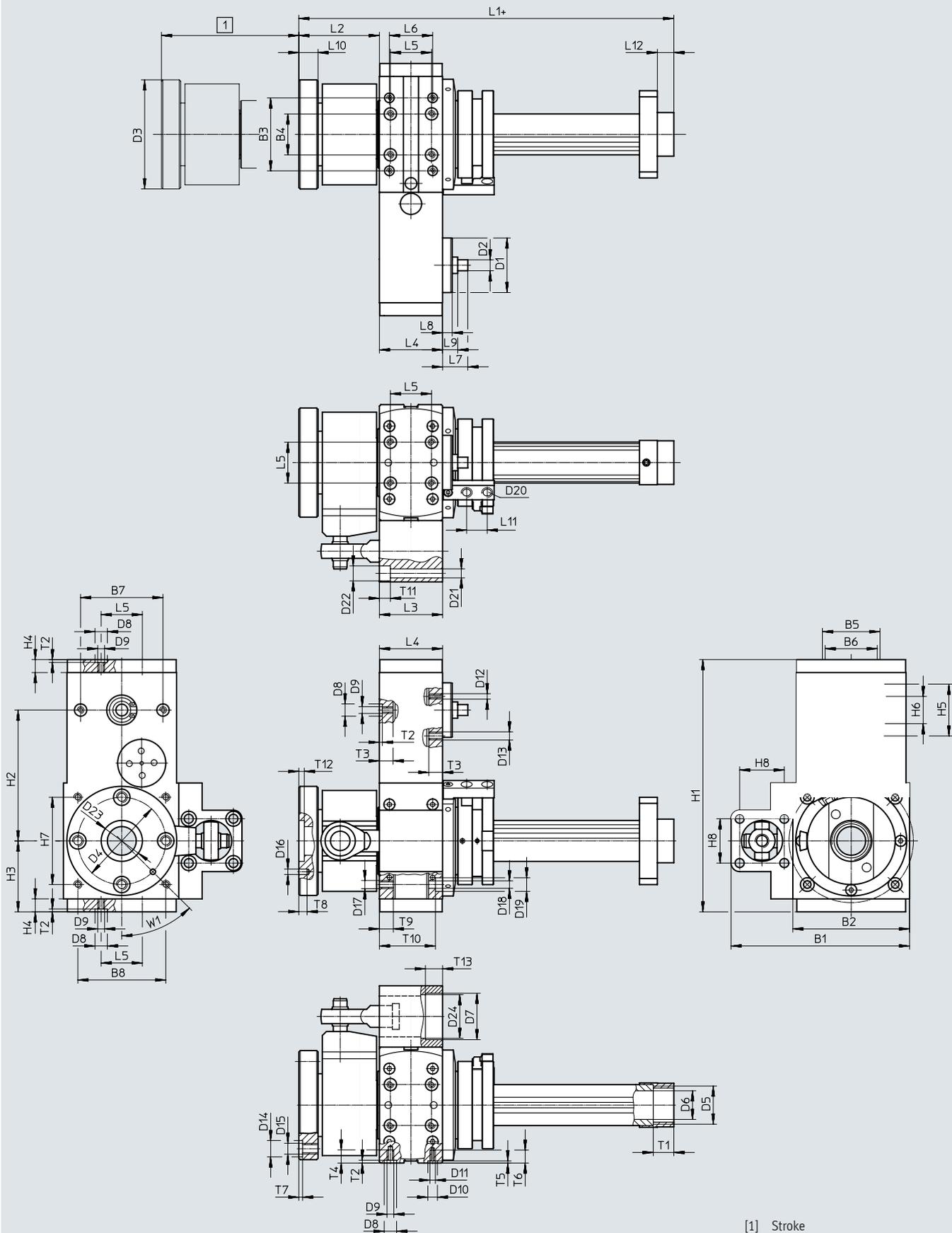


- Permissible range
- Typical operating range, depending on motor size and inertia of the load
- Non-viable range

Data sheet

Dimensions

Download CAD data → www.festo.com



[1] Stroke
+ = plus stroke length

Data sheet

| Size | B1 ±0.5 | B2 ±0.2 | B3 ¹⁾ | B4 ¹⁾ | B5 ±0.15 | B6 ±0.15 | B7 ¹⁾ | B8 ±0.15 | D1 ∅ g7 | D2 ∅ h6 | D3 ∅ | D4 ∅ ±0.05 |
|------|------------|------------|------------------|------------------|-------------|-------------|------------------|-------------|---------------|---------------|---------|------------------|
| 20 | 110 | 65 | 54 | 34 | 32 | 32.5 | 30 | 52 | 32 | 6 | 58 | 45 |
| 25 | 130 | 85 | 53.5 | 30 | 42 | 38 | 60 | 64 | 40 | 8 | 80 | 64 |
| 32 | 169.5 | 115 | 70 | 40 | 62 | 56.5 | 80 | 88 | 60 | 12 | 80 | 64 |

| Size | D5 | D6 ∅ | D7 ∅ H8 | D8 ∅ H7 | D9 | D10 ∅ H7 | D11 | D12 | D13 | D14 ∅ H7 | D15 | D16 ∅ H7 | D17 |
|------|------|---------|---------------------|---------------|----|----------------|-----|-----|-----|----------------|-----|----------------|-----|
| 20 | Pg16 | 14 | 34/30 ²⁾ | 9 | M5 | 7 | M4 | M3 | M6 | 9 | M6 | 4 | M5 |
| 25 | Pg21 | 21 | 34/30 ²⁾ | 9 | M5 | 7 | M4 | M4 | M6 | 12 | M8 | 4 | M6 |
| 32 | Pg21 | 21 | 39/35 ²⁾ | 9 | M5 | – | M5 | M5 | M8 | 12 | M8 | 4 | M6 |

| Size | D18 ∅ | D19 ∅ | D20 | D21 ∅ | D22 ∅ | D23 ∅ | D24 ∅ | H1 ±0.5 | H2 ±0.05 | H3 | H4 | H5 ±0.15 | H6 ±0.15 |
|------|----------|----------|------|----------|----------|------------------|----------|------------|-------------|------|-----|-------------|-------------|
| 20 | – | – | M8x1 | 6.6 | 11 | 19 ^{H8} | 32 | 149 | 72 | 45 | 9.5 | 32.5 | 19 |
| 25 | 5.5 | 10 | M8x1 | 6.6 | 11 | 30 ^{H7} | 32 | 185 | 96 | 52 | 9.5 | 38 | 20 |
| 32 | 6.2 | 10 | M8x1 | 6.6 | 11 | 30 ^{H7} | 37 | 229.5 | 108 | 70.5 | 13 | 56.5 | 31 |

| Size | H7 ±0.15 | H8 | L1 | L2 min. | L3 ±0.1 | L4 ±0.1 | L5 ¹⁾ | L6 ¹⁾ | L7 | L8 | L9 | L10 | L11 ±0.1 | L12 |
|------|-------------|------|-------|------------|------------|------------|------------------|------------------|-------|----|-----|-----|-------------|-----|
| 20 | 44 | 32.5 | 147.5 | 40.5 | 52 | 40 | 30 | 30 | 15.8 | 5 | 7.8 | 9 | 15 | 12 |
| 25 | 64 | 32.5 | 173 | 58.6 | 46 | 46 | 30 | 31.5 | 18.35 | 7 | – | 14 | 15 | 12 |
| 32 | 88 | 38 | 183 | 61.4 | 60 | 60 | 40 | 47 | 23.3 | 6 | – | 14 | 15 | 12 |

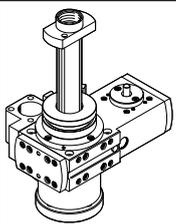
| Size | T1 | T2 +0.1 | T3 | T4 | T5 +0.2 | T6 | T7 +0.1 | T8 | T9 | T10 ±0.2 | T11 | T12 ±0.5 | T13 +0.4 | W1 |
|------|----|------------|----|-----|------------|-----|------------|----|-----|-------------|-----|-------------|-------------|-----|
| 20 | 14 | 2.1 | 10 | 9 | 1.6 | 9.5 | 2.1 | 6 | 8.5 | – | 11 | 3 | 12.5 | 45° |
| 25 | 15 | 2.1 | 10 | 9.6 | 1.6 | 9.5 | 2.7 | 6 | 10 | 40.8 | 8 | 4 | 12.5 | 45° |
| 32 | 15 | 2.1 | 10 | 9 | – | 9.5 | 2.7 | 6 | 10 | 54.3 | 15 | 4 | 14.5 | 45° |

1) Tolerance for centring hole ±0.02 mm
Tolerance for thread ±0.1 mm

 - Note

2) The diameter can be reduced using a centring ring (included in the scope of delivery of the EHMB).

Data sheet

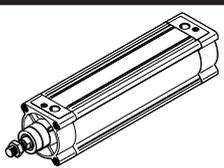
| Ordering data | | | |
|--|------|-------------|------------------------------|
| | Size | Stroke [mm] | Part no. Type |
|  | 20 | 100 | 1107096 EHMB-20-100 |
| | | 200 | 1107097 EHMB-20-200 |
| | 25 | 100 | 1095933 EHMB-25-100 |
| | | 200 | 1095934 EHMB-25-200 |
| | 32 | 100 | 1098558 EHMB-32-100 |
| | | 200 | 1098559 EHMB-32-200 |

Cylinder connection for linear motion

Ordering data

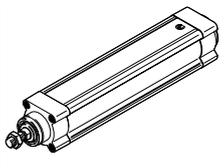
In combination with pneumatic standards-based cylinder DSBC

Data sheets → Internet: dsbc

| | For rotary lifting module | Standards-based cylinder DSBC | |
|--|---------------------------|-------------------------------|----------------------------|
| | | Part no. | Type |
|  | EHMB-20-100 | 1376426 | DSBC-32-100-PPVA-N3 |
| | EHMB-20-200 | 1376429 | DSBC-32-200-PPVA-N3 |
| | EHMB-25-100 | 1376426 | DSBC-32-100-PPVA-N3 |
| | EHMB-25-200 | 1376429 | DSBC-32-200-PPVA-N3 |
| | EHMB-32-100 | 1376660 | DSBC-40-100-PPVA-N3 |
| | EHMB-32-200 | 1376663 | DSBC-40-200-PPVA-N3 |

In combination with electric cylinder ESBF

Data sheets → Internet: esbf

| | For rotary lifting module | Electric cylinder ESBF | |
|--|---------------------------|------------------------|----------------------------|
| | | Part no. | Type |
|  | EHMB-20-100 | 1) | ESBF-...-32-100-... |
| | EHMB-20-200 | 1) | ESBF-...-32-200-... |
| | EHMB-25-100 | 1) | ESBF-...-32-100-... |
| | EHMB-25-200 | 1) | ESBF-...-32-200-... |
| | EHMB-32-100 | 1) | ESBF-...-40-100-... |
| | EHMB-32-200 | 1) | ESBF-...-40-200-... |

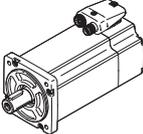
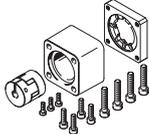
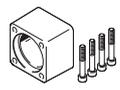
1) Ordering data → Internet: esbf

Accessories

Motor connection for rotary motion

Permissible axis/motor combinations with axial kit – Without gear unit

Data sheets → Internet: eamm-a

| Motor ¹⁾ | Axial kit | Axial kit comprises: | | |
|---|---|---|---|---|
| Type | Part no. Type | Motor flange Part no. Type | Coupling Part no. Type | Coupling housing Part no. Type |
|  |  |  |  |  |
| EHMB-20 | | | | |
| With servo motor | | | | |
| EMME-AS-40-... | 2207441 EAMM-A-D32-35A-40P | – | 533708 EAMC-30-32-6-8 | 2207509 EAMK-A-D32-35A-40P |
| EMMT-AS-60-..., EMME-AS-60-... | 1956054 EAMM-A-D32-60P | 1956846 EAMF-A-44C-60P | 1233256 EAMC-30-32-6-14 | 551006 EAMK-A-D32-44A/C |
| With stepper motor | | | | |
| EMMS-ST-42-... | 543148 EAMM-A-D32-42A | 552164 EAMF-A-28B-42A | 543419 EAMC-16-20-5-6 | 552155 EAMK-A-D32-28B |
| EMMS-ST-57-... | 550980 EAMM-A-D32-57A | 530081 EAMF-A-44A/B-57A | 551002 EAMC-30-32-6-6.35 | 551006 EAMK-A-D32-44A/C |
| With integrated drive | | | | |
| EMCA-EC-67-... | 1454239 EAMM-A-D32-67A | 1476305 EAMF-A-44A/B/C-67A-S1 | 551003 EAMC-30-32-6-9 | 551006 EAMK-A-D32-44A/C |
| EHMB-25 | | | | |
| With servo motor | | | | |
| EMMT-AS-60-..., EMME-AS-60-... | 1977000 EAMM-A-D40-60P | 1956846 EAMF-A-44C-60P | 562682 EAMC-30-32-8-14 | 552157 EAMK-A-D40-44A/C |
| With stepper motor | | | | |
| EMMS-ST-57-... | 543154 EAMM-A-D40-57A | 530081 EAMF-A-44A/B-57A | 543421 EAMC-30-32-6.35-8 | 552157 EAMK-A-D40-44A/C |
| EMMS-ST-87-... | 550982 EAMM-A-D40-87A | 530082 EAMF-A-44A/B-87A | 551004 EAMC-30-32-8-11 | 552157 EAMK-A-D40-44A/C |
| With integrated drive | | | | |
| EMCA-EC-67-... | 1454243 EAMM-A-D40-67A | 1476305 EAMF-A-44A/B/C-67A-S1 | 543423 EAMC-30-32-8-9 | 552157 EAMK-A-D40-44A/C |

1) The input torque must not exceed the maximum permissible transferable torque of the axial kit.

 **Note**

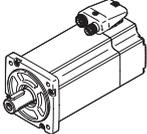
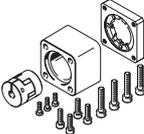
Note the maximum permissible driving torque of the EHMB.
The motor current may need to be limited.

Accessories

Motor connection for rotary motion

Permissible axis/motor combinations with axial kit – Without gear unit

Data sheets → Internet: eamm-a

| Motor ¹⁾ | Axial kit | Axial kit comprises: | | |
|---|---|---|---|---|
|  |  | Motor flange  | Coupling  | Coupling housing  |
| Type | Part no. Type | Part no. Type | Part no. Type | Part no. Type |
| EHMB-32 | | | | |
| With servo motor | | | | |
| EMMT-AS-80-..., EMME-AS-80-... | 1977073 EAMM-A-D60-80P | 1977113 EAMF-A-64A/C-80P | 551005 EAMC-42-50-12-19 | 551007 EAMK-A-D60-64C |
| EMMT-AS-100-..., EMME-AS-100-... | 550983 EAMM-A-D60-100A | 529947 EAMF-A-64A/C/D-100A | 551005 EAMC-42-50-12-19 | 551007 EAMK-A-D60-64C |
| With stepper motor | | | | |
| EMMS-ST-87-... | 543162 EAMM-A-D60-87A | 533140 EAMF-A-64A/B-87A | 543424 EAMC-42-50-11-12 | 552160 EAMK-A-D60-64B |

1) The input torque must not exceed the maximum permissible transferable torque of the axial kit.

 **Note**

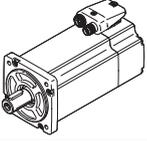
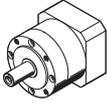
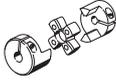
Note the maximum permissible driving torque of the EHMB.
The motor current may need to be limited.

Accessories

Motor connection for rotary motion

Permissible axis/motor combinations with axial kit – With gear unit

Data sheets → Internet: eamm-a

| Motor ¹⁾  | Gear unit  | Axial kit  | Axial kit comprises: | | |
|--|--|--|--|---|---|
| | | | Motor flange  | Coupling  | Coupling housing  |
| Type | Type | Part no. Type | Part no. Type | Part no. Type | Part no. Type |
| EHMB-20 | | | | | |
| With servo motor | | | | | |
| EMME-AS-40-... | EMGA-40-P-G...-EAS-40 | 1454238 EAMM-A-D32-40G | 1460095 EAMF-A-44C-40G-S1 | 562681 EAMC-30-32-6-10 | 551006 EAMK-A-D32-44A/C |
| EMMT-AS-60-..., EMME-AS-60-... | EMGA-60-P-G...-EAS-60 | 2946760 EAMM-A-D32-60H | 1460105 EAMF-A-44C-60G/H-S1 | 1233256 EAMC-30-32-6-14 | 551006 EAMK-A-D32-44A/C |
| With stepper motor | | | | | |
| EMMS-ST-42-... | EMGA-40-P-G...-SST-42 | 1454238 EAMM-A-D32-40G | 1460095 EAMF-A-44C-40G-S1 | 562681 EAMC-30-32-6-10 | 551006 EAMK-A-D32-44A/C |
| EMMS-ST-57-... | EMGA-60-P-G...-SST-57 | 2946758 EAMM-A-D32-60G | 1460105 EAMF-A-44C-60G/H-S1 | 3187577 EAMC-30-32-6-11 | 551006 EAMK-A-D32-44A/C |
| With integrated drive | | | | | |
| EMCA-EC-67-... | EMGC-40-... | 1454238 EAMM-A-D32-40G | 1460095 EAMF-A-44C-40G-S1 | 562681 EAMC-30-32-6-10 | 551006 EAMK-A-D32-44A/C |
| | EMGC-60-... | 2946760 EAMM-A-D32-60H | 1460105 EAMF-A-44C-60G/H-S1 | 1233256 EAMC-30-32-6-14 | 551006 EAMK-A-D32-44A/C |

1) The input torque must not exceed the maximum permissible transferable torque of the axial kit.

-  - Note

Note the maximum permissible driving torque of the EHMB.

The motor current may need to be limited.

Accessories

Permissible axis/motor combinations with axial kit – With gear unit

Data sheets → Internet: eamm-a

| Motor ¹⁾ | Gear unit | Axial kit | Axial kit comprises: | | |
|-----------------------------------|-----------------------|---------------------------------|----------------------|------------------|------------------|
| | | | Motor flange | Coupling | Coupling housing |
| Type | Type | Part no. Type | Part no. Type | Part no. Type | Part no. Type |
| EHMB-25 | | | | | |
| With servo motor | | | | | |
| EMME-AS-40-... | EMGA-40-P-G...-EAS-40 | 560282 | 550986 | 558029 | 552157 |
| | | EAMM-A-D40-40G | EAMF-A-44A/B-40G | EAMC-30-32-8-10 | EAMK-A-D40-44A/C |
| EMMT-AS-60-..., EMME-AS-60-... | EMGA-60-P-G...-EAS-60 | 2256398 | 1460095 | 558029 | 552157 |
| | | EAMM-A-D40-40G-G2 ²⁾ | EAMF-A-44C-40G-S1 | EAMC-30-32-8-10 | EAMK-A-D40-44A/C |
| EMMT-AS-60-..., EMME-AS-60-... | EMGA-60-P-G...-EAS-60 | 1454242 | 1460105 | 562682 | 552157 |
| | | EAMM-A-D40-60H | EAMF-A-44C-60G/H-S1 | EAMC-30-32-8-14 | EAMK-A-D40-44A/C |
| With stepper motor | | | | | |
| EMMS-ST-42-... | EMGA-40-P-G...-SST-42 | 560282 | 550986 | 558029 | 552157 |
| | | EAMM-A-D40-40G | EAMF-A-44A/B-40G | EAMC-30-32-8-10 | EAMK-A-D40-44A/C |
| EMMS-ST-57-... | EMGA-60-P-G...-SST-57 | 2256400 | 1460105 | 551004 | 552157 |
| | | EAMM-A-D40-60G | EAMF-A-44C-60G/H-S1 | EAMC-30-32-8-11 | EAMK-A-D40-44A/C |
| With integrated drive | | | | | |
| EMCA-EC-67-... | EMGC-40-... | 560282 | 550986 | 558029 | 552157 |
| | | EAMM-A-D40-40G | EAMF-A-44A/B-40G | EAMC-30-32-8-10 | EAMK-A-D40-44A/C |
| | EMGC-60-... | 2256398 | 1460095 | 558029 | 552157 |
| EAMM-A-D40-40G-G2 ²⁾ | | EAMF-A-44C-40G-S1 | EAMC-30-32-8-10 | EAMK-A-D40-44A/C | |
| | | 1454242 | 1460105 | 562682 | 552157 |
| | | EAMM-A-D40-60H | EAMF-A-44C-60G/H-S1 | EAMC-30-32-8-14 | EAMK-A-D40-44A/C |

- 1) The input torque must not exceed the maximum permissible transferable torque of the axial kit.
 2) The axial kit can be retrofitted from IP40 to IP65 with the help of a seal set EADS-F. Additional information → eamm-a

 **Note**

Note the maximum permissible driving torque of the EHMB.
 The motor current may need to be limited.

Accessories

Permissible axis/motor combinations with axial kit – With gear unit

Data sheets → Internet: eamm-a

| Motor ¹⁾ | Gear unit | Axial kit | Axial kit comprises: | | |
|-------------------------------------|------------------------|--|--------------------------------|-----------------------------|--------------------------|
| | | | Motor flange | Coupling | Coupling housing |
| Type | Type | Part no. Type | Part no. Type | Part no. Type | Part no. Type |
| EHMB-32 | | | | | |
| With servo motor | | | | | |
| EMMT-AS-60-..., EMME-AS-60-... | EMGA-60-P-G...-EAS-60 | 1454245 EAMM-A-D60-60H | 2256289 EAMF-A-64B-60G/H-S1 | 1455671 EAMC-42-50-12-14 | 552160 EAMK-A-D60-64B |
| EMMT-AS-80-..., EMME-AS-80-... | EMGA-80-P-G...-EAS-80 | 1499402 EAMM-A-D60-80G | 2843290 EAMF-A-64C-80G-S1 | 2138701 EAMC-42-50-12-20 | 551007 EAMK-A-D60-64C |
| EMMT-AS-100-..., EMME-AS-100-... | EMGA-80-P-G...-SAS-100 | 1499402 EAMM-A-D60-80G | 2843290 EAMF-A-64C-80G-S1 | 2138701 EAMC-42-50-12-20 | 551007 EAMK-A-D60-64C |
| With stepper motor | | | | | |
| EMMS-ST-57-... | EMGA-60-P-G...-SST-57 | 560283 EAMM-A-D60-60G | 550987 EAMF-A-64A/B-60G | 543424 EAMC-42-50-11-12 | 552160 EAMK-A-D60-64B |
| | | 2256696 EAMM-A-D60-60G-G2 ²⁾ | 2256289 EAMF-A-64B-60G/H-S1 | 543424 EAMC-42-50-11-12 | 552160 EAMK-A-D60-64B |
| EMMS-ST-87-... | EMGA-80-P-G...-SST-87 | 1499402 EAMM-A-D60-80G | 2843290 EAMF-A-64C-80G-S1 | 2138701 EAMC-42-50-12-20 | 551007 EAMK-A-D60-64C |
| With integrated drive | | | | | |
| EMCA-EC-67-... | EMGC-60-... | 1454245 EAMM-A-D60-60H | 2256289 EAMF-A-64B-60G/H-S1 | 1455671 EAMC-42-50-12-14 | 552160 EAMK-A-D60-64B |

1) The input torque must not exceed the maximum permissible transferable torque of the axial kit.

2) The axial kit can be retrofitted from IP40 to IP65 with the help of a seal set EADS-F. Additional information → eamm-a

 **Note**

Note the maximum permissible driving torque of the EHMB.
The motor current may need to be limited.

Accessories

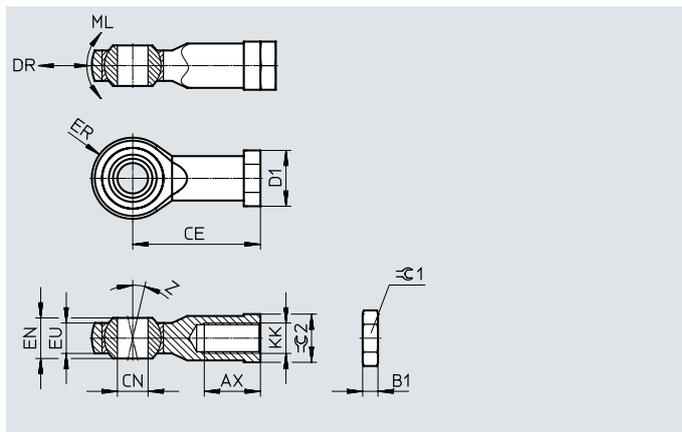
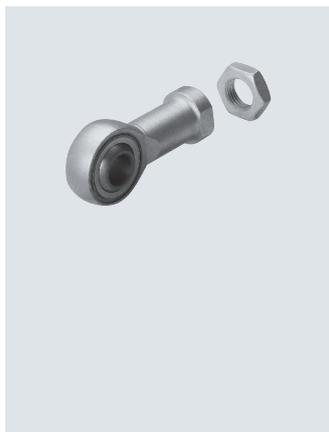
Rod eye SGS

Scope of delivery:

1 rod eye, 1 hex nut to DIN 439

Material:

Galvanised steel



Dimensions and ordering data

| For size | AX | B1 | CE | CN ∅ H7 | D1 ∅ max. | DR max. | EN | ER ±0.5 | EU |
|----------|-------|----|---------|---------------|-----------------|------------|----|------------|------|
| 20, 25 | 20 -2 | 5 | 43 ±1.2 | 10 | 20 | 40 | 14 | 14 | 10.5 |
| 32 | 22 -2 | 6 | 50 ±1.2 | 12 | 23 | 45 | 16 | 16 | 12 |

| For size | KK | ML max. | Z | ≅C1 | ≅C2 | Part no. | Type |
|----------|----------|------------|-----|-----|-----|----------|--------------|
| 20, 25 | M10x1.25 | 0.23 | 13° | 17 | 17 | 9261 | SGS-M10x1,25 |
| 32 | M12x1.25 | 0.28 | 13° | 19 | 19 | 9262 | SGS-M12x1,25 |

Ordering data

| | For size | Brief description | Weight [g] | Part no. | Type | PU ¹⁾ |
|-------------------------------------|----------|--|---------------|----------|-------------------|------------------|
| Covering EASC | | | | | | |
| | 20 | <ul style="list-style-type: none"> For protecting the grooved shaft guide Cannot be used in combination with parallel kit EAMM-U | 303 | 1099901 | EASC-H1-20-100 | 1 |
| | | | 388 | 1099902 | EASC-H1-20-200 | |
| | 25 | | 385 | 1096387 | EASC-H1-25-100 | |
| | | | 482 | 1096388 | EASC-H1-25-200 | |
| | 32 | For protecting the grooved shaft guide | 383 | 1107235 | EASC-H1-32-100 | |
| | | | 481 | 1107236 | EASC-H1-32-200 | |
| Shock absorber retainer EAYH | | | | | | |
| | 20 | For mounting the shock absorbers | 68 | 1153896 | EAYH-H1-20 | 1 |
| | 25, 32 | | 106 | 1153905 | EAYH-H1-25 | |
| Shock absorber DYSW | | | | | | |
| | 20 | Progressive shock absorbers | 42 | 548073 | DYSW-8-14-Y1F | 1 |
| | 25, 32 | | 67 | 548074 | DYSW-10-17-Y1F | |
| Adapter plate kit EHAM | | | | | | |
| | 20 | For attaching the EHMB to the axes EGC and DGC | 288 | 1132369 | EHAM-H1-20-L2-80 | 1 |
| | 25 | | 292 | 1132402 | EHAM-H1-25-L2-80 | |
| | 32 | | 668 | 1132529 | EHAM-H1-32-L2-120 | |

1) Packaging unit

Accessories

| Ordering data | | | | | | |
|---|----------|---|------------|----------------|------------------------|------------------|
| | For size | Brief description | Weight [g] | Part no. | Type | PJ ¹⁾ |
| Protective conduit fitting EASA | | | | | | |
|  | 20 | For mounting the protective conduit | 8 | 1157774 | EASA-H1-20-PG16 | 1 |
| | 25, 32 | | 12 | 1096549 | EASA-H1-25-PG21 | |
| Protective conduit MKR | | | | | | |
|  | 20 | For protecting cables and tubing | - | 177566 | MKR-16.5-PG-16 | - |
| | 25, 32 | | - | 177567 | MKR-23-PG-21 | |
| Cam EAPS | | | | | | |
|  | 20 | For sensing positions (2 cams included in the scope of delivery) | 11 | 1234887 | EAPS-H1-20-CK | 2 |
| | 25, 32 | | 11 | 1234888 | EAPS-H1-25-CK | |
| Centring sleeve ZBH | | | | | | |
|  | - 2) | For centring loads and attachments | 1 | 8146544 | ZBH-7-B | 10 |
| | | | 1 | 8137184 | ZBH-9-B | |
| | | | 1 | 8137185 | ZBH-12-B | |

1) Packaging unit

2) → Dimensional drawing on page 14

| Ordering data – Proximity switches, inductive | | | | | Data sheets → Internet: sien |
|---|---------|--------------|---------------|------------------------|------------------------------|
| | Contact | Connection | Part no. | Type | |
|  | N/O | Cable, 2.5 m | 150386 | SIEN-M8B-PS-K-L | |
| | | Plug | 150387 | SIEN-M8B-PS-S-L | |
| | N/C | Cable, 2.5 m | 150390 | SIEN-M8B-PO-K-L | |
| | | Plug | 150391 | SIEN-M8B-PO-S-L | |

-  - **Note**

The retaining bracket for the proximity switch SIEN is included in the scope of delivery of the rotary lifting module.

| Ordering data – Connecting cables | | | | | | Data sheets → Internet: nebu |
|---|------------------------------|------------------------------|------------------|---------------|----------------------------|------------------------------|
| | Electrical connection, left | Electrical connection, right | Cable length [m] | Part no. | Type | |
|  | Straight socket, M8x1, 3-pin | Cable, open end, 3-wire | 2.5 | 541333 | NEBU-M8G3-K-2.5-LE3 | |
| | | | 5 | 541334 | NEBU-M8G3-K-5-LE3 | |

Accessories

Adapter kit EHAM

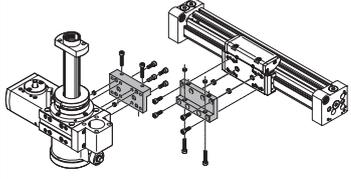
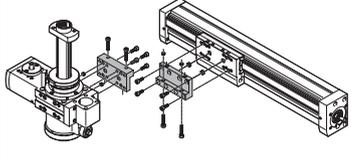
Material:
Wrought aluminium alloy
Free of copper and PTFE
RoHS-compliant

 **Note**

The kit includes the individual mounting interface as well as the necessary mounting material.

Permissible drive/drive combinations with adapter kit

Download CAD data → www.festo.com

| Combination | [1] Drive Size | [2] Drive Size | Adapter kit CRC ¹⁾ | | |
|---|----------------|----------------|-------------------------------|----------------|--------------------------|
| | | | Part no. | Type | |
|  | DGC | EHMB | EHAM | | |
| | 25 | 20 | 2 | 1132369 | EHAM-H1-20-L2-80 |
| | 25 | 25 | | 1132402 | EHAM-H1-25-L2-80 |
| | 40 | 32 | | 1132529 | EHAM-H1-32-L2-120 |
|  | EGC | EHMB | EHAM | | |
| | 80 | 20 | 2 | 1132369 | EHAM-H1-20-L2-80 |
| | 80 | 25 | | 1132402 | EHAM-H1-25-L2-80 |
| | 120 | 32 | | 1132529 | EHAM-H1-32-L2-120 |

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Festo - Your Partner in Automation



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Subject to change