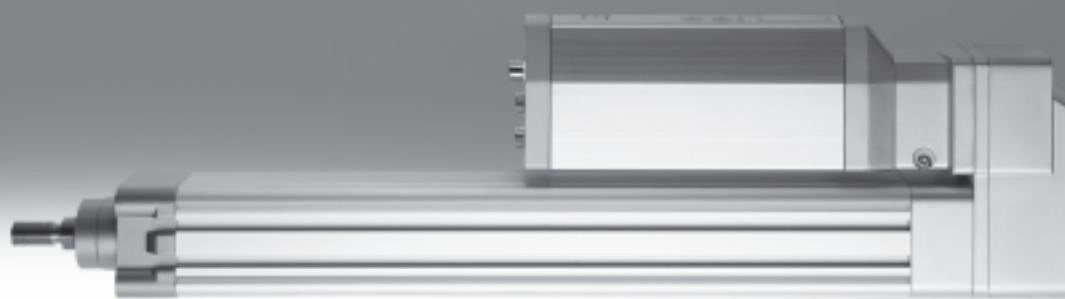


## Electric cylinders DNCE, with spindle drive

**FESTO**



# Electric cylinders DNCE, with spindle drive

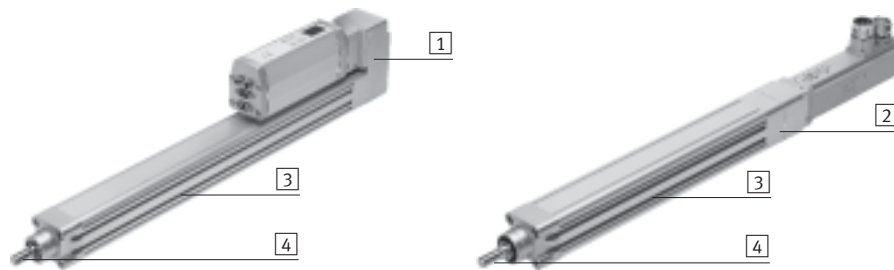
Key features

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| At a glance                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General                                                                                                                                                                                                                    | Properties                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Range of applications                                                                                                                                                                                                                                                                                             |
| <p>The electric cylinder DNCE is a mechanical linear axis with piston rod. The drive component consists of an electrically driven spindle, which converts the rotary motion of the motor into the linear motion of the</p> | <p>piston rod.</p> <p>The mechanical interfaces are largely compatible with the standard cylinder DNC.</p> <ul style="list-style-type: none"> <li>Choice of spindle type: <ul style="list-style-type: none"> <li>With lead screw (LS)</li> <li>With ball screw (BS)</li> </ul> </li> <li>Electric cylinder with lead screw spindle is self-retarding</li> <li>Optionally with protection to IP65</li> <li>Compact dimensions</li> <li>Versions for clean room classes on request</li> </ul> | <ul style="list-style-type: none"> <li>Lead screw spindle <ul style="list-style-type: none"> <li>For applications with slow feed speeds</li> </ul> </li> <li>Ball screw spindle <ul style="list-style-type: none"> <li>For applications with high feed speeds and high running performance</li> </ul> </li> </ul> |

## Entire system consisting of electric cylinder, motor and motor mounting kit

Electric cylinder → 6



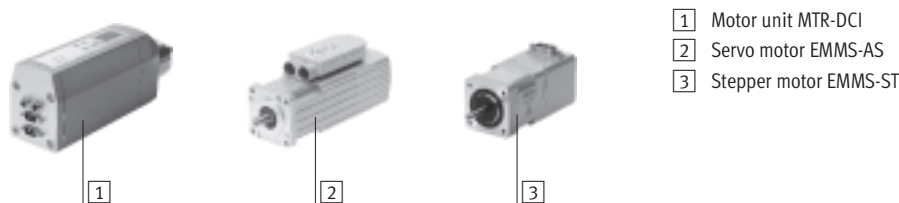
- 1 Parallel kit
- 2 Axial kit
- 3 Slot for proximity sensor
- 4 Choice of spindle type:
  - With lead screw spindle (LS)
  - With ball screw spindle (BS)

### Note

The lead screw spindle is self-retarding, which means that slow movements cannot be excluded in the event of vibration.

The entire system with intelligent motor unit MTR-DCI is self-locking.

## Motor/motor unit → 18



- 1 Motor unit MTR-DCI
- 2 Servo motor EMMS-AS
- 3 Stepper motor EMMS-ST

### Note

A range of specially adapted complete solutions is available for the electric cylinder DNCE and the motors/motor units.

## Motor mounting kit → 18

Axial kit Parallel kit



A range of complete kits is available for both parallel and axial motor mounting.

## Electric cylinders DNCE, with spindle drive

Key features and type codes

### Longer service life with bellows kit EADB

→ 22



The bellows kit is a leak-free system. To prevent unwanted media from being drawn in, the supply and exhaust air must be ducted via a venting hole in the connection part **1**.

The kit protects the piston rod, seal and bearings against a wide variety of media, for example:

- Dust
- Chippings
- Oil
- Grease
- Fuel

### Use in dusty or wet environments thanks to protection to IP65 (feature P5)

→ 17

The electric cylinder to IP65 fulfils the specifications to IEC 60 529. The supply and exhaust air can be expelled through a venting hole in the cylinder barrel. This prevents unwanted media from being drawn in.

Protection to IP65 can only be selected in combination with DNCE-...-BS (ball screw spindle).

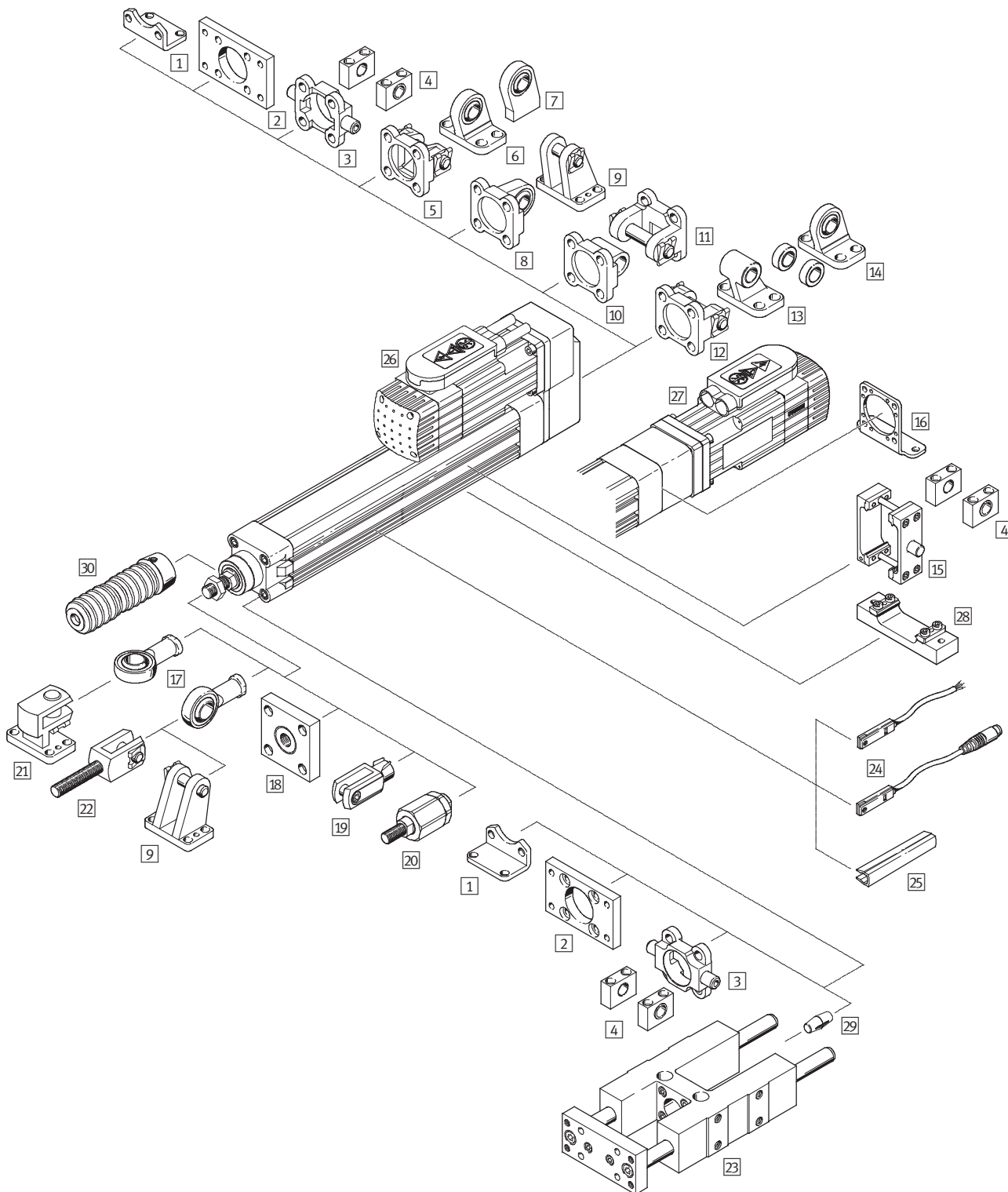
### Type codes

|                           |                          |      |   |    |   |     |   |    |   |         |   |    |
|---------------------------|--------------------------|------|---|----|---|-----|---|----|---|---------|---|----|
|                           |                          | DNCE | – | 32 | – | 100 | – | LS | – | "1.5" P | – | P5 |
| <b>Type</b>               |                          |      |   |    |   |     |   |    |   |         |   |    |
| DNCE                      | Electric cylinder        |      |   |    |   |     |   |    |   |         |   |    |
| <b>Size</b>               |                          |      |   |    |   |     |   |    |   |         |   |    |
| <b>Stroke [mm]</b>        |                          |      |   |    |   |     |   |    |   |         |   |    |
| <b>Drive function</b>     |                          |      |   |    |   |     |   |    |   |         |   |    |
| LS                        | Lead screw spindle       |      |   |    |   |     |   |    |   |         |   |    |
| BS                        | Ball screw spindle       |      |   |    |   |     |   |    |   |         |   |    |
| <b>Spindle pitch [mm]</b> |                          |      |   |    |   |     |   |    |   |         |   |    |
| <b>Variant</b>            |                          |      |   |    |   |     |   |    |   |         |   |    |
| Q                         | Non-rotating piston rod  |      |   |    |   |     |   |    |   |         |   |    |
| K8                        | Extended piston rod      |      |   |    |   |     |   |    |   |         |   |    |
| K3                        | Female piston rod thread |      |   |    |   |     |   |    |   |         |   |    |
| P5                        | Protection class IP65    |      |   |    |   |     |   |    |   |         |   |    |

# Electric cylinders DNCE, with spindle drive

Peripherals overview

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| Mounting attachments and accessories |                               |                                                                                |
|--------------------------------------|-------------------------------|--------------------------------------------------------------------------------|
|                                      | Brief description             | → Page/Internet                                                                |
| 1                                    | Foot mounting<br>HNC/CRHNC    | For mounting the cylinder<br>27                                                |
| 2                                    | Flange mounting<br>FNC/CRFNG  | – Cannot be used on the bearing cap in combination with bellows kit EADB<br>28 |
| 3                                    | Trunnion flange<br>ZNCF/CRZNG | – Cannot be used on the bearing cap in combination with bellows kit EADB<br>29 |

# Electric cylinders DNCE, with spindle drive

Peripherals overview

**FESTO**

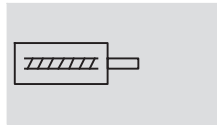
| Mounting attachments and accessories |                                   |                                                                                                                                                                                                      |
|--------------------------------------|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                      | Brief description                 | → Page/Internet                                                                                                                                                                                      |
| 4                                    | Trunnion support<br>LNZG/CRLNZG   | For cylinders with trunnion mounting                                                                                                                                                                 |
| 5                                    | Swivel flange<br>SNC              | With parallel motor mounting                                                                                                                                                                         |
| 6                                    | Clevis foot<br>LSNG               | With parallel motor mounting, with spherical bearing                                                                                                                                                 |
| 7                                    | Clevis foot<br>LSNSG              | With parallel motor mounting, weld-on, with spherical bearing                                                                                                                                        |
| 8                                    | Swivel flange<br>SNCS             | With parallel motor mounting, with spherical bearing                                                                                                                                                 |
| 9                                    | Clevis foot<br>LBG                | With parallel motor mounting, with spherical bearing                                                                                                                                                 |
| 10                                   | Swivel flange<br>SNCL             | With parallel motor mounting                                                                                                                                                                         |
| 11                                   | Swivel flange<br>SNCB/SNCB-...-R3 | With parallel motor mounting, with spherical bearing                                                                                                                                                 |
| 12                                   | Swivel flange<br>SNCB/SNCB-...-R3 | With parallel motor mounting                                                                                                                                                                         |
| 13                                   | Clevis foot<br>LNG/CRLNG          | With parallel motor mounting                                                                                                                                                                         |
| 14                                   | Clevis foot<br>LSN                | With parallel motor mounting, with spherical bearing                                                                                                                                                 |
| 15                                   | Trunnion mounting kit<br>ZNCM     | For mounting anywhere along the cylinder profile barrel. Cannot be mounted in the vicinity of the motor with parallel motor mounting                                                                 |
| 16                                   | Foot mounting<br>HNCE             | With axial motor mounting                                                                                                                                                                            |
| 17                                   | Rod eye<br>SGS/CRSGS              | With spherical bearing                                                                                                                                                                               |
| 18                                   | Coupling piece<br>KSZ             | To compensate for radial deviations                                                                                                                                                                  |
| 19                                   | Rod clevis<br>SG/CRSG             | Permits a swivelling movement of the cylinder in one plane                                                                                                                                           |
| 20                                   | Self-aligning rod coupler<br>FK   | For compensating radial and angular deviations                                                                                                                                                       |
| 21                                   | Right-angle clevis foot<br>LQG    | For rod eye SGS                                                                                                                                                                                      |
| 22                                   | Rod clevis<br>SGA                 | For swivel mounting of cylinders                                                                                                                                                                     |
| 23                                   | Guide unit<br>FENG                | – For protecting electric cylinders against rotation at high torque loads<br>– Cannot be used in combination with bellows kit EADB                                                                   |
| 24                                   | Proximity sensor<br>SME/SMT-8     | For position sensing. Can be integrated in the sensor slot, thus avoiding projecting parts                                                                                                           |
| 25                                   | Slot cover<br>ABP-5-S             | For protecting against the ingress of dirt                                                                                                                                                           |
| 26                                   | Parallel kit<br>EAMM-U            | For parallel motor mounting                                                                                                                                                                          |
| 27                                   | Axial kit<br>EAMM-A               | For axial motor mounting                                                                                                                                                                             |
| 28                                   | Profile mounting<br>EAHF          | – For mounting the electric cylinder via the profile<br>– Cannot be mounted in the vicinity of the motor in combination with the parallel kit EAMM-U                                                 |
| 29                                   | Compensating element<br>EADC      | Compensates the play between the piston rod of the electric cylinder DNCE and the yoke plate of the guide unit FENG                                                                                  |
| 30                                   | Bellows kit<br>EADB               | – Protects the cylinder (piston rod, seal and bearings) against a wide range of media and thus prevents premature wear<br>– The kit can only be used in combination with an extended piston rod (K8) |

# Electric cylinders DNCE, with spindle drive

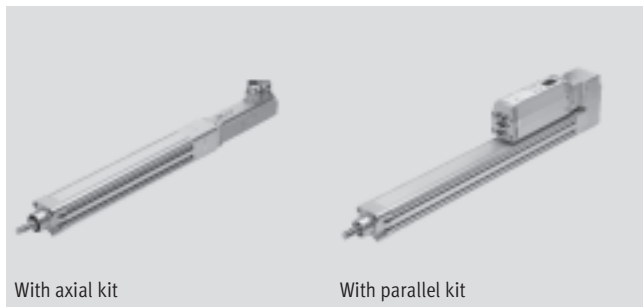
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Technical data

Function



-N- Size  
32 ... 63  
-T- Stroke length  
1 ... 800 mm  
[www.festo.com/en/  
Spare\\_parts\\_service](http://www.festo.com/en/Spare_parts_service)



With axial kit

With parallel kit

| General technical data                     |                                      |                                      |                                      |  |
|--------------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--|
| Size                                       | 32                                   | 40                                   | 63                                   |  |
| Design                                     | With lead screw spindle (LS)         |                                      |                                      |  |
|                                            | With ball screw spindle (BS)         |                                      |                                      |  |
| Piston rod thread                          |                                      |                                      |                                      |  |
| Male thread                                | M10x1.25                             | M12x1.25                             | M16x1.5                              |  |
| Female thread                              | M6                                   | M8                                   | M10                                  |  |
| Working stroke [mm]                        | 1 ... 400                            | 1 ... 600                            | 1 ... 800                            |  |
| Variant                                    | Non-rotating piston rod              |                                      |                                      |  |
| Protection against rotation/guide          | Plain-bearing guide                  |                                      |                                      |  |
| Stroke reserve [mm]                        | 0                                    |                                      |                                      |  |
| Max. torsion angle of the piston rod [°]   | ±0.30                                | ±0.25                                | ±0.20                                |  |
| Impact energy (E) in the end positions [J] | 0.0001 $E = 0.5 \times m \times v^2$ | 0.0002 $E = 0.5 \times m \times v^2$ | 0.0004 $E = 0.5 \times m \times v^2$ |  |
| Duty cycle <sup>1)</sup> [%]               | 100                                  |                                      |                                      |  |
| Position sensing                           | Via proximity sensor                 |                                      |                                      |  |
| Type of mounting                           | Via female thread                    |                                      |                                      |  |
|                                            | Via accessories                      |                                      |                                      |  |
| Mounting position                          | Any                                  |                                      |                                      |  |

1) In the case of the variant with lead screw spindle (LS), the duty cycle depends on the speed

| Mechanical data                         |           |         |          |           |         |            |         |          |          |
|-----------------------------------------|-----------|---------|----------|-----------|---------|------------|---------|----------|----------|
| Size                                    | 32        | 40      | 63       |           |         |            |         |          |          |
| Spindle design                          | LS-"1,5"P | BS-"3"P | BS-"10"P | LS-"2,5"P | BS-"5"P | BS-"12,7"P | LS-"4"P | BS-"10"P | BS-"20"P |
| Spindle pitch [mm/rev.]                 | 1.5       | 3       | 10       | 2.5       | 5       | 12.7       | 4       | 10       | 20       |
| Spindle diameter [mm]                   | 9         | 10      | 10       | 12.5      | 12      | 12.7       | 20      | 20       | 20       |
| Max. stat. axial force [N]              | 600       | 600     | 600      | 1,400     | 1,400   | 1,400      | 3,700   | 3,700    | 3,700    |
| Max. feed force $F_x^{1)}$ [N]          | 300       | 300     | 350      | 600       | 525     | 800        | 1,000   | 2,500    | 1,625    |
| Continuous feed force <sup>1)</sup> [N] | 300       | 240     | 280      | 600       | 420     | 640        | 1,000   | 2,000    | 1,300    |
| Max. driving torque <sup>2)</sup> [Nm]  | 0.4       | 0.4     | 0.8      | 1.15      | 0.9     | 1.9        | 3       | 4.9      | 5.9      |
| Max. radial force <sup>3)</sup> [N]     | 120       | 120     | 120      | 260       | 260     | 260        | 300     | 300      | 300      |
| Max. speed [m/s]                        | 0.06      | 0.15    | 0.5      | 0.07      | 0.25    | 0.64       | 0.07    | 0.5      | 1.0      |
| Max. rotational speed [rpm]             | 2,400     | 3,000   | 3,000    | 1,650     | 3,000   | 3,000      | 1,050   | 3,000    | 3,000    |
| Max. acceleration [m/s <sup>2</sup> ]   | 1         | 6       | 6        | 1         | 6       | 6          | 1       | 6        | 6        |
| Reversing backlash <sup>4)</sup> [mm]   | 0.2       | 0.05    | 0.05     | 0.2       | 0.05    | 0.05       | 0.2     | 0.05     | 0.05     |
| Repetition accuracy [mm]                | ±0.07     | ±0.02   | ±0.02    | ±0.07     | ±0.02   | ±0.02      | ±0.07   | ±0.02    | ±0.02    |

1) In the case of the variant with lead screw spindle (LS), the feed force depends on the speed → 10

The feed force in the case of the variant with ball screw spindle (BS) → 8

2) In the case of the variant with lead screw spindle (LS), the driving torque depends on the rotational speed → 11

3) At the drive shaft

4) In new condition

# Electric cylinders DNCE, with spindle drive

Technical data

| Mechanical data                 |           |         |          |           |         |            |         |          |          |
|---------------------------------|-----------|---------|----------|-----------|---------|------------|---------|----------|----------|
| Size                            | 32        |         |          | 40        |         |            | 63      |          |          |
| Spindle design                  | LS-"1,5"P | BS-"3"P | BS-"10"P | LS-"2,5"P | BS-"5"P | BS-"12,7"P | LS-"4"P | BS-"10"P | BS-"20"P |
| No-load driving torque          |           |         |          |           |         |            |         |          |          |
| With axial kit <sup>1)</sup>    |           |         |          |           |         |            |         |          |          |
| DNCE-... [Nm]                   | 0.08      | 0.08    | 0.08     | 0.12      | 0.12    | 0.12       | 0.3     | 0.2      | 0.2      |
| DNCE-...-P5 [Nm]                | –         | 0.1     | 0.1      | –         | 0.15    | 0.15       | –       | 0.25     | 0.25     |
| With parallel kit <sup>1)</sup> |           |         |          |           |         |            |         |          |          |
| DNCE-... [Nm]                   | 0.13      | 0.13    | 0.13     | 0.22      | 0.22    | 0.22       | 0.6     | 0.5      | 0.5      |
| DNCE-...-P5 [Nm]                | –         | 0.15    | 0.15     | –         | 0.25    | 0.25       | –       | 0.55     | 0.55     |
| Continuous driving torque [Nm]  | 0.4       | 0.3     | 0.6      | 1.15      | 0.8     | 1.6        | 3       | 4.1      | 4.8      |

1) Measured at a speed of 200 rpm

| Operating and environmental conditions |             |
|----------------------------------------|-------------|
| Ambient temperature <sup>1)</sup> [°C] | 0 ... 50    |
| Storage temperature [°C]               | –25 ... +60 |
| Protection class to IEC 60529          | IP40        |
|                                        | IP65        |
| Relative air humidity [%]              | 0 ... 95    |

1) Note operating range of proximity sensors and motors

| Weight [g]                         |           |         |          |           |         |            |         |          |          |
|------------------------------------|-----------|---------|----------|-----------|---------|------------|---------|----------|----------|
| Size                               | 32        |         |          | 40        |         |            | 63      |          |          |
| Spindle design                     | LS-"1,5"P | BS-"3"P | BS-"10"P | LS-"2,5"P | BS-"5"P | BS-"12,7"P | LS-"4"P | BS-"10"P | BS-"20"P |
| Basic weight with 0 mm stroke      | 720       | 750     | 770      | 1,210     | 1,270   | 1,350      | 2,790   | 3,010    | 3,010    |
| Additional weight per 10 mm stroke | 32.4      | 33      | 33.6     | 46.1      | 45.5    | 46.7       | 79.8    | 81.2     | 81.2     |
| Moving load with 0 mm stroke       | 150       | 170     | 200      | 250       | 310     | 380        | 600     | 810      | 810      |
| Moving load per 10 mm stroke       | 6.9       | 6.9     | 6.9      | 8.9       | 8.9     | 8.9        | 12.8    | 12.8     | 12.8     |

| Mass moment of inertia                                      |           |         |          |           |         |            |         |          |          |
|-------------------------------------------------------------|-----------|---------|----------|-----------|---------|------------|---------|----------|----------|
| Size                                                        | 32        |         |          | 40        |         |            | 63      |          |          |
| Spindle design                                              | LS-"1,5"P | BS-"3"P | BS-"10"P | LS-"2,5"P | BS-"5"P | BS-"12,7"P | LS-"4"P | BS-"10"P | BS-"20"P |
| J <sub>0</sub> with 0 mm stroke [kg cm <sup>2</sup> ]       | 0.0433    | 0.0439  | 0.0446   | 0.1316    | 0.1304  | 0.1337     | 0.7565  | 0.7626   | 0.7624   |
| j <sub>H</sub> per metre stroke [kg cm <sup>2</sup> /m]     | 0.0361    | 0.0476  | 0.0595   | 0.1341    | 0.1163  | 0.1572     | 0.8176  | 0.9090   | 0.9103   |
| j <sub>L</sub> per kg working load [kg cm <sup>2</sup> /kg] | 0.0006    | 0.0023  | 0.0253   | 0.0016    | 0.0063  | 0.0409     | 0.0041  | 0.0253   | 0.1013   |

The mass moment of inertia J<sub>A</sub> of the electric cylinder is calculated as follows:

$$J_A = J_0 + j_H \times \text{working stroke [m]} + j_L \times m_{\text{working load [kg]}}$$

# Electric cylinders DNCE, with spindle drive

Technical data

FESTO

## Calculation of the mean feed force $F_{xm}$ for the electric cylinder DNCE with ball screw spindle (BS)

The peak feed force value must not exceed the maximum feed force within a movement cycle. In the case of vertical operation, the peak value is

generally achieved during the acceleration phase of the upwards stroke. If the maximum feed force is exceeded, this can increase wear and

thus shorten the service life of the ball screw spindle. The maximum speed must likewise not be exceeded.

$$F_x \leq F_{x\max.}$$

and

$$v_x \leq v_{x\max.}$$

### Mean feed force (to DIN 69 051-4)

During operation, the continuous feed force may be briefly exceeded up to

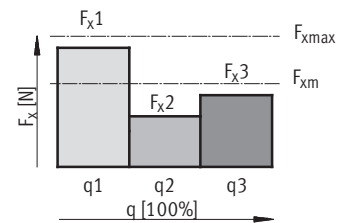
the maximum feed force. The continuous feed force must, however,

be adhered to when averaged over a movement cycle.

$$F_{xm} \leq F_{xcont}$$

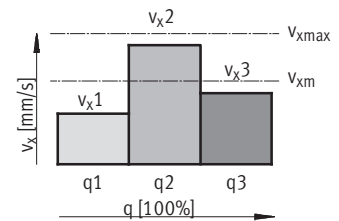
$$F_{xm} = \sqrt[3]{\sum F_x^3 \times \frac{v_x}{v_{xm}} \times \frac{q}{100}} =$$

$$F_{xm} = \sqrt[3]{F_{x1}^3 \times \frac{v_{x1}}{v_{xm}} \times \frac{q_1}{100} + F_{x2}^3 \times \frac{v_{x2}}{v_{xm}} \times \frac{q_2}{100} + F_{x3}^3 \times \frac{v_{x3}}{v_{xm}} \times \frac{q_3}{100} + \dots}$$



### Mean feed speed (to DIN 69 051-4)

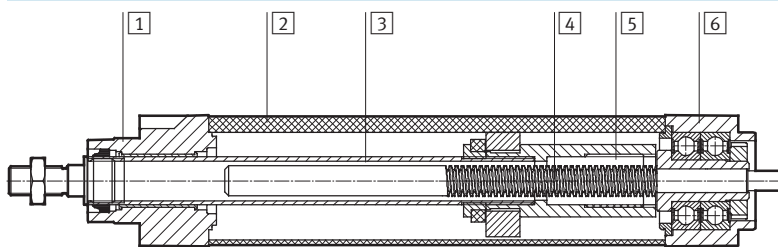
$$v_{xm} = \sum v_x \times \frac{q}{100} = v_{x1} \times \frac{q_1}{100} + v_{x2} \times \frac{q_2}{100} + v_{x3} \times \frac{q_3}{100} + \dots$$



|              |                       |              |                 |
|--------------|-----------------------|--------------|-----------------|
| $F_x$        | Feed force            | $v_x$        | Feed speed      |
| $F_{xm}$     | Mean feed force       | $v_{xm}$     | Mean feed speed |
| $F_{x\max.}$ | Max. feed force       | $v_{x\max.}$ | Max. feed speed |
| $F_{xcont}$  | Continuous feed force |              |                 |
| $q$          | Time                  |              |                 |

## Materials

### Sectional view



### Electric cylinder

|   |                    |                                         |
|---|--------------------|-----------------------------------------|
| 1 | Bearing cap        | Painted die-cast aluminium              |
| 2 | Cylinder barrel    | Smooth anodised wrought aluminium alloy |
| 3 | Piston rod         | High-alloy stainless steel              |
| 4 | Spindle            | Steel                                   |
| 5 | Spindle nut for LS | Polyacetal                              |
|   | Spindle nut for BS | Steel                                   |
| 6 | Drive cover        | Painted die-cast aluminium              |

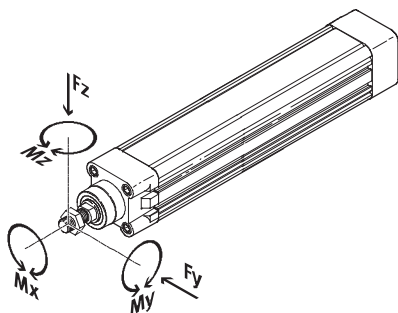


# Electric cylinders DNCE, with spindle drive

Technical data

FESTO

## Maximum permissible loads on the piston rod



If there are two or more forces and torques simultaneously acting on the piston rod, the following equations must be satisfied:

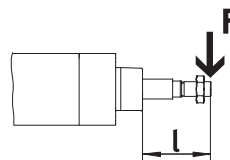
$$\frac{|F_y|}{F_{y_{max}}} + \frac{|F_z|}{F_{z_{max}}} + \frac{|M_y|}{M_{y_{max}}} + \frac{|M_z|}{M_{z_{max}}} \leq 1$$

$$|F_x| \leq F_{x_{max}}$$

$$|M_x| \leq M_{x_{max}}$$

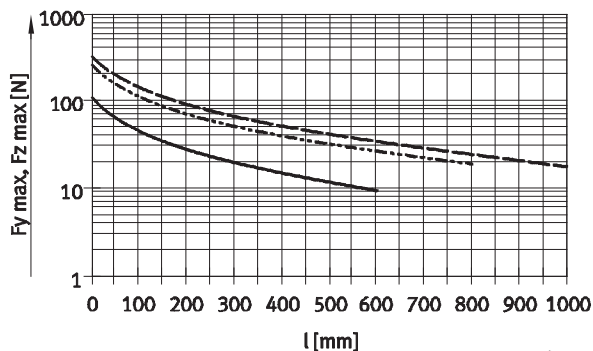
Definition of the stroke length l:

$l = \text{Stroke} + \text{value of the piston rod extension K8}$



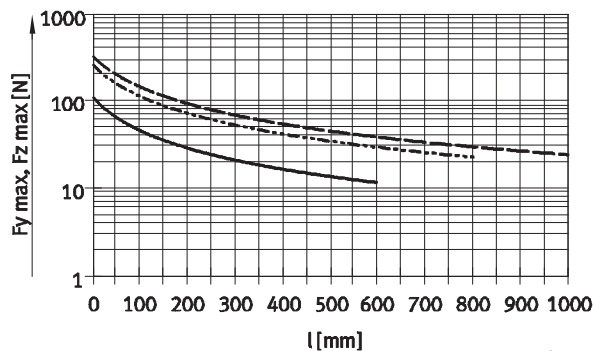
Maximum permissible lateral forces  $F_{y_{max}}$  and  $F_{z_{max}}$  on the piston rod as a function of stroke length l

Horizontal mounting position



— DNCE-32-LS/BS  
 - - - DNCE-40-LS/BS  
 - · - DNCE-63-LS/BS

Vertical mounting position



### Note

PositioningDrives  
 sizing software  
 → [www.festo.com](http://www.festo.com)

| Size                                   | 32  | 40    | 63    |
|----------------------------------------|-----|-------|-------|
| Maximum permissible forces and torques |     |       |       |
| $F_{x_{max}}$ (static) [N]             | 600 | 1,400 | 3,700 |
| $M_{x_{max}}$ [Nm]                     | 1   | 1     | 1.5   |
| $M_{y_{max}}, M_{z_{max}}$ [Nm]        | 8   | 20    | 27    |

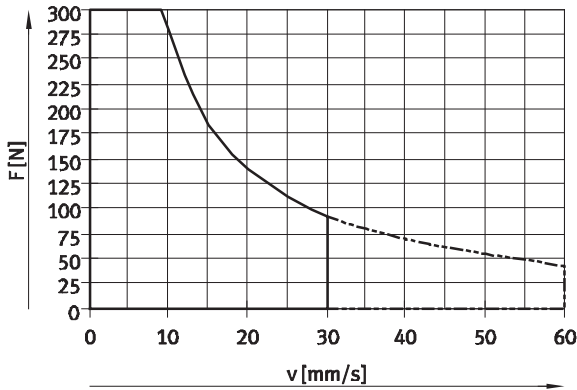
# Electric cylinders DNCE, with spindle drive

Technical data

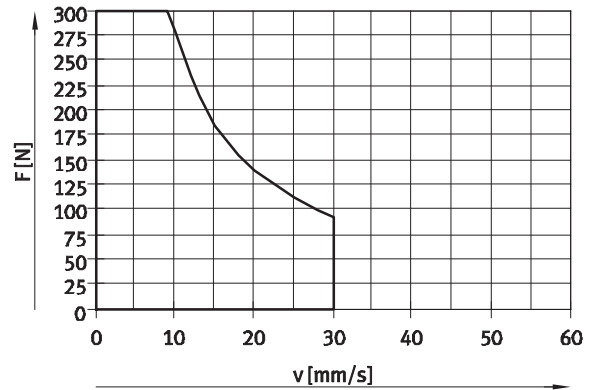
FESTO

## Feed force F as a function of speed v

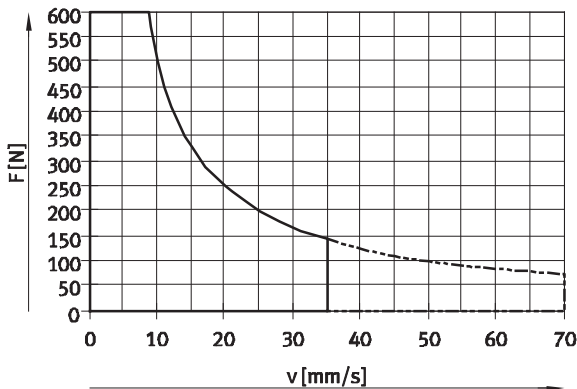
DNCE-32-1...299-LS-...



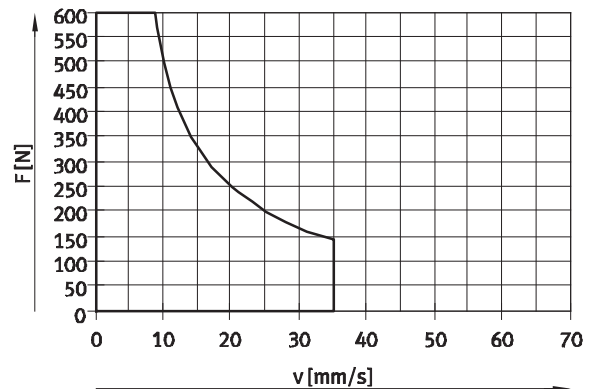
DNCE-32-300...400-LS-...



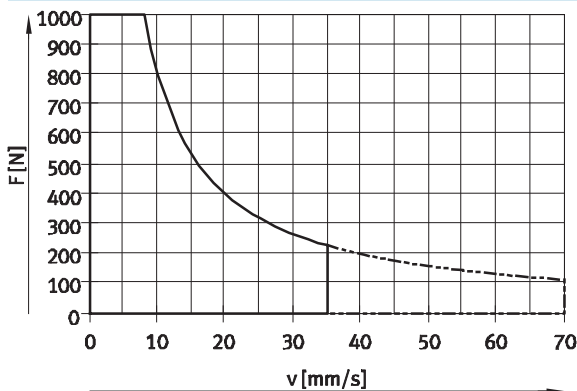
DNCE-40-1...299-LS-...



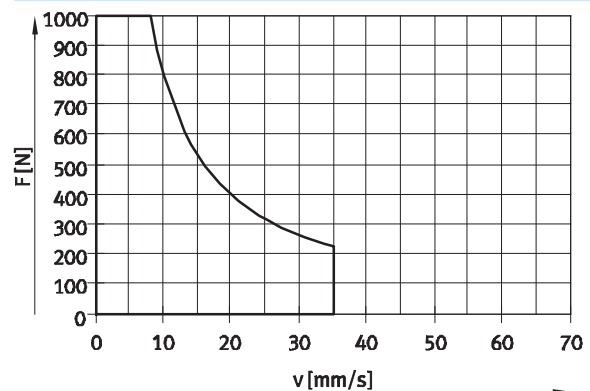
DNCE-40-300...600-LS-...



DNCE-63-1...419-LS-...



DNCE-63-420...800-LS-...



- Recommended operating range
- Permissible operating range  
(duty cycle < 50% recommended)

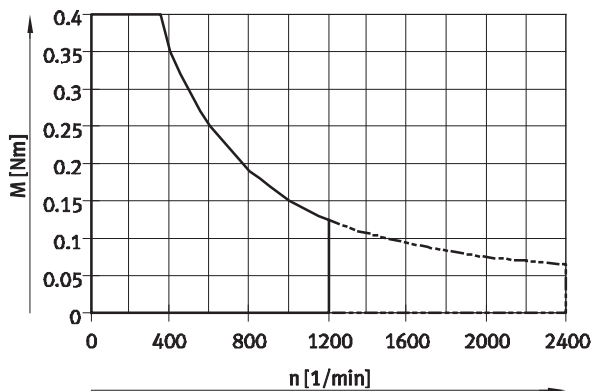
# Electric cylinders DNCE, with spindle drive

Technical data

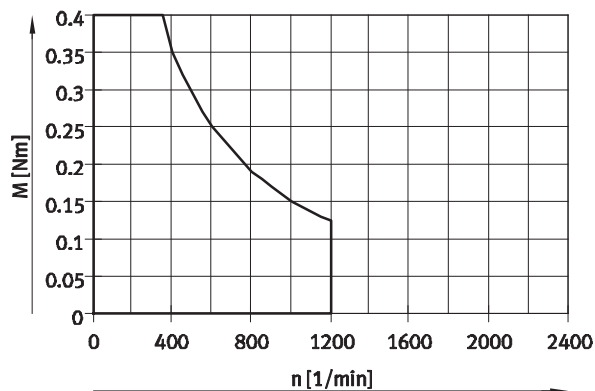
FESTO

## Driving torque M as a function of rotational speed n

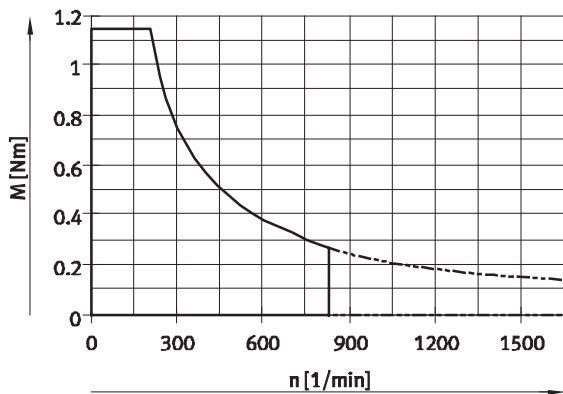
DNCE-32-1...299-LS-...



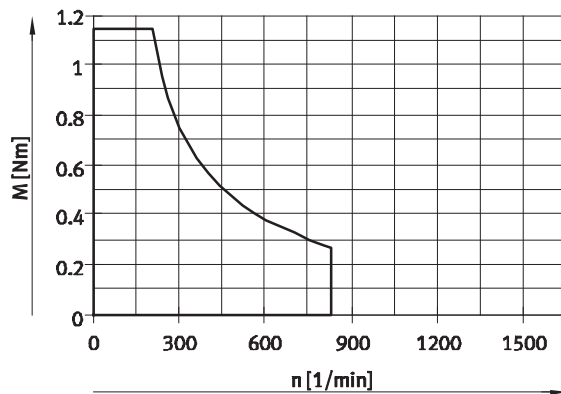
DNCE-32-300...400-LS-...



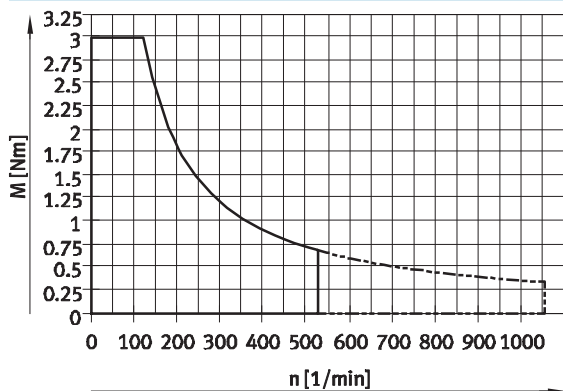
DNCE-40-1...299-LS-...



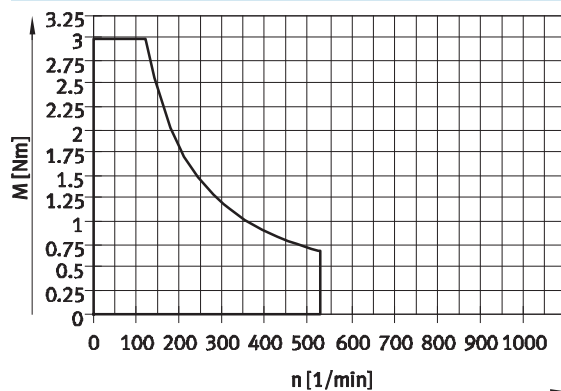
DNCE-40-300...600-LS-...



DNCE-63-1...419-LS-...



DNCE-63-420...800-LS-...



- Recommended operating range
- - - Permissible operating range  
(duty cycle < 50% recommended)

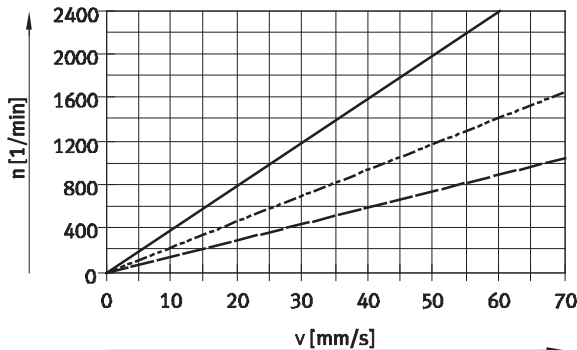
# Electric cylinders DNCE, with spindle drive

Technical data

FESTO

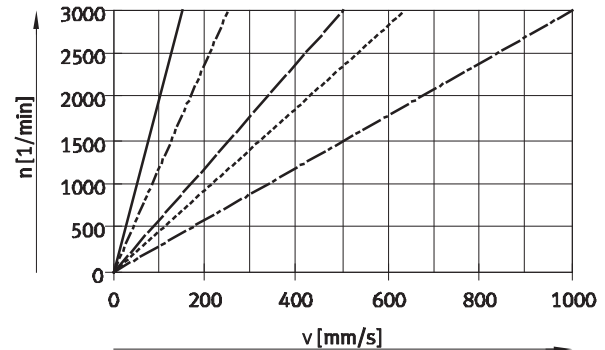
## Rotational speed $n$ as a function of speed $v$

DNCE-...-LS-...



DNCE-32-LS-1,5°P  
DNCE-40-LS-2,5°P  
DNCE-63-LS-4°P

DNCE-...-BS-...



DNCE-32-BS-3°P  
DNCE-32-BS-10°P  
DNCE-40-BS-5°P  
DNCE-40-BS-12,7°P  
DNCE-63-BS-10°P  
DNCE-63-BS-20°P

## Driving torque $M$ as a function of feed force $F$

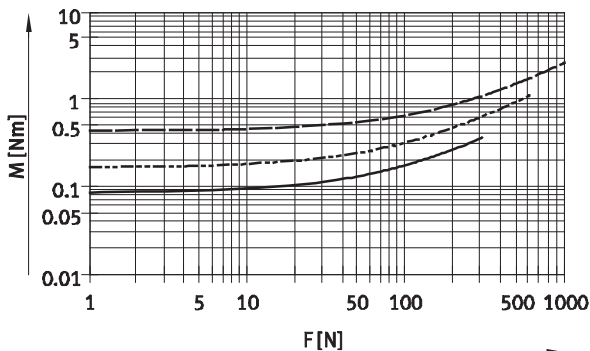
### Note

The frictional torques at room temperature are taken into consideration in the graphs.

The frictional torques with the DNCE-...-LS (lead screw spindle) increase at lower temperatures.

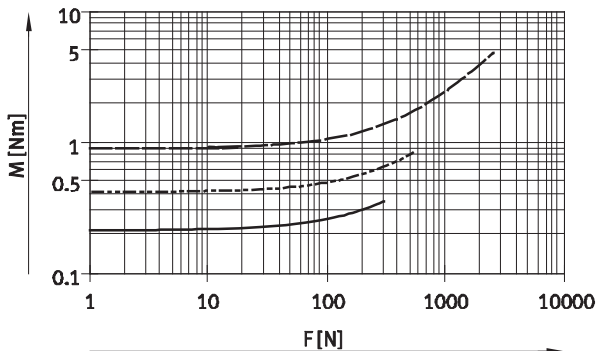
PositioningDrives  
sizing software  
→ [www.festo.com](http://www.festo.com)

DNCE-...-LS-...

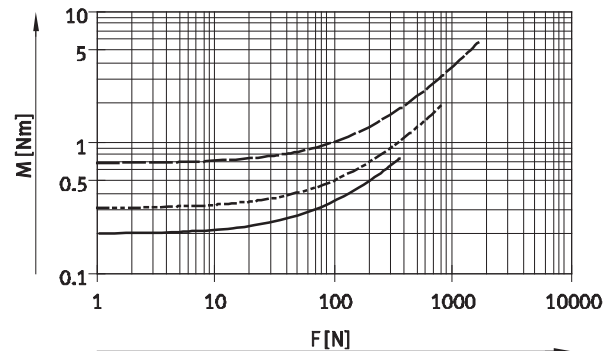


DNCE-32-LS-1,5°P  
DNCE-40-LS-2,5°P  
DNCE-63-LS-4°P

DNCE-...-BS-...



DNCE-32-BS-3°P  
DNCE-40-BS-5°P  
DNCE-63-BS-10°P



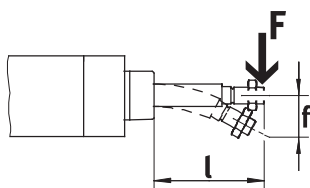
DNCE-32-BS-10°P  
DNCE-40-BS-12,7°P  
DNCE-63-BS-20°P

# Electric cylinders DNCE, with spindle drive

Technical data

FESTO

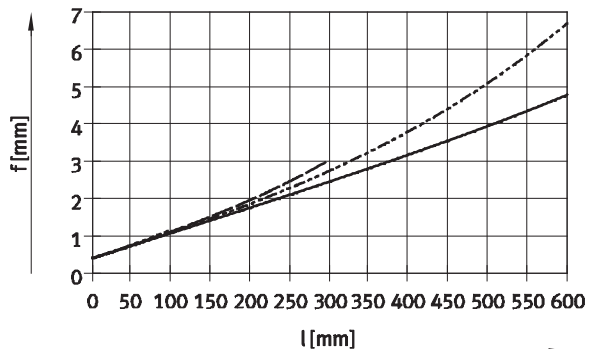
## Piston rod displacement $f$ as a function of stroke length $l$



Definition of the stroke length  $l$ :

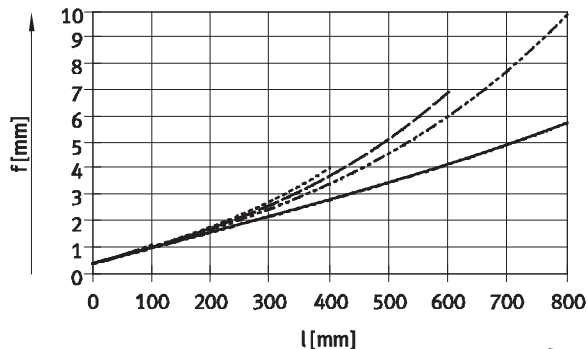
$l = \text{Stroke} + \text{value of the piston rod extension K8}$

### DNCE-32-...



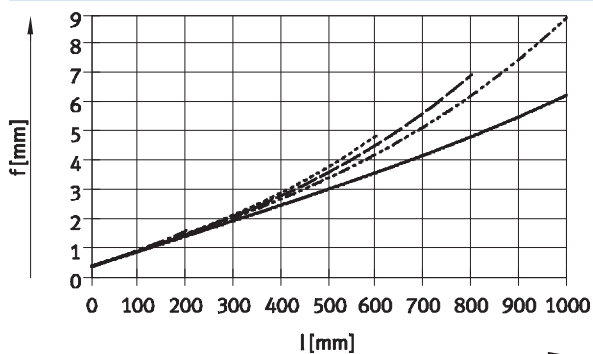
- Lateral force  $F = 0 \text{ N}$
- Lateral force  $F = 10 \text{ N}$
- Lateral force  $F = 20 \text{ N}$
- Lateral force  $F = 45 \text{ N}$

### DNCE-40-...



- Lateral force  $F = 0 \text{ N}$
- Lateral force  $F = 20 \text{ N}$
- Lateral force  $F = 30 \text{ N}$
- Lateral force  $F = 40 \text{ N}$
- Lateral force  $F = 115 \text{ N}$

### DNCE-63-...



- Lateral force =  $0 \text{ N}$
- Lateral force =  $20 \text{ N}$
- Lateral force =  $30 \text{ N}$
- Lateral force =  $40 \text{ N}$
- Lateral force =  $95 \text{ N}$

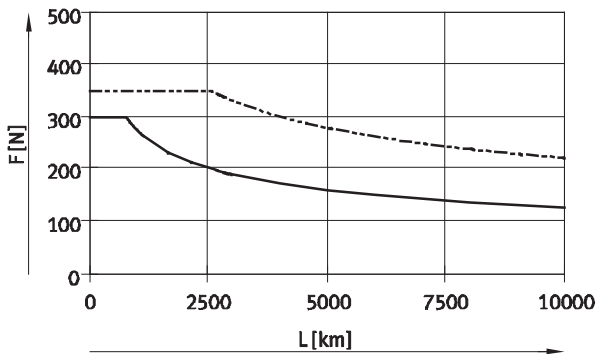
# Electric cylinders DNCE, with spindle drive

Technical data

FESTO

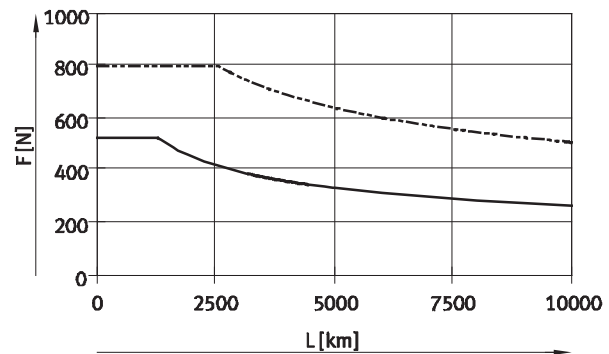
## Mean feed force F as a function of running performance L (to DIN 69 051-4)

DNCE-32-...-BS-...



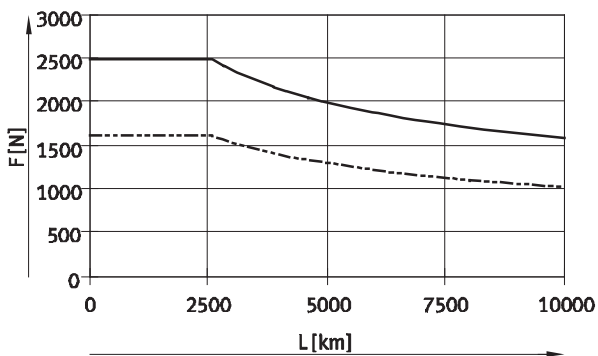
— DNCE-32-BS-3\"P  
- - - DNCE-32-BS-10\"P

DNCE-40-...-BS-...



— DNCE-40-BS-5\"P  
- - - DNCE-40-BS-12,7\"P

DNCE-63-...-BS-...



— DNCE-63-BS-10\"P  
- - - DNCE-63-BS-20\"P

### Note

- The specifications for running performance are based on experimentally determined and theoretically calculated data. The running performance attainable in practice can deviate considerably from the specified curves under different parameters.

## Electric cylinders DNCE, with spindle drive

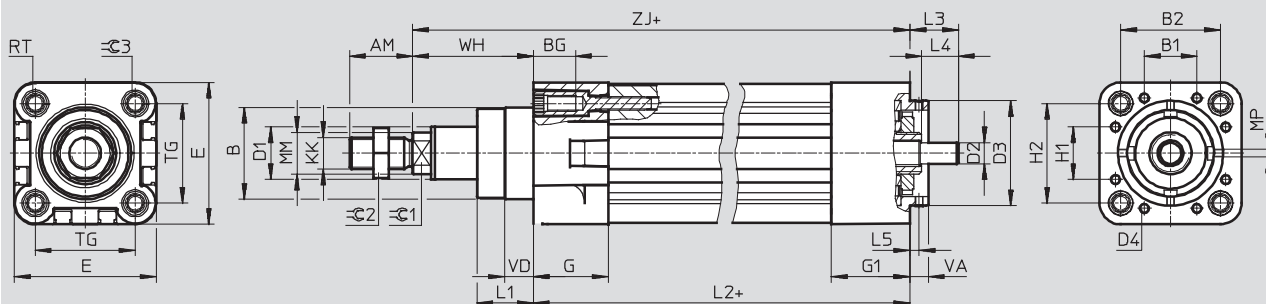
Technical data

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### Dimensions

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)

#### Basic version



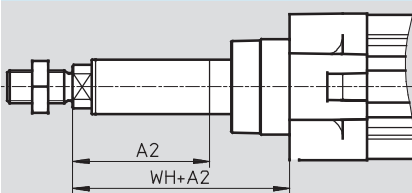
+ = plus stroke length

| Size | AM | B        | B1 | B2 | BG | D1      | D2      | D3      | D4 | E    | G    | G1 | H1 | H2 | KK       |
|------|----|----------|----|----|----|---------|---------|---------|----|------|------|----|----|----|----------|
| [mm] |    | Ø<br>d11 |    |    |    | Ø<br>h9 | Ø<br>h6 | Ø<br>f7 |    |      |      |    |    |    |          |
| 32   | 22 | 30       | 19 | 32 | 16 | 16      | 6       | 32      | M3 | 45.5 | 24   | 26 | 19 | 32 | M10x1.25 |
| 40   | 24 | 35       | 20 | 42 | 16 | 20      | 8       | 40      | M4 | 54   | 28.5 | 30 | 20 | 42 | M12x1.25 |
| 63   | 32 | 45       | 31 | 62 | 17 | 28      | 12      | 60      | M5 | 75.5 | 34   | 36 | 31 | 62 | M16x1.5  |

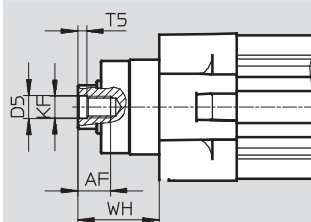
| Size | L1   | L2    | L3   | L4 | L5  | MM | MP | RT | TG   | VA | VD      | WH | ZJ    | Ø1 | Ø2 | Ø3 |
|------|------|-------|------|----|-----|----|----|----|------|----|---------|----|-------|----|----|----|
| [mm] |      |       |      |    |     |    |    |    |      |    | +1/-0.7 |    | ±1    |    |    |    |
| 32   | 18   | 122   | 15.9 | 8  | 3.5 | 12 | M3 | M6 | 32.5 | 7  | 10      | 26 | 148   | 10 | 17 | 6  |
| 40   | 21.5 | 146.5 | 18.4 | 14 | 3.5 | 16 | M3 | M6 | 38   | 7  | 10.5    | 30 | 176.5 | 13 | 19 | 6  |
| 63   | 28.5 | 177   | 23.5 | 17 | 4.5 | 20 | M4 | M8 | 56.5 | 9  | 15      | 37 | 214   | 17 | 24 | 8  |

### Variants

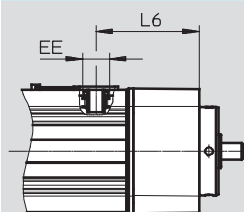
#### K8 – Extended piston rod



#### K3 – Female piston rod thread



#### P5 – Protection class IP65



| Size | A2   | AF | EE              | KF  | L6   | T5  | D5   | WH |
|------|------|----|-----------------|-----|------|-----|------|----|
| [mm] | max. |    |                 |     |      |     |      |    |
| 32   | 200  | 12 | G $\frac{1}{8}$ | M6  | 37.6 | 2.6 | 6.4  | 26 |
| 40   | 200  | 12 | G $\frac{1}{4}$ | M8  | 45.6 | 3.3 | 8.4  | 30 |
| 63   | 200  | 16 | G $\frac{1}{4}$ | M10 | 57.6 | 4.7 | 10.5 | 37 |

# Electric cylinders DNCE, with spindle drive

Technical data

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| Ordering data – DNCE-32                     |          |                        |                                              |          |                         |
|---------------------------------------------|----------|------------------------|----------------------------------------------|----------|-------------------------|
| Stroke<br>[mm]                              | Part No. | Type                   | Stroke<br>[mm]                               | Part No. | Type                    |
| Ball screw spindle with spindle pitch 3 mm  |          |                        | Lead screw spindle with spindle pitch 1.5 mm |          |                         |
| 100                                         | 543 115  | DNCE-32-100-BS-"3"P-Q  | 100                                          | 543 111  | DNCE-32-100-LS-"1,5"P-Q |
| 200                                         | 543 116  | DNCE-32-200-BS-"3"P-Q  | 200                                          | 543 112  | DNCE-32-200-LS-"1,5"P-Q |
| 300                                         | 543 117  | DNCE-32-300-BS-"3"P-Q  | 300                                          | 543 113  | DNCE-32-300-LS-"1,5"P-Q |
| 400                                         | 543 118  | DNCE-32-400-BS-"3"P-Q  | 400                                          | 543 114  | DNCE-32-400-LS-"1,5"P-Q |
| Ball screw spindle with spindle pitch 10 mm |          |                        |                                              |          |                         |
| 100                                         | 543 119  | DNCE-32-100-BS-"10"P-Q |                                              |          |                         |
| 200                                         | 543 120  | DNCE-32-200-BS-"10"P-Q |                                              |          |                         |
| 300                                         | 543 121  | DNCE-32-300-BS-"10"P-Q |                                              |          |                         |
| 400                                         | 543 122  | DNCE-32-400-BS-"10"P-Q |                                              |          |                         |

| Ordering data – DNCE-40                       |          |                          |                                              |          |                         |
|-----------------------------------------------|----------|--------------------------|----------------------------------------------|----------|-------------------------|
| Stroke<br>[mm]                                | Part No. | Type                     | Stroke<br>[mm]                               | Part No. | Type                    |
| Ball screw spindle with spindle pitch 5 mm    |          |                          | Lead screw spindle with spindle pitch 2.5 mm |          |                         |
| 100                                           | 543 127  | DNCE-40-100-BS-"5"P-Q    | 100                                          | 543 123  | DNCE-40-100-LS-"2,5"P-Q |
| 200                                           | 543 128  | DNCE-40-200-BS-"5"P-Q    | 200                                          | 543 124  | DNCE-40-200-LS-"2,5"P-Q |
| 300                                           | 555 466  | DNCE-40-300-BS-"5"P-Q    | 300                                          | 555 465  | DNCE-40-300-LS-"2,5"P-Q |
| 400                                           | 543 129  | DNCE-40-400-BS-"5"P-Q    | 400                                          | 543 125  | DNCE-40-400-LS-"2,5"P-Q |
| 600                                           | 543 130  | DNCE-40-600-BS-"5"P-Q    | 600                                          | 543 126  | DNCE-40-600-LS-"2,5"P-Q |
| Ball screw spindle with spindle pitch 12.7 mm |          |                          |                                              |          |                         |
| 100                                           | 543 131  | DNCE-40-100-BS-"12,7"P-Q |                                              |          |                         |
| 200                                           | 543 132  | DNCE-40-200-BS-"12,7"P-Q |                                              |          |                         |
| 300                                           | 555 467  | DNCE-40-300-BS-"12,7"P-Q |                                              |          |                         |
| 400                                           | 543 133  | DNCE-40-400-BS-"12,7"P-Q |                                              |          |                         |
| 600                                           | 543 134  | DNCE-40-600-BS-"12,7"P-Q |                                              |          |                         |

| Ordering data – DNCE-63                     |          |                        |                                            |          |                       |
|---------------------------------------------|----------|------------------------|--------------------------------------------|----------|-----------------------|
| Stroke<br>[mm]                              | Part No. | Type                   | Stroke<br>[mm]                             | Part No. | Type                  |
| Ball screw spindle with spindle pitch 10 mm |          |                        | Lead screw spindle with spindle pitch 4 mm |          |                       |
| 100                                         | 555 470  | DNCE-63-100-BS-"10"P-Q | 100                                        | 555 468  | DNCE-63-100-LS-"4"P-Q |
| 200                                         | 543 139  | DNCE-63-200-BS-"10"P-Q | 200                                        | 543 135  | DNCE-63-200-LS-"4"P-Q |
| 300                                         | 555 471  | DNCE-63-300-BS-"10"P-Q | 300                                        | 555 469  | DNCE-63-300-LS-"4"P-Q |
| 400                                         | 543 140  | DNCE-63-400-BS-"10"P-Q | 400                                        | 543 136  | DNCE-63-400-LS-"4"P-Q |
| 600                                         | 543 141  | DNCE-63-600-BS-"10"P-Q | 600                                        | 543 137  | DNCE-63-600-LS-"4"P-Q |
| 800                                         | 543 142  | DNCE-63-800-BS-"10"P-Q | 800                                        | 543 138  | DNCE-63-800-LS-"4"P-Q |
| Ball screw spindle with spindle pitch 20 mm |          |                        |                                            |          |                       |
| 100                                         | 555 472  | DNCE-63-100-BS-"20"P-Q |                                            |          |                       |
| 200                                         | 543 143  | DNCE-63-200-BS-"20"P-Q |                                            |          |                       |
| 300                                         | 555 473  | DNCE-63-300-BS-"20"P-Q |                                            |          |                       |
| 400                                         | 543 144  | DNCE-63-400-BS-"20"P-Q |                                            |          |                       |
| 600                                         | 543 145  | DNCE-63-600-BS-"20"P-Q |                                            |          |                       |
| 800                                         | 543 146  | DNCE-63-800-BS-"20"P-Q |                                            |          |                       |

## Note

Order variable strokes via the modular product system → 17



## Electric cylinders DNCE, with spindle drive

Ordering data – Modular products

| Ordering table                 |                         |               |               |                |                |               |
|--------------------------------|-------------------------|---------------|---------------|----------------|----------------|---------------|
| Size                           | 32                      | 40            | 63            | Condition<br>s | Code           | Enter<br>code |
| <b>[M]</b> Module No.          | <b>555488</b>           | <b>555489</b> | <b>555490</b> |                |                |               |
| Function                       | Electric cylinder       |               |               |                | <b>DNCE</b>    | DNCE          |
| Size                           | 32                      | 40            | 63            |                | *...           |               |
| Stroke [mm]                    | 100                     |               |               |                | *...           |               |
|                                | 200                     |               |               |                |                |               |
|                                | 300                     |               |               |                |                |               |
|                                | 400                     |               |               |                |                |               |
|                                | –                       | 600           |               |                |                |               |
|                                | –                       | –             | 800           |                |                |               |
|                                | 1 ... 400               | 1 ... 600     | 1 ... 800     | [1]            |                |               |
| Drive type                     | Lead screw spindle      |               |               |                | <b>-LS</b>     |               |
|                                | Ball screw spindle      |               |               |                | <b>-BS</b>     |               |
| Spindle pitch [mm]             | 1.5                     | –             | –             | [2]            | <b>-“...”P</b> |               |
|                                | –                       | 2.5           | –             | [2]            |                |               |
|                                | 3                       | –             | –             | [3]            |                |               |
|                                | –                       | –             | 4             | [2]            |                |               |
|                                | –                       | 5             | –             | [3]            |                |               |
|                                | 10                      | –             | 10            | [3]            |                |               |
|                                | –                       | 12.7          | –             | [3]            |                |               |
|                                | –                       | –             | 20            | [3]            |                |               |
| Protection against rotation    | Non-rotating piston rod |               |               |                | <b>-Q</b>      | -Q            |
| <b>[O]</b> Extended piston rod | 1 ... 200               |               |               | [3]            | <b>-...K8</b>  |               |
| Female thread                  | M6                      | M8            | M10           | [3]            | <b>-K3</b>     |               |
| Protection class to IEC 60529  | IP65                    |               |               | [3]            | <b>-P5</b>     |               |

[1] ... Additional stroke lengths on request

[2] **“1.5”P, “2.5”P, “4”P**

Only with drive type LS

[3] **“3”P, “5”P, “10”P, “12.7”P, “20”P, ...K8, K3, P5**

Only with ball screw spindle BS

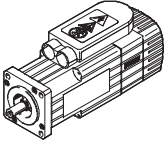
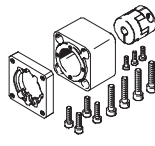
Transfer order code

**DNCE** -  -  -  -  -  **Q** -  -  -

# Electric cylinders DNCE, with spindle drive

Accessories

**FESTO**

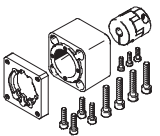
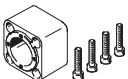
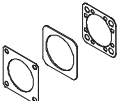
| Permissible axis/motor combinations with axial kit                                |                                                                                    |                                   | Technical data → Internet: eamm-a |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------|-----------------------------------|
| Motor/motor unit                                                                  | Axial kit                                                                          |                                   |                                   |
|  |  |                                   |                                   |
| Type                                                                              | Part No.                                                                           | Type                              |                                   |
| <b>DNCE-32</b>                                                                    |                                                                                    |                                   |                                   |
| With servo motor                                                                  |                                                                                    |                                   |                                   |
| EMMS-AS-40-...                                                                    | 543147                                                                             | EAMM-A-D32-40A                    |                                   |
|                                                                                   | 1322178                                                                            | EAMM-A-D32A-40A-S1 <sup>1)</sup>  |                                   |
| EMMS-AS-55-...                                                                    | 550979                                                                             | EAMM-A-D32-55A                    |                                   |
|                                                                                   | 1322180                                                                            | EAMM-A-D32A-55A-S1 <sup>1)</sup>  |                                   |
| With stepper motor                                                                |                                                                                    |                                   |                                   |
| EMMS-ST-42-...                                                                    | 543148                                                                             | EAMM-A-D32-42A                    |                                   |
|                                                                                   | 1322179                                                                            | EAMM-A-D32A-42A-S1 <sup>1)</sup>  |                                   |
| EMMS-ST-57-...                                                                    | 550980                                                                             | EAMM-A-D32-57A                    |                                   |
|                                                                                   | 1322181                                                                            | EAMM-A-D32A-57A-S1 <sup>1)</sup>  |                                   |
| With motor unit                                                                   |                                                                                    |                                   |                                   |
| MTR-DCI-32S-...                                                                   | 543149                                                                             | EAMM-A-D32-32B                    |                                   |
| <b>DNCE-40</b>                                                                    |                                                                                    |                                   |                                   |
| With servo motor                                                                  |                                                                                    |                                   |                                   |
| EMMS-AS-55-...                                                                    | 543153                                                                             | EAMM-A-D40-55A                    |                                   |
|                                                                                   | 1322182                                                                            | EAMM-A-D40A-55A-S1 <sup>1)</sup>  |                                   |
| EMMS-AS-70-...                                                                    | 550981                                                                             | EAMM-A-D40-70A                    |                                   |
|                                                                                   | 1322185                                                                            | EAMM-A-D40A-70A-S1 <sup>1)</sup>  |                                   |
| With stepper motor                                                                |                                                                                    |                                   |                                   |
| EMMS-ST-57-...                                                                    | 543154                                                                             | EAMM-A-D40-57A                    |                                   |
|                                                                                   | 1322183                                                                            | EAMM-A-D40A-57A-S1 <sup>1)</sup>  |                                   |
| EMMS-ST-87-...                                                                    | 550982                                                                             | EAMM-A-D40-87A                    |                                   |
|                                                                                   | 1322186                                                                            | EAMM-A-D40A-87A-S1 <sup>1)</sup>  |                                   |
| With motor unit                                                                   |                                                                                    |                                   |                                   |
| MTR-DCI-42S-...-G7                                                                | 543155                                                                             | EAMM-A-D40-42B                    |                                   |
| MTR-DCI-42S-...-G14                                                               | 543156                                                                             | EAMM-A-D40-42C                    |                                   |
| <b>DNCE-63</b>                                                                    |                                                                                    |                                   |                                   |
| With servo motor                                                                  |                                                                                    |                                   |                                   |
| EMMS-AS-70-...                                                                    | 543161                                                                             | EAMM-A-D60-70A                    |                                   |
|                                                                                   | 1322187                                                                            | EAMM-A-D60A-70A-S1 <sup>1)</sup>  |                                   |
| EMMS-AS-100-...                                                                   | 550983                                                                             | EAMM-A-D60-100A                   |                                   |
|                                                                                   | 1322190                                                                            | EAMM-A-D60A-100A-S1 <sup>1)</sup> |                                   |
| With stepper motor                                                                |                                                                                    |                                   |                                   |
| EMMS-ST-87-...                                                                    | 543162                                                                             | EAMM-A-D60-87A                    |                                   |
|                                                                                   | 1322188                                                                            | EAMM-A-D60A-87A-S1 <sup>1)</sup>  |                                   |
| With motor unit                                                                   |                                                                                    |                                   |                                   |
| MTR-DCI-52S-...-G7                                                                | 543163                                                                             | EAMM-A-D60-52B                    |                                   |
| MTR-DCI-52S-...-G14                                                               | 543164                                                                             | EAMM-A-D60-52C                    |                                   |

1) With protection class IP65

# Electric cylinders DNCE, with spindle drive

Accessories

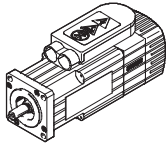
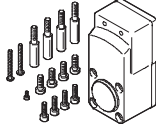
**FESTO**

| Component parts of the axial kit                                                  |                                                                                   |                                                                                   |                                                                                    |                                                                                     |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Axial kit                                                                         | Consisting of:                                                                    |                                                                                   |                                                                                    |                                                                                     |
|                                                                                   | Motor flange                                                                      | Coupling                                                                          | Coupling housing                                                                   | Seal set                                                                            |
|  |  |  |  |  |
| Part No.<br>Type                                                                  | Part No.<br>Type                                                                  | Part No.<br>Type                                                                  | Part No.<br>Type                                                                   | Part No.<br>Type                                                                    |
| <b>DNCE-32</b>                                                                    |                                                                                   |                                                                                   |                                                                                    |                                                                                     |
| 543147<br>EAMM-A-D32-40A                                                          | 552163<br>EAMF-A-28B-40A                                                          | 543420<br>EAMC-16-20-6-6                                                          | 552155<br>EAMK-A-D32-28B                                                           | –                                                                                   |
| 1322178<br>EAMM-A-D32A-40A-S1                                                     |                                                                                   |                                                                                   |                                                                                    | 1561526<br>EADS-F-D32A-40A                                                          |
| 543148<br>EAMM-A-D32-42A                                                          | 552164<br>EAMF-A-28B-42A                                                          | 543419<br>EAMC-16-20-5-6                                                          | 552155<br>EAMK-A-D32-28B                                                           | –                                                                                   |
| 1322179<br>EAMM-A-D32A-42A-S1                                                     |                                                                                   |                                                                                   |                                                                                    | 1561527<br>EADS-F-D32A-42A                                                          |
| 550979<br>EAMM-A-D32-55A                                                          | 529942<br>EAMF-A-44A/B-55A                                                        | 551003<br>EAMC-30-32-6-9                                                          | 551006<br>EAMK-A-D32-44A                                                           | –                                                                                   |
| 1322180<br>EAMM-A-D32A-55A-S1                                                     |                                                                                   |                                                                                   |                                                                                    | 1561528<br>EADS-F-D32A-55A                                                          |
| 550980<br>EAMM-A-D32-57A                                                          | 530081<br>EAMF-A-44A/B-57A                                                        | 551002<br>EAMC-30-32-6-6.35                                                       | 551006<br>EAMK-A-D32-44A                                                           | –                                                                                   |
| 1322181<br>EAMM-A-D32A-57A-S1                                                     |                                                                                   |                                                                                   |                                                                                    | 1561529<br>EADS-F-D32A-57A                                                          |
| <b>DNCE-40</b>                                                                    |                                                                                   |                                                                                   |                                                                                    |                                                                                     |
| 543153<br>EAMM-A-D40-55A                                                          | 529942<br>EAMF-A-44A/B-55A                                                        | 543423<br>EAMC-30-32-8-9                                                          | 552157<br>EAMK-A-D40-44A                                                           | –                                                                                   |
| 1322182<br>EAMM-A-D40A-55A-S1                                                     |                                                                                   |                                                                                   |                                                                                    | 1561530<br>EADS-F-D40A-55A                                                          |
| 543154<br>EAMM-A-D40-57A                                                          | 530081<br>EAMF-A-44A/B-57A                                                        | 543421<br>EAMC-30-32-6.35-8                                                       | 552157<br>EAMK-A-D40-44A                                                           | –                                                                                   |
| 1322183<br>EAMM-A-D40A-57A-S1                                                     |                                                                                   |                                                                                   |                                                                                    | 1561531<br>EADS-F-D40A-57A                                                          |
| 550981<br>EAMM-A-D40-70A                                                          | 529943<br>EAMF-A-44A/B-70A                                                        | 551004<br>EAMC-30-32-8-11                                                         | 552157<br>EAMK-A-D40-44A                                                           | –                                                                                   |
| 1322185<br>EAMM-A-D40A-70A-S1                                                     |                                                                                   |                                                                                   |                                                                                    | 1561532<br>EADS-F-D40A-70A                                                          |
| 550982<br>EAMM-A-D40-87A                                                          | 530082<br>EAMF-A-44A/B-87A                                                        | 551004<br>EAMC-30-32-8-11                                                         | 552157<br>EAMK-A-D40-44A                                                           | –                                                                                   |
| 1322186<br>EAMM-A-D40A-87A-S1                                                     |                                                                                   |                                                                                   |                                                                                    | 1561533<br>EADS-F-D40A-87A                                                          |
| <b>DNCE-63</b>                                                                    |                                                                                   |                                                                                   |                                                                                    |                                                                                     |
| 543161<br>EAMM-A-D60-70A                                                          | 529945<br>EAMF-A-64A/B-70A                                                        | 543424<br>EAMC-42-50-11-12                                                        | 552160<br>EAMK-A-D60-64B                                                           | –                                                                                   |
| 1322187<br>EAMM-A-D60A-70A-S1                                                     |                                                                                   |                                                                                   |                                                                                    | 1561534<br>EADS-F-D60A-70A                                                          |
| 543162<br>EAMM-A-D60-87A                                                          | 533140<br>EAMF-A-64A/B-87A                                                        | 543424<br>EAMC-42-50-11-12                                                        | 552160<br>EAMK-A-D60-64B                                                           | –                                                                                   |
| 1322188<br>EAMM-A-D60A-87A-S1                                                     |                                                                                   |                                                                                   |                                                                                    | 1561536<br>EADS-F-D60A-87A                                                          |
| 550983<br>EAMM-A-D60-100A                                                         | 529947<br>EAMF-A-64A/C-100A                                                       | 551005<br>EAMC-42-50-12-19                                                        | 551007<br>EAMK-A-D60-64C                                                           | –                                                                                   |
| 1322190<br>EAMM-A-D60A-100A-S1                                                    |                                                                                   |                                                                                   |                                                                                    | 1561537<br>EADS-F-D60A-100A                                                         |

# Electric cylinders DNCE, with spindle drive

Accessories

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| Permissible axis/motor combinations with parallel kit                             |                                                                                   |                                         | Technical data → Internet: eamm-u |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------|-----------------------------------|
| Motor/motor unit                                                                  | Parallel kit                                                                      |                                         |                                   |
|  |  | • Space-saving gravity die-cast housing |                                   |
| Type                                                                              | Part No.                                                                          | Type                                    |                                   |
| DNCE-32                                                                           |                                                                                   |                                         |                                   |
| With servo motor                                                                  |                                                                                   |                                         |                                   |
| EMMS-AS-40-...                                                                    | 543150                                                                            | EAMM-U-D32-40A                          |                                   |
| With motor unit                                                                   |                                                                                   |                                         |                                   |
| MTR-DCI-32S-... <sup>1)</sup>                                                     | 543152                                                                            | EAMM-U-D32-32B                          |                                   |
|                                                                                   |                                                                                   |                                         |                                   |
| DNCE-40                                                                           |                                                                                   |                                         |                                   |
| With servo motor                                                                  |                                                                                   |                                         |                                   |
| EMMS-AS-55-...                                                                    | 543157                                                                            | EAMM-U-D40-55A                          |                                   |
| With motor unit                                                                   |                                                                                   |                                         |                                   |
| MTR-DCI-42S-...-G7 <sup>1)</sup>                                                  | 543159                                                                            | EAMM-U-D40-42B                          |                                   |
| MTR-DCI-42S-...-G14 <sup>1)</sup>                                                 | 543160                                                                            | EAMM-U-D40-42C                          |                                   |
|                                                                                   |                                                                                   |                                         |                                   |
| DNCE-63                                                                           |                                                                                   |                                         |                                   |
| With servo motor                                                                  |                                                                                   |                                         |                                   |
| EMMS-AS-70-...                                                                    | 543165                                                                            | EAMM-U-D60-70A                          |                                   |
| With motor unit                                                                   |                                                                                   |                                         |                                   |
| MTR-DCI-52S-...-G7 <sup>1)</sup>                                                  | 543167                                                                            | EAMM-U-D60-52B                          |                                   |
| MTR-DCI-52S-...-G14 <sup>1)</sup>                                                 | 543168                                                                            | EAMM-U-D60-52C                          |                                   |

## Note

- 1) The motor unit MTR-DCI can only be used in combination with the electric cylinder DNCE-...-LS (lead screw spindle).

Depending on the combination of motor/motor unit and electric cylinder, it may not be possible to reach the maximum feed force of the cylinder.

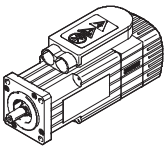
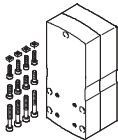
The respective no-load driving torque of the kit must be taken into consideration when using parallel kits.

The following tool is available for sizing:  
PositioningDrives  
sizing software  
→ [www.festo.com](http://www.festo.com)

# Electric cylinders DNCE, with spindle drive

FESTO

Accessories

| Permissible axis/motor combinations with parallel kit                             |                                                                                   |                                                                                                                                                                                                                                                | Technical data → Internet: eamm-u |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| Motor/motor unit                                                                  | Parallel kit                                                                      |                                                                                                                                                                                                                                                |                                   |
|  |  | <ul style="list-style-type: none"> <li>• Increased housing rigidity</li> <li>• Flexible motor connection possible</li> <li>• Optionally with protection class IP65</li> <li>• Use in combination with third-party motors on request</li> </ul> |                                   |
| Type                                                                              | Part No.                                                                          | Type                                                                                                                                                                                                                                           |                                   |
| <b>DNCE-32</b>                                                                    |                                                                                   |                                                                                                                                                                                                                                                |                                   |
| With servo motor                                                                  |                                                                                   |                                                                                                                                                                                                                                                |                                   |
| EMMS-AS-40-...                                                                    | 1201591                                                                           | EAMM-U-50-D32-40A-78                                                                                                                                                                                                                           |                                   |
|                                                                                   | 1202302                                                                           | EAMM-U-50-D32-40A-78-S1 <sup>1)</sup>                                                                                                                                                                                                          |                                   |
| EMMS-AS-55-...                                                                    | 1210126                                                                           | EAMM-U-60-D32-55A-91                                                                                                                                                                                                                           |                                   |
|                                                                                   | 1210450                                                                           | EAMM-U-60-D32-55A-91-S1 <sup>1)</sup>                                                                                                                                                                                                          |                                   |
| With stepper motor                                                                |                                                                                   |                                                                                                                                                                                                                                                |                                   |
| EMMS-ST-42-...                                                                    | 1201607                                                                           | EAMM-U-50-D32-42A-78                                                                                                                                                                                                                           |                                   |
|                                                                                   | 1202312                                                                           | EAMM-U-50-D32-42A-78-S1 <sup>1)</sup>                                                                                                                                                                                                          |                                   |
| EMMS-ST-57-...                                                                    | 1210419                                                                           | EAMM-U-60-D32-57A-91                                                                                                                                                                                                                           |                                   |
|                                                                                   | 1210453                                                                           | EAMM-U-60-D32-57A-91-S1 <sup>1)</sup>                                                                                                                                                                                                          |                                   |
| <b>DNCE-40</b>                                                                    |                                                                                   |                                                                                                                                                                                                                                                |                                   |
| With servo motor                                                                  |                                                                                   |                                                                                                                                                                                                                                                |                                   |
| EMMS-AS-55-...                                                                    | 1210438                                                                           | EAMM-U-60-D40-55A-91                                                                                                                                                                                                                           |                                   |
|                                                                                   | 1210458                                                                           | EAMM-U-60-D40-55A-91-S1 <sup>1)</sup>                                                                                                                                                                                                          |                                   |
| EMMS-AS-70-...                                                                    | 1212826                                                                           | EAMM-U-86-D40-70A-102                                                                                                                                                                                                                          |                                   |
|                                                                                   | 1212854                                                                           | EAMM-U-86-D40-70A-102-S1 <sup>1)</sup>                                                                                                                                                                                                         |                                   |
| With stepper motor                                                                |                                                                                   |                                                                                                                                                                                                                                                |                                   |
| EMMS-ST-57-...                                                                    | 1210442                                                                           | EAMM-U-60-D40-57A-91                                                                                                                                                                                                                           |                                   |
|                                                                                   | 1210462                                                                           | EAMM-U-60-D40-57A-91-S1 <sup>1)</sup>                                                                                                                                                                                                          |                                   |
| EMMS-ST-87-...                                                                    | 1215802                                                                           | EAMM-U-86-D40-87A-102                                                                                                                                                                                                                          |                                   |
|                                                                                   | 1215814                                                                           | EAMM-U-86-D40-87A-102-S1 <sup>1)</sup>                                                                                                                                                                                                         |                                   |
| <b>DNCE-63</b>                                                                    |                                                                                   |                                                                                                                                                                                                                                                |                                   |
| With servo motor                                                                  |                                                                                   |                                                                                                                                                                                                                                                |                                   |
| EMMS-AS-70-...                                                                    | 1212477                                                                           | EAMM-U-86-D60-70A-102                                                                                                                                                                                                                          |                                   |
|                                                                                   | 1212835                                                                           | EAMM-U-86-D60-70A-102-S1 <sup>1)</sup>                                                                                                                                                                                                         |                                   |
| EMMS-AS-100-...                                                                   | 1202436                                                                           | EAMM-U-110-D60-100A-120                                                                                                                                                                                                                        |                                   |
|                                                                                   | 1203112                                                                           | EAMM-U-110-D60-100A-120-S1 <sup>1)</sup>                                                                                                                                                                                                       |                                   |
| With stepper motor                                                                |                                                                                   |                                                                                                                                                                                                                                                |                                   |
| EMMS-ST-87-...                                                                    | 1215784                                                                           | EAMM-U-86-D60-87A-102                                                                                                                                                                                                                          |                                   |
|                                                                                   | 1215810                                                                           | EAMM-U-86-D60-87A-102-S1 <sup>1)</sup>                                                                                                                                                                                                         |                                   |

1) With protection class IP65

# Electric cylinders DNCE, with spindle drive

Accessories

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## Bellows kit EADB



| General technical data                       |      |                                                                      |            |            |
|----------------------------------------------|------|----------------------------------------------------------------------|------------|------------|
| Type EADB-V1-                                |      | 32                                                                   | 40         | 63         |
| Max. stroke range of cylinder <sup>1)</sup>  | [mm] | 10 ... 400                                                           | 10 ... 500 | 10 ... 500 |
| Type of mounting                             |      | Via threaded pin                                                     |            |            |
| Mounting position                            |      | Any                                                                  |            |            |
| Resistance to media                          |      | Dust, chippings, oil, grease, fuel (➔ Internet: Resistance to media) |            |            |
| Ambient temperature <sup>2)</sup>            | [°C] | -10 ... +80                                                          |            |            |
| Protection class to IEC 60529                |      | IP65                                                                 |            |            |
| Corrosion resistance class CRC <sup>3)</sup> |      | 3                                                                    |            |            |

1) In combination with the bellows kit EADB

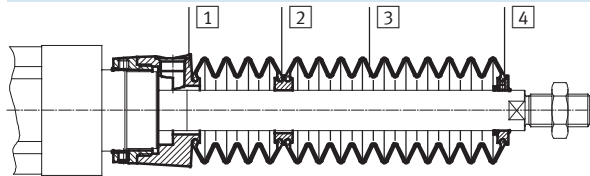
2) Note operating range of proximity sensors and cylinder

3) Corrosion resistance class 3 according to Festo standard 940 070

Components subject to high corrosion stress. External visible parts in direct contact with industrial atmospheres or media such as solvents and cleaning agents, with a predominantly functional requirement for the surface.

## Materials

### Sectional view



| Bellows                 |            |
|-------------------------|------------|
| 1                       | Connection |
| 2                       | Adapter    |
| 3                       | Bellows    |
| 4                       | End piece  |
| -                       | O-ring     |
| Note on materials       |            |
| Free of copper and PTFE |            |
| Conforms to RoHS        |            |

| Weight [g]     |     |     |     |
|----------------|-----|-----|-----|
| Type EADB-V1-  | 32  | 40  | 63  |
| Stroke [mm]    |     |     |     |
| Product weight |     |     |     |
| 10 ... 100     | 77  | 116 | 196 |
| 101 ... 200    | 108 | 153 | 263 |
| 201 ... 300    | 122 | 172 | 309 |
| 301 ... 400    | 153 | 209 | 376 |
| 401 ... 500    | -   | 227 | 397 |
| Moving load    |     |     |     |
| 10 ... 100     | 35  | 43  | 86  |
| 101 ... 200    | 66  | 80  | 153 |
| 201 ... 300    | 80  | 99  | 199 |
| 301 ... 400    | 111 | 136 | 266 |
| 401 ... 500    | -   | 154 | 287 |

# Electric cylinders DNCE, with spindle drive

Accessories

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## Travel speed $v$ as a function of tubing length $l$

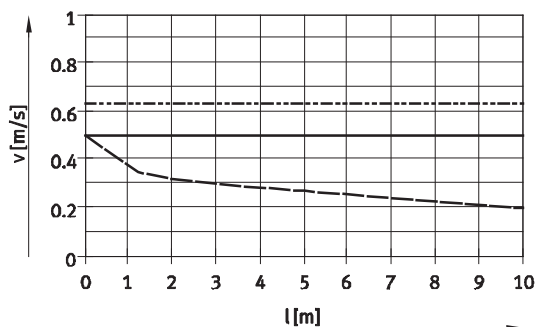


The bellows kit is a leak-free system. To prevent unwanted media from being drawn in, the supply and exhaust air must be ducted via a venting hole in the connection part

[1].

The pressure generated in the bellows kit by the positioning motion is primarily defined by the travel speed

and tubing length. The recommended tubing length based on the travel speed of the drive can be read from the graph.



— EADB-V1-32/tubing Ø 8 mm  
 - - - EADB-V1-40/tubing Ø 16 mm  
 - · - EADB-V1-63/tubing Ø 16 mm

### Note

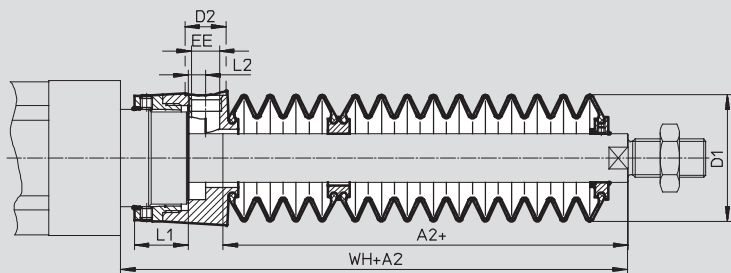
The push-in fittings opposite must be used for the venting hole. alternative. This reduces the travel speed slightly. Silencers can be used as an

### Tubing length and push-in fitting for venting hole

| Ø [mm] | Tubing O.D. [mm] | Push-in fitting Part No. | Type                      |
|--------|------------------|--------------------------|---------------------------|
| 32     | 8                | 186109                   | QS-G $\frac{1}{8}$ -8-I   |
|        |                  | 533929                   | QS-F-G $\frac{1}{8}$ -8-I |
| 40, 63 | 16               | 186350                   | QS-G $\frac{1}{4}$ -12    |
|        |                  | 533848                   | QS-F-G $\frac{1}{4}$ -12  |
|        |                  | 153261                   | QSH-12-16                 |

## Dimensions

Download CAD Data → [www.festo.com/us/cad](http://www.festo.com/us/cad)



+ = plus stroke length

| Ø Stroke [mm] | 32               |         |    |                 |      |     |       | 40               |         |    |                 |      |    |       |
|---------------|------------------|---------|----|-----------------|------|-----|-------|------------------|---------|----|-----------------|------|----|-------|
|               | A2 <sup>1)</sup> | D1 max. | D2 | EE              | L1   | L2  | WH+A2 | A2 <sup>1)</sup> | D1 max. | D2 | EE              | L1   | L2 | WH+A2 |
| 10 ... 100    | 44               | 46      | 14 | G $\frac{1}{8}$ | 12.9 | 5.4 | 70    | 48               | 57      | 17 | G $\frac{1}{4}$ | 16.3 | 7  | 78    |
| 101 ... 200   | 74               |         |    |                 |      |     | 100   | 77               |         |    |                 |      |    | 107   |
| 201 ... 300   | 88               |         |    |                 |      |     | 114   | 88               |         |    |                 |      |    | 118   |
| 301 ... 400   | 117              |         |    |                 |      |     | 143   | 117              |         |    |                 |      |    | 147   |
| 401 ... 500   | —                | —       | —  | —               | —    | —   | —     | 135              | —       | —  | —               | —    | —  | 165   |

| Ø Stroke [mm] | 63               |         |    |                 |      |    |       |
|---------------|------------------|---------|----|-----------------|------|----|-------|
|               | A2 <sup>1)</sup> | D1 max. | D2 | EE              | L1   | L2 | WH+A2 |
| 10 ... 100    | 43               | 93      | 17 | G $\frac{1}{4}$ | 22.4 | 7  | 80    |
| 101 ... 200   | 68               |         |    |                 |      |    | 105   |
| 201 ... 300   | 80               |         |    |                 |      |    | 117   |
| 301 ... 400   | 104              |         |    |                 |      |    | 141   |
| 401 ... 500   | 117              |         |    |                 |      |    | 154   |

1) The dimension corresponds to the K8 value (extended piston rod) of the cylinder

# Electric cylinders DNCE, with spindle drive

Accessories

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## Ordering data – Bellows kit

An extended piston rod (order code K8) → 17 is absolutely necessary when using a bellows kit.

The necessary dimensions for K8 as a function of cylinder size and stroke as well as the corresponding bellows kit are indicated in the table below:

### Order example:

Selected electric cylinder:

DNCE-32-250-BS-“3”P-Q-...K8

The dimension for the corresponding K8 value (see table):  
88 mm

Complete type code for electric cylinder:

DNCE-32-250-BS-“3”P-Q-88K8

The corresponding bellows kit:

EADB-V1-32-S201-300

| Cylinder data |             |                  | Bellows kit   |                            |
|---------------|-------------|------------------|---------------|----------------------------|
| Ø             | Stroke      | Dimension for K8 | Part No.      | Type                       |
| [mm]          | [mm]        | [mm]             |               |                            |
| 32            | 10 ... 100  | 44               | <b>570262</b> | <b>EADB-V1-32-S10-100</b>  |
|               | 101 ... 200 | 74               | <b>570263</b> | <b>EADB-V1-32-S101-200</b> |
|               | 201 ... 300 | 88               | <b>570264</b> | <b>EADB-V1-32-S201-300</b> |
|               | 301 ... 400 | 117              | <b>570265</b> | <b>EADB-V1-32-S301-400</b> |
|               | –           |                  |               |                            |
|               |             |                  |               |                            |
| 40            | 10 ... 100  | 48               | <b>570266</b> | <b>EADB-V1-40-S10-100</b>  |
|               | 101 ... 200 | 77               | <b>570267</b> | <b>EADB-V1-40-S101-200</b> |
|               | 201 ... 300 | 88               | <b>570268</b> | <b>EADB-V1-40-S201-300</b> |
|               | 301 ... 400 | 117              | <b>570269</b> | <b>EADB-V1-40-S301-400</b> |
|               | 401 ... 500 | 135              | <b>570270</b> | <b>EADB-V1-40-S401-500</b> |
|               |             |                  |               |                            |
| 63            | 10 ... 100  | 43               | <b>570271</b> | <b>EADB-V1-63-S10-100</b>  |
|               | 101 ... 200 | 68               | <b>570272</b> | <b>EADB-V1-63-S101-200</b> |
|               | 201 ... 300 | 80               | <b>570273</b> | <b>EADB-V1-63-S201-300</b> |
|               | 301 ... 400 | 104              | <b>570274</b> | <b>EADB-V1-63-S301-400</b> |
|               | 401 ... 500 | 117              | <b>570275</b> | <b>EADB-V1-63-S401-500</b> |



# Electric cylinders DNCE, with spindle drive

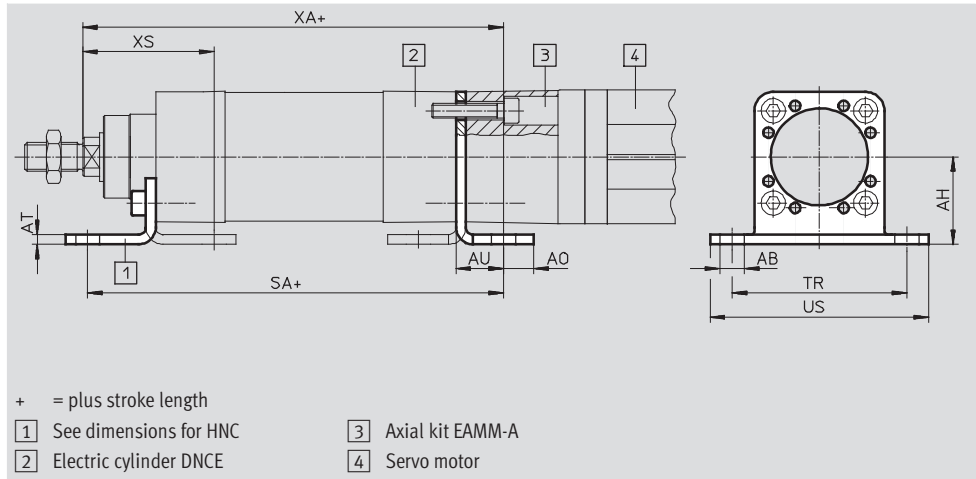
FESTO

Accessories

## Foot mounting HNCE, for axial motor mounting

Material:  
Galvanised steel

Free of copper, PTFE and silicone



| Dimensions and ordering data |         |    |      |    |      |       |    |     |       |    |
|------------------------------|---------|----|------|----|------|-------|----|-----|-------|----|
| For size                     | AB<br>Ø | AH | AO   | AT | AU   | SA    | TR | US  | XA    | XS |
| [mm]                         |         |    |      |    |      |       |    |     |       |    |
| 32                           | 7       | 32 | 10.5 | 4  | 17.5 | 163.5 | 58 | 71  | 165.5 | 46 |
| 40                           | 10      | 36 | 12.5 | 4  | 19.5 | 194.5 | 72 | 90  | 196   | 54 |
| 63                           | 10      | 50 | 15   | 5  | 23   | 232   | 92 | 110 | 237   | 64 |

| For size | CRC <sup>1)</sup> | Weight | Part No. | Type       |
|----------|-------------------|--------|----------|------------|
| [mm]     |                   | [g]    |          |            |
| 32       | 1                 | 160    | 547949   | HNCE-32-AX |
| 40       | 1                 | 220    | 547950   | HNCE-40-AX |
| 63       | 1                 | 470    | 547951   | HNCE-63-AX |

1) Corrosion resistance class 1 according to Festo standard 940 070  
Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

# Electric cylinders DNCE, with spindle drive

Accessories

FESTO

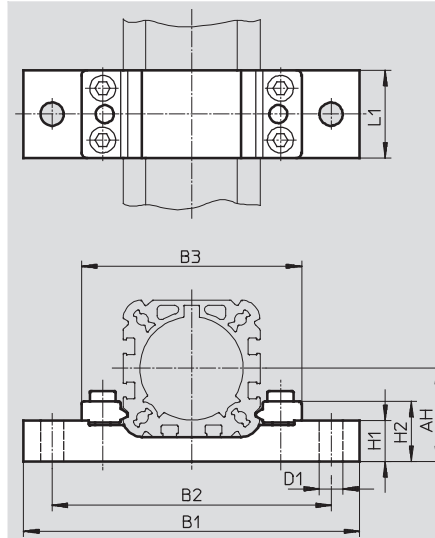
## Profile mounting EAHF

Materials:

RoHS-compliant

Plate: Anodised aluminium

Clamping pieces: Galvanised steel



| Dimensions and ordering data |    |     |     |       |         |      |      |    |
|------------------------------|----|-----|-----|-------|---------|------|------|----|
| For size                     | AH | B1  | B2  | B3    | D1<br>Ø | H1   | H2   | L1 |
| [mm]                         |    |     |     |       |         |      |      |    |
| 32                           | 32 | 100 | 84  | 66.1  | 6.6     | 17.5 | 26.1 | 32 |
| 40                           | 36 | 130 | 108 | 85.2  | 9       | 15.7 | 23.3 | 34 |
| 63                           | 50 | 150 | 128 | 104.8 | 9       | 22.9 | 30.4 | 41 |

| For size | CRC <sup>1)</sup> | Weight | Part No. | Type         |
|----------|-------------------|--------|----------|--------------|
| [mm]     |                   | [g]    |          |              |
| 32       | 1                 | 175    | 1098473  | EAHF-V1-32-P |
| 40       | 1                 | 230    | 1098478  | EAHF-V1-40-P |
| 63       | 1                 | 400    | 1098481  | EAHF-V1-63-P |

1) Corrosion resistance class 1 according to Festo standard 940 070

Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

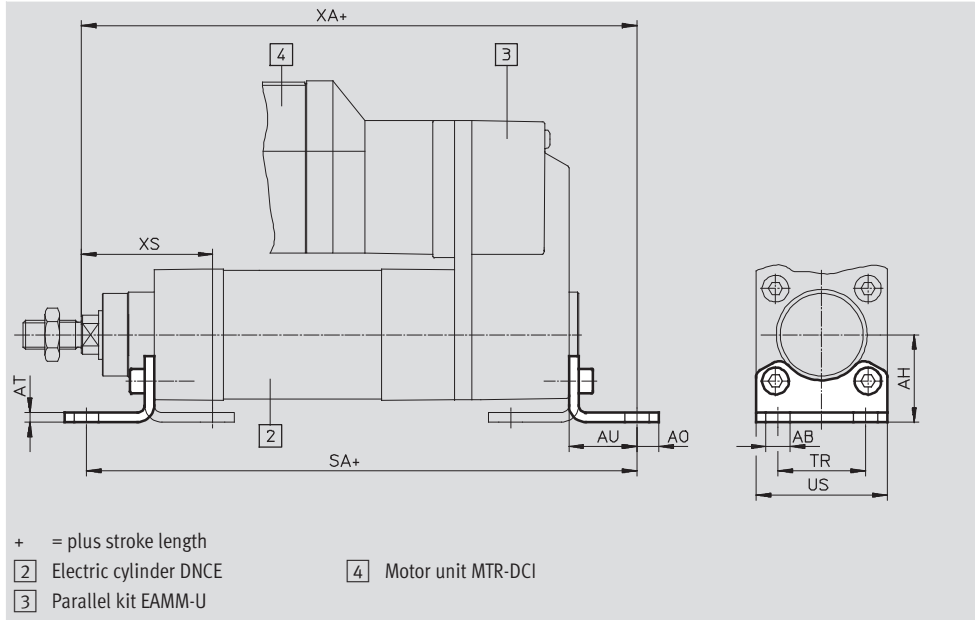
# Electric cylinders DNCE, with spindle drive

FESTO

Accessories

Foot mounting HNC/CRHNC,  
for parallel motor mounting

Material:  
HNC: Galvanised steel  
CRHNC: High-alloy steel  
Free of copper, PTFE and silicone



| Dimensions and ordering data |         |    |      |    |    |       |    |    |       |    |
|------------------------------|---------|----|------|----|----|-------|----|----|-------|----|
| For size                     | AB<br>Ø | AH | AO   | AT | AU | SA    | TR | US | XA    | XS |
| [mm]                         |         |    |      |    |    |       |    |    |       |    |
| 32                           | 7       | 32 | 6.5  | 4  | 24 | 210   | 32 | 45 | 212   | 46 |
| 40                           | 10      | 36 | 9    | 4  | 28 | 249.5 | 36 | 54 | 251.5 | 54 |
| 63                           | 10      | 50 | 12.5 | 5  | 32 | 299   | 50 | 75 | 304   | 64 |

| For size | Basic version     |               |          |        | High corrosion protection |               |          |          |
|----------|-------------------|---------------|----------|--------|---------------------------|---------------|----------|----------|
|          | CRC <sup>1)</sup> | Weight<br>[g] | Part No. | Type   | CRC <sup>1)</sup>         | Weight<br>[g] | Part No. | Type     |
| [mm]     |                   |               |          |        |                           |               |          |          |
| 32       | 2                 | 144           | 174369   | HNC-32 | 4                         | 139           | 176937   | CRHNC-32 |
| 40       | 2                 | 193           | 174370   | HNC-40 | 4                         | 188           | 176938   | CRHNC-40 |
| 63       | 2                 | 436           | 174372   | HNC-63 | 4                         | 424           | 176940   | CRHNC-63 |

- 1) Corrosion resistance class 2 according to Festo standard 940 070  
 Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.  
 Corrosion resistance class 4 according to Festo standard 940 070  
 Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

# Electric cylinders DNCE, with spindle drive

Accessories

FESTO

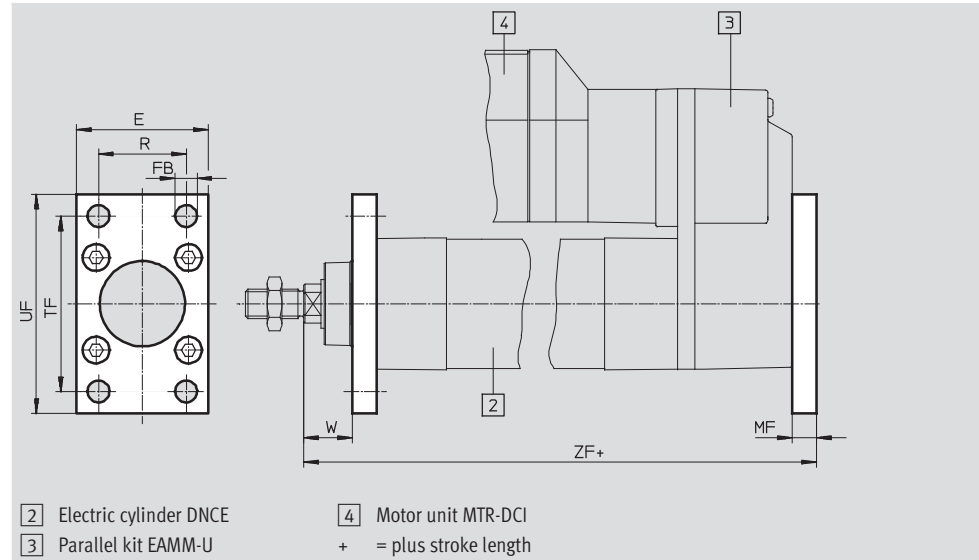
## Flange mounting FNC/CRFNG

Material:

FNC: Galvanised steel

CRFNG: High-alloy steel

Free of copper, PTFE and silicone



| Dimensions and ordering data |    |          |    |    |     |     |    |       |
|------------------------------|----|----------|----|----|-----|-----|----|-------|
| For size                     | E  | FB       | MF | R  | TF  | UF  | W  | ZF    |
| [mm]                         |    | Ø<br>H13 |    |    |     |     |    |       |
| 32                           | 45 | 7        | 10 | 32 | 64  | 80  | 16 | 198   |
| 40                           | 54 | 9        | 10 | 36 | 72  | 90  | 20 | 233.5 |
| 63                           | 75 | 9        | 12 | 50 | 100 | 120 | 25 | 284   |

| For size | Basic version     |               |          |        | High corrosion protection |               |          |          |
|----------|-------------------|---------------|----------|--------|---------------------------|---------------|----------|----------|
|          | CRC <sup>1)</sup> | Weight<br>[g] | Part No. | Type   | CRC <sup>1)</sup>         | Weight<br>[g] | Part No. | Type     |
| [mm]     |                   |               |          |        |                           |               |          |          |
| 32       | 1                 | 221           | 174376   | FNC-32 | 4                         | 225           | 161846   | CRFNG-32 |
| 40       | 1                 | 291           | 174377   | FNC-40 | 4                         | 300           | 161847   | CRFNG-40 |
| 63       | 1                 | 679           | 174379   | FNC-63 | 4                         | 680           | 161849   | CRFNG-63 |

1) Corrosion resistance class 1 according to Festo standard 940 070

Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

Corrosion resistance class 4 according to Festo standard 940 070

Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

# Electric cylinders DNCE, with spindle drive

FESTO

Accessories

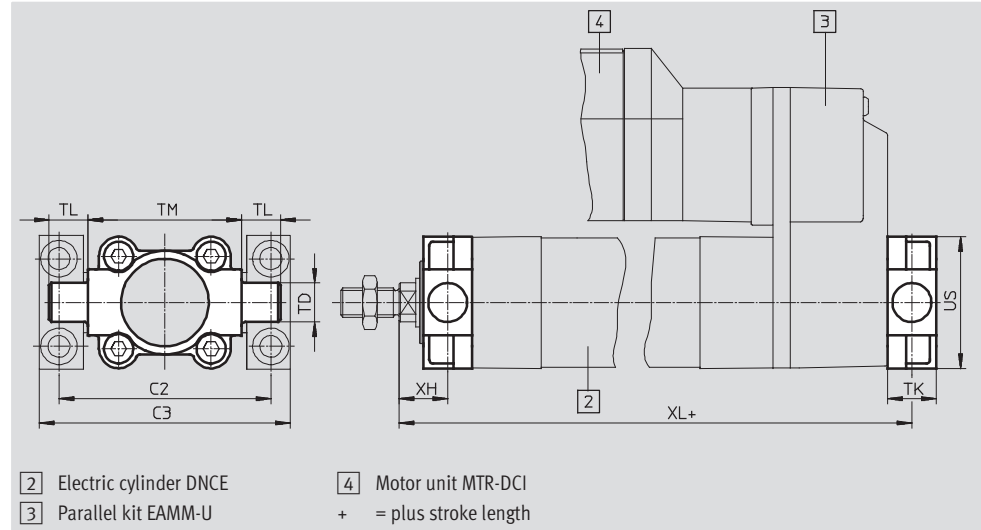
## Trunnion flange ZNCF/CRZNG

Material:

ZNCF: Stainless steel casting

CRZNG: Electropolished stainless steel casting

Free of copper, PTFE and silicone



| Dimensions and ordering data |     |     |               |    |    |    |    |    |       |
|------------------------------|-----|-----|---------------|----|----|----|----|----|-------|
| For size                     | C2  | C3  | TD<br>Ø<br>e9 | TK | TL | TM | US | XH | XL    |
| [mm]                         |     |     |               |    |    |    |    |    |       |
| 32                           | 71  | 86  | 12            | 16 | 12 | 50 | 45 | 18 | 196   |
| 40                           | 87  | 105 | 16            | 20 | 16 | 63 | 54 | 20 | 233.5 |
| 63                           | 116 | 136 | 20            | 24 | 20 | 90 | 75 | 25 | 284   |

| For size<br>[mm] | Basic version     |               |          |         | High corrosion protection |               |          |          |
|------------------|-------------------|---------------|----------|---------|---------------------------|---------------|----------|----------|
|                  | CRC <sup>1)</sup> | Weight<br>[g] | Part No. | Type    | CRC <sup>1)</sup>         | Weight<br>[g] | Part No. | Type     |
| 32               | 2                 | 150           | 174411   | ZNCF-32 | 4                         | 150           | 161852   | CRZNG-32 |
| 40               | 2                 | 285           | 174412   | ZNCF-40 | 4                         | 285           | 161853   | CRZNG-40 |
| 63               | 2                 | 687           | 174414   | ZNCF-63 | 4                         | 687           | 161855   | CRZNG-63 |

1) Corrosion resistance class 2 according to Festo standard 940 070  
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.  
Corrosion resistance class 4 according to Festo standard 940 070  
Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

# Electric cylinders DNCE, with spindle drive

Accessories

FESTO

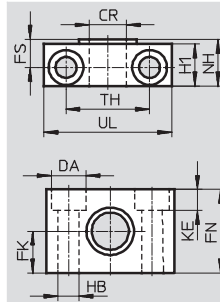
## Trunnion support LNZG

Materials:

Trunnion support: Anodised aluminium

Plain bearing: Plastic

Free of copper, PTFE and silicone



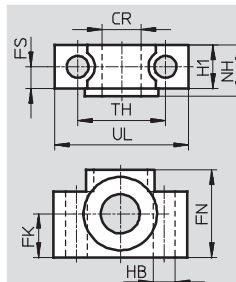
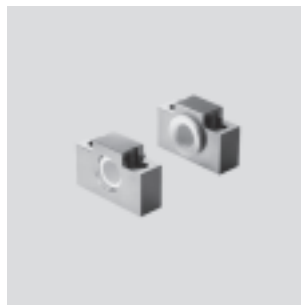
| Dimensions and ordering data |    |    |    |    |      |    |     |     |    |      |    |                   |        |                         |
|------------------------------|----|----|----|----|------|----|-----|-----|----|------|----|-------------------|--------|-------------------------|
| For size                     | CR | DA | FK | FN | FS   | H1 | HB  | KE  | NH | TH   | UL | CRC <sup>1)</sup> | Weight | Part No. Type           |
| [mm]                         | Ø  | Ø  | Ø  |    |      |    | Ø   |     |    | ±0.2 |    |                   | [g]    |                         |
| 32                           | 12 | 11 | 15 | 30 | 10.5 | 15 | 6.6 | 6.8 | 18 | 32   | 46 | 2                 | 90     | <b>32959 LNZG-32</b>    |
| 40                           | 16 | 15 | 18 | 36 | 12   | 18 | 9   | 9   | 21 | 36   | 55 | 2                 | 140    | <b>32960 LNZG-40/50</b> |
| 63                           | 20 | 18 | 20 | 40 | 13   | 20 | 11  | 11  | 23 | 42   | 65 | 2                 | 190    | <b>32961 LNZG-63/80</b> |

## Trunnion support CRLNZG

Material:

High-alloy steel

Free of copper, PTFE and silicone



| Dimensions and ordering data |         |         |    |      |    |         |    |      |    |                   |        |          |              |
|------------------------------|---------|---------|----|------|----|---------|----|------|----|-------------------|--------|----------|--------------|
| For size                     | CR<br>Ø | FK<br>Ø | FN | FS   | H1 | HB<br>Ø | NH | TH   | UL | CRC <sup>1)</sup> | Weight | Part No. | Type         |
| [mm]                         | D11     | ±0.1    |    |      |    | H13     |    | ±0.2 |    |                   | [g]    |          |              |
| 32                           | 12      | 15      | 30 | 10.5 | 15 | 6.6     | 18 | 32   | 46 | 4                 | 200    | 161874   | CRLNZG-32    |
| 40                           | 16      | 18      | 36 | 12   | 18 | 9       | 21 | 36   | 55 | 4                 | 330    | 161875   | CRLNZG-40/50 |
| 63                           | 20      | 20      | 40 | 13   | 20 | 11      | 23 | 42   | 65 | 4                 | 440    | 161876   | CRLNZG-63/80 |

1) Corrosion resistance class 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Corrosion resistance class 4 according to Festo standard 940 070

Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

# Electric cylinders DNCE, with spindle drive

FESTO

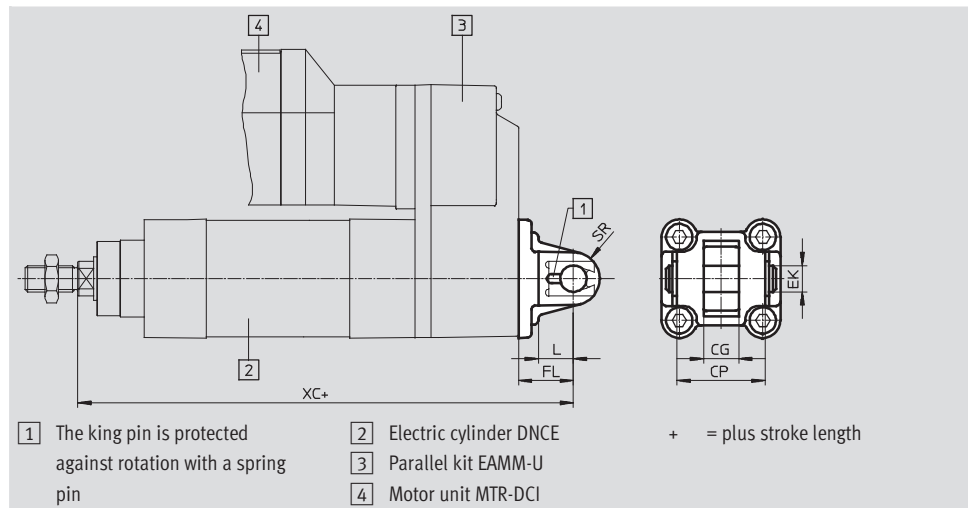
Accessories

## Swivel flange SNC

Material:

Die-cast aluminium

Free of copper, PTFE and silicone



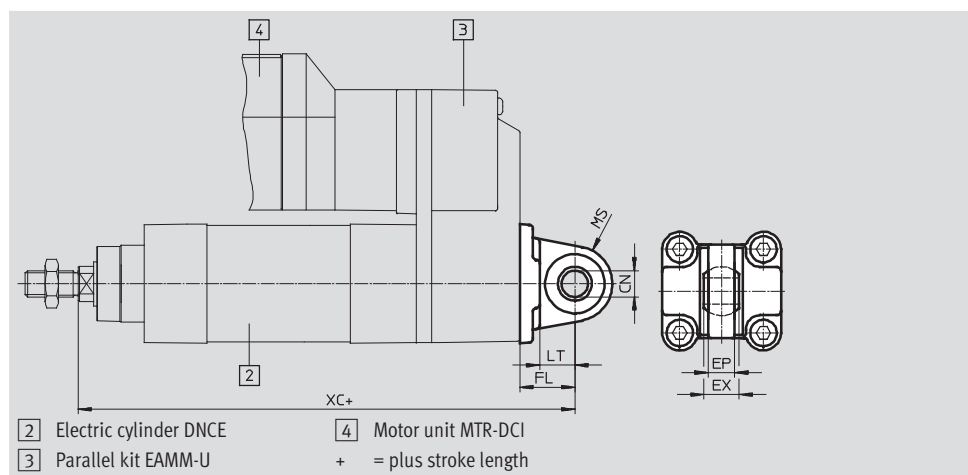
| Dimensions and ordering data |     |     |         |      |    |    |       |                   |        |          |        |
|------------------------------|-----|-----|---------|------|----|----|-------|-------------------|--------|----------|--------|
| For size                     | CG  | CP  | EK<br>Ø | FL   | L  | SR | XC    | CRC <sup>1)</sup> | Weight | Part No. | Type   |
| [mm]                         | H14 | h14 |         | ±0.2 |    |    |       |                   | [g]    |          |        |
| 32                           | 14  | 34  | 10      | 22   | 13 | 10 | 210   | 2                 | 90     | 174383   | SNC-32 |
| 40                           | 16  | 40  | 12      | 25   | 16 | 12 | 248.5 | 2                 | 120    | 174384   | SNC-40 |
| 63                           | 21  | 51  | 16      | 32   | 21 | 16 | 304   | 2                 | 320    | 174386   | SNC-63 |

## Swivel flange SNCS

Material:

Die-cast aluminium

Free of copper, PTFE and silicone



| Dimensions and ordering data |         |      |    |      |    |    |       |                   |        |          |         |
|------------------------------|---------|------|----|------|----|----|-------|-------------------|--------|----------|---------|
| For size                     | CN<br>Ø | EP   | EX | FL   | LT | MS | XC    | CRC <sup>1)</sup> | Weight | Part No. | Type    |
| [mm]                         | H7      | +0.2 |    | ±0.2 |    |    |       |                   | [g]    |          |         |
| 32                           | 10      | 10.5 | 14 | 22   | 13 | 15 | 210   | 2                 | 85     | 174397   | SNCS-32 |
| 40                           | 12      | 12   | 16 | 25   | 16 | 17 | 248.5 | 2                 | 125    | 174398   | SNCS-40 |
| 63                           | 16      | 15   | 21 | 32   | 21 | 22 | 304   | 2                 | 280    | 174400   | SNCS-63 |

1) Corrosion resistance class 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

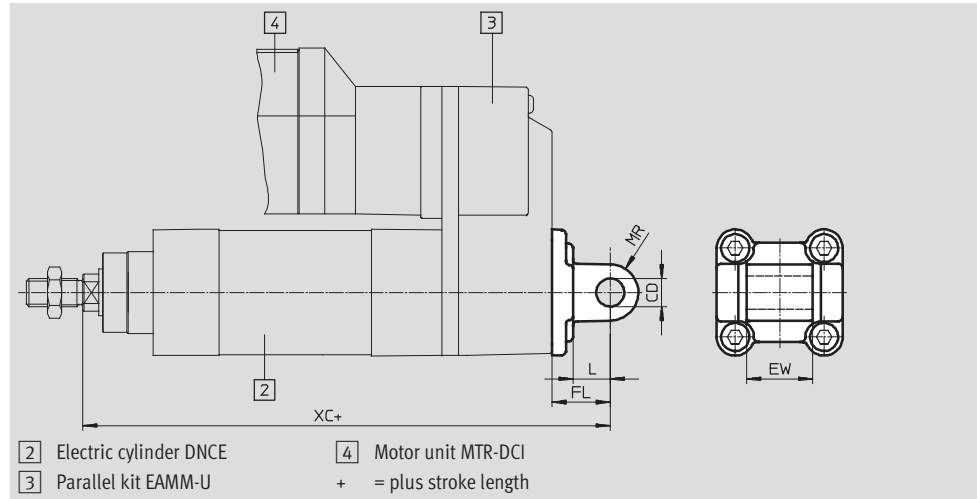
# Electric cylinders DNCE, with spindle drive

Accessories

FESTO

## Swivel flange SNCL

Material:  
Die-cast aluminium  
Free of copper, PTFE and silicone



| Dimensions and ordering data |         |     |      |    |    |       |                   |        |          |         |
|------------------------------|---------|-----|------|----|----|-------|-------------------|--------|----------|---------|
| For size                     | CD      | EW  | FL   | L  | MR | XC    | CRC <sup>1)</sup> | Weight | Part No. | Type    |
| [mm]                         | Ø<br>H9 | h12 | ±0.2 |    |    |       |                   | [g]    |          |         |
| 32                           | 10      | 26  | 22   | 13 | 10 | 210   | 2                 | 75     | 174404   | SNCL-32 |
| 40                           | 12      | 28  | 25   | 16 | 12 | 248.5 | 2                 | 100    | 174405   | SNCL-40 |
| 63                           | 16      | 40  | 32   | 21 | 16 | 304   | 2                 | 250    | 174407   | SNCL-63 |

1) Corrosion resistance class 2 according to Festo standard 940 070  
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.



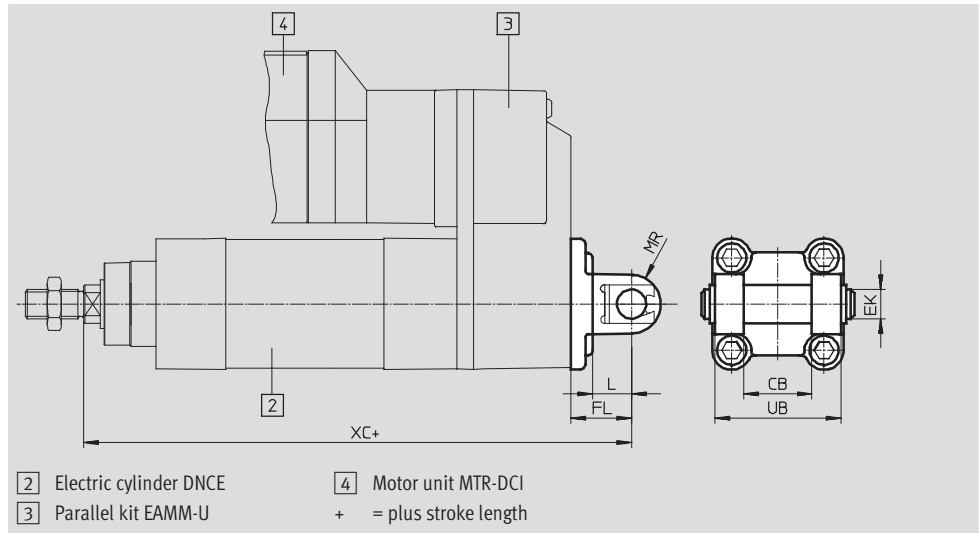
# Electric cylinders DNCE, with spindle drive

FESTO

Accessories

Swivel flange  
SNCB/SNCB-...-R3

Material:  
SNCB: Die-cast aluminium  
SNCB-...-R3: Die-cast aluminium with  
protective coating, high corrosion  
protection  
Free of copper, PTFE and silicone



| Dimensions and ordering data |     |         |      |    |    |     |       |
|------------------------------|-----|---------|------|----|----|-----|-------|
| For size                     | CB  | EK      | FL   | L  | MR | UB  | XC    |
| [mm]                         | H14 | Ø<br>e8 | ±0.2 |    |    | h14 |       |
| 32                           | 26  | 10      | 22   | 13 | 10 | 45  | 210   |
| 40                           | 28  | 12      | 25   | 16 | 12 | 52  | 248.5 |
| 63                           | 40  | 16      | 32   | 21 | 16 | 70  | 304   |

| For size<br>[mm] | Basic version     |               |          |         | Variant R3 – High corrosion protection |               |          |            |
|------------------|-------------------|---------------|----------|---------|----------------------------------------|---------------|----------|------------|
|                  | CRC <sup>1)</sup> | Weight<br>[g] | Part No. | Type    | CRC <sup>1)</sup>                      | Weight<br>[g] | Part No. | Type       |
| 32               | 2                 | 100           | 174390   | SNCB-32 | 3                                      | 100           | 176944   | SNCB-32-R3 |
| 40               | 2                 | 150           | 174391   | SNCB-40 | 3                                      | 150           | 176945   | SNCB-40-R3 |
| 63               | 2                 | 365           | 174393   | SNCB-63 | 3                                      | 365           | 176947   | SNCB-63-R3 |

1) Corrosion resistance class 3 according to Festo standard 940 070  
Components subject to high corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as solvents and cleaning agents.

# Electric cylinders DNCE, with spindle drive

Accessories

FESTO

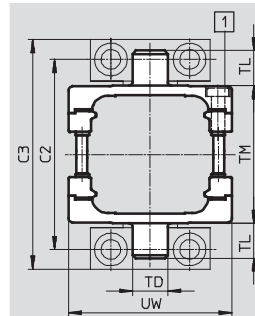
## Trunnion mounting kit ZNCM

Material:  
Tempered steel

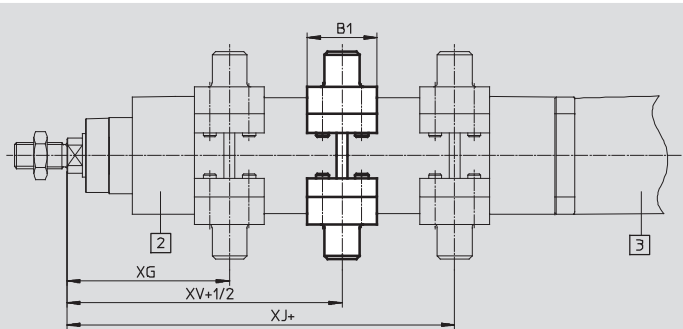
The mounting kit can be attached at any position along the profile barrel of a cylinder.

The trunnion mounting kit cannot be

mounted in the vicinity of the motor when used in combination with the parallel kit EAMM-U.



- 1 Max. tightening torque  
2 Electric cylinder DNCE



- 3 Axial kit EAMM-A

+ = plus stroke length  
+1/2 = plus stroke length

| Dimensions and ordering data |    |     |     |         |    |    |     |      |
|------------------------------|----|-----|-----|---------|----|----|-----|------|
| For size                     | B1 | C2  | C3  | TD      | TL | TM | UW  | XG   |
| [mm]                         |    |     |     | Ø<br>e9 |    |    |     |      |
| 32                           | 30 | 71  | 86  | 12      | 12 | 50 | 65  | 65   |
| 40                           | 32 | 87  | 105 | 16      | 16 | 63 | 75  | 74.5 |
| 63                           | 41 | 116 | 136 | 20      | 20 | 90 | 105 | 91.5 |

| For size | XJ    | XV    | Max. tightening torque | CRC <sup>1)</sup> | Weight | Part No. | Type    |
|----------|-------|-------|------------------------|-------------------|--------|----------|---------|
| [mm]     |       |       | [Nm]                   |                   | [g]    |          |         |
| 32       | 107   | 86    | 4+1                    | 2                 | 210    | 163525   | ZNCM-32 |
| 40       | 130.5 | 102.5 | 8+1                    | 2                 | 385    | 163526   | ZNCM-40 |
| 63       | 157.5 | 124.5 | 18+2                   | 2                 | 890    | 163528   | ZNCM-63 |

1) Corrosion resistance class 2 according to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

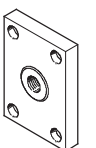
| Ordering data – Mounting attachments |          |          |         | Technical data → Internet: clevis foot |          |          |          |
|--------------------------------------|----------|----------|---------|----------------------------------------|----------|----------|----------|
| Designation                          | For size | Part No. | Type    | Designation                            | For size | Part No. | Type     |
| Clevis foot LNG                      |          |          |         | Clevis foot LSN                        |          |          |          |
|                                      | 32       | 33890    | LNG-32  |                                        | 32       | 5561     | LSN-32   |
|                                      | 40       | 33891    | LNG-40  |                                        | 40       | 5562     | LSN-40   |
|                                      | 63       | 33893    | LNG-63  |                                        | 63       | 5564     | LSN-63   |
| Clevis foot LSNG                     |          |          |         | Clevis foot LSNSG                      |          |          |          |
|                                      | 32       | 31740    | LSNG-32 |                                        | 32       | 31747    | LSNSG-32 |
|                                      | 40       | 31741    | LSNG-40 |                                        | 40       | 31748    | LSNSG-40 |
|                                      | 63       | 31743    | LSNG-63 |                                        | 63       | 31750    | LSNSG-63 |
| Clevis foot LBG                      |          |          |         | Right-angle clevis foot LQG            |          |          |          |
|                                      | 32       | 31761    | LBG-32  |                                        | 32       | 31768    | LQG-32   |
|                                      | 40       | 31762    | LBG-40  |                                        | 40       | 31769    | LQG-40   |
|                                      | 63       | 31764    | LBG-63  |                                        | 63       | 31771    | LQG-63   |

# Electric cylinders DNCE, with spindle drive

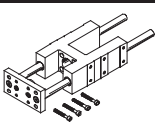
Accessories

**FESTO**

| Ordering data – Mounting attachments, corrosion-resistant                         |          |          | Technical data → Internet: clevis foot |  |
|-----------------------------------------------------------------------------------|----------|----------|----------------------------------------|--|
| Designation                                                                       | For size | Part No. | Type                                   |  |
| Clevis foot CRLNG                                                                 |          |          |                                        |  |
|  | 32       | 161840   | CRLNG-32                               |  |
|                                                                                   | 40       | 161841   | CRLNG-40                               |  |
|                                                                                   | 63       | 161843   | CRLNG-63                               |  |

| Ordering data – Piston rod attachments                                             |          |          |              | Technical data → Internet: piston rod attachment                                  |          |          |              |
|------------------------------------------------------------------------------------|----------|----------|--------------|-----------------------------------------------------------------------------------|----------|----------|--------------|
| Designation                                                                        | For size | Part No. | Type         | Designation                                                                       | For size | Part No. | Type         |
| Rod eye SGS                                                                        |          |          |              | Rod clevis SGA                                                                    |          |          |              |
|   | 32       | 9261     | SGS-M10x1,25 |  | 32       | 32954    | SGA-M10x1,25 |
|                                                                                    | 40       | 9262     | SGS-M12x1,25 |                                                                                   | 40       | 10767    | SGA-M12x1,25 |
|                                                                                    | 63       | 9263     | SGS-M16x1,5  |                                                                                   | 63       | 10768    | SGA-M16x1,5  |
| Rod clevis SG                                                                      |          |          |              | Self-aligning rod coupler FK                                                      |          |          |              |
|   | 32       | 6144     | SG-M10x1,25  |  | 32       | 6140     | FK-M10x1,25  |
|                                                                                    | 40       | 6145     | SG-M12x1,25  |                                                                                   | 40       | 6141     | FK-M12x1,25  |
|                                                                                    | 63       | 6146     | SG-M16x1,5   |                                                                                   | 63       | 6142     | FK-M16x1,5   |
| Coupling piece KSZ                                                                 |          |          |              |                                                                                   |          |          |              |
|  | 32       | 36125    | KSZ-M10x1,25 |                                                                                   |          |          |              |
|                                                                                    | 40       | 36126    | KSZ-M12x1,25 |                                                                                   |          |          |              |
|                                                                                    | 63       | 36127    | KSZ-M16x1,5  |                                                                                   |          |          |              |

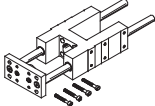
| Ordering data – Piston rod attachments, corrosion-resistant                         |          |          |                | Technical data → Internet: piston rod attachment                                    |          |          |               |
|-------------------------------------------------------------------------------------|----------|----------|----------------|-------------------------------------------------------------------------------------|----------|----------|---------------|
| Designation                                                                         | For size | Part No. | Type           | Designation                                                                         | For size | Part No. | Type          |
| Rod eye CRS GS                                                                      |          |          |                | Rod clevis CRS G                                                                    |          |          |               |
|  | 32       | 195582   | CRSGS-M10x1,25 |  | 32       | 13569    | CRSG-M10x1,25 |
|                                                                                     | 40       | 195583   | CRSGS-M12x1,25 |                                                                                     | 40       | 13570    | CRSG-M12x1,25 |
|                                                                                     | 63       | 195584   | CRSGS-M16x1,5  |                                                                                     | 63       | 13571    | CRSG-M16x1,5  |

| Ordering data – Guide units for fixed strokes (recirculating ball bearing guide only) |             |          |                | Technical data → Internet: feng |             |          |      |
|---------------------------------------------------------------------------------------|-------------|----------|----------------|---------------------------------|-------------|----------|------|
|                                                                                       | Stroke [mm] | Part No. | Type           |                                 | Stroke [mm] | Part No. | Type |
|    | For size 32 |          |                | For size 40                     |             |          |      |
|                                                                                       | 10 ... 100  | 34494    | FENG-32-100-KF | 10 ... 100                      |             |          |      |
|                                                                                       | 10 ... 200  | 34496    | FENG-32-200-KF | 10 ... 200                      |             |          |      |
|                                                                                       | 10 ... 320  | 34497    | FENG-32-320-KF | 10 ... 320                      |             |          |      |
|                                                                                       | 10 ... 400  | 150290   | FENG-32-400-KF | 10 ... 400                      |             |          |      |
|                                                                                       | 10 ... 500  | 34498    | FENG-32-500-KF | 10 ... 500                      |             |          |      |
|                                                                                       | For size 63 |          |                |                                 |             |          |      |
|                                                                                       | 10 ... 100  | 34514    | FENG-63-100-KF |                                 |             |          |      |
|                                                                                       | 10 ... 200  | 34516    | FENG-63-200-KF |                                 |             |          |      |
|                                                                                       | 10 ... 320  | 34518    | FENG-63-320-KF |                                 |             |          |      |
|                                                                                       | 10 ... 400  | 34519    | FENG-63-400-KF |                                 |             |          |      |
|                                                                                       | 10 ... 500  | 34520    | FENG-63-500-KF |                                 |             |          |      |

# Electric cylinders DNCE, with spindle drive

Accessories

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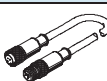
| Ordering data – Guide units for variable strokes                                  |                  |                |                                       |                       | Technical data → Internet: feng |                    |
|-----------------------------------------------------------------------------------|------------------|----------------|---------------------------------------|-----------------------|---------------------------------|--------------------|
|                                                                                   | For size<br>[mm] | Stroke<br>[mm] | With recirculating ball bearing guide |                       | With plain-bearing guide        |                    |
|                                                                                   |                  |                | Part No.                              | Type                  | Part No.                        | Type               |
|  | 32               | 10 ... 500     | <b>34487</b>                          | <b>FENG-32-...-KF</b> | <b>34481</b>                    | <b>FENG-32-...</b> |
|                                                                                   | 40               | 10 ... 500     | <b>34488</b>                          | <b>FENG-40-...-KF</b> | <b>34482</b>                    | <b>FENG-40-...</b> |
|                                                                                   | 63               | 10 ... 500     | <b>34490</b>                          | <b>FENG-63-...-KF</b> | <b>34484</b>                    | <b>FENG-63-...</b> |

| Ordering data – Compensating elements in combination with guide unit FENG         |          |               |                      |
|-----------------------------------------------------------------------------------|----------|---------------|----------------------|
| Designation                                                                       | For size | Part No.      | Type                 |
|  | 32       | <b>570305</b> | <b>EADC-V1-32</b>    |
|                                                                                   | 40       | <b>570306</b> | <b>EADC-V1-40</b>    |
|                                                                                   | 63       | <b>570307</b> | <b>EADC-V1-50/63</b> |

| Permissible proximity sensors in combination with motor units MTR-DCI               |                                                                    |                  |                       |                     |                                          |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------|------------------|-----------------------|---------------------|------------------------------------------|
| Ordering data – Proximity sensors for T-slot, magneto-resistive                     |                                                                    |                  |                       |                     | Technical data → Internet: smt           |
|                                                                                     | Type of mounting                                                   | Switching output | Electrical connection | Cable length<br>[m] | Part No. Type                            |
| N/O contact                                                                         |                                                                    |                  |                       |                     |                                          |
|  | Insertable in the slot lengthwise, flush with the cylinder profile | PNP              | Plug M8x1, 3-pin      | 0.3                 | <b>175484</b> <b>SMT-8-PS-S-LED-24-B</b> |

| Permissible proximity sensors in combination with servo motors EMMS-AS, stepper motors EMMS-ST or guide units FENG |                                                                    |                  |                       |                     |                                          |
|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|------------------|-----------------------|---------------------|------------------------------------------|
| Ordering data – Proximity sensors for T-slot, magneto-resistive                                                    |                                                                    |                  |                       |                     | Technical data → Internet: smt           |
|                                                                                                                    | Type of mounting                                                   | Switching output | Electrical connection | Cable length<br>[m] | Part No. Type                            |
| N/O contact                                                                                                        |                                                                    |                  |                       |                     |                                          |
|                                 | Insertable in the slot lengthwise, flush with the cylinder profile | PNP              | Cable, 3-wire         | 2.5                 | <b>175436</b> <b>SMT-8-PS-K-LED-24-B</b> |

| Ordering data – Proximity sensors for T-slot, magnetic reed                         |                                                                    |                  |                       |                     | Technical data → Internet: sme              |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------|------------------|-----------------------|---------------------|---------------------------------------------|
|                                                                                     | Type of mounting                                                   | Switching output | Electrical connection | Cable length<br>[m] | Part No. Type                               |
| N/O contact                                                                         |                                                                    |                  |                       |                     |                                             |
|  | Insertable in the slot from above, flush with the cylinder profile | Contacting       | Cable, 3-wire         | 2.5                 | <b>543862</b> <b>SME-8M-DS-24V-K-2,5-OE</b> |
|                                                                                     |                                                                    |                  |                       | 5.0                 | <b>543863</b> <b>SME-8M-DS-24V-K-5,0-OE</b> |
|  | Insertable in the slot lengthwise, flush with the cylinder profile | Contacting       | Cable, 3-wire         | 2.5                 | <b>150855</b> <b>SME-8-K-LED-24</b>         |

| Ordering data – Connecting cable                                                    |                         |            |                     | Technical data → Internet: km8 |                        |
|-------------------------------------------------------------------------------------|-------------------------|------------|---------------------|--------------------------------|------------------------|
|                                                                                     | Assembly                | Connection | Cable length<br>[m] | Part No.                       | Type                   |
| Straight socket                                                                     |                         |            |                     |                                |                        |
|  | Union nut M8, both ends | 3-pin      | 0.5                 | <b>175488</b>                  | <b>KM8-M8-GSGD-0,5</b> |
|                                                                                     |                         |            | 1                   | <b>175489</b>                  | <b>KM8-M8-GSGD-1</b>   |
|                                                                                     |                         |            | 2.5                 | <b>165610</b>                  | <b>KM8-M8-GSGD-2,5</b> |
|                                                                                     |                         |            | 5                   | <b>165611</b>                  | <b>KM8-M8-GSGD-5</b>   |

| Ordering data – Slot cover for T-slot                                               |                       |          |               |                |
|-------------------------------------------------------------------------------------|-----------------------|----------|---------------|----------------|
|                                                                                     | Assembly              | Length   | Part No.      | Type           |
|  | Insertable from above | 2x 0.5 m | <b>151680</b> | <b>ABP-5-S</b> |

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# Festo North America

## Festo Regional Contact Center

5300 Explorer Drive  
Mississauga, Ontario L4W 5G4  
Canada

### USA Customers:

For ordering assistance,

**Call:** 1.800.99.FESTO (1.800.993.3786)

**Fax:** 1.800.96.FESTO (1.800.963.3786)

**Email:** [customer.service@us.festo.com](mailto:customer.service@us.festo.com)

For technical support,

**Call:** 1.866.GO.FESTO (1.866.463.3786)

**Fax:** 1.800.96.FESTO (1.800.963.3786)

**Email:** [product.support@us.festo.com](mailto:product.support@us.festo.com)

### Canadian Customers:

**Call:** 1.877.GO.FESTO (1.877.463.3786)

**Fax:** 1.877.FX.FESTO (1.877.393.3786)

**Email:** [festo.canada@ca.festo.com](mailto:festo.canada@ca.festo.com)

## USA Headquarters

Festo Corporation  
395 Moreland Road  
P.O. Box 18023  
Hauppauge, NY 11788, USA  
[www.festo.com/us](http://www.festo.com/us)

## USA Sales Offices

### Appleton

North 922 Tower View Drive, Suite N  
Greenville, WI 54942, USA

### Boston

120 Presidential Way, Suite 330  
Woburn, MA 01801, USA

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1441 East Business Center Drive  
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2601 Cambridge Court, Suite 320  
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### New York

395 Moreland Road  
Hauppauge, NY 11788, USA

### Silicon Valley

4935 Southfront Road, Suite F  
Livermore, CA 94550, USA

## United States



**USA Headquarters, East:** Festo Corp., 395 Moreland Road, Hauppauge, NY 11788

Phone: 1.631.435.0800; Fax: 1.631.435.8026;

Email: [info@festo-usa.com](mailto:info@festo-usa.com)

[www.festo.com/us](http://www.festo.com/us)

## Canada



**Headquarters:** Festo Inc., 5300 Explorer Drive, Mississauga, Ontario L4W 5G4

Phone: 1.905.624.9000; Fax: 1.905.624.9001;

Email: [festo.canada@ca.festo.com](mailto:festo.canada@ca.festo.com)

[www.festo.ca](http://www.festo.ca)

## Mexico



**Headquarters:** Festo Pneumatic, S.A., Av. Ceylán 3, Col. Tequesquahuac,  
54020 Tlalneapantla, Edo. de México

Phone: 011 52 [55] 53 21 66 00; Fax: 011 52 [55] 53 21 66 65;

Email: [festo.mexico@mx.festo.com](mailto:festo.mexico@mx.festo.com)

[www.festo.com/mx](http://www.festo.com/mx)

## Central USA

Festo Corporation  
1441 East Business  
Center Drive  
Mt. Prospect, IL 60056, USA  
Phone: 1.847.759.2600  
Fax: 1.847.768.9480



## Western USA

Festo Corporation  
4935 Southfront Road,  
Suite F  
Livermore, CA 94550, USA  
Phone: 1.925.371.1099  
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