Electric cylinders DNCE, with spindle drive

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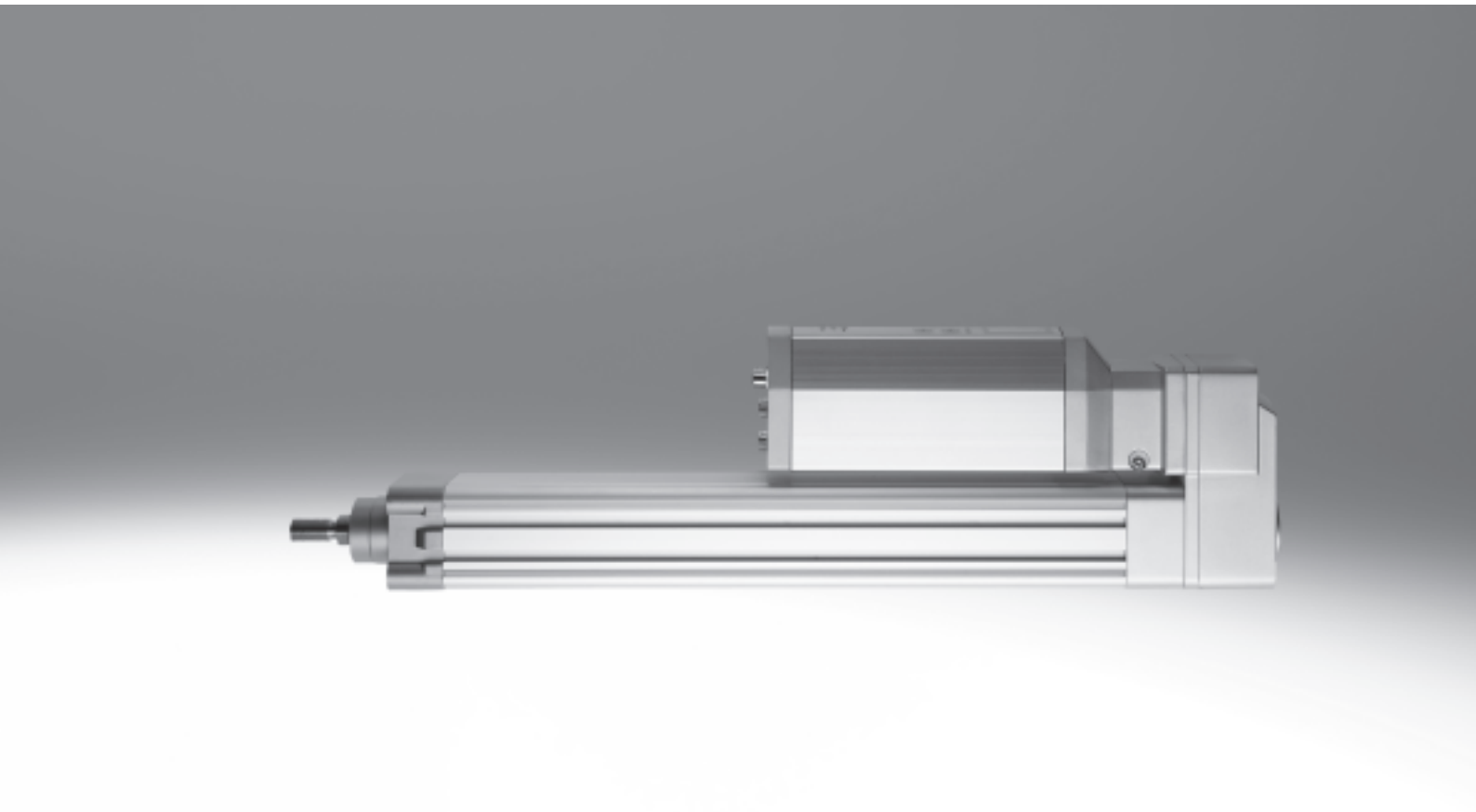


Electric cylinders DNCE, with spindle drive

Key features

At a glance

General information

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 piston rod.

The mechanical interfaces are largely compatible with the standard cylinder DNC.

Properties

- Choice of spindle type:
  - With lead screw (LS)
  - With ball screw (BS)
- Electric cylinder with lead screw is self-retarding
- Compact dimensions
- On request:
  - Higher IP protection class
  - Versions for clean room classes

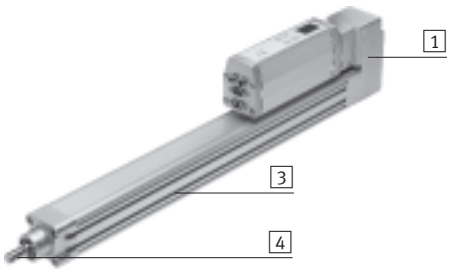
Range of applications

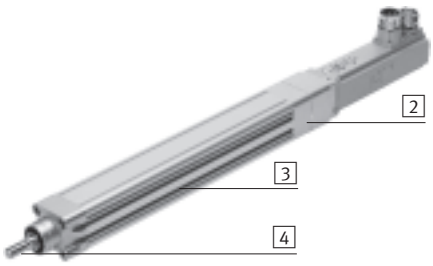
- Lead screw spindle
  - For applications with slow feed speeds
- Ball screw spindle
  - For applications with high feed speeds and high running performance

Entire system consists of electric cylinder, motor and motor mounting kit

Electric cylinder

➔ 6





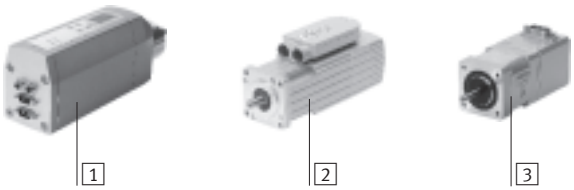
1 Parallel kit
2 Axial kit
3 Slot for proximity sensor
4 Alternatively:
- With lead screw (LS)
- With ball screw (BS)

Note

The lead screw spindle is self-retarding, which means that slow movements cannot be ruled out in the event of vibration.
The entire system with motor unit MTR-DCI is self-locking.

Motor/motor unit

➔ 17



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

➔ 17

Axial kit

Parallel kit

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

Longer service life thanks to bellows kit EADB

➔ 23

The bellows kit is a leak-free system. To prevent unwanted media from being drawn in, the supply and exhaust air is 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

New variant K3

Electric cylinders DNCE, with spindle drive

Type codes

Variants from the modular system	
Symbol	Key features
	K8 Extended piston rod
	K3 Female piston rod thread

Type codes

DNCE – 32 – 100 – LS – "1,5"P – Q – [ ] – [ ]

Type

DNCE	Electric cylinder

Size

Stroke [mm]

Drive function

LS	Lead screw
BS	Ball screw

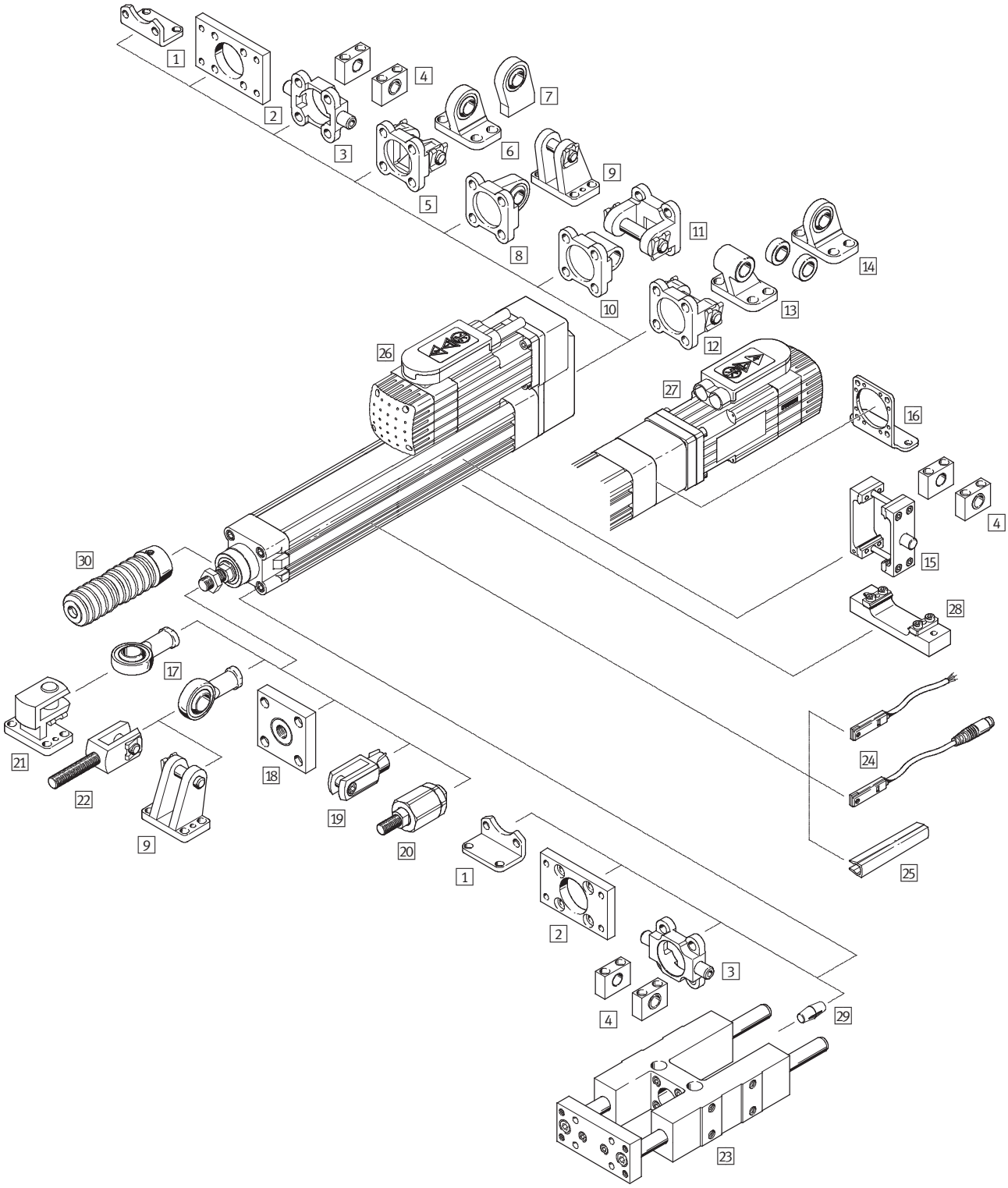
Spindle pitch [mm]

Variant

Q	Non-rotating piston rod
K8	Extended piston rod
K3	Female piston rod thread

Electric cylinders DNCE, with spindle drive

Peripherals overview



Mounting attachments and accessories		
	Brief description	**→ Page/Internet**
1 Foot mounting HNC/CRHNC	For mounting the cylinder	28
2 Flange mounting FNC/CRFNG	– Cannot be used on the bearing cap in combination with bellows kit EADB	29
3 Trunnion flange ZNCF/CRZNG	– Cannot be used on the bearing cap in combination with bellows kit EADB	30

Electric cylinders DNCE, with spindle drive

Peripherals overview

Mounting attachments and accessories			
		Brief description	→ Page/Internet
4	Trunnion support LNZG/CRLNZG	For cylinders with trunnion mounting	31
5	Swivel flange SNC	With parallel motor mounting	32
6	Clevis foot LSNG	With parallel motor mounting, with spherical bearing	35
7	Clevis foot LSNSG	With parallel motor mounting, weld-on, with spherical bearing	35
8	Swivel flange SNCS	With parallel motor mounting, for spherical bearing	32
9	Clevis foot LBG	With parallel motor mounting, for spherical bearing	35
10	Swivel flange SNCL	With parallel motor mounting	33
11	Swivel flange SNCB/SNCB-...-R3	With parallel motor mounting, for spherical bearing	34
12	Swivel flange SNCB/SNCB-...-R3	With parallel motor mounting	34
13	Clevis foot LNG/CRLNG	With parallel motor mounting	35
14	Clevis foot LSN	With parallel motor mounting, with spherical bearing	35
15	Trunnion mounting kit ZNCM	For mounting anywhere along the cylinder profile barrel. Cannot be mounted in the vicinity of the motor with parallel motor mounting	35
16	Foot mounting HNCE	With axial motor mounting	26
17	Rod eye SGS/CRSGS	With spherical bearing	36
18	Coupling piece KSZ	For compensating radial misalignments	36
19	Rod clevis SG/CRSG	Permits a swivelling movement of the cylinder in one plane	36
20	Self-aligning rod coupler FK	For compensating radial and angular misalignments	36
21	Right-angle clevis foot LQG	For rod eye SGS	36
22	Rod clevis SGA	For swivel mounting of cylinders	36
23	Guide unit FENG	– For protecting electric cylinders against rotation at high torque loads – Cannot be used in combination with bellows kit EADB	36
24	Proximity sensor SME/SMT-8	For position sensing. Can be integrated in sensor slot, thus no projecting parts	37
25	Slot cover ABP-5-S	For protecting against ingress of dirt	37
26	Parallel kit EAMM-U	For parallel motor mounting	17
27	Axial kit EAMM-A	For axial motor mounting	17
28	Profile mounting EAHF	– For mounting the electric cylinder via the profile – Cannot be mounted in the vicinity of the motor in combination with the parallel kit EAMM-U	27
29	Compensating component EADC	Compensates the play between the piston rod of the electric cylinder DNCE and the yoke plate of the guide unit FENG	37
30	Bellows kit EADB	– Protects the cylinder (piston rod, seal and bearings) against a wide range of media and thus prevents premature wear – The kit can only be used in combination with an extended piston rod (K8)	23

New
variant K3

Electric cylinders DNCE, with spindle drive

Technical data

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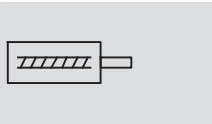
Function



Size
32 ... 63

Stroke length
1 ... 800 mm

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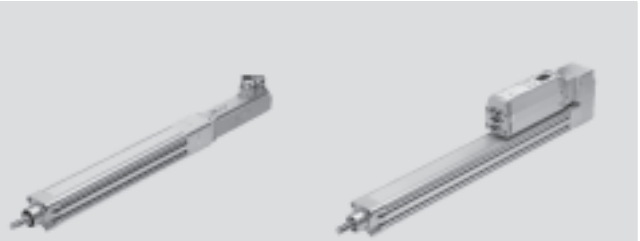

With axial kit

With parallel kit

General technical data				
Size		32	40	63
Design		With lead screw (LS)		
		With ball screw (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 torsion/guide		Plain-bearing guide		
Stroke reserve	[mm]	0		
Max. torsion angle at 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[1]	[%]	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 (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[1]	[N]	300	240	280	600	420	640	1,000	2,000	1,300
Max. driving torque[2]	[Nm]	0.4	0.4	0.8	1.15	0.9	1.9	3	4.9	5.9
No-load driving torque with axial kit[3]	[Nm]	0.08	0.08	0.08	0.12	0.12	0.12	0.3	0.2	0.2
No-load driving torque with parallel kit[3]	[Nm]	0.13	0.13	0.13	0.22	0.22	0.22	0.6	0.5	0.5
Continuous driving torque	[Nm]	0.4	0.3	0.6	1.15	0.8	1.6	3	4.1	4.8
Max. radial force[4]	[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/s²]	1	6	6	1	6	6	1	6	6
Reversing backlash[5]	[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 (LS), the feed force depends on the speed ➔ 9
The feed force in the case of the variant with ball screw (BS) ➔ 7
2) In the case of the variant with lead screw (LS), the driving torque depends on the rotational speed ➔ 10
3) Measured at a speed of 200 rpm
4) At the drive shaft
5) In new condition

Electric cylinders DNCE, with spindle drive

Technical data

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Operating and environmental conditions		
Ambient temperature[1)2)]	[°C]	0 ... 50
Storage temperature	[°C]	–25 ... +60
Protection class[2)]		IP40
Relative air humidity	[%]	0 ... 95

1) Note operating range of proximity sensors and motors
2) Higher protection class and other environmental conditions on request

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_0 at 0 mm stroke	[kg cm^2]	0.0433	0.0439	0.0446	0.1316	0.1304	0.1337	0.7565	0.7626	0.7624
j_S per metre stroke	[kg cm^2/m]	0.0361	0.0476	0.0595	0.1341	0.1163	0.1572	0.8176	0.9090	0.9103
j_L per kg working load	[kg cm^2/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_A of the electric cylinder is calculated as follows:

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

Calculation of the mean feed force F_{xm} for the electric cylinder DNCE with ball screw (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. The maximum speed must likewise not be exceeded.

$F_x \leq F_{xmax.}$

and

$v_x \leq v_{xmax.}$

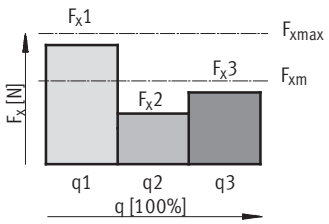
Mean feed force (to DIN 69 051-4)

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.

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

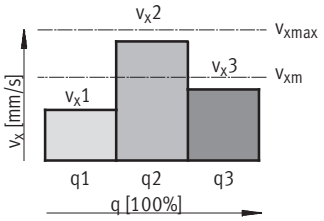
$$F_{xm} = \sqrt[3]{\sum F_x^3 \times \frac{v_x}{v_{xm}} \times \frac{q}{100}} =$$

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



Mean feed speed (to DIN 69 051-4)

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



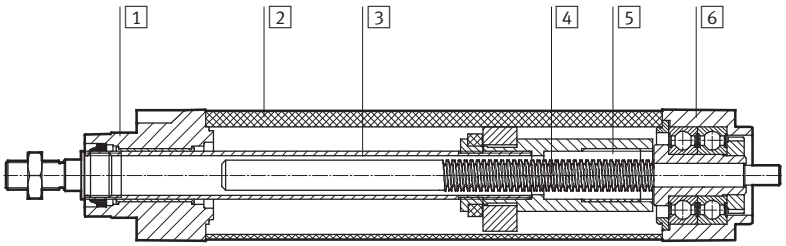
F_x	Feed force	v_x	Feed speed
F_{xm}	Mean feed force	v_{xm}	Mean feed speed
$F_{xmax.}$	Max. feed force	$v_{xmax.}$	Max. feed speed
F_{xcont}	Continuous feed force		
q	Time		

Electric cylinders DNCE, with spindle drive

Technical data

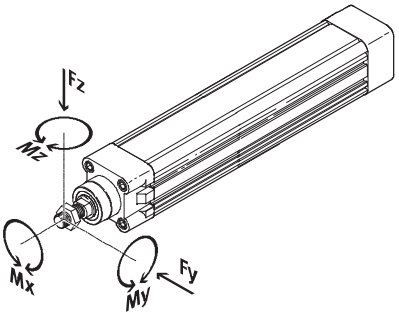
Materials

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

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:

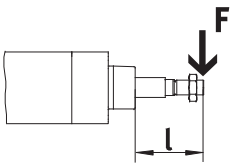
$$\frac{|Fy|}{Fy_{max.}} + \frac{|Fz|}{Fz_{max.}} + \frac{|My|}{My_{max.}} + \frac{|Mz|}{Mz_{max.}} \leq 1$$

$$|Fx| \leq Fxmax$$

$$|Mx| \leq Mxmax$$

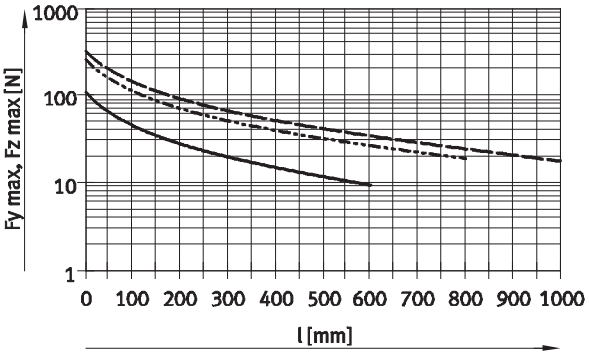
Definition of stroke length l:

l = Stroke + value of the piston rod extension K8

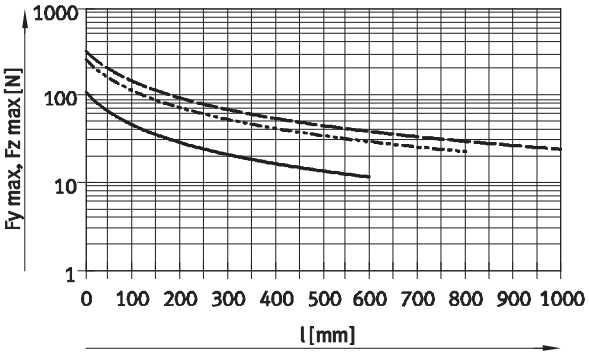


Maximum permissible lateral forces Fy_{max} and Fz_{max} on the piston rod as a function of stroke length l

Mounting position, horizontal



Mounting position, vertical



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

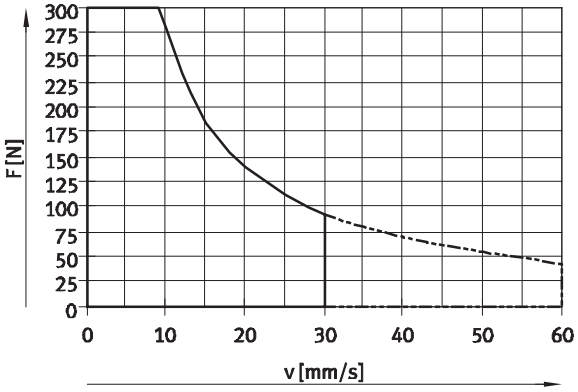
Note

PositioningDrives sizing software
➔ www.festo.com

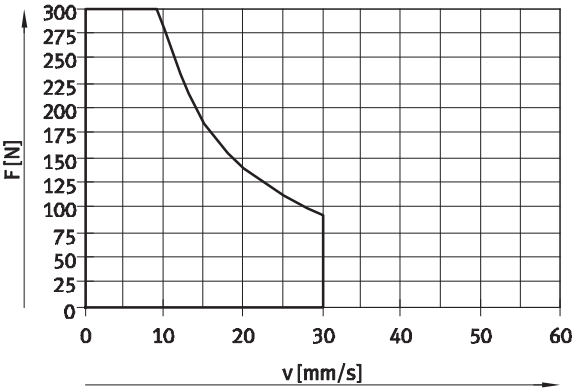
Size		32	40	63
Maximum permissible forces and torques				
Fx_{max} (static)	[N]	600	1,400	3,700
Mx_{max}	[Nm]	1	1	1.5
My_{max}, Mz_{max}	[Nm]	8	20	27

Feed force F as a function of speed v

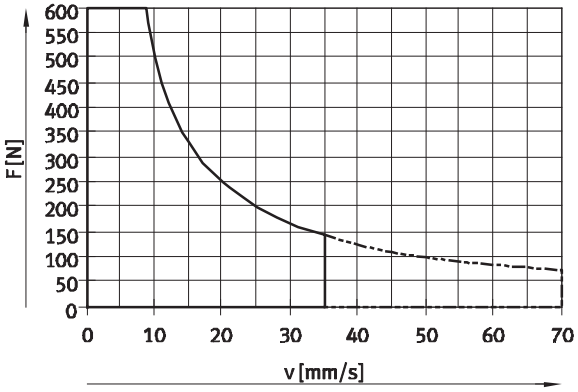
DNCE-32-1...299-LS-...



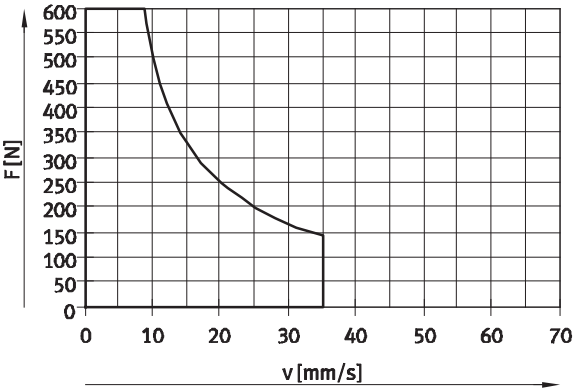
DNCE-32-300...400-LS-...



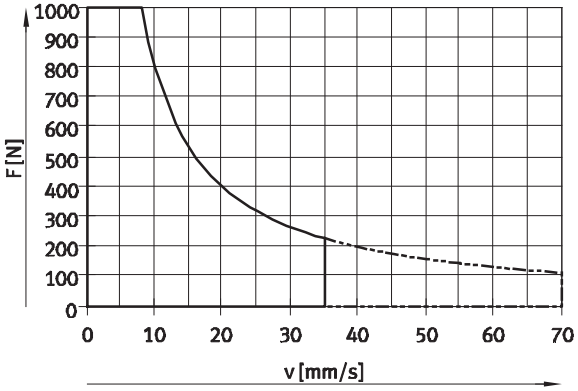
DNCE-40-1...299-LS-...



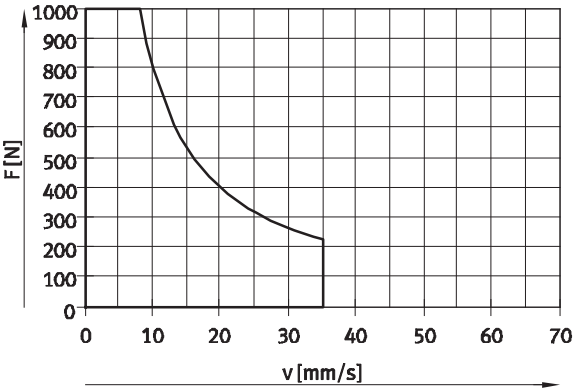
DNCE-40-300...600-LS-...



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



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

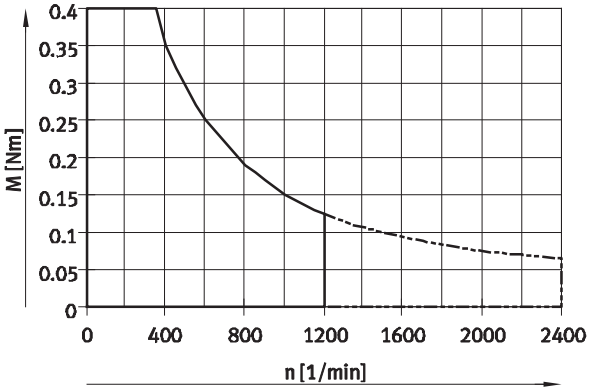


Recommended operating range

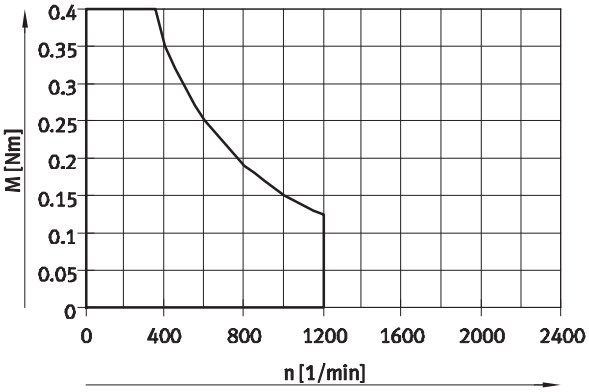
Permissible operating range
(duty cycle < 50% recommended)

Driving torque M as a function of rotational speed n

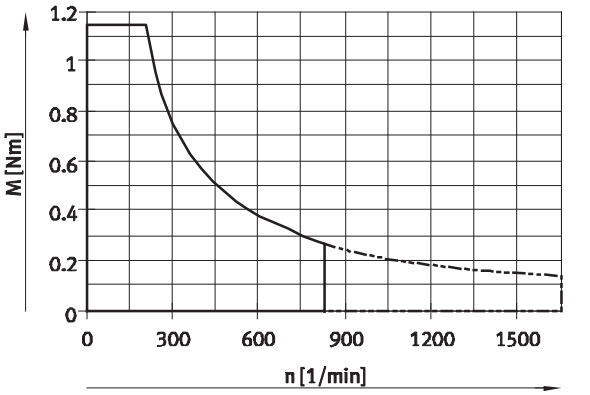
DNCE-32-1...299-LS-...



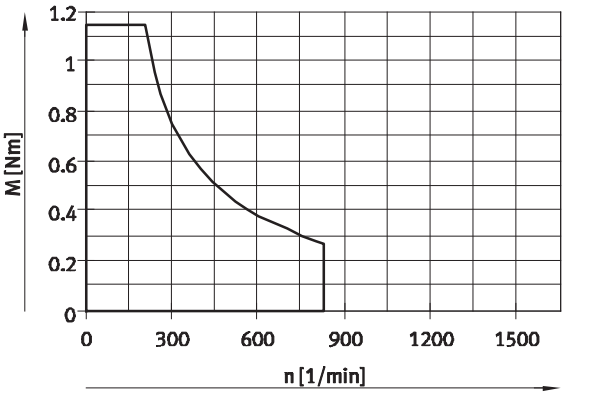
DNCE-32-300...400-LS-...



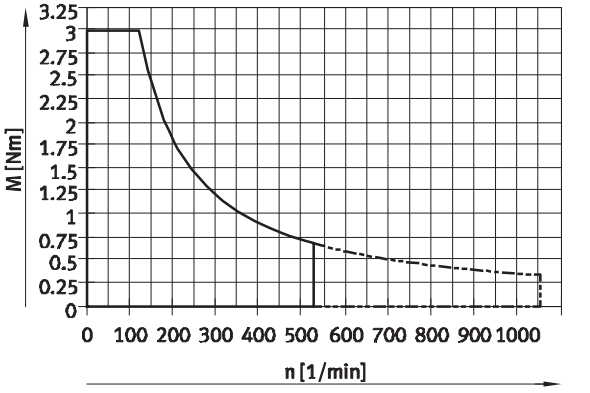
DNCE-40-1...299-LS-...



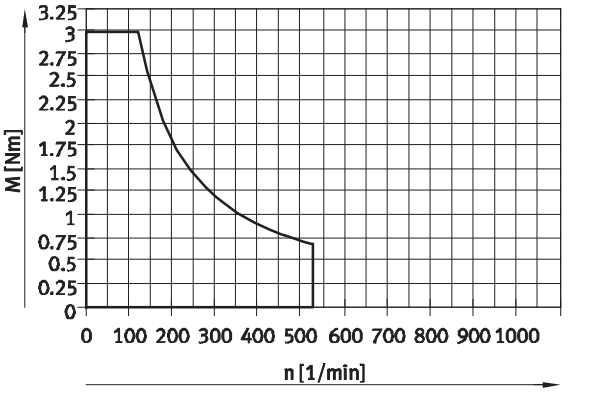
DNCE-40-300...600-LS-...



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



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

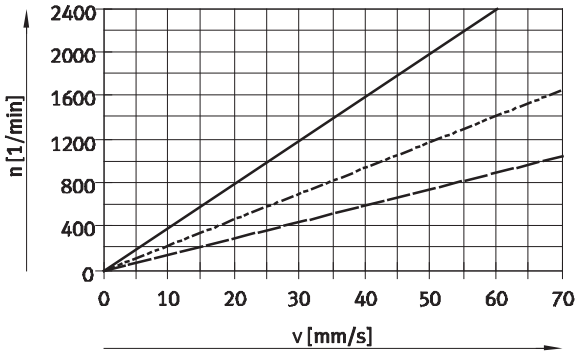


Recommended operating range

Permissible operating range
(duty cycle < 50% recommended)

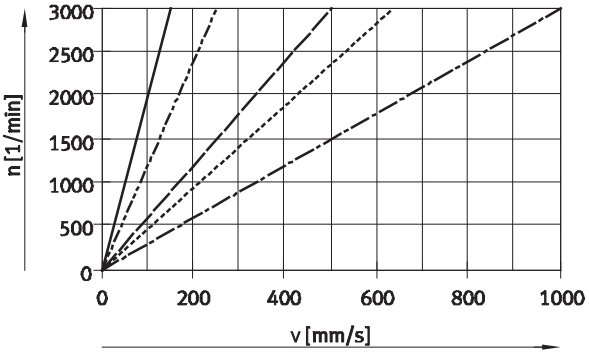
Rotational speed n as a function of speed v

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-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

Driving torque M as a function of feed force F

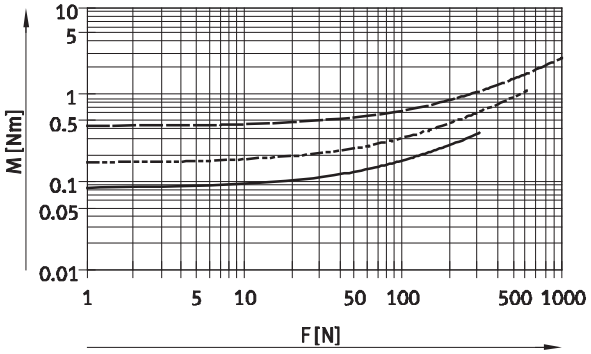
Note

The graphs take into consideration the frictional torques at room temperature.

At lower temperatures, the frictional torques increase with the DNCE-...-LS (lead screw).

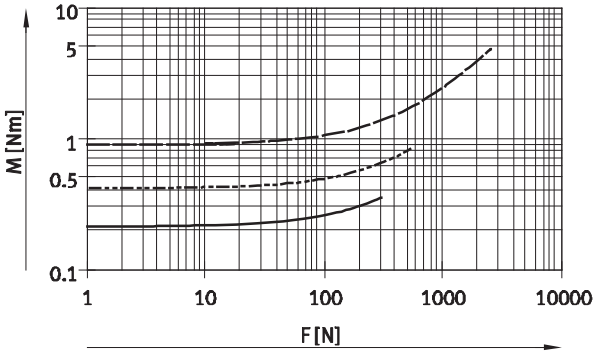
PositioningDrives sizing software
➔ www.festo.com

DNCE-...-LS-...

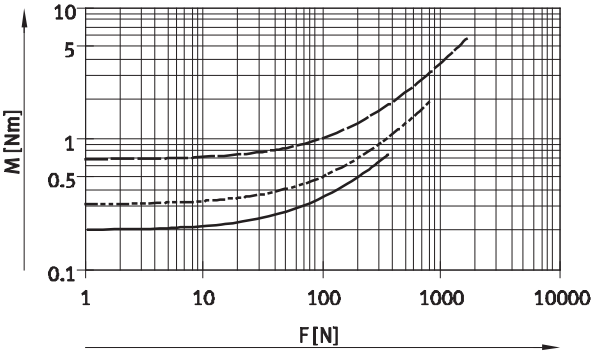


DNCE-32-LS-"1,5"P
DNCE-40-LS-"2,5"P
DNCE-63-LS-"4"P

DNCE-...-BS-...

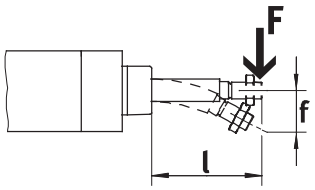


DNCE-32-BS-"3"P
DNCE-40-BS-"5"P
DNCE-63-BS-"10"P



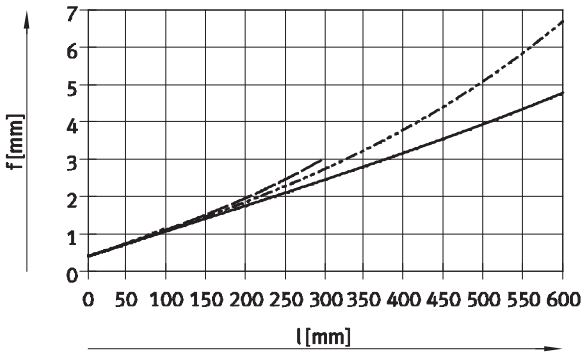
DNCE-32-BS-"10"P
DNCE-40-BS-"12,7"P
DNCE-63-BS-"20"P

Piston rod displacement f as a function of stroke length l



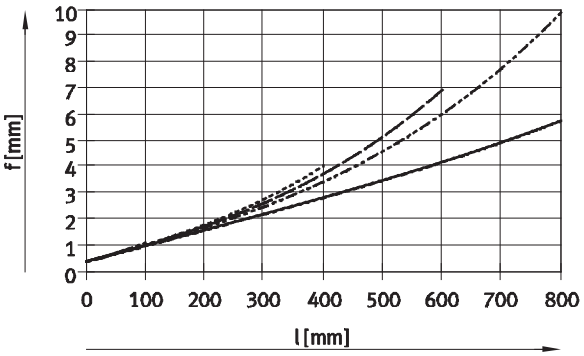
Definition of stroke length l:
l = Stroke + value of the piston rod extension K8

DNCE-32-...



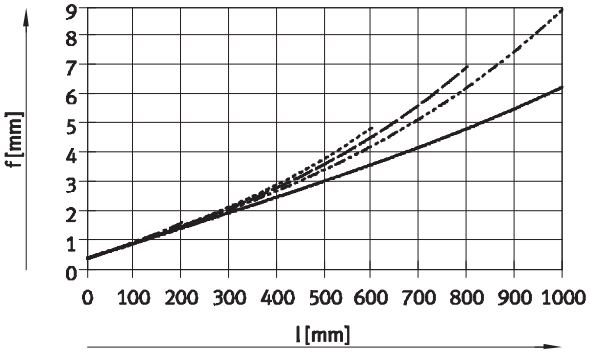
Lateral force F = 0 N
Lateral force F = 10 N
Lateral force F = 20 N
Lateral force F = 45 N

DNCE-40-...



Lateral force F = 0 N
Lateral force F = 20 N
Lateral force F = 30 N
Lateral force F = 40 N
Lateral force F = 115 N

DNCE-63-...



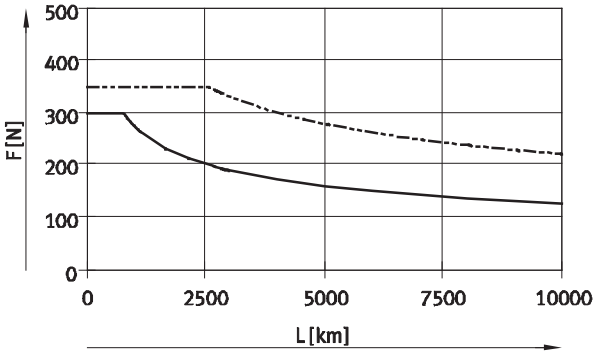
Lateral force = 0 N
Lateral force = 20 N
Lateral force = 30 N
Lateral force = 40 N
Lateral force = 95 N

Electric cylinders DNCE, with spindle drive

Technical data

Running performance L as a function of mean feed force F (to DIN 69 051-4)

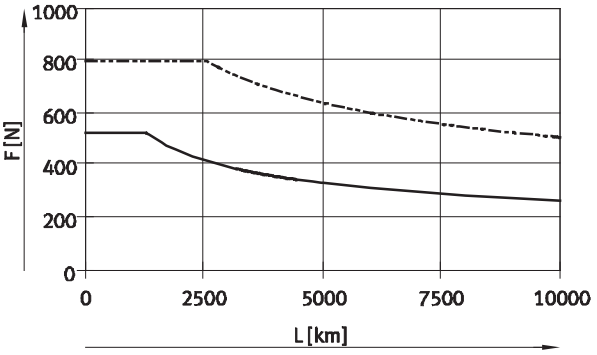
DNCE-32-...-BS-...



DNCE-32-BS-”3”P

DNCE-32-BS-”10”P

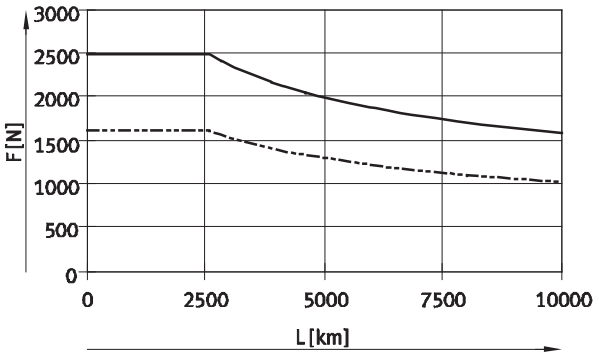
DNCE-40-...-BS-...



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 that can be achieved in practice can deviate considerably from the specified curves under different parameters.

New
variant K3

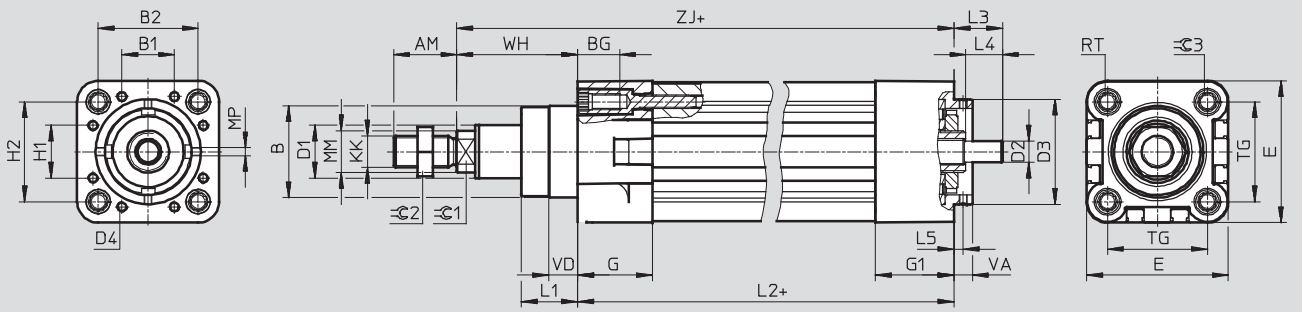
Electric cylinders DNCE, with spindle drive

Technical data

FESTO

Dimensions Download CAD data ➔ **www.festo.com**

Basic version



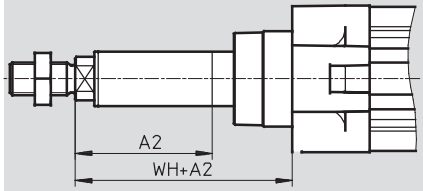
\+ = plus stroke length

Size [mm]	AM	B ∅ d11	B1	B2	BG	D1 ∅ h9	D2 ∅ h6	D3 ∅ f7	D4	E	G	G1	H1	H2	KK
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

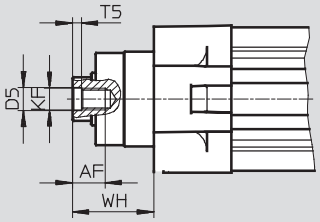
Size [mm]	L1	L2	L3	L4	L5	MM	MP	RT	TG	VA	VD +1/−0.7	WH	ZJ ±1	⏥1	⏥2	⏥3
32	18	122	15.9	8	3.5	12	M3	M6	32.5	7	10	26	148	10	17	6
40	21.5	146.5	18.4	14	3.5	16	M3	M6	38	7	10.5	30	176.5	13	19	6
63	28.5	177	23.5	17	4.5	20	M4	M8	56.5	9	15	37	214	17	24	8

Variants

K8 – Extended piston rod



K3 – Female piston rod thread



Size [mm]	A2 max.	AF	KF	T5	D5	WH
32	200	12	M6	2.6	6.4	26
40	200	12	M8	3.3	8.4	30
63	200	16	M10	4.7	10.5	37

Electric cylinders DNCE, with spindle drive

Technical data

Ordering data – DNCE-32

Stroke [mm]	Part No.	Type
Ball screw drive with spindle pitch 3 mm		
100	543 115	DNCE-32-100-BS-”3”P-Q
200	543 116	DNCE-32-200-BS-”3”P-Q
300	543 117	DNCE-32-300-BS-”3”P-Q
400	543 118	DNCE-32-400-BS-”3”P-Q
Linear drive with ball screw 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

Stroke [mm]	Part No.	Type
Linear drive with lead screw with spindle pitch 1.5 mm		
100	543 111	DNCE-32-100-LS-”1,5”P-Q
200	543 112	DNCE-32-200-LS-”1,5”P-Q
300	543 113	DNCE-32-300-LS-”1,5”P-Q
400	543 114	DNCE-32-400-LS-”1,5”P-Q

Ordering data – DNCE-40

Stroke [mm]	Part No.	Type
Linear drive with ball screw with spindle pitch 5 mm		
100	543 127	DNCE-40-100-BS-”5”P-Q
200	543 128	DNCE-40-200-BS-”5”P-Q
300	555 466	DNCE-40-300-BS-”5”P-Q
400	543 129	DNCE-40-400-BS-”5”P-Q
600	543 130	DNCE-40-600-BS-”5”P-Q
Linear drive with ball screw 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

Stroke [mm]	Part No.	Type
Linear drive with lead screw with spindle pitch 2.5 mm		
100	543 123	DNCE-40-100-LS-”2,5”P-Q
200	543 124	DNCE-40-200-LS-”2,5”P-Q
300	555 465	DNCE-40-300-LS-”2,5”P-Q
400	543 125	DNCE-40-400-LS-”2,5”P-Q
600	543 126	DNCE-40-600-LS-”2,5”P-Q

Ordering data – DNCE-63

Stroke [mm]	Part No.	Type
Linear drive with ball screw with spindle pitch 10 mm		
100	555 470	DNCE-63-100-BS-”10”P-Q
200	543 139	DNCE-63-200-BS-”10”P-Q
300	555 471	DNCE-63-300-BS-”10”P-Q
400	543 140	DNCE-63-400-BS-”10”P-Q
600	543 141	DNCE-63-600-BS-”10”P-Q
800	543 142	DNCE-63-800-BS-”10”P-Q
Linear drive with ball screw 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

Stroke [mm]	Part No.	Type
Linear drive with lead screw with spindle pitch 4 mm		
100	555 468	DNCE-63-100-LS-”4”P-Q
200	543 135	DNCE-63-200-LS-”4”P-Q
300	555 469	DNCE-63-300-LS-”4”P-Q
400	543 136	DNCE-63-400-LS-”4”P-Q
600	543 137	DNCE-63-600-LS-”4”P-Q
800	543 138	DNCE-63-800-LS-”4”P-Q

Note

Variable strokes can be ordered via the modular product system ➔ 16

Electric cylinders DNCE, with spindle drive

Ordering data – Modular products

FESTO

Ordering table								
Size		32	40	63	Condi-tions	Code		Enter code
M	Module No.	**555488**	**555489**	**555490**				
	Function	Electric cylinder				**DNCE**		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				**-LS**		
		Ball screw spindle				**-BS**		
	Spindle pitch [mm]	1.5	–	–	2	**-"..."P**		
		–	2.5	–	2			
		3	–	–	3			
		–	–	4	2			
		–	5	–	3			
		10	–	10	3			
		–	12.7	–	3			
		–	–	20	3			
	Protection against rotation	Non-rotating piston rod				**-Q**		-Q
O	Extended piston rod	1 ... 200			3	**-...K8**		
	Female thread	M6	M8	M10	3	**-K3**		

1 ... Additional stroke lengths on request

2 **"1,5"P, "2,5"P, "4"P**
Only with drive type LS

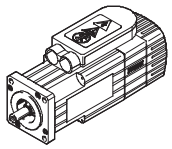
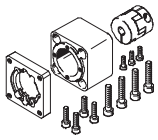
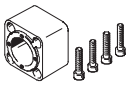
3 **"3"P, "5"P, "10"P, "12,7"P, "20"P, ...K8, K3**
Only with drive type BS

Transfer order code

	DNCE	–		–		–		–		–	Q	–		–		

Electric cylinders DNCE, with spindle drive

Accessories

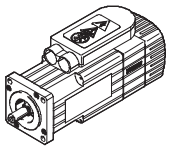
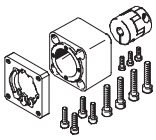
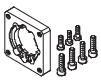
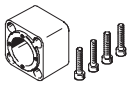
Permissible axis/motor combinations with axial kit				
Motor/motor unit	Axial kit	Axial kit consisting of:		
		Motor flange	Coupling	Coupling housing
				
Type	Part No. Type	Part No. Type	Part No. Type	Part No. Type
DNCE-32				
With servo motor				
EMMS-AS-40-...	**543147** **EAMM-A-D32-40A**	**552163** **EAMF-A-28B-40A**	**543420** **EAMC-16-20-6-6**	**552155** **EAMK-A-D32-28B**
EMMS-AS-55-...	**550979** **EAMM-A-D32-55A**	**529942** **EAMF-A-44A/B-55A**	**551003** **EAMC-30-32-6-9**	**551006** **EAMK-A-D32-44A**
With stepper motor				
EMMS-ST-42-...	**543148** **EAMM-A-D32-42A**	**552164** **EAMF-A-28B-42A**	**543419** **EAMC-16-20-5-6**	**552155** **EAMK-A-D32-28B**
EMMS-ST-57-...	**550980** **EAMM-A-D32-57A**	**530081** **EAMF-A-44A/B-57A**	**551002** **EAMC-30-32-6-6.35**	**551006** **EAMK-A-D32-44A**
With motor unit				
MTR-DCI-32S-...[1)]	**543149** **EAMM-A-D32-32B**	**–**	**543420** **EAMC-16-20-6-6**	**552156** **EAMK-A-D32-32B**
DNCE-40				
With servo motor				
EMMS-AS-55-...	**543153** **EAMM-A-D40-55A**	**529942** **EAMF-A-44A/B-55A**	**543423** **EAMC-30-32-8-9**	**552157** **EAMK-A-D40-44A**
EMMS-AS-70-...	**550981** **EAMM-A-D40-70A**	**529943** **EAMF-A-44A/B-70A**	**551004** **EAMC-30-32-8-11**	**552157** **EAMK-A-D40-44A**
With stepper motor				
EMMS-ST-57-...	**543154** **EAMM-A-D40-57A**	**530081** **EAMF-A-44A/B-57A**	**543421** **EAMC-30-32-6.35-8**	**552157** **EAMK-A-D40-44A**
EMMS-ST-87-...	**550982** **EAMM-A-D40-87A**	**530082** **EAMF-A-44A/B-87A**	**551004** **EAMC-30-32-8-11**	**552157** **EAMK-A-D40-44A**
With motor unit				
MTR-DCI-42S-...-G7[1)]	**543155** **EAMM-A-D40-42B**	**–**	**543422** **EAMC-30-32-8-8**	**522158** **EAMK-A-D40-42B**
MTR-DCI-42S-...-G14[1)]	**543156** **EAMM-A-D40-42C**	**–**	**543422** **EAMC-30-32-8-8**	**522159** **EAMK-A-D40-42C**

Note

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

The maximum feed force of the cylinder may not be reached depending on the combination of motor/motor unit and electric cylinder.

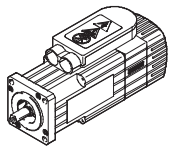
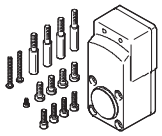
The following tool is available for sizing:
PositioningDrives sizing software
➔ www.festo.com

Permissible axis/motor combinations with axial kit				
Motor/motor unit	Axial kit	Axial kit consisting of:		
		Motor flange	Coupling	Coupling housing
				
Type	Part No. Type	Part No. Type	Part No. Type	Part No. Type
DNCE-63				
With servo motor				
EMMS-AS-70-...	**543161** **EAMM-A-D60-70A**	**529945** **EAMF-A-64A/B-70A**	**543424** **EAMC-42-50-11-12**	**552160** **EAMK-A-D60-64B**
EMMS-AS-100-...	**550983** **EAMM-A-D60-100A**	**529947** **EAMF-A-64A/C-100A**	**551005** **EAMC-42-50-12-19**	**551007** **EAMK-A-D60-64C**
With stepper motor				
EMMS-ST-87-...	**543162** **EAMM-A-D60-87A**	**533140** **EAMF-A-64A/B-87A**	**543424** **EAMC-42-50-11-12**	**552160** **EAMK-A-D60-64B**
With motor unit				
MTR-DCI-52S-...-G7[1)]	**543163** **EAMM-A-D60-52B**	–	**533709** **EAMC-42-50-12-12**	**552161** **EAMK-A-D60-52B**
MTR-DCI-52S-...-G14[1)]	**543164** **EAMM-A-D60-52C**	–	**533709** **EAMC-42-50-12-12**	**552162** **EAMK-A-D60-52C**

- Note

1) The motor unit MTR-DCI must only be used in combination with the electric cylinder DNCE-...-LS (lead screw).
The maximum feed force of the cylinder may not be reached depending on the combination of motor/motor unit and electric cylinder.

The following tool is available for sizing:
PositioningDrives sizing software
➔ www.festo.com

Permissible axis/motor combinations with parallel kit		
Motor/motor unit	Parallel kit	
		
Type	Part No.	Type
DNCE-32		
With servo motor		
EMMS-AS-40-...	**543150**	**EAMM-U-D32-40A**
With motor unit		
MTR-DCI-32S-...[1]	**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[1]	**543159**	**EAMM-U-D40-42B**
MTR-DCI-42S-...-G14[1]	**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[1]	**543167**	**EAMM-U-D60-52B**
MTR-DCI-52S-...-G14[1]	**543168**	**EAMM-U-D60-52C**

Note

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

The maximum feed force of the cylinder may not be reached depending on the combination of motor/motor unit and electric cylinder.

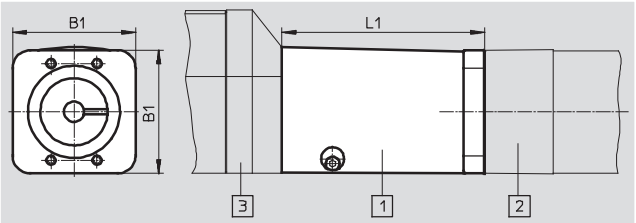
When using parallel kits, the respective no-load driving torque of the kit must be taken into consideration.

The following tool is available for sizing:
PositioningDrives
sizing software
➔ www.festo.com

Electric cylinders DNCE, with spindle drive

Accessories

Axial kit EAMM-A-...
Materials:
Coupling housing, coupling hubs, motor flange: Aluminium
Screws: Galvanised steel
Clamping component: Corrosion-resistant steel



Main picture:
1 Axial kit
2 Electric cylinder
3 Motor

General technical data												
EAMM-A-...		D32-					D40-					
		32B	40A	42A	55A	57A	42B	42C	55A	57A	70A	87A
Transferable torque	[Nm]	1.1	1.1	0.8	4	4	8	8	8	6	8	8
Mass moment of inertia	[kg mm^2]	0.3	0.3	0.3	5.87	5.87	5.87	5.87	5.87	5.87	5.87	5.87
Max. rotational speed	[rpm]	10,000			8,000		8,000					
Mounting position		Any										

EAMM-A-...		D60-				
		52B	52C	70A	87A	100A
Transferable torque	[Nm]	14	14	12	12	14
Mass moment of inertia	[kg mm^2]	35.5	35.5	35.5	35.5	35.5
Max. rotational speed	[rpm]	6,000				
Mounting position		Any				

Operating and environmental conditions		
Ambient temperature	[°C]	0 ... 50
Storage temperature	[°C]	–25 ... +60
Protection class[1)]		IP40
Relative air humidity	[%]	0 ... 95

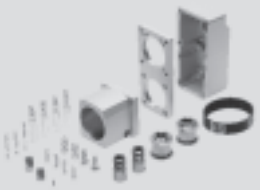
1) Only in combination with attached motor and axis

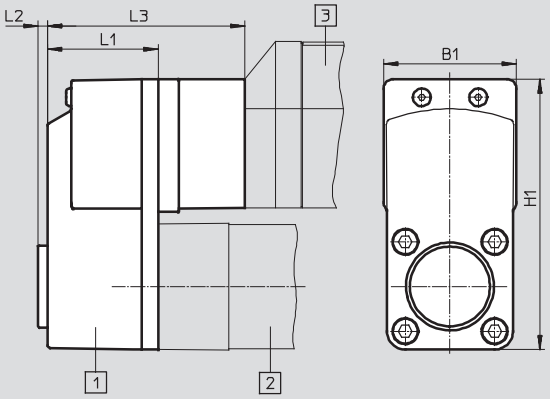
Dimensions and ordering data					
Type	B1	L1	Weight [g]	Part No.	Type
EAMM-A-D32-32B	45	43	150	**543149**	**EAMM-A-D32-32B**
EAMM-A-D32-40A		39.8	130	**543147**	**EAMM-A-D32-40A**
EAMM-A-D32-42A		48	140	**543148**	**EAMM-A-D32-42A**
EAMM-A-D32-55A	55	49.2	260	**550979**	**EAMM-A-D32-55A**
EAMM-A-D32-57A	56.4	50.5	270	**550980**	**EAMM-A-D32-57A**
EAMM-A-D40-42B	53.5	88	340	**543155**	**EAMM-A-D40-42B**
EAMM-A-D40-42C		101	370	**543156**	**EAMM-A-D40-42C**
EAMM-A-D40-55A		49.2	350	**543153**	**EAMM-A-D40-55A**
EAMM-A-D40-57A		50.5	350	**543154**	**EAMM-A-D40-57A**
EAMM-A-D40-70A	70	52	410	**550981**	**EAMM-A-D40-70A**
EAMM-A-D40-87A	85.8	54	530	**550982**	**EAMM-A-D40-87A**
EAMM-A-D60-52B	74	112	930	**543163**	**EAMM-A-D60-52B**
EAMM-A-D60-52C		126	1,020	**543164**	**EAMM-A-D60-52C**
EAMM-A-D60-70A		63.2	750	**543161**	**EAMM-A-D60-70A**
EAMM-A-D60-87A		64.7	890	**543162**	**EAMM-A-D60-87A**
EAMM-A-D60-100A	100	78.2	1,170	**550983**	**EAMM-A-D60-100A**

Electric cylinders DNCE, with spindle drive

Accessories

Parallel kit EAMM-U-...
Materials:
Housing: Die-cast aluminium
Clamping component, clamping sleeve, toothed belt pulley: Corrosion-resistant steel
Toothed belt: Polychloroprene
Screws: Galvanised steel





Main picture:
1 Parallel kit
2 Electric cylinder
3 Motor

General technical data									
EAMM-U-...		D32-		D40-			D60-		
		32B	40A	42B	42C	55A	52B	52C	70A
Transferable torque	[Nm]	1	1	3	3	3	5.5	5.5	5.5
No-load driving torque	[Nm]	0.05	0.05	0.1	0.1	0.1	0.3	0.3	0.3
Mass moment of inertia	[kgmm^2]	2.931	2.931	10.016	10.016	10.016	70.5	70.5	70.5
Max. rotational speed	[rpm]	3,000							
Mounting position		Any							

Operating and environmental conditions		
Ambient temperature	[°C]	0 ... 50
Storage temperature	[°C]	–25 ... +60
Protection class[1)]		IP40
Relative air humidity	[%]	0 ... 95

1) Only in combination with attached motor and axis

Dimensions and ordering data								
Type	B1	H1	L1	L2	L3	Weight [g]	Part No.	Type
EAMM-U-D32-32B	45.1	93.1	40	4	–	300	**543152**	**EAMM-U-D32-32B**
EAMM-U-D32-40A						300	**543150**	**EAMM-U-D32-40A**
EAMM-U-D40-42B	56.5	115	47	4	84	660	**543159**	**EAMM-U-D40-42B**
EAMM-U-D40-42C					97	690	**543160**	**EAMM-U-D40-42C**
EAMM-U-D40-55A					–	530	**543157**	**EAMM-U-D40-55A**
EAMM-U-D60-52B	86	162.6	58	4	106	1,530	**543167**	**EAMM-U-D60-52B**
EAMM-U-D60-52C					120	1,630	**543168**	**EAMM-U-D60-52C**
EAMM-U-D60-70A					–	1,170	**543165**	**EAMM-U-D60-70A**

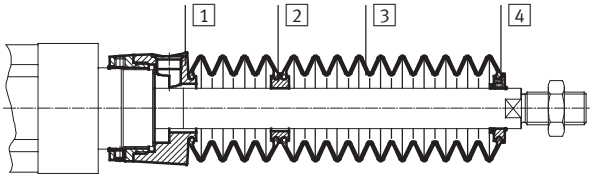
Bellows kit EADB

General technical data				
Type EADB-V1-		32	40	63
Max. stroke range of cylinder[1)]	[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[2)]	[°C]	–10 … +80		
Protection class to IEC 60529		IP65		
Corrosion resistance class CRC[3)]		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. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment or media such as solvents and cleaning agents.

Materials

Sectional view

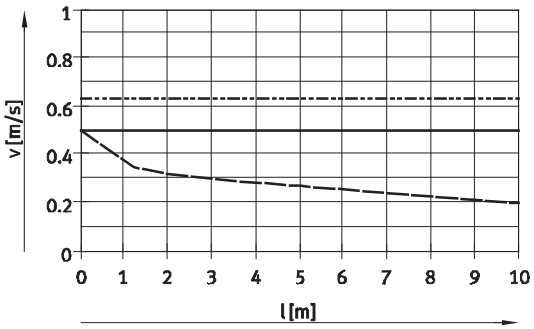


Bellows		
1	Connection	Anodised wrought aluminium alloy
2	Adapter	Polyamide
3	Bellows	Nitrile rubber
4	End piece	Anodised wrought aluminium alloy
–	O-ring	Nitrile rubber
	Note on materials	Free of copper and PTFE
		RoHS-compliant

Weight [g]			
Type EADB-V1- Stroke [mm]	32	40	63
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

Speed of travel 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 is ducted via a venting hole in the connection part 1. The pressure generated in the bellows kit by the travel motion is primarily defined by the speed of travel and tubing length. The recommended tubing length based on the travel speed of the drive can be read from the graph.



- Note

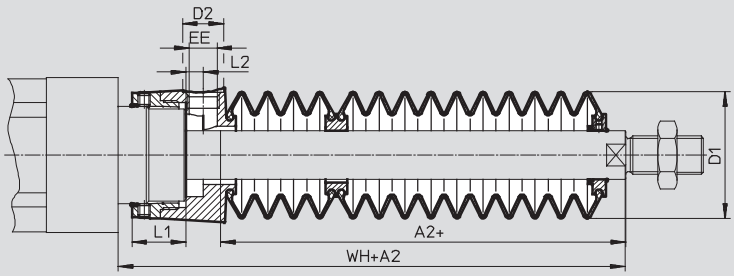
The push-in fittings opposite must be used for the venting hole.
Silencers can be used as an alternative. This reduces the travel speed slightly.

Tubing length and push-in fitting for venting hole

∅ [mm]	Tubing O.D. [mm]	Push-in fitting Part No.	Type
32	8	**186109**	**QS-G⅛-8-I**
		533929	**QS-F-G⅛-8-I**
40, 63	16	**186350**	**QS-G¼-12**
		533848	**QS-F-G¼-12**
		153261	**QSH-12-16**

Dimensions

Download CAD data ➔ **www.festo.com**



\+ = plus stroke length

∅	32							40						
Stroke [mm]	A2[1)]	D1 max.	D2	EE	L1	L2	WH+A2	A2[1)]	D1 max.	D2	EE	L1	L2	WH+A2
10 ... 100	44	46	14	G⅛	12.9	5.4	70	48	57	17	G¼	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

∅	63						
Stroke [mm]	A2[1)]	D1 max.	D2	EE	L1	L2	WH+A2
10 ... 100	43	93	17	G¼	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

Ordering data – Bellows kit

An extended piston rod (order code K8) ➔ 16 is absolutely necessary for using a bellows kit.

The necessary dimension for K8 as a function of cylinder size and stroke as well as the corresponding bellows kit is 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 designation for electric cylinder:
DNCE-32-250-BS-”3”P-Q-88K8
The corresponding bellows kit:
EADB-V1-32-S201-300

Cylinder data			Bellows kit	
∅ [mm]	Stroke [mm]	Dimension for K8 [mm]	Part No.	Type
32	10 ... 100	44	**570262**	**EADB-V1-32-S10-100**
	101 ... 200	74	**570263**	**EADB-V1-32-S101-200**
	201 ... 300	88	**570264**	**EADB-V1-32-S201-300**
	301 ... 400	117	**570265**	**EADB-V1-32-S301-400**
	–			
63	10 ... 100	43	**570271**	**EADB-V1-63-S10-100**
	101 ... 200	68	**570272**	**EADB-V1-63-S101-200**
	201 ... 300	80	**570273**	**EADB-V1-63-S201-300**
	301 ... 400	104	**570274**	**EADB-V1-63-S301-400**
	401 ... 500	117	**570275**	**EADB-V1-63-S401-500**

Cylinder data			Bellows kit	
∅ [mm]	Stroke [mm]	Dimension for K8 [mm]	Part No.	Type
40	10 ... 100	48	**570266**	**EADB-V1-40-S10-100**
	101 ... 200	77	**570267**	**EADB-V1-40-S101-200**
	201 ... 300	88	**570268**	**EADB-V1-40-S201-300**
	301 ... 400	117	**570269**	**EADB-V1-40-S301-400**
	401 ... 500	135	**570270**	**EADB-V1-40-S401-500**

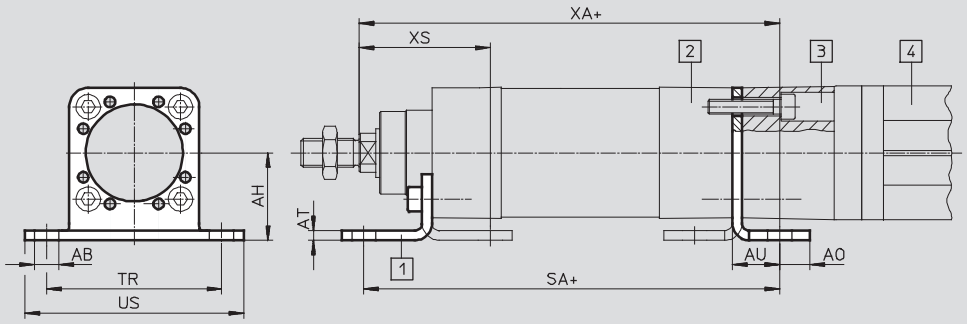
Electric cylinders DNCE, with spindle drive

Accessories

Foot mounting HNCE,
for axial motor mounting

Material:
Galvanised steel

Free of copper, PTFE and silicone



\+ = plus stroke length
1 See dimensions for HNC
2 Electric cylinder DNCE
3 Axial kit EAMM-A
4 Servo motor

Dimensions and ordering data

For size [mm]	AB ∅	AH	AO	AT	AU	SA	TR	US	XA	XS
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

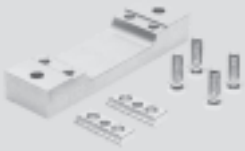
For size [mm]	CRC[1)]	Weight [g]	Part No.	Type
32	1	160	**547949**	**HNCE-32-AX**
40	1	220	**547950**	**HNCE-40-AX**
63	1	470	**547951**	**HNCE-63-AX**

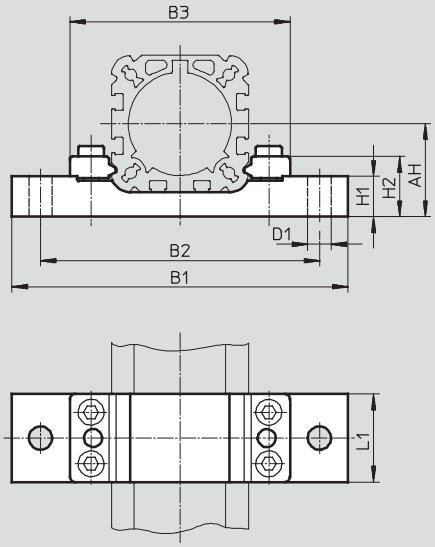
1) Corrosion resistance class 1 according to Festo standard 940 070
Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

Profile mounting EAHF

Materials:
Yoke plate: Anodised aluminium
Clamping pieces: Galvanised steel

RoHS-compliant





Dimensions and ordering data

For size [mm]	AH	B1	B2	B3	D1 ∅	H1	H2	L1
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

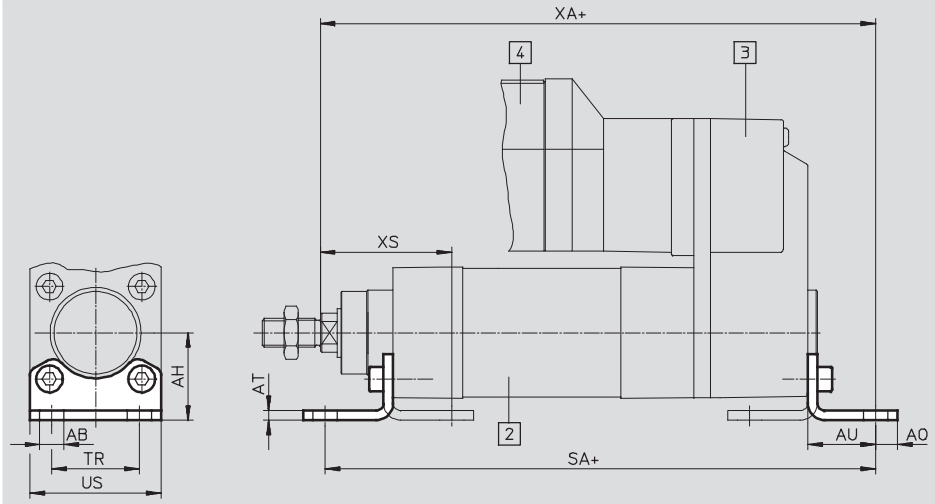
For size [mm]	CRC[1)]	Weight [g]	Part No.	Type
32	1	175	**1098473**	**EAHF-V1-32-P**
40	1	230	**1098478**	**EAHF-V1-40-P**
63	1	400	**1098481**	**EAHF-V1-63-P**

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.

Foot mounting HNC/CRHNC, for parallel motor mounting

Material:
HNC: Galvanised steel

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



\+ = plus stroke length
2 Electric cylinder DNCE
3 Parallel kit EAMM-U
4 Motor unit MTR-DCI

Dimensions and ordering data

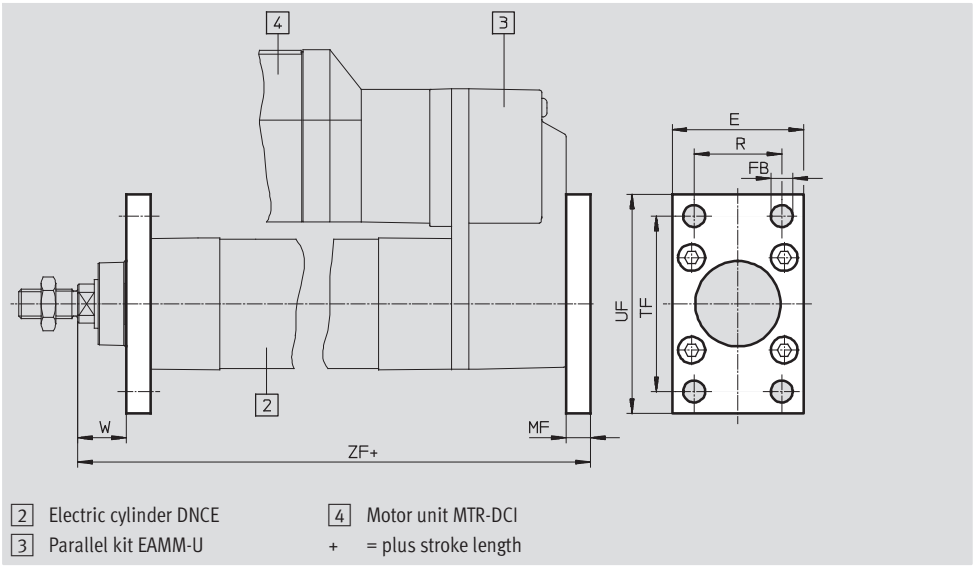
For size [mm]	AB ∅	AH	AO	AT	AU	SA	TR	US	XA	XS
32	7	32	6.5	4	24	210	32	45	212	46
40	10	36	9	4	28	249.5	36	54	251.5	54
63	10	50	12.5	5	32	299	50	75	304	64

For size	Basic version				High corrosion protection			
	CRC[1)]	Weight	Part No.	Type	CRC[1)]	Weight	Part No.	Type
[mm]		[g]				[g]		
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.

Flange mounting FNC/CRFNG

Material:
FNC: Galvanised steel
CRFNG: High-alloy steel
Free of copper, PTFE and silicone



2 Electric cylinder DNCE
3 Parallel kit EAMM-U
4 Motor unit MTR-DCI
\+ = plus stroke length

Dimensions and ordering data

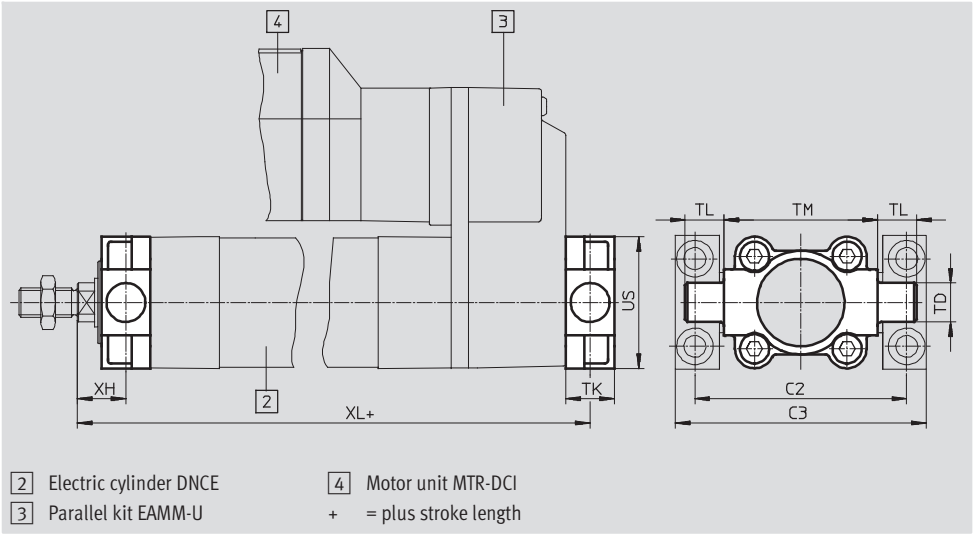
For size [mm]	E	FB ∅ H13	MF	R	TF	UF	W	ZF
32	45	7	10	32	64	80	16	198
40	54	9	10	36	72	90	20	233.5
63	75	9	12	50	100	120	25	284

For size	Basic version				High corrosion protection			
[mm]	CRC[1)]	Weight [g]	Part No.	Type	CRC[1)]	Weight [g]	Part No.	Type
32	2	240	**174376**	**FNC-32**	4	240	**161846**	**CRFNG-32**
40	2	280	**174377**	**FNC-40**	4	300	**161847**	**CRFNG-40**
63	2	690	**174379**	**FNC-63**	4	710	**161849**	**CRFNG-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.

Trunnion flange ZNCF/CRZNG

Material:
ZNCF: Stainless steel casting
CRZNG: Electropolished stainless steel casting
Free of copper, PTFE and silicone



2 Electric cylinder DNCE
3 Parallel kit EAMM-U
4 Motor unit MTR-DCI
\+ = plus stroke length

Dimensions and ordering data

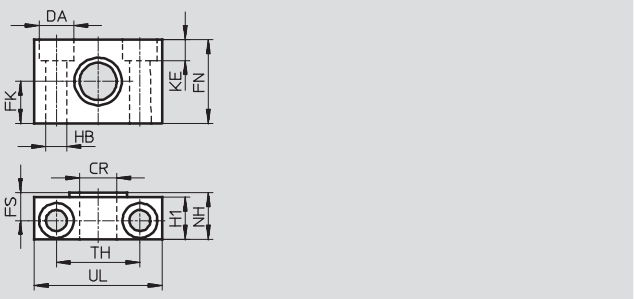
For size [mm]	C2	C3	TD ∅ e9	TK	TL	TM	US	XH	XL
32	71	86	12	16	12	50	45	18	196
40	87	105	16	20	16	63	54	20	233.5
63	116	136	20	24	20	90	75	25	284

For size [mm]	Basic version				High corrosion protection			
	CRC[1)]	Weight [g]	Part No.	Type	CRC[1)]	Weight [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.

Trunnion support LNZG

Materials:
Trunnion support: Anodised aluminium
Plain bearing: Plastic
Free of copper, PTFE and silicone

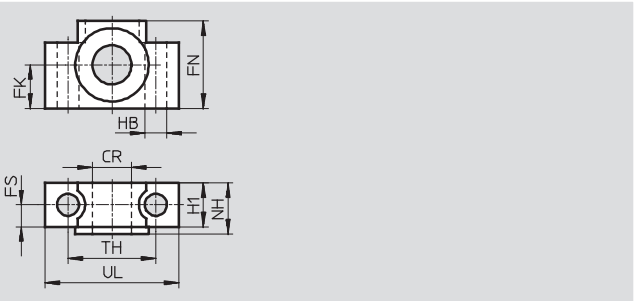


Dimensions and ordering data

For size [mm]	CR ∅ D11	DA ∅ H13	FK ∅ ±0.1	FN	FS	H1	HB ∅ H13	KE	NH	TH ±0.2	UL	CRC[1]	Weight [g]	Part No.	Type
32	12	11	15	30	10.5	15	6.6	6.8	18	32	46	2	125	**32959**	**LNZG-32**
40	16	15	18	36	12	18	9	9	21	36	55	2	400	**32960**	**LNZG-40/50**
63	20	18	20	40	13	20	11	11	23	42	65	2	480	**32961**	**LNZG-63/80**

Trunnion support CRLNZG

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



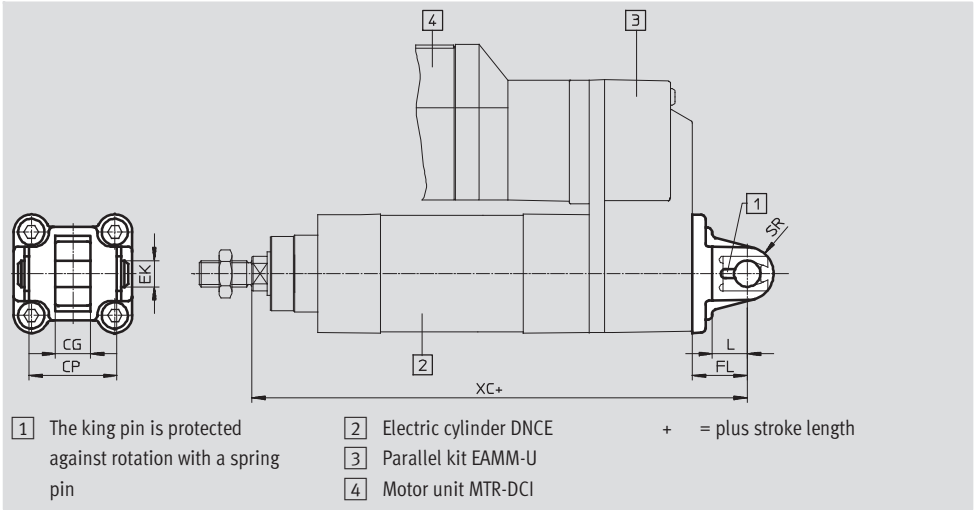
Dimensions and ordering data

For size [mm]	CR ∅ D11	FK ∅ ±0.1	FN	FS	H1	HB ∅ H13	NH	TH ±0.2	UL	CRC[1]	Weight [g]	Part No.	Type
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.

Swivel flange SNC

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



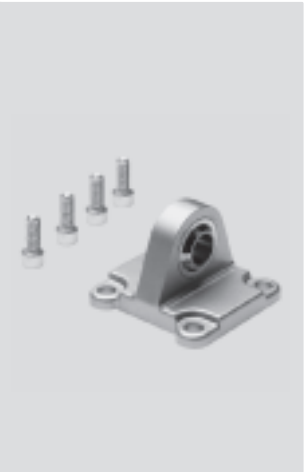
1 The king pin is protected against rotation with a spring pin
2 Electric cylinder DNCE
3 Parallel kit EAMM-U
4 Motor unit MTR-DCI
\+ = plus stroke length

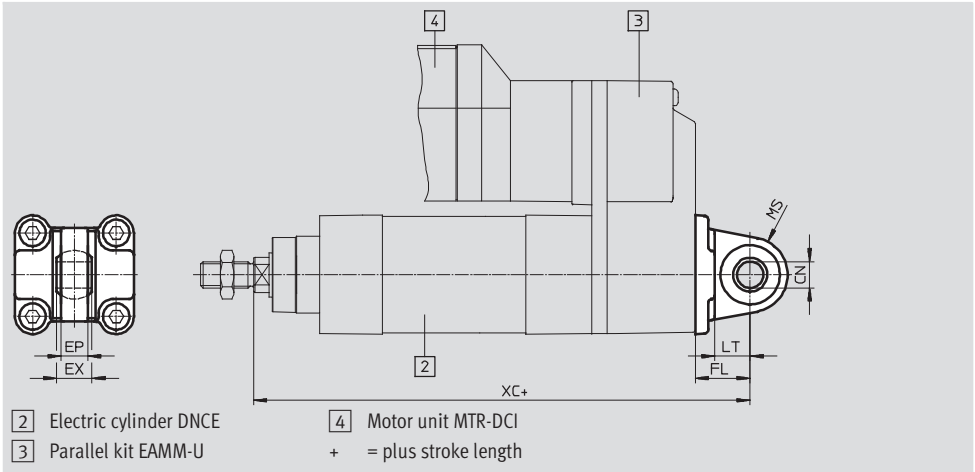
Dimensions and ordering data

For size	CG	CP	EK ∅	FL	L	SR	XC	CRC[1]	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





2 Electric cylinder DNCE
3 Parallel kit EAMM-U
4 Motor unit MTR-DCI
\+ = plus stroke length

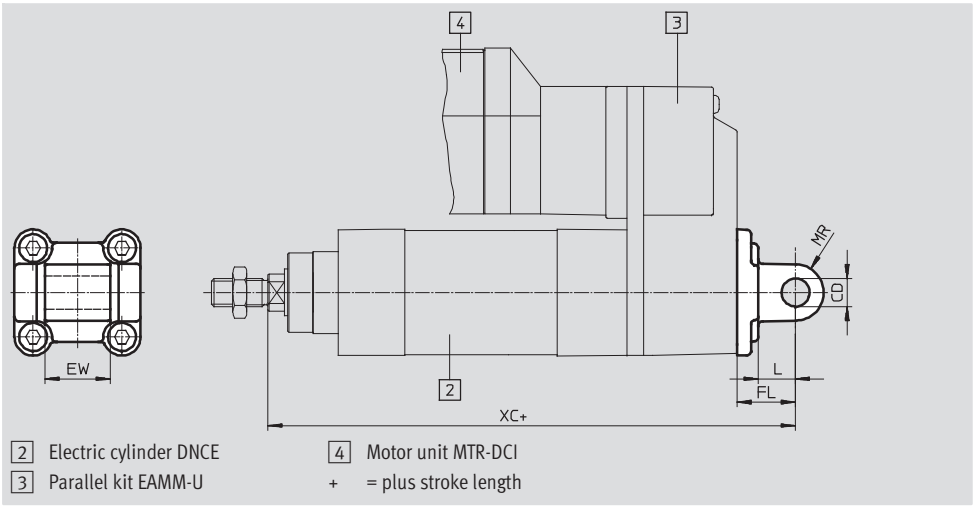
Dimensions and ordering data

For size	CN ∅	EP	EX	FL	LT	MS	XC	CRC[1]	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.

Swivel flange SNCL

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



2 Electric cylinder DNCE
3 Parallel kit EAMM-U
4 Motor unit MTR-DCI
\+ = plus stroke length

Dimensions and ordering data

For size	CD ∅	EW	FL	L	MR	XC	CRC[1)]	Weight	Part No.	Type
[mm]	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**

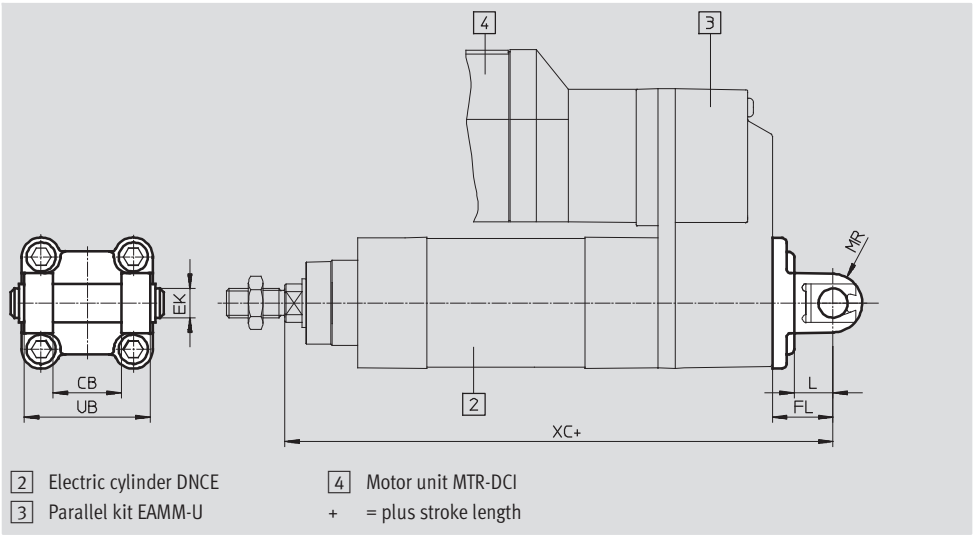
1) Corrosion resistance class 2 according to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Electric cylinders DNCE, with spindle drive

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



2 Electric cylinder DNCE
3 Parallel kit EAMM-U
4 Motor unit MTR-DCI
\+ = plus stroke length

Dimensions and ordering data

For size [mm]	CB H14	EK ∅ e8	FL ±0.2	L	MR	UB h14	XC
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	Basic version				Variant R3 – High corrosion protection			
	CRC[1)]	Weight	Part No.	Type	CRC[1)]	Weight	Part No.	Type
[mm]		[g]				[g]		
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**

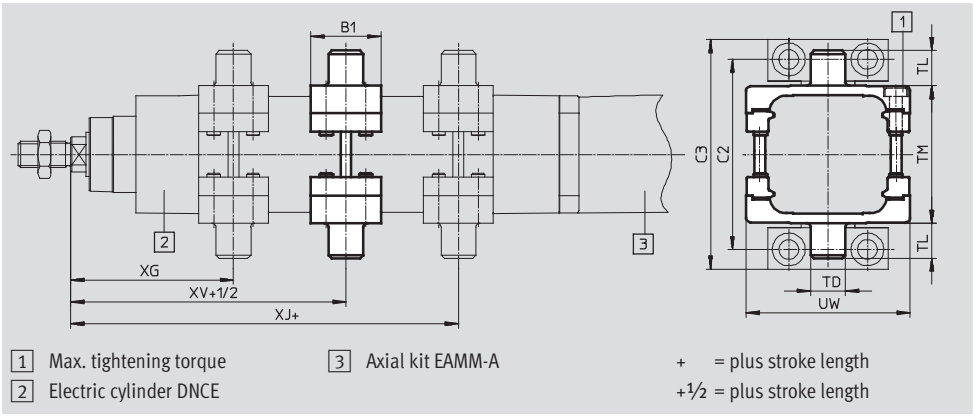
1) Corrosion resistance class 3 according to Festo standard 940 070
Components subject to high corrosion stress. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment or media such as solvents and cleaning agents.

Trunnion mounting kit ZNCM

Material:
Tempered steel

The kit can be mounted 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
+½ = plus stroke length

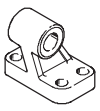
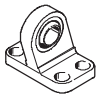
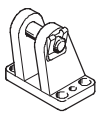
Dimensions and ordering data

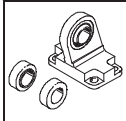
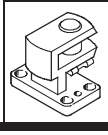
For size [mm]	B1	C2	C3	TD ∅ e9	TL	TM	UW	XG
32	30	71	86	12	12	50	65	65
40	32	87	105	16	16	63	75	74.5
63	41	116	136	20	20	90	105	91.5

For size [mm]	XJ	XV	Max. tightening torque [Nm]	CRC[1)]	Weight [g]	Part No.	Type
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**

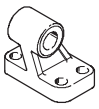
1) Corrosion resistance class 2 according to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Ordering data – Mounting attachments Technical data ➔ Internet: clevis foot

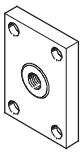
Designation	For size	Part No.	Type
Clevis foot LNG			
	32	**33890**	**LNG-32**
	40	**33891**	**LNG-40**
	63	**33893**	**LNG-63**
Clevis foot LSNG			
	32	**31740**	**LSNG-32**
	40	**31741**	**LSNG-40**
	63	**31743**	**LSNG-63**
Clevis foot LBG			
	32	**31761**	**LBG-32**
	40	**31762**	**LBG-40**
	63	**31764**	**LBG-63**

Designation	For size	Part No.	Type
Clevis foot LSN			
	32	**5561**	**LSN-32**
	40	**5562**	**LSN-40**
	63	**5564**	**LSN-63**
Clevis foot LSNSG			
	32	**31747**	**LSNSG-32**
	40	**31748**	**LSNSG-40**
	63	**31750**	**LSNSG-63**
Right-angle clevis foot LQG			
	32	**31768**	**LQG-32**
	40	**31769**	**LQG-40**
	63	**31771**	**LQG-63**

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
Rod eye SGS			
	32	9261	SGS-M10x1,25
	40	9262	SGS-M12x1,25
	63	9263	SGS-M16x1,5
Rod clevis SG			
	32	6144	SG-M10x1,25
	40	6145	SG-M12x1,25
	63	6146	SG-M16x1,5
Coupling piece KSZ			
	32	36125	KSZ-M10x1,25
	40	36126	KSZ-M12x1,25
	63	36127	KSZ-M16x1,5

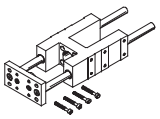
Designation	For size	Part No.	Type
Rod clevis SGA			
	32	32954	SGA-M10x1,25
	40	10767	SGA-M12x1,25
	63	10768	SGA-M16x1,5
Self-aligning rod coupler FK			
	32	6140	FK-M10x1,25
	40	6141	FK-M12x1,25
	63	6142	FK-M16x1,5

Ordering data – Piston rod attachments, corrosion-resistant — Technical data ➔ Internet: piston rod attachment

Designation	For size	Part No.	Type
Rod eye CRSGS			
	32	195582	CRSGS-M10x1,25
	40	195583	CRSGS-M12x1,25
	63	195584	CRSGS-M16x1,5

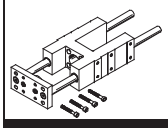
Designation	For size	Part No.	Type
Rod clevis CRSG			
	32	13569	CRSG-M10x1,25
	40	13570	CRSG-M12x1,25
	63	13571	CRSG-M16x1,5

Ordering data – Guide units for fixed strokes (recirculating ball bearing guide only) — Technical data ➔ Internet: feng

	Stroke [mm]	Part No.	Type
	For size 32		
	10 … 100	34494	FENG-32-100-KF
	10 … 200	34496	FENG-32-200-KF
	10 … 320	34497	FENG-32-320-KF
	10 … 400	150290	FENG-32-400-KF
	10 … 500	34498	FENG-32-500-KF
	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

Stroke [mm]	Part No.	Type
For size 40		
10 … 100	34500	FENG-40-100-KF
10 … 200	34502	FENG-40-200-KF
10 … 320	34504	FENG-40-320-KF
10 … 400	150291	FENG-40-400-KF
10 … 500	34505	FENG-40-500-KF

Ordering data – Guide units for variable strokes — Technical data ➔ Internet: feng

	For size [mm]	Stroke [mm]	With recirculating ball bearing guide Part No.	Type	With plain-bearing guide Part No.	Type
	32	10 … 500	**34487**	**FENG-32-…-KF**	**34481**	**FENG-32-…**
	40	10 … 500	**34488**	**FENG-40-…-KF**	**34482**	**FENG-40-…**
	63	10 … 500	**34490**	**FENG-63-…-KF**	**34484**	**FENG-63-…**

Ordering data – Compensating components in combination with guide unit FENG

Designation	For size	Part No.	Type
	32	**570305**	**EADC-V1-32**
	40	**570306**	**EADC-V1-40**
	63	**570307**	**EADC-V1-50/63**

Permissible proximity sensors in combination with motor units MTR-DCI

Ordering data – Proximity sensors for T-slot, magneto-resistive — Technical data ➔ Internet: smt

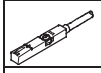
	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in slot lengthwise, flush with cylinder profile	PNP	Plug M8x1, 3-pin	0.3	**175484**	**SMT-8-PS-S-LED-24-B**

Permissible proximity sensors in combination with servo motors EMMS-AS, stepper motors EMMS-ST or with guide units FENG

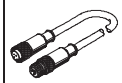
Ordering data – Proximity sensors for T-slot, magneto-resistive — Technical data ➔ Internet: smt

	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in slot lengthwise, flush with cylinder profile	PNP	Cable, 3-wire	2.5	**175436**	**SMT-8-PS-K-LED-24-B**

Ordering data – Proximity sensors for T-slot, magnetic reed — Technical data ➔ Internet: sme

	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in slot from above, flush with cylinder profile	Contacting	Cable, 3-wire	2.5	**543862**	**SME-8M-DS-24V-K-2,5-OE**
				5.0	**543863**	**SME-8M-DS-24V-K-5,0-OE**
	Insertable in slot lengthwise, flush with cylinder profile	Contacting	Cable, 3-wire	2.5	**150855**	**SME-8-K-LED-24**

Ordering data – Connecting cable — Technical data ➔ Internet: km8

	Mounting	Connection	Cable length [m]	Part No.	Type
Straight socket					
	Union nut M8 at both ends	3-pin	0.5	**175488**	**KM8-M8-GSGD-0,5**
			1	**175489**	**KM8-M8-GSGD-1**
			2.5	**165610**	**KM8-M8-GSGD-2,5**
			5	**165611**	**KM8-M8-GSGD-5**

Ordering data – Slot cover for T-slot

	Mounting	Length	Part No.	Type
	Insertable from above	2x 0.5 m	**151680**	**ABP-5-S**