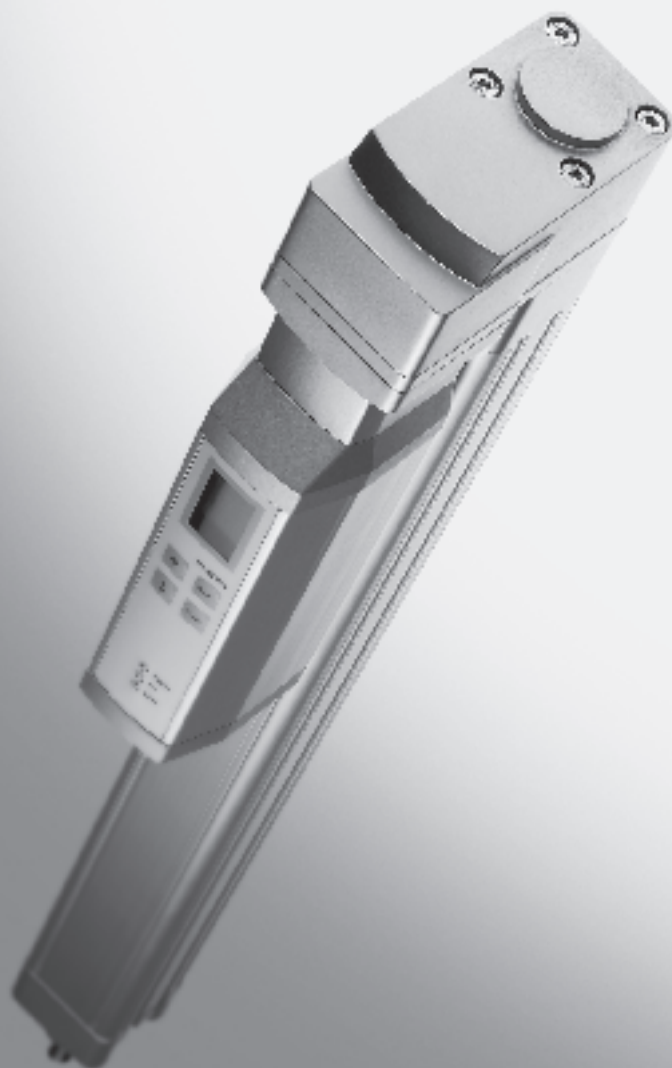




- Asse elettro-meccanico lineare con stelo
- Configurazione dei fori a norme ISO 15552
- Guida scorrevole o a ricircolo di sfere
- Montaggio motore assiale o parallelo
- Vasta gamma di accessori del sistema modulare DNC

Elettro-cilindri DNCE, con stelo

Caratteristiche

FESTO

Dati generali

Informazioni generali

L'elettro-cilindro DNCE è un asse meccanico lineare con stelo.
L'elemento di azionamento è costituito da una vite ad azionamento elettrico, che trasforma il movimento rotatorio del motore in un movimento lineare dello stelo.

Le interfacce meccaniche di collegamento sono compatibili con quelle dei cilindri DNC a norme.

Caratteristiche tecniche

- Trasmissione a vite a scelta:
 - con guida scorrevole (LS)
 - con guida a ricircolo di sfere (BS)
- L'elettro-cilindro con azionamento a vite è auto-frenante
- Dimensioni compatte

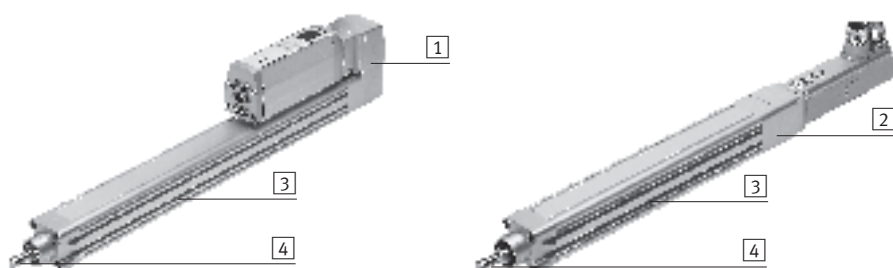
Settori di impiego

- Guida scorrevole
 - per applicazioni a basse velocità di avanzamento
- Guida a ricircolo di sfere
 - per applicazioni a velocità di avanzamento caratteristiche di scorrimento elevate

Sistema completo composto da elettro-cilindro, motore e kit di montaggio

Elettro-cilindro

→ 5/ 2.1-12



- 1** Kit parallelo
- 2** Kit assiale
- 3** Scanalatura per sensore di finecorsa
- 4** A scelta:
 - con guida scorrevole (LS)
 - con guida a ricircolo di sfere (BS)

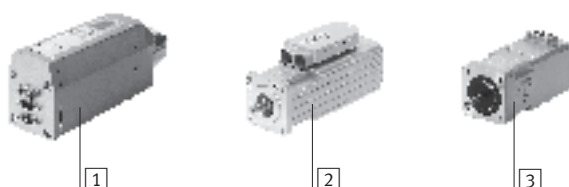
⚠ - Attenzione

La guida scorrevole è autofrenante, pertanto non è da escludere che si verifichino movimenti lenti in caso di

vibrazioni.
Il sistema completo di motore MTR-DCI è autobloccante.

Motore/Unità motore

→ 5/ 2.1-23



- 1** Motore MTR-DCI
- 2** Servomotore EMMS-AS, MTR-AC
- 3** Motore passo-passo EMMS-ST, MTR-ST

⚠ - Attenzione

Per gli elettro-cilindri DNCE e i motori sono disponibili numerose soluzioni complete coordinate.

Kit di montaggio motore kit assiale

Kit parallelo

→ 5/ 2.1-23



Sono disponibili kit completi sia per il montaggio parallelo che assiale.

Elettro-cilindri DNCE, con stelo

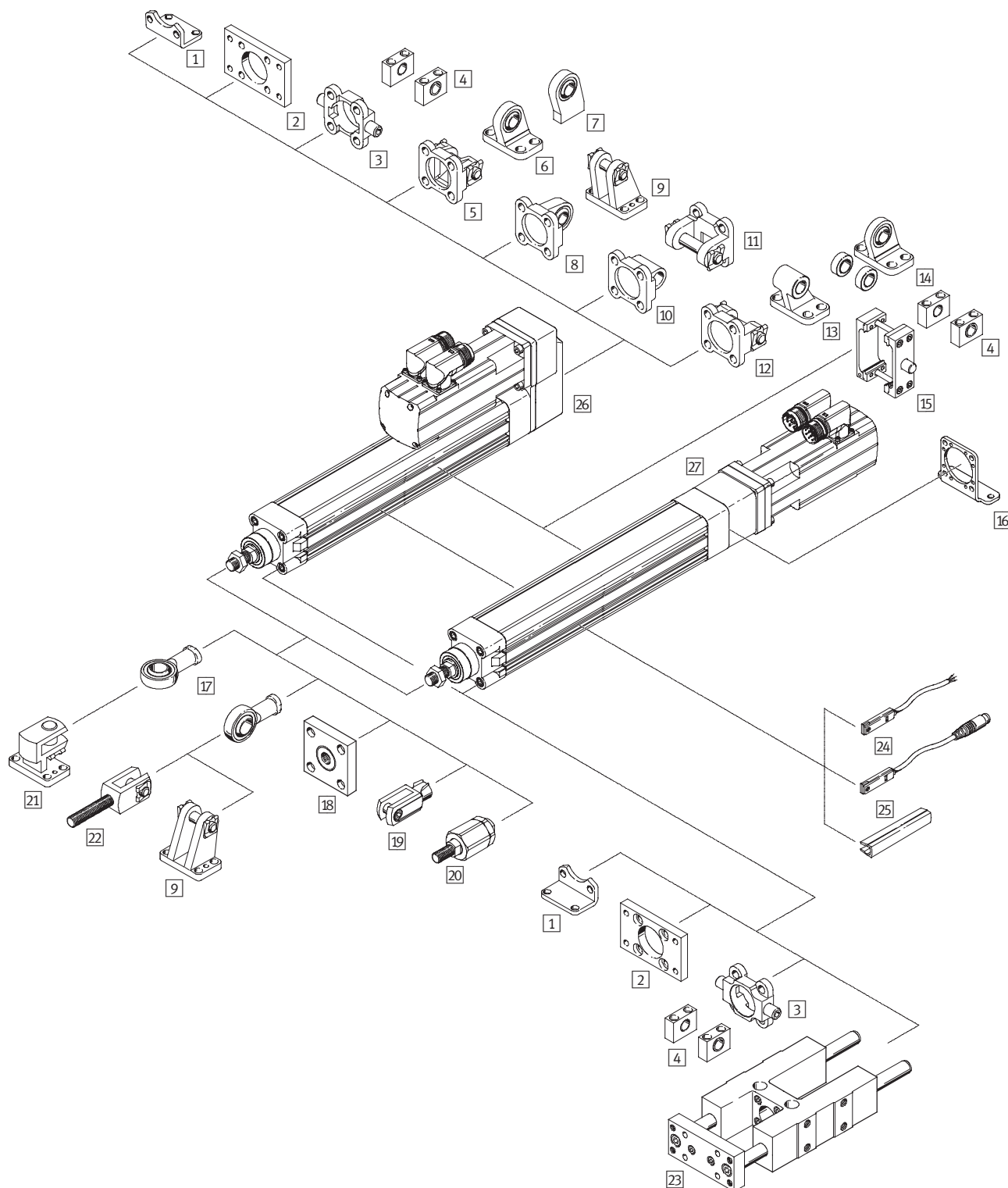
Composizione del codice

		DNCE	–	32	–	100	–	LS	–	"1,5"P	–	Q
Tipo												
DNCE	Elettro-cilindro											
Dimensioni												
Corsa [mm]												
Funzione attuatore												
LS	Attuatore con guida scorrevole											
BS	Attuatore con guida a ricircolo di sfere											
Passo della vite [mm]												
Esecuzione antirotativa												
Q	Stelo antirotativo											

Elettro-cilindri DNCE, con stelo

Componenti

FESTO



Elettro-cilindri DNCE, con stelo

Componenti

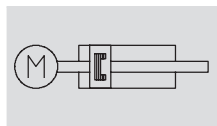
Elementi di fissaggio e accessori			
	Descrizione	➔ Pagina	
1	Fissaggio a piedini HNC/CRHNC	– Con montaggio parallelo del motore per testata anteriore e posteriore – Con montaggio assiale del motore per testata anteriore	5/ 2.1-30
2	Fissaggio a flangia FNC/CRFNG	– Con montaggio parallelo del motore per testata anteriore e posteriore – Con montaggio assiale del motore per testata anteriore	5/ 2.1-31
3	Perno oscillante ZNCF/CRZNG	– Con montaggio parallelo del motore per testata anteriore e posteriore – Con montaggio assiale del motore per testata anteriore	5/ 2.1-32
4	Supporto LNZG/CRLNZG	Per cilindri con fissaggio a perno oscillante	5/ 2.1-33
5	Flangia oscillante SNC	Con montaggio parallelo del motore	5/ 2.1-34
6	Supporto a cerniera LSNG	Con montaggio parallelo del motore, con supporto sferico	5/ 2.1-37
7	Supporto a cerniera LSNSG	Con montaggio parallelo del motore, saldabile, con supporto sferico	5/ 2.1-37
8	Flangia oscillante SNCS	Con montaggio parallelo del motore, per supporto sferico	5/ 2.1-34
9	Supporto a cerniera LBG	Con montaggio parallelo del motore, per supporto sferico	5/ 2.1-37
10	Flangia oscillante SNCL	Con montaggio parallelo del motore	5/ 2.1-35
11	Flangia oscillante SNCB/SNCB-...-R3	Con montaggio parallelo del motore, per supporto sferico	5/ 2.1-36
12	Flangia oscillante SNCB/SNCB-...-R3	Con montaggio parallelo del motore	5/ 2.1-36
13	Supporto a cerniera LNG/CRLNG	Con montaggio parallelo del motore	5/ 2.1-37
14	Supporto a cerniera LSN	Con montaggio parallelo del motore, con supporto sferico	5/ 2.1-37
15	Kit con perno oscillante ZNCM	Per il fissaggio in qualsiasi posizione sul profilo del cilindro. Con montaggio parallelo del motore non è montabile nell'area del motore	5/ 2.1-37
16	Fissaggio a piedini HNCE	Con montaggio assiale del motore	5/ 2.1-29
17	Snodo SGS/CRSGS	Con supporto sferico	5/ 2.1-38
18	Raccordo KSZ	Per la compensazione di tolleranze radiali	5/ 2.1-38
19	Forcella SG/CRSG	Permette l'oscillazione del cilindro su un piano	5/ 2.1-38
20	Giunto Flexo FK	Per la compensazione di tolleranze radiali e angolari	5/ 2.1-38
21	Supporto a cerniera LQG	Per snodo SGS	5/ 2.1-38
22	Forcella SGA	Per fissaggio orientabile dei cilindri	5/ 2.1-38
23	Unità di guida FENG	Per la protezione antirotativa di cilindri a norme con momenti elevati	5/ 2.1-38
24	Sensori di finecorsa SME/SMT-8	Per il rilevamento delle posizioni. Sensori di finecorsa integrabili, montati a scomparsa	5/ 2.1-39
25	Copertura per scanalatura ABP-5-S	Per la protezione interna del cilindro	5/ 2.1-39
26	Kit parallelo EAMM-U	Per il montaggio parallelo del motore	5/ 2.1-23
27	Kit assiale EAMM-A	Per il montaggio assiale del motore	5/ 2.1-23

Elettro-cilindri DNCE, con stelo

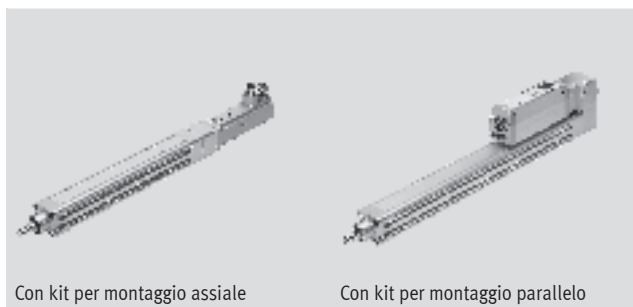
Foglio dati

FESTO

Funzione



-  - Diametro
32 ... 63
-  - Corsa
1 ... 800 mm
-  - www.festo.it/
Parti di ricambio



Con kit per montaggio assiale

Con kit per montaggio parallelo

Dati generali				
Dimensioni		32	40	63
Struttura e composizione	LS	Con attuatore a guida scorrevole		
	BS	Con attuatore a guida a ricircolo di sfere		
Filettatura stelo		M10x1,25	M12x1,25	M16x1,5
Corsa di lavoro		1 ... 400	1 ... 600	1 ... 800
Variante		Stelo antirotativo		
Protezione antirotativa/guida		Guida scorrevole		
Extracorsa	[mm]	0		
Max. angolo di torsione dello stelo	[°]	±0,30	±0,25	±0,20
Energia di impatto (E) nelle posizioni terminali	[J]	0,0001 $E = 0,5 \times m \times v^2$	0,0002 $E = 0,5 \times m \times v^2$	0,0004 $E = 0,5 \times m \times v^2$
Durata dell'inserimento ¹⁾	[%]	100		
Rilevamento posizioni		Per sensore di finecorsa		
Fissaggio		Con filetto femmina		
		Con accessori		
Posizione di montaggio		Qualsiasi		

1) Nella variante con guida scorrevole (LS) la durata dell'inserimento dipende dalla velocità

Caratteristiche meccaniche									
Dimensioni		32			40			63	
Esecuzione vite		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
Passo della vite senza fine	[mm/U]	1,5	3	10	2,5	5	12,7	4	10
Diametro vite	[mm]	9	10	10	12,5	12	12,7	20	20
Forza assiale stat. max.	[N]	600	600	600	1400	1400	1400	3700	3700
Forza di avanzamento max. $F_x^{1)}$	[N]	300	300	350	600	525	800	1000	2500
Forza di avanzamento continua ¹⁾	[N]	300	240	280	600	420	640	1000	2000
Coppia di azionamento max. ²⁾	[Nm]	0,4	0,4	0,8	1,15	0,9	1,9	3	4,9
Coppia di azionamento a vuoto con kit per montaggio assiale ³⁾	[Nm]	0,08	0,08	0,08	0,12	0,12	0,12	0,3	0,2
Coppia di azionamento a vuoto con kit per montaggio parallelo ³⁾	[Nm]	0,13	0,13	0,13	0,22	0,22	0,22	0,6	0,5
Coppia di azionamento continuo	[Nm]	0,4	0,3	0,6	1,15	0,8	1,6	3	4,1
Forza radiale max. sull'albero di azionamento	[N]	120	120	120	260	260	260	300	300
Max. velocità	[m/s]	0,06	0,15	0,5	0,07	0,25	0,64	0,07	0,5
Numero di giri max.		2400	3000	3000	1650	3000	3000	1050	3000
Accelerazione max.	[m/s ²]	1	6	6	1	6	6	1	6
Gioco di reversibilità ⁴⁾	[mm]	0,2	0,05	0,05	0,2	0,05	0,05	0,2	0,05
Ripetibilità	[mm]	±0,07	±0,02	±0,02	±0,07	±0,02	±0,02	±0,07	±0,02

1) Nella variante con guida scorrevole (LS) la forza di avanzamento (forza di spinta) dipende dalla velocità → 5/ 2.1-15

Nella variante con guida a ricircolo di sfere (BS) la forza di avanzamento (forza di spinta) → 5/ 2.1-13

2) Nella variante con guida scorrevole (LS) la coppia di azionamento dipende dal numero di giri → 5/ 2.1-16

3) Misurato con un numero di giri di 200 1/min

4) In condizioni di fornitura

Elettro-cilindri DNCE, con stelo

Foglio dati

Condizioni d'esercizio e ambientali		
Temperatura ambiente ¹⁾²⁾	[°C]	0 ... 50
Temperatura di stoccaggio	[°C]	-25 ... +60
Grado di protezione ²⁾		IP40
Umidità relativa dell'aria	[%]	0 ... 95

1) Tenere presente il campo di impiego dei finecorsa e dei motori

2) Su richiesta sono disponibili versioni con grado di protezione maggiore e condizioni ambientali diverse

Pesi [g]									
Dimensioni	32			40			63		
Esecuzione vite	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
Peso base per corsa = 0 mm	720	750	770	1210	1270	1350	2790	3010	3010
Peso per ogni 10 mm di corsa aggiuntiva	32,4	33	33,6	46,1	45,5	46,7	79,8	81,2	81,2
Massa movimentata a corsa 0 mm	150	170	200	250	310	380	600	810	810
Massa movimentata per ogni 10 mm di corsa	6,9	6,9	6,9	8,9	8,9	8,9	12,8	12,8	12,8

Momenti di inerzia di massa									
Dimensioni	32			40			63		
Esecuzione vite	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 a corsa 0 mm	[kg cm ²]	0,0433	0,0439	0,0446	0,1316	0,1304	0,1337	0,7565	0,7626
J_H per ogni metro di corsa	[kg cm ² /m]	0,0361	0,0476	0,0595	0,1341	0,1163	0,1572	0,8176	0,9090
J_L per ogni kg di carico utile	[kg cm ² /Kg]	0,0006	0,0023	0,0253	0,0016	0,0063	0,0409	0,0041	0,0253

Il momento di inerzia di massa J_A dell'elettro-cilindro si calcola:
 $J_A = J_0 + j_H \times \text{Corsa di lavoro [m]} + j_L \times m_{\text{Carico utile [kg]}}$

Calcolo della forza di avanzamento (forza di spinta) F_{xm} nell'elettro-cilindro DNCE con azionamento a ricircolo di sfere (BS)

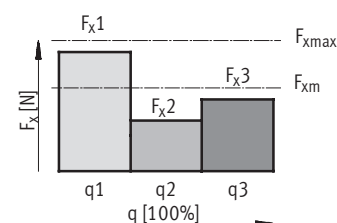
Il valore di picco della forza di spinta all'interno di un ciclo di movimento non deve superare la forza di spinta max. Il valore di picco viene raggiunto solitamente nell'esercizio verticale in fase di accelerazione verso l'alto. Il superamento della forza di spinta max. comporta una maggiore usura e quindi una minore durata della guida a ricircolo di sfere. Inoltre non deve essere superata la velocità max.:
 $F_x \leq F_{x\max.}$
 $v_x \leq v_{x\max.}$

Forza media di spinta (a norme DIN 69 051-4)

Durante il funzionamento è ammesso un temporaneo superamento della forza di avanzamento (forza di spinta) continuo entro i limiti massimi. All'interno di un ciclo di movimento, deve essere tuttavia rispettata la forza di avanzamento continua:
 $F_{xm} \leq F_{x\text{continua}}$

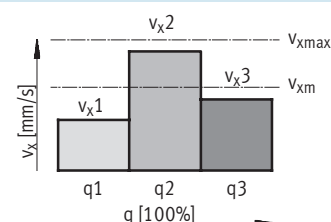
$$F_{xm} = \sqrt[3]{\sum F_x^3 \times \frac{v_x}{v_{xm}} \times \frac{q}{100}} =$$

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



Velocità media di avanzamento (a norme DIN 69 051-4)

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



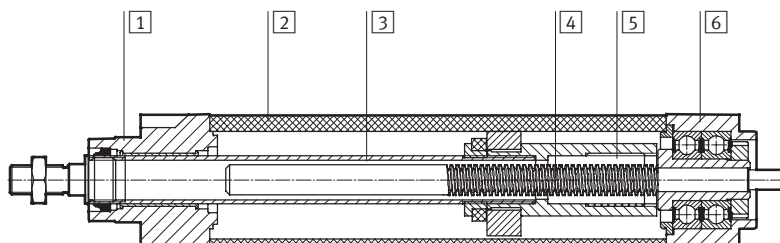
F_x	Forza di avanzamento (di spinta)	q	Segmento di tempo
F_{xm}	Forza di avanzamento (di spinta) media	v_x	Velocità di avanzamento
$F_{x\max.}$	Forza di avanzamento (di spinta) max.	v_{xm}	Velocità di avanzamento media
$F_{x\text{continua}}$	Forza di avanzamento (di spinta) continua	$v_{x\max.}$	Velocità di avanzamento max.

Elettro-cilindri DNCE, con stelo

Foglio dati

Materiali

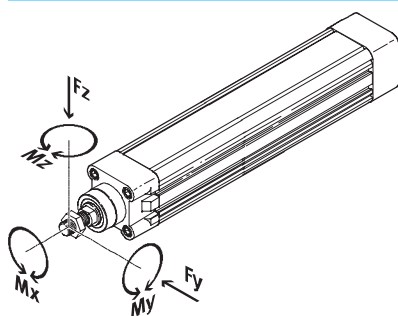
Disegno funzionale



Elettro-cilindro

1	Testata anteriore	Alluminio pressofuso, verniciato
2	Canna del cilindro	Lega di alluminio per lavorazione plastica, anodizzata liscia
3		Acciaio inossidabile fortemente legato
4	Vite senza fine	Acciaio
5	Madrevite nella versione LS	Poliacetato
	Madrevite nella versione BS	Acciaio
6	Testata di azionamento	Alluminio pressofuso, verniciato

Carichi max. ammissibili sullo stelo



Se sullo stelo agiscono contemporaneamente più forze e momenti, è necessario rispettare le seguenti equazioni:

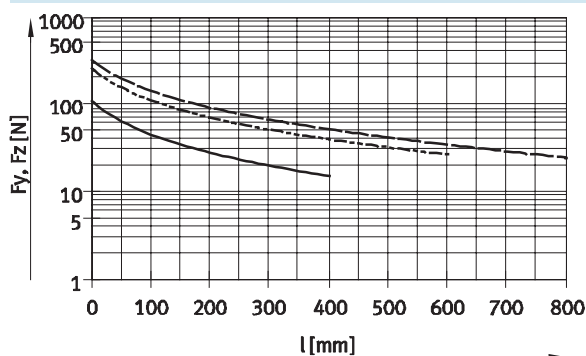
$$\frac{|F_x|}{F_{x\max}} + \frac{|F_y|}{F_{y\max}} + \frac{|F_z|}{F_{z\max}} + \frac{|M_x|}{M_{x\max}} + \frac{|M_y|}{M_{y\max}} + \frac{|M_z|}{M_{z\max}} \leq 1$$

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

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

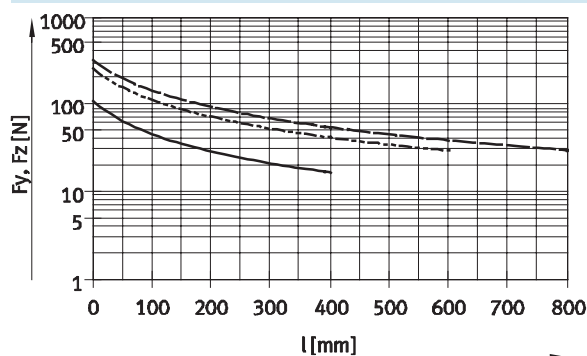
Forze radiali max $F_{y\max}$ e $F_{z\max}$ sullo stelo

Posizione di montaggio orizzontale



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

Posizione di montaggio verticale



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



Software di progettazione
Positioning Drives
www.festo.it/engineering

Dimensioni	32	40	63
Forze e momenti max. ammissibili			
$F_{x\max}$ (stat.) [N]	600	1400	3700
$M_{x\max}$ [Nm]	1	1	1,5
$M_{y\max}, M_{z\max}$ [Nm]	8	20	27

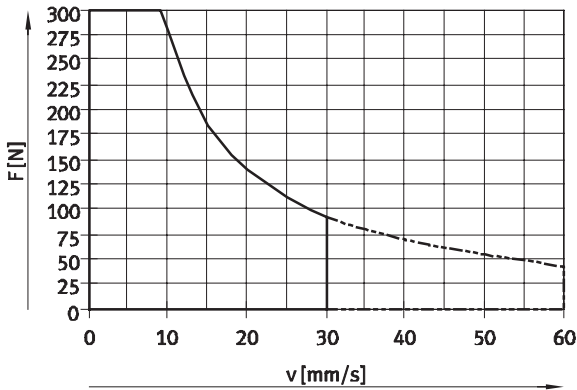
Elettro-cilindri DNCE, con stelo

Foglio dati

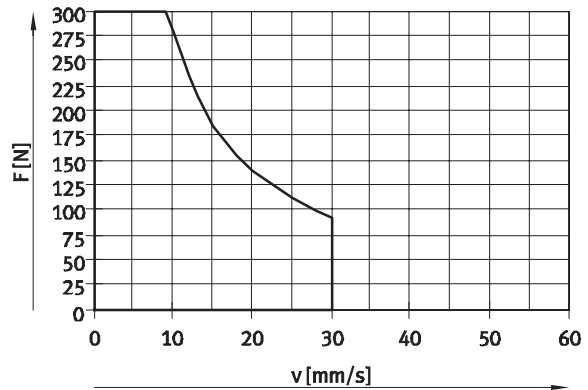
FESTO

Forza di spinta max. ammissibile F in funzione della velocità di avanzamento v

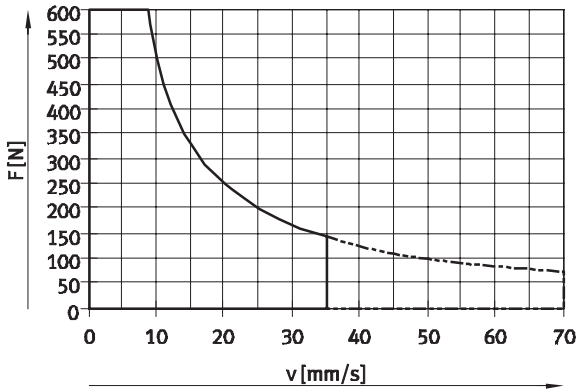
DNCE-32-1...299-LS-...



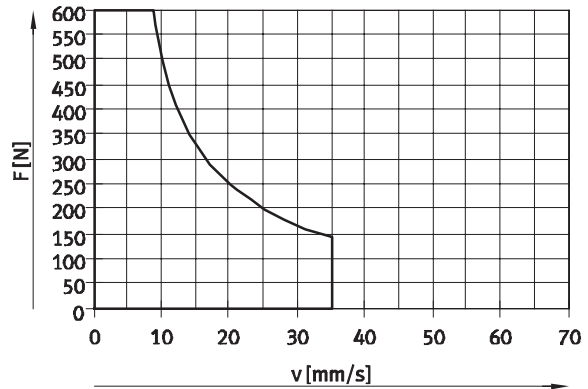
DNCE-32-300...400-LS-...



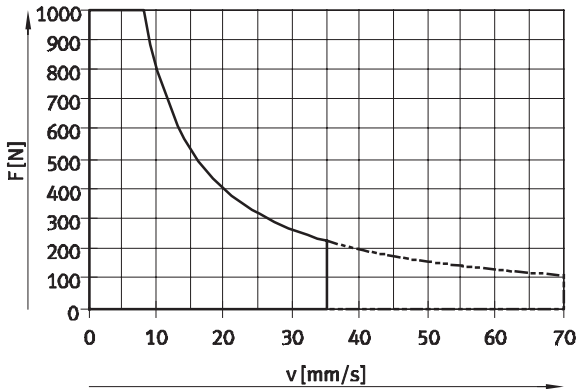
DNCE-40-1...299-LS-...



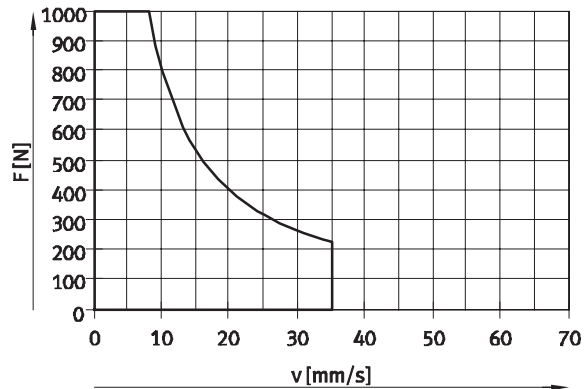
DNCE-40-300...600-LS-...



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



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



- Campo di funzionamento consigliato
- - - Campo di funzionamento ammissibile
(durata dell'inserimento consigliata 50%)

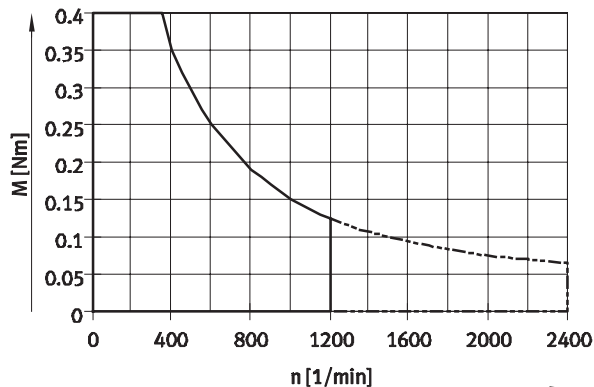
Elettro-cilindri DNCE, con stelo

Foglio dati

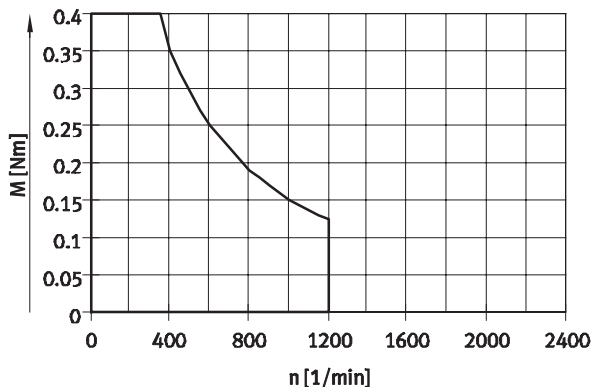
FESTO

Coppia di azionamento M in funzione del numero di giri n

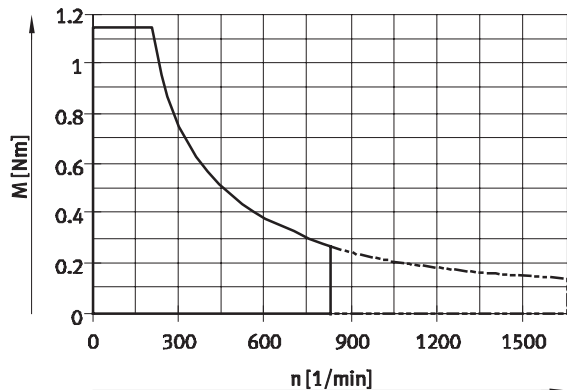
DNCE-32-1...299-LS-...



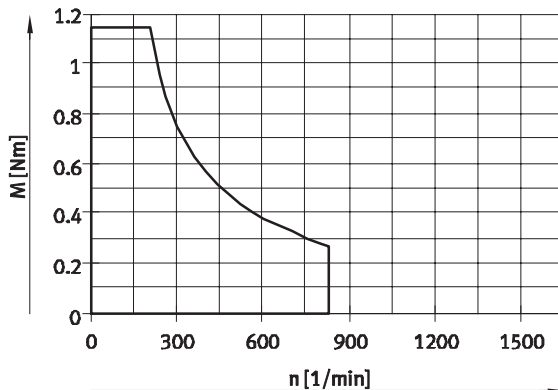
DNCE-32-300...400-LS-...



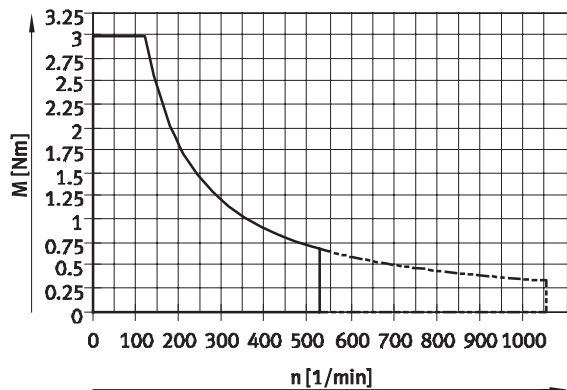
DNCE-40-1...299-LS-...



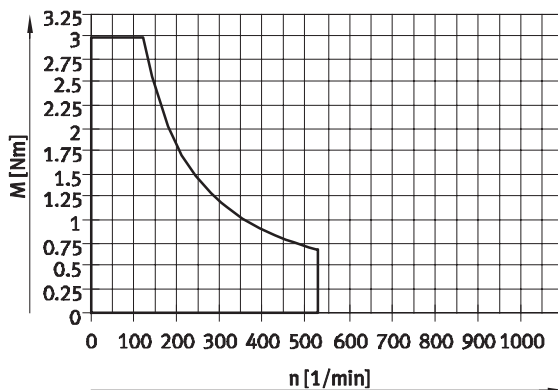
DNCE-40-300...600-LS-...



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



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



- Campo di funzionamento consigliato
- - - Campo di funzionamento ammissibile
(durata dell'inserimento consigliata 50%)

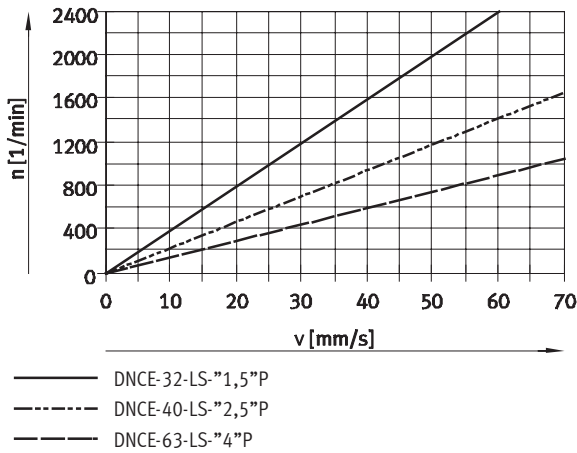
Elettro-cilindri DNCE, con stelo

Foglio dati

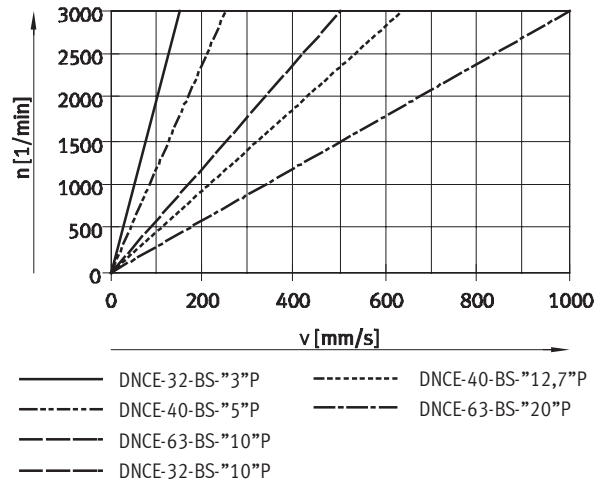
FESTO

Numero di giri n in funzione della velocità v

DNCE-...-LS-...



DNCE-...-BS-...

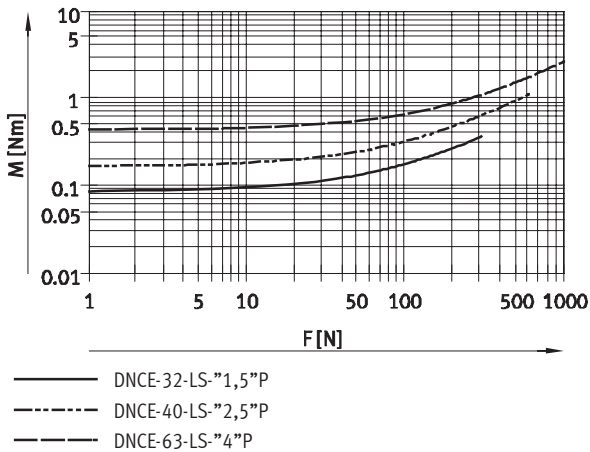


Coppia di azionamento M in funzione della forza di spinta F

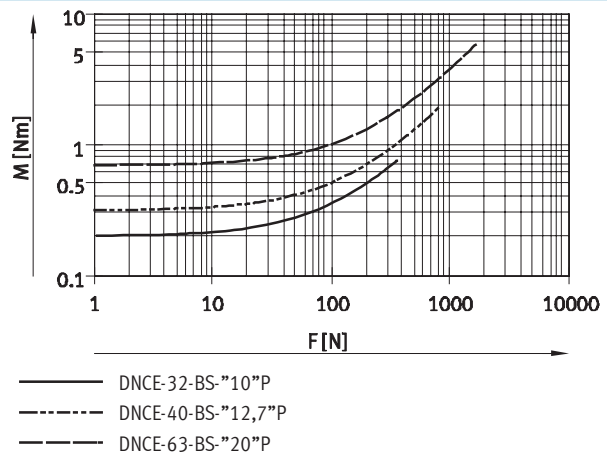
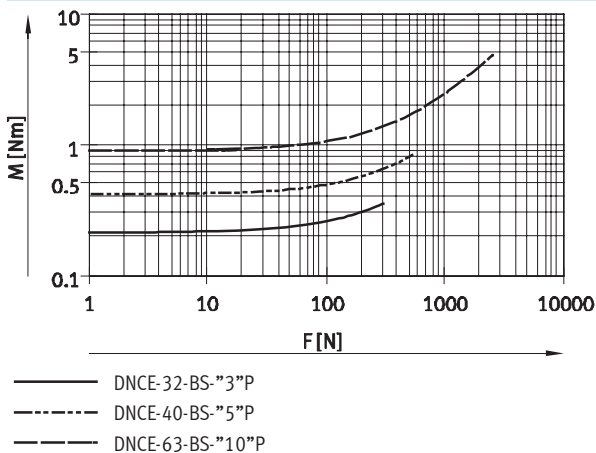
 **Attenzione**

I valori indicati tengono conto delle coppie di attrito dell'elettro-cilindro.

DNCE-...-LS-...



DNCE-...-BS-...

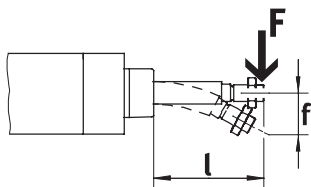


Elettro-cilindri DNCE, con stelo

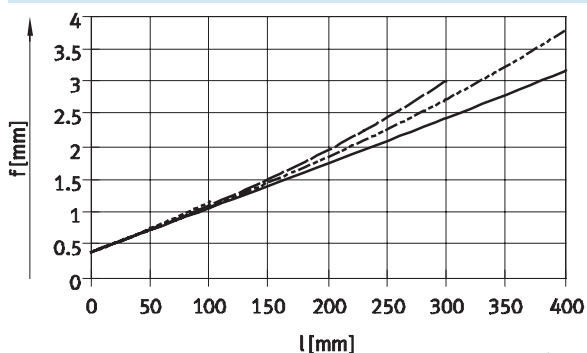
Foglio dati

FESTO

Sporgenza dello stelo f in funzione della corsa l

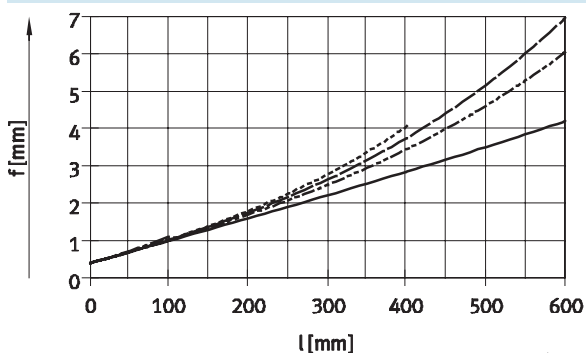


DNCE-32-...



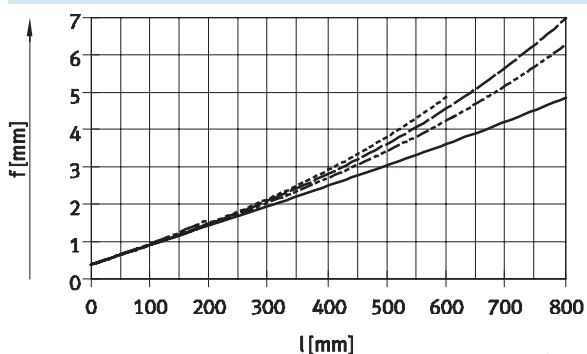
- Forza radiale $F = 0$ N
- - - - - Forza radiale $F = 10$ N
- Forza radiale $F = 20$ N
- - - - - Forza radiale $F = 45$ N

DNCE-40-...



- Forza radiale $F = 0$ N
- - - - - Forza radiale $F = 20$ N
- Forza radiale $F = 30$ N
- - - - - Forza radiale $F = 40$ N
- - - - - Forza radiale $F = 115$ N

DNCE-63-...



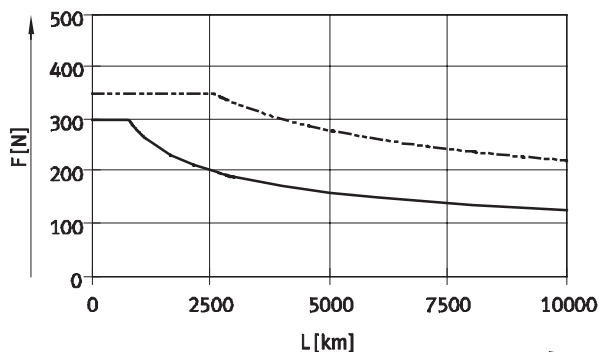
- Forza radiale $F = 0$ N
- - - - - Forza radiale $F = 20$ N
- Forza radiale $F = 30$ N
- - - - - Forza radiale $F = 40$ N
- - - - - Forza radiale $F = 95$ N

Elettro-cilindri DNCE, con stelo

Foglio dati

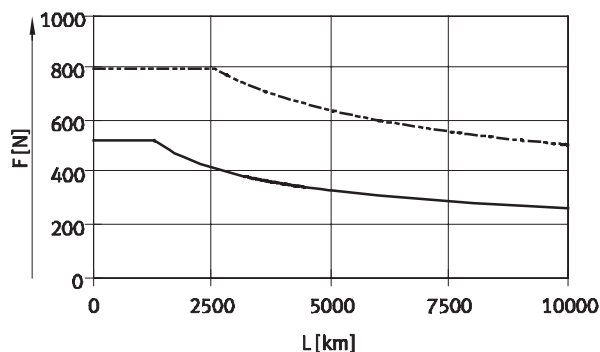
Caratteristica di scorrimento L in funzione della forza di avanzamento (di spinta) media F (a norme DIN 69 051-4)

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



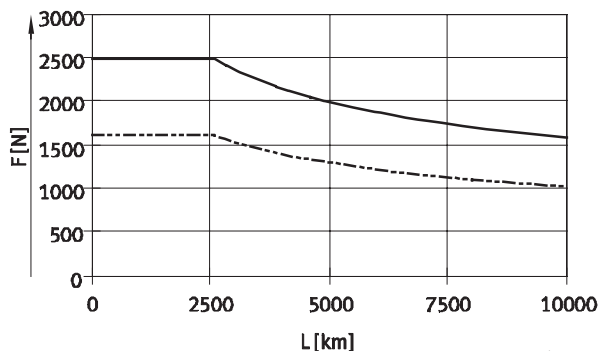
— DNCE-32-BS-3-P
- - - DNCE-32-BS-10-P

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



— DNCE-40-BS-5-P
- - - DNCE-40-BS-12,5-P

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



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

 **Attenzione**

- Le indicazioni sulle caratteristiche di scorrimento si basano su dati teorici determinati in via sperimentale. Le caratteristiche di scorrimento realmente raggiungibili possono variare significativamente dalle curve indicate, a seconda di modificate condizioni di impiego.
- La curva caratteristica per DNCE-63-BS-10-P vale per un numero medio di giri di 1500 1/min.
- La curva caratteristica per tutti gli altri DNCE-...-BS vale per un numero di giri max. di 3000 1/min.

Elettro-cilindri DNCE, con stelo

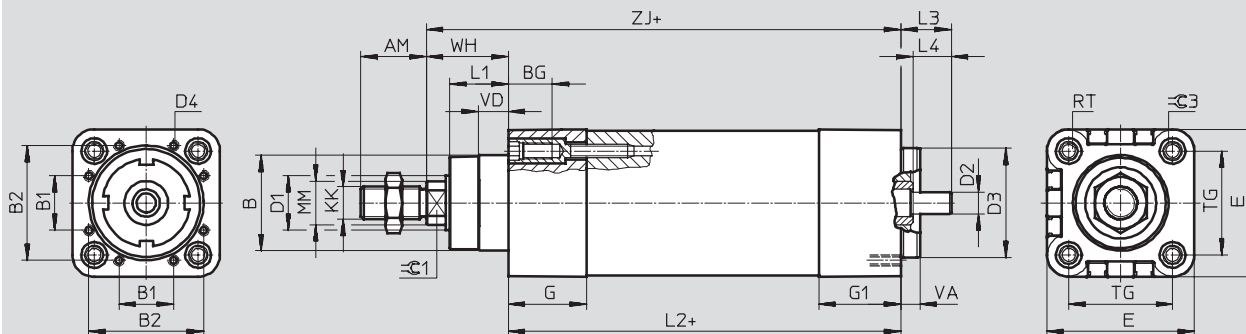
Foglio dati

FESTO

Dimensioni

Elettro-cilindro DNCE

Download dati CAD → www.festo.it/engineering



+ = aggiungere la corsa

Dimensioni	AM	B Ø d11	B1	B2	BG	D1 Ø h9	D2 Ø h6	D3 Ø f7	D4	E	G	G1	KK
[mm]													
32	22	30	19	32	16	16	6	32	M3	45,5	24	26	M10x1,25
40	24	35	20	42	16	20	8	40	M4	54	28,5	30	M12x1,25
63	32	45	31	62	17	28	12	60	M5	75,5	34	36	M16x1,5

Dimensioni	L1	L2	L3	L4	MM	RT	TG	VA	VD	WH	ZJ ±1	⌀1	⌀3
[mm]													
32	18	122	15,9	8	12	M6	32,5	7	10	26	148	10	6
40	21,5	146,5	18,4	14	16	M6	38	7	10,5	30	176,5	13	6
63	28,5	177	23,5	17	20	M8	56,5	9	15	37	214	17	8

Elettro-cilindri DNCE, con stelo

Foglio dati

Dati di ordinazione - DNCE-32					
Corsa [mm]	Cod. prod.	Tipo	Corsa [mm]	Cod. prod.	Tipo
Con attuatore a ricircolo di sfere con passo della vite 3 mm			Con attuatore a guida scorrevole con passo della vite 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
Con attuatore a ricircolo di sfere con passo della vite 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			

Dati di ordinazione - DNCE-40					
Corsa [mm]	Cod. prod.	Tipo	Corsa [mm]	Cod. prod.	Tipo
Con attuatore a ricircolo di sfere con passo della vite 5 mm			Con attuatore a guida scorrevole con passo della vite 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
Con attuatore a ricircolo di sfere con passo della vite 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			

Dati di ordinazione - DNCE-63					
Corsa [mm]	Cod. prod.	Tipo	Corsa [mm]	Cod. prod.	Tipo
Con attuatore a ricircolo di sfere con passo della vite 10 mm			Con attuatore a guida scorrevole con passo della vite 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
Con attuatore a ricircolo di sfere con passo della vite 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			

 **Attenzione**
Ordinazione corse X mediante
sistema modulare → 5/ 2.1-22

Elettro-cilindri DNCE, con stelo

Dati di ordinazione - Gruppo modulare

FESTO

Indicazioni obbligatorie

Codice prodotto	Funzione	Dimensioni	Corsa	Tipo di attuatore	Passo della vite senza fine	Esecuzione antirotativa
555 488	DNCE	32	1 ... 800	LS BS	"..."P	Q
555 489		40				
555 490		63				
Esempio di ordinazione						
555 489	DNCE	- 40	- 550	- LS	- "2,5"P	- Q

Tabella di ordinazione						
Dimensioni	32	40	63	Condizioni	Codice	Inserimento codice
 Codice prodotto	555 488	555 489	555 490			
Funzione	Elettro-cilindro				DNCE	DNCE
Dimensioni	32	40	63		"..."	
Corsa [mm]	100				"..."	
	200					
	300					
	400					
	- 600					
	- 800					
	1 ... 400	1 ... 600	1 ... 800			
Tipo di attuatore	Vite senza fine				-LS	
	Guida a ricircolo di sfere				-BS	
Passo della vite senza fine [mm]	1,5	-	-		-"..."P	
	- 2,5	-	-			
	3	-	-			
	- 4	-	-			
	- 5	-	-			
	10	-	10			
	- 12,7	-	-			
	- 20	-	20			
Esecuzione antirotativa	Stelo antirotativo				-Q	-Q

 ... Altre corse su richiesta

 "1,5"P, "2,5"P, "4"P

Solo con azionamento LS

 "3"P, "5"P, "10"P, "12,7"P, "20"P

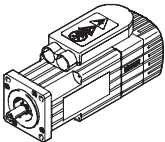
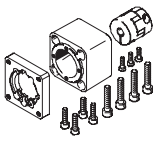
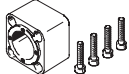
Solo con azionamento BS

Trascrizione codice di ordinazione

	DNCE	-		-		-		-		-	Q
--	------	---	--	---	--	---	--	---	--	---	---

Elettro-cilindri DNCE, con stelo

Accessori

Possibilicombinazioni asse/motore con kit assiale				
Motore/unità motore	kit assiale	Kit assiale, costituito da:		
		flangia motore	giunto	supporto giunto-motore
				
Tipo	Cod. prod. Tipo	Cod. prod. Tipo	Cod. prod. Tipo	Cod. prod. Tipo
DNCE-32				
Con servomotore				
EMMS-AS-40-...	543 147	552 163	543 420	552 155
MTR-AC-40-3S-A...	EAMM-A-D32-40A	EAMF-A-28B-40A	KSE-16-20-D06-D06	EAMK-A-D32-28B
EMMS-AS-55-...	550 979	529 942	551 003	551 006
MTR-AC-55-3S-A...	EAMM-A-D32-55A	MTR-FL44-AC55	KSE-30-32-D06-D09	EAMK-A-D32-44
Con motore passo-passo				
EMMS-ST-42-...	543 148	552 164	543 419	552 155
MTR-ST-42-48S-A...	EAMM-A-D32-42A	EAMF-A-28B-42A	KSE-16-20-D05-D06	EAMK-A-D32-28B
EMMS-ST-57-...	550 980	530 081	551 002	551 006
MTR-ST-57-48S-A...	EAMM-A-D32-57A	MTR-FL44-ST57	KSE-30-32-D06-D06.35	EAMK-A-D32-44
Con motore				
MTR-DCI-32S-...	543 149 EAMM-A-D32-32B	–	543 420 KSE-16-20-D06-D06	552 156 EAMK-A-D32-32B
DNCE-40				
Con servomotore				
EMMS-AS-55-...	543 153	529 942	543 423	552 157
MTR-AC-55-3S-A...	EAMM-A-D40-55A	MTR-FL44-AC55	KSE-30-32-D08-D09	EAMK-A-D40-44
EMMS-AS-70-...	550 981	529 943	551 004	552 157
MTR-AC-70-3S-A...	EAMM-A-D40-70A	MTR-FL44-AC70	KSE-30-32-D08-D11	EAMK-A-D40-44
Con motore passo-passo				
EMMS-ST-57-...	543 154	530 081	543 421	552 157
MTR-ST-57-48S-A...	EAMM-A-D40-57A	MTR-FL44-ST57	KSE-30-32-D06.35-D08	EAMK-A-D40-44
EMMS-ST-87-...	550 982	530 082	551 004	552 157
MTR-ST-87-48S-A...	EAMM-A-D40-87A	MTR-FL44-ST87	KSE-30-32-D08-D11	EAMK-A-D40-44
Con motore				
MTR-DCI-42S-...-G7	543 155 EAMM-A-D40-42B	–	543 422 KSE-30-32-D08-D08	522 158 EAMK-A-D40-42B
MTR-DCI-42S-...-G14	543 156 EAMM-A-D40-42C	–	543 422 KSE-30-32-D08-D08	522 159 EAMK-A-D40-42C

Attenzione

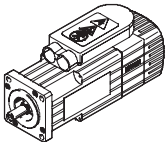
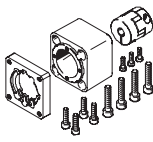
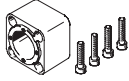
I dati relativi alle prestazioni dell'elettro-cilindro sono rilevabili solo in combinazione con il relativo motore.
In particolari condizioni è possibile

che non si raggiunga la forza max. di avanzamento del cilindro.
Per un corretto dimensionamento è consigliabile utilizzare l'apposito software Positioning Drives.

Elettro-cilindri DNCE, con stelo

Accessori

FESTO

Possibili combinazioni asse/motore con kit assiale				
 Motore/unità motore	 kit assiale	Kit assiale, costituito da:		
		 flangia motore	 giunto	 supporto giunto-motore
Tipo	Cod. prod. Tipo	Cod. prod. Tipo	Cod. prod. Tipo	Cod. prod. Tipo
DNCE-63				
Con servomotore				
EMMS-AS-70-...	543 161	529 945	543 424	552 160
MTR-AC-70-3S-A...	EAMM-A-D60-70A	MTR-FL64-AC70	KSE-42-50-D11-D12	EAMK-A-D60-64-L51
EMMS-AS-100-...	550 983	529 947	551 005	551 007
MTR-AC-100-...-A...	EAMM-A-D60-100A	MTR-FL64-AC100	KSE-42-50-D12-D19	EAMK-A-D60-64-L61
Con motore passo-passo				
EMMS-ST-87-...	543 162	530 082	543 424	552 160
MTR-ST-87-48S-A...	EAMM-A-D60-87A	MTR-FL64-ST87	KSE-42-50-D11-D12	EAMK-A-D60-64-L51
Con motore				
MTR-DCI-52S-...-G7	543 163 EAMM-A-D60-52B	—	533 709 KSE-42-50-D12-D12	552 161 EAMK-A-D60-52B
MTR-DCI-52S-...-G14	543 164 EAMM-A-D60-52C	—	533 709 KSE-42-50-D12-D12	552 162 EAMK-A-D60-52C

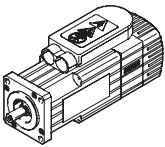
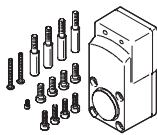
 **Attenzione**

I dati relativi alle prestazioni dell'elettro-cilindro sono rilevabili solo in combinazione con il relativo motore.
In particolari condizioni è possibile

che non si raggiunga la forza max. di avanzamento del cilindro.
Per un corretto dimensionamento è consigliabile utilizzare l'apposito software Positioning Drives.

Elettro-cilindri DNCE, con stelo

Accessori

Possibili combinazioni asse/motore con kit parallelo		
Motore/unità motore	Kit parallelo	
		
Tipo	Cod. prod.	Tipo
DNCE-32		
Con servomotore		
EMMS-AS-40-...	543 150	EAMM-U-D32-40A
MTR-AC-40-3S-A...		
Con motore		
MTR-DCI-32S-...	543 152	EAMM-U-D32-32B
DNCE-40		
Con servomotore		
EMMS-AS-55-...	543 157	EAMM-U-D40-55A
MTR-AC-55-3S-A...		
Con motore		
MTR-DCI-42S-G07	543 159	EAMM-U-D40-42B
MTR-DCI-42S-G14	543 160	EAMM-U-D40-42C
DNCE-63		
Con servomotore		
EMMS-AS-70-...	543 165	EAMM-U-D60-70A
MTR-AC-70-3S-A...		
Con motore		
MTR-DCI-52S-G07	543 167	EAMM-U-D60-52B
MTR-DCI-52S-G14	543 168	EAMM-U-D60-52C

 Attenzione

I dati relativi alle prestazioni dell'elettro-cilindro sono rilevabili solo in combinazione con il relativo motore.

In particolari condizioni è possibile

che non si raggiunga la forza max. di avanzamento del cilindro.

Per un corretto dimensionamento è consigliabile utilizzare l'apposito software Positioning Drives.

Elettro-cilindri DNCE, con stelo

Accessori

FESTO

Kit assiale EAMM-A-...

Materiali

supporto giunto-motore: alluminio

pressofuso

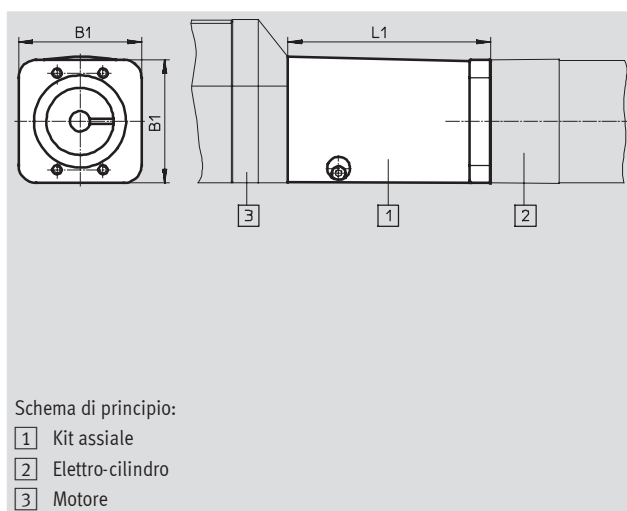
mozzo giunto: lega di alluminio per

lavorazione plastica

elemento di serraggio: acciaio

fortemente legato

viti: acciaio zincato



Dati generali												
EAMM-A-...		D32-					D40-					
		32B	40A	42A	55A	57A	42B	42C	55A	57A	70A	87A
Momento trasmissibile	[Nm]	1,1	1,1	0,8	4	4	8	8	8	6	8	8
Momento di inerzia di massa	[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
Numero di giri max.	[1/min]	10000			8000		8000					
Posizione di montaggio		Qualsiasi										

EAMM-A-...	D60-				
	52B	52C	70A	87A	100A
Momento trasmissibile [Nm]	14	14	12	12	14
Momento di inerzia di massa [kg mm ²]	35,5	35,5	35,5	35,5	35,5
Numero di giri max. [1/min]	6000				
Posizione di montaggio	Qualsiasi				

Condizioni d'esercizio e ambientali	
Temperatura ambiente [°C]	0 ... 50
Temperatura di stoccaggio [°C]	-25 ... +60
Grado di protezione ¹⁾	IP40
Umidità relativa dell'aria [%]	0 ... 95

1) Solo con motore e asse montati

Elettro-cilindri DNCE, con stelo

Accessori

Dimensioni e dati di ordinazione					
Tipo	B1	L1	Peso [g]	Cod. prod.	Tipo
EAMM-A-D32-32B	45	43	150	543 149	EAMM-A-D32-32B
EAMM-A-D32-40A		39,8	130	543 147	EAMM-A-D32-40A
EAMM-A-D32-42A		48	140	543 148	EAMM-A-D32-42A
EAMM-A-D32-55A	55	49,2	260	550 979	EAMM-A-D32-55A
EAMM-A-D32-57A	56,4	50,5	270	550 980	EAMM-A-D32-57A
EAMM-A-D40-42B	53,5	88	340	543 155	EAMM-A-D40-42B
EAMM-A-D40-42C		101	370	543 156	EAMM-A-D40-42C
EAMM-A-D40-55A		49,2	350	543 153	EAMM-A-D40-55A
EAMM-A-D40-57A		50,5	350	543 154	EAMM-A-D40-57A
EAMM-A-D40-70A	70	52	410	550 981	EAMM-A-D40-70A
EAMM-A-D40-87A	85,8	54	530	550 982	EAMM-A-D40-87A
EAMM-A-D60-52B	74	112	930	543 163	EAMM-A-D60-52B
EAMM-A-D60-52C		126	1020	543 164	EAMM-A-D60-52C
EAMM-A-D60-70A		63,2	750	543 161	EAMM-A-D60-70A
EAMM-A-D60-87A		64,7	890	543 162	EAMM-A-D60-87A
EAMM-A-D60-100A	100	78,2	1170	550 983	EAMM-A-D60-100A



Attenzione

Combinazioni possibili asse/motore

➔ 5/ 2.1-23

Elettro-cilindri DNCE, con stelo

Accessori

FESTO

Kit parallelo EAMM-U-...

Materiali

corpo: fusione in conchiglia in

alluminio

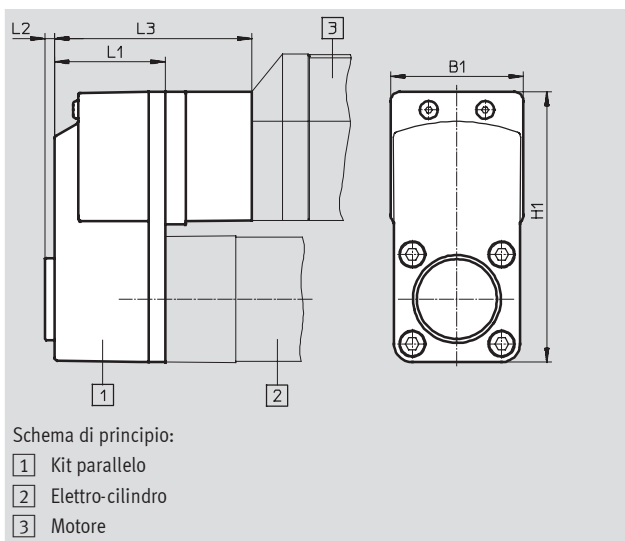
elemento di serraggio, bussola di

bloccaggio, disco per cinghia dentata:

acciaio, resistente alla corrosione

cinghia dentata: policloroprene

viti: acciaio zincato



Dati generali									
EAMM-U-...	D32-		D40-			D60-			
	32B	40A	42B	42C	55A	52B	52C	70A	
Momento trasmissibile [Nm]	1	1	3	3	3	5,5	5,5	5,5	
Coppia a vuoto [Nm]	0,05	0,05	0,1	0,1	0,1	0,3	0,3	0,3	
Momento di inerzia di massa [kgmm ²]	2,931	2,931	10,016	10,016	10,016	70,5	70,5	70,5	
Numero di giri max. [1/min]	3000								
Posizione di montaggio	Qualsiasi								

Condizioni d'esercizio e ambientali		
Temperatura ambiente [°C]	0 ... 50	
Temperatura di stoccaggio [°C]	-25 ... +60	
Grado di protezione ¹⁾	IP40	
Umidità relativa dell'aria [%]	0 ... 95	

1) Solo con motore e asse montati

Dimensioni e dati di ordinazione								
Tipo	B1	H1	L1	L2	L3	Peso [g]	Cod. prod.	Tipo
EAMM-U-D32-32B	45,1	93,1	40	4	-	300	543 152	EAMM-U-D32-32B
EAMM-U-D32-40A						300	543 150	EAMM-U-D32-40A
EAMM-U-D40-42B	56,5	115	47	4	84	660	543 159	EAMM-U-D40-42B
EAMM-U-D40-42C					97	690	543 160	EAMM-U-D40-42C
EAMM-U-D40-55A					-	530	543 157	EAMM-U-D40-55A
EAMM-U-D60-52B	86	162,6	58	4	106	1530	543 167	EAMM-U-D60-52B
EAMM-U-D60-52C					120	1630	543 168	EAMM-U-D60-52C
EAMM-U-D60-70A					-	1170	543 165	EAMM-U-D60-70A

Attenzione

Combinazioni possibili asse/motore
➔ 5/ 2.1-25

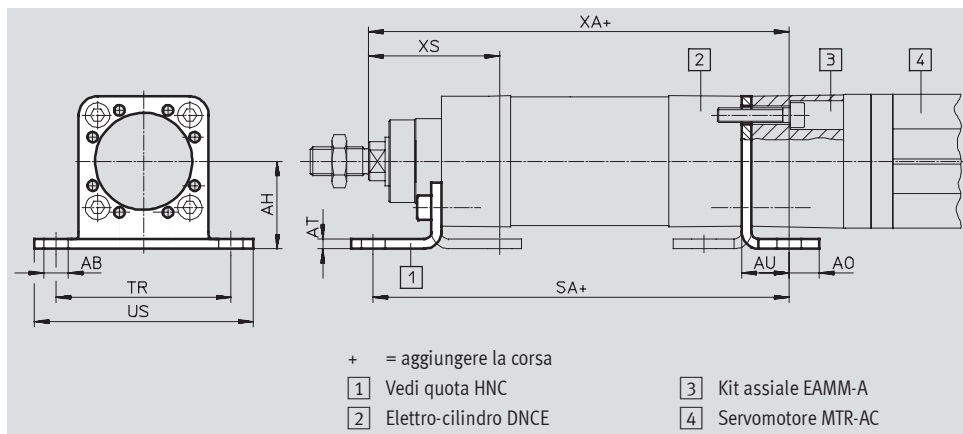
Elettro-cilindri DNCE, con stelo

Accessori

**Fissaggio a piedini HNCE,
per montaggio assiale del motore**

Materiali
acciaio zincato

Senza rame, PTFE e silicone



Dimensioni e dati di ordinazione

Per dimensioni	AB 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

Per dimensioni	CRC ¹⁾	Peso	Cod. prod.	Tipo
[mm]		[g]		
32	1	160	547 949	HNCE-32-AX
40	1	220	547 950	HNCE-40-AX
63	1	470	547 951	HNCE-63-AX

1) Classe di resistenza alla corrosione 1 a norme Festo 940 070
Componenti soggetti a limitata corrosione. Protezione per trasporto e stoccaggio. Componenti senza funzione prevalentemente decorativa delle superfici, per es. installati in aree interne non visibili o dietro le coperture.

Elettro-cilindri DNCE, con stelo

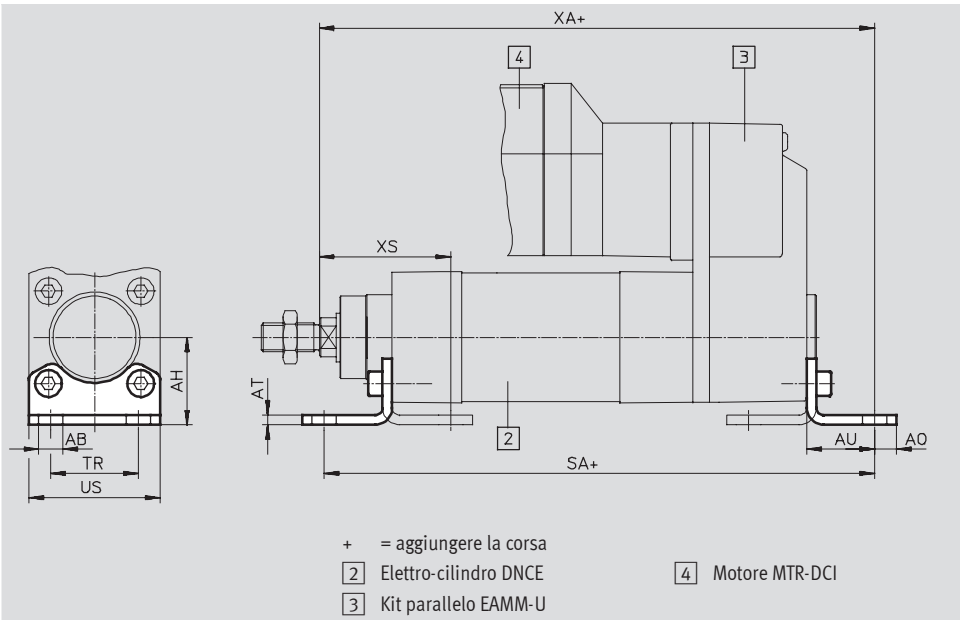
Accessori

FESTO

**Fissaggio a piedini HNC/CRHNC,
per montaggio parallelo del motore**

Materiali
HNC: acciaio zincato

CRHNC: acciaio fortemente legato
Senza rame, PTFE e silicone



Dimensioni e dati di ordinazione										
Per dimensioni	AB 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

Per dimensioni	Tipo base				Elevata protezione contro la corrosione			
	CRC ¹⁾	Peso [g]	Cod. prod.	Tipo	CRC ¹⁾	Peso [g]	Cod. prod.	Tipo
[mm]								
32	2	135	174 369	HNC-32	4	135	176 937	CRHNC-32
40	2	180	174 370	HNC-40	4	180	176 938	CRHNC-40
63	2	405	174 372	HNC-63	4	405	176 940	CRHNC-63

- 1) Classe di resistenza alla corrosione 2 a norme Festo 940 070
Componenti soggetti a media corrosione. Componenti esterni, con funzione prevalentemente decorativa, a contatto diretto con l'atmosfera industriale normale o con fluidi come refrigeranti e lubrificanti.
Classe di resistenza alla corrosione 4 a norme Festo 940 070
Componenti soggetti a corrosione molto forte. Componenti utilizzati in presenza di sostanze aggressive, per es. nell'industria alimentare o chimica. Per queste applicazioni è consigliabile eseguire prove speciali a contatto con le sostanze.

Elettro-cilindri DNCE, con stelo

Accessori

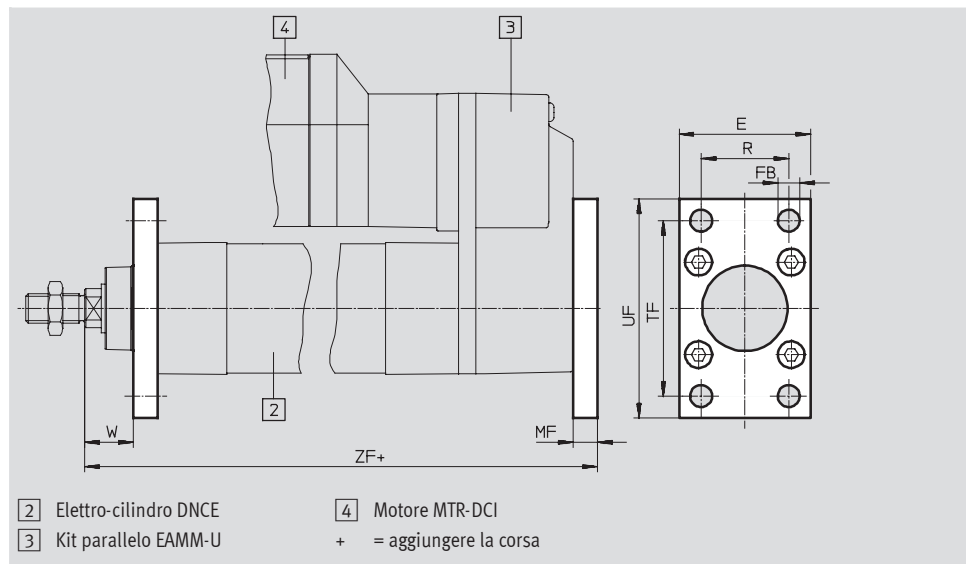
Fissaggio a flangia FNC/CRFNG

Materiali

FNC: acciaio zincato

CRFNG: acciaio fortemente legato

Senza rame, PTFE e silicone



Dimensioni e dati di ordinazione

Per dimensioni [mm]	E	FB Ø 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

Per dimensioni [mm]	Tipo base				Elevata protezione contro la corrosione			
	CRC ¹⁾	Peso [g]	Cod. prod.	Tipo	CRC ¹⁾	Peso [g]	Cod. prod.	Tipo
32	2	240	174 376	FNC-32	4	240	161 846	CRFNG-32
40	2	280	174 377	FNC-40	4	300	161 847	CRFNG-40
63	2	690	174 379	FNC-63	4	710	161 849	CRFNG-63

1) Classe di resistenza alla corrosione 2 a norme Festo 940 070

Componenti soggetti a media corrosione. Componenti esterni, con funzione prevalentemente decorativa, a contatto diretto con l'atmosfera industriale normale o con fluidi come refrigeranti e lubrificanti.

Classe di resistenza alla corrosione 4 a norme Festo 940 070

Componenti soggetti a corrosione molto forte. Componenti utilizzati in presenza di sostanze aggressive, per es. nell'industria alimentare o chimica. Per queste applicazioni è consigliabile eseguire prove speciali a contatto con le sostanze.

Elettro-cilindri DNCE, con stelo

Accessori

FESTO

Perno oscillante ZNCF/CRZNG

Materiali

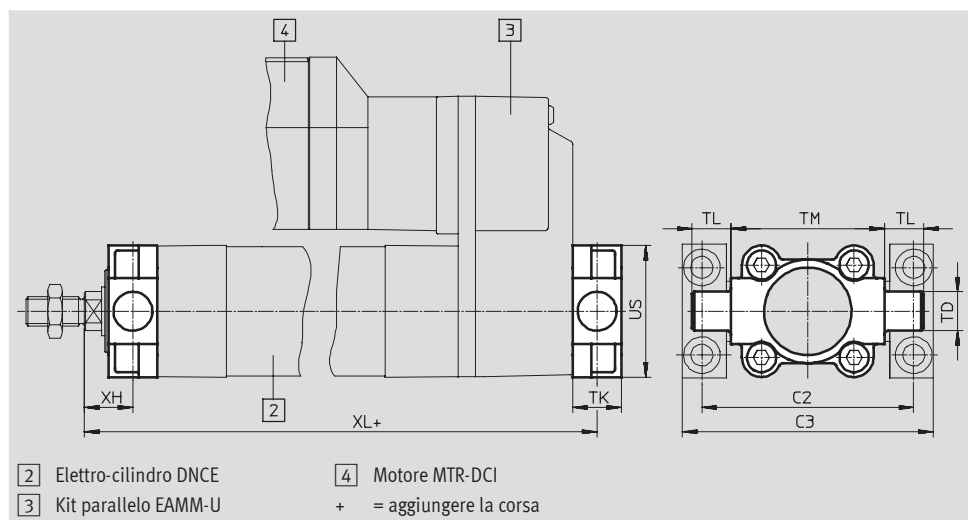
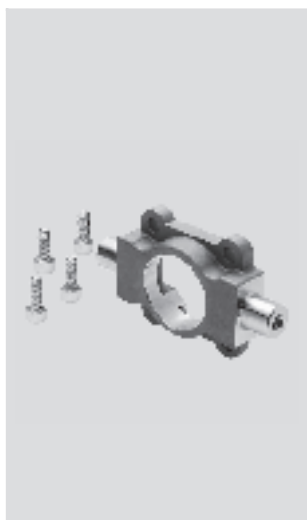
ZNCF: fusione di acciaio inossidabile

CRZNG: fusione di acciaio

inossidabile, lucidato

elettrochimicamente

Senza rame, PTFE e silicone



Dimensioni e dati di ordinazione

Per dimensioni	C2	C3	TD Ø 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

Per dimensioni	Tipo base				Elevata protezione contro la corrosione			
	CRC ¹⁾	Peso [g]	Cod. prod.	Tipo	CRC ¹⁾	Peso [g]	Cod. prod.	Tipo
[mm]								
32	2	130	174 411	ZNCF-32	4	150	161 852	CRZNG-32
40	2	240	174 412	ZNCF-40	4	260	161 853	CRZNG-40
63	2	600	174 414	ZNCF-63	4	640	161 855	CRZNG-63

- 1) Classe di resistenza alla corrosione 2 a norme Festo 940 070
Componenti soggetti a media corrosione. Componenti esterni, con funzione prevalentemente decorativa, a contatto diretto con l'atmosfera industriale normale o con fluidi come refrigeranti e lubrificanti.
Classe di resistenza alla corrosione 4 a norme Festo 940 070
Componenti soggetti a corrosione molto forte. Componenti utilizzati in presenza di sostanze aggressive, per es. nell'industria alimentare o chimica. Per queste applicazioni è consigliabile eseguire prove speciali a contatto con le sostanze.

Elettro-cilindri DNCE, con stelo

Accessori

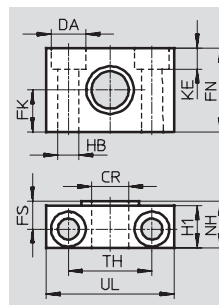
Supporto LN2G

Materiali

supporto: alluminio anodizzato

bronzina: plastica

Senza rame, PTFE e silicone



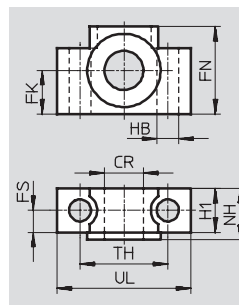
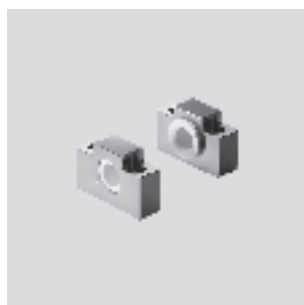
Dimensioni e dati di ordinazione															
Per dimensioni	CR	DA	FK	FN	FS	H1	HB	KE	NH	TH	UL	CRC ¹⁾	Peso	Cod. prod.	Tipo
[mm]	Ø D11	Ø H13	Ø ±0,1				Ø H13			±0,2			[g]		
32	12	11	15	30	10,5	15	6,6	6,8	18	32	46	2	125	32 959	LN2G-32
40	16	15	18	36	12	18	9	9	21	36	55	2	400	32 960	LN2G-40/50
63	20	18	20	40	13	20	11	11	23	42	65	2	480	32 961	LN2G-63/80

Supporto CRLN2G

Materiali

acciaio fortemente legato

Senza rame, PTFE e silicone



Dimensioni e dati di ordinazione													
Per dimensioni	CR	FK	FN	FS	H1	HB	NH	TH	UL	CRC ¹⁾	Peso	Cod. prod.	Tipo
[mm]	Ø D11	Ø ±0,1				Ø H13		±0,2			[g]		
32	12	15	30	10,5	15	6,6	18	32	46	4	200	161 874	CRLNZG-32
40	16	18	36	12	18	9	21	36	55	4	330	161 875	CRLNZG-40/50
63	20	20	40	13	20	11	23	42	65	4	440	161 876	CRLNZG-63/80

- 1) Classe di resistenza alla corrosione 2 a norme Festo 940 070
Componenti soggetti a media corrosione. Componenti esterni, con funzione prevalentemente decorativa, a contatto diretto con l'atmosfera industriale normale o con fluidi come refrigeranti e lubrificanti.
Classe di resistenza alla corrosione 4 a norme Festo 940 070
Componenti soggetti a corrosione molto forte. Componenti utilizzati in presenza di sostanze aggressive, per es. nell'industria alimentare o chimica. Per queste applicazioni è consigliabile eseguire prove speciali a contatto con le sostanze.

Elettro-cilindri DNCE, con stelo

Accessori

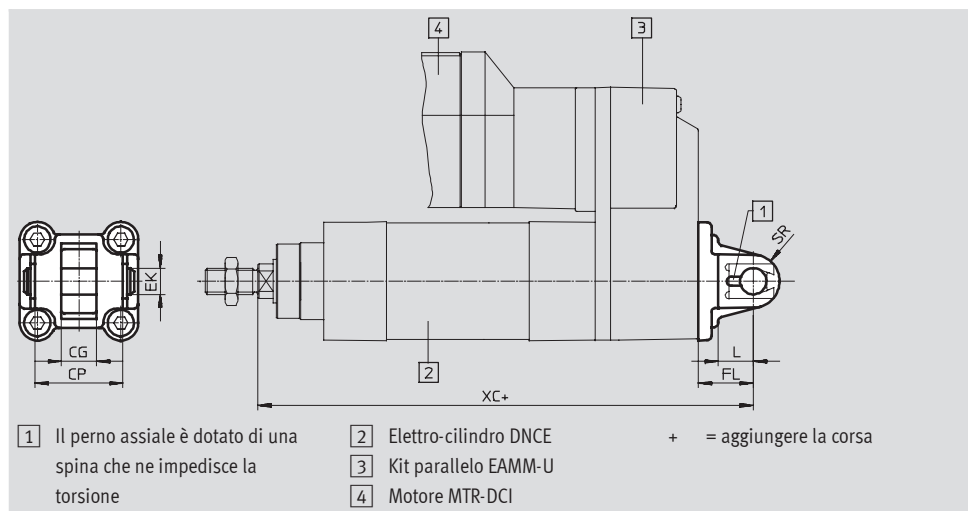
FESTO

Flangia oscillante SNC

Materiali

alluminio pressofuso

Senza rame, PTFE e silicone



Dimensioni e dati di ordinazione

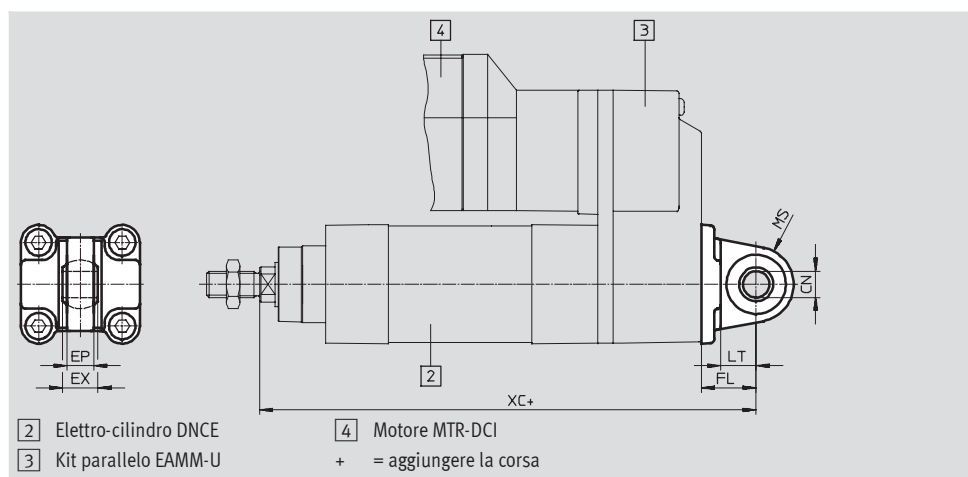
Per dimensioni	CG	CP	EK Ø	FL ±0,2	L	SR	XC	CRC ¹⁾	Peso [g]	Cod. prod.	Tipo
[mm]	H14	h14									
32	14	34	10	22	13	10	210	2	90	174 383	SNC-32
40	16	40	12	25	16	12	248,5	2	120	174 384	SNC-40
63	21	51	16	32	21	16	304	2	320	174 386	SNC-63

Flangia oscillante SNCS

Materiali

alluminio pressofuso

Senza rame, PTFE e silicone



Dimensioni e dati di ordinazione

Per dimensioni	CN Ø	EP ±0,2	EX ±0,2	FL ±0,2	LT	MS	XC	CRC ¹⁾	Peso [g]	Cod. prod.	Tipo
[mm]	H7										
32	10	10,5	14	22	13	15	210	2	85	174 397	SNCS-32
40	12	12	16	25	16	17	248,5	2	125	174 398	SNCS-40
63	16	15	21	32	21	22	304	2	280	174 400	SNCS-63

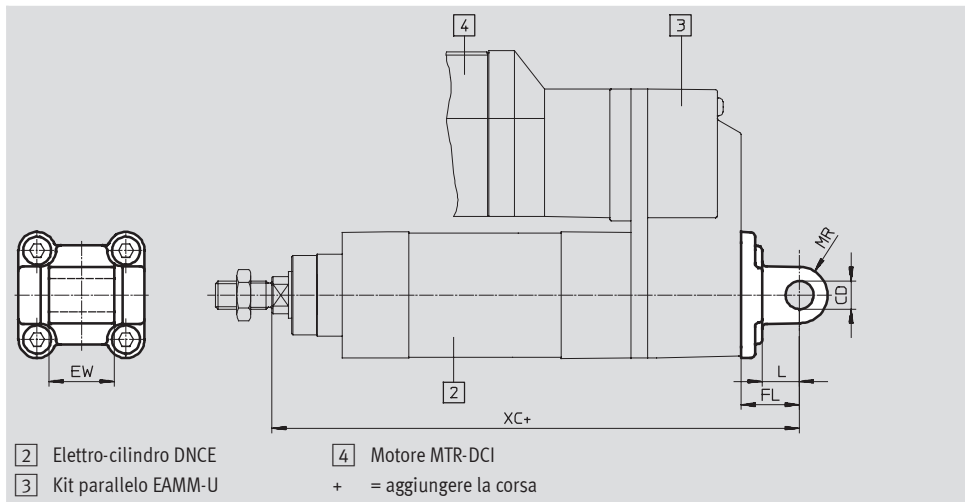
1) Classe di resistenza alla corrosione 2 a norme Festo 940 070
Componenti soggetti a media corrosione. Componenti esterni, con funzione prevalentemente decorativa, a contatto diretto con l'atmosfera industriale normale o con fluidi come refrigeranti e lubrificanti.

Elettro-cilindri DNCE, con stelo

Accessori

Flangia oscillante SNCL

Materiali
alluminio pressofuso
Senza rame, PTFE e silicone



Dimensioni e dati di ordinazione										
Per dimensioni	CD Ø	EW	FL	L	MR	XC	CRC ¹⁾	Peso	Cod. prod.	Tipo
[mm]	H9	h12	±0,2					[g]		
32	10	26	22	13	10	210	2	75	174 404	SNCL-32
40	12	28	25	16	12	248,5	2	100	174 405	SNCL-40
63	16	40	32	21	16	304	2	250	174 407	SNCL-63

1) Classe di resistenza alla corrosione 2 a norme Festo 940 070
Componenti soggetti a media corrosione. Componenti esterni, con funzione prevalentemente decorativa, a contatto diretto con l'atmosfera industriale normale o con fluidi come refrigeranti e lubrificanti.

Elettro-cilindri DNCE, con stelo

Accessori

FESTO

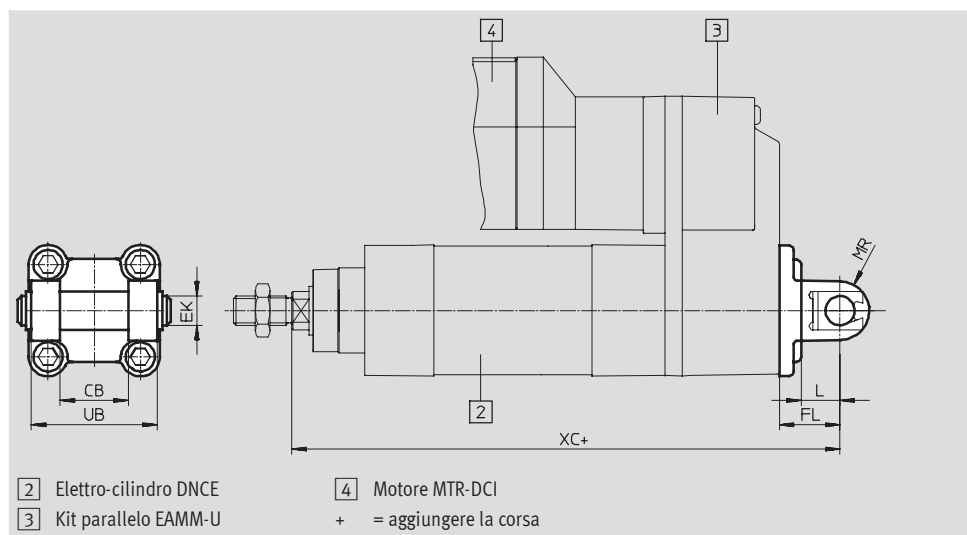
Flangia oscillante SNCB/SNCB-...-R3

Materiali

SNCB: alluminio pressofuso

SNCB-...-R3: pressofusione di alluminio con rivestimento protettivo, elevata resistenza alla corrosione

Senza rame, PTFE e silicone



Dimensioni e dati di ordinazione

Per dimensioni	CB	EK	FL	L	MR	UB	XC
[mm]	H14	Ø 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

Per dimensioni	Tipo base				Variante R3 - Elevata protezione contro la corrosione			
	CRC ¹⁾	Peso [g]	Cod. prod.	Tipo	CRC ¹⁾	Peso [g]	Cod. prod.	Tipo
32	2	100	174 390	SNCB-32	3	100	176 944	SNCB-32-R3
40	2	150	174 391	SNCB-40	3	150	176 945	SNCB-40-R3
63	2	365	174 393	SNCB-63	3	365	176 947	SNCB-63-R3

1) Classe di resistenza alla corrosione 3 a norme Festo 940 070

Componenti soggetti a forte corrosione. Componenti esterni visibili, a contatto diretto con l'atmosfera industriale normale o con fluidi come solventi e detergenti, le cui superfici devono soddisfare requisiti prevalentemente funzionali.

Elettro-cilindri DNCE, con stelo

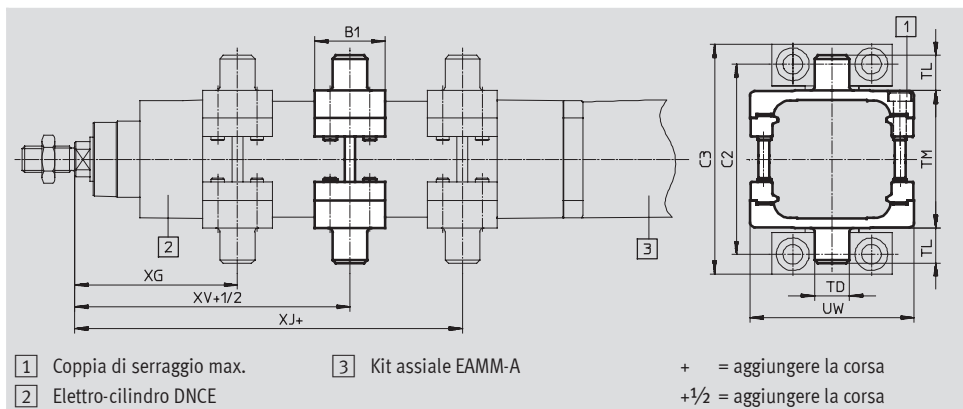
Accessori

Kit con perno oscillante ZNCM

Materiali
acciaio temprato

Il kit può essere fissato in qualsiasi
posizione sul profilo del cilindro.
In combinazione con il kit parallelo

EAMM-U non è possibile montare il kit
con perno oscillante nell'area del
motore.

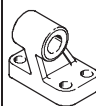
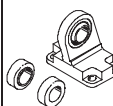
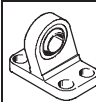
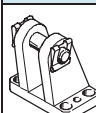
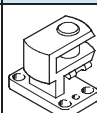


Dimensioni e dati di ordinazione								
Per dimensioni	B1	C2	C3	TD Ø e9	TL	TM	UW	XG
[mm]								
32	30	71	86	12	12	50	65	65
40	32	87	105	16	16	63	75	74,5
63	41	116	136	20	20	90	105	91,5

Per dimensioni	XJ	XV	Max. Coppia di serraggio [Nm]	CRC ¹⁾	Peso [g]	Cod. prod.	Tipo
[mm]							
32	107	86	4+1	2	210	163 525	ZNCM-32
40	130,5	102,5	8+1	2	385	163 526	ZNCM-40
63	157,5	124,5	18+2	2	890	163 528	ZNCM-63

1) Classe di resistenza alla corrosione 2 a norme Festo 940 070

Componenti soggetti a media corrosione. Componenti esterni, con funzione prevalentemente decorativa, a contatto diretto con l'atmosfera industriale normale o con fluidi come refrigeranti e lubrificanti.

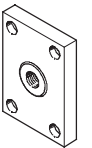
Dati di ordinazione - Elementi di fissaggio				Fogli dati → www.festo.it			
Denominazione	Per dimensioni	Cod. prod.	Tipo	Denominazione	Per dimensioni	Cod. prod.	Tipo
Supporto a cerniera LNG				Supporto a cerniera LSN			
	32	33 890	LNG-32		32	5 561	LSN-32
	40	33 891	LNG-40		40	5 562	LSN-40
	63	33 893	LNG-63		63	5 564	LSN-63
Supporto a cerniera LSNG				Supporto a cerniera LSNSG			
	32	31 740	LSNG-32		32	31 747	LSNSG-32
	40	31 741	LSNG-40		40	31 748	LSNSG-40
	63	31 743	LSNG-63		63	31 750	LSNSG-63
Supporto a cerniera LBG				Supporto a cerniera trasversale LQG			
	32	31 761	LBG-32		32	31 768	LQG-32
	40	31 762	LBG-40		40	31 769	LQG-40
	63	31 764	LBG-63		63	31 771	LQG-63

Elettro-cilindri DNCE, con stelo

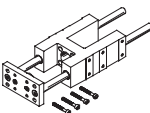
Accessori

FESTO

Dati di ordinazione - Elementi di fissaggio resistenti alla corrosione				Fogli dati ➔ www.festo.it	
Denominazione	Per dimensioni	Cod. prod.	Tipo		
Supporto a cerniera CRLNG					
	32	161 840	CRLNG-32		
	40	161 841	CRLNG-40		
	63	161 843	CRLNG-63		

Dati di ordinazione - Elementi da montare sullo stelo				Fogli dati ➔ www.festo.it			
Denominazione	Per dimensioni	Cod. prod.	Tipo	Denominazione	Per dimensioni	Cod. prod.	Tipo
Snodo SGS				Forcella SGA			
	32	9 261	SGS-M10x1,25		32	32 954	SGA-M10x1,25
	40	9 262	SGS-M12x1,25		40	10 767	SGA-M12x1,25
	63	9 263	SGS-M16x1,5		63	10 768	SGA-M16x1,5
Forcella SG				Giunto Flexo FK			
	32	6 144	SG-M10x1,25		32	6 140	FK-M10x1,25
	40	6 145	SG-M12x1,25		40	6 141	FK-M12x1,25
	63	6 146	SG-M16x1,5		63	6 142	FK-M16x1,5
Raccordo KSZ							
	32	36 125	KSZ-M10x1,25				
	40	36 126	KSZ-M12x1,25				
	63	36 127	KSZ-M16x1,5				

Dati di ordinazione - Elementi da montare sullo stelo resistenti alla corrosione				Fogli dati ➔ www.festo.it			
Denominazione	Per dimensioni	Cod. prod.	Tipo	Denominazione	Per dimensioni	Cod. prod.	Tipo
Snodo CRS GS				Forcella CRS G			
	32	195 582	CRSGS-M10x1,25		32	13 569	CRSG-M10x1,25
	40	195 583	CRSGS-M12x1,25		40	13 570	CRSG-M12x1,25
	63	195 584	CRSGS-M16x1,5		63	13 571	CRSG-M16x1,5

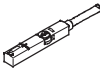
Dati di ordinazione - Unità di guida per corse fisse (solo guida a ricircolo di sfere)				Fogli dati ➔ www.festo.it		
	Corsa [mm]	Cod. prod.	Tipo	Corsa [mm]	Cod. prod.	Tipo
	Per dimensioni 32			Per dimensioni 40		
	10 ... 100	34 494	FENG-32-100-KF	10 ... 100	34 500	FENG-40-100-KF
	10 ... 200	34 496	FENG-32-200-KF	10 ... 200	34 502	FENG-40-200-KF
	10 ... 320	34 497	FENG-32-320-KF	10 ... 320	34 504	FENG-40-320-KF
	10 ... 400	150 290	FENG-32-400-KF	10 ... 400	150 291	FENG-40-400-KF
	10 ... 500	34 498	FENG-32-500-KF	10 ... 500	34 505	FENG-40-500-KF
	Per dimensioni 63					
	10 ... 100	34 514	FENG-63-100-KF			
	10 ... 200	34 516	FENG-63-200-KF			
	10 ... 320	34 518	FENG-63-320-KF			
	10 ... 400	34 519	FENG-63-400-KF			
10 ... 500	34 520	FENG-63-500-KF				

Elettro-cilindri DNCE, con stelo

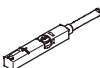
Accessori

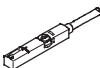
Dati di ordinazione - Unità di guida per corse variabili						Fogli dati ➔ www.festo.it	
	Per dimensioni	Corsa	Con guida a ricircolo di sfere		Con guida su bronzina		
	[mm]	[mm]	Cod. prod.	Tipo	Cod. prod.	Tipo	
	32	10 ... 500	34 487	FENG-32-...-KF	34 481	FENG-32-...	
	40	10 ... 500	34 488	FENG-40-...-KF	34 482	FENG-40-...	
	63	10 ... 500	34 490	FENG-63-...-KF	34 484	FENG-63-...	

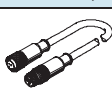
Sensori di finecorsa combinabili con motore MTR-DCI

Dati di ordinazione - Sensori di finecorsa per scanalatura a T, magnetoresistivi						Fogli dati → www.festo.com/catalogue/sm	
	Fissaggio	Uscita di commutazione	Connessione elettrica	Lunghezza cavo [m]	Cod. prod.	Tipo	
Contatto n.a.							
	Applicabile dall'alto nella scanalatura, protetto dal profilo del cilindro	PNP	Connettore M8x1, a 3 poli	0,3	543 866	SMT-8M-PS-24V-K-0,3-M8D	

Sensori di finecorsa combinabili con servo-motori MTR-AC, motori passo-passo MTR-ST o con unità di guida FENG

Dati di ordinazione - Sensori di finecorsa per scanalatura a T, magnetoresistivi						Fogli dati → www.festo.com/catalogue/sm	
	Fissaggio	Uscita di commutazione	Connessione elettrica	Lunghezza cavo [m]	Cod. prod.	Tipo	
Contatto n.a.							
	Applicabile dall'alto nella scanalatura, protetto dal profilo del cilindro	PNP	Cavo, a 3 fili	2,5	543 867	SMT-8M-PS-24V-K-2,5-OE	
	Inseribile longitudinalmente nella scanalatura, protetto dal profilo del cilindro	PNP	Cavo, a 3 fili	2,5	175 436	SMT-8-PS-K-LED-24-B	

Dati di ordinazione - Sensori di finecorsa per scanalatura a T, magnetici Reed						Fogli dati → www.festo.com/catalogue/sm	
	Fissaggio	Uscita di commutazione	Connessione elettrica	Lunghezza cavo [m]	Cod. prod.	Tipo	
Contatto n.a.							
	Applicabile dall'alto nella scanalatura, protetto dal profilo del cilindro	A contatto	Cavo, a 3 fili	2,5	543 862	SME-8M-DS-24V-K-2,5-OE	
				5,0	543 863	SME-8M-DS-24V-K-5,0-OE	
	Inseribile longitudinalmente nella scanalatura, protetto dal profilo del cilindro	A contatto	Cavo, a 3 fili	2,5	150 855	SME-8-K-LED-24	

Dati di ordinazione - Cavi di collegamento						Fogli dati ➔ www.festo.it	
	Montaggio	Attacco	Lunghezza cavo [m]	Cod. prod.	Tipo		
Connettore, diritto							
	Ghiera M8 su entrambi i lati	A 3 poli	0,5	175 488	KM8-M8-GSGD-0,5		
			1	175 489	KM8-M8-GSGD-1		
			2,5	165 610	KM8-M8-GSGD-2,5		
			5	165 611	KM8-M8-GSGD-5		

Dati di ordinazione - Copertura per scanalatura a T				
	Montaggio	Lunghezza	Cod. prod.	Tipo
	Applicabile	2x 0,5 m	151 680	ABP-5-S

Electric cylinders DNCE-LAS, with linear motor

FESTO



Electric cylinders DNCE-LAS, with linear motor

Key features

FESTO

At a glance

Characteristics

- Linear motor axis with piston rod
- The electric cylinder consists of a freely positionable linear motor, integrated displacement encoder with magnetic strip, reference switch and plain bearings
- Enables positioning with very high dynamic response. Accelerations of up to 125 m/s² are possible without load
- Mechanical interfaces are largely compatible with the standard cylinder DNC
- Together with the motor controller SFC-LACI and the associated cables, it is a quickly commissioned positioning system for small loads

Range of applications

- Positioning of small loads such as:
 - placing small parts into and removing small parts from magazines
 - sorting parts quickly
 - for equipping and assembly processes

Everything from a single source

Electric cylinder
DNCE-LAS

→ 3



Motor controller
SFC-LACI

→ Internet: sfc-laci

The electric cylinder DNCE-LAS and motor controller SFC-LACI form one unit.

- Thanks to protection class IP54, the SFC can be mounted close to the DNCE, either:
 - via central supports or
 - via H-rail
 - Just two cables are required between the electric cylinder DNCE and motor controller SFC (motor and encoder cable)
 - The motor controller SFC is available with or without control panel
 - Up to 31 positioning records
- Parameterisation via:
- Control panel:
 - suitable for simple position sequences

Parameterisation via:

- FCT (Festo Configuration Tool) configuration package:
 - via RS 232 interface
 - Windows-based PC user interface, Festo Configuration Tool
- Easy actuation via:
 - I/O interface
 - Profibus
 - CANopen, incl. “interpolated position mode”
 - DeviceNet



Optional: Electric cylinder DNCE-LAS with clamping unit



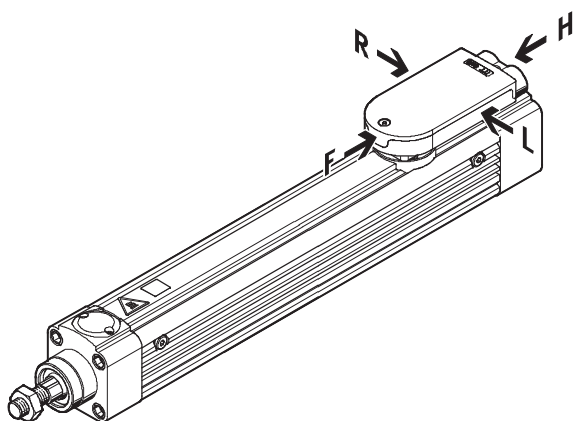
The pneumatically actuated clamping unit can be used to hold loads in any stroke position and with the module installed in any position. Clamping in the end positions is not permitted. In the case of a pressure drop or pressure failure, the clamping unit acts like an EMERGENCY STOP device. The clamping unit can be released by means of the manual override.

Electric cylinders DNCE-LAS, with linear motor

Type codes

		DNCE	—	32	—	100	—	LAS	—	F	—	C	—	S1
Type														
DNCE	Electric cylinder													
Size														
Stroke [mm]														
Drive type/motor technology														
LAS	Linear motor, AC synchronous													
Cable outlet direction														
H	To the rear													
F	To the front													
L	To the left													
R	To the right													
Clamping unit														
C	Attached													
Protection class for electrics														
S1	IP65													

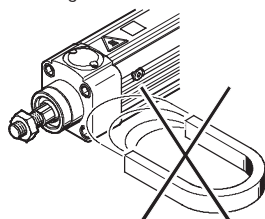
Cable outlet direction



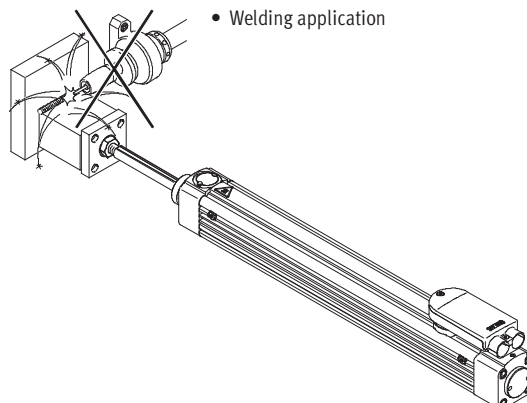
Instructions for use

The electric cylinder with linear motor is not designed for the following sample applications:

- Magnetic field



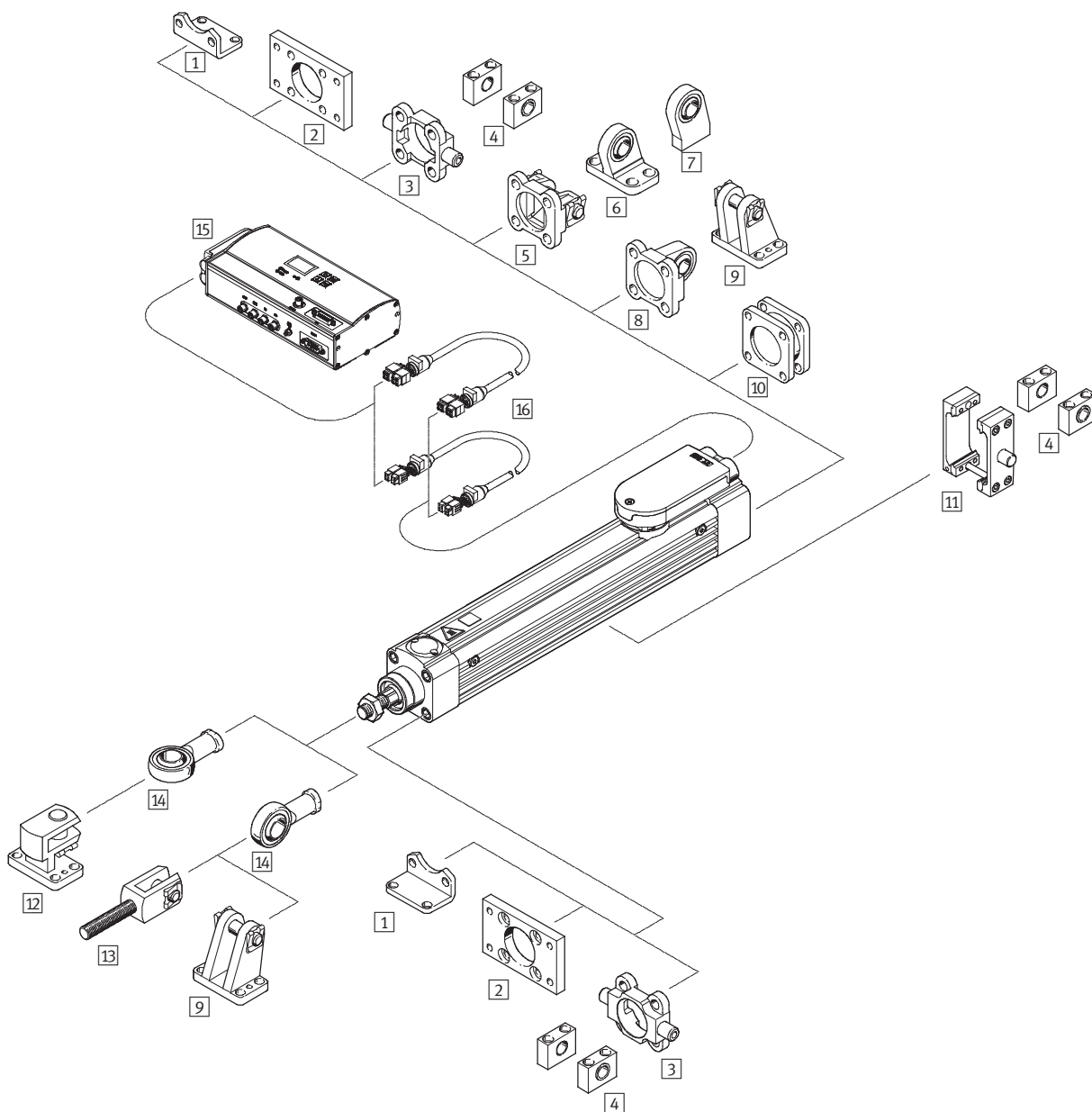
- Welding application



Electric cylinders DNCE-LAS, with linear motor

Peripherals overview

FESTO



Electric cylinders DNCE-LAS, with linear motor

Peripherals overview

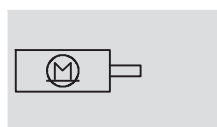
Mounting attachments and accessories		
	Brief description	→ Page/Internet
1	Foot mounting HNC/CRHNC	For bearing or end caps 17
2	Flange mounting FNC/CRFNG	For bearing or end caps 18
3	Trunnion flange ZNCf/CRZNG	For bearing or end caps 19
4	Trunnion support LNZG/CRLNZG	For cylinders with trunnion mounting 20
5	Swivel flange SNC	For end caps 21
6	Clevis foot LSNG	With spherical bearing 22
7	Clevis foot LSNSG	Weld-on, with spherical bearing 22
8	Swivel flange SNCS	For end caps, with spherical bearing 21
9	Clevis foot LBG	With non-rotating pivot pin 22
10	Multi-position kit DPNC	For connecting two cylinders of the same size to form a multi-position cylinder 19
11	Trunnion mounting kit ZNCM	For mounting anywhere along the cylinder profile barrel 22
12	Right-angle clevis foot LQG	For rod eye SGS 22
13	Rod clevis SGA	For swivel attachment of cylinders 22
14	Rod eye SGS	With spherical bearing 22
15	Motor controller SFC-LACI	For parameterising and positioning the electric cylinder sfc-laci
16	Motor/encoder cable NEBM	For connecting the motor and controller sfc-laci

Electric cylinders DNCE-LAS, with linear motor

FESTO

Technical data

Function



Size
32, 40

Stroke length
100 ... 400 mm



Note

All values are based on a standard temperature of 23 °C.
Dynamic response and accuracy are dependent on the mounting (rigidity) and temperature stresses (heat concentration).



www.festo.com



General technical data								
Size		32			40			
Stroke	[mm]	100	200	320	100	200	320	400
Mechanical								
Design		Electric linear direct drive						
Drive unit operating mode		Piston rod						
Type of mounting		Via female thread						
		Via accessories						
Mounting position		Any						
Continuous feed force ¹⁾	[N]	33.7	29.4	33.8	55.3	33.8	42.1	47.9
Peak feed force ¹⁾	[N]	93.7	141	141	183	202	202	202
Max. effective load without external guide (horizontal operation)	[kg]	1.5	1	0.5	2.5	2.5	1.5	1.4
Max. effective load with external guide (horizontal operation)	[kg]	2.8	6	4	3.4	6	6	6
Max. effective load without external guide (vertical operation)	[kg]	3	3	2	3	3	3	3
Max. speed	[m/s]	2	3	3	2	3	3	3
Repetition accuracy	[mm]	±0.02						
Electric								
Type of motor		Linear AC servo motor						
Displacement encoder		Relative measurement, magnetic, incremental, contactless						
Peak motor current	[A]	5.9	16.2	16.2	7.65	22.5	22.5	22.5
Nominal motor current	[A]	2.1	3.3	3.9	2.25	3.7	4.6	5.2
Rated motor output	[W]	101	88	101	166	101	126	144
Homing		Integrated reference sensor						

1) Disregarding friction

Technical data – Clamping unit								
Size		32			40			
Stroke	[mm]	100	200	320	100	200	320	400
Design		Spring-loaded clamping profile						
Pneumatic connection		M5			G1/8			
Min. release pressure	[bar]	3						
Max. operating pressure	[bar]	8						
Operating medium		Dried compressed air, lubricated or unlubricated						
Max. static holding force	[N]	600			1,000			
Max. effective load (vertical operation)	[kg]	1.5	1.5	1	1.5	1.5	1.5	1.5
Max. axial backlash with clamped piston rod without load	[mm]	0.5						

Electric cylinders DNCE-LAS, with linear motor

Technical data

Operating and environmental conditions		
Ambient temperature	[°C]	0 ... +40
Max. motor temperature	[°C]	70 (warning at 70 °C, shut-off at 75 °C)
Standard temperature ¹⁾	[°C]	23
Temperature monitoring		Shuts off if motor overheats
Protection class (mechanical system)		IP40
Protection class (electrical connection)		IP40 (with DNCE-...-S1: IP65)
CE marking (see declaration of conformity)		To EU EMC Directive
Corrosion resistance class CRC ²⁾		1

1) Unless otherwise stated, all values are based on standard temperature

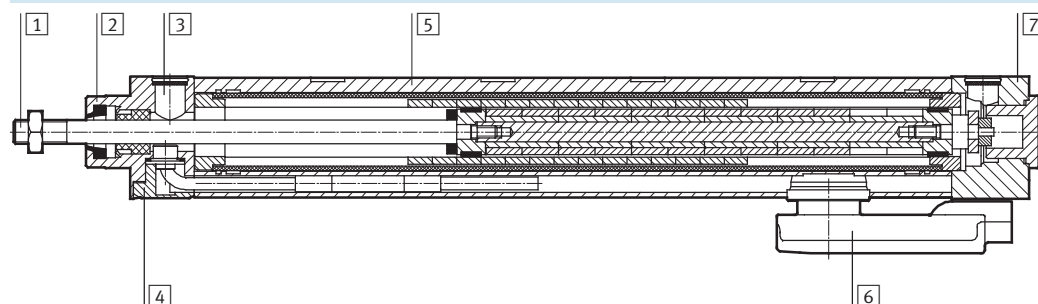
2) Corrosion resistance class 1 according to Festo standard 940 070

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

Weight [g]							
Size	32			40			
Stroke [mm]	100	200	320	100	200	320	400
Product weight	2,570	3,170	3,750	4,560	5,420	6,420	7,000
Moving load	530	610	710	1,340	1,470	1,630	1,750

Materials

Sectional view



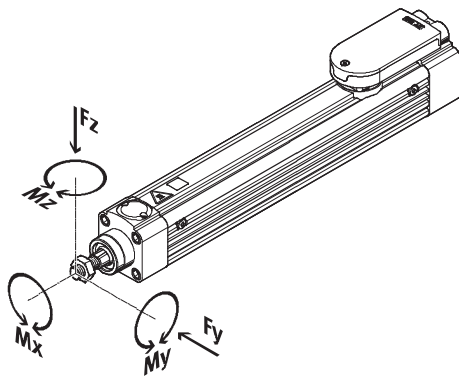
Electric cylinder	
1	Piston rod
2	Bearing cap
3	Filter disc
4	Distance piece
5	Cylinder barrel
6	Terminal strip
7	End cap
-	Screws
Note on materials	
Contains PWIS (paint-wetting impairment substances)	
RoHS-compliant	

Electric cylinders DNCE-LAS, with linear motor

Technical data

FESTO

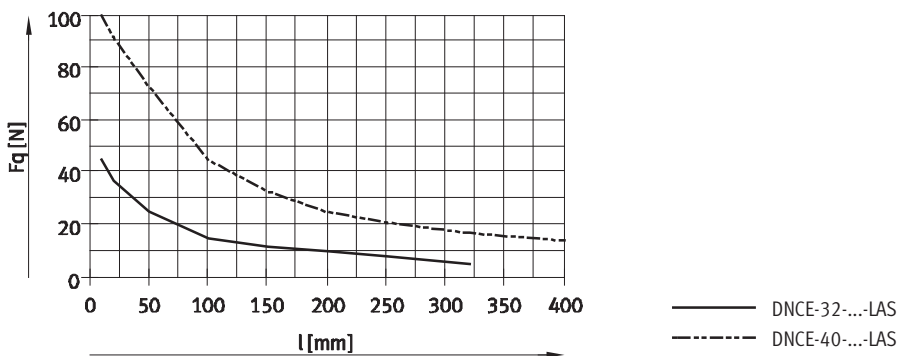
Maximum permissible loads on the piston rod



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

$$\frac{|F_{y1}|}{F_{y_{\max}}} + \frac{|F_{z1}|}{F_{z_{\max}}} + \frac{|M_{y1}|}{M_{y_{\max}}} + \frac{|M_{z1}|}{M_{z_{\max}}} \leq 1$$

Maximum permissible lateral forces $F_{y_{\max}}$ and $F_{z_{\max}}$ as a function of stroke l (limited by the plain bearing)



Maximum permissible forces and torques

Size		32	40
$M_{x_{\max}}$	[Nm]	No torques are permitted	
$M_{y_{\max}}, M_{z_{\max}}$	[Nm]	2	5

 Note

PositioningDrives
sizing software
→ www.festo.com

Stroke reserve and cushioning length

1 Working stroke:

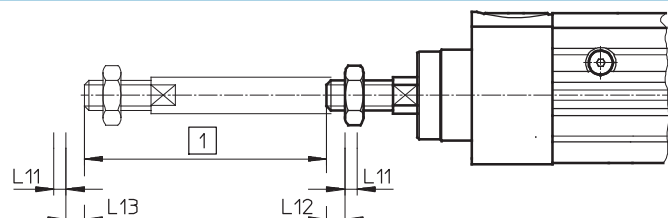
The recommended, available operating range

L12, L13 Stroke reserve:

The distance from the end positions of the working stroke to the buffers

L11 Cushioning length:

The distance from the buffer surface to the mechanical end position



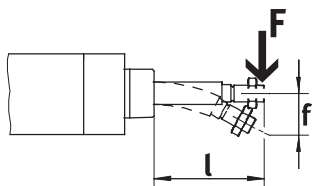
Size		Retracted		Advanced	
		L12	L11	L13	L11
32	[mm]	3.3	2	5.9	2
40	[mm]	3.1	2	3.7	2

Electric cylinders DNCE-LAS, with linear motor

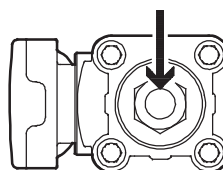
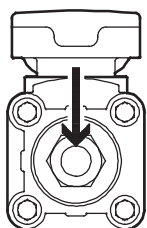
Technical data

FESTO

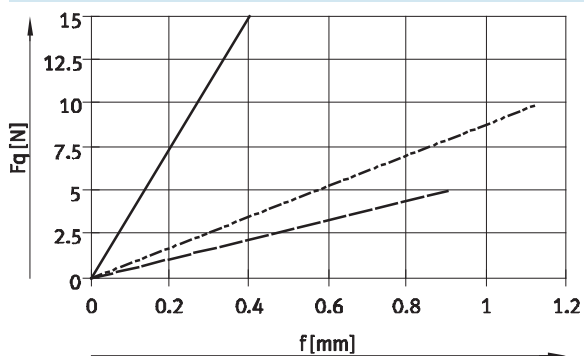
Piston rod displacement f , with fully advanced piston rod, as a function of lateral force F_q



Mounting position

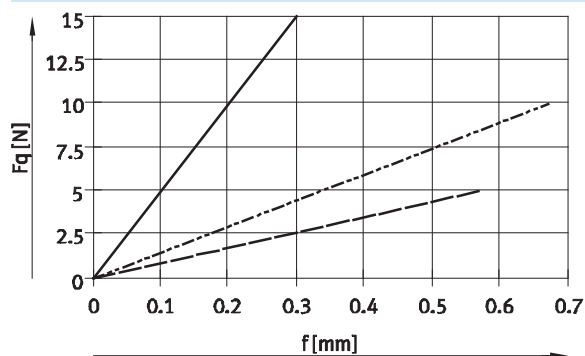


DNCE-32



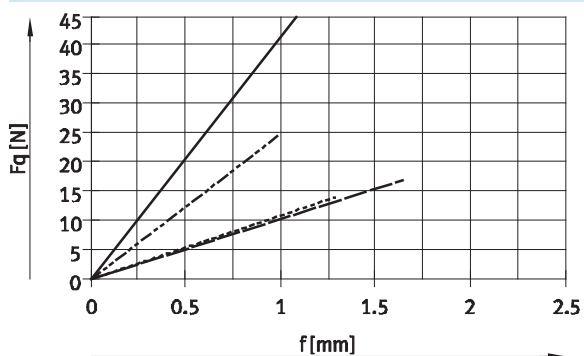
— DNCE-32-100-LAS
 - - - DNCE-32-200-LAS
 - · - DNCE-32-320-LAS

DNCE-32



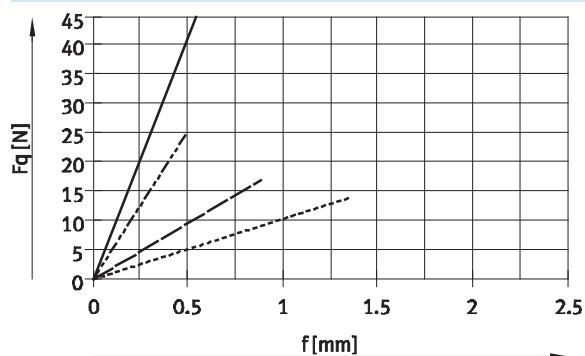
— DNCE-32-100-LAS
 - - - DNCE-32-200-LAS
 - · - DNCE-32-320-LAS

DNCE-40



— DNCE-40-100-LAS
 - - - DNCE-40-200-LAS
 - · - DNCE-40-320-LAS
 - · · - DNCE-40-400-LAS

DNCE-40



— DNCE-40-100-LAS
 - - - DNCE-40-200-LAS
 - · - DNCE-40-320-LAS
 - · · - DNCE-40-400-LAS

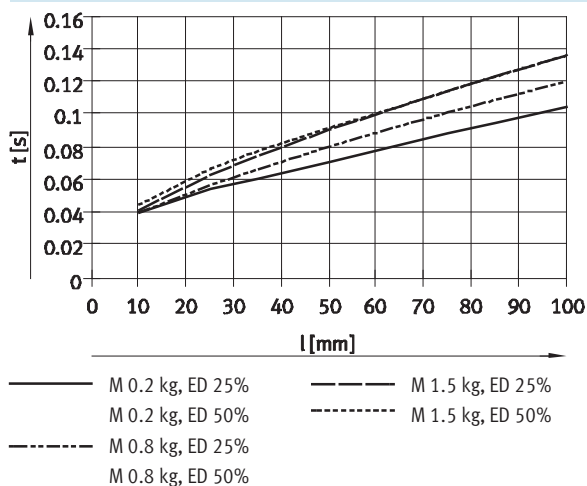
Electric cylinders DNCE-LAS, with linear motor

Technical data

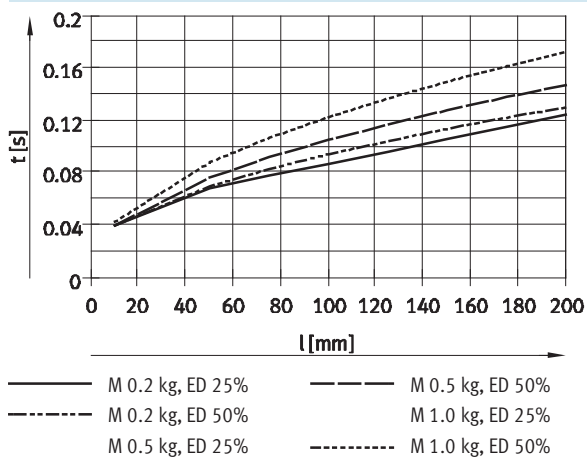
FESTO

Positioning time t as a function of stroke l , effective load M and duty cycle ED
For horizontal mounting position

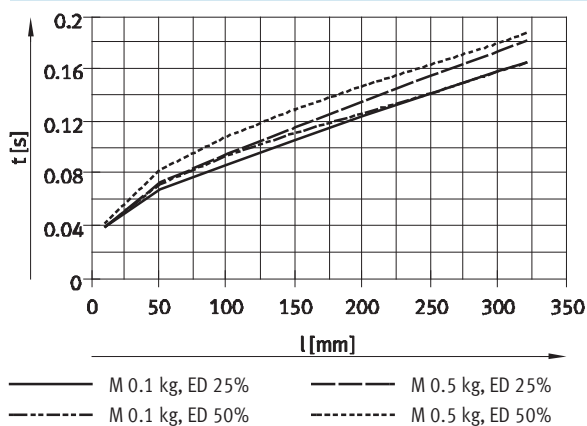
DNCE-32-100



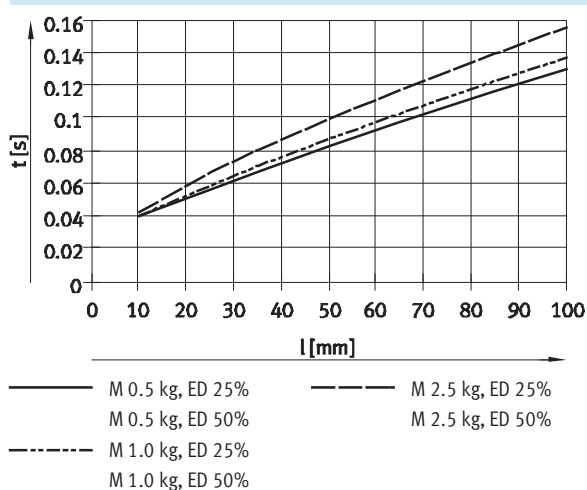
DNCE-32-200



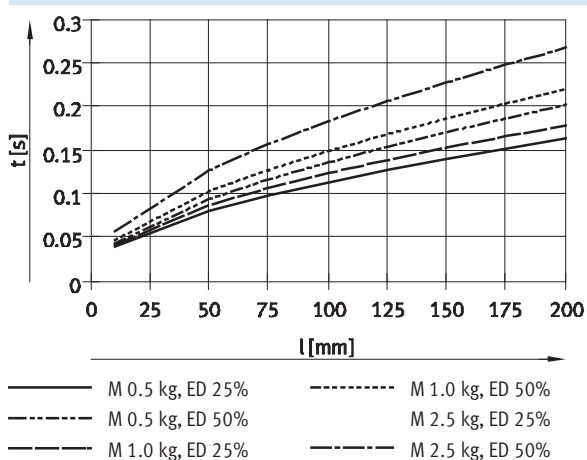
DNCE-32-320



DNCE-40-100



DNCE-40-200



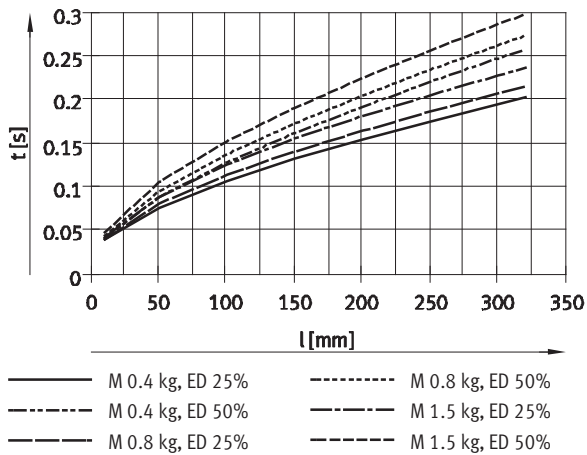
Electric cylinders DNCE-LAS, with linear motor

Technical data

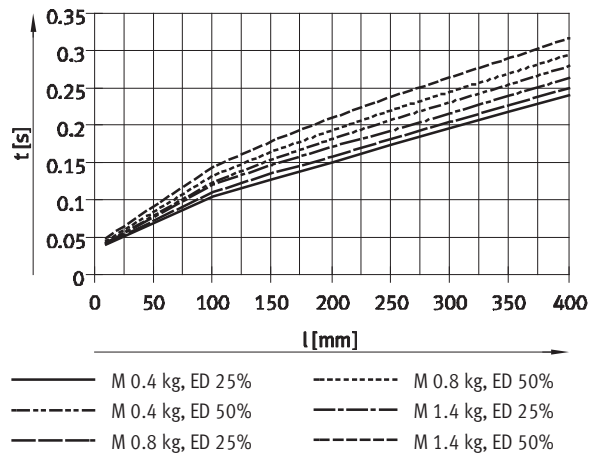
FESTO

Positioning time t as a function of stroke l , effective load M and duty cycle ED
For horizontal mounting position

DNCE-40-320



DNCE-40-400



Feed force F as a function of stroke l

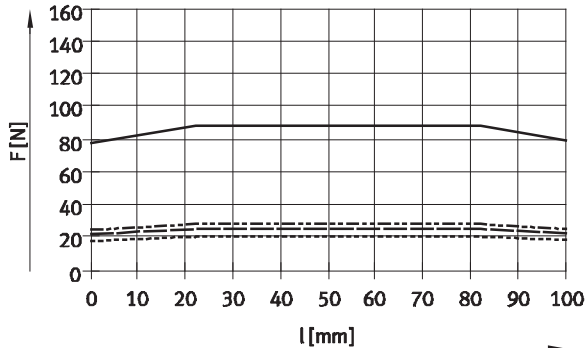
The graphs are based on practical values with friction taken into account.

Peak feed force

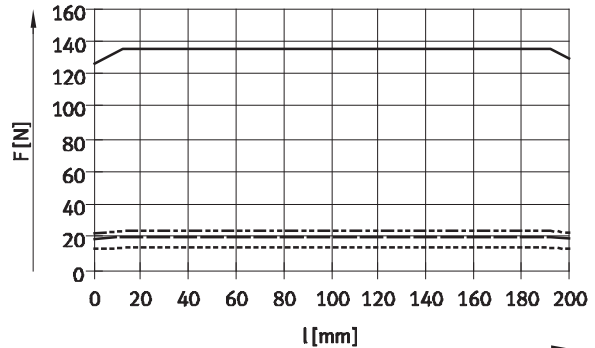
Continuous feed force at ambient temperature:

----- from 23 °C
——— from 30 °C
----- from 40 °C

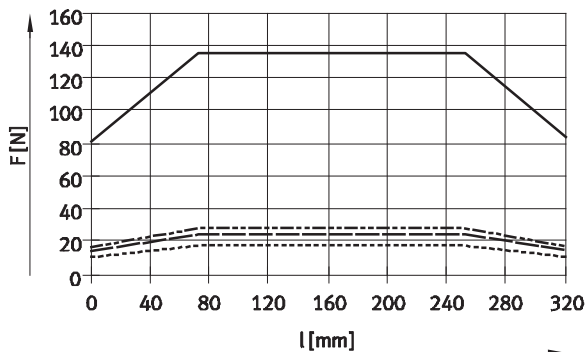
DNCE-32-100



DNCE-32-200



DNCE-32-320



Electric cylinders DNCE-LAS, with linear motor

Technical data

FESTO

Feed force F as a function of stroke l

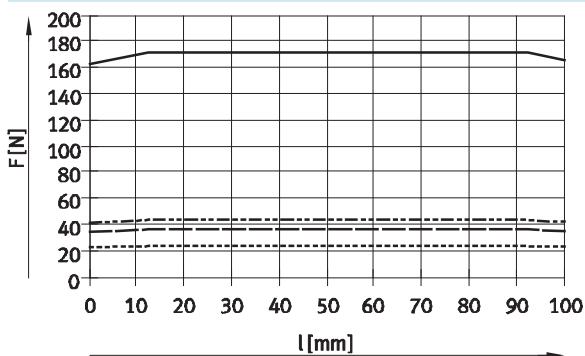
The graphs are based on practical values with friction taken into account.

Peak feed force

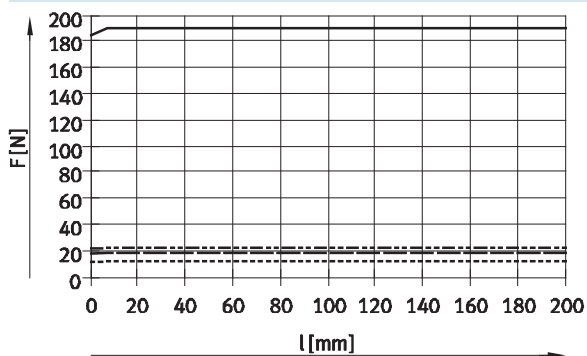
Continuous feed force at ambient temperature:

- - - - - from 23 °C
 ——— from 30 °C
 - - - - - from 40 °C

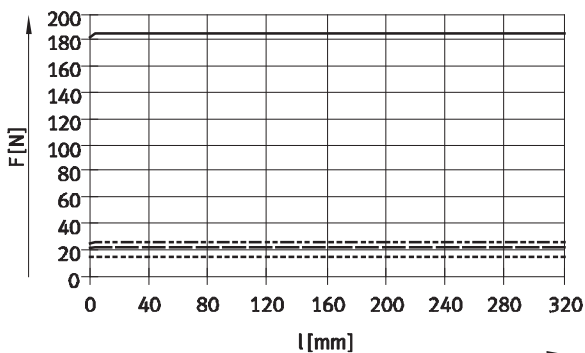
DNCE-40-100



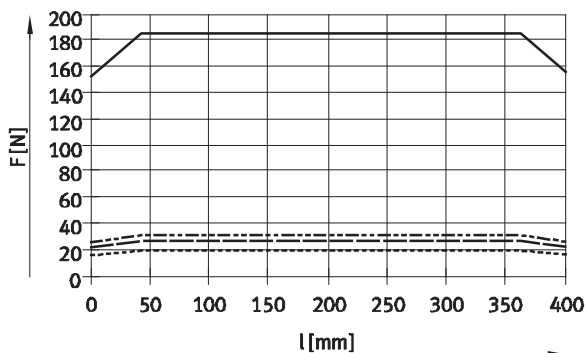
DNCE-40-200



DNCE-40-320



DNCE-40-400



Electric cylinders DNCE-LAS, with linear motor

Technical data

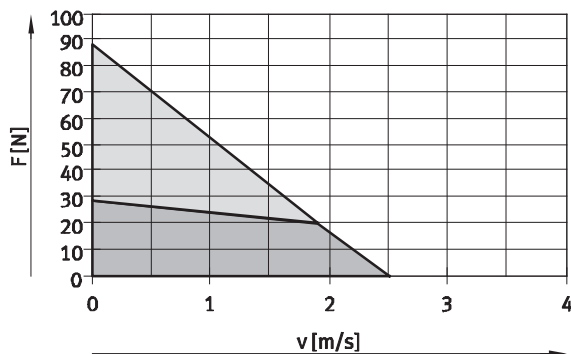
Feed force F as a function of speed v

The graphs are based on practical values under the following conditions:

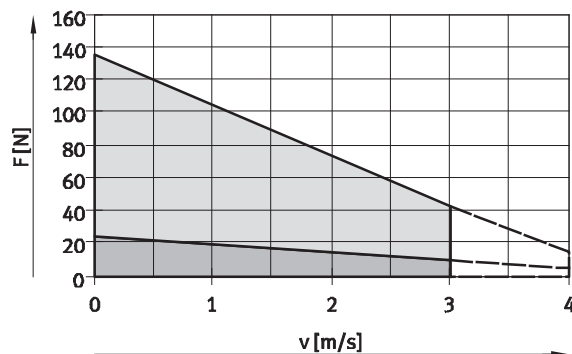
- Stroke centre of the electric cylinder
- Friction taken into account
- Standard temperature of 23 °C
- Max. motor temperature of 70 °C

-  Peak feed force
-  Continuous feed force
-  Non-permissible range

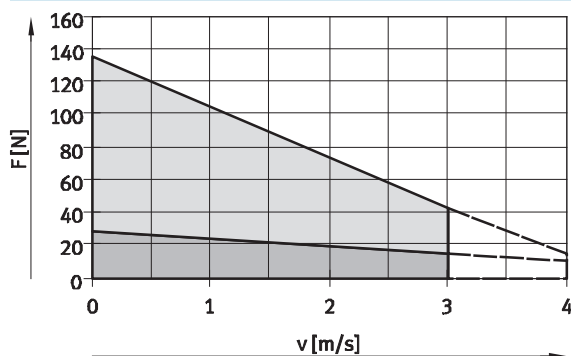
DNCE-32-100



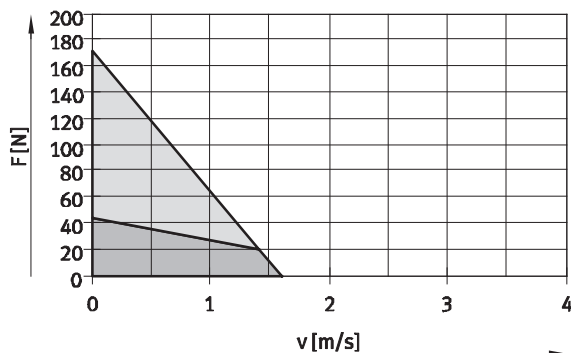
DNCE-32-200



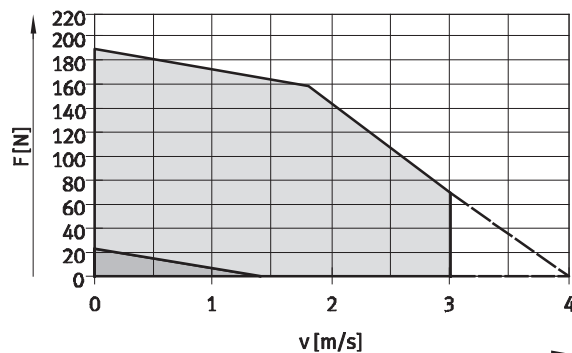
DNCE-32-320



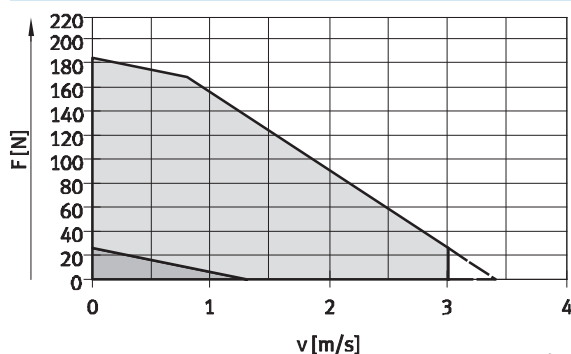
DNCE-40-100



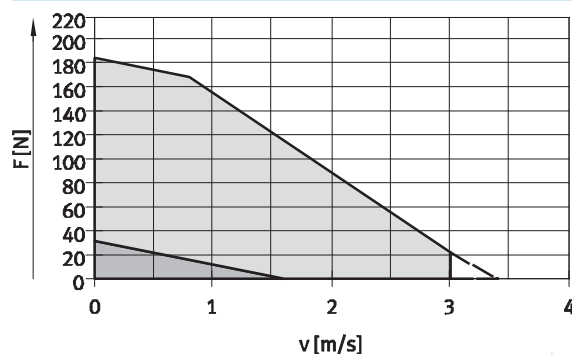
DNCE-40-200



DNCE-40-320



DNCE-40-400



Electric cylinders DNCE-LAS, with linear motor

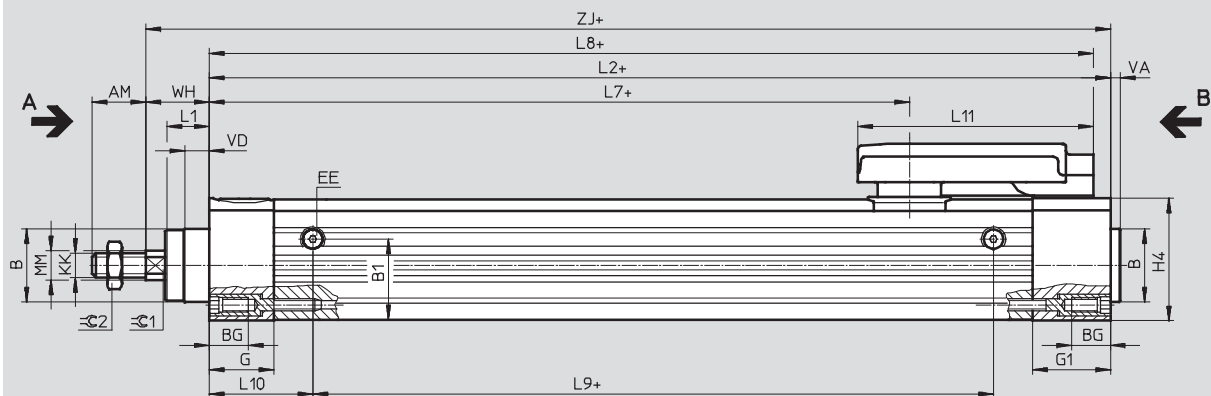
Technical data

FESTO

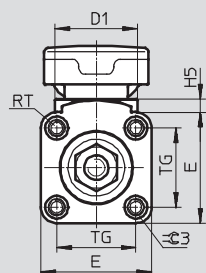
Dimensions

Download CAD data → www.festo.com

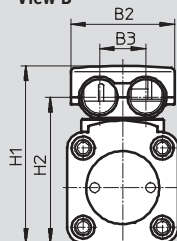
DNCE-...



View A



View B



+ = plus stroke length

Size	AM	B Ø d11	B1	B2	B3	BG	D1 Ø	E	EE	G	G1
32	22	30	33	42.6	19	16	34	45.5	M5	26.5	32
40	24	35	38	42.6	19	16	34	54	M5	26.5	32

Size	H1	H2	H4	H5	KK	L1	L2	L7	L8	L9	L10
32	72.8	59.8	50.3	5.5	M10X1.25	18	270	187.5	263	179.5	42.5
40	81.3	68.3	58.7	5.5	M12X1.25	21.3	341	258.5	334	240.5	47.5

Size	L11	MM Ø	RT	TG	VA	VD	WH	ZJ	≈C1	≈C2	≈C3
32	96.8	12	M6	32.5	4	10	26 _{-3,3}	296 _{-3,3}	10	17	6
40	96.8	16	M6	38	4	10.3	30 _{-3,1}	371 _{-3,1}	13	19	6

Electric cylinders DNCE-LAS, with linear motor

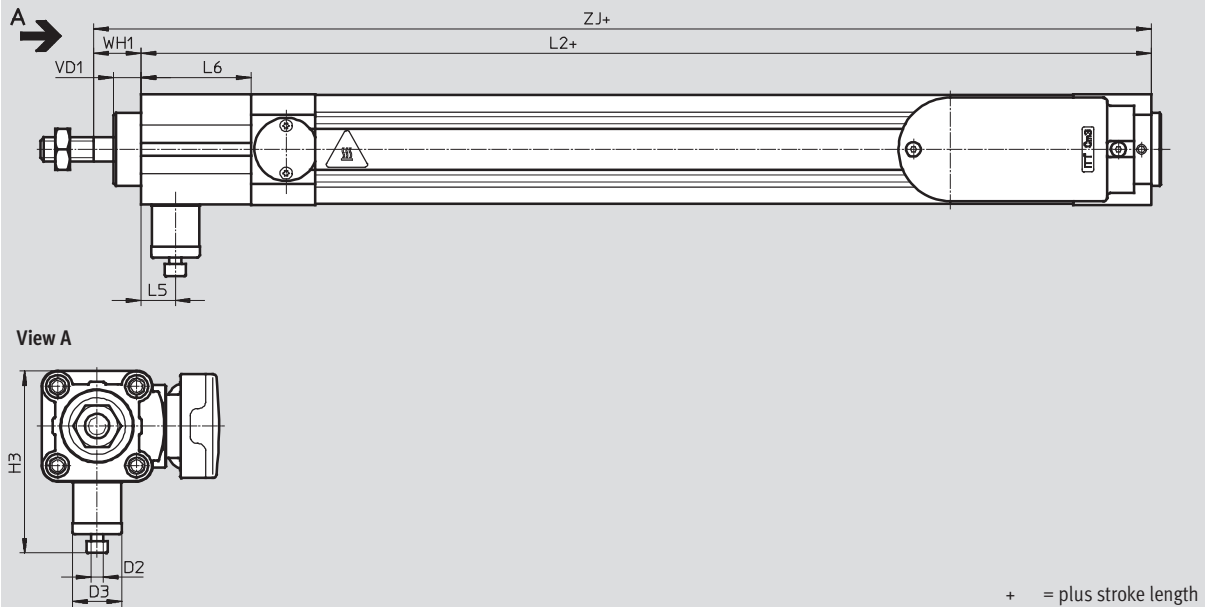
Technical data

FESTO

Dimensions

Download CAD data → www.festo.com

DNCE-...C – With clamping unit



Size	D2	D3 Ø	H3	L2	L5	L6	VD1	WH1	ZJ
32	M5	20	67.3	315	14	45	11.5	19.5-3.3	334.5-3.3
40	G1/8	24	88	394	16	53	11.5	20-3.1	414-3.1

Electric cylinders DNCE-LAS, with linear motor

Ordering data – Modular products

FESTO

Ordering table					
Size	32	40	Condi- tions	Code	Enter code
M Module No.	562830	562831			
Function	Electric cylinder			DNCE	DNCE
Size	32	40		-...	
Stroke [mm]	100	100		-...	
	200	200			
	320	320			
	–	400			
Drive type	Linear motor			-L	-L
Motor technology	AC synchronous			AS	AS
Cable outlet direction	To the rear			-H	
	To the front			-F	
	To the left			-L	
	To the right			-R	
O Clamping unit	Attached			-C	
Protection class for electrics	IP65			-S1	

Transfer order code

	DNCE	-		-		-	L		AS	-		-		-	
--	------	---	--	---	--	---	---	--	----	---	--	---	--	---	--

Electric cylinders DNCE-LAS, with linear motor

Accessories

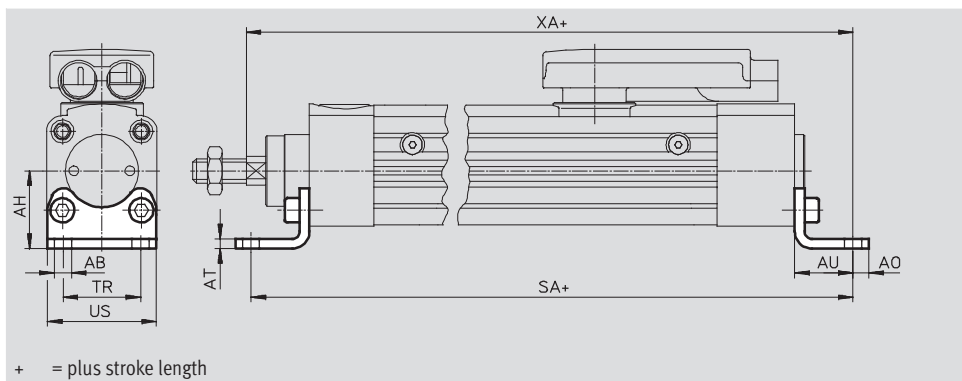
Foot mounting HNC/CRHNC

Material:

HNC: Galvanised steel

CRHNC: High-alloy steel

Free of copper, PTFE and silicone



Dimensions and ordering data

For size	AB Ø	AH	AO	AT	AU	SA		TR	US	XA	
[mm]							-C				-C
32	7	32	6.5	4	24	318	363	32	45	320	358.5
40	10	36	9	4	28	397	450	36	54	399	442

For size [mm]	Basic version				High corrosion protection			
	CRC ¹⁾	Weight [g]	Part No.	Type	CRC ¹⁾	Weight [g]	Part No.	Type
32	2	144	174369	HNC-32	4	139	176937	CRHNC-32
40	2	193	17470	HNC-40	4	188	176938	CRHNC-40

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-LAS, with linear motor

Accessories

FESTO

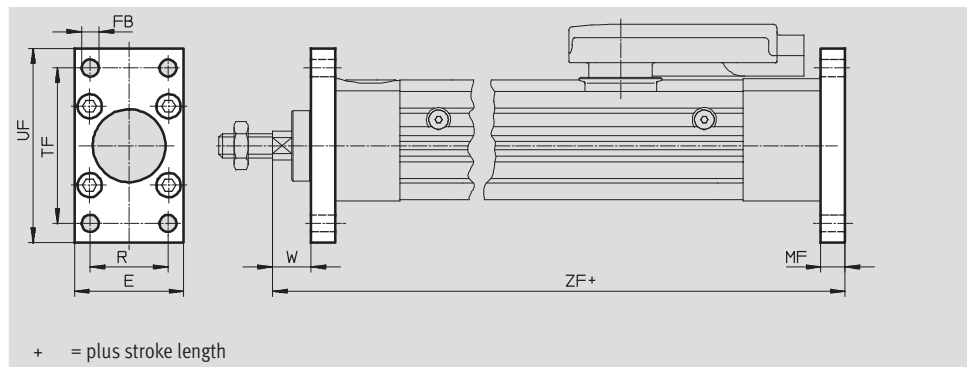
Flange mounting FNC/CRFNG

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 H13						-C		-C
32	45	7	10	32	64	80	16	9.5	306	344.5
40	54	9	10	36	72	90	20	10	381	424

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

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-LAS, with linear motor

Accessories

Trunnion flange ZNCF/CRZNG

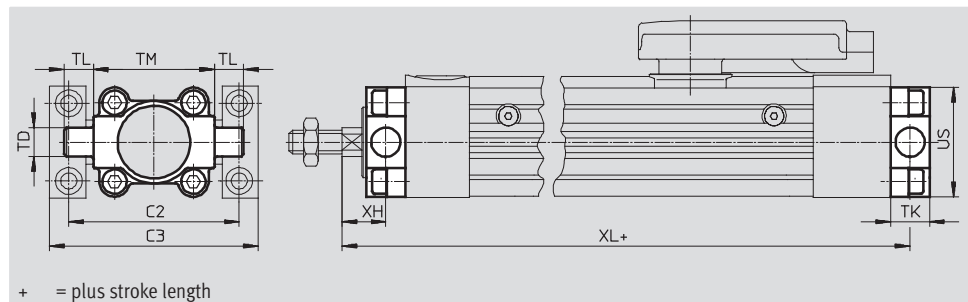
Material:

ZNCF: Stainless steel casting

CRZNG: Electropolished special steel

casting

Free of copper, PTFE and silicone



Dimensions and ordering data

For size	C2	C3	TD Ø e9	TK	TL	TM	US	XH		XL	
[mm]									-C		-C
32	71	86	12	16	12	50	45	18	11.5	304	342.5
40	87	105	16	20	16	63	54	20	10	381	424

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

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

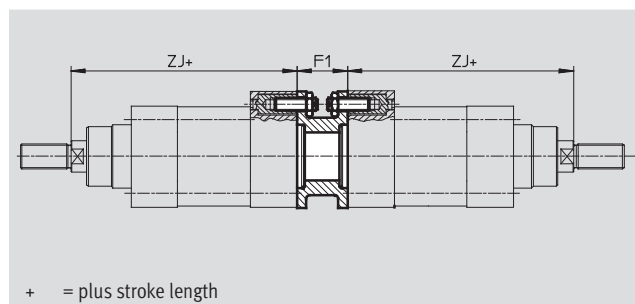
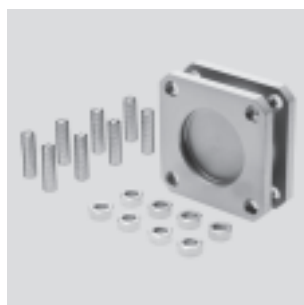
Multi-position kit DPNC

Material:

Flange: Wrought aluminium alloy

Threaded studs, hex nuts:

Galvanised steel



Dimensions and ordering data

For size [mm]	F1	ZJ		Weight [g]	Part No.	Type
			-C			
32	27	296	334.5	85	174418	DPNC-32
40	27	371	414	115	174419	DPNC-40

Electric cylinders DNCE-LAS, with linear motor

Accessories

FESTO

Trunnion support LN2G

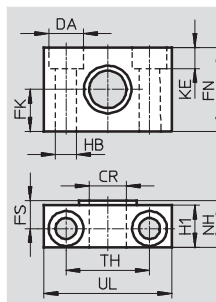
Material:

Trunnion support:

Anodised aluminium

Plain bearing: Plastic

Free of copper, PTFE and silicone



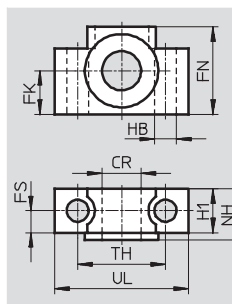
Dimensions and ordering data														
For size	CR	DA	FK	FN	FS	H1	HB	KE	NH	TH	UL	CRC ¹⁾	Weight	Part No. Type
[mm]	Ø D11	Ø H13	Ø ±0.1				Ø H13			±0.2			[g]	
32	12	11	15	30	10.5	15	6.6	6.8	18	32	46	2	125	32959 LN2G-32
40	16	15	18	36	12	18	9	9	21	36	55	2	400	32960 LN2G-40/50

Trunnion support CRLN2G

Material:

High-alloy steel

Free of copper, PTFE and silicone



Dimensions and ordering data													
For size	CR	FK	FN	FS	H1	HB	NH	TH	UL	CRC ¹⁾	Weight	Part No.	Type
[mm]	Ø D11	Ø ±0.1				Ø 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

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-LAS, with linear motor

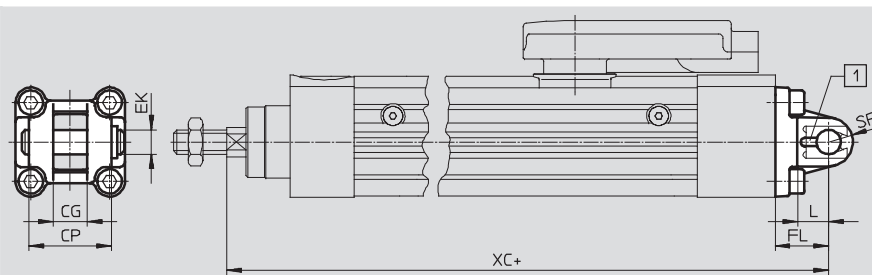
Accessories

Swivel flange SNC

Material:

Die-cast aluminium

Free of copper, PTFE and silicone



- 1 The king pin is protected against rotation with a dowel pin
+ = plus stroke length

Dimensions and ordering data

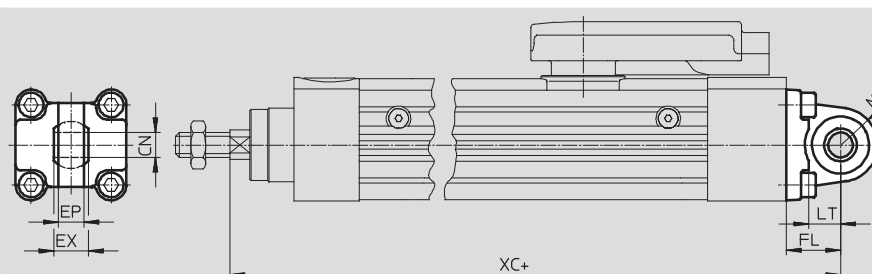
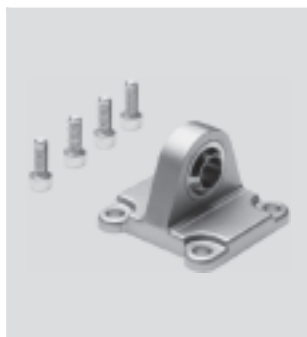
For size	CG	CP	EK	FL	L	SR	XC		CRC ¹⁾	Weight	Part No.	Type
[mm]	H14	h14	∅	±0.2				-C		[g]		
32	14	34	10	22	13	10	318	356.5	2	90	174383	SNC-32
40	16	40	12	25	16	12	396	439	2	120	174384	SNC-40

Swivel flange SNCS

Material:

Die-cast aluminium

Free of copper, PTFE and silicone



- + = 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				-C		[g]		
32	10	10.5	14	22	13	15	318	356.5	2	85	174397	SNCS-32
40	12	12	16	25	16	17	396	439	2	125	174398	SNCS-40

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

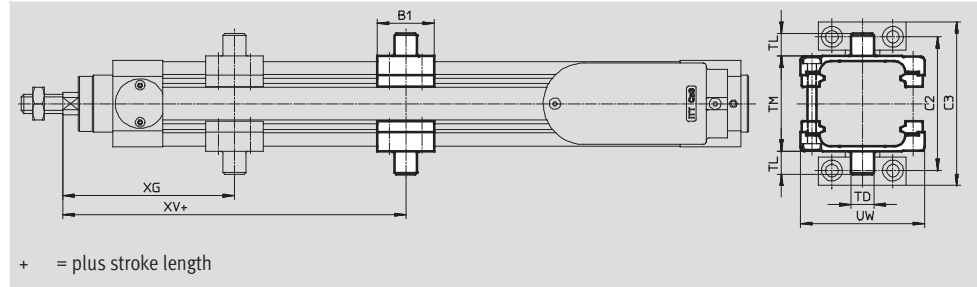
Electric cylinders DNCE-LAS, with linear motor

Accessories

FESTO

Trunnion mounting kit ZNCM

Material:
Tempered steel



Note

The kit can be mounted axially anywhere on the cylinder barrel between the positions XG and XV+stroke.

The kit can only be mounted as shown in the drawing and not turned by 90°. The bolt on the top side must be removed for attachment.

Dimensions and ordering data

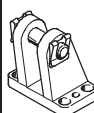
For size	B1	C2	C3	TD Ø e9	TL	TM	UW	XG	XV
[mm]									
32	30	71	86	12	12	50	65	90	80
40	32	87	105	16	16	63	75	100	150

For size	Max. tightening torque	CRC ¹⁾	Weight	Part No.	Type
[mm]	[Nm]		[g]		
32	4+1	2	210	163525	ZNCM-32
40	8+1	2	385	163526	ZNCM-40

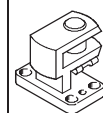
1) Corrosion resistance class 2 according to Festo standard 940 070

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

Designation	For size	Part No.	Type
Clevis foot LSNG			
	32	31740	LSNG-32
	40	31741	LSNG-40
Clevis foot LBG			
	32	31761	LBG-32
	40	31762	LBG-40

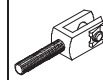
Technical data → Internet: clevis foot

Designation	For size	Part No.	Type
Clevis foot LSNSG			
	32	31747	LSNSG-32
	40	31748	LSNSG-40
Right-angle clevis foot LQG			
	32	31768	LQG-32
	40	31769	LQG-40

Ordering data – Piston rod attachments

Designation	For size	Part No.	Type
Rod eye SGS			
	32	9261	SGS-M10x1,25
	40	9262	SGS-M12x1,25

Technical data → Internet: piston rod attachments

Designation	For size	Part No.	Type
Rod clevis SGA			
	32	32954	SGA-M10x1,25
	40	10767	SGA-M12x1,25

Short-stroke cylinders ADNE-LAS, with linear motor

FESTO



Short-stroke cylinders ADNE-LAS, with linear motor

Key features

FESTO

At a glance

Properties

- Electric short-stroke cylinder with integrated linear motor, specifically designed for dynamic movements between two end positions
- A cycle of advancing and retracing motion over 15 mm can be achieved in 64 ms (movement frequency of up to 13.6 Hz)
- Plug & work: connect, switch on, teach-in end positions and then the system is ready to use. There is no need to set servo parameters
- Mechanical interfaces are largely compatible with the pneumatic compact cylinder ADN
- Electronic end-position cushioning, i.e. constant force across the entire stroke with the force only reduced at the end positions as end-position cushioning
- No external magnetic fields

Range of applications

- Dynamic movement with secondary accuracy requirements:
 - Switching deflectors
 - Rejecting good/bad parts from an ongoing production process
 - Blocking movements
 - Checking switches
 - Applying labels

Everything from a single source

Short-stroke cylinder
ADNE-LAS

→ 3



End-position controller
CMFL

→ Internet: cmfl

- Short-stroke cylinder ADNE-LAS
- End-position controller CMFL
- Motor cable NEBM
- Power supply cable KPWR
- Pilot line KES

The short-stroke cylinder ADNE-LAS and the end-position controller CMFL form one unit. Only one cable is required between the short-stroke cylinder and end-position controller.

Movement pattern

Four movement patterns can be selected via inputs.

1. Advancing 
2. Retracting 
3. Advancing and then retracting again 
4. Retracting and then advancing again 

Short-stroke cylinders ADNE-LAS, with linear motor

FESTO

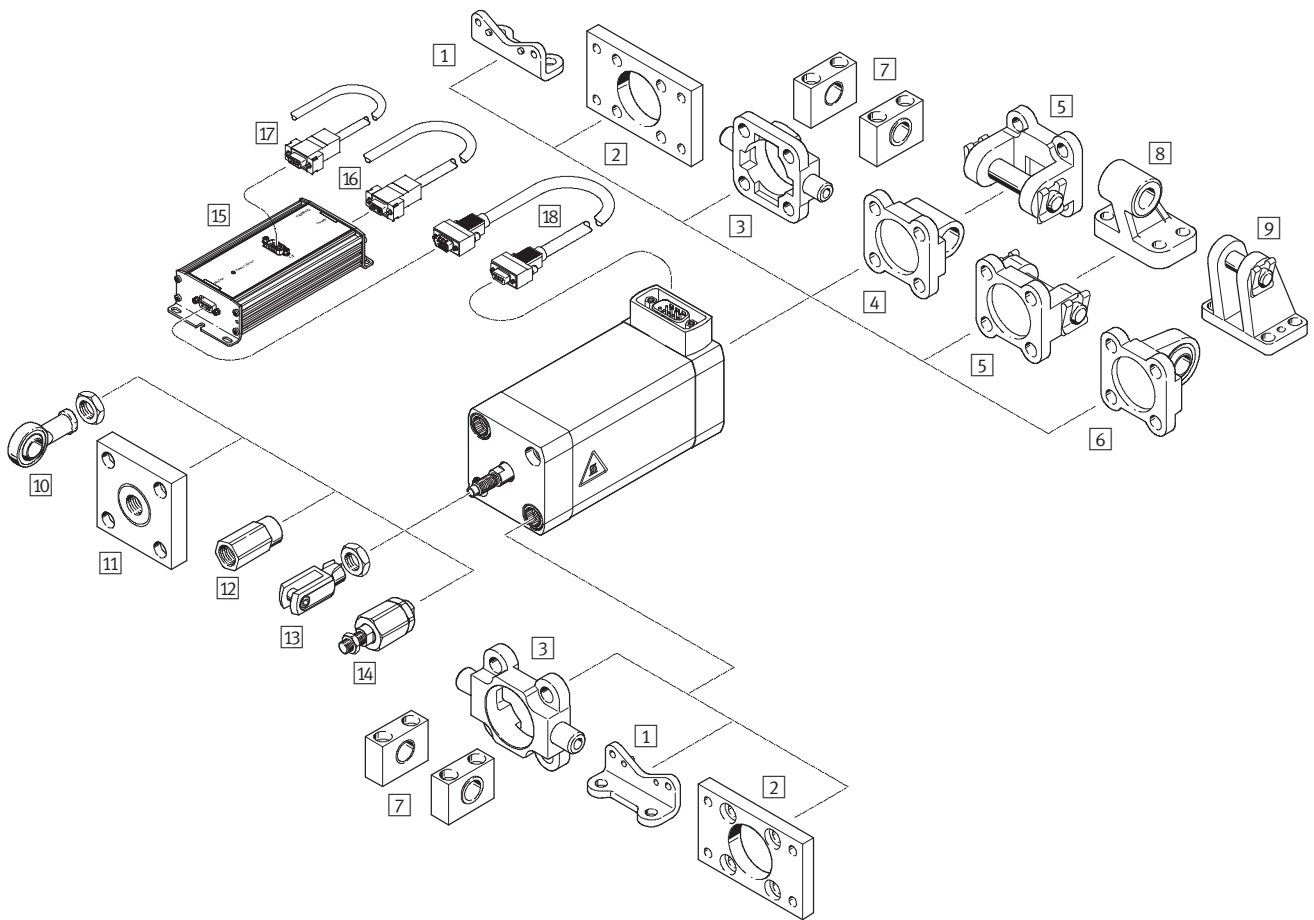
Type codes

		ADNE	–	32	–	35	–	LAS	–	A	–	
Type												
ADNE	Short-stroke cylinder											
Size												
Stroke [mm]												
Drive type/motor technology												
LAS	Linear motor, AC synchronous											
Piston rod thread												
A	Male thread											
Type of piston rod												
S20	Through, hollow piston rod											

Short-stroke cylinders ADNE-LAS, with linear motor

Peripherals overview

FESTO



Short-stroke cylinders ADNE-LAS, with linear motor

Peripherals overview

FESTO

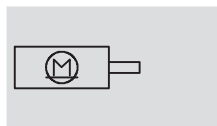
Mounting attachments and accessories				
	Brief description	Variant		→ Page/Internet
		Basic version	S20	
1 Foot mounting HNA	For bearing or end caps	■	■	15
2 Flange mounting FNC	For bearing or end caps	■	■	15
3 Trunnion flange ZNCF	For bearing or end caps	■	■	17
4 Swivel flange SNCL	For end caps	■	–	16
5 Swivel flange SNCB	For end caps	■	–	16
6 Swivel flange SNCS	For end caps, with spherical bearing	■	–	17
7 Trunnion support LNZG	In combination with trunnion flange ZNCF	■	■	18
8 Clevis foot LNG	In combination with swivel flange SNCB	■	–	18
9 Clevis foot LBG	In combination with swivel flange SNCS	■	–	18
10 Rod eye SGS	With spherical bearing	■	■	18
11 Coupling piece KSZ	Compensates radial misalignments up to ±1 mm	■	■	18
12 Adapter AD	Specially for through, hollow piston rods, for example for connecting vacuum generators	■	■	18
13 Rod clevis SG	–	■	■	18
14 Self-aligning rod coupler FK	Compensates radial and angular misalignments	■	■	18
15 End-position controller CMFL	For parameterising and positioning the short-stroke cylinder	■	■	cmfl
16 Power supply cable KPWR	For connecting the load and logic supply	■	■	cmfl
17 Pilot line KES	For I/O interface to any controller	■	■	cmfl
18 Motor cable NEBM	For connecting the motor and end-position controller	■	■	cmfl

Short-stroke cylinders ADNE-LAS, with linear motor

Technical data

FESTO

Function



 Size
32, 40

 Stroke length
15 ... 45 mm

 Note

All values are based on a standard temperature of 23 °C.
Dynamic response and accuracy are dependent on the mounting (rigidity) and the derivation of the thermal energy (heat concentration).



General technical data					
Size		32		40	
Stroke	[mm]	15	35	20	45
Design		Electric linear direct drive			
		Electric cylinder with piston rod			
Based on standard		ISO 21287			
Type of mounting		Via female thread			
		Via accessories			
Mounting position		Horizontal			
Minimum stroke	[mm]	7.5	17.5	10	22.5
Max. effective load	[g]	500			
Max. speed	[m/s]	1.9	1.8	1.5	1.6
Repetition accuracy	[mm]	±0.1			

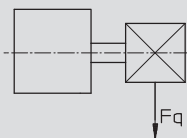
Mechanical data					
Size		32		40	
Stroke	[mm]	15	35	20	45
Deflection of piston rod ¹⁾	Retracted	[mm]	0.14	0.14	0.15
	Advanced	[mm]	0.25	0.35	0.25
At operating voltage of 48 V					
Continuous feed force ²⁾	[N]	10.5	5.9	14.2	11
Peak feed force	[N]	26	15	51	30
Holding force in the end positions	[N]	3	2	6	4.5
At operating voltage of 24 V					
Continuous feed force ²⁾	[N]	10.5	5.9	14.2	11
Peak feed force	[N]	13	8	28	16
Holding force in the end positions	[N]	3	2	6	4.5

1) In new condition

2) Measured at a motor temperature of 70 °C

 Note

- Due to the maximum effective load of 500 g, the lateral force F_Q of max. 5 N must not be exceeded.



- No torques are permissible on the piston rod.

Short-stroke cylinders ADNE-LAS, with linear motor

Technical data

Electrical data		
Motor type		Linear AC synchronous motor
End-position detection		Internal, non-contacting
Magnetic radiation		None
Operating and environmental conditions		
Ambient temperature	[°C]	0 ... +40
Motor temperature during teach-in procedure	[°C]	+15 ... +50
Max. motor temperature	[°C]	70 (shuts down at 75 °C/in the event of a malfunction over 100 °C)
Standard temperature ¹⁾	[°C]	23
Temperature monitoring		Shuts down if motor overheats
Storage temperature	[°C]	−20 ... +60
Protection class (mechanical system)		IP40
Protection class (electrical connection)		IP65
Relative air humidity (non-condensing)	[%]	95
CE marking (see declaration of conformity)		To EU EMC Directive
Certification		C-Tick
Corrosion resistance class CRC ²⁾		2

1) Unless otherwise stated, all values are based on standard temperature.

2) 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.

Weight [g]					
Size	32		40		
Stroke [mm]	15	35	20	45	
Product weight	710	940	1,260	1,710	
S20	725	960	1,290	1,750	
Moving load	105	130	275	350	
S20	120	150	305	390	

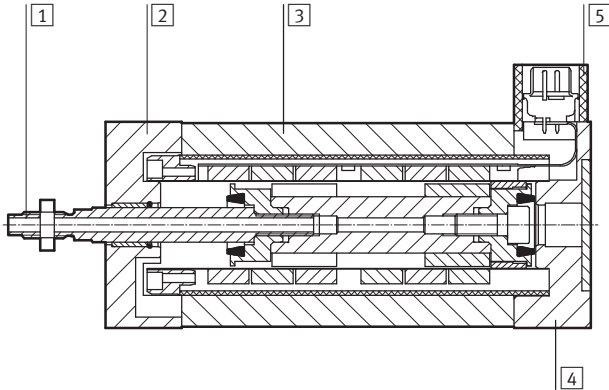
Short-stroke cylinders ADNE-LAS, with linear motor

Technical data

FESTO

Materials

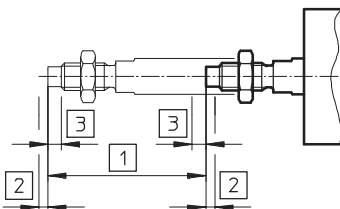
Sectional view



Short-stroke cylinder

1	Piston rod	High-alloy stainless steel
2	Bearing cap	Anodised wrought aluminium alloy
3	Housing	Anodised wrought aluminium alloy
4	Connector cap	Anodised wrought aluminium alloy
5	Cover	Anodised wrought aluminium alloy
–	Plain bearing	Polyacetal
–	Screws, nuts	Steel
	Note on materials	Contains PWIS (paint-wetting impairment substances)
		RoHS-compliant

Internal cushioning



1 Working stroke:

The recommended, available operating range

2 Cushioning length:

The distance from the end positions of the working stroke to the mechanical end position

3 Rebound:

How far the drive rebounds depends on the load, the dynamics of the movement and the temperature of the cylinder

Size		32		40	
Stroke	[mm]	15	35	20	45
Working stroke	[mm]	15	35	20	45
Minimum stroke	[mm]	7.5	17.5	10	22.5
Cushioning length	[mm]	0.7	0.7	0.8	0.8
Rebound at 48 V ¹⁾	[mm]	0.8	0.8	0.5	1.3
Rebound at 24 V ¹⁾	[mm]	0.3	0.6	0.5	1.3

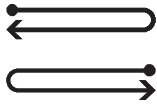
1) Repeat the teach-in procedure if the rebound is too strong.

Short-stroke cylinders ADNE-LAS, with linear motor

Technical data

FESTO

Max. frequency f as a function of effective load m and voltage U , briefly



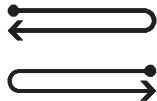
Size		32		40	
Stroke		[mm]			
		15	35	20	45
At operating voltage of 48 V					
Frequency	Effective load = 0 g	[Hz]	13.6	7.1	11.6
	Effective load = 250 g	[Hz]	7.2	5.8	8.9
	Effective load = 500 g	[Hz]	4.7	4.5	7
At operating voltage of 24 V					
Frequency	Effective load = 0 g	[Hz]	11.1	5.5	8.8
	Effective load = 250 g	[Hz]	9.1	4.7	7.2
	Effective load = 500 g	[Hz]	6	3.2	5.4



Note

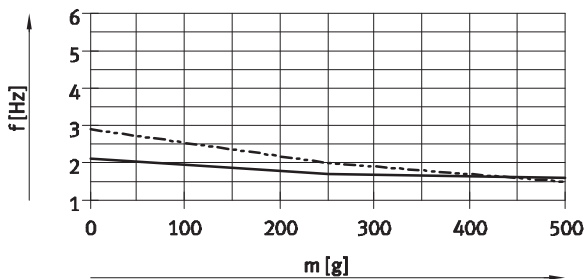
Applies to a motor temperature up to max. 74 °C.

Frequency f as a function of effective load m and voltage U , during continuous operation



At $U = 48 \text{ V}$

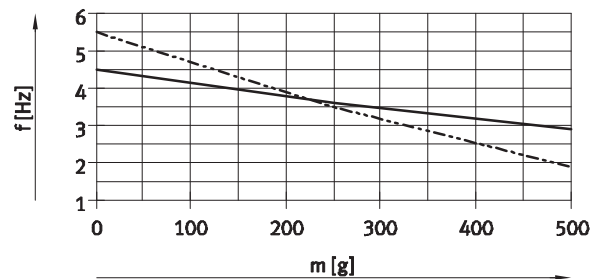
ADNE-32-15/35



— ADNE-32-15
- - - ADNE-32-35

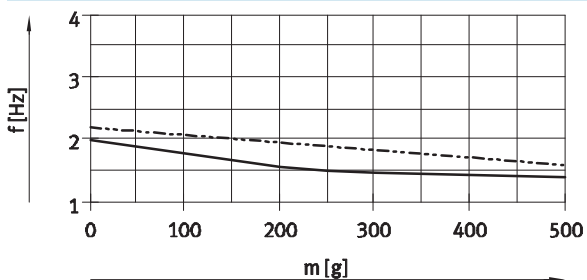
At $U = 24 \text{ V}$

ADNE-32-15/35



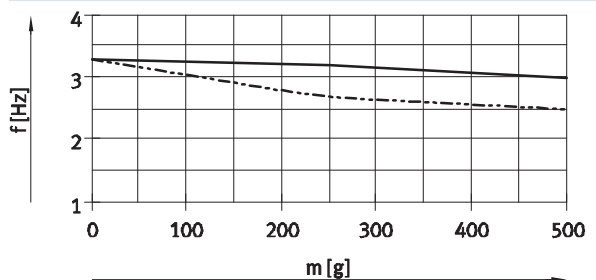
— ADNE-32-15
- - - ADNE-32-35

ADNE-40-20/45



— ADNE-40-20
- - - ADNE-40-45

ADNE-40-20/45



— ADNE-40-20
- - - ADNE-40-45

Short-stroke cylinders ADNE-LAS, with linear motor

FESTO

Technical data

Min. positioning time t as a function of voltage U , at an effective load of 0 g

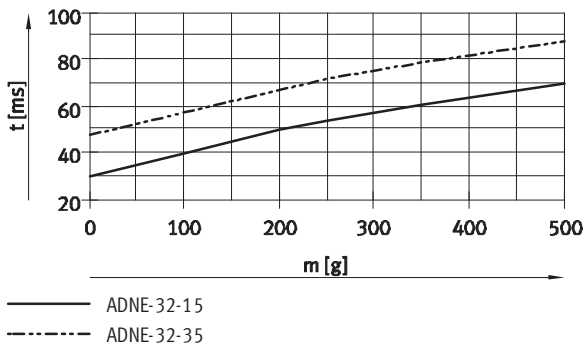


Size		32		40	
Stroke	[mm]	15	35	20	45
At operating voltage of 48 V					
Positioning time	[ms]	30	48	36	75
At operating voltage of 24 V					
Positioning time	[ms]	30	62	44	100

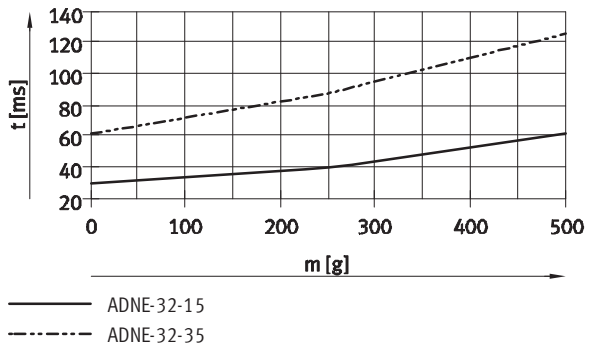
Positioning time t as a function of effective load m and voltage U



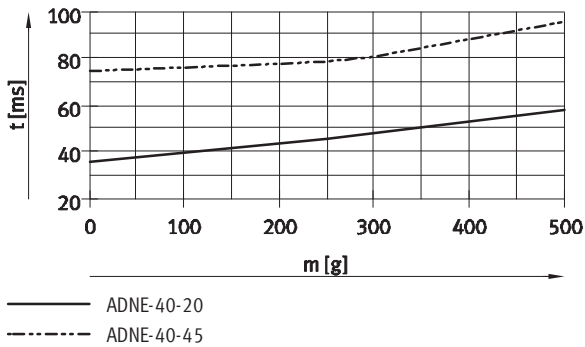
At $U = 48$ V
ADNE-32-15/35



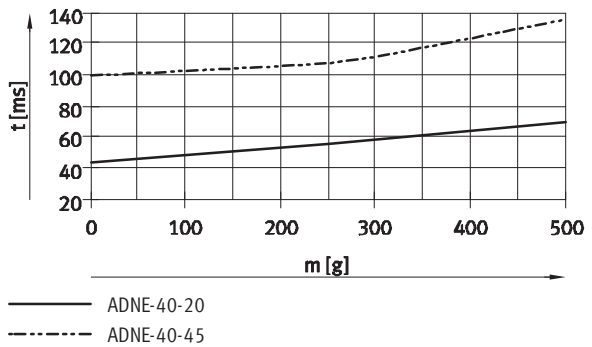
At $U = 24$ V
ADNE-32-15/35



ADNE-40-20/45



ADNE-40-20/45

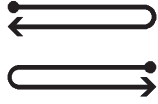


Short-stroke cylinders ADNE-LAS, with linear motor

Technical data

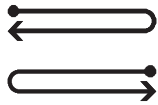
FESTO

Min. positioning time t as a function of voltage U , at an effective load of 0 g

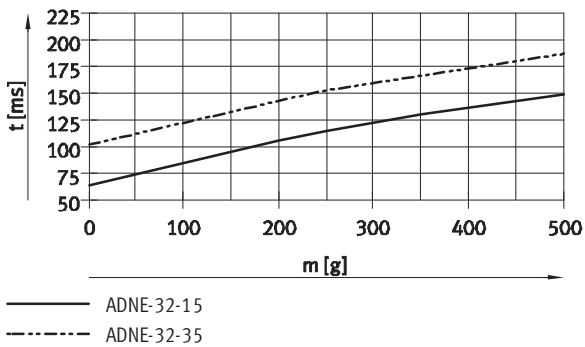


Size		32		40	
Stroke	[mm]	15	35	20	45
At operating voltage of 48 V					
Positioning time	[ms]	64	102	77	160
At operating voltage of 24 V					
Positioning time	[ms]	64	132	94	213

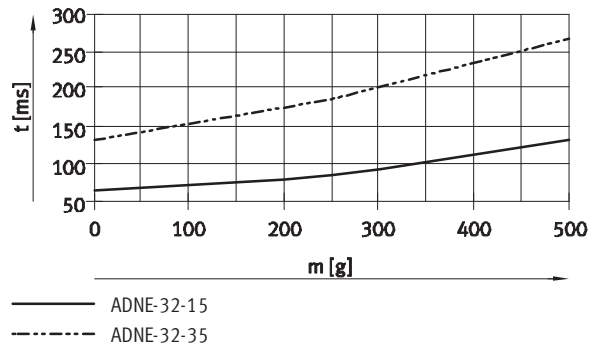
Positioning time t as a function of effective load m and voltage U



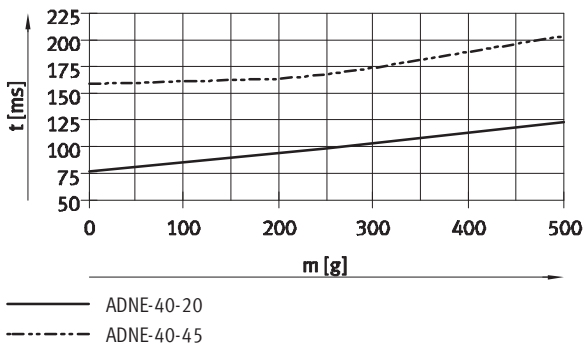
At $U = 48 \text{ V}$
ADNE-32-15/35



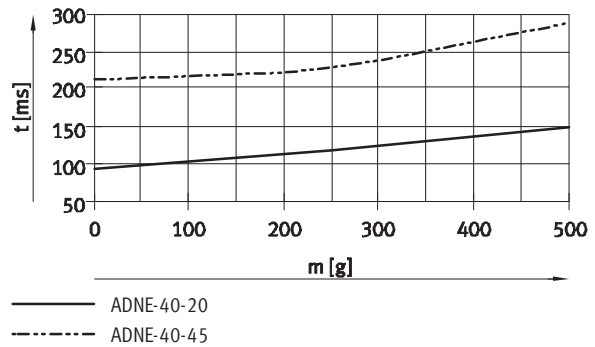
At $U = 24 \text{ V}$
ADNE-32-15/35



ADNE-40-20/45



ADNE-40-20/45



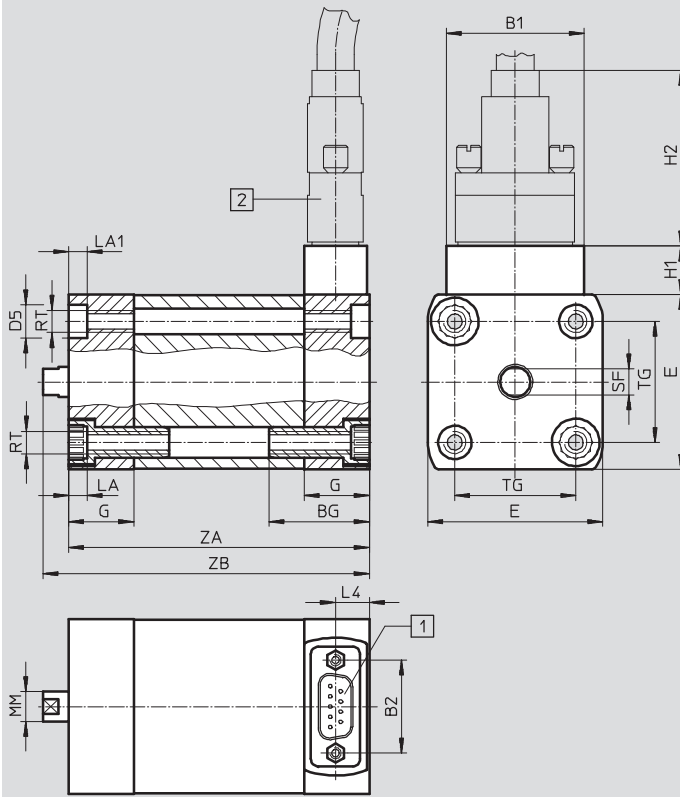
Short-stroke cylinders ADNE-LAS, with linear motor

Technical data

FESTO

Dimensions – Basic version

Download CAD data → www.festo.com



- 1 Electrical connection
2 Motor cable not included in the scope of delivery

Size	Stroke [mm]	B1	B2	BG	D5 Ø F9	E +0.3	G	H1	H2	LA +0.4
32	15	37	25	26	9	47	17.5	13	50	4.6
	35									
40	20					54.5				
	45									

Size	Stroke [mm]	LA1	L4	MM Ø h9	RT	SF h13	TG ±0.2	ZA +0.4/-0.2	ZB +0.75/-0.35
32	15	5	9.1	8	M6	7	32.5	110.8	117.65
	35							150.8	157.65
40	20			10		9	38	136.5	143.4
	45							186.5	193.4

Short-stroke cylinders ADNE-LAS, with linear motor

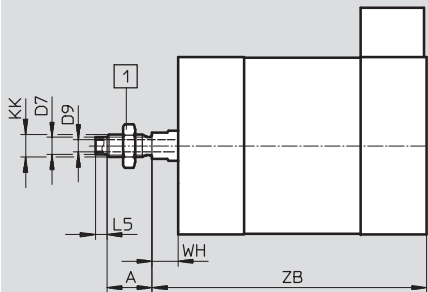
Technical data

FESTO

Dimensions – Variants

Download CAD data → www.festo.com

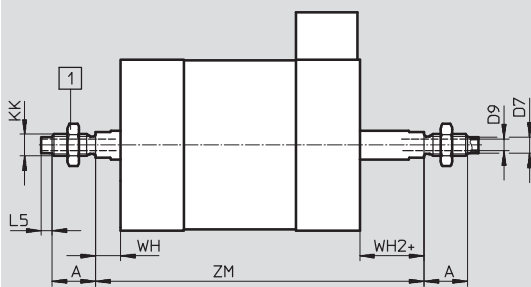
A – Male thread



1 Hex nut DIN 439-B included in the scope of delivery

Size	Stroke [mm]	A -0.5	D7 Ø	D9 Ø	KK	L5	WH +0.75 -0.55	ZB +0.75 -0.35
32	15	12	4.5	3.2	M6	3	6.85	117.65
	35							157.65
40	20	16	6	3.8	M8	2	6.9	143.4
	45							193.4

S20 – Through, hollow piston rod



1 Hex nut DIN 439-B included in the scope of delivery
+ = plus stroke length

Size	Stroke [mm]	A -0.5	D7 Ø	D9 Ø	KK	L5	WH +0.75 -0.55	WH2 +0.55 -0.75	ZM +0.6 -0.4
32	15	12	4.5	3.2	M6	3	6.85	6.85	140
	35							6.85	200
40	20	16	6	3.8	M8	2	6.9	6.9	170.8
	45							6.9	245.8

Short-stroke cylinders ADNE-LAS, with linear motor

FESTO

Ordering data – Modular products

Ordering table					
Size	32	40	Condi- tions	Code	Enter code
M Module No.	566415	566416			
Function	Electric short-stroke cylinder, based on ISO 21287			ADNE	ADNE
Size	32	40		-...	
Stroke [mm]	15, 35	20, 45		-...	
Drive type	Linear motor			-L	-L
Motor technology	AC synchronous			AS	AS
Piston rod thread	Male thread			-A	A
O Type of piston rod	Through, hollow piston rod			-S20	

Transfer order code

	ADNE	-		-		-	L		AS	-	A	-	
--	------	---	--	---	--	---	---	--	----	---	---	---	--

Short-stroke cylinders ADNE-LAS, with linear motor

Accessories

FESTO

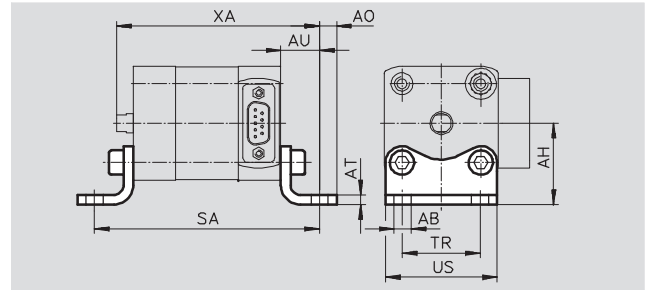
Foot mounting HNA

Material:

HNA: Galvanised steel

HNA-...-R3: Steel with protective coating

Free of copper, PTFE and silicone



Dimensions and ordering data										
For size	Stroke	AB Ø	AH	A0	AT	AU	SA	TR	US	XA
	[mm]	H14	JS14		±0.5	±0.2		±0.2	-0.5	
32	15	7	33.5	7	4	16	142.8	32	46	133.65
	35						182.8			173.65
40	20	10	38	9	4	18	172.5	36	54	161.4
	45						222.5			211.4

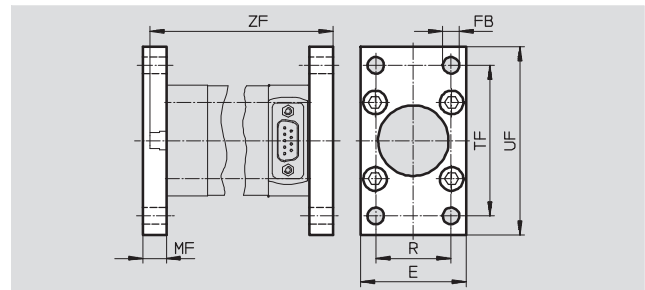
For size	Basic version				High corrosion protection			
	CRC ¹⁾	Weight [g]	Part No.	Type	CRC ¹⁾	Weight [g]	Part No.	Type
32	2	70	537241	HNA-32	3	70	537256	HNA-32-R3
40	2	90	537242	HNA-40	3	90	537257	HNA-40-R3

Flange mounting FNC

Material:

Galvanised steel

Free of copper, PTFE and silicone



Dimensions and ordering data								
For size	Stroke	E	FB Ø	MF	R	TF	UF	ZF
	[mm]						±1	
32	15	45	7	10	32	64	80	127.65
	35							167.65
40	20	54	9	10	36	72	90	153.4
	45							203.4

For size	Basic version				High corrosion protection			
	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

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 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.

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.

Short-stroke cylinders ADNE-LAS, with linear motor

Accessories

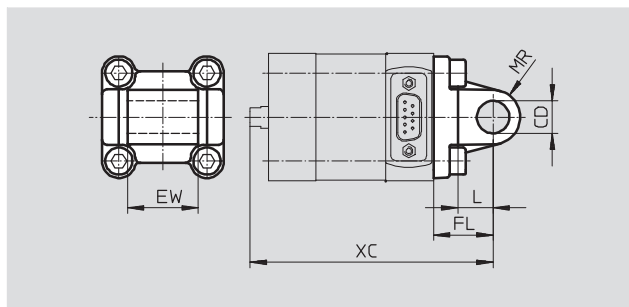
FESTO

Swivel flange SNCL

Material:

SNCL: Die-cast aluminium

Free of copper, PTFE and silicone



Dimensions and ordering data

For size	Stroke	CD Ø H9	EW h12	FL ±0.2	L	MR	XC
32	15	10	26	22	13	10	139.65
	35						179.65
40	20	12	28	25	16	12	168.4
	45						218.4

For size	Basic version CRC ¹⁾		Weight [g]	Part No.	Type
32	2		85	174404	SNCL-32
40	2		115	174405	SNCL-40

Swivel flange

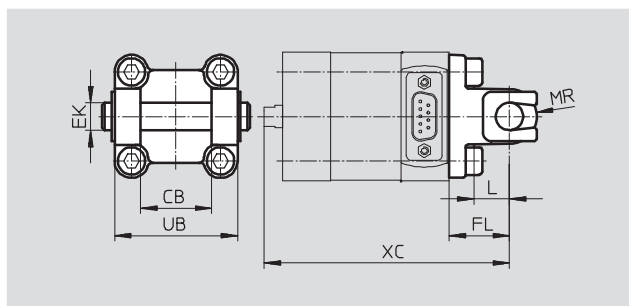
SNCB/SNCB-...-R3

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	Stroke	CB H14	EK Ø e8	FL ±0.2	L	MR	XC
32	15	26	10	22	13	8.5	139.65
	35						179.65
40	20	28	12	25	16	12	168.4
	45						218.4

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

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 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.

Short-stroke cylinders ADNE-LAS, with linear motor

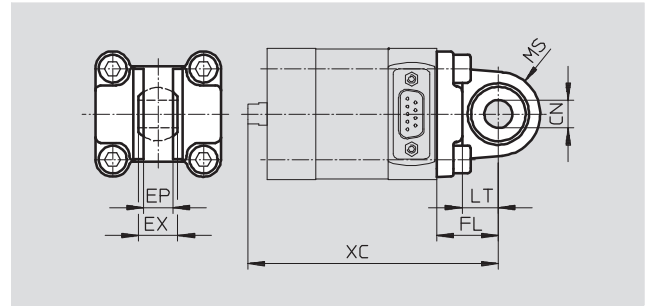
Accessories

FESTO

Swivel flange SNCS

Material:

SNCL: Die-cast aluminium



Dimensions and ordering data								
For size	Stroke	CN Ø H7	EP ±0.2	EX	FL ±0.2	LT	MS	XC
32	15	10	10.5	14	22	13	15	139.65
	35							179.65
40	20	12	12	16	25	16	17	168.4
	45							218.4

For size	Basic version CRC ¹⁾	Weight [g]	Part No.	Type
32	2	85	174397	SNCS-32
40	2	125	174398	SNCS-40

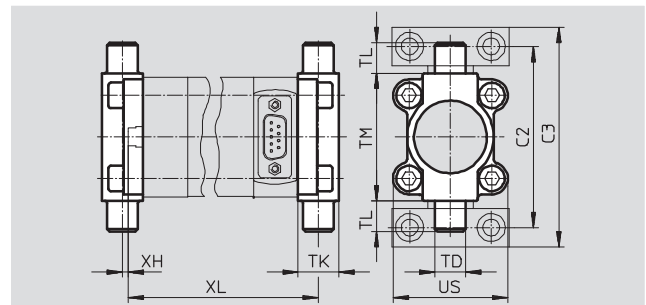
Trunnion flange ZNCF/CRZNG

Material:

ZNCF: Stainless steel casting

CRZNG: Electropolished stainless steel casting

Free of copper, PTFE and silicone



Dimensions and ordering data										
For size	Stroke	C2	C3	TD Ø e9	TK	TL	TM	US	XH	XL
32	15	71	86	12	16	12	50	45	1.15	125.65
	35									165.65
40	20	87	105	16	20	16	63	54	3.1	153.4
	45									203.4

For size	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

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

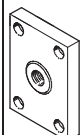
Components subject to particularly high corrosion stress. Parts used with aggressive media, e.g. in the food or chemical industry. These applications should be supported with special tests with the media if required.

Short-stroke cylinders ADNE-LAS, with linear motor

Accessories

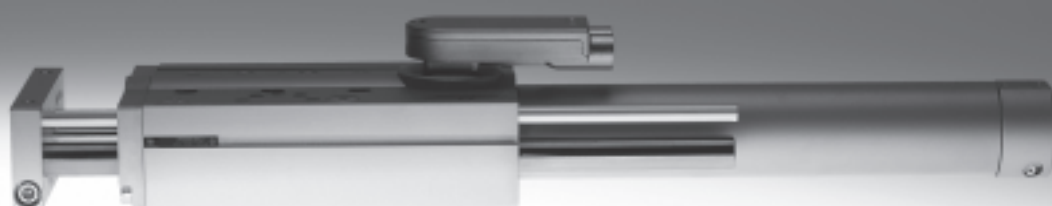
FESTO

Ordering data			
Designation	For size	Part No.	Type
Trunnion support LNZG			
	32	32959	LNZG-32
	40	32960	LNZG-40/50
Trunnion support CRLNZG, corrosion-resistant			
	32	161874	CRLNZG-32
	40	161875	CRLNZG-40/50
Clevis foot LNG			
	32	33890	LNG-32
	40	33891	LNG-40
Clevis foot CRLNG, corrosion-resistant			
	32	161840	CRLNG-32
	40	161841	CRLNG-40
Clevis foot LBG			
	32	31761	LBG-32
	40	31762	LBG-40
Rod eye SGS			
	32	9254	SGS-M6
	40	9255	SGS-M8
Rod eye CRS GS, corrosion-resistant			
	32	195580	CRSGS-M6
	40	195581	CRSGS-M8

Ordering data			
Designation	For size	Part No.	Type
Coupling piece KSZ			
	32	36123	KSZ-M6
	40	36124	KSZ-M8
Adapter AD			
	32	157328	AD-M6-M5
		157329	AD-M6-1/8
		157330	AD-M6-1/4
	40	157331	AD-M8-1/8
		157332	AD-M8-1/4
Rod clevis SG			
	32	3110	SG-M6
	40	3111	SG-M8
Rod clevis CRSG, corrosion-resistant			
	32	13567	CRSG-M6
	40	13568	CRSG-M8
Self-aligning rod coupler FK			
	32	2061	FK-M6
	40	2062	FK-M8

Guided drives DFME-LAS, electric

FESTO



Guided drives DFME-LAS, electric

Key features

FESTO

At a glance

Characteristics

- The guided drive consists of a freely positionable linear motor, integrated displacement encoder with magnetic strip and reference switch
- Enables positioning with very high dynamic response. Accelerations of up to 80 m/s^2 are possible without load
- Mechanical interfaces are largely compatible with the guided drive DFM-B
- Together with the motor controller SFC-LACI and the associated cables, it is a quickly commissioned positioning system for small loads

Range of applications

- Positioning of small loads such as:
 - placing small parts into and removing small parts from magazines,
 - sorting parts quickly,
 - for equipping and assembly processes

Everything from a single source

Guided drive
DFME-LAS

→ 3



Motor controller
SFC-LACI

→ Internet: sfc-laci

The guided drive DFME-LAS and motor controller SFC-LACI form one unit.

- Thanks to protection class IP54, the SFC can be mounted close to the DFME, either:
 - via central supports or
 - via H-rail
- Just two cables are required between the guided drive DFME and motor controller SFC (motor and encoder cable)
- The motor controller SFC is available with or without control panel
- Up to 31 positioning records

Parameterisation via:

- Control panel:
 - suitable for simple position sequences

Parameterisation via:

- FCT (Festo Configuration Tool) configuration package:
 - via RS 232 interface
 - Windows-based PC user interface, Festo Configuration Tool
- Easy actuation via:
 - I/O interface
 - Profibus
 - CANopen, incl. “interpolated position mode”
 - DeviceNet

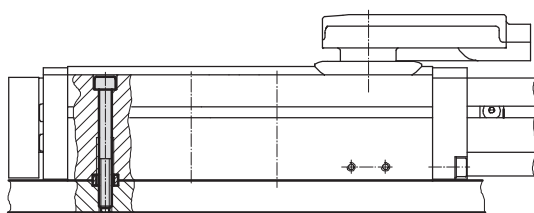


CANopen

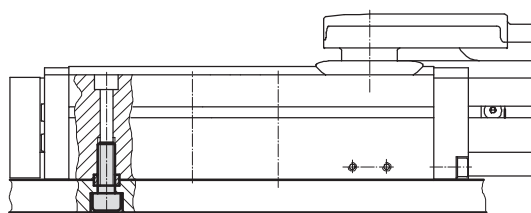
DeviceNet

Mounting options

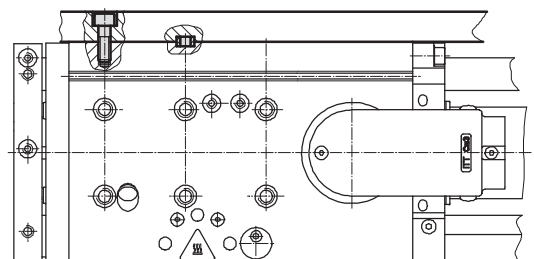
Flat from above



Flat from below



Side from below



Guided drives DFME-LAS, electric

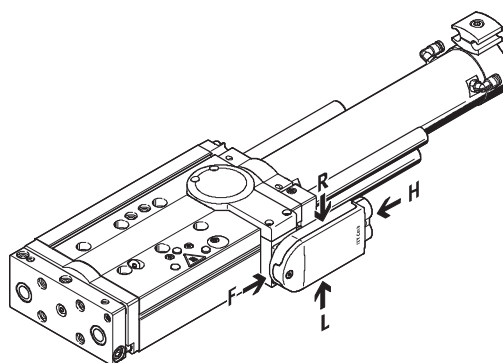
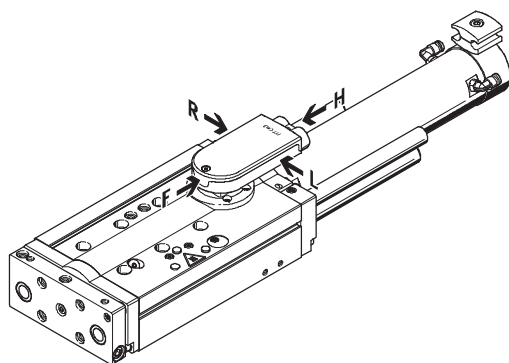
Type codes

		DFME	—	32	—	100	—	LAS	—	T	—	H	—	KF	—	S1
Type																
DFME	Guided drive															
Size																
Stroke [mm]																
Drive type/motor technology																
LAS	Linear motor, AC synchronous															
Cable outlet																
T	At the top															
S	At the side															
Cable outlet direction																
H	To the rear															
F	To the front															
L	To the left															
R	To the right															
Guide																
KF	Recirculating ball bearing guide															
Protection class for electrics																
S1	IP65															

Cable outlet direction

With cable outlet at top

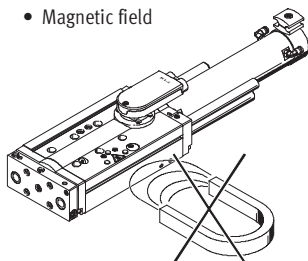
With cable outlet at side



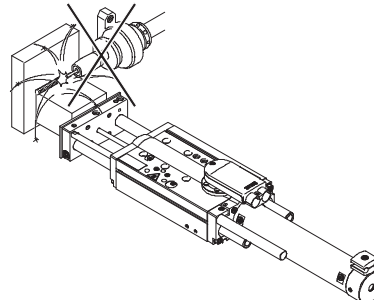
Instructions for use

The guided drive with linear motor is not designed for the following sample applications:

- Magnetic field



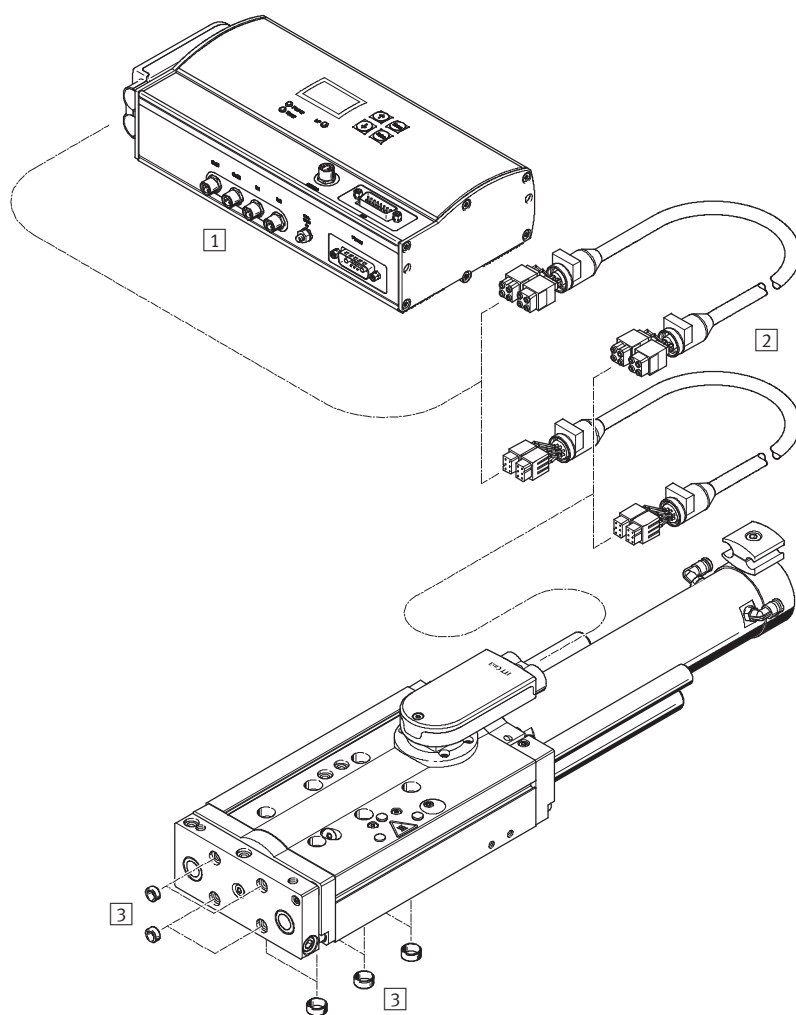
- Welding application



Guided drives DFME-LAS, electric

Peripherals overview

FESTO



Accessories		
	Brief description	→ Page/Internet
1 Motor controller SFC-LACI	For parameterising and positioning the guided drives	sfc-laci
2 Motor/encoder cable NEBM	For connecting the motor and controller	sfc-laci
3 Centring sleeve ZBH	For centring loads and attachment components	16

Guided drives DFME-LAS, electric

Technical data

Function



 Size
 32, 40

 Stroke length
 100 ... 400 mm

 Note

All values are based on a standard temperature of 23 °C.
 Dynamic response and accuracy are dependent on the mounting (rigidity) and temperature stresses (heat concentration).

 www.festo.com



General technical data								
Size		32			40			
Stroke	[mm]	100	200	320	100	200	320	400
Mechanical								
Design		Guided drive						
		Electric linear direct drive						
Guide		Recirculating ball bearing guide						
Drive unit operating mode		Yoke						
Type of mounting		Via female thread and centring sleeve						
		Via through-hole and centring sleeve						
Mounting position		Horizontal						
Stroke reserve	[mm]	3.5						
Continuous feed force ¹⁾	[N]	36	29	29	53	40	49	49
Peak feed force ¹⁾	[N]	94	141	141	183	202	202	202
Max. effective load ²⁾	[kg]	2	6	4	3.4	6	6	6
Max. speed	[m/s]	2	3	3	2	3	3	3
Repetition accuracy	[mm]	±0.015						
Electric								
Type of motor		Linear AC servo motor						
Displacement encoder		Relative measurement, magnetic, incremental, contactless						
Peak motor current	[A]	5.9	16.2	16.2	7.7	22.4	22.4	22.4
Nominal motor current	[A]	2.2	3.3	3.3	2.2	4.4	5.4	5.4
Rated motor output	[W]	108	87	87	159	120	147	147
Homing		Integrated reference sensor						

1) Disregarding friction

2) Limited by motor power. The values specified here are recommended values

Operating and environmental conditions		
Ambient temperature	[°C]	0 ... +40
Max. motor temperature	[°C]	70 (warning at 70 °C, shut-off at 75 °C)
Standard temperature ¹⁾	[°C]	23
Temperature monitoring	Shuts off if motor overheats	
Protection class (mechanical system)	IP40	
Protection class (electrical connection)	IP40 (with DFME-...-S1: IP65)	
CE marking (see declaration of conformity)	To EU EMC Directive	

1) Unless otherwise stated, all values are based on standard temperature

Guided drives DFME-LAS, electric

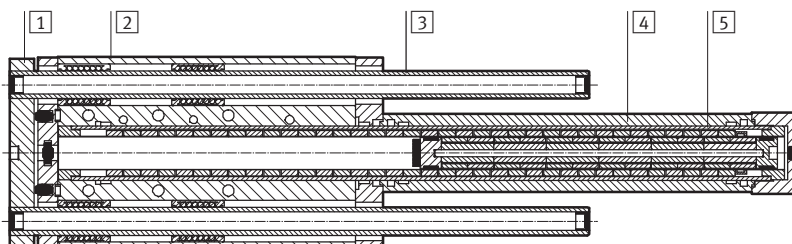
Technical data

FESTO

Weight [g]							
Size	32			40			
Stroke [mm]	100	200	320	100	200	320	400
Product weight	4,100	4,900	5,600	6,300	7,000	8,200	8,600
Moving load	1,030	1,280	1,500	1,620	2,060	2,290	2,520

Materials

Sectional view



Guided drive		
1	Yoke plate	Anodised wrought aluminium alloy
2	Housing	Anodised wrought aluminium alloy
3	Guide rod	Tempered steel (surface hardened)
4	Cooling tube	Anodised wrought aluminium alloy
5	Piston rod	High-alloy stainless steel
-	Terminal strip	Die-cast zinc
-	Screws	Steel
-	Note on materials	Contains PWIS (paint-wetting impairment substances) RoHS-compliant

Stroke reserve and cushioning length

1 Working stroke:

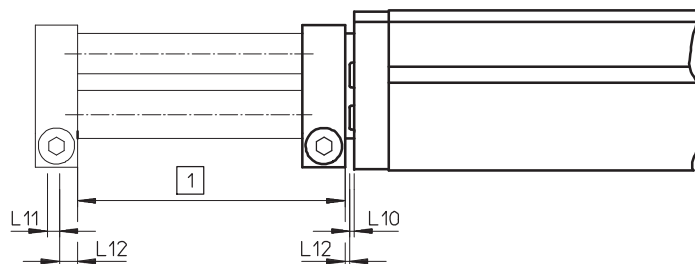
The recommended, available operating range

L12 Stroke reserve:

The distance from the end positions of the working stroke to the buffers

L10, L11 Cushioning length:

The distance from the buffer surface to the mechanical end position



Size		Retracted		Advanced	
		L12	L10	L12	L11
32	[mm]	1.75	1.5	1.75	2
40	[mm]	1.75	1.5	1.75	2

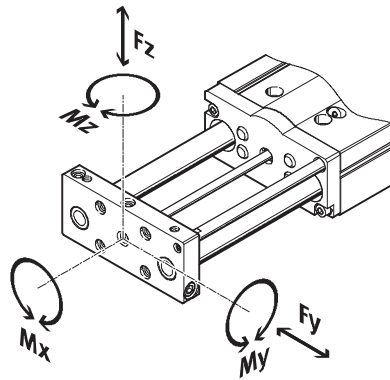
Guided drives DFME-LAS, electric

Technical data

FESTO

Dynamic characteristic load values

Torques are indicated with reference to the centre of the yoke plate.
These values must not be exceeded during dynamic operation.
Special attention must be paid to the cushioning phase.



If the drive is simultaneously subjected to several of the indicated forces and torques, the following equation must be satisfied in addition to the indicated maximum loads:

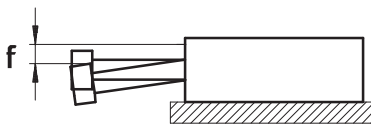
$$\frac{|F_y|}{F_{y_{\max.}}} + \frac{|F_z|}{F_{z_{\max.}}} + \frac{|M_x|}{M_{x_{\max.}}} + \frac{|M_y|}{M_{y_{\max.}}} + \frac{|M_z|}{M_{z_{\max.}}} \leq 1$$

Permissible forces and torques								
Size	32			40				
Stroke [mm]	100	200	320	100	200	320	400	
$F_{y_{\max.}}, F_{z_{\max.}}$ [N]	20	60	40	34	60	60	60	
$M_{x_{\max.}}$ [Nm]	5	4	3	6.3	5.3	4.3	3.3	
$M_{y_{\max.}}$ [Nm]	2	12	12	3.4	12	19	24	
$M_{z_{\max.}}$ [Nm]	2	12	12	3.4	12	19	24	

 Note

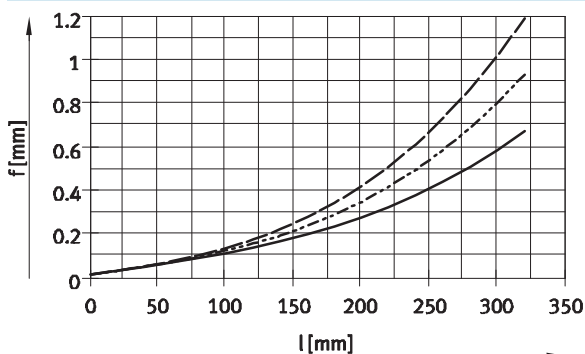
PositioningDrives
sizing software
→ www.festo.com

Piston rod displacement f, with fully advanced piston rod, as a function of stroke l

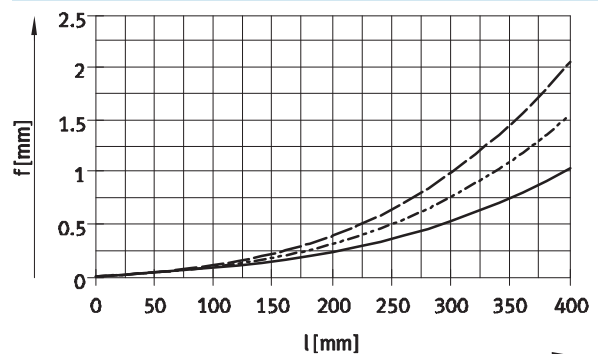


— 2 kg
- - - 4 kg
- · - 6 kg

DFME-32



DFME-40



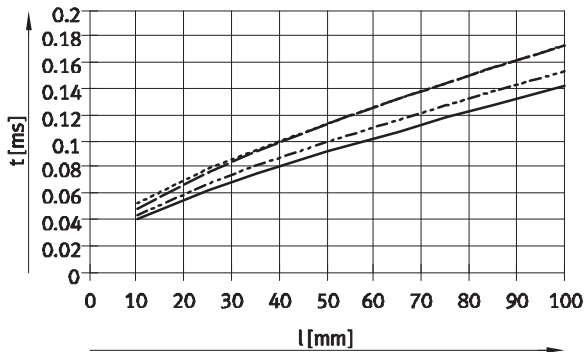
Guided drives DFME-LAS, electric

Technical data

FESTO

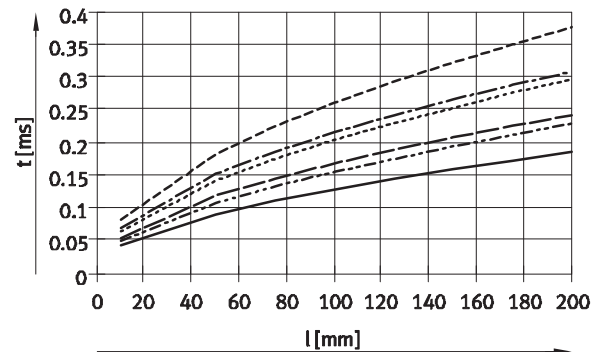
Positioning time t as a function of stroke l , effective load M and duty cycle ED

DFME-32-100



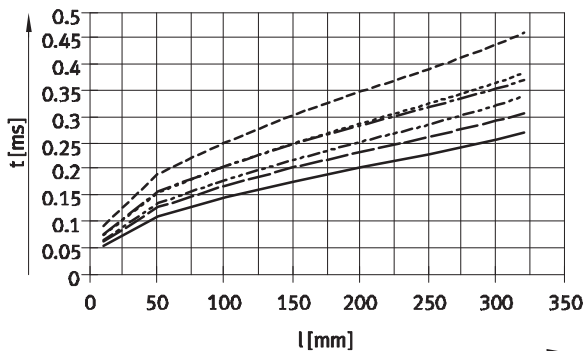
— M 0.5 kg, ED 25% to 50%
 - - - M 1.0 kg, ED 25% to 50%
 — M 2.0 kg, ED 25%
 - - - M 2.0 kg, ED 50%

DFME-32-200



— M 1.0 kg, ED 25%
 - - - M 1.0 kg, ED 50%
 — M 3.0 kg, ED 25%
 - - - M 3.0 kg, ED 50%
 — M 6.0 kg, ED 25%
 - - - M 6.0 kg, ED 50%

DFME-32-320



— M 1.0 kg, ED 25%
 - - - M 1.0 kg, ED 50%
 — M 2.0 kg, ED 25%
 - - - M 2.0 kg, ED 50%
 — M 4.0 kg, ED 25%
 - - - M 4.0 kg, ED 50%

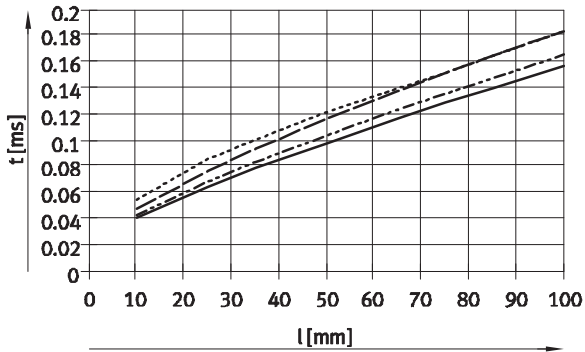
Guided drives DFME-LAS, electric

Technical data

FESTO

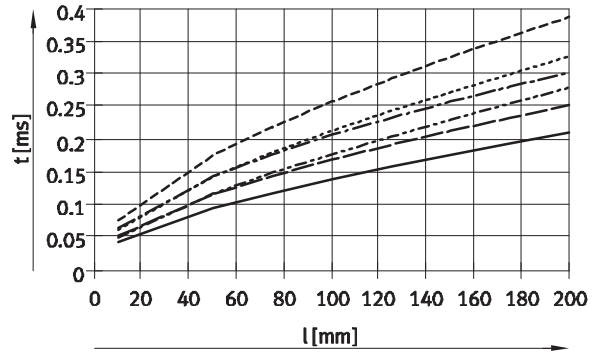
Positioning time t as a function of stroke l , effective load M and duty cycle ED

DFME-40-100



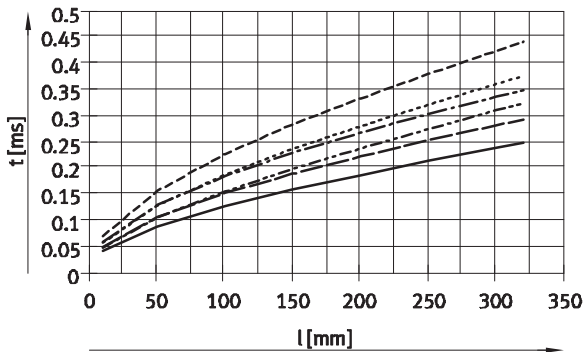
- M 1.0 kg, ED 25% to 50%
- - - M 1.7 kg, ED 25% to 50%
- M 3.4 kg, ED 25%
- - - M 3.4 kg, ED 50%

DFME-40-200



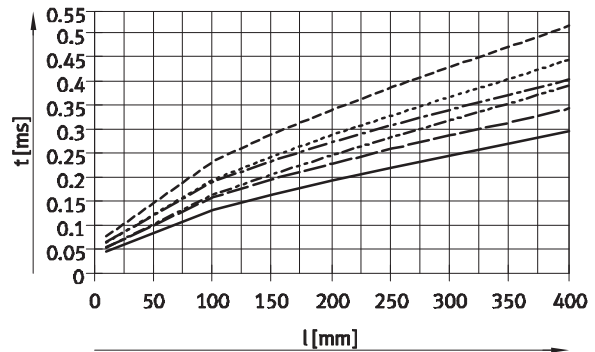
- M 1.0 kg, ED 25%
- - - M 1.0 kg, ED 50%
- M 3.0 kg, ED 25%
- - - M 3.0 kg, ED 50%
- - - M 3.0 kg, ED 50%
- - - M 6.0 kg, ED 25%
- - - M 6.0 kg, ED 50%

DFME-40-320



- M 1.0 kg, ED 25%
- - - M 1.0 kg, ED 50%
- M 3.0 kg, ED 25%
- - - M 3.0 kg, ED 50%
- - - M 6.0 kg, ED 25%
- - - M 6.0 kg, ED 50%

DFME-40-400



- M 1.0 kg, ED 25%
- - - M 1.0 kg, ED 50%
- M 3.0 kg, ED 25%
- - - M 3.0 kg, ED 50%
- - - M 6.0 kg, ED 25%
- - - M 6.0 kg, ED 50%

Guided drives DFME-LAS, electric

Technical data

FESTO

Feed force F as a function of stroke l

The graphs are based on practical values with friction taken into account.

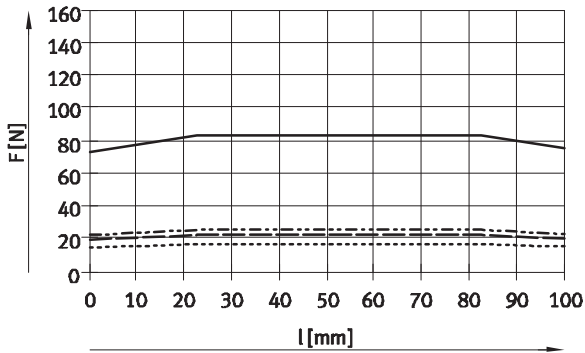
Peak feed force

—

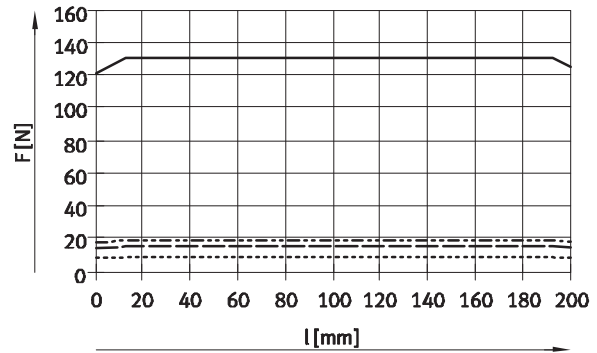
Continuous feed force
at ambient temperature:

----- from 23 °C
- - - - - from 30 °C
..... from 40 °C

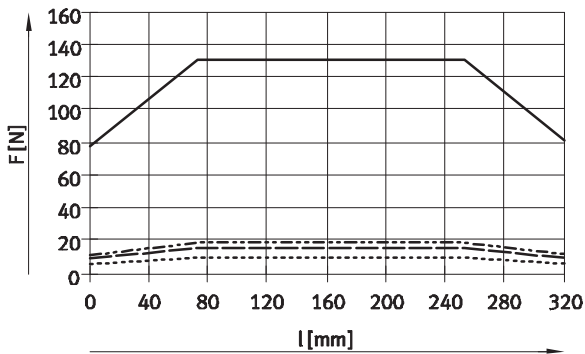
DFME-32-100



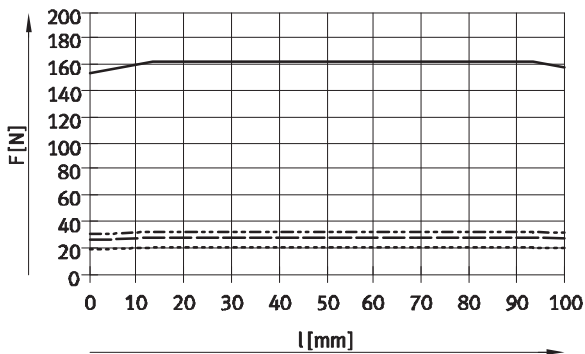
DFME-32-200



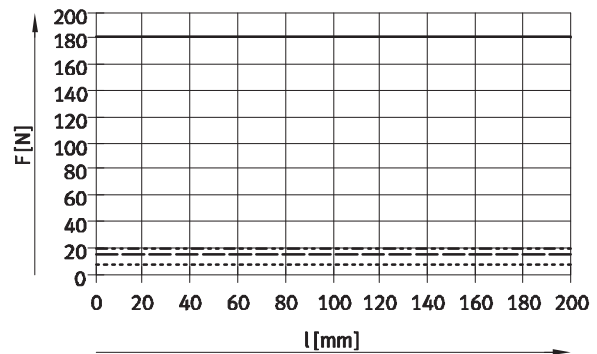
DFME-32-320



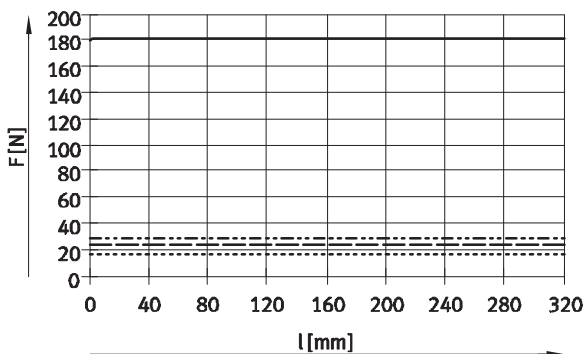
DFME-40-100



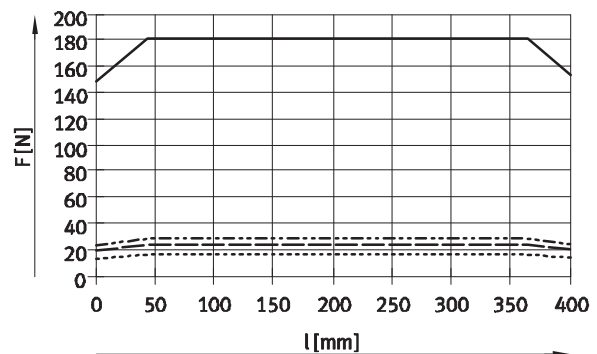
DFME-40-200



DFME-40-320



DFME-40-400



Guided drives DFME-LAS, electric

Technical data

FESTO

Feed force F as a function of speed v

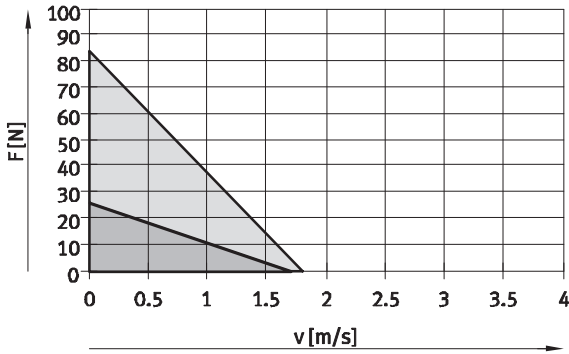
The graphs are based on practical values under the following conditions:

- Stroke centre of the electric cylinder
- Friction taken into account

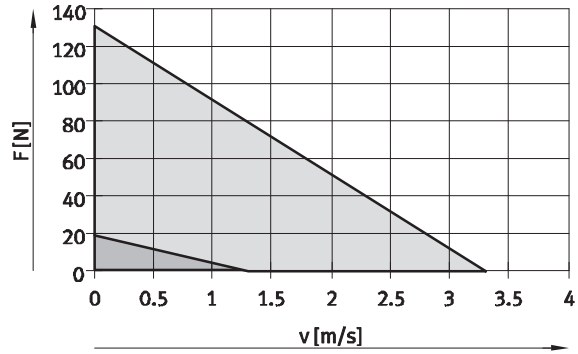
- Standard temperature of 23 °C
- Max. motor temperature of 70 °C

- Peak feed force
- Continuous feed force

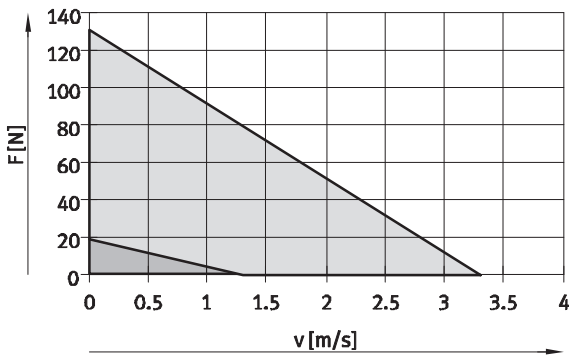
DFME-32-100



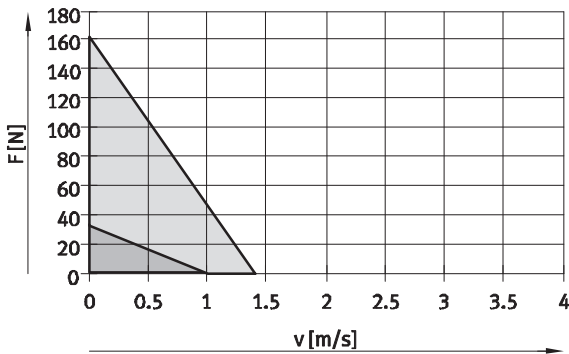
DFME-32-200



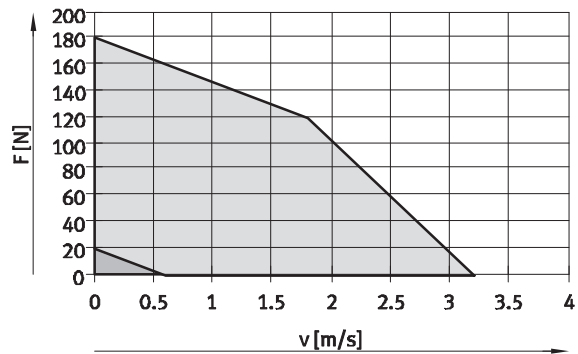
DFME-32-320



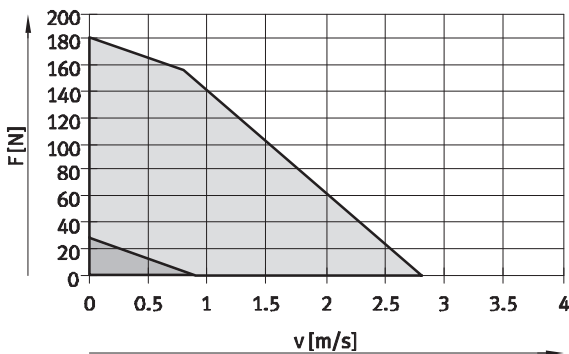
DFME-40-100



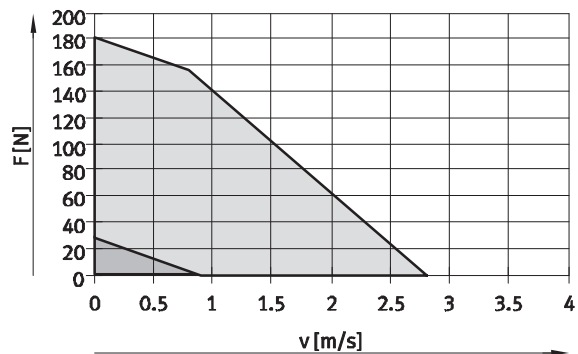
DFME-40-200



DFME-40-320



DFME-40-400



Technical data

Dimensions

Download CAD data → www.festo.com



Guided drives DFME-LAS, electric

Technical data

FESTO

Size	B1	B2	B3	B4 ¹⁾	B5	B6	B7 ¹⁾	B8	B9 ¹⁾	B10	B11	B12
32	110	108	109	45	7	33.5	43	35	40	16	78	15
40	120	118	119	46	6.5	34.5	51	35	50	16	88	15

Size	B13	B14	B15 ¹⁾	B16	B17	B18	B19	B20	B21	B22	B23	B27
32	78	41	26	31.6	34.5	43	55	76	38	8	30.5	20
40	88	41	36	33	36.6	45	60	76	39	8	30.5	20

Size	B28	B29	D1	D2 Ø	D3 Ø H7	D4	D5 Ø H7	D6	D7 Ø	D8 Ø	D9 Ø	D10
32	42.6	21.8	M8	11	12	M6	9	M6	16	10.5	50	M5
40	42.6	21.8	M8	11	12	M8	9	M6	16	10.5	50	M5

Size	D11 Ø	D12 Ø	D13 Ø	D14 Ø	EE1	EE2	H1	H2	H3	H4	H5 ¹⁾	H6
32	13.3	47	45	8	M5	M7	49	47	77.3	6	37	24.5
40	13.3	52	50.5	8	M5	M7	54	52	82.8	6	42	27

Size	H7	H8 ¹⁾	H9	H10	H11	H14	H15	H16	H17	H18	H19	H20
32	8.5	30	21	52.9	6.5	64.3	57.9	43	20	24.5	41.6	19
40	10	30	26	59.5	8	70.8	62.7	48.5	20	27	46	19

Size	L2	L3	L4 -1.75	L8	L9 ¹⁾	L10 -1.75	L11 ¹⁾	L12	L13	L14 ¹⁾	L15	L16
32	197.5	14	16	29	40	45	80	7	82	14	40.5	36.5
40	227.5	14	16	29	40	45	120	7	85	11.5	42.7	38.5

Size	L18	L19	L20	L21	n	T1	T2	T3 +0.1	T4	T5 +0.1	T6	T7	T8
32	151.5	227	96.8	25	1	20	6.8	2.6	11	2.1	8	9	8
40	181.5	257	96.8	25	2	20	6.8	2.6	16	2.1	12	9	10

Size	Stroke [mm]	L1 -1.75	L5	L6	L7	L17
32	100	349	135.5	18	17.7	87.5
	200	449	235.5	118	117.7	187.5
	320	569	355.5	238	237.7	307.5
40	100	423.5	180	18	16.7	127.8
	200	523.5	280	118	116.7	227.8
	320	643.5	400	238	236.7	347.8
	400	723.5	480	318	316.7	427.8

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

Guided drives DFME-LAS, electric

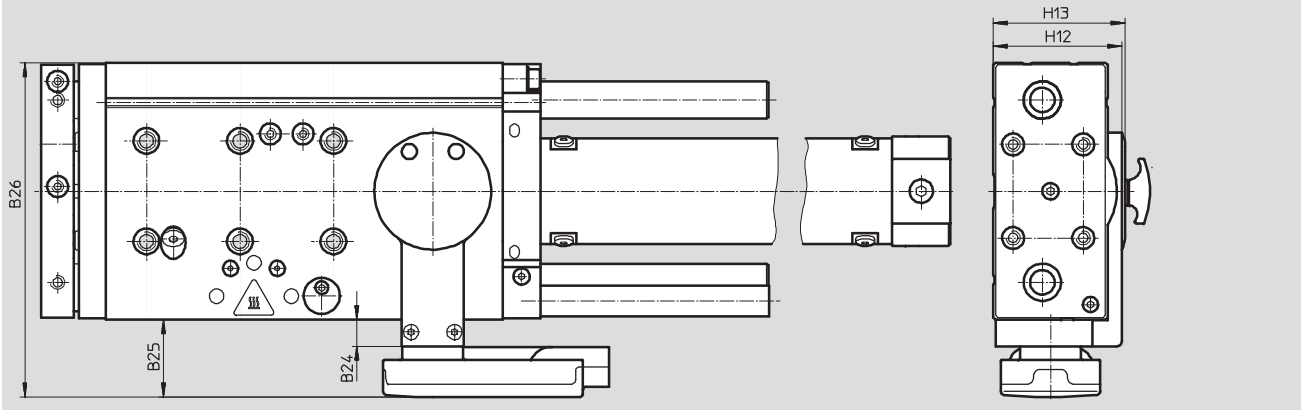
Technical data

FESTO

Dimensions

Download CAD data → www.festo.com

DFME-...S – Cable outlet at side



Size	B24	B25	B26	H12	H13
32	11.3	33	143	55	56.5
40	11.3	33	153	61.5	63

Guided drives DFME-LAS, electric

Ordering data – Modular products

FESTO

Ordering table					
Size	32	40	Condi- tions	Code	Enter code
[M] Module No.	562828	562829			
Function	Guided drive			DFME	DFME
Size	32	40		-...	
Stroke [mm]	100	100		-...	
	200	200			
	320	320			
	–	400			
Drive type	Linear motor			-L	-L
Motor technology	AC synchronous			AS	AS
Cable outlet	At the top			-T	
	At the side			-S	
Cable outlet direction	To the rear			-H	
	To the front			-F	
	To the left			-L	
	To the right			-R	
Guide	Recirculating ball bearing guide			-KF	-KF
[O] Protection class for electrics	IP65			-S1	

Transfer order code

DFME - - - **L** **AS** - - - **KF** -

Guided drives DFME-LAS, electric

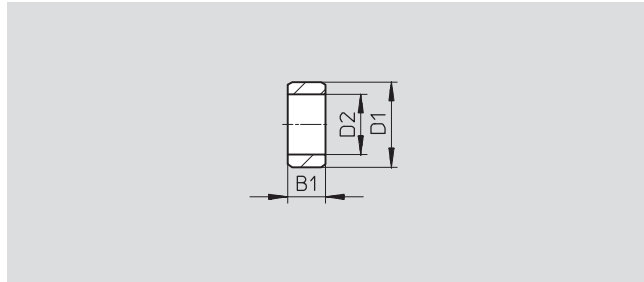
Accessories

FESTO

Centring sleeve ZBH

Material:

High-alloy steel



Dimensions and ordering data							
B1	D1	D2	CRC ¹⁾	Weight	Part No.	Type	PU ²⁾
-0.2	Ø h7	Ø		[g]			
4	9	6.4	2	1	150927	ZBH-9	10
5	12	10.3	2	1	189653	ZBH-12	10

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

2) Packaging unit quantity