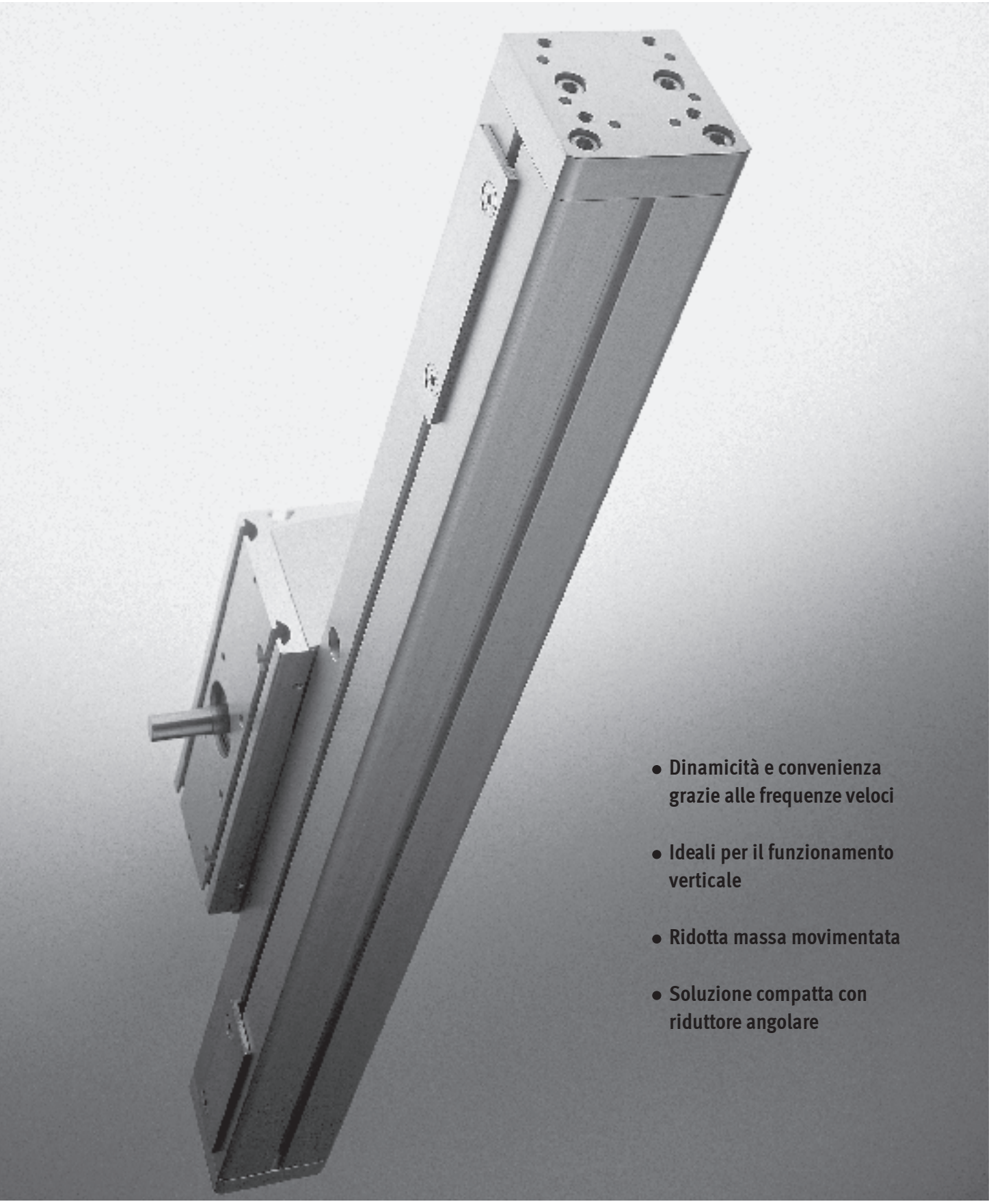
Assi a sbalzo DGEA

FESTO



- Dinamicità e convenienza grazie alle frequenze veloci
- Ideali per il funzionamento verticale
- Ridotta massa movimentata
- Soluzione compatta con riduttore angolare

Assi a sbalzo DGEA

Caratteristiche

FESTO

Auf einen Blick

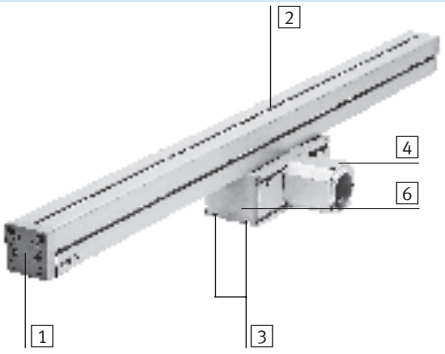
- Testa motrice Ω in esecuzione piatta, per momenti meccanici elevati.

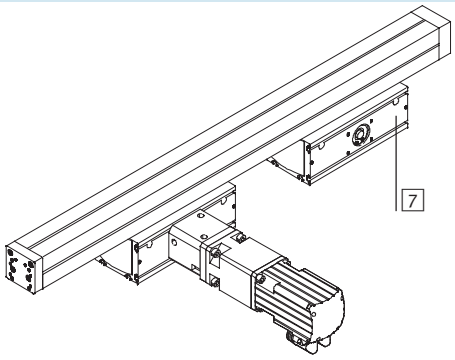
- Guida di tecnologia avanzata, come negli assi DGE-KF/DGP-KF.
- Migliore dinamicità rispetto all'asse lineare con trasmissione a cinghia dentata DGE-ZR nel funzionamento a sbalzo, dato che motore, riduttore e testa motrice sono fissi e si riduce quindi sensibilmente la massa in movimento (canna profilata).
- Utilizzo dei controllori motori di provata affidabilità.
- Possibilità di montaggio adeguate ai nuovi sistemi modulari multiassiali.

Dimensioni		18	25	40
Corsa max. di lavoro	[mm]	800	900	1000
Carico utile max.	[kg]	7	18	27
Velocità max.	[m/s]	3	3	3
Forza di spinta max.	[N]	230	400	1000

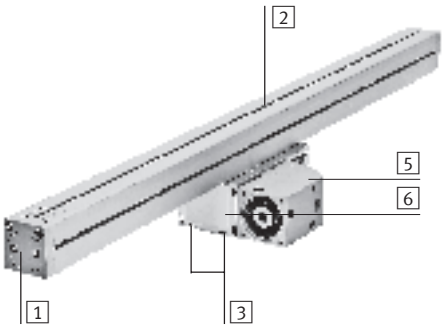
Varianti

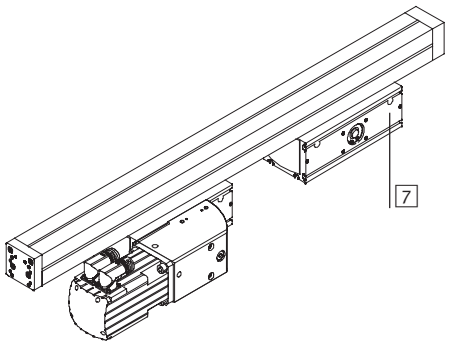
Versione base





Con riduttore angolare





1 Interfaccia di fissaggio per carico utile: filettatura, fori di fissaggio e configurazione dei fori sono identici a quelle delle testate degli assi DGE. Entrambe le testate possono essere rimosse e sostituite con altre.

2 Canna profilata: 3 lati dotati di scanalature per fissaggio esterno.
Spazio per il passaggio di tubi e cavi elettrici

3 Interfaccia di fissaggio per funzionamento a sbalzo (adeguata a slitte DGE-...-KF)

4 Supporto giunto-motore

5 Supporto giunto-motore con riduttore angolare integrato

6 Testa motrice

7 Opzionale:
testa motrice supplementare senza albero, per una maggiore compensazione di coppie meccaniche

Assi a sbalzo DGEA

Caratteristiche

Sistema completo composto da asse a sbalzo, kit, motore e controllore motore

Asse a sbalzo

- Attenzione

Per gli assi a sbalzo DGEA e i motori sono disponibili numerose soluzioni complete coordinate.

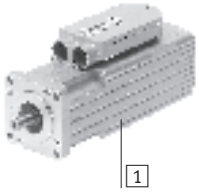
Kit di montaggio motore
Kit assiale

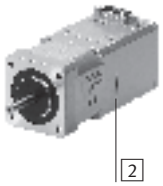
➔5/ 2.1-118

Il kit comprende:
- flangia motore
- supporto giunto-motore
- giunto
- viti

Motore

➔5/ 2.1-118





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

Controllore motore

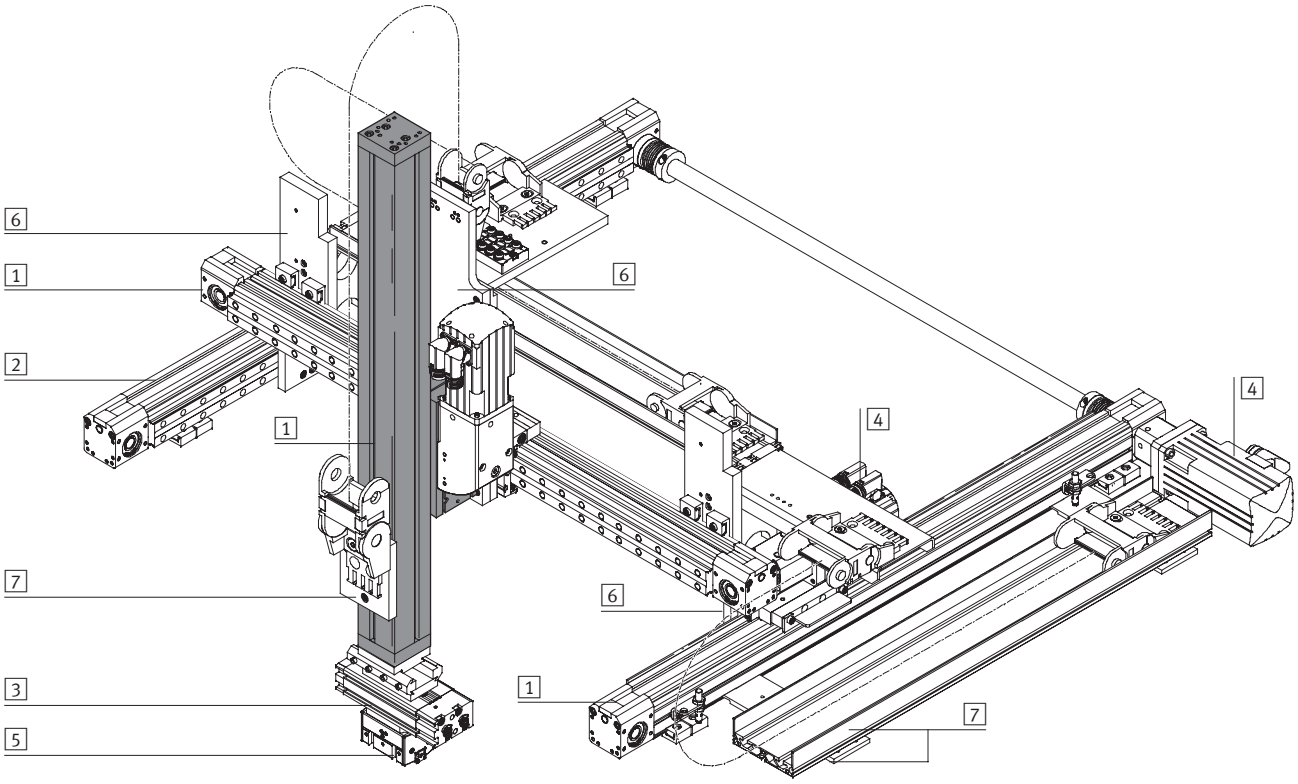
➔ www.festo.it

1 Controllore per servomotore CMMP-AS, SEC-AC
2 Controllore per motore passo-passo EMMS-ST

Assi a sbalzo DGEA

Esempio di configurazione di sistema

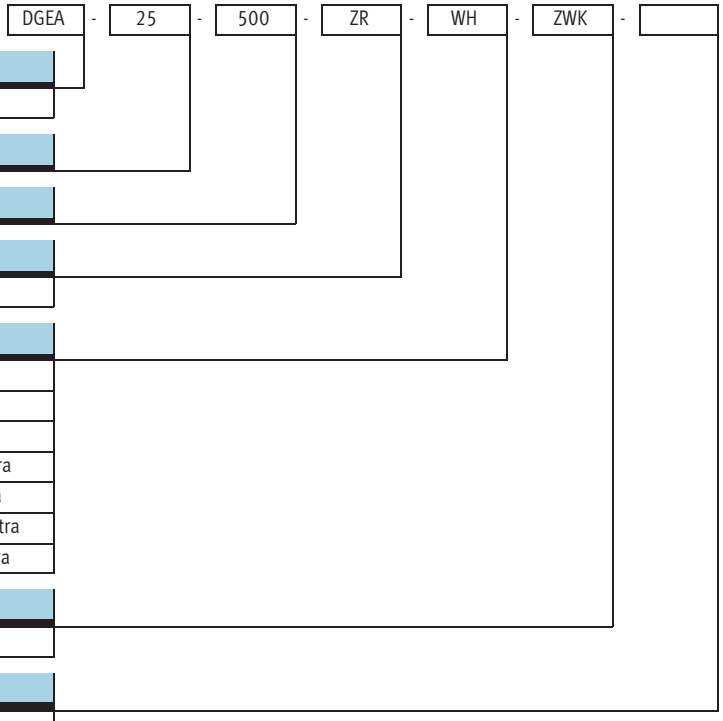
Prodotto globale per le applicazioni di manipolazione e di montaggio



Elementi di sistema ed accessori			
		Descrizione	**➔ Pagina**
1	Assi	Numerose possibilità di combinazione con gli elementi della tecnica di manipolazione e montaggio	www.festo.it
2	Assi di guida	Per la compensazione di forze e momenti in applicazioni multi-asse	www.festo.it
3	Attuatori	Numerose possibilità di combinazione con gli elementi della tecnica di manipolazione e montaggio	www.festo.it
4	Motori	Servomotori e motori passo-passo, con o senza riduttore	www.festo.it
5	Pinze	Numerose possibilità di varianti con gli elementi della tecnica di manipolazione e montaggio	www.festo.it
6	Piastre di adattamento	Per il collegamento attuatore/attuatore e attuatore/pinza	www.festo.it
7	Elementi di installazione	Per il cablaggio corretto ed ordinato di cavi elettrici e tubi	www.festo.it

Assi a sbalzo DGEA

Composizione del codice



Tipo	
DGEA	Asse a sbalzo

Dimensioni	

Corsa [mm]	

Funzione attuatore	
ZR	Cinghia dentata

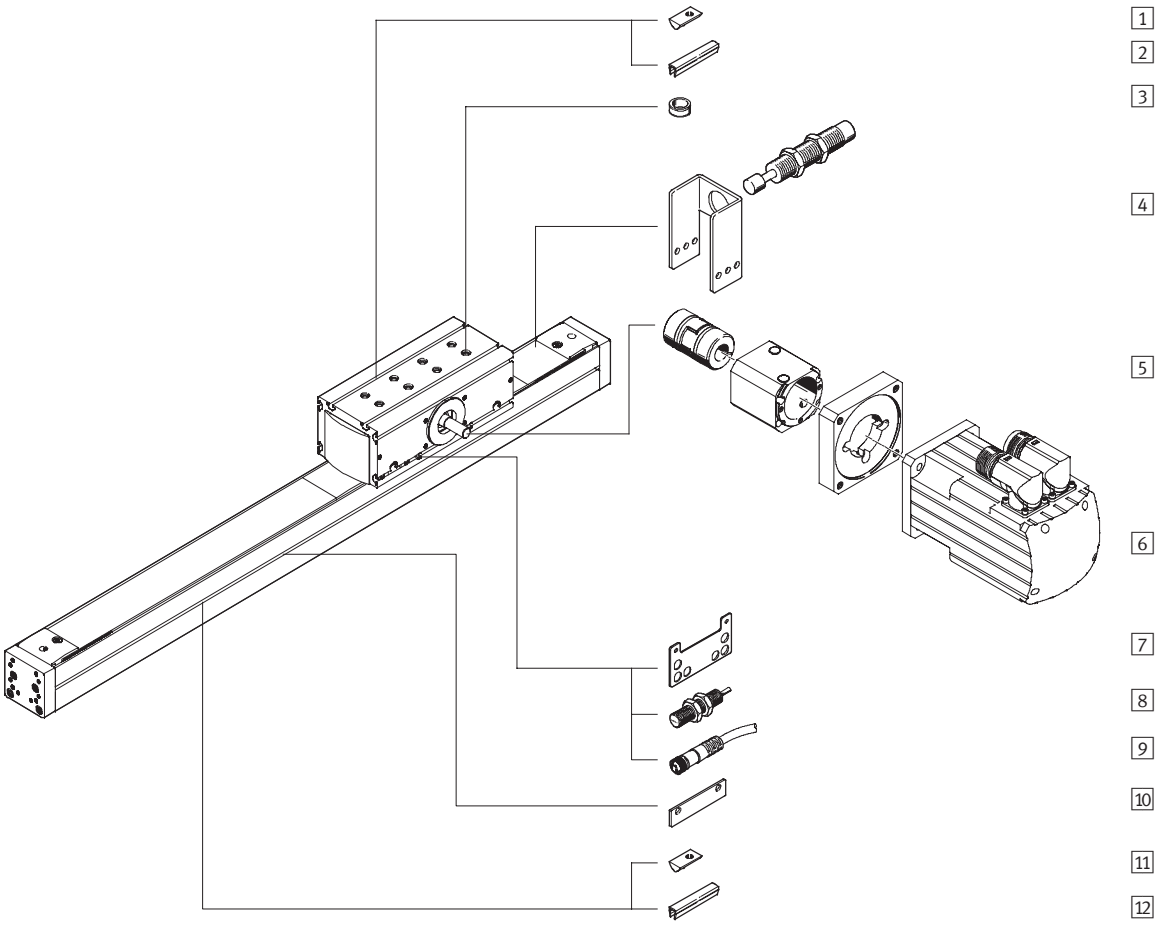
Testa motrice	
WH	Albero posteriore
WV	Albero anteriore
WB	Albero su entrambi i lati
GVL	Riduttore angolare integrato/motore anteriore a sinistra
GVR	Riduttore angolare integrato/motore anteriore a destra
GHL	Riduttore angolare integrato/motore posteriore a sinistra
GHR	Riduttore angolare integrato/motore posteriore a destra

Testa motrice supplementare	
ZWK	Senza albero

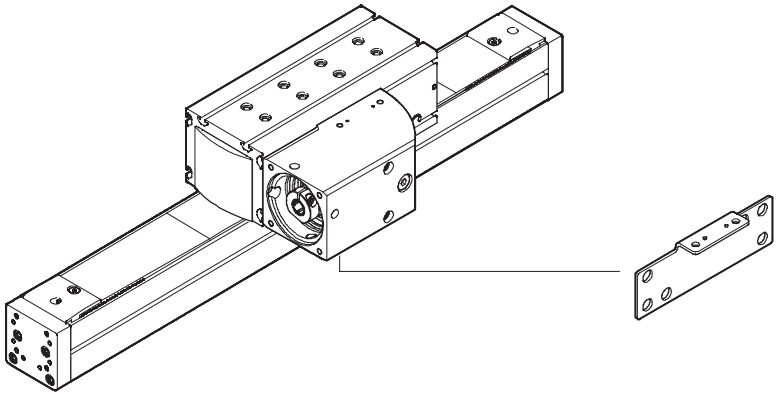
Accessori, forniti non montati	
...S	Copertura scanalatura profilo
...B	Copertura scanalatura testa motrice
...Y	Tassello scorrevole per scanalatura
...X	Tassello scorrevole testa motrice
...C	Ammortizzatore con supporto
...Z	Bussola di centratura
L	Kit di fissaggio per sensori di finecorsa
...O	Sensore di finecorsa con cavo (contatto n.a.)
...P	Sensore di finecorsa con cavo (contatto n.c.)
...W	Sensore di finecorsa con connettore (contatto n.a.)
...R	Sensore di finecorsa con connettore (contatto n.c.)
...V	Cavo con connettore, 2,5 m

Assi a sbalzo DGEA

Componenti



Con riduttore angolare



Assi a sbalzo DGEA

Componenti

FESTO

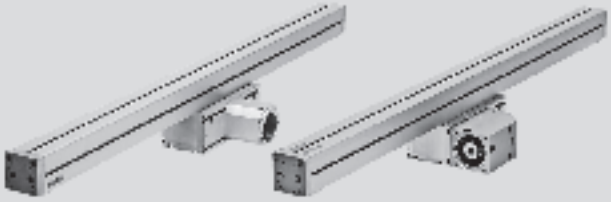
Varianti ed accessori					
	Tipo	**Descrizione**	**Versione base**	**Riduttore angolare**	**→ Pagina**
1	Tassello scorrevole testa motrice X	Per il fissaggio dell'asse sul corpo	■	■	5/ 2.1-124
2	Copertura scanalatura testa motrice B	Per la protezione interna del cilindro	■	■	5/ 2.1-124
3	Bussola di centratura Z	Per la centratura dell'asse sul corpo	■	■	5/ 2.1-124
4	Ammortizzatore con supporto C	Evita il danneggiamento dell'asse in caso di caduta di corrente (nel funzionamento verticale), quando il carico sposta l'asse in posizione terminale	■	■	5/ 2.1-123
5	Kit assiale EAMM-A	Per il montaggio assiale del motore (costituito da: giunto, supporto giunto-motore e flangia motore)	■	–	5/ 2.1-118
5	Supporto giunto-motore KG	Adattatore per il fissaggio del motore sull'asse	■	Integrato	5/ 2.1-118
5	Giunto KSE	Raccordo asse-motore	■	Integrato	5/ 2.1-118
5	Flangia motore MTR-FL	Raccordo giunto motore-motore	■	Integrato	5/ 2.1-118
6	Motore EMMS, MTR	Motori specifici per l'asse, con o senza riduttore	■	■	5/ 2.1-118
7	Piastra di fissaggio L	Adattatore per il fissaggio dei sensori di finecorsa SIEN sull'asse (esecuzione base)	■	–	5/ 2.1-121
8	Sensori di finecorsa O/P/W/R	Per il rilevamento dei segnali o richiesta di conferma	■	■	5/ 2.1-124
9	Connettore con cavo V	Per sensore di finecorsa	■	■	5/ 2.1-124
10	Blocchetto di connessione L	Per il rilevamento della posizione della slitta	■	■	5/ 2.1-121
11	Tassello scorrevole per scanalatura Y	Per il fissaggio di elementi da montare	■	■	5/ 2.1-124
12	Copertura scanalatura profilo S	Per la protezione interna del cilindro	■	■	5/ 2.1-124
13	Piastra di fissaggio L	Adattatore per il fissaggio dei sensori di finecorsa SIEN sull'asse con riduttore angolare	–	■	5/ 2.1-122

Assi a sbalzo DGEA

Foglio dati

FESTO

- Diametro
  18, 25, 40
- Corsa
  100 ... 1000 mm
- Servizio riparazione



DGEA-... DGEA-...G-...

Dati generali				
Dimensioni		18	25	40
Struttura e composizione		Asse a sbalzo con trasmissione a cinghia dentata		
Guida		Guida a ricircolo di sfere		
Posizione di montaggio		Qualsiasi		
Corsa di lavoro max.[1]	[mm]	1 ... 800	1 ... 900	1 ... 1000
Carico utile max., orizzontale[2]	[kg]	6	15	40
Carico utile max., verticale	[kg]	10	20	50
Forza di avanzamento max. F_x	[N]	230	400	1000
Velocità max.	[m/s]	3		
Accelerazione max.	[m/s²]	50		
Ripetibilità	[mm]	< ± 0,05		
Versione base				
Coppia di azionamento max.	[Nm]	3	5,2	19
Coppia max. di azionamento a vuoto[3]	[Nm]	0,4	0,4	1
Numero di giri max. attuatore	[1/min]	2222	2222	1500
Con riduttore angolare				
Coppia di azionamento max.	[Nm]	1,4	2,2	7,3
Coppia max. di azionamento a vuoto[3]	[Nm]	0,3	0,6	1,3
Numero di giri max. attuatore	[1/min]	6666	6666	4500
Tipo di riduttore		Corona dentata		
Ingranaggio		Diritto		
Trasmissione		3		

1) Corsa complessiva = corsa di lavoro + 2x extracorse.
2) Con corsa 500 mm e carico utile applicato sul centro della guida. Altri valori ➔ 5/ 2.1-108.
3) Misurata a una velocità di 0,2m/s.

Condizioni d'esercizio e ambientali				
Dimensioni		18	25	40
Temperatura ambiente	[°C]	-10 ... +60		
Grado di protezione		IP20		

Assi a sbalzo DGEA

Foglio dati

FESTO

Pesi [kg]							
Dimensioni		18		25		40	
Numero teste motrici		1	2	1	2	1	2
Versione base							
Peso complessivo	A corsa 0 mm[1)]	2,8	4,7	4,9	8,5	14,3	23,2
	Peso aggiuntivo per ogni 100 mm di corsa[1)]	0,35	0,35	0,47	0,47	1	1
Carico movimentato	A corsa 0 mm[1)]	1,5	2	2,4	3,3	6,2	8,6
Con riduttore angolare							
Peso complessivo	A corsa 0 mm[1)]	3,6	5	6,6	9,3	19,5	26
	Peso aggiuntivo per ogni 100 mm di corsa[1)]	0,35	0,35	0,47	0,47	1	1
Carico movimentato	A corsa 0 mm[1)]	1,5	2	2,4	3,3	6,2	8,6

1) Senza motore, giunto, supporto giunto-motore e accessori.

Momento di inerzia di massa							
Dimensioni			18		25		40	
Numero teste motrici			1	2	1	2	1	2
J_O		[kg cm^2]	2,87	4,08	4,45	6,40	28	41,5
J_H	Per ogni metro di corsa	[kg cm^2/m]	0,6		0,8		3,65	
J_L	Per ogni kg di carico utile	[kg cm^2/Kg]	1,66		1,66		3,65	
J_G	Riduttore angolare	[kg cm^2/m]	0,14		0,26		2,02	
i	Rapporto di trasmissione		3		3		3	

Il momento di inerzia di massa J_A dell'intero asse si calcola come segue:

Versione base

$$J_A = J_O + J_H \times \text{Corsa di lavoro [m]} + J_L \times m_{\text{Carico utile}}\ [\text{kg}]$$

Con riduttore angolare

$$J_A = J_G + \frac{J_O + J_H \times \text{Corsa di lavoro [m]} + J_L \times m_{\text{Carico utile}}\ [\text{kg}]}{i^2}$$

Cinghia dentata				
Dimensioni		18	25	40
Allungamento[1)]	[%]	0,037	0,053	0,056
Passo	[mm]	3	3	5
Puleggia; diametro effettivo	[mm]	25,78	25,78	38,2
Costante di avanzamento	[mm/U]	81	81	120
Costante di avanzamento con riduttore angolare integrato	[mm/U]	27	27	40

1) Alla forza max. di avanzamento

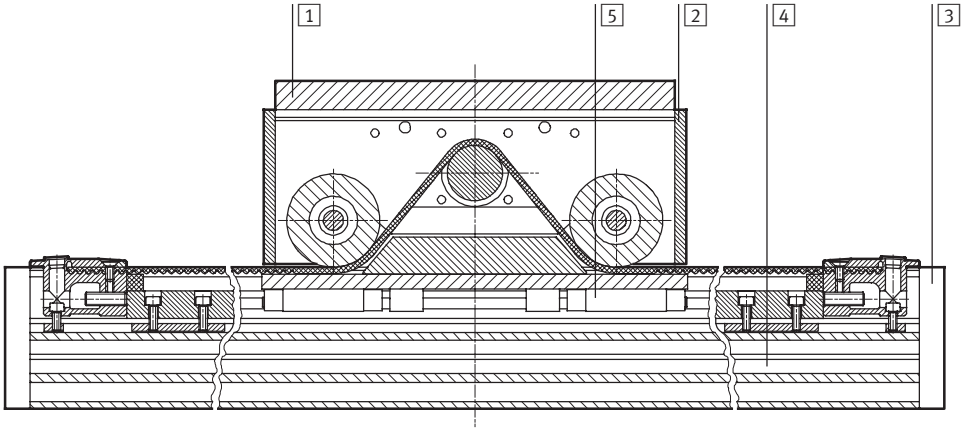
Assi a sbalzo DGEA

Foglio dati

FESTO

Materiali

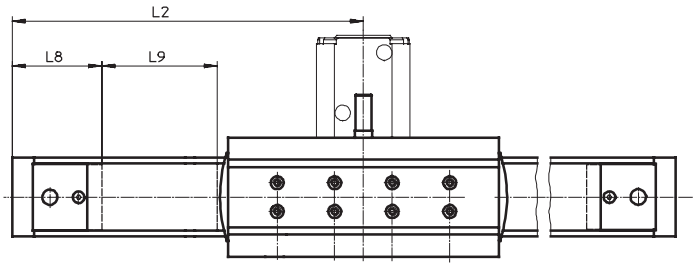
Disegno funzionale



Asse	
1 Slitta testa motrice	Acciaio zincato
2 Corpo testa motrice	Alluminio anodizzato
3 Testata posteriore	Alluminio anodizzato
4 Profilo	Alluminio anodizzato
5 Profilo di guida	Acciaio per cuscinetti rivestito in corrotect
– Scatola ingranaggio	Alluminio anodizzato
– Pignone	Acciaio
– Corona dentata	Acciaio

Extracorsa

L2 Testa motrice in posizione terminale della corsa di lavoro
L8 Distanza tra arresto meccanico e misura esterna asse
L9 L'extracorsa è una distanza di sicurezza, disponibile oltre la corsa su entrambi i lati.



Dimensioni	18	25	40
L9 per ogni posizione terminale [mm]	81	81	120

Esempio:
Tipo DGEA-25-500-ZR

Corsa di lavoro = 500 mm
Extracorsa = (2x 81 mm)
= 162 mm
Corsa complessiva= 500 mm + 126 mm
= 662 mm

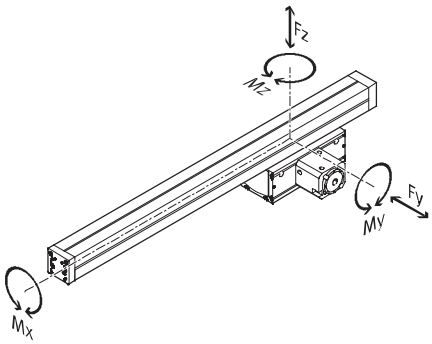
Assi a sbalzo DGEA

Foglio dati

FESTO

Parametri di carico della guida

Le forze e i momenti indicati sono riferiti al centro del profilo di guida. In condizioni di esercizio dinamico non devono essere superati i valori indicati. Per questo occorre prestare particolare attenzione alla fase di ammortizzazione.



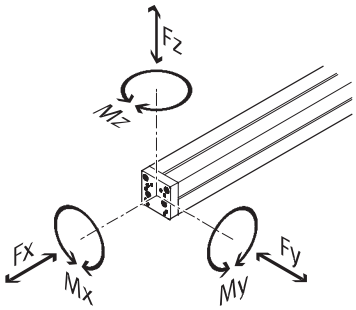
Se l'asse è soggetto contemporaneamente a più forze e momenti, oltre ad osservare i parametri di carico indicati si devono soddisfare le seguenti equazioni:

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

Forze e momenti ammissibili				
Dimensioni		18	25	40
$Fy_{max.}$	[N]	2000	3080	7300
$Fz_{max.}$	[N]	2000	3080	7300
$Mx_{max.}$	[Nm]	19	28	133
$My_{max.}$	[Nm]	94	230	665
$Mz_{max.}$	[Nm]	65	160	460

Parametri di carico dell'interfaccia di fissaggio del carico utile

Le forze e i momenti indicati sono riferiti all'interfaccia di fissaggio del carico utile.
In condizioni di esercizio dinamico non devono essere superati i valori indicati. Per questo occorre prestare particolare attenzione alla fase di ammortizzazione.



Se l'asse è soggetto contemporaneamente a più forze e momenti, oltre ad osservare i parametri di carico indicati si devono soddisfare le seguenti equazioni:

$$\left|\frac{Fx}{Fx_{max.}}\right| + \left|\frac{Fy}{Fy_{max.}}\right| + \left|\frac{Fz}{Fz_{max.}}\right| + \left|\frac{Mx}{Mx_{max.}}\right| + \left|\frac{My}{My_{max.}}\right| + \left|\frac{Mz}{Mz_{max.}}\right| \leq 1$$

Forze e momenti ammissibili				
Dimensioni		18	25	40
$Fx_{max.}$	[N]	6000	6000	8400
$Fy_{max.}$	[N]	2240	2240	3200
$Fz_{max.}$	[N]	2240	2240	3200
$Mx_{max.}$	[Nm]	30	50	118
$My_{max.}$	[Nm]	125	230	407
$Mz_{max.}$	[Nm]	185	273	580

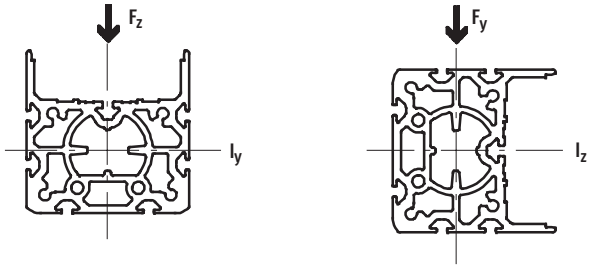
Software di progettazione
PositioningDrives
www.festo.it/engineering

Assi a sbalzo DGEA

Foglio dati

FESTO

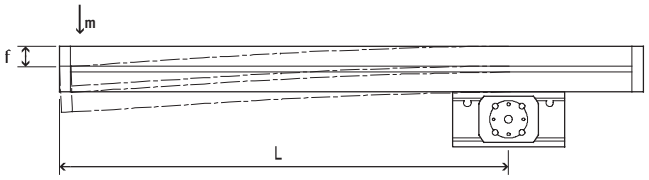
Momento di superficie di secondo grado[1)]



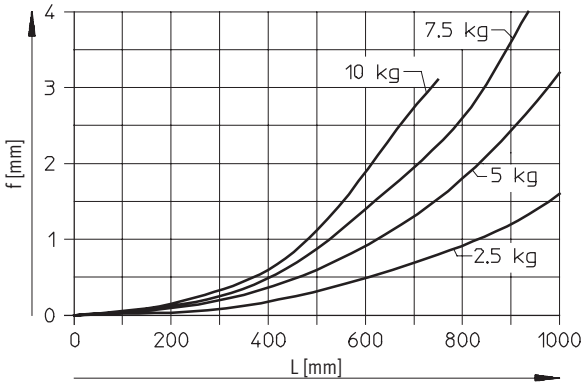
Dimensioni		18	25	40
Iy	[mm^4]	173x10^3	432x10^3	1759x10^3
Iz	[mm^4]	135x10^3	438x10^3	1894x10^3

1) Dopo un intervento o una sostituzione della testata, i valori non sono più validi.

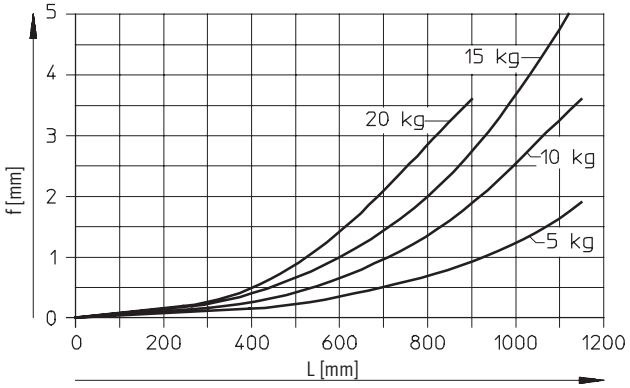
Flessione del profilo f in funzione della distanza L e del carico utile m



DGEA-18

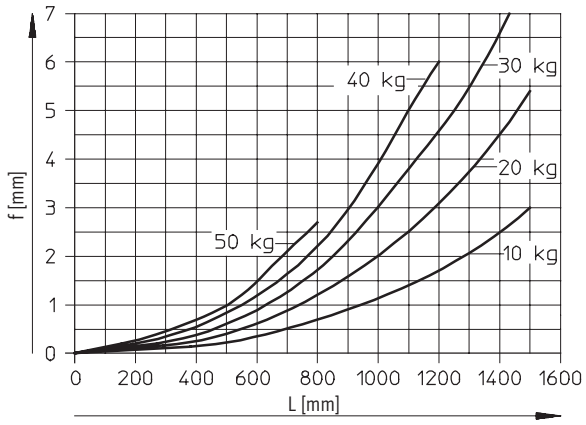


DGEA-25



Flessione del profilo f in funzione della distanza L e del carico utile m

DGEA-40



Assi a sbalzo DGEA

Foglio dati

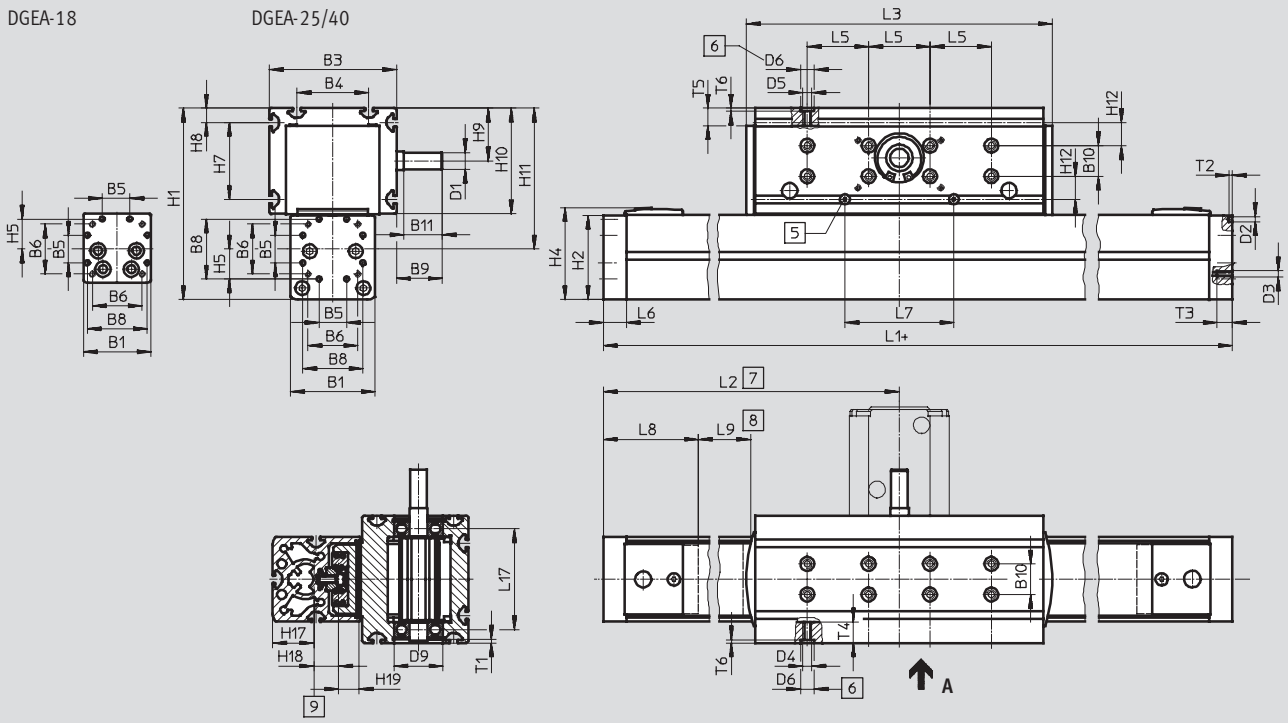
FESTO

Dimensioni

Download dati CAD ➔ **www.festo.it/engineering**

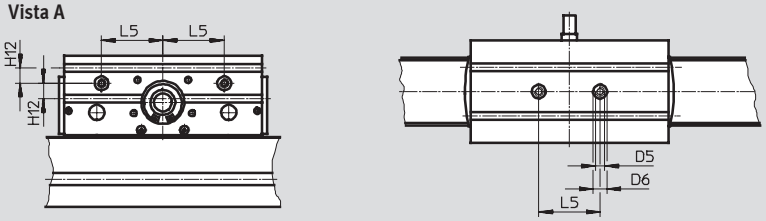
Versione base

DGEA-18 DGEA-25/40



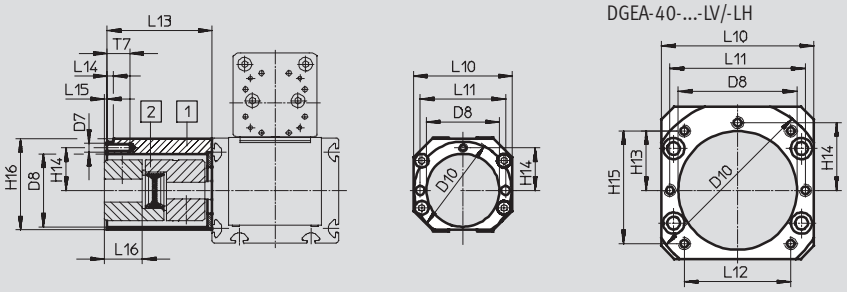
DGEA-18

Vista A



\+ = aggiungere la corsa

Supporto giunto-motore



1 Supporto giunto-motore
2 Giunto
5 Nipplo di lubrificazione
6 Foro per bussola di centratura ZBH-9
7 Cursore a fine corsa di lavoro
8 Extracorsa (distanza di sicurezza dalla posizione terminale meccanica, su entrambi i lati)
9 Baricentro della massa propria in movimento

Assi a sbalzo DGEA

Foglio dati

Dimensioni	Variante	B1	B3	B4	B5 ±0,1	B6	B8	B9	B10	B11	D1 ∅ h6	D2 ∅	D3
18	KV/KH	44	67	32	18	32,5	39,1	16	–	12	8	3,3	M4
25	KV/KH	55	83	47	18	32,5	39,1	29,8	20	25	11	3,3	M4
40	KV/KH	80	111,8	72	28	49	53	30,1	40	25	15	4	M5
	LV/LH												

Dimensioni	Variante	D4	D5	D6 ∅ H7	D7	D8 ∅	D9 ∅ H7	D10 ∅ g7	H1	H2	H4	H5	H7
18	KV/KH	M6	M6	9	M4	32	28	44	99	45	50,8	19,55	20
25	KV/KH	M6	M6	9	M6	48	32	64	128	57,7	63,1	19,55	50
40	KV/KH	M6	M6	9	M6	48	40	64	197	85	91,3	26,5	72
	LV/LH				M8	78		118					

Dimensioni	Variante	H8	H9	H10	H11	H12	H13	H14 ±0,1	H15	H16	H17	H18	H19
18	KV/KH	8	30,5	52	77	10	–	19	–	45	19,6	10	14,3
25	KV/KH	9,5	32,5	69	95	15	–	28	–	60	27,1	16	13,3
40	KV/KH	15,5	55,5	110	153	16	–	28	–	60	42,8	21,5	18
	LV/LH						39	44,5	74	100			

Dimensioni	Variante	L1	L2	L3	L5	L6	L7	L8	L9	L10	L11	L12	L13
18	KV/KH	419,5	210	138	40	13	28	58	81	45	38	–	40
25	KV/KH	487,5	244	202	40	15	71	60	81	65	56	–	65
40	KV/KH	662	331	256	40	15	94	81	120	65	56	–	65
	LV/LH									100	89	70	96

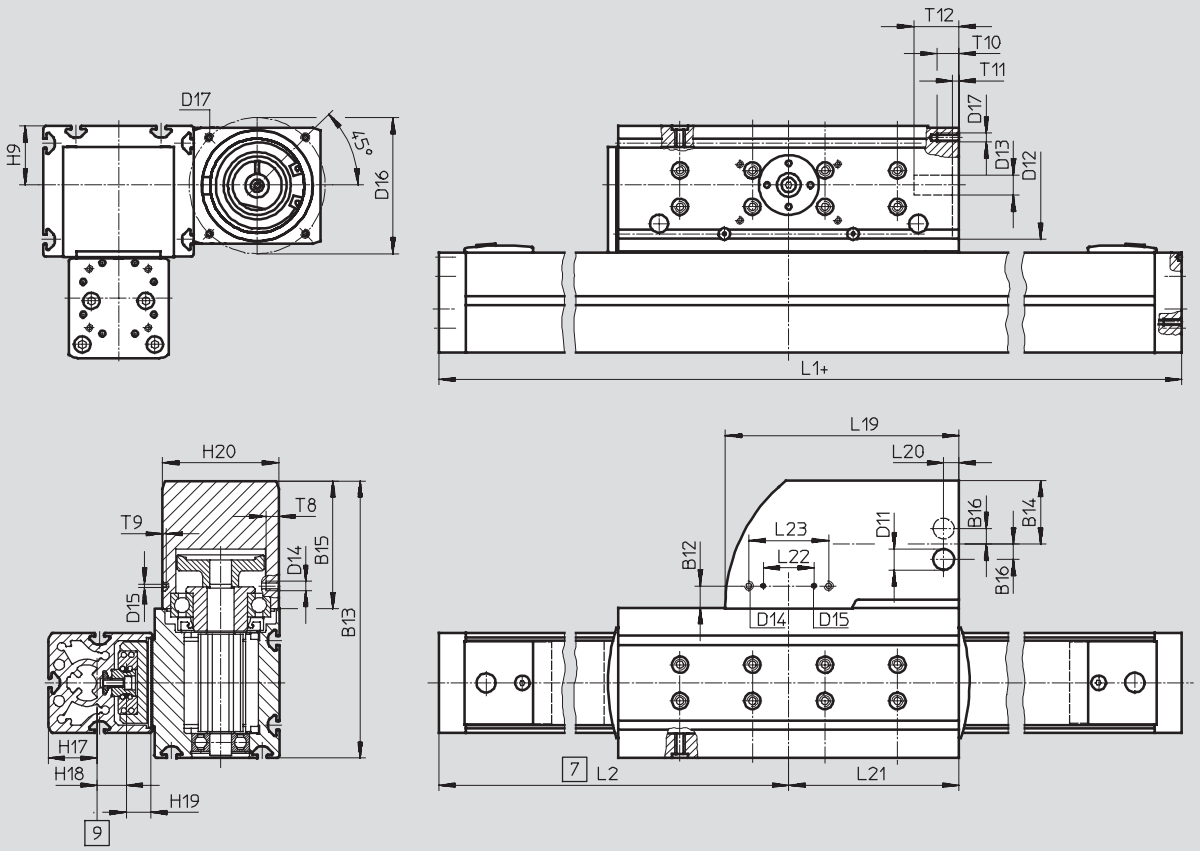
Dimensioni	Variante	L14	L15	L16	L17	T1	T2	T3	T4 min.	T5 min.	T6	T7
18	KV/KH	3,2	-3,6	14,6	53	1,6	2	9	11	11	2,1	10
25	KV/KH	4	2,2	22,8	65,6	2,3	2	10	11	11	2,1	13
40	KV/KH	4	2,2	22,8	90	2,8	3	10	11	11	2,1	13
	LV/LH	5	-0,9	35,9								18

Assi a sbalzo DGEA

Foglio dati

Dimensioni Download Dati CAD ➔ **www.festo.it/engineering**

Con riduttore angolare



\+ = aggiungere la corsa

7 Cursore a fine corsa nominale

9 Baricentro della massa propria in movimento

Dimensioni	B12	B13	B14	B15	B16	D11 ∅	D12 ∅ +0,05/+0,08	D13 ∅	D14	D15 ∅ ±0,05
18	11	122	27,5	55	9	11,5	40	9	M4	2
25	12	153	35	70	9	11,5	60	11	M5	2
40	16	211,8	50	100	17	11,9	95	19	M5	3

Dimensioni	D16 ∅	D17	H9	H17	H18	H19	H20	L1	L2	L19
18	63	M5	30,5	19,6	10	14,3	55	419,5	210	97
25	75	M5	32,5	27,1	16	13,3	64	487,5	244	129
40	115	M8	55,5	42,8	21,5	18	100	662	331	173

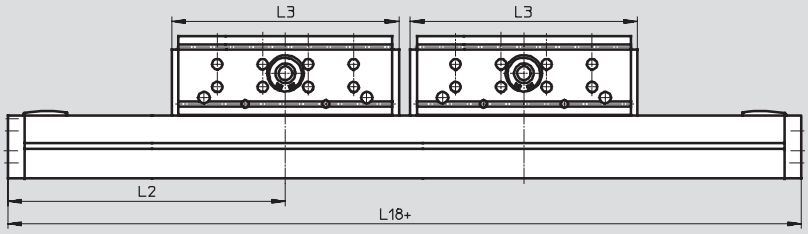
Dimensioni	L20	L21	L22 ±0,1	L23 ±0,1	T8	T9	T10	T11	T12
18	8,5	64,5	18	34	5	2	12	3,5	24
25	8,5	94	28	44	7	2	12	3,5	25
40	11,5	120	44	68	5	2	12	3,5	40

Assi a sbalzo DGEA

Foglio dati

Dimensioni Download Dati CAD ➔ **www.festo.it/engineering**

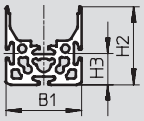
Con testa motrice supplementare



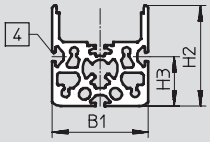
\+ = aggiungere la corsa

Canna profilata

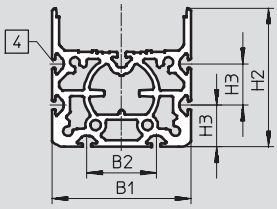
Dimensioni 18



Dimensioni 25



Dimensioni 40



4 Scanalature di fissaggio per tasselli scorrevoli NST

Dimensioni	B1	B2	H2	H3	L2	L3	L18
18	44	–	45	18	210	138	569,5
25	55	–	57,7	28,4	244	202	697,5
40	80	40	85	24	331	256	926

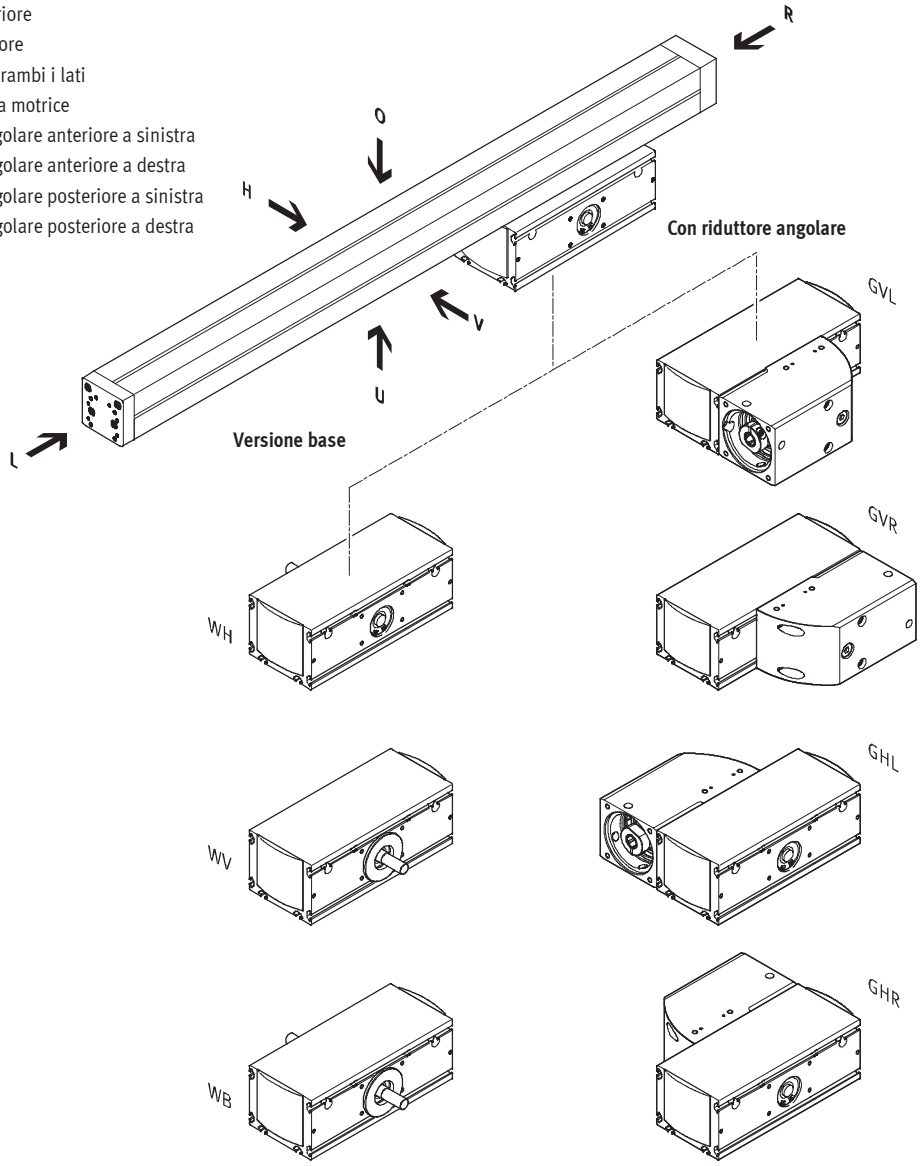
Assi a sbalzo DGEA

Dati di ordinazione - Gruppo modulare

Codice di ordinazione

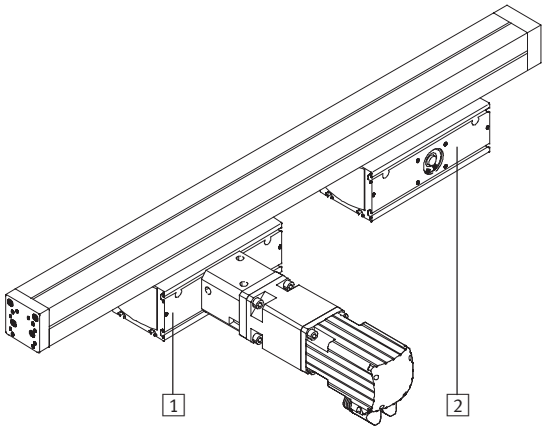
Indicazioni obbligatorie/facoltative

WH	Albero posteriore
WV	Albero anteriore
WB	Albero su entrambi i lati
ZWK	Seconda testa motrice
GVL	Riduttore angolare anteriore a sinistra
GVR	Riduttore angolare anteriore a destra
GHL	Riduttore angolare posteriore a sinistra
GHR	Riduttore angolare posteriore a destra



O = in alto
U = in basso
R = a destra
L = a sinistra
V = davanti
H = dietro

[1] Testa motrice
[2] Opzionale:
testa motrice supplementare
(per una maggiore
compensazione di
coppie meccaniche)

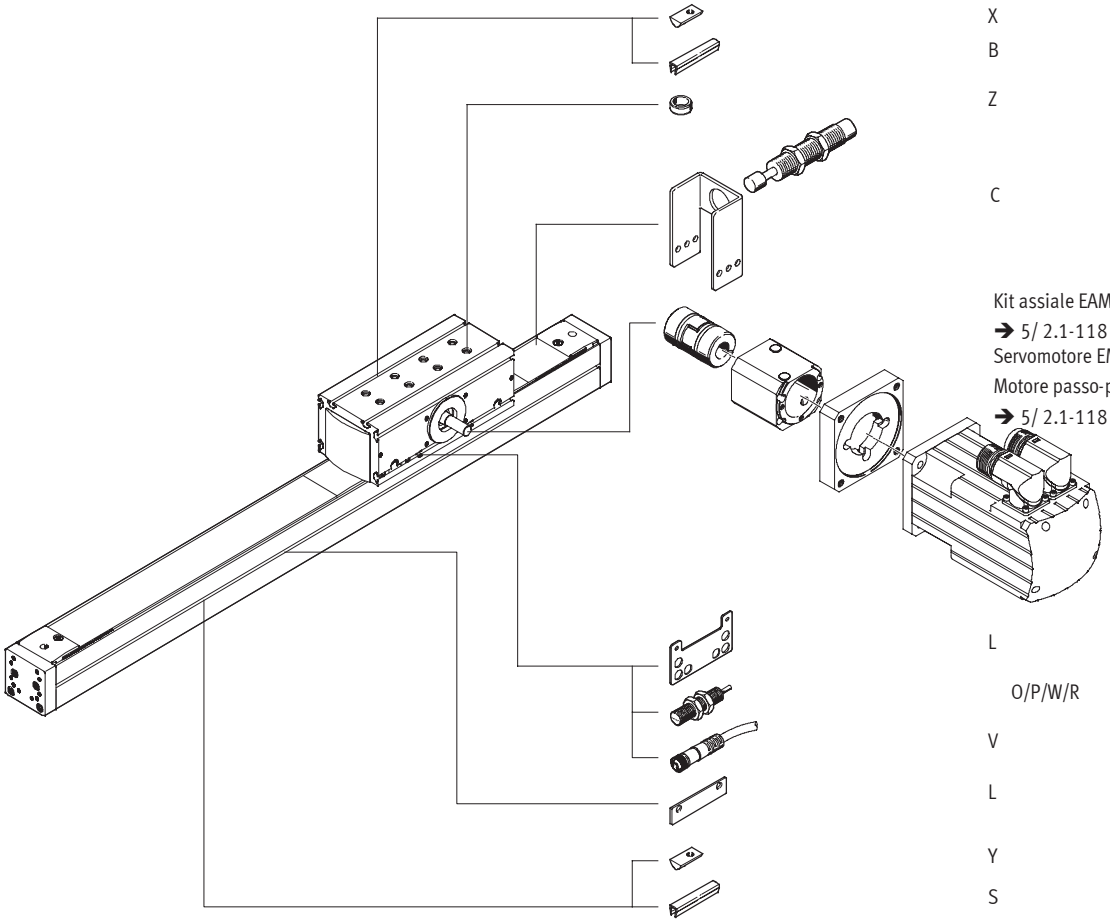


Assi a sbalzo DGEA

Dati di ordinazione - Gruppo modulare

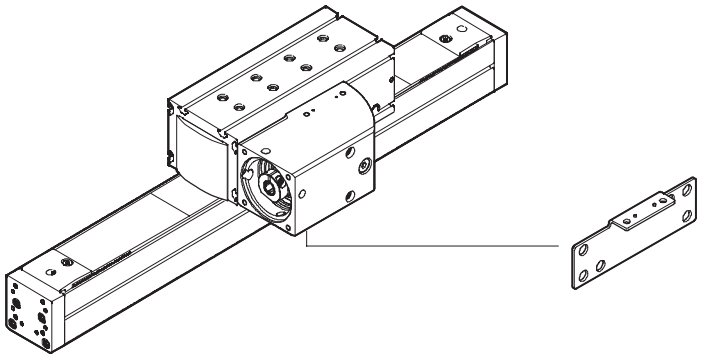
Codice di ordinazione

Indicazioni facoltative



X
B
Z
C
Kit assiale EAMM-A
➔ 5/ 2.1-118
Servomotore EMMS-AS, MTR-AC
Motore passo-passo EMMS-ST, MTR-ST
➔ 5/ 2.1-118
L
O/P/W/R
V
L
Y
S

Con riduttore angolare



L

Assi a sbalzo DGEA

Dati di ordinazione - Gruppo modulare

FESTO

[M] **Indicazioni obbligatorie**

[O] **Indicazioni facoltative** →

Codice prodotto	Funzione	Dimensioni	Corsa	Funzione attuatore	Testa motrice	Testa motrice supplementare
195 611 195 612 195 613	DGEA	18 25 40	1 ... 1000	ZR	WH WV WB GVL GVR GHL GHR	ZWK
Esempio di ordinazione						
195 612	**DGEA** -	**25** -	**850** -	**ZR** -	**WV** -	

Tabella di ordinazione

	Dimensioni	18	25	40	Condizioni	Codice		Inserimento codice
[M]	Codice prodotto	**195 611**	**195 612**	**195 613**				
	Funzione	Asse a sbalzo con trasmissione a cinghia dentata				**DGEA**		DGEA
	Dimensioni	18	25	40		-...		
	Corsa [mm]	1 ... 800	1 ... 900	1 ... 1000		-...		
	Funzione attuatore	Attuatore elettromeccanico con cinghia dentata				**-ZR**		-ZR
	Testa motrice	Albero posteriore				**-WH**		
		Albero anteriore				**-WV**		
		Albero su entrambi i lati				**-WB**		
		Riduttore angolare integrato per motore anteriore a sinistra				**-GVL**		
		Riduttore angolare integrato per motore anteriore a destra				**-GVR**		
		Riduttore angolare integrato per motore posteriore a sinistra				**-GHL**		
		Riduttore angolare integrato per motore posteriore a destra				**-GHR**		
[O] ↓	Testa motrice supplementare	Senza albero				**-ZWK**		

Trascrizione codice di ordinazione

	DGEA	-		-		-	**ZR**	-		-	

Assi a sbalzo DGEA

Dati di ordinazione - Gruppo modulare

FESTO

➔ O **Indicazioni facoltative**

Accessori		Copertura per scanalatura	Tassello scorrevole	Ammortizzatore con supporto	Bussola di centratura	Supporto per finecorsa	Sensori induttivi di finecorsa	Connettore con cavo
ZUB		...S ...B	...Y ...X	...C	...Z	L	...O ...P ...W ...R	...V
ZUB	**-**	**2B**		**2C**	**10Z**	**L**	**2P2W**	**2V**

Tabella di ordinazione

Dimensioni		18	25	40	Condizioni	Codice		Inserimento codice
↓ Accessori		Forniti non montati				**ZUB-**		ZUB-
O Copertura per scanalatura	Per scanalatura profilo	1 ... 10				**...S**		
	Per testa motrice	1 ... 10				**...B**		
Tassello scorrevole	Per scanalatura profilo	1 ... 10				**...Y**		
	Per testa motrice	1 ... 10				**...X**		
Ammortizzatore con supporto		1 ... 2				**...C**		
Bussola di centratura		10, 20, 30, 40, 50, 60, 70, 80, 90				**...Z**		
Supporto per sensore di finecorsa induttivo, con 2 blocchetti di connessione		1				**L**		
Sensori induttivi di finecorsa	Contatto n.a., cavo	1 ... 5				**...O**		
	Contatto n.c., cavo	1 ... 5				**...P**		
	Contatto n.a., connettore	1 ... 5				**...W**		
	Contatto n.c., connettore	1 ... 5				**...R**		
Connettore con cavo		1 ... 10				**...V**		

- - Attenzione

Gli assi a sbalzo DGEA offrono le stesse possibilità di fissaggio (sulla testata del profilo e della testa motrice) degli assi elettromeccanici DGE-...-ZR-KF/-SP-KF.

Va tuttavia osservato che non sussiste rapporto 1:1 con le grandezze. Esempio: le dimensioni del profilo DGEA-18 corrispondono a DGE-25.

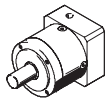
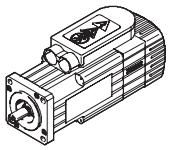
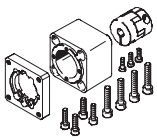
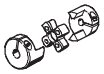
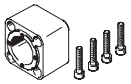
Trascrizione codice di ordinazione

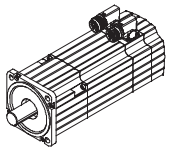
ZUB	-						

Assi a sbalzo DGEA

Accessori

FESTO

Combinazioni possibili con kit assiale - Versione base					
Riduttore	Motore	Kit assiale	Kit assiale, costituito da:		
			flangia motore	giunto	supporto giunto-motore
					
Tipo	Tipo	Cod. prod. Tipo	Cod. prod. Tipo	Cod. prod. Tipo	Cod. prod. Tipo
DGEA-18					
Con servomotore					
EMGA-60-P-G...-SAS-55	**EMMS-AS-55-...**	**550 957** **EAMM-A-F28-60G**	**529 944** **MTR-FL44-PL60**	**123 042** **KSE-30-35-D08-D11**	**530 468** **DGEA-KG-18-ZR-FL44**
Con motore passo-passo					
–	**EMMS-ST-57-...**	**550 956** **EAMM-A-F28-57A**	**530 081** **MTR-FL44-ST57**	**530 088** **KSE-30-35-D06,35-D08**	**530 468** **DGEA-KG-18-ZR-FL44**
EMGA-60-P-G...-SST-57	**EMMS-ST-57-...**	**550 957** **EAMM-A-F28-60G**	**529 944** **MTR-FL44-PL60**	**123 042** **KSE-30-35-D08-D11**	**530 468** **DGEA-KG-18-ZR-FL44**
–	**EMMS-ST-87-...** **MTR-ST-87-48S-A...**	**550 958** **EAMM-A-F28-87A**	**530 082** **MTR-FL44-ST87**	**123 042** **KSE-30-35-D08-D11**	**530 468** **DGEA-KG-18-ZR-FL44**
DGEA-25					
Con servomotore					
EMGA-60-P-G...-SAS-70	**EMMS-AS-70-...**	**550 959** **EAMM-A-F32-60G**	**550 987** **EAMF-A-64-60G**	**530 090** **KSE-40-66-D11-D11**	**530 469** **DGEA-KG-25-ZR-FL64**
Con motore passo-passo					
–	**EMMS-ST-87-...** **MTR-ST-87-48S-A...**	**550 960** **EAMM-A-F32-87A**	**533 140** **MTR-FL64-ST87**	**530 090** **KSE-40-66-D11-D11**	**530 469** **DGEA-KG-25-ZR-FL64**
DGEA-40					
Con servomotore					
EMGA-80-P-G...-SAS-100	**EMMS-AS-100-...**	**550 935** **EAMM-A-F40-80G**	**533 139** **MTR-FL64-PL80**	**123 845** **KSE-40-66-D15-D20**	**124 629** **DGEA-KG-40-ZR-FL64**
Con motore passo-passo					
EMGA-80-P-G...-SST-87	**EMMS-ST-87-...**	**550 935** **EAMM-A-F40-80G**	**533 139** **MTR-FL64-PL80**	**123 845** **KSE-40-66-D15-D20**	**124 629** **DGEA-KG-40-ZR-FL64**

Combinazioni possibili con riduttore angolare
Motore

Tipo
DGEA-18
Con servomotore
EMMS-AS-55-...
MTR-AC-55-3S-...
DGEA-25
Con servomotore
EMMS-AS-70-...
MTR-AC-70-3S-...
DGEA-40
Con servomotore
EMMS-AS-100-...
MTR-AC-100-5S-...

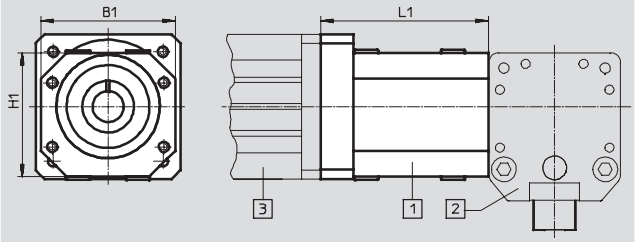
- - Attenzione

I riduttori hanno un rapporto di riduzione di 4:1 e, nell'esecuzione con riduttore angolare, di 3:1.

Assi a sbalzo DGEA

Accessori

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



Schema di principio:
1 kit assiale
2 asse a sbalzo
3 motore

Dati generali							
EAMM-A-...		F28-			F32-		F40-
		57A	87A	60G	87A	60G	80G
Momento trasmissibile	[Nm]	7,5	8		17		17
Momento di inerzia di massa	[kg mm^2]	6,1			42,3		42,3
Numero di giri max.	[1/min]	8000			6500		6500
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	Peso [g]	Cod. prod.	Tipo
EAMM-A-F28-57A	45	45	52,7	282	**550 956**	**EAMM-A-F28-57A**
EAMM-A-F28-87A			56,2	454	**550 958**	**EAMM-A-F28-87A**
EAMM-A-F28-60G			60,7	345	**550 957**	**EAMM-A-F28-60G**
EAMM-A-F32-87A	65	60	82,7	773	**550 960**	**EAMM-A-F32-87A**
EAMM-A-F32-60G			89,4	918	**550 959**	**EAMM-A-F32-60G**
EAMM-A-F40-80G	65	60	89,4	890	**550 935**	**EAMM-A-F40-80G**

- Attenzione

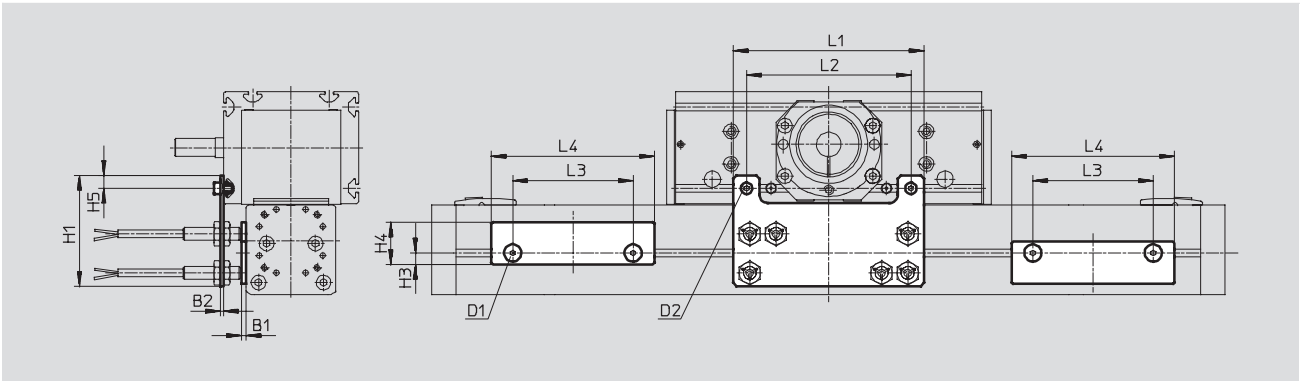
Combinazioni possibili asse/motore
➔ 5/ 2.1-118

Assi a sbalzo DGEA

Accessori

Kit di fissaggio per sensori di finecorsa (DGEA in esecuzione base) DGEA-...-SIE-M8
(codice di ordinazione L)

Materiali
acciaio zincato



Dimensioni e dati di ordinazione

Per dimensioni	B1	B2	D1	D2	H1	H3	H4
18	3	2	M4	M4	77	5	21
25	3	2	M4	M5	68	7	26
40	3	7	M4	M5	92	7	26

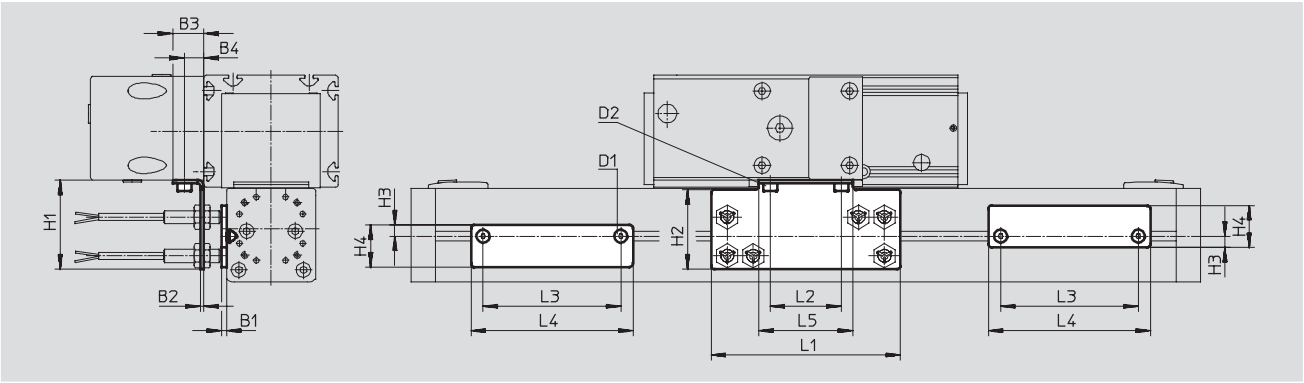
Per dimensioni	H5	L1	L2	L3	L4	Peso [g]	Cod. prod.	Tipo
18	7,5	114	90	74	84	200	**525 868**	**DGEA-18-SIE-M8**
25	8	117	101	85	100	250	**525 869**	**DGEA-25-SIE-M8**
40	10	190	133	124,5	145	600	**525 870**	**DGEA-40-SIE-M8**

Assi a sbalzo DGEA

Accessori

Kit di fissaggio per sensori di finecorsa (DGEA con riduttore angolare) DGEA-...-G...-SIE-M8
(codice di ordinazione L)

Materiali
acciaio zincato



Dimensioni e dati di ordinazione

Per dimensioni	B1	B2	B3	B4	D1	D2	H1	H2	H3
18	3	2	17	11	M4	M4	40	34	5
25	3	2	19	12	M4	M5	55	49	7
40	3	4	23	16	M4	M5	64	52	7

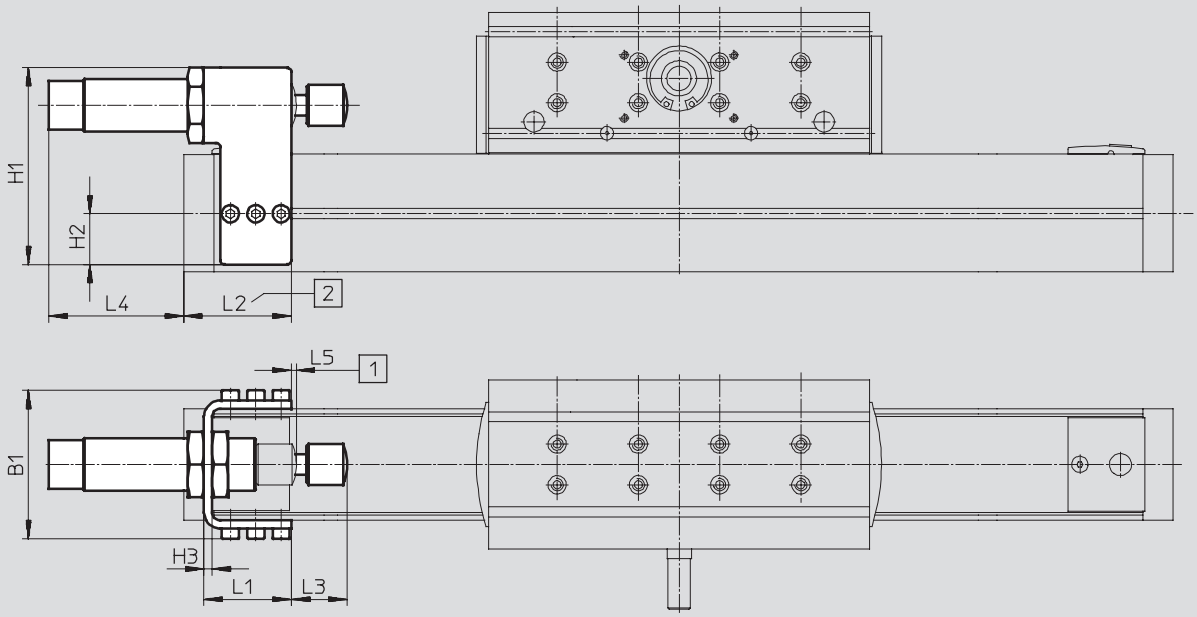
Per dimensioni	H4	L1	L2	L3	L4	L5	Peso [g]	Cod. prod.	Tipo
18	21	114	34	74	84	46	170	**539 935**	**DGEA-18-G...-SIE-M8**
25	26	117	44	85	100	58	250	**539 936**	**DGEA-25-G...-SIE-M8**
40	26	153	68	124,5	145	82	520	**539 937**	**DGEA-40-G...-SIE-M8**

Assi a sbalzo DGEA

Accessori

Kit ammortizzatore DGEA-...-YSR
(codice di ordinazione C)

Materiali
acciaio zincato
Senza rame, PTFE e silicone



1 Regolazione in fase di montaggio

2 Distanza minima a fine asse, altrimenti posizione terminale non assicurata

Dimensioni e dati di ordinazione

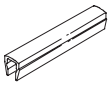
Per dimensioni	B1	H1	H2	H3	L1	L2 +1	L3	L4	L5 +1	Peso [g]	Cod. prod.	Tipo
18	59	80	15	3	44	67	1)	1)	2	390	**525 865**	**DGEA-18-YSR**
25	73	97	25	4	43	60	1)	1)	2	630	**525 866**	**DGEA-25-YSR**
40	98	122	14	4	70,5	81	1)	1)	2	1200	**525 867**	**DGEA-40-YSR**

1) La misura dipende dalle dimensioni dell'ammortizzatore e dalla posizione di montaggio del kit ammortizzatore

Assi a sbalzo DGEA

Accessori

FESTO

Dati di ordinazione						
	Per dimensioni	Nota	Codice di ordinazione	Cod. prod.	Tipo	PE[1]
Tassello scorrevole NST						
	18	Per scanalatura profilo	Y	**526 091**	**NST-HMV-M4**	1
	25, 40			**150 914**	**NST-5-M5**	1
	18, 25, 40	Per testa motrice	X	**150 914**	**NST-5-M5**	1
Bussola di centratura ZBH						
	18, 25, 40	Per testa motrice	Z	**150 927**	**ZBH-9**	10
Copertura per scanalatura ABP/ABP-S						
	18	Per scanalatura profilo ogni 0,5 m	S	**151 680**	**ABP-5-S**	2
	25, 40			**151 681**	**ABP-5**	2
	18, 25, 40	Per testa motrice ogni 0,5 m	B	**151 681**	**ABP-5**	2

1) Quantità in pezzi

Dati di ordinazione - Sensori di finecorsa induttivi M8							
	Connessione elettrica		Uscita di commutazione	LED	Lunghezza cavo [m]	Cod. prod.	Tipo
	Cavo	Connettore M8					
Contatto n.a.							
	A 3 fili	–	PNP	■	2,5	**150 386**	**SIEN-M8B-PS-K-L**
	–	A 3 poli	PNP	■		**150 387**	**SIEN-M8B-PS-S-L**
Contatto n.c.							
	A 3 fili	–	PNP	■	2,5	**150 390**	**SIEN-M8B-PO-K-L**
	–	A 3 poli	PNP	■		**150 391**	**SIEN-M8B-PO-S-L**

Dati di ordinazione - Cavi di collegamento						Fogli dati ➔ www.festo.com/catalogue/nebu
	Connessione elettrica a sinistra	Connessione elettrica a destra		Lunghezza cavo [m]	Cod. prod.	Tipo
	Connettore diritto, M8x1, a 3 poli	Cavo, estremità aperta, a 3 fili		2,5	**541 333**	**NEBU-M8G3-K-2.5-LE3**
				5	**541 334**	**NEBU-M8G3-K-5-LE3**
	Connettore angolare, M8x1, a 3 poli	Cavo, estremità aperta, a 3 fili		2,5	**541 338**	**NEBU-M8W3-K-2.5-LE3**
				5	**541 341**	**NEBU-M8W3-K-5-LE3**

Cantilever axes EGSA, with spindle drive

FESTO

Cantilever axes EGSA, with spindle drive

Key features

At a glance

The spindle driven cantilever axis EGSA reduces cycle times to an absolute minimum. This is thanks to a powerful mechanical system and a range of motor choices adapted to the requirements of the application.

In contrast to the electric cantilever axis DGEA designed for longer strokes, the EGSA demonstrates its strengths with short strokes.

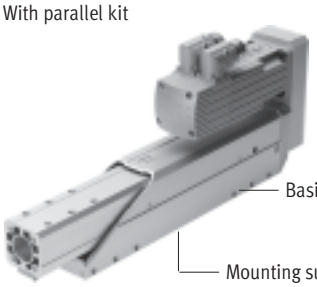
Advantages:
- Maximum precision
- High dynamic response
- Repetition accuracy of ±0.01 mm

Complete system comprises cantilever axis, motor, motor controller and motor mounting kit

Spindle driven cantilever axis

With axial kit

With parallel kit



Note

The spindle driven cantilever axis must only be mounted using the underside of the base profile (➔ picture on left). The lateral holes on the base profile are provided for securing accessories (e.g. protective trunking).

Motor ➔ 11

1 Servo motor EMMS-AS
2 Stepper motor EMMS-ST

Note

A range of specially adapted complete solutions is available for the spindle driven cantilever axis EGSA and the motors.

Motor controller Technical data ➔ Internet: motor controller

1 Servo motor controller CMMP-AS
2 Stepper motor controller CMMS-ST

Motor mounting kit ➔11

Axial kit

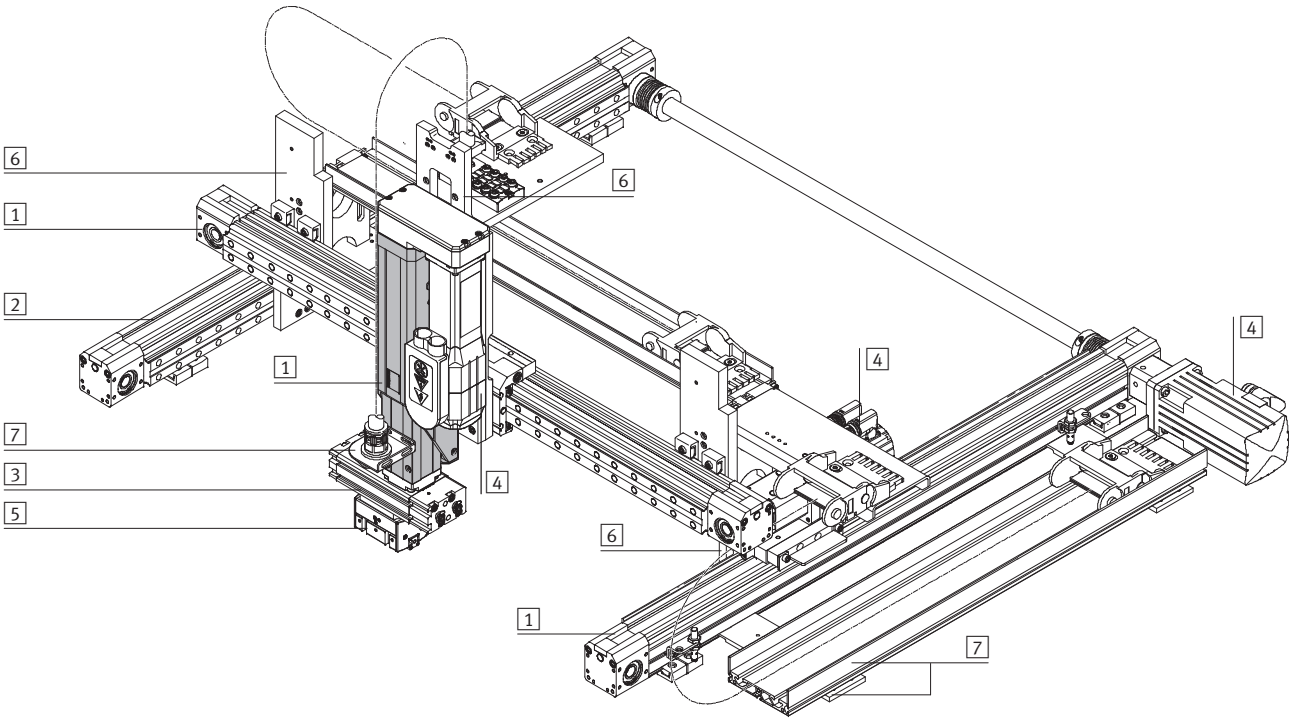
Parallel kit

There are complete kits for both parallel and axial motor mounting.

Cantilever axes EGSA, with spindle drive

Key features

System product for handling and assembly technology



System components and accessories			
		Brief description	**➔ Page/Internet**
1	Axes	Wide range of combinations possible within handling and assembly technology	axes
2	Guide axes	To increase force and torque capacity in multi-axis applications	guide axes
3	Drives	Wide range of combinations possible within handling and assembly technology	drive
4	Motors	Servo and stepper motors	motor
5	Grippers	Wide range of variations possible within handling and assembly technology	gripper
6	Adapters	For drive/drive and drive/gripper connections	adapter kit
7	Installation components	For a clean, safe layout of electrical cables and tubing	installation component

Cantilever axes EGSA, with spindle drive

Type codes and peripherals overview

Type codes

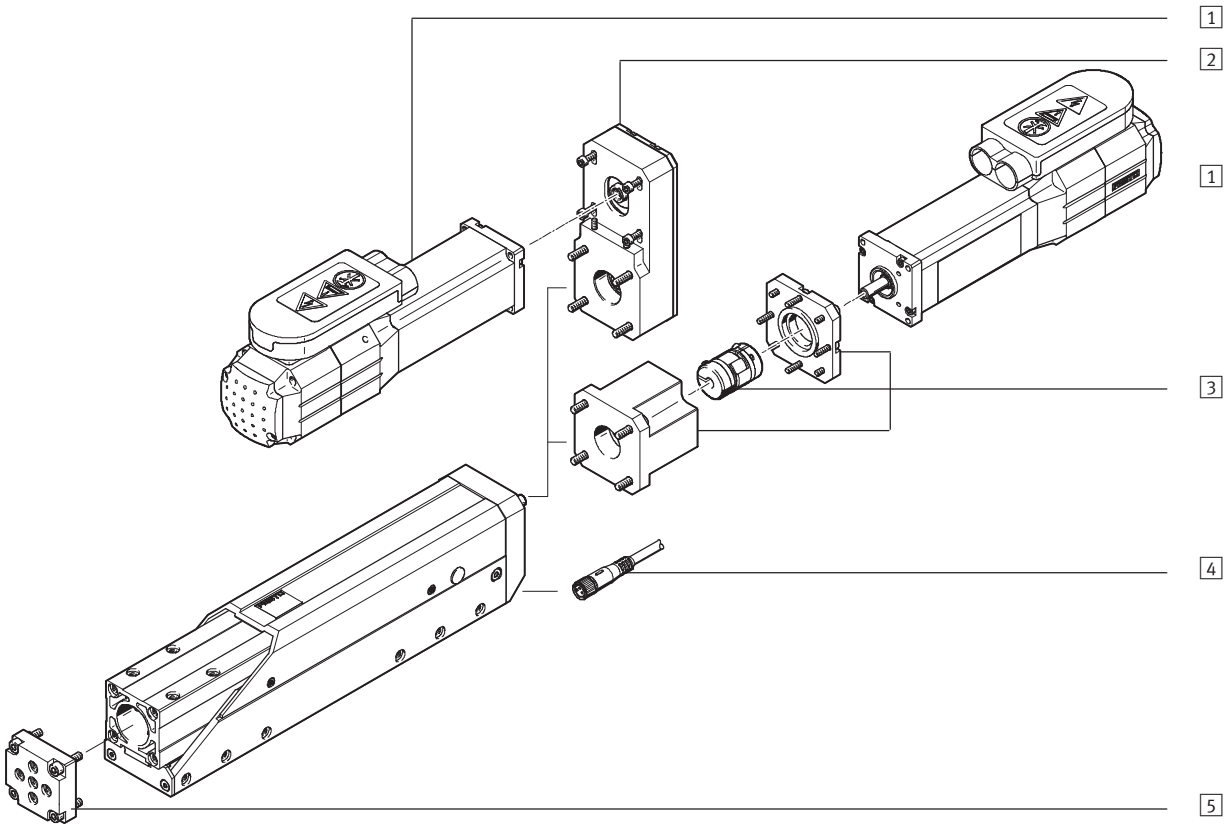
EGSA	–	50	–	100

Type	
EGSA	Cantilever axis with spindle drive

Size

Stroke [mm]

Peripherals overview



Accessories

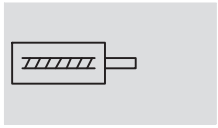
	Type	Brief description	➔ Page/Internet
1	Motor EMMS	• Motors specially matched to the axis, with or without brake • The motor can be turned by 90° for mounting, depending on requirements. This means the connection side can be freely selected	11
2	Parallel kit EAMM-U	For parallel motor mounting (consisting of: housing, clamping sleeve, toothed belt pulley, toothed belt)	11
3	Axial kit EAMM-A	For axial motor mounting (consisting of: coupling, coupling housing and motor flange)	11
4	Connecting cable NEBU	For connecting the proximity sensor to a controller. The proximity sensor (N/C contact) is integrated in the spindle driven cantilever axis	14
5	Adapter kit HMSV	Interface between the spindle driven cantilever axis and drive or gripper	14

Cantilever axes EGSA, with spindle drive

Technical data

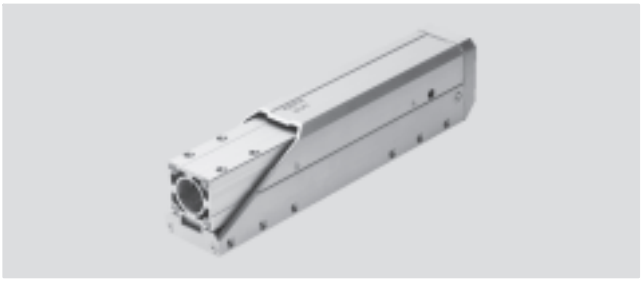
FESTO

Function



Size
50 and 60

Stroke length
100 ... 300 mm



General technical data					
Size		50	60		
Constructional design		Electromechanical cantilever axis with recirculating ball bearing spindle and roller bearing guide			
Working stroke	[mm]	100	100	200	300
Stroke reserve	[mm]	–3/+7	–4/+9		
Max. speed	[m/s]	1.0	1.5		1.0
Max. rotational speed	[rpm]	3,000			
Max. acceleration[1]	[m/s²]	15			
Reversing backlash[2]	[mm]	≤ 0.02			
Repetition accuracy	[mm]	±0.01			
Position sensing		Sensing of the reference point via integrated reference sensor (N/C contact)			
Type of mounting		Via female thread and centring sleeve			
Mounting position		Any			

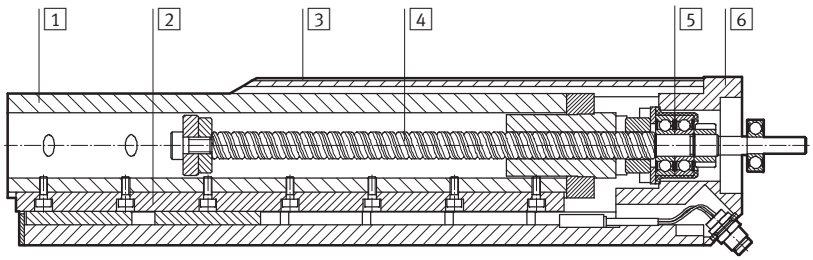
1) At max. effective load
2) In new condition

Operating and environmental conditions			
Size		50	60
Ambient temperature[1]	[°C]	0 ... 50	
Storage temperature	[°C]	0 ... 50	
Duty cycle	[%]	100	
Noise level	[dB]	< 58	< 62
Protection class		IP20	
Relative air humidity[2]	[%]	0 ... 95	

1) Note operating range of proximity sensors and motors
2) Non-condensing

Materials

Sectional view



Spindle driven cantilever axis		
1	Cantilever profile	Wrought aluminium alloy, anodised
2	Guide rail	Rolled steel
3	Housing profile, cover	Wrought aluminium alloy, anodised
4	Ball screw	Steel
5	Ball bearing	Steel
6	Spindle bearing plate	Wrought aluminium alloy, anodised
–	Note on material	Conforms to RoHS

Cantilever axes EGSA, with spindle drive

Technical data

Weight					
Size		50	60		
Stroke	[mm]	100	100	200	300
Basic weight	[g]	2,000	3,300	4,200	5,100
Moving load	[g]	750	1,350	1,800	2,250

Mass moment of inertia					
Size		50	60		
Stroke	[mm]	100	100	200	300
Total	[kgmm^2]	2	21.9	29.8	37.8
Per kg of effective load	[kgmm^2/kg]	2.5	16.4		

Mechanical data			
Size		50	60
Spindle diameter	[mm]	10	12.7
Spindle pitch	[mm/rev.]	10	25.4
Max. feed force $F_{xmax.}$	[N]	120	240
Continuous feed force	[N]	100	200
Max. effective load, horizontal	[kg]	5	10
Max. effective load, vertical	[kg]	3	6
Continuous driving torque	[Nm]	0.2	1
Max. radial force[1)]	[N]	60	110

1) On the drive shaft

Calculation of the mean feed force F_{xm}

The peak feed force value must not exceed the maximum feed force within a movement cycle. In the case of vertical operation, the peak value is generally achieved during the acceleration phase of the upwards stroke. If the maximum feed force is exceeded, this can increase wear and thus shorten the service life of the ball screw spindle. The maximum speed must likewise not be exceeded.

$F_x \leq F_{xmax.}$

and

$v_x \leq v_{xmax.}$

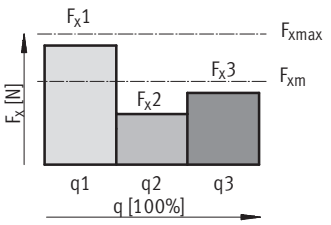
Mean feed force (to DIN 69 051-4)

During operation, the continuous feed force may be briefly exceeded up to the maximum feed force. The continuous feed force must, however, be adhered to when averaged over a movement cycle.

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

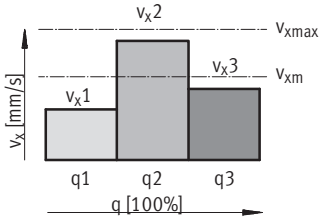
$$F_{xm} = \sqrt[3]{\sum F_x^3 \times \frac{v_x}{v_{xm}} \times \frac{q}{100}} =$$

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



Mean feed speed (to DIN 69 051-4)

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



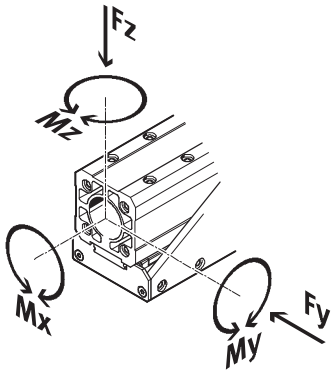
F_x	Feed force	v_x	Feed speed
F_{xm}	Mean feed force	v_{xm}	Mean feed speed
$F_{xmax.}$	Max. feed force	$v_{xmax.}$	Max. feed speed
F_{xcont}	Continuous feed force		
q	Time		

Cantilever axes EGSA, with spindle drive

Technical data

Characteristic load values of the guide

The indicated forces and torques refer to the centre of the guide rail.
They must not be exceeded during dynamic operation. Special attention must be paid to the cushioning phase.



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

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

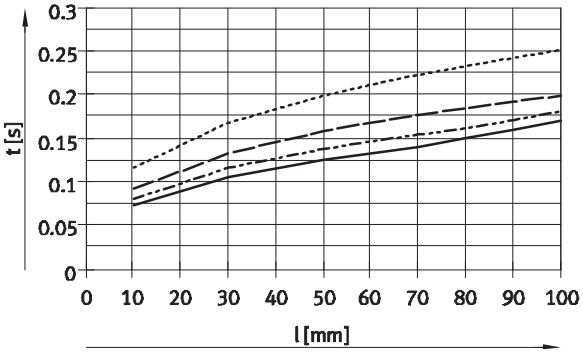
Permissible forces and torques			
Size		50	60
$Fy_{max.}$	[N]	150	200
$Fz_{max.}$	[N]	150	200
$Mx_{max.}$	[Nm]	10	25
$My_{max.}$	[Nm]	25	70
$Mz_{max.}$	[Nm]	25	70

Note

Sizing software
PositioningDrives
➔www.festo.com

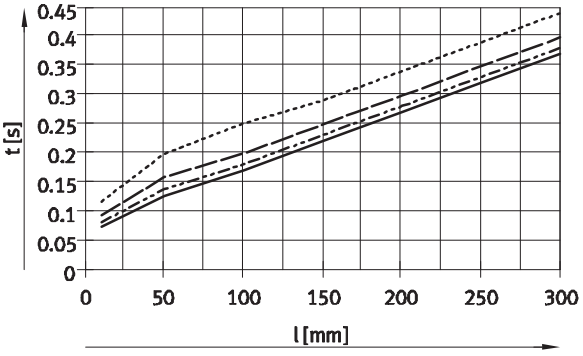
Positioning time t as a function of working stroke l and load m

EGSA-50-100 with servo motor EMMS-AS-40...



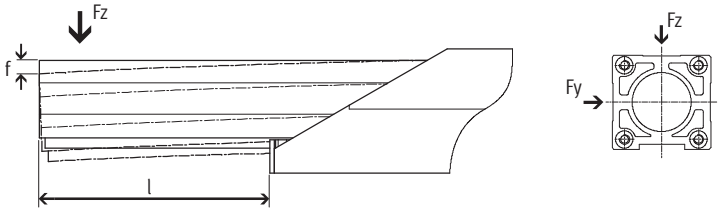
m = 0 kg
m = 1 kg
m = 2 kg
m = 3 kg

EGSA-60-300 with servo motor EMMS-AS-55...



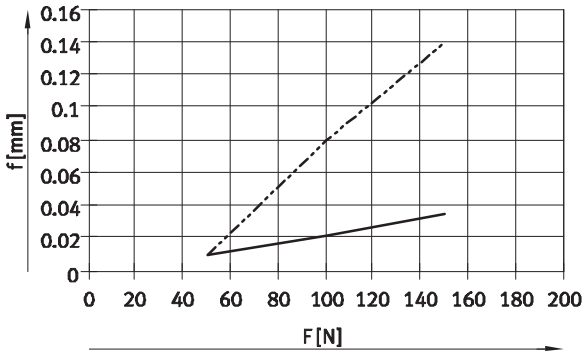
m = 0 kg
m = 2 kg
m = 4 kg
m = 6 kg

Deflection f as a function of working stroke l and effective load F

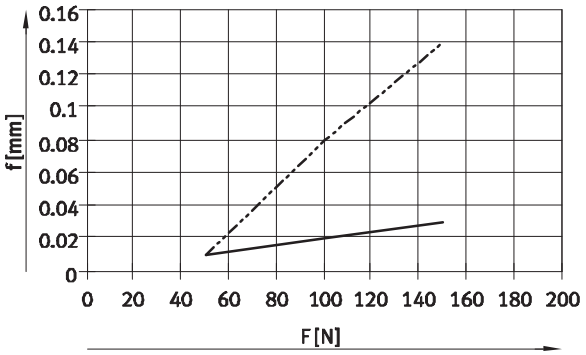


EGSA-50-100

Applied force Fy



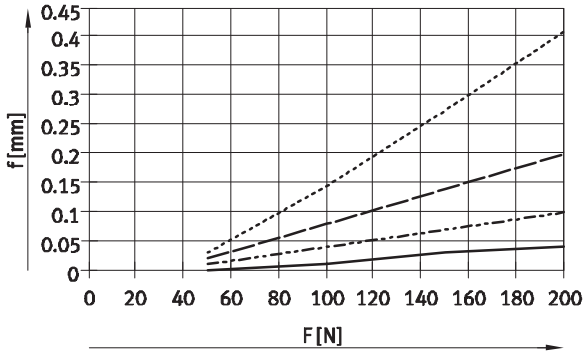
Applied force Fz



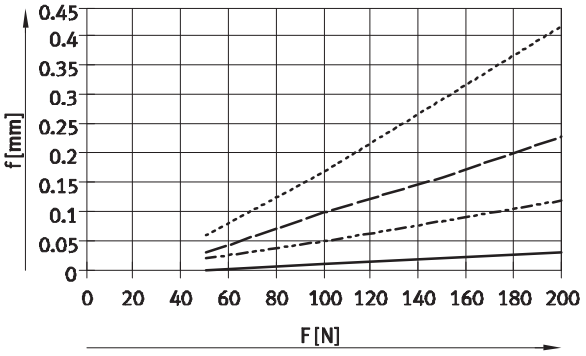
l = 0 mm
l = 100 mm

EGSA-60-...

Applied force Fy



Applied force Fz

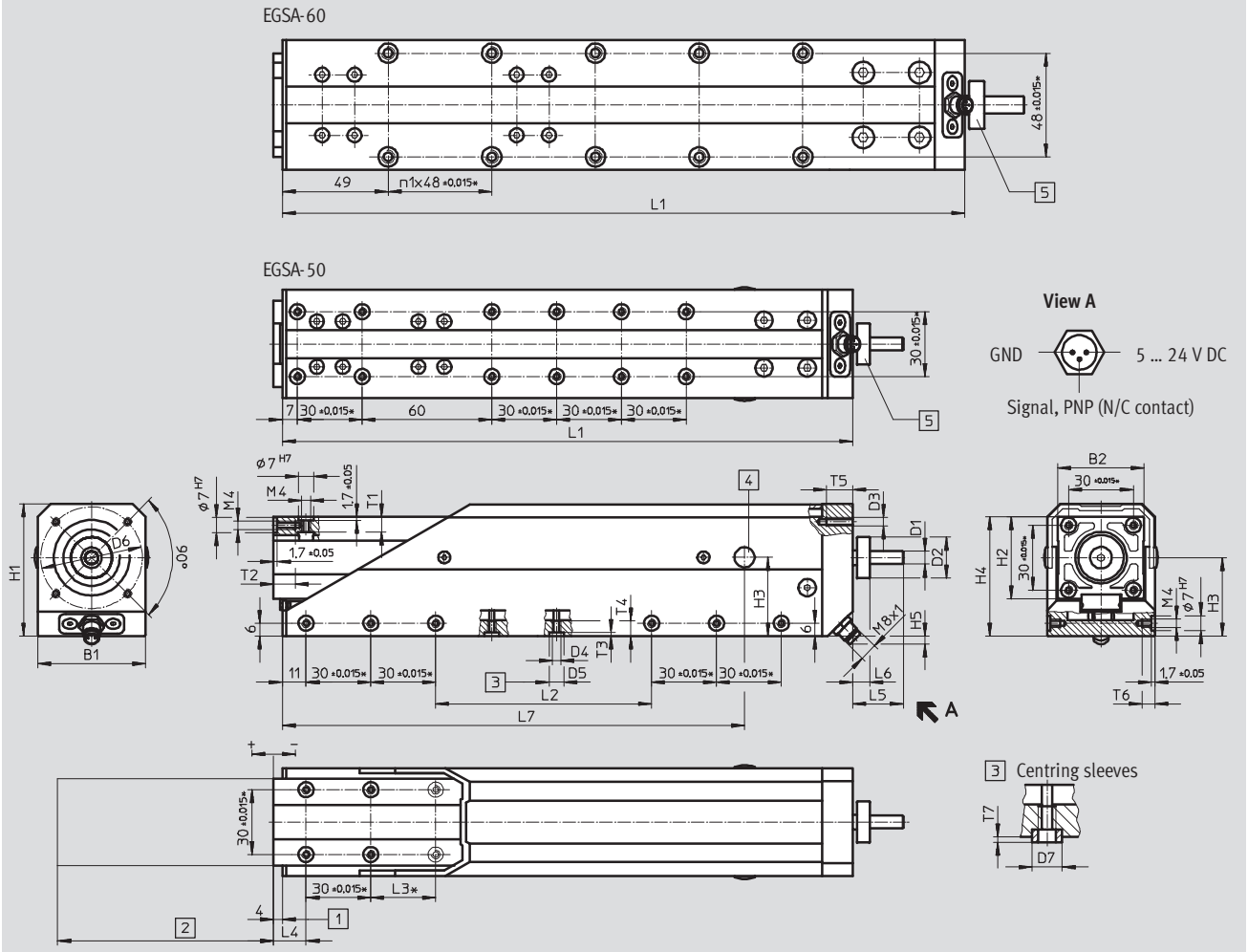


l = 0 mm
l = 100 mm
l = 200 mm
l = 300 mm

Cantilever axes EGSA, with spindle drive

Technical data

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



1 Retracted (without stroke reserve)

2 Usable working stroke (without stroke reserve)

3 Centring sleeves included in scope of delivery

4 Lubrication facility for the spindle nut in retracted condition

5 Roller bearing for centring the attachments

Size	Stroke [2]	Stroke reserve		B1	B2	D1 k6 ∅	D2 −0.01 ∅	D3	D4	D5 H7 ∅	D6 ∅	D7 ∅	H1	H2	H3
		Retracted	Advanced												
50	100	−3	+7	50	40	6	19	M4	M4	7	47	7_{js7}	61.4	38	36.4
60	100	−4	+9	60	48	8	22	M5	M6	9	60	9_{h6}	75	48	45
	200														
	300														

Size	Stroke [2]	H4	H5	L1	L2	L3* ±0.015	L4	L5	L6	L7	n1	T1 min.	T2 min.	T3 ±0.05	T4 min.	T5 min.	T6 min.	T7 ±0.1
50	100	55.4	3.6	264	100	–	15	23.5	~8	214	–	7	10	1.7	7	12	6	1.3
60	100	69	1.3	316	152	30	20	27.5	~9	258	4	10	14	2.2	12	11	15	1.8
	200			416	252					358	6							
	300			516	352					458	8							

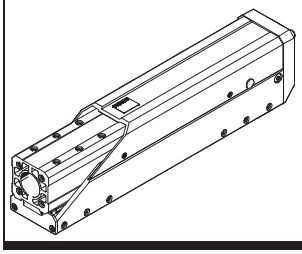
* Tolerances for centring holes, ±0.2 for threaded holes

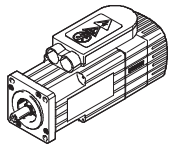
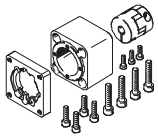
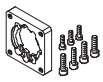
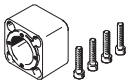
Cantilever axes EGSA, with spindle drive

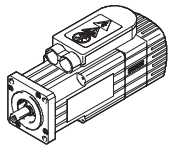
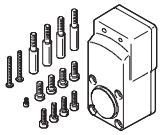
Technical data

FESTO

Ordering data

	Size	Stroke	Part No.	Type
	50	100	**558199**	**EGSA-50-100**
	60	100	**558200**	**EGSA-60-100**
		200	**558201**	**EGSA-60-200**
		300	**558202**	**EGSA-60-300**

Permissible axis/motor combinations with axial kit				
Motor	Axial kit	Axial kit consisting of:		
		Motor flange	Coupling	Coupling housing
				
Type	Part No. Type	Part No. Type	Part No. Type	Part No. Type
EGSA-50				
with servo motor				
EMMS-AS-40-...	**559798** **EAMM-A-A19-40A**	**558904** **EAMF-A-28C-40A**	**558901** **EAMC-20-30-6-6**	**559801** **EAMK-A-A19-28C**
with stepper motor				
EMMS-ST-42-...	**558895** **EAMM-A-A19-42A**	**558905** **EAMF-A-28C-42A**	**558902** **EAMC-20-30-5-6**	**559801** **EAMK-A-A19-28C**
EGSA-60				
with servo motor				
EMMS-AS-55-...	**559799** **EAMM-A-A22-55A**	**559800** **EAMF-A-38C-55A**	**557390** **EAMC-30-35-8-9**	**559802** **EAMK-A-A22-38C**
EMMS-AS-70-...	**558898** **EAMM-A-A22-70A**	**558908** **EAMF-A-38C-70A**	**123042** **EAMC-30-35-8-11**	**559802** **EAMK-A-A22-38C**
with stepper motor				
EMMS-ST-57-...	**558897** **EAMM-A-A22-57A**	**558907** **EAMF-A-38C-57A**	**530088** **EAMC-30-35-6.35-8**	**559802** **EAMK-A-A22-38C**

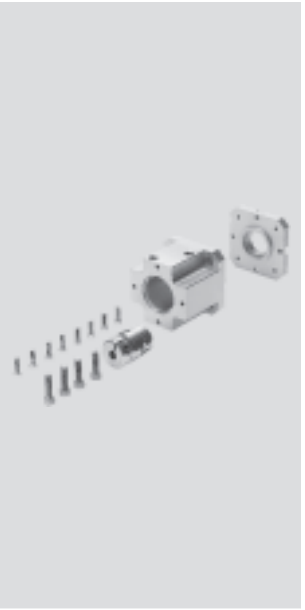
Permissible axis/motor combinations with parallel kit		
Motor	Parallel kit	
		
Type	Part No.	Type
EGSA-50		
with servo motor		
EMMS-AS-40-...	**559785**	**EAMM-U-A19-40A**
EGSA-60		
with servo motor		
EMMS-AS-55-...	**559786**	**EAMM-U-A22-55A**
EMMS-AS-70-...	**559787**	**EAMM-U-A22-70A**

- Note

Technical data for motors
➔ Internet: motor

Axial kit EAMM-A-...

Material:
Coupling housing, coupling hubs, motor flange: Aluminium
Screws: Galvanised steel



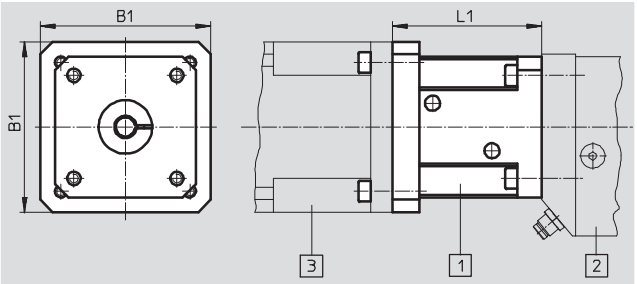


Diagram:
1 Axial kit
2 Cantilever axis
3 Motor

General technical data						
EAMM-A-...		A19-		A22-		
		40A	42A	55A	57A	70A
Transferable torque	[Nm]	2.3	2.2	5.1	7.5	8
Mass moment of inertia	[kgmm²]	1.06	1.06	6.06	6.06	6.06
Mounting position		Any				

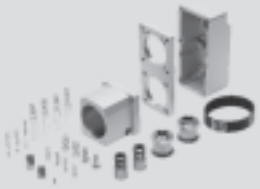
Operating and environmental conditions		
Ambient temperature	[°C]	0 ... 50
Storage temperature	[°C]	−25 ... +60
Protection class[1)]		IP40
Relative air humidity	[%]	0 ... 95
Corrosion resistance class CRC[2)]		2
Note on material		Conforms to RoHS

1) Only with combined attachment of motor and axis
2) Corrosion resistance class 2 to Festo standard 940 070
Components requiring moderate corrosion resistance. 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.

Dimensions and ordering data					
Type	B1	L1	Weight [g]	Part No.	Type
EAMM-A-A19-40A	49	49	240	**559798**	**EAMM-A-A19-40A**
EAMM-A-A19-42A	49	55.5	270	**558895**	**EAMM-A-A19-42A**
EAMM-A-A22-55A	58	59	430	**559799**	**EAMM-A-A22-55A**
EAMM-A-A22-57A	58	59	430	**558897**	**EAMM-A-A22-57A**
EAMM-A-A22-70A	70	61.5	480	**558898**	**EAMM-A-A22-70A**

Parallel kit EAMM-U-...

Material:
Housing: Gravity die aluminium
Clamping component, clamping sleeve, toothed belt gearwheel: Steel, corrosion resistant
Toothed belt: Polychloroprene
Screws: Galvanised steel



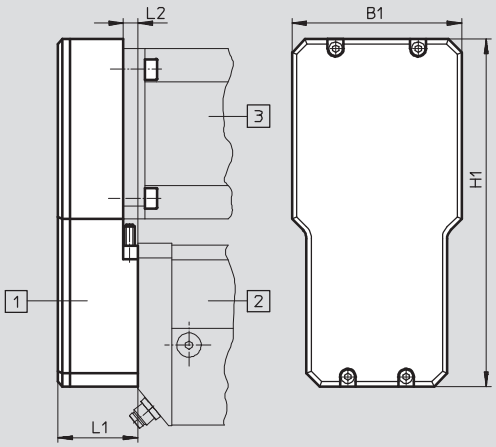


Diagram:
1 Parallel kit
2 Cantilever axis
3 Motor

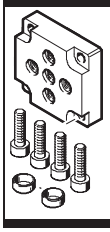
General technical data				
EAMM-U-...		A19-	A22-	
		40A	55A	70A
Transferable torque	[Nm]	1	3	3
No-load driving torque	[Nm]	0.05	0.1	0.2
Mass moment of inertia	[kgmm^2]	2.868	9.630	10.13
Max. rotational speed	[rpm]	6,000	4,000	4,000
Mounting position		Any		

Operating and environmental conditions		
Ambient temperature	[°C]	0 ... 50
Storage temperature	[°C]	–25 ... +60
Protection class[1)]		IP40
Relative air humidity	[%]	0 ... 95
Corrosion resistance class CRC[2)]		2
Note on material		Conforms to RoHS

1) Only with combined attachment of motor and axis
2) Corrosion resistance class 2 to Festo standard 940 070
Components requiring moderate corrosion resistance. 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.

Dimensions and ordering data							
Type	B1	H1	L1	L2	Weight [g]	Part No.	Type
EAMM-U-A19-40A	49	107	30	7	270	**559785**	**EAMM-U-A19-40A**
EAMM-U-A22-55A	58	133	32	4.5	410	**559786**	**EAMM-U-A22-55A**
EAMM-U-A22-70A	70	143	33	6	540	**559787**	**EAMM-U-A22-70A**

Ordering data – Adapter kits

	Remarks	For size	Part No.	Type
	Drive/drive connections, drive/gripper connections ➔ Internet: hmsv	50	**560017**	**HMSV-61**
		60	**560018**	**HMSV-62**
			560019	**HMSV-63**

Ordering data – Connecting cables Technical data ➔ Internet: nebu

	Electrical connection, left	Electrical connection, right	Cable length [m]	Part No.	Type
	Straight socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	**541333**	**NEBU-M8G3-K-2.5-LE3**
			5	**541334**	**NEBU-M8G3-K-5-LE3**
	Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	**541338**	**NEBU-M8W3-K-2.5-LE3**
			5	**541341**	**NEBU-M8W3-K-5-LE3**

Linear drives ELGL-LAS, with air bearing and linear motor

FESTO

New

Linear drives ELGL-LAS, with air bearing and linear motor

Key features

At a glance

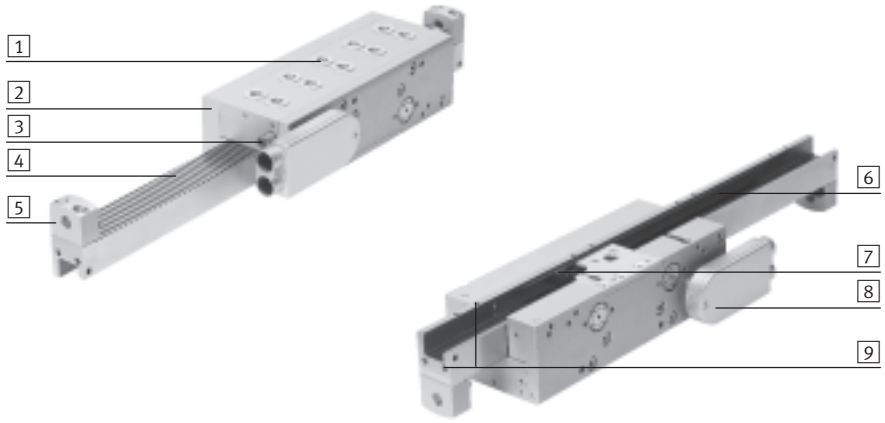
The electric linear drive ELGL is a handling axis with air-bearing guide and integrated linear motor. The drive elements and the air bearing form a single unit. The slide moves on the stator rail. An integrated displacement encoder sends signals to the controller.

The displacement encoder, controller and motor operate in a closed-loop control circuit.
This enables the motor to regulate to specified set values for speed and position within the permitted stroke range with a high degree of accuracy.

Advantages

- Highly accurate positioning and very good linearity thanks to the air bearing
- Integrated locking brake function through magnetic pretensioning of the air bearing
- Multiple carriages possible on one axis
- Opposing and synchronous movements possible
- No friction on the guide parts
- Maintenance and wear-free
- Insensitive to dirt thanks to air bearing

The technology in detail



1 Mounting thread with centring recesses
2 Slide
3 Supply port for air bearing
4 Stator
5 End stop with rubber buffer, shock absorbers can alternatively be screwed in
6 Integrated displacement encoder
7 Sensor
8 Electrical interface, rotatable in steps of 90°
9 Mounting thread for foot mountings

Complete system consisting of linear drive and motor controller

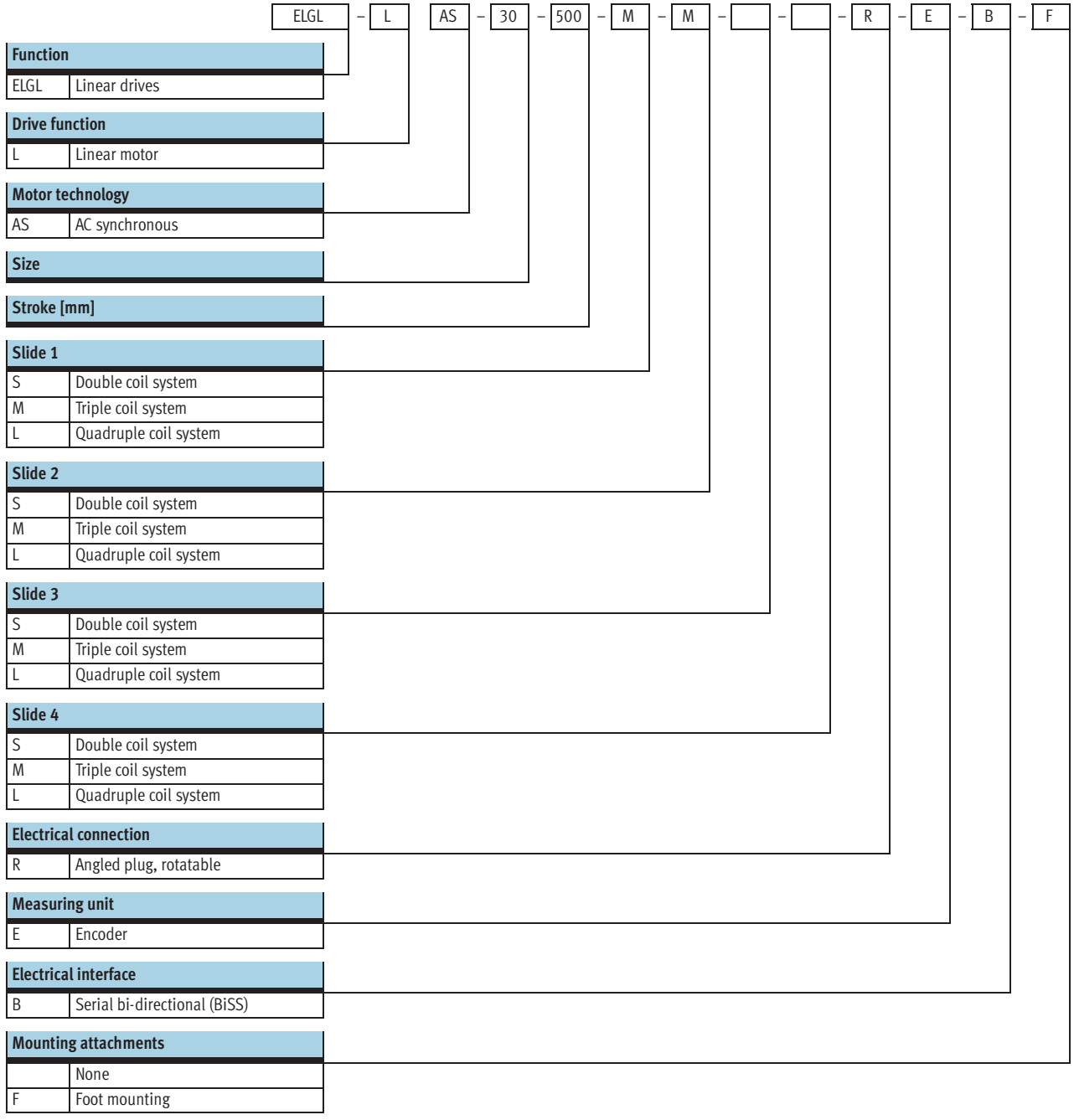
Linear axis ELGL ➔3

Servo motor controller CMMP-AS ➔Internet: motor controller

Linear drives ELGL-LAS, with air bearing and linear motor

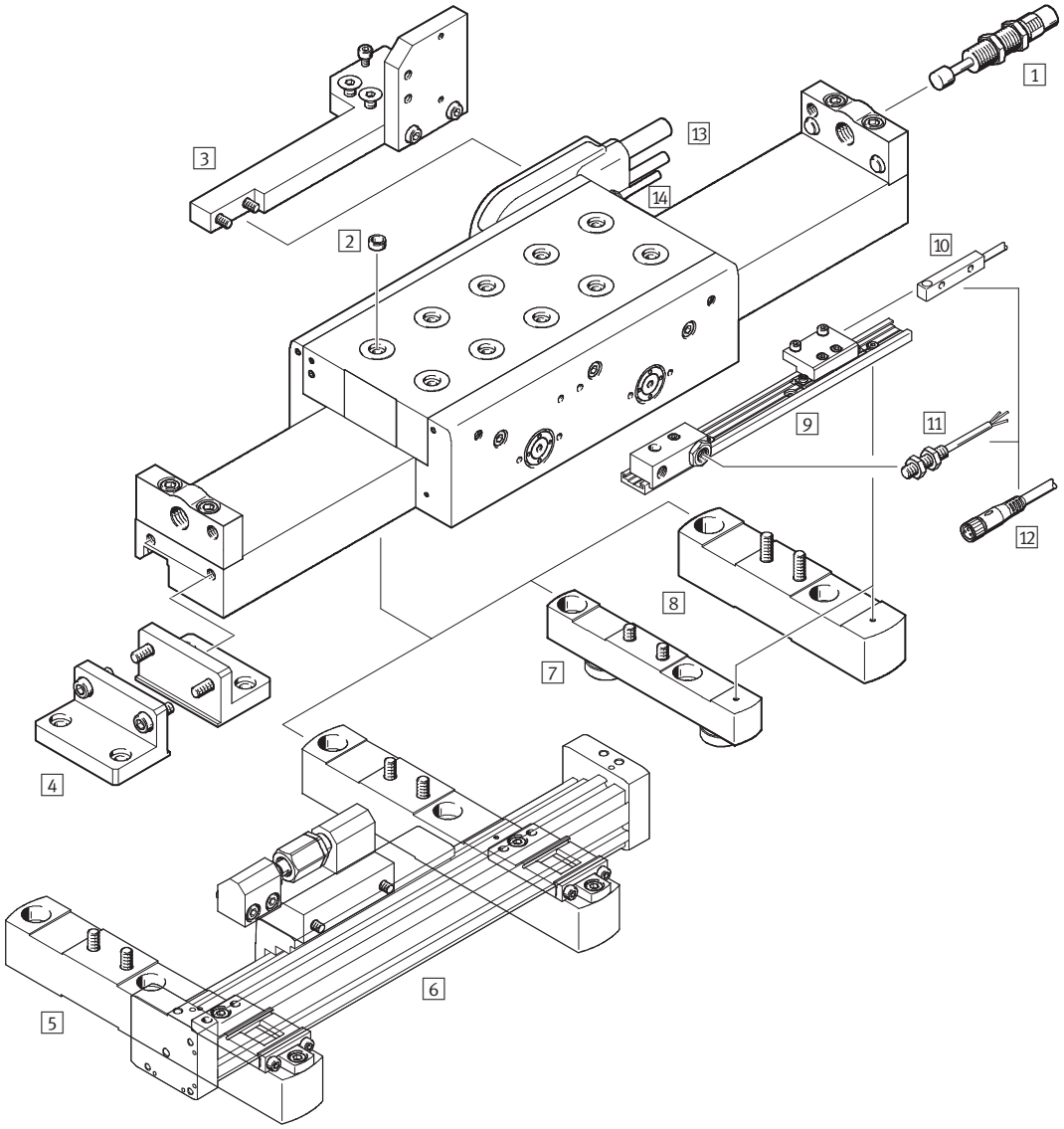
FESTO

Type codes



Linear drives ELGL-LAS, with air bearing and linear motor

Peripherals overview



Linear drives ELGL-LAS, with air bearing and linear motor

FESTO

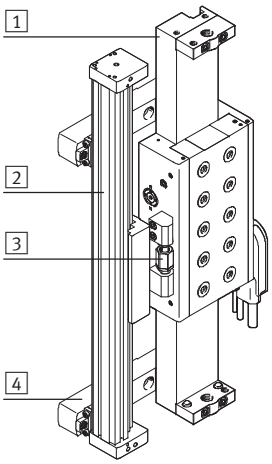
Peripherals overview

Accessories			
	Type	Brief description	→ Page/Internet
1	Shock absorber YSRW	For avoiding damage at the end stop in the event of malfunction	19
2	Centring sleeve ZBH	• For centring loads and attachments on the slide • Centring sleeves are not included in the scope of delivery of the drive	19
3	Mounting kit EAHT	For mounting an energy chain (type: E6.29 or E6.40) on the linear drive ELGL	17
4	Foot mounting EAHF	• For mounting the axis on the end cap • 2 included in the scope of delivery	14
5	Mounting kit EAHC	• For mounting a pneumatic linear drive DGC on the linear drive ELGL • The slides are connected to each other via a self-aligning rod coupler	18
6	Linear drive DGC-18-...	For relieving the load on the linear motor when used vertically (→ below)	dgc
7	Adjustable foot mounting EAHF-...-PJ	• For mounting the axis on the stator • Height-adjustable foot mounting, compensates for unevenness of the mounting surface • 1 included in the scope of delivery	15
8	Foot mounting EAHF-...-P	For mounting the axis on the stator • 2 included in the scope of delivery	14
9	Sensor bracket EAPR	For attaching the inductive proximity sensors to the foot mountings EAHF-...-P or EAHF-...-PJ	16
10	Proximity sensor SIES	Inductive proximity sensor, square design	19
11	Proximity sensor SIEN	Inductive proximity sensor, round design	20
12	Connecting cable NEBU	For connecting the proximity sensor with plug connection to the controller	20
13	Motor cable NEBM	• For connecting the motor and controller • Connection can be rotated in steps of 90°	19
13	Encoder cable NEBM	• For connecting the displacement encoder and controller • Connection can be rotated in steps of 90°	19
14	QS push-in fitting QSM	For connecting compressed air tubing with standard external diameters	20

Compressed air backup for vertical operation

A pneumatic linear drive DGC-18 can be attached to the linear drive ELGL to protect the linear motor from overheating. The effective load is additionally held by the DGC when approaching the position by means of an appropriate backpressure in the DGC.

Ordering aid:
Part number: 532446
Type: DGC-18-...-G-...



1 Linear drive ELGL
2 Linear drive DGC
3 Self-aligning rod coupler FK
4 Mounting kit EAHC

New

Linear drives ELGL-LAS, with air bearing and linear motor

Technical data

FESTO

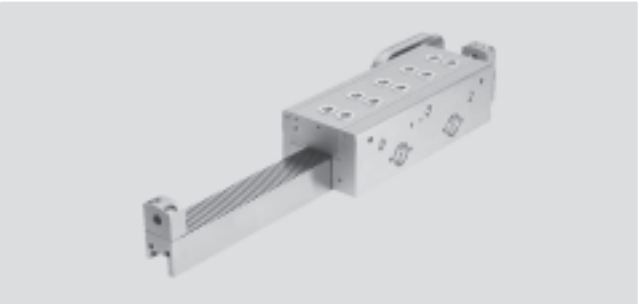
Function

Size
30 … 120

Stroke length
1 … 5,750 mm

Note

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



General technical data							
Size		30	64		120		
Coil system		S	S	M	S	M	L
Mechanical							
Constructional design		Electric linear direct drive					
		Guide with integrated displacement encoder					
Guide		Air bearing					
Type of mounting		Via accessories					
Mounting position		Horizontal	Any				
Effective stroke	[mm]	1 … 740	1 … 1,750[1]	1 … 1,650[1]	1 … 1,750[1]	1 … 1,650[1]	1 … 1,550[1]
Max. feed force Fx	[N]	44	119	164	240	310	450
Continuous feed force Fx	[N]	44	110	160	217	282	330
Max. speed	[m/s]	4			3.4	3.2	2
Max. acceleration	[m/s²]	15.4	29.4	29.1	47.6	40.4	50.2
Repetition accuracy	[mm]	±0.01					
Locking brake		Integrated by means of air bearing					
Pneumatic							
Operating pressure	[bar]	5					6
Air consumption	[l/min]	15	15	20	15	20	40
Electric							
Type of motor		Linear AC servo motor					
Displacement encoder		Magnetic					
Intermediate circuit voltage	[V]	600					
Peak current	[A]	4.0	4.0	4.0	4.5	4.5	4.5
Nominal current	[A]	3.5	3.5	3.0	3.5	3.0	2.75
Magnetic radiation		None					

1) Work strokes up to 5,750 mm on request

Operating and environmental conditions		
Ambient temperature[1]	[°C]	0 … +40
Max. motor temperature	[°C]	70
Normal temperature[2]	[°C]	23
Temperature monitoring		Automatic switch-off in event of over-temperature (PTC resistor)
Degree of protection		IP65
Relative air humidity (non-condensing)	[%]	20 … 80
CE mark (see declaration of conformity)		To EU EMC Directive
		To EU Low Voltage Directive
Certification		C-Tick

1) Note operating range of proximity sensors
2) Unless otherwise stated, all values are based on normal temperature

Linear drives ELGL-LAS, with air bearing and linear motor

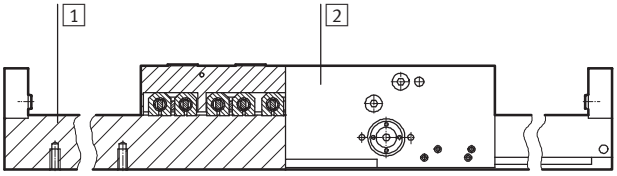
Technical data

FESTO

Weight							
Size		30	64		120		
Coil system		S	S	M	S	M	L
Slide	[kg]	2.8	3.8	5.0	4.7	6.8	8.7
Stator	[kg/m]	4.9	13.3		27.0		

Materials

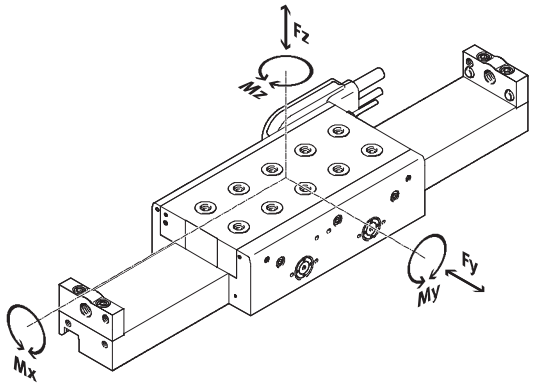
Sectional view



Linear drive		
1	Stator	Steel
2	Housing	Wrought aluminium alloy, anodised
–	Note on materials	Contains PWIS (paint-wetting impairment substances)
		RoHS-compliant

Static characteristic load values

The indicated forces and torques refer to the slide surface. The point of application of force is the point where the centre of the guide and the longitudinal centre of the slide intersect. These values must not be exceeded during dynamic operation. Attention must be paid to the acceleration and braking.



If the axis is simultaneously subjected to more than two of the indicated forces and torques, the following equation must be satisfied in addition to the indicated maximum loads:

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

Permissible forces and torques							
Size		30	64		120		
Coil system							
$Fy_{max.}$	[N]	600	600	600	600	600	600
Limit load $Fz_{max.}$	[N]	160	700	1,000	1,300	1,700	2,500
Tensile load $Fz_{max.}$	[N]	35	140	220	260	300	400
$Mx_{max.}$	[Nm]	1.2	8	10	14	21	28
$My_{max.}$	[Nm]	7	20	28	45	60	80
$Mz_{max.}$	[Nm]	20	20	30	20	30	50

Note

Positioning Drives sizing software
➔ www.festo.com

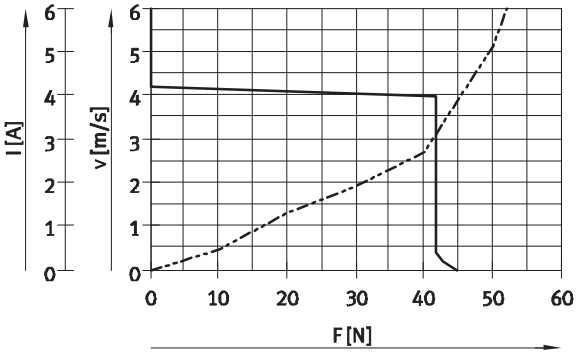
Linear drives ELGL-LAS, with air bearing and linear motor

Technical data

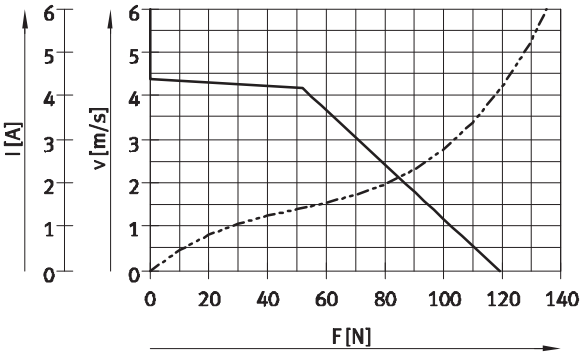
FESTO

Speed v and current I as a function of feed force F

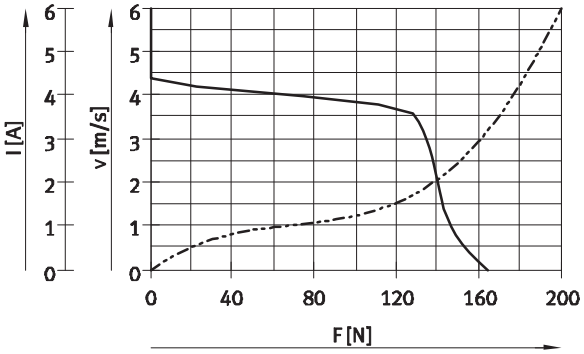
ELGL-LAS-30-...-S



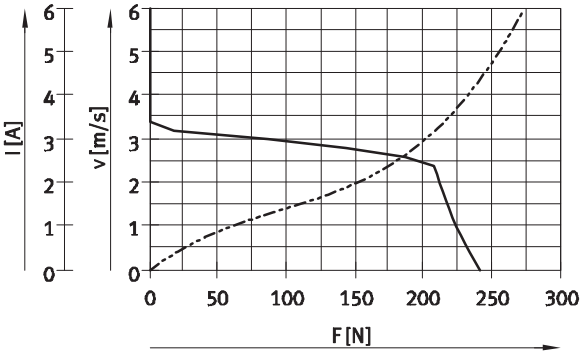
ELGL-LAS-64-...-S



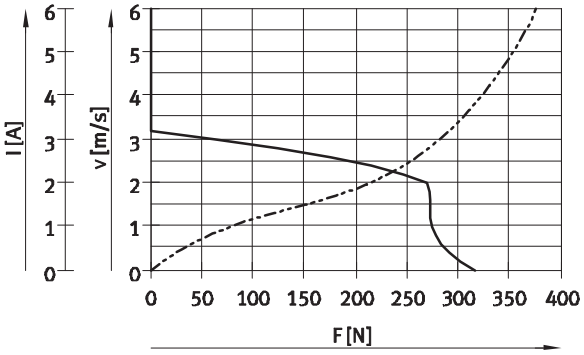
ELGL-LAS-64-...-M



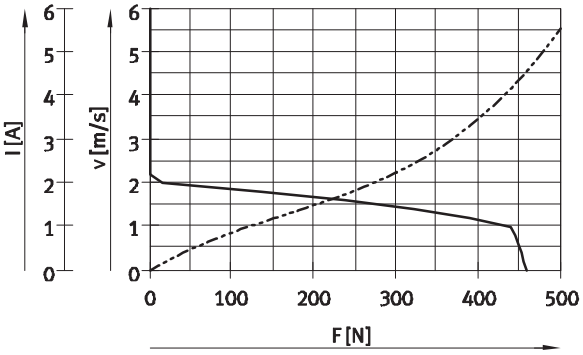
ELGL-LAS-120-...-S



ELGL-LAS-120-...-M



ELGL-LAS-120-...-L



Speed m/s

Current A

Note

Characteristics for intermediate circuit voltage of 600 V.

Linear drives ELGL-LAS, with air bearing and linear motor

Technical data

FESTO

Mounting options

The stator has an evenness value of 7 µm/300 mm. To ensure the quality of the air bearing, the mounting surface must be correspondingly precise.

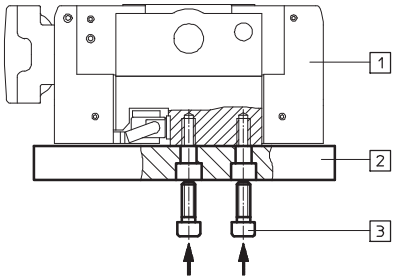
For points of support with smooth surfaces, the linear drive can be mounted directly at the stator 1 or with the help of the foot mountings 2.

If the surface is not sufficiently even, the foot mounting 3 is used together with the adjustable foot mounting 4.

A 3 or 4-point mounting is recommended to secure the load.

1 Direct mounting

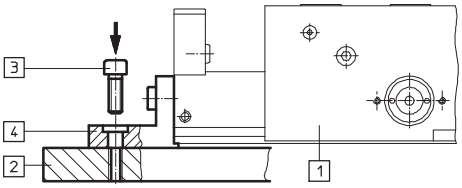
Range of application:
- Only with smooth surface (e.g. granite table)



1 Linear drive
2 Mounting surface
3 Socket head screw

2 Angled foot mounting

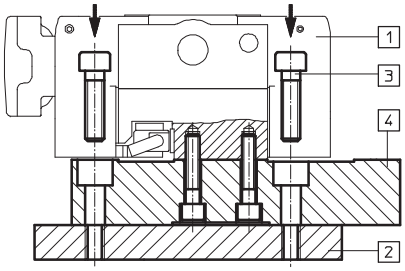
Range of application:
- Only with smooth surface (e.g. granite table)
- Up to a stator length of max. 500 mm



1 Linear drive
2 Mounting surface
3 Socket head screw
4 Foot mounting EAHF-...

3 Foot mounting

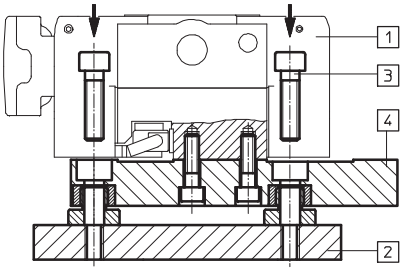
Range of application:
- With milled surface (good evenness)
- Recommended support spacing: every 360 mm



1 Linear drive
2 Mounting surface
3 Socket head screw
4 Foot mounting EAHF-...-P

4 Adjustable foot mounting

Range of application:
- With surface with low evenness
- Recommended support spacing: every 360 mm



1 Linear drive
2 Mounting surface
3 Socket head screw
4 Foot mounting EAHF-...-PJ

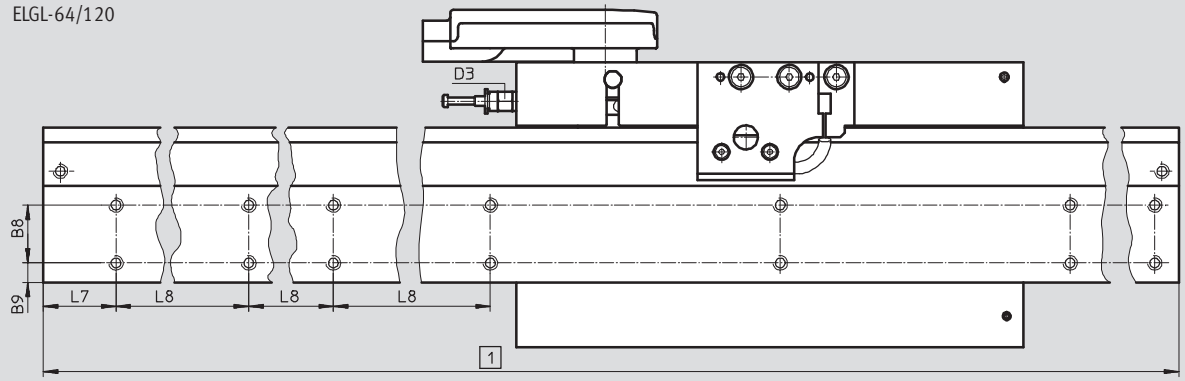
Linear drives ELGL-LAS, with air bearing and linear motor

Technical data

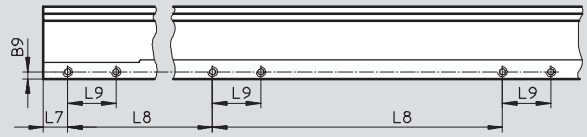
FESTO

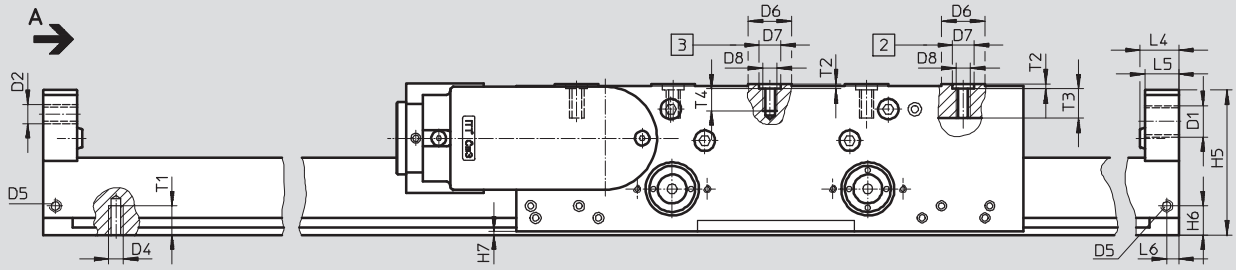
Dimensions Download CAD data ➔ **www.festo.com**

ELGL-64/120

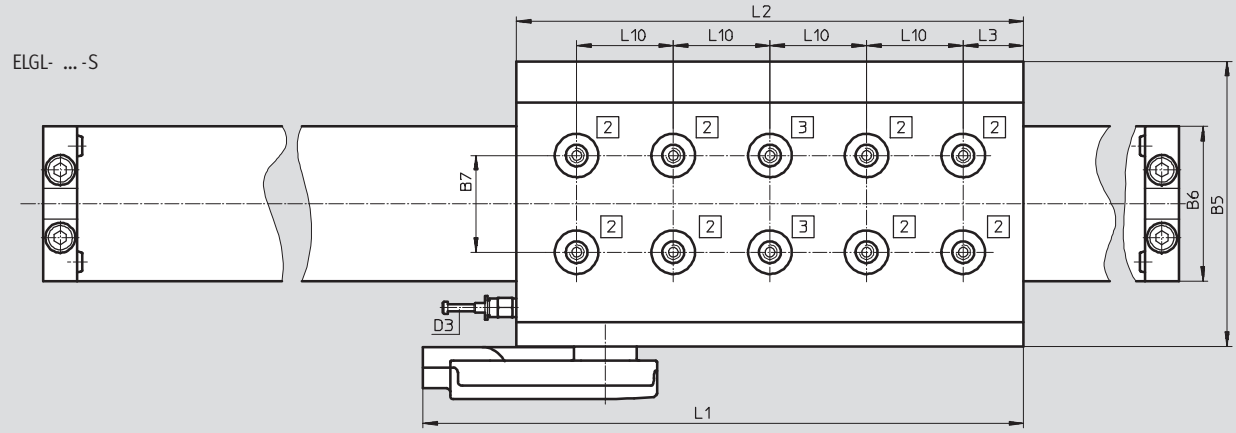


ELGL-30

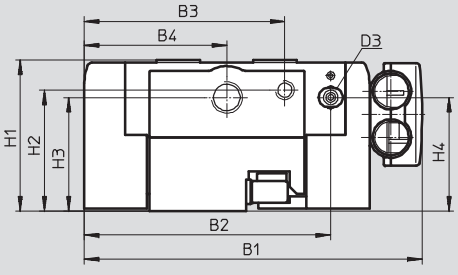




ELGL- ... -S



View A



1 ➔ table on page 12

2 Hole for centring sleeve ZBH-9, thread depth 12 mm

3 Hole for centring sleeve ZBH-9, thread depth 9 mm

Note

Use max. 4 screws to mount the effective load.

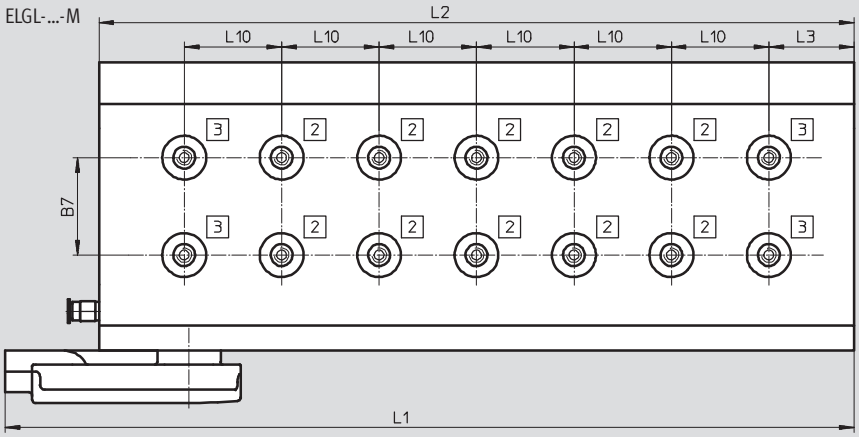
Linear drives ELGL-LAS, with air bearing and linear motor

Technical data

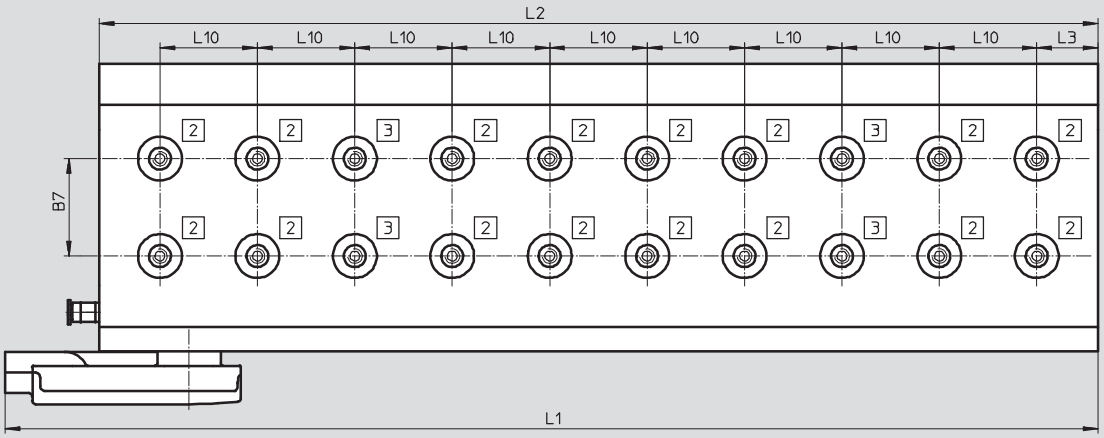
FESTO

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

ELGL-...-M



ELGL-...-L



Size	B1	B3	B4	B5	B6	B7 ±0.01	B8	B9	D1	D2	D4	D5	D6	D7 H7	D8	H1
30	105.8	–	42	84	30	20	–	3	M10x1	–	M4	M5	18	9	M6	62
64	139.8	83.5	59	118	64	40	24	8	M14x1	M8x1	M6	M5	18	9	M6	62
120	195.8	111.5	87	174	120	80	72	12	M14x1	M8x1	M6	M5	18	9	M6	62

Size	H2	H3	H4	H5	H6	H7	L4	L5	L6	L7	L8	L9	L10 ±0.01	T1	T2 +0.1	T3	T4
30	–	46.5	47	58	12	1	20	17	5	10	120	20	40	10	2.1	12	9
64	50	47	47	60	12	1	16	14	5	30	120	–	40	12	2.1	12	9
120	50	47	52	60	12	1	16	14	5	30	120	–	40	12	2.1	12	9

Size	Rotor variant	B2	D3		L1	L2	L3
			QS push-in fitting	For tubing O.D.			±0.01
30	S	68	QSM-M5-4	4	248.6	210	25
64	S	102	QSM-M5-4	4	248.6	210	25
	M	102	QSM-M5-4	4	348.6	310	35
120	S	158	QSM-M5-4	4	248.6	210	25
	M	158	QSM-M5-4	4	348.6	310	35
	L	154	QSM-⅛-6	6	453.1	410	25

New

Linear drives ELGL-LAS, with air bearing and linear motor

Technical data

Total length of the drive with one slide						
Size	30	64		120		
Slide variant	S	S	M	S	M	L
Work stroke [mm]						
100	360	350	450	350	450	550
200	460	450	550	450	550	650
300	560	550	650	550	650	765
400	660	650	765	650	765	850
500	765	765	850	765	850	950
600	860	850	950	850	950	1,050
700	960	950	1,050	950	1,050	1,150
800	–	1,050	1,150	1,050	1,150	1,250
900	–	1,150	1,250	1,150	1,250	1,365
1,000	–	1,250	1,365	1,250	1,365	1,450
1,100	–	1,365	1,450	1,365	1,450	1,550
1,200	–	1,450	1,550	1,450	1,550	1,650
1,300	–	1,550	1,650	1,550	1,650	1,750
1,400	–	1,650	1,750	1,650	1,750	1,850
1,500	–	1,750	1,850	1,750	1,850	1,965
1,600	–	1,850	1,965	1,850	1,965	–
1,700	–	1,965	–	1,965	–	–

Note

Total length for other variants on request.

Linear drives ELGL-LAS, with air bearing and linear motor

Ordering data – Modular products

FESTO

Ordering table

Size		30	64	120	Condi-tions	Code		Enter code
M	Module No.	**560753**	**560754**	**560755**				
	Function	Electrical linear drive				**ELGL**		ELGL
	Drive type	Linear motor				**-L**		-L
	Motor technology	AC synchronous				**AS**		AS
	Size [mm]	30				**-30**		
			64			**-64**		
				120		**-120**		
	Stroke [mm]	1 ... 740	1 ... 1,750		1	-...		
	Slide 1	Double coil system, 3 strings				**-S**		
			Triple coil system, 3 strings			**-M**		
				Quadruple coil system, 3 strings		**-L**		
O	Slide 2	None						
		Double coil system, 3 strings				**-S**		
			Triple coil system, 3 strings			**-M**		
				Quadruple coil system, 3 strings		**-L**		
	Slide 3	None						
		Double coil system, 3 strings				**-S**		
			Triple coil system, 3 strings			**-M**		
				Quadruple coil system, 3 strings		**-L**		
	Slide 4	None						
		Double coil system, 3 strings				**-S**		
			Triple coil system, 3 strings			**-M**		
				Quadruple coil system, 3 strings		**-L**		
M	Electrical connection	Angled plug, rotatable				**-R**		-R
	Measuring unit	Encoder				**E**		E
	Electrical interface	Serial bi-directional (BiSS)				**-B**		-B
O	Mounting attachments	None						
		Foot mounting			2	**-F**		

1 **Stroke** For sizes 64 and 120: 1,750 ... 5,750 mm on request

2 **F** Can be selected with stator length <500 mm

Transfer order code

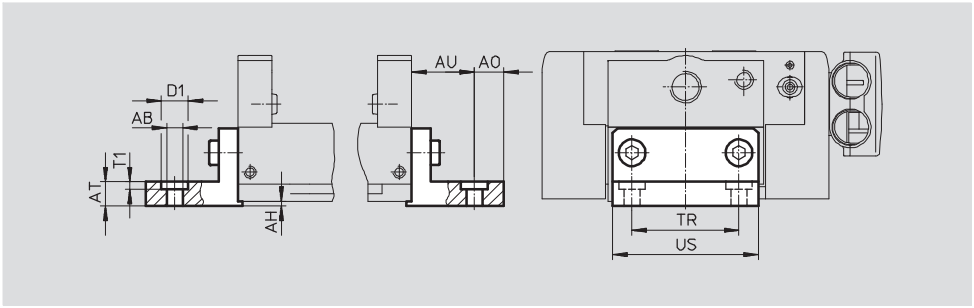
	ELGL	–	LAS	–		–		–		–		–		–		–	RE	–	B	–	

Linear drives ELGL-LAS, with air bearing and linear motor

Accessories

Foot mounting EAHF
2 included in the scope of delivery

Material:
Aluminium
Contains PWIS (paint-wetting impairment substances)
RoHS-compliant



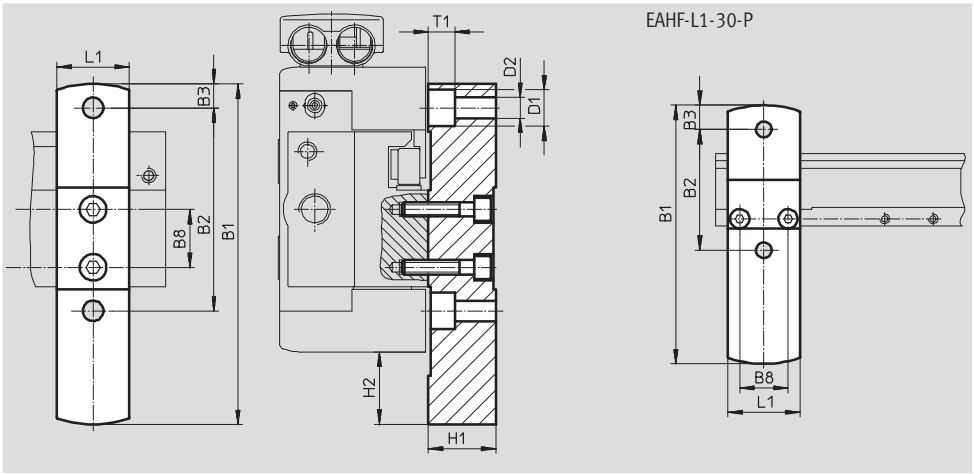
Dimensions and ordering data

For size	AB	AH −0.1	AO	AT	AU	D1	T1	TR	US	CRC[1]	Weight [g]	Part No.	Type
30	5.5	2	10	10	18	10	3	18	29	1	180	**564252**	**EAHF-L1-30**
64	6.5	2	12	10	26	11	3	44	60	1	400	**564253**	**EAHF-L1-64**
120	6.5	2	12	10	26	11	3	78	94	1	600	**564254**	**EAHF-L1-120**

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

Foot mounting EAHF-...-P
2 included in the scope of delivery

Material:
Aluminium
Contains PWIS (paint-wetting impairment substances)
RoHS-compliant



Dimensions and ordering data

For size	B1	B2	B3	B8	D1	D2	H1 −0.01	H2	L1	CRC[1]	Weight [g]	Part No.	Type
30	107	50	10	20	11	6.5	28	30	30	1	250	**564246**	**EAHF-L1-30-P**
64	141	84	10	24	15	8.5	28	30	30	1	310	**564247**	**EAHF-L1-64-P**
120	197	140	10	72	15	8.5	28	30	30	1	450	**564248**	**EAHF-L1-120-P**

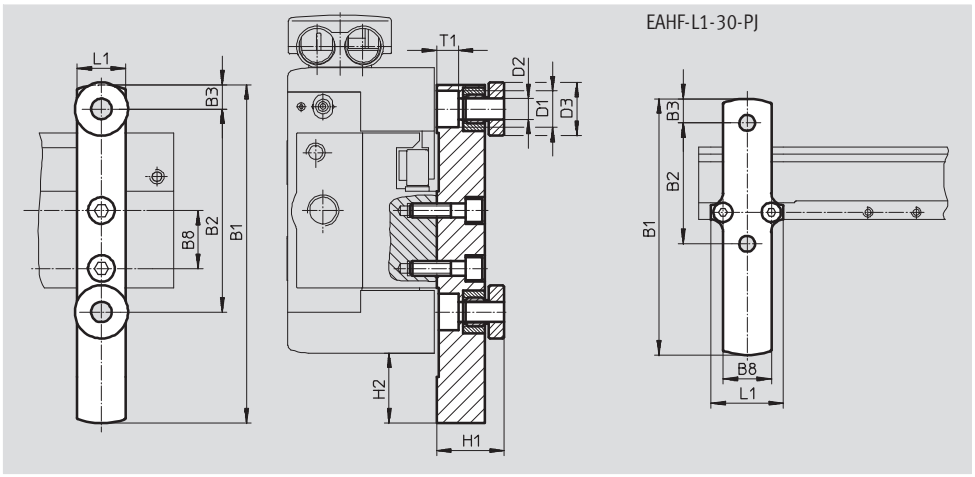
1) Corrosion resistance class 1 as per Festo standard 940 070
Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

Linear drives ELGL-LAS, with air bearing and linear motor

Accessories

Adjustable foot mounting
EAHF-...-PJ
1 included in the scope of delivery

Material:
Aluminium
Contains PWIS (paint-wetting impairment substances)
RoHS-compliant



Dimensions and ordering data

For size	B1	B2	B3	B8	D1	D2	D3	H1	H2	L1	CRC[1]	Weight [g]	Part No.	Type
30	106	50	10	20	11	6.5	22	28	29	30	1	210	**564249**	**EAHF-L1-30-PJ**
64	140	84	10	24	15	8.5	22	28	29	20	1	230	**564250**	**EAHF-L1-64-PJ**
120	196	140	10	72	15	8.5	22	28	29	20	1	260	**564251**	**EAHF-L1-120-PJ**

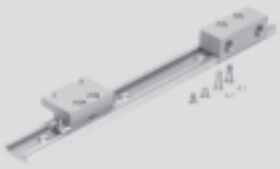
1) Corrosion resistance class 1 as per Festo standard 940 070
Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

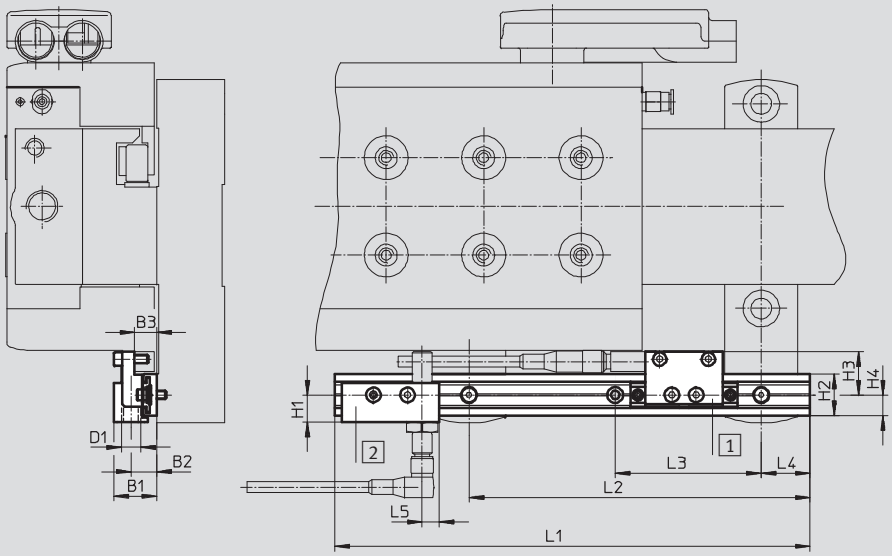
Linear drives ELGL-LAS, with air bearing and linear motor

Accessories

Sensor bracket EAPR

Material:
Aluminium
Contains PWIS (paint-wetting impairment substances)
RoHS-compliant





Note

Two foot mountings are needed to attach the bracket; either the foot mounting EAHF-...-P or the adjustable foot mounting EAHF-...-PJ.

[1] For proximity sensor SIES, square design
[2] For proximity sensor SIEN, round design

Dimensions and ordering data

For size	B1	B2	B3	D1	H1	H2	H3	H4
30, 64, 120	17.5	10.5	9	M8	11.2	17	17.7	8.5

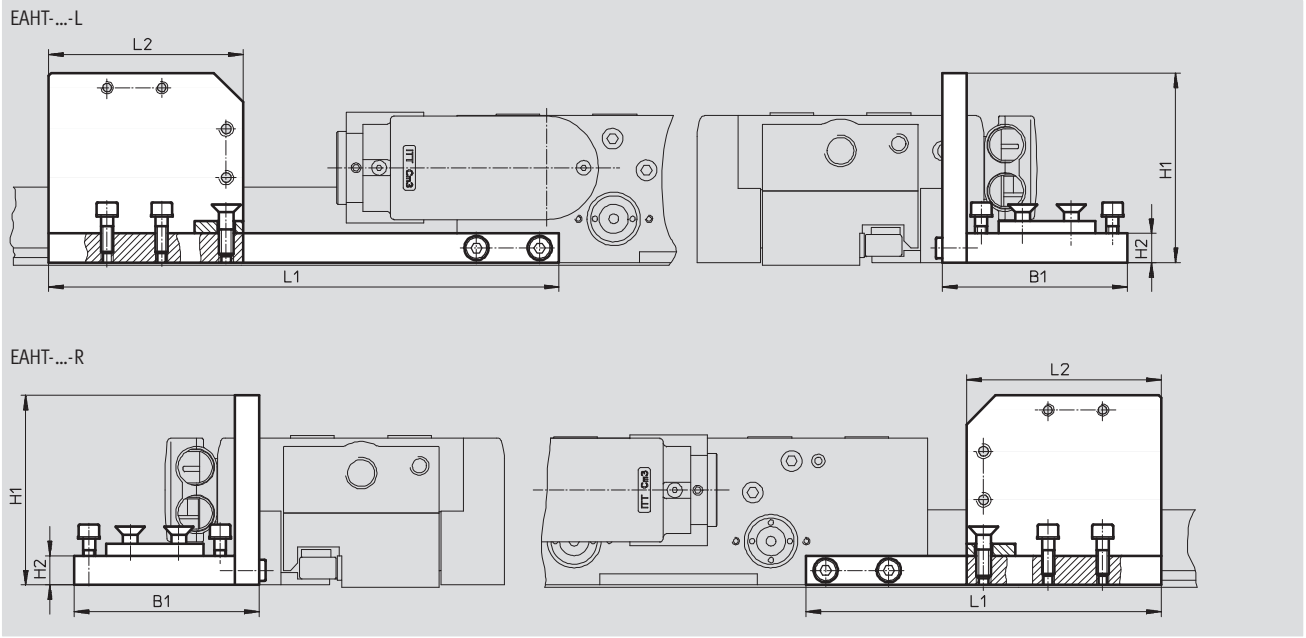
For size	L1	L2	L3	L4	L5	CRC[1)]	Weight [g]	Part No.	Type
30, 64, 120	195	140	60	20	7	1	75	**564259**	**EAPR-L1-S**

1) Corrosion resistance class 1 as per 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.

Linear drives ELGL-LAS, with air bearing and linear motor

Accessories

Mounting kit EAHT
Material:
Aluminium
Contains PWIS (paint-wetting impairment substances)
RoHS-compliant



Dimensions and ordering data									
For size	B1	H1	H2	L1	L2	CRC[1]	Weight [g]	Part No.	Type
For energy chain type: E6.29									
30, 64, 120	60	62	12	170	50	1	300	**564255**	**EAHT-L1-E6-29-L**
	60	62	12	105	50	1	300	**564256**	**EAHT-L1-E6-29-R**
For energy chain type: E6.40									
30, 64, 120	76	78	12	210	80	1	400	**564257**	**EAHT-L1-E6-40-L**
	76	78	12	146	80	1	400	**564258**	**EAHT-L1-E6-40-R**

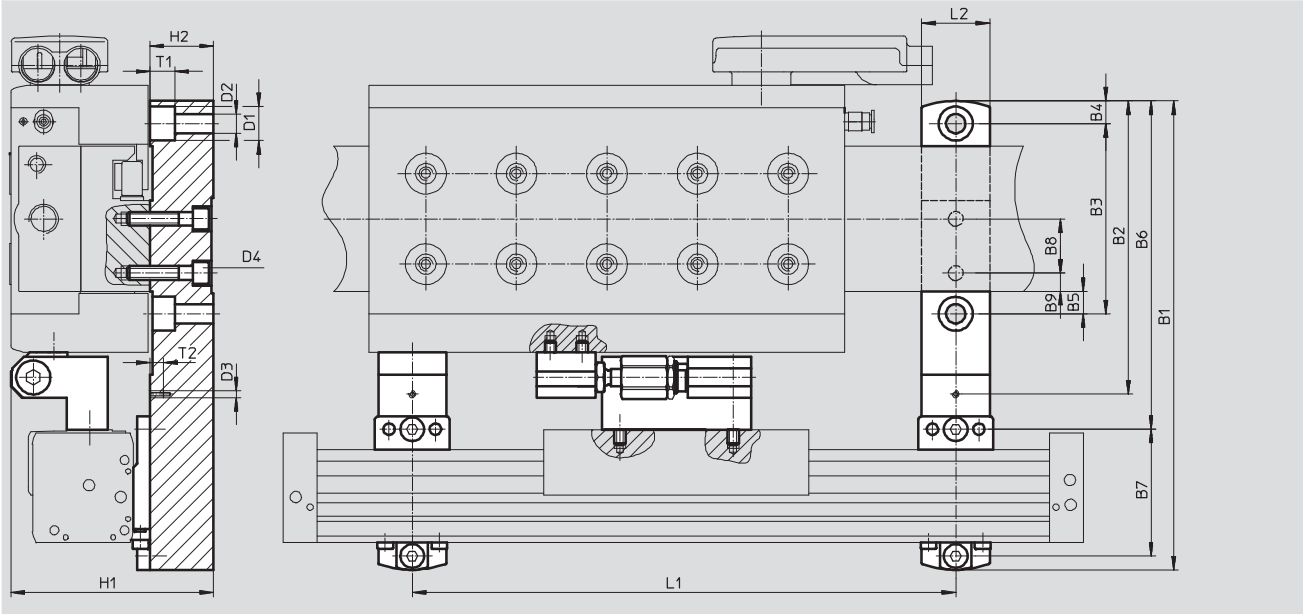
1) Corrosion resistance class 1 as per Festo standard 940 070
Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

Linear drives ELGL-LAS, with air bearing and linear motor

Accessories

FESTO

Mounting kit EAHC
Material:
Aluminium
Contains PWIS (paint-wetting impairment substances)
RoHS-compliant



Dimensions and ordering data

For size	B1	B2	B3	B4	B5	B6	B7	B8	B9	D1 ∅	D2 ∅	D3	D4
30	173	95.5	50	10	10	111	56	–	3	11	6.5	M3	M4
64	207	129.5	84	10	10	145	56	24	8	15	8.5	M3	M6
120	263	185.5	140	10	10	201	56	72	12	15	8.5	M3	M6

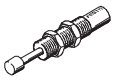
For size	H1	H2 –0.01	L1	L2	L3	T1	T2	CRC[1)]	Weight [g]	Part No.	Type
30	89.6	28	nx120	30	20	8	6	1	960	**564260**	**EAHC-L1-30**
64	89.6	28	nx120	30	–	11	6	1	1,100	**564261**	**EAHC-L1-64**
120	89.6	28	nx120	30	–	11	6	1	1,350	**564262**	**EAHC-L1-120**

1) Corrosion resistance class 1 as per 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.

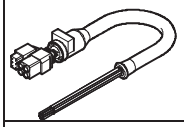
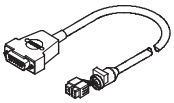
Linear drives ELGL-LAS, with air bearing and linear motor

Accessories

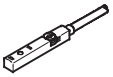
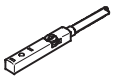
FESTO

Ordering data					
	For size	Comment	Part No.	Type	PU[1]
Shock absorber YSRW					Technical data ➔ Internet: ysrw
	30	For avoiding damage at the end stop in the event of malfunction	**191193**	**YSRW-7-10**	1
	64, 120		**191195**	**YSRW-10-17**	
Centring sleeve ZBH					
	30, 64, 120	For slide	**150927**	**ZBH-9**	10

1) Packaging unit quantity

Ordering data – Cables				
	Brief description	Cable length [m]	Part No.	Type
	Motor cable, for connecting motor and controller	5	**550306**	**NEBM-T1G7-E-5-N-LE7**
		10	**550307**	**NEBM-T1G7-E-10-N-LE7**
		15	**550308**	**NEBM-T1G7-E-15-N-LE7**
		X length[1]	**550309**	**NEBM-T1G7-E- -N-LE7**
	Encoder cable, for connecting motor and controller	5	**550314**	**NEBM-T1G8-E-5-N-S1G15**
		10	**550315**	**NEBM-T1G8-E-10-N-S1G15**
		15	**550316**	**NEBM-T1G8-E-15-N-S1G15**
		X length[1]	**550317**	**NEBM-T1G8-E- -N-S1G15**

1) Max. 25 m

Ordering data – Proximity sensors, inductive						Technical data ➔ Internet: sies
	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Is screwed on via mounting attachment	PNP	Cable, 3-wire	2.5	**178294**	**SIES-Q8B-PS-K-L**
			Plug M8x1, 3-pin	0.3	**178295**	**SIES-Q8B-PS-S-L**
N/C contact						
	Is screwed on via mounting attachment	PNP	Cable, 3-wire	2.5	**174552**	**SIES-Q8B-PO-K-L**
			Plug M8x1, 3-pin	0.3	**174553**	**SIES-Q8B-PO-S-L**

Linear drives ELGL-LAS, with air bearing and linear motor

Accessories

FESTO

Ordering data – Inductive proximity sensors M8 — Technical data ➔ Internet: sien

	Electrical connection		Switching output	LED	Cable length [m]	Part No.	Type
	Cable	Plug M8					
N/O contact							
	3-wire	–	PNP	■	2.5	**150386**	**SIEN-M8B-PS-K-L**
	–	3-pin	PNP	■	–	**150387**	**SIEN-M8B-PS-S-L**
N/C contact							
	3-wire	–	PNP	■	2.5	**150390**	**SIEN-M8B-PO-K-L**
	–	3-pin	PNP	■	–	**150391**	**SIEN-M8B-PO-S-L**

Ordering data – Connecting cables — Technical data ➔ Internet: nebu

	Electrical connection, left	Electrical connection, right	Cable length [m]	Part No.	Type
	Straight socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	**541333**	**NEBU-M8G3-K-2.5-LE3**
			5	**541334**	**NEBU-M8G3-K-5-LE3**
	Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	**541338**	**NEBU-M8W3-K-2.5-LE3**
			5	**541341**	**NEBU-M8W3-K-5-LE3**

Ordering data

	For size	Connection		Description	Part No.	Type	PU[1]
		Threaded	O.D.				
Push-in fitting QSM						Technical data ➔ Internet: quick star	
	30	M5	4	For connecting compressed air tubing with standard external diameters	**153304**	**QSM-M5-4**	10
	64-...-S	M5	4				
	64-...-M	M5	4				
	120-...-S	M5	4				
	120-...-M	M5	4				
	120-...-L	G1/8	6		**153307**	**QSM-1/8-6**	
Blanking plug QSC-...H						Technical data ➔ Internet: quick star	
	30	–	4	For closing off QS push-in connections	**153267**	**QSC-4H**	10
	64-...-S	–	4				
	64-...-M	–	4				
	120-...-S	–	4				
	120-...-M	–	4				
	120-...-L	–	6		**153268**	**QSC-6H**	

1) Packaging unit quantity