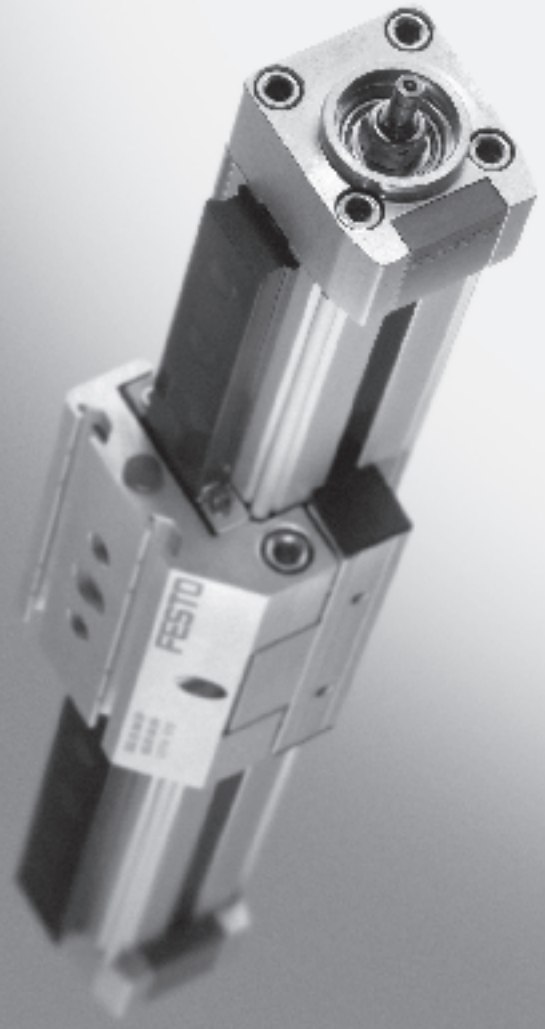


- Precisi e flessibili
- Totalmente compatibili con il sistema modulare multiasse Festo
- Tutto da un unico fornitore

Assi con trasmissione a vite DGE

Caratteristiche

FESTO

Dati generali

- Guida precisa e robusta
- Elevata flessibilità grazie a molteplici soluzioni di fissaggio e di installazione
- Diverse possibilità di adattamento su attuatori
- Numerosi accessori di montaggio per combinazioni multiasse
- Gruppi motore-unità di controllo adattati in modo ottimale

Esecuzione base DGE-SP

- Corse da 100 ... 2000 mm
- Senza guida
- Parametri di carico ridotti

Guida a ricircolo di sfere DGE-SP-KF-GK/-GV

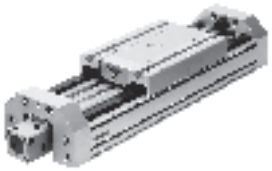
- Corse da 100 ... 2000 mm
- Slitta standard o slitta prolungata
- Parametri di carico da medi ad alti

Esecuzione protetta DGE-SP-KF-GA

- Corse da 140 ... 1500 mm
- Guida e slitta sono protetti dall'infiltrazione di particelle mediante copertura superiore e laterale.

Guida per carichi pesanti DGE-SP-HD

- Corse da 100 ... 1500 mm
- Elevata precisione di guida
- Struttura robusta
- Parametri di carico elevati



Assi con trasmissione a vite DGE

Caratteristiche

Sistema completo composto da asse con trasmissione a vite, kit, motore e controllore motore

Asse con trasmissione a vite

- Attenzione

Per gli assi con trasmissione a vite DGE e i motori sono disponibili numerose soluzioni complete coordinate.

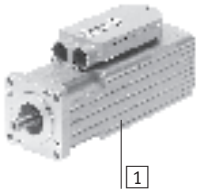
Kit di montaggio motore →5/ 2.1-178

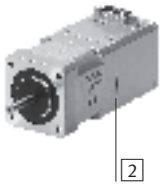
Kit assiale

Kit parallelo

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

Motore →5/ 2.1-178





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

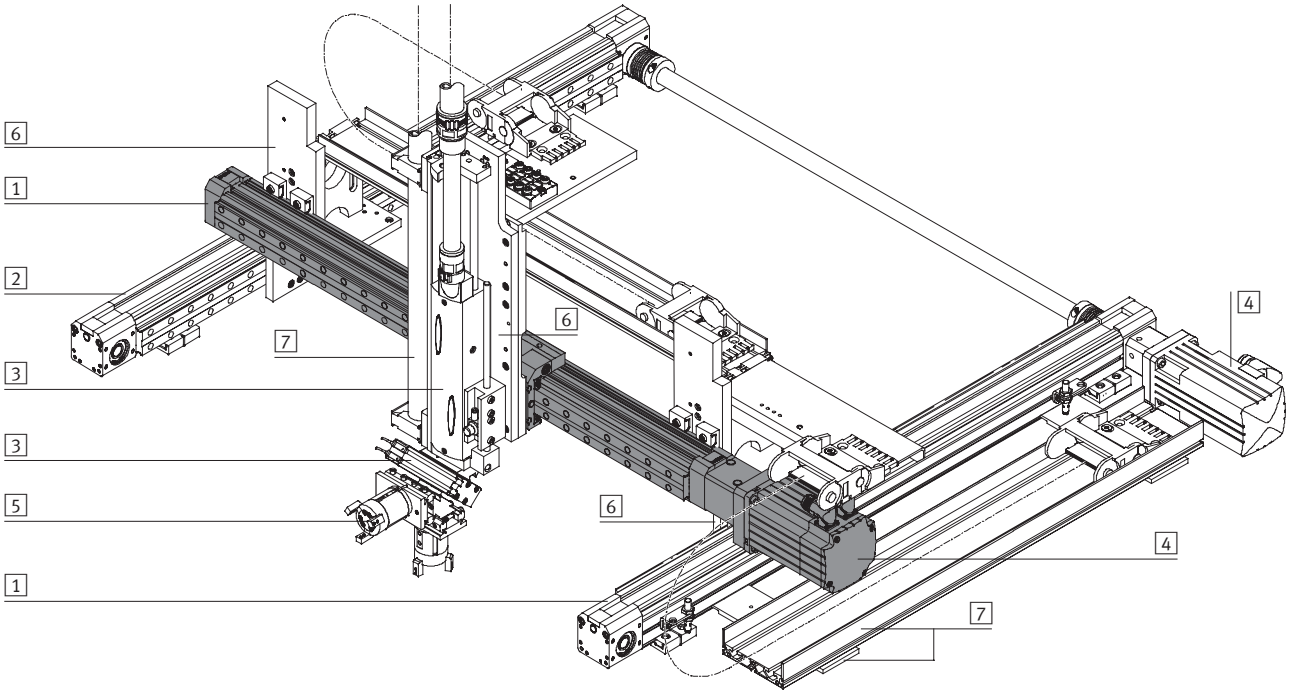
Controllore motore → www.festo.it

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

Assi con trasmissione a vite DGE

Esempio di configurazione di sistema

Prodotto globale per le applicazioni di manipolazione e di montaggio



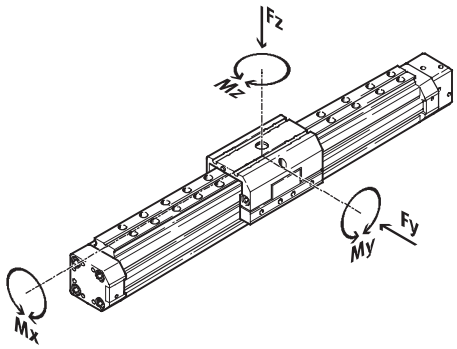
Elementi di sistema ed accessori			
		Descrizione	**➔ Pagina**
1	Assi	Numerose possibilità di combinazione con gli elementi della tecnica di manipolazione e montaggio	www.festo.it
2	Assi di guida	Per la compensazione di forze e momenti in apllicazioni multi-asse	www.festo.it
3	Attuatori	Numerose possibilità 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

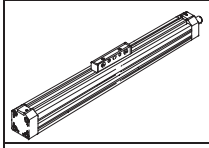
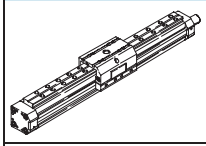
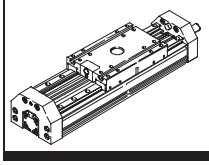
Assi con trasmissione a vite DGE

Supporto alla scelta

Caratteristiche di guida

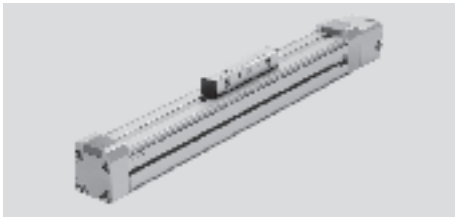
Le indicazioni in tabella si riferiscono ai valori massimi.
I valori esatti sono riportati nel foglio dati relativo a ciascuna variante.

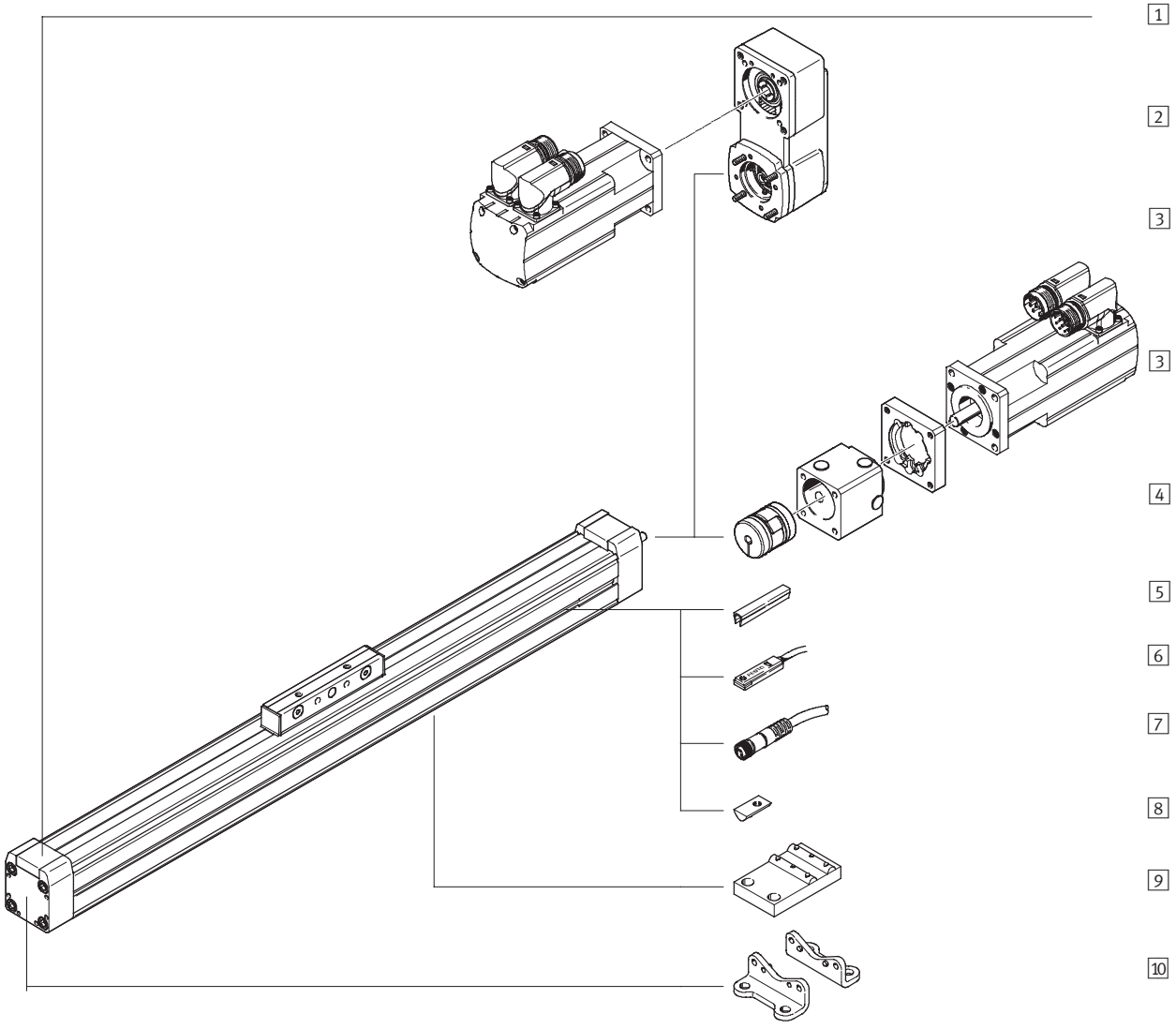


Esecuzione	Dimensioni	Corsa di lavoro [mm]	Velocità [m/s]	Ripetibilità [mm]	Forza di spinta [N]	Forze e momenti Fy [N]	Fz [N]	Mx [Nm]	My [Nm]	Mz [Nm]	→ Pagina
Esecuzione base senza guida SP											
	18	100 ... 500	0,2	±0,02	140	–	1,8	0,5	0,8	0,8	5/ 2.1-130
	25	100 ... 1000	0,5	±0,02	250	–	2	1	1,5	1,5	
	40	200 ... 1500	1	±0,02	600	–	15	4	4	4	
	63	300 ... 2000	1,2	±0,02	1600	–	106	8	18	18	
Guida a ricircolo di sfere SP-KF											
	18	100 ... 500	0,2	±0,02	140	930	930	7	45	45	5/ 2.1-144
	25	100 ... 1000	0,5	±0,02	250	3080	3080	45	170	170	
	40	140 ... 1500	1	±0,02	600	7300	7300	170	660	660	
	63	150 ... 2000	1,2	±0,02	1600	14050	14050	580	1820	1820	
Guida per carichi pesanti SP-HD											
	18	100 ... 400	0,2	±0,02	140	1820	1820	70	115	112	5/ 2.1-166
	25	100 ... 900	0,5	±0,02	250	5400	5600	260	415	400	
	40	200 ... 1500	1	±0,02	600	5400	5600	375	560	540	

Assi con trasmissione a vite DGE-SP

Componenti





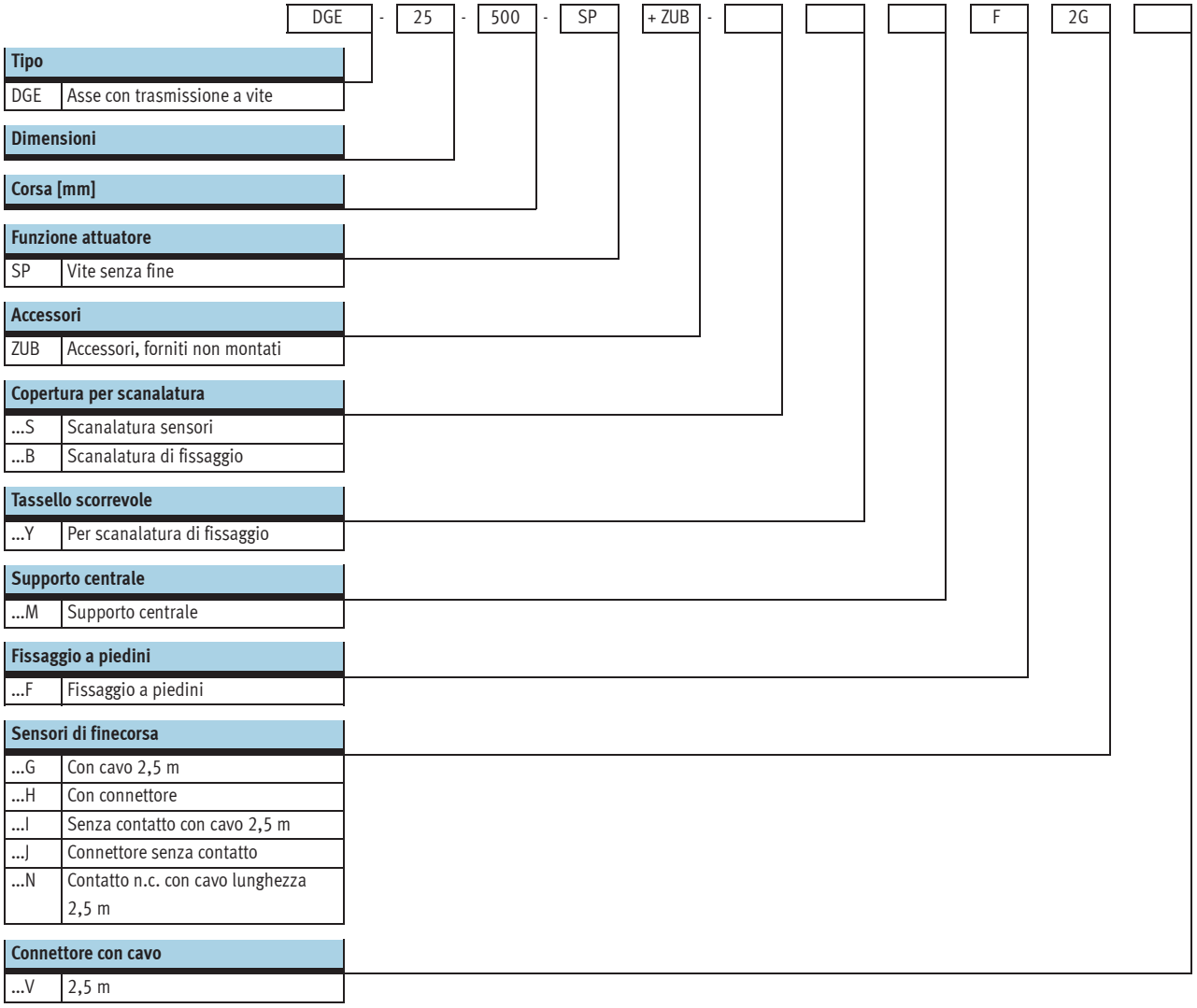
Assi con trasmissione a vite DGE-SP

Componenti

Varianti ed accessori			
	Tipo	**Descrizione**	**→ Pagina**
1	Asse con trasmissione a vite DGE-SP	Asse elettro-meccanico senza guida	5/ 2.1-132
2	Kit parallelo EAMM-U	Per il montaggio parallelo del motore (costituito da: corpo, elemento di serraggio, bussola di bloccaggio, disco per cinghia dentata, cinghia dentata)	5/ 2.1-181
3	Motore EMMS, MTR	Motori specifici per l'asse, con o senza riduttore, con o senza freno	5/ 2.1-178
4	Kit assiale EAMM-A	Per il montaggio assiale del motore (costituito da: giunto, supporto giunto-motore e flangia motore)	5/ 2.1-178
5	Copertura per scanalatura B/S	Per la protezione interna del cilindro	5/ 2.1-192
6	Sensori di finecorsa G/H/I/J/N	Per il rilevamento dei segnali o richiesta di conferma	5/ 2.1-193
7	Connettore con cavo V	Per sensore di finecorsa	5/ 2.1-193
8	Tassello scorrevole per scanalatura di fissaggio Y	Per il fissaggio di elementi da montare	5/ 2.1-192
9	Supporto centrale M	Per il fissaggio dell'asse sul corpo	5/ 2.1-185
10	Fissaggio a piedini F	Per il fissaggio dell'asse sul corpo	5/ 2.1-185

Assi con trasmissione a vite DGE-SP

Composizione del codice

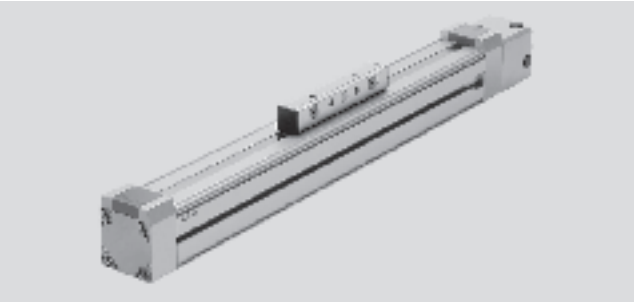


Assi con trasmissione a vite DGE-SP

Foglio dati

FESTO

- Diametro
  18 ... 63
- Corsa
  100 ... 2000 mm
- www.festo.it/
  Parti di ricambio
- Servizio riparazione



Dati generali					
Dimensioni		18	25	40	63
Struttura e composizione		Asse elettromeccanico con trasmissione a vite e cursore			
Guida		–			
Posizione di montaggio		Qualsiasi			
Corsa di lavoro max.[1]	[mm]	100 ... 500	100 ... 1000[2]	200 ... 1500[2]	300 ... 2000[2]
Forza di avanzamento max. F_x	[N]	140	250	600	1600
Coppia di azionamento max.	[Nm]	0,1	0,45	2,1	8,5
Coppia max. di azionamento a vuoto[3]	[Nm]	0,05	0,15	0,5	1,4
Velocità max.[2]	[m/s]	0,2	0,5	1	1,2
Accelerazione max.	[m/s²]	6			
Ripetibilità	[mm]	±0,02			

1) Corsa complessiva = corsa di lavoro + 2x extracorse.
2) Il numero di giri e la velocità max. sono in funzione della corsa ➔ 5/ 2.1-137.
3) Misurata a una velocità di 0,2m/s.

Condizioni d'esercizio e ambientali					
Dimensioni		18	25	40	63
Temperatura ambiente	[°C]	0 ... +40			
Grado di protezione		IP40			

Pesi [kg]				
Dimensioni	18	25	40	63
Peso base a corsa 0 mm[1]	0,55	1,40	4,30	12,50
Peso per ogni 100 mm di corsa aggiuntiva	0,21	0,41	0,71	2,53
Carico movimentato	0,13	0,25	0,67	2,17

1) Supporto giunto-motore incluso

Momento di inerzia di massa					
Dimensioni		18	25	40	63
J_O	[kg cm²]	0,007	0,029	0,364	3,15
J_H per ogni metro di corsa	[kg cm²/m]	0,031	0,121	1	6,67
J_L per ogni kg di carico utile	[kg cm²/Kg]	0,005	0,025	0,101	0,228

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

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

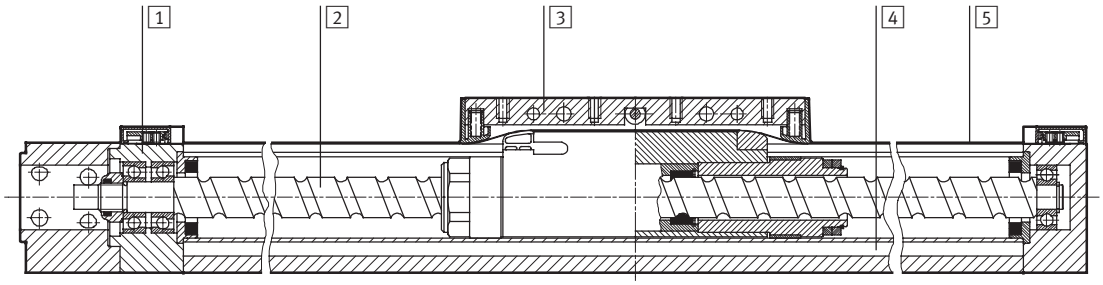
Assi con trasmissione a vite DGE-SP

Foglio dati

Vite senza fine					
Dimensioni		18	25	40	63
Diametro	[mm]	8	12	20	32
Passo	[mm/U]	4	10	20	30

Materiali

Disegno funzionale



Asse	
1 Testata posteriore	Lega di alluminio per lavorazione plastica, anodizzata
2 Vite senza fine	Acciaio per cuscinetti
3 Cursore	Lega di alluminio per lavorazione plastica, anodizzata
4 Profilo	Lega di alluminio per lavorazione plastica, anodizzata
5 Nastro di copertura	Acciaio, inossidabile

Extracorsa

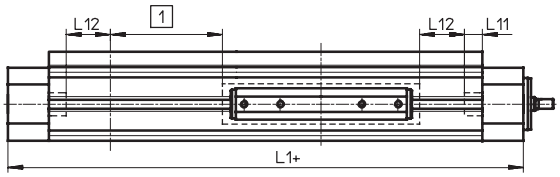
L1+ Lunghezza complessiva dell'asse

L11 Arresto meccanico

1 La corsa di lavoro è l'intervallo disponibile e utilizzabile di lavoro. Va indicata in fase di ordinazione.

L12 L'extracorsa è una distanza di sicurezza all'arresto meccanico, disponibile oltre la corsa su entrambi i lati.

Esempio:
Tipo DGE-25-500-SP
Corsa di lavoro = 500 mm
Extracorsa = (2x 10 mm)
= 20 mm
Corsa utile max.:
520 mm = 500 mm + 20 mm



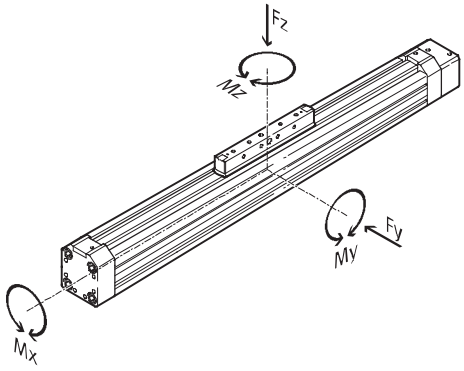
Dimensioni		18	25	40	63
L12 per ogni posizione terminale	[mm]	6,5	10	20	30

Assi con trasmissione a vite DGE-SP

Foglio dati

Parametri di carico

Le forze e i momenti indicati si riferiscono al baricentro del diametro interno del profilo dell'attuatore. In condizioni di esercizio dinamico non devono essere superati i valori indicati. Per questo occorre prestare particolare attenzione alla fase di ammortizzazione.



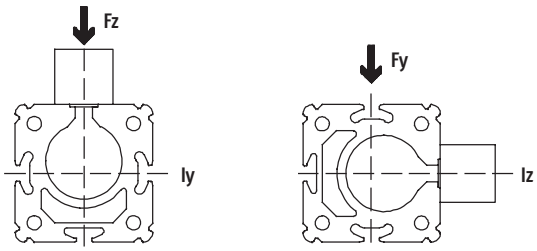
Se l'attuatore è soggetto contemporaneamente a più forze e momenti, oltre ad osservare i parametri di carico indicati si devono soddisfare la seguente equazione:

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

$$\frac{Mx}{Mx_{max.}} \leq 1$$

Forze e momenti ammissibili					
Dimensioni		18	25	40	63
$Fy_{max.}$	[N]	–	–	–	–
$Fz_{max.}$	[N]	1,8	2	15	106
$Mx_{max.}$	[Nm]	0,5	1	4	8
$My_{max.}$	[Nm]	0,8	1,5	4	18
$Mz_{max.}$	[Nm]	0,8	1,5	4	18

Momento di superficie di secondo grado



Dimensioni		18	25	40	63
Iy	[mm^4]	$69,8x10^3$	$224x10^3$	$673x10^3$	$5688x10^3$
Iz	[mm^4]	$72,3x10^3$	$240x10^3$	$748x10^3$	$6031x10^3$

Software di progettazione
PositioningDrives
www.festo.it/engineering

Assi con trasmissione a vite DGE-SP

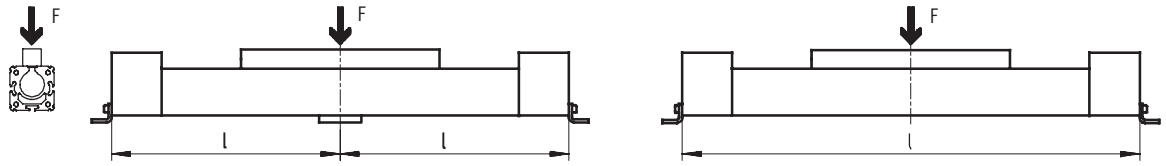
Foglio dati

FESTO

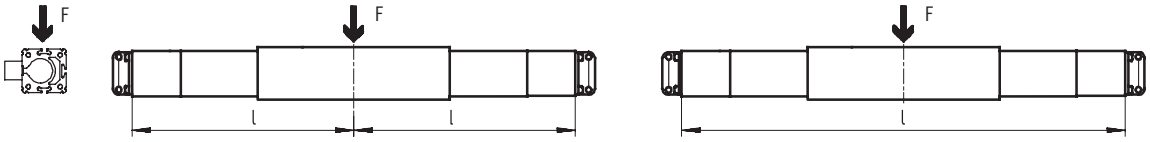
Interasse max. tra i supporti l in funzione della forza F

Per limitare la flessione sulle corse lunghe, è eventualmente necessario dotare l'asse di supporti centrali. I diagrammi seguenti consentono di determinare l'interasse max. ammissibile dei supporti in funzione della forza agente F.

1 Forza applicata sulla superficie della slitta

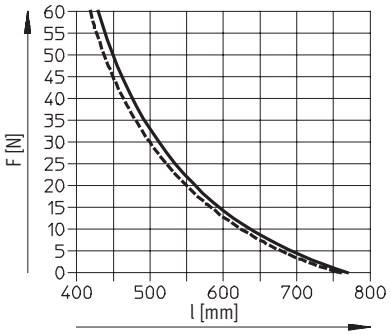


2 Forza applicata sul lato frontale della slitta

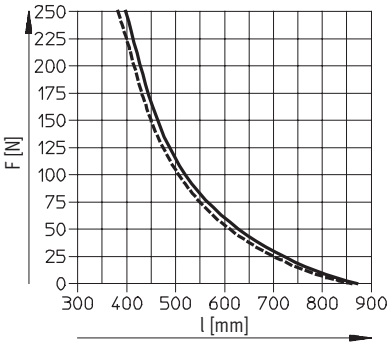


Interasse max. tra i supporti l (senza supporto centrale) in funzione della forza F

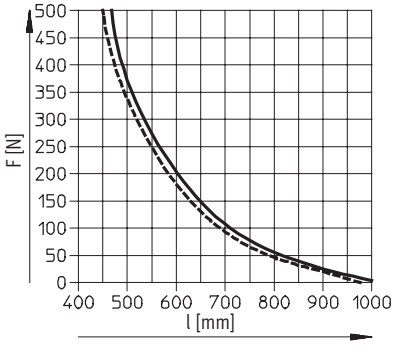
DGE-18



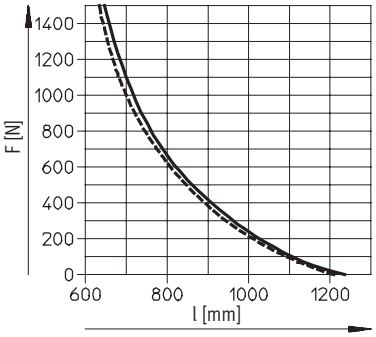
DGE-25



DGE-40



DGE-63



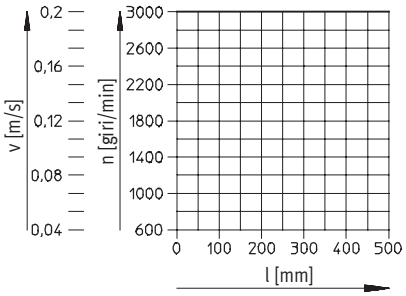
——— 1
- - - - - - - 2

Assi con trasmissione a vite DGE-SP

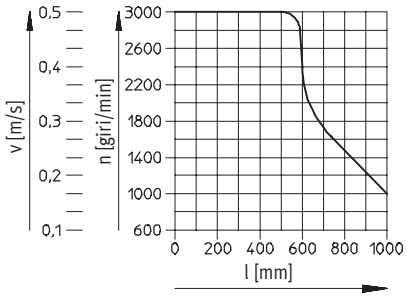
Foglio dati

Massima velocità v e numero giri motore n ammessi in funzione della corsa l

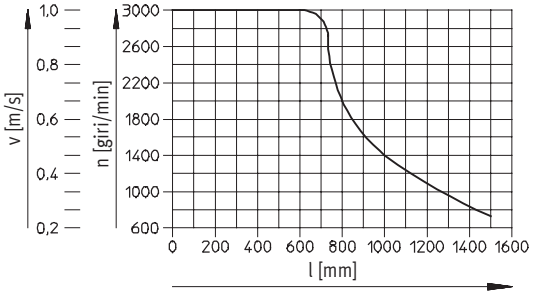
DGE-18



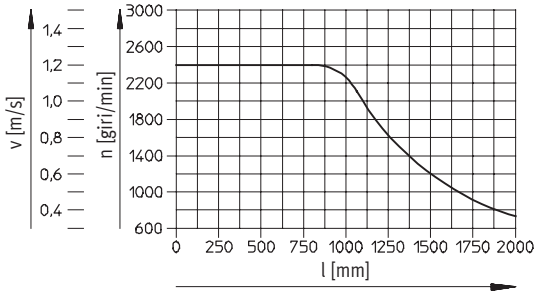
DGE-25



DGE-40



DGE-63



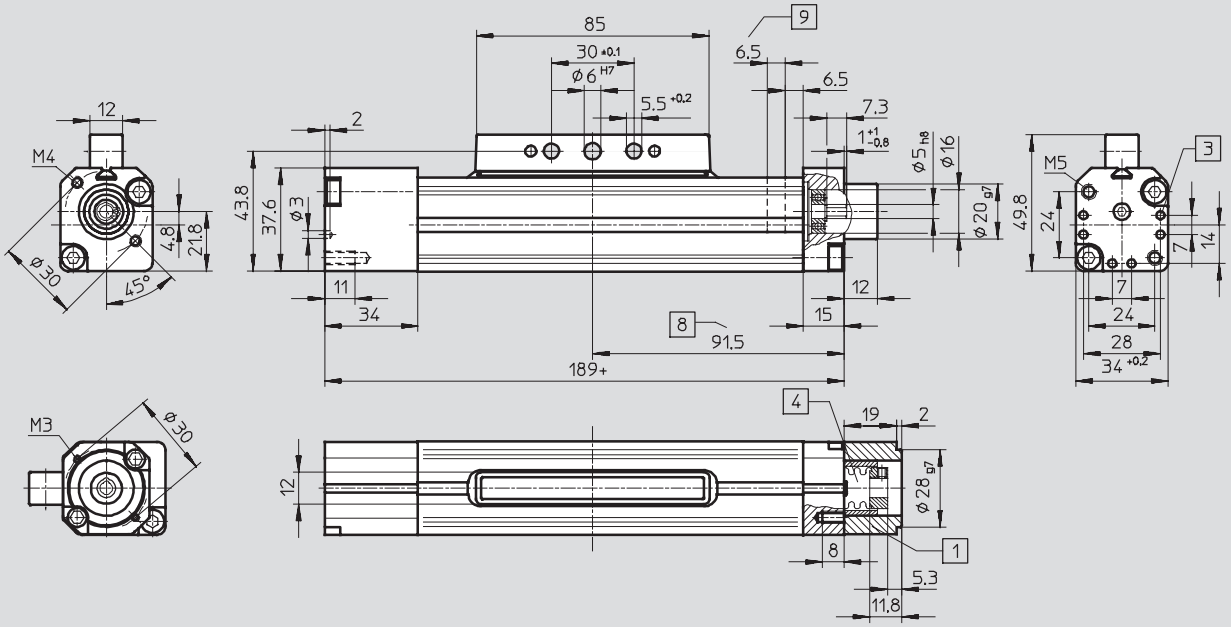
Assi con trasmissione a vite DGE-SP

Foglio dati

Dimensioni

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

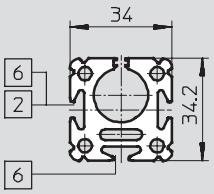
Dimensioni 18



1 Supporto giunto-motore
3 Foro di centratura dei piedini HP
4 Giunto
8 Slitta in posizione terminale della corsa di lavoro (con extracorsa fino all'arresto meccanico ancora disponibile)
9 Extracorsa ➔ 5/ 2.1-134
\+ = aggiungere la corsa

Profilo

Dimensioni 18



2 Scanalatura di montaggio sensori
6 Scanalature di fissaggio per tasselli scorrevoli NST

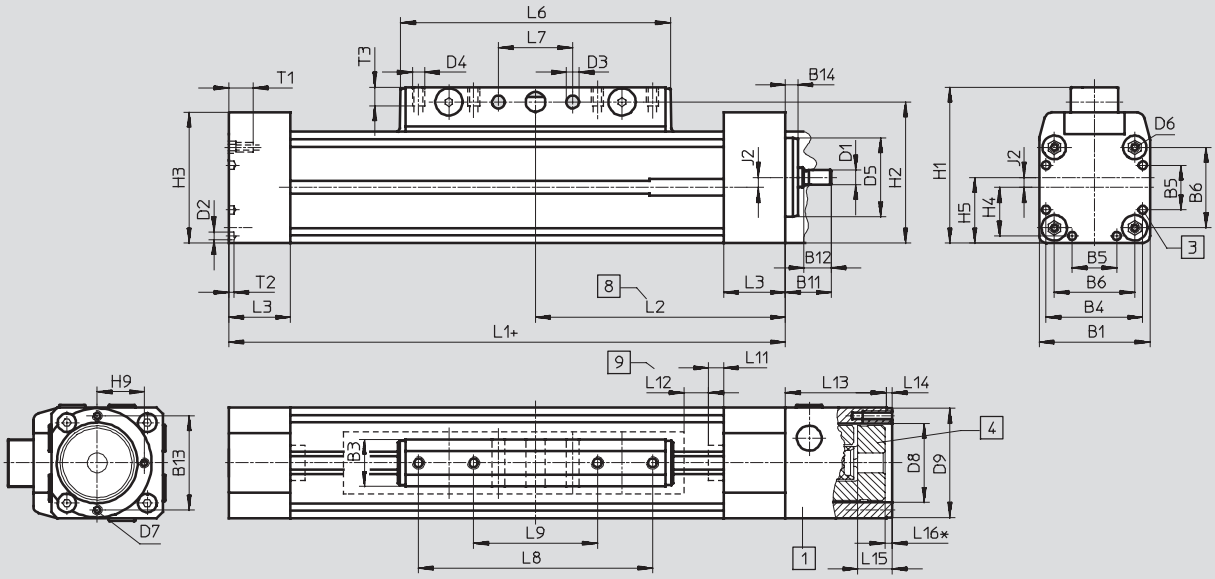
Assi con trasmissione a vite DGE-SP

Foglio dati

Dimensioni

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

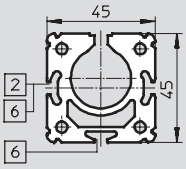
Dimensioni 25 ... 63



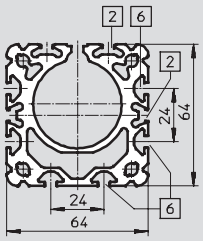
1 Supporto giunto-motore
3 Foro di centratura dei piedini HP
4 Giunto
8 Slitta in posizione terminale della corsa di lavoro (con extracorsa fino all'arresto meccanico ancora disponibile)
9 Extracorsa ➔ 5/ 2.1-134
\+ = aggiungere la corsa

Profilo

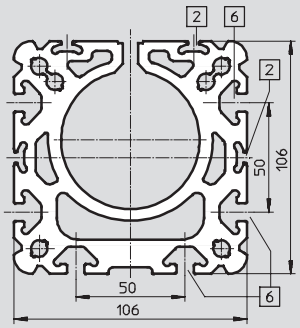
Dimensioni 25



Dimensioni 40



Dimensioni 63



2 Scanalatura di montaggio sensori
6 Scanalature di fissaggio per tasselli scorrevoli NST

Dimensioni	B1	B3 ±0,2	B4	B5	B6	B11	B12	B13	B14	D1 ∅ h6	D2 ∅	D3 ∅ +0,2	D4	D5 ∅ g7	D6	D7	D8 ∅	D9 ∅ g7	H1	H2	H3
25	45	19	39,1	18	32,5	18,5	11	38	4	6	3,3	5,2	M5	32	M4	M4	32	44	63	57	52,8
40	64	21	53	28	49	22,5	12	38	5	12	4,4	6,5	M6	48	M5	M4	32	44	86	78	71,8
63	106	24	89	44	83	47,5	25	56	7	20	6,4	8,5	M8	72	M8	M6	48	64	131	122	115

Dimensioni	H4	H5	H9	J2	L1	L2	L3	L6	L7 ±0,1	L8 ±0,1	L9 ±0,1	L11	L12	L13	L14	L15	L16[1)]	T1	T2	T3
25	19,6	26,5	19	4	213	101,5	25	109	30	–	50	6	10	43	2,5	14	3	13	2	7,5
40	26,5	37	19	5	315	153	31	171	70	130	40	7	20	46	3	14,5	3,5	13	3	10,5
63	44,5	61	28	8	410	200	36	234	110	190	70	9	30	83	4	23	-2	21	4	12,5

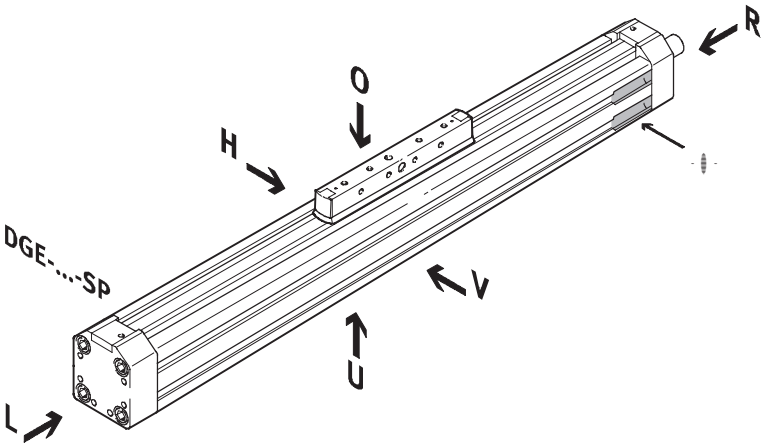
1) Quota negativa: sporgenza rispetto al supporto giunto-motore.

Assi con trasmissione a vite DGE-SP

Dati di ordinazione - Gruppo modulare

Codice di ordinazione

Indicazioni obbligatorie



- - Attenzione

L'apertura per il sensore di finecorsa magnetico si trova sul lato destro dell'asse DGE-...-SP

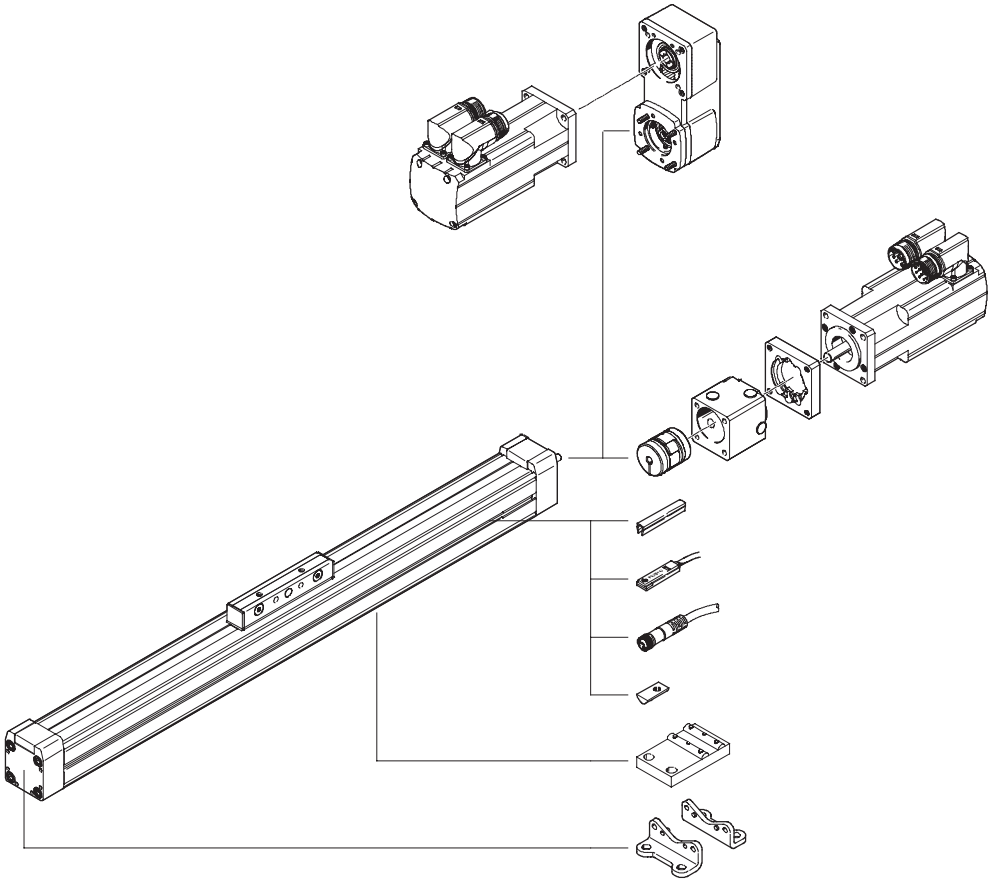
O	sopra
U	sotto
V	anteriormente
H	posteriormente
R	a destra
L	a sinistra

Assi con trasmissione a vite DGE-SP

Dati di ordinazione - Gruppo modulare

Codice di ordinazione

Indicazioni facoltative



Kit parallelo EAMM-U
➔ 5/ 2.1-181

Servomotore EMMS-AS, MTR-AC
Motore passo-passo EMMS-ST, MTR-ST
➔ 5/ 2.1-178

Kit assiale EAMM-A
➔ 5/ 2.1-178

B/S

G/H/I/J/N

V

Y

M

F

Assi con trasmissione a vite DGE-SP

Dati di ordinazione - Gruppo modulare

FESTO

M **Indicazioni obbligatorie** →

Codice prodotto	Funzione		Dimensioni		Corsa		Funzione
193 745 193 746 193 747 193 748	DGE		18 25 40 63		1 ... 2000		SP
Esempio di ordinazione							
193 747	**DGE**	-	**40**	-	**800**	-	**SP**

Tabella di ordinazione

	Dimensioni		18	25	40	63	Condizioni	Codice		Inserimento codice
M	Codice prodotto		**193 745**	**193 746**	**193 747**	**193 748**				
	Funzione		Asse lineare					**DGE**		DGE
	Dimensioni		18	25	40	63		**-...**		
	Corsa	[mm]	100, 200, 300, 400, 500	100, 200, 300, 400, 500, 600, 700, 800, 900, 1000	200, 300, 400, 500, 600, 800, 1000, 1200, 1400, 1500	300, 400, 500, 600, 800, 1000, 1200, 1400, 1500, 1800, 2000		**-...**		
			–	1 ... 990	1 ... 1487	1 ... 1982				
	Funzione		Asse lineare con trasmissione a vite					**-SP**		-SP

Trascrizione codice di ordinazione

	DGE	-		-		- **SP**

Assi con trasmissione a vite DGE-SP

Dati di ordinazione - Gruppo modulare

FESTO

→ [O] Indicazioni facoltative

Accessori	Copertura per scanalatura	Tassello scorrevole	Supporto centrale	Fissaggio a piedini	Sensori di finecorsa	Connettore con cavo
ZUB	...S ...B	...Y	...M	...F	...G ...H ...I ...J ...N	...V
ZUB	- **2S2B**	**10Y**		**F**	**2G**	

Tabella di ordinazione

	Dimensioni		18	25	40	63	Condizioni	Codice		Inserimento codice
↓	Accessori		Forniti non montati					**ZUB-**		ZUB-
[O]	Copertura per scanalatura	Scanalatura sensori	1 ... 10					**...S**		
		Scanalatura di fissaggio	–	–	1 ... 10			**...B**		
	Tassello scorrevole	Scanalatura di fissaggio	1 ... 10					**...Y**		
	Supporto centrale		1 ... 10					**...M**		
	Fissaggio a piedini		1 ... 10					**...F**		
	Sensori di finecorsa	cavo 2,5 m	1 ... 10					**...G**		
		Connettore M8	1 ... 10					**...H**		
		Senza contatto con cavo 2,5 m	1 ... 10					**...I**		
		Senza contatto, connettore M8	1 ... 10					**...J**		
		Contatto n.c. con cavo lunghezza 2,5 m	1 ... 10					**...N**		
	Cavo con connettore M8, 2,5 m		1 ... 10					**...V**		

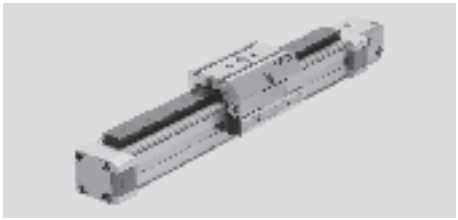
Trascrizione codice di ordinazione

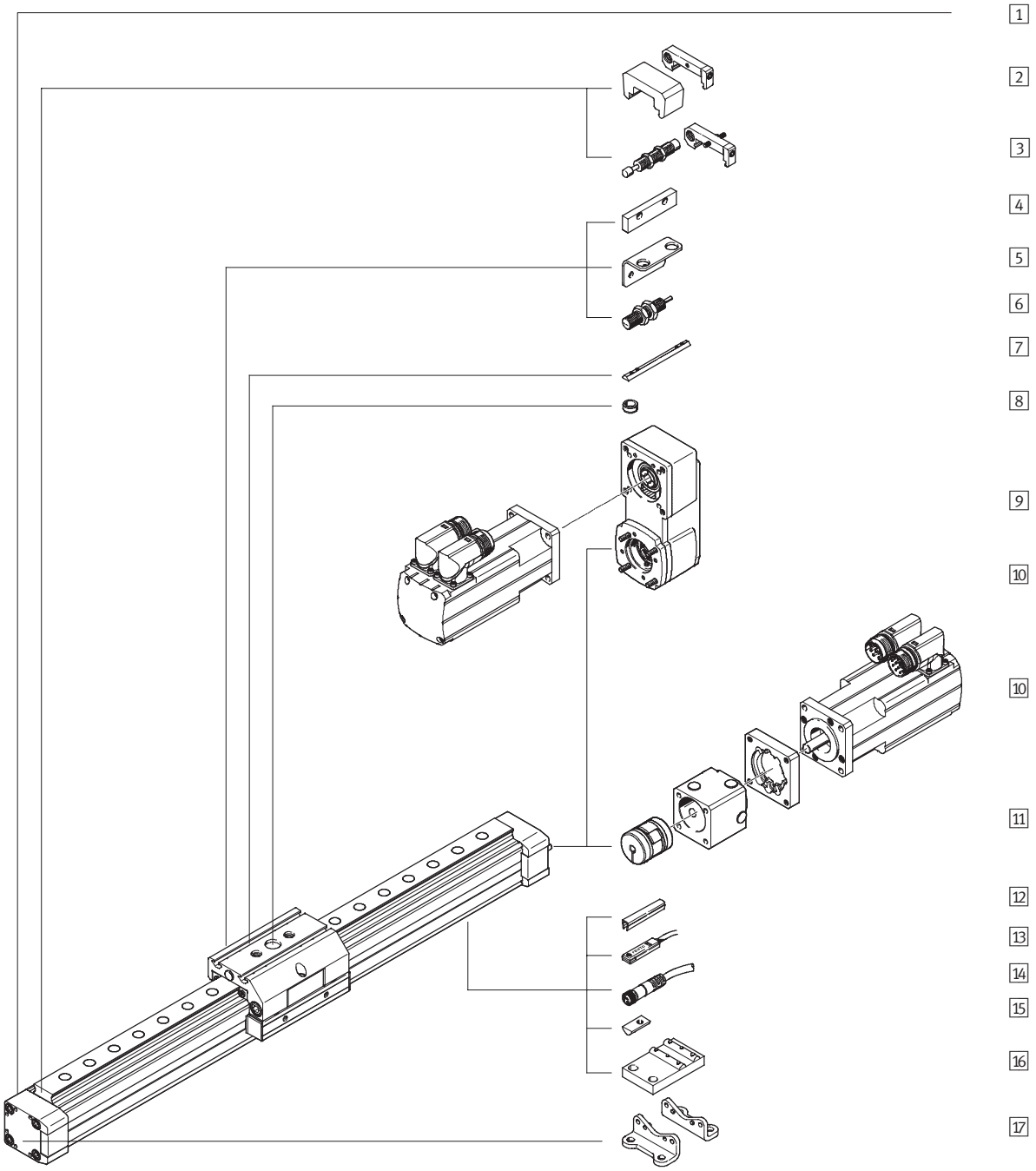
ZUB	-						

Assi con trasmissione a vite DGE-SP-KF, con guida a ricircolo di sfere

Componenti

FESTO





Assi con trasmissione a vite DGE-SP-KF, con guida a ricircolo di sfere

Componenti

Varianti ed accessori					
	Tipo	**Descrizione**	GK/GV	GA	➔ **Pagina**
1	Asse con trasmissione a vite DGE-SP-KF	Asse elettromeccanico con trasmissione a vite e guida a ricircolo di sfere	■	■	5/ 2.1-146
2	Paracolpi con supporto[1)] A	Per evitare il danneggiamento dell'arresto di finecorsa in caso di guasto	■	■	5/ 2.1-188
3	Kit ammortizzatori C	Per evitare il danneggiamento dell'arresto di finecorsa in caso di guasto	■	–	5/ 2.1-187
3	Kit ammortizzatori E	Per evitare il danneggiamento dell'arresto di finecorsa in caso di guasto	–	■	5/ 2.1-188
4	Blocchetto di connessione L	Per il rilevamento della posizione della slitta	■	–	5/ 2.1-190
5	Supporto sensore T	Adattatore per il fissaggio dei sensori di finecorsa induttivi sull'attuatore	■	–	5/ 2.1-190
6	Sensori induttivi di finecorsa O/P/R/W	Per il rilevamento dei segnali o richiesta di conferma	■	–	5/ 2.1-193
7	Tassello scorrevole per slitta X	Per il fissaggio di carichi e dispositivi sulla slitta	■	■	5/ 2.1-192
8	Perni/bussole di centratura Z	Per la centratura di carichi e dispositivi sulla slitta	■	■	5/ 2.1-192
9	Kit parallelo EAMM-U	Per il montaggio parallelo del motore (costituito da: corpo, elemento di serraggio, bussola di bloccaggio, disco per cinghia dentata, cinghia dentata)	■	■	5/ 2.1-181
10	Motore EMMS, MTR	Motori specifici per l'asse, con o senza riduttore, con o senza freno	■	■	5/ 2.1-178
11	Kit assiale EAMM-A	Per il montaggio assiale del motore (costituito da: giunto, supporto giunto-motore e flangia motore)	■	■	5/ 2.1-178
12	Copertura per scanalatura B/S	Per la protezione interna del cilindro	■	■	5/ 2.1-192
13	Sensori di finecorsa G/H/I/J/N	Per il rilevamento dei segnali o richiesta di conferma	■	■	5/ 2.1-193
14	Connettore con cavo V	Per sensore di finecorsa	■	■	5/ 2.1-193
15	Tassello scorrevole per scanalatura di fissaggio Y	Per il fissaggio di elementi da montare	■	■	5/ 2.1-192
16	Supporto centrale M	Per il fissaggio dell'asse sul corpo	■	■	5/ 2.1-185
17	Fissaggio a piedini F	Per il fissaggio dell'asse sul corpo	■	■	5/ 2.1-185

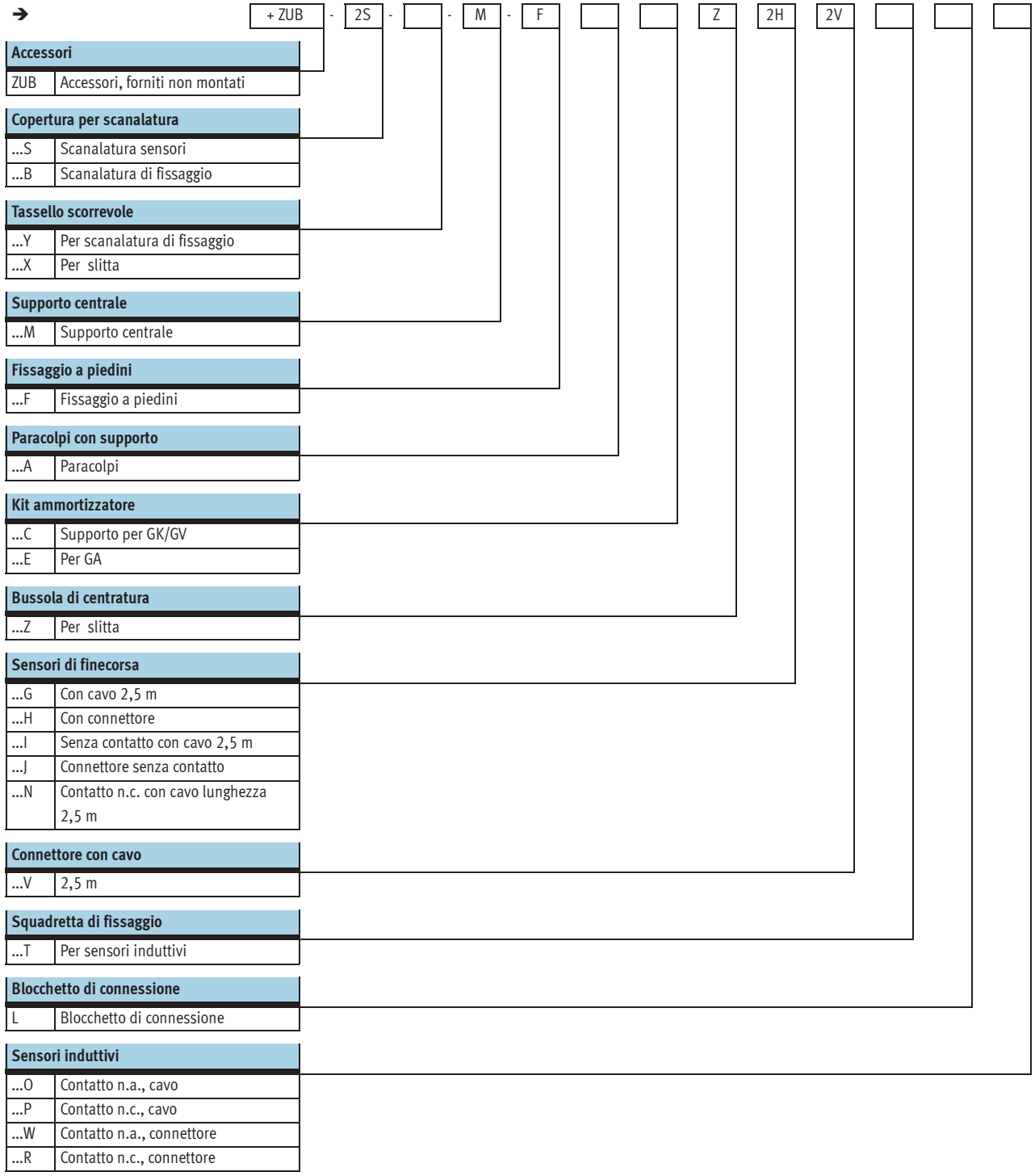
1) Montato di serie nelle versioni GV e GA.

Assi con trasmissione a vite DGE-SP-KF, con guida a ricircolo di sfere

Composizione del codice

Assi con trasmissione a vite DGE-SP-KF, con guida a ricircolo di sfere

Composizione del codice



Accessori	
ZUB	Accessori, forniti non montati

Copertura per scanalatura	
...S	Scanalatura sensori
...B	Scanalatura di fissaggio

Tassello scorrevole	
...Y	Per scanalatura di fissaggio
...X	Per slitta

Supporto centrale	
...M	Supporto centrale

Fissaggio a piedini	
...F	Fissaggio a piedini

Paracolpi con supporto	
...A	Paracolpi

Kit ammortizzatore	
...C	Supporto per GK/GV
...E	Per GA

Bussola di centratura	
...Z	Per slitta

Sensori di finecorsa	
...G	Con cavo 2,5 m
...H	Con connettore
...I	Senza contatto con cavo 2,5 m
...J	Connettore senza contatto
...N	Contatto n.c. con cavo lunghezza 2,5 m

Connettore con cavo	
...V	2,5 m

Squadretta di fissaggio	
...T	Per sensori induttivi

Blocchetto di connessione	
L	Blocchetto di connessione

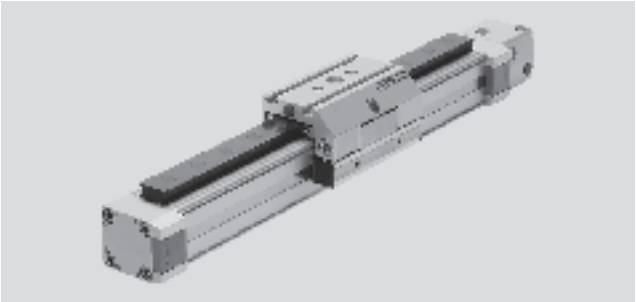
Sensori induttivi	
...O	Contatto n.a., cavo
...P	Contatto n.c., cavo
...W	Contatto n.a., connettore
...R	Contatto n.c., connettore

Assi con trasmissione a vite DGE-SP-KF, con guida a ricircolo di sfere

Foglio dati

FESTO

- Diametro
  18 ... 63
- Corsa
  100 ... 2000 mm
- www.festo.it/
  Parti di ricambio
- Servizio riparazione



Dati generali						
Dimensioni			18	25	40	63
Struttura e composizione			Asse elettromeccanico con trasmissione a vite e guida a ricircolo di sfere			
Guida			Guida a ricircolo di sfere			
Posizione di montaggio			Qualsiasi			
Corsa di lavoro max.[1]	GK	[mm]	100 ... 500	100 ... 1000[2]	200 ... 1500[2]	300... 2000[2]
	GV	[mm]	110 ... 410	170 ... 870[2]	170 ... 1270[2]	150... 1650[2]
	GA	[mm]	–	170 ... 970[2]	140 ... 1440[2]	–
Carico utile max.		[kg]	6	25	50	150
Forza di avanzamento max. F_x		[N]	140	250	600	1600
Coppia di azionamento max.		[Nm]	0,1	0,45	2,1	8,5
Coppia max. di azionamento a vuoto[3]		[Nm]	0,05	0,15	0,5	1,4
Velocità max.[2]		[m/s]	0,2	0,5	1	1,2
Accelerazione max.		[m/s²]	6			
Ripetibilità		[mm]	±0,02			

1) Corsa complessiva = corsa di lavoro + 2x extracorse ➔ 5/ 2.1-152.
2) Il numero di giri e la velocità max. sono in funzione della corsa ➔ 5/ 2.1-154.
3) Misurata a una velocità di 0,2m/s.

Condizioni d'esercizio e ambientali					
Dimensioni		18	25	40	63
Temperatura ambiente	[°C]	0 ... +40			
Grado di protezione		IP40			

Pesi [kg]					
Dimensioni		18	25	40	63
Peso base a corsa 0 mm[1]	GK	1	2,1	6,4	18,1
	GV	1,52	3,26	10,04	32,2
	GA	–	3,1	8,97	–
Peso per ogni 100 mm di corsa aggiuntiva	GK	0,3	0,56	1,14	3,31
	GV	0,3	0,56	1,14	3,31
	GA	–	0,65	1,26	–
Carico movimentato	GK	0,45	0,68	1,82	5,38
	GV	0,61	0,94	2,54	7,84
	GA	–	1,24	3,19	–
Slitta supplementare	KL/KR	0,25	0,38	1,06	3,1

1) Supporto giunto-motore e slitta inclusi

Assi con trasmissione a vite DGE-SP-KF, con guida a ricircolo di sfere

Foglio dati

Momento di inerzia di massa						
Dimensioni			18	25	40	63
J_O	GK	[kg cm^2]	0,008	0,04	0,48	3,88
	GV	[kg cm^2]	0,0117	0,0617	0,782	6,77
	GA	[kg cm^2]	–	0,0573	0,678	–
J_H per ogni metro di corsa		[kg cm^2/m]	0,031	0,121	1	6,67
J_L per ogni kg di carico utile		[kg cm^2/Kg]	0,005	0,025	0,101	0,228
J_W per slitta supplementare		[kg cm^2]	0,001	0,0096	0,107	0,707

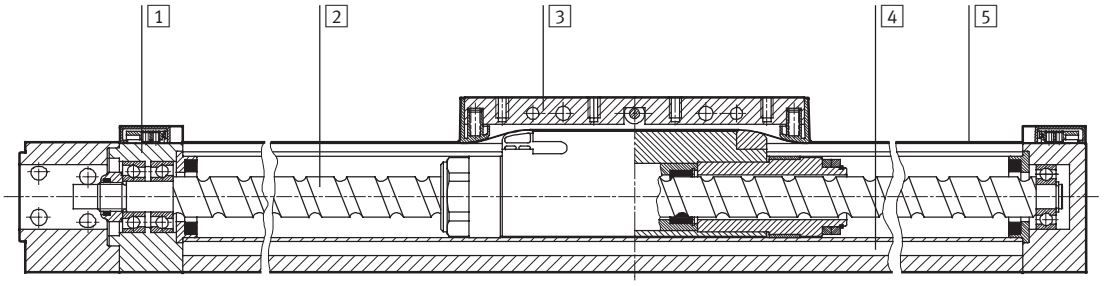
Il momento di inerzia di massa J_A dell'intero asse si calcola come segue:

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

Vite senza fine					
Dimensioni		18	25	40	63
Diametro	[mm]	8	12	20	32
Passo	[mm/U]	4	10	20	30

Materiali

Disegno funzionale



Asse		
1	Testata posteriore	Lega di alluminio per lavorazione plastica, anodizzata
2	Vite senza fine	Acciaio per cuscinetti
3	Slitta	Lega di alluminio per lavorazione plastica, anodizzata
4	Profilo	Lega di alluminio per lavorazione plastica, anodizzata
5	Nastro di copertura	Acciaio, inossidabile

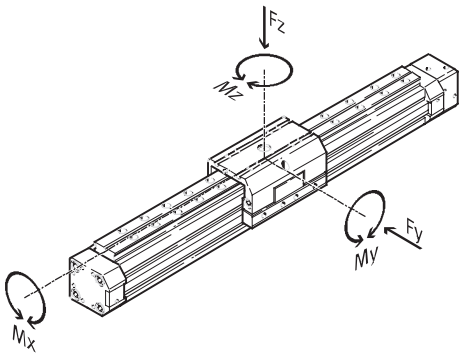
Assi con trasmissione a vite DGE-SP-KF, con guida a ricircolo di sfere

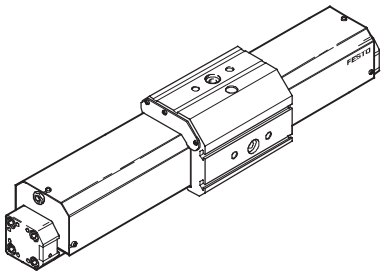
Foglio dati

FESTO

Parametri di carico per l'asse con slitta standard GK o con esecuzione protetta GA

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.





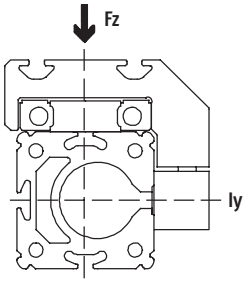
Se l'attuatore è soggetto contemporaneamente a più forze e momenti, oltre ad osservare i parametri di carico indicati si devono soddisfare le seguenti equazioni:

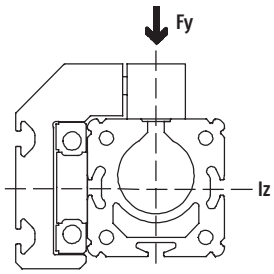
$$\frac{Fy}{Fy_{max.}} + \frac{Fz}{Fz_{max.}} + \frac{Mx}{Mx_{max.}} + \frac{My}{My_{max.}} + \frac{Mz}{Mz_{max.}} \leq 1$$

Forze e momenti ammissibili GK/-GA

Dimensioni		18	25	40	63
$Fy_{max.}$	[N]	930	3080	7300	14050
$Fz_{max.}$	[N]	930	3080	7300	14050
$Mx_{max.}$	[Nm]	7	45	170	580
$My_{max.}$	[Nm]	23	85	330	910
$Mz_{max.}$	[Nm]	23	85	330	910

Momento di superficie di secondo grado





Dimensioni		18	25	40	63
Iy	[mm^4]	$172{,}3x10^3$	$551x10^3$	$1908x10^3$	$13677x10^3$
Iz	[mm^4]	$73{,}7x10^3$	$250x10^3$	$875x10^3$	$6987x10^3$

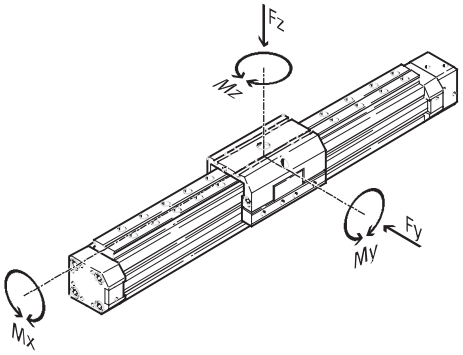
Software di progettazione
PositioningDrives
www.festo.it/engineering

Assi con trasmissione a vite DGE-SP-KF, con guida a ricircolo di sfere

Foglio dati

Parametri di carico per asse con slitta prolungata GV

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.



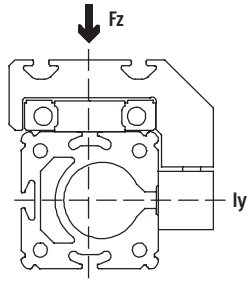
Se l'attuatore è soggetto contemporaneamente a più forze e momenti, oltre ad osservare i parametri di carico indicati si devono soddisfare le seguenti equazioni:

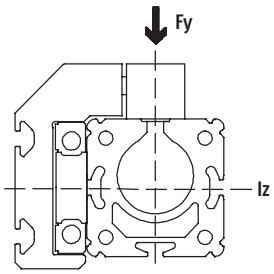
$$\frac{Fy}{Fy_{max.}} + \frac{Fz}{Fz_{max.}} + \frac{Mx}{Mx_{max.}} + \frac{My}{My_{max.}} + \frac{Mz}{Mz_{max.}} \leq 1$$

Forze e momenti ammissibili

Dimensioni		18	25	40	63
$Fy_{max.}$	[N]	930	3080	7300	14050
$Fz_{max.}$	[N]	930	3080	7300	14050
$Mx_{max.}$	[Nm]	7	45	170	580
$My_{max.}$	[Nm]	45	170	660	1820
$Mz_{max.}$	[Nm]	45	170	660	1820

Momento di superficie di secondo grado





Dimensioni		18	25	40	63
Iy	[mm^4]	$172{,}3x10^3$	$551x10^3$	$1908x10^3$	$13677x10^3$
Iz	[mm^4]	$73{,}7x10^3$	$250x10^3$	$875x10^3$	$6987x10^3$

Assi con trasmissione a vite DGE-SP-KF, con guida a ricircolo di sfere

Foglio dati

FESTO

Extracorsa

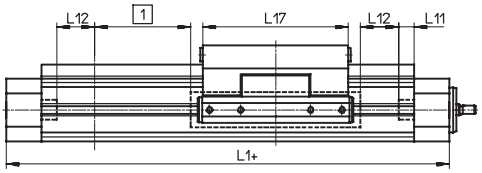
L1+ Lunghezza complessiva dell'asse
L11 Arresto meccanico
L17 Lunghezza della slitta

[1] La corsa di lavoro è l'intervallo disponibile e utilizzabile di lavoro. Va indicata in fase di ordinazione.

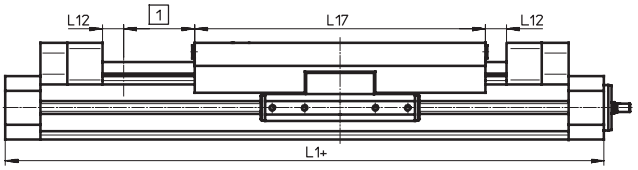
L12 L'extracorsa è una distanza di sicurezza all'arresto meccanico, disponibile oltre la corsa su entrambi i lati.

Esempio:
Tipo DGE-25-500-SP
Corsa di lavoro = 500 mm
Extracorsa = (2x 10 mm)
= 20 mm
Corsa utile max.:
520 mm = 500 mm + 20 mm

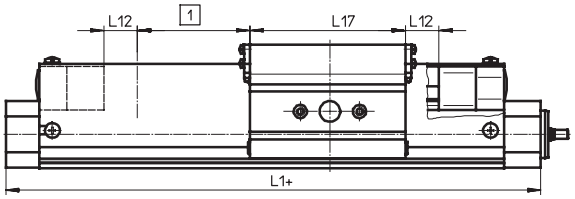
Slitta standard GK



Slitta prolungata GV



Esecuzione protetta GA

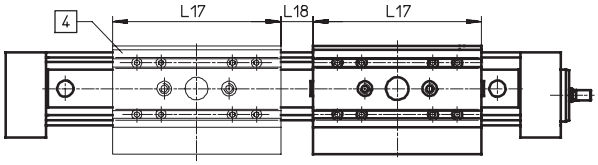


Extracorsa L12e [mm] per posizione di finecorsa

Dimensioni Variante	18	25	40	63
Slitta standard GK	6,5	10	20	30
Slitta prolungata GV	3,5	0	1	0
Esecuzione protetta GA	–	0	1	–

Riduzione corsa di lavoro per slitta standard GK o per slitta maggiorata GV e slitta supplementare KL/KR

L17 = lunghezza slitta/ slitta supplementare
L18 = distanza tra le slitte
[4] Slitta supplementare

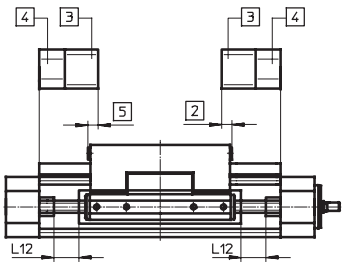


Nell'asse con tramissione a vite con slitta supplementare, la corsa di lavoro è ridotta della lunghezza della slitta supplementare e della distanza tra le due slitte.

Esempio:
Tipo DGE-25-500-SP-...-KF-GK-KL
Corsa di lavoro senza slitta supplementare = 500 mm
L18 = 20 mm
L17 = 105 mm
Corsa di lavoro con slitta supplementare = 375 mm
(500 mm - 20 mm - 105 mm)

Riduzione della corsa di lavoro per slitta standard GK con paracolpi opzionale

[2] Riduzione della corsa di lavoro
[5] Riduzione della corsa di lavoro
[3] Paracolpi
[4] Supporto ammortizzatore
L12 Extracorsa



Nell'asse con trasmissione a vite con paracolpi opzionale, la corsa di lavoro è ridotta, poiché l'extracorsa è inferiore rispetto alla quota totale risultante dal paracolpi e dal supporto ammortizzatore.
La riduzione della corsa di lavoro è diversa secondo le dimensioni dell'asse.

		18	25	40	63
[2]	[mm]	-5	20	33,5	55
[5]	[mm]	8	10	24,5	45

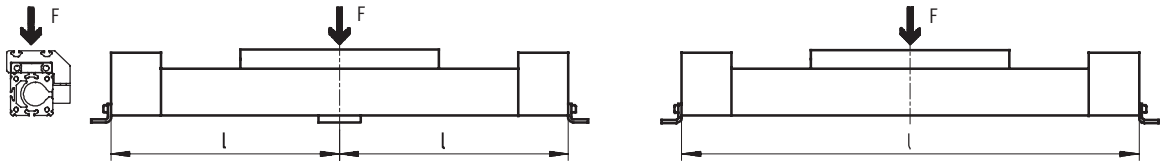
Assi con trasmissione a vite DGE-SP-KF, con guida a ricircolo di sfere

Foglio dati

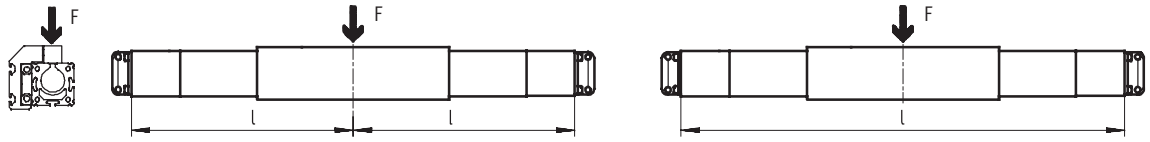
Interasse max. tra i supporti l in funzione della forza F

Per limitare la flessione sulle corse lunghe, è eventualmente necessario dotare l'asse di supporti centrali. I diagrammi seguenti consentono di determinare l'interasse max. ammissibile dei supporti in funzione della forza agente F.

1 Forza applicata sulla superficie della slitta

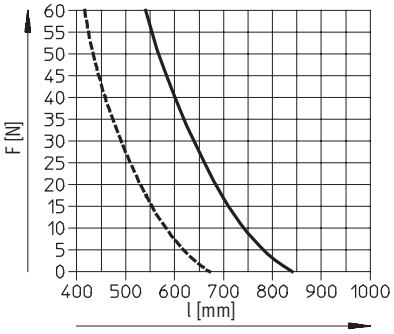


2 Forza applicata sul lato frontale della slitta

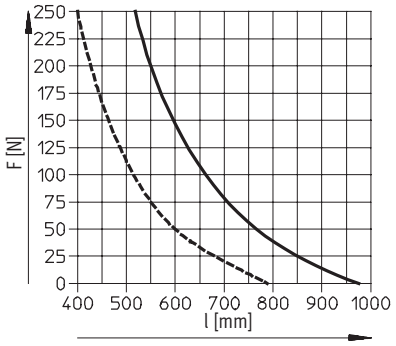


Interasse max. tra i supporti l (senza supporto centrale) in funzione della forza F

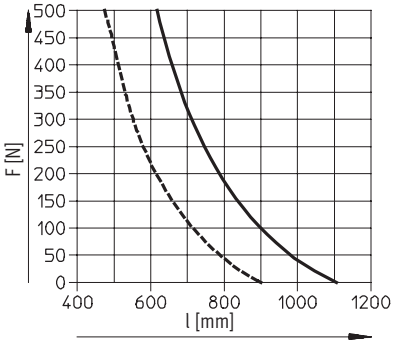
DGE-18



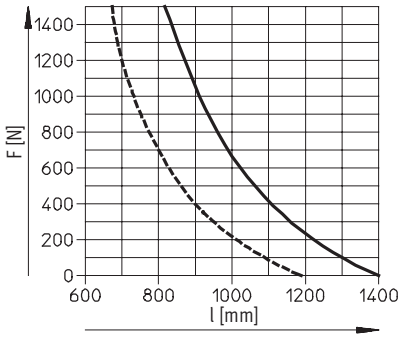
DGE-25



DGE-40



DGE-63



1

2

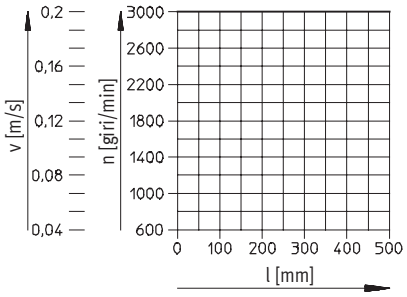
Assi con trasmissione a vite DGE-SP-KF, con guida a ricircolo di sfere

Foglio dati

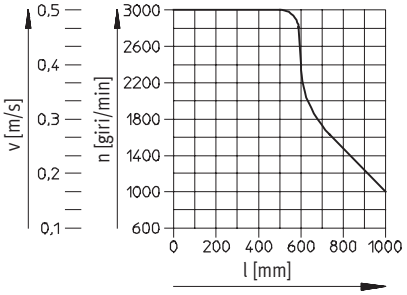
FESTO

Massima velocità v e numero giri motore n ammessi in funzione della corsa l

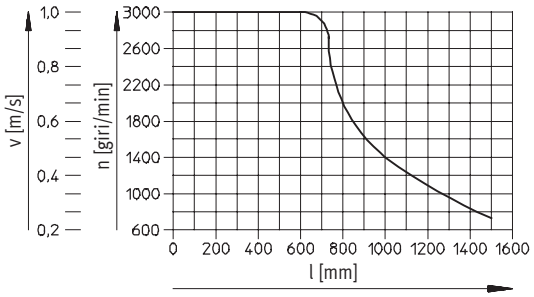
DGE-18



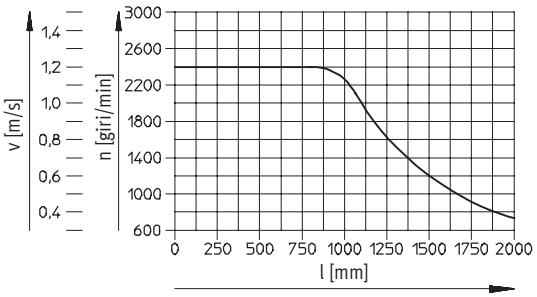
DGE-25



DGE-40



DGE-63



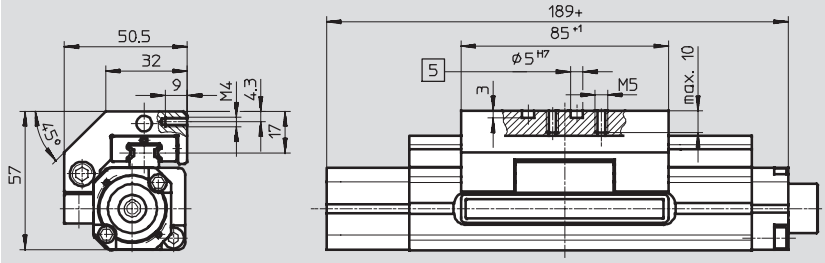
Assi con trasmissione a vite DGE-SP-KF, con guida a ricircolo di sfere

Foglio dati

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

Slitta standard GK

Dimensioni 18

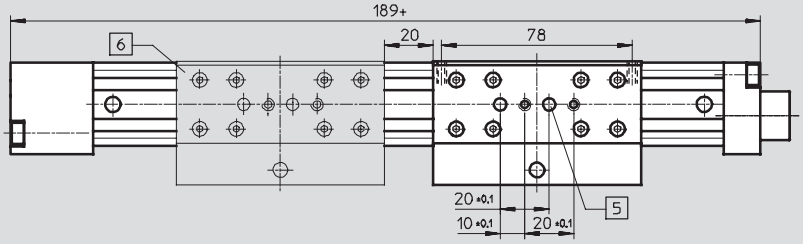


5 Foro per perno di centratura ZBS-5
\+ = aggiungere la corsa

Dimensioni base
➔ 5/ 2.1-138
Extracorsa
➔ 5/ 2.1-152

Slitta supplementare KL/KR

Dimensioni 18

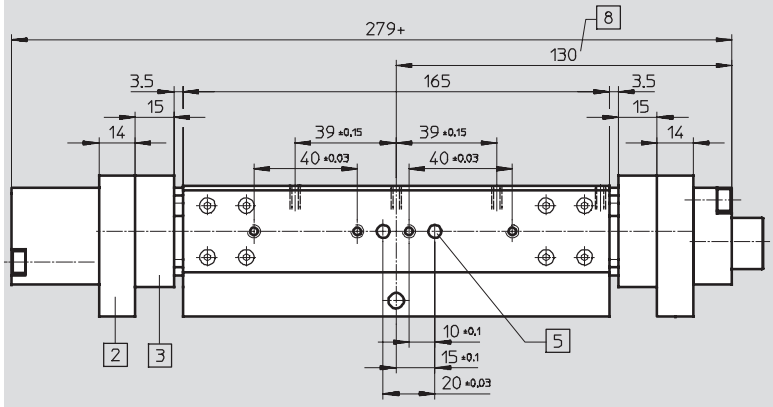


5 Foro per perno di centratura ZBS-5
6 Slitta supplementare DGE-18-...-KL/KR
\+ = aggiungere la corsa

Riduzione della corsa di lavoro
➔ 5/ 2.1-152

Slitta prolungata GV

Dimensioni 18

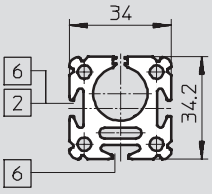


2 Ammortizzatore KYP
3 Paracolpi NPE
5 Foro per perno di centratura ZBS-5
8 Slitta in posizione terminale della corsa di lavoro (con extracorsa fino all'arresto meccanico ancora disponibile)
\+ = aggiungere la corsa

Extracorsa
➔ 5/ 2.1-152

Profilo

Dimensioni 18



2 Scanalatura di montaggio sensori
6 Scanalature di fissaggio per tasselli scorrevoli NST

Assi con trasmissione a vite DGE-SP-KF, con guida a ricircolo di sfere

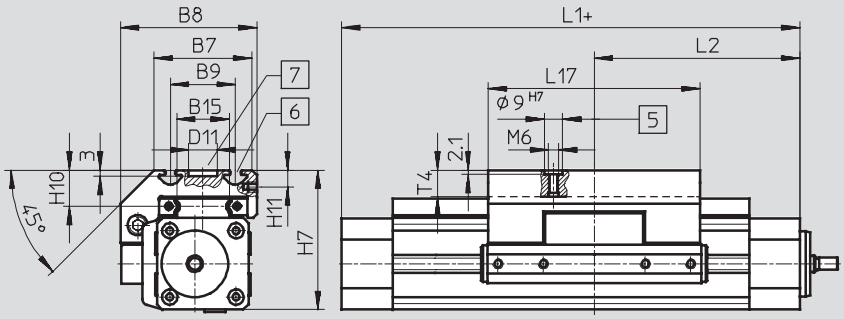
Foglio dati

FESTO

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

Slitta standard GK

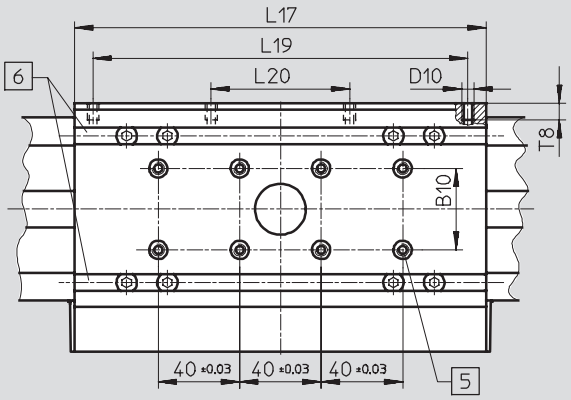
Dimensioni 25 ... 63



5 Foro per bussola di centratura ZBH-9
6 Scanalatura di fissaggio per tasselli scorrevoli NSTL
7 Foro per fissaggio centrale SLZZ
\+ = aggiungere la corsa

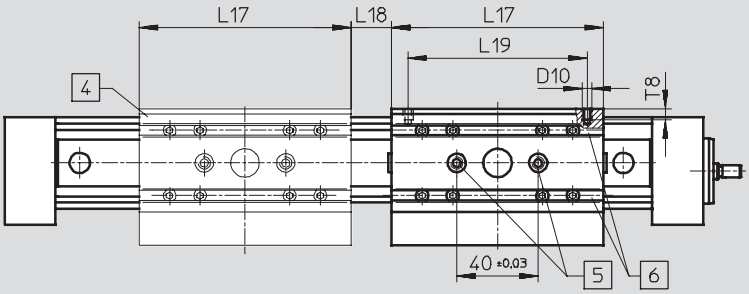
Dimensioni base
➔ 5/ 2.1-139
Extracorsa
➔ 5/ 2.1-152

Dimensioni 40/63



5 Foro per bussola di centratura ZBH-9
6 Scanalatura di fissaggio per tasselli scorrevoli NSTL
\+ = aggiungere la corsa

Dimensioni 25 ... 63



4 Slitta supplementare DGE-...-...-KL/KR
5 Foro per bussola di centratura ZBH-9
6 Scanalatura di fissaggio per tasselli scorrevoli NSTL
\+ = aggiungere la corsa

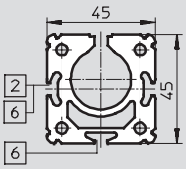
Riduzione della corsa di lavoro
➔ 5/ 2.1-152

Assi con trasmissione a vite DGE-SP-KF, con guida a ricircolo di sfere

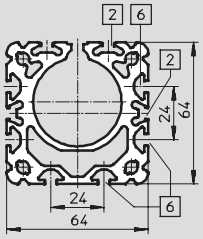
Foglio dati

Profilo

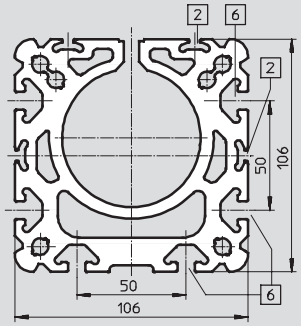
Dimensioni 25



Dimensioni 40



Dimensioni 63



2 Scanalatura di montaggio sensori

6 Scanalature di fissaggio per tasselli scorrevoli NST

Dimensioni	B7	B8	B9 ±0,2	B10	B15	D10	D11 ∅ G7	H7	H10
25	48	67	32	–	23,5	M5	14	68,5	18,5
40	78,5	96,5	55	20	42	M5	25	90,5	20
63	121	142	90	40	71	M8	25	144,5	30

Dimensioni	H11	L1	L2	L17	L18[1)]	L19 ±0,1	L20 ±0,1	T4 max.	T8
25	8,2	213	101,5	105	20	88	–	12,5	8,5
40	7	315	153	167	20	150	58	12,5	8,5
63	12,5	410	200	230	27	200	72	20,5	10,5

1) Distanza minima consigliata per l'accessibilità del nipplo di lubrificazione.

Assi con trasmissione a vite DGE-SP-KF, con guida a ricircolo di sfere

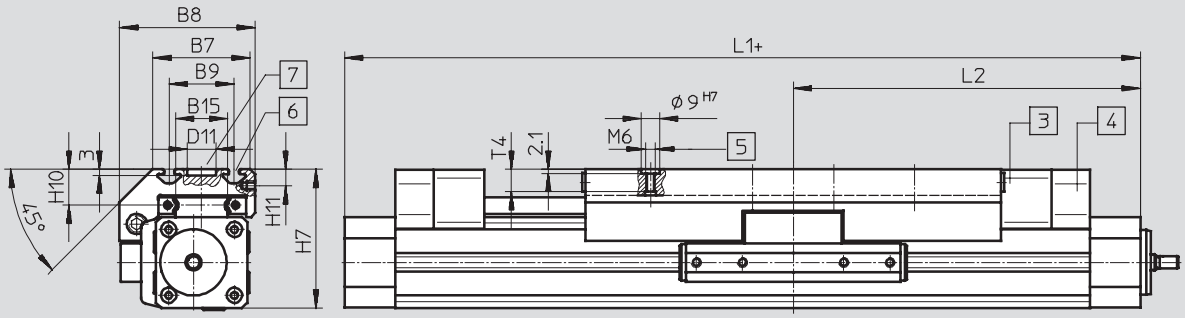
Foglio dati

FESTO

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

Slitta prolungata GV

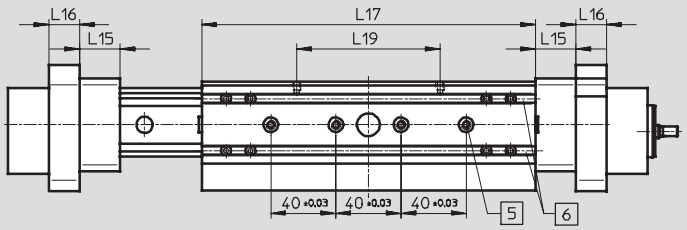
Dimensioni 25 ... 63



3 Paracolpi NPE
4 Supporto ammortizzatore KYP
5 Foro per bussola di centratura ZBH-9
6 Scanalatura per tassello scorrevole NSTL
7 Foro per fissaggio centrale SLZZ
\+ = aggiungere la corsa

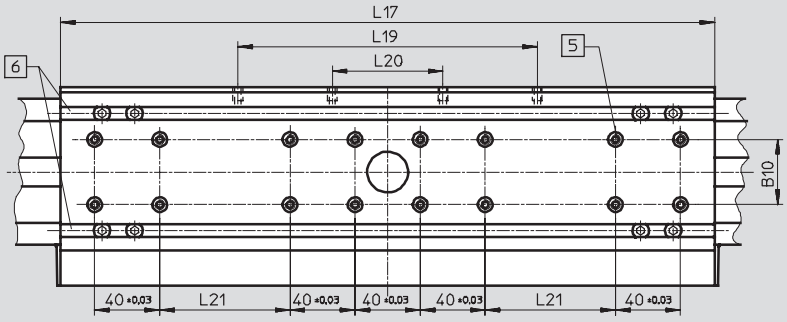
Dimensioni base
➔ 5/ 2.1-139
Extracorsa
➔ 5/ 2.1-152

Dimensioni 25



5 Foro per bussola di centratura ZBH-9
6 Scanalatura di fissaggio per tasselli scorrevoli NSTL

Dimensioni 40/63



5 Foro per bussola di centratura ZBH-9
6 Scanalatura di fissaggio per tasselli scorrevoli NSTL

Assi con trasmissione a vite DGE-SP-KF, con guida a ricircolo di sfere

Foglio dati

Dimensioni	B7	B8	B9 ±0,2	B10	B15	D10	D11 ∅ G7	H7	H10	H11
25	48	67	32	–	23,5	M5	14	68,5	18,5	8,2
40	78,5	96,5	55	20	42	M5	25	90,5	20	7
63	121	142	90	40	71	M8	25	144,5	30	12,5

Dimensioni	L1	L2	L15	L16	L17 ±0,2	L19 ±0,1	L20 ±0,1	L21 ±0,1	T4 max.	T8
25	343	171,5	25	19	205	88	–	–	12,5	8,5
40	545	272,5	40	32	337	150	58	40	12,5	8,5
63	760	380	60	44	480	200	72	120	20,5	10,5

Assi con trasmissione a vite DGE-SP-KF, con guida a ricircolo di sfere

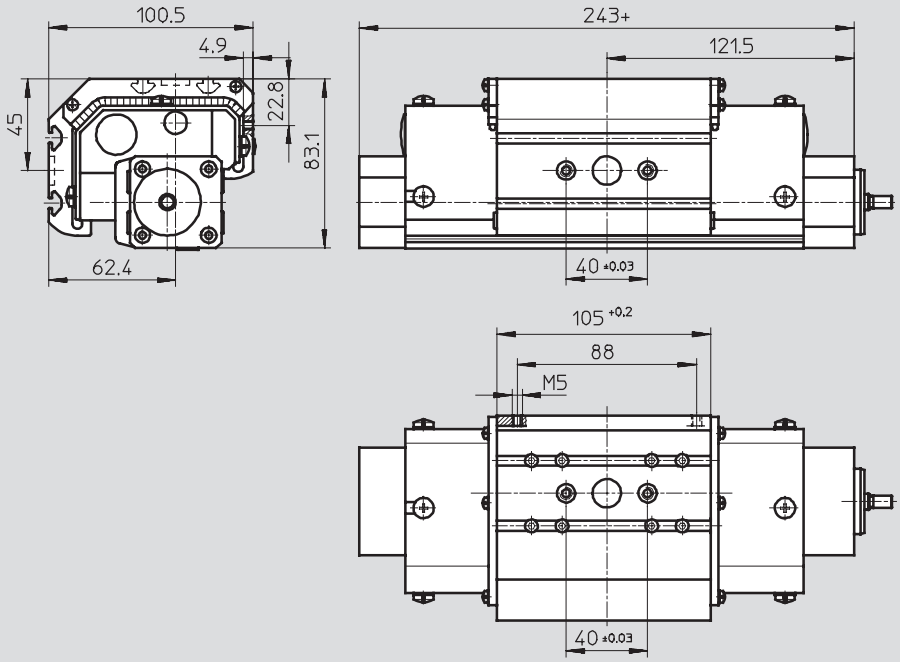
Foglio dati

FESTO

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

Esecuzione protetta GA

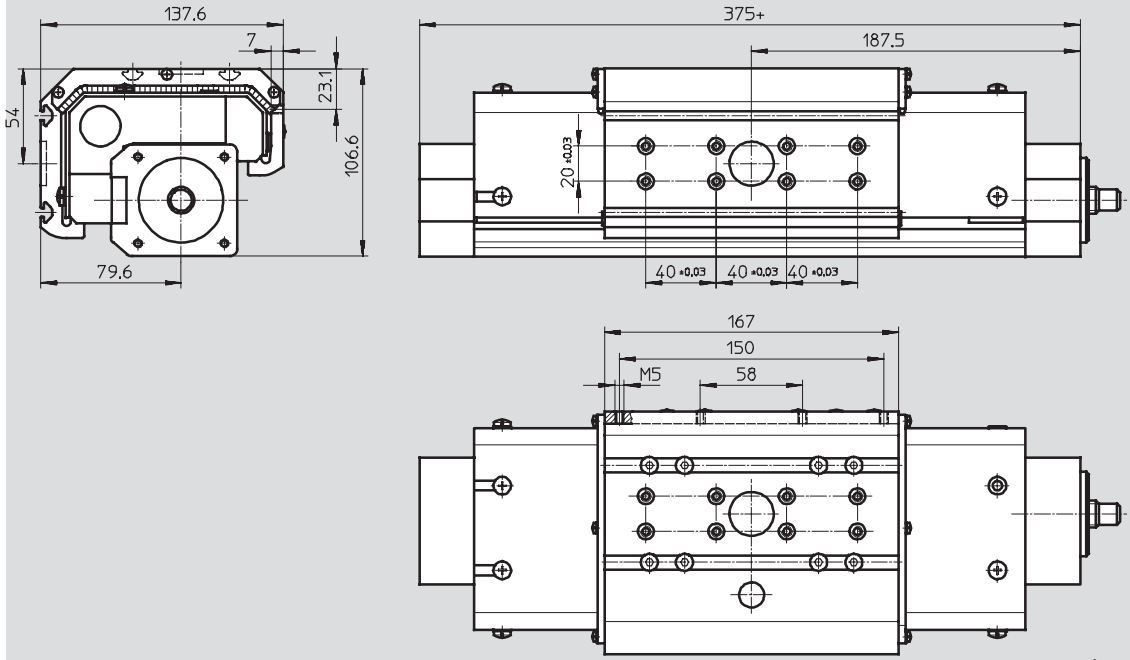
Dimensioni 25



\+ = aggiungere la corsa

Extracorsa ➔ 5/ 2.1-152

Dimensioni 40



\+ = aggiungere la corsa

Extracorsa ➔ 5/ 2.1-152

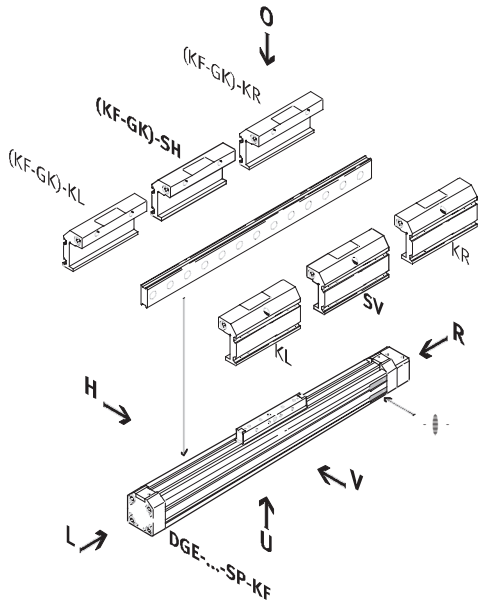
Assi con trasmissione a vite DGE-SP-KF, con guida a ricircolo di sfere

Dati di ordinazione - Gruppo modulare

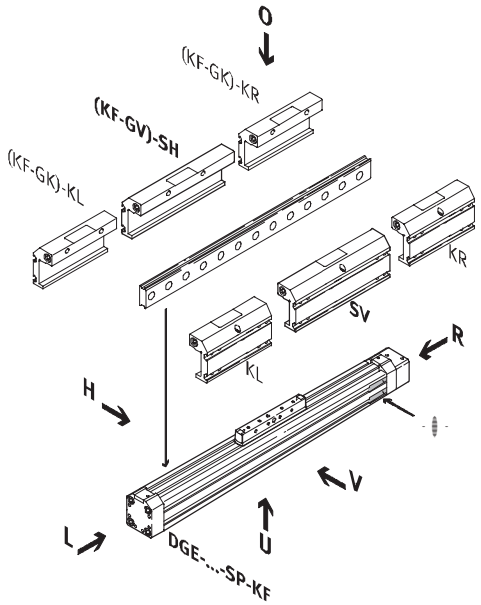
Codice di ordinazione

Indicazioni obbligatorie

Slitta standard GK



Slitta prolungata GV



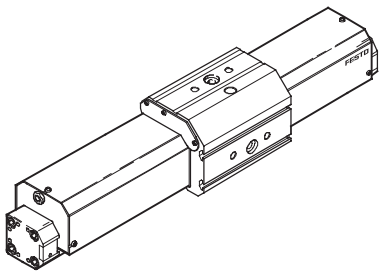
KF	Guida a ricircolo di sfere
KL	Slitta supplementare sinistra
KR	Slitta supplementare destra
SV	Slitta anteriore
SH	Slitta posteriore

Attenzione

L'apertura per il finecorsa magnetico si trova sul lato destro degli assi con trasmissione a vite DGE-...-SP-KF

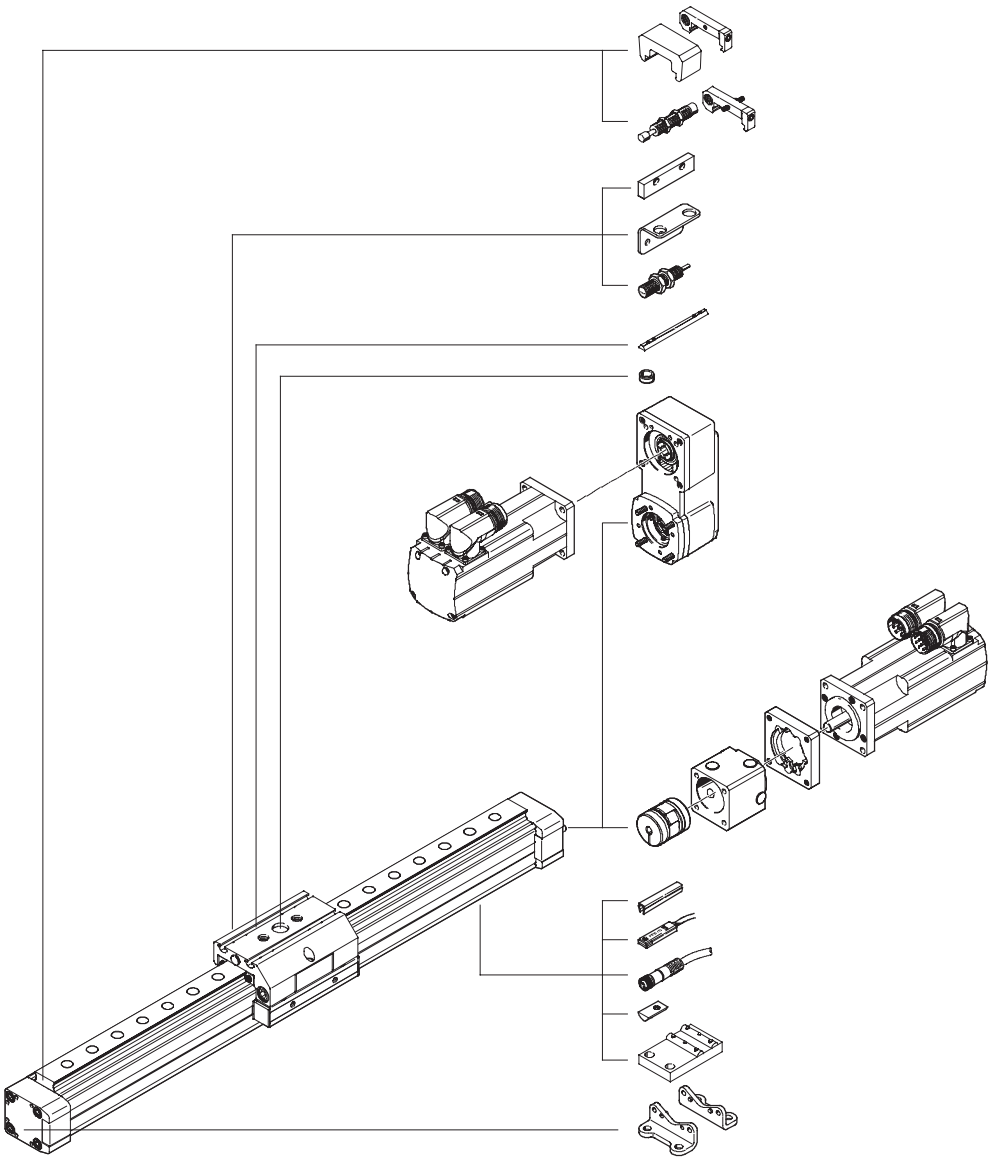
U = in basso
O = in alto
R = a destra
L = a sinistra
V = davanti
H = dietro

Esecuzione protetta GA



Assi con trasmissione a vite DGE-SP-KF, con guida a ricircolo di sfere

Dati di ordinazione - Gruppo modulare



A

C/E

L

T

O/P/W/R

X

Z

Kit parallelo EAMM-U
➔ 5/ 2.1-181

Servomotore EMMS-AS, MTR-AC
Motore passo-passo EMMS-ST, MTR-ST
➔ 5/ 2.1-178

Kit assiale EAMM-A
➔ 5/ 2.1-178

B/S

G/H/I/J/N

V

Y

M

F

Assi con trasmissione a vite DGE-SP-KF, con guida a ricircolo di sfere

Dati di ordinazione - Gruppo modulare

FESTO

M Indicazioni obbligatorie

Codice prodotto	Funzione		Dimensioni		Corsa		Funzione
193 745 193 746 193 747 193 748	DGE		18 25 40 63		1 ... 2000		SP
Esempio di ordinazione							
193 745	**DGE**	-	**18**	-	**410**	-	**SP**

Tabella di ordinazione

Dimensioni		18	25	40	63	Condizioni	Codice		Inserimento codice
M Codice prodotto		**193 745**	**193 746**	**193 747**	**193 748**				
Funzione		Asse elettro-meccanico lineare					**DGE**		DGE
Dimensioni		18	25	40	63		-...		
Corsa [mm]	Slitta standard GK	100, 200, 300, 400, 500	100, 200, 300, 400, 500, 600, 700, 800, 900, 1000	200, 300, 400, 500, 600, 800, 1000, 1200, 1400, 1500	300, 400, 500, 600, 800, 1000, 1200, 1400, 1500, 1800, 2000		-...		
		–	1 ... 990	1 ... 1487	1 ... 1982				
	Slitta prolungata GV	110, 210, 310, 410	170, 270, 370, 470, 570, 670, 770, 870	170, 270, 370, 570, 770, 970, 1170, 1270	150, 250, 450, 650, 850, 1050, 1150, 1450, 1650		-...		
		–	1 ... 860	1 ... 1257	1 ... 1632				
	Esecuzione protetta GA	–	170, 270, 370, 470, 570, 670, 770, 870, 970	140, 240, 340, 440, 540, 740, 940, 1140, 1340, 1440	–		-...		
		–	1 ... 960	1 ... 1427	–				
Funzione		Asse lineare con trasmissione a vite					**-SP**		-SP

Trascrizione codice di ordinazione

	DGE	-		-		-	**SP**

Assi con trasmissione a vite DGE-SP-KF, con guida a ricircolo di sfere

Dati di ordinazione - Gruppo modulare

FESTO

→ 0 **Indicazioni facoltative** →

Guida	**Slitta**	**Posizione di montaggio slitta**	**Slitta supplementare**
KF	GK GV GA	SV SH	KL KR
- **KF**	- **GV**	- **SV**	-

Tabella di ordinazione

Dimensioni		18	25	40	63	Condizioni	Codice	Inserimento codice
0 Guida		Guida a ricircolo di sfere				1	**-KF**	-KF
Slitta	Standard	Standard				2	**-GK**	
	Prolungata	Prolungata				3	**-GV**	
	Protezione contro la polvere	–	Esecuzione protetta		–	3	**-GA**	
Posizione di montaggio slitta		Anteriore					**-SV**	
		Slitta posteriore					**-SH**	
Slitta supplementare	Standard (riduzione della corsa utile)	Sinistra (85 mm*)	(105 mm*)	(167 mm*)	(230 mm*)	4	**-KL**	
	Standard (riduzione della corsa utile)	Destra (85 mm*)	(105 mm*)	(167 mm*)	(230 mm*)	4	**-KR**	

* Spazio intermedio stra slitta e slitta supplementare.

1 **KF** Solo con slitta GK, GV, GA.

2 **GK** Solo con posizione di montaggio slitta SV, SH.
Paracolpi consigliato → Opzione accessori "A".

3 **GV, GA** Solo con posizione di montaggio slitta SV, SH.
Paracolpi compreso nella fornitura.

4 **KL, KR** Solo con slitta GK, GV.
Paracolpi consigliato → Opzione accessori "A".

Trascrizione codice di ordinazione

- **KF**	-	-	-

Assi con trasmissione a vite DGE-SP-KF, con guida a ricircolo di sfere

Dati di ordinazione - Gruppo modulare

FESTO

➔ [0] **Indicazioni facoltative**

Accessori	Copertura per scanalatura		Supporto centrale		Paracolpi con supporto		Bussola di centratura		Connettore con cavo		Blocchetto di connessione	
	Tassello scorrevole		Fissaggio a piedini		Ammortizzatori		Sensori di finecorsa		Squadretta di fissaggio		Sensori induttivi di finecorsa	
ZUB	...S ...B	...Y ...X	...M	...F	...A	...C ...E	...Z	...G ...H ...I ...J ...N	...V	...T	L	...O ...P ...W ...R
ZUB -	**2S**	**10Y**		**F**				**2G**				

Tabella di ordinazione

Dimensioni			18	25	40	63	Condizioni	Codice		Inserimento codice
↓	Accessori		Forniti non montati					**ZUB-**		ZUB-
[0]	Copertura per scanalatura	Scanalatura sensori	1 ... 10					**...S**		
		Scanalatura di fissaggio	–	–	1 ... 10			**...B**		
	Tassello scorrevole	Per scanalatura di fissaggio	1 ... 10					**...Y**		
		Per slitta	–	1 ... 10				**...X**		
	Supporto centrale		1 ... 10					**...M**		
	Fissaggio a piedini		1 ... 10					**...F**		
	Paracolpi con supporto	(riduzione della corsa utile* con paracolpi su entrambi i lati)	1 ... 2 (10 mm)	(30 mm)	(60 mm)	(100 mm)	[9]	**...A**		
	Ammortizzatore autoregolante	Con supporto per KF-GK, KF-GV	1 ... 2				[10]	**...C**		
		Per KF-GA	–	1 ... 2		–	[11]	**...E**		
	Bussola di centratura (confezione da 10 pezzi)		10, 20, 30, 40, 50, 60, 70, 80, 90					**...Z**		
	Sensori di finecorsa	Cavo 2,5 m	1 ... 10					**...G**		
		Connettore M8	1 ... 10					**...H**		
		Senza contatto con cavo 2,5 m	1 ... 10					**...I**		
		Senza contatto, connettore M8	1 ... 10					**...J**		
		Contatto n.c. con cavo lunghezza 2,5 m	1 ... 10					**...N**		
	Cavo con connettore M8, 2,5 m		1 ... 10					**...V**		
	Squadretta di fissaggio per sensori induttivi		1 ... 5				[10]	**...T**		
	Blocchetto di connessione		1				[10]	**L**		
	Sensore di finecorsa induttivo	Contatto n.a., cavo 2,5 m	1 ... 5				[10]	**...O**		
		Contatto n.c. con cavo lunghezza 2,5 m	1 ... 5				[10]	**...P**		
		Contatto n.a., connettore M8	1 ... 5				[10]	**...W**		
		Contatto n.c., connettore, M8	1 ... 5				[10]	**...R**		

* Corsa utile = Corsa ordinata - riduzione della corsa utile

[9] **A** Solo con slitta GK.
Montato di serie sulle slitte GV, GA

[10] **C, T, L, O, P, W, R.**
Non con slitta GA

[11] **E** Solo con slitta GA.

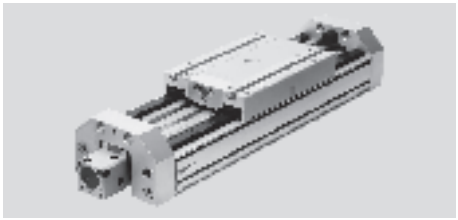
Trascrizione codice di ordinazione

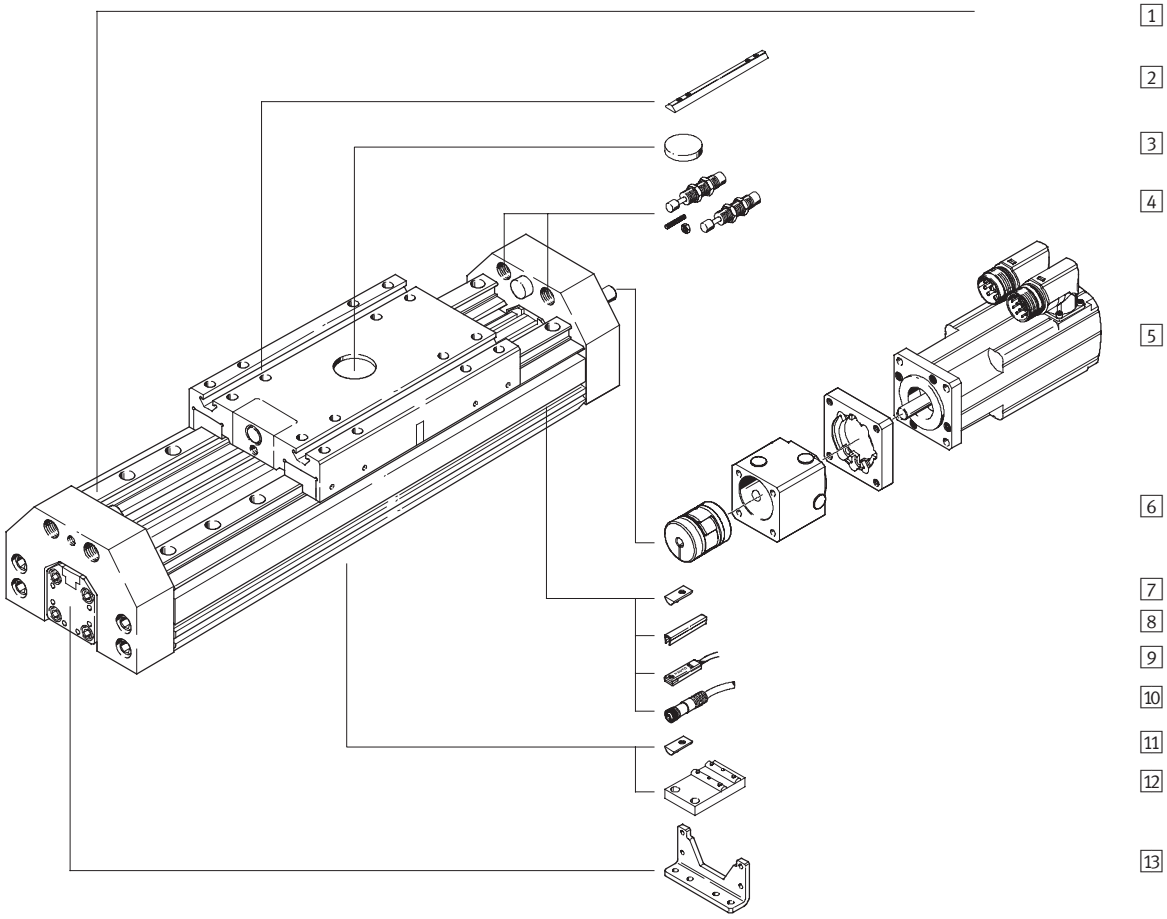
ZUB	-												

Assi con trasmissione a vite DGE-SP-HD, con guida per carichi pesanti

Componenti

FESTO





Assi con trasmissione a vite DGE-SP-HD, con guida per carichi pesanti

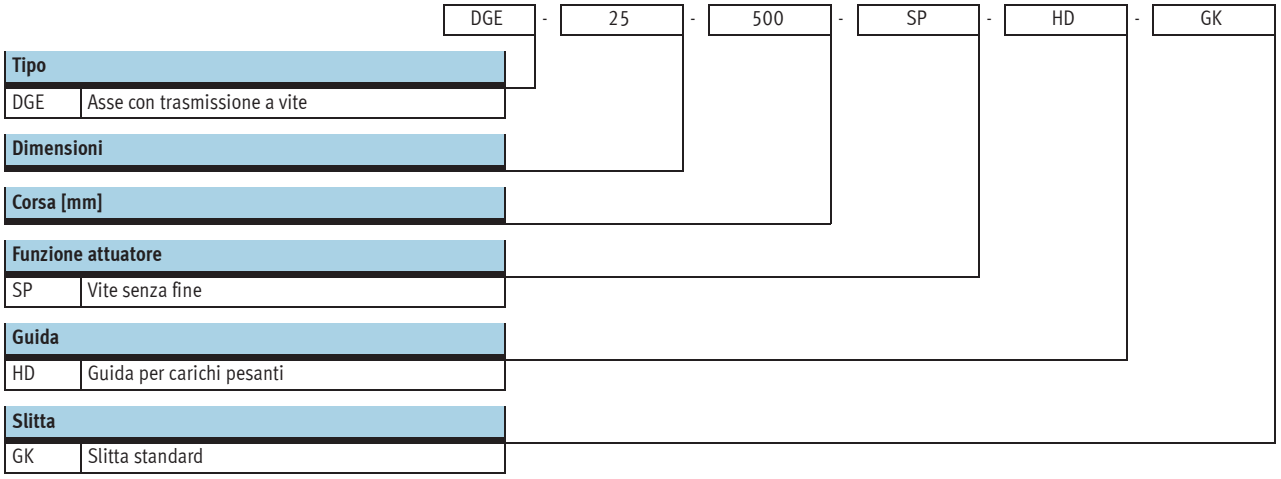
Componenti

FESTO

Varianti ed accessori			
	Tipo	**Descrizione**	**➔ Pagina**
1	Asse con trasmissione a vite DGE-SP-HD	Asse elettro-meccanico con guida per carichi pesanti	5/ 2.1-168
2	Tassello scorrevole per slitta X	Per il fissaggio di carichi e dispositivi sulla slitta	5/ 2.1-192
3	Fissaggio centrale Q	Per la centratura di carichi e dispositivi sulla slitta	5/ 2.1-192
4	Kit ammortizzatore D	Per evitare il danneggiamento dell'arresto di finecorsa in caso di guasto	5/ 2.1-189
5	Kit assiale EAMM-A	Per il montaggio assiale del motore (costituito da: giunto, supporto giunto-motore e flangia motore)	5/ 2.1-178
6	Motore EMMS, MTR	Motori specifici per l'asse, con o senza riduttore, con o senza freno	5/ 2.1-178
7	Tassello scorrevole per scanalatura di fissaggio Y	Per il fissaggio di elementi da montare	5/ 2.1-192
8	Copertura per scanalatura B/S	Per la protezione interna del cilindro	5/ 2.1-192
9	Sensori di finecorsa G/H/I/J/N	Per il rilevamento dei segnali o richiesta di conferma	5/ 2.1-193
10	Connettore con cavo V	Per sensore di finecorsa	5/ 2.1-193
11	Tassello scorrevole per HD in basso U	Per il fissaggio di elementi da montare	5/ 2.1-192
12	Supporto centrale M	Per il fissaggio dell'asse sul corpo	5/ 2.1-186
13	Fissaggio a piedini F	Per il fissaggio dell'asse sul corpo	5/ 2.1-186

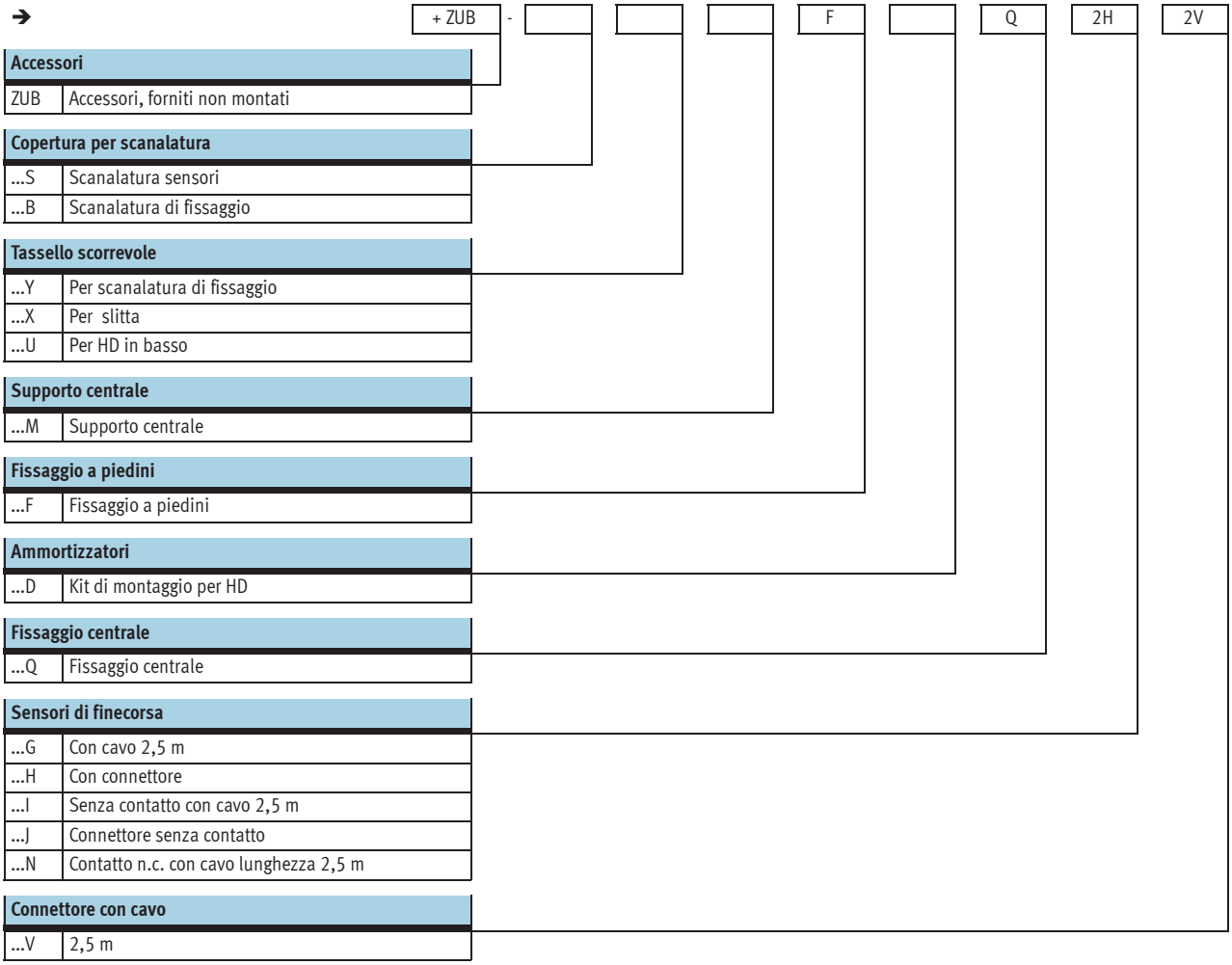
Assi con trasmissione a vite DGE-SP-HD, con guida per carichi pesanti

Composizione del codice



Assi con trasmissione a vite DGE-SP-HD, con guida per carichi pesanti

Composizione del codice



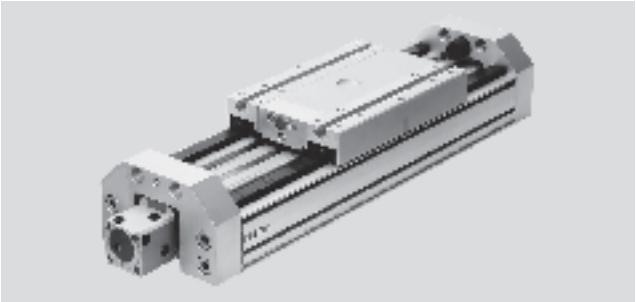
Assi con trasmissione a vite DGE-SP-HD, con guida per carichi pesanti

Foglio dati

FESTO

- Ø - Diametro
  18 ... 40
- l - Corsa
  100 ... 1500 mm

- - Servizio riparazione



Dati generali					
Dimensioni		18-HD18	25-HD25	25-HD40	40-HD40
Struttura e composizione		Asse elettro-meccanico con guida per carichi pesanti			
Guida		Guida a ricircolo di sfere			
Posizione di montaggio		Qualsiasi			
Corsa max. di lavoro	[mm]	100 ... 400	100 ... 900	100 ... 900	200 ... 1500
Carico utile max.	[kg]	6	25	25	50
Forza di avanzamento max. F_x	[N]	140	250	250	600
Coppia di azionamento max.	[Nm]	0,1	0,45	0,45	2,1
Coppia a vuoto[1)]	[Nm]	0,05	0,2	0,2	0,6
Velocità max.	[m/s]	0,2	0,5	0,5	1
Accelerazione max.	[m/s²]	6			
Ripetibilità	[mm]	±0,02			

1) Misurata a una velocità di 0,2 m/s.

Condizioni d'esercizio e ambientali					
Dimensioni		18-HD18	25-HD25	25-HD40	40-HD40
Temperatura ambiente	[°C]	0 ... +40			
Grado di protezione		IP40			

Pesi [kg]					
Dimensioni		18-HD18	25-HD25	25-HD40	40-HD40
Peso base a corsa 0 mm[1)]		4,31	7,04	16,13	19,02
Peso per ogni 100 mm di corsa aggiuntiva		0,32	1,6	2,19	2,62

1) Supporto giunto-motore e slitta inclusi

Momento di inerzia di massa					
Dimensioni		18-HD18	25-HD25	25-HD40	40-HD40
J_O	[kg cm²]	0,013	0,086	0,375	0,698
J_H per ogni metro di corsa	[kg cm²/m]	0,031	0,121	0,121	1
J_L per ogni kg di carico utile	[kg cm²/Kg]	0,005	0,025	0,025	0,101

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

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

Assi con trasmissione a vite DGE-SP-HD, con guida per carichi pesanti

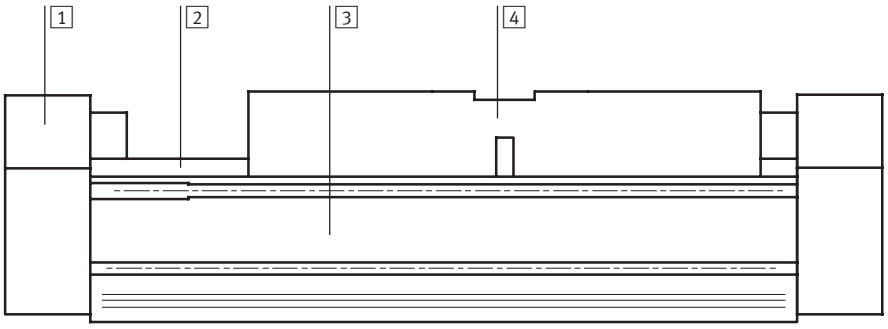
Foglio dati

FESTO

Vite senza fine					
Dimensioni		18-HD18	25-HD25	25-HD40	40-HD40
Diametro	[mm]	8	12	12	20
Passo	[mm/U]	4	10	10	20

Materiali

Disegno funzionale



Asse	
1 Testata posteriore	Alluminio anodizzato
2 Guida	Acciaio per cuscinetti
3 Profilo	Alluminio anodizzato
4 Slitta	Alluminio anodizzato

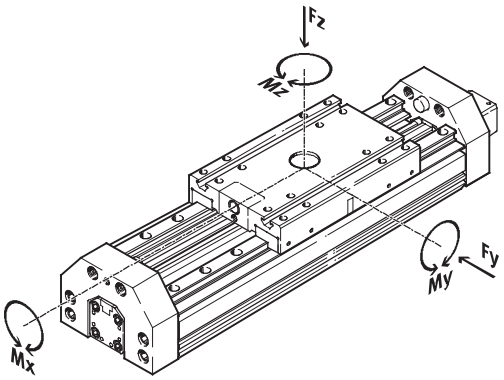
Assi con trasmissione a vite DGE-SP-HD, con guida per carichi pesanti

Foglio dati

FESTO

Parametri di carico

Le forze e i momenti indicati sono riferiti al baricentro della guida per carichi pesanti.
In condizioni di esercizio dinamico non devono essere superati i valori indicati. Per questo occorre prestare particolare attenzione alla fase di ammortizzazione.



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

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

Forze e momenti ammissibili

Dimensioni		18-HD18	25-HD25	25-HD40	40-HD40
$Fy_{max.}$	[N]	1820	5400	5400	5400
$Fz_{max.}$	[N]	1820	5600	5600	5600
$Mx_{max.}$	[Nm]	70	260	375	375
$My_{max.}$	[Nm]	115	415	560	560
$Mz_{max.}$	[Nm]	112	400	540	540

Software di progettazione
PositioningDrives
www.festo.it/engineering

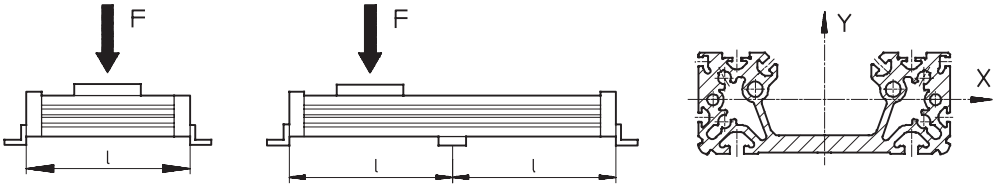
Assi con trasmissione a vite DGE-SP-HD, con guida per carichi pesanti

Foglio dati

Interasse max. tra i supporti l in funzione della forza F

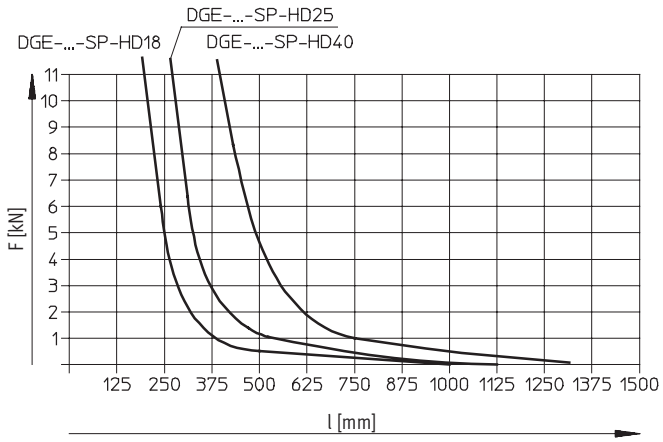
Per limitare la flessione sulle corse lunghe, è necessario dotare l'attuatore di supporti. I diagrammi seguenti consentono di determinare l'interasse max. ammissibile dei supporti in funzione della forza agente F.

Forza applicata sulla superficie della slitta

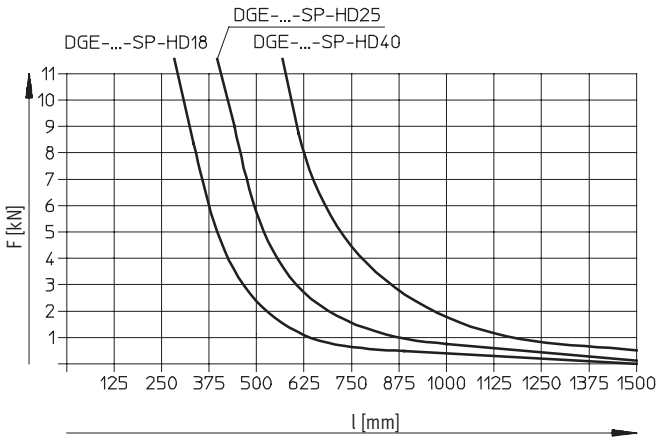


Interasse max. tra i supporti l (senza supporto centrale) in funzione della forza F

Flessione sull'asse X



Flessione sull'asse Y



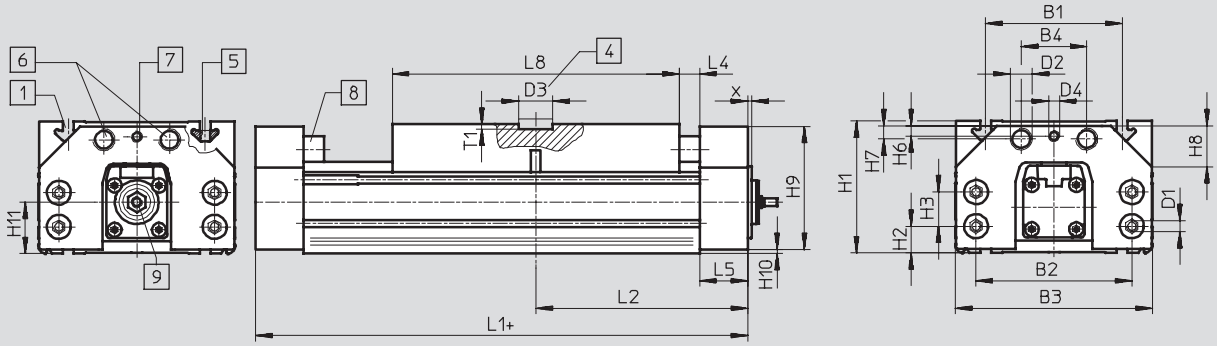
Assi con trasmissione a vite DGE-SP-HD, con guida per carichi pesanti

Foglio dati

FESTO

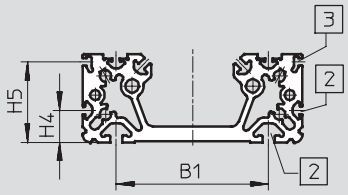
Dimensioni

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



1 Scanalature di fissaggio per tasselli scorrevoli NSTH
4 Foro per fissaggio centrale SLZZ
5 Tassello scorrevole NSTH
6 Filettatura per ammortizzatore
7 Filettatura per perno filettato
8 Paracolpi
9 Quota per attacco motore su un lato
\+ = aggiungere la corsa

Profilo



2 Scanalature di fissaggio per tasselli scorrevoli NST
3 Scanalatura di montaggio sensori

Dimensioni	B1	B2	B3 ±0,2	B4	D1	D2	D3 ∅ G7	D4	D5	H1	H2	H3	H4
18-HD18	80±0,3	85	116	40	M5	M12x1	25	M6	M5	70	12,8	19,5±0,1	14
25-HD-25	100±0,3	114	144	48	M8	M16x1	25	M8	G⅛	93,5	18,5	25±0,2	21
25-HD40	140±0,35	156	185	54	M8	M22x1,5	25	M8	G⅛	124,5	21	48±0,2	35
40-HD40	140±0,35	156	185	54	M8	M22x1,5	25	M8	G¼	124,5	21	48±0,2	35

Dimensioni	H5	H6	H7	H8	H9	H10	H11	L1	L2	L4	L5	L8	T1	X
18-HD18	42,3	5,9	8,7	20x45°	68	0,8	30,3	240	120	15	25	160	3,5	49
25-HD25	52,8	9	9,8	30x45°	90	2	37	310	155	15	35	210	3,5	3
25-HD40	82,8	5,5	15,5	35x45°	120	2	63	354	177	15	32	260	4	–
40-HD40	82,8	5,5	15,5	35x45°	120	2	52,5	354	177	15	32	260	4	-7

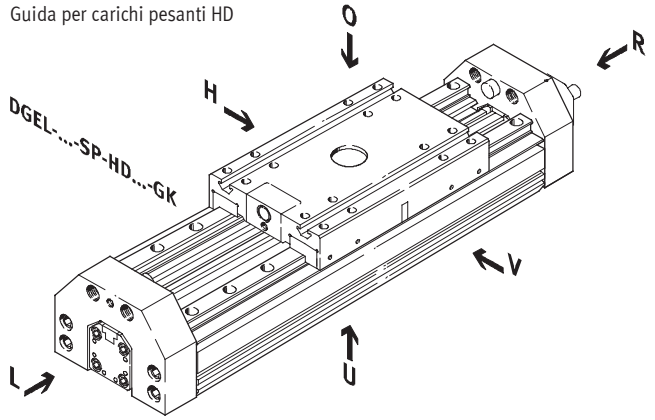
Assi con trasmissione a vite DGE-SP-HD, con guida per carichi pesanti

Dati di ordinazione - Gruppo modulare

Codice di ordinazione

Indicazioni obbligatorie

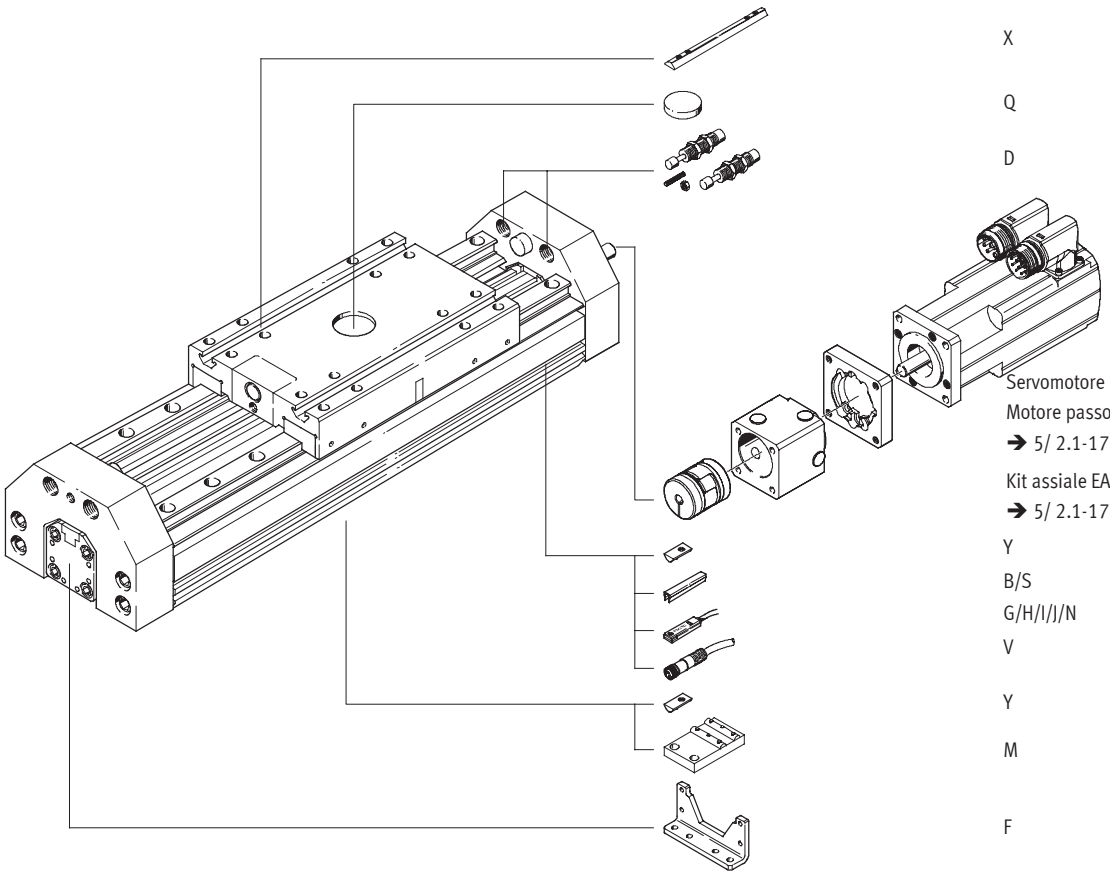
Guida per carichi pesanti HD



- Attenzione

L'apertura per il finecorsa magnetico si trova sul lato destro della guida per carichi pesanti.

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



X

Q

D

Servomotore EMMS-AS, MTR-AC
Motore passo-passo EMMS-ST, MTR-ST
➔ 5/ 2.1-178

Kit assiale EAMM-A
➔ 5/ 2.1-178

Y

B/S

G/H/I/J/N

V

Y

M

F

Assi con trasmissione a vite DGE-SP-HD, con guida per carichi pesanti

Dati di ordinazione - Gruppo modulare

FESTO

M Indicazioni obbligatorie					O Indicazioni facoltative →	
Codice prodotto	**Funzione**	**Dimensioni**	**Corsa**	**Funzione**	**Guida**	**Slitta**
193 745 193 746 193 747	DGE	18 25 40	1 ... 1500	SP	HD18 HD25 HD40	GK
Esempio di ordinazione						
193 747	**DGE** -	**40** -	**800** -	**SP** -	**HD40** -	**GK**

Tabella di ordinazione

	Dimensioni	18	25	40	Condizioni	Codice	Inserimento codice
M	Codice prodotto	**193 745**	**193 746**	**193 747**			
	Funzione	Asse lineare				**DGE**	DGE
	Dimensioni	18	25	40		-...	
	Corsa [mm]	100, 200, 300, 400	100, 200, 300, 400, 500, 600, 700, 800, 900	200, 300, 400, 500, 600, 800, 1000, 1200, 1400, 1500		-...	
		–	1 ... 900	1 ... 1487			
	Funzione	Asse lineare con trasmissione a vite				**-SP**	-SP
O	Guida	Guida per carichi pesanti HD18	–	–		**-HD18**	-HD...
		–	Guida per carichi pesanti HD25	–		**-HD25**	
		–	Guida per carichi pesanti HD40	Guida per carichi pesanti HD40		**-HD40**	
↓	Slitta	Standard			1	**-GK**	-GK

1 **GK** Paracolpi consigliato → Opzione accessori "A"

Trascrizione codice di ordinazione

	DGE -		-	**SP** -	**HD...** -	**GK**

Assi con trasmissione a vite DGE-SP-HD, con guida per carichi pesanti

Dati di ordinazione - Gruppo modulare

FESTO

→ 0 **Indicazioni facoltative**

Accessori	Copertura per scanalatura		Supporto centrale		Paracolpi con supporto		Fissaggio centrale		Connettore con cavo
	Tassello scorrevole		Fissaggio a piedini		Kit ammortizzatore		Sensori di finecorsa		
ZUB	...S ...B	...Y ...X ...U	...M	...F	...A	...D	...Q	...G ...H ...I ...J ...N	...V
ZUB -	**2SB**	**10Y2X**	**M**	**F**			**Q**	**2J**	**2V**

Tabella di ordinazione

Dimensioni		18	25	40	Condizioni	Codice		Inserimento codice
↓	Accessori	Forniti non montati				**ZUB-**		ZUB-
0	Copertura per scanalatura: Scanalatura sensori	1 ... 10				**...S**		
	Copertura per scanalatura: Scanalatura di fissaggio	1 ... 10				**...B**		
	Tassello scorrevole: Per scanalatura di fissaggio	1 ... 10				**...Y**		
	Tassello scorrevole: Per slitta	1 ... 10				**...X**		
	Tassello scorrevole: Per guida per carichi pesanti, scanalatura di fissaggio inferiore	1 ... 10				**...U**		
	Supporto centrale	1 ... 10				**...M**		
	Fissaggio a piedini	1 ... 10				**...F**		
	Paracolpi con supporto (riduzione della corsa utile* con paracolpi su entrambi i lati)	1 ... 2 (10)	(30)	(60)		**...A**		
	Kit ammortizzatore	1 ... 2				**...D**		
	Fissaggio centrale	1 ... 10				**...Q**		
	Sensori di finecorsa: Cavo 2,5 m	1 ... 10				**...G**		
	Sensori di finecorsa: Connettore M8	1 ... 10				**...H**		
	Sensori di finecorsa: Senza contatto con cavo 2,5 m	1 ... 10				**...I**		
	Sensori di finecorsa: Senza contatto, connettore M8	1 ... 10				**...J**		
	Sensori di finecorsa: Contatto n.c. con cavo lunghezza 2,5 m	1 ... 10				**...N**		
	Cavo con connettore M8, 2,5 m	1 ... 10				**...V**		

* Corsa utile = Corsa ordinata - riduzione della corsa utile

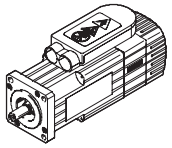
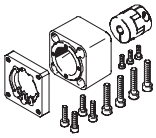
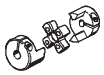
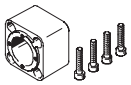
Trascrizione codice di ordinazione

ZUB	-									

Assi con trasmissione a vite DGE

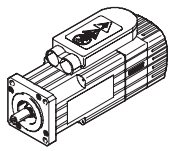
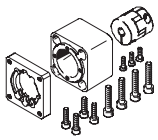
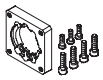
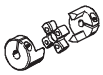
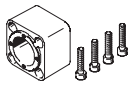
Accessori

FESTO

Combinazioni possibili asse/motore con kit assiale - senza riduttore				
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
DGE-18				
Con servomotore				
EMMS-AS-40-... **MTR-AC-40-3S-A...**	**550 961** **EAMM-A-E20-40A**	**552 163** **EAMF-A-28B-40A**	**540 751** **KSE-15-22-D05-D06**	**170 374** **DGE-KG-18-SP-FL28**
EMMS-AS-55-... **MTR-AC-55-3S-A...**	**550 963** **EAMM-A-E20-55A**	**529 946** **MTR-FL28-AC55**	**529 953** **KSE-15-22-D05-D09**	**170 374** **DGE-KG-18-SP-FL28**
Con motore passo-passo				
EMMS-ST-42-... **MTR-ST-42-48S-A...**	**550 962** **EAMM-A-E20-42A**	**552 164** **EAMF-A-28B-42A**	**530 085** **KSE-15-22-D05-D05**	**170 374** **DGE-KG-18-SP-FL28**
Con motore				
MTR-DCI-32S-...	**556 991** **EAMM-A-E20-32B**	**–**	**533 707** **KSE-15-20-D05-D06**	**533 703** **DME-KG-18-AX-D32-L27**
DGE-25				
Con servomotore				
EMMS-AS-40-... **MTR-AC-40-3S-A...**	**550 964** **EAMM-A-E32-40A**	**550 985** **EAMF-A-44-40A**	**123 040** **KSE-30-35-D06-D06**	**124 631** **DGE-KG-25-SP-FL44**
EMMS-AS-55-... **MTR-AC-55-3S-A...**	**550 965** **EAMM-A-E32-55A**	**529 942** **MTR-FL44-AC55**	**530 941** **KSE-30-35-D06-D09**	**124 631** **DGE-KG-25-SP-FL44**
Con motore passo-passo				
EMMS-ST-57-... **MTR-ST-57-48S-A...**	**550 966** **EAMM-A-E32-57A**	**530 081** **MTR-FL44-ST57**	**530 087** **KSE-30-35-D06-D06.35**	**124 631** **DGE-KG-25-SP-FL44**
Con motore				
MTR-DCI-42S-...-G07	**556 992** **EAMM-A-E32-42B**	**–**	**533 708** **KSE-30-32-D06-D08**	**533 704** **DME-KG-25-AX-D42-L88**
MTR-DCI-42S-...-G14	**556 993** **EAMM-A-E32-42C**	**–**	**533 708** **KSE-30-32-D06-D08**	**538 578** **DME-KG-25-AX-D42-L101**

Assi con trasmissione a vite DGE

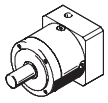
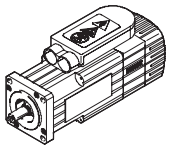
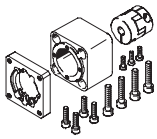
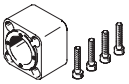
Accessori

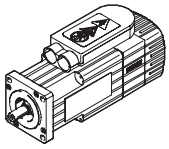
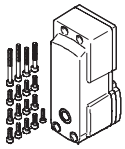
Combinazioni possibili asse/motore con kit assiale - senza riduttore				
Motore	Kit assiale	Kit assiale, costituito da:		
		flangia motore	giunto	supporto giunto-motore
				
Tipo	Cod. prod. Tipo	Cod. prod. Tipo	Cod. prod. Tipo	Cod. prod. Tipo
DGE-40				
Con servomotore				
EMMS-AS-55-... **MTR-AC-55-3S-A...**	**550 969** **EAMM-A-E48-55A**	**529 942** **MTR-FL44-AC55**	**550 996** **KSE-30-35-D09-D12**	**124 632** **DGE-KG-40-SP-FL44**
EMMS-AS-70-... **MTR-AC-70-3S-A...**	**550 971** **EAMM-A-E48-44-70A**	**529 943** **MTR-FL44-AC70**	**123 051** **KSE-30-35-D11-D12**	**124 632** **DGE-KG-40-SP-FL44**
EMMS-AS-100-... **MTR-AC-100-3S-A...**	**550 973** **EAMM-A-E48-100A**	**529 947** **MTR-FL64-AC100**	**529 952** **KSE-40-66-D12-D19**	**529 940** **DGE-KG-40-SP-FL64**
Con motore passo-passo				
EMMS-ST-57-... **MTR-ST-57-48S-A...**	**550 970** **EAMM-A-E48-57A**	**530 081** **MTR-FL44-ST57**	**550 995** **KSE-30-35-D6.35-D12**	**124 632** **DGE-KG-40-SP-FL44**
EMMS-ST-87-... **MTR-ST-87-48S-A...**	**550 972** **EAMM-A-E48-87A**	**533 140** **MTR-FL64-ST87**	**525 864** **KSE-40-66-D11-D12**	**529 940** **DGE-KG-40-SP-FL64**
Con motore				
MTR-DCI-52S-...-G07	**556 994** **EAMM-A-E48-52B**	**–**	**533 709** **KSE-42-50-D12-D12**	**533 705** **DME-KG-40-AX-D52-L121**
MTR-DCI-52S-...-G14	**556 995** **EAMM-A-E48-52C**	**–**	**533 709** **KSE-42-50-D12-D12**	**538 579** **DME-KG-40-AX-D52-L135**
DGE-63				
Con servomotore				
EMMS-AS-70-... **MTR-AC-70-3S-A...**	**550 975** **EAMM-A-E72-70A**	**529 945** **MTR-FL64-AC70**	**550 999** **KSE-40-66-D11-D20**	**529 941** **DGE-KG-63-SP-FL64**
EMMS-AS-100-... **MTR-AC-100-5S-A...**	**550 978** **EAMM-A-E72-100A**	**529 947** **MTR-FL64-AC100**	**123 847** **KSE-40-66-D19-D20**	**529 941** **DGE-KG-63-SP-FL64**
Con motore passo-passo				
EMMS-ST-87-... **MTR-ST-87-48S-A...**	**550 977** **EAMM-A-E72-87A**	**533 140** **MTR-FL64-ST87**	**550 999** **KSE-40-66-D11-D20**	**529 941** **DGE-KG-63-SP-FL64**
Con motore				
MTR-DCI-62S-...	**556 996** **EAMM-A-E72-62B**	**–**	**533 710** **KSE-42-50-D14-D20**	**533 706** **DME-KG-63-AX-D62-L150**

Assi con trasmissione a vite DGE

Accessori

FESTO

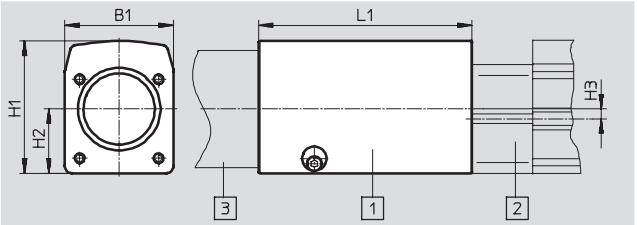
Combinazioni possibili asse/motore con kit assiale - con riduttore					
Riduttore	Motore	Kit assiale	Kit assiale, costituito da:		
			flangia motore	giunto	supporto giunto-motore
					
Tipo	Tipo	Cod. prod. Tipo	Cod. prod. Tipo	Cod. prod. Tipo	Cod. prod. Tipo
DGE-40					
Con servomotore					
EMGA-40-P-G...-SAS-40	**EMMS-AS-40-...**	**550 968** **EAMM-A-E48-40G**	**550 986** **EAMF-A-44-40G**	**552 640** **KSE-30-35-D10-D12**	**124 632** **DGE-KG-40-SP-FL44**
DGE-63					
Con servomotore					
EMGA-60-P-G...-SAS-70	**EMMS-AS-70-S-...**	**550 974** **EAMM-A-E72-60G**	**550 987** **EAMF-A-64-60G**	**550 999** **KSE-40-66-D11-D20**	**529 941** **DGE-KG-63-SP-FL64**
EMGA-80-P-G...-SAS-70	**EMMS-AS-70-M-...**	**550 976** **EAMM-A-E72-80G**	**533 139** **MTR-FL64-PL80**	**123 849** **KSE-40-66-D20-D20**	**529 941** **DGE-KG-63-SP-FL64**
Con motore passo-passo					
EMGA-80-P-G...-SST-87	**EMMS-ST-87-...**	**550 976** **EAMM-A-E72-80G**	**533 139** **MTR-FL64-PL80**	**123 849** **KSE-40-66-D20-D20**	**529 941** **DGE-KG-63-SP-FL64**

Combinazioni possibili asse/motore con kit parallelo - senza riduttore		
Motore	Kit parallelo	
		
Tipo	Cod. prod.	Tipo
DGE-25		
Con servomotore		
EMMS-AS-55-...	**543 230**	**EAMM-U-E32-55A**
MTR-AC-55-3S-A...		
Con motore		
MTR-DCI-42S-...-G07	**543 228**	**EAMM-U-E32-42B**
MTR-DCI-42S-...-G14	**543 229**	**EAMM-U-E32-42C**
DGE-40		
Con servomotore		
EMMS-AS-70-...	**543 234**	**EAMM-U-E48-70A**
MTR-AC-70-3S-A...		
Con motore		
MTR-DCI-52S-...-G07	**543 232**	**EAMM-U-E48-52B**
MTR-DCI-52S-...-G14	**543 233**	**EAMM-U-E48-52C**

Assi con trasmissione a vite DGE

Accessori

Kit assiale EAMM-A-...
Materiali
supporto giunto-motore, mozzo
giunto: alluminio
elemento di serraggio: acciaio,
resistente alla corrosione
flangia motore: lega di alluminio
per lavorazione plastica
viti: acciaio zincato



Schema di principio:
1 kit assiale
2 asse con trasmissione a vite
3 motore

Dati tecnici generali										
EAMM-A-...		E20-				E32-				
		32B	40A	42A	55A	40A	42B	42C	55A	57A
Momento trasmissibile	[Nm]	1,5	1			7,5	7		7,5	
Momento di inerzia di massa	[kgmm^2]	0,23	0,13			6,1	5,87		6,1	
Numero di giri max.	[1/min]	10000	12000			8000				
Posizione di montaggio		Qualsiasi								

EAMM-A-...		E48-							
		52B	52C	55A	57A	44 -70A	87A	100A	40G
Momento trasmissibile	[Nm]	17		8,3	7,5	8,9	17		8,6
Momento di inerzia di massa	[kgmm^2]	35,5		6,1			42,3		6,1
Numero di giri max.	[1/min]	6000		8000			6500		8000
Posizione di montaggio		Qualsiasi							

EAMM-A-...		E72-					
		62B	70A	87A	100A	60G	80G
Momento trasmissibile	[Nm]	17					
Momento di inerzia di massa	[kgmm^2]	35,5	42,3				
Numero di giri max.	[1/min]	6000	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

Assi con trasmissione a vite DGE

Accessori

Dimensioni e dati di ordinazione								
Tipo	B1	H1	H2	H3	L1	Peso [g]	Cod. prod.	Tipo
EAMM-A-E20-32B	33,6	41	21,6	0	27	80	**556 991**	**EAMM-A-E20-32B**
EAMM-A-E20-40A	33,5	31,5	15,75		27,4	78	**550 961**	**EAMM-A-E20-40A**
EAMM-A-E20-42A					35,7	91	**550 962**	**EAMM-A-E20-42A**
EAMM-A-E20-55A					29,5	134	**550 963**	**EAMM-A-E20-55A**
EAMM-A-E32-40A	45	45	26,5	4	52,5	243	**550 964**	**EAMM-A-E32-40A**
EAMM-A-E32-42B	44,8	54,4	26,4		88	50	**556 992**	**EAMM-A-E32-42B**
EAMM-A-E32-42C					101	50	**556 993**	**EAMM-A-E32-42C**
EAMM-A-E32-55A	45	45	26,5		53,7	271	**550 965**	**EAMM-A-E32-55A**
EAMM-A-E32-57A					55	288	**550 966**	**EAMM-A-E32-57A**
EAMM-A-E48-52B	63,8	76,4	36,9	5	121	142	**556 994**	**EAMM-A-E48-52B**
EAMM-A-E48-52C					135	142	**556 995**	**EAMM-A-E48-52C**
EAMM-A-E48-55A	64	64	32		57,2	523	**550 969**	**EAMM-A-E48-55A**
EAMM-A-E48-57A					58,5	534	**550 970**	**EAMM-A-E48-57A**
EAMM-A-E48-44-70A					60	591	**550 971**	**EAMM-A-E48-44-70A**
EAMM-A-E48-87A	65	64	32		87,7	1 278	**550 972**	**EAMM-A-E48-87A**
EAMM-A-E48-100A					91,2	1 492	**550 973**	**EAMM-A-E48-100A**
EAMM-A-E48-40G	64	64	32		63,5	542	**550 968**	**EAMM-A-E48-40G**
EAMM-A-E72-62B	105,1	127,3	60,8	8	150	2800	**556 996**	**EAMM-A-E72-62B**
EAMM-A-E72-70A	105,6	114,8			98,7	2362	**550 975**	**EAMM-A-E72-70A**
EAMM-A-E72-87A					100,2	3032	**550 977**	**EAMM-A-E72-87A**
EAMM-A-E72-100A					103,7	3235	**550 978**	**EAMM-A-E72-100A**
EAMM-A-E72-60G					106,9	3182	**550 974**	**EAMM-A-E72-60G**
EAMM-A-E72-80G					106,9	3183	**550 976**	**EAMM-A-E72-80G**

- - Attenzione

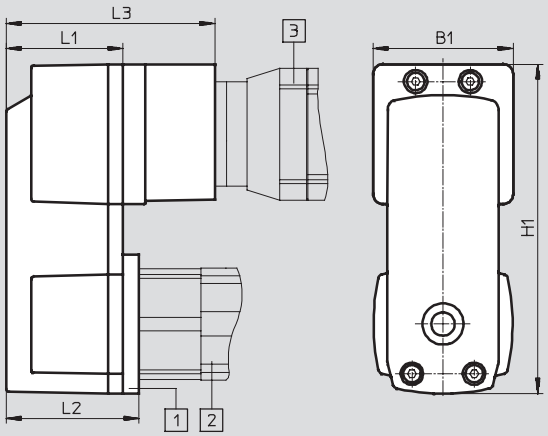
Combinazioni possibili asse/motore

➔ 5/ 2.1-178

Assi con trasmissione a vite DGE

Accessori

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



Schema di principio:
1 kit parallelo
2 asse con trasmissione a vite
3 motore

Dati generali							
EAMM-U-...		E32-			E48-		
		42B	42C	55A	52B	52C	70A
Momento trasmissibile	[Nm]	3			5,5		
Coppia a vuoto	[Nm]	0,1			0,3		
Momento di inerzia di massa	[kgmm^2]	10,22			71,138		
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-E32-42B	56,4	132,7	47	53,5	84	660	**543 228**	**EAMM-U-E32-42B**
EAMM-U-E32-42C					97	690	**543 229**	**EAMM-U-E32-42C**
EAMM-U-E32-55A					–	540	**543 230**	**EAMM-U-E32-55A**
EAMM-U-E48-52B	85,8	189,9	58	66,5	106	1700	**543 232**	**EAMM-U-E48-52B**
EAMM-U-E48-52C					120	1800	**543 233**	**EAMM-U-E48-52C**
EAMM-U-E48-70A					–	1300	**543 234**	**EAMM-U-E48-70A**

- Attenzione
Combinazioni possibili asse/motore
➔ 5/ 2.1-181

Assi con trasmissione a vite DGE

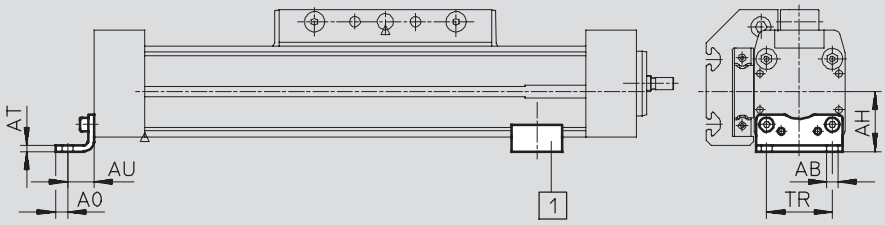
Accessori

Fissaggio a piedini HP
(Codice di ordinazione F)

Materiali
acciaio zincato
Senza rame, PTFE e silicone

HP-25

DGE-18-...-63



Dimensioni e dati di ordinazione

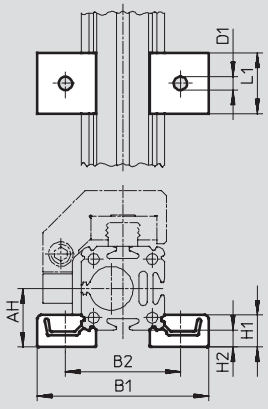
Per dimensioni	AB ∅	AH	AO	AT	AU	TR	Peso [g]	Cod. prod.	Tipo
18	5,5	24	4,8	3	13,3	24	70	**158 472**	**HP-18**
25	5,5	29,5	6	3	13	32,5	61	**150 731**	**HP-25**
40	6,6	46	8,5	5	17,5	45	188	**150 733**	**HP-40**
63	11	69	13,5	6	28	75	305	**150 735**	**HP-63**

Supporto centrale MUP
(Codice di ordinazione M)

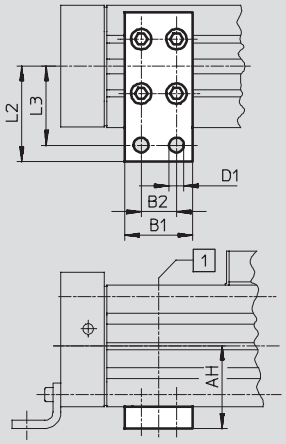
Materiali
acciaio zincato
Senza rame, PTFE e silicone

MUP-40

DGE-18-...-25



DGE-40-...-63



1 Il supporto centrale può essere posizionato in qualsiasi punto lungo il profilo

Dimensioni e dati di ordinazione

Per dimensioni	AH	B1	B2	D1 ∅	H1	H2	L1	L2	L3	Peso [g]	Cod. prod.	Tipo
18	24	70,5	47	5,5	13	7	25	–	–	33	**150 736**	**MUP-18/25**
25	29,5	81	58	5,5	13	7	25	–	–	33	**150 736**	**MUP-18/25**
40	46	35	22	6,6	–	–	–	47	40	126	**150 738**	**MUP-40**
63	69	50	26	11	–	–	–	77	65	340	**150 800**	**MUP-63**

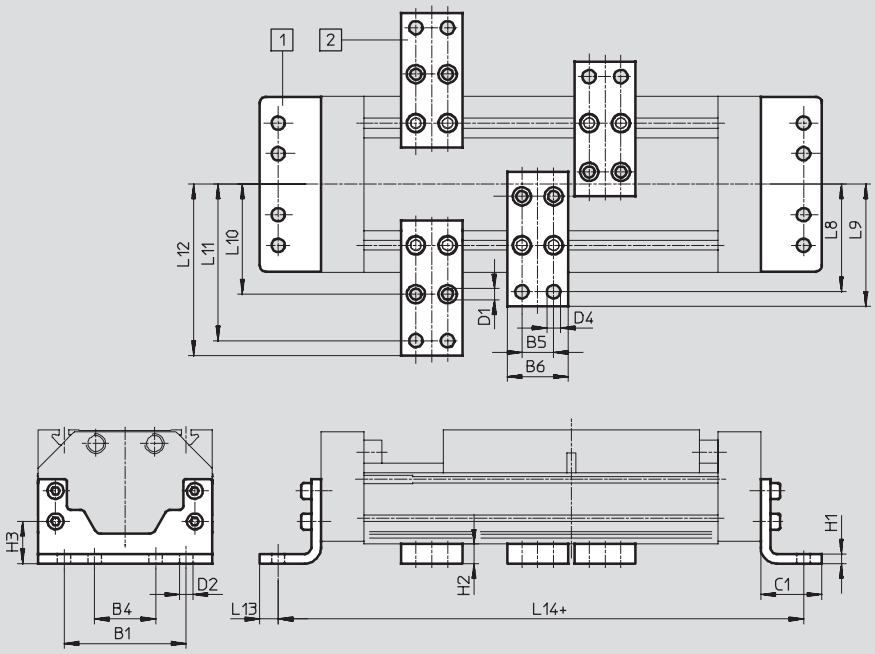
Assi con trasmissione a vite DGE

Accessori

Fissaggio a piedini HHP
Per guida per carichi pesanti
(Codice di ordinazione F)
Materiali
acciaio zincato

Supporto centrale MUP
Per guida per carichi pesanti
(Codice di ordinazione M)
Materiali
acciaio zincato
Senza rame, PTFE e silicone

DGE-...-HD18/-HD25/-HD40



1 Fissaggio a piedini HHP
2 Supporto centrale MUP

\+ = aggiungere la corsa

Dimensioni e dati di ordinazione											
Per guida per carichi pesanti	B1	B4	B5	B6	C1	D1	D2	D4	H1	H2	H3
HD18	80	40	22	35	34	5,5	6,6	6,6	8	14	26,8
HD25	100	50	26	50	50	9	11	11	8	16	34,5
HD40	140	70	26	50	50	9	11	11	10	16	37

Per guida per carichi pesanti	L8	L9	L10	L11	L12	L13	L14	Peso [g]	Cod. prod.	Tipo
HD18	68	75	64	92	99	9	290	357	**161 993**	**HHP-18**
								126	**150 738**	**MUP-40**
HD25	88	100	90	128	140	15	380	794	**161 994**	**HHP-25**
								347	**150 739**	**MUP-50**
HD40	108	120	110	148	160	15	424	1318	**161 995**	**HHP-40**
								347	**150 739**	**MUP-50**

Assi con trasmissione a vite DGE

Accessori

Ammortizzatori YSR-...-C
(Codice di ordinazione: C)

Materiali
corpo: acciaio zincato; stelo: acciaio fortemente legato,
guarnizioni: gomma al nitrile, poliuretano
Senza rame, PTFE e silicone

- - Attenzione

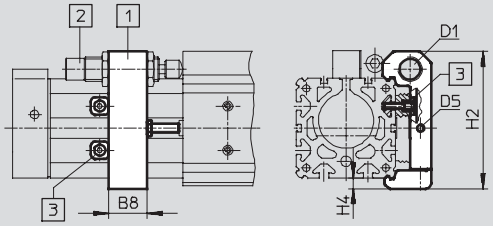
Ammortizzatori YSRW con decelerazione progressiva

Dati di ordinazione

Per dimensioni	Peso [g]	Cod. prod.	Tipo
18	30	**34 571**	**YSR-8-8-C**
25	70	**34 572**	**YSR-12-12-C**
40	140	**34 573**	**YSR-16-20-C**
63	240	**34 574**	**YSR-20-25-C**

Supporto ammortizzatore KYP
(Codice di ordinazione: C)

Materiali
fissaggio: alluminio
bussola: acciaio, inossidabile



1 Supporto ammortizzatore KYP (appoggiando il supporto alla testata anteriore, questa funge da blocco antispostamento, rendendo utilizzabile l'intera lunghezza della corsa)

2 Ammortizzatore YSR-...-C

3 Blocco antispostamento (compreso nella fornitura) da montare a scelta dietro o sotto il supporto ammortizzatore KYP

Dimensioni e dati di ordinazione

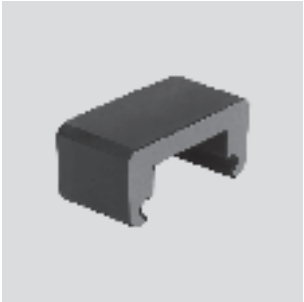
Per dimensioni	B8	D1	D5	H2	H4	Peso [g]	Cod. prod.	Tipo
18	14	M12x1	M4	50,5	4,5	66	**158 907**	**KYP-18**
25	19	M16x1	M5	69,5	6	95	**158 908**	**KYP-25**
40	32	M22x1,5	M5	102	8	209	**158 910**	**KYP-40**
63	44	M26x1,5	M10	152,5	11,5	609	**158 912**	**KYP-63**

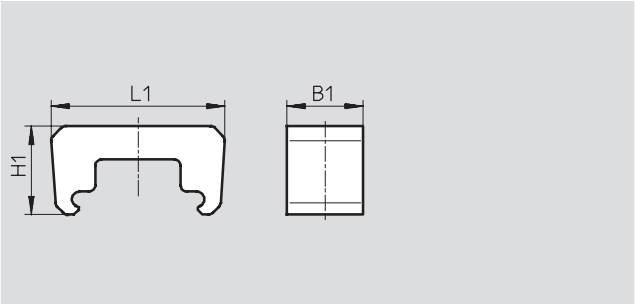
Assi con trasmissione a vite DGE

Accessori

Paracolpi di emergenza NPE
(Codice di ordinazione: A)

Materiali
poliuretano





Dimensioni e dati di ordinazione						
Per dimensioni	B1	L1	H1	Peso [g]	Cod. prod.	Tipo
18	15	43,1	28,5	6	**193 901**	**NPE-18**
25	25	57	29	12	**193 902**	**NPE-25**
40	40	80,5	36	41	**193 904**	**NPE-40**
63	60	128,6	55	152	**193 906**	**NPE-63**

- - Attenzione

Paracolpi utilizzabile in combinazione con supporto ammortizzatore KYP ➔ 5/ 2.1-187 (Perno filettato e dado non sono necessari)

Ammortizzatore DG-GA
Per esecuzione protetta GA
(Codice di ordinazione: E)

Materiali
corpo: acciaio zincato; stelo: acciaio fortemente legato
guarnizioni: gomma al nitrile, poliuretano
Senza rame, PTFE e silicone

Dati di ordinazione			
Per dimensioni	Peso [g]	Cod. prod.	Tipo
25	70	**192 875**	**DG-GA-25-YSR**
40	140	**192 877**	**DG-GA-40-YSR**

Assi con trasmissione a vite DGE

Accessori

Kit ammortizzatore YHD
Per guida per carichi pesanti
(Codice di ordinazione: D)

Materiali
corpo: acciaio zincato
guarnizioni: TPE-U(PU) NBR
Senza rame, PTFE e silicone

Dati di ordinazione

Per guida per carichi pesanti	Peso [g]	Cod. prod.	Tipo
HD18	203	**174 544**	**YHD-18**
HD25	293	**174 545**	**YHD-25**
HD40	515	**174 546**	**YHD-40**

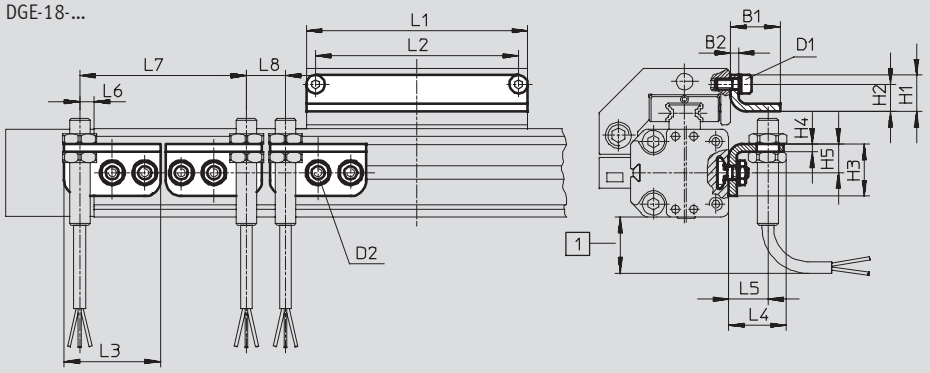
Assi con trasmissione a vite DGE

Accessori

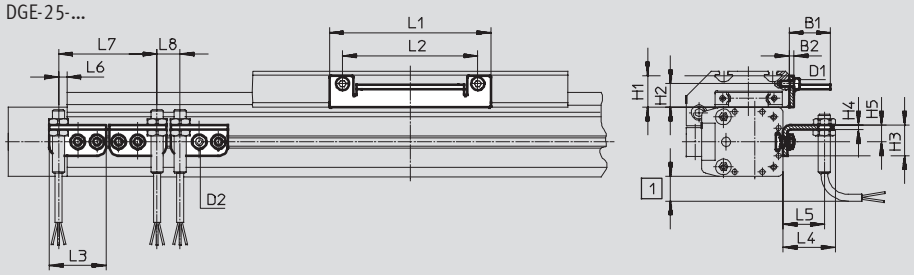
Supporto sensore HWS
Per sensori induttivi
(Codice di ordinazione: T)
Materiali
acciaio zincato

Blocchetto di connessione SF
(Codice di ordinazione: L)
Materiali
acciaio zincato

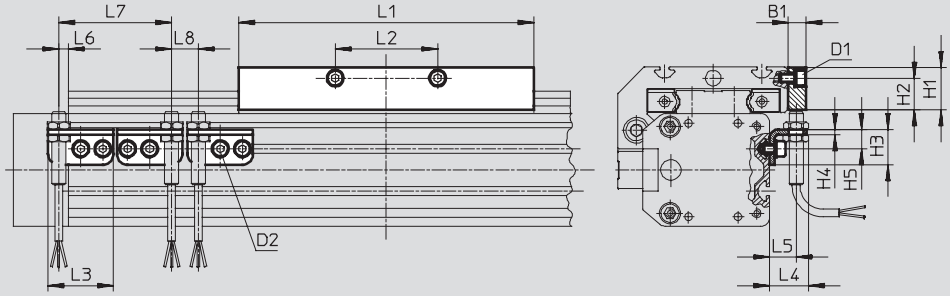
DGE-18-...



DGE-25-...



DGE-40/-63-...



1 Sporgenza del cavo dei sensori, prevedere uno spazio sufficiente

Dimensioni e dati di ordinazione

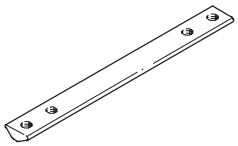
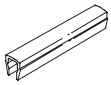
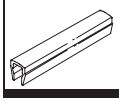
Per dimensioni	D1	D2	B1	B2	H1	H2	H3	H4	H5	L1	L2	L3	L4	L5
18	M4	M5	19	3	14	10,5	20	3	11	85	78	37	22,5	15
25	M5	M5	27	3	20,5	15,3	20	3	11	105	88	37	34,5	27
40	M5	M5	10	–	24	18	20	3	11	167	58	37	22,5	15
63	M8	M5	10	–	35	25	20	3	11	230	72	37	22,5	15

Per dimensioni	L6 max.	L7 min.	L8 min.	Peso [g]	Cod. prod.	Tipo
18	5,5	64	15	30	**188 968**	**HWS-18/25-M8**
				60	**188 964**	**SF -18**
25	5,5	64	15	30	**540 780**	**HWS-25-MAB-M8**
				80	**540 430**	**SF-25-MAB**
40	5,5	64	15	40	**188 969**	**HWS-40-M8**
				310	**188 966**	**SF -40**
63	5,5	64	15	40	**188 970**	**HWS-63-M8**
				630	**188 967**	**SF -63**

Assi con trasmissione a vite DGE

Accessori

FESTO

Dati di ordinazione						
	Per dimensioni	Nota	Codice di ordinazione	Cod. prod.	Tipo	PE[1]
Tassello scorrevole NST						
	18, 25	Per scanalatura di fissaggio	Y	**526 091**	**NST-HMV-M4**	1
	40			**150 914**	**NST-5-M5**	1
	63			**150 915**	**NST-8-M6**	1
	HD18, HD25	Per guida per carichi pesanti: scanalatura di fissaggio	Y	**150 914**	**NST-5-M5**	1
	HD40			**150 915**	**NST-8-M6**	1
	HD18	Per guida per carichi pesanti: HD in basso	U	**150 914**	**NST-5-M5**	1
	HD25, HD40			**150 915**	**NST-8-M6**	1
Tassello scorrevole NSTL						
	25	Per slitta	X	**158 410**	**NSTL-25**	1
	40			**158 412**	**NSTL-40**	1
	63			**158 414**	**NSTL-63**	1
	HD18	Per guida per carichi pesanti: slitta	X	**161 020**	**NSTH-18**	1
	HD25			**161 021**	**NSTH-25**	1
	HD40			**161 022**	**NSTH-40**	1
Perno/bussola di centratura ZBS/ZBH						
	18	Per slitta	Z	**150 928**	**ZBS-5**	10
	25 ... 63			**150 927**	**ZBH-9**	10
Fissaggio centrale SLZZ						
	HD18	Per guida per carichi pesanti: slitta	Q	**150 901**	**SLZZ-25/16**	1
	HD25					
	HD40					
Copertura scanalatura ABP						
	40	Per scanalatura di fissaggio ogni 0,5 m	B	**151 681**	**ABP-5**	2
	63			**151 682**	**ABP-8**	
	HD18, HD25	Per scanalatura di fissaggio inferiore e laterale, ogni 0,5 m		**151 681**	**ABP-5**	
	HD40			**151 682**	**ABP-8**	
Copertura per scanalatura ABP-S						
	18 ... 63	Per scanalatura sensori ogni 0,5 m	S	**151 680**	**ABP-5-S**	2

1) Quantità in pezzi

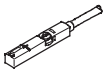
Assi con trasmissione a vite DGE

Accessori

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.						
	Inseribile longitudinalmente nella scanalatura, protetto dal profilo del cilindro	A contatto	Cavo, a 3 fili	2,5	**150 855**	**SME-8-K-LED-24**
			Cnnettore M8x1, a 3 poli	0,3	**150 857**	**SME-8-S-LED-24**
Contatto n.c.						
	Inseribile longitudinalmente nella scanalatura, protetto dal profilo del cilindro	A contatto	Cavo, a 3 fili	7,5	**160 251**	**SME-8-O-K-LED-24**

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.						
	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**
			Connettore M8x1, a 3 poli	0,3	**175 484**	**SMT-8-PS-S-LED-24-B**
Contatto n.c.						
	Applicabile dall'alto nella scanalatura, protetto dal profilo del cilindro	PNP	Cavo, a 3 fili	7,5	**543 873**	**SMT-8M-PO-24V-K7,5-OE**

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**

Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

FESTO

Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

Caratteristiche

Caratteristiche principali

Potente

- Grandi profili con sezione ottimizzata assicurano la massima stabilità e resistenza di carico
- Eccellenti prestazioni per velocità, accelerazione e supporto di momenti esterni

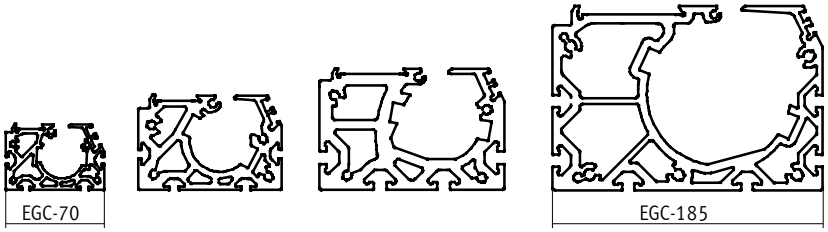
Conveniente

- L'asse con trasmissione a vite si distingue sia per le caratteristiche tecniche che per l'eccellente rapporto prezzo-prestazioni
- Grazie alle sue eccellenti prestazioni è spesso possibile utilizzare un EGC di taglia inferiore

Flessibile

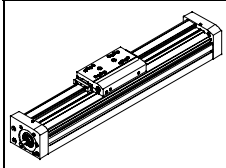
- L'ampia scelta di passi della vite, diverse taglie e varianti come la guida protetta consentono un grande spettro di applicazioni
- Rilevamento posizioni nel minimo spazio grazie al montaggio del sensore nell'apposita scanalatura profilata
- Diverse possibilità di adattamento sugli attuatori
- Vasta gamma di accessori di montaggio per combinazioni multi-asse

Gamma articolata di taglie per diverse condizioni di carico



Valori caratteristici degli assi

I dati riportati in tabella sono valori massimi.
I valori esatti sono riportati nel foglio dati relativo a ciascuna variante.

Esecuzione	Dimensioni	Corsa di lavoro	Velocità	Riproducibilità	Forza di spinta	Caratteristiche di guida				
						Forze e momenti				
		[mm]	[m/s]	[mm]	[N]	Fy [N]	Fz [N]	Mx [Nm]	My [Nm]	Mz [Nm]
Guida a ricircolo di sfere										
	70	50 ... 1000	0,5	±0,02	300	1850	1850	16	132	132
	80	50 ... 2000	1,0	±0,02	600	3050	3050	36	228	228
	120	50 ... 2500	1,5	±0,02	1300	6890	6890	144	680	680
	185	50 ... 3000	2,0	±0,02	3000	15200	15200	529	1820	1820

Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

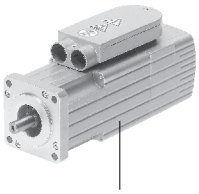
Caratteristiche

Sistema completo composto da asse con trasmissione a vite, motore, controllore per motore e kit di montaggio motore

Asse con trasmissione con guida a ricircolo di sfere

Motore

➔24



1

2

1 Servomotore EMMS-AS
2 Motore passo-passo EMMS-ST

·H· Attenzione

Per l'asse con trasmissione a vite EGC e i motori sono disponibili numerose soluzioni complete coordinate.

Controllore per motori

Foglio dati ➔ Internet: www.festo.it

1

2

1 Controllore per servomotori CMMP-AS, CMMS-AS
2 Controllore per motori passo-passo EMMS-ST

fKit di montaggio motore

➔24

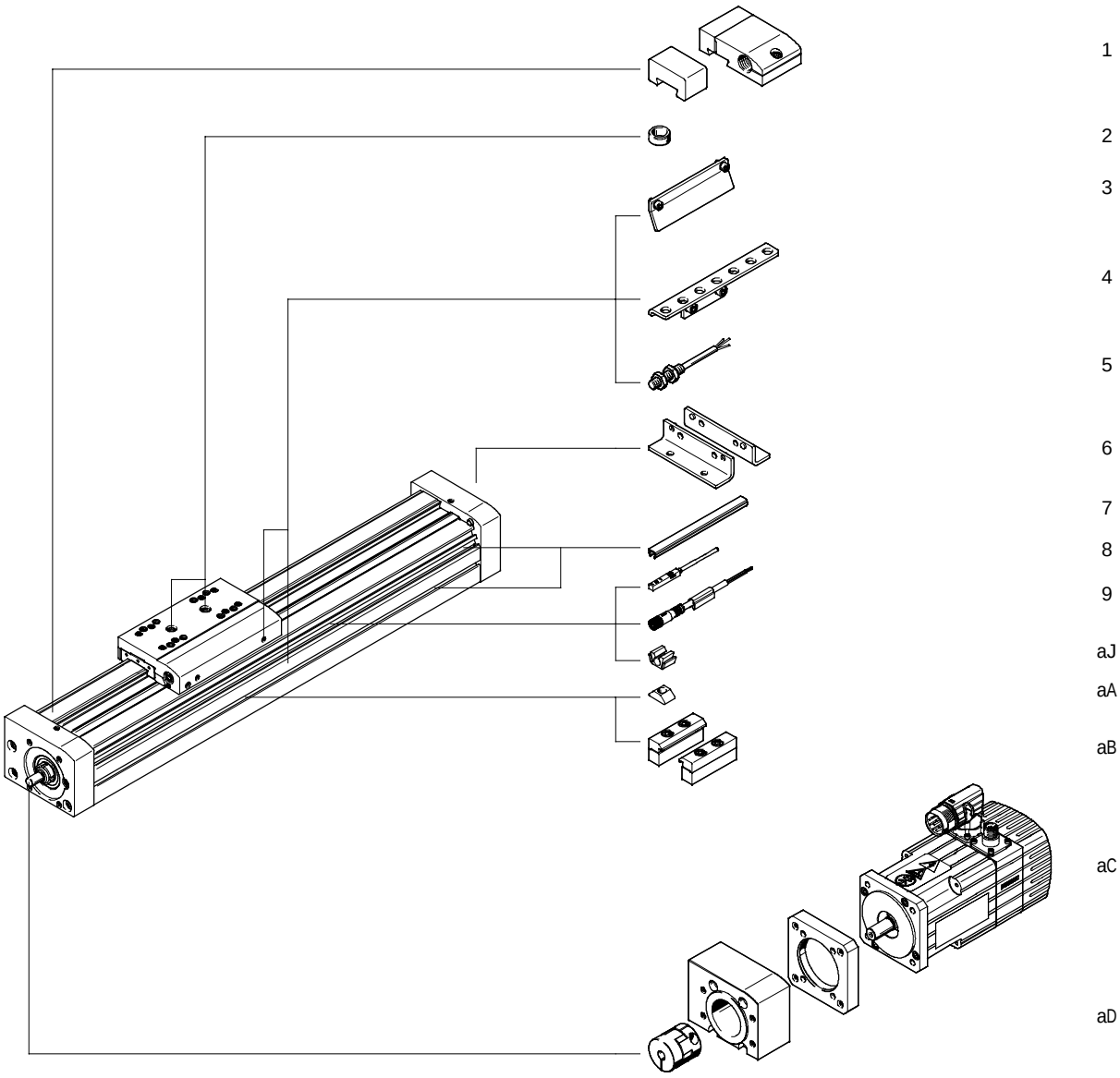
Kit di montaggio assiale

Il kit di montaggio è composto da:

- flangia motore
- supporto giunto-motore
- giunto
- viti

Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

Componenti



Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

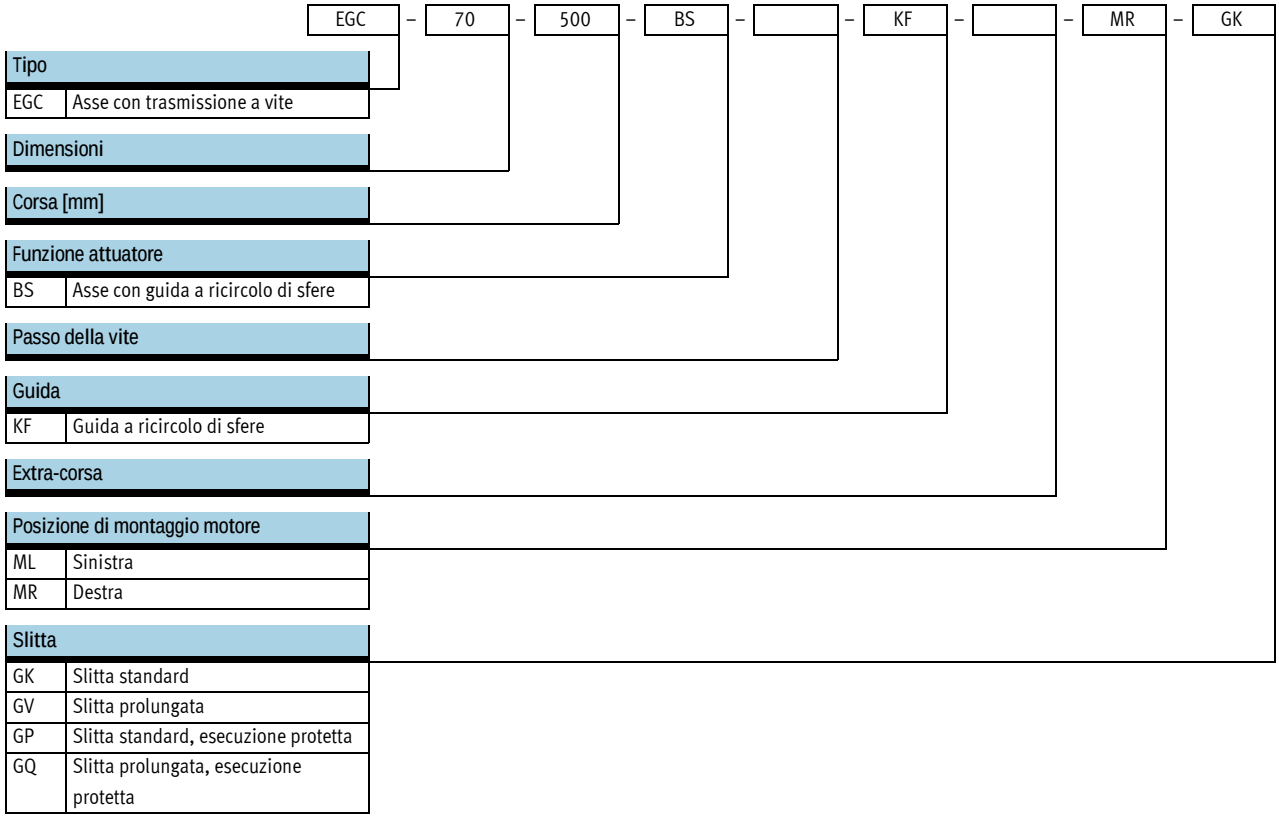
Componenti

FESTO

Varianti e accessori			
	Tipo	Descrizione	➔ Pagina/Internet
1	Paracolpi con supporto A	Per evitare il danneggiamento dell'arresto di finecorsa, in caso di guasto	27
2	Perno/Bussola di centratura ZBS, ZBH	● Per la centratura di carichi e dispositivi sulla slitta ● 6 perni/bussole di centratura sono compresi nella fornitura dell'asse	29
3	Blocchetto di connessione X, Z, O, P, W, R	Per il rilevamento della posizione della slitta	27
4	Supporto sensore O, P, W, R	Adattatore per il fissaggio dei sensori induttivi sull'asse, forma rotonda	28
5	Sensore di finecorsa, M8 O, P, W, R	● Sensore di finecorsa induttivo, forma rotonda ● Con il codice di ordinazione O, P, W, R la fornitura comprende 1 blocchetto di connessione e max. 2 supporti sensore	30
6	Fissaggio a piedini F	Per il fissaggio dell'asse sulla testata posteriore (possibile solo su un lato)	26
7	Copertura scanalatura B, S	● Per la protezione dalla sporcizia	29
8	Sensore di finecorsa, scanalatura 8 X, Z	● Sensore di finecorsa induttivo, per scanalatura 8 ● Con il codice di ordinazione X, Z la fornitura comprende 1 blocchetto di conenssione	29
9	Cavo con connettore V	Per sensori di finecorsa (codice di ordinazione W e R)	30
aJ	Clip CL	Per il fissaggio del cavo del sensore nella scanalatura	29
aA	Tassello scorrevole Y	Per il fissaggio di elementi da montare	29
aB	Supporto centrale M	Per il fissaggio dell'asse sul profilo	26
aC	Motore EMMS	Motori specifici per l'asse, con o senza freno	24
aD	Kit di montaggio assiale EAMM	Per montaggio assiale del motore (costituito da: giunto, supporto giunto-motore e flangia motore)	24

Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

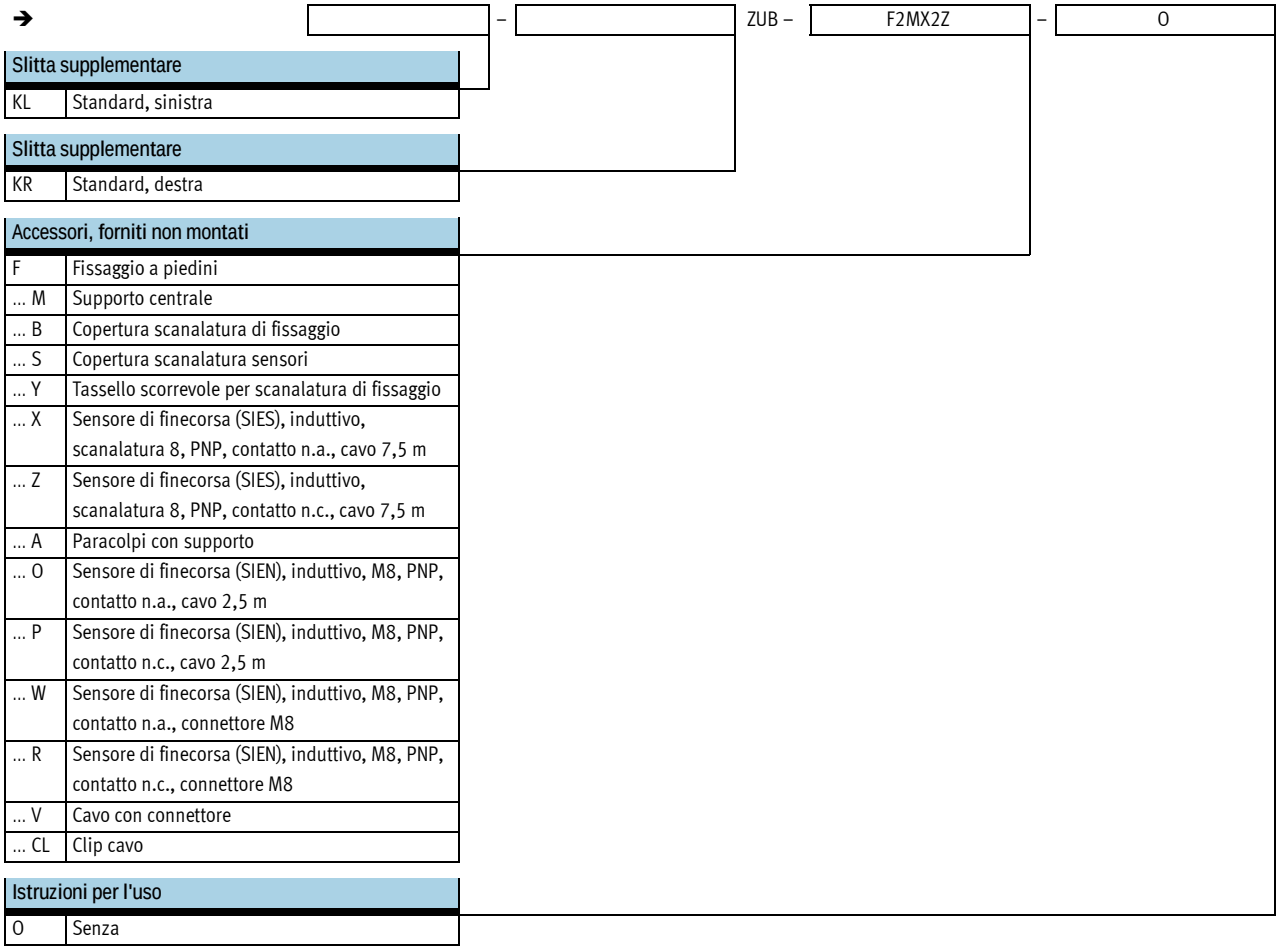
Composizione del codice



Asse con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

FESTO

Composizione del codice



Slitta supplementare	
KL	Standard, sinistra

Slitta supplementare	
KR	Standard, destra

Accessori, forniti non montati	
F	Fissaggio a piedini
... M	Supporto centrale
... B	Copertura scanalatura di fissaggio
... S	Copertura scanalatura sensori
... Y	Tassello scorrevole per scanalatura di fissaggio
... X	Sensore di finecorsa (SIES), induttivo, scanalatura 8, PNP, contatto n.a., cavo 7,5 m
... Z	Sensore di finecorsa (SIES), induttivo, scanalatura 8, PNP, contatto n.c., cavo 7,5 m
... A	Paracolpi con supporto
... O	Sensore di finecorsa (SIEN), induttivo, M8, PNP, contatto n.a., cavo 2,5 m
... P	Sensore di finecorsa (SIEN), induttivo, M8, PNP, contatto n.c., cavo 2,5 m
... W	Sensore di finecorsa (SIEN), induttivo, M8, PNP, contatto n.a., connettore M8
... R	Sensore di finecorsa (SIEN), induttivo, M8, PNP, contatto n.c., connettore M8
... V	Cavo con connettore
... CL	Clip cavo

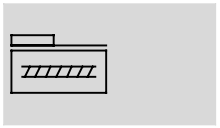
Istruzioni per l'uso	
O	Senza

Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

Foglio dati

FESTO

Funzione



·N· Diametro
70...185

·T· Corsa
50...3.000 mm

Dati tecnici generali									
Dimensioni			70	80		120		185	
Passo della vite senza fine			10	10	20	10	25	40	
Struttura e composizione			Asse elettro-meccanico con guida a ricircolo di sfere						
Guida			Guida a ricircolo di sfere						
Posizione di montaggio			Qualsiasi						
Corsa di lavoro	GK/GP	[mm]	50 ... 1000	50 ... 2000		50 ... 2500		50 ... 3000	
	GV/GQ	[mm]	50...900	50 ... 1900		50 ... 2400		50 ... 2900	
Forza di spinta max. F_x		[N]	300	600		1300		3000	
Coppia a vuoto		[Nm]	0,1	0,1	0,2	0,5	0,6	1,5	
alla velocità min. di traslazione		[m/s]	0,05	0,1	0,1	0,2	0,2	0,2	
Coppia a vuoto		[Nm]	0,2	0,3	0,45	1	1,4	4,3	
alla velocità max. di traslazione		[m/s]	0,5	0,5	1	0,6	1,5	2	
Forza radiale max.[1]		[N]h	220	250		500		4000	
Numero di giri max.[2]		[giri/min]	3000	3000		3600		3000	
Accelerazione max.		[m/s²]	15						
Riproducibilità		[mm]	±0,02						

1) Sull'albero di collegamento
2) Numero di giri e velocità sono in funzione della corsa

Condizioni d'esercizio e ambientali		
Temperatura ambiente	[°C]	–10 ... +60
Grado di protezione		IP40
Durata dell'inserimento	[%]	100

Pesi [kg]						
Dimensioni		70	80	120	185	
Peso base a corsa 0 mm[1]	GK/GP	1,5	2,7	12,5	30	
	GV/GQ	2	3,5	14,4	34,5	
Peso per ogni 1.000 mm di corsa aggiuntiva		5	8	19	39	
Carico movimentato	GK/GP	0,4	0,74	2,4	8,6	
	GV/GQ	0,6	0,95	2,9	9,85	
Slitta supplementare	KL/KR	0,3	0,55	2	6	

1) Slitta inclusa

Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

Foglio dati

FESTO

Vite senza fine								
Dimensioni			70	80		120		185
Diametro		[mm]	12	15		25		40
Passo		[mm/giro]	10	10	20	10	25	40

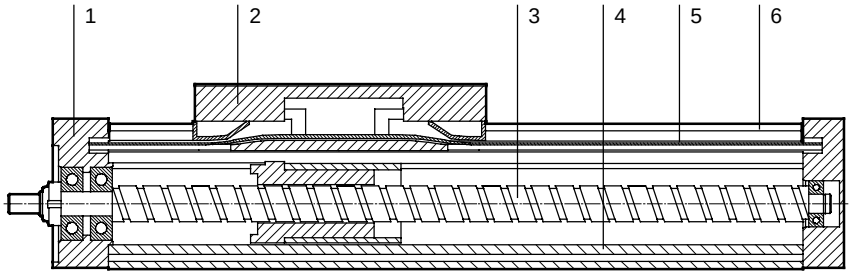
Momento di inerzia di massa								
Dimensioni			70	80		120		185
Passo della vite senza fine			10	10	20	10	25	40
J_O	GK	[kg mm^2]	1,99	5,2	5,2	64,46	64,46	594
	GV	[kg mm^2]	3,41	8,67	8,68	92	92	774,71
J_H per ogni metro di corsa		[kg mm^2/m]	1,42	3,46	3,46	27,56	27,56	180,31
J_L per ogni kg di carico utile		[kg mm^2/Kg]	2,53	2,53	10,13	2,53	15,83	40,53
J_W	GK	[kg mm^2]	1,04	1,86	7,46	6,09	38,06	348,87
J_W	GV	[kg mm^2]	1,48	2,34	9,35	7,34	45,85	399,08

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

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

Materiali

Disegno funzionale



Asse		
1	Testata posteriore	Lega di alluminio per lavorazione plastica, anodizzata
2	Slitta	Lega di alluminio per lavorazione plastica, anodizzata
3	Vite senza fine	Acciaio
4	Profilo	Alluminio anodizzato
5	Nastro di copertura	Poliuretano
6	Profilo di guida	Acciaio fortemente legato
	Nota materiali	Conformità RoHS

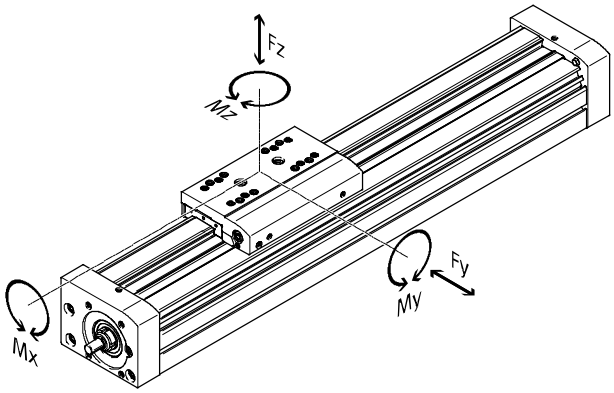
Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

Foglio dati

FESTO

Parametri di carico

Le forze e i momenti indicati sono riferiti alla superficie della slitta. Il punto di attacco è in punto di intersezione tra il centro della guida e e il centro della lunghezza della slitta. In condizioni di esercizio dinamico non devono essere superati i valori indicati. Per questo occorre prestare particolare attenzione alla fase di ammortizzazione.



Se sull'asse agiscono contemporaneamente più forze e momenti, oltre ad osservare i valori di carico massimo indicati si deve soddisfare la seguente equazione:

Calcolo del coefficiente di durata della guida:

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

Forze e momenti ammissibili

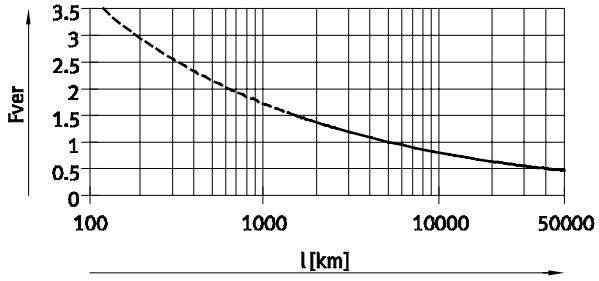
Dimensioni			70	80	120	185
$Fy_{max.}$		[N]	1850	3050	6890	15200
$Fz_{max.}$		[N]	1850	3050	6890	15200
$Mx_{max.}$		[Nm]	16	36	144	529
$My_{max.}$	GK/GP	[Nm]	51	97	380	1157
$Mz_{max.}$	GK/GP	[Nm]	51	97	380	1157
$My_{max.}$	GV/GQ	[Nm]	132	228	680	1820
$Mz_{max.}$	GV/GQ	[Nm]	132	228	680	1820

Durata

La durata della guida dipende dal carico a cui è sottoposta. Al fine di offrire un dato approssimativo sulla durata della guida, si compara il coefficiente di durata della guida F_{ver} rappresentato nel seguente diagramma.

Si tratta di un valore puramente teorico. Con coefficienti di durata della guida F_{ver} maggiori di 1,5 si raccomanda di contattare l'ufficio di vendita Festo più vicino.

Durata della guida in funzione del coefficiente di durata F_{ver}



Esempio:
E' richiesta la movimentazione di un carico x. Applicando la formula, il coefficiente di durata della guida è pari a 1,5 kg. In base al diagramma la guida può effettuare movimenti equivalenti a circa 1500 km. Per la riduzione dell'accelerazione si riducono i valori di Mz e My. In queste condizioni, essendo il coefficiente di durata pari a 1, la durata è di 5000 km.

·H· Attenzione

Software di dimensionamento
PositioningDrives
www.festo.it

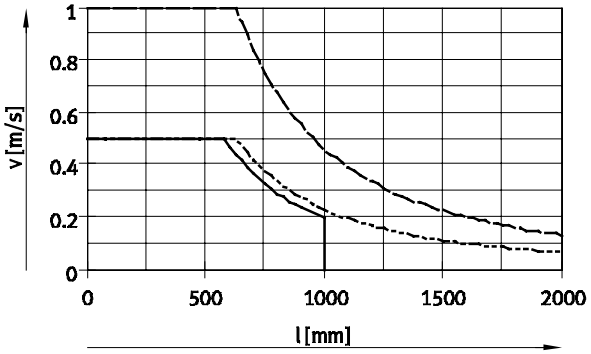
Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

Foglio dati

FESTO

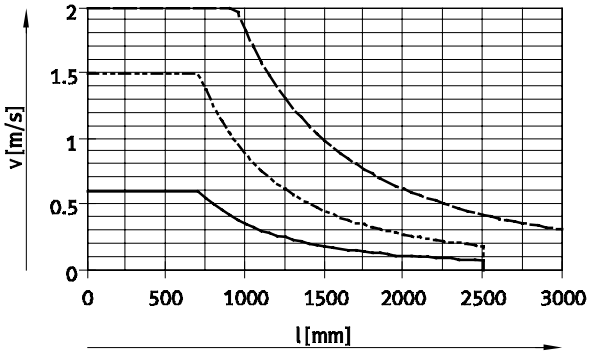
Velocità v in funzione della corsa di lavoro l

EGC-70/-80



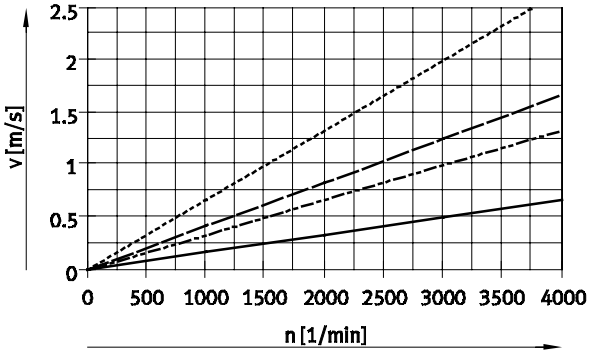
EGC-70-10P
EGC-80-20P
EGC-80-10P

EGC-120/-185



EGC-120-10P
EGC-185-40P
EGC-120-25P

Velocità v in funzione del numero di giri n



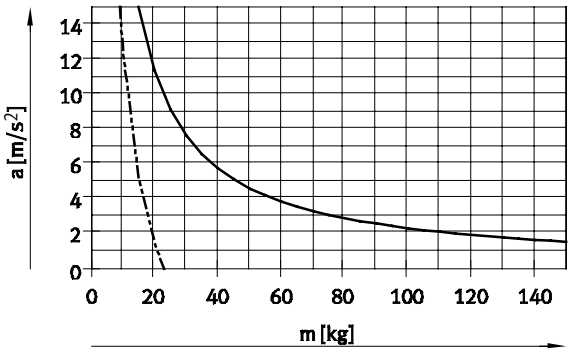
·H· Attenzione

Il numero di giri è in funzione della corsa.
Tener conto del numero di giri max.

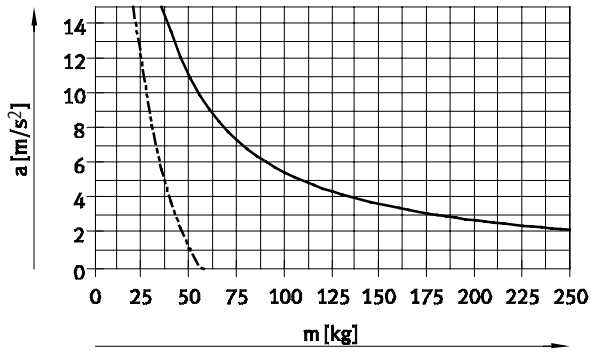
EGC-70/-80-10P/-120-10P
EGC-80-20P
EGC-120-25P
EGC-185

Massima accelerazione ammissibile a in funzione del carico supplementare m

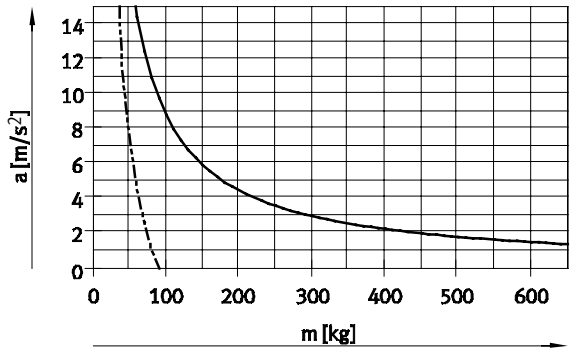
EGC-70



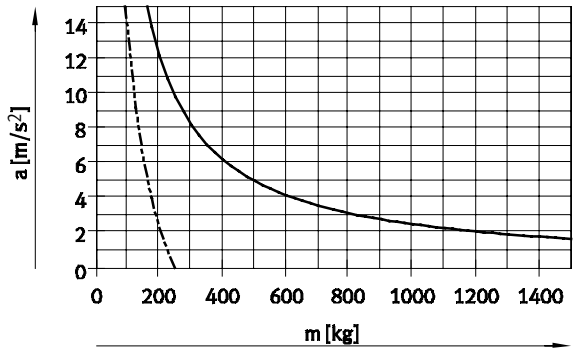
EGC-80



EGC-120



EGC-185



Posizione di montaggio orizzontale
Posizione di montaggio verticale

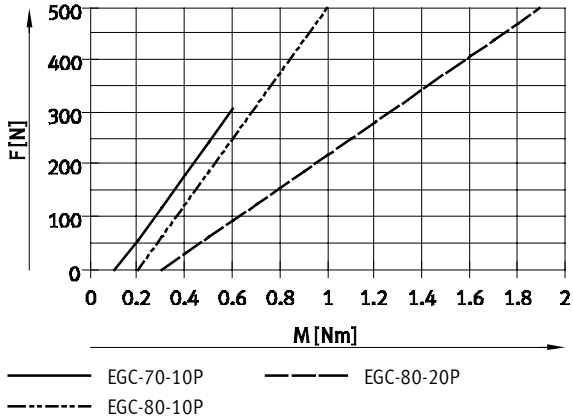
Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

Foglio dati

FESTO

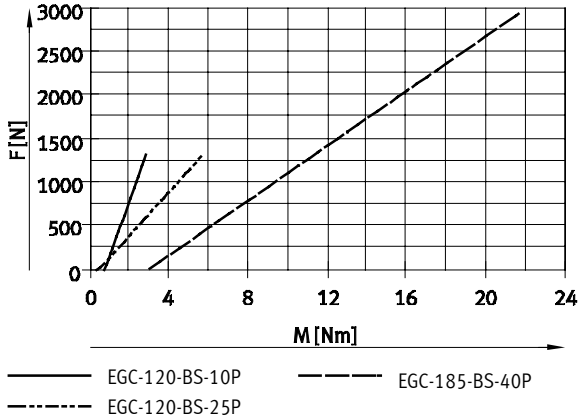
Forza di spinta F in funzione del momento di ingresso M

EGC-70/-80



EGC-70-10P
EGC-80-20P
EGC-80-10P

EGC-120/-185



EGC-120-BS-10P
EGC-185-BS-40P
EGC-120-BS-25P

Extracorsa

Corsa

La corsa selezionata corrisponde generalmente alla corsa utile necessaria. Nel caso della variante GK/GV la guida non è dotata di raschiapolvere. In queste varianti è quindi prevista una distanza supplementare di sicurezza tra la testata posteriore e la slitta, non inclusa nella corsa di lavoro.

Extracorsa

Se si intende definire una distanza di sicurezza (simile a GK/GV) anche nelle varianti GP/GQ tra testata posteriore e slitta, questo è possibile ricorrendo alla funzione "extracorsa" del sistema modulare di prodotti. Nel caso delle varianti GK/GV l'extracorsa e la distanza di sicurezza si sommano per entrambe le posizioni terminali.

- La lunghezza dell'extracorsa è definibile liberamente.
- La somma della corsa e di 2 extracorse non deve superare la corsa max. di lavoro.

Esempio:
EGC-70-500-BS-10P-KF-20H-...
Corsa di lavoro = 500 mm
2x extracorsa = 40 mm

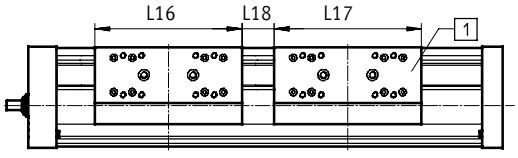
Lunghezza totale = 540 mm
(540 mm = 500 mm + 2x 20 mm)

Dimensioni		70	80		120		185
Passo della vite senza fine		10	10	20	10	25	40
Distanza di sicurezza per GK/GV (per ciascuna posizione terminale)	[mm]	10,5	13	13	18	18	21

Riduzione della corsa di lavoro

Per slitte standard GK/GP / slitta prolungata GV/GQ con slitta supplementare KL/KR

L16 = Lunghezza slitta
L17 = Lunghezza slitta supplementare
L18 = Distanza tra le due slitte
1 Slitta supplementare



- Nell'asse con tramissione a vite con slitta supplementare, la corsa di lavoro è ridotta della lunghezza della slitta supplementare e della distanza tra le due slitte
- Nella variante GP/GQ è protetta anche la slitta supplementare
- Nella variante GV/GQ la slitta supplementare non è prolungata

Esempio:
Tipo EGC-70-500-BS-...-GK-KR
Corsa di lavoro senza slitta supplementare = 500 mm
L18 = 20 mm
L16, L17 = 100 mm

Corsa di lavoro con slitta supplementare = 380 mm
(500 mm – 20 mm – 100 mm)

Dimensioni– Slitta supplementare

Dimensioni		70		80		120		185
Variante		GK/GV	GP/GQ	GK/GV	GP/GQ	GK/GV	GP/GQ	GK/GV
Lunghezza L17	[mm]	100	121	120	146	200	236	280
Distanza min. tra le due slitte L18	[mm]	–	21	–	26	–	36	–

Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

Foglio dati

FESTO

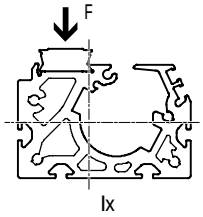
Riduzione della corsa di lavoro su ciascun lato

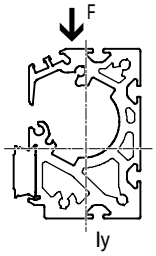
Con paracolpi NPE incorporato con supporto ammortizzatore KYE

In un asse con trasmissione a vite dalla corsa di lavoro deve essere tolta la lunghezza complessiva del paracolpi e del supporto ammortizzatore.
Il paracolpi in gamma deve essere rimosso dalla testata.

Dimensioni		70	80	120	185
Con paracolpi	[mm]	43	68	98	133

Momento di superficie di secondo grado



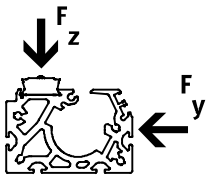


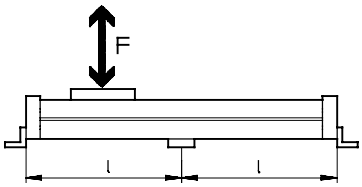
Dimensioni		70	80	120	185
Ix	[mm^4]	$4{,}19x10^5$	$9{,}81x10^5$	$5{,}01x10^6$	$2{,}61x10^7$
Iy	[mm^4]	$5{,}78x10^5$	$1{,}32x10^6$	$5{,}82x10^6$	$2{,}6x10^7$

Interasse max. tra i supporti L (senza supporto centrale) in funzione della forza F

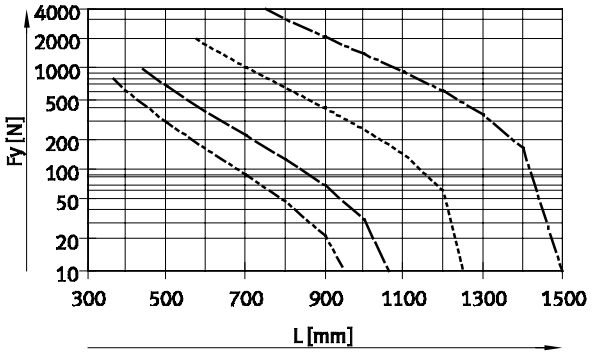
Per limitare la flessione sulle corse lunghe, è eventualmente necessario dotare l'asse di supporti.

I diagrammi seguenti consentono di determinare l'interasse max. ammissibile dei supporti l in funzione della forza agente F. La flessione è pari a f = 0,5 mm.

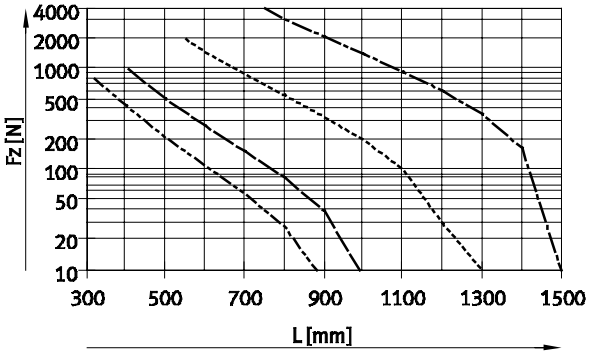




Forza Fy



Forza Fz



—·—·— EGC-70
—— —— EGC-80
---------- EGC-120
—·—·—·— EGC-185

Valori massimi di flessione raccomandati

Per non compromettere il funzionamento degli assi, si raccomanda di rispettare i seguenti valori limiti per la flessione. Una flessione maggiore può provocare un maggior attrito, con conseguente maggiore usura e ridotta durata del prodotto.

Dimensioni	Flessione dinamica (carico movimentato)	Flessione statica (carico in condizioni di fermo)
70...185	0,05% della lunghezza dell'asse, max. 0,5 mm	0,1% della lunghezza dell'asse

Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

Foglio dati

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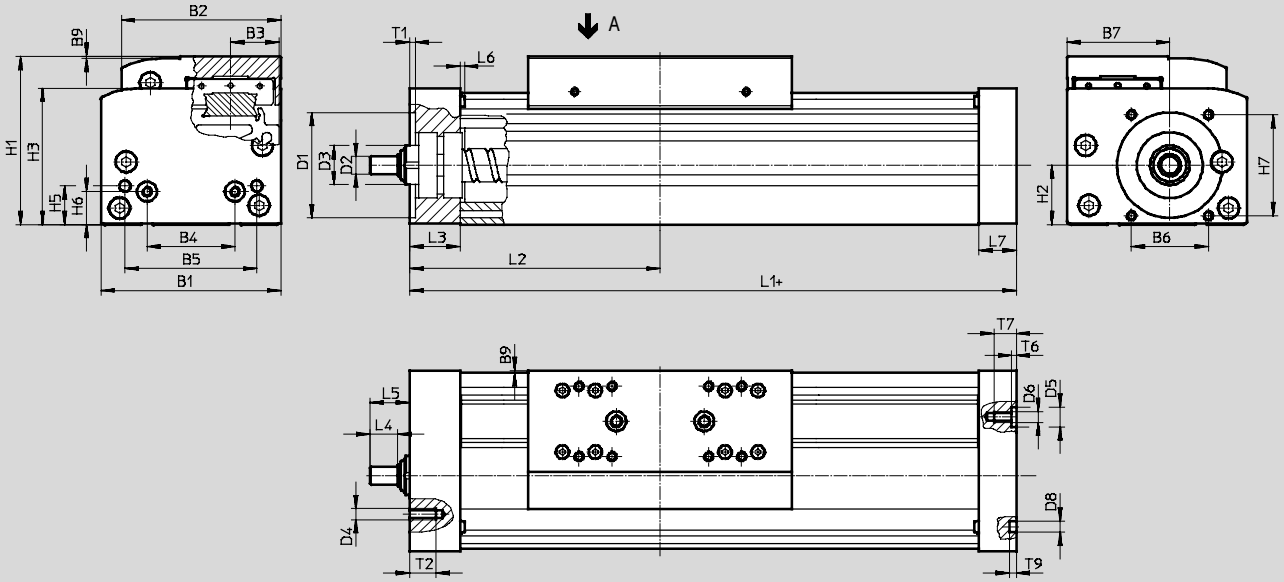
Dimensioni

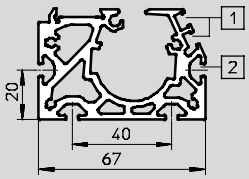
Download dati CAD ➔ www.festo.it



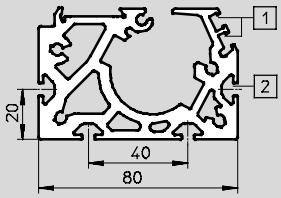
\+ = aggiungere la corsa + 2x extracorsa

Profilo

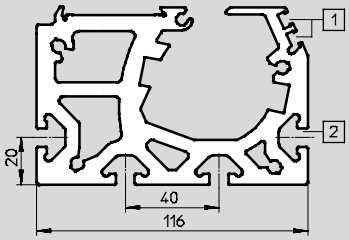
Dimensioni 70



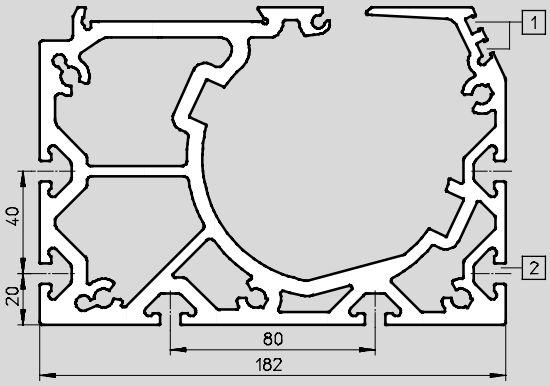
Dimensioni 80



Dimensioni 120



Dimensioni 185



1 Scanalatura di montaggio sensori
2 Scanalatura di fissaggio per tassello scorrevole

·H· Attenzione

Per evitare sollecitazioni meccaniche nella slitta, è necessario rispettare una planarità di min. 0,01 mm delle superfici di fissaggio dei componenti montati.

Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

FESTO

Foglio dati

Dimensioni	Variante	Corsa	B1	B2	B3	B4	B5	B6	B7	B9	D1 ∅ H7	D2 ∅ h7	D3
70	GK/GP	50 ... 1 000	69	58,6	16,5	30	45	29	39	1	38	6	ß 13
	GV/GQ	50 ... 900											
80	GK/GP	. 1477	82	72,6	22	40	60	35	46,75	1	48	8	∅18
		, 1477											
	GV/GQ	. 1377											
		, 1377											
120	GK/GP	. 1704	120	107	33	80	40	64	78	1	62	12	∅28
		, 1704											
	GV/GQ	. 1604											
		, 1604											
185	GK/GP	. 2361	186	169	53	120	80	80	114	1	95	25	∅44
		, 2361											
	GV/GQ	. 2261											
		, 2261											

Dimensioni	Variante	Corsa	D4	D5 ∅ H7	D6	D8 ∅ H7	H1	H2	H3	H5	H6	H7	L1
70	GK/GP	50 ... 1000	M5	–	M5	5	64	22,5	50,5	13	13	36	168
	GV/GQ	50 ... 900											268
80	GK/GP	. 1477	M5	9	M5	5	76,5	27	62	17,5	15	46	196
		, 1477											236
	GV/GQ	. 1377											296
		, 1377											336
120	GK/GP	. 1704	M6	–	M8	9	111,5	42,5	89,5	22	22	54	309
		, 1704											369
	GV/GQ	. 1604											409
		, 1604											469
185	GK/GP	. 2361	M8	–	M10	9	172,5	65,2	141,5	25	25	80	412
		, 2361											512
	GV/GQ	. 2261											512
		, 2261											612

Dimensioni	Variante	Corsa	L2	L3	L4	L5	L6	L7	T1	T2	T6	T7	T9
70	GK/GP	50 ... 1000	86,5	21	8	14	1,8	16	2,5	12	–	10	3,1
	GV/GQ	50 ... 900	136,5										
80	GK/GP	. 1477	101	23	12,5	18	2	17	2,5	12	2,1	10	3,1
		, 1477	121										
	GV/GQ	. 1377	151										
		, 1377	171										
120	GK/GP	. 1704	156	33	17,5	25,5	2	30	3	12	–	16	2,1
		, 1704	186										
	GV/GQ	. 1604	206										
		, 1604	236										
185	GK/GP	. 2361	209	43	23	30,5	2	37	3	20	–	20	2,1
		, 2361	259										
	GV/GQ	. 2261	259										
		, 2261	309										

Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

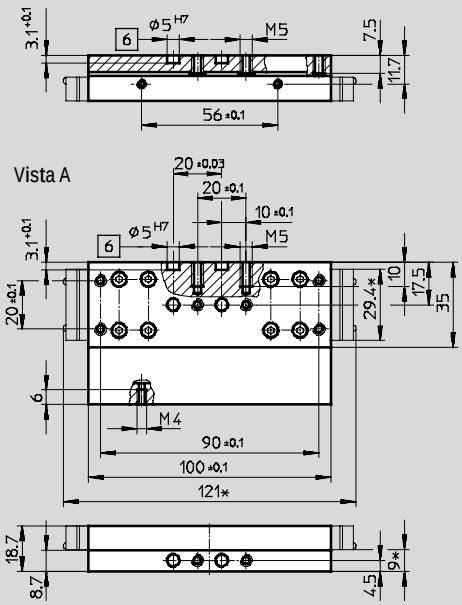
Foglio dati

FESTO

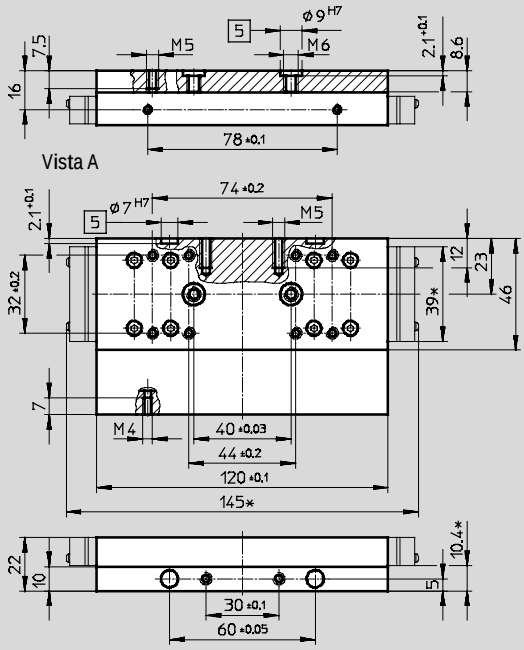
Dimensioni Download dati CAD ➔ www.festo.it

GK – Slitta standard / GP – Slitta standard, esecuzione protetta

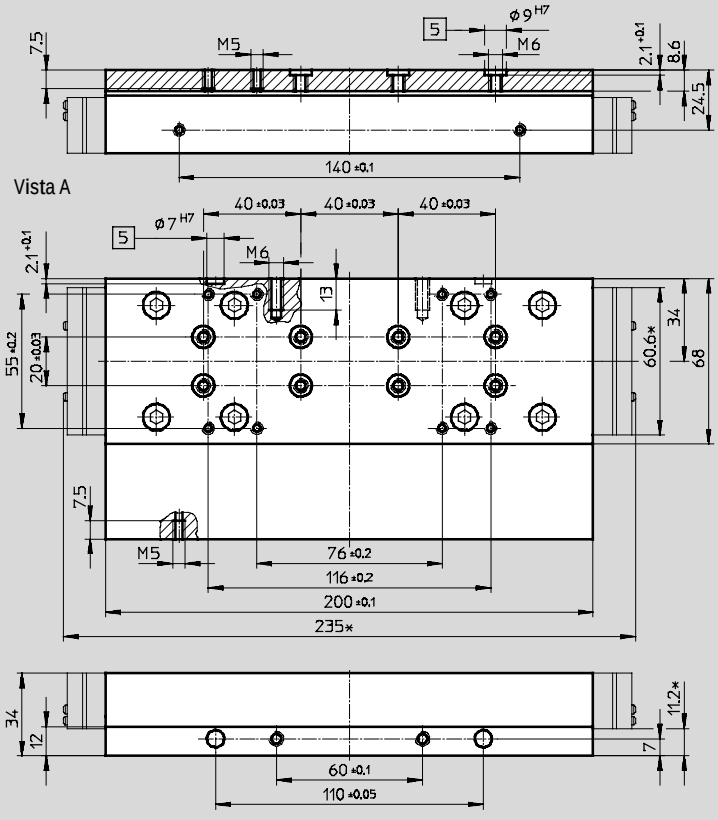
Dimensioni 70



Dimensioni 80



Dimensioni 120



5 Foro per bussola di centratura
6 Foro per perno di centratura
* Esecuzione protetta

Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

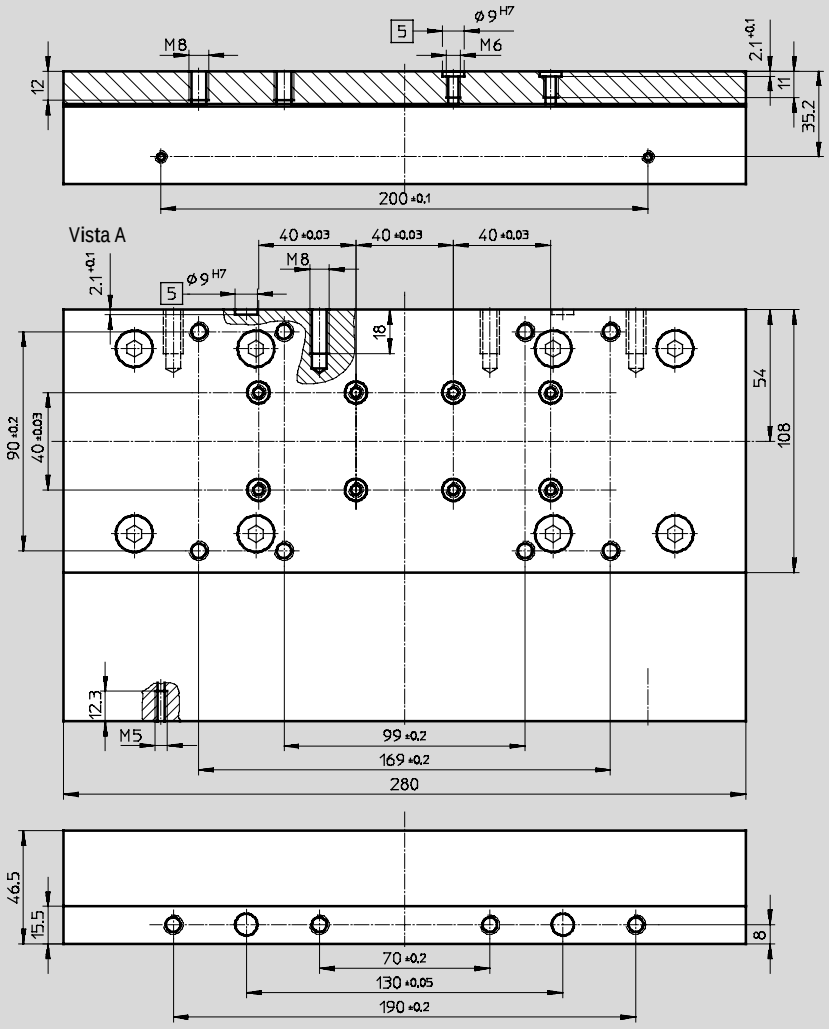
Foglio dati

FESTO

Dimensioni Download dati CAD ➔ www.festo.it

GK - Slitta standard

Dimensioni 185



5 Foro per bussola di centratura

Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

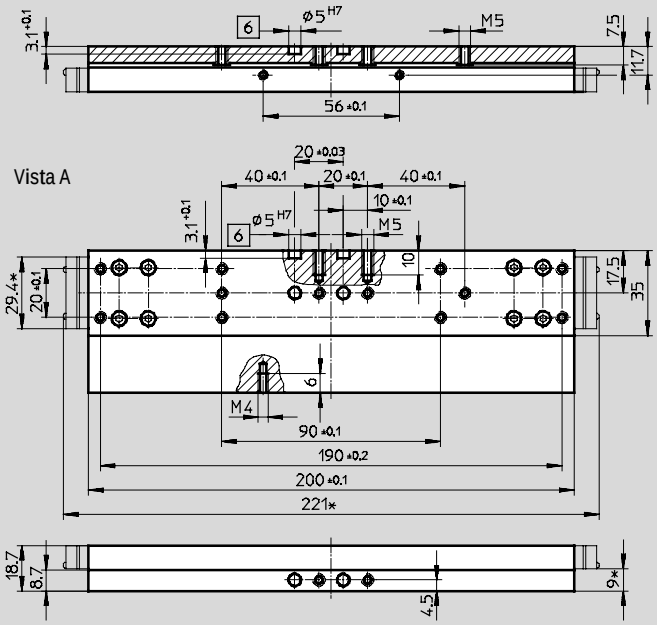
Foglio dati

FESTO

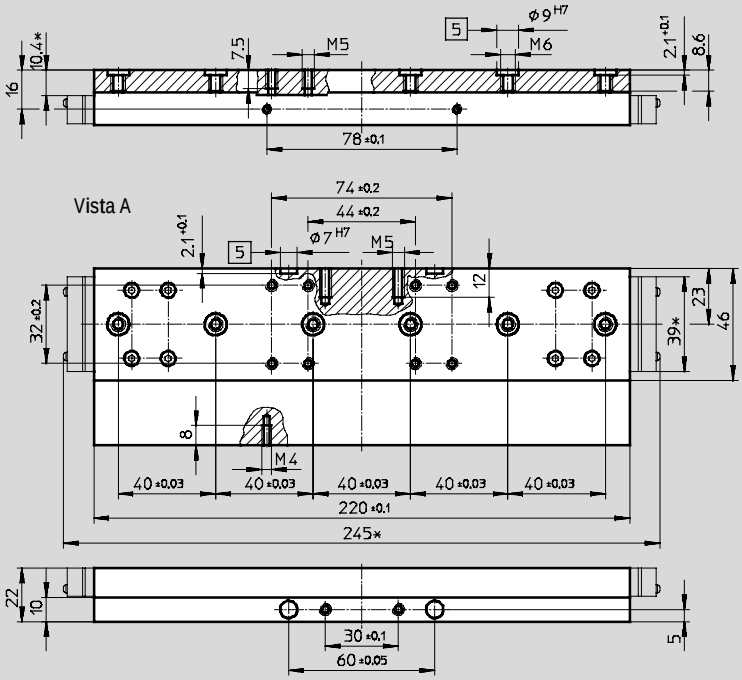
Dimensioni Download dati CAD ➔ www.festo.it

GV – Slitta prolungata / GQ – Slitta prolungata, esecuzione protetta

Dimensioni 70



Dimensioni 80



5 Foro per bussola di centratura
6 Foro per perno di centratura
* Esecuzione protetta

Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

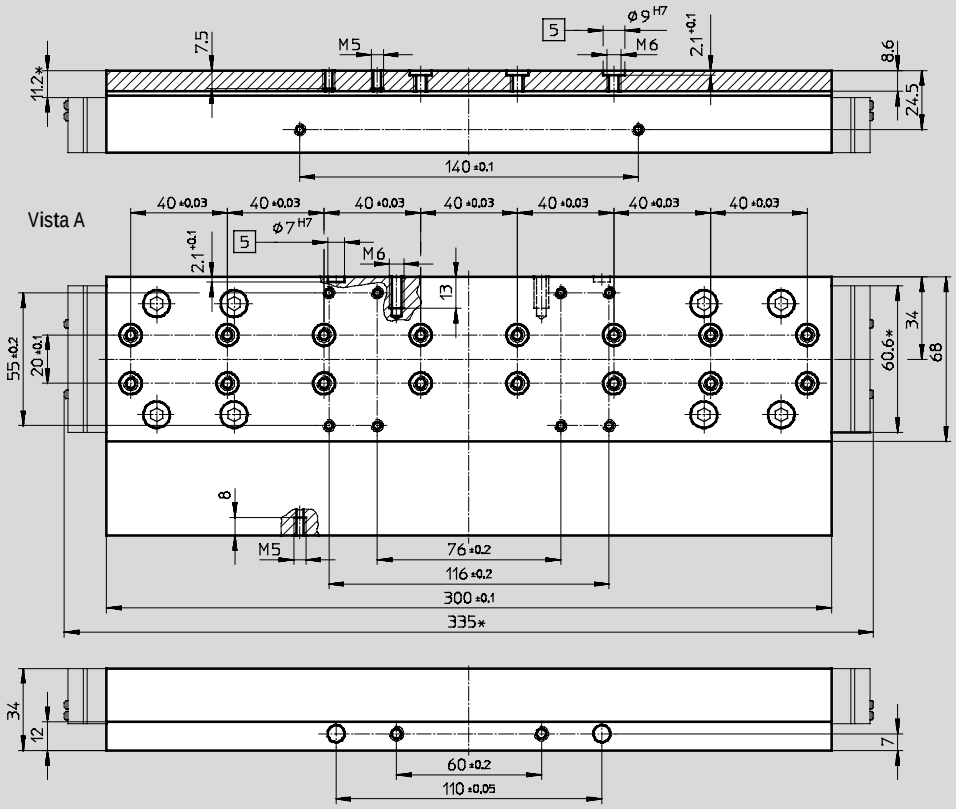
Foglio dati

FESTO

Dimensioni Download dati CAD ➔ www.festo.it

GV – Slitta prolungata / GQ – Slitta prolungata, esecuzione protetta

Dimensioni 120



5 Foro per bussola di centratura

* Esecuzione protetta

Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

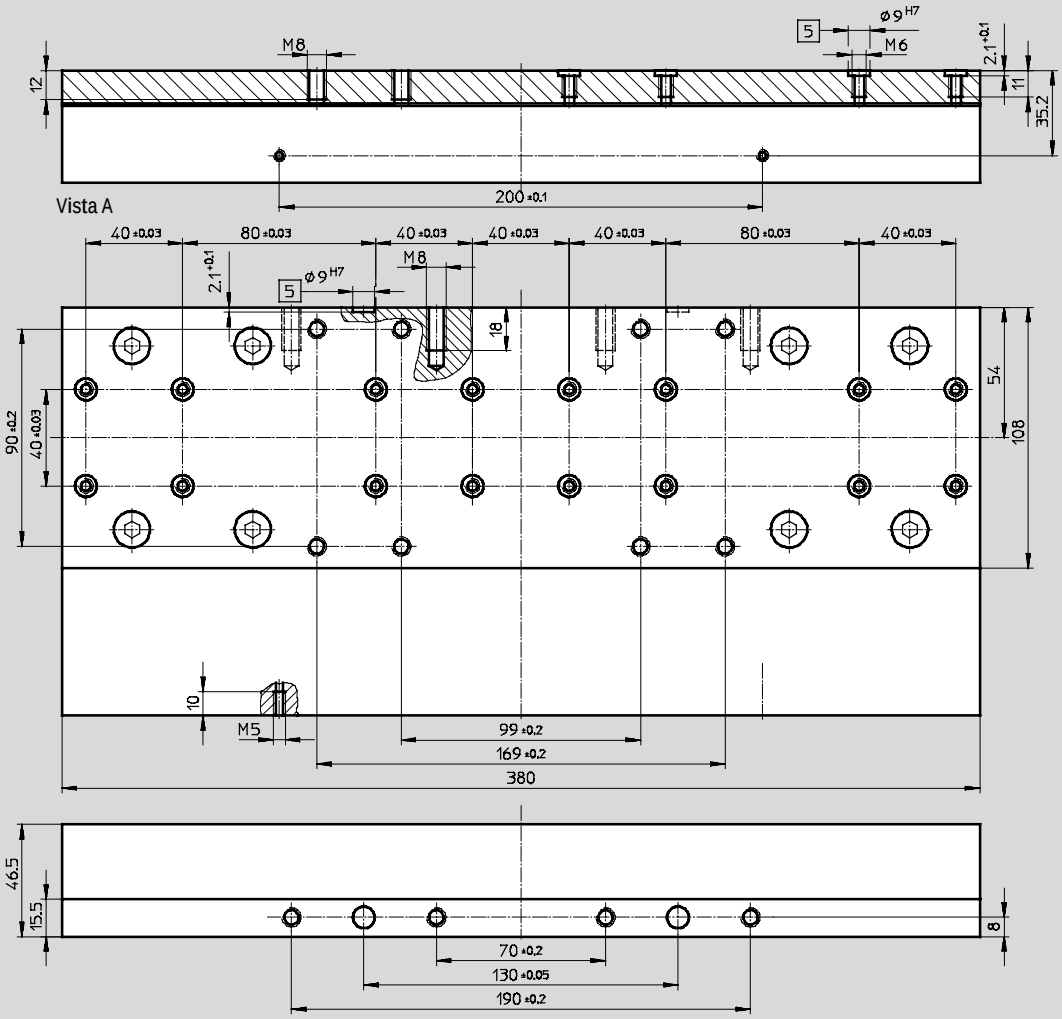
Foglio dati

FESTO

Dimensioni Download dati CAD ➔ www.festo.it

GV - Slitta prolungata

Dimensioni 185



5 Foro per bussola di centratura

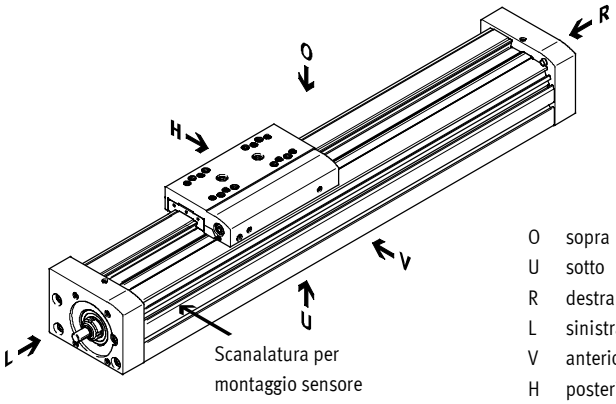
Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

Dati di ordinazione – Gruppo modulare

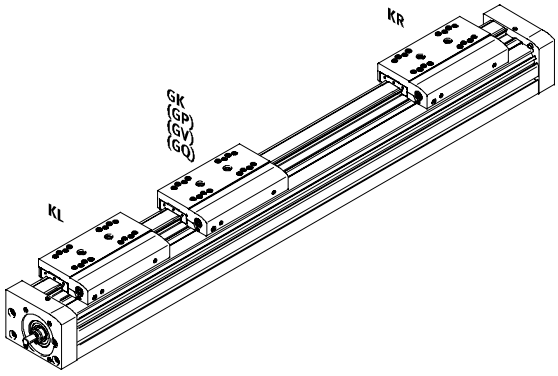
FESTO

Codice di ordinazione

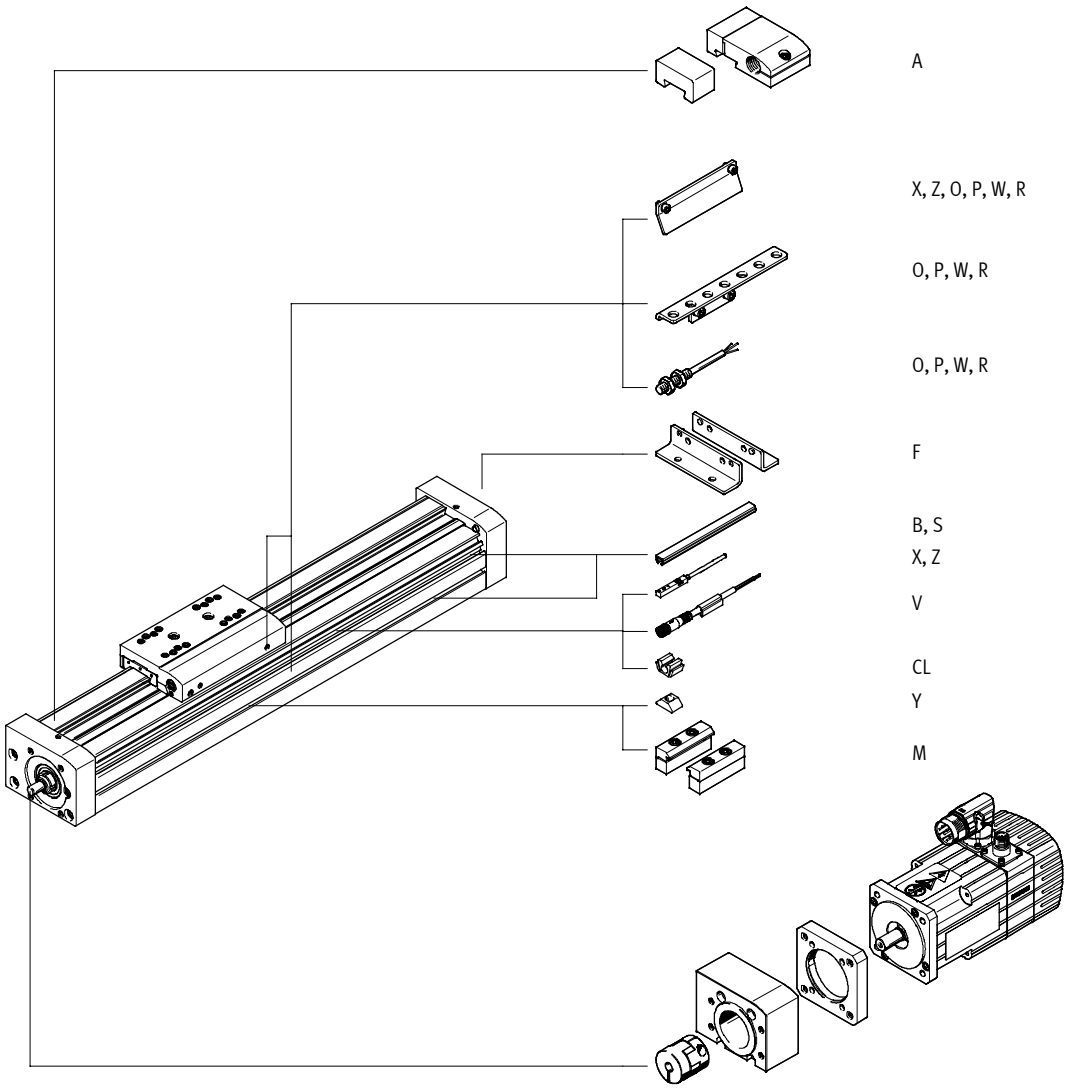
Indicazioni obbligatorie



O sopra
U sotto
R destra
L sinistra
V anteriore
H posteriore



Accessori



A

X, Z, O, P, W, R

O, P, W, R

O, P, W, R

F

B, S
X, Z

V

CL

Y

M

Servomotore EMMS-AS
Motore passo-passo EMMS-ST
➔24

kit assiale
➔24

Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

FESTO

Dati di ordinazione - Gruppo modulare

Tabella di ordinazione

	Dimensioni		70	80	120	185	Condizioni	Codice		Inserimento codice
M	Codice prodotto		556 807	556 808	556 809	556 811				
	Tipo		Asse lineare					EGC		EGC
	Dimensioni		70	80	120	185		-...		
	Corsa per GK, GP (senza extracorsa)	[mm]	100, 200, 300, 400, 500, 600, 700, 800, 1000	100, 200, 300, 500, 600, 800, 1000, 1400, 1500, 1800, 2000	200, 300, 500, 600, 800, 1000, 1400, 1500, 2000, 2500	300, 500, 600, 1000, 1500, 2000, 2500, 3000		-...		-...
			50 ... 1000	50 ... 2000	50 ... 2500	50 ... 3000				
	Corsa per GV, GQ (senza extracorsa)	[mm]	100, 200, 300, 400, 500, 600, 700, 900	100, 200, 400, 500, 700, 900, 1300, 1400, 1700, 1900	100, 200, 400, 500, 700, 900, 1300, 1400, 1900, 2400	200, 400, 500, 900, 1400, 1900, 2400, 2900		-...		
			50 ... 900	50 ... 1900	50 ... 2400	50 ... 2900				
	Funzione		Guida a ricircolo di sfere					-BS		-BS
	Passo della vite senza fine		10	10	10	–		-10P		
			–	20	–	–		-20P		
			–	–	25	–		-25P		
			–	–	–	40		-40P		
	Guida		Guida a ricircolo di sfere					-KF		-KF
	Extracorsa	[mm]	0 ... 999 (0 = nessuna extracorsa)				1	-...H		
	Posizione di montaggio motore		Motore a sinistra					-ML		
			Motore a destra					-MR		
	Slitta		Slitta standard					-GK		
			Slitta prolungata, esecuzione protetta			–		-GQ		
			Slitta standard, esecuzione protetta			–		-GP		
			Slitta prolungata					-GV		
O	Slitta supplementare	Sinistra	Slitta supplementare standard, sinistra				2	-KL		
↓		Destra	Slitta supplementare standard, destra				2	-KR		

1 -... La somma della corsa e di 2 extracorse non deve superare la corsa max.

2 **KL, KR** Selezionando la slitta in esecuzione protetta (GQ, GP) anche la slitta supplementare (KL, KR) è in esecuzione protetta
Selezionando la slitta prolungata (GQ, GV), la slitta supplementare (KL, KR) non è prolungata

Trascrizione codice di ordinazione

	EGC	–		–		–		–	BS	–		–	KF	–		–		–		–	

Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

FESTO

Dati di ordinazione - Gruppo modulare

Tabella di ordinazione

	Dimensioni		70	80	120	185	Condizioni	Codice		Inserimento codice
↓	Accessori		Accessori, forniti non montati					ZUB-		ZUB-
0	Fissaggio a piedini		1					F		
	Supporto centrale		1 ... 50					...M		
	Copertura	Scanalatura di fissaggio	1 ... 50 (1 = 2 pz lunghezza 500 mm)					...B		
		Scanalatura sensori	1 ... 50 (1 = 2 pz lunghezza 500 mm)					...S		
	Tassello scorrevole per scanalatura di fissaggio		1 ... 99					...Y		
	Sensore di finecorsa (SIES), induttivo, scanalatura 8, PNP, incluso blocchetto di connessione	Contatto n.a., cavo 7,5 m	1 ... 6					...X		
		Contatto n.c. con cavo lunghezza 7,5 m	1 ... 6					...Z		
	Paracolpi con supporto		1 ... 2				3	...A		
	Sensore di finecorsa (SIEN), induttivo, M8, PNP, incluso blocchetto di connessione con supporto sensore	Contatto n.a., cavo 2,5 m	1 ... 99					...O		
		Contatto n.c. con cavo lunghezza 2,5 m	1 ... 99					...P		
		Contatto n.a., connettore M8	1 ... 99					...W		
		Contatto n.c., connettore, M8	1 ... 99					...R		
	Cavo con connettore, 2,5 m, M8, a 3 fili		1 ... 99					...V		
	Clip cavo		1 ... 99					...CL		
	Istruzioni per l'uso		Rinuncia alla fornitura del manuale, perchè già disponibile (istruzioni per l'uso in formato PDF disponibili gratuitamente in Internet nel sito www.festo.it)					-O		

3 ...**A** Paracolpi con supporto A non combinabile con slitte versione GP, GQ

·H· Attenzione

Con i codici X, Z la fornitura comprende un blocchetto di connessione.
Con i codici O, P, W, R la fornitura comprende un blocchetto di connessione e max. due supporti sensore.

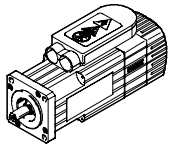
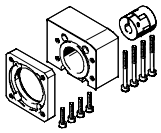
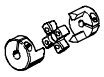
Trascrizione codice di ordinazione

ZUB	–															–	

Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

FESTO

Accessori

Combinazioni possibili asse/motore con kit per montaggio assiale				
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
EGC-70				
Con servomotore				
EMMS-AS-40-M-...	558 162 EAMM-A-S38-40A	558 175 EAMF-A-38B-40A	558 312 EAMC-30-32-6-6	558 171 EAMK-A-S38-38AB
EMMS-AS-55-S-...	558 163 EAMM-A-S38-55A	558 176 EAMF-A-38A-55A	551 003 EAMC-30-32-6-9	558 171 EAMK-A-S38-38AB
Con motore passo-passo				
EMMS-ST-42-S-...	560 685 EAMM-A-S38-42A	560 691 EAMF-A-38B-42A	561 333 EAMC-30-32-5-6	558 171 EAMK-A-S38-38AB
EMMS-ST-57-S-...	560 686 EAMM-A-S38-57A	560 692 EAMF-A-38A-57A	551 002 EAMC-30-32-6-6,35	558 171 EAMK-A-S38-38AB
EGC-80				
Con servomotore				
EMMS-AS-55-S-...	558 164 EAMM-A-S48-55A	558 177 EAMF-A-48B-55A	543 423 EAMC-30-32-8-9	558 172 EAMK-A-S48-48AB
EMMS-AS-70-S-...	558 165 EAMM-A-S48-70A	558 025 EAMF-A-48A-70A	551 004 EAMC-30-32-8-11	558 172 EAMK-A-S48-48AB
Con motore passo-passo				
EMMS-ST-57-S-...	560 687 EAMM-A-S48-57A	560 694 EAMF-A-48B-57A	543 421 EAMC-30-32-6,35-8	558 172 EAMK-A-S48-48AB
EMMS-ST-87-S-...[1)2)] EMMS-ST-87-M-...[2)]	560 688 EAMM-A-S48-87A	560 695 EAMF-A-48A-87A	551 004 EAMC-30-32-8-11	558 172 EAMK-A-S48-48AB
EGC-120				
Con servomotore				
EMMS-AS-70-M-...	558 166 EAMM-A-S62-70A	558 179 EAMF-A-62B-70A	558 313 EAMC-42-66-11-12	558 173 EAMK-A-S62-62AB
EMMS-AS-100-S-...	558 167 EAMM-A-S62-100A	558 026 EAMF-A-62A-100A	551 005 EAMC-42-50-12-19	558 173 EAMK-A-S62-62AB
EMMS-AS-140-S-...	558 168 EAMM-A-S62-140A	558 022 EAMF-A-62A-140A	558 314 EAMC-42-50-12-24	558 173 EAMK-A-S62-62AB
Con motore passo-passo				
EMMS-ST-87-S-...[1)] EMMS-ST-87-M-...[3)] EMMS-ST-87-L-...[3)]	560 689 EAMM-A-S62-87A	560 696 EAMF-A-62B-87A	558 313 EAMC-42-66-11-12	558 173 EAMK-A-S62-62AB
EGC-185				
Con servomotore				
EMMS-AS-100-M-...	558 169 EAMM-A-S95-100A	558 182 EAMF-A-95B-100A	558 315 EAMC-56-58-19-25	558 174 EAMK-A-S95-95AB
EMMS-AS-140-M-...	558 170 EAMM-A-S95-140A	558 023 EAMF-A-95A-140A	558 316 EAMC-56-58-24-25	558 174 EAMK-A-S95-95AB

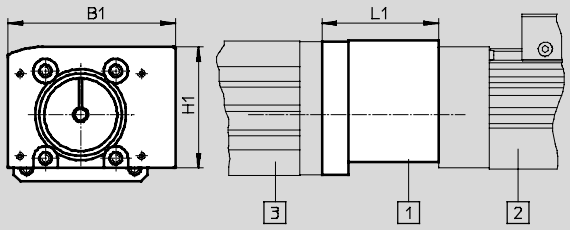
1) Con passo della vite 10
2) Con passo della vite 20
3) Con passo della vite 25

Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

Accessori

FESTO

Kit assiale EAMM-A-...
Materiali
Supporto giunto-motore, mozzo giunto, flangia motore: alluminio
Viti: acciaio



Schema di principio:
1 Kit assiale
2 Asse con trasmissione a vite
3 Motore

Dati tecnici generali									
EAMM-A-...		S38-				S48-			
		40A	42A	55A	57A	55A	57A	70A	87A
Momento trasmissibile	[Nm]	6,5	3,5	6,5	6,5	12,5	6,5	12,5	12,5
Momento di inerzia di massa	[kgmm^2]	5,87	5,88	5,87	5,87	5,87	5,87	5,87	5,87
Numero di giri max.	[1/min]	8000	8000	8000	8000	8000	8000	8000	8000
Posizione di montaggio		Qualsiasi							

EAMM-A-...		S62-				S95-	
		70A	87A	100A	140A	100A	140A
Momento trasmissibile	[Nm]	17	17	17	17	60	60
Momento di inerzia di massa	[kgmm^2]	45,5	45,5	34,8	34,1	128	127
Numero di giri max.	[1/min]	6000	6000	6000	6000	5500	5500
Posizione di montaggio		Qualsiasi					

Condizioni d'esercizio e ambientali		
Temperatura ambiente	[°C]	–10...+60
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-S38-40A	69	50	44	370	558 162	EAMM-A-S38-40A
EAMM-A-S38-42A			52	412	560 685	EAMM-A-S38-42A
EAMM-A-S38-55A			48	400	558 163	EAMM-A-S38-55A
EAMM-A-S38-57A			48	400	560 686	EAMM-A-S38-57A
EAMM-A-S48-55A	82	61,5	47,2	590	558 164	EAMM-A-S48-55A
EAMM-A-S48-57A			47,2	580	560 687	EAMM-A-S48-57A
EAMM-A-S48-70A			50,2	610	558 165	EAMM-A-S48-70A
EAMM-A-S48-87A			54	760	560 688	EAMM-A-S48-87A
EAMM-A-S62-70A	120	88,5	78,5	1950	558 166	EAMM-A-S62-70A
EAMM-A-S62-87A			81,5	2070	560 689	EAMM-A-S62-87A
EAMM-A-S62-100A			81	2050	558 167	EAMM-A-S62-100A
EAMM-A-S62-140A			91	2870	558 168	EAMM-A-S62-140A
EAMM-A-S95-100A	186	140,5	85,5	4910	558 169	EAMM-A-S95-100A
EAMM-A-S95-140A			95,5	5500	558 170	EAMM-A-S95-140A

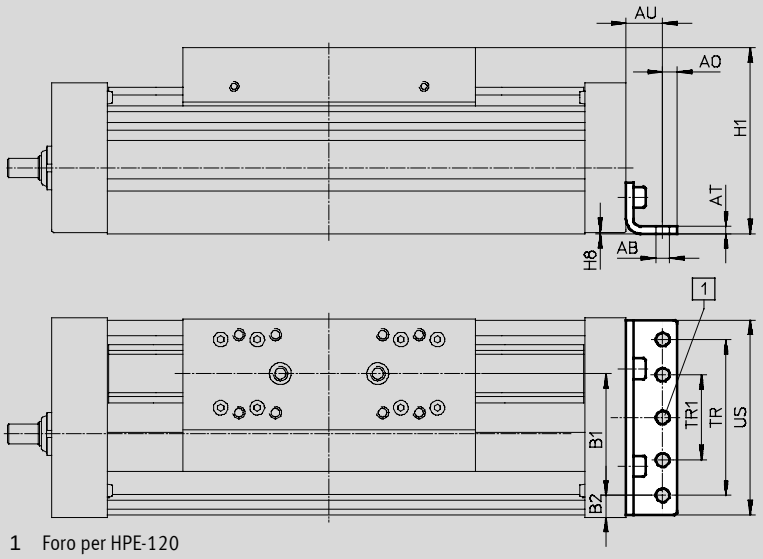
Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

Accessori

FESTO

Fissaggio a piedini HPE
(Codice di ordinazione F)

Materiali:
acciaio zincato
Conformità RoHS

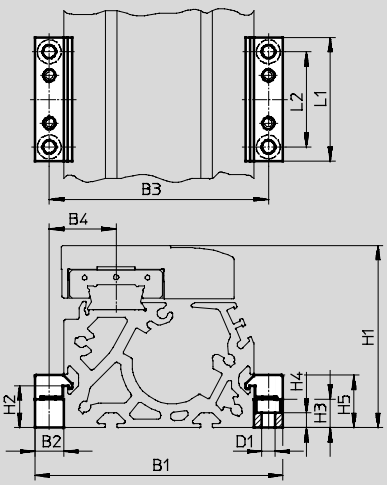


1 Foro per HPE-120

Dimensioni e dati di ordinazione														
Per dimensioni	AB ∅	A0	AT	AU	B1	B2	H1	H8	TR	TR1	US	Peso [g]	Cod. prod.	Tipo
70	5,5	6	3	13	37	14,5	64	0,5	40	–	67	115	558 321	HPE-70
80	5,5	6	3	15	38	21	76,5	0,5	40	–	80	150	558 322	HPE-80
120	9	8	6	22	65	20	111,5	0,6	80	–	116	578	558 323	HPE-120
185	9	12	8	25	118	13	172,5	0,5	160	80	182	1438	558 325	HPE-185

Supporto centrale MUE
(Codice di ordinazione M)

Materiali:
alluminio anodizzato
Conformità RoHS



Dimensioni e dati di ordinazione														
Per dimensioni	B1	B2	B3	B4	D1 ∅	H1	H2	H3	H4	H5	L1	L2	Peso [g]	Cod. prod.	Tipo
70	91	12	79	21,5	5,5	64	17,5	12	6,2	22	52	40	80	558 043	MUE-70/80
80	104	12	92	27	5,5	76,5	17,5	12	6,2	22	52	40	80	558 043	MUE-70/80
120	154	19	135	41,5	9	111,5	16	14	5,5	29,5	90	40	290	558 044	MUE-120/185
185	220	19	201	61,5	9	172,5	16	14	5,5	29,5	90	40	290	558 044	MUE-120/185

Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

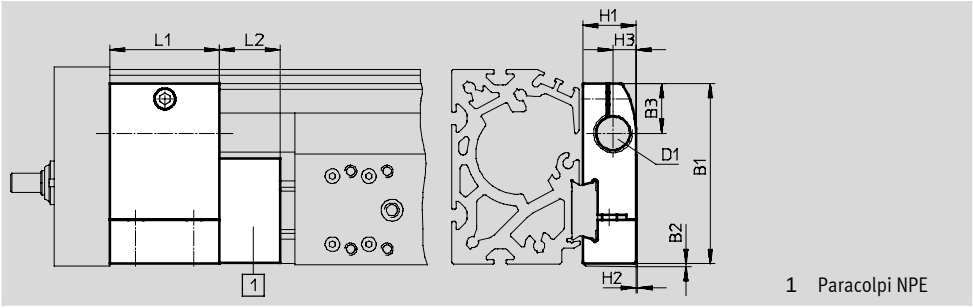
Accessori

FESTO

Supporto ammortizzatore KYE
Paracolpi NPE➔29
(Codice di ordinazione A)

Materiali:
alluminio anodizzato
Conformità RoHS

Non utilizzabile con le varianti GP e GQ.



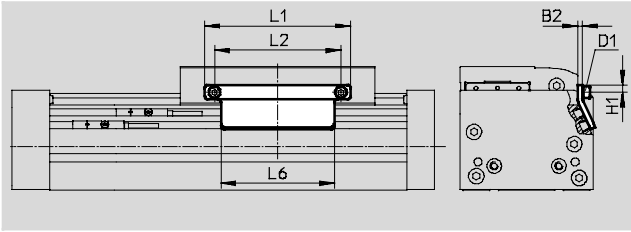
1 Paracolpi NPE

Dimensioni e dati di ordinazione

Per dimensioni	B1	B2	B3	D1	H1	H2	H3	L1	L2	Peso [g]	Cod. prod.	Tipo
70	57,5	1	16,5	M12X1	18,2	0,5	7,5	30	15	75	557 584	KYE-70
80	74,2	1	20,5	M16X1	22	0,5	9,5	45	25	170	557 585	KYE-80
120	108,5	1	26	M22X1,5	31	1	14	60	40	680	557 586	KYE-120
185	168	1	37	M26X1,5	42	4	18	75	60	1075	557 587	KYE-185

Blocchetto di connessione SF-EGC-1
per il rilevamento con sensore di finecorsa SIES-8M
(Codice di ordinazione X oppure Z)

Materiali:
acciaio zincato
Conformità RoHS



Dimensioni e dati di ordinazione

Per dimensioni	B2	D1	H1	L1	L2	L6	Peso [g]	Cod. prod.	Tipo
70	3	M4	4,65	70	56	50	50	558 047	SF-EGC-1-70
80	3	M4	4,65	90	78	70	60	558 048	SF-EGC-1-80
120	3	M5	8	170	140	170	150	558 049	SF-EGC-1-120
185	3	M5	10	230	200	230	245	558 051	SF-EGC-1-185

Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

Accessori

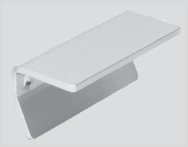
Blocchetto di connessione SF-EGC-2
per il rilevamento con sensore di finecorsa SIEN-M8B (codice di ordinazione O, P, W oppure R) oppure SIES-8M (codice di ordinazione X oppure Z)

Materiali:
acciaio zincato
Conformità RoHS

Supporto sensore HWS-EGC
per sensore di finecorsa SIEN-M8B (codice di ordinazione O, P, W oppure R)

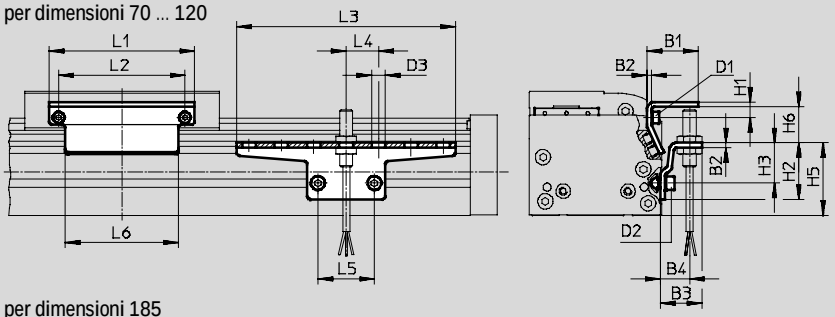
Materiali:
acciaio zincato
Conformità RoHS

Blocchetto di connessione SF-EGC-2

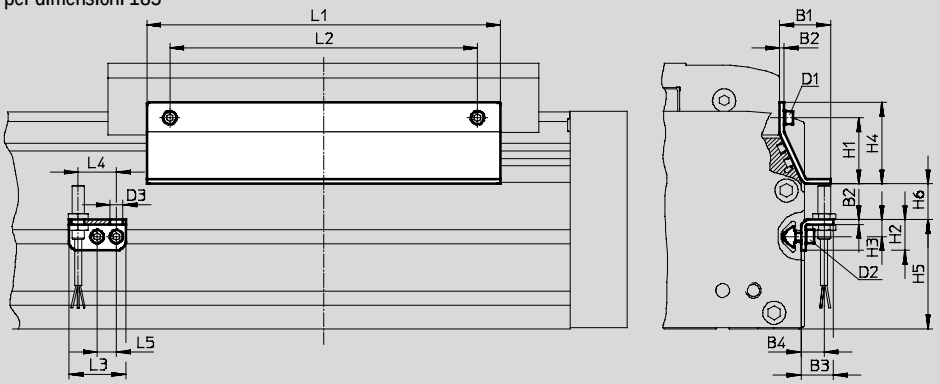


Supporto sensore HWS-EGC

per dimensioni 70 ... 120



per dimensioni 185



Dimensioni e dati di ordinazione

Per dimensioni	B1	B2	B3	B4	D1	D2	D3 ∅	H1	H2
70	31,5	3	25,5	18	M4	M5	8,4	9,5	35
80	31,5	3	25,5	18	M4	M5	8,4	9,5	35
120	32	3	25,5	18	M5	M5	8,4	13,2	65
185	33	3	25,5	15	M5	M5	8,4	43	20

Per dimensioni	H3	H4	H5	H6 max.	L1	L2	L3	L4	L5	L6
70	25	–	45	13,5	70	56	135	20	35	50
80	25	–	45	23,5	90	78	135	20	35	70
120	55	–	75	24	170	140	215	20	35	170
185	11	53	71	25,5	230	200	37	25	12,5	230

Per dimensioni	Peso [g]	Cod. prod.	Tipo
	Blocchetto di connessione		
70	100	558 052	SF-EGC-2-70
80	130	558 053	SF-EGC-2-80
120	280	558 054	SF-EGC-2-120
185	390	558 056	SF-EGC-2-185

Per dimensioni	Peso [g]	Cod. prod.	Tipo
	Supporto sensore		
70	110	558 057	HWS-EGC-M5
80	110	558 057	HWS-EGC-M5
120	200	558 058	HWS-EGC-M8
185	60	560 517	HWS-EGC-M8:KURZ

Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

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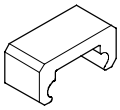
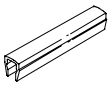
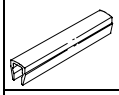
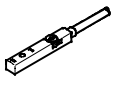
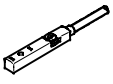
Accessori

Dati di ordinazione

	Per dimensioni	Nota	Codice di ordinazione	Cod. prod.	Tipo	PE[1]
Paracolpi NPE						
	70	Utilizzo in combinazione con supporto ammortizzatore KYE	A	562 581	NPE-70	1
	80			562 582	NPE-80	
	120			562 583	NPE-120	
	185			562 584	NPE-185	
Tassello scorrevole NST						
	70, 80	Per scanalatura di fissaggio	Y	150 914	NST-5-M5	1
	120, 185			150 915	NST-8-M6	1
Perno/Bussola di centratura ZBS/ZBH[2]						
	70	Per slitta	–	150 928	ZBS-5	10
	80, 120, 185			150 927	ZBH-9	10
Copertura scanalatura ABP						
	70, 80	Per scanalatura di fissaggio ogni 0,5 m	B	151 681	ABP-5	2
	120, 185			151 682	ABP-8	
Copertura scanalatura ABP-S						
	70...185	Per scanalatura sensori ogni 0,5 m	S	563 360	ABP-5-S1	2
Clip SMBK						
	70...185	Per scanaltura di montaggio sensori, per il fissaggio del cavo del sensore	CL	534 254	SMBK-8	1

1) Quantità in pezzi
2) 6 perni/bussole di centratura sono compresi nella fornitura dell'asse

Dati di ordinazione – Sensori di finecorsa per scanalatura a T, induttivi Foglio dati ➔ Internet: www.festo.it

	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	7,5	551 386	SIES-8M-PS-24V-K-7,5-OE
			Connettore M8x1, a 3 poli	0,3	551 387	SIES-8M-PS-24V-K-0,3-M8D
		NPN	Cavo, a 3 fili	7,5	551 396	SIES-8M-NS-24V-K-7,5-OE
			Connettore M8x1, a 3 poli	0,3	551 397	SIES-8M-NS-24V-K-0,3-M8D
Contatto n.c.						
	Applicabile dall'alto nella scanalatura, protetto dal profilo del cilindro	PNP	Cavo, a 3 fili	7,5	551 391	SIES-8M-PO-24V-K-7,5-OE
			Connettore M8x1, a 3 poli	0,3	551 392	SIES-8M-PO-24V-K-0,3-M8D
		NPN	Cavo, a 3 fili	7,5	551 401	SIES-8M-NO-24V-K-7,5-OE
			Connettore M8x1, a 3 poli	0,3	551 402	SIES-8M-NO-24V-K-0,3-M8D

Assi con trasmissione a vite EGC-BS-KF, con guida a ricircolo di sfere

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Accessori

Dati di ordinazione – Sensori di finecorsa induttivi M8 — Foglio dati ➔ Internet: www.festo.it

	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 — Foglio dati ➔ Internet: www.festo.it

	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	159 420	SIM-M8-3GD-2,5-PU
			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

Mini slides SLTE, electric

FESTO

Mini slides SLTE, electric

Key features

Range of applications

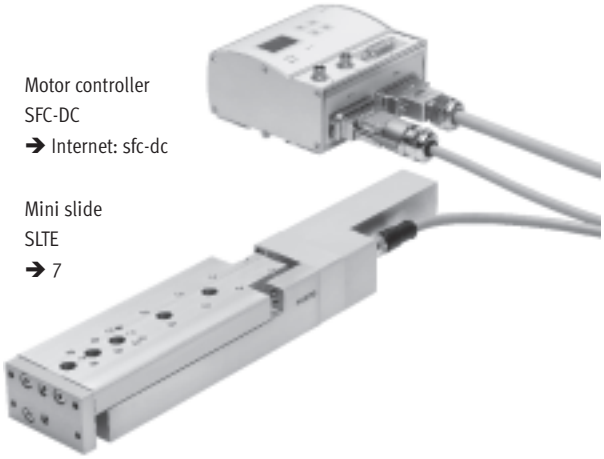
The electric mini slide SLTE is ideal for use in automation applications where controlled end-position cushioning (gentle stopping), constant travel speed and positioning capability are important factors.

The SLTE has the same interfaces on the yoke, slide and underneath the housing as the pneumatic SLT. It is also fully compatible with the modular handling and assembly system and SLT adapter kits.

Special features

- Precise and rigid guide
- Freely positionable
- Fast positioning times
- Through-holes from above and below
- Sensors can be integrated
- Gentle starting and stopping
- Working loads up to 4 kg
- Constant travel speeds of 2 ... 200 mm/s

Everything from a single source



Motor controller
SFC-DC
➔ Internet: sfc-dc

Mini slide
SLTE
➔ 7

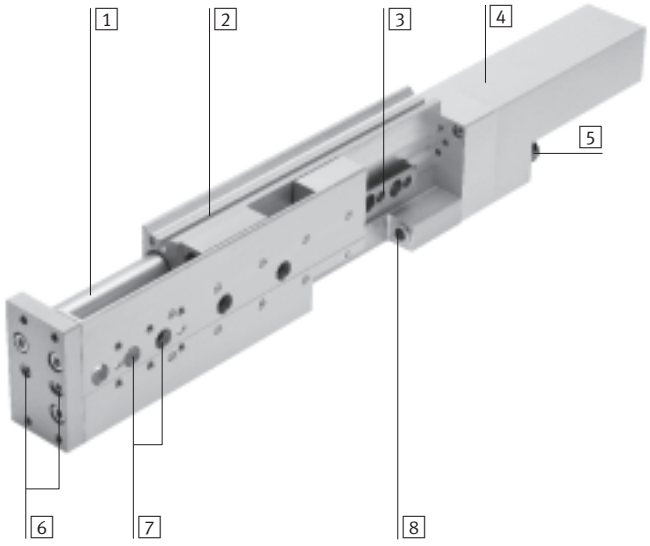
The mini slide SLTE and motor controller SFC form one unit.

- Thanks to the protection class IP54, the SFC can be mounted close to the SLTE, either:
  - with centre supports
  - on an H-rail
- Only one cable required between SLTE and SFC
- Motor controller SFC available with or without control panel
- Easy control with
  - I/O interface
  - Profibus
  - CANopen
  - DeviceNet

Parameterisation possible via

- Control panel:
  - Suitable for simple position sequences
- Configuration package FCT (Festo configuration tool):
  - Parameterisation via RS 232 interface
  - Windows-based PC user interface (Festo configuration tool)

The technology in detail

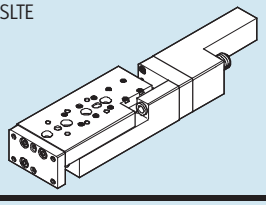
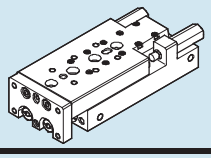
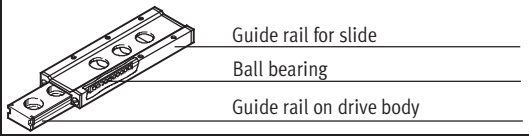
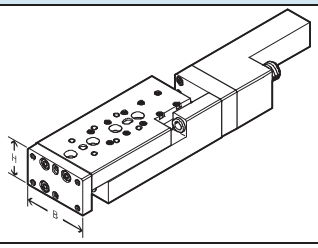
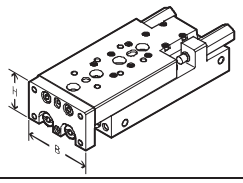
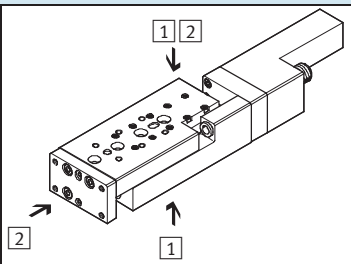
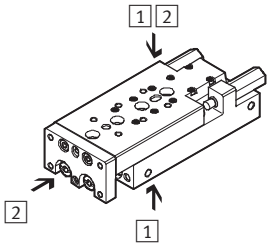


1 Drive rod
2 Slot for reference switch
3 Roller bearing guide
4 Drive assembly consisting of DC motor with displacement encoder
5 Electrical connection
6 Threaded holes and through-holes with centring hole for attaching the working load
7 Threaded holes and through-holes with centring hole for attaching the SLTE
8 Fixed stop with integrated rubber buffer

Mini slides SLTE, electric

Key features

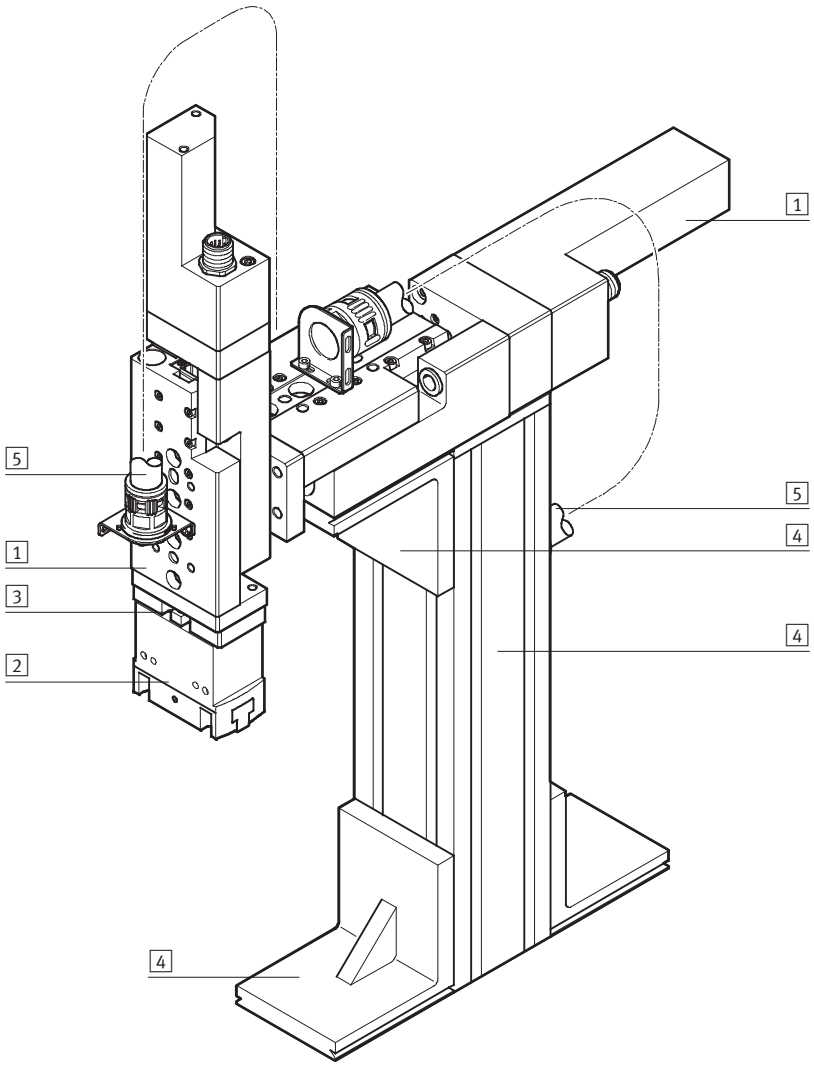
Comparison between electric mini slide SLTE and pneumatic mini slide SLT

	Electrical: SLTE	Pneumatic: SLT
		
Advantages		
	• Gentle starting and stopping • Constant and precise speed (2 ... 200 mm/s) • Flexible positioning without mechanical devices • Programmable drive profile	• High feed force • High speed • Fast positioning time • Compact length
Guide		
• Preloaded, backlash-free, precise and rigid ball bearing cage guide • High torque and load absorption		
Dimensions		
• Identical width and height dimensions Type Width (W) x Height (H) SLT(E)-10 50 x 30 mm SLT(E)-16 66 x 40 mm		
Interfaces		
• Identical mounting and attachment options 1 Attachment surfaces: Direct mounting using threaded holes and through-holes 2 Mounting surfaces: Direct mounting of loads and devices (e.g. SLT: semi-rotary drives and grippers) via threaded holes in the slide and the yoke plate		
Technical data		
Piston ∅ [mm]	10, 16	6 ... 25
Stroke [mm]	50 ... 150	10 ... 200
Max. speed [m/s]	0.2	0.8
Repetition accuracy at end positions [mm]	±0.1	±0.02
Intermediate positions	Any	None

Mini slides SLTE, electric

Key features

System product for handling and assembly technology

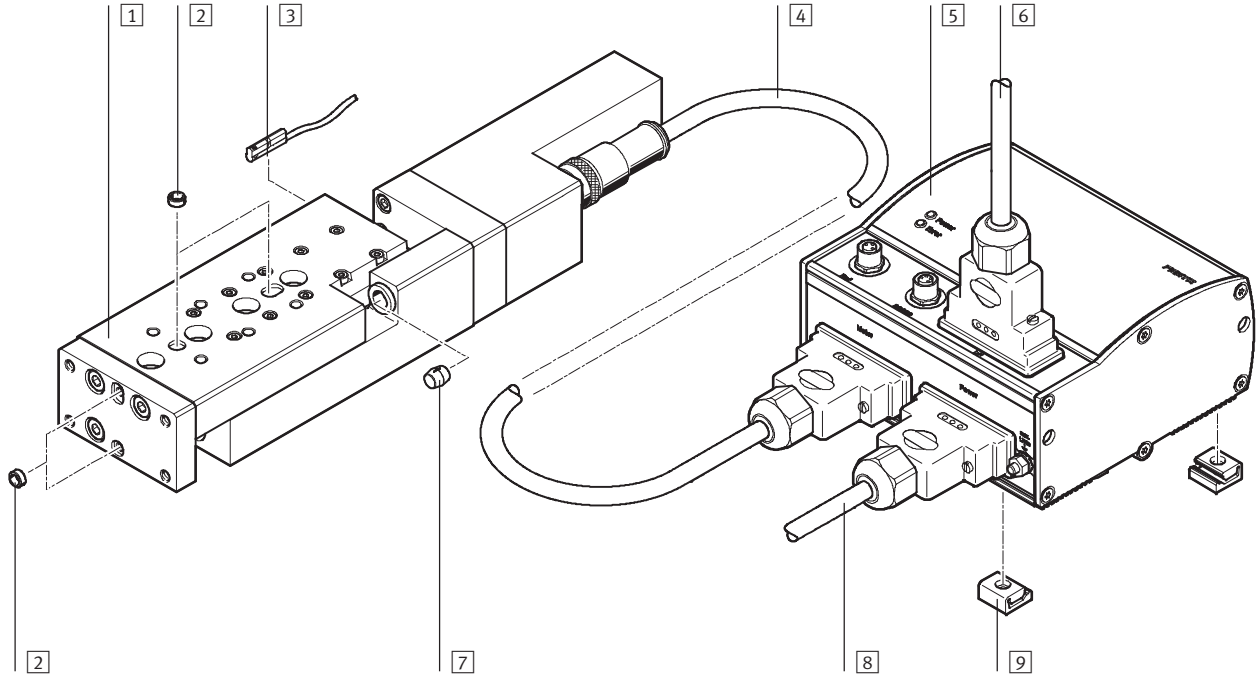


System elements and accessories			
		Brief description	**➔ Page/Internet**
1	Axes	Wide range of combinations possible within handling and assembly technology	axes
2	Grippers	Wide range of variations possible within handling and assembly technology	gripper
3	Adapters	For drive/drive and drive/gripper combinations	adapter kit
4	Basic mounting components	Profiles and profile connectors as well as profile/drive connectors	basic component
5	Installation components	For manageable and secure guidance of electrical cables and tubing	installation component
–	Drive units	Wide range of combinations possible within handling and assembly technology	drive

Mini slides SLTE, electric

Peripherals overview

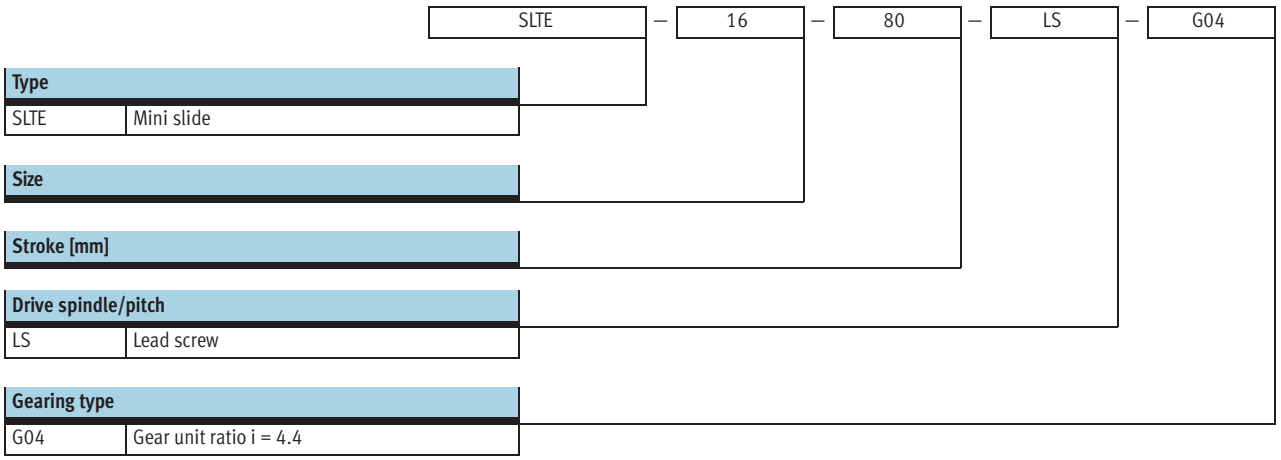
Size 10/16



Accessories			
		Brief description	**➔ Page/Internet**
1	Mini slide SLTE	Electromechanical linear axis with lead screw spindle	7
2	Centring pin/sleeve ZBS/ZBH	– For centring loads and attachment components – Centring sleeves included in scope of delivery	15
3	Proximity sensor SME/SMT-10	For referencing mini slide or for sensing slide position	15
4	Motor cable KMTR	Connecting cable between motor and motor controller	kmtr
5	Motor controller SFC	For parameterising and positioning mini slide	sfc-dc
6	Control cable KES	For I/O connection to any controller	kes
6	Plug FBS, FBA	For fieldbus interface	plug
7	Buffer	Buffer included in scope of delivery	–
8	Supply cable KPWR	Power supply cable; load and logic power supplies are isolated	kpwr
9	Centre supports MUP	– For mounting motor controller – Motor controller can also be mounted on H-rail	mup

Mini slides SLTE, electric

Type codes



Mini slides SLTE, electric

Technical data

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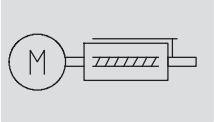
Function



- Ø - Size
10 and 16

- | - Stroke length
50 ... 150 mm

General technical data				
Size			10	16
Constructional design			Electromechanical linear axis with lead screw	
Guide			With ball bearings	
Type of mounting			Via through-holes	
			Via female thread	
			Via female thread and centring sleeve	
Stroke		[mm]	50, 80	50, 80, 100, 150
Stroke reserve per end position	with rubber buffer at both ends	[mm]	0.5	0.6
	with rubber buffer at one end	[mm]	1.2	1.25
Assembly position			Any	
Lead screw pitch		[mm]	5	7.5
Min. travel speed		[mm/s]	2	
Max. acceleration		[m/s^2]	2.5	
Repetition accuracy		[mm]	±0.1	
Reversing backlash		[mm]	< 0.1	

Electrical data for motor			
Size		10	16
System resolution of encoder		512 (pulses per rotation)	1,000 (pulses per rotation)
Nominal operating voltage	[V DC]	24	
Output	[W]	4.5	18

Operating and environmental conditions			
Size		10	16
Ambient temperature	[°C]	0 ... +40	
Protection class		IP40	
Fast transients		To EN61000-4-4	
Max. noise level[1)]	[dB A]	< 50	< 55
CE symbol (declaration of conformity)		In accordance with EU EMC directive	
Certification		C-Tick	

1) At maximum permissible speed

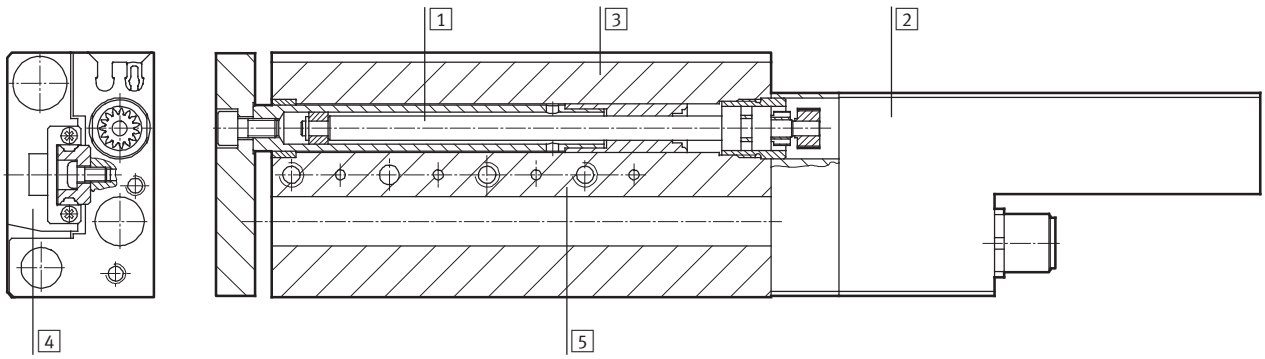
Weight [g]						
Size	10		16			
Stroke	50	80	50	80	100	150
Product weight	574	737	1,185	1,465	1,714	2,196
Moving load	163	235	296	415	519	729

Mini slides SLTE, electric

Technical data

Materials

Sectional view

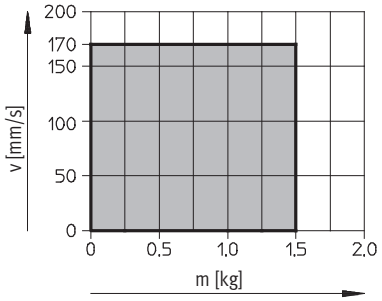


Mini slide		
1	Lead screw	High-alloy steel
2	Motor housing	Wrought aluminium alloy, anodised
3	Housing	Wrought aluminium alloy, anodised
4	Slide	Wrought aluminium alloy, anodised
5	Guide	Tempered steel
–	Seals	Thermoplastic rubber, nitrile rubber

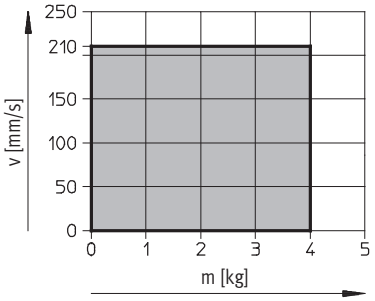
Travel speed v as a function of applied load m

Horizontal mounting position

SLTE-10

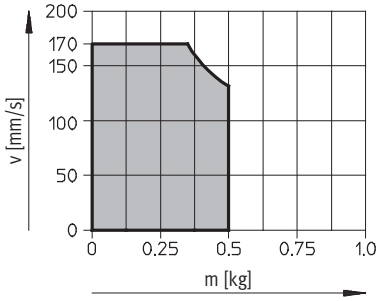


SLTE-16

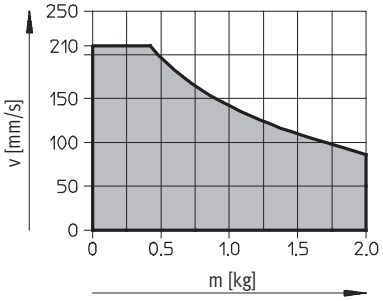


Vertical mounting position

SLTE-10



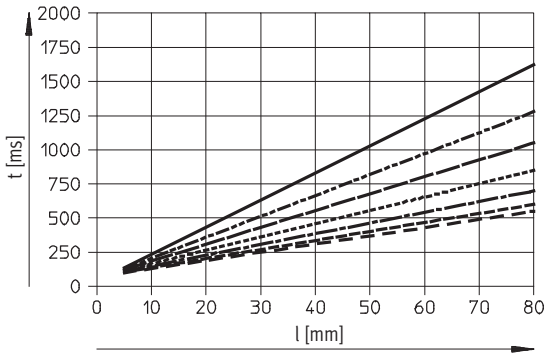
SLTE-16



Permissible operating range

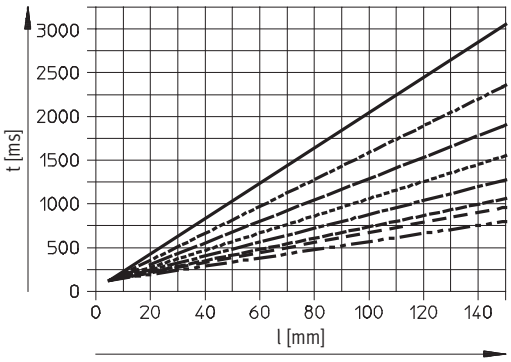
Positioning time t as a function of stroke l

SLTE-10



- v = 50 mm/s
- v = 65 mm/s
- v = 80 mm/s
- v = 100 mm/s
- v = 125 mm/s
- v = 150 mm/s
- v = 170 mm/s

SLTE-16

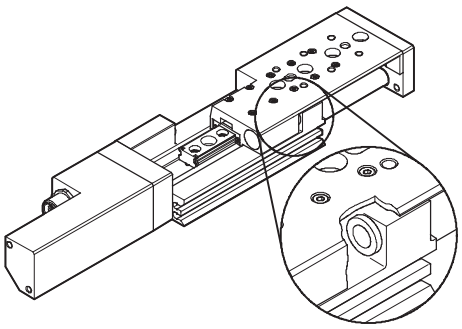


- v = 50 mm/s
- v = 65 mm/s
- v = 80 mm/s
- v = 100 mm/s
- v = 125 mm/s
- v = 150 mm/s
- v = 170 mm/s
- v = 210 mm/s

Reference travel

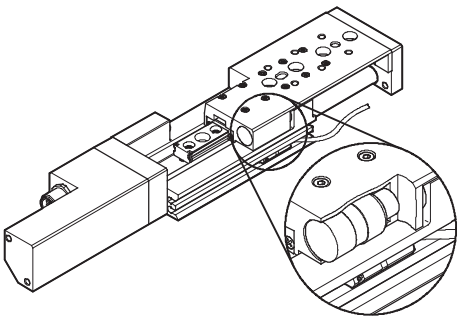
to fixed stop

- Positive fixed stop
  - To front stop bush (extended)
- Negative fixed stop
  - To rear stop bush (retracted)



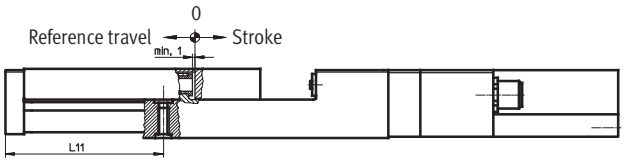
to proximity sensor

- Position freely selectable

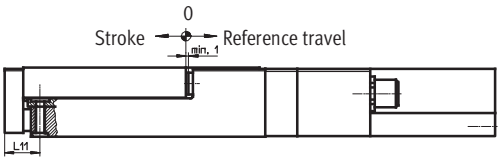


The following applies for reference travel to a fixed stop:

Positive fixed stop



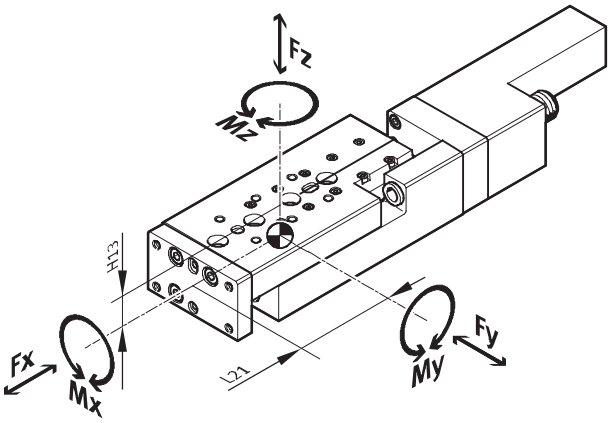
Negative fixed stop



Size	Stroke	L11	
		Positive fixed stop	Negative fixed stop
10	50	$67.4^{+1.1}$	$15.6_{-1.1}$
	80	$97.0^{+1.1}$	$15.2_{-1.1}$
16	50	$74.9^{+1.1}$	$23.1_{-1.1}$
	80	$104.1^{+1.1}$	$22.3_{-1.1}$
	100	$124.6^{+1.1}$	$22.8_{-1.1}$
	150	$173.3^{+1.1}$	$21.5_{-1.1}$

Dynamic characteristic load values

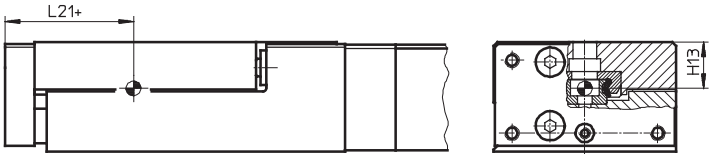
Torques are indicated with reference to the centre of the guide.
They must not be exceeded in the dynamic range. Special attention must be paid to the cushioning phase.



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

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

Position of the guide centre



\+ plus stroke length

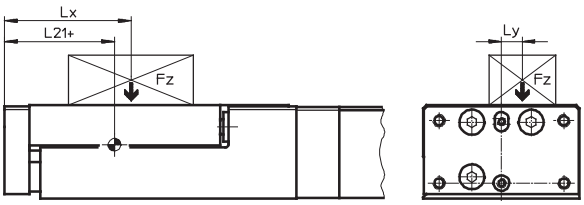
Permissible forces and torques						Geometric characteristics	
Size	Stroke	Fy_{max} [N]	Fz_{max} [N]	Mx_{max}, My_{max} [Nm]	Mz_{max} [Nm]	H13 [mm]	L21 [mm]
10							
	50	390	390	3.1	1.4	13	33.5
	80	410	410	4.3	1.5		41
16							
	50	510	510	4.6	2.8	16	35
	80	520	520	6.0	2.8		41.5
	100	600	600	9.1	3.2		51.5
	150	660	960	12.6	3.5		66.5

Note

Sizing software
PositioningDrives
➔www.festo.com

Calculation example

Given



Mini slide	= SLTE-10
Stroke length	= 80 mm
Lever arm L_x	= 50 mm
Lever arm L_y	= 30 mm
Weight F_z	= 0.8 kg
Acceleration a	= 0 m/s^2

To be found

F_y, F_z, Mx, My, Mz
and verification of function with combined load

Solution:

L21 = 41 mm from table

F_y = 0 N

F_z = m x g
= 0.8 kg x 9.81 m/s^2 = 7.848 N

M_x = m x g x L_y
= 0.8 kg x 9.81 m/s^2 x 30 mm = 0.236 Nm

M_y = m x g x [(L21+stroke)-L_x]
= 0.8 kg x 9.81 m/s^2 [(41 mm + 80 mm) – 50 mm] = 0.557 Nm

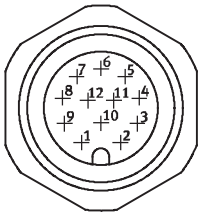
M_z = 0 Nm

Combined load:

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

$$= 0 + \frac{7.848N}{410N} + \frac{0.2366Nm}{4.3Nm} + \frac{0.557Nm}{1.5Nm} + 0 = 0.445 \leq 1$$

Pin allocation of connection plug

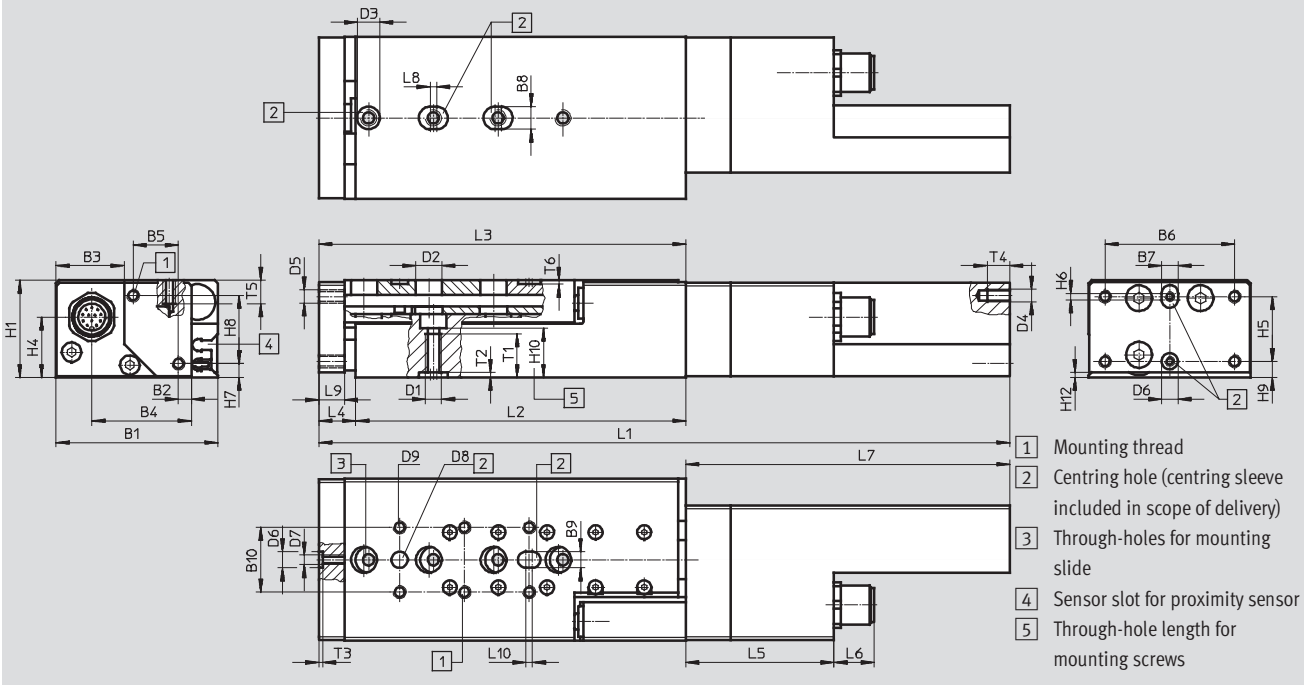


Plug M12		
Pin	Connection	Function
1	Motor +	Motor conductor
2	Motor –	Motor conductor
3	A	Encoder signal RS 485
4	A/	Encoder signal RS 485
5	B	Encoder signal RS 485
6	B/	Encoder signal RS 485
7	I	Encoder signal RS 485
8	I/	Encoder signal RS 485
9	+5 V DC	Signal supply
10	0 V	Signal ground
11	–	–
12	–	–

Mini slides SLTE, electric

Technical data

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



1 Mounting thread
2 Centring hole (centring sleeve included in scope of delivery)
3 Through-holes for mounting slide
4 Sensor slot for proximity sensor
5 Through-hole length for mounting screws

Size	B1	B2 ±0.3	B3 ±0.3	B4	B5	B6	B7 H7	B8 H7	B9 H7	B10	D1	D2 ∅	D3 ∅ H7	D4
10	50	30.8	20.8	4	14	40	5	5	5	20	M5	8	7	M4
16	66	45.7	24.3	4.2	25	55	7	9	5	20	M6	10	9	M4

Size	D5	D6 ∅ H7	D7	D8 ∅ H7	D9	H1	H4	H5	H6	H7	H8	H9	H10	H12
10	M4	5	M3	5	M4	30	18.4	20	2	4	21	5	15	1.5
16	M5	7	M4	5	M5	40	25.8	20	2	4.5	30	13	20	1.5

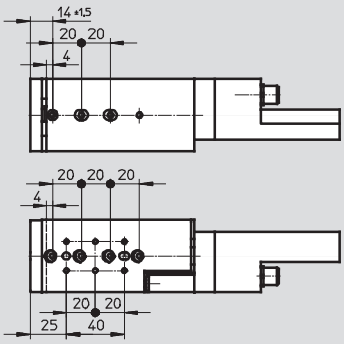
Size	Stroke	L1 ±1.5		L2	L3 ±1		L4 ±1	
	[mm]	1)	2)		1)	2)	1)	2)
10	50	212	213	102	112	113	10	11.1
	80	262	263	152	162	163	9.6	10.7
16	50	262.5	263.5	100	112.5	113.5	12.5	13.5
	80	307.5	308.5	146	158	159	11.7	12.7
	100	349	350	187	199.5	200.5	12.2	13.2
	150	430.5	431.5	270	281	282	11	12

Size	L5 ±0.5	L6	L7	L8	L9	L10	T1	T2	T3	T4	T5	T6
10	45.8	12.5	100	2	8	2	12	1.5	1.2	7	8	1.2
16	56.3	12.5	149.7	2	10	1	16	2.1	1.5	7	7	1.2

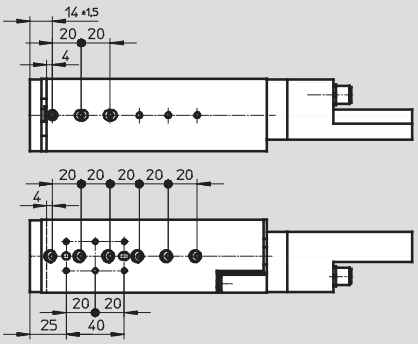
1) End position at fixed stop
2) End position at rubber buffer

Hole pattern for mounting thread and centring holes

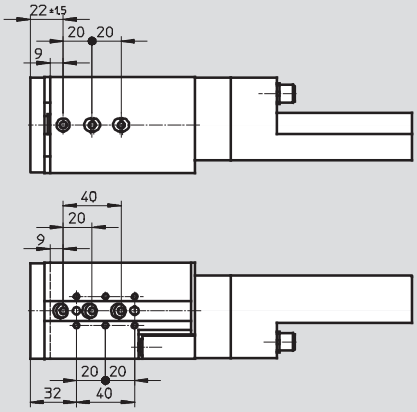
SLTE-10-50



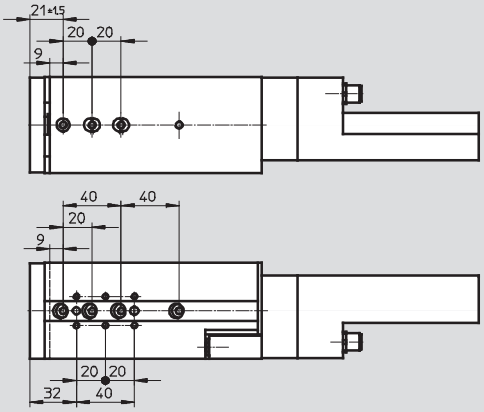
SLTE-10-80



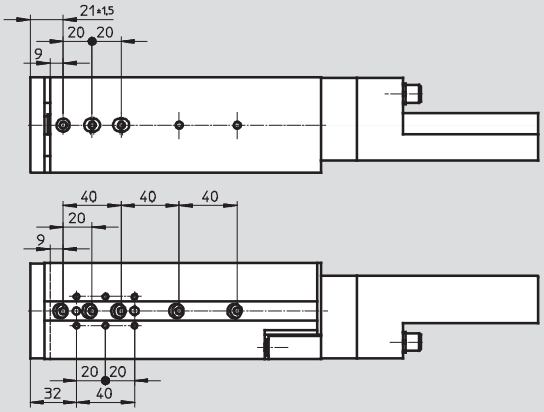
SLTE-16-50



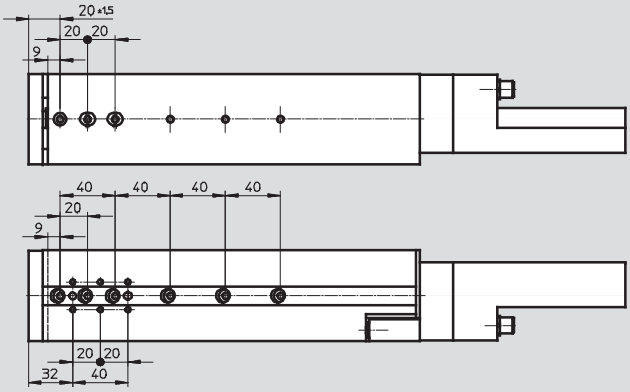
SLTE-16-80



SLTE-16-100



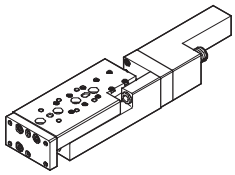
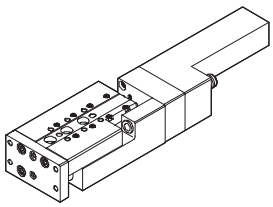
SLTE-16-150



Mini slides SLTE, electric

Technical data

FESTO

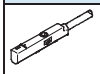
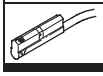
Ordering data			
Size	Brief description	Part No.	Type
10			
	Mini slide	**537 447**	**SLTE-10-50-LS-G04**
		537 449	**SLTE-10-80-LS-G04**
16			
	Mini slide	**537 459**	**SLTE-16-50-LS-G04**
		537 461	**SLTE-16-80-LS-G04**
		537 463	**SLTE-16-100-LS-G04**
		537 465	**SLTE-16-150-LS-G04**

Ordering data – Centring sleeves[1] — Technical data ➔ Internet: zbh

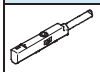
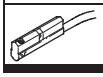
Size		10 Part No.	10 Type	16 Part No.	16 Type
	Housing	**186 717**	**ZBH-7**	**150 927**	**ZBH-9**
	Slide	**189 652**	**ZBH-5**	**189 652**	**ZBH-5**
	Yoke	**189 652**	**ZBH-5**	**186 717**	**ZBH-7**

1) Scope of delivery: 10 per pack

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

	Type of mounting	Switch output	Electrical connection, connection direction	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot from above	PNP	Cable, 3-wire, in-line	2.5	**551 373**	**SMT-10M-PS-24V-E-2,5-L-OE**
			Plug M8x1, 3-pin, in-line	0.3	**551 375**	**SMT-10M-PS-24V-E-0,3-L-M8D**
			Plug M8x1, 3-pin, lateral	0.3	**551 376**	**SMT-10M-PS-24V-E-0,3-Q-M8D**
	Insertable in the slot lengthwise	PNP	Plug M8x1, 3-pin, in-line	0.3	**173 220**	**SMT-10-PS-SL-LED-24**
			Cable, 3-wire, in-line	2.5	**173 218**	**SMT-10-PS-KL-LED-24**

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

	Type of mounting	Switch output	Electrical connection, connection direction	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot from above	Contacting	Plug M8x1, 3-pin, in-line	0.3	**551 367**	**SME-10M-DS-24V-E-0,3-L-M8D**
			Cable, 3-wire, in-line	2.5	**551 365**	**SME-10M-DS-24V-E-2,5-L-OE**
			Cable, 2-wire, in-line	2.5	**551 369**	**SME-10M-ZS-24V-E-2,5-L-OE**
	Insertable in the slot lengthwise	Contacting	Plug M8x1, 3-pin, in-line	0.3	**173 212**	**SME-10-SL-LED-24**
			Cable, 3-wire, in-line	2.5	**173 210**	**SME-10-KL-LED-24**

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	**541 333**	**NEBU-M8G3-K-2.5-LE3**
			5	**541 334**	**NEBU-M8G3-K-5-LE3**
	Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	**541 338**	**NEBU-M8W3-K-2.5-LE3**
			5	**541 341**	**NEBU-M8W3-K-5-LE3**

Positioning axes DMES

FESTO

Positioning axes DMES

Key features

At a glance

General

DMES positioning axes are mechanical linear drives that are specially designed for movements involving high forces.
The mechanical interfaces are compatible with the spindle axis DGE-SP.

Properties

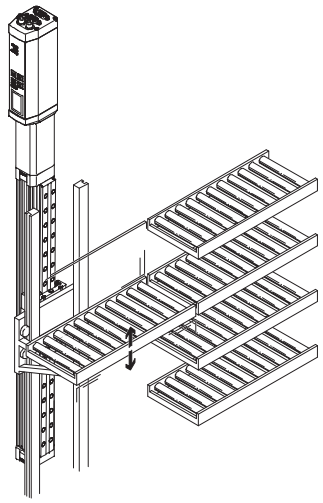
- High mechanical torques
- High feed forces up to 3,000 N
- Self-retarding lead-screw spindle
- Compact dimensions
- Cost optimised
- Alternatively:
  - without guide
  - with plain-bearing guide GF
  - with recirculating ball bearing guide KF

Range of applications

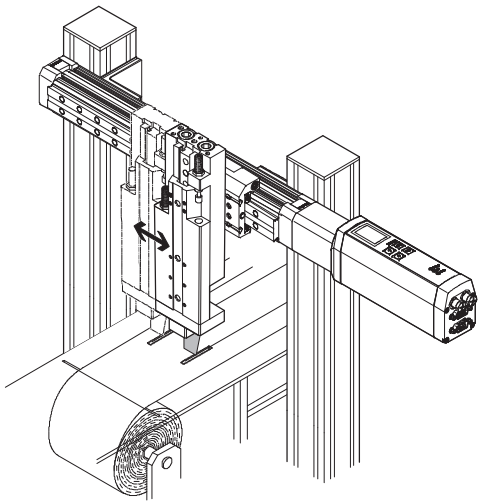
- For format adjustment:
  - in printing, paper and foil wrapping machines
  - in packaging machines
  - in feed technology

Application examples

Adjusting sorting conveyors

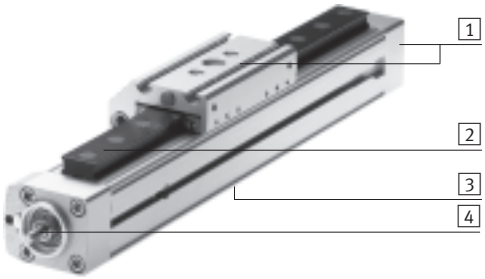


Programming formats for paper or foil cutting machines



The technology in detail

Positioning axis ➔ 4



1 Mechanical interfaces are identical to spindle axes DGE-...-SP
2 Choice of two guide variants:
- GF: Plain-bearing guide
- KF: Recirculating ball bearing guide

3 Slot for proximity sensor
4 Lead-screw spindle, for use with high forces

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

Motor ➔ 42

Motor unit
MTR-DCI

Intelligent servo motor
EMMS-ST

Servo motor
EMMS-AS

A range of specially adapted complete solutions is available for the positioning axes DMES and the motors.
Two motor interfaces are available:
- Axial motor interface
- Parallel motor interface

Positioning axes DMES

Key features

Wide choice of variants

Basic design DMES, without guide

- For connection to an existing guide
- For small loads

Plain-bearing guide DMES-GF

- With standard slide (GK) or extended slide (GV)
- For medium loads
- For medium guide precision

Recirculating ball bearing guide DMES-KF

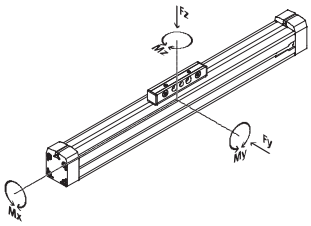
- With standard slide (GK) or extended slide (GV)
- For higher loads
- For high guide precision

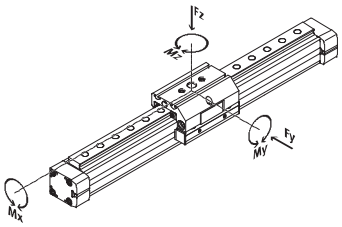
Protected version DMES-GA

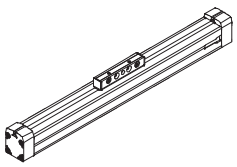
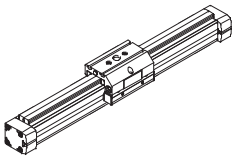
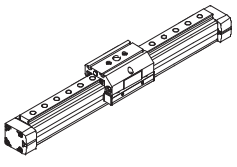
- With standard slide (GK)
- With plain or recirculating ball bearing guide as an option
- Guide and slide are fitted with a cover to protect against the ingress of particles from above and from the side

Guide characteristics

The specifications shown in the table are maximum values.
The precise values for each of the variants can be found in the relevant technical data in the catalogue.

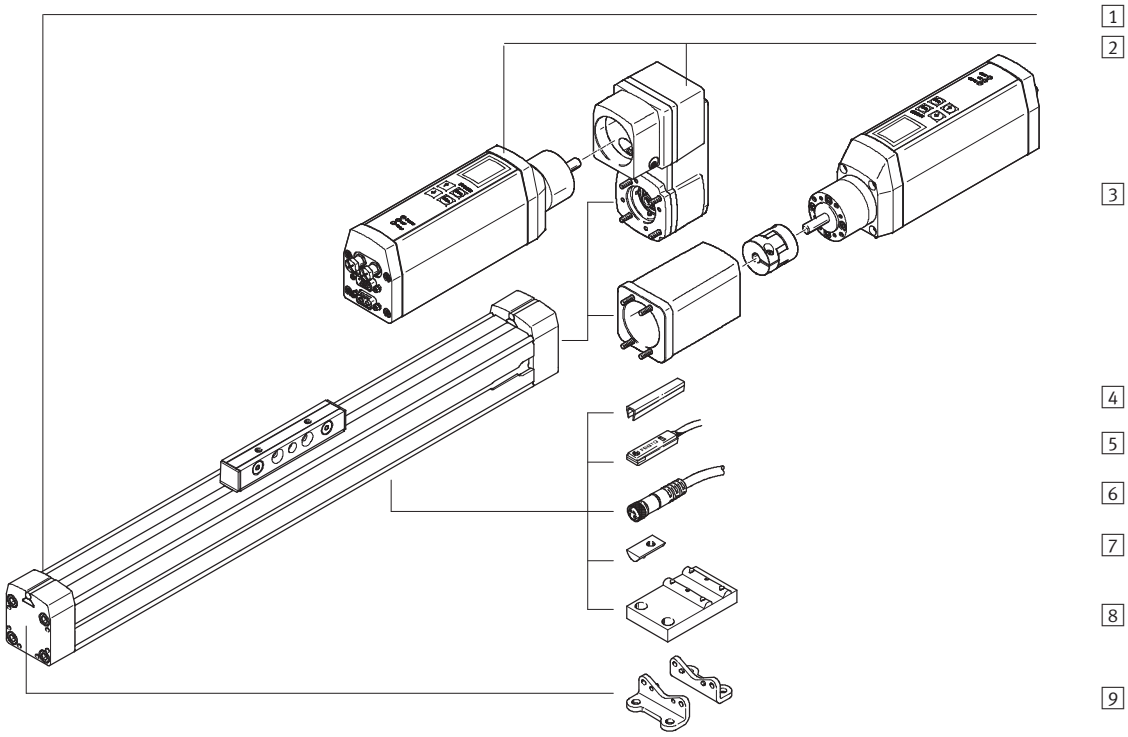




	Size	Working stroke [mm]	Speed [m/s]	Repetition accuracy [mm]	Feed force [N]	Forces and torques Fy [N]	Fz [N]	Mx [Nm]	My [Nm]	Mz [Nm]	➔ Page/ Internet
Basic design DMES											
	18	50 … 400	0.05	±0.05	240	36	80	0.4	2	0.7	6
	25	50 … 700	0.05	±0.05	500	80	100	1.3	4	1.6	
	40	50 … 1,200	0.05	±0.05	1,000	92	390	2.2	20	4.6	
	63	50 … 1,800	0.05	±0.07	3,000	300	900	12	80	22	
Plain-bearing guide DMES-GF											
	18	50 … 400	0.05	±0.05	240	930	930	7	45	45	20
	25	50 … 700	0.05	±0.05	500	1,650	1,650	23	95	95	
	40	50 … 1,200	0.05	±0.05	1,000	3,990	3,990	89	360	360	
	63	50 … 1,800	0.05	±0.07	3,000	7,250	7,250	290	980	980	
Recirculating ball bearing guide DMES-KF											
	18	50 … 400	0.05	±0.05	240	930	930	7	45	45	20
	25	50 … 700	0.05	±0.05	500	3,080	3,080	45	170	170	
	40	50 … 1,200	0.05	±0.05	1,000	7,300	7,300	170	660	660	
	63	50 … 1,800	0.05	±0.07	3,000	13,900	14,050	580	1,820	1,820	

Positioning axes DMES, without guide

Peripherals overview



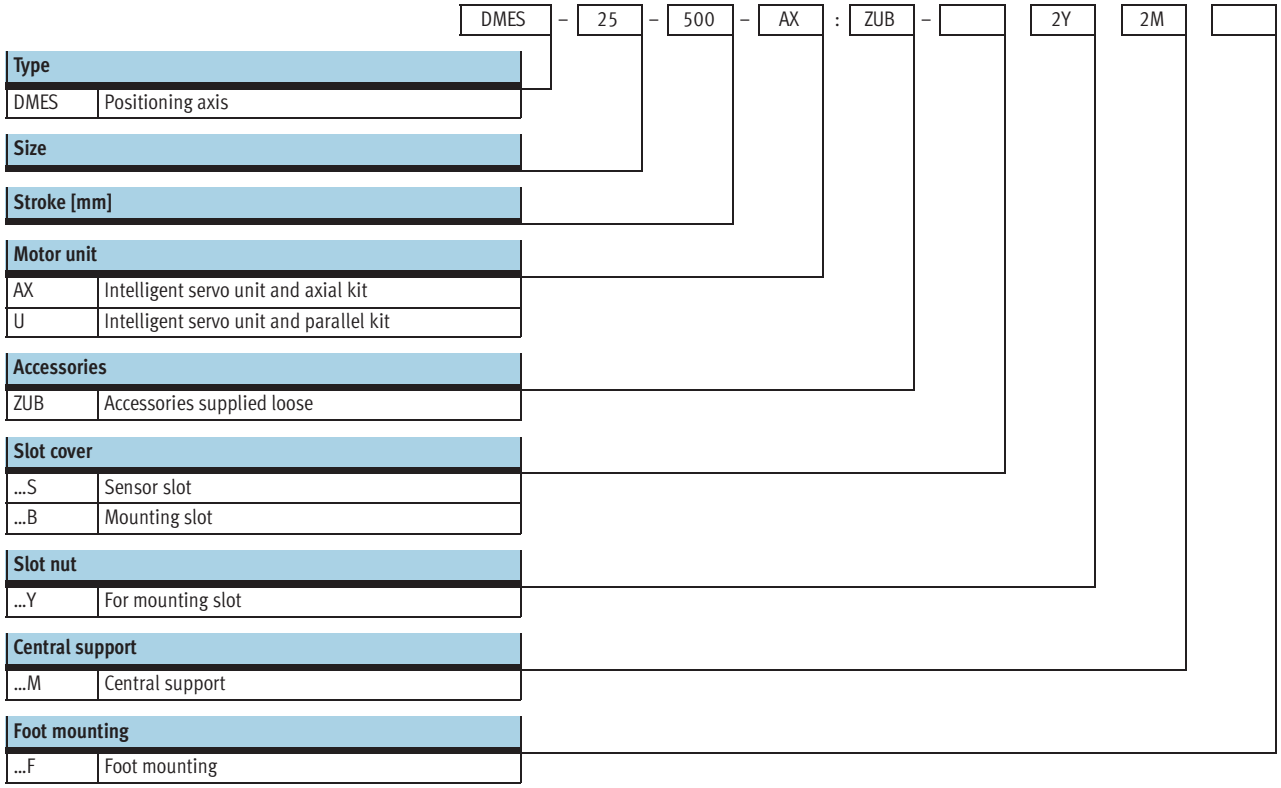
Variants and accessories			
Type/Order code		**Brief description**	**➔ Page/Internet**
1	Positioning axis DMES	Electromechanical axis without guide	6
2	Intelligent servo unit and parallel kit U	Complete package for parallel motor attachment, comprising parallel kit and intelligent motor unit MTR-DCI	14
3	Intelligent servo unit and axial kit AX	Complete package for axial motor attachment, comprising axial kit and intelligent motor unit MTR-DCI	14
4	Slot cover B/S	For protecting against ingress of dirt	52
5	Proximity sensor SMT-8	For providing a proximity signal or safety sensing	51
6	Connecting cable KM8	For proximity sensor	51
7	Slot nut for mounting slot Y	For mounting attachments	52
8	Central support M	For mounting the axis	49
9	Foot mounting F	For mounting the axis (can only be attached to end cap, must be combined with central support)	49

- Note

Servo, stepper motors and the corresponding mounting kits must be ordered separately ➔ 42

Positioning axes DMES, without guide

Type code

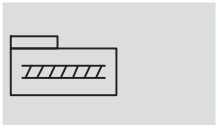


Positioning axes DMES, without guide

Technical data

FESTO

Function



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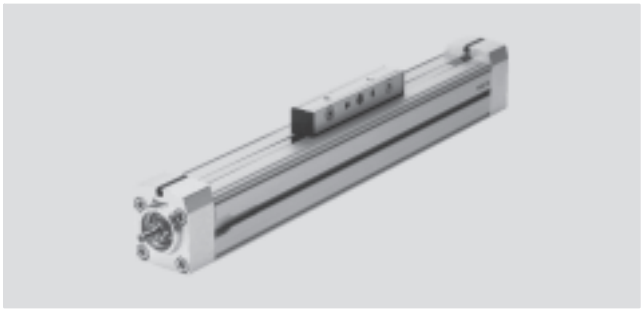


- Size
  18 ... 63
- Stroke length
  50 ... 1,800 mm

General technical data					
Size		18	25	40	63
Design		Electromechanical linear axis with lead-screw spindle			
Guide		None			
Assembly position		Any			
Working stroke	[mm]	50 ... 400	50 ... 700	50 ... 1,200	50 ... 1,800
Max. feed force F_x	[N]	240	500	1,000	3,000
Max. driving torque	[Nm]	0.3	0.9	3	14
Max. no-load driving torque[1]	[Nm]	0.07	0.2	0.45	1.1
Max. radial force[2]	[N]	40	75	250	800
Max. speed	[m/s]	0.05			
Max. acceleration	[m/s^2]	2.5			
Repetition accuracy	[mm]	±0.05			±0.07
Positioning rigidity	[N/mm]	1,700	2,300	4,200	5,600
Duty cycle	[%]	100			
Reversing backlash[3]	[mm]	< 0.1			

1) Measured at a speed of 200 rpm.
2) On drive shaft
3) In new condition

Operating and environmental conditions		
Ambient temperature[1]	[°C]	0 ... +50
Protection class		IP40

1) Note operating range of proximity sensors

Weights [kg]				
Size	18	25	40	63
Basic weight with 0 mm stroke[1]	0.49	0.98	2.9	10.05
Additional weight per 100 mm stroke	0.2	0.36	0.74	1.97
Moving load	0.06	0.15	0.47	1.51

1) Without coupling housing

Positioning axes DMES, without guide

Technical data

Mass moment of inertia					
Size		18	25	40	63
J_0	[kg cm^2]	0.0028	0.0147	0.1824	1.7747
j_H per metre stroke	[kg cm^2/m]	0.0210	0.0980	0.8400	5.5600
j_L per kg working load	[kg cm^2/Kg]	0.0006	0.0023	0.0041	0.0091

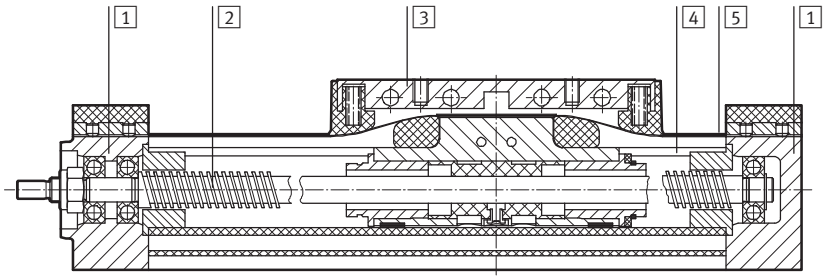
The mass moment of inertia J_A of the entire axis is calculated as follows:

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

Spindle					
Size		18	25	40	63
Diameter	[mm]	8	12	20	32
Pitch	[mm/rev.]	1.5	2.5	4	6

Materials

Sectional view



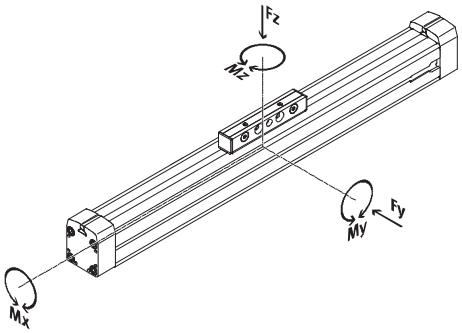
Positioning axis		
1	Cover	Wrought aluminium alloy, anodised
2	Spindle	Steel
3	Piston, driver	Wrought aluminium alloy, anodised
4	Profile	Wrought aluminium alloy, anodised
5	Cover strip	High-alloy stainless steel

Positioning axes DMES, without guide

Technical data

Characteristic load values

The indicated forces refer to the centre line of the internal diameter of the profile.
They must not be exceeded during dynamic operation. Special attention must be paid to the cushioning phase.



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

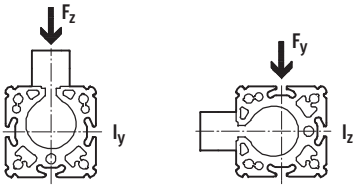
$$\frac{|Fy|}{Fy_{max.}} + \frac{|Fz|}{Fz_{max.}} + \frac{|Mx|}{Mx_{max.}} + \frac{|My|}{My_{max.}} + \frac{|Mz|}{Mz_{max.}} \leq 1$$

- Note

Positioning axes DMES without guide are not designed to absorb lateral forces or torques on the slide.

Permissible forces and torques					
Size		18	25	40	63
$Fy_{max.}$	[N]	36	80	92	300
$Fz_{max.}$	[N]	80	100	390	900
$Mx_{max.}$	[Nm]	0.4	1.3	2.2	12
Mymax.	[Nm]	2	4	20	80
$Mz_{max.}$	[Nm]	0.7	1.6	4.6	22

2nd moment of area



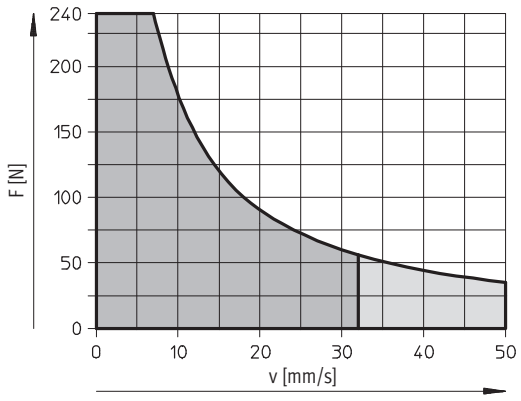
Size		18	25	40	63
Iy	[cm^4]	6.90	20.92	76.24	587.74
Iz	[cm^4]	6.83	21.20	71.01	464.30

- Note

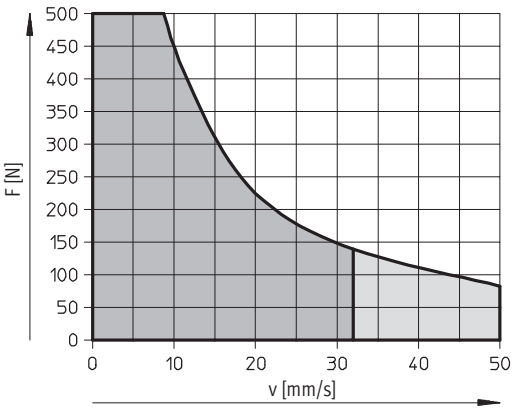
Sizing software
PositioningDrives
➔www.festo.com

Maximum permissible feed force F as a function of the feed speed v

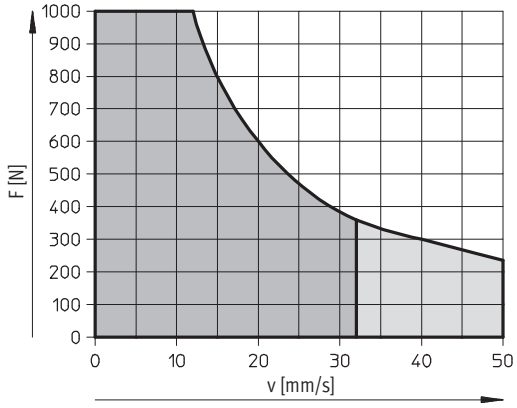
Size 18



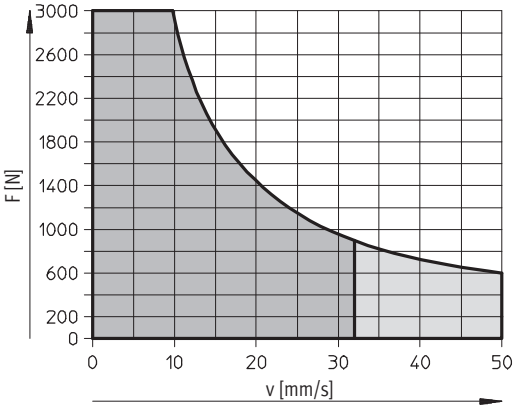
Size 25



Size 40



Size 63

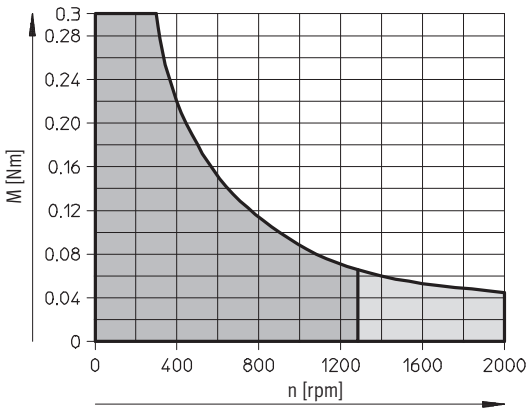


Recommended operating range

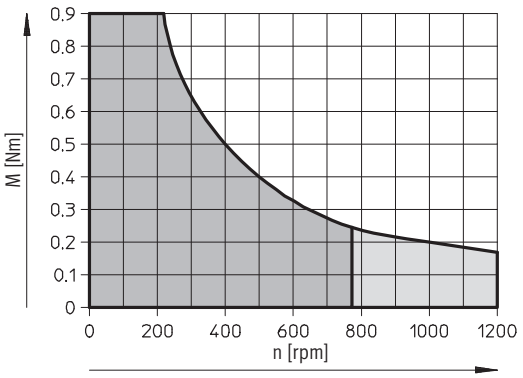
Permissible operating range (duty cycle < 50% recommended)

Maximum permissible driving torque M as a function of n (rpm)

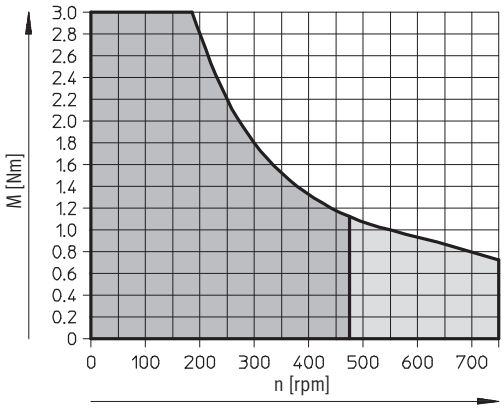
Size 18



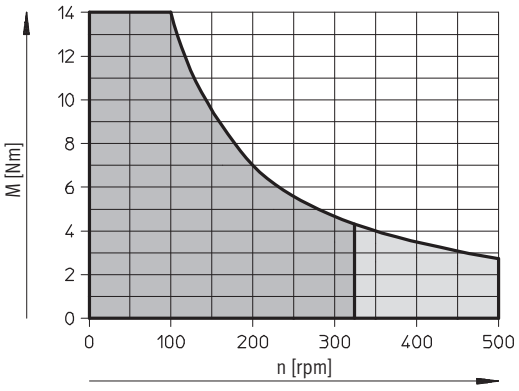
Size 25



Size 40



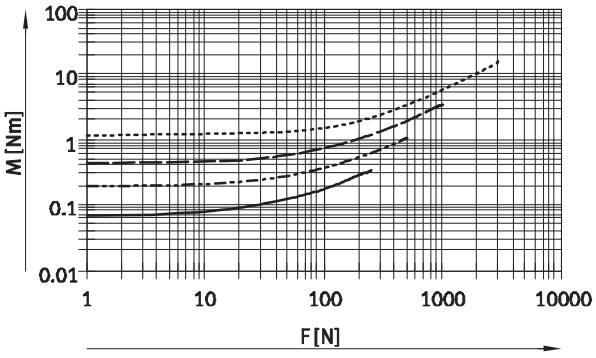
Size 63



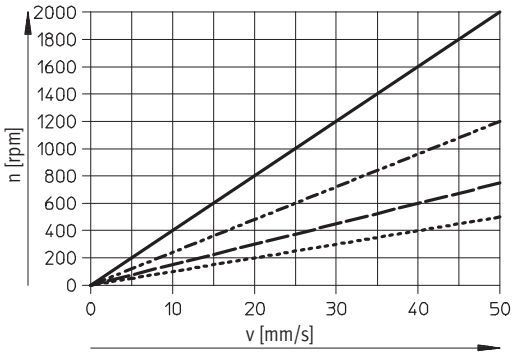
Recommended operating range

Permissible operating range (duty cycle < 50% recommended)

Driving torque M as a function of the feed force F



Speed as a function of the feed speed v



DMES-18

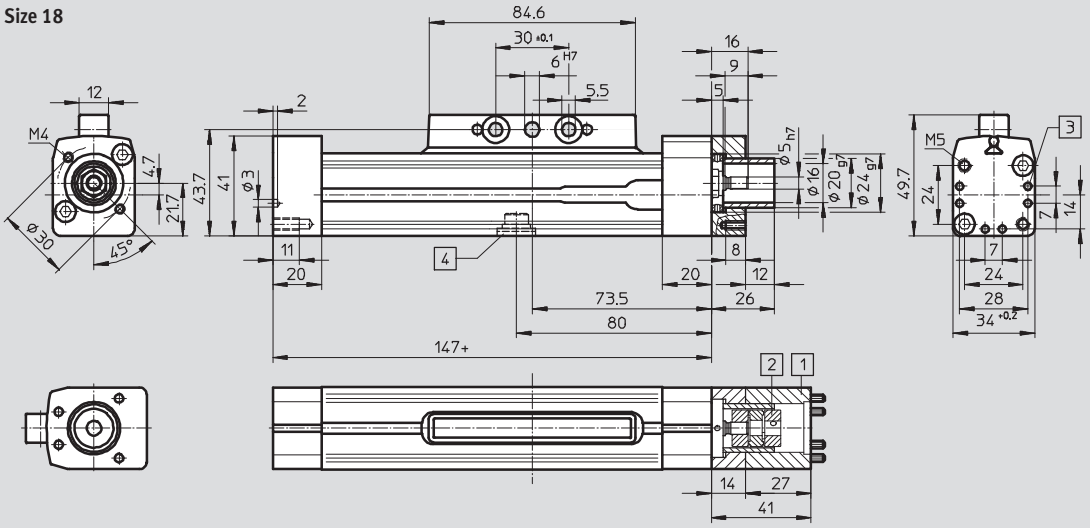
DMES-25

DMES-40

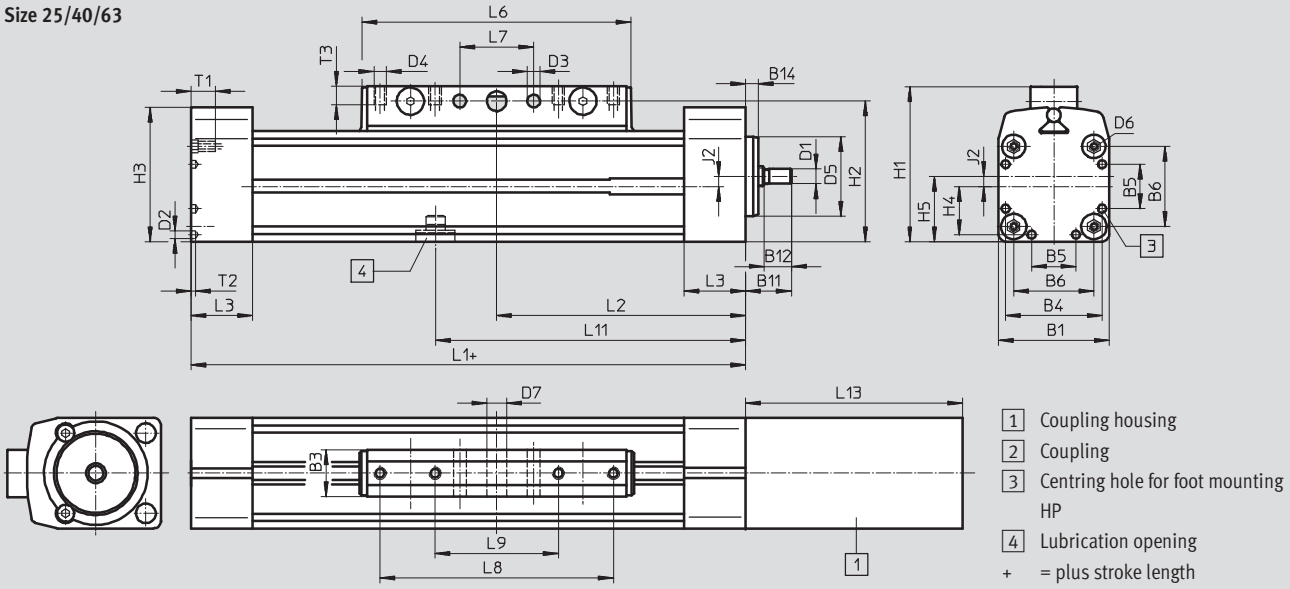
DMES-63

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

Size 18



Size 25/40/63



1 Coupling housing
2 Coupling
3 Centring hole for foot mounting HP
4 Lubrication opening
\+ = plus stroke length

Size	B1 +0.4	B3	B4	B5	B6	B11	B12	B14	D1 ∅ h7	D2 ∅	D3 ∅	D4	D5 ∅ g7	D6	D7 ∅ H10	H1	H2	H3
25	45	19	39.1	18	32.5	18.5	11	4	6	3.3	5.2	M5	32	M4	8	63	57	54.5
40	64	21	53	28	49	33.5	23	5	12	4.4	6.5	M6	48	M5	10	86	78	76.5
63	106	24	89	44	83	47.5	25	7	20	6.4	8.5	M8	72	M8	12	131	122	127.5

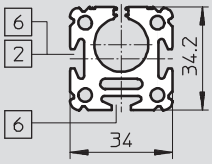
Size	H4	H5	J2	L1	L2	L3	L6	L7 ±0.1	L8 ±0.1	L9 ±0.1	L11	L13 1)	L13 2)	L13 3)	T1	T2	T3
25	19.6	26.5	4	175	87.5	25	108.8	30	–	50	105	88	101	–	13	2	7.5
40	26.5	37	5	250	126	31	170.8	70	130	40	151	121	135	–	13	6	10
63	44.5	61	8	328	164	36	233.8	110	190	70	196	150	150	150	21	6	12.5

1) When combined with motor unit MTR-DCI with gear reduction 7:1.
2) When combined with motor unit MTR-DCI with gear reduction 14:1.
3) When combined with motor unit MTR-DCI with gear reduction 22:1.

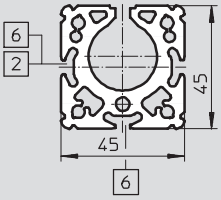
Dimensions Download CAD data ➔ **www.festo.com**

Profile

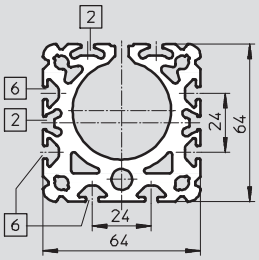
Size 18



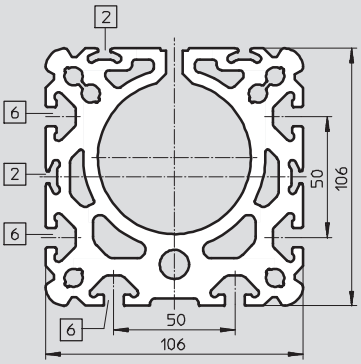
Size 25



Size 40



Size 63



2 Sensor slot for proximity sensor

6 Mounting slot for slot nut NST

Positioning axes DMES, without guide

Ordering data – Modular products

FESTO

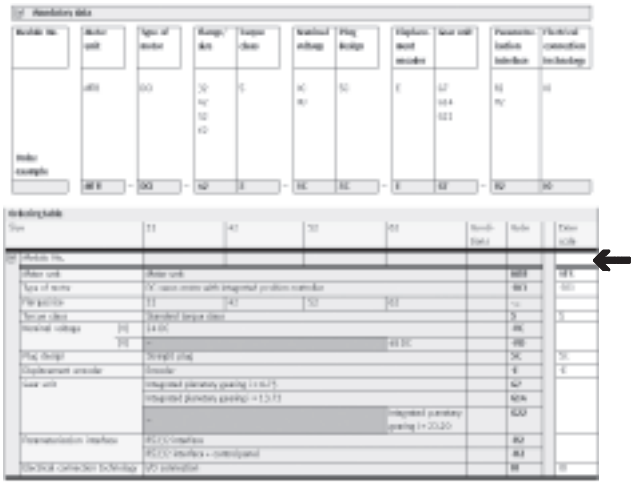
Order processing for positioning axis DMES in combination with intelligent motor unit MTR-DCI

1 Ordering positioning axis DMES — Ordering table ➔ 15

The drive unit and corresponding accessories are configured in the ordering table for the positioning axis DMES.
The code “AX” or “U” is used to specify whether an intelligent motor unit MTR-DCI and an axial or a parallel kit are required for the positioning axis.
The motor unit design must be defined separately.

3 Ordering intelligent motor unit MTR-DCI — Ordering table ➔ 9

The motor unit order code determined from table 2 must now be completed with the “gear unit” and “parameterisation interface” codes.
The module number of the intelligent motor unit must not be specified when ordering with order code “AX” or “U”. It is determined automatically.



2 Permissible combinations with intelligent motor unit MTR-DCI

Positioning axis	Motor unit
DMES-18-...	MTR-DCI-32S-VCSC-E...
DMES-25-...	MTR-DCI-42S-VCSC-E...
DMES-40-...	MTR-DCI-52S-VCSC-E...
DMES-63-...	MTR-DCI-62S-VDSC-E...

4 Order example

Part No.	Type
	Positioning axis DMES
533 700	DMES-25-700-AX:ZUB-2S2Y1M1F
	Intelligent motor unit MTR-DCI
–	MTR-DCI-42S-VCSC-EG7-R2IO

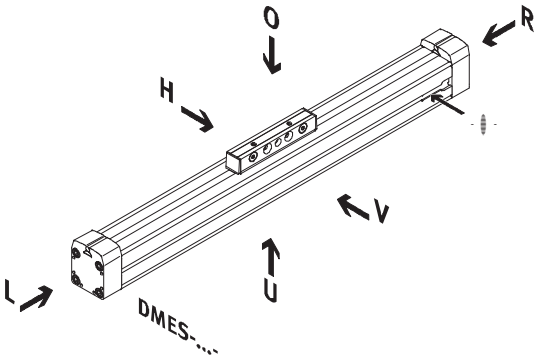
Note

Servo, stepper motors and the corresponding mounting kits must be ordered separately ➔ 42

Positioning axes DMES, without guide

Ordering data – Modular products

Order code
Mandatory data

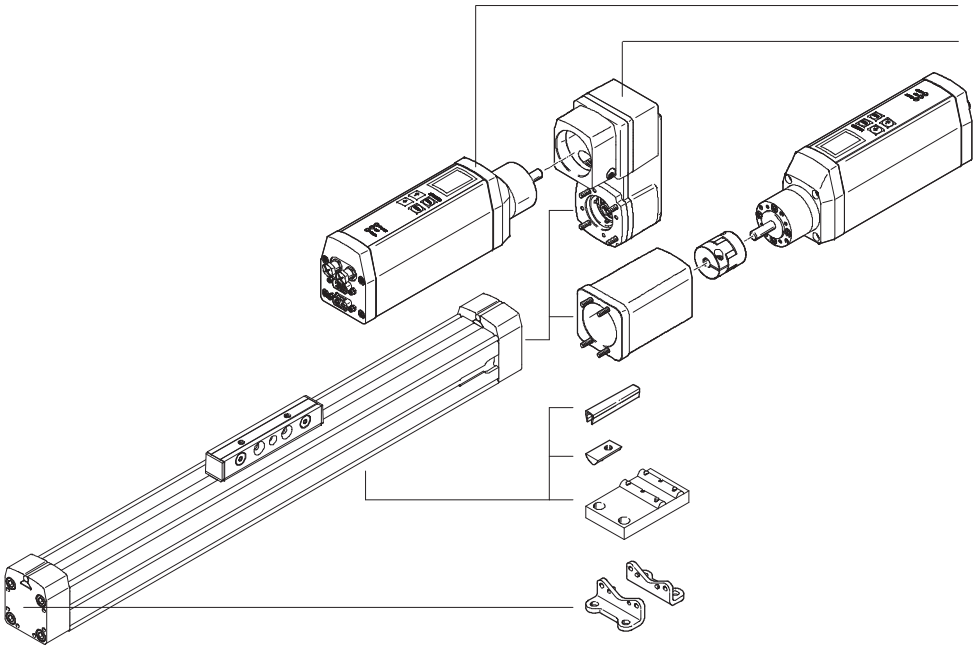


- Note

The insertion point for the proximity sensor is located on the right-hand side of the positioning axis.

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

Order code
Options



Positioning axes DMES, without guide

Ordering data – Modular products

FESTO

M Mandatory data					O Options		
Module No.	**Function**	**Size**	**Stroke**		**Motor unit**	**Acces-sories**	**Accessories supplied loose**
533 699 533 700 533 701 533 702	DMES	18 25 40 63	50 ... 1,800		AX U		...S, ...B, ...Y, ...M, ...F
Order example							
533 700	**DMES**	**– 25**	**–**	**700**	**–**	**: ZUB**	**– 2S2Y2M**
					MTR-DCI-...S-...SC-E...-...IO		

Ordering table

Size			18	25	40	63	Condi-tions	Code		Enter code
M	Module No.		**533 699**	**533 700**	**533 701**	**533 702**				
	Function		Positioning axis without guided slide					**DMES**		DMES
	Size		18	25	40	63		**-...**		
	Stroke	[mm]	50 ... 400	50 ... 700	50 ... 1,200	50 ... 1,800		**-...**		
O	Motor unit		Axial kit and motor unit (enclosed separately)				[1]	**-AX**		
			Parallel kit and motor unit (enclosed separately)			–	[1]	**U**		
	Accessories		Supplied separately					**:ZUB-**		:ZUB-
	Slot cover	Sensor slot	1 ... 10					**...S**		
		Mounting slot	–	–	1 ... 10			**...B**		
	Slot nut	Mounting slot	1 ... 10					**...Y**		
	Central support		1 ... 10					**...M**		
	Foot mounting		1 ... 10					**...F**		

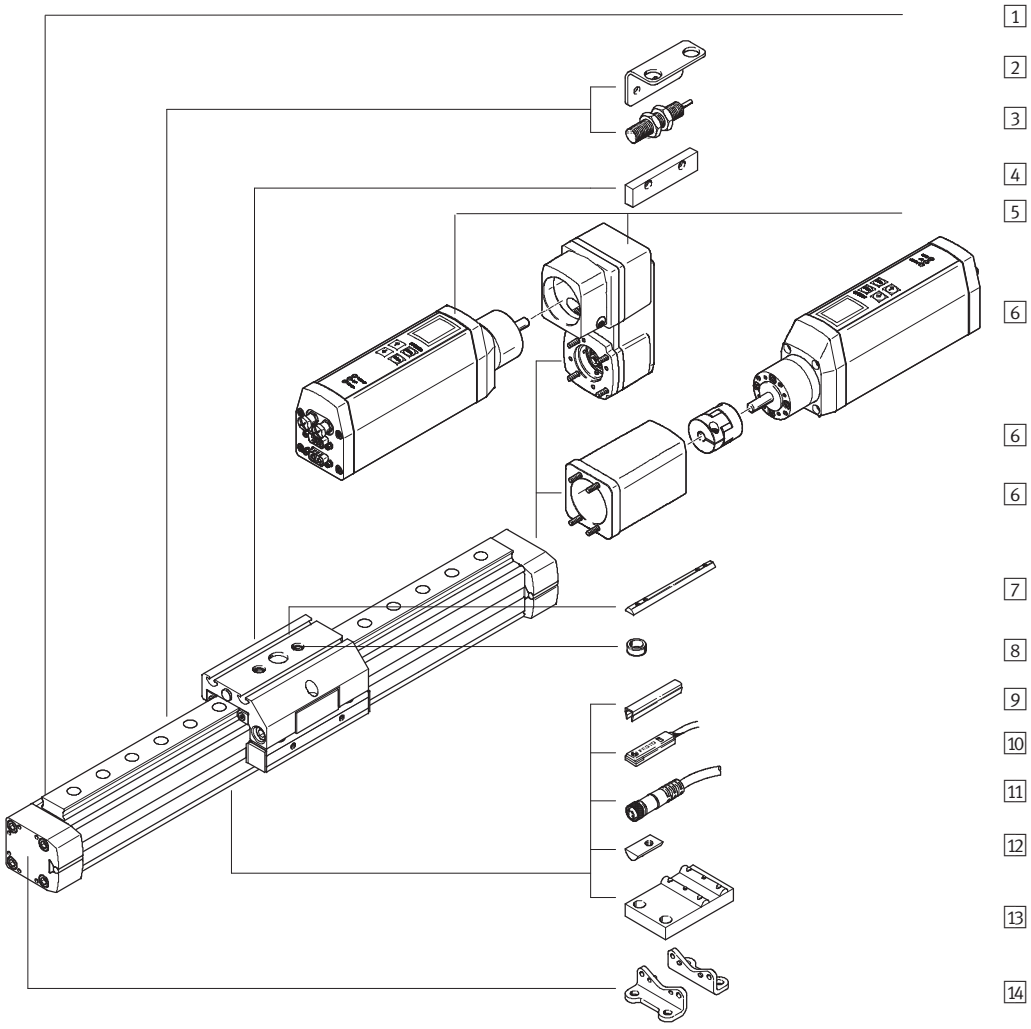
[1] **AX, U** Order processing for intelligent motor unit MTR-DCI ➔ 9.

Transfer order code

	DMES	**–**		**–**		**–**	**: ZUB**	**–**
					MTR-DCI-...S-...SC-E...-...IO			

Positioning axes DMES-GF/-KF, with guide

Peripherals overview



Positioning axes DMES-GF/-KF, with guide

Peripherals overview

Variants and accessories					
Type/Order code		**Brief description**	GK/GV	GA	**➔ Page/Internet**
1	Positioning axis DMES	Electromechanical axis with spindle and plain-bearing guide or recirculating ball bearing guide	■	■	20
2	Sensor retainer T	Adapter for mounting the inductive proximity sensors on the axis	■	–	50
3	Inductive proximity sensor SIEN	For providing a proximity signal or safety sensing	■	–	51
4	Switching lug L	For sensing the slide position with inductive proximity sensors	■	–	50
5	Motor unit and parallel kit U	Complete package for parallel motor attachment, comprising parallel kit and intelligent motor unit MTR-DCI	■	■	39
6	Motor unit and axial kit AX	Complete package for axial motor attachment, comprising axial kit and intelligent motor unit MTR-DCI	■	■	39
7	Slot nut for slide X	For mounting loads and attachments on the slide	■	■	52
8	Centring sleeves Z	For centring loads and attachments on the slide	■	■	52
9	Slot cover B/S	For protecting against ingress of dirt	■	■	52
10	Proximity sensor SMT-8	For providing a proximity signal or safety sensing	■	■	51
11	Connecting cable KM8	For proximity sensor	■	■	51
12	Slot nut for mounting slot Y	For mounting attachments	■	■	52
13	Central support M	For mounting the axis	■	■	49
14	Foot mounting F	For mounting the axis (can only be attached to end cap, must be combined with central support)	■	■	49

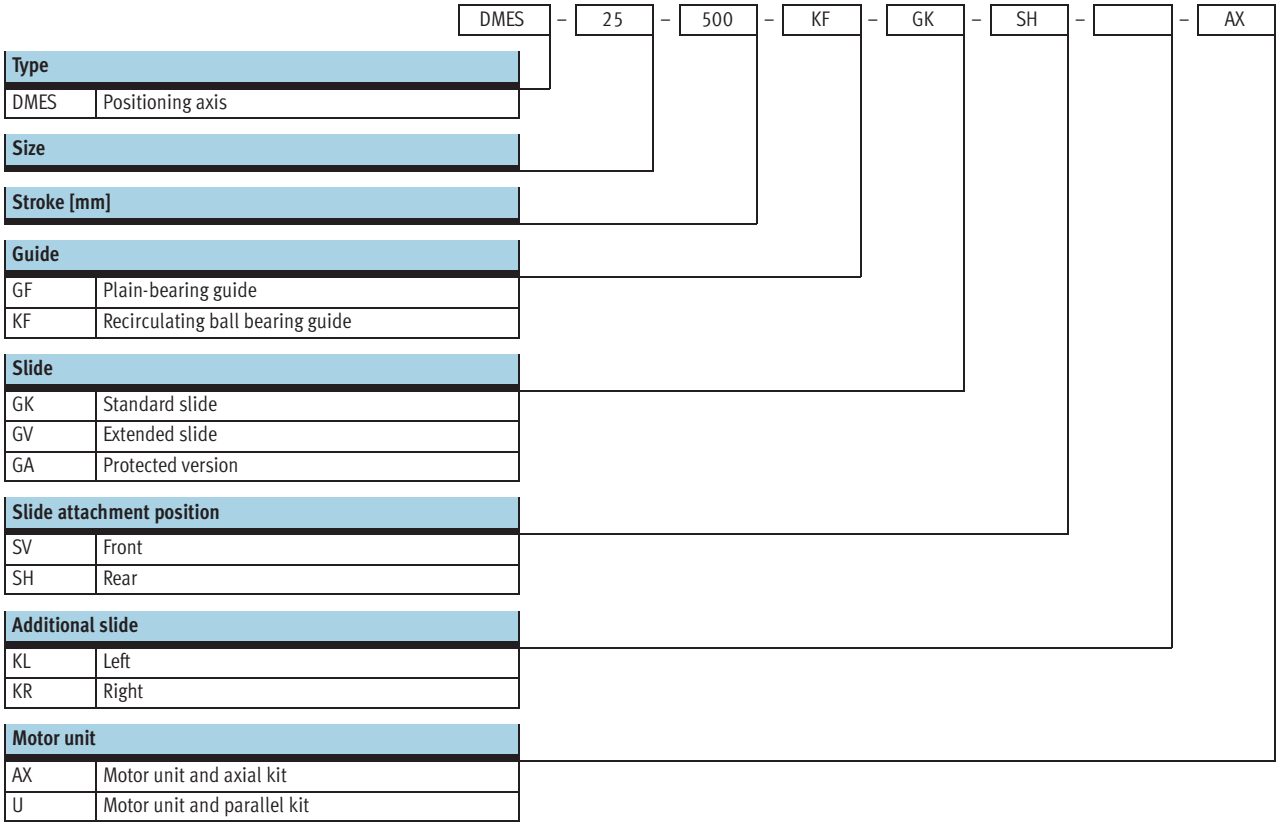
GK: Standard slide
GV: Extended slide
GA: Protected version

Note

Servo, stepper motors and the corresponding mounting kits must be ordered separately ➔ 42

Positioning axes DMES-GF/-KF, with guide

Type code



Type	
DMES	Positioning axis

Size	

Stroke [mm]	

Guide	
GF	Plain-bearing guide
KF	Recirculating ball bearing guide

Slide	
GK	Standard slide
GV	Extended slide
GA	Protected version

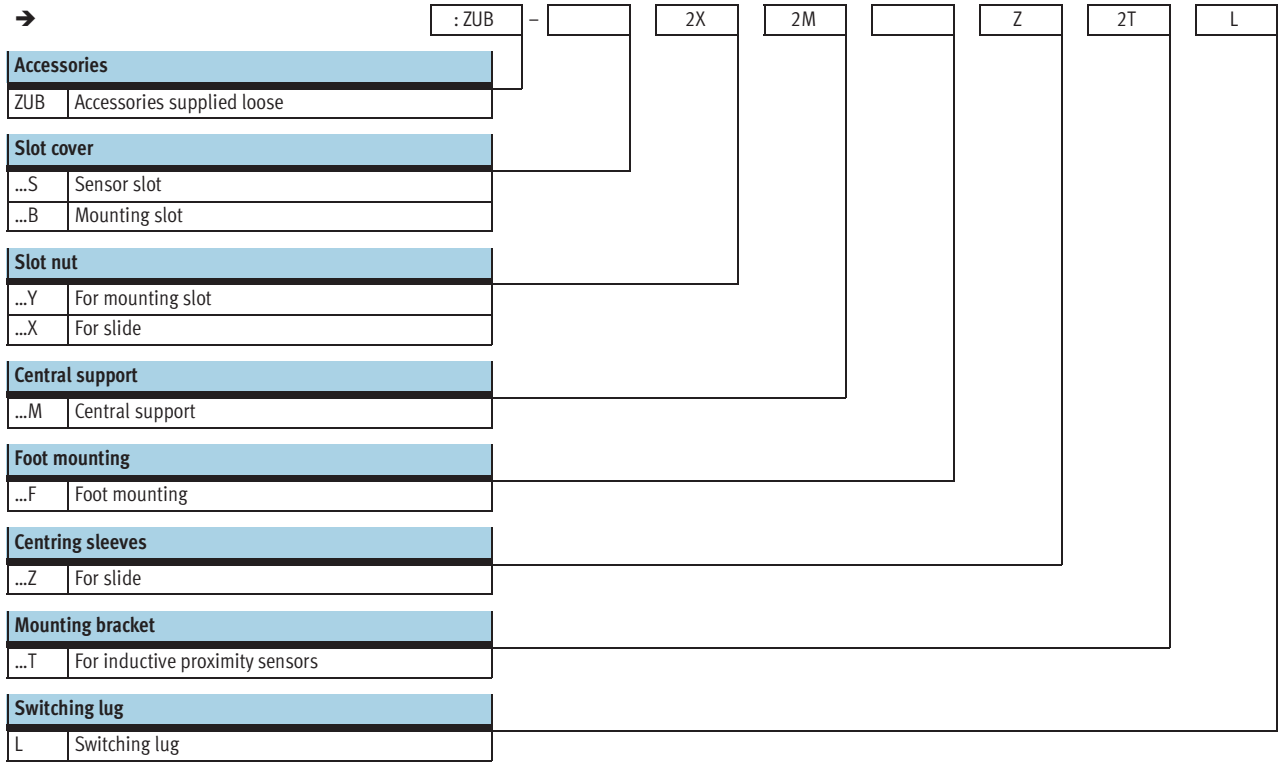
Slide attachment position	
SV	Front
SH	Rear

Additional slide	
KL	Left
KR	Right

Motor unit	
AX	Motor unit and axial kit
U	Motor unit and parallel kit

Positioning axes DMES-GF/-KF, with guide

Type code

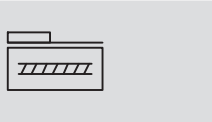


Positioning axes DMES-GF/-KF, with guide

Technical data

FESTO

Function



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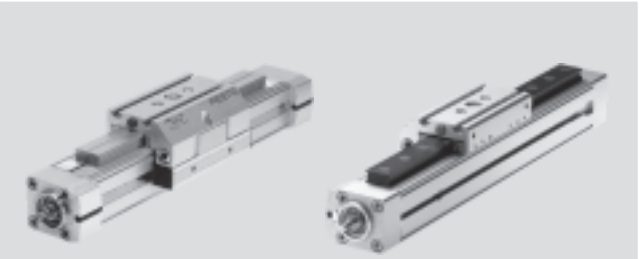
Size
18 ... 63

Stroke length
50 ... 1,800 mm



DMES-GF DMES-KF

General technical data					
Size		18	25	40	63
Design		Electromechanical linear axis with lead-screw spindle			
Guide		With plain-bearing guide or recirculating ball bearing guide			
Assembly position		Any			
Working stroke	[mm]	50 ... 400	50 ... 700	50 ... 1,200	50 ... 1,800
Max. feed force F_x	[N]	240	500	1,000	3,000
Max. driving torque	[Nm]	0.3	0.9	3	14
Max. no-load driving torque[1]	[Nm]	0.07	0.2	0.45	1.1
Max. radial force[2]	[N]	40	75	250	800
Max. speed	[m/s]	0.05			
Max. acceleration	[m/s^2]	2.5			
Repetition accuracy	[mm]	±0.05			±0.07
Positioning rigidity	[N/mm]	1,700	2,300	4,200	5,600
Duty cycle	[%]	100			
Reversing backlash[3]	[mm]	< 0.1			

1) Measured at a speed of 200 rpm.
2) On drive shaft
3) In new condition

Operating and environmental conditions		
Ambient temperature[1]	[°C]	0 ... +50
Protection class		IP40

1) Note operating range of proximity sensors

Weights [kg]									
Size		18		25		40		63	
Guide type		GF	KF	GF	KF	GF	KF	GF	KF
Basic weight with 0 mm stroke[1]	GK	0.77	0.93	1.52	1.70	4.11	5.06	13.31	16.48
	GV	1.16	1.37	2.34	2.61	6.53	8.06	21.75	27.14
	GA	1.49	1.65	2.73	2.90	7.15	8.14	–	–
Additional weight per 100 mm stroke	GK	0.238	0.294	0.466	0.547	0.841	1.170	2.079	2.958
	GV	0.238	0.294	0.466	0.547	0.841	1.170	2.079	2.958
	GA	0.313	0.369	0.556	0.638	0.965	1.294	–	–
Moving load	GK	0.29	0.38	0.55	0.66	1.49	1.83	4.48	5.29
	GV	0.48	0.56	0.88	0.99	2.38	2.72	7.06	7.88
	GA	0.71	0.81	1.19	1.30	2.90	3.24	–	–
Additional slide	KL/KR	–	0.29	–	0.440	–	1.21	–	3.55

1) Without coupling housing

Positioning axes DMES-GF/-KF, with guide

Technical data

Mass moment of inertia									
Size			18		25		40		63	
Guide type			GF	KF	GF	KF	GF	KF	GF	KF
J_0	GK	[kg cm^2]	0.0030	0.0030	0.0156	0.0158	0.1865	0.1879	1.8018	1.8093
	GV	[kg cm^2]	0.0048	0.0049	0.0263	0.0265	0.3327	0.3340	3.2184	3.2258
	GA	[kg cm^2]	0.0038	0.0039	0.0209	0.0212	0.2463	0.2476	–	–
j_H per metre stroke		[kg cm^2/m]	0.0210	0.0210	0.0980	0.0980	0.8400	0.8400	5.5600	5.5600
j_L per kg working load		[kg cm^2/Kg]	0.0006	0.0006	0.0023	0.0023	0.0041	0.0041	0.0091	0.0091
j_W for additional slide		[kg cm^2]	–	0.0002	–	0.0010	–	0.0049	–	0.0324

The mass moment of inertia J_A of the entire axis is calculated as follows:

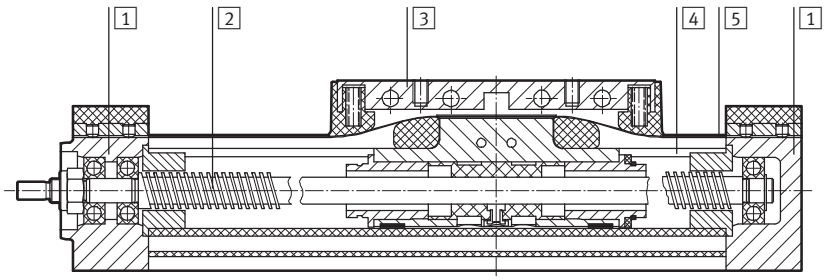
$J_A = J_0 + j_H \times \text{working stroke [m]} + j_L \times m_{\text{working load}}\ [\text{kg}] + i \times j_W$

i = Number of additional slides

Spindle					
Size		18	25	40	63
Diameter	[mm]	8	12	20	32
Pitch	[mm/rev.]	1.5	2.5	4	6

Materials

Sectional view



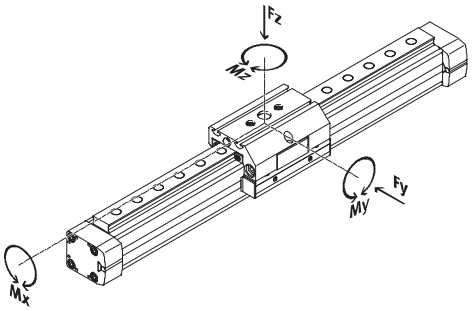
Positioning axis		
1	Cover	Wrought aluminium alloy, anodised
2	Spindle	Steel
3	Piston, driver	Wrought aluminium alloy, anodised
4	Profile	Wrought aluminium alloy, anodised
5	Cover strip	High-alloy stainless steel
–	Guide rail for GF	Anodised aluminium
	Guide rail for KF	Hardened steel

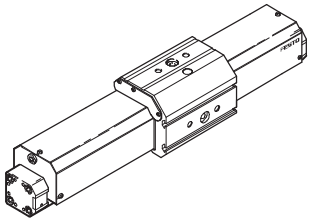
Positioning axes DMES-GF/-KF, with guide

Technical data

Characteristic load values for axis with standard slide GK or protected version GA

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.





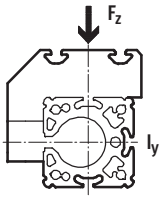
If the axis is subjected to more than two of the indicated forces and torques simultaneously, the following equation must be satisfied in addition to the indicated maximum loads:

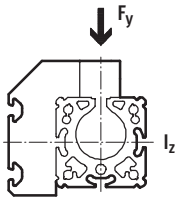
$$\frac{|Fy|}{Fy_{max.}} + \frac{|Fz|}{Fz_{max.}} + \frac{|Mx|}{Mx_{max.}} + \frac{|My|}{My_{max.}} + \frac{|Mz|}{Mz_{max.}} \leq 1$$

Permissible forces and torques

Size		18		25		40		63	
Guide type		GF	KF	GF	KF	GF	KF	GF	KF
$Fy_{max.}$	[N]	930	930	1,760	2,600	3,070	4,300	3,880	6,600
$Fz_{max.}$	[N]	930	930	1,760	2,600	4,300	4,300	6,600	6,600
$Mx_{max.}$	[Nm]	7	7	24	45	98	160	220	400
Mymax.	[Nm]	23	23	52	85	210	330	580	910
$Mz_{max.}$	[Nm]	23	23	52	85	210	330	580	910

2nd moment of area





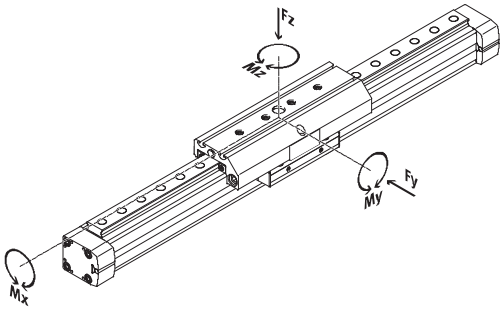
Size		18		25		40		63	
Guide type		GF	KF	GF	KF	GF	KF	GF	KF
Iy	[cm^4]	11.19	14.37	39.10	47.60	125.38	176.24	709.04	992.06
Iz	[cm^4]	7.11	7.16	25.85	23.34	84.76	95.43	614.44	693.35

Note

Sizing software
PositioningDrives
➔www.festo.com

Characteristic load values for axis with extended slide GV

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.



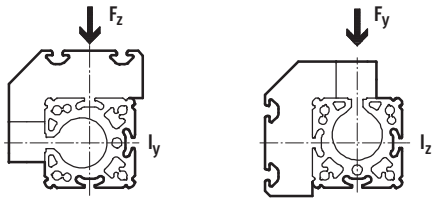
If the axis is subjected to more than two of the indicated forces and torques simultaneously, the following equation must be satisfied in addition to the indicated maximum loads:

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

Permissible forces and torques

Size		18		25		40		63	
Guide type		GF	KF	GF	KF	GF	KF	GF	KF
$Fy_{max.}$	[N]	930	930	1,650	3,080	3,990	7,300	7,250	13,900
$Fz_{max.}$	[N]	930	930	1,650	3,080	3,990	7,300	7,250	14,050
$Mx_{max.}$	[Nm]	7	7	23	45	89	170	290	580
$My_{max.}$	[Nm]	45	45	95	170	360	660	980	1,820
$Mz_{max.}$	[Nm]	45	45	95	170	360	660	980	1,820

2nd moment of area

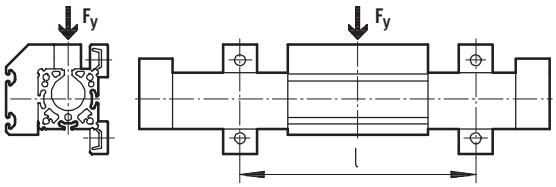


Size		18		25		40		63	
Guide type		GF	KF	GF	KF	GF	KF	GF	KF
Iy	[cm^4]	11.19	14.37	39.10	47.60	125.38	176.24	709.04	992.06
Iz	[cm^4]	7.11	7.16	25.85	23.34	84.76	95.43	614.44	693.35

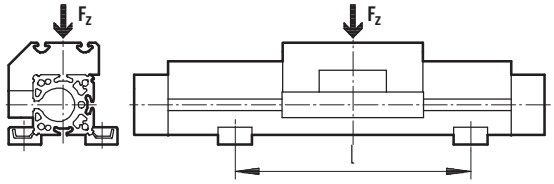
Deflection of the positioning axis as a function of the working load F and the support span l

The following diagrams can be used to determine the deflection of a positioning axis supported externally at both ends (see drawing below). A differentiation is made between two load directions. The axis may also need to be supported with central supports MUP in order to limit deflection in the case of large strokes.

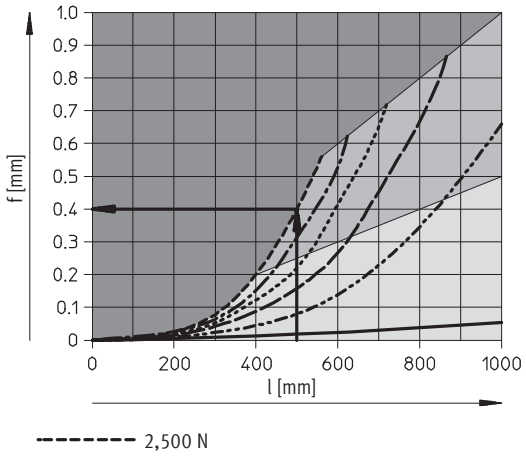
Deflection along the y-axis



Deflection along the z-axis



Example showing how to determine deflection



Given:
Positioning axis
DMES-25-700-KF-...

Working stroke = 700 mm
Total length of the positioning axis, dimensional drawing ➔31
700 mm+175 mm = 875 mm
Working load F = 2,500 N
Support span l = 500 mm

To be found:
Deflection f

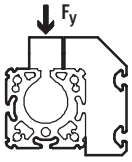
Procedure:
A support span of 500 mm (see X-axis) and a working load of 2,500 N (see characteristic curve) produces a deflection of 0.4 mm.

Note:
The slide may not be moved under this load as the operating point is in the static area of the diagram.
In order to be able to operate the slide dynamically, the support span must be reduced to 400 mm.

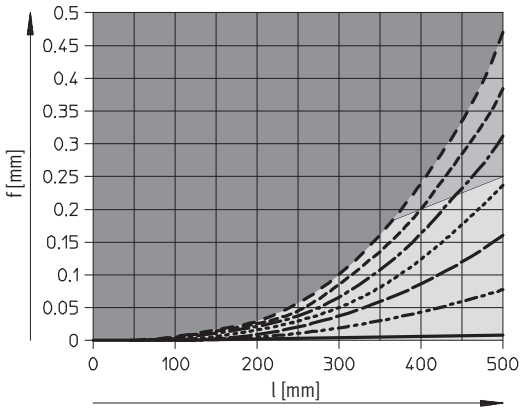
Impermissible range:	The positioning axis may not be used.
Static range:	The slide must not be moved under load.
Static and dynamic range:	The slide must be moved under load.

Deflection of the positioning axis as a function of the working load F and the working stroke l

Along the y-axis

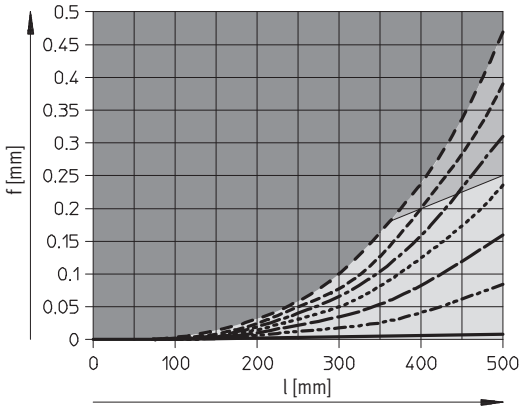


DMES-18-GF, with plain-bearing guide



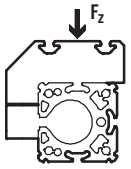
0 N
150 N
300 N
450 N
600 N
750 N
900 N

DMES-18-KF, with recirculating ball bearing guide

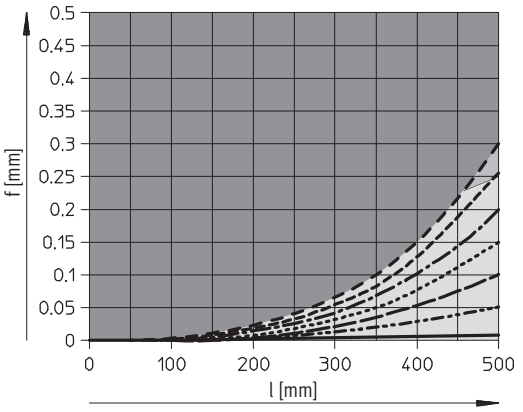


0 N
150 N
300 N
450 N
600 N
750 N
900 N

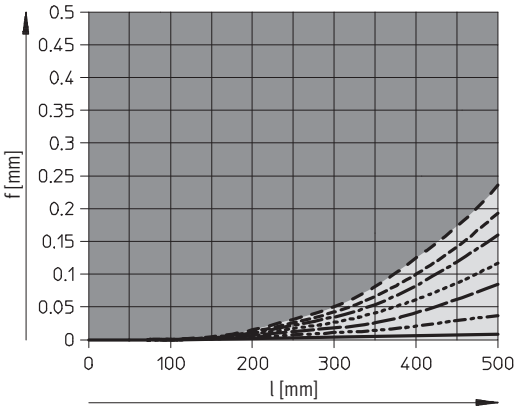
Along the z-axis



DMES-18-GF, with plain-bearing guide



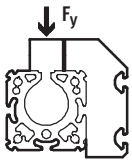
DMES-18-KF, with recirculating ball bearing guide



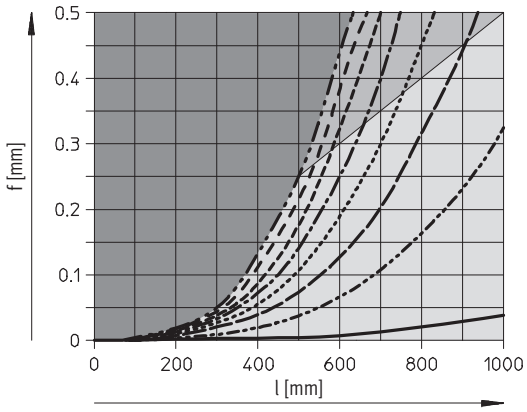
Impermissible range
Static range
Static and dynamic range

Deflection of the positioning axis as a function of the working load F and the working stroke l

Along the y-axis

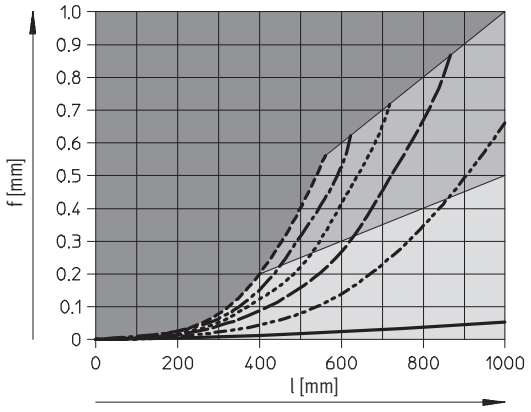


DMES-25-GF, with plain-bearing guide



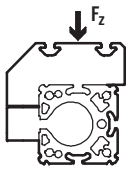
0 N
250 N
500 N
750 N
1,000 N
1,250 N
1,500 N
1,750 N

DMES-25-KF, with recirculating ball bearing guide

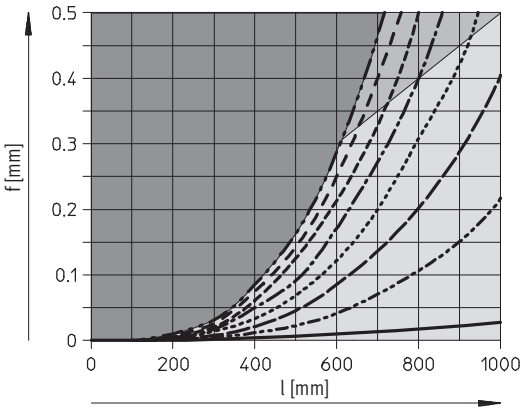


0 N
500 N
1,000 N
1,500 N
2,000 N
2,500 N

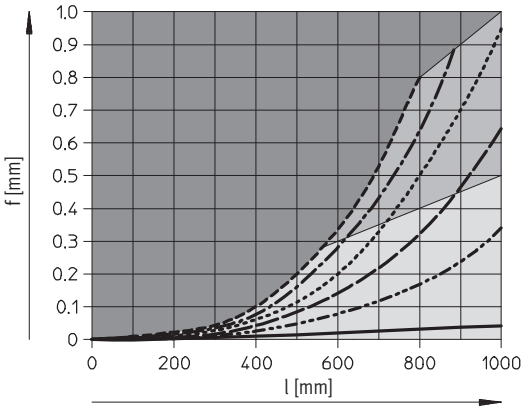
Along the z-axis



DMES-25-GF, with plain-bearing guide



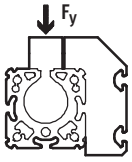
DMES-25-KF, with recirculating ball bearing guide



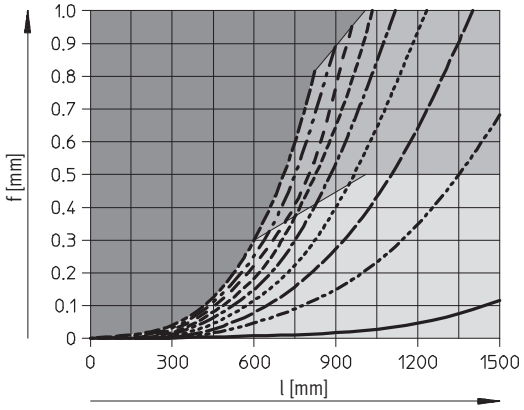
Impermissible range
Static range
Static and dynamic range

Deflection of the positioning axis as a function of the working load F and the working stroke l

Along the y-axis

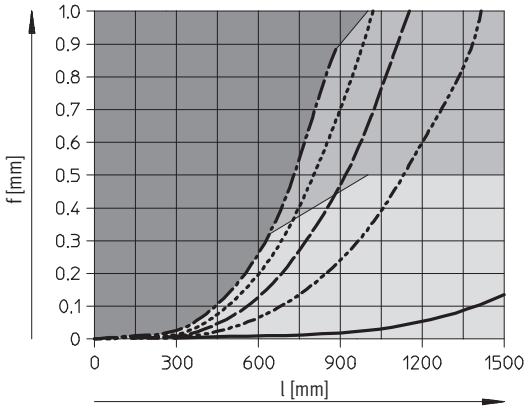


DMES-40-GF, with plain-bearing guide



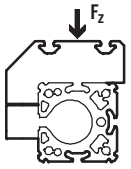
0 N
500 N
1,000 N
1,500 N
2,000 N
2,500 N
3,000 N
3,500 N
4,000 N

DMES-40-KF, with recirculating ball bearing guide

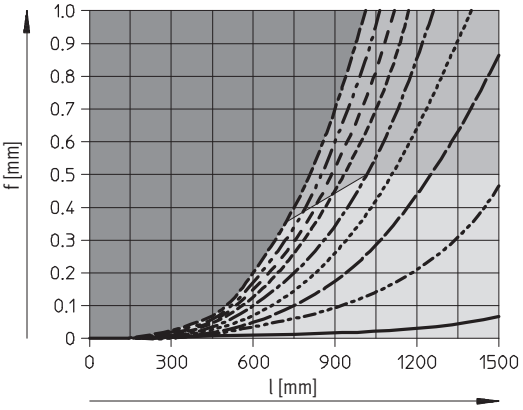


0 N
1,000 N
2,000 N
3,000 N
4,000 N

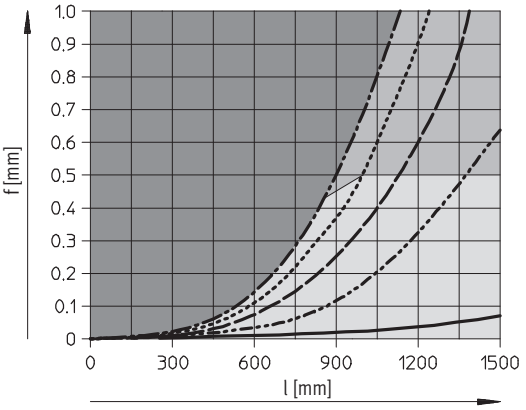
Along the z-axis



DMES-40-GF, with plain-bearing guide



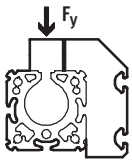
DMES-40-KF, with recirculating ball bearing guide



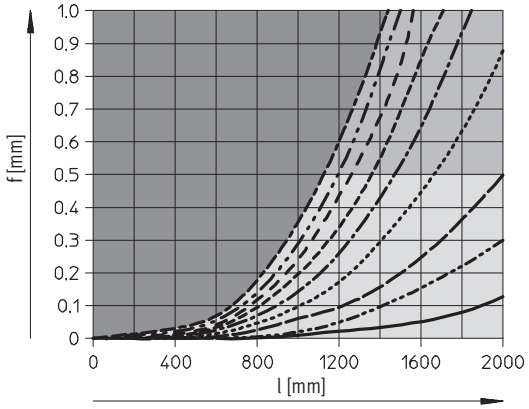
Impermissible range
Static range
Static and dynamic range

Deflection of the positioning axis as a function of the working load F and the working stroke l

Along the y-axis

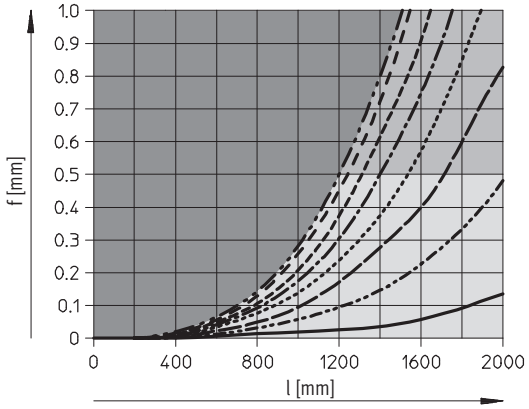


DMES-63-GF, with plain-bearing guide



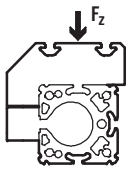
0 N
500 N
1,000 N
2,000 N
3,000 N
4,000 N
5,000 N
6,000 N
7,000 N

DMES-63-KF, with recirculating ball bearing guide

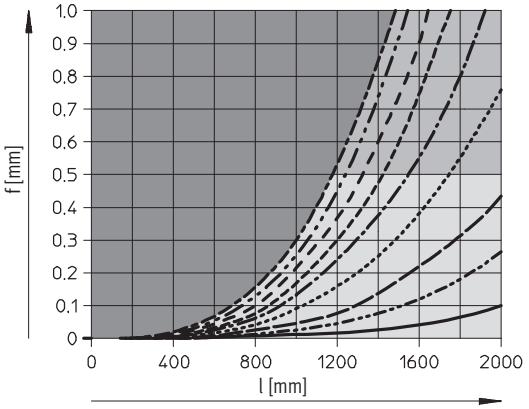


0 N
1,000 N
2,000 N
3,000 N
4,000 N
5,000 N
6,000 N
6,500 N

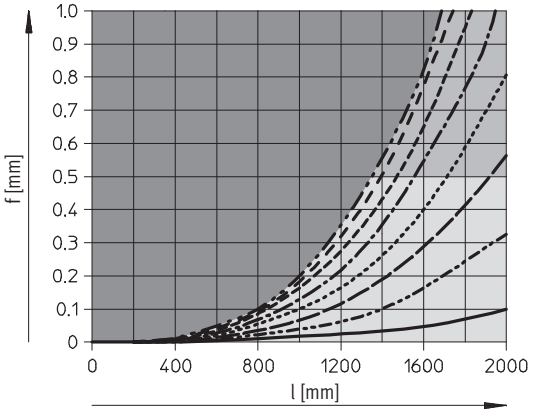
Along the z-axis



DMES-63-GF, with plain-bearing guide



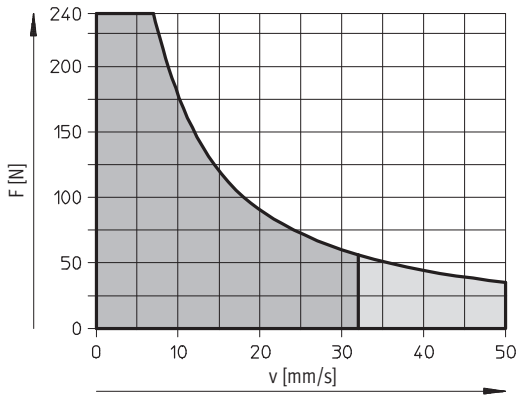
DMES-63-KF, with recirculating ball bearing guide



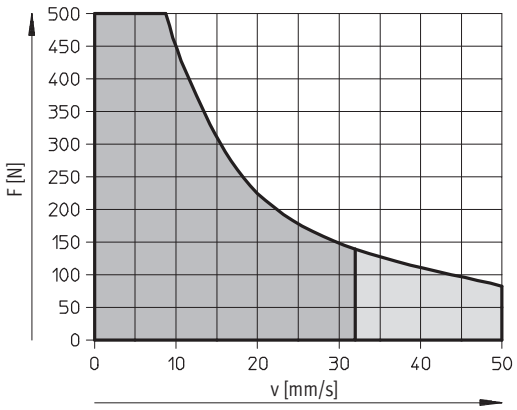
Impermissible range
Static range
Static and dynamic range

Maximum permissible feed force F as a function of the feed speed v

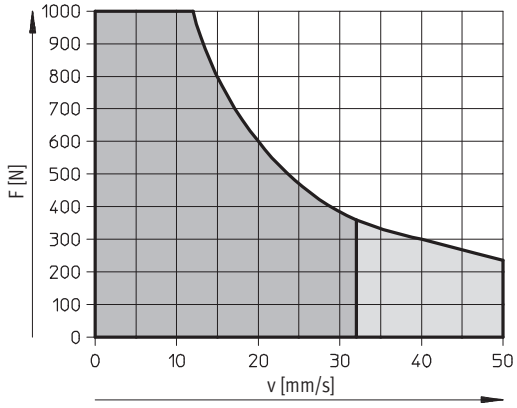
Size 18



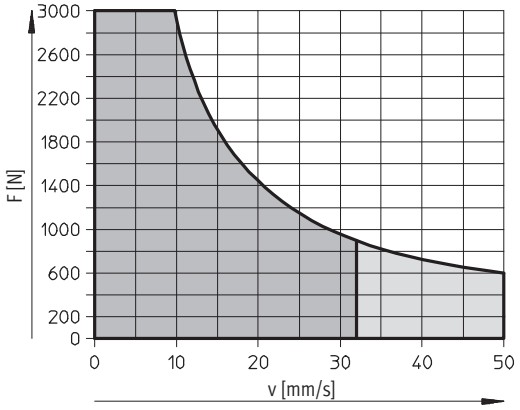
Size 25



Size 40



Size 63



Recommended operating range

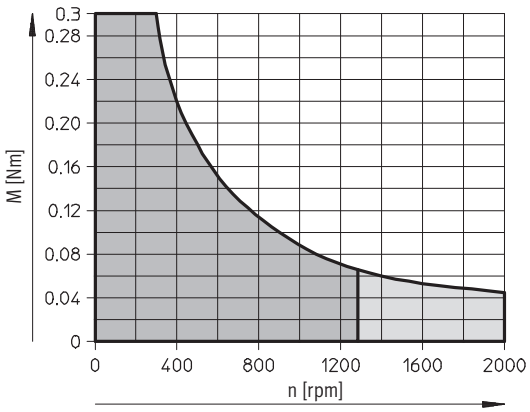
Permissible operating range (duty cycle < 50% recommended)

Positioning axes DMES-GF/-KF, with guide

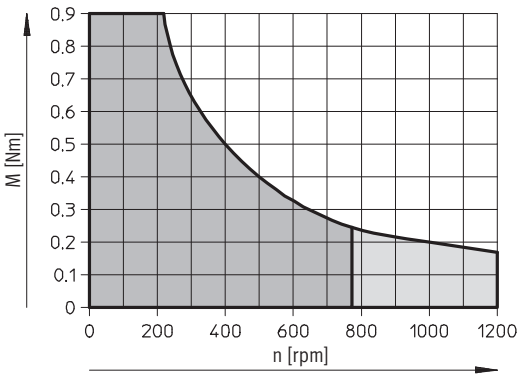
Technical data

Maximum permissible driving torque M as a function of n (rpm)

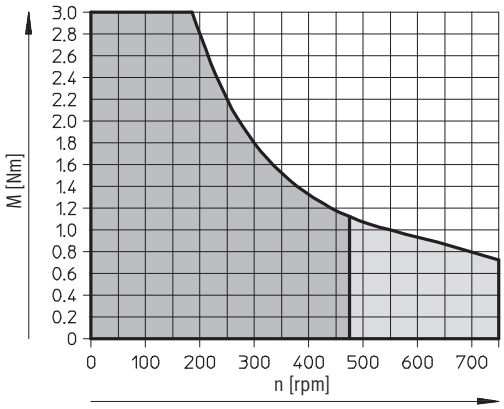
Size 18



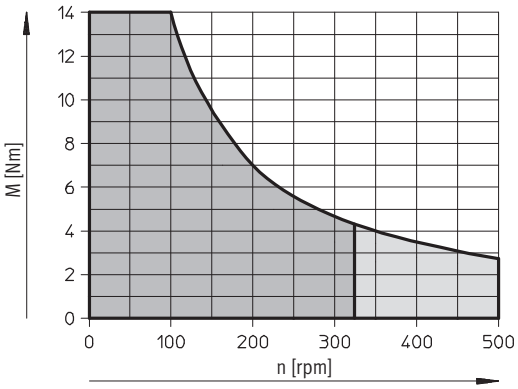
Size 25



Size 40



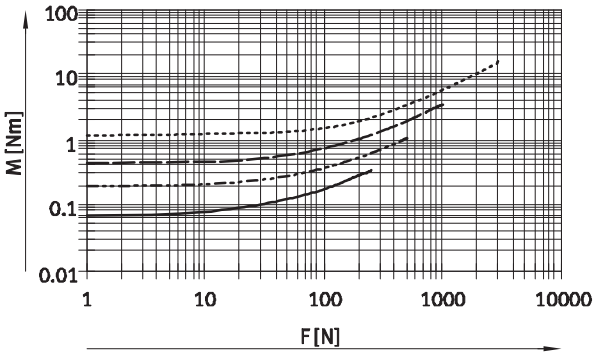
Size 63



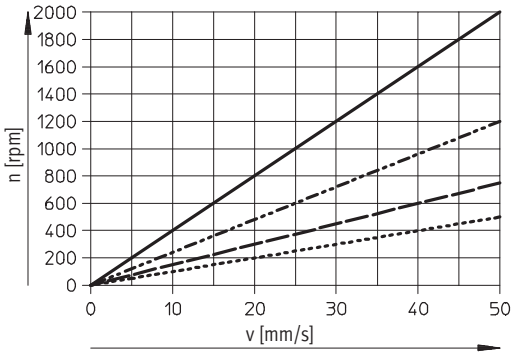
Recommended operating range

Permissible operating range (duty cycle < 50% recommended)

Driving torque M as a function of the feed force F



Speed as a function of the feed speed v



DMES-18

DMES-25

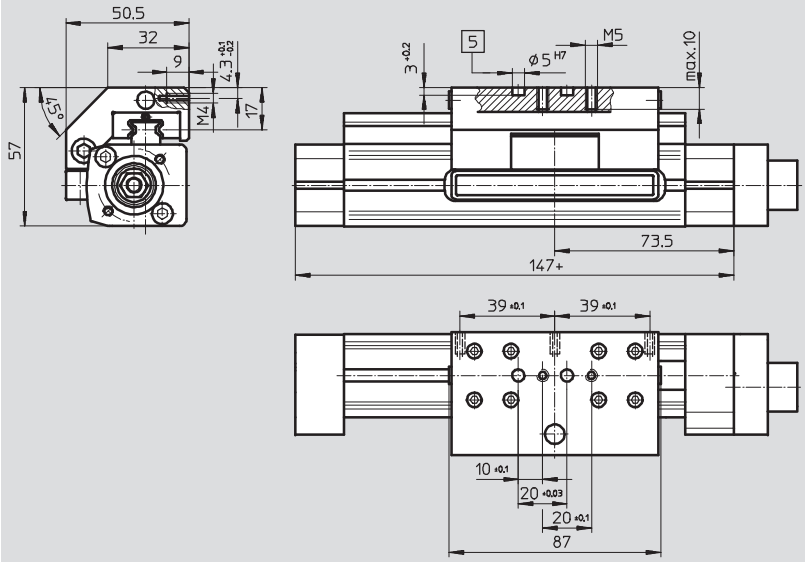
DMES-40

DMES-63

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

Standard slide GK

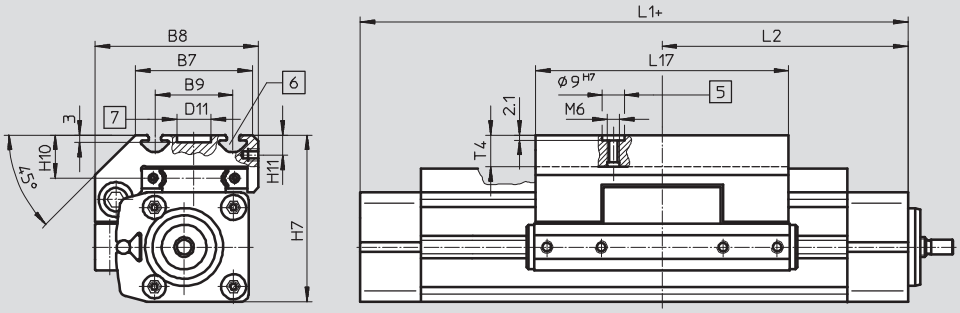
Size 18



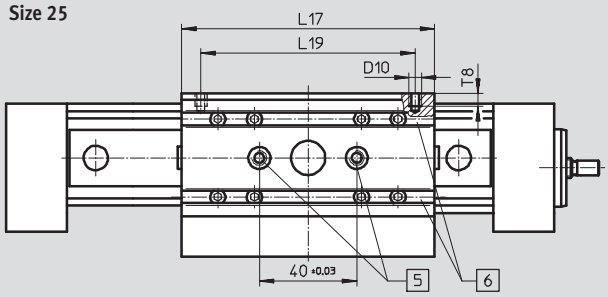
5 Hole for centring pin ZBS-5

Basic dimensions
➔ 11

Size 25/40/63



Size 25



5 Hole for centring pin ZBH-9
6 Mounting slot for slot nut NSTL
7 Hole for central mounting SLZZ
\+ = plus stroke length

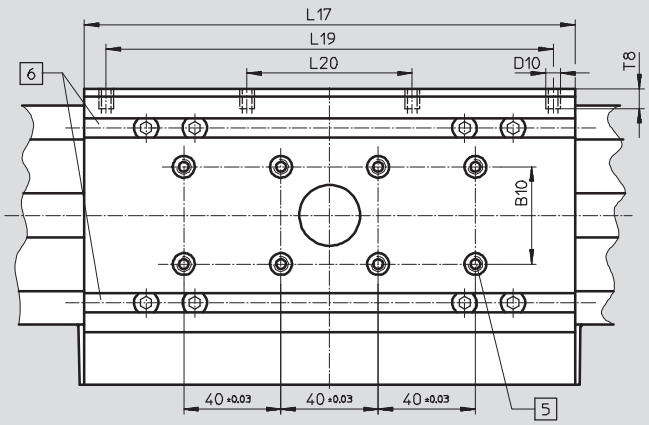
Basic dimensions
➔ 11

Size	B7	B8	B9 ±0.2	D10	D11 ∅ G7	H7	H10	H11 +0.3	L1	L2	L17	L19 ±0.1	T4 max.	T8
25	48	67	32	M5	14	68.5	18.5	8.2	175	87.5	105	88	12.5	8.5
40	78.5	96.5	55	M5	25	90.5	20	7	250	126	167	150	12.5	8.5
63	121	142	90	M8	25	144.5	30	12.5	328	164	230	200	20.5	10.5

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

Standard slide GK

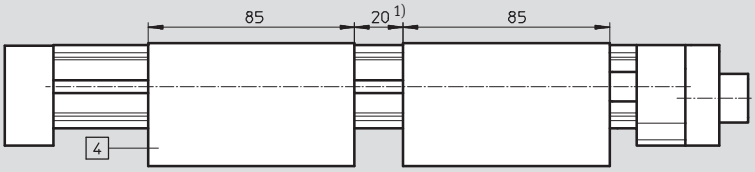
Size 40/63



5 Hole for centring pin ZBH-9
6 Mounting slot for slot nut NSTL
\+ = plus stroke length

Additional slide KL/KR

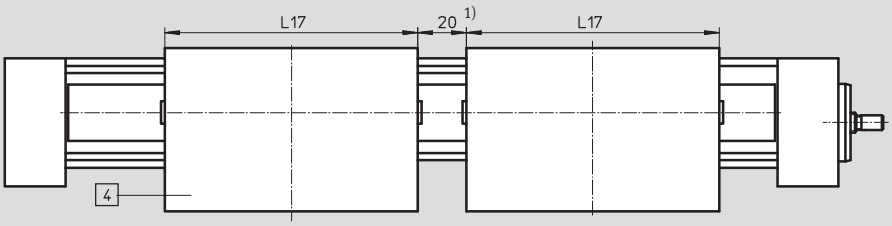
Size 18



4 Additional slide DMES-...-KL/KR

1) Recommended minimum distance for access to lubrication nipple

Size 25/40/63



4 Additional slide DMES-...-KL/KR

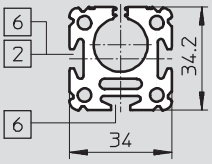
1) Recommended minimum distance for access to lubrication nipple

Size	D10	L17	L19 ±0.1	L20 ±0.1	T8
25	M5	105	88	–	8.5
40	M5	167	150	58	8.5
63	M8	230	200	72	10.5

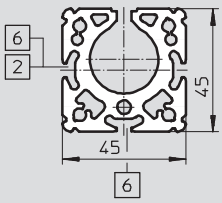
Dimensions Download CAD data ➔ **www.festo.com**

Profile

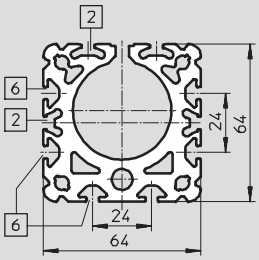
Size 18



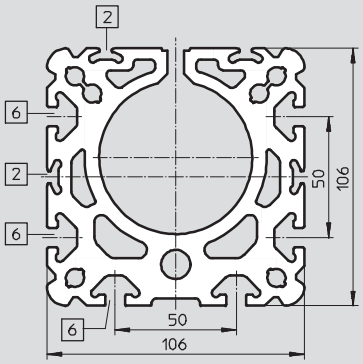
Size 25



Size 40



Size 63



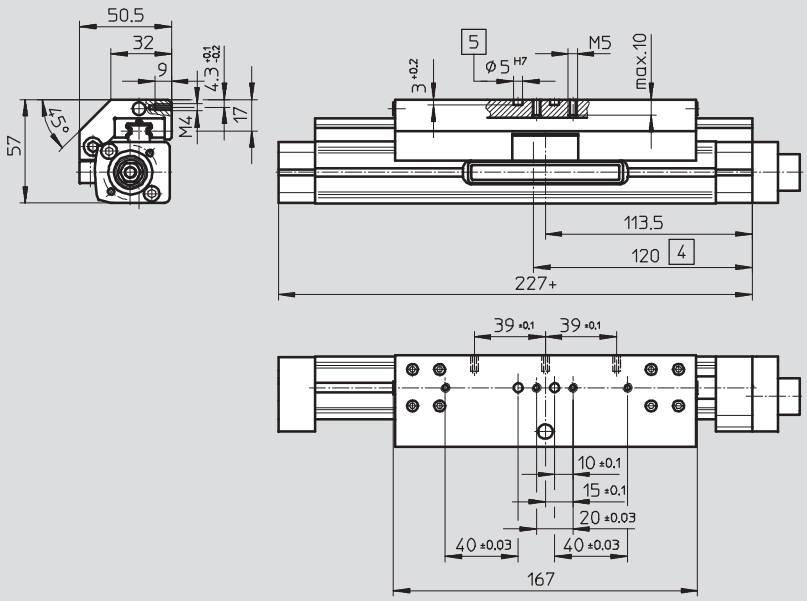
2 Sensor slot for proximity sensor

6 Mounting slot for slot nut NST

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

Extended slide GV

Size 18



4 Lubrication opening
5 Hole for centring pin ZBS-5
\+ = plus stroke length

Basic dimensions
➔ 11

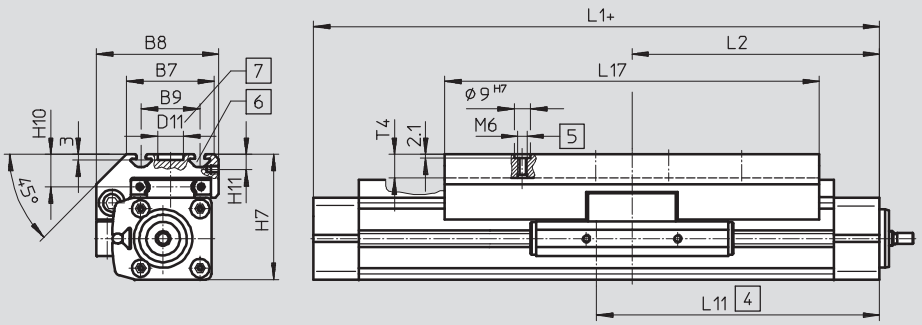
Positioning axes DMES-GF/-KF, with guide

Technical data

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

Extended slide GV

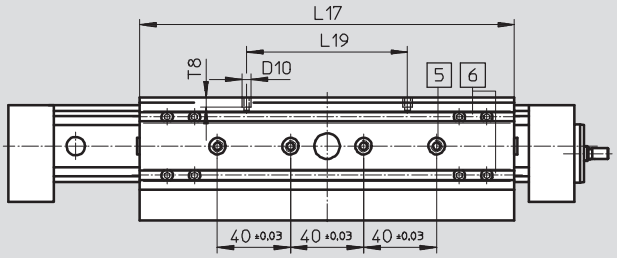
Size 25/40/63



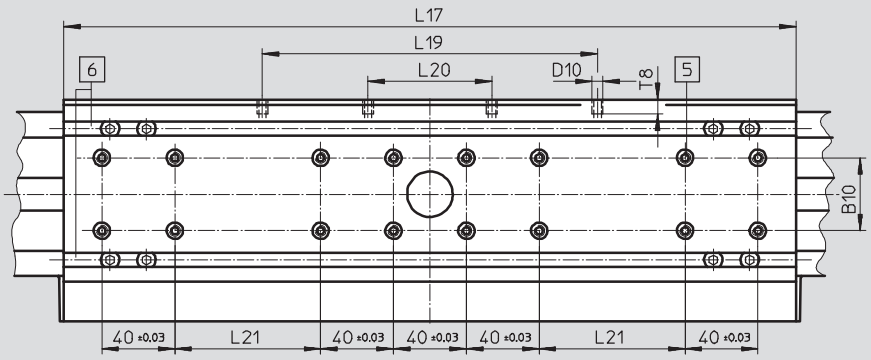
4 Lubrication opening
5 Hole for centring pin ZBS-9
6 Slot for slot nut NSTL
7 Hole for central mounting SLZZ
\+ = plus stroke length

Basic dimensions
➔ 11

Size 25



Size 40



5 Hole for centring pin ZBH-9
6 Mounting slot for slot nut NSTL

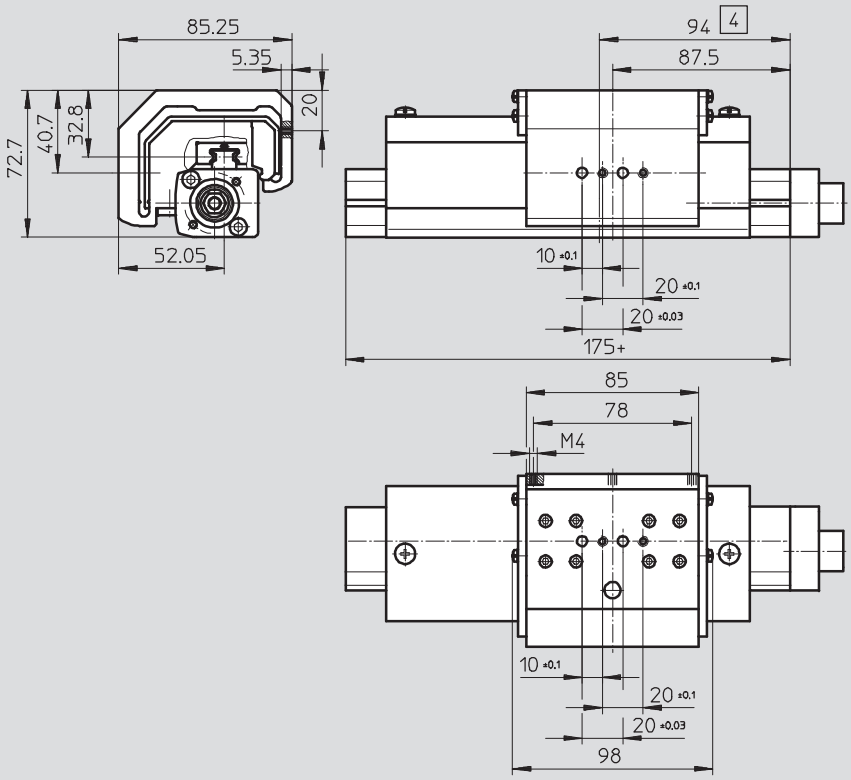
Size	B7	B8	B9 ±0.2	B10	D10	D11 ∅ G7	H7	H10	H11 +0.3
25	48	67	32	–	M5	14	68.5	18.5	8.2
40	78.5	96.5	55	20	M5	25	90.5	20	7
63	121	142	90	40	M8	25	144.5	30	12.5

Size	L1	L2	L11	L17 ±0.1	L19 ±0.1	L20 ±0.1	L21 ±0.1	T4 max.	T8
25	275	137.5	155	205	88	–	–	12.5	8.5
40	420	211	236	337	150	58	40	12.5	8.5
63	578	289	321	480	200	72	120	20.5	10.5

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

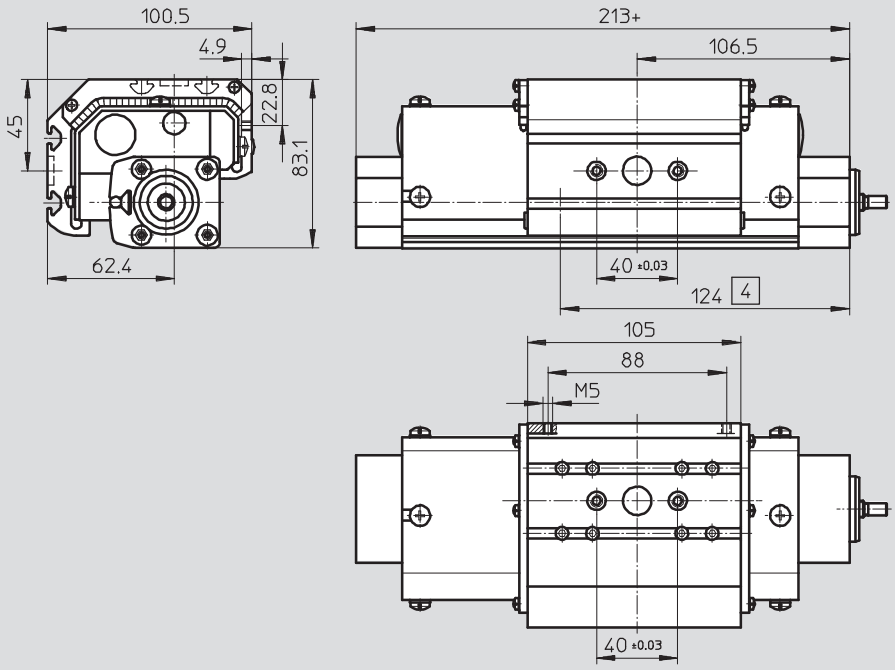
Protected version GA

Size 18



4 Lubrication opening
\+ = plus stroke length

Size 25

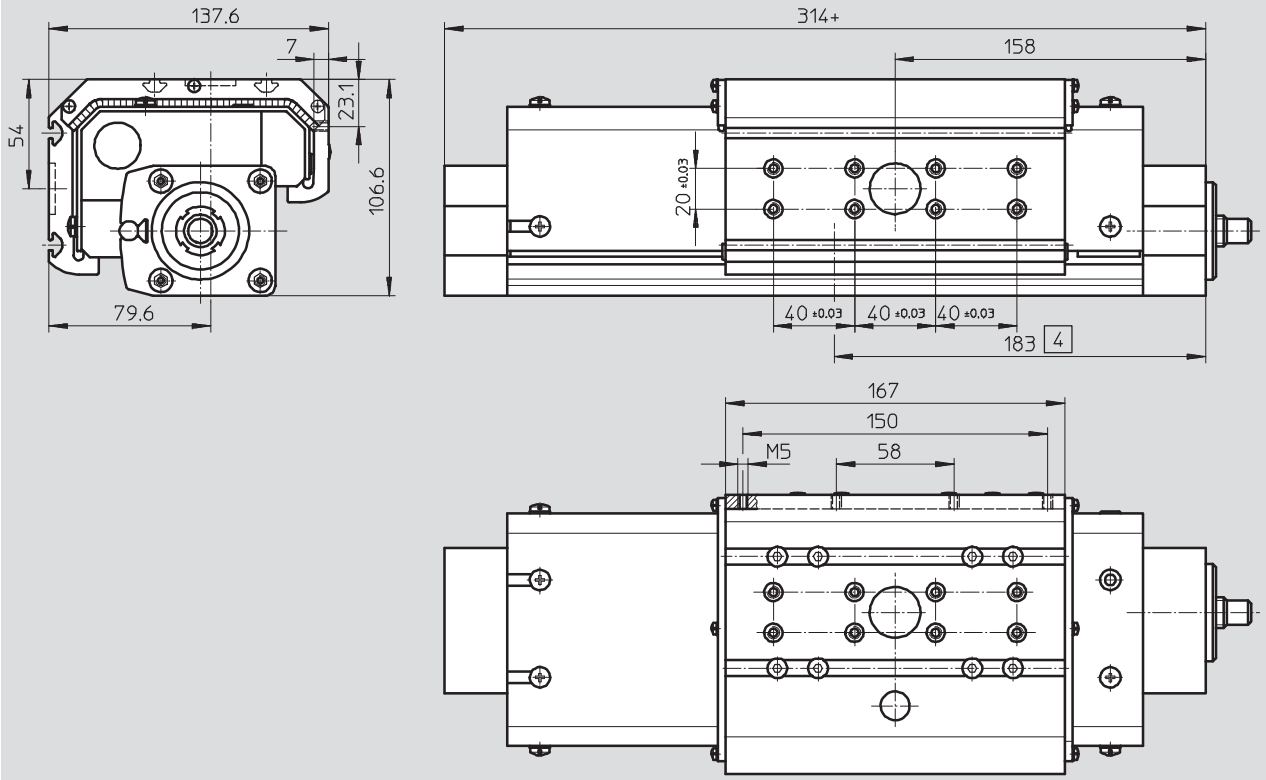


4 Lubrication opening
\+ = plus stroke length

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

Protected version GA

Size 40



4 Lubrication opening

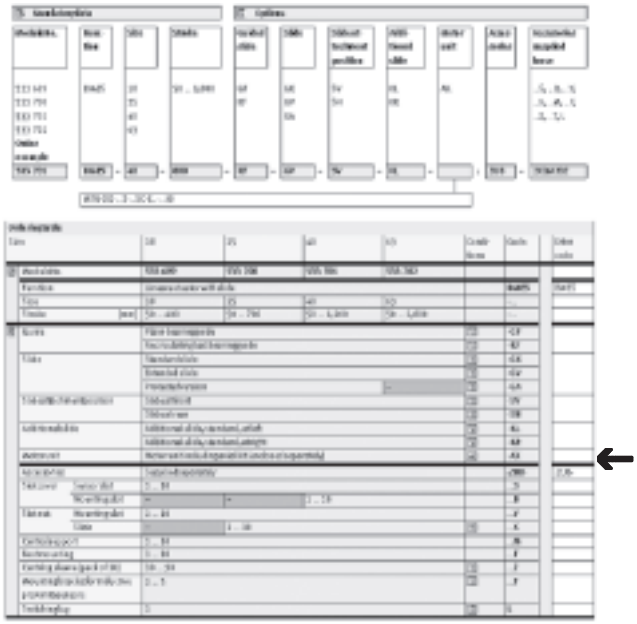
\+ = plus stroke length

Order processing for positioning axis DMES in combination with intelligent motor unit MTR-DCI

1 Ordering positioning axis DMES

Ordering table ➔ 40

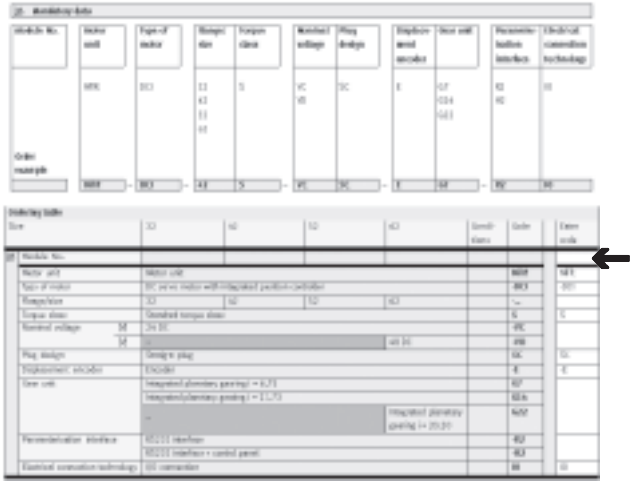
The drive unit and corresponding accessories are configured in the ordering table for the positioning axis DMES.
The code “AX” or “U” is used to specify whether an intelligent motor unit MTR-DCI and an axial or a parallel kit are required for the positioning axis.
The motor unit design must be defined separately.



3 Ordering intelligent motor unit MTR-DCI

Ordering table ➔ 9

The motor unit order code determined from table 2 must now be completed with the “gear unit” and “parameterisation interface” codes.
The module number of the intelligent motor unit must not be specified when ordering with order code “AX” or “U”. It is determined automatically.



2 Permissible combinations with intelligent motor unit MTR-DCI

Positioning axis	Motor unit
DMES-18-...	MTR-DCI-32S-VCSC-E...
DMES-25-...	MTR-DCI-42S-VCSC-E...
DMES-40-...	MTR-DCI-52S-VCSC-E...
DMES-63-...	MTR-DCI-62S-VDSC-E...

4 Order example

Part No.	Type
	Positioning axis DMES
533 700	DMES-25-700-KF-GK-SH-AX:ZUB-2S2Y1M1F
	Intelligent motor unit MTR-DCI
–	MTR-DCI-42S-VCSC-EG7-R2IO

Note

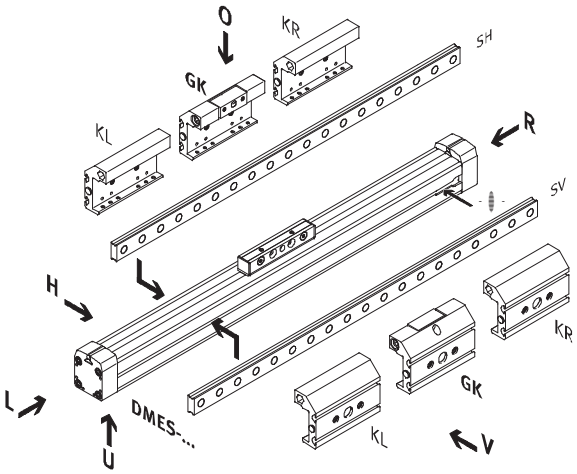
Servo, stepper motors and the corresponding mounting kits must be ordered separately ➔ 42

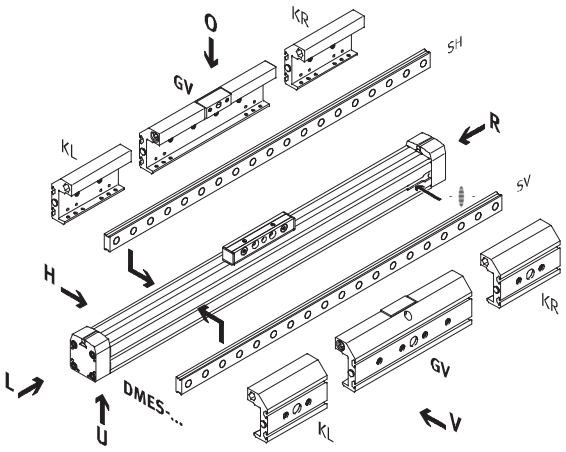
Positioning axes DMES-GF/-KF, with guide

Ordering data – Modular products

FESTO

Order code	
Mandatory data	
DMES-...-GK	DMES-...-GV



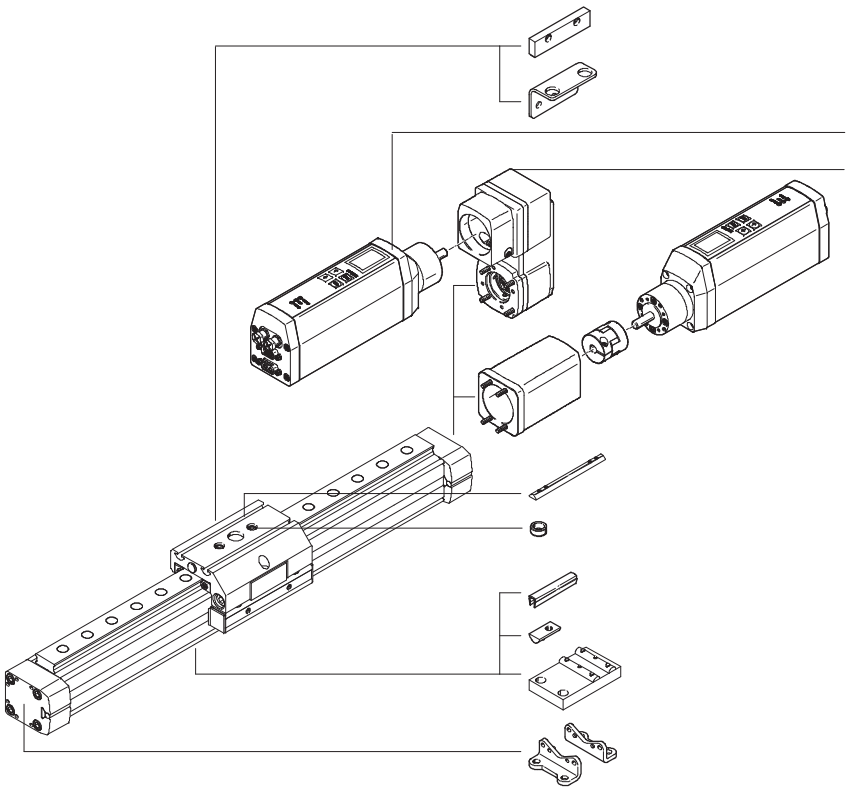


- Note

The insertion point for the proximity sensor is located on the right-hand side of the positioning axis.

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

Order code
Options



L		
T		
Motor unit		U
Parallel kit		
Motor unit		AX
Axial kit		
X		
Z		
B/S		
Y		
M		
F		

FESTO

M Mandatory data					O Options							
Module No.	Function	Size	Stroke		Guide	Slide	Slide attachment position	Additional slide	Motor unit		Accessories	Accessories supplied loose
533 699 533 700 533 701 533 702	DMES	18 25 40 63	50 … 1,800		GF KF	GK GV GA	SV SH	KL KR	AX U			…S, …B, …Y, …X, …M, …F, …Z, …T, L
Order example												
533 701	DMES	– 40	– 800		– KF	– GV	– SV	– KL	–	:	ZUB	– 2X2M20Z

MTR-DCI-…S-VCSC-E…-…IO

Ordering table								
Size		18	25	40	63	Conditions	Code	Enter code
M Module No.		**533 699**	**533 700**	**533 701**	**533 702**			
Function		Positioning axis with slide					**DMES**	DMES
Size		18	25	40	63		**-…**	
Stroke [mm]		50 … 400	50 … 700	50 … 1,200	50 … 1,800		**-…**	
O Guide		Plain-bearing guide				1	**-GF**	
		Recirculating ball bearing guide				1	**-KF**	
Slide		Standard slide				2	**-GK**	
		Extended slide				2	**-GV**	
		Protected version			–	2	**-GA**	
Slide attachment position		Slide at front				2	**-SV**	
		Slide at rear				2	**-SH**	
Additional slide		Additional slide, standard, at left				3	**-KL**	
		Additional slide, standard, at right				3	**-KR**	
Motor unit		Axial kit and motor unit (enclosed separately)				4	**-AX**	
		Parallel kit and motor unit (enclosed separately)			–	4	**-U**	
Accessories		Supplied separately					**:ZUB-**	:ZUB-
Slot cover	Sensor slot	1 … 10					**…S**	
	Mounting slot	–	–	1 … 10			**…B**	
Slot nut	Mounting slot	1 … 10					**…Y**	
	Slide	–	1 … 10			2	**…X**	
Central support		1 … 10					**…M**	
Foot mounting		1 … 10					**…F**	
Centring sleeve (pack of 10)		10 … 90				2	**…Z**	
Mounting bracket for inductive proximity sensors		1 … 5				5	**…T**	
Switching lug		1				5	**L**	

1 **GF, KF** Only with slide GK, GV or GA and with slide attachment position SV or SH.
2 **GK, GV, GA, SV, SH, X, Z** Only with guide GF or KF
3 **KL, KR** Only with guide KF (recirculating ball bearing guide) and with slide GK or GV
4 **AX, U** Order processing for intelligent motor unit MTR-DCI → 9
5 **T, L** Only with slide GK or GV

Transfer order code

	DMES	–	–	–	–	–	–	–	–	: ZUB	–

MTR-DCI-…S-VCSC-E…-…IO

M Mandatory data

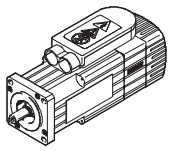
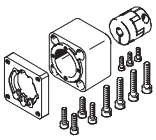
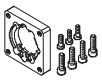
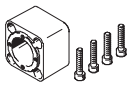
Module No.	Motor unit		Flange/size		Nominal voltage		Measuring system		Parameterisation interface	
	Motor type		Torque class		Plug design		Gearing unit		Electrical connection technology	
	MTR	DCI	32 42 52 62	S	VC VD	SC	E	G7 G14 G22	R2 H2	IO CO PB DN
Order example										
533 742	MTR	– DCI	42	S	VC	SC	E	G7	R2	IO

Ordering table

Size		32	42	52	62	Conditions	Code		Enter code
M Module No.		533 736			533 754				
Motor unit		Motor unit					MTR		MTR
Motor type		DC servo motor with integrated position controller					-DCI		-DCI
Flange/size		32	42	52	62		-...		
Torque class		Standard torque class					S		S
Nominal voltage	[V]	24 DC			–		-VC		
	[V]	–			48 DC		-VD		
Plug design		Straight plug					SC		SC
Measuring system		Encoder					-E		-E
Gearing unit		Integrated planetary gearing i = 6.75					G7		
		Integrated planetary gearing i = 13.73					G14		
		–			Integrated planetary gearing i = 22.21		G22		
Parameterisation interface		RS232 interface					-R2		
		RS232 interface + control panel					-H2		
Electrical connection technology		I/O interface					IO		
		CANopen					CO		
		Profibus DP					PB		
		DeviceNet					DN		

Transfer order code

	MTR	– DCI		S		SC	– E		–	–	

Permissible axis/motor combinations with axial kit – Without gear unit				
Motor unit	Axial kit	Axial kit comprises:		
		Motor flange	Coupling	Coupling housing
				
Type	Part No. Type	Part No. Type	Part No. Type	Part No. Type
DMES-18				
With servo motor				
EMMS-AS-40-...	**550 961** **EAMM-A-E20-40A**	**552 163** **EAMF-A-28B-40A**	**540 751** **EAMC-15-22-5-6**	**170 374** **EAMK-A-E20-28B**
EMMS-AS-55-...	**550 963** **EAMM-A-E20-55A**	**529 946** **EAMF-A-28A/B-55A**	**529 953** **EAMC-15-22-5-9**	**170 374** **EAMK-A-E20-28B**
With stepper motor				
EMMS-ST-42-...	**550 962** **EAMM-A-E20-42A**	**552 164** **EAMF-A-28B-42A**	**530 085** **EAMC-15-22-5-5**	**170 374** **EAMK-A-E20-28B**
With intelligent motor unit				
MTR-DCI-32S-...	**556 991** **EAMM-A-E20-32B**	–	**533 707** **EAMC-15-20-5-6**	**533 703** **EAMK-A-E20-32B**
DMES-25				
With servo motor				
EMMS-AS-40-...	**550 964** **EAMM-A-E32-40A**	**550 985** **EAMF-A-44A/B-40A**	**123 040** **EAMC-30-35-6-6**	**124 631** **EAMK-A-E32-44A**
EMMS-AS-55-...	**550 965** **EAMM-A-E32-55A**	**529 942** **EAMF-A-44A/B-55A**	**530 941** **EAMC-30-35-6-9**	**124 631** **EAMK-A-E32-44A**
With stepper motor				
EMMS-ST-57-...	**550 966** **EAMM-A-E32-57A**	**530 081** **EAMF-A-44A/B-57A**	**530 087** **EAMC-30-35-6-6.35**	**124 631** **EAMK-A-E32-44A**
With intelligent motor unit				
MTR-DCI-42S-...G7	**556 992** **EAMM-A-E32-42B**	–	**533 708** **EAMC-30-32-6-8**	**533 704** **EAMK-A-E32-42B**
MTR-DCI-42S-...G14	**556 993** **EAMM-A-E32-42C**	–	**533 708** **EAMC-30-32-6-8**	**538 578** **EAMK-A-E32-42C**

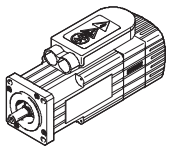
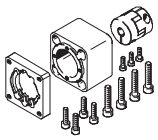
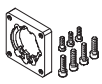
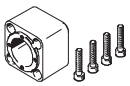
- Note

At ambient temperatures below room temperature the moment of friction of the DMES-...-GF (plain-bearing) will increase.
Depending on the combination of motor/motor unit and positioning axis the maximum feed force of the axis cannot be reached.

The following tool is available for selecting and sizing the unit:

- Note

Sizing software
PositioningDrives
➔www.festo.com

Permissible axis/motor combinations with axial kit – Without gear unit				
Motor/motor unit	Axial kit	Axial kit comprises:		
		Motor flange	Coupling	Coupling housing
				
Type	Part No. Type	Part No. Type	Part No. Type	Part No. Type
DMES-40				
With servo motor				
EMMS-AS-70-...	**557 448** **EAMM-A-E48-64A-70A**	**529 945** **EAMF-A-64A/B-70A**	**525 864** **EAMC-40-66-11-12**	**529 940** **EAMK-A-E48-64A**
EMMS-AS-100-...	**550 973** **EAMM-A-E48-100A**	**529 947** **EAMF-A-64A/C-100A**	**529 952** **EAMC-40-66-12-19**	**529 940** **EAMK-A-E48-64A**
With stepper motor				
EMMS-ST-87-...	**550 972** **EAMM-A-E48-87A**	**533 140** **EAMF-A-64A/B-87A**	**525 864** **EAMC-40-66-11-12**	**529 940** **EAMK-A-E48-64A**
With intelligent motor unit				
MTR-DCI-52S-...-G7	**556 994** **EAMM-A-E48-52B**	**–**	**533 709** **EAMC-42-50-12-12**	**533 705** **EAMK-A-E48-52B**
MTR-DCI-52S-...-G14	**556 995** **EAMM-A-E48-52C**	**–**	**533 709** **EAMC-42-50-12-12**	**538 579** **EAMK-A-E48-52C**
DMES-63				
With servo motor				
EMMS-AS-70-...	**550 975** **EAMM-A-E72-70A**	**529 945** **EAMF-A-64A/B-70A**	**550 999** **EAMC-40-66-11-20**	**529 941** **EAMK-A-E72-64A**
EMMS-AS-100-...	**550 978** **EAMM-A-E72-100A**	**529 947** **EAMF-A-64A/C-100A**	**132 847** **EAMC-40-66-19-20**	**529 941** **EAMK-A-E72-64A**
With stepper motor				
EMMS-ST-87-...	**550 977** **EAMM-A-E72-87A**	**533 140** **EAMF-A-64A/B-87A**	**550 999** **EAMC-40-66-11-20**	**529 941** **EAMK-A-E72-64A**
With intelligent motor unit				
MTR-DCI-62S-...	**556 996** **EAMM-A-E72-62B**	**–**	**533 710** **EAMC-42-50-14-20**	**533 706** **EAMK-A-E72-62B**

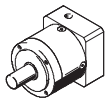
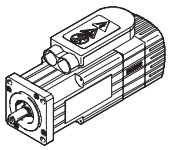
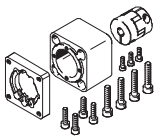
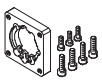
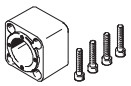
- Note

At ambient temperatures below room temperature the moment of friction of the DMES-...-GF (plain-bearing) will increase.
Depending on the combination of motor/motor unit and positioning axis the maximum feed force of the axis cannot be reached.

The following tool is available for selecting and sizing the unit:

- Note

Sizing software
PositioningDrives
➔www.festo.com

Permissible axis/motor combinations with axial kit – With gear unit					
Gear unit	Motor	Axial kit	Axial kit comprises:		
			Motor flange	Coupling	Coupling housing
					
Type	Type	Part No. Type	Part No. Type	Part No. Type	Part No. Type
DMES-63					
With servo motor					
EMGA-60-P-G...-SAS-70	**EMMS-AS-70-S-...**	**550 974** **EAMM-A-E72-60G**	**550 987** **EAMF-A-64A/B-60G**	**550 999** **EAMC-40-66-11-20**	**529 941** **EAMK-A-E72-64A**
EMGA-80-P-G...-SAS-70	**EMMS-AS-70-M-...**	**550 976** **EAMM-A-E72-80G**	**533 139** **EAMF-A-64A/C-80G**	**123 849** **EAMC-40-66-20-20**	**529 941** **EAMK-A-E72-64A**
With stepper motor					
EMGA-80-P-G...-SST-87	**EMMS-ST-87-L-...**	**550 976** **EAMM-A-E72-80G**	**533 139** **EAMF-A-64A/C-80G**	**123 849** **EAMC-40-66-20-20**	**529 941** **EAMK-A-E72-64A**

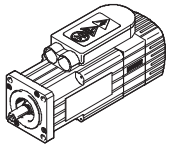
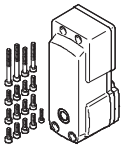
- Note

At ambient temperatures below room temperature the moment of friction of the DMES-...-GF (plain-bearing) will increase.
Depending on the combination of motor/motor unit and positioning axis the maximum feed force of the axis cannot be reached.

The following tool is available for selecting and sizing the unit:

- Note

Sizing software
PositioningDrives
➔www.festo.com

Permissible axis/motor combinations with parallel kit – Without gear unit		
Motor/motor unit	Parallel kit	
		
Type	Part No.	Type
DMES-18		
With servo motor		
EMMS-AS-40-...	**543 226**	**EAMM-U-E24-40A**
With intelligent motor unit		
MTR-DCI-32S-...	**543 225**	**EAMM-U-E24-32B**
DMES-25		
With servo motor		
EMMS-AS-55-...	**543 230**	**EAMM-U-E32-55A**
With intelligent motor unit		
MTR-DCI-42S-...-G7	**543 228**	**EAMM-U-E32-42B**
MTR-DCI-42S-...-G14	**543 229**	**EAMM-U-E32-42C**
DMES-40		
With servo motor		
EMMS-AS-70-...	**543 234**	**EAMM-U-E48-70A**
With intelligent motor unit		
MTR-DCI-52S-...-G7	**543 232**	**EAMM-U-E48-52B**
MTR-DCI-52S-...-G14	**543 233**	**EAMM-U-E48-52C**

- Note

At ambient temperatures below room temperature the moment of friction of the DMES-...-GF (plain-bearing) will increase.
Depending on the combination of motor/motor unit and positioning axis the maximum feed force of the axis cannot be reached.
If parallel kits are used, the relevant no-load driving torque of the kit must be taken into account.

The following tool is available for selecting and sizing the unit:

- Note

Sizing software
PositioningDrives
➔www.festo.com

Axial kit EAMM-A-...

Material:
Coupling housing, coupling hubs, motor flange: Aluminium
Screws: Galvanised steel
Clamping component: Steel, corrosion resistant

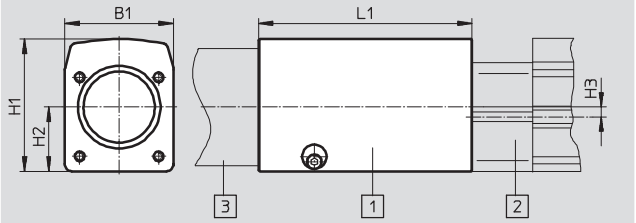


Diagram:
1 Axial kit
2 Positioning axis
3 Motor

General technical data										
EAMM-A-...		E20-				E32-				
		32B	40A	42A	55A	40A	42B	42C	55A	57A
Transferable torque	[Nm]	1.5	1	1	1	7.5	7	7	7.5	7.5
Mass moment of inertia	[kg mm^2]	0.23	0.13			6.1	5.87		6.1	
Max. speed	[rpm]	10,000	12,000			8,000				
Assembly position		Any								

EAMM-A-...		E48-					E72-					
		52B	52C	64A-70A	87A	100A	62B	70A	60G	80G	87A	100A
Transferable torque	[Nm]	17	17	17	17	17	17	17	17	17	17	17
Mass moment of inertia		35.5		42.3			35.5	42.3				
Max. speed	[rpm]	6,000		6,500			6,000	6,500				
Assembly position		Any										

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

1) Only with combined attachment of motor and axis

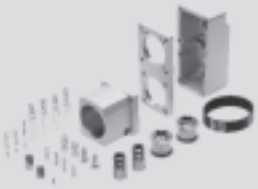
Dimensions and ordering data								
Type	B1	H1	H2	H3	L1	Weight [g]	Part No.	Type
EAMM-A-E20-32B	33.6	41	21.6	0	27	100	**556 991**	**EAMM-A-E20-32B**
EAMM-A-E20-40A	33.5	31.5	15.75	0	27.4	80	**550 961**	**EAMM-A-E20-40A**
EAMM-A-E20-42A					35.7	100	**550 962**	**EAMM-A-E20-42A**
EAMM-A-E20-55A					29.5	140	**550 963**	**EAMM-A-E20-55A**
EAMM-A-E32-40A	45	45	26.5	4	52.5	250	**550 964**	**EAMM-A-E32-40A**
EAMM-A-E32-42B	44.8	54.4	26.4		88	340	**556 992**	**EAMM-A-E32-42B**
EAMM-A-E32-42C					101	380	**556 993**	**EAMM-A-E32-42C**
EAMM-A-E32-55A	45	45	26.5		53.7	280	**550 965**	**EAMM-A-E32-55A**
EAMM-A-E32-57A					55	290	**550 966**	**EAMM-A-E32-57A**
EAMM-A-E48-52B	63.8	76.4	36.9	5	121	1 120	**556 994**	**EAMM-A-E48-52B**
EAMM-A-E48-52C					135	1,210	**556 995**	**EAMM-A-E48-52C**
EAMM-A-E48-64A-70A	65	64	32		86.2	785	**557 448**	**EAMM-A-E48-64A-70A**
EAMM-A-E48-87A					87.7	1,500	**550 972**	**EAMM-A-E48-87A**
EAMM-A-E48-100A					91.2	1,280	**550 973**	**EAMM-A-E48-100A**
EAMM-A-E72-60G	105.6	114.8	60.8	8	106.9	3,190	**550 974**	**EAMM-A-E72-60G**
EAMM-A-E72-62B	105.1	127.3	60.8		150	2,800	**556 996**	**EAMM-A-E72-62B**
EAMM-A-E72-70A	105.6	114.8	60.8		98.7	2,370	**550 975**	**EAMM-A-E72-70A**
EAMM-A-E72-80G					106.9	3,190	**550 976**	**EAMM-A-E72-80G**
EAMM-A-E72-87A					100.2	3,040	**550 977**	**EAMM-A-E72-87A**
EAMM-A-E72-100A					103.7	3,240	**550 978**	**EAMM-A-E72-100A**

- Note

Permissible axis/motor combinations
➔ 42

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



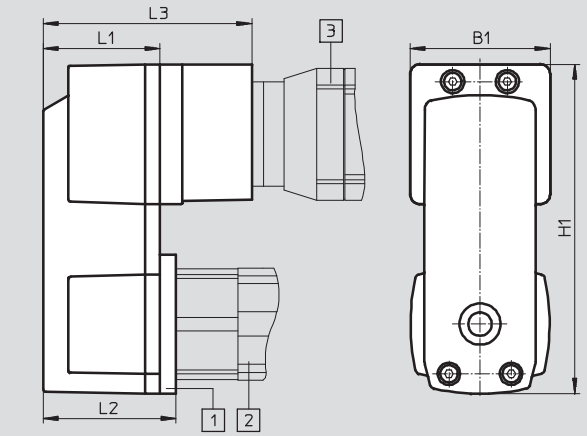


Diagram
1 Parallel kit
2 Positioning axis
3 Motor

General technical data									
EAMM-U-...		E24-		E32-			E48-		
		32B	40A	42B	42C	55A	52B	52C	70A
Transferable torque	[Nm]	1	1	3	3	3	5.5	5.5	5.5
No-load drive torque	[Nm]	0.05	0.05	0.1	0.1	0.1	0.3	0.3	0.3
Mass moment of inertia	[kgmm^2]	3.016	3.016	10.22	10.22	10.22	71.138	71.138	71.138
Max. speed	[rpm]	3,000							
Assembly position		Any							

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

1) Only with combined attachment of motor and axis

Dimensions and ordering data								
Type	B1	H1	L1	L2	L3	Weight [g]	Part No.	Type
EAMM-U-E24-32B	43.3	110.05	39	–	–	240	**543 225**	**EAMM-U-E24-32B**
EAMM-U-E24-40A						240	**543 226**	**EAMM-U-E24-40A**
EAMM-U-E32-42B	56.4	132.7	47	53.5	84	660	**543 228**	**EAMM-U-E32-42B**
EAMM-U-E32-42C					97	690	**543 229**	**EAMM-U-E32-42C**
EAMM-U-E32-55A					–	540	**543 230**	**EAMM-U-E32-55A**
EAMM-U-E48-52B	85.8	189.9	58	66.5	106	1 700	**543 232**	**EAMM-U-E48-52B**
EAMM-U-E48-52C					120	1,800	**543 233**	**EAMM-U-E48-52C**
EAMM-U-E48-70A					–	1,300	**543 234**	**EAMM-U-E48-70A**

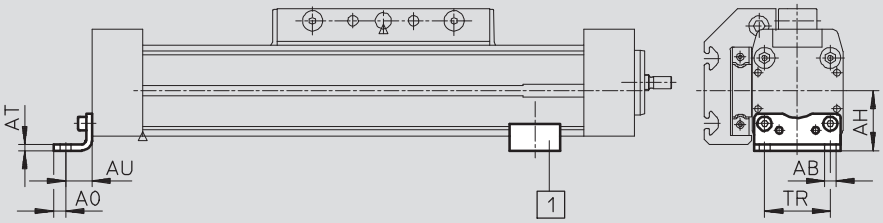
Note

Permissible axis/motor combinations
➔ 45

Foot mounting HP
(order code F)

Material:
Galvanised steel
Free of copper, PTFE and silicone

HP-25



1 Position of the central support along the profile is freely selectable

Dimensions and ordering data

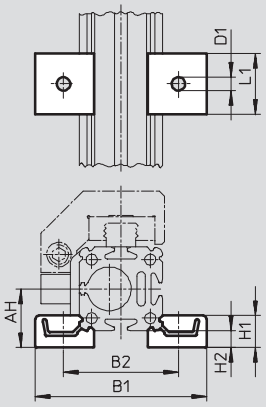
For size	AB ∅	AH	AO	AT	AU	TR	Weight [g]	Part No.	Type
18	5.5	24	4.8	3	13.2	24	59	**158 472**	**HP-18**
25	5.5	29.5	6	3	13	32.5	61	**150 731**	**HP-25**
40	6.6	46	8.5	5	17.5	45	188	**150 733**	**HP-40**
63	11	69	13.5	6	28	75	305	**150 735**	**HP-63**

Central support MUP
(order code M)

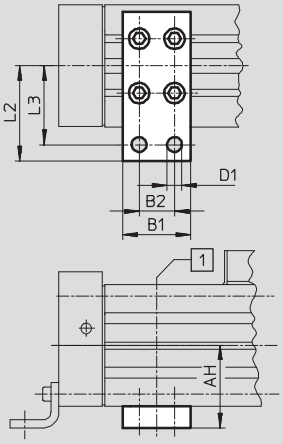
Material:
Galvanised steel
Free of copper, PTFE and silicone

MUP-40

Size 18/25



Size 40/63



1 Position of the central support along the profile is freely selectable

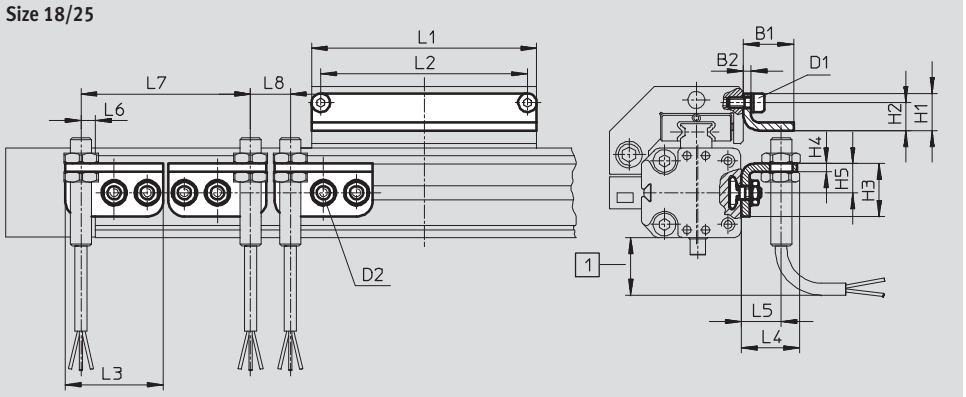
Dimensions and ordering data

For size	AH	B1	B2	D1 ∅	H1	H2	L1	L2	L3	Weight [g]	Part No.	Type
18	24	70.5	47	5.5	13	7	25	–	–	33	**150 736**	**MUP-18/25**
25	29.5	81	58	5.5	13	7	25	–	–	33	**150 736**	**MUP-18/25**
40	46	35	22	6.6	–	–	–	47	40	126	**150 738**	**MUP-40**
63	69	50	26	11	–	–	–	77	65	340	**150 800**	**MUP-63**

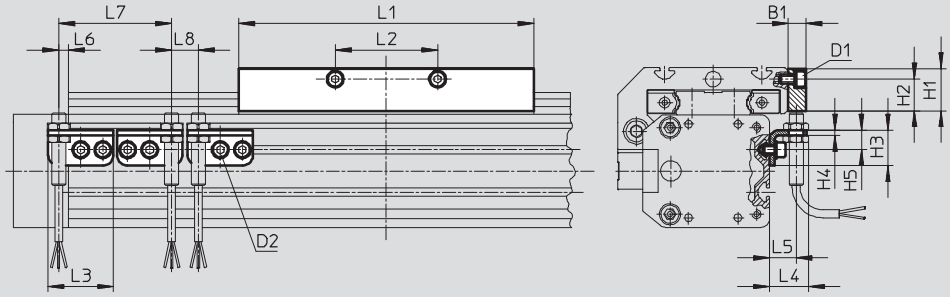
Sensor retainer HWS
For inductive proximity sensors
(order code: T)
Material:
Galvanised steel

Switching lug SF
(order code: L)
Material:
Galvanised steel

Size 18/25



Size 40/63



1 Protruding sensor cable, ensure sufficient installation space

Dimensions and ordering data

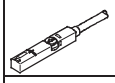
For size	D1	D2	B1	B2	H1	H2	H3	H4	H5	L1	L2	L3	L4	L5
18	M4	M5	19	3	14	10.5	20	3	11	85	78	37	22.5	15
25	M5	M5	27	3	20.5	15.3	20	3	11	105	88	37	34.5	27
40	M5	M5	10	–	24	18	20	3	11	167	58	37	22.5	15
63	M8	M5	10	–	35	25	20	3	11	230	72	37	22.5	15

For size	L6 max.	L7 min.	L8 min.	Weight [g]	Part No.	Type
18	5.5	64	15	34	**188 968**	**HWS-18/25-M8**
				59	**188 964**	**SF-18**
25	5.5	64	15	34	**188 968**	**HWS-18/25-M8**
				75	**188 965**	**SF-25**
40	5.5	64	15	37	**188 969**	**HWS-40-M8**
				328	**188 966**	**SF-40**
63	5.5	64	15	45	**188 970**	**HWS-63-M8**
				630	**188 967**	**SF-63**

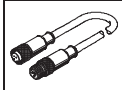
Ordering data – Inductive proximity sensors M8 — Technical data ➔ Internet: sien

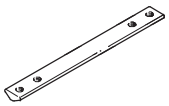
	Electrical connection		Switch output	LED	Cable length [m]	Part No.	Type
	Cable	M8 plug					
N/O contact							
	3-wire	–	PNP	■	2.5	**150 386**	**SIEN-M8B-PS-K-L**
	–	3-pin	PNP	■	–	**150 387**	**SIEN-M8B-PS-S-L**
N/C contact							
	3-wire	–	PNP	■	2.5	**150 390**	**SIEN-M8B-PO-K-L**
	–	3-pin	PNP	■	–	**150 391**	**SIEN-M8B-PO-S-L**

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

	Type of mounting	Switch output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot from above, flush with cylinder profile	PNP	Plug M8x1, 3-pin	0.3	**543 866**	**SMT-8M-PS-24V-K-0,3-M8D**
		NPN	Plug M8x1, 3-pin	0.3	**543 871**	**SMT-8M-NS-24V-K-0,3-M8D**
	Insertable in the slot lengthwise, flush with the cylinder profile	PNP	Cable, 3-wire	2.5	**175 436**	**SMT-8-PS-K-LED-24-B**
			Plug M8x1, 3-pin	0.3	**175 484**	**SMT-8-PS-S-LED-24-B**

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

	Assembly	Connection	Cable length [m]	Part No.	Type
Straight plug socket					
	Union nut M8, both ends	3-pin	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**

Ordering data				Technical data ➔ Internet: mounting attachment		
	For size	Remarks	Order code	Part No.	Type	PU[1]
Slot nut NST						
	18/25	For mounting slot	Y	**526 091**	**NST-HMV-M4**	10
	40			**150 914**	**NST-5-M5**	1
	63			**150 915**	**NST-8-M6**	1
Slot nut NSTL						
	25	For slide	X	**158 410**	**NSTL-25**	1
	40			**158 412**	**NSTL-40**	1
	63			**158 414**	**NSTL-63**	1
Centring pin ZBS/centring sleeve ZBH						
	18	For slide	Z	**150 928**	**ZBS-5**	10
	25/40/63			**150 927**	**ZBH-9**	10
Slot cover ABP						
	40	For mounting slot each 0.5 m	B	**151 681**	**ABP-5**	2
	63			**151 682**	**ABP-8**	2
Slot cover ABP-S						
	18/25/40/63	For sensor slot each 0.5 m	S	**151 680**	**ABP-5-S**	2

1) Packaging unit quantity

Electric slides EGSK/EGSP

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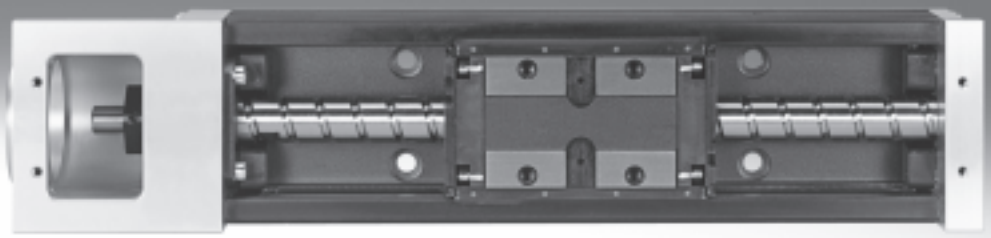


New

Electric slides EGSK/EGSP

Key features

At a glance

Precision embedded in steel

The new generation of electric slide axes EGSK and EGSP impresses with its precision, repetition accuracy, compactness and rigidity.
The two axis series form a complete range with a uniform design, long service life and standardised mounting interfaces. The U-shaped steel housing serves simultaneously as a guide rail. The slide combines linear guide elements and the spindle nuts of the ball screw in one component, thus avoiding the accumulation of production tolerances.
Both series come in three accuracy classes with the option of an additional slide (series 33 and 46 are also available in a short-slide design).

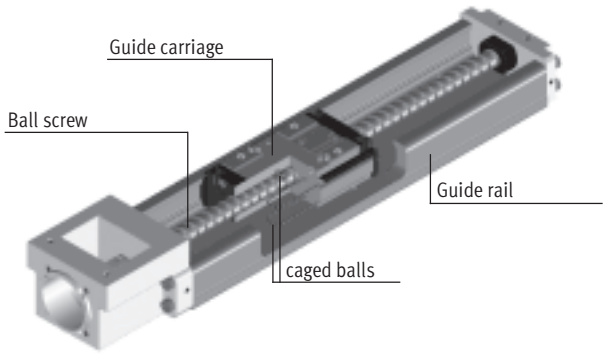
Electric slide EGSK

- Recirculating ball bearing guide and ball screw without caged balls
- Standard designs available ex-stock

Electric slide EGSP

- Recirculating ball bearing guide with caged balls
- Size 33, 46 features a ball screw with caged balls
- Low-maintenance
- Uniform operating behaviour with very low noise levels

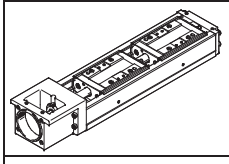
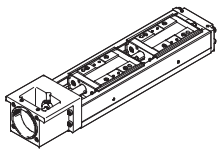
Linear guide with caged balls



The linear guide features four rows of balls circulating within the guide carriage. In the loaded area, the balls run between the honed grooves of the guide carriage and guide rail until they are returned by means of the reversers in the end plates and the return channels. The very rigid design of the guide carriage enables precision linear movements to be executed with impressive dynamism. The four rows of balls are arranged at a contact angle of 45°, giving the guide carriage the same basic load ratings in both radial coordinate directions. This type of guide can therefore be used in any mounting position for a wide range of load directions.

Axis characteristics

The specifications shown in the table are maximum values.
The precise values for each of the variants can be found in the relevant technical data section.

Design	Size	Working stroke	Speed	Repetition accuracy	Feed force	Guide characteristics				
						Forces and torques				
						Fy	Fz	Mx	My	Mz
		[mm]	[m/s]	[µm]	[N]	[N]	[N]	[Nm]	[Nm]	[Nm]
Electric slide EGSK										→ 6
	15	25 … 100	0.33	±3	57	1,185	1,185	13	3.7	3.7
	20	25 … 125	1.10	±3	133	2,204	2,204	28.7	9.2	9.2
	26	50 … 200	0.83	±3	184	3,528	3,528	60	20.4	20.4
	33	100 … 630	1.10	±3	239	3,920	3,920	79.5	26	26
	46	200 … 840	1.48	±3	392	7,809	7,809	231	77.3	77.3
Electric slide EGSP										→ 22
	20	25 … 125	0.6	±3	112	2,929	2,929	36.3	12.5	12.5
	26	50 … 200	0.6	±3	212	5,028	5,028	81.5	31.6	31.6
	33	100 … 630	2	±3	466	4,559	4,559	90.3	32.1	32.1
	46	200 … 840	2	±3	460	8,935	8,935	258	94	94

Electric slides EGSK/EGSP

Key features

Complete system comprising electric slide, motor, motor controller and motor mounting kit

Electric slide with recirculating ball bearing guide

Motor

➔ 34

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

Note

A range of specially matched complete solutions is available for the electric slides EGSK, EGSP and the motors.

Motor controller

Technical data ➔ Internet: motor controller

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

Motor mounting kit

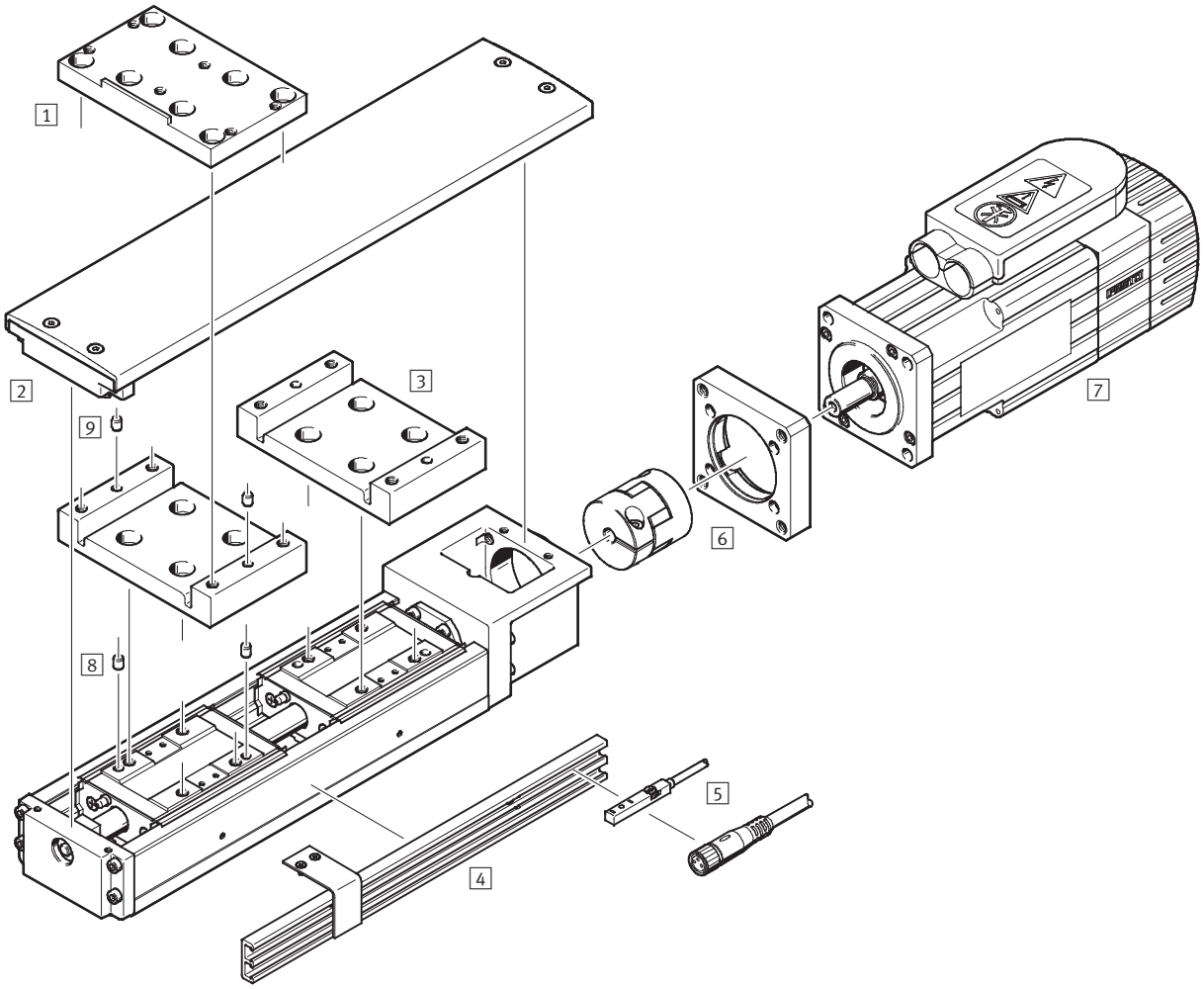
➔ 34

Axial kit

Kit comprising:
- Motor flange
- Coupling
- Screws

Electric slides EGSK/EGSP

Peripherals overview



Electric slides EGSK/EGSP

Peripherals overview

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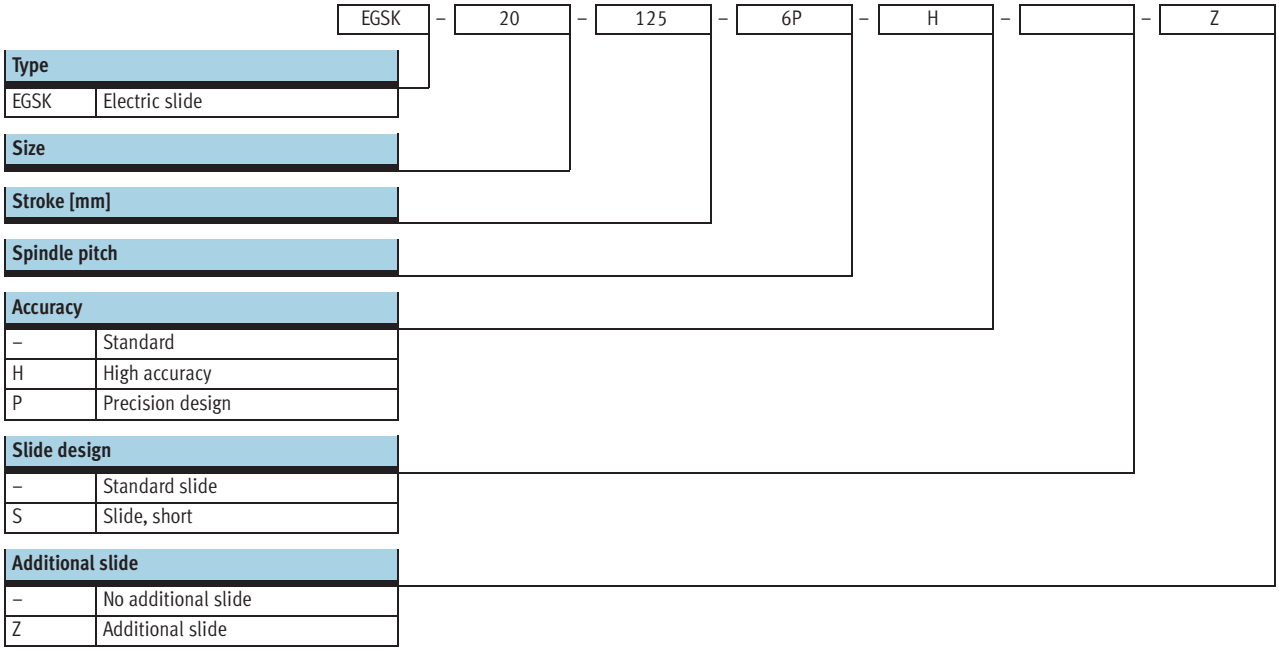
Accessories			
	Type	Brief description	→ Page/Internet
1	Cross connecting kit EHAM-S1	For mounting an assembly axis EGSK/EGSP at right angles on the slide of a basic axis EGSK/EGSP. The assembly axis is one size smaller than the respective basic axis.	38
2	Covering kit EASC-S1	For covering the axis profile that is open at the top. The kit includes a slide adapter EASA-S1.	40
3	Slide adapter EASA-S1	Required to mount the effective load in combination with the covering kit for axis variants with additional slide.	39
4	Sensor strip EAPR-S1-S	• For mounting the inductive proximity sensor SIES-8M on the electric slide. • Switching lugs are included in the scope of delivery.	42
5	Proximity sensor SIES-8M	Inductive proximity sensor, for T-slot.	43
6	Axial kit EAMM-A	For axial motor mounting (comprising: coupling and motor flange).	35
7	Motor EMMS	Motors specially matched to the axis, with or without brake.	35
8	Centring pin ZBS	For centring loads and attachments on the slide.	43
9	Centring pin ZBS	For centring loads and attachments on the slide adapter.	43

Electric slides EGSK

Type codes



Electric slides EGSK

Technical data

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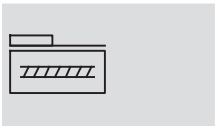
Function



Size
15 ... 46

Stroke length
25 ... 840 mm

General technical data												
Size			15[2]		20		26		33		46	
Spindle pitch			1	2	1	6	2	6	6	10	10	20
	Code[1]											
Constructional design			Electromechanical linear axis with recirculating ball bearing spindle									
Guide			Recirculating ball bearing guide									
Installation position			Any									
Type of mounting for effective load			Female thread									
			Centring sleeve		Locating pin							
Working stroke[3]	–	[mm]	25 ... 100		25 ... 125		50 ... 200		100 ... 600		200 ... 800	
	S	[mm]	–		–		–		130 ... 630		240 ... 840	
Max. feed force	–/H[4]	[N]	36	19	69	72	116	116	150	148	264	192
$F_{x,max}$	P[5]	[N]	57	31	110	133	184	184	239	183	392	343
Max. driving torque	–/H[4]	[Ncm]	0.6	0.6	1.1	6.9	3.7	11	14	24	42	61
$M_{Driving,max}$	P[5]	[Ncm]	0.9	1.0	1.8	13	5.9	18	23	29	62	109
No-load torque	–/H	[Ncm]	0.4	0.4	0.5	0.5	1.5	1.5	7	7	10	10
$M_{No-load}$	P	[Ncm]	0.8	0.8	1.2	1.2	4.0	4.0	15	15	17	17
Max. rotational speed[6]		[1/min]	9,600	9,900	11,400	7,900	8,400	5,900	4,700	4,700	3,100	3,100
Max. speed[6]	–/H	[m/s]	0.16	0.33	0.19	0.79	0.28	0.59	0.47	0.79	0.52	1.05
	P	[m/s]	0.16	0.33	0.19	1.10	0.28	0.83	0.66	1.10	0.74	1.48
Max. acceleration		[m/s²]	10		10		10		20		20	
Homing			Inductive proximity sensor SIES-8M									

1) Variant code ➔ 6
2) Size 15 only comes in the accuracy classes H and P
3) Maximum travel distance ➔ 15
In combination with an additional slide, the working stroke is reduced by the length of the additional slide and the distance between the two slides
4) Loads are based on a service life specification of 5 x 10^8 rotations
5) Loads are based on a service life specification of 1.25 x 10^8 rotations
6) Reduced speeds with sizes 33 and 46 with long strokes ➔ 9

Operating and environmental conditions		
Ambient temperature	[°C]	0 ... +40
Relative air humidity	[%]	0 ... 95 (non-condensing)

Weight [kg]						
Size		15	20	26	33	46
	Code[1]					
Basic weight with 0 mm stroke[2]	–	0.16	0.38	0.78	1.38	5.17
	S	–	–	–	1.28	4.77
Additional weight per 100 mm stroke	–	0.12	0.27	0.42	0.63	1.27
Moving load		0.04	0.07	0.15	0.31	0.91
	S	–	–	–	0.17	0.57
Additional slide Z	–	0.04	0.07	0.15	0.31	0.91
	S	–	–	–	0.17	0.57

1) Variant code ➔ 6
2) Including slide, without additional slide

Electric slides EGSK

FESTO

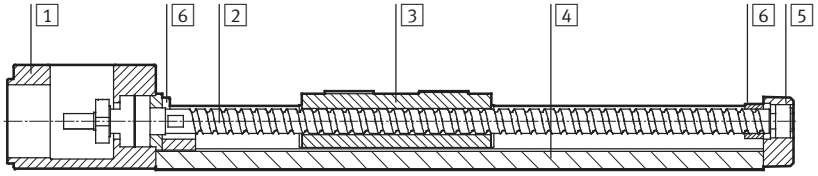
Technical data

Accuracy data [µm]							
Size			15	20	26	33	46
	Stroke	Code[1]					
Repetition accuracy[2]		–	–	±10	±10	±10	±10
		H	±4	±5	±5	±5	±5
		P	±3	±3	±3	±3	±3
Operating parallelism	25 ... 340	H	20	25	25	25	35
	400 ... 540	H	–	–	–	35	35
	600 ... 640	H	–	–	–	40	40
	800 ... 840	H	–	–	–	–	50
	25 ... 340	P	10	10	10	10	15
	400 ... 540	P	–	–	–	15	15
	600 ... 640	P	–	–	–	20	20
Max. reversing play		–	–	20	20	20	20
		H	10	10	10	20	20
		P	2	3	3	3	3

1) Variant code ➔ 6
2) The repetition accuracy that can be achieved with a motor/axis system is also influenced by the angle resolution of the motor and the chosen control parameters. The specified repetition accuracy cannot, therefore, be achieved with all motors.

Materials

Sectional view



Electric slide	
1 Drive cover	Die-cast aluminium, coated
2 Spindle	Steel
3 Slide	Steel
4 Profile	High-alloy steel
5 End cap	Die-cast aluminium, coated
6 Buffer	Ethylene vinyl acetate copolymer
Note on materials	RoHS-compliant
	Contains PWIS (paint-wetting impairment substances)

Mass moment of inertia												
Size			15		20		26		33		46	
Spindle pitch			1	2	1	6	2	6	6	10	10	20
	Code[1]											
J_O		[kg mm²]	0.030	0.033	0.087	0.143	0.355	0.479	1.15	1.65	8.43	15.3
	S	[kg mm²]	–	–	–	–	–	–	0.791	1.07	6.01	10.3
J_S per 100 mm stroke		[kg mm²/100 mm]	0.048		0.099		0.314		0.766		3.877	
J_L per kg effective load		[kg mm²/kg]	0.03	0.10	0.03	0.91	0.10	0.91	0.91	2.53	2.53	10.13
J_W per additional slide		[kg mm²]	0.001	0.004	0.002	0.058	0.016	0.14	0.28	0.79	2.31	9.22
	S	[kg mm²]	–	–	–	–	–	–	0.16	0.43	1.44	5.78

1) Variant code ➔ 6

The mass moment of inertia J_A of the entire axis is calculated as follows:

$$J_A = J_O + J_W + J_S \times \text{working stroke} + J_L \times m_{\text{Effective load}}$$

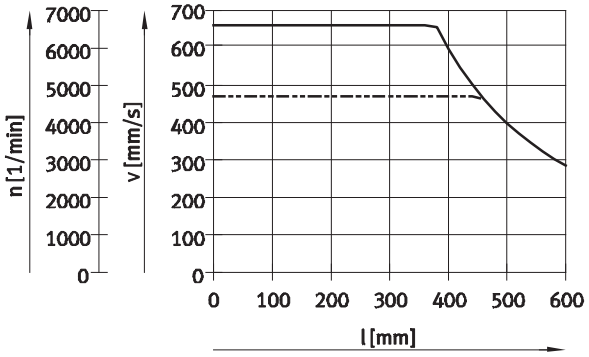
Electric slides EGSK

Technical data

FESTO

Speed v, rotational speed n as a function of working stroke l

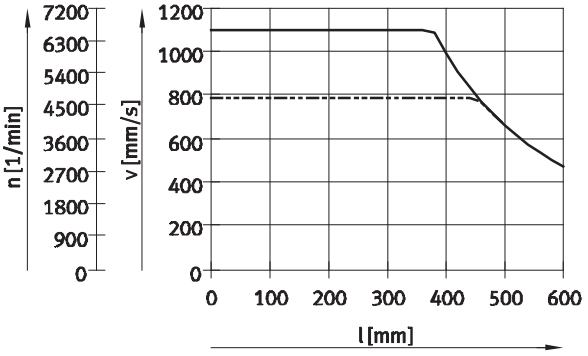
EGSK-33-...-6P



EGSK-33-...-6P-P

EGSK-33-...-6P, EGSK-33-...-6P-H

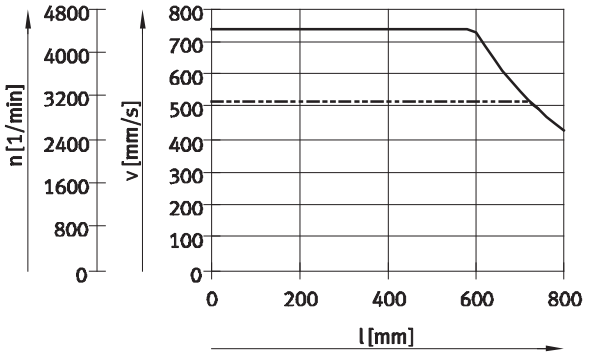
EGSK-33-...-10P



EGSK-33-...-10P-P

EGSK-33-...-10P, EGSK-33-...-10P-H

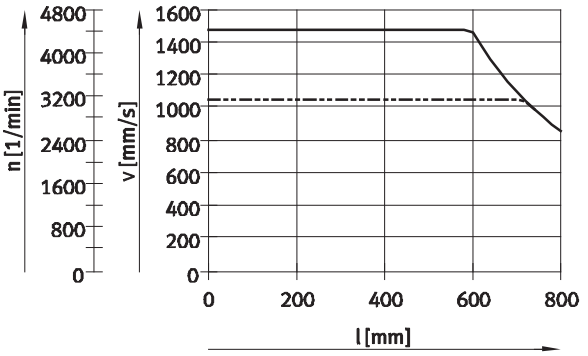
EGSK-46-...-10P



EGSK-46-...-10P-P

EGSK-46-...-10P, EGSK-46-...-10P-H

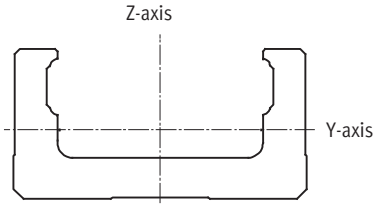
EGSK-46-...-20P



EGSK-46-...-20P-P

EGSK-46-...-20P, EGSK-46-...-20P-H

2nd moment of area



Size		15	20	26	33	46
Iy	[mm^4]	908	6,100	17,000	62,000	240,000
Iz	[mm^4]	14,200	62,000	150,000	380,000	1,500,000

Electric slides EGSK

Technical data

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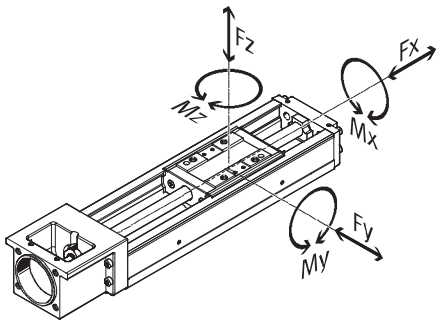
Characteristic load values

The indicated forces and torques refer to the centre axis of the spindle.
The coordinate zero point is the point where the centre of the guide and the longitudinal centre of the slide intersect.



Note

PositioningDrives sizing software
www.festo.com

Permissible dynamic forces and torques[1)]

Size				15[3)]		20		26		33		46	
Spindle pitch				1	2	1	6	2	6	6	10	10	20
	Code[2)]												
$Fy_{max.}$, $Fz_{max.}$	–/H[4)]	–	[N]	747	593	1,389	764	2,223	1,541	2,469	2,083	4,919	3,904
	P[5)]	–	[N]	1,185	941	2,204	1,213	3,528	2,446	3,920	3,306	7,809	6,198
	–/H[4)]	S	[N]	–	–	–	–	–	–	1,043	880	2,514	1,995
	P[5)]	S	[N]	–	–	–	–	–	–	1,656	1,396	3,990	3,167
$Mx_{max.}$	–/H[4)]	–	[Nm]	8.2	6.5	18.1	9.9	37.8	26.2	50.1	42.2	145	115
	P[5)]	–	[Nm]	13	10.3	28.7	15.8	60	41.6	79.5	67.1	231	183
	–/H[4)]	S	[Nm]	–	–	–	–	–	–	21.2	17.8	74.4	59
	P[5)]	S	[Nm]	–	–	–	–	–	–	33.6	28.3	118	93.7
$My_{max.}$, $Mz_{max.}$	–/H[4)]	–	[Nm]	2.3	1.9	5.8	3.2	12.9	8.9	16.4	13.8	48.7	38.7
	P[5)]	–	[Nm]	3.7	2.9	9.2	5.1	20.4	14.1	26	21.9	77.3	61.4
	–/H[4)]	S	[Nm]	–	–	–	–	–	–	3.8	3.2	13.6	10.8
	P[5)]	S	[Nm]	–	–	–	–	–	–	6	5	21.6	17.1

1) Calculated with a speed-dependent load factor f_w of 1.2
2) Variant code ➔ 6
3) Size 15 only comes in the accuracy classes H and P
4) Loads are based on a service life specification of 5 x 10^8 rotations and a load factor f_w of 1.2
5) Loads are based on a service life specification of 1.25 x 10^8 rotations and a load factor f_w of 1.2

Basic load ratings

Size			15[2)]		20		26		33		46	
Spindle pitch			1	2	1	6	2	6	6	10	10	20
	Code[1)]											
Ball screw												
Static $c_{o,ball\ screw}$	–/H	[N]	660	410	1,170	1,450	4,020	3,510	4,900	2,840	6,760	7,150
	P	[N]	660	410	1,170	1,600	4,020	3,900	2,740	1,570	3,720	5,290
Dynamic $c_{dyn,ball\ screw}$	–/H[3)]	[N]	340	230	660	860	2,350	1,950	2,840	1,760	3,140	3,040
	P[3)]	[N]	340	230	660	1,060	2,350	2,390	2,250	1,370	2,940	3,430
Fixed bearing												
Static $c_{o,bearing}$		[N]	290		1,240		1,760		2,590		3,240	
Dynamic $c_{dyn,bearing}$[3)]		[N]	590		1,000		1,380		1,790		6,660	

1) Variant code ➔ 6
2) Size 15 only comes in the accuracy classes H and P
3) Dynamic basic load ratings are based on a basic service life of 10^6 rotations

Electric slides EGSK

Technical data

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Basic load ratings												
Size			15[2]		20		26		33		46	
Spindle pitch			1	2	1	6	2	6	6	10	10	20
	Code[1]											
Linear guide												
Static $c_{o,guide}$	–	[N]	3,450		6,300		12,150		20,200		45,500	
	S	[N]	–		–		–		10,000		22,700	
Dynamic $c_{dyn,guide}$[3]	–	[N]	1,532		2,849		5,746		9,207		21,747	
	S	[N]	–		–		–		3,889		11,112	
Torque equivalence factors												
k_x	–	[1/m]	90.9		76.9		58.8		49.3		33.8	
	S	[1/m]	–		–		–		49.3		33.8	
k_y, k_z	–	[1/m]	319.9		238.7		172.9		151		101	
	S	[1/m]	–		–		–		277.1		185	

1) Variant code ➔ 6
2) Size 15 only comes in the accuracy classes H and P
3) Dynamic basic load ratings are based on a basic service life of 100 km

Speed-dependent load factor fw

fw = 1.0 ... 1.2 (v ≤ 0.25 m/s)
fw = 1.2 ... 1.5 (0.25 m/s ≤ v ≤ 1.0 m/s)
fw = 1.5 ... 2.0 (1.0 m/s ≤ v ≤ 2.0 m/s)
fw = 2.0 ... 3.5 (v ≥ 2.0 m/s)

Calculation of the maximum feed force F_x

$$F_{x,max} = \frac{1}{f_w} \times \frac{Min[C_{dyn,KGT}; C_{dyn,bearing}]}{\sqrt[3]{\frac{L_{ref,rot}}{10^6}}}$$

Calculation of the maximum forces $F_{y/z}$ and torques $M_{x/y/z}$

$$F_{y/z,max} = \frac{1}{f_w} \times \frac{C_{dyn,guide}}{\sqrt[3]{\frac{L_{ref,km}}{100km}}}$$

$$M_{x/y/z,max} = \frac{1}{k_{x/y/z}} \times \frac{1}{f_w} \times \frac{C_{dyn,guide}}{\sqrt[3]{\frac{L_{ref,km}}{100km}}}$$

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Technical data

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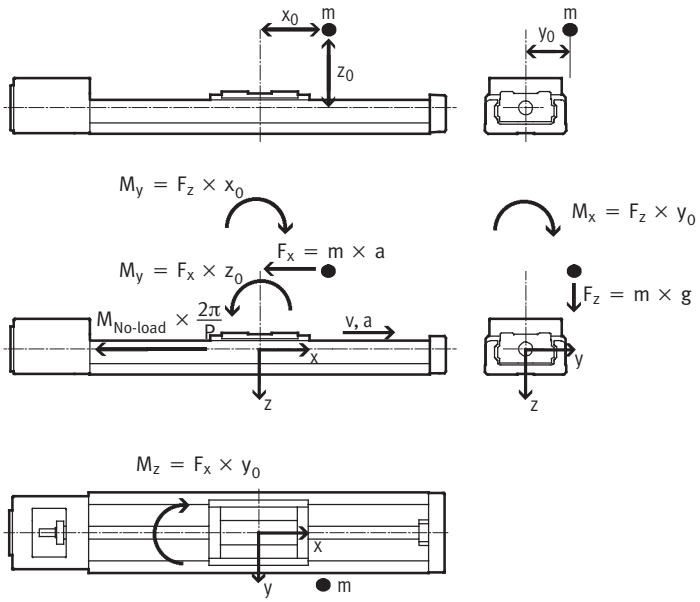
Calculation of the service life

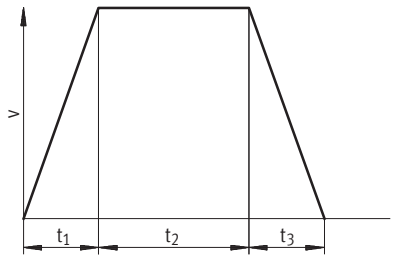
Size			15		20		26		33		46	
Spindle pitch P			1	2	1	6	2	6	6	10	10	20
	Code[1]											
Reference service life in rotations, $L_{ref,rot}$	–/H		5 x 10^8									
	P		1.25 x 10^8									
Reference service life in kilometres, $L_{ref,km}$	–/H	[km]	500	1,000	500	3,000	1,000	3,000	3,000	5,000	5,000	10,000
	P	[km]	125	250	125	750	250	750	750	1,250	1,250	2,500

1) Variant code ➔ 6

1 Representation of the loads



2 Determination of the loads over the travel cycle



$$q_1 = \frac{t_1}{t_{tot}} \qquad q_2 = \frac{t_2}{t_{tot}} \qquad q_3 = \frac{t_3}{t_{tot}}$$

$$t_{tot} = t_1 + t_2 + t_3$$

v	Speed
t_1	Acceleration time
t_2	Constant travel time
t_3	Deceleration time
$q_{1/2/3}$	Relative time of the cycle phases
t_{tot}	Cycle time

Ball screw

For t_1: $F_{x1} = -(m \times a) - (M_{No\text{-}load} \times \frac{2\pi}{P})$

For t_2: $F_{x2} = -(M_{No\text{-}load} \times \frac{2\pi}{P})$

For t_3: $F_{x3} = m \times a - (M_{No\text{-}load} \times \frac{2\pi}{P})$

$$F_{x,dyn} = \sqrt[3]{q_1 \times |F_{x1}|^3 + q_2 \times |F_{x2}|^3 + q_3 \times |F_{x3}|^3}$$

$F_{x1/2/3}$	Calculated force load per cycle phase
$F_{x,dyn}$	Calculated average force load
m	Effective load (centre of gravity)
a	Acceleration
$M_{No\text{-}load}$	No-load torque ➔ 7
P	Spindle pitch ➔ 7
$q_{1/2/3}$	Relative time of the cycle phases

Electric slides EGSK

Technical data

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2 Determination of the loads over the travel cycle

Linear guide

For t_1: a ⟶, v ⟶

$F_{y1} = 0$

$F_{z1} = m \times g$

$M_{x1} = F_z \times y_0 = m \times g \times y_0$

$M_{y1} = -F_z \times x_0 + F_x \times z_0 = -m \times g \times x_0 + m \times a \times z_0$

$M_{z1} = F_x \times y_0 = m \times a \times y_0$

For t_2: a = 0 , v ⟶

$F_{y2} = 0$

$F_{z2} = m \times g$

$M_{x2} = F_z \times y_0 = m \times g \times y_0$

$M_{y2} = -F_z \times x_0 = -m \times g \times x_0$

$M_{z2} = 0$

For t_3: a ⟵, v ⟶

$F_{y3} = 0$

$F_{z3} = m \times g$

$M_{x3} = F_z \times y_0 = m \times g \times y_0$

$M_{y3} = -F_z \times x_0 - F_x \times z_0 = -m \times g \times x_0 - m \times a \times z_0$

$M_{z3} = -F_x \times y_0 = -m \times a \times y_0$

$$F_{y,dyn} = \sqrt[3]{q_1 \times |F_{y1}|^3 + q_2 \times |F_{y2}|^3 + q_3 \times |F_{y3}|^3}$$

$$F_{z,dyn} = \sqrt[3]{q_1 \times |F_{z1}|^3 + q_2 \times |F_{z2}|^3 + q_3 \times |F_{z3}|^3}$$

$$M_{x,dyn} = \sqrt[3]{q_1 \times |M_{x1}|^3 + q_2 \times |M_{x2}|^3 + q_3 \times |M_{x3}|^3}$$

$$M_{y,dyn} = \sqrt[3]{q_1 \times |M_{y1}|^3 + q_2 \times |M_{y2}|^3 + q_3 \times |M_{y3}|^3}$$

$$M_{z,dyn} = \sqrt[3]{q_1 \times |M_{z1}|^3 + q_2 \times |M_{z2}|^3 + q_3 \times |M_{z3}|^3}$$

$F_{y1/2/3}$, $F_{z1/2/3}$	Calculated force load per cycle phase
$M_{x1/2/3}$, $M_{y1/2/3}$, $M_{z1/2/3}$	Calculated torque load per cycle phase
$F_{y/z,dyn}$	Calculated average force load
$M_{x/y/z,dyn}$	Calculated average torque load
m	Effective load (centre of gravity)
g	Gravitational acceleration
a	Acceleration
x_0, y_0, z_0	Distances between the centre of gravity of the effective load and the slide centre point
$q_{1/2/3}$	Relative time of the cycle phases

3 Total load

Ball screw

$$\frac{|F_{x,dyn}|}{F_{x,max}} \leq f_v$$

$F_{x,dyn}$	Calculated average force load
$F_{x,max}$	Max. permissible force load ➔ 7
f_v	Load comparison factor ➔ 14

Linear guide

$$\frac{|F_{y,dyn}|}{F_{y,max}} + \frac{|F_{z,dyn}|}{F_{z,max}} + \frac{|M_{x,dyn}|}{M_{x,max}} + \frac{|M_{y,dyn}|}{M_{y,max}} + \frac{|M_{z,dyn}|}{M_{z,max}} \leq f_v$$

$F_{y/z,dyn}$	Calculated average force load
$F_{y/z,max}$	Max. permissible force load ➔ 10
$M_{x/y/z,dyn}$	Calculated average torque load
$M_{x/y/z,max}$	Max. permissible torque load ➔ 10
f_v	Load comparison factor ➔ 14

Electric slides EGSK

Technical data

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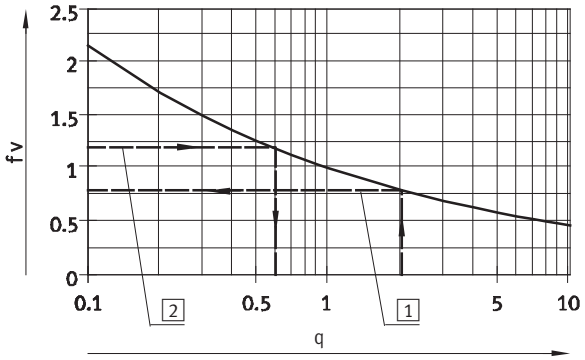
4 Determination of the load comparison factor f_v

$$f_v = \frac{1}{\sqrt[3]{q}} \quad \text{with} \quad q = \frac{L_{calc,km}}{L_{ref,km}} = \frac{L_{calc,rot}}{L_{ref,rot}}$$

for q = 1:
Calculated service life (here desired service life) $L_{calc,km}$ = 1 x reference service life $L_{ref,km}$ gives f_v = 1

for q ≠ 1:
Calculated service life (here desired service life) $L_{calc,km}$ = q x reference service life $L_{ref,km}$ read off (➔ graph) or calculate f_v



1 ➔ Example 1
2 ➔ Example 2

f_v	Load comparison factor
q	Quotient of desired service life divided by reference service life
$L_{calc, km}$	Calculated service life in km
$L_{ref, km}$	Reference service life in km ➔ 12
$L_{calc, rot}$	Calculated service life in rotations
$L_{ref, rot}$	Reference service life in rotations ➔ 12

5 Calculation examples

Example 1:

EGSK-26-...-2P-H-...

$L_{ref,km}$ = 1,000 km
$L_{calc,km}$ = 2,000 km

$$q = \frac{2000km}{1000km} = 2.0$$

$$f_v = \frac{1}{\sqrt[3]{q}} = 0.79$$

Result:
A desired service life of 200% of the reference service life means that the permissible total load must be 21% lower.

Example 2:

If the total load calculation gives a load comparison factor f_v of 1.2, the mathematical service life is only approx. 60% (x = 0.6 ➔ graph) of the reference service life.

$$q = \frac{1}{f_v^3} = 0.58$$

6 Static sizing

Ball screw

$$F_{x,stat} = Max[F_{x1}, F_{x2}, F_{x3}] \leq \frac{c_{o,KGT}}{f_s}$$

$F_{x,stat}$	Maximum value of the calculated force load per cycle phase	$c_{o,KGT}$	Static basic load rating of ball screw ➔ 10
$F_{x1/2/3}$	Calculated force load per cycle phase	f_s	Safety factor against static overload f_s = 1.0 ... 3.0

Linear guide

$$F_{y,stat} = Max[F_{y1}, F_{y2}, F_{y3}] \leq \frac{c_{o,guide}}{f_s}$$

$$F_{z,stat} = Max[F_{z1}, F_{z2}, F_{z3}] \leq \frac{c_{o,guide}}{f_s}$$

$$M_{x,stat} = Max[M_{x1}, M_{x2}, M_{x3}] \leq \frac{1}{k_x} \times \frac{c_{o,guide}}{f_s}$$

$$M_{y,stat} = Max[M_{y1}, M_{y2}, M_{y3}] \leq \frac{1}{k_y} \times \frac{c_{o,guide}}{f_s}$$

$$M_{z,stat} = Max[M_{z1}, M_{z2}, M_{z3}] \leq \frac{1}{k_z} \times \frac{c_{o,guide}}{f_s}$$

$F_{y/z,stat}$	Maximum value of the calculated force load per cycle phase	$M_{x1/2/3}$, $M_{y1/2/3}$, $M_{z1/2/3}$	Calculated torque load per cycle phase
$M_{x/y/z,stat}$	Maximum value of the calculated torque load per cycle phase	$c_{o,guide}$	Static basic load rating of ball screw ➔ 11
$F_{y1/2/3}$, $F_{z1/2/3}$	Calculated force load per cycle phase	$k_{x/y/z}$	Torque equivalence factors ➔ 11
		f_s	Safety factor against static overload f_s = 1.0 ... 3.0

Electric slides EGSK

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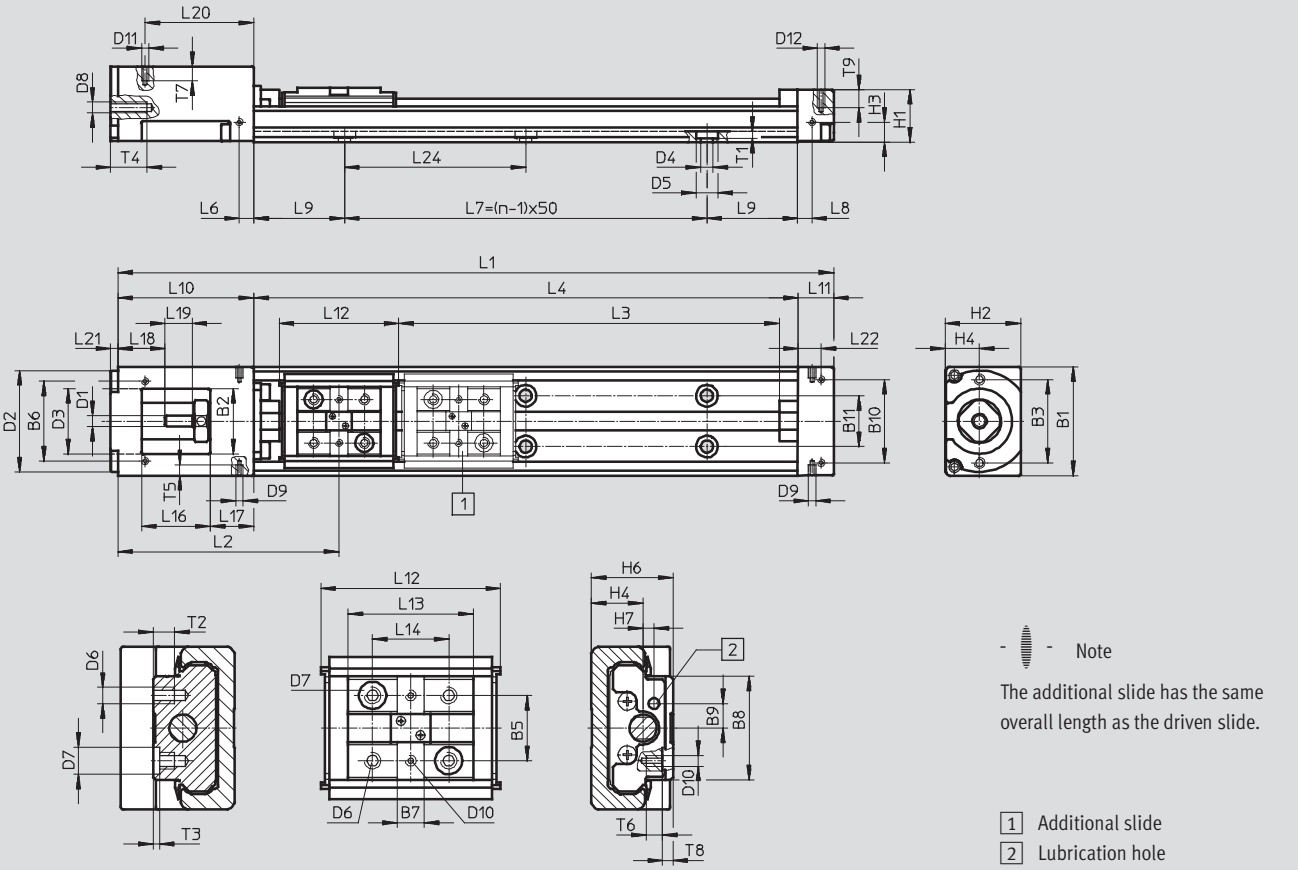
EGSK-15



Size	Stroke	L1	L3 +4	L4	L7	L9	n
15	25	122.5	30	75	50	12.5	2
	50	147.5	55	100	50	25	2
	75	172.5	80	125	100	12.5	3
	100	197.5	105	150	100	25	3

Size	B1	B2	B3 ±0.1	B5 ±0.02	B6 ±0.1	B7	B8	B9	B11	B10 ±0.1	D1 ∅ h6	D2 ∅ g7	D3 ∅	D4 ∅	D5 ∅	D6	D7 ∅ H7	D8
15	30	18	23	12	22	5	19	4.5	14	23	3	28	18	3.4	6	M3	5	M3

Size	D9	D10	D11	D12	H1	H2	H3	H4	H6	H7	L2	L6	L8	L10	L11	L12	L13	L14 ±0.02
15	M2	M2	M2	M2	14.5	20.9	5.5	9.5	15	2	60.3	4	4	37.5	10	33	23	14

Size	L16	L17	L18	L19	L20 ±0.1	L21	L22 ±0.1	L24	T1	T2	T3 +0.1	T4	T5	T6	T7	T8	T9
15	19	12	13	7.5	30	2	6.5	50	2	4	1.2	10	3	3	4	1.9	5

Electric slides EGSK

Technical data

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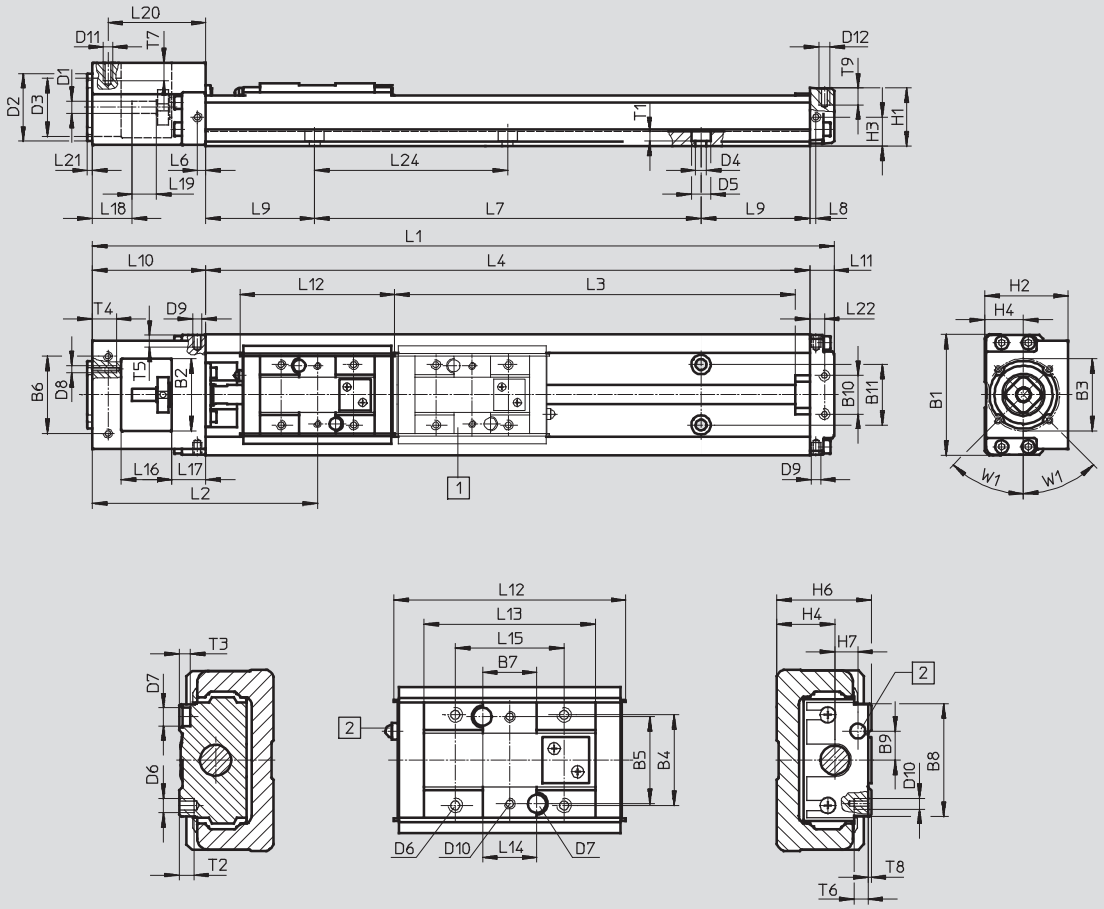
EGSK-20/26



Note

The additional slide has the same overall length as the driven slide.

1 Additional slide

2 Lubrication nipple

Size	Stroke	L1	L3 +4	L4	L7= (n−1)x60	L9	n
20	25	152	40	100	60	20	2
	75	202	90	150	120	15	3
	125	252	140	200	120	40	3

Size	Stroke	L1	L3 +4	L4	L7= (n−1)x80	L9	n
26	50	207	67	150	80	35	2
	100	257	117	200	160	20	3
	150	307	167	250	160	45	3
	200	357	217	300	240	30	4

Electric slides EGSK

Technical data

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Size	B1	B2	B3 ∅	B4	B5 ±0.02	B6 ±0.1	B7	B8	B9	B10 ±0.1	B11	D1 ∅ h7	D2 ∅ g7	D3 ∅
20	40	22	30	18	18	29	10	23	5	18	18	4	28	22
26	50	30	30	25	24	32	15	31	8	16	25	5	28	24

Size	D4 ∅	D5 ∅	D6	D7 ∅ H7	D8	D9	D10	D11	D12	H1	H2	H3	H4	H6
20	3.4	6.5	M3	2	M3	M2.6	M2	M2.5	M2.5	19	28	10	13	20
26	4.5	8	M4	5	M3	M2.6	M3	M2.5	M3	24	34.5	12	16	26

Size	H7	L2	L6	L8	L10	L11	L12	L13	L14[1] ±0.02	L15	L16	L17	L18	L19
20	3.4	72.5	3.5	2.5	42	10	46	33.2	10	20	18	12	16	8
26	6	91	3.5	2.5	47	10	64	47.4	15	30	21	14	16.5	10

Size	L20 ±0.1	L21	L22 ±0.1	L24	T1	T2	T3	T4	T5	T6	T7	T8	T9	W1
20	34.5	2	6.5	60	3	4.5	3	10	4	5	5	0.9	5	45°
26	40.5	2	6	80	4	6.5	3	10	4	6	5	0.9	6	45°

1) Distance between the locating holes

Electric slides EGSK

Technical data

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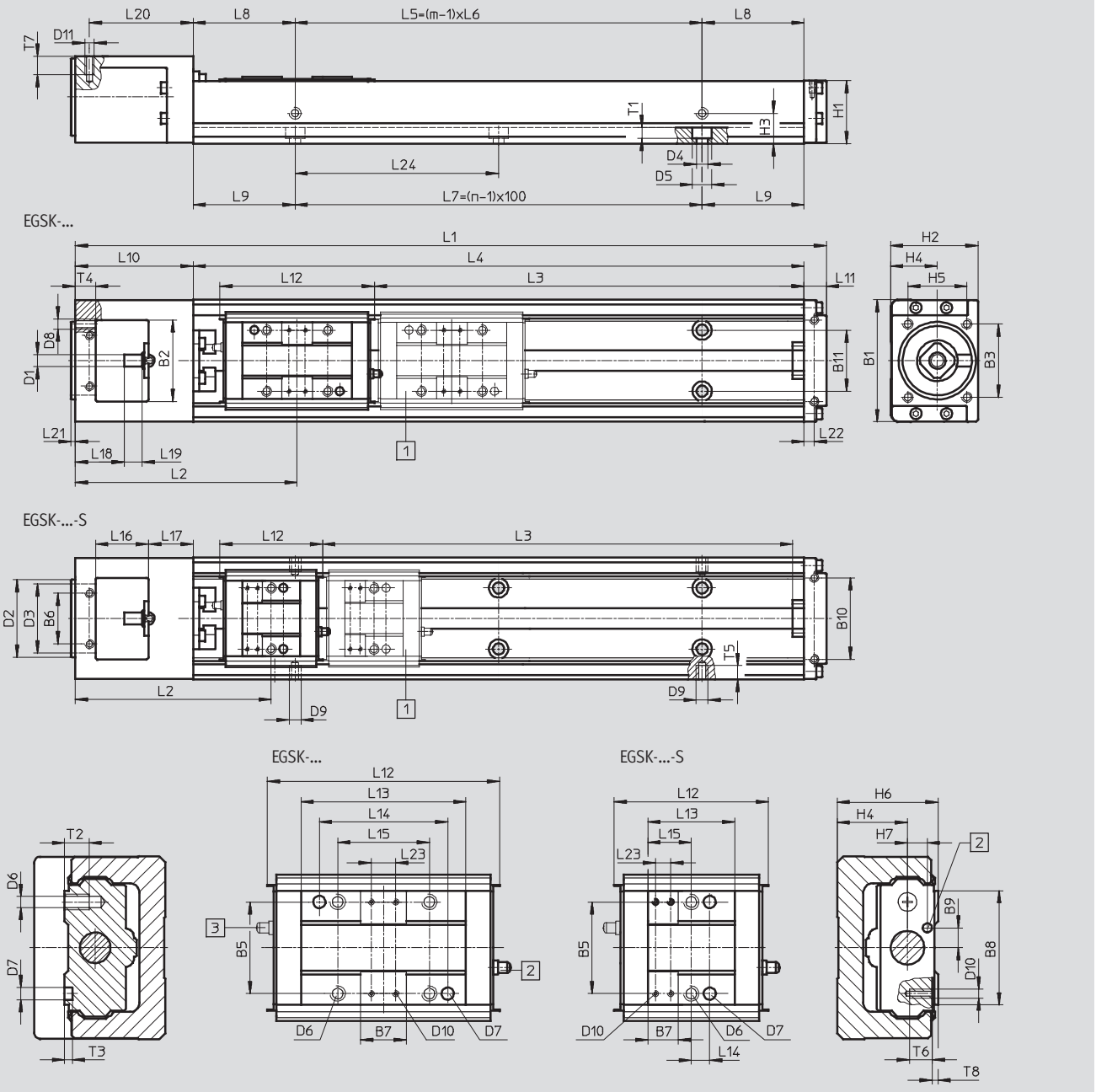
EGSK-33/46



Note

The additional slide has the same overall length as the driven slide.

1 Additional slide
2 Lubrication nipple

3 The lubrication nipple is in the direction of the drive cover on the version with additional slide (EGSK-...-Z)

Electric slides EGSK

Technical data

Size	Stroke	L1	L3 +4		L4	L5	L6	L7	L8	m	n
				S							
33	100	269	110	135	200	100	100	100	50	2	2
	200	369	210	235	300	200	200	200	50	2	3
	300	469	310	335	400	200	200	300	100	2	4
	400	569	410	435	500	400	200	400	50	3	5
	500	669	510	535	600	400	200	500	100	3	6
	600	769	610	635	700	600	200	600	50	4	7

Size	Stroke	L1	L3 +4		L4	L5	L6	L7	L8	m	n
				S							
46	200	425.5	206	244	340	200	200	200	70	2	3
	300	525.5	306	344	440	400	200	300	20	3	4
	400	625.5	406	444	540	400	200	400	70	3	5
	500	725.5	506	544	640	600	200	500	20	4	6
	600	825.5	606	644	740	600	200	600	70	4	7
	800	1,025.5	806	844	940	800	200	800	70	5	9

Size	B1	B2	B3 ±0.1	B5 ±0.04	B6 ±0.1	B7	B8	B9	B10 ±0.1	B11	D1 ∅ h7	D2 ∅ g7	D3 ∅	D4 ∅	D5 ∅
33	60	40	36	30	25	15	37.4	6.5	40	30	6	38	34	5.5	9.5
46	86	48	36	46	42	15	54.4	10	58	46	8	38	34	6.6	11

Size	D6	D7 ∅ H7	D8	D9	D10	D11	H1	H2	H3	H4	H5 ±0.1	H6	H7	L2	
															S
33	M5	4	M5	M2.6	M2	M3	31	43	15	23	29	33	6.5	105	92.3
46	M6	5	M5	M2.6	M2	M4	43.5	60	28	32	29	46	9	142.5	123.8

Size	L9	L10	L11	L12		L13		L14		L15		L16	L17	L18	L19
					S		S	±0.04	S ±0.1		S				
33	50	58	11	76	50.5	54	28.5	42	6	30	14.25	26	22	24	9
46	70	72.5	13	110	72.5	81	43.5	28	11	46	21.75	33.5	25	21.5	18

Size	L20 ±0.1	L21	L22 ±0.1	L23		L24	T1	T2	T3	T4	T5	T6	T7	T8
					S									
33	51	2	5	8	5	100	5.4	8	2.5	10	4	5	6	1
46	65.5	2	3.5	8	8	100	6.5	12	2.5	10	4	5	8	1

Electric slides EGSK

Technical data

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Ordering data – Electric slides with standard slide

Size	Stroke [mm]	Part No.	Type	Part No.	Type
		Spindle pitch 1 mm		Spindle pitch 6 mm	
20	25	**562758**	**EGSK-20-25-1P**	**562761**	**EGSK-20-25-6P**
	75	**562759**	**EGSK-20-75-1P**	**562762**	**EGSK-20-75-6P**
	125	**562760**	**EGSK-20-125-1P**	**562763**	**EGSK-20-125-6P**

Size	Stroke [mm]	Part No.	Type	Part No.	Type
		Spindle pitch 2 mm		Spindle pitch 6 mm	
26	50	**562764**	**EGSK-26-50-2P**	**562768**	**EGSK-26-50-6P**
	100	**562765**	**EGSK-26-100-2P**	**562769**	**EGSK-26-100-6P**
	150	**562766**	**EGSK-26-150-2P**	**562770**	**EGSK-26-150-6P**
	200	**562767**	**EGSK-26-200-2P**	**562771**	**EGSK-26-200-6P**

Size	Stroke [mm]	Part No.	Type	Part No.	Type
		Spindle pitch 6 mm		Spindle pitch 10 mm	
33	100	**562772**	**EGSK-33-100-6P**	**562778**	**EGSK-33-100-10P**
	200	**562773**	**EGSK-33-200-6P**	**562779**	**EGSK-33-200-10P**
	300	**562774**	**EGSK-33-300-6P**	**562780**	**EGSK-33-300-10P**
	400	**562775**	**EGSK-33-400-6P**	**562781**	**EGSK-33-400-10P**
	500	**562776**	**EGSK-33-500-6P**	**562782**	**EGSK-33-500-10P**
	600	**562777**	**EGSK-33-600-6P**	**562783**	**EGSK-33-600-10P**

Size	Stroke [mm]	Part No.	Type	Part No.	Type
		Spindle pitch 10 mm		Spindle pitch 20 mm	
46	200	**562784**	**EGSK-46-200-10P**	**562790**	**EGSK-46-200-20P**
	300	**562785**	**EGSK-46-300-10P**	**562791**	**EGSK-46-300-20P**
	400	**562786**	**EGSK-46-400-10P**	**562792**	**EGSK-46-400-20P**
	500	**562787**	**EGSK-46-500-10P**	**562793**	**EGSK-46-500-20P**
	600	**562788**	**EGSK-46-600-10P**	**562794**	**EGSK-46-600-20P**
	800	**562789**	**EGSK-46-800-10P**	**562795**	**EGSK-46-800-20P**

Electric slides EGSK

Ordering data – Modular products

FESTO

Ordering table

Size			15	20	26	33	46	Condi-tions	Code		Enter code
M	Module No.		**562749**	**562750**	**562751**	**562752**	**562753**				
	Drive function		Electric slide drive						**EGSK**		EGSK
	Size		15	20	26	33	46		**-...**		-...
	Standard stroke for standard slide	[mm]	25		–				**-25**		-...
			50	–	50	–			**-50**		
			75		–				**-75**		
			100	–	100		–		**-100**		
			–	125	–				**-125**		
			–		150	–			**-150**		
			–		200				**-200**		
			–			300			**-300**		
			–			400			**-400**		
			–			500			**-500**		
			–			600			**-600**		
			–				800		**-800**		
	Standard stroke for slide, short	[mm]	–			130	–		**-130**		-...
			–			230	–		**-230**		
			–				240		**-240**		
			–			330	–		**-330**		
			–				340		**-340**		
			–			430	–		**-430**		
			–				440		**-440**		
			–			530	–		**-530**		
			–				540		**-540**		
			–			630	–		**-630**		
			–				640		**-640**		
			–				840		**-840**		
	Spindle pitch	[mm]	1		–				**-1P**		-...
			2	–	2	–			**-2P**		
			–	6			–		**-6P**		
			–	–	–	10			**-10P**		
			–				20		**-20P**		
O	Accuracy		–	Standard accuracy					**-_**		
			Greater accuracy						**-H**		
			Precision accuracy					1	**-P**		
	Slide design		Standard slide						**-_**		
			–			Slide, short			**-S**		
	Additional slide		No additional slide						**-_**		
			Additional slide (additional slide Z in combination with slide design S also results in a short slide)					2	**-Z**		

1 **P** With size 33 not in combination with stroke for standard slide 600 and stroke for slide, short 630
With size 46 not in combination with stroke for standard slide 800 and stroke for slide, short 840

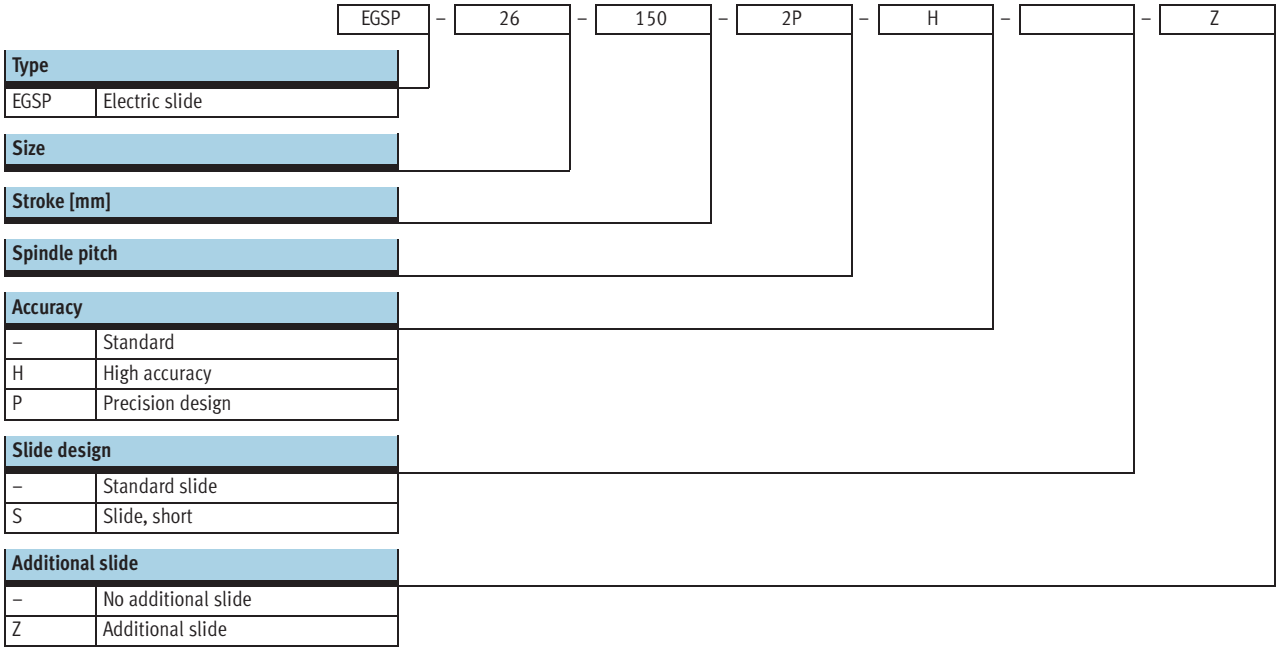
2 **Z** With size 15 not in combination with stroke for standard slide 25 and stroke for standard slide 50
With size 20 not in combination with stroke for standard slide 25
With size 26 not in combination with stroke for standard slide 50
With size 33 not in combination with stroke for standard slide 100

Transfer order code

	EGSK	–		–		–		–		–		–	

Electric slides EGSP

Type codes

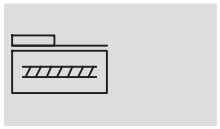


Electric slides EGSP

Technical data

FESTO

Function



Size
20 ... 46

Stroke length
25 ... 840 mm

General technical data											
Size			20		26		33			46	
Spindle pitch			1	6	2	6	6	10	20	10	20
	Code[1]										
Constructional design			Electromechanical linear axis with recirculating ball bearing spindle								
Guide			Recirculating ball bearing guide								
Installation position			Any								
Type of mounting for effective load			Female thread								
			Locating pin								
Working stroke[2]	–	[mm]	25 ... 125		50 ... 200		100 ... 600			200 ... 800	
	S	[mm]	–		–		130 ... 630			240 ... 840	
Max. feed force	–/H[3]	[N]	69	72	168	164	370	227	165	365	267
$F_{x,max}$	P[4]	[N]	87	112	212	212	466	286	208	460	337
Max. driving torque	–/H[3]	[Ncm]	1.1	6.9	5.3	16	35	36	53	58	85
$M_{Driving,max}$	P[4]	[Ncm]	1.4	11	6.7	20	45	46	66	73	107
No-load torque	–/H	[Ncm]	0.5	0.5	1.5	1.5	7	7	7	10	10
$M_{No-load}$	P	[Ncm]	1.2	1.2	4.0	4.0	15	15	15	17	17
Max. rotational speed[5]		[1/min]	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000
Max. speed[5]	–/H	[m/s]	0.1	0.6	0.2	0.6	0.6	1	2	1	2
	P	[m/s]	0.1	0.6	0.2	0.6	0.6	1	2	1	2
Max. acceleration		[m/s²]	10		10		20			20	
Homing			Inductive proximity sensor SIES-8M								

1) Variant code ➔ 22
2) Maximum travel distance ➔ 31
In combination with an additional slide, the working stroke is reduced by the length of the additional slide and the distance between the two slides
3) Loads are based on a service life specification of 5 x 10^8 rotations
4) Loads are based on a service life specification of 2.5 x 10^8 rotations
5) Reduced speeds with sizes 33 and 46 with long strokes ➔ 25

Operating and environmental conditions		
Ambient temperature	[°C]	0 ... +40
Relative air humidity	[%]	0 ... 95 (non-condensing)

Weight [kg]					
Size		20	26	33	46
	Code[1]				
Basic weight with 0 mm stroke[2]	–	0.38	0.78	1.38	3.60
	S	–	–	1.30	3.30
Additional weight per 100 mm stroke	–	0.27	0.42	0.72	1.40
Moving load		0.07	0.15	0.31	0.91
	S	–	–	0.17	0.57
Additional slide Z	–	0.07	0.15	0.31	0.91
	S	–	–	0.17	0.57

1) Variant code ➔ 22
2) Including slide, without additional slide

Electric slides EGSP

Technical data

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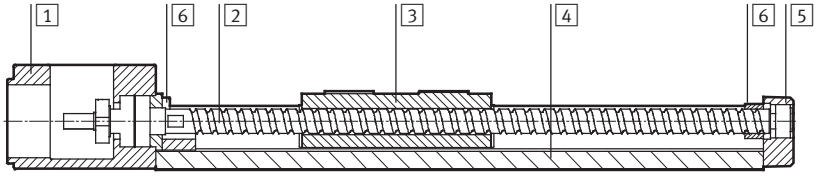
Accuracy data [µm]						
Size			20	26	33	46
	Stroke	Code[1]				
Repetition accuracy[2]		–	±10	±10	±10	±10
		H	±5	±5	±5	±5
		P	±3	±3	±3	±3
Running parallelism	25 … 340	H	25	25	25	35
	400 … 540	H	–	–	35	35
	600 … 640	H	–	–	40	40
	800 … 840	H	–	–	–	50
	25 … 340	P	10	10	10	15
	400 … 540	P	–	–	15	15
	600 … 640	P	–	–	20	20
Max. reversing play		–	20	20	20	20
		H	10	10	20	20
		P	3	3	3	3

1) Variant code → 22
2) The repetition accuracy that can be achieved with a motor/axis system is also influenced by the angle resolution of the motor and the chosen control parameters. The specified repetition accuracy cannot, therefore, be achieved with all motors.

Materials

Sectional view



Electric slide	
1 Drive cover	Die-cast aluminium, coated
2 Spindle	Steel
3 Slide	Steel
4 Profile	High-alloy steel
5 End cap	Die-cast aluminium, coated
6 Buffer	Ethylene vinyl acetate copolymer
Note on materials	RoHS-compliant
	Contains PWIS (paint-wetting impairment substances)

Mass moment of inertia											
Size			20		26		33			46	
Spindle pitch			1	6	2	6	6	10	20	10	20
	Code[1]										
J_O		[kg mm²]	0.087	0.143	0.355	0.479	2.72	3.22	5.57	8.51	15.42
	S	[kg mm²]	–	–	–	–	1.93	2.21	–	6.10	10.43
J_S per 100 mm stroke		[kg mm²/100 mm]	0.099		0.314		0.766			3.877	
J_L per kg effective load		[kg mm²/kg]	0.03	0.91	0.10	0.91	0.91	2.53	10.13	2.53	10.13
J_W per additional slide		[kg mm²]	0.002	0.058	0.016	0.14	0.28	0.79	3.14	2.31	9.22
	S	[kg mm²]	–	–	–	–	0.16	0.43	–	1.44	5.78

1) Variant code → 22

The mass moment of inertia J_A of the entire axis is calculated as follows:

$$J_A = J_O + J_W + J_S \times \text{working stroke} + J_L \times m_{\text{effective load}}$$

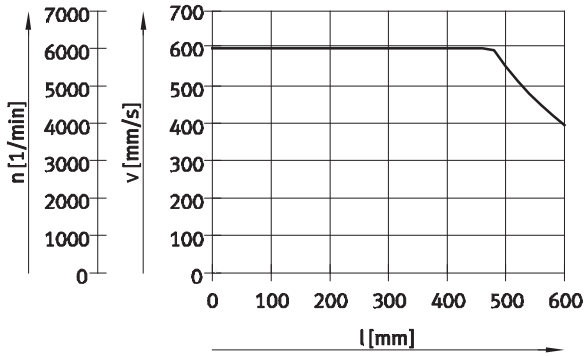
Electric slides EGSP

Technical data

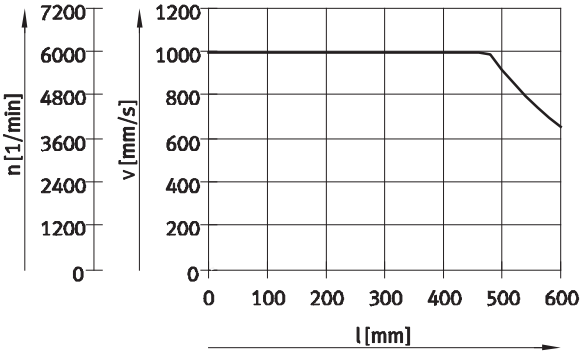
FESTO

Speed v, rotational speed n as a function of working stroke l

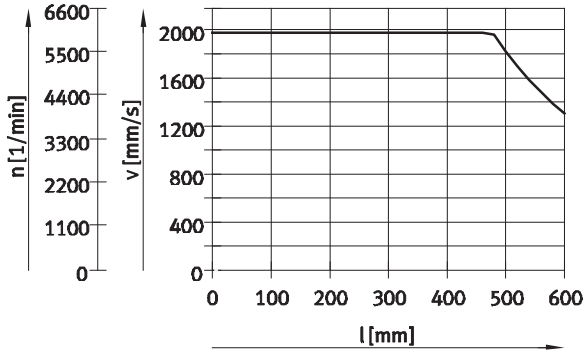
EGSP-33-...-6P



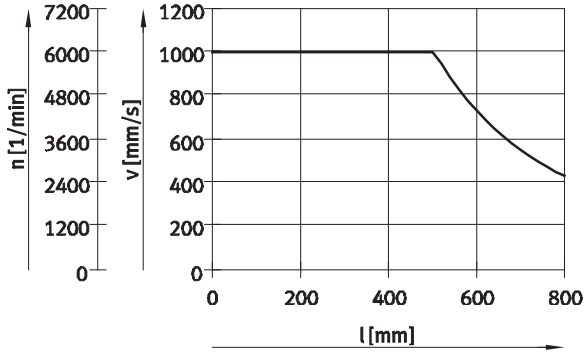
EGSP-33-...-10P



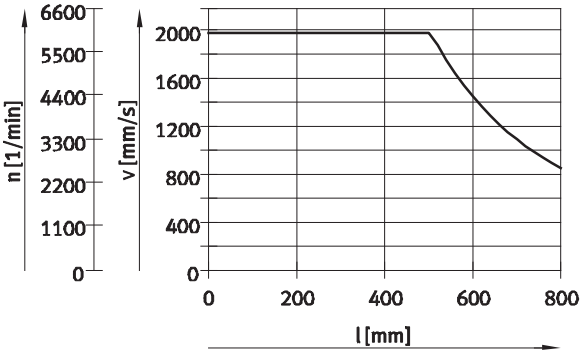
EGSP-33-...-20P



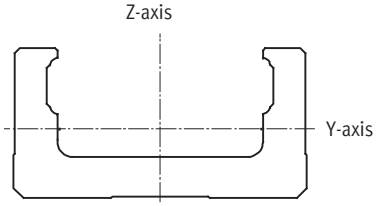
EGSP-46-...-10P



EGSP-46-...-20P



2nd moment of area



Size		20	26	33	46
Iy	[mm^4]	6,000	16,600	53,500	205,000
Iz	[mm^4]	61,400	148,000	352,000	1,450,000

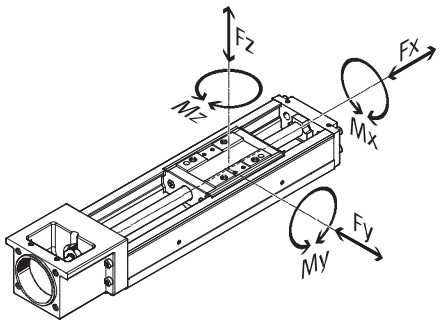
Electric slides EGSP

Technical data

FESTO

Characteristic load values

The indicated forces and torques refer to the centre axis of the spindle.
The coordinate zero point is the point where the centre of the guide and the longitudinal centre of the slide intersect.



Note

PositioningDrives sizing software
www.festo.com

Permissible dynamic forces and torques[1]

Size				20		26		33			46	
Spindle pitch				1	6	2	6	6	10	20	10	20
	Code[2]											
$Fy_{max.}$, $Fz_{max.}$	–/H[3]	–	[N]	2,325	1,279	3,991	2,767	3,619	3,052	2,422	7,092	5,629
	P[4]	–	[N]	2,929	1,612	5,028	3,486	4,559	3,845	3,052	8,935	7,092
	–/H[3]	S	[N]	–	–	–	–	2,405	2,029	–	5,099	4,047
	P[4]	S	[N]	–	–	–	–	3,031	2,556	–	6,424	5,099
$Mx_{max.}$	–/H[3]	–	[Nm]	28.8	15.9	64.7	44.8	71.7	60.4	48.0	205	163
	P[4]	–	[Nm]	36.3	20.0	81.5	56.5	90.3	76.1	60.4	258	205
	–/H[3]	S	[Nm]	–	–	–	–	47.6	40.2	–	147	117
	P[4]	S	[Nm]	–	–	–	–	60.0	50.6	–	186	147
$My_{max.}$, $Mz_{max.}$	–/H[3]	–	[Nm]	9.9	5.5	25.1	17.4	25.5	21.5	17.1	74.6	59.2
	P[4]	–	[Nm]	12.5	6.9	31.6	21.9	32.1	27.1	21.5	94.0	74.6
	–/H[3]	S	[Nm]	–	–	–	–	10.1	8.5	–	34.9	27.7
	P[4]	S	[Nm]	–	–	–	–	12.7	10.7	–	44.0	34.9

1) Calculated with a speed-dependent load factor f_w of 1.2
2) Variant code ➔ 22
3) Loads are based on a service life specification of 5×10^8 rotations and a load factor f_w of 1.2
4) Loads are based on a service life specification of 2.5×10^8 rotations and a load factor f_w of 1.2

Basic load ratings

Size			20		26		33			46	
Spindle pitch			1	6	2	6	6	10	20	10	20
	Code[1]										
Ball screw											
Static $c_{o,ball\ screw}$	–/H	[N]	1,170	1,450	4,020	3,510	6,290	3,780	3,770	6,990	7,040
	P	[N]	1,170	1,600	4,020	3,900	6,290	3,780	3,770	6,990	7,040
Dynamic $c_{dyn,ball\ screw}$	–/H[2]	[N]	660	860	2,350	1,950	4,400	2,700	2,620	4,350	4,240
	P[2]	[N]	660	1,060	2,350	2,390	4,400	2,700	2,620	4,350	4,240
Fixed bearing											
Static $c_{o,bearing}$		[N]	735		1,230		2,700			3,330	
Dynamic $c_{dyn,bearing}$[2]		[N]	1,150		2,000		6,250			6,700	

1) Variant code ➔ 22
2) Dynamic basic load ratings are based on a basic service life of 10^6 rotations

Electric slides EGSP

Technical data

FESTO

Basic load ratings											
Size			20		26		33			46	
Spindle pitch			1	6	2	6	6	10	20	10	20
	Code[1]										
Linear guide											
Static $c_{0,guide}$	–	[N]	8,030		16,500		20,400			45,900	
	S	[N]	–		–		11,500		–	28,700	
Dynamic $c_{dyn,guide}$[2]	–	[N]	4,770		10,318		13,493			31,351	
	S	[N]	–		–		8,969		–	22,541	
Torque equivalence factors											
k_x	–	[1/m]	80.7		61.7		50.5			34.6	
	S	[1/m]	–		–		50.5		–	34.6	
k_y, k_z	–	[1/m]	234.4		159.1		142			95.1	
	S	[1/m]	–		–		239.1		–	146.1	

1) Variant code ➔ 22
2) Dynamic basic load ratings are based on a basic service life of 100 km

Speed-dependent load factor fw

fw = 1.0 ... 1.2 (v ≤ 0.25 m/s)
fw = 1.2 ... 1.5 (0.25 m/s ≤ v ≤ 1.0 m/s)
fw = 1.5 ... 2.0 (1.0 m/s ≤ v ≤ 2.0 m/s)
fw = 2.0 ... 3.5 (v ≥ 2.0 m/s)

Calculation of the maximum feed force F_x

$$F_{x,max} = \frac{1}{f_w} \times \frac{Min[C_{dyn,KGT}; C_{dyn,bearing}]}{\sqrt[3]{\frac{L_{ref,rot}}{10^6}}}$$

Calculation of the maximum forces $F_{y/z}$ and torques $M_{x/y/z}$

$$F_{y/z,max} = \frac{1}{f_w} \times \frac{C_{dyn,guide}}{\sqrt[3]{\frac{L_{ref,km}}{100km}}}$$

$$M_{x/y/z,max} = \frac{1}{k_{x/y/z}} \times \frac{1}{f_w} \times \frac{C_{dyn,guide}}{\sqrt[3]{\frac{L_{ref,km}}{100km}}}$$

Electric slides EGSP

Technical data

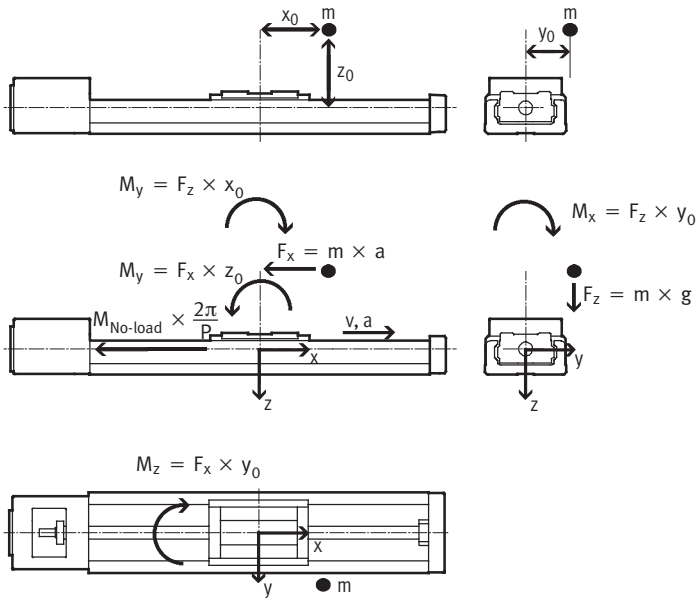
FESTO

Calculation of the service life

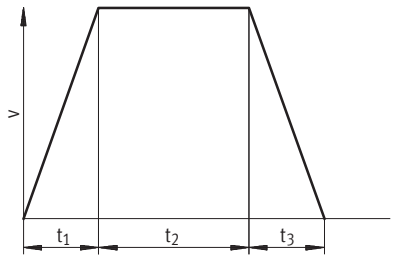
Size			20		26		33			46	
Spindle pitch P			1	6	2	6	6	10	20	10	20
	Code[1]										
Reference service life in rotations, $L_{ref,rot}$	–/H		5×10^8								
	P		2.5×10^8								
Reference service life in kilometres, $L_{ref,km}$	–/H	[km]	500	3,000	1,000	3,000	3,000	5,000	10,000	5,000	10,000
	P	[km]	250	1,500	500	1,500	1,500	2,500	5,000	2,500	5,000

1) Variant code ➔ 22

1 Representation of the loads



2 Determination of the loads over the travel cycle



$$q_1 = \frac{t_1}{t_{tot}} \qquad q_2 = \frac{t_2}{t_{tot}} \qquad q_3 = \frac{t_3}{t_{tot}}$$

$$t_{tot} = t_1 + t_2 + t_3$$

v	Speed
t_1	Acceleration time
t_2	Constant travel time
t_3	Deceleration time
$q_{1/2/3}$	Relative time of the cycle phases
t_{tot}	Cycle time

Ball screw

For t_1: $F_{x1} = -(m \times a) - (M_{No\text{-}load} \times \frac{2\pi}{P})$

For t_2: $F_{x2} = -(M_{No\text{-}load} \times \frac{2\pi}{P})$

For t_3: $F_{x3} = m \times a - (M_{No\text{-}load} \times \frac{2\pi}{P})$

$$F_{x,dyn} = \sqrt[3]{q_1 \times |F_{x1}|^3 + q_2 \times |F_{x2}|^3 + q_3 \times |F_{x3}|^3}$$

$F_{x1/2/3}$	Calculated force load per cycle phase
$F_{x,dyn}$	Calculated average force load
m	Effective load (centre of gravity)
a	Acceleration
$M_{No\text{-}load}$	No-load torque ➔ 23
P	Spindle pitch ➔ 23
$q_{1/2/3}$	Relative time of the cycle phases

Electric slides EGSP

Technical data

FESTO

2 Determination of the loads over the travel cycle

Linear guide

For t_1: a ⟶, v ⟶

$F_{y1} = 0$

$F_{z1} = m \times g$

$M_{x1} = F_z \times y_0 = m \times g \times y_0$

$M_{y1} = -F_z \times x_0 + F_x \times z_0 = -m \times g \times x_0 + m \times a \times z_0$

$M_{z1} = F_x \times y_0 = m \times a \times y_0$

For t_2: a = 0 , v ⟶

$F_{y2} = 0$

$F_{z2} = m \times g$

$M_{x2} = F_z \times y_0 = m \times g \times y_0$

$M_{y2} = -F_z \times x_0 = -m \times g \times x_0$

$M_{z2} = 0$

For t_3: a ⟵, v ⟶

$F_{y3} = 0$

$F_{z3} = m \times g$

$M_{x3} = F_z \times y_0 = m \times g \times y_0$

$M_{y3} = -F_z \times x_0 - F_x \times z_0 = -m \times g \times x_0 - m \times a \times z_0$

$M_{z3} = -F_x \times y_0 = -m \times a \times y_0$

$$F_{y,dyn} = \sqrt[3]{q_1 \times |F_{y1}|^3 + q_2 \times |F_{y2}|^3 + q_3 \times |F_{y3}|^3}$$

$$F_{z,dyn} = \sqrt[3]{q_1 \times |F_{z1}|^3 + q_2 \times |F_{z2}|^3 + q_3 \times |F_{z3}|^3}$$

$$M_{x,dyn} = \sqrt[3]{q_1 \times |M_{x1}|^3 + q_2 \times |M_{x2}|^3 + q_3 \times |M_{x3}|^3}$$

$$M_{y,dyn} = \sqrt[3]{q_1 \times |M_{y1}|^3 + q_2 \times |M_{y2}|^3 + q_3 \times |M_{y3}|^3}$$

$$M_{z,dyn} = \sqrt[3]{q_1 \times |M_{z1}|^3 + q_2 \times |M_{z2}|^3 + q_3 \times |M_{z3}|^3}$$

$F_{y1/2/3}$, $F_{z1/2/3}$	Calculated force load per cycle phase
$M_{x1/2/3}$, $M_{y1/2/3}$, $M_{z1/2/3}$	Calculated torque load per cycle phase
$F_{y/z,dyn}$	Calculated average force load
$M_{x/y/z,dyn}$	Calculated average torque load
m	Effective load (centre of gravity)
g	Gravitational acceleration
a	Acceleration
x_0, y_0, z_0	Distances between the centre of gravity of the effective load and the slide centre point
$q_{1/2/3}$	Relative time of the cycle phases

3 Total load

Ball screw

$$\frac{|F_{x,dyn}|}{F_{x,max}} \leq f_v$$

$F_{x,dyn}$	Calculated average force load
$F_{x,max}$	Max. permissible force load ➔ 23
f_v	Load comparison factor ➔ 30

Linear guide

$$\frac{|F_{y,dyn}|}{F_{y,max}} + \frac{|F_{z,dyn}|}{F_{z,max}} + \frac{|M_{x,dyn}|}{M_{x,max}} + \frac{|M_{y,dyn}|}{M_{y,max}} + \frac{|M_{z,dyn}|}{M_{z,max}} \leq f_v$$

$F_{y/z,dyn}$	Calculated average force load
$F_{y/z,max}$	Max. permissible force load ➔ 26
$M_{x/y/z,dyn}$	Calculated average torque load
$M_{x/y/z,max}$	Max. permissible torque load ➔ 26
f_v	Load comparison factor ➔ 30

Electric slides EGSP

Technical data

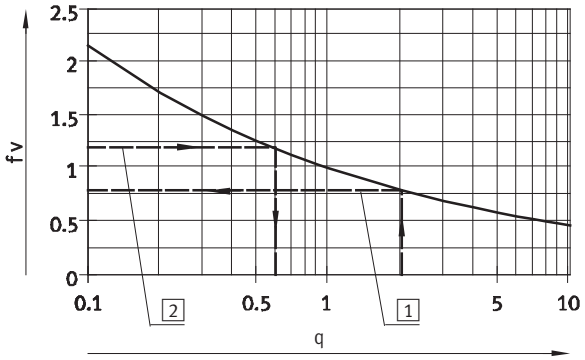
FESTO

4 Determination of the load comparison factor f_v

$$f_v = \frac{1}{\sqrt[3]{q}} \quad \text{with} \quad q = \frac{L_{calc,km}}{L_{ref,km}} = \frac{L_{calc,rot}}{L_{ref,rot}}$$

for q = 1:
Calculated service life (here desired service life) $L_{calc,km}$ = 1 x reference service life $L_{ref,km}$ gives f_v = 1

for q ≠ 1:
Calculated service life (here desired service life) $L_{calc,km}$ = q x reference service life $L_{ref,km}$ read off (➔ graph) or calculate f_v



1 ➔ Example 1
2 ➔ Example 2

f_v	Load comparison factor
q	Quotient of desired service life divided by reference service life
$L_{calc, km}$	Calculated service life in km
$L_{ref, km}$	Reference service life in km ➔ 28
$L_{calc, rot}$	Calculated service life in rotations
$L_{ref, rot}$	Reference service life in rotations ➔ 28

5 Calculation examples

Example 1:

EGSP-26-...-2P-H-...

$L_{ref,km}$ = 1,000 km
$L_{calc,km}$ = 2,000 km

$$q = \frac{2000km}{1000km} = 2.0$$

$$f_v = \frac{1}{\sqrt[3]{q}} = 0.79$$

Result:
A desired service life of 200% of the reference service life means that the permissible total load must be 21% lower.

Example 2:

If the total load calculation gives a load comparison factor f_v of 1.2, the mathematical service life is only approx. 60% (x = 0.6 ➔ graph) of the reference service life.

$$q = \frac{1}{f_v^3} = 0.58$$

6 Static sizing

Ball screw

$$F_{x,stat} = Max[F_{x1}, F_{x2}, F_{x3}] \leq \frac{c_{o,KGT}}{f_s}$$

$F_{x,stat}$	Maximum value of the calculated force load per cycle phase	$c_{o,KGT}$	Static basic load rating of ball screw ➔ 26
$F_{x1/2/3}$	Calculated force load per cycle phase	f_s	Safety factor against static overload f_s = 1.0 ... 3.0

Linear guide

$$F_{y,stat} = Max[F_{y1}, F_{y2}, F_{y3}] \leq \frac{c_{o,guide}}{f_s}$$

$$F_{z,stat} = Max[F_{z1}, F_{z2}, F_{z3}] \leq \frac{c_{o,guide}}{f_s}$$

$$M_{x,stat} = Max[M_{x1}, M_{x2}, M_{x3}] \leq \frac{1}{k_x} \times \frac{c_{o,guide}}{f_s}$$

$$M_{y,stat} = Max[M_{y1}, M_{y2}, M_{y3}] \leq \frac{1}{k_y} \times \frac{c_{o,guide}}{f_s}$$

$$M_{z,stat} = Max[M_{z1}, M_{z2}, M_{z3}] \leq \frac{1}{k_z} \times \frac{c_{o,guide}}{f_s}$$

$F_{y/z,stat}$	Maximum value of the calculated force load per cycle phase	$M_{x1/2/3}$, $M_{y1/2/3}$, $M_{z1/2/3}$	Calculated torque load per cycle phase
$M_{x/y/z,stat}$	Maximum value of the calculated torque load per cycle phase	$c_{o,guide}$	Static basic load rating of ball screw ➔ 27
$F_{y1/2/3}$, $F_{z1/2/3}$	Calculated force load per cycle phase	$k_{x/y/z}$	Torque equivalence factors ➔ 27
		f_s	Safety factor against static overload f_s = 1.0 ... 3.0

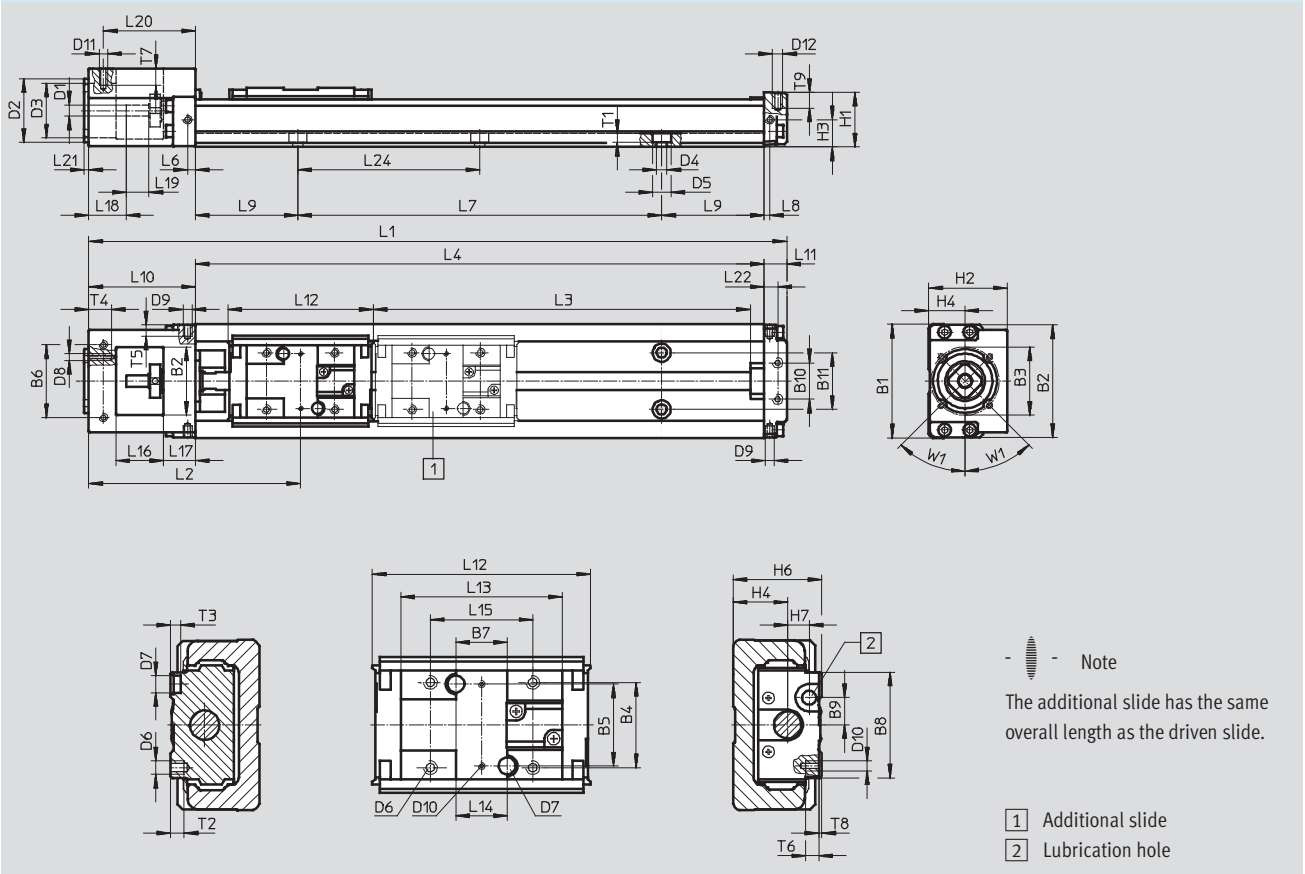
Electric slides EGSP

Technical data

FESTO

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

EGSP-20/26



Size	Stroke	L1	L3 +4	L4	L7= (n−1)x60	L9	n
20	25	152	39	100	60	20	2
	75	202	89	150	120	15	3
	125	252	139	200	120	40	3

Size	Stroke	L1	L3 +4	L4	L7= (n−1)x80	L9	n
26	50	207	67	150	80	35	2
	100	257	117	200	160	20	3
	150	307	167	250	160	45	3
	200	357	217	300	240	30	4

Size	B1	B2	B3 ∅	B4	B5 ±0.02	B6 ±0.1	B7	B8	B9	B10 ±0.1	B11	D1 ∅ h7	D2 ∅ g7	D3 ∅	D4 ∅	D5 ∅	D6	D7 ∅ H7	D8
20	40	22	30	18	18	29	10	23	5.5	18	18	4	28	22	3.4	6.5	M3	2	M3
26	50	30	30	25	24	32	15	31	8	16	25	5	28	24	4.5	8	M4	5	M3

Size	D9	D10	D11	D12	H1	H2	H3	H4	H6	H7	L2	L6	L8	L10	L11	L12	L13	L14[1] ±0.02
20	M2.6	M1.6	M2.5	M2.5	19	28	10	13	20	4	72.8	3.5	2.5	42	10	46	33.2	10
26	M2.6	M2	M2.5	M3	24	34.5	12	16	26	6.3	91.3	3.5	2.5	47	10	64	47.4	15

Size	L15	L16	L17	L18	L19	L20 ±0.1	L21	L22 ±0.1	L24	T1	T2	T3	T4	T5	T6	T7	T8	T9	W1
20	20	18	12	16	8	34.5	2	6.5	60	3	3	3	10	4	2.4	5	0.9	5	45°
26	30	21	14	16.5	10	40.5	2	6	80	4	4	3	10	4	3	5	0.9	6	45°

1) Distance between the locating holes

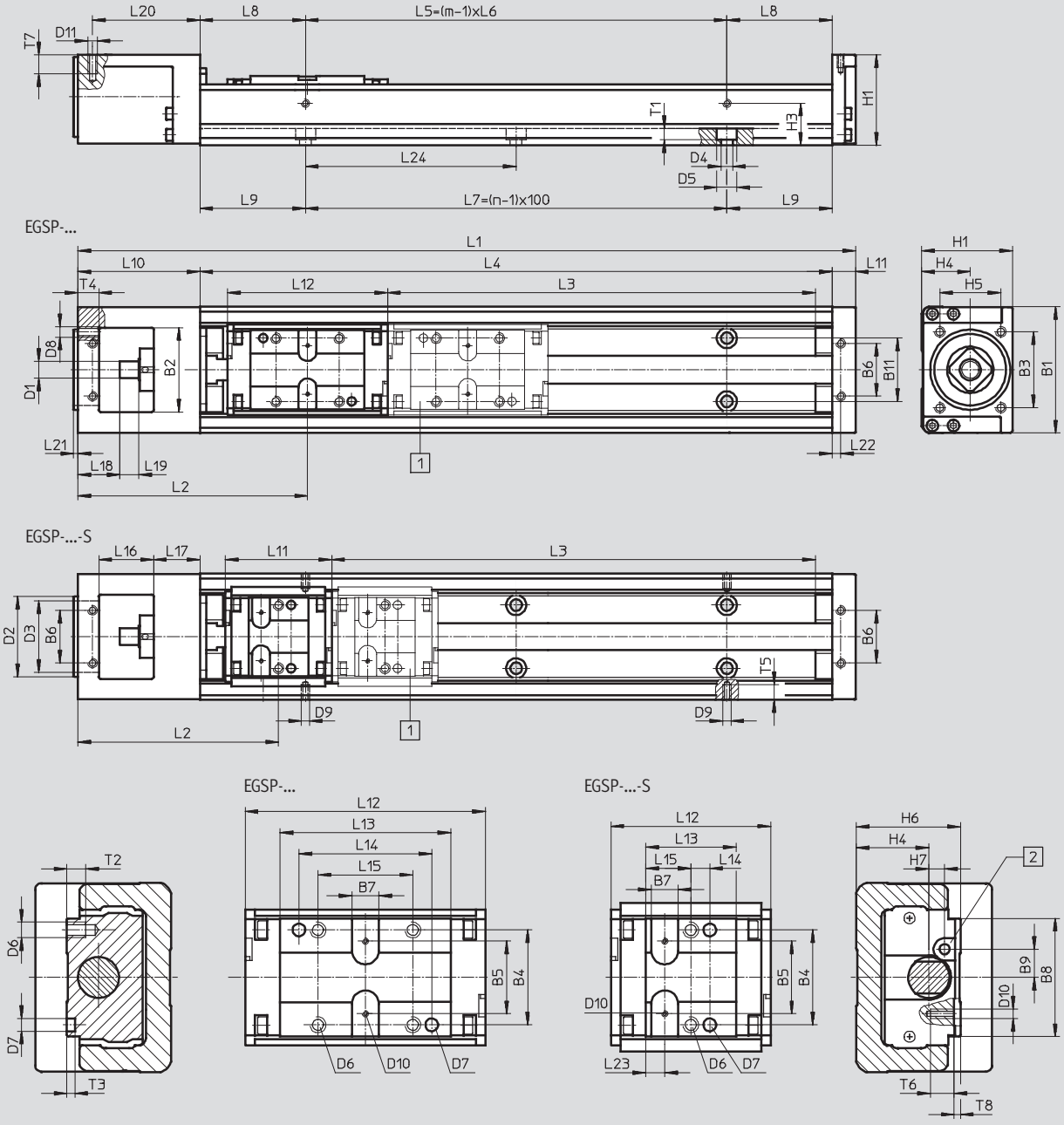
Electric slides EGSP

Technical data

FESTO

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

EGSP-33/46



Note

The additional slide has the same overall length as the driven slide.

1 Additional slide

2 Lubrication hole

Electric slides EGSP

Technical data

FESTO

Size	Stroke	L1	L3 +4		L4	L5	L6	L7	L8	m	n
				S							
33	100	269	103	130	200	100	100	100	50	2	2
	200	369	203	230	300	200	200	200	50	2	3
	300	469	303	330	400	200	200	300	100	2	4
	400	569	403	430	500	400	200	400	50	3	5
	500	669	503	530	600	400	200	500	100	3	6
	600	769	603	630	700	600	200	600	50	4	7

Size	Stroke	L1	L3 +4		L4	L5	L6	L7	L8	m	n
				S							
46	200	425.5	206	240	340	200	200	200	70	2	3
	300	525.5	306	340	440	400	200	300	20	3	4
	400	625.5	406	440	540	400	200	400	70	3	5
	500	725.5	506	540	640	600	200	500	20	4	6
	600	825.5	606	640	740	600	200	600	70	4	7
	800	1,025.5	806	840	940	800	200	800	70	5	9

Size	B1	B2	B3 ±0.1	B4	B5 ±0.04	B6 ±0.1	B7	B8	B9	B10	B11	D1 ∅ h7	D2 ∅ g7	D3 ∅	D4 ∅
33	60	40	36	30	30	25	8.5	37.4	8.9	23	30	8	38	34	5.5
46	86	48	36	46	46	42	10	54.4	10	46	46	10	38	34	6.6

Size	D5 ∅	D6	D7 ∅ H7	D8	D9	D10	D11	H1	H3	H4	H5 ±0.1	H6	H7	L2	
															S
33	9.5	M5	4	M5	M2.6	M2	M3	43	20	23	29	33	5	107	94.3
46	11	M6	5	M5	M2.6	M2	M4	60	29	32	29	46	8	140	123.5

Size	L9	L10	L11	L12		L13		L14		L15		L16	L17	L18	L19
					S		S	±0.04	S ±0.1		S				
33	50	58	11	76	50.5	54	28.5	42	6	30	14.25	26	22	20	9
46	70	72.5	13	110	77	81	48	28	11	46	24	33.5	25	19.5	18

Size	L20 ±0.1	L21	L22 ±0.1	L24	T1	T2	T3	T4	T5	T6	T7	T8
33	51	2	4	100	5.4	6	2.5	10	3.5	5	6	2
46	65.5	2	6	100	6.5	9	2.5	10	4	5	8	2

Electric slides EGSP

Ordering data – Modular products

FESTO

Ordering table

	Size	20	26	33	46	Condi-tions	Code		Enter code
M	Module No.	**562754**	**562755**	**562756**	**562757**				
	Drive function	Electric slide drive, with caged balls					**EGSP**		EGSP
	Size	20	26	33	46		**-...**		-...
	Standard stroke [mm] for standard slide	25	–				**-25**		-...
		–	50	–			**-50**		
		75	–				**-75**		
		–	100		–		**-100**		
		125	–				**-125**		
		–	150	–			**-150**		
		–	200				**-200**		
		–		300			**-300**		
		–		400			**-400**		
		–		500			**-500**		
		–		600			**-600**		
		–			800		**-800**		
	Standard stroke [mm] for slide, short	–		130	–		**-130**		-...
		–		230	–		**-230**		
		–			240		**-240**		
		–		330	–		**-330**		
		–			340		**-340**		
		–		430	–		**-430**		
		–			440		**-440**		
		–		530	–		**-530**		
		–			540		**-540**		
		–		630	–		**-630**		
		–			640		**-640**		
		–			840		**-840**		
	Spindle pitch [mm]	1	–				**-1P**		-...
		–	2	–			**-2P**		
		6			–		**-6P**		
		–	–	10			**-10P**		
		20		20			**-20P**		
O	Accuracy	Standard accuracy							
		Greater accuracy					**-H**		
		Precision accuracy				1	**-P**		
	Slide design	Standard slide					**-_**		
		–		Slide, short		2	**-S**		
	Additional slide	No additional slide					**-_**		
		Additional slide (additional slide Z in combination with slide design S also results in a short slide)				3	**-Z**		

1 **P** With size 46 not in combination with stroke for standard slide 800 and stroke for slide, short 840

2 **S** With size 33 not in combination with spindle pitch 20

3 **Z** With size 20 not in combination with stroke for standard slide 25
With size 26 not in combination with stroke for standard slide 50
With size 33 not in combination with stroke for standard slide 100

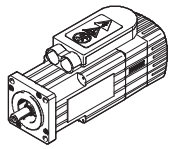
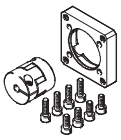
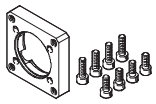
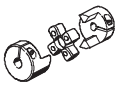
Transfer order code

	EGSP	–		–		–		–		–		–		–	

Electric slides EGSK/EGSP

Accessories

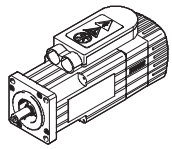
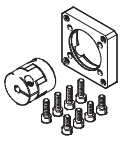
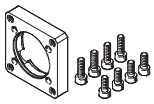
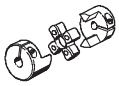
FESTO

Permissible axis/motor combinations with axial kit – without gear unit			
Motor	Axial kit	Axial kit comprising:	
		Motor flange	Coupling
			
Type	Part No. Type	Part No. Type	Part No. Type
EGSK-20/EGSP-20			
With servo motor			
EMMS-AS-40-M-...	**562637** **EAMM-A-P4-28B-40A**	**552163** **EAMF-A-28B-40A**	**562673** **EAMC-16-20-4-6**
With stepper motor			
EMMS-ST-42-S-...	**562636** **EAMM-A-P4-28B-42A**	**552164** **EAMF-A-28B-42A**	**562674** **EAMC-16-20-4-5**
EGSK-26/EGSP-26			
With servo motor			
EMMS-AS-40-M-...	**562641** **EAMM-A-P5-28B-40A**	**552163** **EAMF-A-28B-40A**	**543419** **EAMC-16-20-5-6**
With stepper motor			
EMMS-ST-42-S-...	**562640** **EAMM-A-P5-28B-42A**	**552164** **EAMF-A-28B-42A**	**562676** **EAMC-16-20-5-5**
EGSK-33			
With servo motor			
EMMS-AS-40-M-...	**562646** **EAMM-A-P6-38A-40A**	**562667** **EAMF-A-38A-40A**	**558312** **EAMC-30-32-6-6**
EMMS-AS-55-S-...	**562647** **EAMM-A-P6-38A-55A**	**558176** **EAMF-A-38A-55A**	**551003** **EAMC-30-32-6-9**
With stepper motor			
EMMS-ST-42-S-...	**562644** **EAMM-A-P6-38A-42A**	**562668** **EAMF-A-38A-42A**	**561333** **EAMC-30-32-5-6**
EMMS-ST-57-S-...	**562645** **EAMM-A-P6-38A-57A**	**560692** **EAMF-A-38A-57A**	**551002** **EAMC-30-32-6-6.35**
EGSK-46/EGSP-33			
With servo motor			
EMMS-AS-40-M-...	**562652** **EAMM-A-P8-38A-40A**	**562667** **EAMF-A-38A-40A**	**533708** **EAMC-30-32-6-8**
EMMS-AS-55-S-...	**562653** **EAMM-A-P8-38A-55A**	**558176** **EAMF-A-38A-55A**	**543423** **EAMC-30-32-8-9**
EMMS-AS-70-S-...	**564996** **EAMM-A-P8-38A-70A**	**558018** **EAMF-A-38A-70A**	**551004** **EAMC-30-32-8-11**
With stepper motor			
EMMS-ST-42-S-...	**562650** **EAMM-A-P8-38A-42A**	**562668** **EAMF-A-38A-42A**	**562678** **EAMC-30-32-5-8**
EMMS-ST-57-S-...	**562651** **EAMM-A-P8-38A-57A**	**560692** **EAMF-A-38A-57A**	**543421** **EAMC-30-32-6.35-8**
EMMS-ST-87-S-...	**564998** **EAMM-A-P8-38A-87A**	**560693** **EAMF-A-38A-87A**	**551004** **EAMC-30-32-8-11**

Electric slides EGSK/EGSP

Accessories

FESTO

Permissible axis/motor combinations with axial kit – without gear unit			
Motor	Axial kit	Axial kit comprising:	
		Motor flange	Coupling
			
Type	Part No. Type	Part No. Type	Part No. Type
EGSP-46			
With servo motor			
EMMS-AS-55-S-...	**562659** **EAMM-A-P10-38A-55A**	**558176** **EAMF-A-38A-55A**	**562680** **EAMC-30-32-9-10**
EMMS-AS-70-S-...	**564997** **EAMM-A-P10-38A-70A**	**558018** **EAMF-A-38A-70A**	**565008** **EAMC-30-32-10-11**
With stepper motor			
EMMS-ST-57-S-...	**562658** **EAMM-A-P10-38A-57A**	**560692** **EAMF-A-38A-57A**	**562679** **EAMC-30-32-6.35-10**
EMMS-ST-87-S-...	**564999** **EAMM-A-P10-38A-87A**	**560693** **EAMF-A-38A-87A**	**565008** **EAMC-30-32-10-11**

Electric slides EGSK/EGSP

Accessories

FESTO

Axial kit EAMM-A-...

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

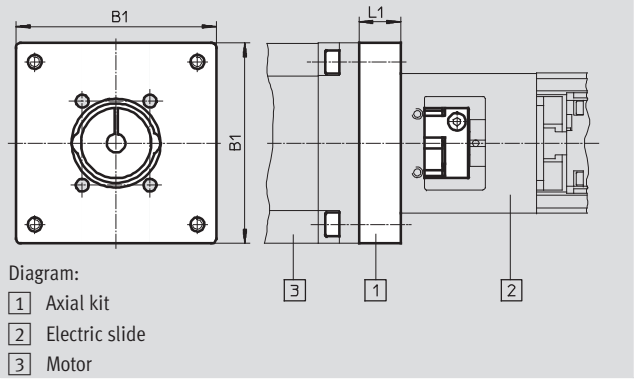


Diagram:
1 Axial kit
2 Electric slide
3 Motor

General technical data									
EAMM-A-...		P4-28B-		P5-28B-		P6-38A-			
		40A	42A	40A	42A	40A	42A	55A	57A
Transferable torque	[Nm]	0.7	0.7	1.1	1.1	6.5	3.5	6.5	6.5
Mass moment of inertia	[kgmm²]	0.28				5.88			
Max. rotational speed	[1/min]	10,000				8,000			
Installation position		Any							

EAMM-A-...		P8-38A-						P10-38A-			
		40A	42A	55A	57A	70A	87A	55A	57A	70A	87A
Transferable torque	[Nm]	6.5	3.5	12.5	6.5	12.5	12.5	12.5	6.5	12.5	12.5
Mass moment of inertia	[kgmm²]	5.88									
Max. rotational speed	[1/min]	8,000									
Installation position		Any									

Operating and environmental conditions		
Ambient temperature	[°C]	0 ... +50
Storage temperature	[°C]	–25 ... +60
Relative air humidity	[%]	0 ... 95 (non-condensing)

Dimensions and ordering data

Type	B1	L1	Weight [g]	Part No.	Type
EAMM-A-P4-28B-40A	40	8.3	50	**562637**	**EAMM-A-P4-28B-40A**
EAMM-A-P5-28B-40A				**562641**	**EAMM-A-P5-28B-40A**
EAMM-A-P4-28B-42A	42	16.5	60	**562636**	**EAMM-A-P4-28B-42A**
EAMM-A-P5-28B-42A				**562640**	**EAMM-A-P5-28B-42A**
EAMM-A-P6-38A-40A	50	9	100	**562646**	**EAMM-A-P6-38A-40A**
EAMM-A-P8-38A-40A				**562652**	**EAMM-A-P8-38A-40A**
EAMM-A-P6-38A-42A	55	15	160	**562644**	**EAMM-A-P6-38A-42A**
EAMM-A-P8-38A-42A				**562650**	**EAMM-A-P8-38A-42A**
EAMM-A-P6-38A-55A	55	11	130	**562647**	**EAMM-A-P6-38A-55A**
EAMM-A-P8-38A-55A				**562653**	**EAMM-A-P8-38A-55A**
EAMM-A-P10-38A-55A				**562659**	**EAMM-A-P10-38A-55A**
EAMM-A-P6-38A-57A	56	11	130	**562645**	**EAMM-A-P6-38A-57A**
EAMM-A-P8-38A-57A				**562651**	**EAMM-A-P8-38A-57A**
EAMM-A-P10-38A-57A				**562658**	**EAMM-A-P10-38A-57A**
EAMM-A-P8-38A-70A	70	13.75	200	**564996**	**EAMM-A-P8-38A-70A**
EAMM-A-P10-38A-70A				**564997**	**EAMM-A-P10-38A-70A**
EAMM-A-P8-38A-87A	85.8	18	380	**564998**	**EAMM-A-P8-38A-87A**
EAMM-A-P10-38A-87A				**564999**	**EAMM-A-P10-38A-87A**

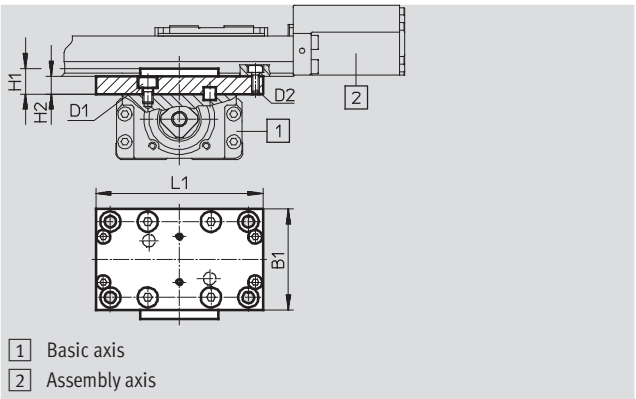
Electric slides EGSK/EGSP

Accessories

FESTO

Cross connecting kit EHAM

Material:
Adapter plate: Anodised aluminium
Screws, locating pins: Steel
RoHS-compliant



Dimensions and ordering data

For size		B1	D1	D2	H1	H2	L1	Weight	Part No.	Type
Basic axis [1]	Assembly axis [2]	±0.2					±0.2	[g]		
20	15	30	M3	M3	7	5	56	27	**563747**	**EHAM-S1-20-15**
26	20	40	M4	M3	10	7	66	59	**563748**	**EHAM-S1-26-20**
33	26	54	M5	M4	12	9	86	124	**563749**	**EHAM-S1-33-26**
46	33	60	M6	M5	15	10	112	216	**563750**	**EHAM-S1-46-33**

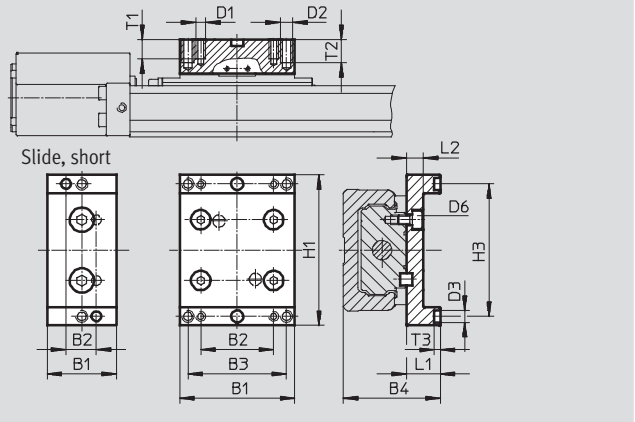
Electric slides EGSK/EGSP

Accessories

FESTO

Slide adapter EASA

Material:
Adapter plate: Anodised aluminium
Screws, locating pins: Steel
RoHS-compliant



Dimensions and ordering data

For size	B1 ±0.2	B2	B3	B4	D1	D2	D3 ∅ H7	D6	H1 ±0.2	H3 ±0.04
With standard slide										
15	23	14	–	25	M3	–	4	M3	44	38
20	33.2	23		32	M3		2	M3	52	44.5
26	47.4	30		40	M4		5	M4	62	54.5
33	54	40		48	M5		4	M5	86	74
46	81	30	48	68	M5	M6	5	M6	112	100
With slide, short										
33	28.5	12.5±0.04	–	48	M5	–	4	M5	86	74
46	48	22±0.04		68	M6		5	M6	112	100

For size	L1	L2	T1	T2	T3 ±0.1	Weight [g]	Part No.	Type
With standard slide								
15	10	5.4	6	–	2.5	20	**562742**	**EASA-S1-15**
20	12	6	6		2.5	38	**562743**	**EASA-S1-20**
26	14	7	8		2.5	74	**562744**	**EASA-S1-26**
33	15	9	15		2.6	130	**562745**	**EASA-S1-33**
46	22	10	10	12	2.6	310	**562746**	**EASA-S1-46**
With slide, short								
33	15	9	15	–	2.6	70	**562747**	**EASA-S1-33-S**
46	22	10	12		2.6	180	**562748**	**EASA-S1-46-S**

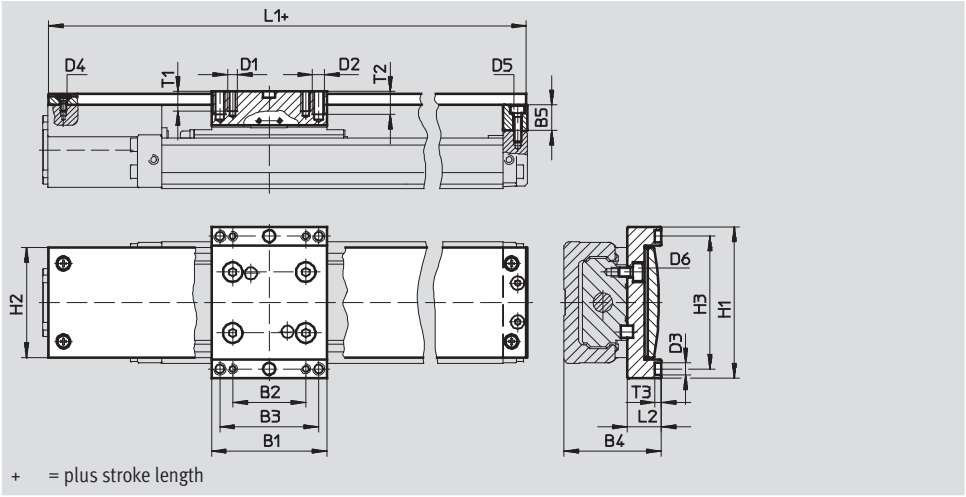
Electric slides EGSK/EGSP

Accessories

FESTO

Covering kit EASC
for standard slide

Material:
Cover profile, adapter plate, adapter:
Anodised aluminium
Screws, locating pins: Steel
RoHS-compliant



\+ = plus stroke length

Dimensions

For size	B1 ±0.2	B2	B3	B4	B5	D1	D2	D3 ∅ H7	D4	D5
15	23	14	–	25	6.5	M3	–	4	M2	M2
20	33.2	23		32	9	M3		2	M2.5	M2.5
26	47.4	30		40	10.5	M4		5	M2.5	M3
33	54	40		48	7	M5		4	M3	M3
46	81	30	48	68	10	M5	M6	5	M4	M4

For size	D6	H1 ±0.2	H2 ±0.2	H3 ±0.04	L1 –0.3	L2	T1	T2	T3 +0.1
15	M3	44	30	38	96.7	10	6	–	2.5
20	M3	52	35.6	44.5	126.2	12	6		2.5
26	M4	62	45	54.5	156.2	14	8		2.5
33	M5	86	62.5	74	168.2	15	15		2.6
46	M6	112	82.4	100	224.7	22	10	12	2.6

Ordering data

For size	Stroke [mm]	Weight [g]	Part No.	Type
15	25	51	**562707**	**EASC-S1-15-25**
	50	57	**562708**	**EASC-S1-15-50**
	75	62	**562709**	**EASC-S1-15-75**
	100	67	**562710**	**EASC-S1-15-100**
20	25	92	**562711**	**EASC-S1-20-25**
	75	107	**562712**	**EASC-S1-20-75**
	125	121	**562713**	**EASC-S1-20-125**
26	50	187	**562714**	**EASC-S1-26-50**
	100	211	**562715**	**EASC-S1-26-100**
	150	234	**562716**	**EASC-S1-26-150**
	200	258	**562717**	**EASC-S1-26-200**

For size	Stroke [mm]	Weight [g]	Part No.	Type
33	100	327	**562718**	**EASC-S1-33-100**
	200	391	**562719**	**EASC-S1-33-200**
	300	454	**562720**	**EASC-S1-33-300**
	400	518	**562721**	**EASC-S1-33-400**
	500	581	**562722**	**EASC-S1-33-500**
	600	645	**562723**	**EASC-S1-33-600**
46	200	850	**562724**	**EASC-S1-46-200**
	300	965	**562725**	**EASC-S1-46-300**
	400	1,080	**562726**	**EASC-S1-46-400**
	500	1,200	**562727**	**EASC-S1-46-500**
	600	1,310	**562728**	**EASC-S1-46-600**
	800	1,540	**562729**	**EASC-S1-46-800**

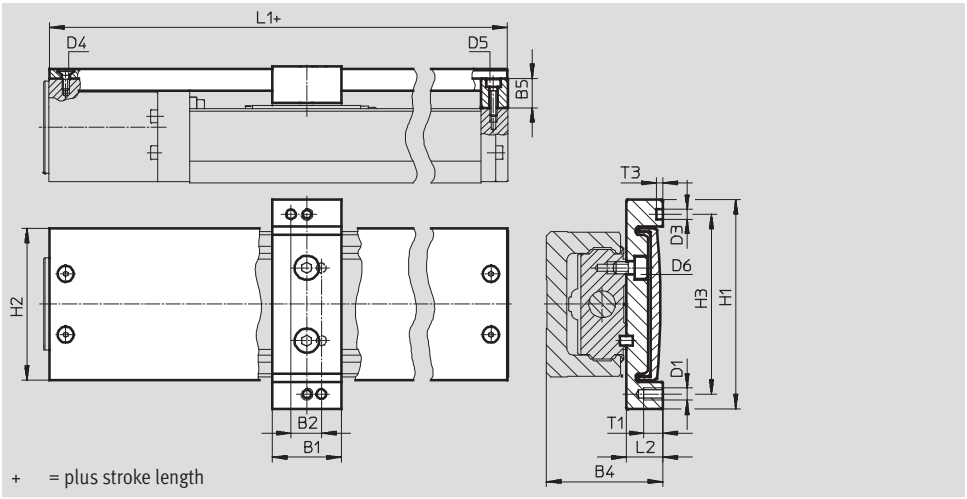
Electric slides EGSK/EGSP

Accessories

FESTO

Covering kit EASC
for slide, short

Material:
Cover profile, adapter plate, adapter:
Anodised aluminium
Screws, locating pins: Steel
RoHS-compliant



Dimensions								
For size	B1 ±0.2	B2 ±0.04	B4	B5	D1	D3 ∅ H7	D4	D5
33	28.5	12.5	48	7	M5	4	M3	M3
46	48	22	68	10	M6	5	M4	M4

For size	D6	H1 ±0.2	H2 ±0.2	H3 ±0.04	L1 −0.3	L2	T1	T3 +0.1
33	M5	86	62.5	74	138.2	15	15	2.6
46	M6	112	82.4	100	184.7	22	12	2.6

Ordering data				
For size	Stroke [mm]	Weight [g]	Part No.	Type
33	130	263	**562730**	**EASC-S1-33-130-S**
	230	328	**562731**	**EASC-S1-33-230-S**
	330	391	**562732**	**EASC-S1-33-330-S**
	430	454	**562733**	**EASC-S1-33-430-S**
	530	518	**562734**	**EASC-S1-33-530-S**
	630	581	**562735**	**EASC-S1-33-630-S**
46	240	724	**562736**	**EASC-S1-46-240-S**
	340	840	**562737**	**EASC-S1-46-340-S**
	440	955	**562738**	**EASC-S1-46-440-S**
	540	1,070	**562739**	**EASC-S1-46-540-S**
	640	1,190	**562740**	**EASC-S1-46-640-S**
	840	1,420	**562741**	**EASC-S1-46-840-S**

Electric slides EGSK/EGSP

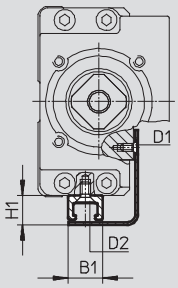
Accessories

FESTO

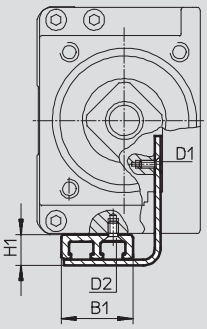
Sensor strip EAPR

Material:
Sensor bracket: Anodised aluminium
Switching lug, screws:
Galvanised steel
RoHS-compliant

EAPR-S1-S-15/20/26



EAPR-S1-S-33/46



Dimensions						
For size / For type	B1	H1		D1		D2
		EGSK	EGSP	EGSK	EGSP	
With standard slide						
15	9	8.5	–	M2	–	M2
20		7.75	7.75		M1.6	M2.5
26				M3	M2	
33	19	7.75	8.5	M2	M2	M2.5
46						
With slide, short						
33	19	7.5	8.5	M2	M2	M2.5
46		8.5				

Ordering data				
For size / For type	Stroke [mm]	Weight [g]	Part No.	Type
With standard slide				
15	25	10	**562611**	**EAPR-S1-S-15-25**
	50	12	**562612**	**EAPR-S1-S-15-50**
	75	14	**562613**	**EAPR-S1-S-15-75**
	100	16	**562614**	**EAPR-S1-S-15-100**
20	25	14	**562615**	**EAPR-S1-S-20-25**
	75	18	**562616**	**EAPR-S1-S-20-75**
	125	22	**562617**	**EAPR-S1-S-20-125**
26	50	24	**562618**	**EAPR-S1-S-26-50**
	100	28	**562619**	**EAPR-S1-S-26-100**
	150	32	**562620**	**EAPR-S1-S-26-150**
	200	37	**562621**	**EAPR-S1-S-26-200**
With standard slide or slide, short				
33	100/130-S	51	**562622**	**EAPR-S1-S-33-100/130-S**
	200/230-S	69	**562623**	**EAPR-S1-S-33-200/230-S**
	300/330-S	88	**562624**	**EAPR-S1-S-33-300/330-S**
	400/430-S	106	**562625**	**EAPR-S1-S-33-400/430-S**
	500/530-S	125	**562626**	**EAPR-S1-S-33-500/530-S**
	600/630-S	144	**562627**	**EAPR-S1-S-33-600/630-S**
46	200/240-S	78	**562628**	**EAPR-S1-S-46-200/240-S**
	300/340-S	97	**562629**	**EAPR-S1-S-46-300/340-S**
	400/440-S	115	**562630**	**EAPR-S1-S-46-400/440-S**
	500/540-S	134	**562631**	**EAPR-S1-S-46-500/540-S**
	600/640-S	153	**562632**	**EAPR-S1-S-46-600/640-S**
	800/840-S	190	**562633**	**EAPR-S1-S-46-800/840-S**

Electric slides EGSK/EGSP

Accessories

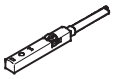
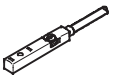
FESTO

Ordering data – Centring pins, centring sleeves

	For size	Comment	Part No.	Type	PU[1]
	15	For slide	**189652**	**ZBH-5**	10
	20		**525273**	**ZBS-2**	
	26, 46		**150928**	**ZBS-5**	
	33		**562959**	**ZBS-4**	
	15, 33	For slide adapter	**562959**	**ZBS-4**	
	20		**525273**	**ZBS-2**	
	26, 46		**150928**	**ZBS-5**	

1) Packaging unit quantity

Ordering data – Proximity sensors for T-slot, inductive Technical data ➔ Internet: sies

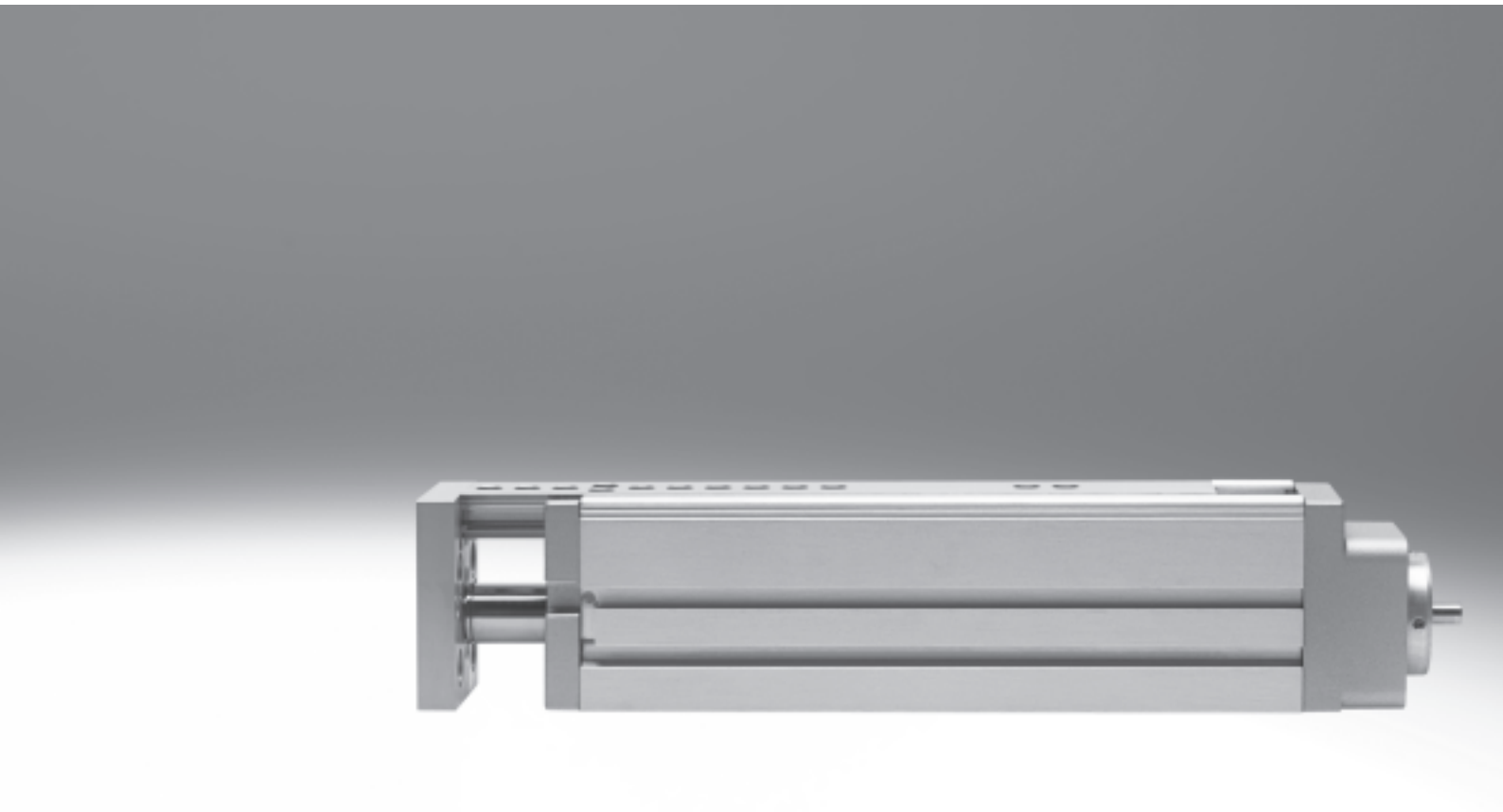
	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in slot from above, flush with sensor strip	PNP	Cable, 3-wire	7.5	**551386**	**SIES-8M-PS-24V-K-7,5-OE**
			Plug M8x1, 3-pin	0.3	**551387**	**SIES-8M-PS-24V-K-0,3-M8D**
		NPN	Cable, 3-wire	7.5	**551396**	**SIES-8M-NS-24V-K-7,5-OE**
			Plug M8x1, 3-pin	0.3	**551397**	**SIES-8M-NS-24V-K-0,3-M8D**
N/C contact						
	Insertable in slot from above, flush with sensor strip	PNP	Cable, 3-wire	7.5	**551391**	**SIES-8M-PO-24V-K-7,5-OE**
			Plug M8x1, 3-pin	0.3	**551392**	**SIES-8M-PO-24V-K-0,3-M8D**
		NPN	Cable, 3-wire	7.5	**551401**	**SIES-8M-NO-24V-K-7,5-OE**
			Plug M8x1, 3-pin	0.3	**551402**	**SIES-8M-NO-24V-K-0,3-M8D**

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**

Mini slides EGSL, electric

FESTO



New

Mini slides EGSL, electric

Key features

At a glance

- Electric slide series
- Maximum performance in compact space:
  - Precision
  - Load capacity
  - Dynamic response
- Choice of homing:
  - To fixed stop
  - To reference switch
- Perfect for vertical applications
- System product for handling and assembly technology
- Wide range of options for mounting on drives

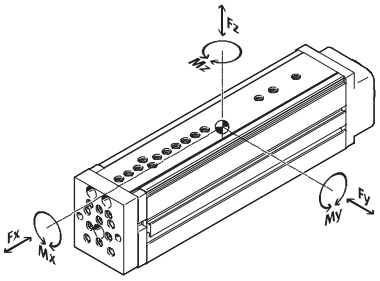
Motor mounting variants

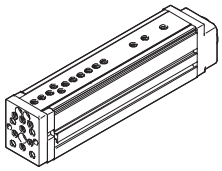
Axial

Parallel

Characteristic values of the axes

The specifications shown in the table are maximum values.
The precise values for each of the variants can be found in the relevant technical data.



Version	Size	Working stroke [mm]	Speed [m/s]	Max. acceleration [m/s²]	Repetition accuracy [mm]	Feed force Fx [N]	Guide characteristics: Forces and torques Fy [N]	Fz [N]	Mx [Nm]	My [Nm]	Mz [Nm]
	35	50	0.5	25	±0.015	75	512	512	6.2	6.0	6.0
	45	100, 200	1.0	25	±0.015	150	631	631	18.6	16.3	16.3
	55	100, 200, 250	1.0	25	±0.015	300	1,047	1,047	33.1	33.3	33.3
	75	100, 200, 300	1.3	25	±0.015	450	1,539	1,539	67.4	47.1	47.1

Note

PositioningDrives
sizing software
www.festo.com

Mini slides EGSL, electric

Key features

Complete system comprising mini slide, motor, motor controller and motor mounting kit

Mini slide

Motor ➔ 22

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

Note

A range of specially adapted complete solutions is available for the mini slide EGSL and the motors.

Motor controller — Technical data ➔ Internet: motor controller

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

Motor mounting kit ➔22

Axial kit

Parallel kit

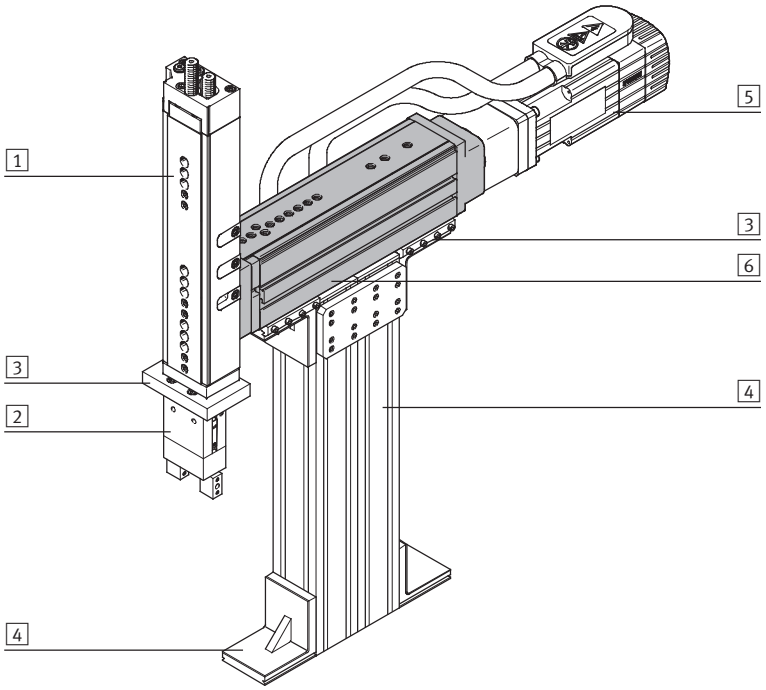
There are complete kits for both parallel and axial motor mounting.

Mini slides EGSL, electric

Key features and type codes

FESTO

System product for handling and assembly technology



System components and accessories

		Brief description	➔ Page/Internet
1	Drives	Wide range of combinations possible within handling and assembly technology	drive
2	Grippers	Wide range of variations possible within handling and assembly technology	gripper
3	Adapters	For drive/drive and drive/gripper connections	adapter kit
4	Basic components	Profiles and profile connections as well as profile/drive connections	basic component
5	Motors	Servo and stepper motors, with or without gearing	motor
6	Axes	Wide range of combinations possible within handling and assembly technology	axis
–	Installation components	For a clear, safe layout of electrical cables and tubing	installation component

Type codes

EGSL – BS – 45 – 200 – 10P

Type	
EGSL	Mini slide

Drive function	
BS	Ball screw spindle

Size

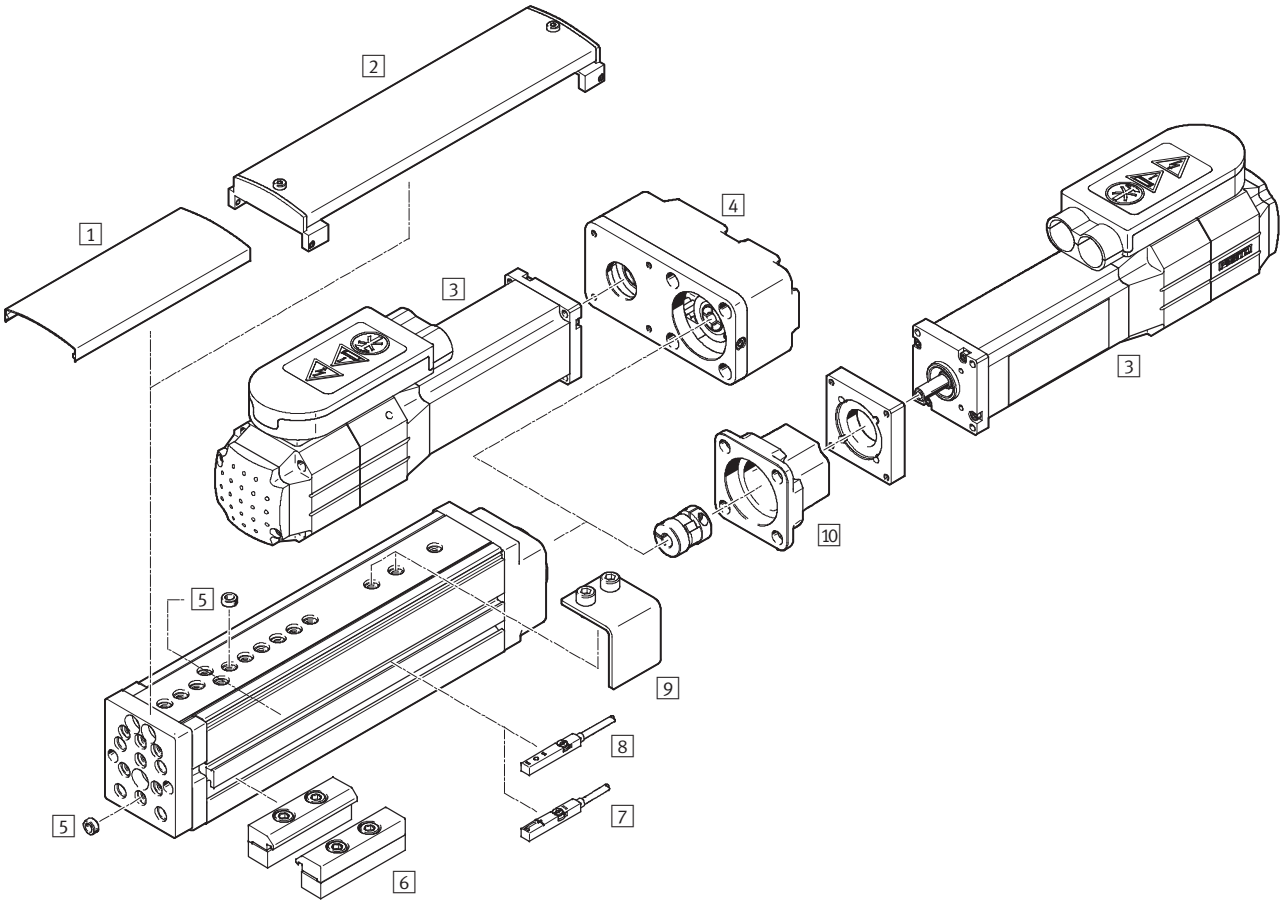
Stroke [mm]

Spindle pitch [mm]

Mini slides EGSL, electric

FESTO

Peripherals overview



Variants and accessories

	Type	Brief description	➔ Page/Internet
1	Cover EASC-...	• For protection, so that no foreign parts can get into the guide • The cover can be shortened by the customer as required	27
2	Cover EASC-...-F	• This cover must be used in combination with the switching lug EAPM • For protection, so that no foreign parts can get into the guide	27
3	Motor EMMS	Motors specially matched to the axis, with or without brake	22
4	Parallel kit EAMM-U	• For parallel motor mounting • The motor can only be mounted at the side and underneath • (comprising: housing, clamping sleeve, toothed belt pulley, toothed belt)	23
5	Centring sleeve ZBH	• For centring loads and attachments • Makes lateral mounting on the slide much easier	28
6	Profile mounting EAHF, MUE	For mounting the axis	26
7	Proximity sensor SIES	Inductive proximity sensor, for slot type 8	28
8	Proximity sensor SMT-8-...-B	Magnetic proximity sensor, for slot type 8	28
9	Switching lug EAPM	For sensing the slide position via proximity sensors SIES	26
10	Axial kit EAMM-A	For axial motor mounting (comprising: coupling, coupling housing and motor flange)	22
–	Connecting cable NEBU	For proximity sensor SIES or SMT-8-...-B	28

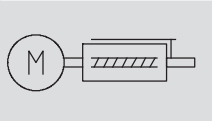
New

Mini slides EGSL, electric

Technical data

FESTO

Function



Size
35, 45, 55, 75

Stroke length
50 ... 300 mm

Note

All values are based on a room temperature of 20 °C.

General technical data								
Size		35	45		55		75	
Spindle pitch	[mm]	8	3	10	5	12.7	10	20
Design		Electric mini slide						
		With recirculating ball spindle						
		With guide						
Guide		Ball bearing cage guide						
Type of mounting		Via female thread						
		Via centring sleeve						
		Via accessories						
Mounting position		Any						
Working stroke	[mm]	50	100, 200		100, 200, 250		100, 200, 300	
Max. permissible applied load, horizontal	[kg]	2	6		10		14	
Max. permissible applied load, vertical	[kg]	2	6		10		14	
Continuous feed force F_x	[N]	50	100		200		300	
Max. feed force F_x	[N]	75	150		300		450	
Max. no-load driving torque	[Nm]	0.015	0.055	0.050	0.100	0.135	0.265	0.165
Max. driving torque[1]	[Nm]	0.2	0.45	0.51	0.9	1.25	3.25	3.25
Max. radial force[2]	[N]	20	120		260		300	
Max. speed	[m/s]	0.5	0.3	1.0	0.4	1.0	0.65	1.3
Nominal acceleration	[m/s²]	15						
Max. acceleration[3]	[m/s²]	25						
Repetition accuracy	[mm]	±0.015						
Max. reversing backlash[4]	[µm]	≤50						

1) Friction and acceleration torque of the rotating load taken into consideration
2) At the drive shaft
3) The max. acceleration is dependent on the moving load, the driving torque and the max. feed force
4) In new condition

Operating and environmental conditions					
Size		35	45	55	75
Ambient temperature	[°C]	0 ... +60			
Protection class		IP40			
Duty cycle	[%]	100			
Noise level	[dB (A)]	60		65	
Maintenance interval		Maintenance-free			

Mini slides EGSL, electric

Technical data

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Weight [kg]							
Size		35			45		
Stroke	[mm]	50			100		200
Product weight		0.6			1.6		2.2
Moving load		0.3			0.7		0.9
Dead weight of guide rail and yoke plate		0.13			0.4		0.58

Size		55			75		
Stroke	[mm]	100	200	250	100	200	300
Product weight		2.6	3.4	4.1	5.1	6.5	8.1
Moving load		1.2	1.5	1.8	2.3	2.9	3.4
Dead weight of guide rail and yoke plate		0.61	0.87	1.07	1.2	1.64	2.07

Mass moment of inertia – for sizing the motor						
Size		35	45			
Spindle pitch	[mm]	8	3		10	
Stroke	[mm]	50	100	200	100	200
J_O	[kg mm^2]	4.26	4.59	5.14	6.14	7.31
J_L per kg effective load	[kg mm^2/kg]	1.62	0.23	0.23	2.53	2.53

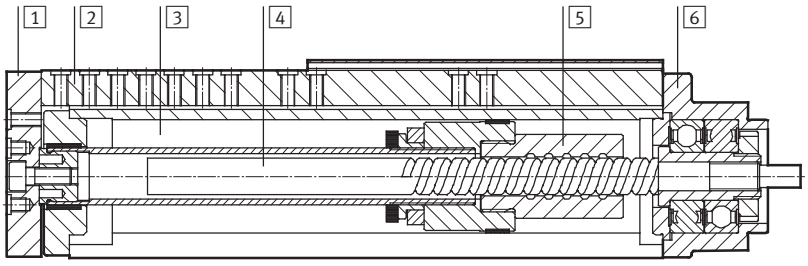
Size		55			75							
Spindle pitch	[mm]	5			12.7			10			20		
Stroke	[mm]	100	200	250	100	200	250	100	200	300	100	200	300
J_O	[kg mm^2]	13.52	14.77	15.74	18.27	21.13	23.27	86.95	96.49	106.67	105.12	119.45	134.59
J_L per kg effective load	[kg mm^2/kg]	0.63	0.63	0.63	4.09	4.09	4.09	2.53	2.53	2.53	10.13	10.13	10.13

The mass moment of inertia J_A of the entire axis is calculated as follows:
$J_A = J_O + J_L \times m_{effective\ load}$ [kg]

The inertia of the motor mounting kit and motor is not taken into consideration here.

Materials

Sectional view



Axis		
1	Yoke plate	Anodised wrought aluminium alloy
2	Guide rail	Rolled steel
3	Housing	Anodised wrought aluminium alloy
4	Spindle	Rolled steel
5	Spindle nut	Rolled steel
6	End cap	Painted aluminium
	Note on materials	RoHS-compliant
		Contains PWIS (paint-wetting impairment substances)

Mini slides EGSL, electric

Technical data

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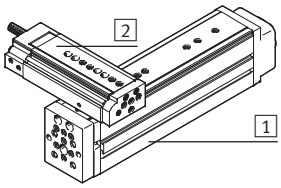
Possible combinations

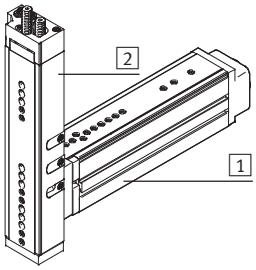
Via guide



Direct mounting

	1 Basic drive				
		EGSL-35	EGSL-45	EGSL-55	EGSL-75
2 Assembly drive	EGSL-35	**1088327 HMSV-73**	**1088338 HMSV-74**	**1088338 HMSV-74**	–
	EGSL-45	–	**1088338 HMSV-74**	**1088338 HMSV-74**	**1089092 HMSV-75**
	EGSL-55	–	–	**1088338 HMSV-74**	**1089092 HMSV-75**
	EGSL-75	–	–	–	**1089092 HMSV-75**
	DGSL-4	**1088327 HMSV-73**	–	–	–
	DGSL-6	**1088327 HMSV-73**	–	–	–
	DGSL-8	**1088327 HMSV-73**	**ZBV-M5-7**	**ZBV-M5-7**	–
	DGSL-10	**1088327 HMSV-73**	**ZBV-M5-7**	**ZBV-M5-7**	–
	DGSL-12	–	**M5x14 ZBH-7**	**M5x16 ZBH-7**	**ZBV-M6-9**
	DGSL-16	–	**M5x14 ZBH-7**	**M5x16 ZBH-7**	**ZBV-M6-9**
	DGSL-20	–	–	–	**M6x20 ZBH-9**

Via yoke plate



Direct mounting

	1 Basic drive				
		EGSL-35	EGSL-45	EGSL-55	EGSL-75
2 Assembly drive	EGSL-35	**M4x12 ZBH-7**	**1088295 HMSV-71**	**1088295 HMSV-71**	–
	EGSL-45	–	**M5x12 ZBH-7**	**M5x14 ZBH-7**	**1088311 HMSV-72**
	EGSL-55	–	–	**M5x14 ZBH-7**	**1088311 HMSV-72**
	EGSL-75	–	–	–	**M6x18 ZBH-9**
	DGSL-4	**1088262 HMSV-70**	–	–	–
	DGSL-6	**1088262 HMSV-70**	–	–	–
	DGSL-8	**1088262 HMSV-70**	**ZBV-M5-7**	**ZBV-M5-7**	–
	DGSL-10	**1088262 HMSV-70**	**ZBV-M5-7**	**ZBV-M5-7**	–
	DGSL-12	–	**M5x14 ZBH-7**	**M5x12 ZBH-7**	**ZBV-M6-9**
	DGSL-16	–	**M5x14 ZBH-7**	**M5x12 ZBH-7**	**ZBV-M6-9**
	DGSL-20	–	–	–	**M6x20 ZBH-9**

Note

Ordering data for centring sleeves ZBH and connecting sleeves ZBV
➔ 28.

Mini slides EGSL, electric

Technical data

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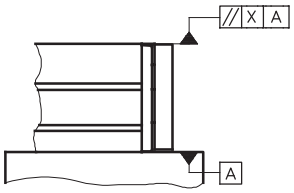
Parallelism [mm]

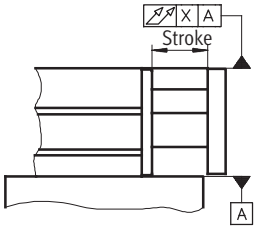
The term parallelism refers to the accuracy of alignment between the mounting surface and the slide surface.
Specifications apply in retracted state.



Size	Stroke [mm]	35	45	55	75
Parallelism X	50	0.03	–	–	–
	100	–	0.05	0.05	0.05
	200	–	0.1	0.1	0.1
	250	–	–	0.125	–
	300	–	–	–	0.15

Linearity [mm]

Linearity refers to the max. difference between normal position and the reference plane experienced at any point of the moving axis components when traversing the entire stroke.



Size	Stroke [mm]	35	45	55	75
Linearity X	50	0.02	–	–	–
	100	–	0.04	0.04	0.04
	200	–	0.08	0.08	0.08
	250	–	–	0.10	–
	300	–	–	–	0.12

Mini slides EGSL, electric

Technical data

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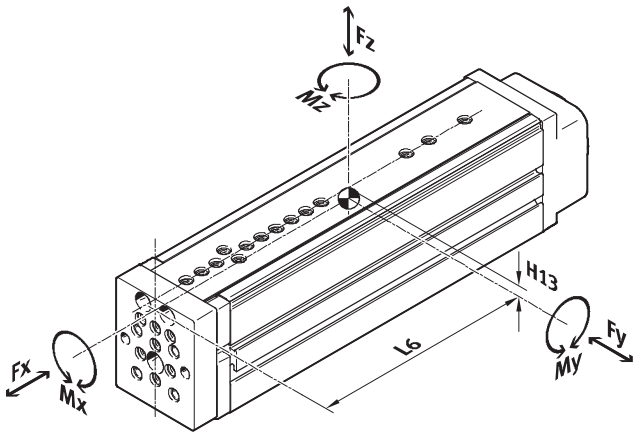
Dynamic characteristic load values

The indicated forces and torques refer to the centre of the guide.
These values must not be exceeded during dynamic operation.



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

$$f_v = \frac{|F_{y,dyn}|}{Fy_{max.}} + \frac{|F_{z,dyn}|}{Fz_{max.}} + \frac{|M_{x,dyn}|}{Mx_{max.}} + \frac{|M_{y,dyn}|}{My_{max.}} + \frac{|M_{z,dyn}|}{Mz_{max.}}$$

Permissible forces and torques						Geometric characteristics	
Size	Stroke [mm]	Fy_{max} [N]	Fz_{max} [N]	Mx_{max} [Nm]	My_{max}, Mz_{max} [Nm]	H13 [mm]	L6 [mm]
35							
	50	512	512	6.2	6.0	4.2	106
45							
	100	631	631	18.6	16.3	6.4	162
	200	291	291	14.3	12.3	6.4	262
55							
	100	1,047	1,047	33.1	31.0	6.4	180
	200	490	490	24.2	22.6	6.4	280
	250	563	563	27.0	33.3	6.4	344
75							
	100	1,539	1,539	67.4	47.1	7.6	187
	200	714	714	48.5	33.8	7.6	287
	300	555	555	46.4	36.5	7.6	389

Note

PositioningDrives
sizing software
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Mini slides EGSL, electric

Technical data

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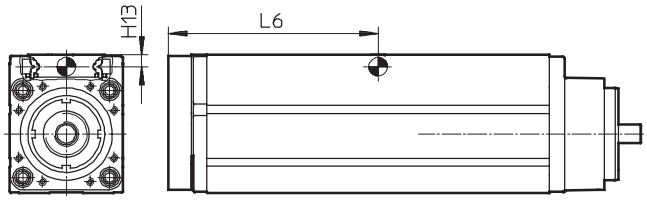
Position of the guide centre



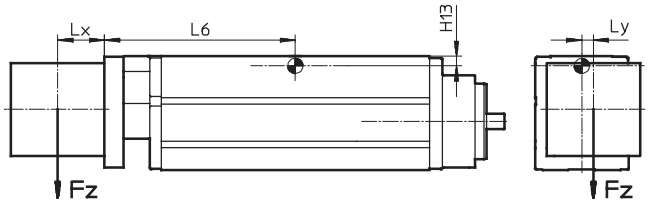
Calculation example

Given:

Type: EGSL-BS-45-100-10P
Stroke length = 100 mm
Lever arm L_x = 30 mm
Lever arm L_y = 10 mm
Mass F_z = 5 kg
Acceleration a = 0 m/s^2
Mounting position: Horizontal

To be calculated:

- F_y, F_z, Mx, My, Mz
- Verification of operation with combined load
- Service life estimate



Solution:

L6 = 0.162 m from table
F_y = 0 N

F_z = m x g
= 5 kg x 9.81 m/s^2 = 49.05 N

M_x = F_z x L_y
= 49.05 N x 0.01 m = 0.4905 Nm

M_y = F_z x (L6+L_x)
= 49.05 N x (0.162 m + 0.03 m) = 9.42 Nm

M_z = 0 Nm

Combined load:

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

$$= 0 + \frac{49.05N}{631N} + \frac{0.49Nm}{18.6Nm} + \frac{9.42Nm}{16.3Nm} + 0 = 0.68$$

The diagram on page 12 shows a service life of approx. 30 million cycles when fv = 0.68.

Mini slides EGSL, electric

Technical data

FESTO

Calculating service life

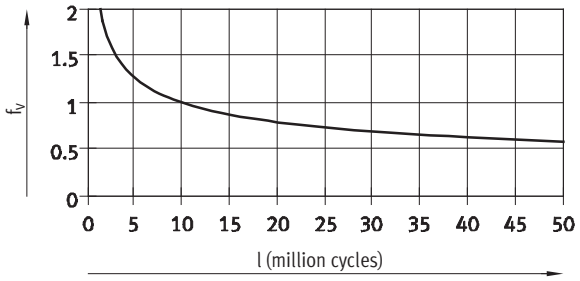
The service life of the guide depends on the load. To provide a rough indication of the service life of the guide, the graph below plots the load comparison factor f_v against the service life.

The spindle module even exceeds the guide's high load capacity and service life. The load characteristics of the spindle therefore need not be considered for the service life calculation.

These values are only theoretical. Consultation with your local contact person at Festo is mandatory for load comparison factors f_v greater than 1.5.

Load comparison factor f_v as a function of service life

Example:
A user wants to move an X kg load. Using the formula ➔ 10 gives a value of 1.5 for the load comparison factor f_v. According to the graph, the guide would have a service life of approx. 3 million cycles. Reducing the acceleration reduces the Mz and My values. A load comparison factor f_v of 1 now gives a service life of 10 million cycles.



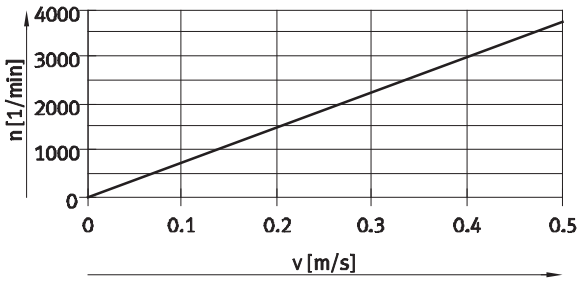
Mini slides EGSL, electric

Technical data

FESTO

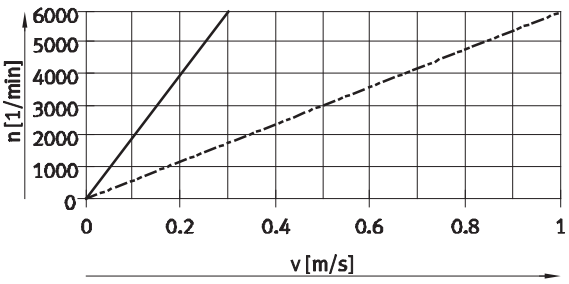
Rotational speed n as a function of feed speed v

EGSL-35



EGSL-BS-35- ... -8P

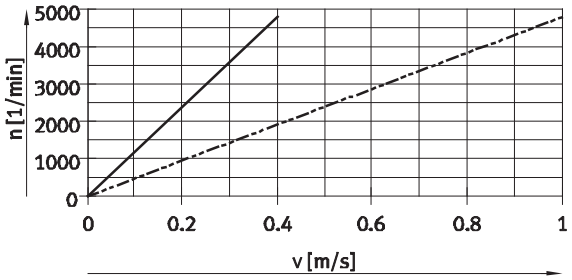
EGSL-45



EGSL-BS-45- ... -3P

EGSL-BS-45- ... -10P

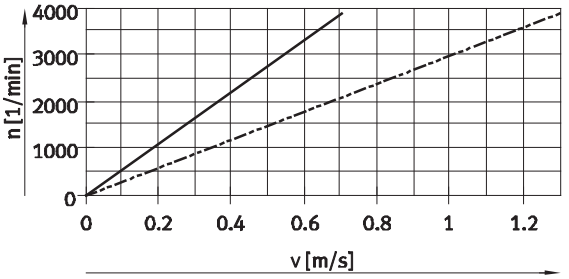
EGSL-55



EGSL-BS-55- ... -5P

EGSL-BS-55- ... -12.7P

EGSL-75

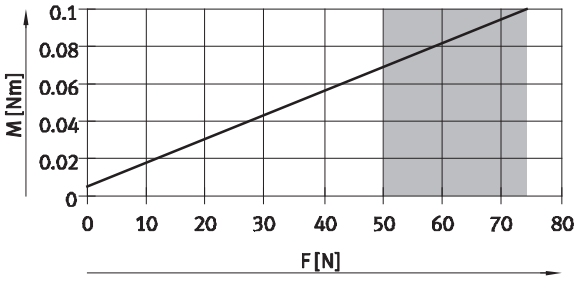


EGSL-BS-75- ... -10P

EGSL-BS-75- ... -20P

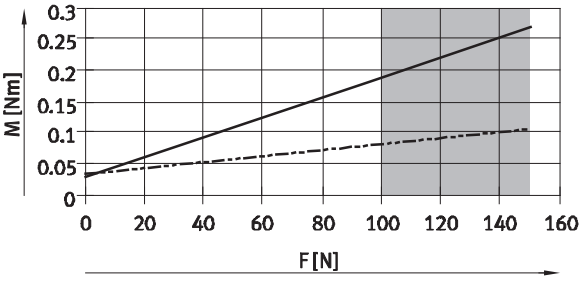
Driving torque M as a function of feed force F

EGSL-35



EGSL-BS-35- ... -8P

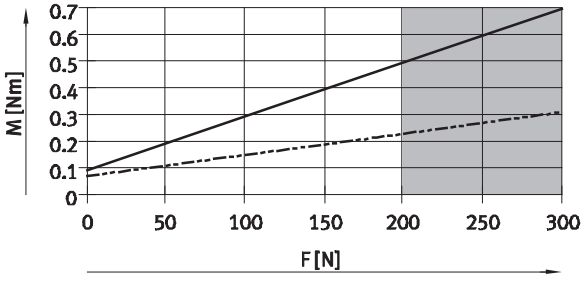
EGSL-45



EGSL-BS-45- ... -10P

EGSL-BS-45- ... -3P

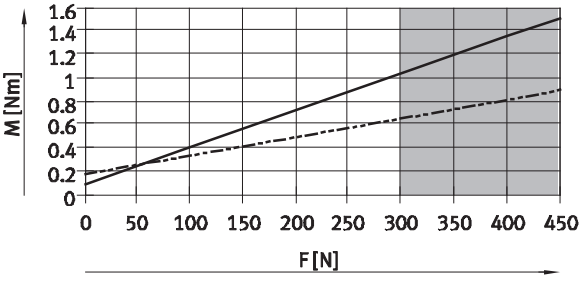
EGSL-55



EGSL-BS-55- ... -12.7P

EGSL-BS-55- ... -5P

EGSL-75



EGSL-BS-75- ... -20P

EGSL-BS-75- ... -10P

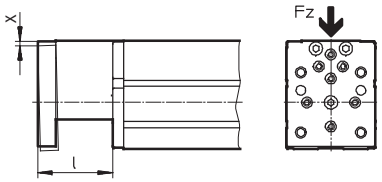
This range should be used only briefly.

Mini slides EGSL, electric

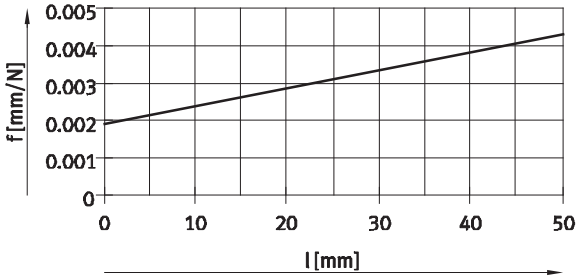
Technical data

FESTO

Deflection x as a function of force Fz and stroke l

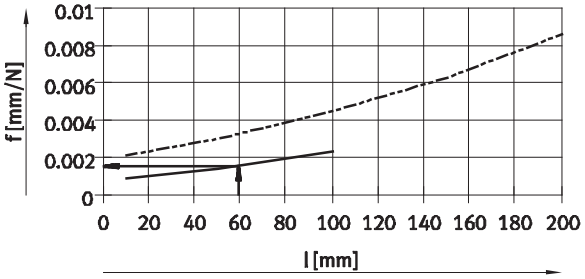


EGSL-35



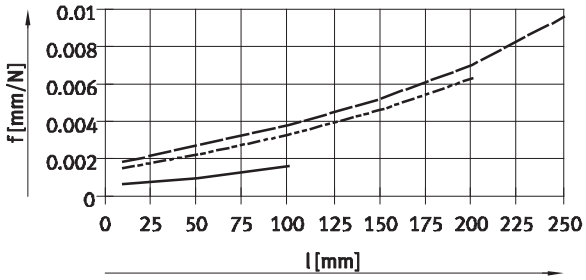
EGSL-BS-35-50

EGSL-45



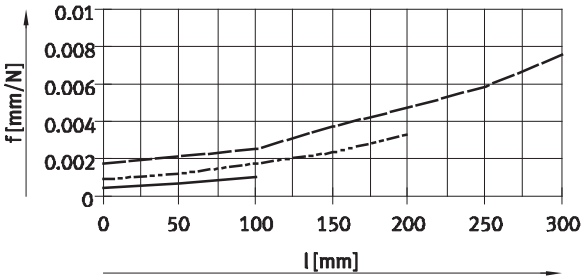
EGSL-BS-45-100
EGSL-BS-45-200

EGSL-55



EGSL-BS-55-100
EGSL-BS-55-200
EGSL-BS-55-250

EGSL-75



EGSL-BS-75-100
EGSL-BS-75-200
EGSL-BS-75-300

Calculation example

Given:
EGSL-BS-45-100
l = 60 mm
Fz = 30 N
Mounting position:
Horizontal

Result:
The graph shows a resilience of f = 0.0015 mm/N with a stroke of 60 mm.

$x = f \times F_z$

$x = 0.0015\text{mm/N} \times 30\text{N}$

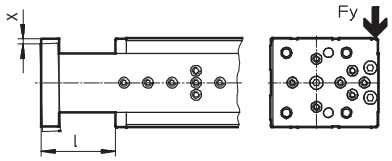
$x = 0.045\text{mm}$

Mini slides EGSL, electric

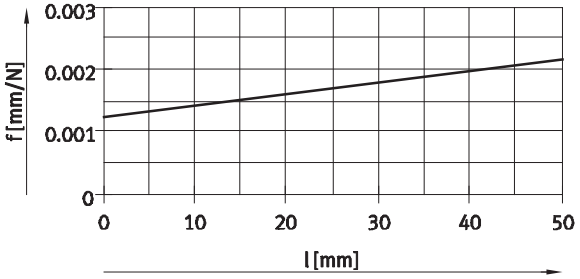
Technical data

FESTO

Deflection x as a function of force Fy and stroke l

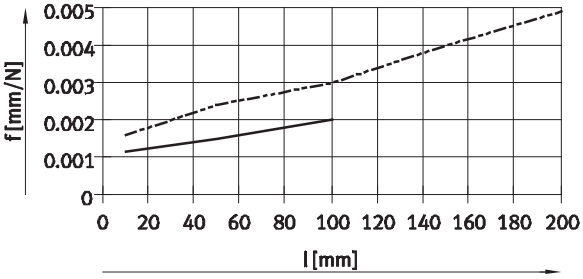


EGSL-35



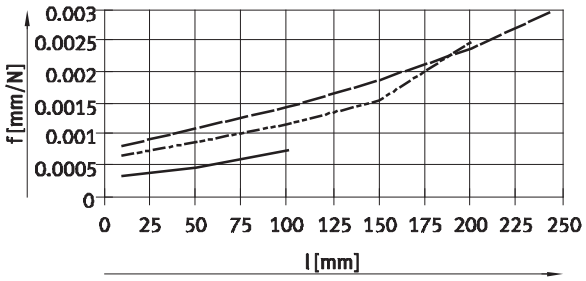
EGSL-BS-35-50

EGSL-45



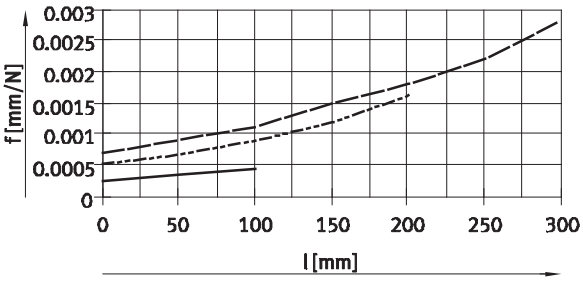
EGSL-BS-45-100
EGSL-BS-45-200

EGSL-55



EGSL-BS-55-100
EGSL-BS-55-200
EGSL-BS-55-250

EGSL-75



EGSL-BS-75-100
EGSL-BS-75-200
EGSL-BS-75-300

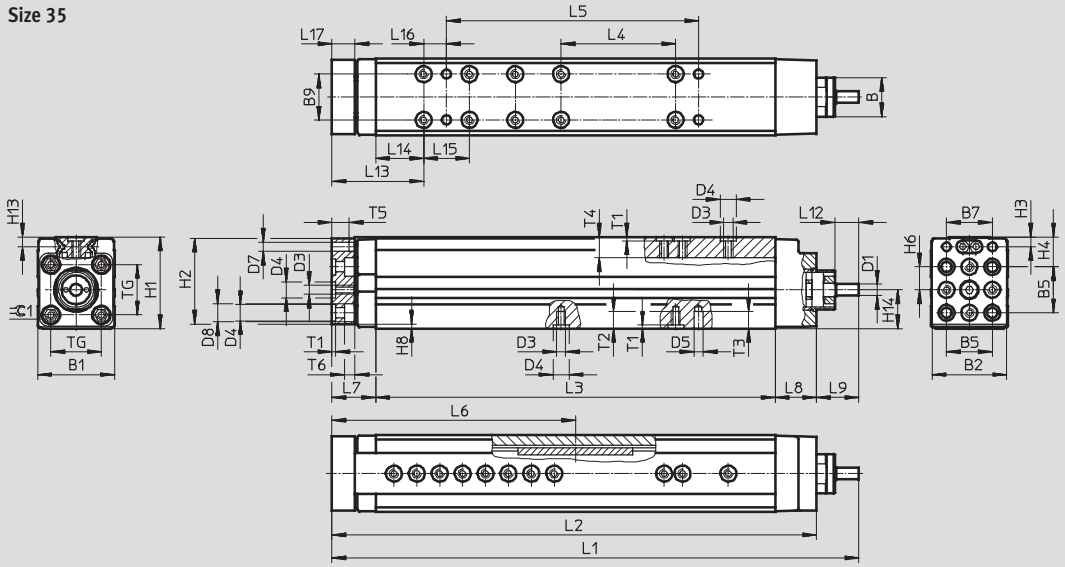
Mini slides EGSL, electric

Technical data

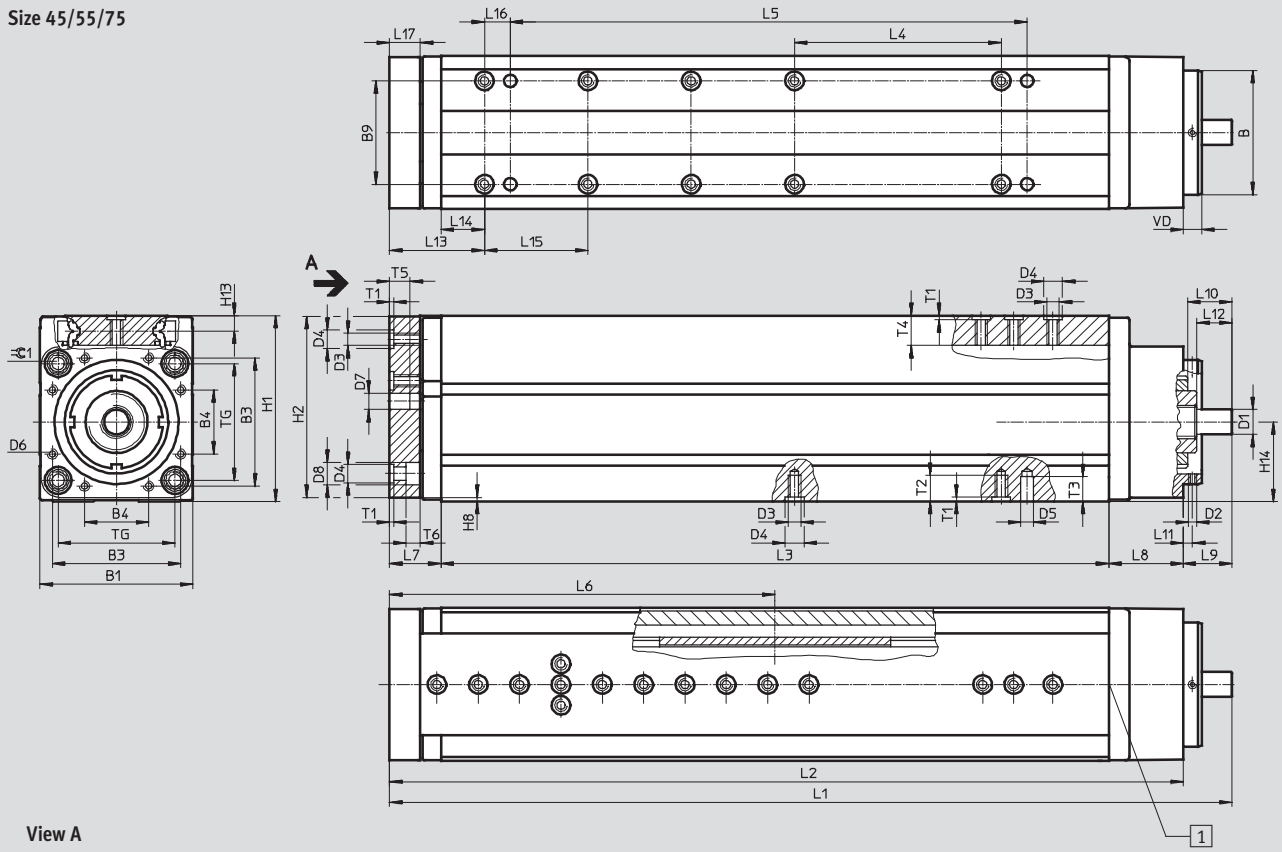
FESTO

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

Size 35

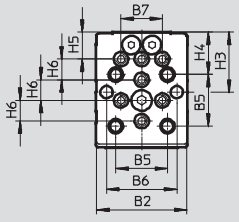


Size 45/55/75

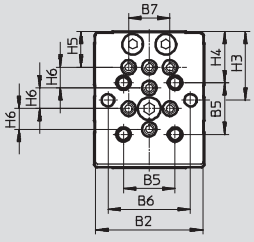


View A

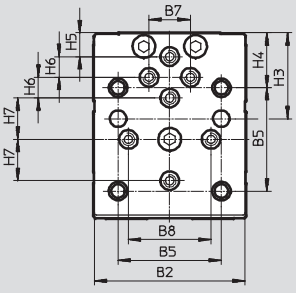
Size 45



Size 55



Size 75



1 Rubber buffers are integrated in the slide and can be removed for homing to the fixed stop.

Mini slides EGSL, electric

Technical data

FESTO

Size	B ∅ g7	B1	B2	B3	B4	B5	B6	B7	B8	B9 ±0.5
35	19	33.5	33	–	–	20	–	20	–	20
45	32	44.5	43.5	32	19	25	34	20	–	25
55	40	53	52	42	20	25	40	20	–	25
75	60	74	73	62	31	50	–	20	40	50

Size	D1 ∅	D2	D3	D4 ∅ H7	D5 ∅ H7	D6	D7 ∅	D8 ∅	H1	H2
35	5	–	M4	7	4	–	4	8	40	37.5
45	6	M3	M5	7	6	M3	6	10	56	43.5
55	8	M3	M5	7	6	M4	6	10	66	63.5
75	12	M4	M6	9	6	M5	8	11	90	87.5

Size	H3	H4	H5	H6	H7	H8	H13	H14	L7	
									2) ±1	3) ±1
35	4.2	13	–	10	–	2	4.2	$17^{+0.09/-0.07}$	21	19
45	29	20.5	13	10	–	2	6.4	$23^{\pm 0.08}$	22	20
55	33.3	24.8	17.3	10	–	2	6.4	$28.7^{\pm 0.08}$	27	25
75	41.5	26.5	11.5	10	20	2	7.6	$38.5^{\pm 0.08}$	27	25

Size	L8	L9 ±1	L10	L11	L12 ±0.2	L13		L14	L15	L16 ±0.1
						2)	3)			
35	18	18.5	–	–	10.5	42	40	21	20	10
45	26	16	16.9	3.5	8	43	41	21	25	12.5
55	30	18.5	14.9	3.5	14	48	46	21	25	12.5
75	36	23.6	21.5	4.5	17	48	46	21	50	12.5

Size	L17	T1 ±0.1	T2	T3	T4	T5	T6	TG	VD	⌯ 1
35	10	1.6	7.6	7.5	9	7.5	4.6	22	–	5
45	10	1.6	8.1	7.5	12.4	7.5	5.7	32.5	7	6
55	15	1.6	8.6	8.5	12.4	10	8.7	38	7	6
75	15	2.1	12.6	12	14.5	10	6.8	56.5	9	8

Size	Stroke	L1		L2		L3	L4	L5	L6	
		2)	3)	2)	3)				2)	3)
	[mm]	±1.5	±1.5	±1	±1	−0.2		±0.05		
35	50	182	180	163.5	161.5	124.5	–	60	83	81
45	100	248	246	232	230	184	75	125	114	112
	200	348	346	332	330	284	100	175	164	162
55	100	284.5	282.5	266	264	209	100	150	132	130
	200	384.5	382.5	366	364	309	100	175	182	180
	250	463.5	461.5	445	443	388	100	175	221	219
75	100	309.6	307.6	286	284	223	–	150	139	137
	200	409.6	407.6	386	384	323	100	250	189	187
	300	514.6	512.6	491	489	428	150	350	241	239

1) Tolerance for centring hole ±0.02 mm
Tolerance for thread ±0.1 mm
2) With rubber buffer
3) Without rubber buffer: for homing to the fixed stop

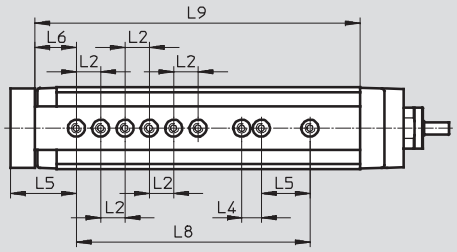
Mini slides EGSL, electric

Technical data

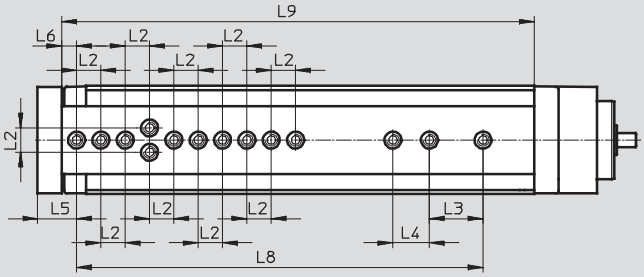
FESTO

Hole pattern for mounting threads and centring holes

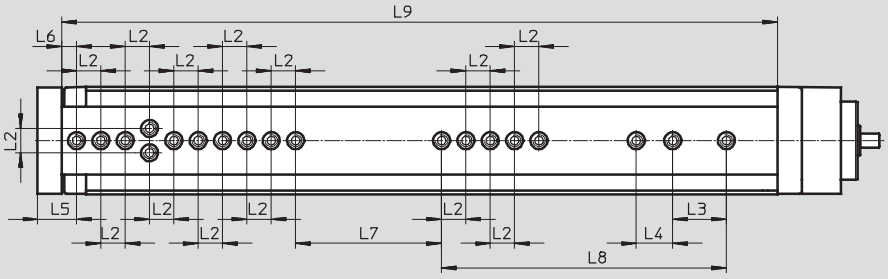
EGSL-35-50



EGSL-45-100



EGSL-45-200



Size	Stroke [mm]	L2[1)]	L3[1)]	L4[1)]	L5	L6	L7[1)]	L8[1)]	L9
35	50	10	20	8	27	17	–	96	133.5
45	100	10	22	15	16	6	–	167	194
	200						60	117	294

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

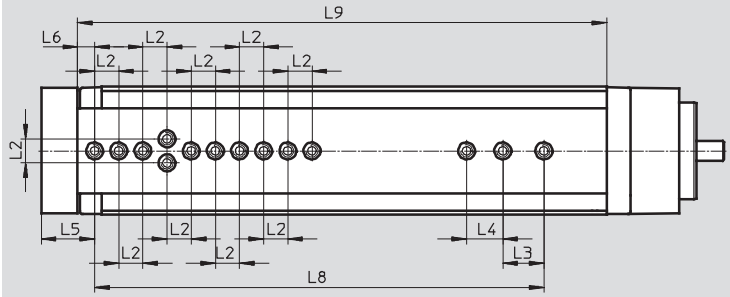
Mini slides EGSL, electric

Technical data

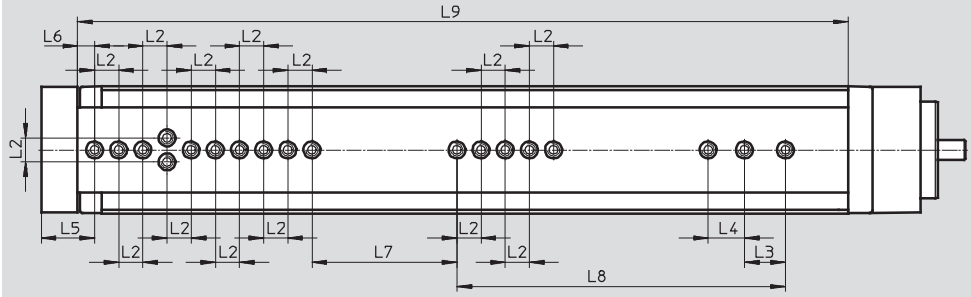
FESTO

Hole pattern for mounting threads and centring holes

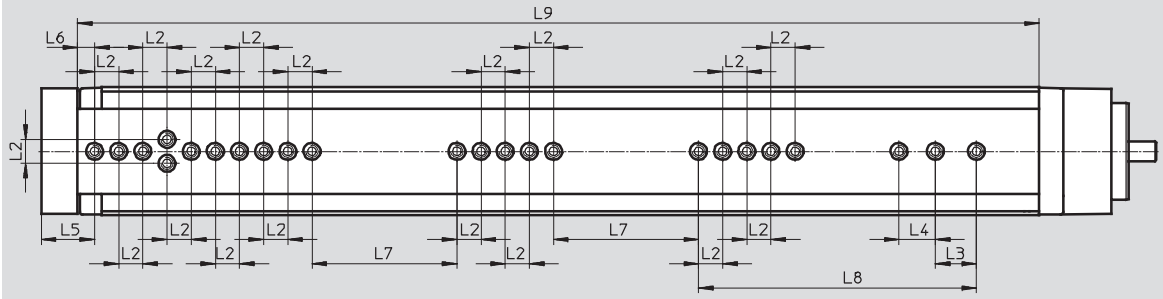
EGSL-55-100



EGSL-55-200



EGSL-55-250



Size	Stroke [mm]	L2[1)]	L3[1)]	L4[1)]	L5	L6	L7[1)]	L8[1)]	L9
55	100	10	17	15	22	7	–	186	219
	200						60	136	319
	250						60	115	398

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

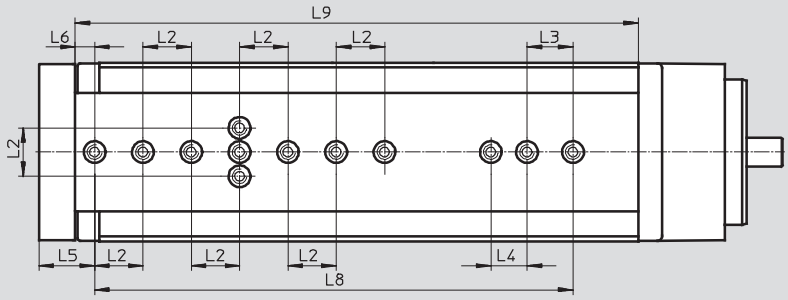
Mini slides EGSL, electric

Technical data

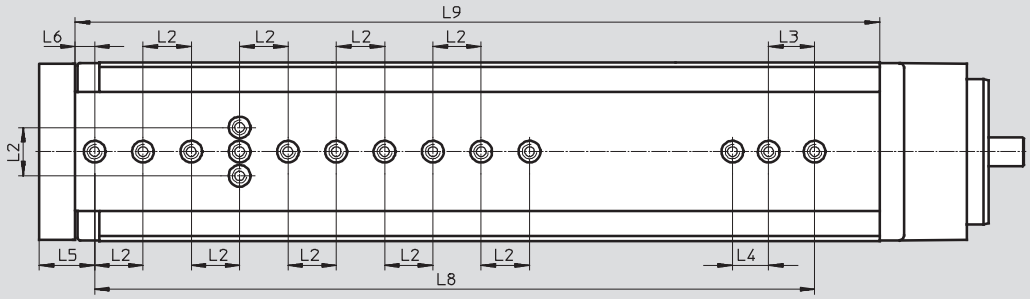
FESTO

Hole pattern for mounting threads and centring holes

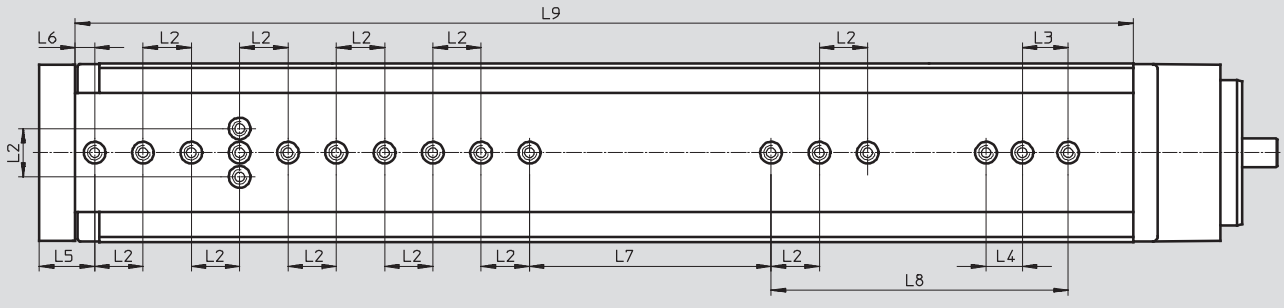
EGSL-75-100



EGSL-75-200



EGSL-75-300



Size	Stroke [mm]	L2[1)]	L3[1)]	L4[1)]	L5	L6	L7[1)]	L8[1)]	L9
75	100	20	19	15	23	8	–	198	233
	200						–	298	333
	300						100	123	438

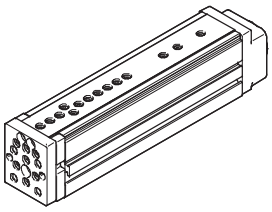
1) Tolerance for centring hole ±0.02 mm
Tolerance for thread ±0.1 mm

Mini slides EGSL, electric

Technical data

FESTO

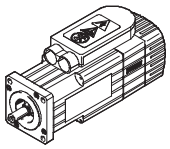
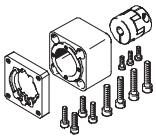
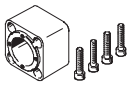
Ordering data

	Size	Spindle pitch	Stroke	Part No.	Type
	35	8	50	**562160**	**EGSL-BS-35-50-8P**
	45	3	100	**562225**	**EGSL-BS-45-100-3P**
			200	**562226**	**EGSL-BS-45-200-3P**
		10	100	**559335**	**EGSL-BS-45-100-10P**
			200	**559336**	**EGSL-BS-45-200-10P**
	55	5	100	**562227**	**EGSL-BS-55-100-5P**
			200	**562228**	**EGSL-BS-55-200-5P**
			250	**562229**	**EGSL-BS-55-250-5P**
		12.7	100	**559337**	**EGSL-BS-55-100-12.7P**
			200	**559338**	**EGSL-BS-55-200-12.7P**
			250	**559339**	**EGSL-BS-55-250-12.7P**
	75	10	100	**562230**	**EGSL-BS-75-100-10P**
			200	**562231**	**EGSL-BS-75-200-10P**
			300	**562232**	**EGSL-BS-75-300-10P**
		20	100	**559340**	**EGSL-BS-75-100-20P**
			200	**559341**	**EGSL-BS-75-200-20P**
			300	**559342**	**EGSL-BS-75-300-20P**

Mini slides EGSL, electric

Accessories

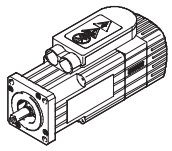
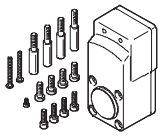
FESTO

Permissible axis/motor combinations with axial kit				
Motor/motor unit	Axial kit	Axial kit comprising:		
		Motor flange	Coupling	Coupling housing
				
Type	Part No. Type	Part No. Type	Part No. Type	Part No. Type
EGSL-35				
With servo motor				
EMMS-AS-40-...	**1199152** **EAMM-A-D19-40A**	**1199144** **EAMF-A-28D-40A**	**543419** **EAMC-16-20-5-6**	**1087585** **EAMK-A-D19-28D**
With stepper motor				
EMMS-ST-42-...	**1087642** **EAMM-A-D19-42A**	**1087630** **EAMF-A-28D-42A**	**562676** **EAMC-16-20-5-5**	**1087585** **EAMK-A-D19-28D**
EGSL-45				
With servo motor				
EMMS-AS-40-...	**543147** **EAMM-A-D32-40A**	**552163** **EAMF-A-28B-40A**	**543420** **EAMC-16-20-6-6**	**552155** **EAMK-A-D32-28B**
EMMS-AS-55-...	**550979** **EAMM-A-D32-55A**	**529942** **EAMF-A-44A/B-55A**	**551003** **EAMC-30-32-6-9**	**551006** **EAMK-A-D32-44A**
With stepper motor				
EMMS-ST-42-...	**543148** **EAMM-A-D32-42A**	**552164** **EAMF-A-28B-42A**	**543419** **EAMC-16-20-5-6**	**552155** **EAMK-A-D32-28B**
EMMS-ST-57-...	**550980** **EAMM-A-D32-57A**	**530081** **EAMF-A-44A/B-57A**	**551002** **EAMC-30-32-6-6.35**	**551006** **EAMK-A-D32-44A**
EGSL-55				
With servo motor				
EMMS-AS-55-...	**543153** **EAMM-A-D40-55A**	**529942** **EAMF-A-44A/B-55A**	**543423** **EAMC-30-32-8-9**	**552157** **EAMK-A-D40-44A**
EMMS-AS-70-...	**550981** **EAMM-A-D40-70A**	**529943** **EAMF-A-44A/B-70A**	**551004** **EAMC-30-32-8-11**	**552157** **EAMK-A-D40-44A**
With stepper motor				
EMMS-ST-57-...	**543154** **EAMM-A-D40-57A**	**530081** **EAMF-A-44A/B-57A**	**543421** **EAMC-30-32-6.35-8**	**552157** **EAMK-A-D40-44A**
EMMS-ST-87-...	**550982** **EAMM-A-D40-87A**	**530082** **EAMF-A-44A/B-87A**	**551004** **EAMC-30-32-8-11**	**552157** **EAMK-A-D40-44A**
EGSL-75				
With servo motor				
EMMS-AS-70-...	**543161** **EAMM-A-D60-70A**	**529945** **EAMF-A-64A/B-70A**	**543424** **EAMC-42-50-11-12**	**552160** **EAMK-A-D60-64B**
EMMS-AS-100-...	**550983** **EAMM-A-D60-100A**	**529947** **EAMF-A-64A/C-100A**	**551005** **EAMC-42-50-12-19**	**551007** **EAMK-A-D60-64C**
With stepper motor				
EMMS-ST-87-...	**543162** **EAMM-A-D60-87A**	**530082** **EAMF-A-44A/B-87A**	**543424** **EAMC-42-50-11-12**	**552160** **EAMK-A-D60-64B**

Mini slides EGSL, electric

Accessories

FESTO

Permissible axis/motor combinations with parallel kit		
Motor/motor unit	Parallel kit	
		
Type	Part No.	Type
EGSL-45		
With servo motor		
EMMS-AS-40-...	**543150**	**EAMM-U-D32-40A**
EGSL-55		
With servo motor		
EMMS-AS-55-...	**543157**	**EAMM-U-D40-55A**
EGSL-75		
With servo motor		
EMMS-AS-70-...	**543165**	**EAMM-U-D60-70A**

Mini slides EGSL, electric

Accessories

FESTO

Axial kit EAMM-A-...

Material:
Coupling housing, coupling hubs, motor flange: Aluminium
Screws: Galvanised steel
Clamping component: Corrosion-resistant steel

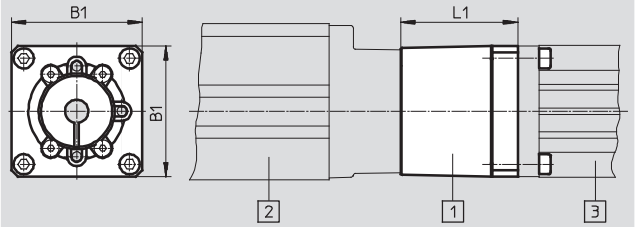


Diagram:
1 Axial kit
2 Mini slide
3 Motor

General technical data							
EAMM-A-...		D19-		D32-			
		40A	42A	40A	42A	55A	57A
Transferable torque	[Nm]	1.1	1.1	1.1	0.8	4	4
Mass moment of inertia	[kg mm^2]	0.28	0.28	0.3	0.3	5.87	5.87
Max. rotational speed	[rpm]	10,000		10,000		8,000	
Mounting position		Any					

EAMM-A-...		D40-				D60-		
		55A	57A	70A	87A	70A	87A	100A
Transferable torque	[Nm]	8	6	8	8	12	12	14
Mass moment of inertia	[kg mm^2]	5.87	5.87	5.87	5.87	35.5	35.5	35.5
Max. rotational speed	[rpm]	8,000				6,000		
Mounting position		Any						

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

1) Only with combined attachment of motor and axis

Dimensions and ordering data					
Type	B1	L1	Weight [g]	Part No.	Type
EAMM-A-D19-40A	40	42.7	110	**1199152**	**EAMM-A-D19-40A**
EAMM-A-D19-42A	42	50	130	**1087642**	**EAMM-A-D19-42A**
EAMM-A-D32-40A	45	39.8	130	**543147**	**EAMM-A-D32-40A**
EAMM-A-D32-42A	45	48	140	**543148**	**EAMM-A-D32-42A**
EAMM-A-D32-55A	45	49.2	260	**550979**	**EAMM-A-D32-55A**
EAMM-A-D32-57A	45	50.5	270	**550980**	**EAMM-A-D32-57A**
EAMM-A-D40-55A	53.5	49.2	350	**543153**	**EAMM-A-D40-55A**
EAMM-A-D40-57A	53.5	50.5	350	**543154**	**EAMM-A-D40-57A**
EAMM-A-D40-70A	53.5	52	410	**550981**	**EAMM-A-D40-70A**
EAMM-A-D40-87A	53.5	54	530	**550982**	**EAMM-A-D40-87A**
EAMM-A-D60-70A	74	63.2	750	**543161**	**EAMM-A-D60-70A**
EAMM-A-D60-87A	74	64.7	890	**543162**	**EAMM-A-D60-87A**
EAMM-A-D60-100A	74	78.2	1,170	**550983**	**EAMM-A-D60-100A**

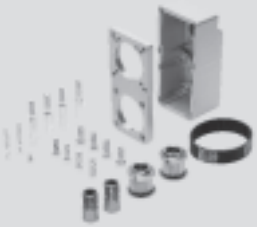
Mini slides EGSL, electric

Accessories

FESTO

Parallel kit EAMM-U-...

Material:
Housing: Die-cast aluminium
Clamping sleeve, toothed belt pulley: Corrosion-resistant steel
Toothed belt: Polychloroprene
Screws: Galvanised steel



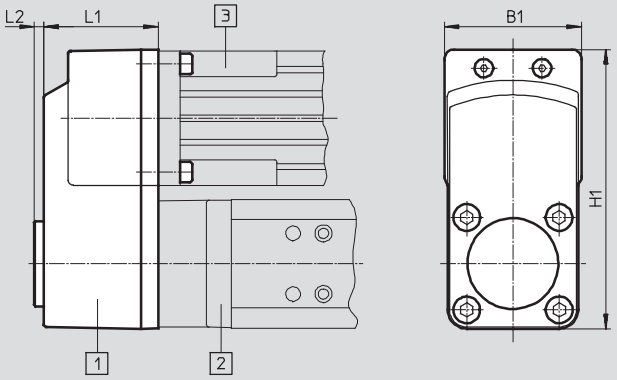


Diagram:
1 Parallel kit
2 Mini slide
3 Motor

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

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

1) Only with combined attachment of motor and axis

Dimensions and ordering data							
Type	B1	H1	L1	L2	Weight [g]	Part No.	Type
EAMM-U-D32-40A	45.1	93.1	40	4	300	**543150**	**EAMM-U-D32-40A**
EAMM-U-D40-55A	56.5	115	47	4	530	**543157**	**EAMM-U-D40-55A**
EAMM-U-D60-70A	86	162.6	58	4	1,170	**543165**	**EAMM-U-D60-70A**

Note

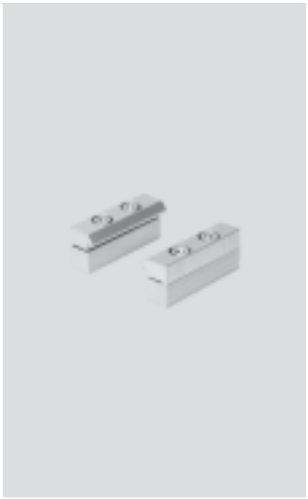
The motor can only be mounted at the side and underneath.

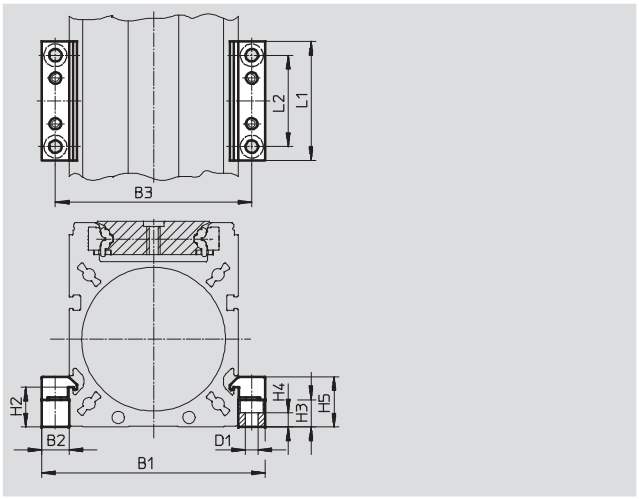
Mini slides EGSL, electric

Accessories

Profile mounting
EAHF/MUE

Material:
Anodised aluminium



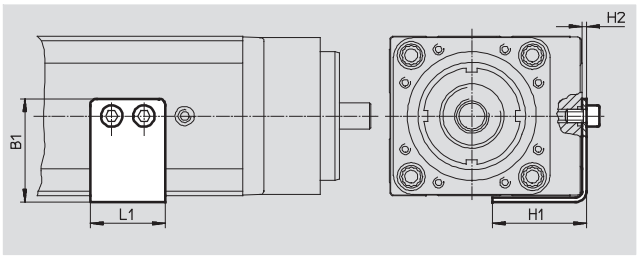


Dimensions and ordering data						
For size	B1	B2	B3	D1 ∅	H2	H3
35	49.5	8	41.5	3.4	10.5	10
45	68.5	12	56.5	5.5	12.5	8.3
55	77	12	65	5.5	17.5	12
75	98	12	86	5.5	17.5	12

For size	H4	H5	L1	L2	Weight [g]	Part No.	Type
35	6.8	15.5	40	20	20	**1170211**	**EAHF-G1-35-P**
45	2.5	17	52	40	23	**1168859**	**EAHF-G1-45-P**
55	6.2	22	52	40	80	**558043**	**MUE-70/80**
75	6.2	22	52	40	80	**558043**	**MUE-70/80**

Switching lug EAPM

Material:
Galvanised steel



Dimensions and ordering data							
For size	B1	H1	H2	L1	Weight [g]	Part No.	Type
35	25.5	25	1.5	17	15	**1235029**	**EAPM-G1-35-SLS**
45	32	32.5	2	30	30	**1235033**	**EAPM-G1-45-SLS**
55	36	35	2	30	35	**1235035**	**EAPM-G1-55-SLS**
75	48	44	2	35	50	**1235036**	**EAPM-G1-75-SLS**

Note

The switching lug may only be attached to the designated threads (guide rail at the back).

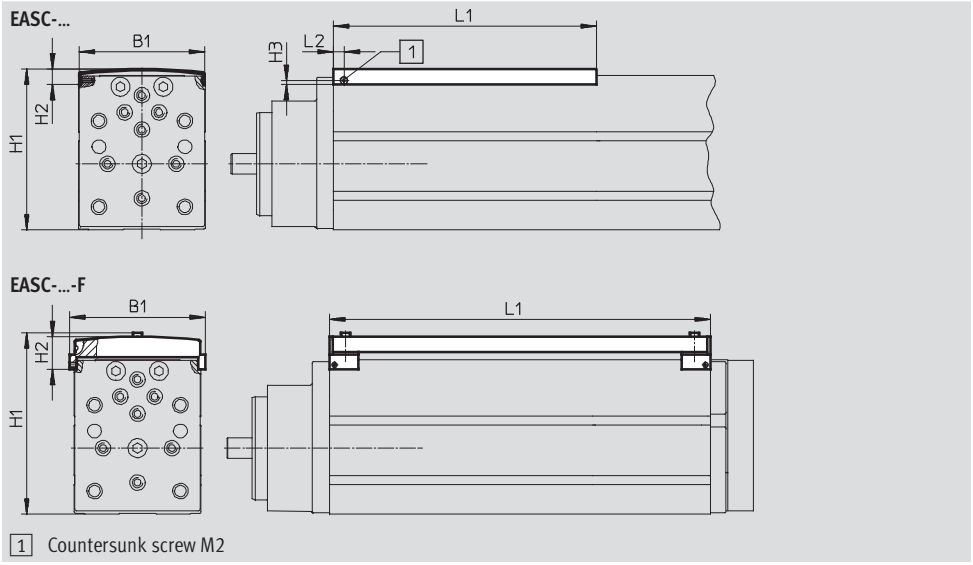
Mini slides EGSL, electric

Accessories

FESTO

Cover EASC

Material:
Anodised aluminium
Free of copper, PTFE and silicone



1 Countersunk screw M2

Dimensions and ordering data

For size	Length [mm]	B1	H1	H2	H3	L1 −0.5	L2 −0.3	Part No.	Type
For use without switching lug									
35	50	32.5	43.2	8.5	2.3	58	6	570819	EASC-G1-35-50
	500[1)]							570874	EASC-G1-35-500
45	100	43.5	59.7	9	2.3	108	6	570822	EASC-G1-45-100
	200					208		570823	EASC-G1-45-200
	500[1)]							570875	EASC-G1-45-500
55	100	52	69.7	9	2.3	108	6	570824	EASC-G1-55-100
	200					208		570825	EASC-G1-55-200
	250					258		570826	EASC-G1-55-250
	500[1)]							570876	EASC-G1-55-500
75	100	73	93.7	9	2.3	108	6	570827	EASC-G1-75-100
	200					208		570828	EASC-G1-75-200
	300					308		570829	EASC-G1-75-300
	500[1)]							570877	EASC-G1-75-500
For use with switching lug									
35	50	38.3	55	19.1	–	119.5	–	570830	EASC-G1-35-50-F
45	100	49.7	71.5	19.6		179		570833	EASC-G1-45-100-F
	200					279		570834	EASC-G1-45-200-F
55	100	58.2	81.5	19.6		204		570835	EASC-G1-55-100-F
	200					304		570836	EASC-G1-55-200-F
	250					383		570837	EASC-G1-55-250-F
75	100	78.9	105.5	19.4		218		570838	EASC-G1-75-100-F
	200					318		570839	EASC-G1-75-200-F
	300					423		570840	EASC-G1-75-300-F

Note

For covers with length 500 mm, the customer must make the mounting hole on the side.

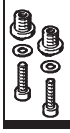
1) The cover can be shortened by the customer as required.

Mini slides EGSL, electric

Accessories

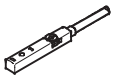
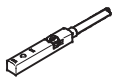
FESTO

Ordering data

	For size	Brief description	Part No.	Type	PU[1]
Centring sleeve ZBH					
	35, 45, 55	For slide and yoke plate	**186717**	**ZBH-7**	10
	75		**150927**	**ZBH-9**	
Connecting sleeve ZBV					
	45, 55	For connecting the mini slide EGSL with mini slide DGSL	**548803**	**ZBV-M5-7**	3
	75		**548804**	**ZBV-M6-9**	

1) Packaging unit

Ordering data – Proximity sensors for T-slot, inductive — Technical data ➔ Internet: sies

	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in slot from above, flush with cylinder profile	PNP	Cable, 3-wire	7.5	**551386**	**SIES-8M-PS-24V-K-7,5-OE**
			Plug M8x1, 3-pin	0.3	**551387**	**SIES-8M-PS-24V-K-0,3-M8D**
		NPN	Cable, 3-wire	7.5	**551396**	**SIES-8M-NS-24V-K-7,5-OE**
			Plug M8x1, 3-pin	0.3	**551397**	**SIES-8M-NS-24V-K-0,3-M8D**
N/C contact						
	Insertable in slot from above, flush with cylinder profile	PNP	Cable, 3-wire	7.5	**551391**	**SIES-8M-PO-24V-K-7,5-OE**
			Plug M8x1, 3-pin	0.3	**551392**	**SIES-8M-PO-24V-K-0,3-M8D**
		NPN	Cable, 3-wire	7.5	**551401**	**SIES-8M-NO-24V-K-7,5-OE**
			Plug M8x1, 3-pin	0.3	**551402**	**SIES-8M-NO-24V-K-0,3-M8D**

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

	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in slot lengthwise, flush with cylinder profile	PNP	Cable, 3-wire	2.5	**175 436**	**SMT-8-PS-K-LED-24-B**
			Plug M8x1, 3-pin	0.3	**175 484**	**SMT-8-PS-S-LED-24-B**

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**