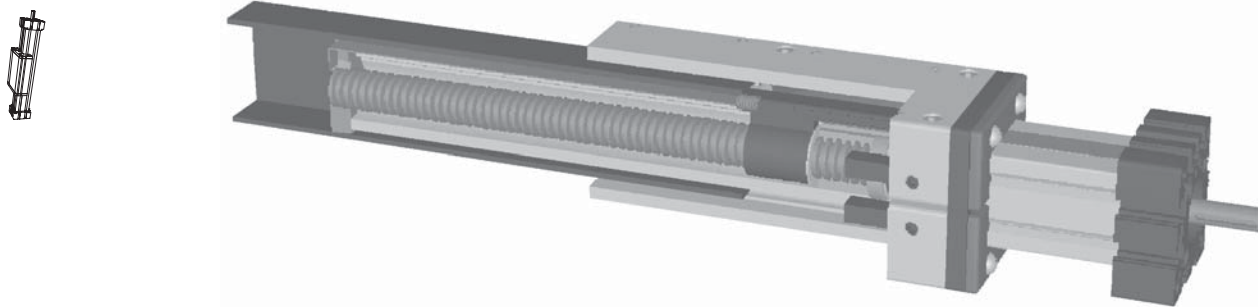


Modular Linear Actuator EGTH/EGKH 40, 60, 80

Acme or Ball Screw Driven



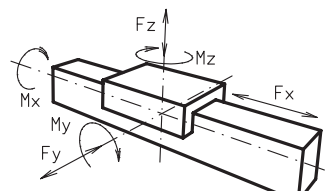
Function:

The rotation of the screw is translated into a linear movement. Guiding profile and square tube are connected by a clamping block. The result is a telescopic movement.

Fitting length: As required. Max. length 3,000 mm

Carriage mounting: T-slots and tapped holes

Unit mounting: T-slots

Forces and torques	Size	EG(T/K)H 40		EG(T/K)H 60		EG(T/K)H 80	
	Forces / Torques	static	dynamic	static	dynamic	static	dynamic
	F _x (N)	1500	1200	2500	2000	4200	3500
	F _y (N)	350	315	500	450	1000	900
	F _z (N)	500	450	750	675	1125	1000
	M _x (Nm)	20	18	33	30	82	75
	M _y (Nm)	44	40	77	70	220	200
	M _z (Nm)	33	30	55	50	165	150
	No-load torque						
Acme screw	18x4	18x8	24x5	24x10	28x5	28x10	
(Nm)	0,70	0,70	0,50	0,80	0,80	1,0	
Geometrical moments of inertia of aluminium profile							
I _x mm ⁴	1,35x10 ⁵		5,65x10 ⁵		19,14x10 ⁵		
I _y mm ⁴	1,48x10 ⁵		6,12x10 ⁵		20,12x10 ⁵		
E-modulus N/mm ²	70000		70000		70000		

Formula: EGTH

Driving torque:

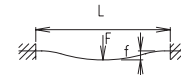
$$M_a = \frac{F \cdot p \cdot S \cdot w}{2000 \cdot \pi \cdot \mu} + M_{leer}$$

$$P_o = \frac{M_a \cdot n}{9550}$$

F = force (N)
 P = thread pitch (mm)
 S = safety factor 1, 2 ... 2
 M_{leer} = no-load torque (Nm)
 n = rpm of screw (min⁻¹)
 M_a = driving torque (Nm)
 μ = screw efficiency
 w = friction coefficient ~ 1, 22
 P_o = motor power (KW)

Efficiency of lead screws:

All ball screw	0.900
Tr 18x4	0.399
Tr 24x5	0.384
Tr 28x5	0.349
Tr 18x8	0.565
Tr 24x10	0.550
Tr 28x10	0.513

$$f = \frac{F \cdot L^3}{E \cdot I \cdot 192}$$


f = deflection (mm)
 F = load (N)
 L = free length (mm)
 E = elastic modulus 70000 (N/mm²)
 I = second moment of area (mm⁴)

