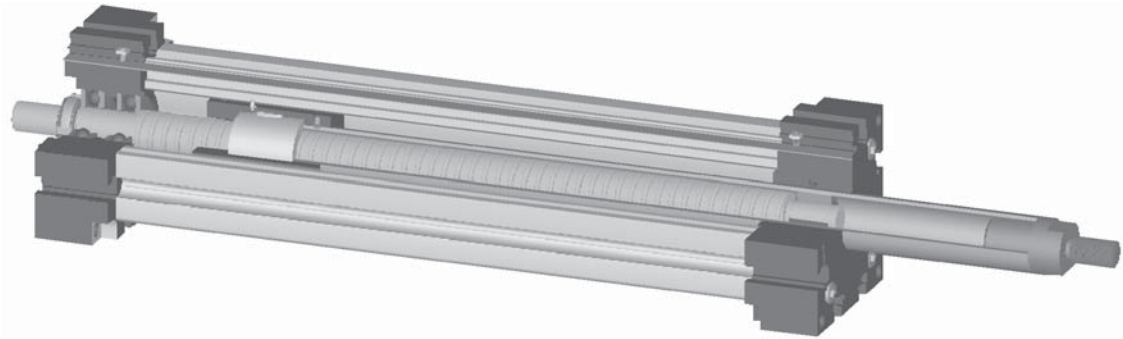


Modular Linear Actuator EHT/EHK 40, 60, 80, 100

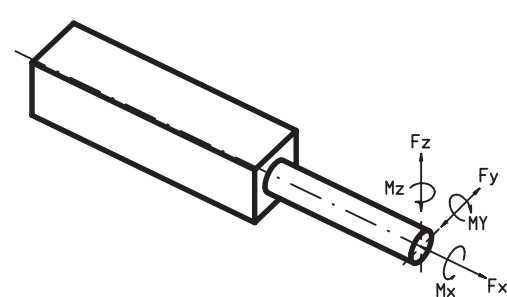
Acme or Ball Screw Driven



Function:

The rotation of the screw is translated into a linear movement. The result is a telescopic movement.

Fitting length: As required. Max. length size 40 = 500 mm, size 60 = 1000 mm, size 80 and 100 = 1500 mm
Unit mounting: T-slots

Forces and torques	Size	EH 40		EH 60		EH 80		EH 100	
	Forces / Torques	static	dynamic	static	dynamic	static	dynamic	static	dynamic
	F _x (N)	800	550	1800	1200	2600	1500	3100	1900
	F _y (N)	50	27	130	80	210	140	300	175
	F _z (N)	50	27	130	80	210	140	300	175
	M _x (Nm)	12	8	20	11	27	16	34	20
	M _y (Nm)	25	13	95	60	190	110	290	180
	M _z (Nm)	25	13	95	60	190	110	290	180
No-load torque									
Acme Screw		10 x 3		18 x 4	18 x 8	24x5	24x10	32x6	32x12
(Nm)		0,30		0,40	0,50	0,60	0,80	0,80	1,00
Ball Screw		12 x 5	12x10	16 x 5	16 x 10	20 x 5		32x5	32x10
(Nm)		0,20	0,40	0,20	0,40	0,40		0,60	0,80
Geometrical moments of inertia of aluminium profile									
I _x mm ⁴		1,32x10 ⁵		6,79x10 ⁵		18,99x10 ⁵		44,4x10 ⁵	
I _y mm ⁴		1,34x10 ⁵		6,97x10 ⁵		18,97x10 ⁵		44,8x10 ⁵	
E-modulus N/mm ²		70000		70000		70000		70000	

Formula: EGT

Driving torque:

$$M_a = \frac{F \cdot p \cdot S_w}{2000 \cdot \pi \cdot \mu} + M_{\text{no-load}}$$

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

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

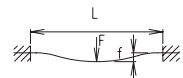
Efficiency (M)

Ball Screws = 0.900

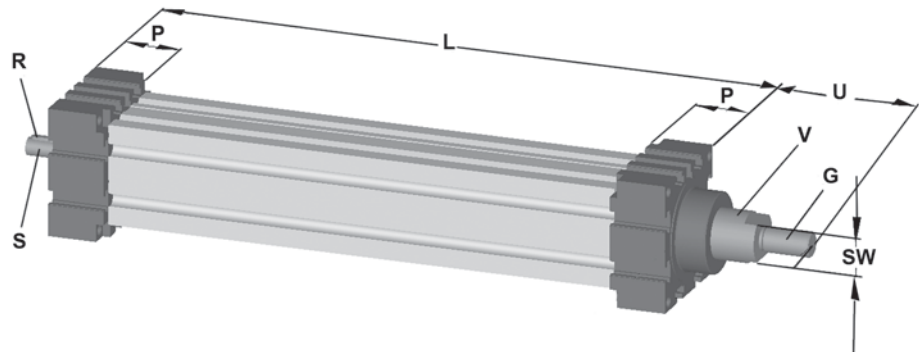
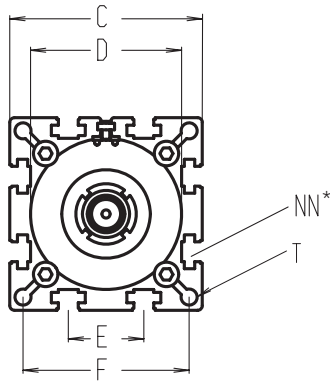
Acme Screws

Tr 18x4 = 0.399 Tr 18x8 = 0.565
 Tr 24x5 = 0.384 Tr 24x10 = 0.550
 Tr 28x5 = 0.349 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)



*For Trnuts refer to the accessory section

Size	Basic length L	C	D	E	F	G Ø x length	NN	P	R	S Ø x length	SW	T Ø	U	V Ø	Basic weight	Additional Weight per 100 mm
EH 40	156*	58	48x1	18	47	M12 x 1,25 x 24	M6	25	2x2x22	6x27	17	6,5	54	20	*	*
EH 60	217*	82	62x1	30	69	M16 x 1,5 x 32	M8	35	3x3x25	10x27	27	8,5	77	30	*	*
EH 80	254*	102	80x1	40	88	M20 x 1,5 x 40	M10	45	5x5x28	14x35	30	8,5	100	40	*	*
EH 100	290*	130	110x1	50	112	M30 x 2 x 45	M10	55	6x6x40	22x45	46	10,5	105	50	6,5 kg	2,10 kg

*Length and weight is based on screw selection, please contact factory.

Screw type:
(K) Acme Screw **(K)** Ball Screw

Selection of screw hand:
(1) right-hand **(2)** left-hand

Choice of guide body profile:
(0) standard **(1)** stainless screws

Selection of screw:

Size	Standard acme screw (trapezoidal)	Multistart-screw ball screw
40	(0) Tr 10x3	(0) Kg 12x5 (1) Kg 12x10
60	(0) Tr 18x4 (1) Tr 18x8	(0) Kg 16x5 (1) Kg 16x10
80	(0) Tr 24x5 (1) Tr 24x10	(0) Kg 20x5
100	(0) Tr 28x5 (1) Tr 28x10	(0) Kg 32x5 (1) Kg 32x10

Ball Screw pitch accuracy:
(0) 0,1 mm / 300 mm (Standard) **(1)** 0,05 mm / 300 mm **(2)** 0,025 mm / 300 mm

End play of ball nut:
(0) 0,04 mm (Standard), **(1)** < 0,02 mm, **(2)** 2% apply preload

Repeatability:
± 0,2 mm Acme Screw
± 0,025 mm Ball Screw

680 basic length + stroke = total length

EH K 100 1 0 0 0 0 0 0 00680
Pos. 1 2 3 4 5 6 7

Sample ordering code:
EHK100, ball screw right-hand screw, standard body profile, screw type 32x5, 430 mm stroke