



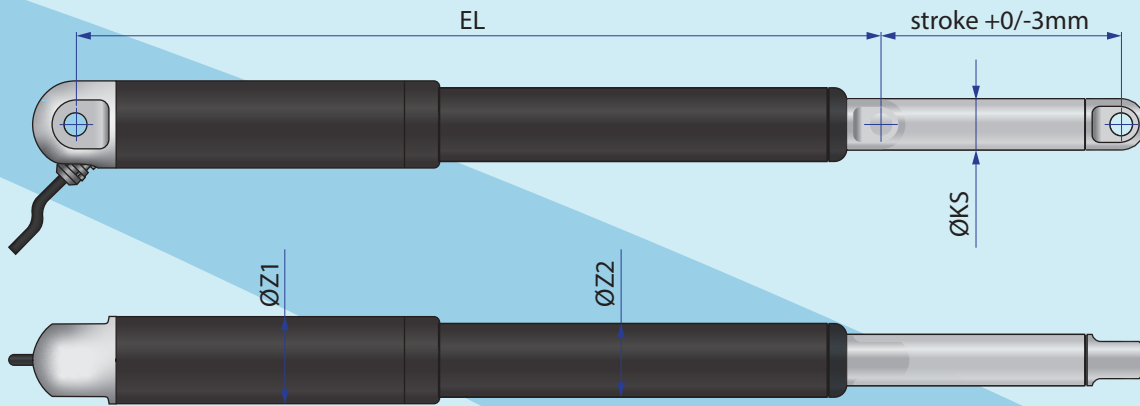
easyE[®]-line

Electric Linear Actuators

Bansbach
easylift[®]

(800) 225-4498

sales@easylift.com • www.easylift.com



Axial backlash: +/-0,5mm, generally length tolerance +/- 1mm

	EL	ØZ1	ØZ2	ØKS	Clevis rear	Hall	UL/ EN60.601	Harsh environment
easyE [®] -35								
Gear ratio: C, D, E, F	stroke+160*	35	28	20	+10	+10	+10	+11
Gear ratio: G, H	stroke+170*							
easyE [®] -50								
Gear ratio: C, D, E, F	stroke+240	50	40	30	-	+15	+15	+14
Gear ratio: G, H	stroke+255							
easyE [®] -60								
Gear ratio: all ratios	stroke+358	60	50	35	-	+15	+15	+25

*If stroke >500mm: EL+7mm, if stroke >700mm: EL+42mm

Gear Ratio	C*	D	E	F	G	H
easyE⁻³⁵						
12/24VDC						
Force 24V (dyn. push and pull) [N]	120	400	600	900	1600	2200
Speed at maximum load [mm/s]	33	16	12	7.5	4	3
Force 12V (dyn. push and pull) [N]	-	400	600	900	1500	2000
Speed at maximum load [mm/s]	-	16	12	7.5	3.5	2.5
Current at maximum load: 12VDC = 3.6A, 24VDC = 1.8A						
easyE⁻⁵⁰						
12/24VDC						
Force 24V (dyn. push and pull) [N]	500	1750	2200	3100	4500	4500
Speed at maximum load [mm/s]	70	20	17	12	6	4
Force 12V (dyn. push and pull) [N]	-	1400	1700	2400	4500	4500
Speed at maximum load [mm/s]	-	14	10	6	3	3.5
Current at maximum load: 12VDC = 16A (ratio C-F), 14A (ratio G), 9A (ratio H), 24VDC = 8A (ratio C-F), 7A (ratio G), 4.5A (ratio H)						
easyE⁻⁶⁰						
24VDC						
Force 24V (dyn. push and pull) [N]		1900	4300	6600	8100	10000
Speed at maximum load [mm/s]		26	12	8	6	5

Current at maximum load: **24VDC** = 11.5A

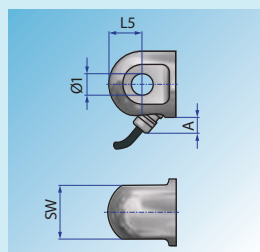
Max load limited for stroke length >= 400mm:

1000N (easyE⁻³⁵), 2000N (easyE⁻⁵⁰), 5000N (easyE⁻⁶⁰)

*only 24V DC power supply

CONNECTING PARTS "MOTOR SIDE"

Hinge eyes (standard)



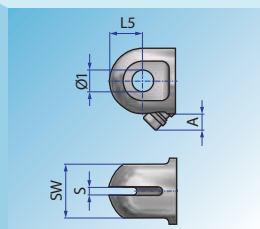
Code	Ø1	L5	SW	A	Material	Max static load
easyE®-35	(mm)	(mm)	(mm)	(mm)		
A1M	10	17.5	28	6	Alu	5400 N
B1M	10	17.5	28	-	Polyamid (PA)	2000 N
C1M	10	17.5	28	6	stainless steel	5400 N
easyE®-50						
A2M	16	25	40	12.3	Alu	16800 N
B2M	16	25	40	-	Polyamid (PA)	4700 N
C2M	16	25	40	12.3	stainless steel	16800 N
easyE®-60						
A3M	16	30	50	12.3	Alu	16800 N
C3M	16	30	50	12.3	stainless steel	16800 N

with spherical bearings



Code	Ø1	L5	SW	A	Material	Max static load
easyE®-35	(mm)	(mm)	(mm)	(mm)		
E1M	8	17.5	28	-	Alu	5400 N
easyE®-50						
E2M	12	25	40	-	Alu	11000 N

Clevis

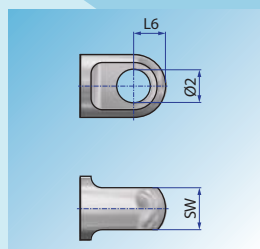


Code	Ø1	L5	SW	A	S	Material	Max static load
easyE®-35	(mm)	(mm)	(mm)	(mm)	(mm)		
F1M	10	17.5	28	6	6.2	Alu	5400 N
G1M	10	17.5	28	-	4.2	Polyamid (PA)	2000 N
H1M	10	17.5	28	6	6.2	stainless steel	5400 N
easyE®-50							
F2M	16	25	40	12.3	6.2	Alu	16800 N
G2M	16	25	40	-	6.2	Polyamid (PA)	4700 N
H2M	16	25	40	12.3	6.2	stainless steel	16800 N

PA-connecting parts are not available for gear ratio G and H

CONNECTING PARTS "PISTON ROD SIDE"

Hinge eyes (standard)



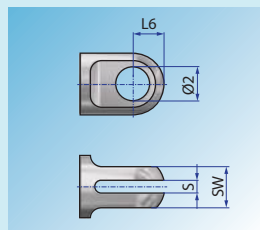
Code	Ø2	L6	SW	Material	Max static load
easyE®-35	(mm)	(mm)	(mm)		
A1K	10	10	13	Alu	5400 N
B1K	10	10	13	Polyamid (PA)	2000 N
C1K	10	10	13	stainless steel	5400 N
easyE®-50					
A2K	16	15	20	Alu	16800 N
B2K	16	15	20	Polyamid (PA)	4700 N
C2K	16	15	20	stainless steel	16800 N
easyE®-60					
A3K	16	17.5	25	Alu	16800 N
C3K	16	17.5	25	stainless steel	16800 N

with spherical bearings



Code	Ø2	L6	SW	Material	Max static load
easyE®-35	(mm)	(mm)	(mm)		
E1K	8	12	18	Alu	5400 N
easyE®-50					
E2K	12	15	20	Alu	11000 N

Clevis



Code	Ø2	L6	SW	S	Material	Max static load
easyE®-35	(mm)	(mm)	(mm)	(mm)		
F1K	10	10	15	6.2	Alu	5400 N
G1K	10	10	13	4.2	Polyamid (PA)	2000 N
H1K	10	10	15	6.2	stainless steel	5400 N
easyE®-50						
F2K	16	15	20	6.2	Alu	16800 N
G2K	16	15	20	6.2	Polyamid (PA)	4700 N
H2K	16	15	20	6.2	stainless steel	16800 N

PA-connecting parts are not available for gear ratio G and H

FEATURES

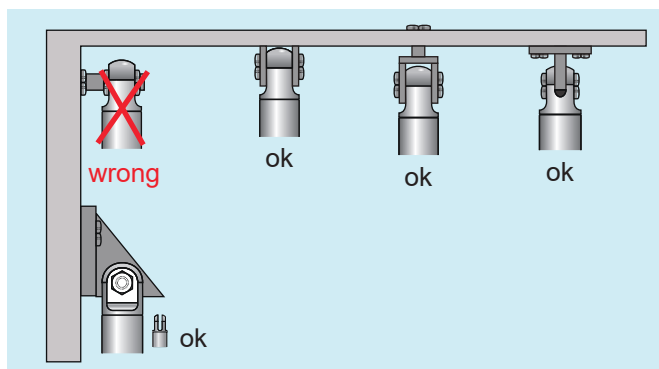
- Stroke length: 50, 100, 150, 200, 250, 300, 350, 400, 500 and 750mm (others on request)
- Cable:
 - easyE[®]-35: 1m, 2x0.65mm² (AWG19), Ø = 4.8mm, black, Molex Mini-Fit Jr. 6 pin
 - easyE[®]-50: 1m, 2x1.3mm² (AWG16), Ø = 6.4mm, black, Molex Mini-Fit Jr. 6 pin
 - easyE[®]-60: 1m, 2x1.3mm² (AWG16), Ø = 6.4mm, black, Molex Mini-Fit Jr. 6 pin
- Bending radius: 6x cable diameter
- Materials: Motor and actuator tube are powder coated steel or stainless steel
Piston rod is aluminium (easyE[®]-35) or stainless steel (easyE[®]-50 and easyE[®]-60)
Front and rear brackets are PA, Aluminum or stainless steel
- Protection class: IP66 (standard), harsh environment (according to IP68 and IP69)
- Max. static load/
Self locking force:
 - easyE[®]-35: PA brackets: 2000N Alu/AISI: 5400N
 - easyE[®]-50: PA brackets: 4700N Alu/AISI: 16800N
 - easyE[®]-60: Alu/AISI: 16800N
 - Depending on stroke length for push-applications
- Temperature: Operation: -20°C to +70°C (easyE[®]-35 and easyE[®]-50) -20°C to +50°C (easyE[®]-60)
Storage: -40°C to +70°C
- Duty cycle: Max. 10% or 2 minutes in use followed by 18 minutes rest
- Colors: RAL colors available

PLEASE NOTE

- Never expose the actuator to hammer strike during installation or in other situations
- Retrofitted bushings should be pressed into the bracket-borings. No hammering
- Power supply without over-current protection can cause serious damage to the actuator at mechanical end-stop or when actuator is overloaded in another way
- Keep piston tube clean
- Effective stroke is reduced by up to 3mm
- Longer cable lengths may cause voltage drop which affects the performance of the actuator
- For medical applications (IEC/EN/UL60601-1): Operating temperature +5°C to +48°C, Relative humidity 20% - 70% atmospheric pressure = 1 atm. Connect to medically approved supply source only and according to guidelines provided with the source
- Function of the actuator is subject to the settings of the control box
- The dust and water sealing of harsh environment actuators might affect their performance
- All specification are for 25°C ambient – low temperature might affect performance
- Depending on load and application, nominal and actual stroke length may differ due to internal disc springs not being fully compressed

RECOMMENDED MOUNTING METHODS

- Do not clamp actuators on tubing
- Always keep both brackets mounted in the same orientation and ensure to flush mount actuator
- Brackets must always be able to rotate on axis in mountings



CONTROLLERS

FEATURES

TECHNICAL DETAILS

EEL-S1 For 1-3 actuators



* up to 12 actuators by synchronizing multiple boxes

- Plug and play solution
- Handset or external switches
- For easyE®-35 and easyE®-50
- Wired and wireless IR handset available

- 120C AV 60Hz
- Only for use with 24VDC actuators
- Other variations available

EEL-S2-1 For 1 actuator



- Adjustable start and stop ramp
- Adjustable current limit
- Continuous-mode, impulse-mode
- Easy interfacing to PLC etc.
- DIN-rail fittable
- Hall sensors not supported
- Programming box sold separately

- Supply: 12 or 24VDC
- Over voltage protection: 40V
- Idle current: Approx. 15mA
- Driving current: 10A continuous, 16A with duty cycle 50%, Max 16A on duty 2 min

EEL-S2-2 For 1 actuator

* Programmable – ask for details



- Precise position control from analog voltage input
- Adjustable start and stop ramp
- Settable current limit
- High momentary load capacity
- DIN-rail base fittable
- "Position reached" – signal
- Hall sensors necessary
- Programming box sold separately

- Supply voltage: 12 or 24VDC
- Actuator current continuous max: 15A
- Current limit adj.: 0.1-20A
- Overheat limit: 100°C
- Hall input freq.: Max 1kHz
- Input control logic (pos.): High=4-30V, Low=0-1V or open

EEL-S2-3 For 2 actuators

* Programmable – ask for details



- Synchronized operation of 2 actuators
- Current and temperature protection
- Settable drive speed
- Adjustable start and stop ramp
- Easy setting with serial interface
- Autobalance feature
- Hall sensors necessary
- Programming box sold separately

- Supply voltage: 12 or 24VDC
- Quiescent current: 15mA
- Motor current: 2x10A cont. 2x20A, 25% duty
- Current limit: 1-20A
- Pulse input freq. max: 1kHz
- Pulse inputs pull- up/down: 10kΩ
- Control inputs: 0-1V=OFF; 4-30V=ON

EEL-S3

EEL-S4

For 1-4 actuators

* Programmable – ask for details



- Battery powered for mobile use
- 24VDC NiMH or Li-Ion battery
- Customized colors and foil design
- Wired handset
- Programming software/cable available

- Supply: 24VDC NiMH or Li-Ion battery
- Idle current: < 5mA
- Current limit: 8A/ch max. total 12A
- Ramps 0-3 sec
- Connector type Molex Mini-Fit 6 pin
- USB programming cable separate

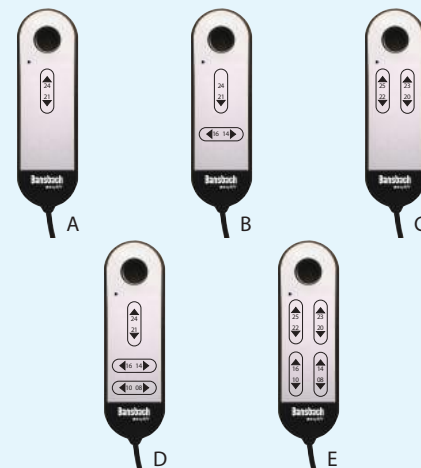
EEL-S3

- 1 actuator
- Up and down function

EEL-S4

- Adjustable current limit in and out
- Adjustable calibration speed
- Adjustable virtual min/max-position
- Individual or synchronous operation for driving 1-4 actuators

REMOTE CONTROL LAYOUTS



- 24V Battery adaptor for direct plug-in available

HANDSETS AND ACCESSORIES

FEATURES

EEL-LDH-BASIC-DN



- Up/Down keys
- Mounting under table
- Compact size

EEL-LDH-BASIC-IL



- Up/Down keys
- Mounting over table
- Compact size
- Rubber ribs

EEL-LDH-IL



- Up/Down keys
- Memory position keys
- Save key
- Display
- Rubber ribs

EEL-LDH-FX



- Up/Down keys
- Memory position keys
- Save key
- Display
- Drilling holes
- Strain relief

EEL-LDH-ST1



- Up/Down keys
- Mounting under table
- Compact size

EEL-LDH-ST2



- Up/Down keys
- Up to 2 motor groups
- 4 Memory positions
- 3-digit display for inch or cm

EEL-LDH-Down



- Up/Down keys
- Memory position keys
- Save key
- Display
- Drilling holes
- Supports for cable loop

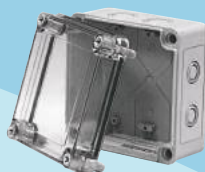
EEL-LDH-AC-FER



- Up/Down function
- Max 4 memory positions
- IR-Remote
- Operation of up to 16 systems
- W x H x T - 3.5 x 1.5 x 5.5cm
- Wireless attachment w/remote for EEL-S1 or Easymotion

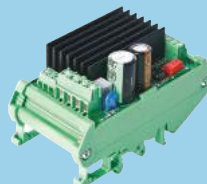
EEL-S2-Box-IP66

- Transparent Cover
- -13°F to 104°F (-25°C to 40°C)
- Knockouts (With cable glands and vent)
- IP66 IEC 60529, EN 60529



DIN Rail Mount

- Standard DIN Rail Configuration
- For use with EEL-S2-1, EEL-S2-2 and EEL-S2-3



EEL-S2-BOX EEL-S2-BOX-XL

- Plastic enclosure for EEL-S2-1, EEL-S2-2 and EEL-S2-3
- IP55



BRACKETS

FOR MOTOR SIDE



- EEL900BA35-1MS (easyE®-35)
- EEL900BA50-1MS (easyE®-50)
- EEL900BA60-1MS (easyE®-60)

FOR PISTON SIDE



- EEL900BA35-1KS (easyE®-35)
- EEL900BA50-1KS (easyE®-50)
- EEL900BA60-1KS (easyE®-60)

EXTENSION CABLES AND SPLITTERS

AC-SK200 (Splitting Cable)



- Connect several control systems to your system (e.g. ST1 and remote control)
- Easymotion & easyE® control splitter

AC-PVK1000 (Extension Cable for Handsets)



- Length 1000mm
- For use with all handsets
- Can be combined
- Max recommended length 9m

EEL-EXTEN-X-CAB (Extension Cable for Motor to Power)



- 3 or 6 Meter cables
- Extension for actuator to controller connection