

Linear Actuator KA30 Open Spindle

Data Sheet



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Introduction



KA30 Open spindle is a multi-flexible actuator which allows design-freedom for application design due to its small and compact housing in combination with the uncovered spindle.

KA30 OS is suitable for applications where power and high lifting capacity are needed and where space is limited. All this without compromising stability and precision when operating.

The KA30 OS is tailor-made for use in healthcare applications supporting daily working routines for the staff while ensuring optimal comfort for patients.

Highlights:

- Compact design
- Low noise level
- Robustness
- Strong and reliable

Features and options

Load in push:	Up to 8,000 N
Load in pull:	4,000 N
Housing colour:	Light grey, RAL 7035
Protection class:	IPX0
Motor:	24 VDC - Large motor, 8,000 N (D) - Fast motor for 2,500 N and 4,000 N (E) - Standard fast motor for 6,000 N (F) - Small motor, 4,000 N (pull) (H)
Stroke length:	8,000 N, SL 50-600 mm (D) 6,000 N, SL 50-600 (F) 4,000 N (pull), SL 50-600 mm (H) 2,500 N + 4,000 N, SL 50-600 (E)
Built-in dimensions:	$BID_{min} = SL + 188 \text{ mm}$
Positioning options:	Dual Hall with external power switches
Noise level:	$\leq 50 \text{ dB (A)}$
Safety nut:	Standard
Electrical limit switch:	External power switch
Cable:	Fixed cable with Mini-Fit
Safety factor:	Application-dependent
Built-in endstop:	Mechanical (for safety only)
Back fixture:	Plastic Metal (required for 8,000 N push or 4,000 N pull versions)
Weight:	>1.2 kg (depending on specifications such as motor type, stroke/cable length, etc.)
Feedback:	None, Dual Hall digital (power switch)



Usage

Duty cycle:	10%, 2 minutes continuous use followed by 18 minutes not in use (5% duty cycle for fast motor type: E and F)
Operation temperature:	+5 °C to +40 °C
Storage temperature:	-10 °C to +50 °C
Compatibility:	Compatible with LINAK control boxes. Please contact LINAK for questions re. product compatibility.
Relative humidity:	20% to 80% – non-condensing
Atmospheric pressure:	700 to 1060 hPa
Height above sea level:	Max. 3000 meters
Flammability rating:	UL94V-2
Approvals:	N/A



Ordering example

Actuator Type:	KA 30	30	=	KA30	
Spindle Pitch:	040	030 040	=	3 mm 4 mm	Available up to 8,000 N Available up to 6,000 N
Stroke Length:	200	xxx	=	mm	Min. = 50 mm, Max. = 600 mm in 5 mm steps
Safety:	0A	00 0A	=	None Safety Nut	Only for push application
Feedback:	00	00 0H	=	None (F1) Dual Hall, digital (F2)	
Platform:	0	0	=	None	
Motor Type:	D	D E	=	Large motor (8,000 N) Fast motor (2,500 N + 4,000 N)	F = Standard fast motor (6,000 N) H = Small motor with increased self-lock
End Stop:	0	0	=	Power switch (E1)	
IP Degree:	0	0	=	IPx0	
Colour:	+	+	=	Light Grey (RAL7035) housing	
Outer Tube:	N	N	=	No outer tube	
Quick Release:	0	0	=	No Quick Release	
Back Fixture End:	1	1 2	=	With slot Ø10.2 With slot Ø12.2	3 = Metal with slot Ø10 (up to SF 5.0 in pull requires metal back fixture)
Back Fixture Rot.:	1	1 2	=	Standard Turned 90°	
Piston Rod End:	N	N	=	No piston rod end	
Bushings:	A	A	=	No bushings	
Brake:	1	0	=	No brake (only pull)	1 = Brake in push
Install. Dim.:	388	xxx	=	xxx mm	188 mm + stroke
Load Range:	4	4 5 6 8	=	4,000 N 2,500 N 6,000 N 8,000 N	
Safety Factor:	N	N	=	Application-dependent	
Cable Type:	Y	Z W V	=	Straight 1,250+1,250+205 mm, 6 pin Mini-Fit angled Straight 1,250+1,250+555 mm, 6 pin Mini-Fit angled Straight 1,250+1,250+1650 mm, 6 pin Mini-Fit angled	

Chosen item No.: 300402000A000D00+N011NA13884NY



Approvals and certifications

For approval documentation, LINAK recommends specifying the product type instead of individual item numbers to ensure broader approval coverage and simplify future product changes.

Listed LINAK item for application approval: KA30 OS

If this is not possible, we advise being as non-specific as possible when specifying LINAK products in your approval application:

Listed LINAK item for application approval: KA30*****SS***S*S*****S**

" * " is not safety critical and we recommend including a non-specific signifier such as an asterisk.

" S " is safety critical and represents a listed critical component in the product and cannot be left out.

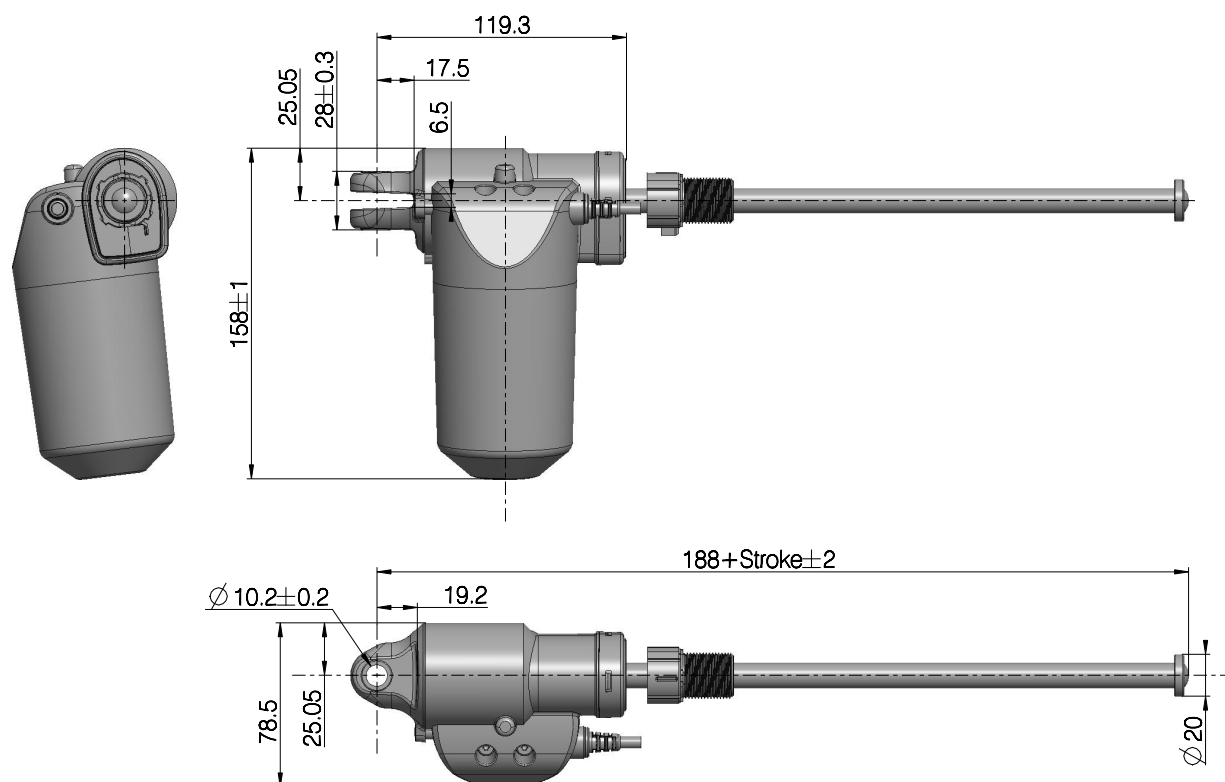
For more information, please refer to "Approvals and certifications" in LINAK Application Design Recommendations found under User Manual for any given product on LINAK.com



Dimensions

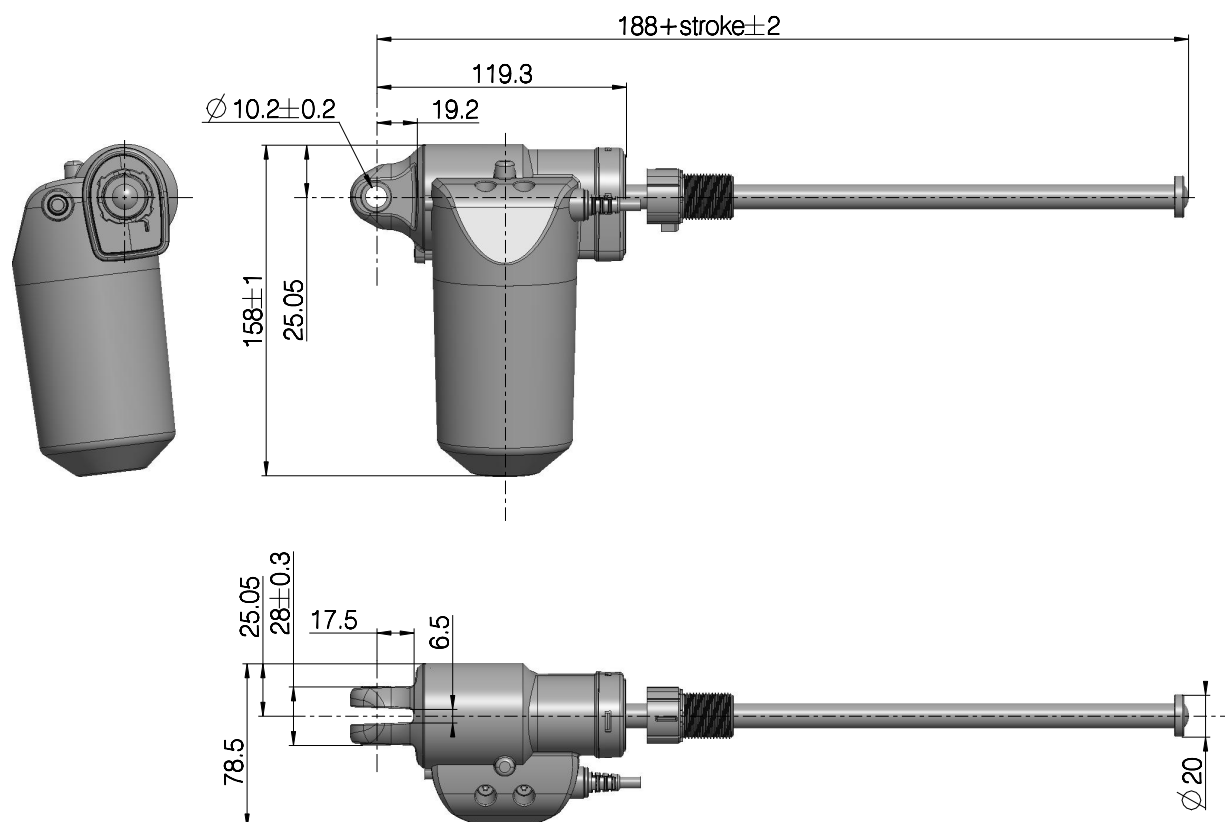
All dimensions are in mm.

KA30 OS large motor (D) and fast motor (E) with standard back fixture



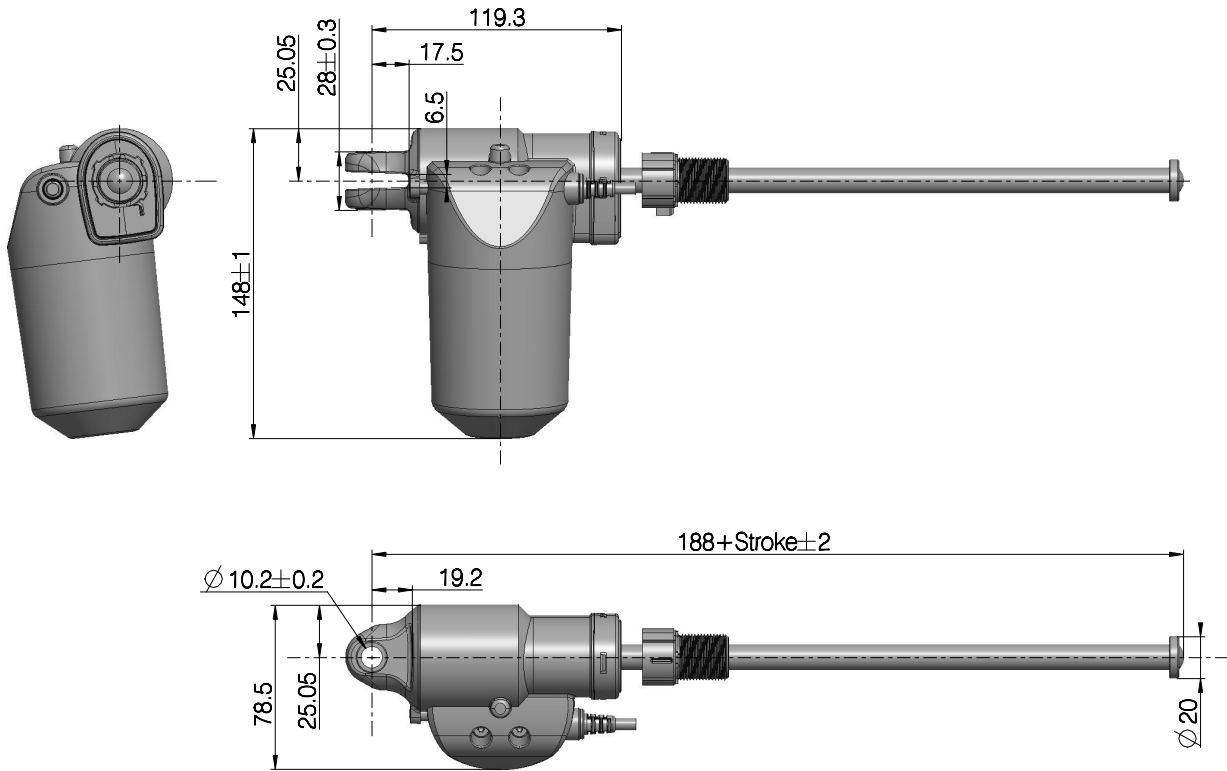
Drawing no.: 1046w4040

KA30 OS large motor (D) and fast motor (E) with 90 turned back fixture



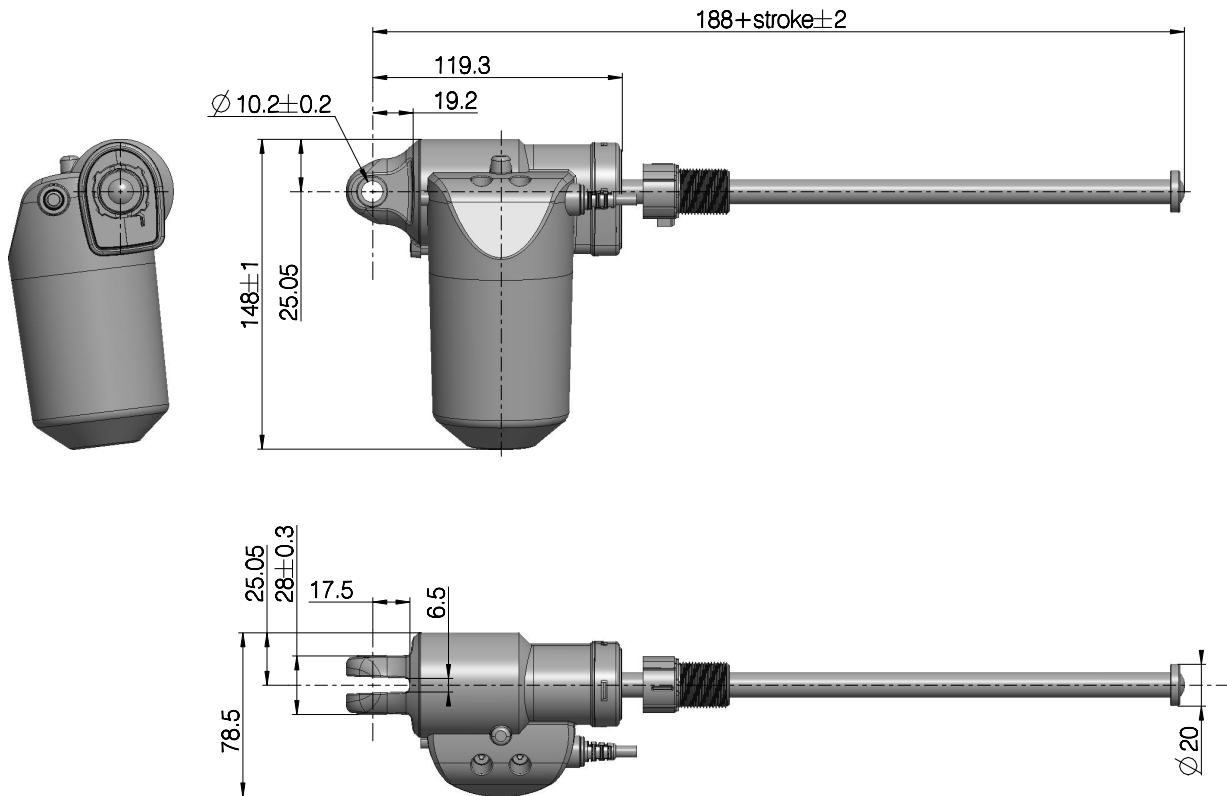
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KA30 OS fast motor (F) with standard back fixture



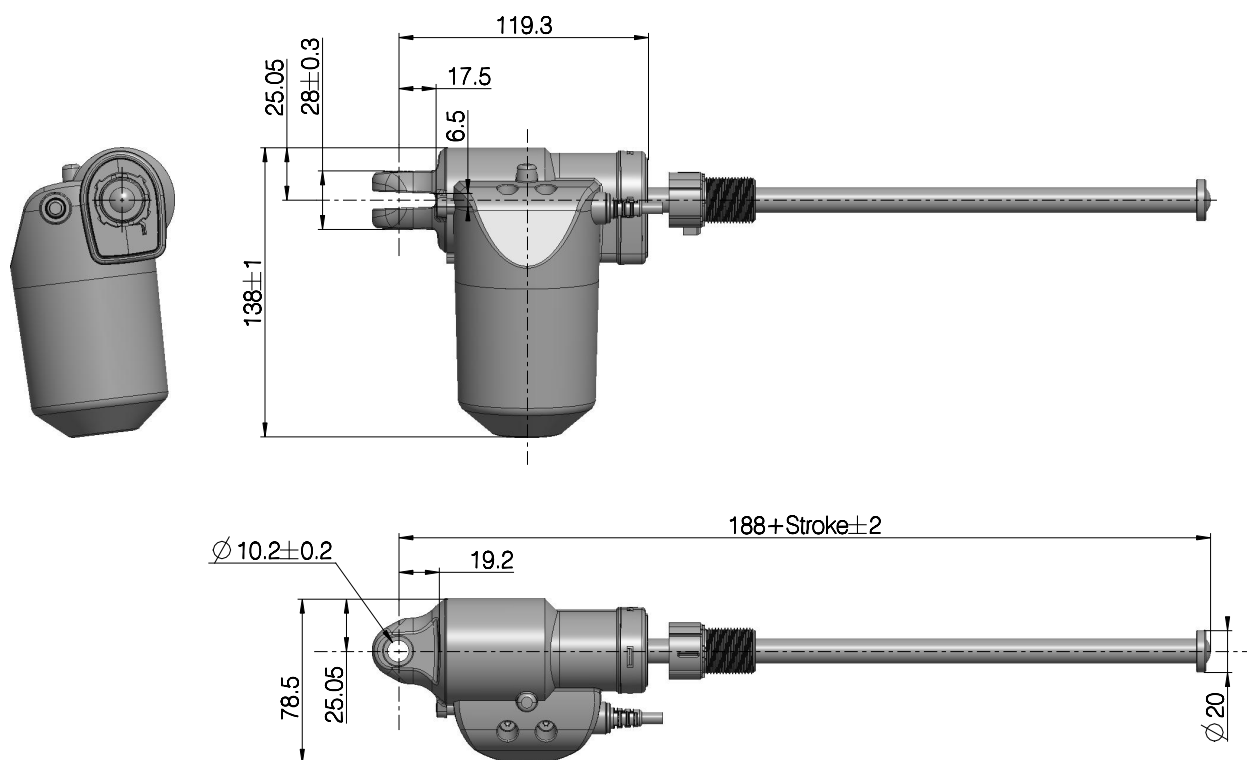
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KA30 OS fast motor (F) with 90° turned back fixture



Drawing no.:1046w4042

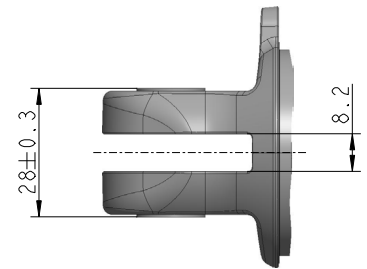
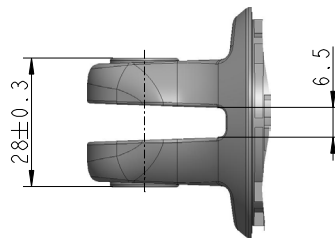
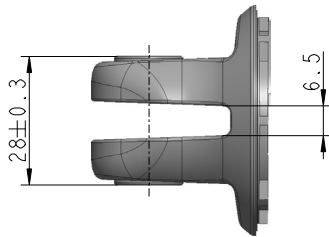
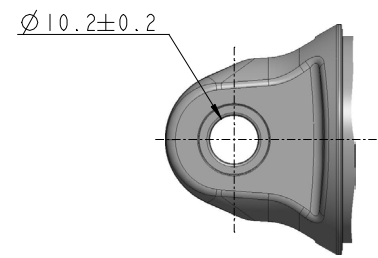
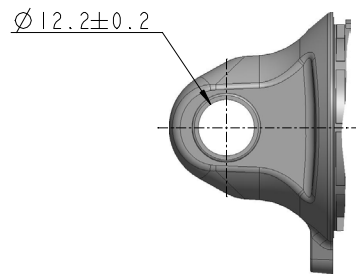
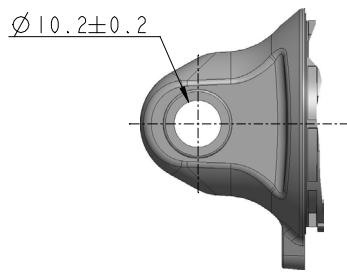


KA30 OS small motor (H) with standard back fixture (for pull)

Drawing no.: 1046w4038



Back fixture overview



1=Plastic with slot $\varnothing 10.2$

2=Plastic with slot $\varnothing 12.2$

3=Metal with slot $\varnothing 10.2$

Technical specifications

Motor type	Power Supply [V]	Spindle pitch [mm]	Max. push load [N]	Self-locking load [N]	Typical speed at 0/ max. load [mm/s] +/-10%	Typical current at 0/ max. load [A]
Large (D)	24	3	8,000	8,000	4.2 / 2.9	0.6 / 4.7
Large (D)	33	3	8,000	8,000	5.8 / 4.6	0.6 / 4.8
Small (H) - Pull	24	3	4,000	4,000	4.4 / 3.3	0.5 / 3.5
Small (H) - Pull	33	3	4,000	4,000	6.1 / 4.6	0.5 / 3.5
Fast M (E)	24	4	2,500	2,500	13.49 / 11.03	0.82 / 3.73
Fast M (E)	33	4	2,500	2,500	20.23 / 16.70	1.12 / 3.89
Fast M (E)	24	3	4,000	4,000	10.27 / 7.81	0.86 / 4.40
Fast M (E)	33	3	4,000	4,000	15.32 / 11.94	1.07 / 4.55
Fast M (F)	24	4	6,000	6,000	6.99 / 4.83	0.77 / 4.71
Fast M (F)	33	4	6,000	6,000	10.21 / 7.65	0.89 / 4.80

See section on speed/load, current/load curves on next page.

Comments to Technical Specifications

Self-locking ability

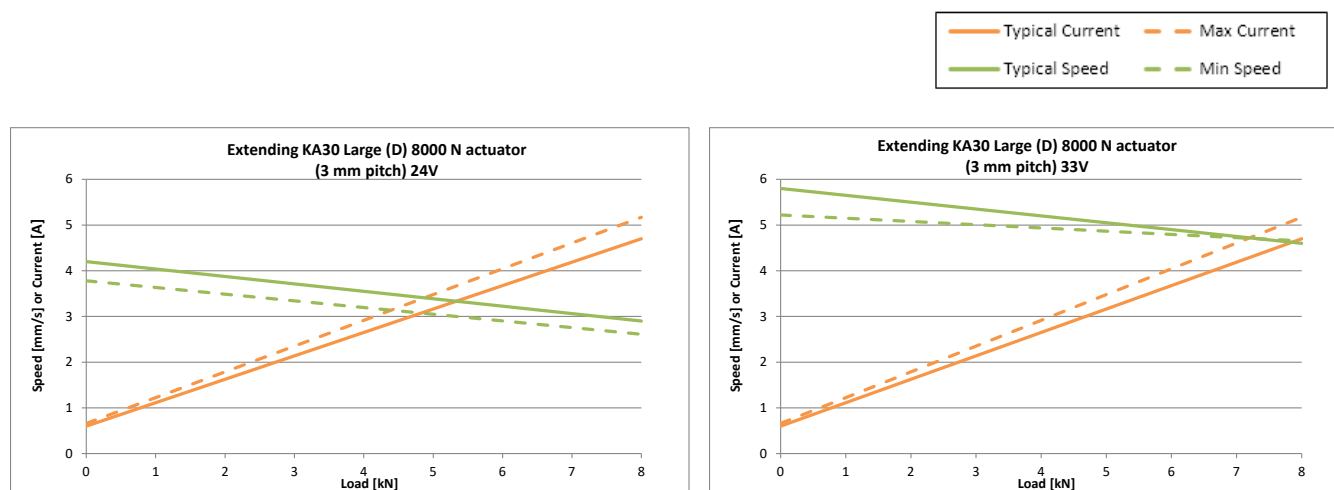
LINAK control boxes are designed so that they will short-circuit the motor terminals (poles) of the actuator(s), when the actuator(s) is/are not running. This solution gives the actuator(s) a higher self-locking ability. If the actuator(s) is/are not connected to a LINAK control box, the terminals of the motor must be short-circuited to achieve the self-locking ability of the actuator(s).

When using the KA30 Open Spindle with LINAK control boxes, the terminals are only short-circuited for max. 60 seconds. Afterwards, the actuator is self-locking.

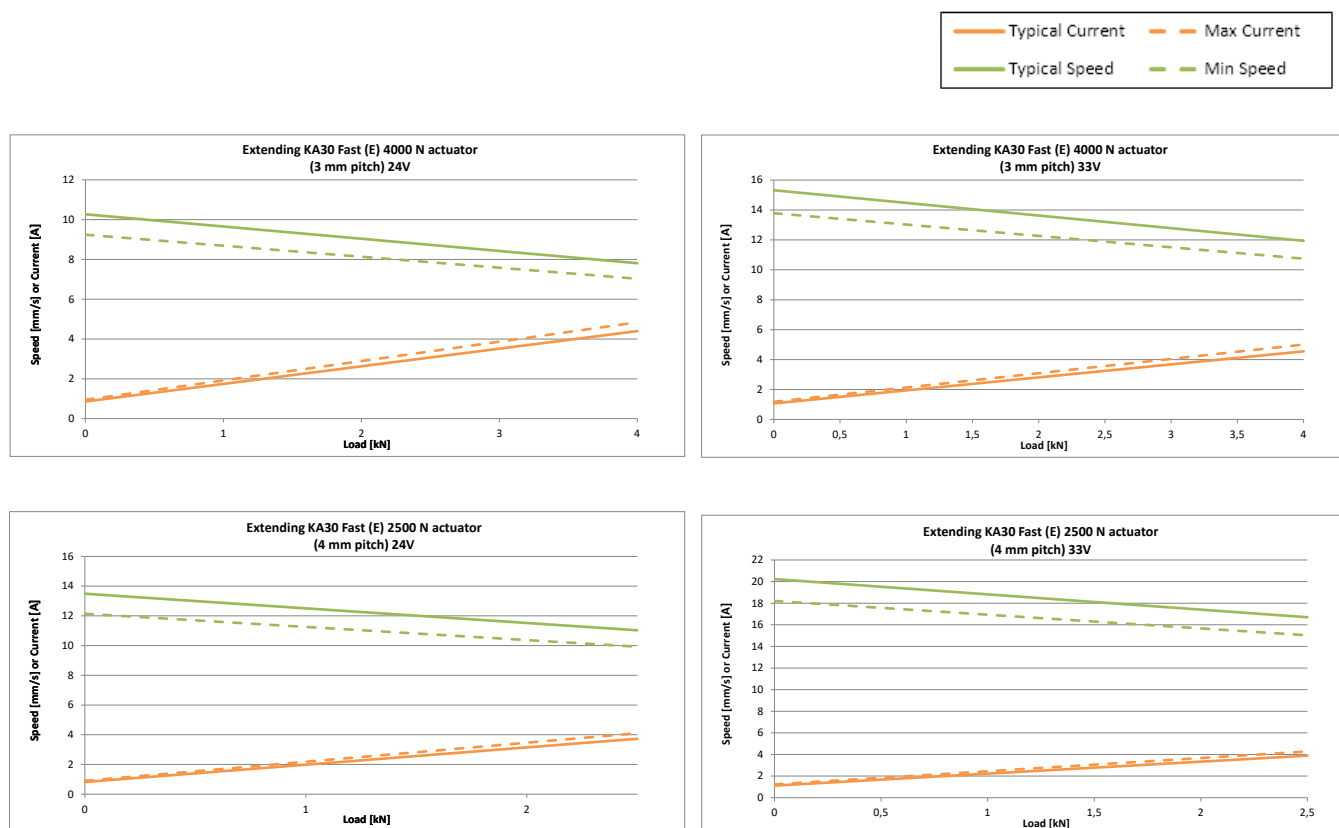


Speed and current curves

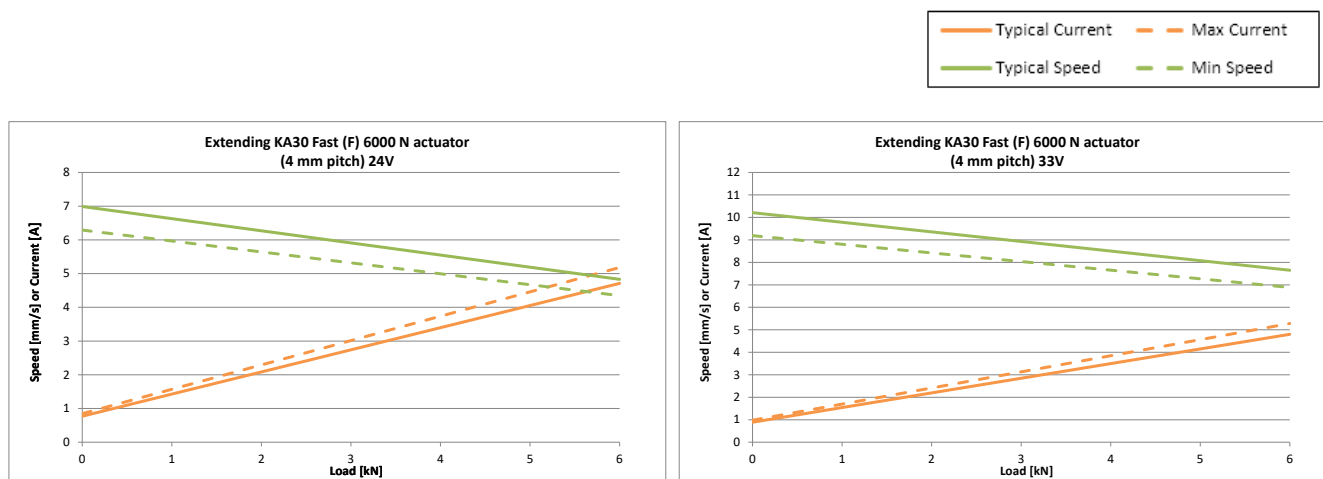
KA30 large, motor type D



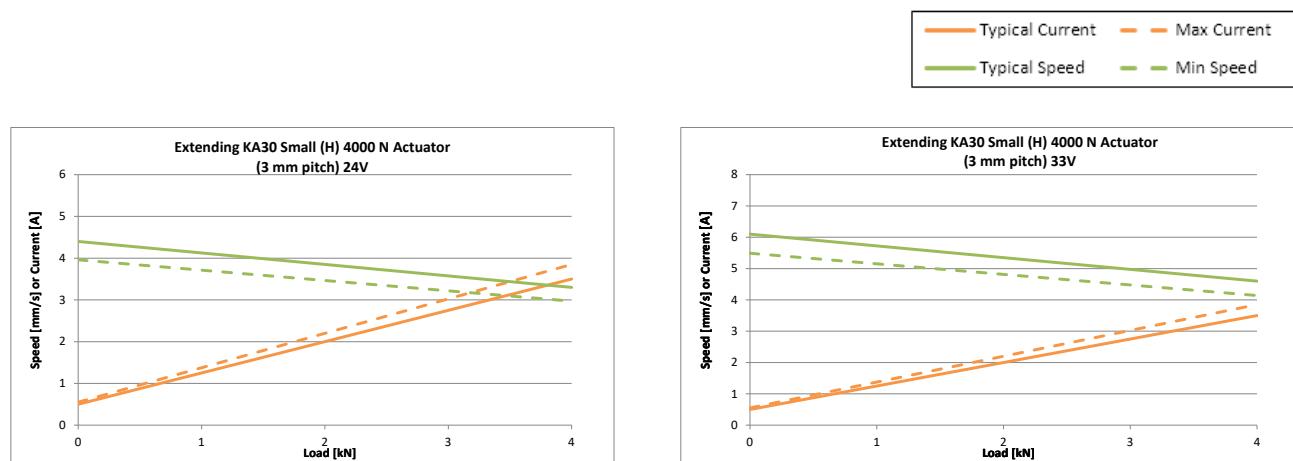
KA30 fast, motor type E



KA30 standard fast, motor type F



KA30 small with increased self-locking, motor type H for pull



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