

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 <ul style="list-style-type: none"> - 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

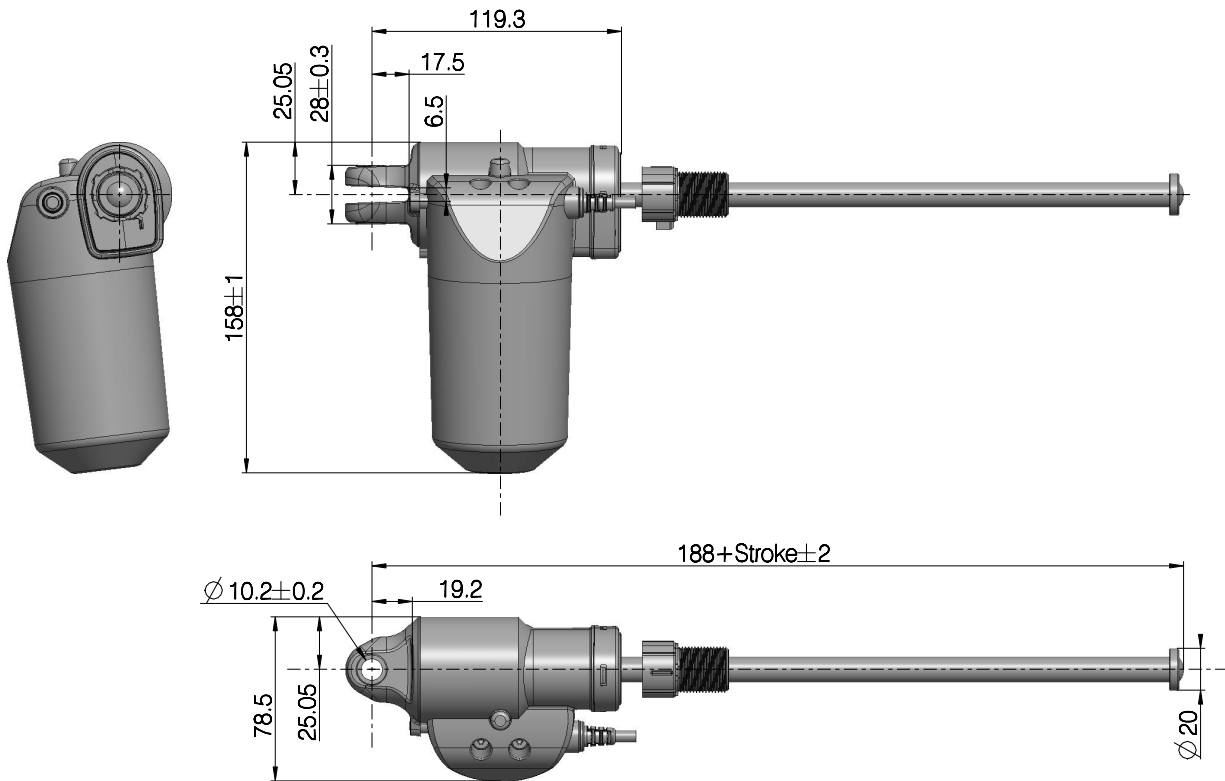
| | | | |
|---------------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| Actuator Type: | KA 30 | 30 = KA30 | |
| Spindle Pitch: | 040 | 030 = 3 mm 040 = 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 = None 0A = Safety Nut | Only for push application |
| Feedback: | 00 | 00 = None (F1) 0H = Dual Hall, digital (F2) | |
| Platform: | 0 | 0 = None | |
| Motor Type: | D | D = Large motor (8,000 N) E = 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 = With slot Ø10.2 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 = Standard 2 = 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 = 4,000 N 5 = 2,500 N 6 = 6,000 N 8 = 8,000 N | |
| Safety Factor: | N | N = Application-dependent | |
| Cable Type: | Y | Z = Straight 1,250+1,250+205 mm, 6 pin Mini-Fit angled W = Straight 1,250+1,250+555 mm, 6 pin Mini-Fit angled V = Straight 1,250+1,250+1650 mm, 6 pin Mini-Fit angled | |

Chosen item No.: 300402000A000D00+N011NA13884NY

Dimensions

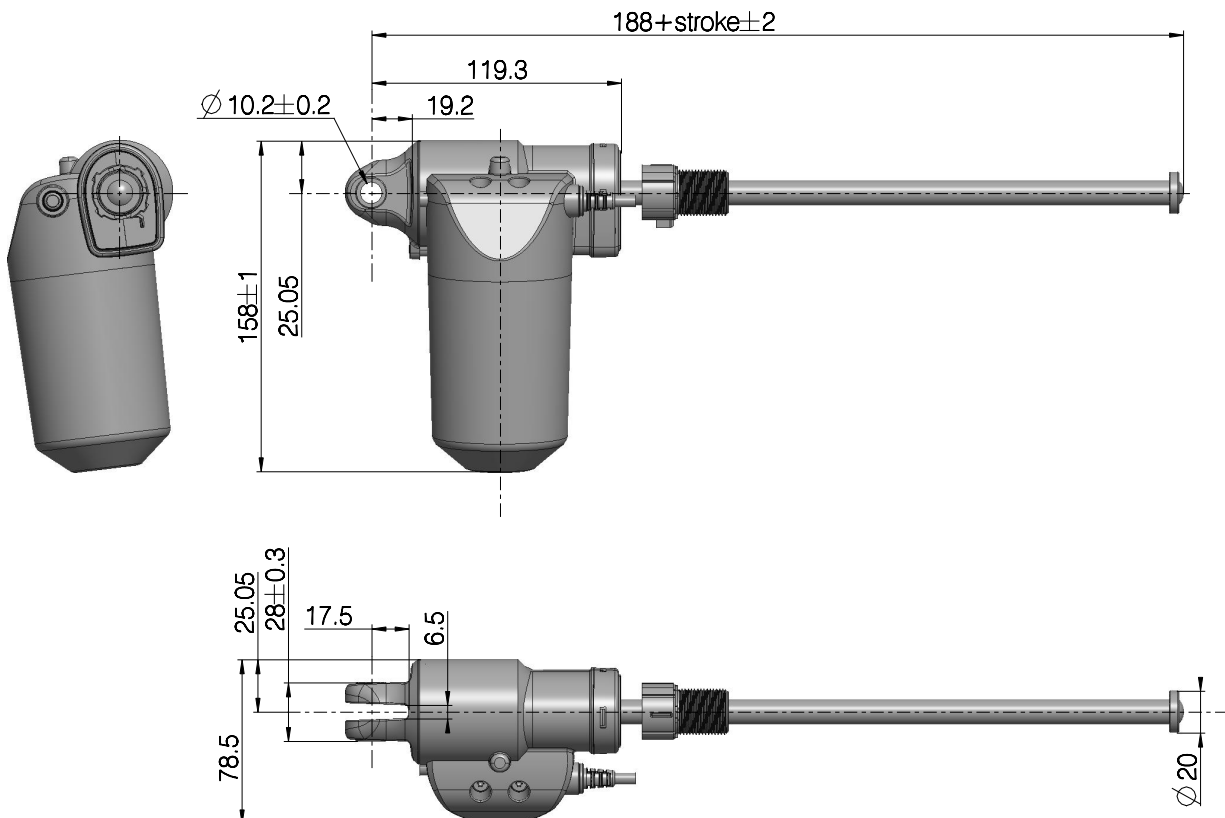
All dimensions are in mm.

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



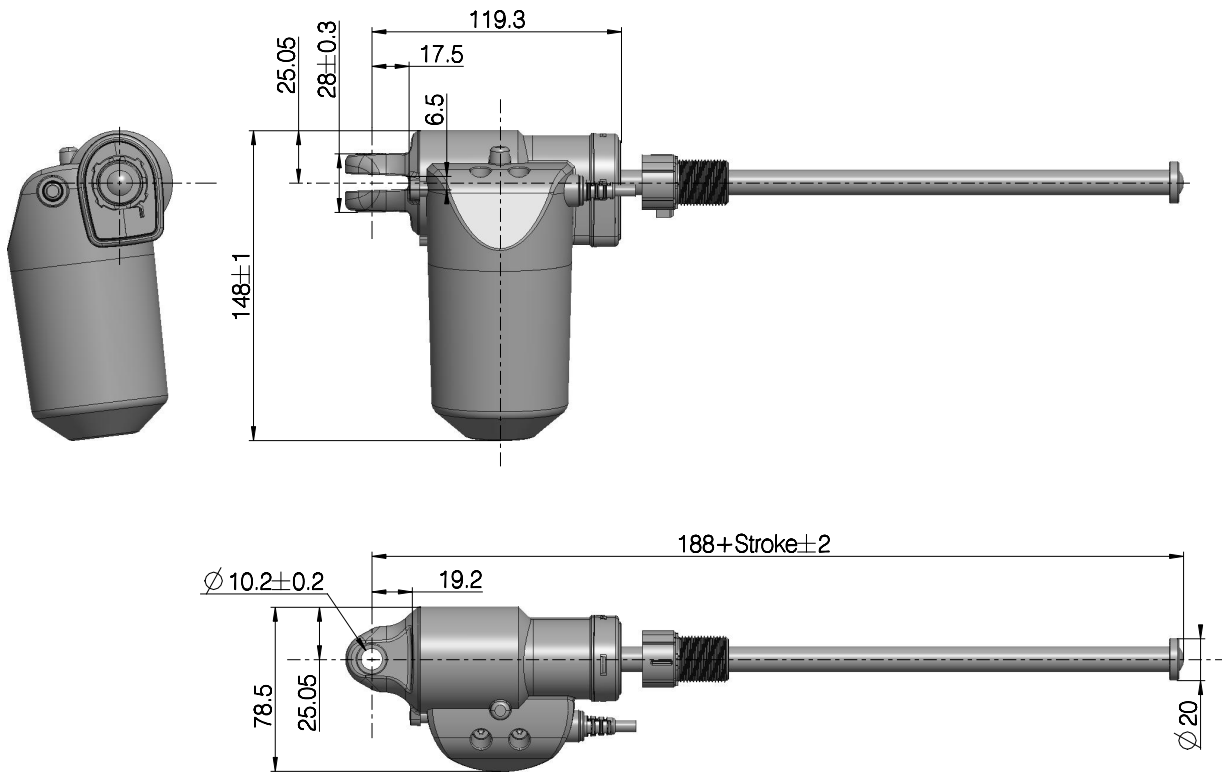
Drawing no.: 1046w4040

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



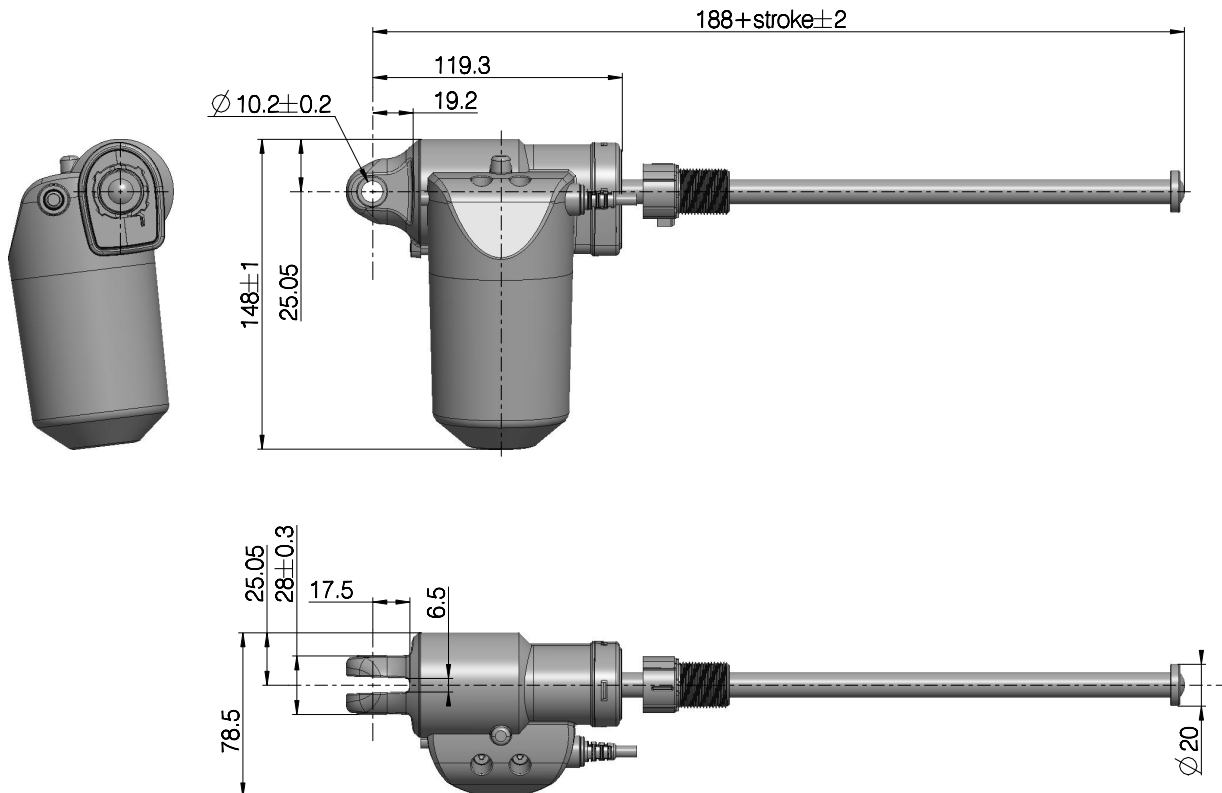
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KA30 OS fast motor (F) with standard back fixture

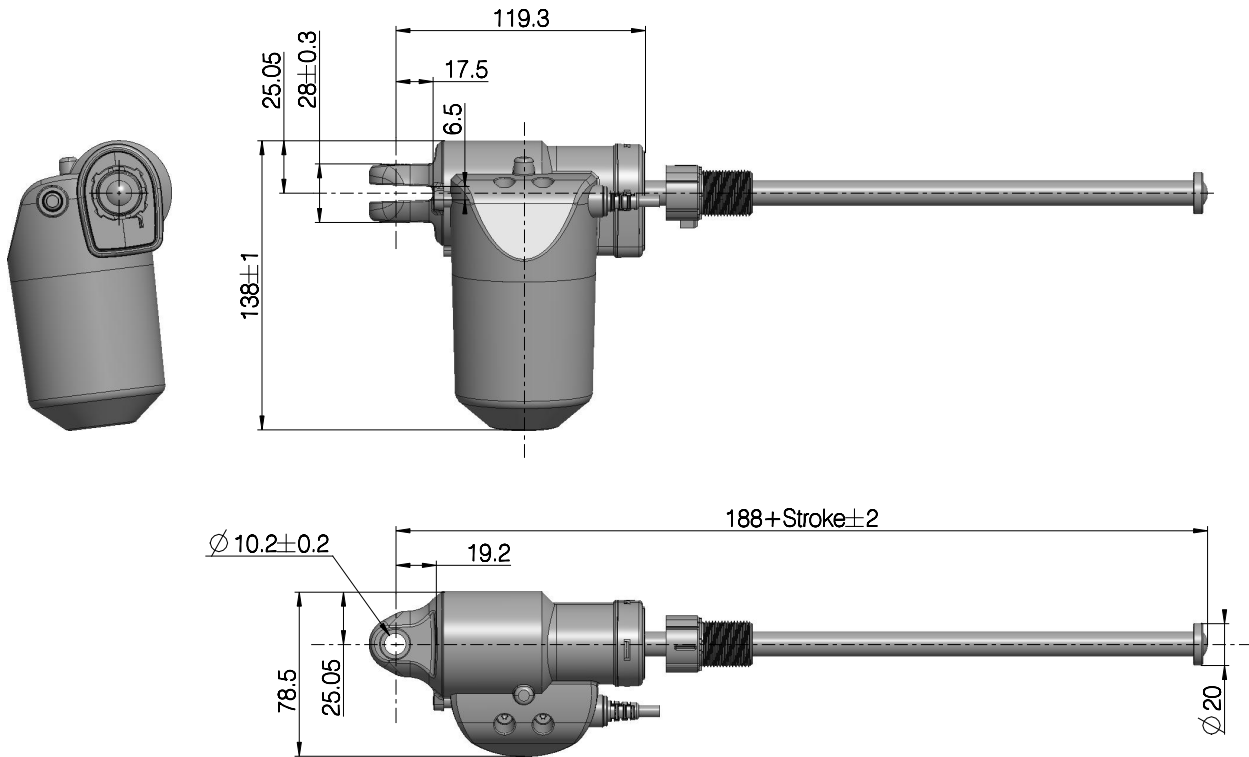


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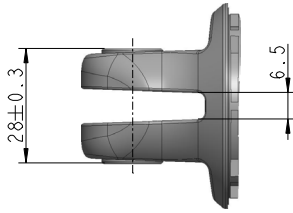
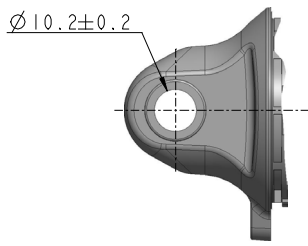
KA30 OS fast motor (F) with 90° turned back fixture



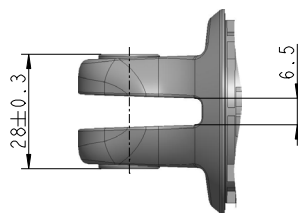
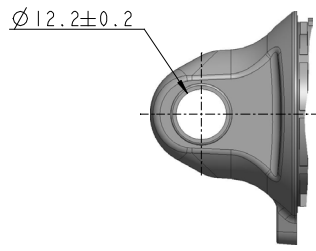
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KA30 OS small motor (H) with standard back fixture (for pull)

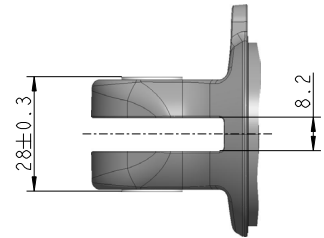
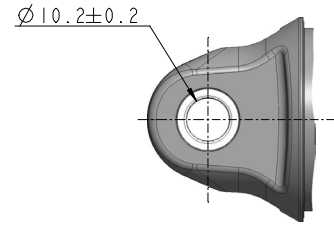
Drawing no.: 1046w4038

Back fixture

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

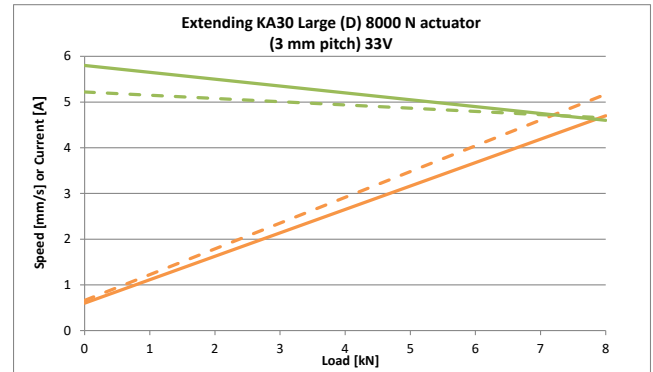
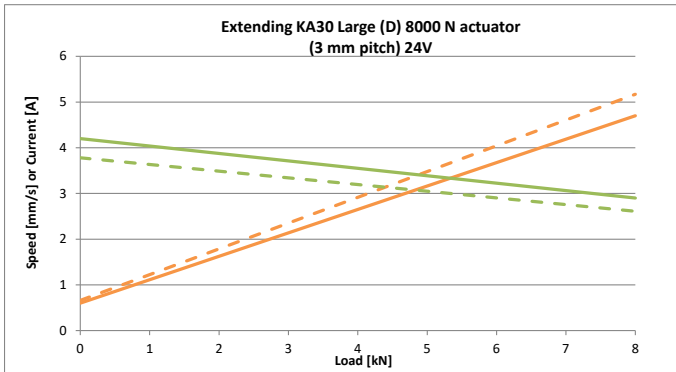
Self-locking ability

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).

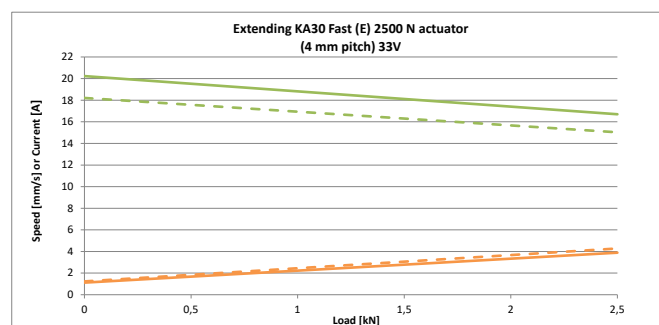
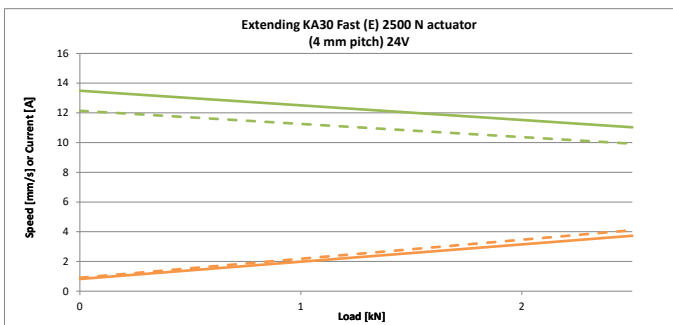
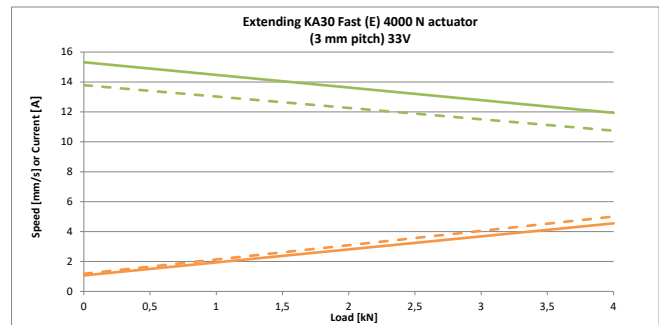
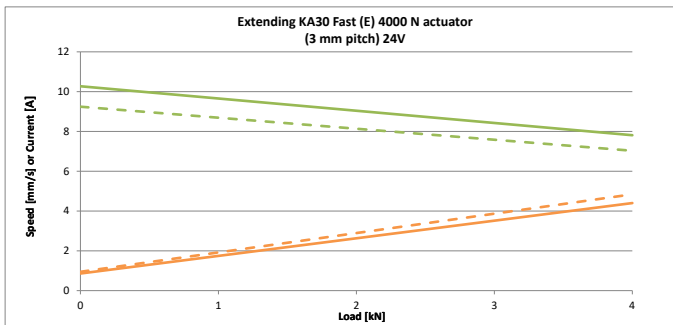
When using the KA30 Open Spindle with LINAK control boxes, the terminals are only short-circuited for max. 60 seconds. Afterwards, the actuator is self-locking.

Speed and current curves

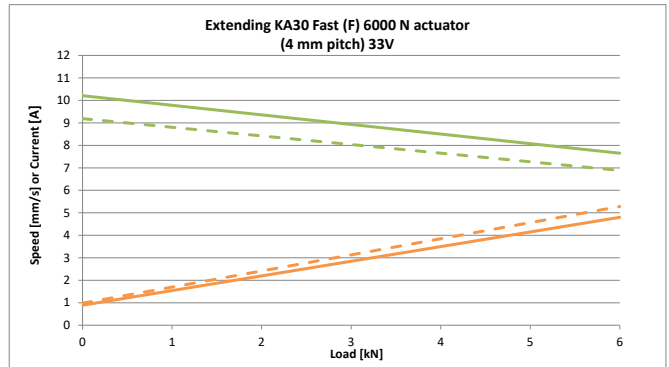
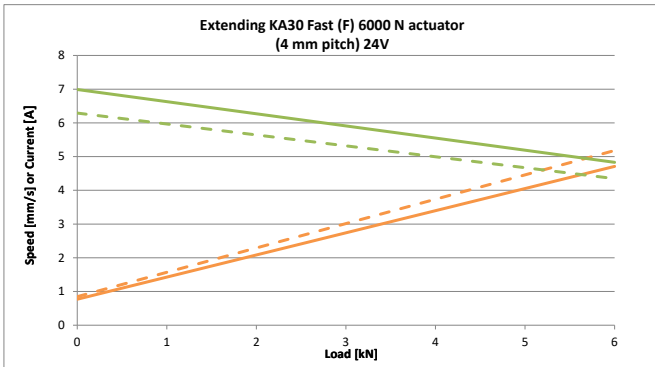
KA30 large, motor type D



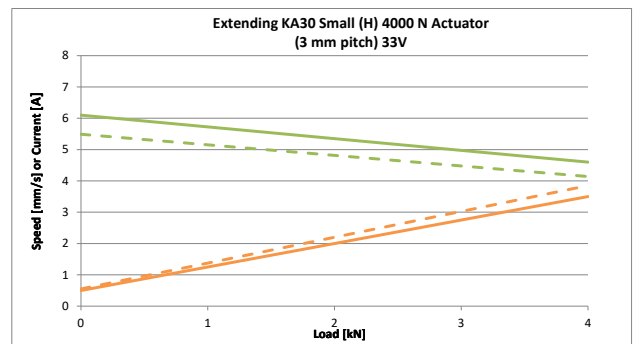
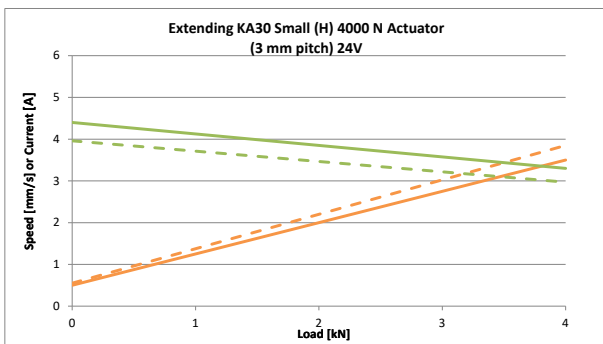
KA30 fast, motor type E



KA30 standard fast, motor type F



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



Contacts

FACTORIES

Denmark - Headquarters
 LINAK A/S
 Phone: +45 73 15 15 15
 Fax: +45 74 45 80 48
 Fax (Sales): +45 73 15 16 13
 Web: www.linak.com

China
 LINAK (Shenzhen) Actuator Systems, Ltd.
 Phone: +86 755 8610 6656
 Phone: +86 755 8610 6990
 Web: www.linak.cn

Slovakia
 LINAK Slovakia s.r.o.
 Phone: +421 51 7563 444
 Web: www.linak.sk

Thailand
 LINAK APAC Ltd.
 Phone: +66 33 265 400
 Web: www.linak.com

USA
 LINAK U.S. Inc.
 Americas Headquarters
 Phone: +1 502 253 5595
 Fax: +1 502 253 5596
 Web: www.linak-us.com
 www.linak-latinamerica.com

SUBSIDIARIES

Australia
 LINAK Australia Pty. Ltd
 Phone: +61 3 8796 9777
 Fax: +61 3 8796 9778
 E-mail: sales@linak.com.au
 Web: www.linak.com.au

Austria
 LINAK Zweigniederlassung - Österreich (Wien)
 Phone: +43 (1) 890 7446
 Fax: +43 (1) 890 744615
 E-mail: info@linak.de
 Web: www.linak.at - www.linak.hu

Belgium
 LINAK Actuator-Systems NV/SA
 (Belgium & Luxembourg)
 Phone: +32 (0)9 230 01 09
 E-mail: beinfo@linak.be
 Web: www.linak.be - www.fr.linak.be

Brazil
 LINAK Do Brasil Comércio De Atuadores Ltda.
 Phone: +55 (11) 2832 7070
 Fax: +55 (11) 2832 7060
 E-mail: info@linak.com.br
 Web: www.linak.com.br

Canada
 LINAK Canada Inc.
 Phone: +1 502 253 5595
 Fax: +1 416 255 7720
 E-mail: info@linak.ca
 Web: www.linak-us.com

Czech Republic
 LINAK C&S s.r.o.
 Phone: +42 058 174 1814
 Fax: +42 058 170 2452
 E-mail: info@linak.cz
 Web: www.linak.cz - www.linak.sk

Denmark - International
 LINAK International
 Phone: +45 73 15 15 15
 E-mail: info@linak.com
 Web: www.linak.com

Denmark - Sales
 LINAK Danmark A/S
 Phone: +45 86 80 36 11
 Fax: +45 86 82 90 51
 E-mail: linak@linak-silkeborg.dk
 Web: www.linak.dk

Finland
 LINAK OY
 Phone: +358 10 841 8700
 E-mail: linak@linak.fi
 Web: www.linak.fi

France
 LINAK France E.U.R.L
 Phone: +33 (0) 2 41 36 34 34
 Fax: +33 (0) 2 41 36 35 00
 E-mail: linak@linak.fr
 Web: www.linak.fr

Germany
 LINAK GmbH
 Phone: +49 6043 9655 0
 Fax: +49 6043 9655 60
 E-mail: info@linak.de
 Web: www.linak.de

India
 LINAK A/S India Liaison Office
 Phone: +91 120 4531797
 Fax: +91 120 4786428
 E-mail: info@linak.in
 Web: www.linak.in

Ireland
 LINAK UK Limited (Ireland)
 Phone: +44 (0)121 544 2211
 Fax: +44 (0)121 544 2552
 +44 (0)796 855 1606 (UK Mobile)
 +35 387 634 6554 (Rep.of Ireland Mobile)
 E-mail: sales@linak.co.uk
 Web: www.linak.co.uk

Italy
 LINAK ITALIA S.r.l.
 Phone: +39 02 48 46 33 66
 Fax: +39 02 48 46 82 52
 E-mail: info@linak.it
 Web: www.linak.it

Japan
 LINAK K.K.
 Phone: 81-45-533-0802
 Fax: 81-45-533-0803
 E-mail: linak@linak.jp
 Web: www.linak.jp

Malaysia
 LINAK Actuators Sdn. Bhd.
 Phone: +60 4 210 6500
 Fax: +60 4 226 8901
 E-mail: info@linak-asia.com
 Web: www.linak.my

Netherlands
 LINAK Actuator-Systems B.V.
 Phone: +31 76 5 42 44 40 /
 +31 76 200 11 10
 E-mail: info@linak.nl
 Web: www.linak.nl

New Zealand
 LINAK New Zealand Ltd
 Phone: +64 9580 2071
 Fax: +64 9580 2072
 E-mail: nzsales@linak.com.au
 Web: www.linak.com.au

Norway
 LINAK Norge AS
 Phone: +47 32 82 90 90
 E-mail: info@linak.no
 Web: www.linak.no

Poland
 LINAK Polska
 LINAK Danmark A/S (Spółka Akcyjna)
 Phone: +48 22 295 09 70 /
 +48 22 295 09 71
 E-mail: info@linak.pl
 Web: www.linak.pl

Republic of Korea
 LINAK Korea Ltd.
 Phone: +82 2 6231 1515
 Fax: +82 2 6231 1516
 E-mail: info@linak.kr
 Web: www.linak.kr

Slovakia
 LINAK Slovakia S.R.O.
 Phone: +421 51 7563 444
 Web: www.linak.sk

Spain
 LINAK Actuadores, S.L.u
 Phone: +34 93 588 27 77
 Fax: +34 93 588 27 85
 E-mail: esma@linak.es
 Web: www.linak.es

Sweden
 LINAK Scandinavia AB
 Phone: +46 8 732 20 00
 Fax: +46 8 732 20 50
 E-mail: info@linak.se
 Web: www.linak.se

Switzerland
 LINAK AG
 Phone: +41 43 388 31 88
 Fax: +41 43 388 31 87
 E-mail: info@linak.ch
 Web: www.linak.ch - www.fr.linak.ch
 www.it.linak.ch

Taiwan
 LINAK (Shenzhen) Actuator systems Ltd.
 Taiwan Representative office
 Phone: +886 2 272 90068
 Fax: +886 2 272 90096
 E-mail: sales@linak.com.tw
 Web: www.linak.com.tw

Turkey
 LINAK İth. İhr. San. ve Tic. A.Ş.
 Phone: +90 312 4726338
 Fax: +90 312 4726635
 E-mail: info@linak.com.tr
 Web: www.linak.com.tr

United Kingdom
 LINAK UK Limited
 Phone: +44 (0)121 544 2211
 Fax: +44 (0)121 544 2552
 E-mail: sales@linak.co.uk
 Web: www.linak.co.uk

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Indonesia
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 Phone: +6 221 544 8956 /+6 221 544 8965
 Fax: +6 221 619 1925
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Israel
 NetivTech LTD
 Phone: +972 55-2266-535
 Fax: +972 2-9900-560
 Email: info@NetivTech.com
 Web: www.netivtech.com

Singapore
 Servo Dynamics Pte Ltd
 Phone: +65 6844 0288
 Fax: +65 6844 0070
 E-mail: servodynamics@servo.com.sg

South Africa
 Industrial Specialised Applications CC
 Phone: +27 011 466 0346
 E-mail: gartht@isagroup.co.za
 Web: www.isaza.co.za

United Arab Emirates
 Mechatronics
 Phone: +971 4 267 4311
 Fax: +971 4 267 4312
 E-mail: mechtron@emirates.net.ae

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