

# Linear Actuator KA30 Patient Lift Data Sheet



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## Introduction

The KA30 PL is a durable actuator with a low noise level at a powerful lifting capacity. It is available with a load capacity of up to 8,000 N, suitable for powerful lifting.

This actuator meets the demand for stroke lengths between 40-400 mm with a minimum built-in-dimension of 294 mm + stroke for perfect application design. This makes it suitable for a variety of lift applications for patient transfer, such as patient lifts and sit-to-stand lifts.

KA30 PL offers a smooth and compact design that makes it easy to clean, ideal for demanding healthcare environments. It is rated at IPX6 and is equipped with fixed cables, either coiled or straight.

## Features and options

Load in push:	Up to 8,000 N
	344 mm:
	8,000 N: SL 40-300 mm
	7,500 N: SL 300-350 mm
	6,000 N: SL 350-400 mm
	294 mm:
	8,000 N: SL 40-300 mm
	7,000 N: SL 300-350 mm
	6,000 N: SL 350-400 mm
Housing colour:	Light grey, RAL 7035
Protection class:	IPX6
Motor:	Motor type P
Stroke length:	40-400 mm in steps of 5 mm
Built-in dimension:	Stroke +294, stroke length $\leq$ 400 mm Stroke + 344, stroke length $\leq$ 400 mm
Noise level:	$\leq$ 50 dB (A)
Safety nut:	Standard in push
Spline:	Mechanical spline
Built-in electrical limit switch:	Power switch, signal switch (digital), encoded
Built-in end stop:	Mechanical (for safety only)
Cable:	Fixed cable
Safety factor:	2.0 (patient lift)
Weight:	3.0 kg (stroke length = 400 mm)
Static bending moment:	No side load allowed
Feedback:	None, dual Hall - digital, dual Hall - encoded with signal switches
Manual lowering:	Yes



## Usage

Duty cycle:	10%, 2 minutes continuous use followed by 18 minutes not in use
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 on product compatibility.
Relative humidity:	20% to 80% – non-condensing
Atmospheric pressure:	700 to 1,060 hPa
Height above sea level:	Max. 3,000 meters
Flammability rating:	UL94V-2
Approvals:	IEC60601-1 ANSI/AAMI ES60601-1 CAN/CSA-22.2 No 60601-1



## Ordering example

	KA			
Actuator Type:	30	30	=	KA30
Spindle Pitch:	040	040	=	4 mm <i>Available up to 8,000 N</i>
Stroke Length:	300	xxx	=	mm
Safety:	0A	0A	=	Safety nut
		0D	=	Mechanical spline + safety nut
Feedback:	00	00	=	None (F1)
				0H = Dual Hall, digital (F2)
				0M = Dual Hall, encoded (F3)
Platform:	0	0	=	None
Motor type:	P	P	=	PL motor
End stop:	0	0	=	Power switch (E1)
		1	=	Signal switch, digital (E2)
		2	=	Encoded (E3)
IP degree:	6	6	=	IPx6
Colour:	+	+	=	Light Grey (RAL7035)
Outer tube:	1	1	=	Anodised
Not used:	0	0	=	
Back fixture end:	3	3	=	Metal with slot Ø10.2 (with bushings), slot width 8.2
		6	=	Metal with slot Ø10.2 (with bushings), slot width 10.5
Back fixture rot.:	1	1	=	Standard
		2	=	Turned 90°
Piston rod end:	P	P	=	PL Ø12.2 solid
		Q	=	PL Ø12.2 with slot
Piston rod eye end:	B	A	=	No bushings
		B	=	Plastic bushings with Ø10.2 hole in piston rod
Brake:	1	1	=	Brake in push
Install. Dim.:	594	xxx	=	xxx mm $BID_{min} = SL + 294 \text{ mm}$ or $BID_{min} = SL + 344 \text{ mm}$
Load Range:	8	8	=	8,000 N
Safety Factor:	0	0	=	2.0 Patient lifts
Cable Type:	C	A	=	Straight 460 mm, 6-pin Mini-Fit angled
		B	=	Straight 1250 mm, 6-pin Mini-Fit angled
		E	=	Coiled 200 + 400 + 200 mm, 6-pin Mini-Fit angled
		F	=	Straight 460 mm, 2-pin Jack*
		G	=	Straight 800 mm, 2-pin Jack*
		H	=	Straight 1250 mm, 2-pin Jack*
		I	=	Coiled 200 + 200 + 200 mm, 2-pin Jack*
		J	=	Coiled 200 + 400 + 200 mm, 2-pin Jack*
		0	=	6-pin Mini-Fit extension

\* no feedback available (hhv. F, G, H, I and J)

Chosen item No.: 300403000A000P06+1031PB159480C



## Technical specifications

Actuator	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]	Max. stroke [mm]	BID [mm]
KA30 PL	PL (P)	24	4	8,000	8,000	7.8/5.8	1.3/8.0	300	S + 294 S + 344
KA30 PL	PL (P)	24	4	7,500	7,500	7.8/6.0	1.3/7.5	350	S + 344
KA30 PL	PL (P)	24	4	7,000	7,000	7.8/6.1	1.3/7.0	350	S + 294
KA30 PL	PL (P)	24	4	6,000	6,000	7.8/6.2	1.3/6.2	400	S + 294 S + 344

See section on speed/load, current/load curves below.

### 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 PL with CBJ2, CBJC, CAL40, COL50, the terminals are only short-circuited for max. 60 seconds. Afterwards, the actuator is self-locking.

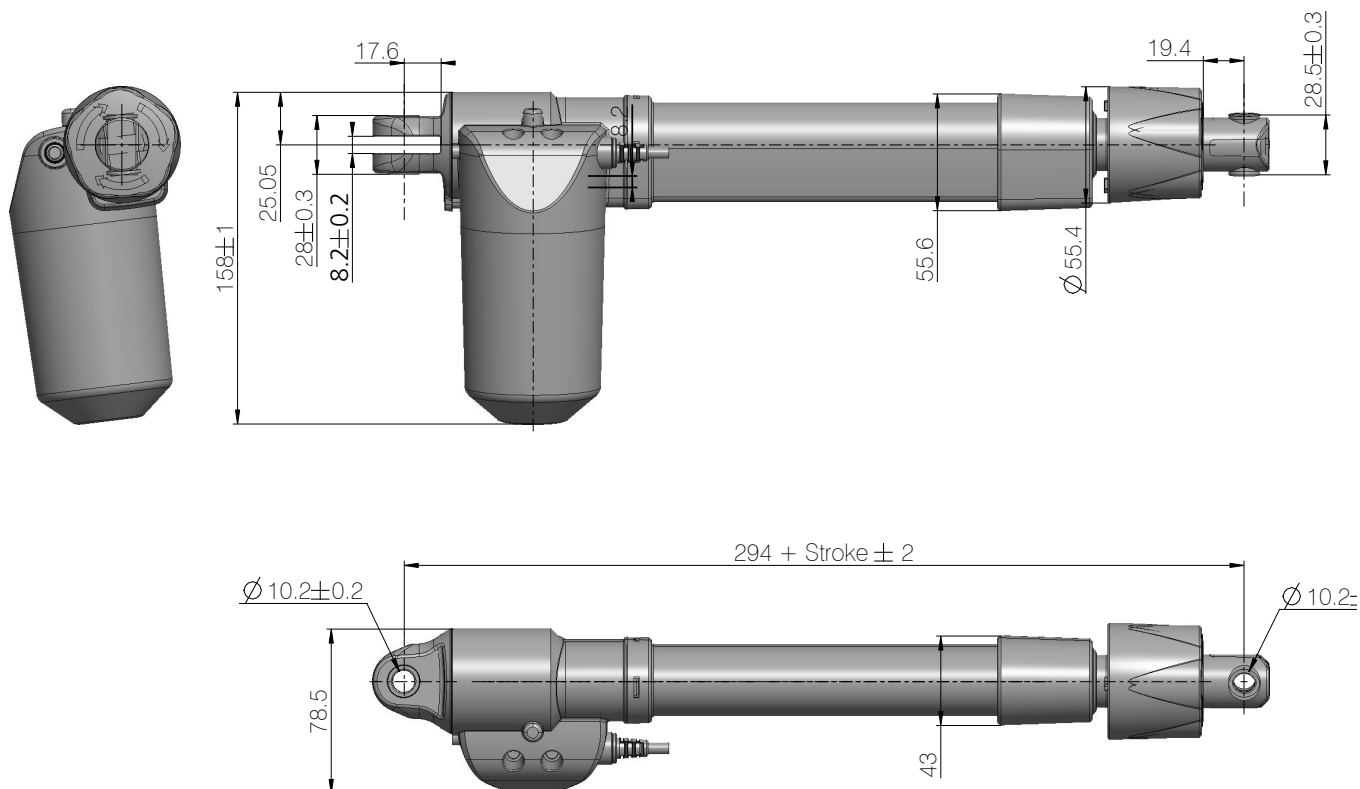


## Dimensions

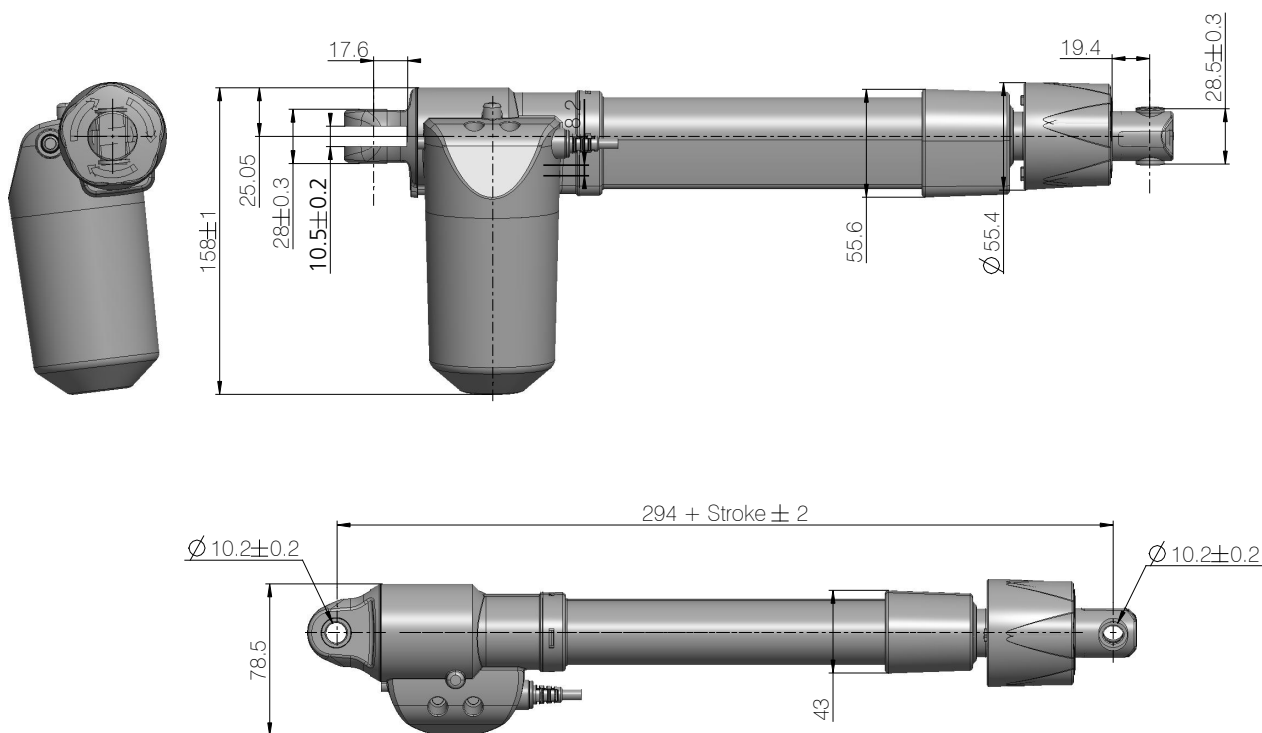
All dimensions are in mm.

Available in 344 mm and 294 mm plus stroke. The drawing below is provided as an example only.

### KA30 PL motor (P) with std. back fixture Ø10.2, width 8.2



### KA30 PL motor (P) with std. back fixture Ø10.2, width 10.5

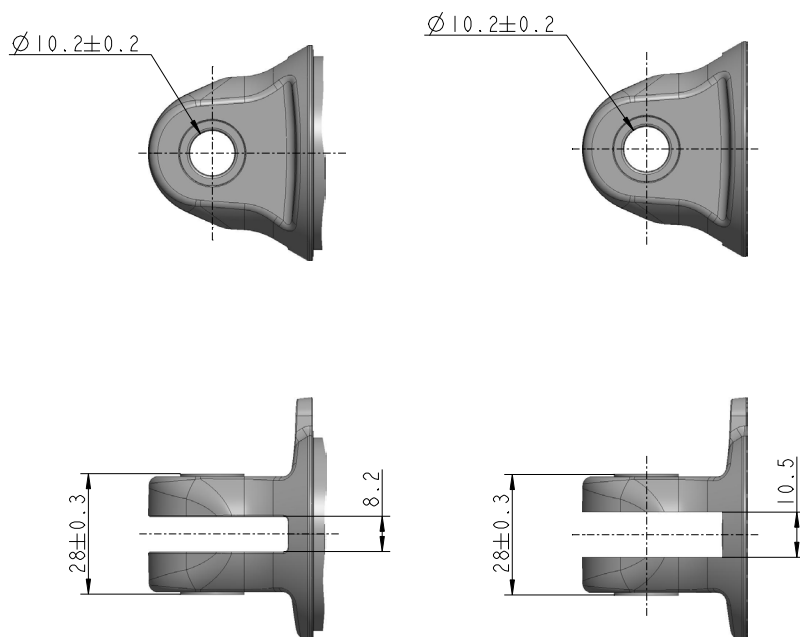


Drawing no.: 1046W4037



## Back fixture overview

All dimensions are in mm.

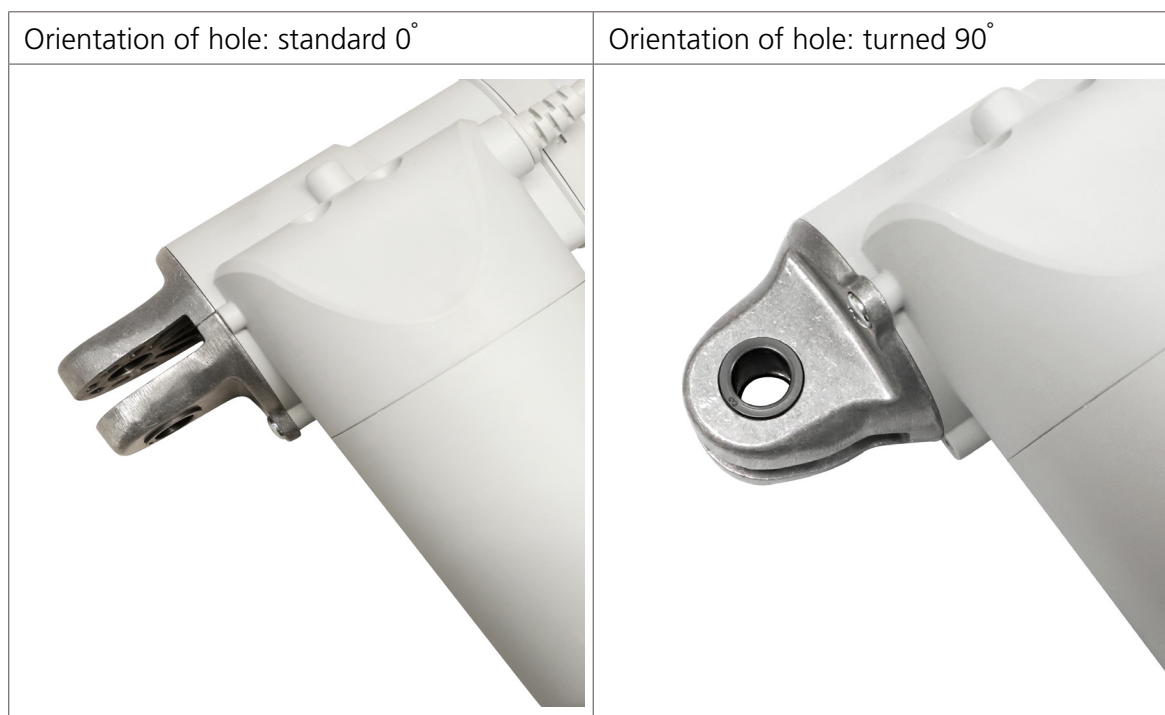


3 = Metal with slot  $\varnothing 10.2$   
Slot width 8.2  
with bushings

6 = Metal with slot  $\varnothing 10.2$   
Slot width 10.5  
with bushings

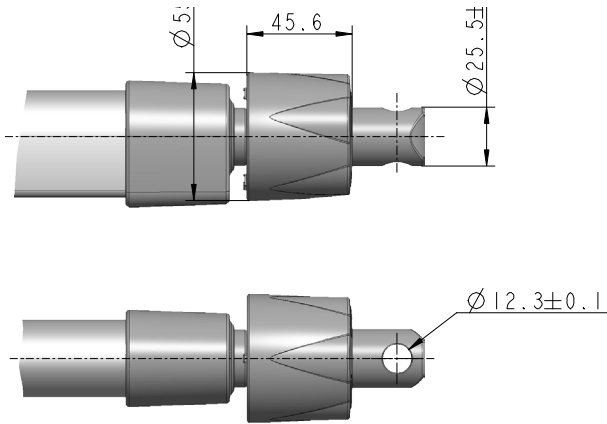
## Back fixture orientation

Orientation of back fixture in relation to encapsulation.



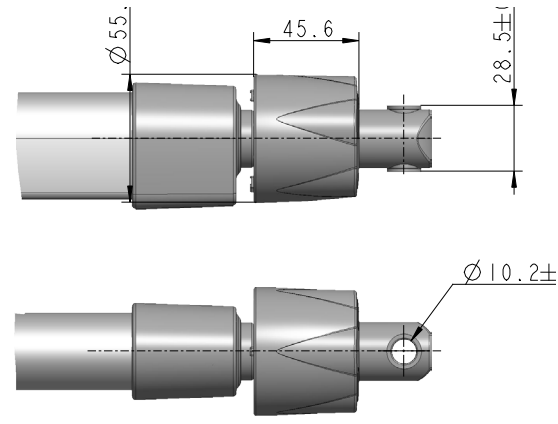
# Piston rod eyes

All dimensions are in mm.



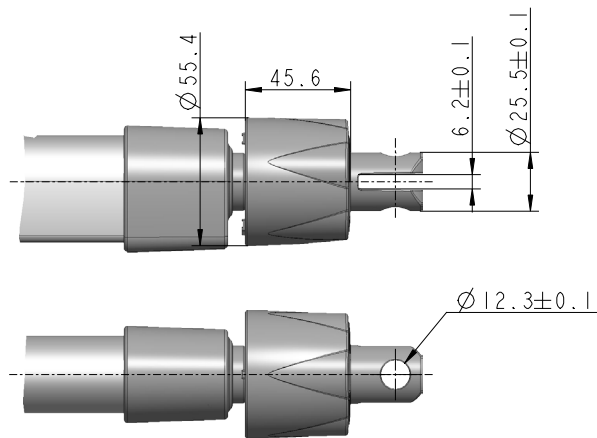
Option P : Without bushing

solid



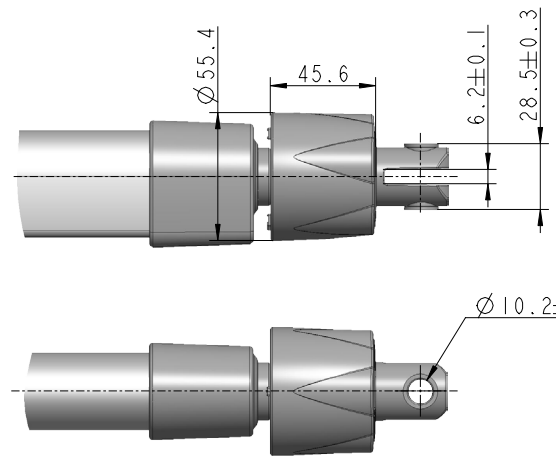
Option P : With bushing

solid



Option Q : Without bushing

slot



Option Q : With bushing

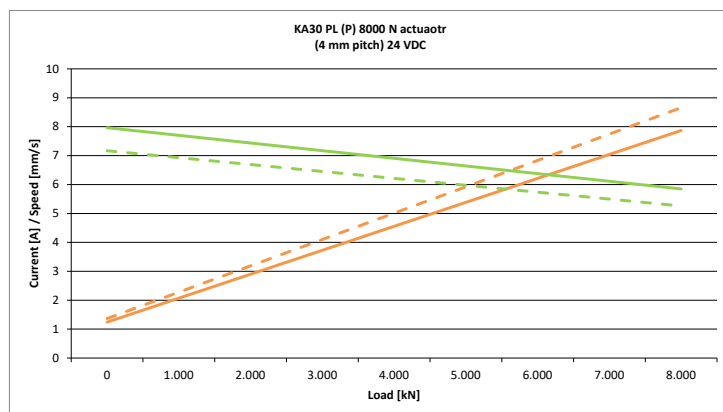
slot

Drawing no.: 1046W9019



## Speed and current curves

KA30 PL, motor type P



# 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  
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Web: www.linak.co.uk

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Web: www.hej.co.id

Israel  
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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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