

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												
	<table> <tr> <td>344 mm:</td> <td>294 mm:</td> <td>274 mm:</td> </tr> <tr> <td>8,000 N: SL 40-300 mm</td> <td>8,000 N: SL 40-300 mm</td> <td>7,000 N: SL 0-300 mm</td> </tr> <tr> <td>7,500 N: SL 300-350 mm</td> <td>7,000 N: SL 300-350 mm</td> <td></td> </tr> <tr> <td>6,000 N: SL 350-400 mm</td> <td>6,000 N: SL 350-400 mm</td> <td></td> </tr> </table>	344 mm:	294 mm:	274 mm:	8,000 N: SL 40-300 mm	8,000 N: SL 40-300 mm	7,000 N: SL 0-300 mm	7,500 N: SL 300-350 mm	7,000 N: SL 300-350 mm		6,000 N: SL 350-400 mm	6,000 N: SL 350-400 mm	
344 mm:	294 mm:	274 mm:											
8,000 N: SL 40-300 mm	8,000 N: SL 40-300 mm	7,000 N: SL 0-300 mm											
7,500 N: SL 300-350 mm	7,000 N: SL 300-350 mm												
6,000 N: SL 350-400 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 ≤ 400 mm Stroke +344, stroke length ≤ 400 mm Stroke +274, stroke length ≤ 300 mm												
Noise level:	≤50 dB (A)												
Safety nut:	Standard in push												
Spline:	Mechanical spline												
End stop:	Power switch, signal switch Signal switch, 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 Dual Hall, encoded												
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

Actuator Type:	KA 30	30 = KA30	
Spindle Pitch:	040	040 = 4 mm	Available up to 8,000 N
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	$BID_{min} = SL + 294 \text{ mm}$, $BID_{min} = SL + 344 \text{ mm}$ or $BID_{min} = SL + 274 \text{ mm}$
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	SL + 294 SL + 344
KA30 PL	PL (P)	24	4	7,500	7,500	7.8/6.0	1.3/7.5	350	SL + 344
KA30 PL	PL (P)	24	4	7,000	7,000	7.8/6.1	1.3/7.0	350	SL + 294
KA30 PL	PL (P)	24	4	6,000	6,000	7.8/6.2	1.3/6.2	400	SL + 294 SL + 344
KA30 PL	PL (P)	24	4	7,000	7,000	7.8/6.1	1.3/7.0	300	SL +274

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

Comments to technical specifications

Self-locking ability

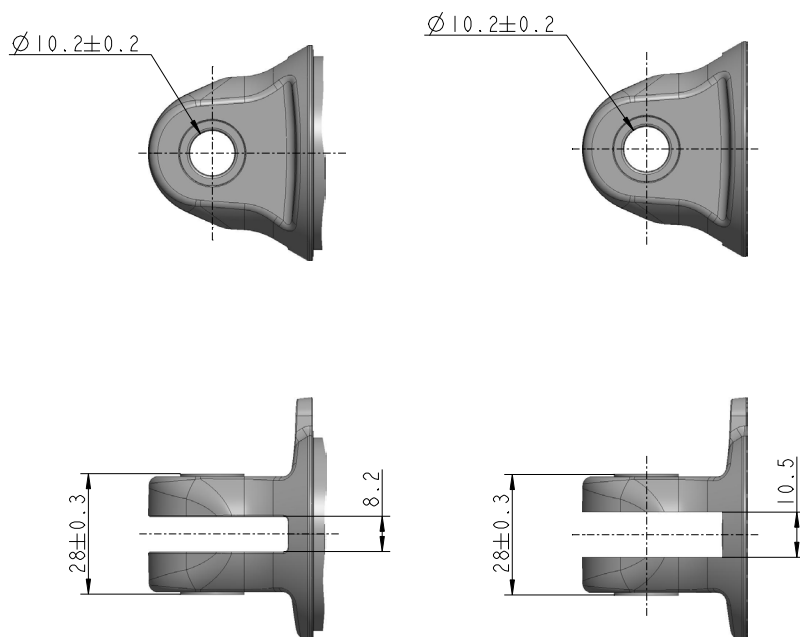
LINAK control boxes are designed so that they will short-circuit the motor terminals (poles) of the actuator(s), when the actuator(s) is/are not running. This solution gives the actuator(s) a higher self-locking ability. If the actuator(s) is/are not connected to a LINAK control box, the terminals of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



Back fixture overview

All dimensions are in mm.

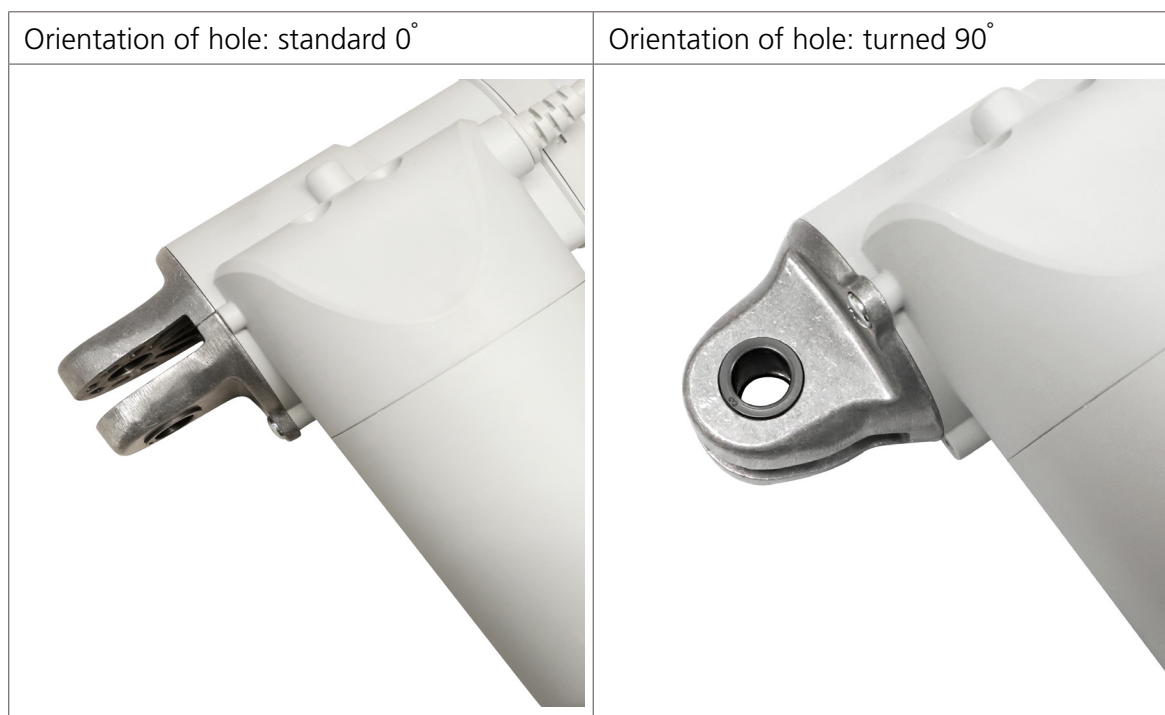


3 = Metal with slot $\varnothing 10.2$
Slot width 8.2
with bushings

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

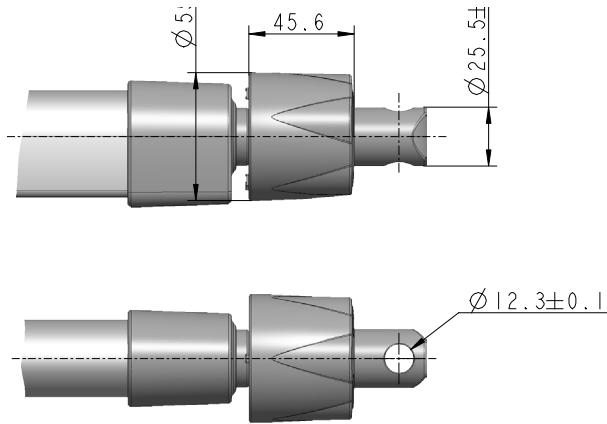
Back fixture orientation

Orientation of back fixture in relation to encapsulation.



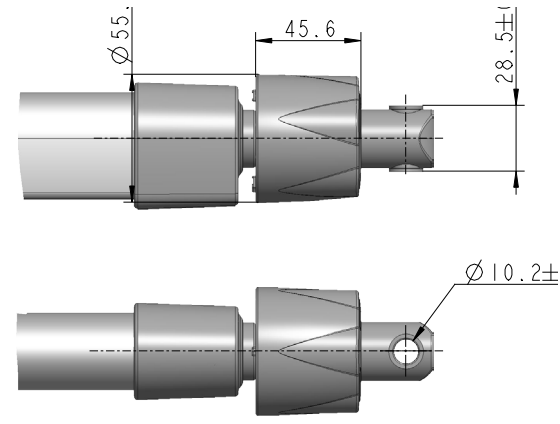
Piston rod eyes

All dimensions are in mm.



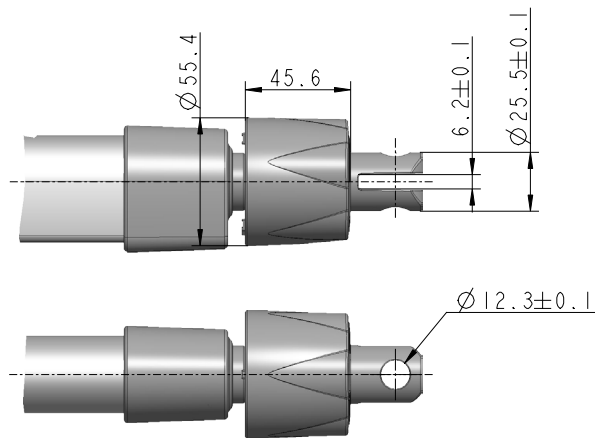
Option P : Without bushing

solid



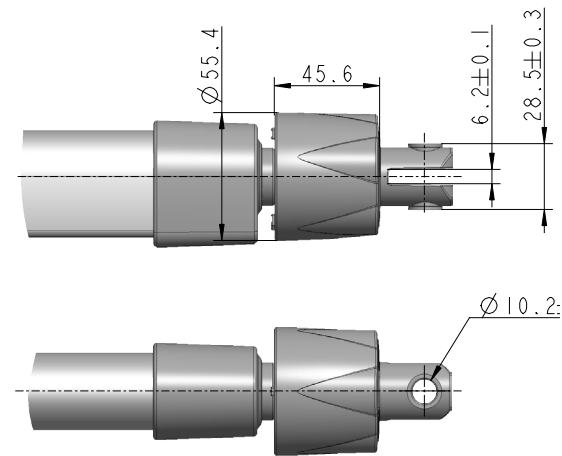
Option P : With bushing

solid



Option Q : Without bushing

slot



Option Q : With bushing

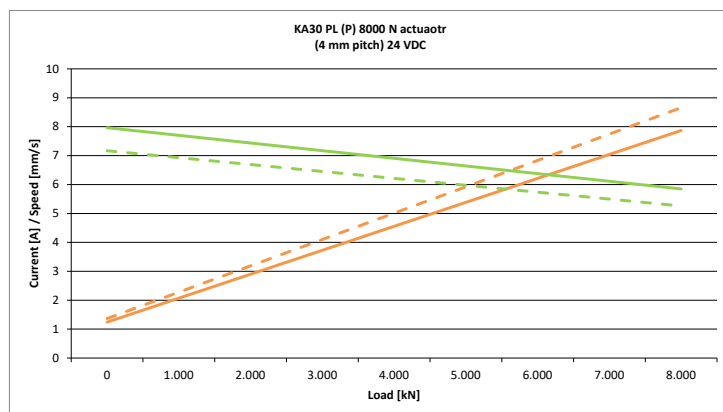
slot

Drawing no.: 1046W9019



Speed and current curves

KA30 PL, motor type P



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