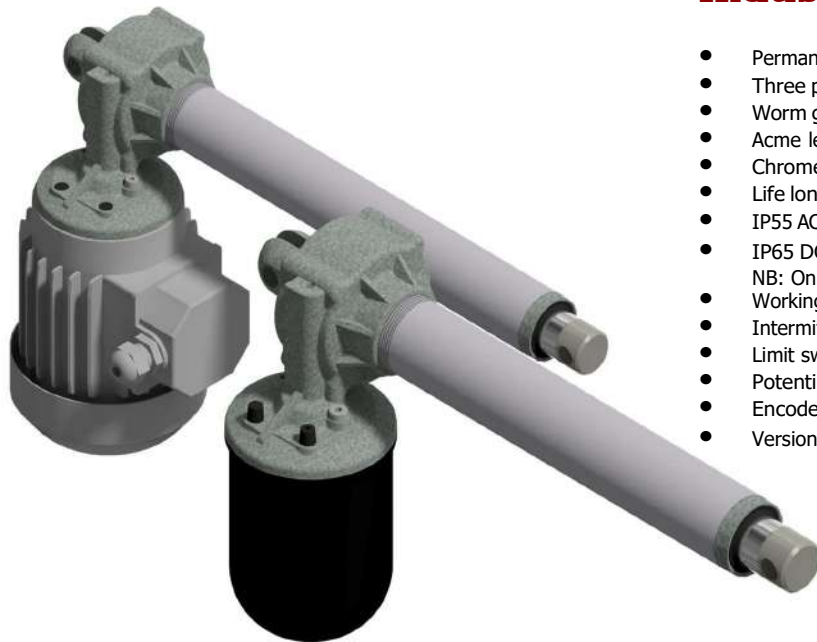


ALI-3

Industrial Linear Actuator



- Permanent magnet DC motor 12-24 V
- Three phase or single phase AC motor
- Worm gearbox
- Acme lead screw or ballscrew (VRS)
- Chrome plated steel push rod
- Life long grease lubricated
- IP55 AC
- IP65 DC, tested according to rule CEI EN 60529
- NB: Only for brake motors Standard IP54, IP65 on request
- Working temperature range -10°C +60°C
- Intermittent duty S3 30% (5 min) a +30°C, only for AC
- Limit switches on request
- Potentiometer on request
- Encoder on request
- Version At-Ex II 3 D T4 (AC motor) on request

ALI3 (Vac 3-phase)				
Fmax (N)	Speed (mm/s)	Version	Motor size	Motor power (KW)
2600	20	M01	IEC56	0.09 2 poles
2800	14	M02	IEC56	0.09 2 poles
4800	7	M03	IEC56	0.09 2 poles
5000	5	M04	IEC56	0.09 2 poles
5000	2,5	M05	IEC56	0.09 2 poles

ALI3 VRS (ballscrew) (Vac 3-phase)				
Fmax (N)	Speed (mm/s)	Version	Motor size	Motor power (KW)
5000	9	M01	IEC56	0.09 2 poles
5000	3,5	M02	IEC56	0.09 2 poles

ALI3 (Vdc)						
Fmax (N)	Speed (mm/s)	Version	Motor size	Motor speed (rpm)	Max Current for F max(A) 24Vdc	Fs % base 5 min.
3600 *	35	M01	59	4900	15	10
3600	25	M02	59	4900	12	10
6000	12	M03	59	4900	14	10
6000	9	M04	59	4900	9,5	10
6000	5	M05	59	4900	7	20

* When speed is more than 30 mm/s and/or strokes longer than 350mm, check STROKE SETUP section.

** For 12 Vdc power supply currents are doubled, and loads are 20% lower.

With single-phase motors performances are 20% lower than the three- phase motor.

For the DC models it is possible to add an IP20 brake.

→ The brake motor is strongly recommended

Before operating an actuator make sure you read and understand basic operational instructions shown on user manuals, available from our sales office.

This document displays most typical standard features and setups.

Actuators must not come to a mechanical stroke-end / mechanical lock to avoid failures.

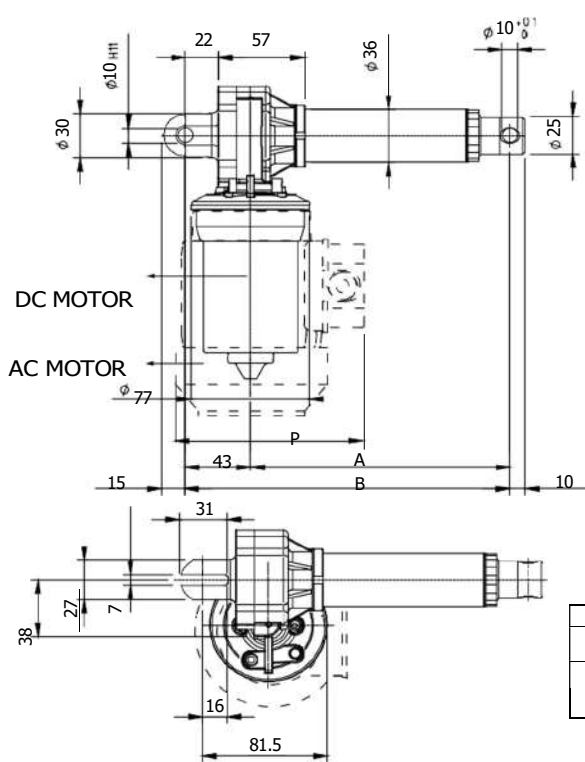
Consider limit switches (MODEL ALI3-F or ALI3-FCM) or put them on a machine / frame.

GUIDELINE DIMENSIONS ONLY

t: + (27) 011 468 1881 c: + (27) 074 465 1744
e: 01@BirCraft.co.za w: www.BirCraft.co.za

Address: 320 B Percheron Road, Kyalami, Midrand, 1684
GPS Coordinates: [S 25.98115° / E 028.06869°](#)

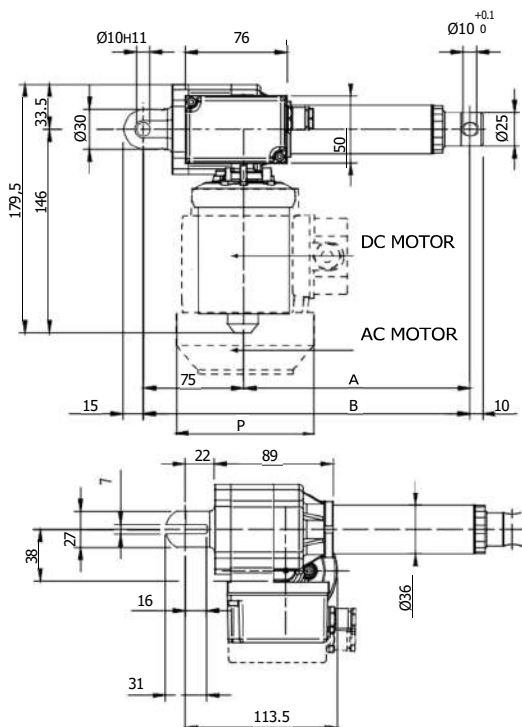
VERSION WITHOUT LIMITSWITCHES



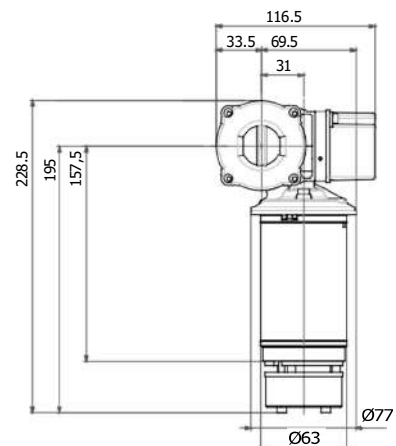
AC MOTOR DIMENSIONS				
SIZE	TYPE	H	Ø	P
56	Standard	232	110	150
	Brake motor	276		

DIMENSION	Stroke < 320 mm	Stroke > 320 mm
A	69 + stroke	79 + stroke
B	112 + stroke	122 + stroke

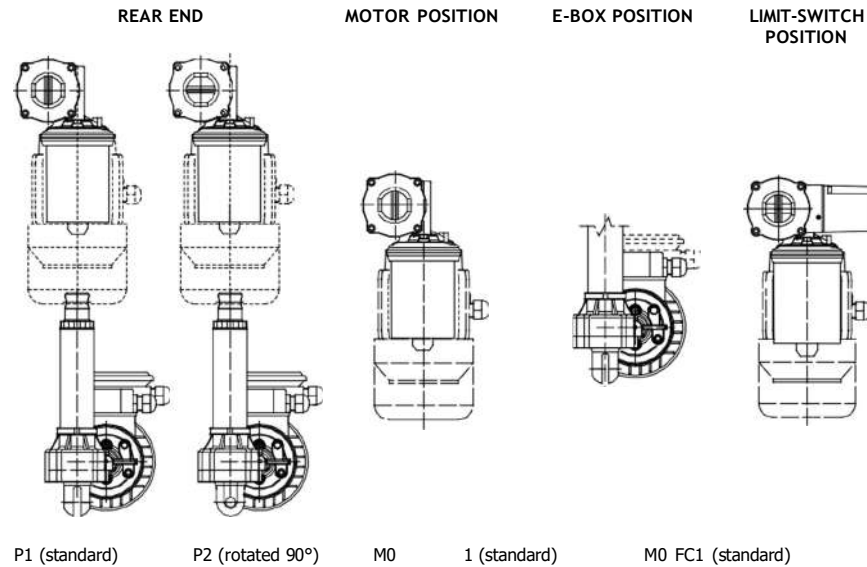
VERSION WITH LIMITSWITCHES



AC MOTOR DIMENSIONS				
SIZE	TYPE	H	Ø	P
56	Standard	232	110	150
	Brake motor	276		



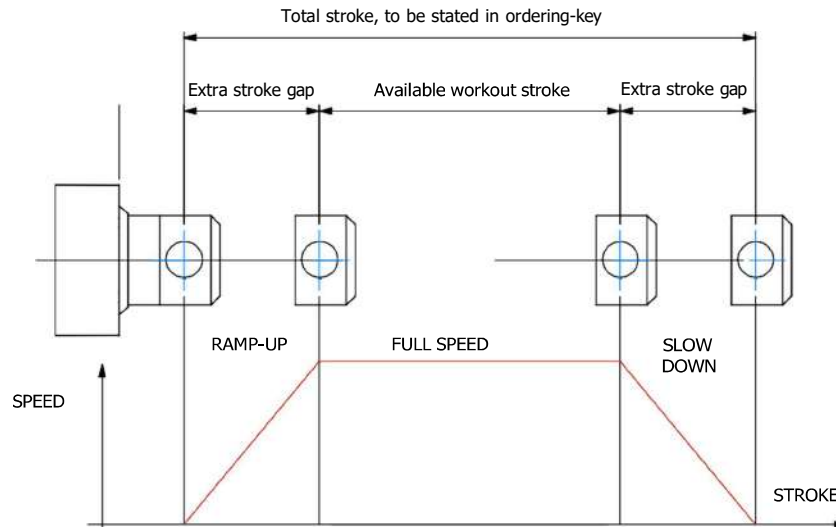
DIMENSION	Stroke < 320 mm	Stroke > 320 mm
A	69 + stroke	79 + stroke
B	144 + stroke	154 + stroke



STROKE SETUP

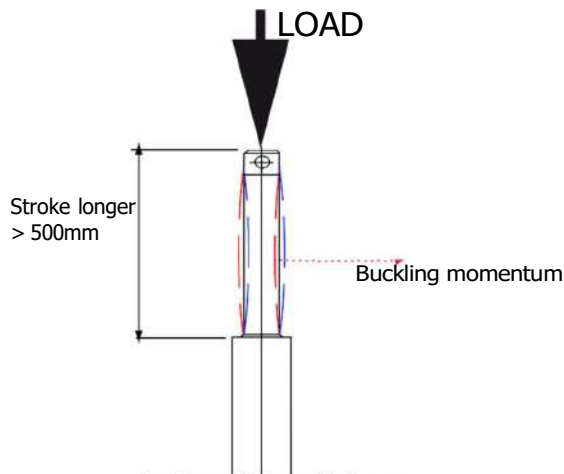
Useful tips for handling stroke length and avoiding run-on-block collision.

- When stroke is more than 350 mm, add 50 mm extra-stroke as guidance, and put corresponding value in ordering-key.
- WARNING SPEED-TIMING ALONG STROKE LENGTH:** ramps are extremely important when speed is 30 mm/s! Inverter or PWM drive recommended!
- The higher the speed, the more safety stroke is required.



BUCKLING

When stroke is longer than 500mm, BUCKLING can be a risk: please check mounting with our offices and/or see user manuals.



IMPORTANT:

Long strokes, even if the load is low, can generate significant buckling momentum, as sketch shows.

This happens when the actuator is in its all-open position. Therefore, we recommend 100mm extra non-usable stroke to act as bushing.

Push tube will have this 100mm-portion always inside the outer tube, improving guidance against buckling

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ORDERING KEY EXAMPLE

ALI3/0250/M03/AC-400/50-T-56-2-0,09/AB/M0/1/E06/2FC1/POT01A/FC1/P1/A1/

MODEL

ALI3 / ALI3-F / ALI3-VRS / ALI3-F-VRS /
ALI3-FCM / ALI3-FCM-VRS

STROKE

es. 250 mm = 0250

VERSION

M01 / M02 / M03 / M04 / M05 (DC) M01 /
M02 / M03 / M04 / M05 (AC)
M00 = Not standard speed

MOTOR

AC: version, voltage, type, size, no. of poles, power
DC: version, voltage, size, Rpm

AC MOTOR OPTIONS

With DC motor, don't consider the following lines 3
Protection Degree: IP65, for self brake motor IP54 standard
Brake type: for brake motors only (es. FECA)
Options: Advise if needed (es. AB 2'shaft)

MOTOR POSITION

M0 None: Leave blank

E-BOX POSITION

1

ENCODER

Options pg.76 None: Leave blank

LIMIT SWITCHES

2FC1 None: Leave blank

POTENTIOMETER

POT01A (1Kohm) POT10A (10Kohm) None: Leave blank

LIMIT SWITCHES POSITION

FC1 None: Leave blank

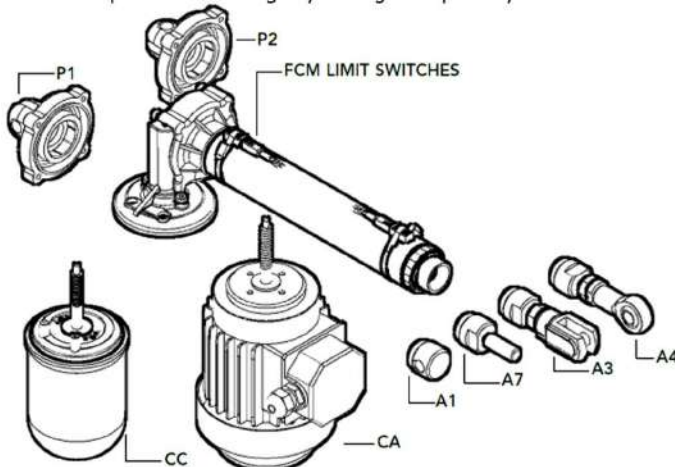
REAR END

P1 = Eyelet (standard) P2 = Eyelet (90°)

FRONT END

A1 = Eyelet (standard) A4 = Rod end A3 = Yoke + Clip A7 = M10 male

NOTE: Complete the ordering key adding the options you can find in the "Accessories and Options" section



Note: "B" dimension changes according to model

ALI3 = See pictures

ALI3 stroke > 320 mm = + 10 mm

ALI3-FCM = + 34 mm

ALI3-FCM stroke > 320 mm = +44

ALI3-F = + 23 mm

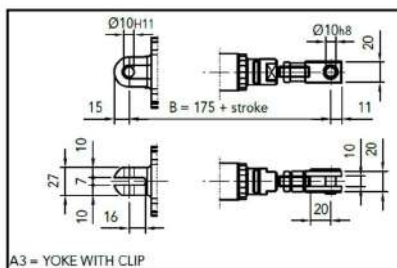
ALI3-F stroke > 320 mm = + 33 mm

With safety nut "G" = + 30 mm

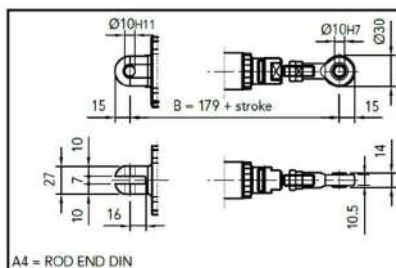
ALI3-VRS = + 40 mm

ALI3-F-VRS = + 63 mm

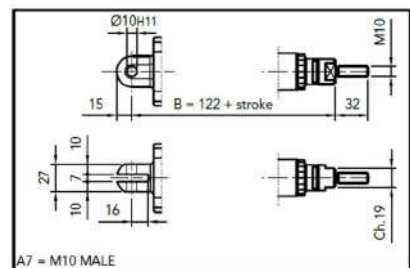
Bellows + 20mm



A3 = YOKE WITH CLIP



A4 = ROD END DIN



A7 = M10 MALE

GUIDELINE DIMENSIONS ONLY