



ALI-5

Industrial Linear Actuator

- Three phase or single phase AC motor
- Worm gearbox
- Acme lead screw or ballscrew (VRS)
- Chrome plated steel push rod
- Grease (standard) or oil lubricated on request
- IP55, 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% (5min) +30°C
- Limit switch, potentiometer, encoder on request
- At-Ex II 3 D T4 version (AC motor) on request

ALI5 (Vac 3-phase Acme lead screw)				
Fmax (N)	Speed (mm/s)	Version	Motor size	Motor power (KW)
4300 *	93	M01	IEC80	1.1 2 poles
7200 *	47	M02	IEC80	1.1 2 poles
11000	23	M03	IEC80	1.1 2 poles
18000	12	M04	IEC80	1.1 2 poles
18000	6	M05	IEC71	0.37 4 poles
18000	3	M06	IEC71	0.37 4 poles

ALI 5 VRS (Vac 3-phase ballscrew)				
Fmax (N)	Speed (mm/s)	Version	Motor size	Motor power (KW)
4800 *	93	M45	IEC71	0.55 2 poles
6000 *	47	M46	IEC71	0.37 2 poles
7500	23	M47	IEC71	0.37 2 poles
9500	12	M48	IEC71	0.25 4 poles
12000	6	M49	IEC71	0.25 4 poles

* When speed is more than 30 mm/s and/or strokes longer than 350mm, check the stroke setup section.

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

→ 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.

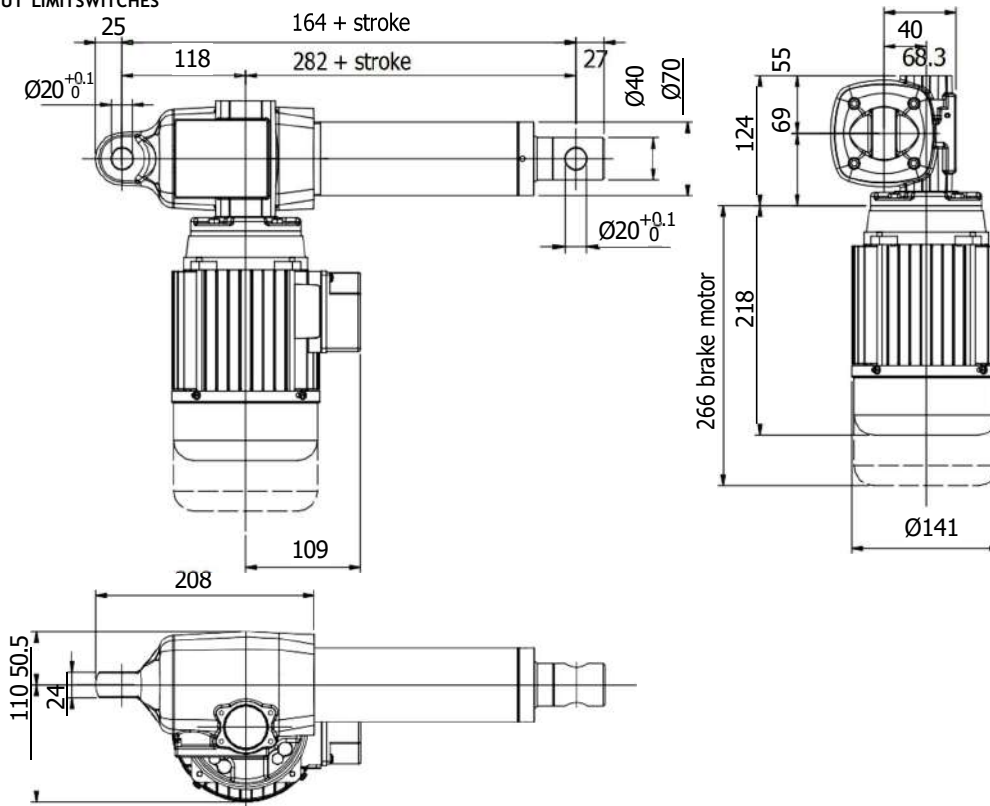
Actuators must not come to a mechanical stroke-end / mechanical lock to avoid failures.

Consider limit switches (MODEL ALI5-F or ALI5-FCM) or put them on a machine / frame.

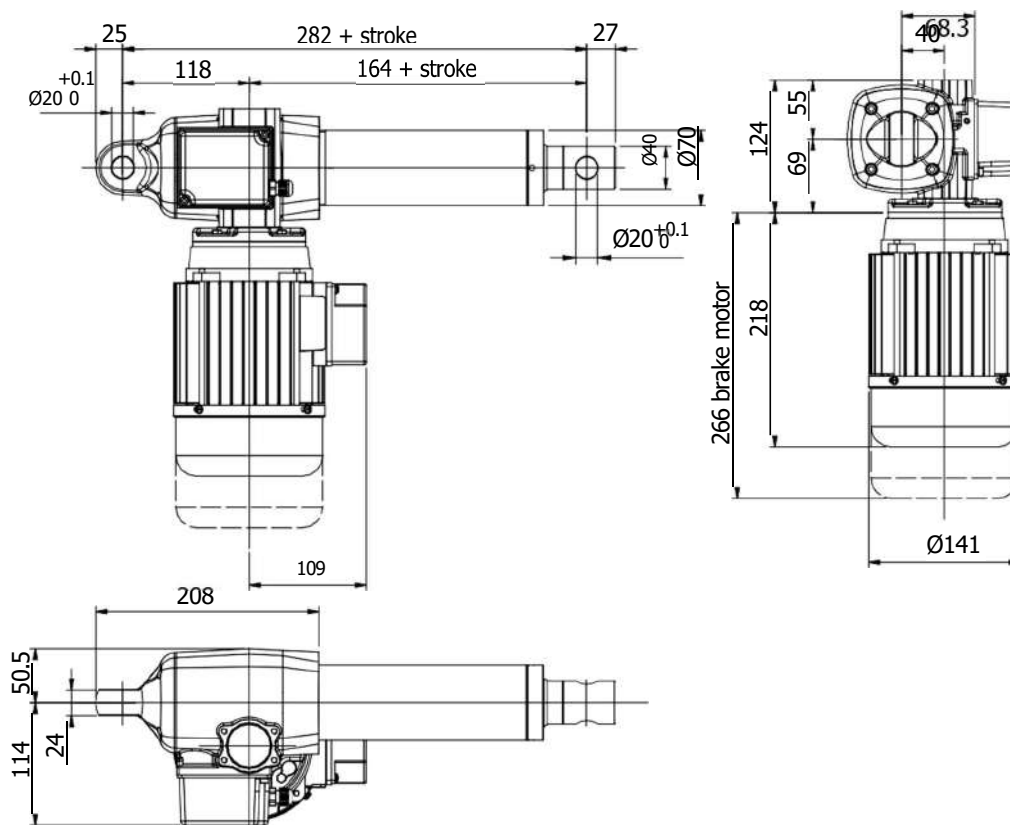
t: + (27) 011 468 1881 c: + (27) 074 465 1744
e: 01@**BirCraft**.co.za w: www.BirCraft.co.za

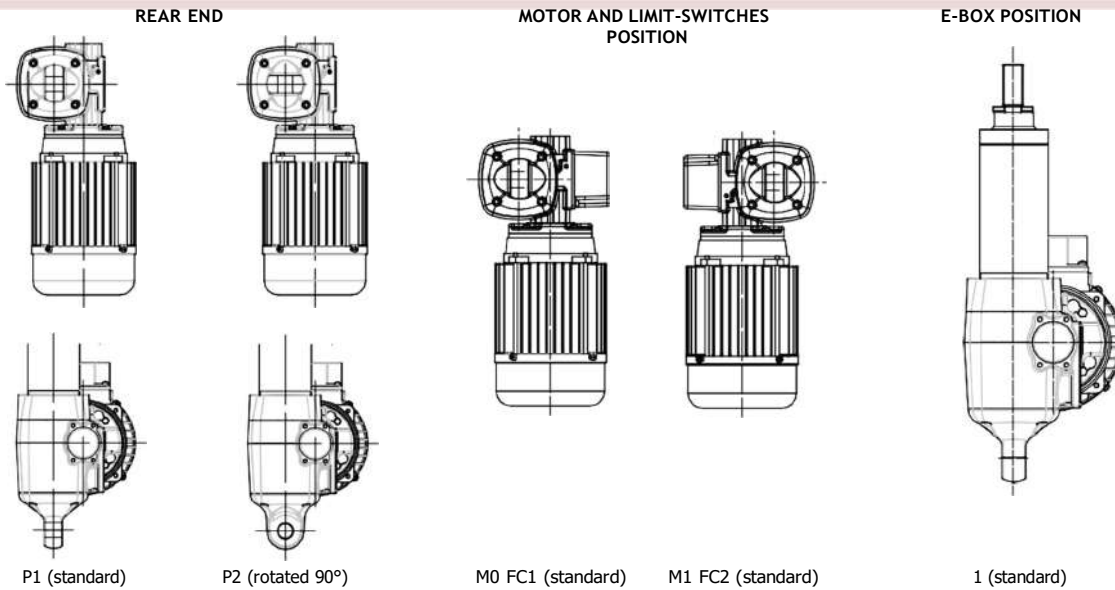
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GPS Coordinates: [S 25.98115° / E 028.06869°](#)

VERSION WITHOUT LIMITSWITCHES



VERSION WITH LIMITSWITCHES

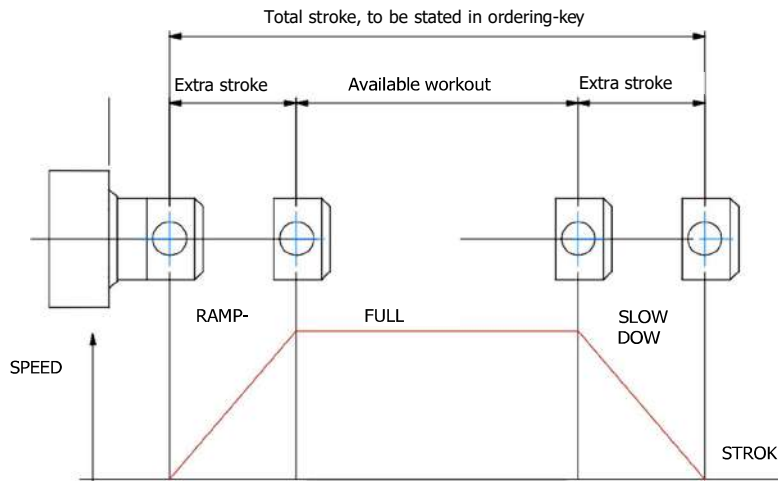




STROKE SETUP

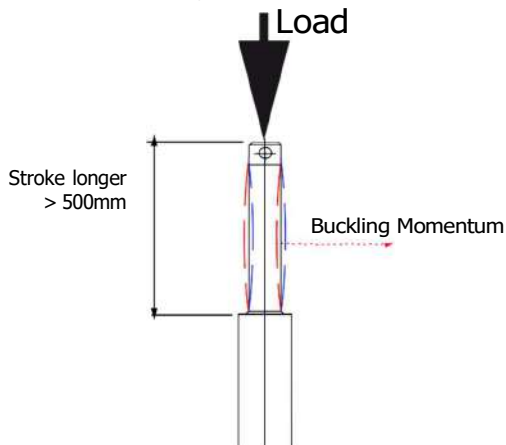
Useful tips for handling stroke length and avoiding run-on-block collision.

- 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 100 mm-portion always inside the outer tube, improving guidance against buckling.

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ORDERING KEY EXSAMPLE

MODEL ALI5/0250/M05/AC-400/50-T-71-4-0,37/AB/M0/2FC1/FC1/1/E06/POT01A/P1/A1/

ALI5 / ALI5-F / ALI5 VRS / ALI5-F VRS / ALI5-FCM /
ALI5-FCM VRS / ALI5-FCI / ALI5-FCI VRS

STROKE
es. 300 mm = 0300

VERSION
M01 / M02 / M03 / M04 / M05 / M06 / M45 / M46 / M47 / M48 / M49
M00 = Not standard speed
Flanged version = advice reduction ratio and screw pitch

MOTOR
AC: version, voltage, type, size, no. of pole, power
With motor flange only put 0
With special motor flange put: PD

AC MOTOR OPTIONS
Motor flange: for motor flange version only advise size - i.e. For IEC71 B14 put 71B14
No motor: leave all following parameters blank
Protection Degree: IP65, for self-brake motor IP54 standard
Brake type: for brake motors only: ES. FECA

MOTOR POSITION
M0 M1 None: Leave blank

LIMIT SWITCHES
2FC1 None: Leave blank

LIMIT SWITCHES POSITION
FC1 FC2 None: Leave blank

E-BOX POSITION
1 No Motor: Leave blank

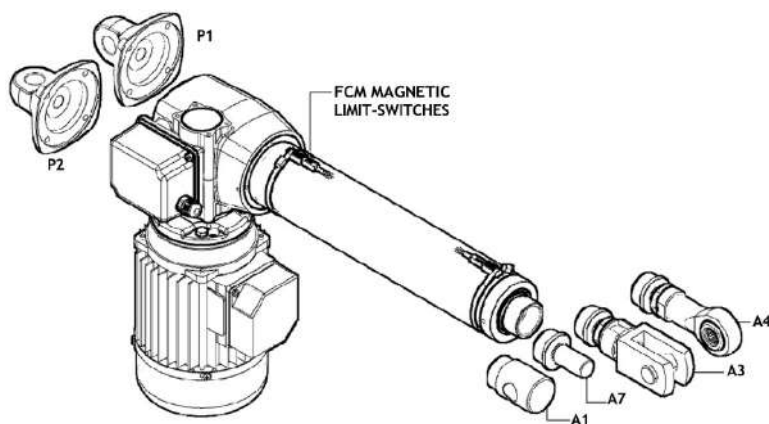
ENCODER
Options pg.76 None: Leave blank

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

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

FRONT END
A1 = Eyelet (standard) A3 = Yoke + Clip A4 = Rod end A7 = M20 male

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



Note: "B" dimension variations depending on model

ALI5 / ALI5-F = See pictures
ALI5 / ALI5-F stroke > 500 = + 20 mm
ALI5-FCM stroke < 500 = + 40 mm
ALI5-FCM stroke > 500 = + 60 mm
ALI5-FCI stroke < 500 = + 30 mm
ALI5-FCI stroke > 500 = + 50 mm
ALI5-VRS ALI5-F-VRS stroke < 500 = + 88 mm
ALI5-VRS ALI5-F-VRS stroke > 500 = + 108 mm
ALI5-VRS-FCM stroke < 500 = + 128 mm
ALI5-VRS-FCM stroke > 500 = + 148 mm
ALI5-VRS-FCI stroke < 500 = + 118 mm
ALI5-VRS-FCI stroke > 500 = + 138 mm
ALI5 with safety nut "G" = + 50 mm
ALI5 with anti-rotation device "L" = + 15 mm
ALI5 with bellows = +25 (excluding FCM and FCI version)

