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Linear Actuators

ALI 4 – Model



For any special duty requests, please contact our Sales Department for more assistance.

Features and Options:

- ✓ Permanent magnet motor CE
- ✓ Three phase or single-phase motor CE
- ✓ Worm gearbox
- ✓ Acme lead screw or ballscrew (VRS)
- ✓ Chrome plated steel push rod
- ✓ Lifelong grease lubricated
- ✓ IP65, tested according to rule CEI EN 60529
- ✓ DC motor IP 54 standard - IP65 on request
- 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*
- ✓ Limit switches, potentiometer and encoder on request

ALI4 (VAC 3-PHASE)					
FMAX (N)	SPEED (MM/S)	VERSION	MOTOR SIZE	MOTOR POWER (KW)	MOTOR SPEED (RPM)
2100 ¹	93	M01	IEC71	0.55	2800
3900 ¹	47	M02	IEC71	0.55	2800
5300	23	M03	IEC63	0.37	1400
8600	9	M04	IEC63	0.22	1400
9400	6	M05	IEC63	0.18	1400
10000	3	M06	IEC63	0.13	1400
10000	2	M07	IEC56	0.09	1400

ALI3 (VDC)					
FMAX (N)	SPEED (MM/S)	VERSION	MOTOR SIZE	MOTOR SPEED (RPM)	MAX CURRENT FOR FMAX 24VDC ²
600 ¹	100	M20	D.85	3000	10
1100 ¹	50	M21			13
2800	20	M22			13.5
4100	13	M23			14
6800	7	M24			12
10000	4	M25			13

ALI4-VRS (BALLSCREW 16X5) (VAC)					
FMAX (N)	SPEED (MM/S)	VERSION	MOTOR SIZE	MOTOR POWER (KW)	MOTOR SPEED (RPM)
2500 ¹	58	M08	IEC63	0.25	2800
3100	29	M09	IEC63	0.18	1400
3400	23	M10	IEC56	0.14	2800
5000	15	M11	IEC56	0.14	2800
6000	7	M12	IEC56	0.09	1400
7500	4	M13	IEC56	0.09	1400

ALI4 - VRS (BALLSCREW 16X5) 24 VDC					
FMAX (N)	SPEED (MM/S)	VERSION	MOTOR SIZE	MOTOR SPEED (RPM)	MAX CURRENT FOR FMAX 24VDC ²
2400 ¹	63	M26	D.85	3000	14
3400	25	M27			12
3900	16	M28			10
6800	8	M29			9
7500	5	M30			9

¹When speed is more than 40 mm/s and/or strokes longer than 350mm, check STROKE SETUP section; BRAKEMOTOR IS RECOMMENDED

²For 12 Vdc power supply currents are doubled and loads are 20% lower.

THIS DOCUMENT DISPLAYS THE MOST TYPICAL STANDARD FEATURES AND SETUPS. PLEASE CONTACT OUR SALES TEAM FOR MORE INFORMATION

Linear Actuators

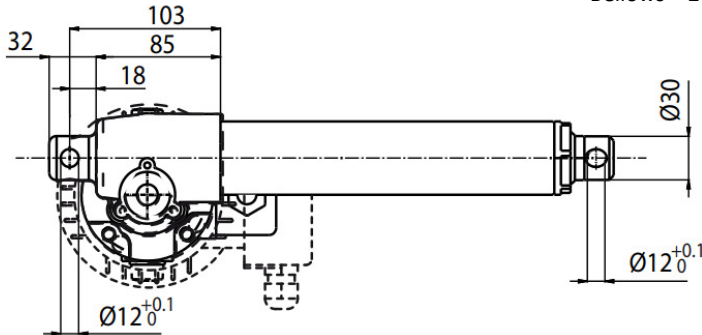
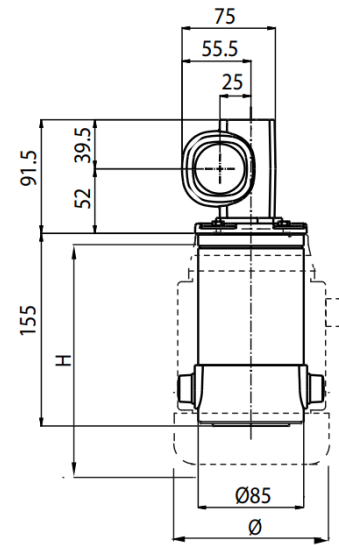
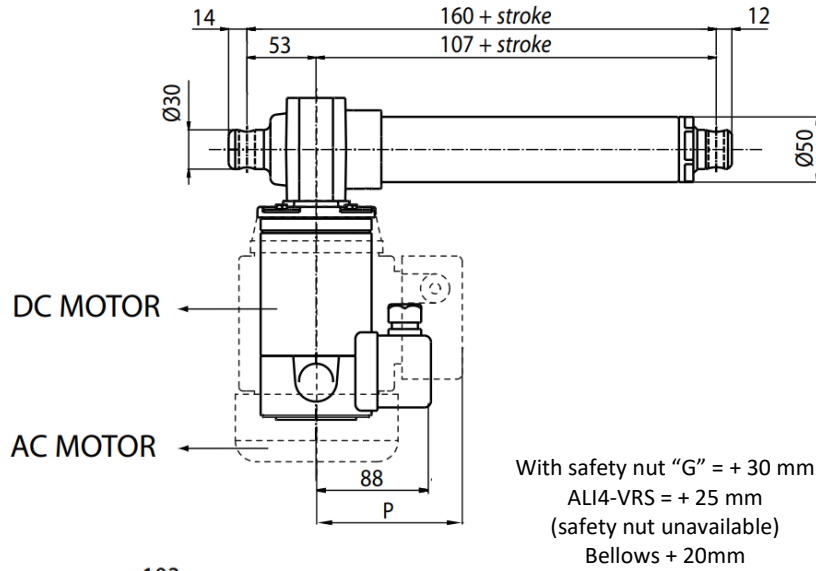
ALI 4 – Model

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GEARED MOTORS - LINEAR ACTUATORS - CONTROLS

- Over 40 Years of Supplying Africa -

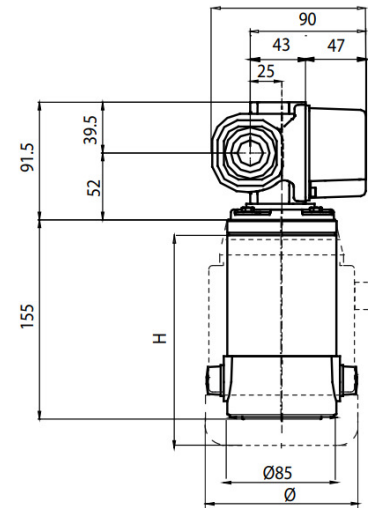
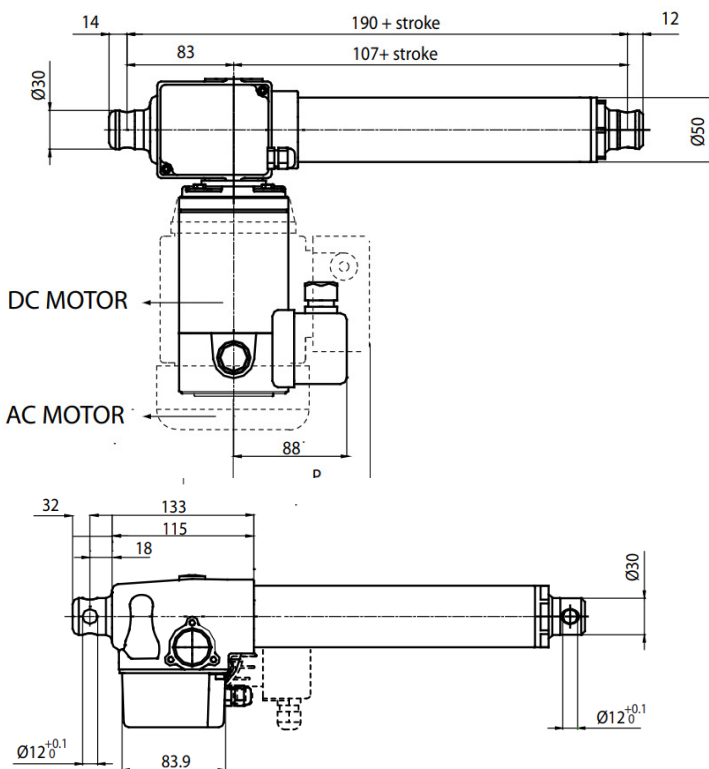
ALI4 Version without limit switches



AC MOTOR DIMENSIONS

SIZE:	TYPE:	H:	Ø:	P:
56	Standard	168	116	108
	Brake Motors	200		
63	Standard	190	129	110
	Brake Motors	235		
71	Standard	220	146	121
	Brake Motors	267		

ALI4-F Version with limit switches



AC MOTOR DIMENSIONS

SIZE:	TYPE:	H:	Ø:	P:
56	Standard	168	116	108
	Brake Motors	200		
63	Standard	190	129	110
	Brake Motors	235		
71	Standard	220	146	121
	Brake Motors	267		

Linear Actuators

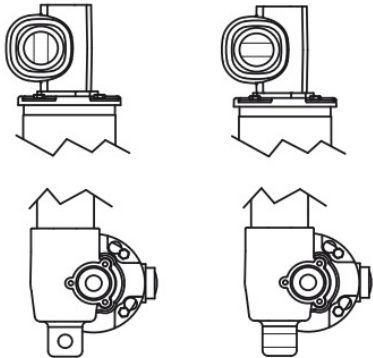
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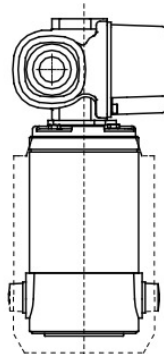
REAR ENDS



P1 Standard

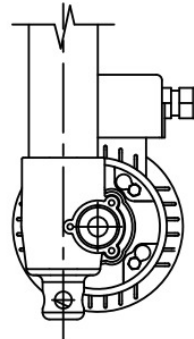
P2 Rotated 90°

MOTOR POSITION



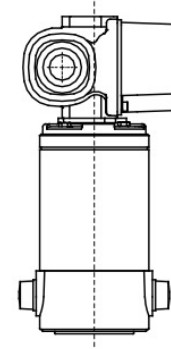
M0 (Standard)

E-BOX POSITION



1 Standard

LIMIT SWITCHES POSITION



FC1 (Standard) M0

Stroke Setup:

Useful tips for handling stroke and avoid run-on-block collision

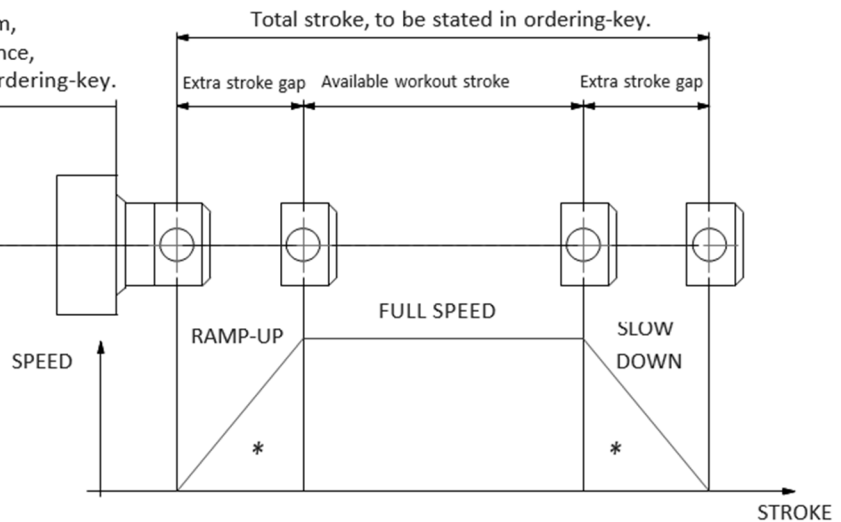
When stroke is more than 350 mm, add 50 mm extra-stroke as guidance, and put corresponding value in ordering-key.

WARNING:

SPEED-TIMING ALONG STROKELENGTH:

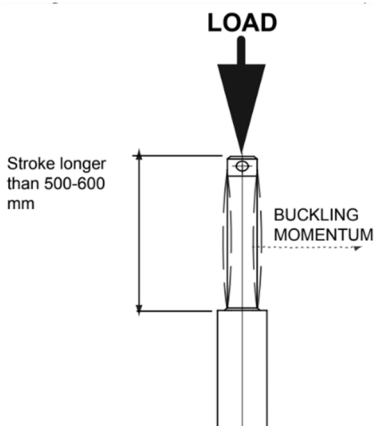
Ramps are extremely important when speed is > 40mm/s. Inverter or PWM drive recommended.

* The more speed raises the more extra stroke must raise too



Buckling:

When stroke is longer than 500 mm, BUCKLING can be a risk. Please check mounting with our Sales Department.



IMPORTANT:

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

This happens when actuator is in its all-opened position: that's the reason why we recommend 100 mm extra-stroke.

Pushtube will have this 100 mm-portion always inside the overtube, improving guidance against buckling.

For more information on this, please contact our Sales Department.

Ordering Key

ALI4 / 0250 / M01 / CA-400/50-T-56-4-0,09 / AB / FC1 / M0 / 1 / E01 / 2FC2 / POT01A / P1 / A1

MODEL: _____

ALI4 / ALI4-F / ALI4-FCM / ALI4-FCI

ALI4-VRS / ALI4-VRS-F /

ALI4-VRS-FCM / ALI4-VRS-FCI

STROKE: _____

es. 250 mm = 0250

VERSION: _____

Advise: choose among

M00 Not standard speed

Flanged Version = Rpm

Advise reduction ratio and screw pitch

MOTOR: _____

Advise only if with motor:

AC: version, voltage, type, size, n°pole, power

DC: version, voltage, size, Rpm

With motor flange only put 0

With special motor flange put: PD

AC MOTOR OPTIONS: _____

Motor flange: for motor flange version only advise size –

IE: for IEC56 B14 put 56B14

No motor or DC motor: leave all following parameters blank

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)

LIMIT SWITCHES POSITION: _____

FC1 None: Leave blank

MOTOR POSITION: _____

M0

None: Leave blank

E-BOX POSITION: _____

1 No Motor: Leave blank

ENCODER: _____

None: Leave blank

LIMIT SWITCHES: _____

None: Leave blank

POTENTIOMETER: _____

POT01A (1Kohm)

POT10A (10Kohm)

None: Leave blank

REAR END: _____

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

FRONT END: _____

A1 = Eyelet A3 = Yoke + Clip

A4 = Rod end A7 = M12 male

NOTE: COMPLETE THE ORDERING KEY ADDING THE OPTIONS YOU CAN FIND IN THE "ACCESSORIES AND OPTIONS" SECTION ON THE BIRCREFT WEBSITE.

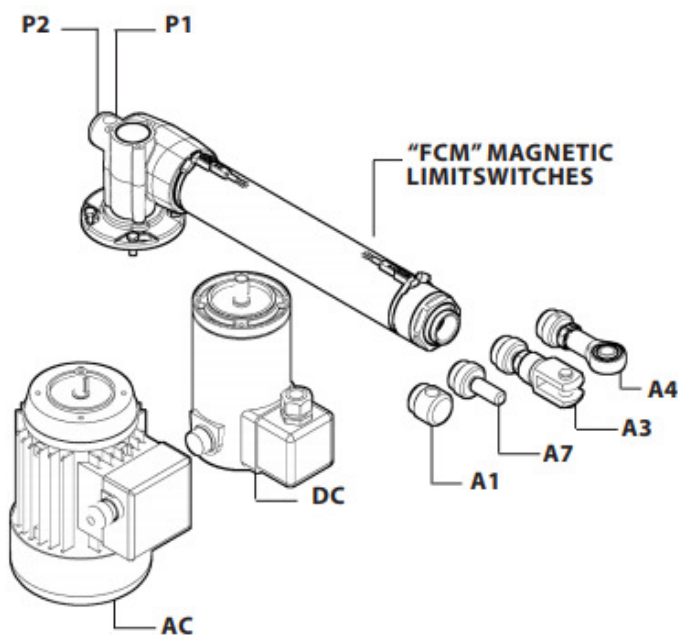
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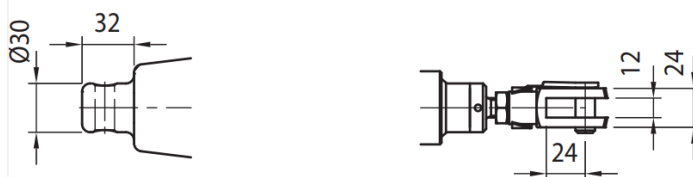
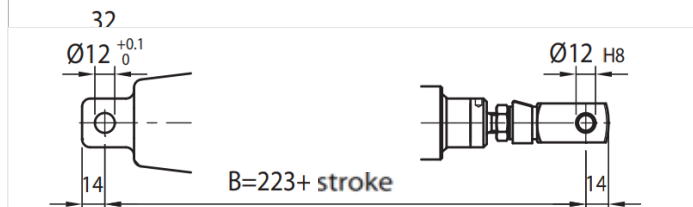
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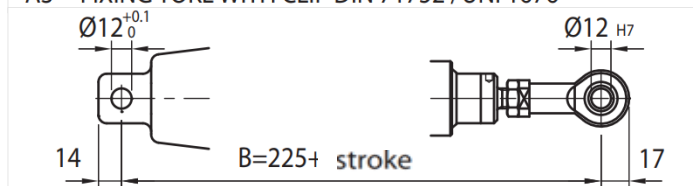
NOTES:

"B" dimension variations depending on model

- ALI4 = see pictures
- ALI4-F = + 30 mm
- ALI4-FCM = + 42,5 mm
- ALI4-FCI = + 42,5 mm with safety nut "G" = + 30 mm (i.e. ALI4-F "G" option = +30)
- ALI4-VRS (version 16x5) = + 25 mm
- ALI4-VRS-F (version 16x5) = + 55 mm
- ALI4-VRS-FCM (version 16x5) = + 53 mm
- ALI4-VRS-FCI (version 16x5) = + 53 mm
- L = + 15 mm
- Bellows = + 15 mm



A3 = FIXING YOKE WITH CLIP DIN 71752 / UNI 1676



A4 = FIXING WITH ROD END DIN 648 serie K / ISO 6126