

ALI4-Model CE

- Permanent magnet motor CE
- Three phase or single phase motor CE
- Worm gearbox
- Acme lead screw or ballscrew (VRS)
- Chrome plated steel push rod
- Life long grease lubricated
- IP65, tested according to rule CEI EN 60529
D.C. 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

(*) For any special duty please contact our technical dept.

| ALI4 (Vac 3-phase) | | | | | |
|--------------------|--------------|---------|------------|------------------|-------------------|
| Fmax (N) | Speed (mm/s) | Version | Motor size | Motor power (KW) | Motor speed (rpm) |
| * 2100 | 93 | M01 | IEC71 | 0,55 | 2800 |
| * 3900 | 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 |

| ALI4 (Vdc) | | | | | | |
|------------|--------------|---------|------------|------------------|-------------------|-------------------------------|
| Fmax (N) | Speed (mm/s) | Version | Motor size | Motor power (KW) | Motor speed (rpm) | Max Current for Fmax(A) 24Vdc |
| * 600 | 100 | M20 | D.85 | - | 3000 | 10 |
| * 1100 | 50 | M21 | D.85 | - | 3000 | 13 |
| 2800 | 20 | M22 | D.85 | - | 3000 | 13,5 |
| 4100 | 13 | M23 | D.85 | - | 3000 | 14 |
| 6800 | 7 | M24 | D.85 | - | 3000 | 12 |
| 10000 | 4 | M25 | D.85 | - | 3000 | 13 |

| ALI4-VRS (ballscrew 16x5) (Vac) | | | | | |
|---------------------------------|--------------|---------|------------|------------------|-------------------|
| Fmax (N) | Speed (mm/s) | Version | Motor size | Motor power (KW) | Motor speed (rpm) |
| * 2500 | 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 power (KW) | Motor speed (rpm) | Max Current for Fmax(A) 24Vdc |
| * 2400 | 63 | M26 | D.85 | - | 3000 | 14 |
| 3400 | 25 | M27 | D.85 | - | 3000 | 12 |
| 3900 | 16 | M28 | D.85 | - | 3000 | 10 |
| 6800 | 8 | M29 | D.85 | - | 3000 | 9 |
| 7500 | 5 | M30 | D.85 | - | 3000 | 9 |

With single-phase motors type M (see motor choice guideline in paragraph ACCESSORIES) performances are 20% lower than the three-phase motor.

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

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

BEFORE OPERATING ACTUATOR MAKE SURE YOU READ AND UNDERSTOOD BASIC OPERATIONAL INSTRUCTIONS SHOWN ON USERMANUALS, AVAILABLE FROM WEBSITE.

THIS DOCUMENT DISPLAYS MOST TYPICAL STANDARD FEATURES AND SETUPS: CONTACT OUR OFFICES FOR MORE.

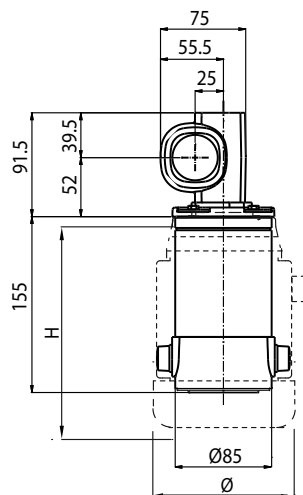
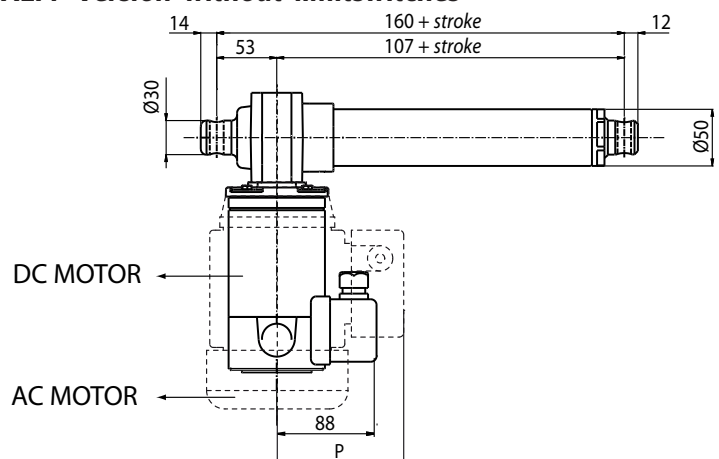
ACTUATOR SHALL NOT COME TO **MECHANICAL STROKE-END**, TO AVOID **FAILURES**.

CONSIDER MECVEL's LIMITSWITCHES (MODEL ALI4-F or ALI4-FCM) OR PUT THEM ON MACHINE/FRAME.



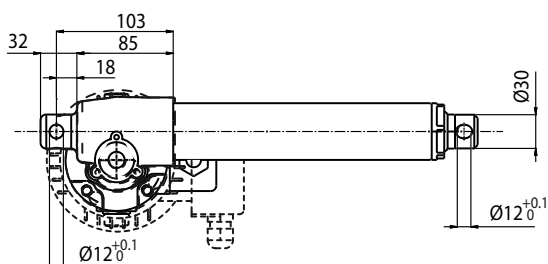
MecVel reserves the right to change products information and/or features without notice; all data contained in this catalogue are purely indicative and not binding for the company.

ALI4 Version without limitswitches

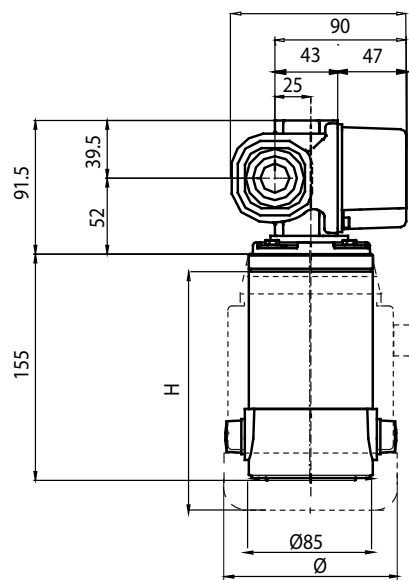
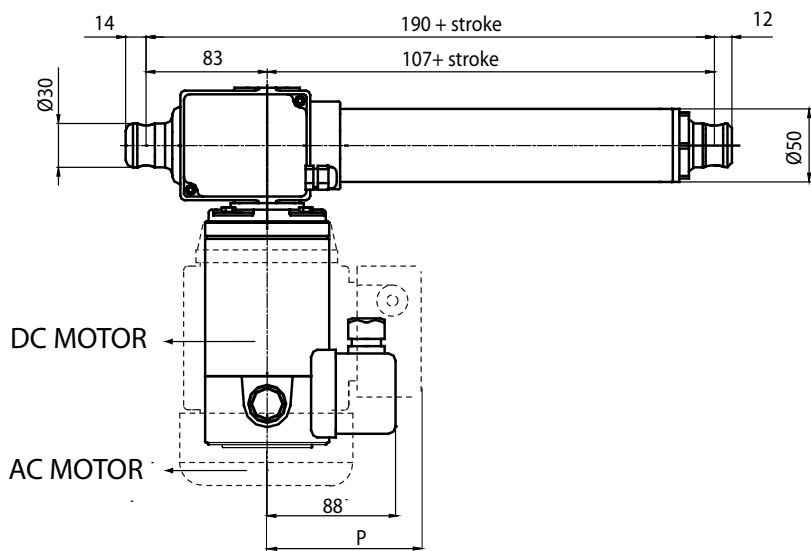


| A.C. MOTORS DIMENSIONS | | | | |
|------------------------|--------------|-----|-----|-----|
| GR. / SIZE | TYPE | H | Ø | P |
| 56 | Standard | 168 | 116 | 108 |
| | Brake motors | 200 | | |
| 63 | Standard | 190 | 129 | 110 |
| | Brake motors | 235 | | |
| 71 | Standard | 220 | 146 | 121 |
| | Brake motors | 267 | | |

With safety nut "G" = + 30 mm
 ALI4-VRS = + 25 mm (safety nut unavailable)
 Bellows + 20mm (for FCM limitswitches contact our Offices)

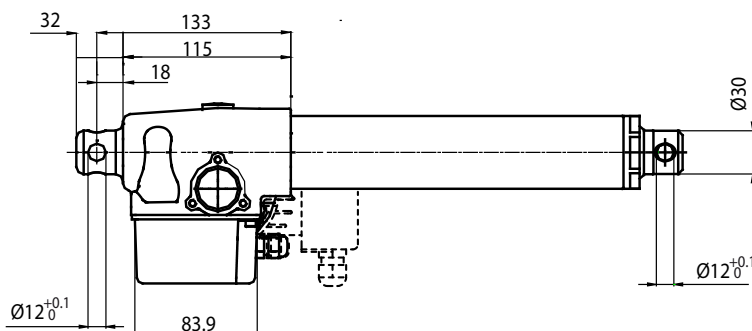


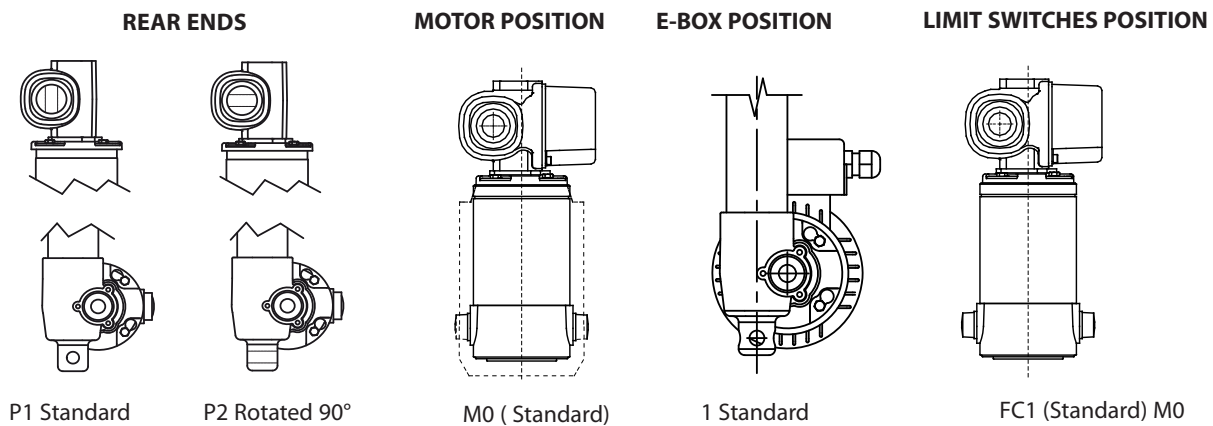
ALI4-F Version with limitswitches



| A.C. MOTORS 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 | | |

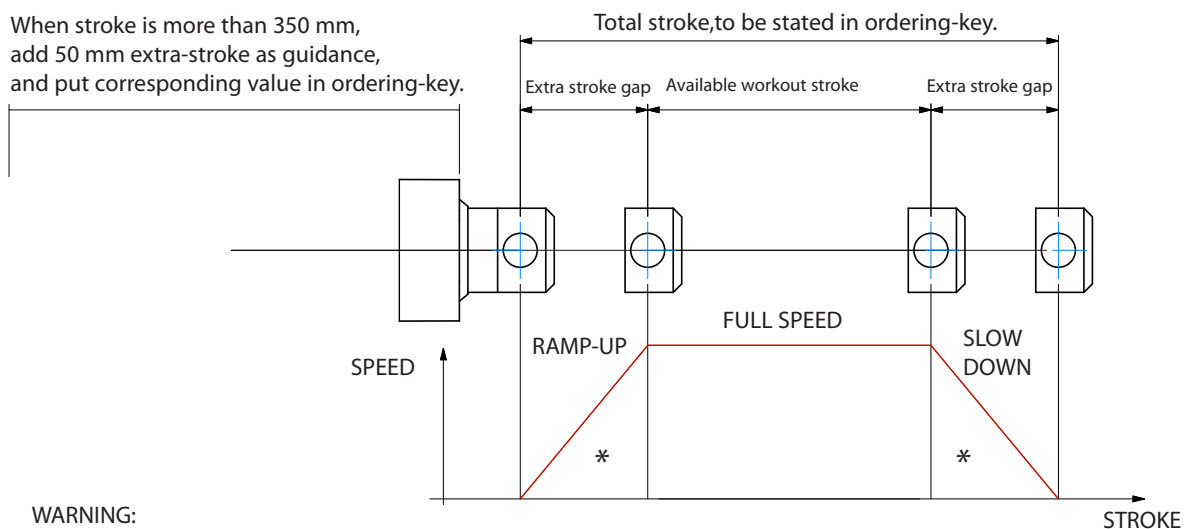
With safety nut "G" = + 30 mm
 ALI4-VRS = + 25 mm (safety nut unavailable)
 Bellows + 20mm (for FCM limitswitches contact our Offices)





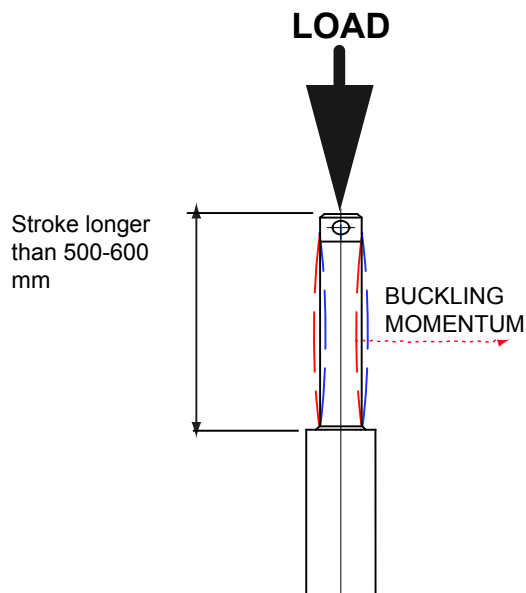
STROKE SETUP: Useful tips for handling stroke and avoid run-on-block collision.

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 has to raise too.

BUCKLING: With strokes longer than 500mm, BUCKLING can be a risk: please check mounting with our offices and/or see usermanuals.



IMPORTANT:
 Long strokes, even if load is low, can generate significant buckling momentums, as sketch slows.
 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, contact our office.

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: (Pag. 37) _____
 Advise: choose among
 M00 Not standard speed
 Flanged Version = Rpm
 Advise reduction ratio and screw pitch

MOTOR: _____
 Advise only if with motor:
A.C.: version, voltage, type, size, n°pole, power
D.C.: version, voltage, size, Rpm
 With motorflange only put 0
 With special motorflange put: PD

AC MOTOR OPTIONS: (Pag.ACCESSORIES) _____
 Motorflange: for motorflange version only advise size - i.e.for IEC56 B14 put 56B14
 No motor or DC motor: leave all following parameters blank
 Protection Degree: IP65, for selfbrake motor IP54 standard
 Brake type: for brakemotors 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: (Pag. ACCESSORIES) _____
 None: Leave blank

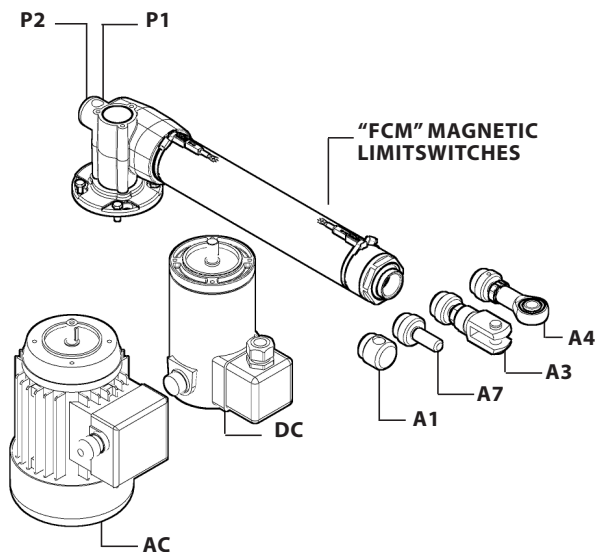
LIMIT SWITCHES: (Pag. ACCESSORIES) _____
 None: Leave blank

POTENTIOMETER: (Pag. ACCESSORIES) _____
POT01A (1Kohm) **POT10A** (10Kohm) None: Leave blank

REAR END: _____
P1 = Eyelet (standard) **P2** = Eyelet (90°)

FRONT END: _____
A1 = Eyelet (Std pag.38) **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.



Note: "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 (versione 16x5) = + 25 mm | ALI4-VRS-F (versione 16x5) = + 55 mm | |
| | ALI4-VRS-FCM (versione 16x5) = + 53 mm | ALI4-VRS-FCI (versione 16x5) = + 53 mm | |
| | L = + 15 mm | | |
| | Bellows = + 15 mm (excluding FCM and FCI version, for versions FCM and FCI contact MecVel) | | |

