

ALI3 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
 - 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.

| ALI3 (Vac 3-phase) | | | | | |
|--------------------|--------------|---------|------------|------------------|-------------------|
| Fmax (N) | Speed (mm/s) | Version | Motor size | Motor power (KW) | Motor speed (rpm) |
| 2600 | 20 | M01 | IEC50 | 0.09 | 2800 |
| 2800 | 14 | M02 | IEC50 | 0.09 | 2800 |
| 4800 | 7 | M03 | IEC50 | 0.09 | 2800 |
| 5000 | 5 | M04 | IEC50 | 0.09 | 2800 |
| 5000 | 2.5 | M05 | IEC50 | 0.06 | 2800 |

| ALI3 (Vdc) | | | | | | |
|------------|--------------|---------|------------|------------------|-------------------|-------------------------------|
| Fmax (N) | Speed (mm/s) | Version | Motor size | Motor power (KW) | Motor speed (rpm) | Max Current for Fmax(A) 24Vdc |
| 3600 | 35 | M01 | 61.5 | - | 5000 | 13 |
| 3600 | 25 | M02 | 61.5 | - | 5000 | 9 |
| 6000 | 12 | M03 | 61.5 | - | 5000 | 10 |
| 6000 | 9 | M04 | 61.5 | - | 5000 | 7,6 |
| 6000 | 5 | M05 | 61.5 | - | 5000 | 5,8 |

| ALI3 VRS (ballscrew) (Vac 3-phase) | | | | | |
|------------------------------------|--------------|---------|------------|------------------|-------------------|
| Fmax (N) | Speed (mm/s) | Version | Motor size | Motor power (KW) | Motor speed (rpm) |
| 5000 | 9 | M01 | IEC50 | 0.09 | 2800 |
| 5000 | 3,5 | M02 | IEC50 | 0.09 | 2800 |

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

When stroke is 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.

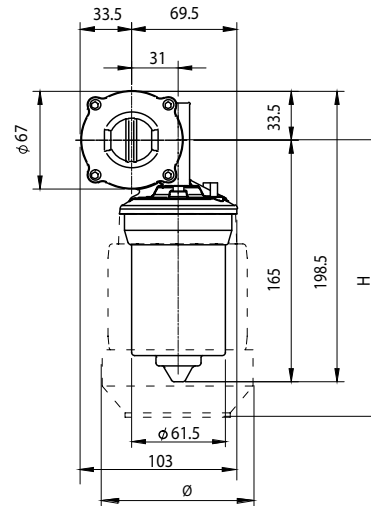
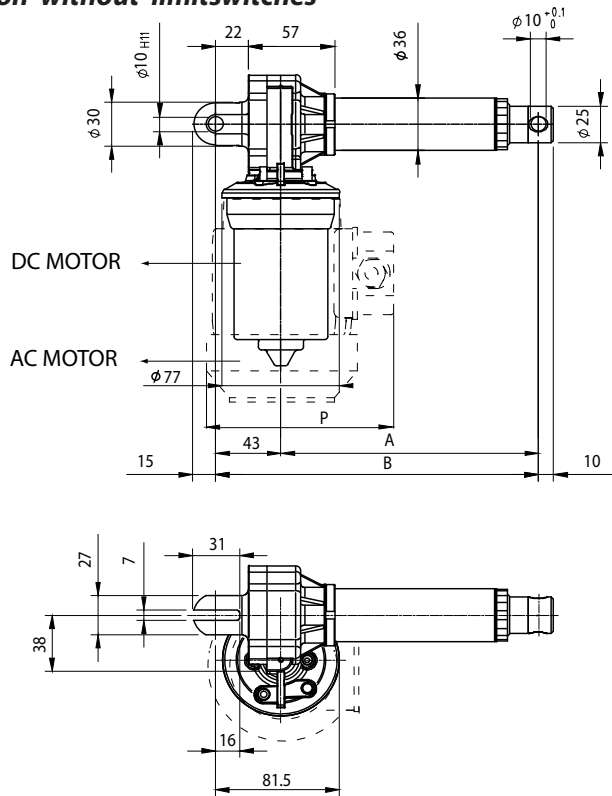
ACTUATOR SHALL NOT COME TO **MECHANICAL STROKE-END**, TO AVOID **FAILURES**.

CONSIDER MECVEL's LIMITSWITCHES (MODEL ALI3-F or ALI3-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.

AL13 Version without limitswitches

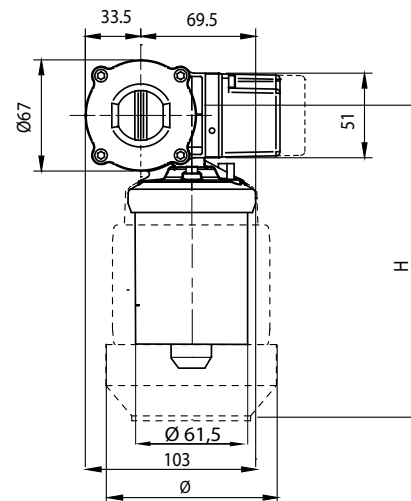
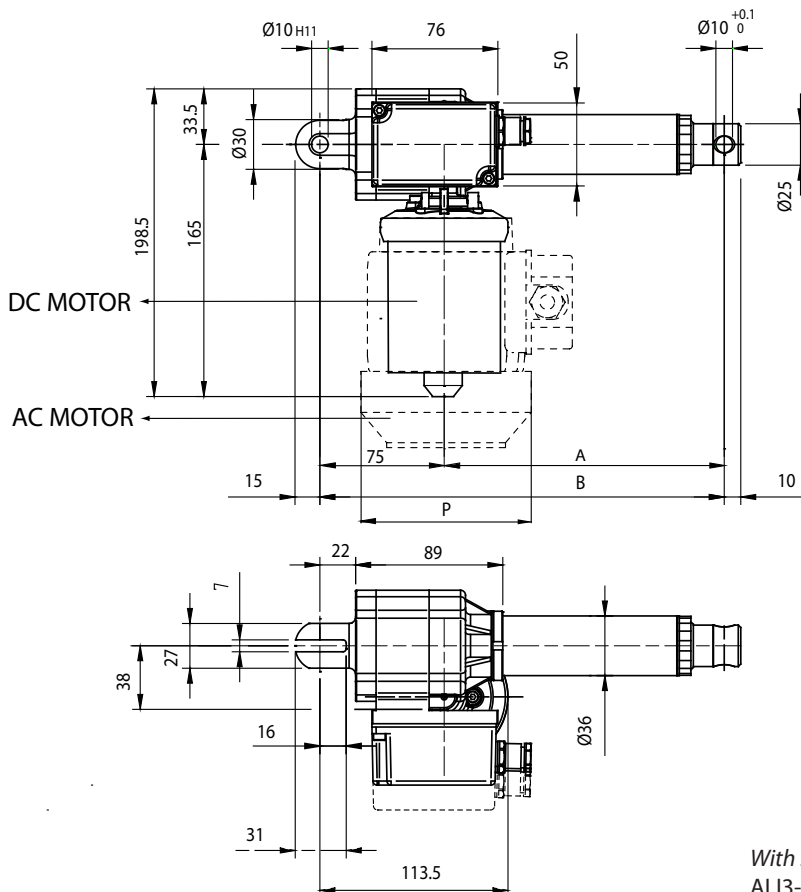


| DIM. | Stroke < to 320 mm. | Stroke > to 320 mm. |
|------|---------------------|---------------------|
| A | 69 + stroke | 79 + stroke |
| B | 112 + stroke | 122 + stroke |

| A.C MOTORS DIMENSIONS | | | | |
|-----------------------|--------------|-----|--------|-----|
| SIZE | TYPE | H | ϕ | P |
| 50 | Standard | 188 | 110 | 105 |
| | Brake Motors | 226 | 110 | 105 |
| 56 | Standard | 216 | 110 | 108 |
| | Brake Motors | 260 | 110 | 108 |

With safety nut "G" = + 30 mm
 AL13-VRS = + 40 mm (safety nut unavailable)
 Bellows + 20mm (for FCM limitswitches contact our Offices)

AL13-F Version with limitswitches

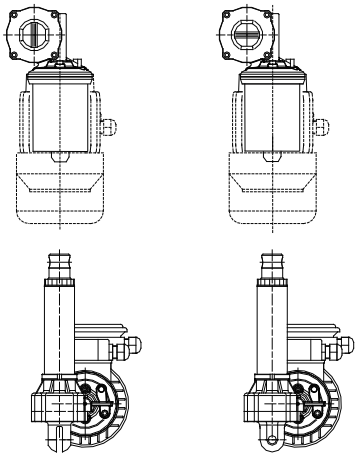


| DIM. | Stroke < to 320 mm. | Stroke > to 320 mm. |
|------|---------------------|---------------------|
| A | 69 + stroke | 79 + stroke |
| B | 144 + stroke | 154 + stroke |

| A.C MOTORS DIMENSIONS | | | | |
|-----------------------|--------------|-----|--------|-----|
| SIZE | TYPE | H | ϕ | P |
| 50 | Standard | 188 | 110 | 105 |
| | Brake Motors | 226 | 110 | 105 |
| 56 | Standard | 216 | 110 | 108 |
| | Brake Motors | 260 | 110 | 108 |

With safety nut "G" = + 30 mm
 AL13-F-VRS = + 40 mm (safety nut unavailable)
 Bellows + 20mm (for FCM limitswitches contact our Offices)

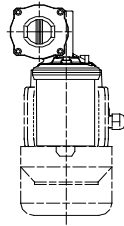
REAR ENDS



P1 Standard

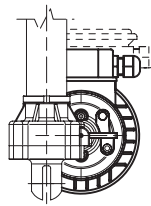
P2 Rotated 90°

MOTOR POSITION



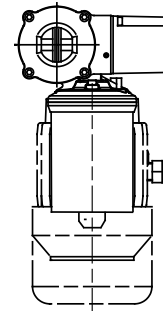
M0

E-BOX POSITION



1 Standard

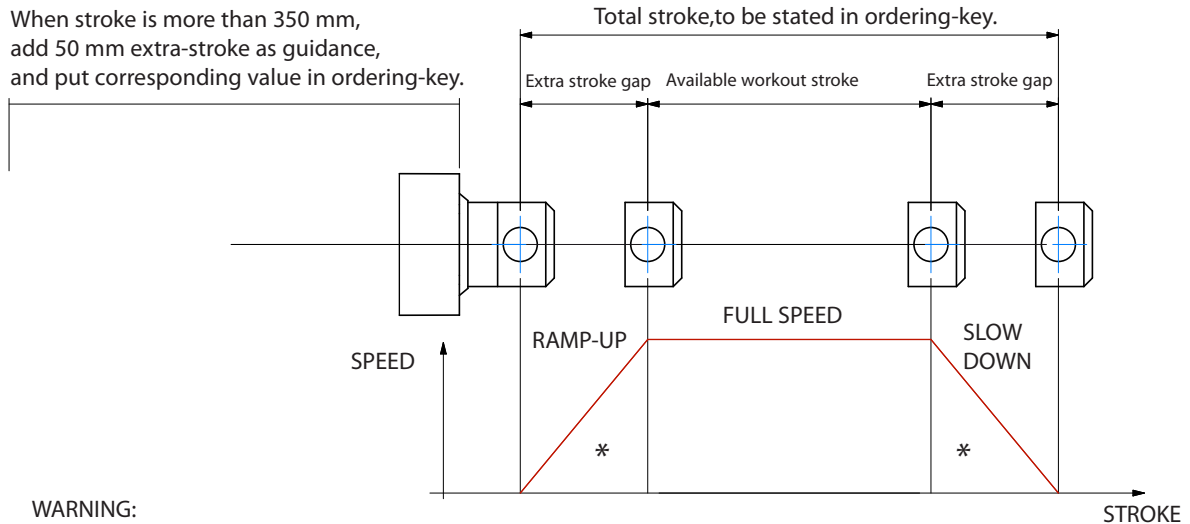
LIMIT SWITCHES POSITION



M0 FC1

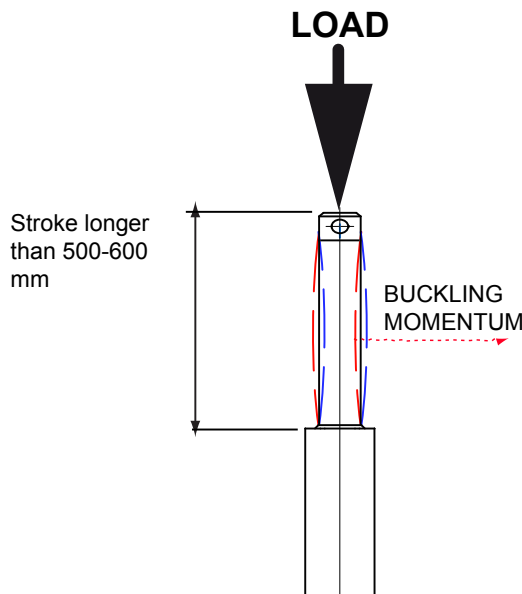
STROKE SETUP: Useful tips for handling stroke and avoid run-on-block collision.

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 with high speed !!! 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

ALI3 / 0250 / M01 / CA-400/50-T-56-4-0,09 / AB / M1 / 1 / E01 / 2FC1 / POT01A / FC1 / P1 / A1

MODEL: _____
 ALI3 / ALI3-F / ALI3-VRS / ALI3-F-VRS / ALI3-FCM

STROKE: _____
 es. 250 mm = 0250

VERSION: (Pag. 29) _____
 M01 / M02 / M03 / M04 / M05 (version D.C.)
 M01 / M02 / M03 / M04 / M05 (version A.C.)
 M00 = Not standard speed

MOTOR: (Pag. ACCESSORIES) _____
 Advise only if with motor:
A.C.: version, voltage, type, size, n°pole, power
D.C.: version, voltage, size, Rpm

AC MOTOR OPTIONS: (Pag. ACCESSORIES) _____
 Protection Degree: IP65, for selfbrake motor IP54 standard
 Brake type: for brakemotors only: ES. FECA
 Options: Advise if needed (ES. AB 2'shaft)

MOTOR POSITION: _____
M0 None: Leave blank

E-BOX POSITION: _____
1
 No Motor or DC Motor: Leave blank

ENCODER: (Pag. ACCESSORIES) _____
 None: Leave blank

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

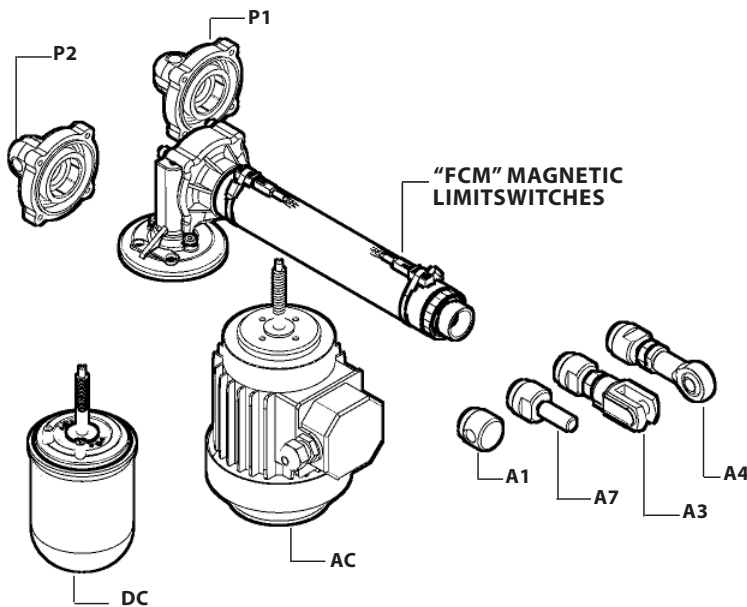
POTENTIOMETER: (Pag. ACCESSORIES) _____
POT01A (1Kohm) **POT10A** (10Kohm) None: Leave blank

LIMIT SWITCHES POSITION: _____
FC1 None: Leave blank

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

FRONT END: _____
A1 = Eyelet (Std pag.30) **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

