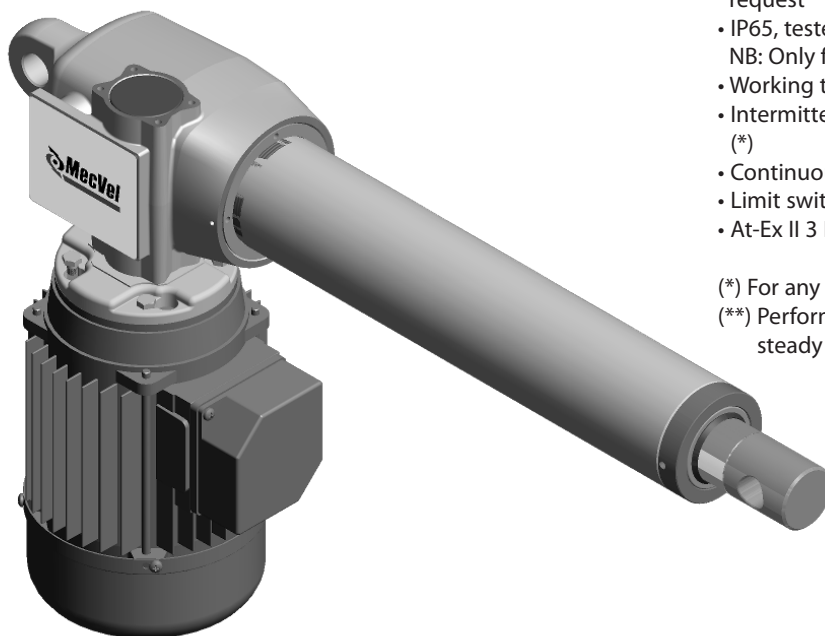




ALI5-Model C€

- Three phase or single phase motor CE
- Worm gearbox (ALI5)
- Acme lead screw or ballscrew (VRS)
- Chrome plated steel push rod
- Grease (standard) or oil (VRS continuous duty S1) lubricated on request
- 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% (5min) a +30°C acme lead screw version (*)
- Continuous duty S1 +30°C ballscrew version on request (**)
- Limit switch, potentiometer, encoder on request
- At-Ex II 3 D T4 version (A.C.motor) on request

(*) For any special duty, please contact our technical department

(**) Performance are related to ball screw, lifetime of 2000 hours with steady load and without shocks or vibrations

ALI 5 VRS (Vac 3-phase ballscrew)					
Fmax (N)	Speed (mm/s)	Version	Motor size	Motor power (KW)	Motor speed (rpm)
* 4800	93	M45	IEC71	0.55	2800
* 6000	47	M46	IEC71	0.37	2800
7500	23	M47	IEC71	0.37	2800
9500	12	M48	IEC71	0.25	1400
12000	6	M49	IEC71	0.25	1400

ALI5 (Vac 3-phase Acme lead screw)					
Fmax (N)	Speed (mm/s)	Version	Motor size	Motor power (KW)	Motor speed (rpm)
* 4300	93	M01	IEC80	1,1	2800
* 7200	47	M02	IEC80	1,1	2800
* 11000	23	M03	IEC71	0,75	2800
18000	12	M04	IEC71	0,37	2800
18000	6	M05	IEC71	0,37	1400
18000	3	M06	IEC71	0,37	1400

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

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 ALI5-F or ALI5-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.

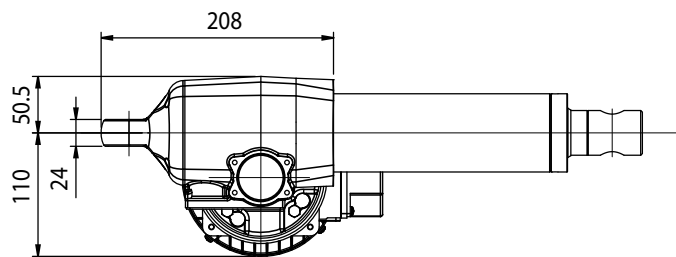
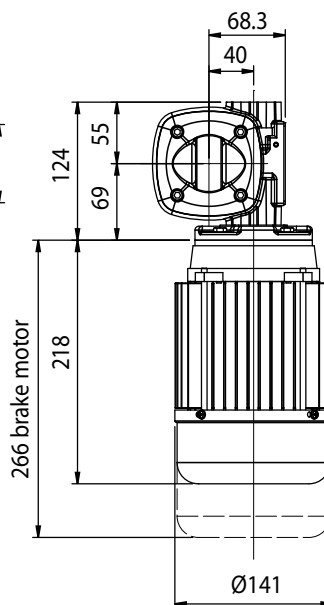
Technical drawing of the SMC SMD Series Double-Acting Hydraulic Cylinder, showing front and side views with dimensions.

Front View Dimensions:

- Total length: $282 + \text{stroke}$
- Stroke length: $164 + \text{stroke}$
- Mounting bracket width: 25
- End cap diameter: $\varnothing 20^{+0.1}_0$
- Intermediate flange diameter: $\varnothing 70$
- Cylinder body diameter: $\varnothing 40$
- Bottom mounting plate diameter: $\varnothing 20^{+0.1}_0$

Side View Dimensions:

- Distance from mounting bracket to cylinder body: 118
- Distance from cylinder body to end cap: 27
- Overall height: 109



With safety nut "G" = + 50 mm
Bellows + 25mm (for FCM limitswitches contact our
Officies)

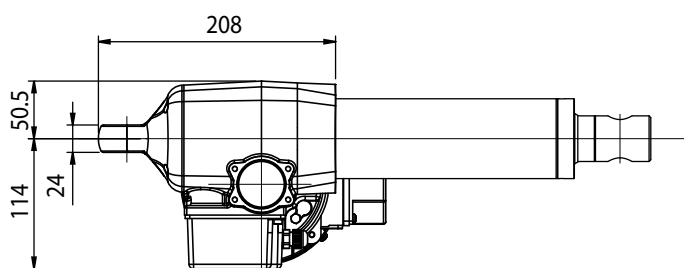
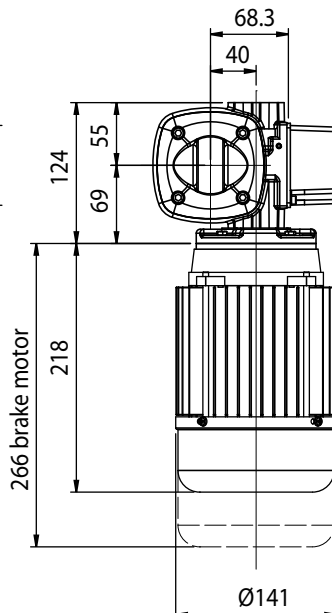
Technical drawing of the R10000 robot arm, showing top and front views with dimensions.

Top View Dimensions:

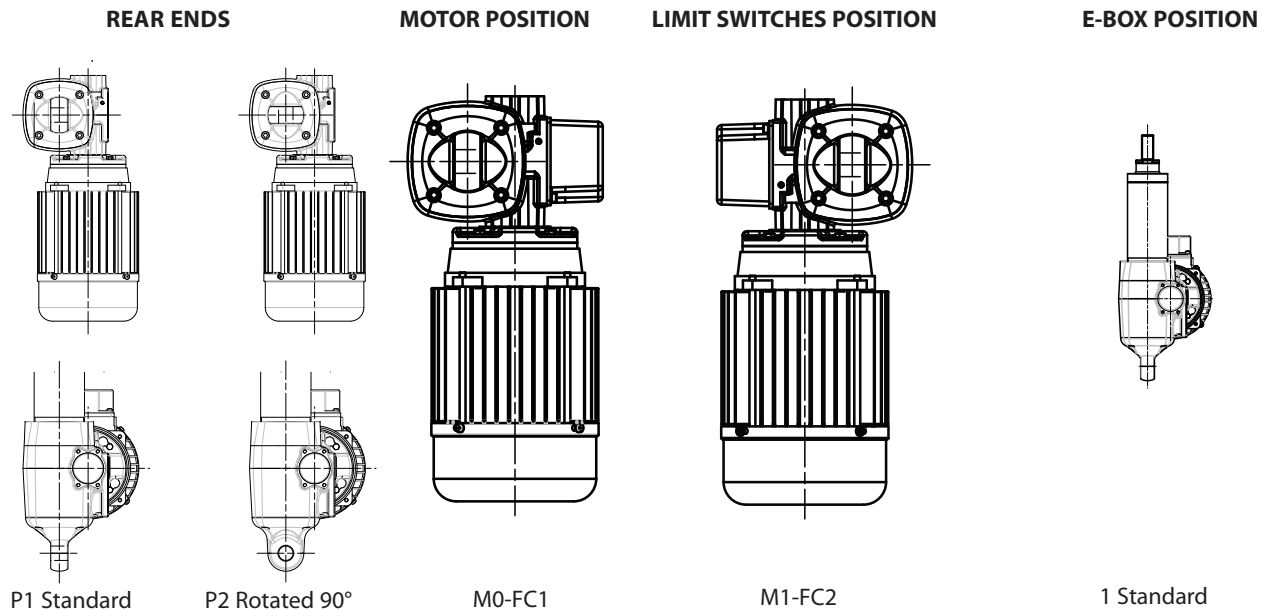
- Distance from center to mounting hole: 25
- Distance from center to end effector: 118
- Distance from center to end effector (including stroke): $164 + \text{stroke}$
- Distance from center to end effector (including stroke and offset): $282 + \text{stroke}$
- Offset from end effector center to mounting hole: 27
- End effector hole diameter: $\varnothing 40$
- End effector outer diameter: $\varnothing 70$
- Mounting hole diameter: $\varnothing 20^{+0.1}_0$

Front View Dimensions:

- Distance from center to end effector: 109

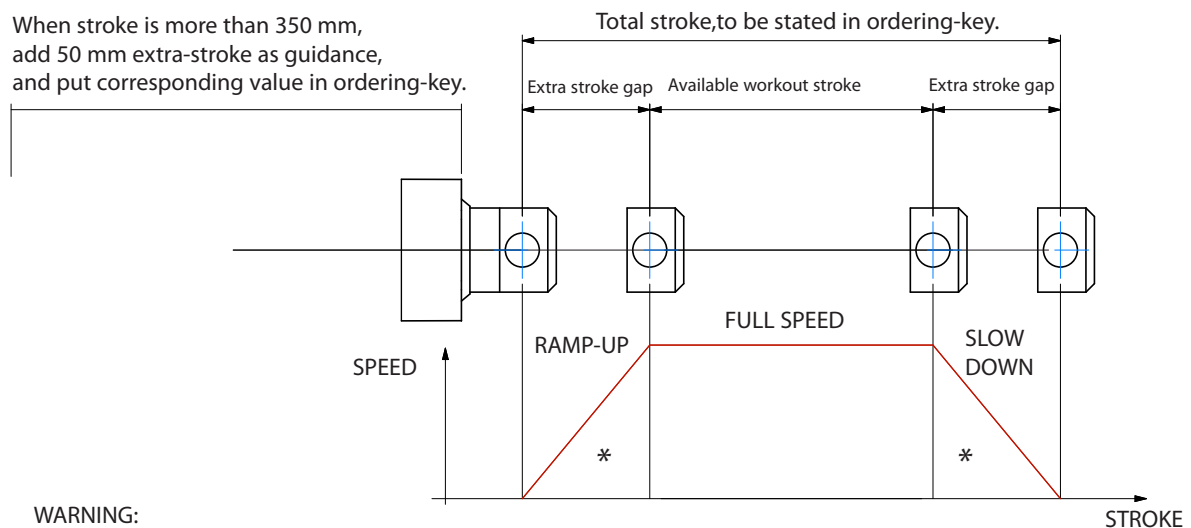


With safety nut "G" = + 50 mm
Bellows + 25mm (for FCM limitswitches contact our
Officies)



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.



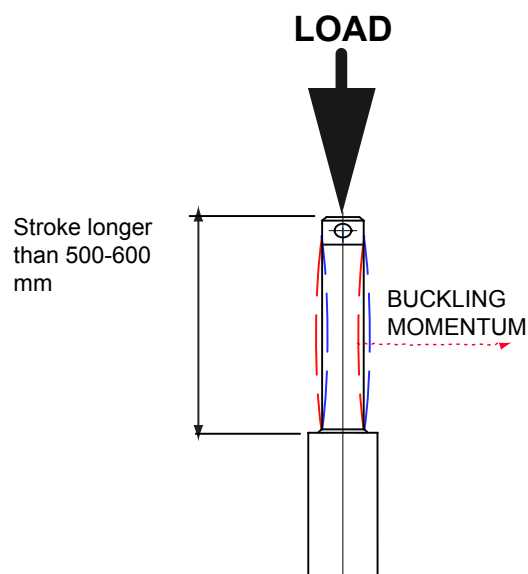
WARNING:

SPEED-TIMING ALONG STROKE LENGTH:

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: 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 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, contact our office.

ORDERING KEY

ALI5 / 0300 / M01 / CA-400-50-T-71-2-0,55 / AB / M0-FC1 / 1 / E05 / 2FC2 / POT01A / P1 / A1

MODEL:

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

STROKE:

es. 300 mm = 0300

VERSION: (pag.41)

Advise: choose among

Flanged Version = Rpm

Advise reduction ratio and screw pitch (ALI5)

MOTOR: (pag. ACCESSORIES)

Advise only if with motor:

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

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 IEC71 B14 put 71B14

No 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)

MOTOR LIMIT SWITCHES POSITION:

M0-FC1 / M1-FC2 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

P2 = Eyelet (90°)

FRONT END:

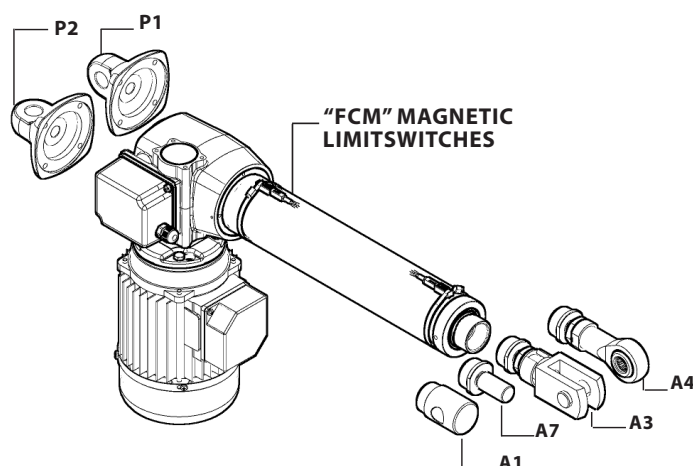
A1 = Eyelet (Std pag. 42)

A3 = Yoke + Clip

A4 = Rod end

A7 = M20x1,5 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-FCM stroke < 500 = + 40 mm

ALI5-FCI stroke < 500 = + 30 mm

ALI5-VRS ALI5-F-VRS stroke < 500 = + 88 mm

ALI5-VRS-FCM corsa stroke < 500 = + 128 mm

ALI5-VRS-FCI stroke < 500 = + 118 mm

ALI5 / ALI5-F stroke > 500 = + 20 mm

ALI5-FCM stroke > 500 = + 60 mm

ALI5-FCI stroke > 500 = + 50 mm

ALI5-VRS ALI5-F-VRS stroke > 500 = + 108 mm

ALI5-VRS-FCM stroke > 500 = + 148 mm

ALI5-VRS-FCI stroke > 500 = + 138 mm

with safety nut "G" = + 50 mm (Es. ALI5-F opzione "G" = +50) / (i.e. ALI5-F "G" option = +50)

antirotation device "L" = + 15 mm

Bellows = + 25 (excluding FCM and FCI version, for version FCM and FCI contact MecVel)

