ACCESSORIES AND OPTIONS

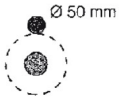
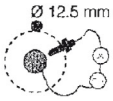
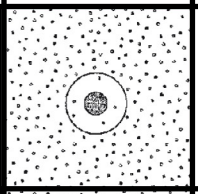
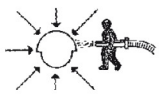
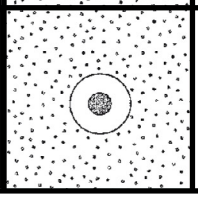
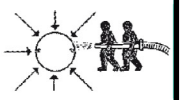
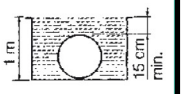
According to the options desired, add the identification letters at the end of ordering key related to the product chosen.

A	Stainless steel
AA	Industry version
B	Bellows boot
CG	Bell flange with coupling (on request)
E	Silicon seals
FX	Anticorrosion painting
G	Safety nut
H	Handwheel
L	Anti-rotation device
MN	Manual driving for ALI1 and ALI1-P models
N	Manual driving with safety limit switch
O	Body integrated Swivelling shafts (on request)
OA	Front Swivelling plate (on request)
OP	Rear Swivelling plate (on request)
P	Handwheel and safety-switch
PO	Rear-pipe for swinging movement (on request)
S	Torque limiter
T	Additional shaft
Z	Low noise
N.DIS.	Drawing number: Request of no standard options.

Examples:

- Ordering key for standard product
  ALI5/0300/M01/CA-400-50-T-71-2-0,55/B5+AB/M0-FC1/1/E05 /2FC2/P0T01A/P1/A1
- Ordering key for standard product + options
  ALI5/0300/M01/CA-400-50-T-71-2-0,55/B5+AB/M0-FC1/1/E05 /2FC2/P0T01A/P1/A1/A/B/T
- Ordering key with NO standard options
  ALI5/0300/M01/CA-400-50-T-71-2-0,55/B5+AB/M0-FC1/1/E05 /2FC2/P0T01A/P1/A1/1234

HOUSING PROTECTION LEVEL (IP CODE)

First digit	Protection against solid objects		**Second digit**	Protection against liquids	
0		Not protected	0		Not protected
1		Protected against solid foreign objects of 50 mm diameter and greater	1		Protected against vertically falling water drips
2		Protected against solid foreign objects of 12,5 mm diameter and greater	2		Protected against vertical water drips with casing inclined up to 15°
3		Protected against solid foreign objects of 2,5 mm diameter and greater	3		Protected against spraying water
4		Protected against solid foreign objects of 1,0 mm diameter and greater	4		Protected against splashing water
5		Protected against dust	5		Protected against jets of water
6		Totally protected against dust	6		Protected against powerful jets of water jets
			7		Protected against the effects of temporary immersion in water
			8		Protected against the effects of continuos immersion in water

The tables shown in this page are from IEC EN 60529 (CEI 70-1) standards

MecVel standard products are equipped with IP55

MOTOR CHOICE GUIDELINE

MOTOR TYPE

VERSION	DC	direct current
	AC	alternate current
	PD	Special motorflange (provide drawing)
VOLTAGE	DC	V12 / V24
	AC	STANDARD VOLTEGE TABLE
	MT	MULTIVOLTAGE
TYPE (only for AC)	T	3-phase
	M	1-phase
	AT	3-phase with brake
	AM	1-phase with brake
SIZE	AC	IEC 50/56/63/71/80/90/100/112/132
POLE (ONLY FOR AC MOTOR)	2	
	4	
	6	

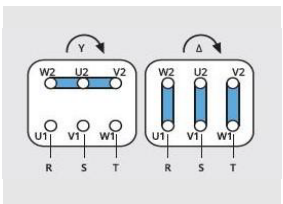
STANDARD VOLTEGE TABLE		
[V] [Hz] Rated voltages		[V] [Hz] Usable voltages
230/400/50	277/480/60	240/415/50 - 220/380/50 - 265/460/60 - 255/440/60
190/330/50	220/380/60	200/346/60 - 208/360/60 - 230/400/60
208/360/50	254/440/60	200/346/50 - 240/415/60
400/690/50	480/830/60	380/660/50 - 415/717/50

AC MOTOR OPTIONS

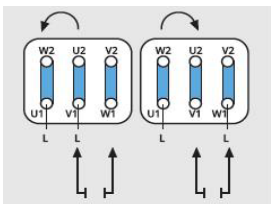
MOTORFLANGE	IEC56 B14 / IEC63 B14 / IEC71 B14 / IEC80 B14 / IEC90 B14 / IEC100 B14 / IEC112 B14	
SERVICE RATE	S3 30% (standard for triphse-singlephase)	
INSULATION CLASS	F standard specify when different from F	
PROTECTION DEGREE	IP54	motore standard autofrenante
	IP55	
	IP65	a richiesta
	TP	tropicalization
	AOTHER	indicate
	WITHOUT	leave blank

MOTOR CONNECTION

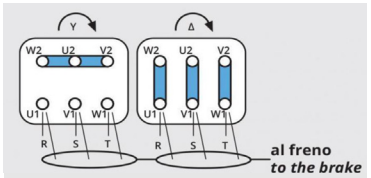
Triphase motor



Singlephase motor (DC)



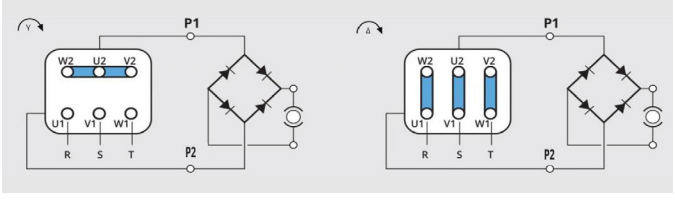
Triphase brakemotor (AC)
- With power supply

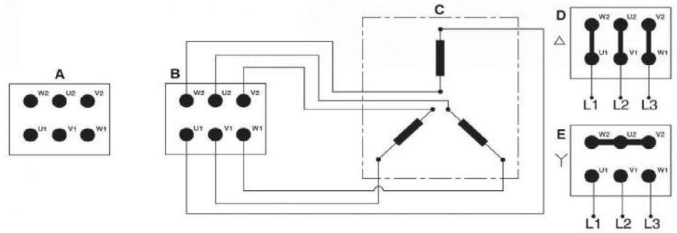


Triphase brakemotor (AC)
- Separate power supply

A. motor terminal board
B. auxiliary terminal board
C. brake
D delta connection
E star connection

Triphase brakemotor (DC)





BRAKE FECC DC brake

Electromagnetic spring applied brakes for DC motors, available for single-phase and three-phase motors. Supply voltage: 230 V (single-phased) ± 10% 50/60 Hz. The brake is powered directly from the motor's power supply (standard). FECC brakes have a slower reaction time when compared to CA brakes, but are quieter.

Motors with separated brake power supplies and different tensions (24-205 Vdc) can be available, on request. In this case, the brake needs a separate power supply from the motor and its code becomes FECC-AS-24 Vdc

FECA AC brake

Electromagnetic brake for AC motors, available only for three-phase motors IEC63 model or above. Supply voltage: 230V (tree-phase) ± 10% 50/60 Hz. The brake is powered directly by the motor's power supply. FECA brakes have a quicker reaction time when compared to DC brakes, but noisier. It is suggested when multiple uses in a short period, and/or a high braking torque are required.

Motors with separated brake power supply and tensions in the range 24-690 Vac - 50/60 Hz can be available on request. In this case, the brake needs a separate power supply from the motor and its code becomes FECA-AS-230 Vac 50 HZ

Separate brake power supply: Achieved using an auxiliary terminal board, with fixed brake coil terminals, located inside the motor terminal box

Nb: For all motors equipped with inverters, the brake must always have a separate power supply.

OPTIONS	LS	hand release lever	AB	2'shaft
	OTHER	advise	NONE	leave blank

ELECTRIC / ELECTRONIC STROKE CONTROL DEVICES

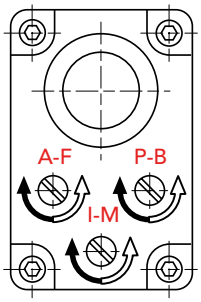
Actuators can host different stroke control systems: simple micro-switches (mechanical or magnetic) able to provide a signal to handle motor supply (ON-OFF operation), or electronic devices for servo-mechanisms.

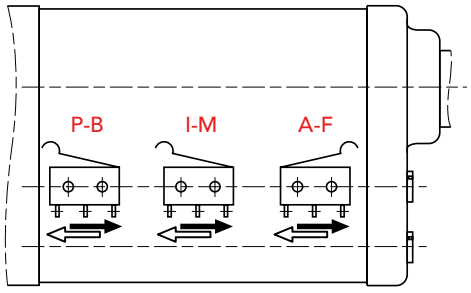
⚠ All wiring operations of actuator (motor and stroke control devices) must be done with power switched off. If not, both operator and actuator are at risk.

LIMIT SWITCHES INTEGRATED IN TO COVERTUBE (ONLY FOR ALI1 AND ALI1-P MODEL)

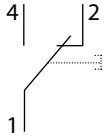
This model is equipped with two limit switches (featuring one contact each). A version with a third limit switch, central positioning, is available. Intermediate position changes according to push-rod moving direction.Tuning is adjusted by turning screws on actuator header. Each clock wise turn of the screw allows the micro switch to go 0.7 mm. forth, towards the header itself.
Look at the drawing to see how it works; letters have following meaning:

A-F front
I-M intermediate
P-B back





Limit Switches Features:
- Housing: Glass fibre reinforce PA66
- Mechanism: Snap-action coil spring mechanism with stainless steel spring. Change over, normally-closed / normally-open
- Mechanical life: $5x10^6$ cycle minimum (impact free actuation)



INTEGRATED MECHANICAL LIMIT SWITCHES

Changeover single-contact, cam-actuated micro-switches integrated onto actuator gearbox, getting movement by a small gearing connected to lead screw. System is thus protected and compact but its limit lies in long strokes: since the stroke is directly related to cams angle of rotation, with long strokes this device is not able to perform. Furthermore its stopping precision and repeatability are negatively affected by actuator non-self locking condition. A potentiometer is also available for some of the gearbox ratios (hence speeds) and limited lengths of the stroke to be controlled.

⚠ In case integrated mechanical limit switches are delivered already adjusted, manual rotation of push-rod will cause adjustment loss!

⚠ RUNNING AGAINST MECHANICAL STOP CAUSES SERIOUS DAMAGES TO ACTUATOR'S MECHANICAL STROKE LIMIT DEVICE!

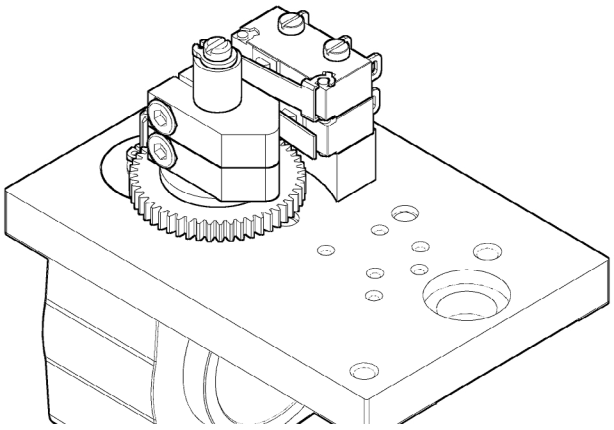
ORDERING KEY REFERENCES:

- 2FC1 2 micro
- 3FC1 3 micro

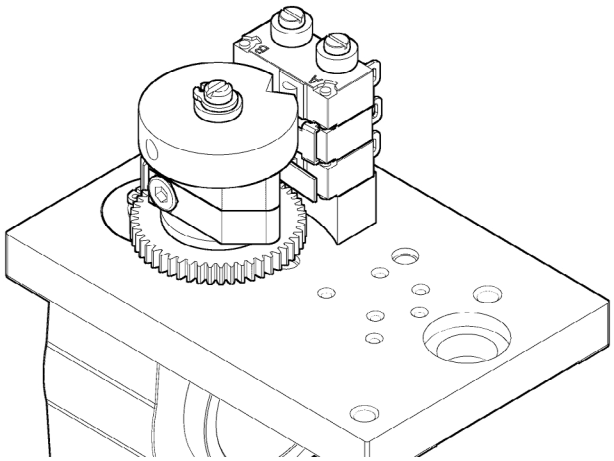
Limit Switches Features:

- Housing: heat-sealed phenolic / melamine resin
- Mechanism: Snap-action coil spring mechanism with bronze/ beryllium spring. Change over, normally-closed / normally-open
- Mechanical life: $3x10^5$ cycle minimum (impact actuation)

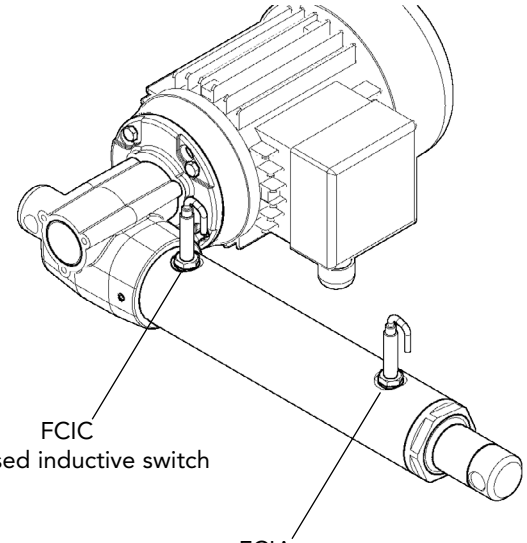
2FC1

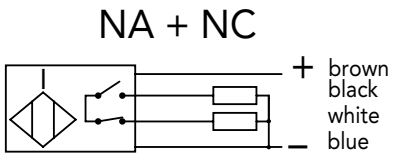


3FC1



INDUCTIVE SENSORS FCI



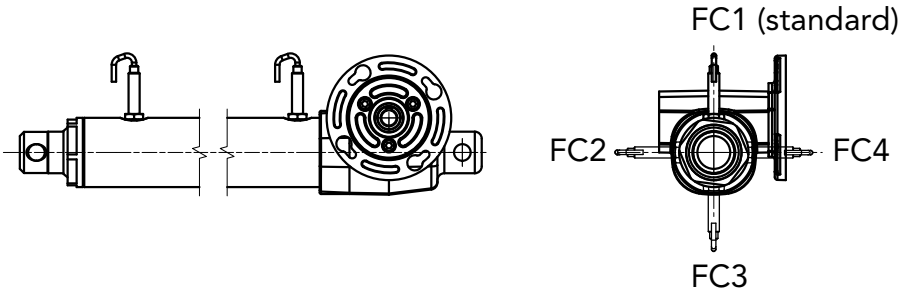


FCI INDUCTIVE LIMIT SWITCHES	
DC voltage	5 ÷ 40 Vcc
Temperature range	25° ÷ 75°
Protection level	IP67
Switch status indicator	YELLOW LED

ORDERING KEY REFERENCES

- 2FCI 2 sensors NO + NC

FCI POSITION

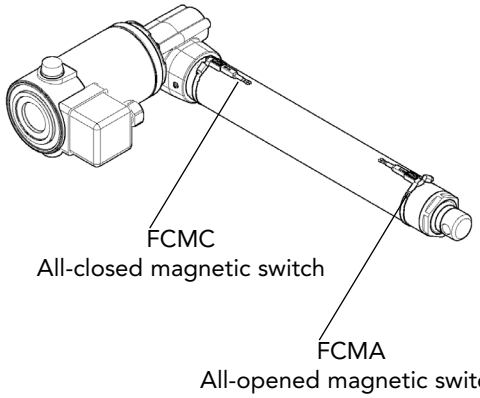


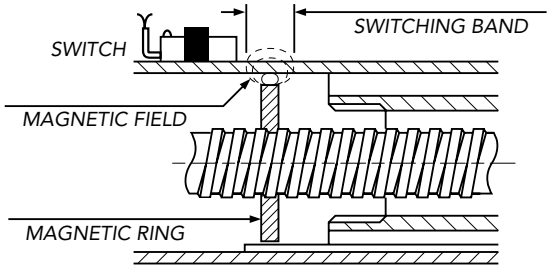
MAGNETIC LIMIT SWITCHES FCM

Magnetic sensors are activated by a magnetic field generated by a magnetic ring fixed to the nut.
These reads are mounted on outer tube with brackets; outer tube shall therefore be built with non-magnetic materials.

The magnetic switches are fixed as shown in the figure, the customer can rotate at will by adjusting the bracket.

Due to the size of the magnetic switches and to the so called switching band generated by the internal magnet the maximum working stroke is reduced by a few millimetres. This switching band width differs according to actuators size.





FCM MAGNETIC LIMITSWITCH			
Performance	Reed NC (standard)	Reed NO	PNP
DC voltage	5 / 130 V	5 / 130 V	5 / 30 V
AC voltage	5 / 130 V	5 / 130 V	5 / 30 V
25°C Current	200 mA	200 mA	500 mA
Power	6 W	10 W	6 W
Supply cable	PVC 2 x 0,14 mmq	PVC 2 x 0,14 mmq	PVC 3 x 0,14 mmq
Cable lenght		2000 mm	
Protection		IP67	

CIRCUIT REED NC

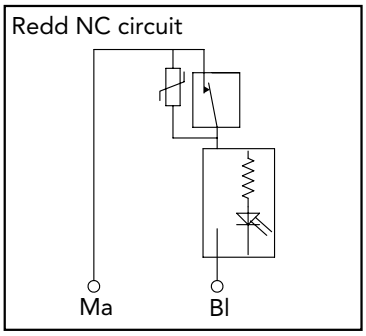
Circuit with normally closed Reed switch protected by a varistor against overvoltages caused when switching off, with LED indicator (image in the following page)

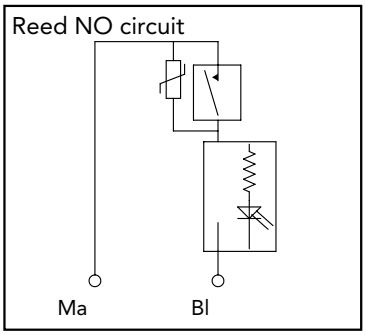
CIRCUIT PNP

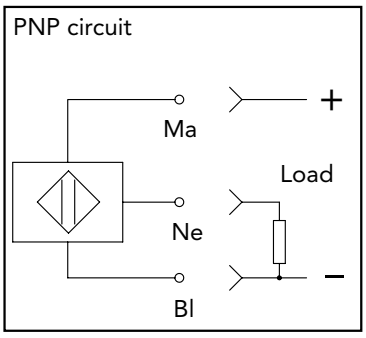
Circuit with Hall-effect switch and PNP outlet. Protected against overvoltage spikes and reverse of polarity. With LED indicator (image in the following page)

CIRCUIT REED NO

Circuit with normally open Reed switch protected by a varistor against overvoltages caused when switching off, with LED indicator.







ORDERING KEY REFERENCES

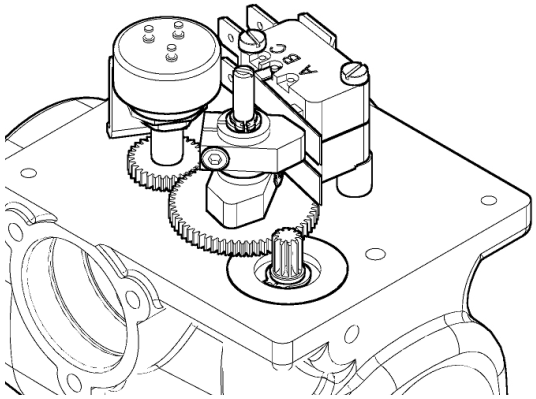
- 2FCM0 2 Sensors circuit Reed NC (standard version without prior information)
- 2FCM1 2 Sensors circuit Reed NO
- 2FCM2 2 Sensors PNP

INTEGRATED LIMIT SWITCHES AND POTENTIOMETER - STROKE CONTROL DEVICES ASSEMBLY

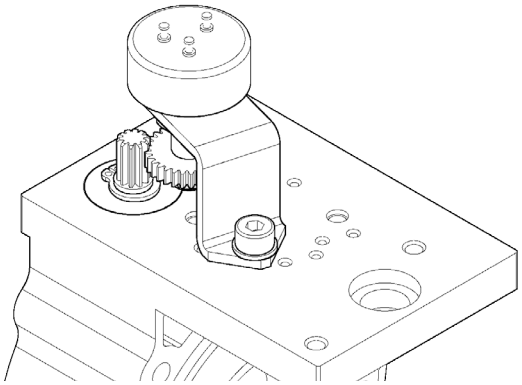
POTENTIOMETER

Absolute feedback for actuator position monitoring: it can be installed alone or together with limit switches, so to achieve end positions control also. Potentiometer movement comes from the same gearing of the integrated limit switches therefore is has the same limit: long strokes cannot be controlled. Please refer to each actuator performance table to know max achievable length. Furthermore potentiometer electric angle cannot always be achieved. NB: not available for ALI1, ALI1-P and L series.

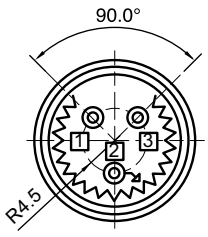
VERSION WITH LIMITSWITCHES AND POTENIOMETER

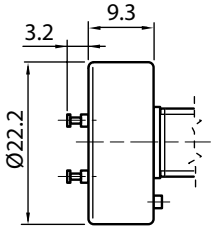


VERSION WITH POTENIOMETER

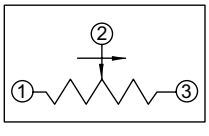


POTENTIOMETER	
Performances	Type (A)
Max. angle	340° ± 3°
Resistence	1K / 5K / 10K (standard)
Indipendent linearity	± 2%
Tolerance	± 20%
Coefficient of temperature resistance	± 600 ppm / °C





SYMBOL



ORDERING KEY REFERENCES

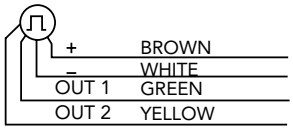
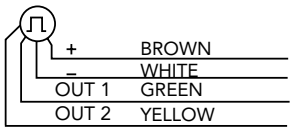
- POT01A 1 kOhm
- POT05A 5 kOhm
- POT10A 10 KOhm (standard)

N.B. to be adjusted by end-user

INCREMENTAL ENCODER

An incremental rotative transducer converts spinning movement into digital pulses. It can be installed on actuator, by using a longer worm-screw extension (rotating at the same speed of the motor) and coming out from the gearbox on opposite side of motor, or directly on AC or DC motors. Its digital output allows for a relative (not absolute) feedback on actuator position, hence, every time machinery is resetted, encoder shall be given the zero position.

ENCODER ON DC MOTOR

MODEL	ENCODER FEATURES	WIRING DIAGRAM	TYPE
ALI1 ALI1-P	• Power supply 5 V - 24Vcc (+10%) • PUSH-PULL • 2 channel - 4 ppr square wave • Max output current 20 mA + 15% for each channel		See wiring diagram ALI1
ALI2 ALI2-P ALI3	• Power supply 5 V - 20 Vcc • NPN Open Collector • 2 channel - 1 ppr square wave • Max output current 100 mA		E01
L02 L03	• Power supply 5 V - 24 Vcc (+10%) • PUSH-PULL • 2 channel - 4 ppr square wave • Max output current 20 mA + 15% for each channel		E00

ENCODER MOUNTED ON AC MOTORS

- Bidirectional incremental encoder, with (standard) or without zero-pulse, protection IP54.
- Available ppr: 50 / 100 / 200 / 400 / 500 / 512 / 1000 / 1024 (standard)
- Available output circuits: Line Drive 5 Vdc (standard)/ Push Pull 24 Vdc / Open Collector NPN 10 -30 Vdc / OpenCollector PNP 10 -30 Vdc.

ORDERING KEY REFERENCES

ENCODER ON DC MOTOR

E01 NPN 2 channel ppr

ENCODER ON AC MOTOR

E05 Push Pull 1024 ppr
E06 Line Drive 1024 ppr (standard)
E07 Open Collector NPN
E08 Open Collector PNP

ENCODER ON ACTUATOR HOUSING

E00 Push Pull 2 channel 4 ppr
E09 Push Pull 1024 ppr
E10 Line Drive 1024 ppr
E11 Open Collector NPN
E12 Open Collector PNP
E13 Encoder not considered above (according to customer request)

L02 & L03

E00 Push Pull 2 channel 4 ppr

	E00	E01	E05	E06	E07	E08	E09	E10	E11	E12	E50
ALI2-CC		O									
ALI2-CA			O	O	O	O					
ALI2-P		O									
ALI3-CC		O									
ALI3-CA			O	O	O	O					
ALI4	O		O	O	O	O	O	O	O	O	
ALI4-P	O		O	O	O	O	O	O	O	O	
HP5		O									
ALI5	O		O	O	O	O	O	O	O	O	
ALI5-P			O	O	O	O					
AV3			O	O	O	O					
L02	O										
L03	O										
EC			O	O	O	O					
HRS	O		O	O	O	O	O	O	O	O	

O : a richiesta

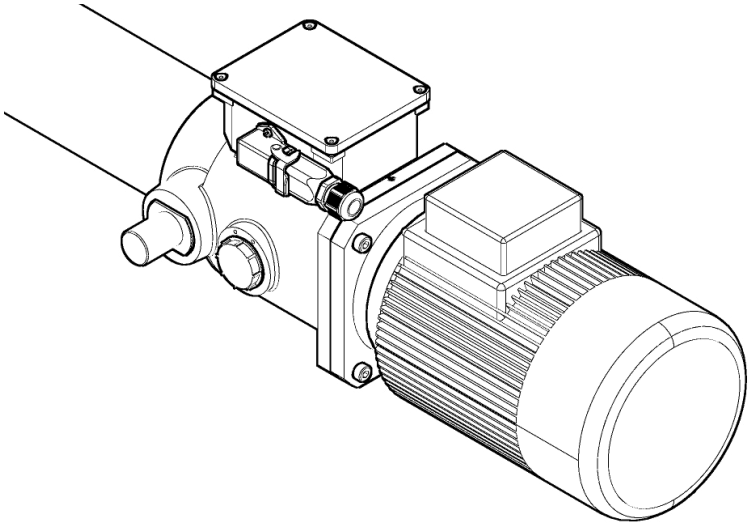
OPTION A - STAINLESS STEEL

The stainless steel version includes front rear and push rod in stainless steel (X5CrNi18-10).
For AV3 and EC models the push rod is in double chromed.

OPTION AA - STEEL INDUSTRY VERSION

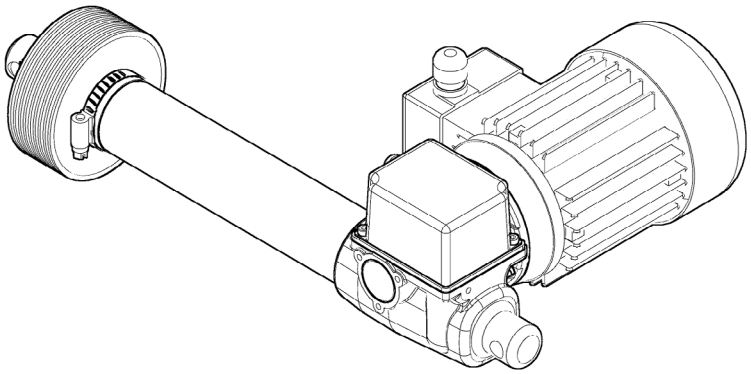
The steel industry version includes:

- Larger limit switches box
- Brass gears and cams
- Metal connectors
- Silicon seals
- Mechanical limiter with warning sensor
- Handwheel for manual driving (standard pos.N; optional P and H)
- Front end with shock absorber



OPTION B - BELLOWS BOOT

Bellows boot protects push rods: pharmaceutical and food industries or aggressive environments are typical examples of applications where this option can be required.



OPTION E - SILICON SEALS

Silicon seals are available as a replacement to those of NBR, except models ALI1 and ALI1-P.
For actuators with Option AA (Steel industry version) Silicon seals are included.

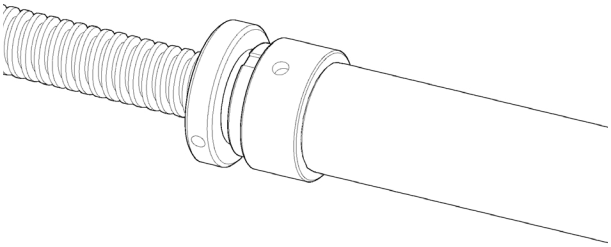
- T NBR -30°C +110°C
- T Silicon -50°C +200°C

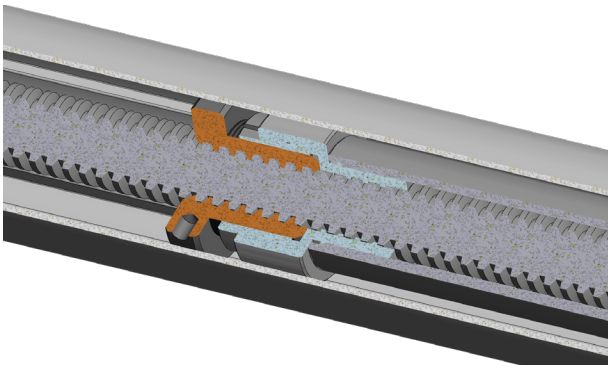
OPTION FX - PROTECTIVE PAINTING

Anti-corrosion coating used on all metals and many other materials also against aggressive agents such extreme sea water, industrial fumes, acid rain, etc. .. It also has excellent resistance to impact and abrasion.

OPTION G - SAFETY NUT

The safety nut has been designed to start working only in case of main nut maximum wear. This safety nut is connected to the main bronze nut and travels with it along the stroke. When the bronze nut is completely worn out, the steel nut starts working on acme screw until it comes to a complete grip to acme screw. This kind of nut can work in both directionsand that is integral with the load in both compression or traction (pushing / pulling)



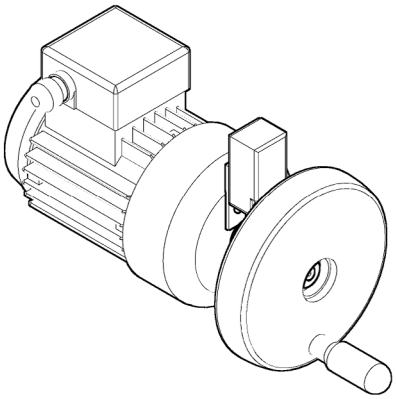


OPTION H, N, P - HANDWHEEL AND SAFETY-SWITCH UNIT

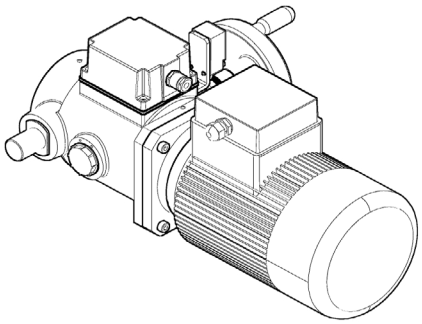
Option allowing actuator driving back in case power supply fails or some other inconvenience occurs. Second shafts on the back of the motors or extended worm-screws coming out from gearbox (see Encoder paragraph) can be manually turned with hand wheels, so to let actuator move without power supply for load disengagement. Gearing ratio and screw pitch determine number of revolutions to be done to run whole actuator's stroke: be aware that this number can be quite high.

- **OPTION H** For all model in A.C. Only for EC model with safety limit switch MS
- **OPZIONI N e P** Only for model EC With safety limit switch MS

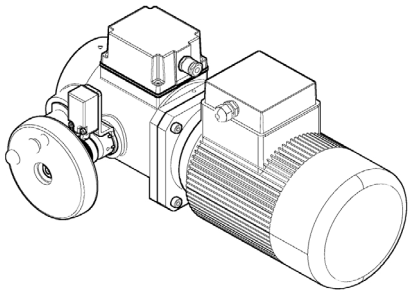
H



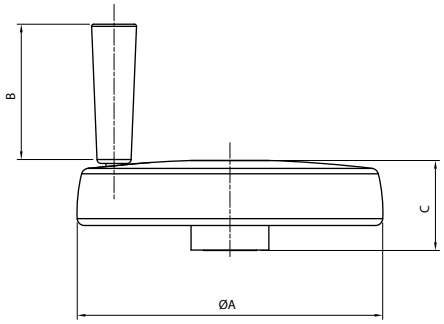
N



P



WARNING - Before connecting motor to power supply, you must connect power to safety microswitch positioned on hand wheel : so you can disconnect motor from power supply pressing safety switch and be able to work in safe conditions

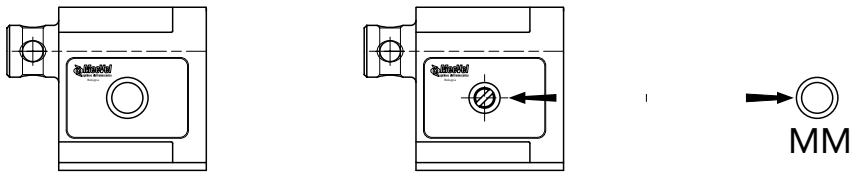


Dimensions			
Model	A	B	C
ALI2-ALI3-ALI4-ALI5-EC1-EC2-EC3-EC4	Ø 150	65	44
AV3-EC5	Ø 250	90	66

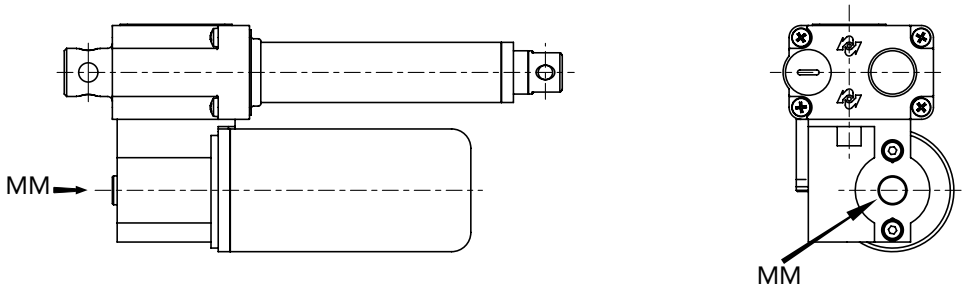
OPTION MM - MANUAL DRIVING ON ALI1 AND ALI1-P

A manual driving system is available, for emergency situations, in the ALI1 / ALI1-F and ALI1-P / ALI1-P-F models.
By removing the cap support, movement can be controlled using a screwdriver. In this way the shaft of the actuator can move forward and backwards

ALI1
ALI1-F

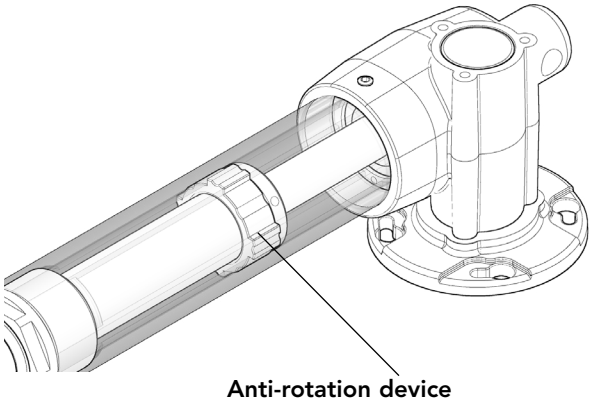


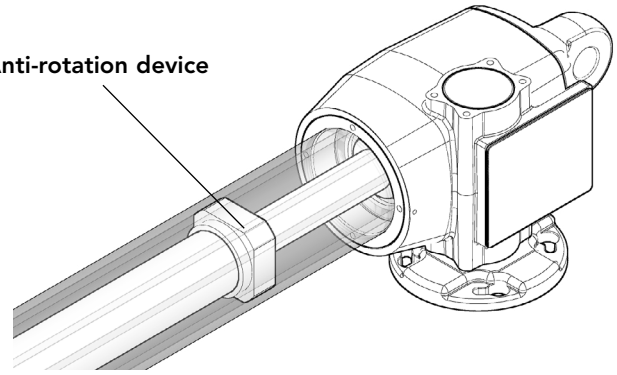
ALI1-P
ALI1-P-F



OPTION L - ANTI-ROTATION DEVICE

The Anti-rotation device avoids push rod spinning around its own axis when travelling: it is essential in case of not guided load.
When the anti-rotation device is selected, the front-end is oriented to the rear-end in the assembly phase.
The anti-rotation device is made in different ways depending on actuators model.





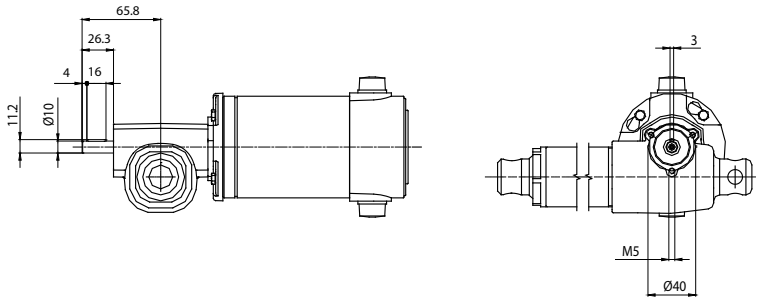
OPTION S - TORQUE LIIMTER

It is assembled between motor and gearbox to prevent occasional overload.
Available for DC and AC motors with IEC flange.
As to dimensions contact Technical Department.

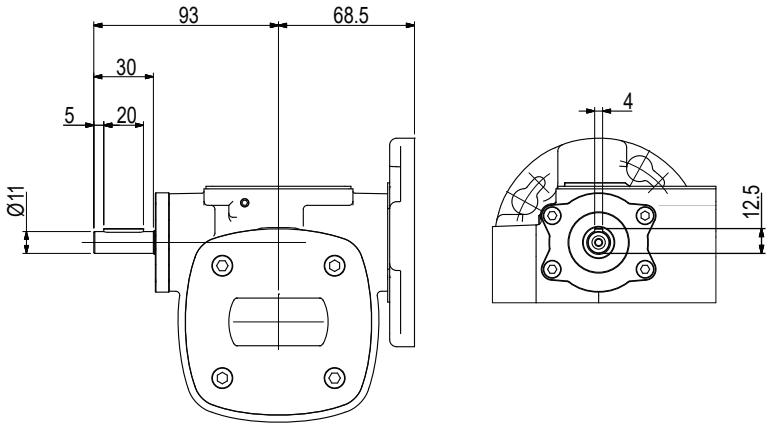
⚠ Torque limiter reacts at 150-160% of nominal load.
Torque limiter cannot be used as stroke control device with actuator getting to mechanical end-stops. In this way you will lose the torque limiter setting and get it unuseful.

OPTION T - SHAFT ON MOTOR OPPOSITE SIDE (AVAILABLE ONLY ON ALI4 AND ALI5)

Shaft on motor opposite side on ALI4 e ALI4-F



Shaft on motor opposite side on ALI5

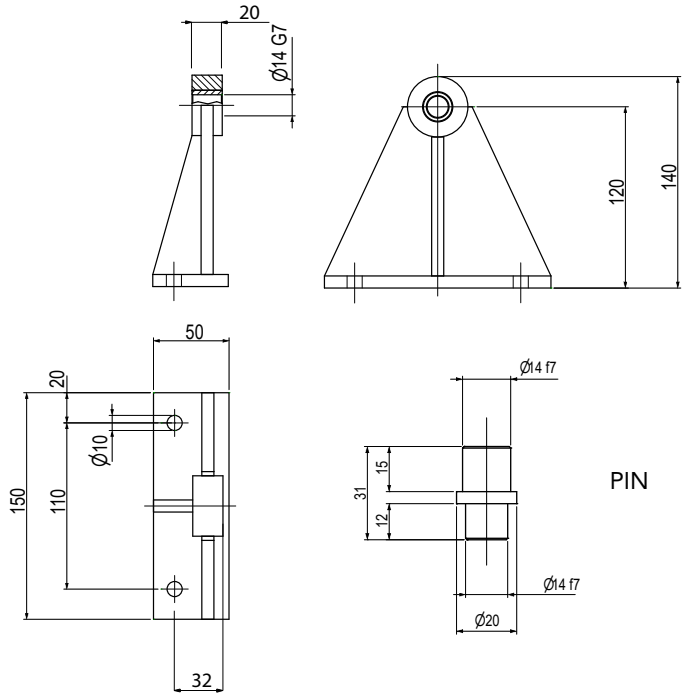
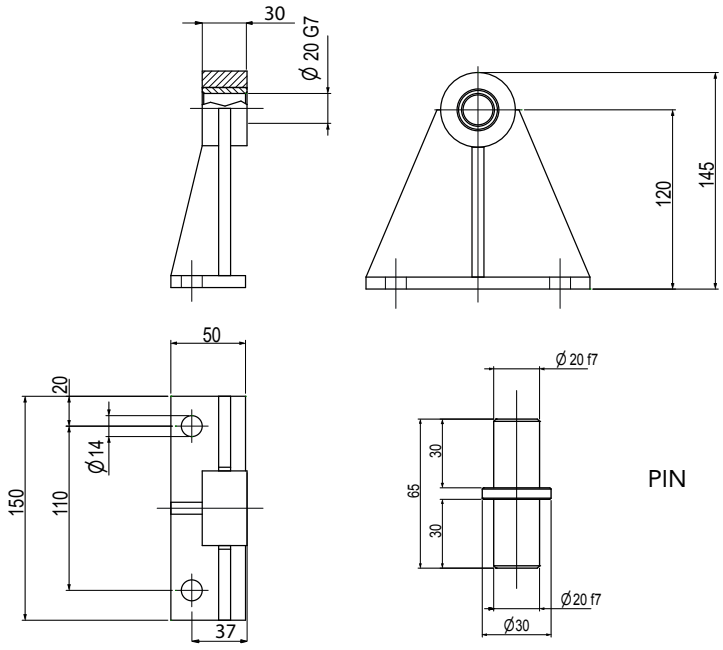


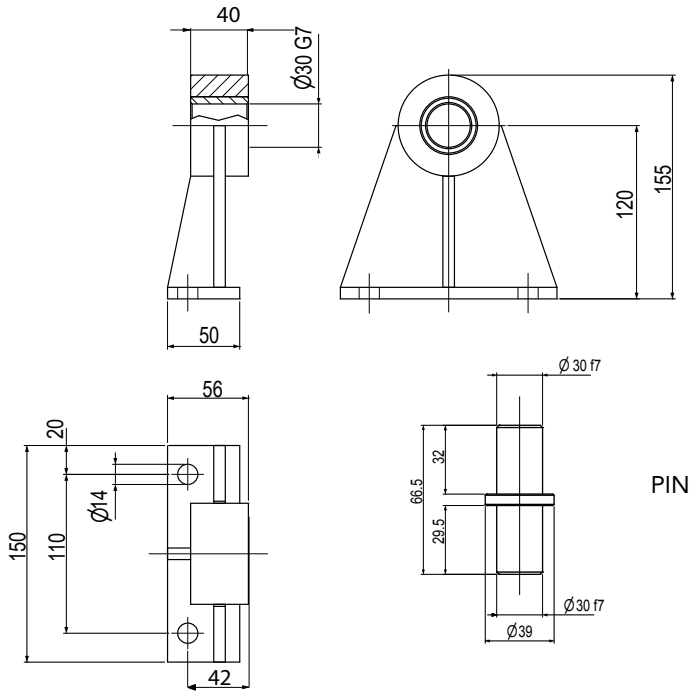
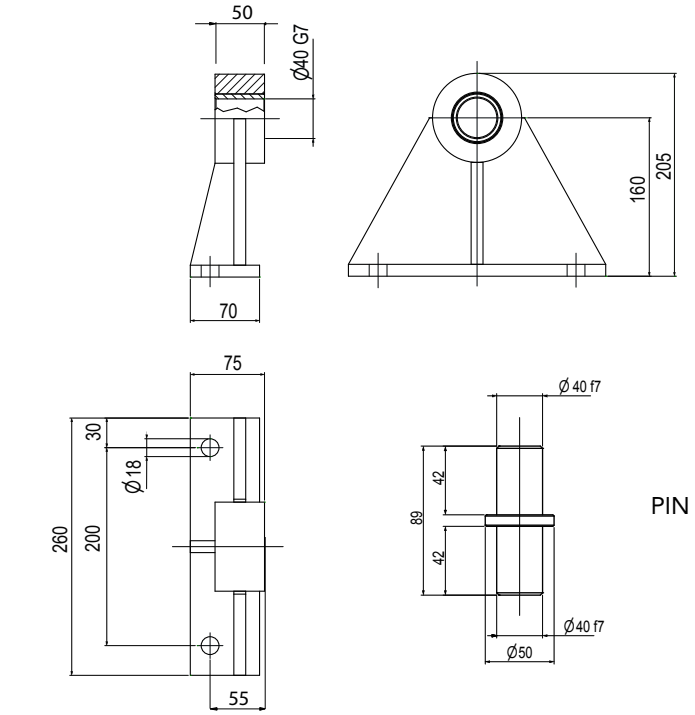
OPTION Z - LOW NOISE VERSION

It is a version with special solutions for noise reduction.

SWIVELLING SHAFTS HOLDER

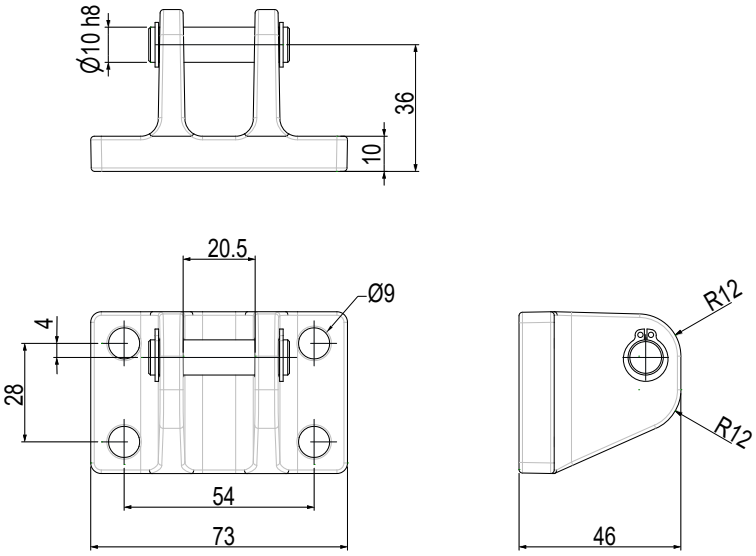
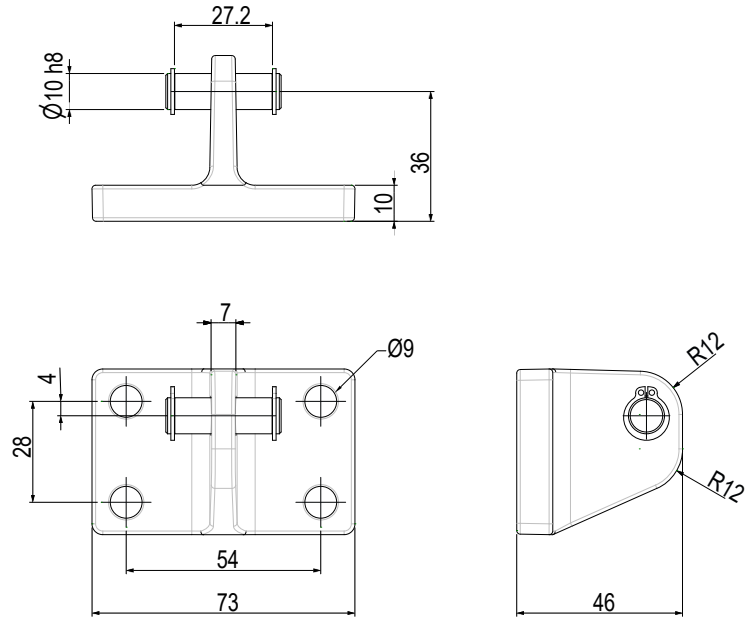
To mount actuators series EC, four sizes of shaft holders.
The SP element is formed by two components.

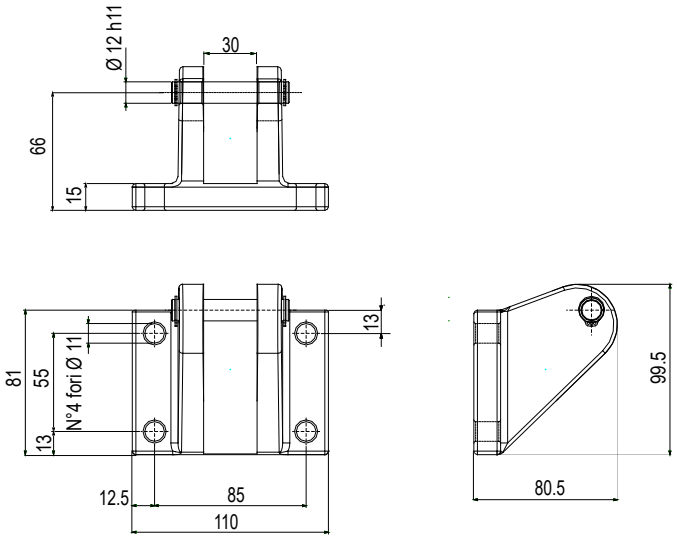
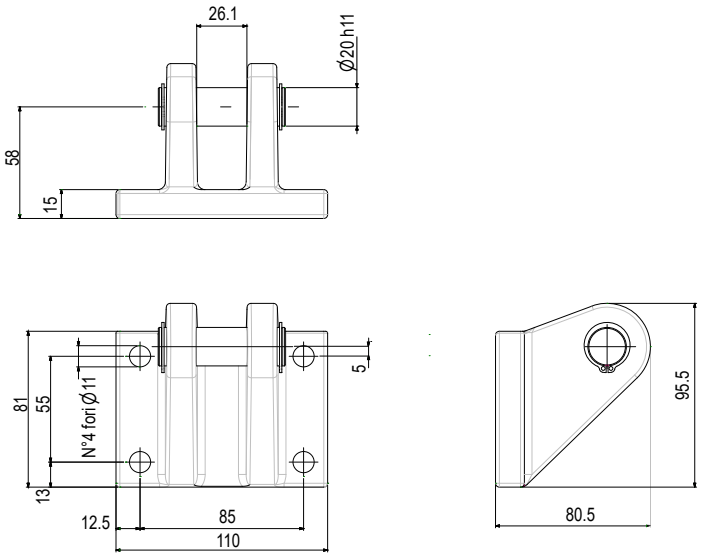
Code	Description	Dimension
SP0014	Kit of 2 shaft holders for EC1	
SP0020	Kit of 2 shaft holders for EC2	

Code	Description	Dimension
SP0030	Kit of 2 shaft holders for EC3	
SP0040	Kit of 2 shaft holders for EC4 / EC5	

BRACKET FOR FRONT AND REAR ENDS

To mount actuators having rear connection P1 / P2 and front head A1 and A4 the brackets are available for the ALI2, ALI3, ALI4 and ALI5 series.

Code	Description	Dimension
SAA0002	Asymmetric bracket for front and rear ends ALI2	
SAA0003	Asymmetric bracket for front and rear ends ALI3	

Code	Description	Dimension
SAA0004	Asymmetric bracket for front and rear ends ALI4	
SAA0005	Asymmetric bracket for front and rear ends ALI5	

SALE CONDITIONS

ART. 1 APPLICABLE LAW AND CONCLUSION OF THE CONTRACT

1.1 Any matter regarding the relationship between MECVEL and the Buyer that is not explicitly or implicitly resolved by the dispositions of the present General Sales Conditions or by possible special conditions agreed upon by the parties and settled in the sale contract (that in case of contrast will be considered prevailing) will be governed by the Italian law.
1.2 Any modification to the present General Sales Conditions must be made in writing.
1.3 The sale contract (hereinafter called "contract") has to be considered as concluded when, on reception of an order, the Producer has sent an acceptance in writing within the term eventually fixed by the Buyer.

ART. 2 CHARACTERISTICS OF THE PRODUCTS AND DESCRIPTIVE DOCUMENTS

2.1 Any information relating to working characteristics of the products, weights, dimensions, abilities, prices, outputs, and other data contained in catalogues, prospects, circulars, advertising, illustrations or price-lists of the Producer, have character of approximate indications. These information shall be binding only to the extent they are expressly referred to in the contract.
2.2 Any design or technical document enabling the manufacture of the supplied products or their parts, that the Producer has delivered to the Buyer before or after the stipulation of the contract, remains the Producer's property, and the Buyer cannot use, copy, reproduce, transmit or communicate it to third parties without the consent of the Producer.
2.3 The title of any intellectual or industrial right related to the products is and remains of the Producer.

ART. 3 PRICE

3.1 Unless otherwise agreed the price does not include value added tax, packing, custom costs, transport and accessory expenses, and it is subject to change according to the Producer.

ART. 4 TESTING

4.1 Whether technical specifications for the tests are not specified in the contract, the tests will be carried out according to the procedures generally followed by the Producer.
4.2 If the Buyer claims for it at the moment of the order, the Producer has to communicate to him when the tests will take place, in order to allow his representatives to be present.
4.3 Unless otherwise agreed the Producer will be charged of all the expenses of the tests carried out in his establishments, in exception of those for the personnel of the Buyer.

ART. 5 PAYMENT CONDITIONS AND RETENTION OF TITLE

5.1 Payments must be made with the means and to the expiration or expirations arranged by the parties. The obligation of payment is considered fulfilled when the due amount is received from the bank of the Producer in available funds.
5.2 If the delivery occurs before the complete payment, the Products delivered remain the Producer's property until complete payment is received by the Producer.

ART. 6 INTERESTS ON DELAYED PAYMENT

6.1 In case of delay in any payment by the Buyer, the Producer can actually suspend the fulfilment of his own obligations until complete payment is effected.
6.2 In addition to what is expressed in the preceding point, the Producer will have the right to interests on delayed payment on the amount that is not paid to the agreed date, beginning from the moment in which the payment is due up to the moment in which the payment is made, previous written notice to the Buyer. The parties arrange to fix the rate of the interests on delayed payment to the…..%.
6.3 Whether the delay of the Buyer in making any payment depends on a circumstance listed under article 10, the Producer is not entitled to any interest on delayed payment.
6.4 Whether the delay of the Buyer exceeds 60 days from the agreed date, the Producer has the right to withdraw from the contract, and consequently to get from the Buyer the restitution of the products and the compensation for damages, previous written notice to the Buyer and without having to require a favourable sentence of any Court.

ART. 7 TIME OF DELIVERY

7.1 Except as otherwise agreed, the supply of goods will be Ex Works the Producer's establishment. The transfer of risks is determined in conformity to the Incoterms of the International Chamber of Commerce, in force at the moment of the contract conclusion.
7.2 Shall the delivery be delayed for any of the circumstances listed under article 10, or for any action or omission of the Buyer, a reasonable extension of the term of such delivery will be granted, considering all the circumstances of the delay.
7.3 Whether the Buyer does not withdraw the products to the agreed time, however he shall be engaged to make all the payments relating to the delivery as if the material had been delivered. The Producer shall care for the storage of the material at the Buyer's expenses and risks. On application of the Buyer the Producer has to assure the material at expenses of the Buyer.
7.4 Except if the Buyer does not withdraw the material because of one of the circumstances specified under article 10, the Producer can require the Buyer to withdraw the material within a reasonable term. Shall the Buyer, for any reason, not comply in the aforesaid term, the Producer shall have the right to withdraw from the contract, in regard to the part of the supply undelivered because of the above-mentioned breach of the Buyer, and consequently to get from the Buyer the compensation for those damages suffered because of his breach, previous written notice to the Buyer and without having to require the favourable sentence of any Court.

7.5 Possible penalties for delivery delays due to the Producer must be specified in writing at the conclusion of the sale contract, and they shall exclude any other remedy for his delayed delivery or non-delivery.

ART. 8 WARRANTY

8.1 Within the limits of the following dispositions, the Producer undertakes to remedy any imperfection that is consequence of any project, materials, or processing defect. Such obligation is limited to defects occurring during the period (hereinafter called "warranty period") of 12 months from the date of delivery to the buyer.
8.2 In order to claim the rights settled in the present article, the Buyer has to notify the Producer of all the manifested defects in writing, and he has to give him any possibility to ascertain and remedy them.
8.3 Upon reception of such notification during the warranty period, the Producer has to remedy the above mentioned defects at his own expenses. Except when the nature of the defects makes it convenient to carry out the reparation on the place, the Buyer shall forward the defective parts to the Producer, so that the latter can repair or replace them. The obligations of the Producer are considered duly carried out with the delivery to the Buyer of the repaired or replaced parts.
8.4 Except as otherwise agreed, the Buyer undertakes to bear all the costs and risks of transport of the defective parts, and the Producer those of the repaired or replaced ones, between the place where the material is located and the seat of the Producer and vice versa.
8.5 The defective products which the Producer has replaced according to the present article will be returned to the Producer within and not later than 15 days, from the date of reception of the goods sent for replacement, by the Buyer or by one of his customers on his behalf.
8.6 The liability of the Producer is limited to those defects manifesting under conditions of employment as provided in the contract and during a correct use. The guarantee does not cover defects due to causes arising after the transfer of the risks as described under clause 7.1, neither it concerns the normal deterioration.
8.7 Specially, the Buyer loses the right to the guarantee in the following cases: failure to comply with the instructions of use, installation and maintenance of the contractual products and the original spare parts, any modifications made to the products and their original spare parts without prior written consent of the Producer; any repairs made to the contractual products by persons not belonging to the Producer's network and using non-original spare parts.

ART. 9 CIVIL LIABILITY OF THE PRODUCER

9.1 Shall the Buyer or his customers modify the products or use them for purposes other than those indicated in the catalogue without having obtained prior written consent to do so from the Producer, the Producer shall not be held liable for any loss or damage caused to people or property.
9.2 Pursuant to and for the purposes of Presidential Decree no. 224/88 the Producer shall be liable for any damages caused to third parties deriving from the use of the contractual products only in the event that the injured party is able to provide unassailable proof of the existence of the damage claimed, and of the causal link between any defects and the damage.
9.3 The Producer shall not be liable in the following cases: if the defect that has caused the damage did not exist at the moment the Producer delivered the contractual products to the Buyer; if the injured party, while aware of the defect and the danger to which it might give rise, deliberately exposed itself to it; if the damage is caused by a failure to comply with the instructions set out in the manual of use and maintenance of the contractual products, or when it is caused by the use of non-original spare parts mounted on the contractual products.
9.4 The Buyer shall promptly notify the Producer of any accident or potential safety issue relating to use of the contractual products.

ART. 10 FORCE MAJEURE

10.1 Neither party shall be held in any way liable for any non-fulfilment of one of its obligations if, after the conclusion of the contract, there arise unexpectedly causes that prevent the fulfilment (such as strikes, fires, mobilisations, requisitions, embargo, monetary restrictions, riots, deficiency of means of transport, general lacks of raw materials and restrictions to the use of energy), to the extent in which it provides the proof (a) that such non-fulfilment was caused by unforeseeable events beyond its control, and (b) that at the moment of conclusion of the contract it could not reasonably foresee such event and its effects on its attitude to perform its contractual obligations, and (c) that it could not reasonably avoid or overcome such event or overcome its effects.
10.2 The party claiming for liability exemption shall notify the counterpart, as soon as possible and immediately after having discovered the impediment and its effects on its attitude to perform its obligations, of the existence of such impediment, as well as the effects of the same on its attitude to face its own obligations. Similar communication must be given as soon as the cause of liability exemption fails. Failure by the breaching party in giving such communication has the effect to make this party responsible for those damages that otherwise could have been avoided.
10.3 Whether the causes of liability exemption last for more than six months, each party shall have the right to terminate the contract. The parties will arrange the repartition of the expenses born up to that moment for the execution of the contract.

Art. 11 JURISDICTION

11.1 Any matter arising from the present General Sales Conditions and from the single sale contracts governed by them, shall be of exclusive competence of the Court of Bologna. However, as an exception to the above mentioned principle, the Producer is in any case entitled to bring his action before the competent court of the place where the Buyer has his registered seat.

MecVel®
Via Due Portoni 23,
40132 Bologna (IT)
tel: +390514143737
info@mecvel.com
www.mecvel.com