

AM SERVO-ACTUATION SERIES

**MATCH ANY SERVO, STEPPER OR BRUSHLESS MOTOR
TO EXPERIENCE A NEW LINEAR MOTION**

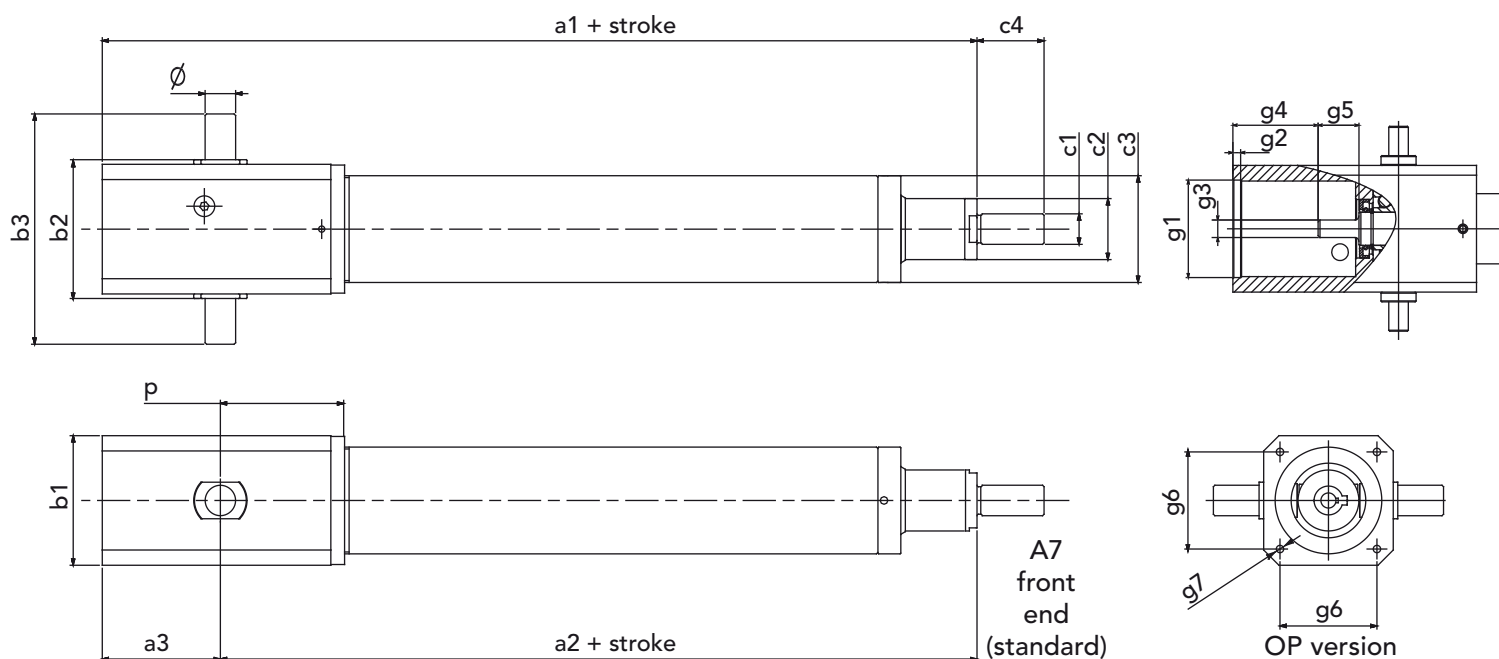
PERFORMANCES

Model	Ball screw (VRS)	Load with 150 mm/s and approx. 4000 hours	Max load
AM2	14x04	600 N	2500 N
AM4	16x05	1500 N	10000 N
AM5	25x10	3500 N	15000 N

These values must be intended as standard/typical references, further performance available depending on the motor mounted by the customer.

Contact MecVel to get the product data according to the kind of application to which it is intended and the related technical specifications.

DIMENSIONS



	a1	a2	a3	b1	b2	b3	c1	c2	c3	c4	g1	g2	g3	g4	g5	g6	g7	p	Ø
	mm	mm	mm	mm	mm	mm		mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
AM2	330	250	85	65	75	105	M10	Ø 25	Ø 36	35	Ø 50	4	9	44	21	50	M5x0,8	40	10
AM4	335	250	85	65	71	131	M12	Ø 30	Ø 50	34	Ø 50	4	11	38	27,5	50	M5x0,8	40	20
AM5	398	320	78	85	91	171	M20	Ø 40	Ø 70	44	Ø 70	3	12	55,5	30,5	64	M6x1	81,5	30

NOTES:

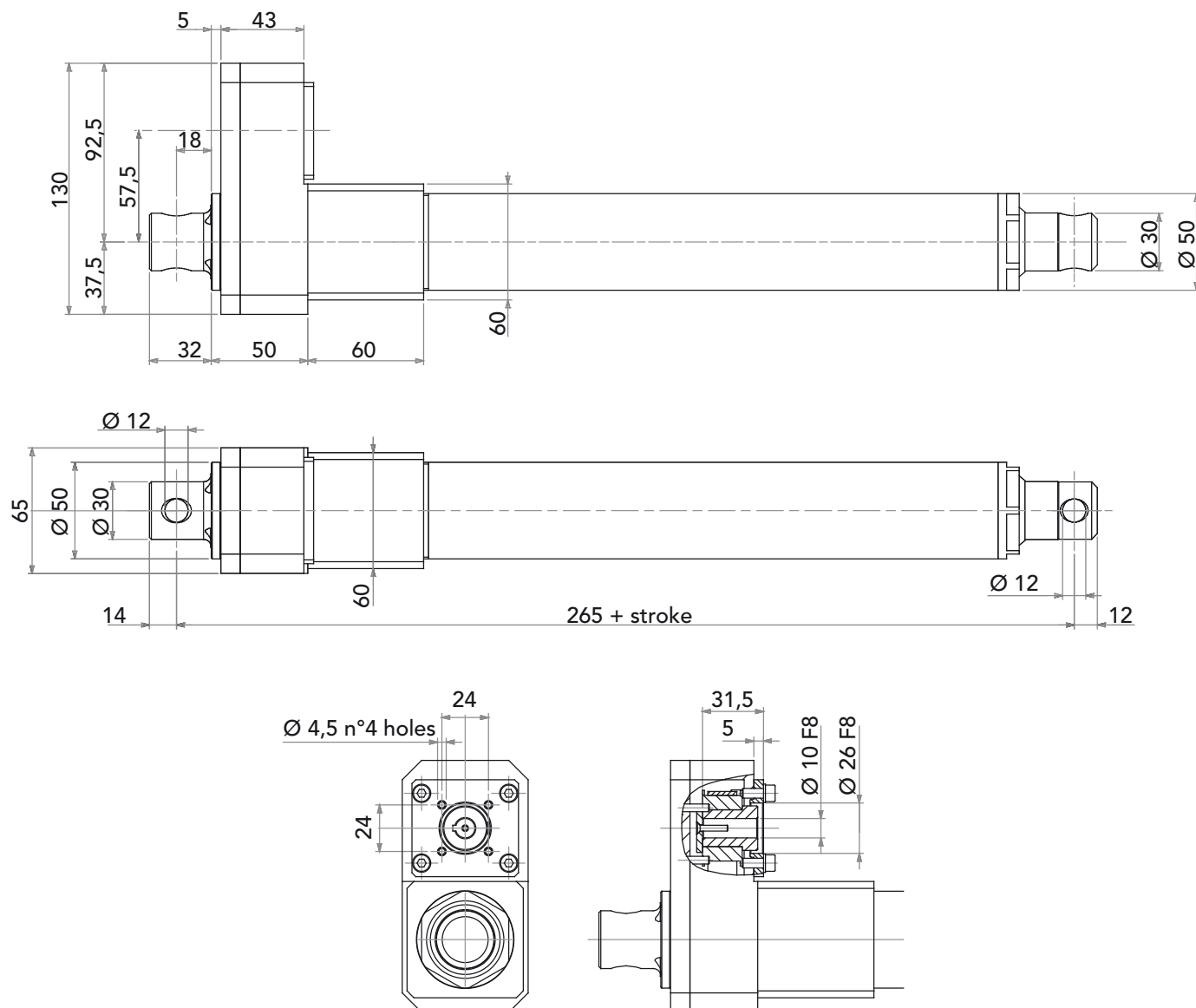
- In case of review/development of the product, values indicated may undergo modifications. Verify with MecVel the whole dimensions during the linear actuator choice/setup.
- Adaptation flanges are possible for the assembly of motors with different settings from those shown in the drawing. Contact MecVel for their design

PERFORMANCES

Model	Ball screw (VRS)	Load with 150 mm/s and approx. 4000 hours	Max load
AM4-P	16x05	1500 N	10000 N

Other versions with parallel motor available on request.

DIMENSIONS



NOTES:

- Adaptation flanges are possible for the assembly of motors with different settings from those shown in the drawing. Contact MecVel for their design

Model	Ball screw (VRS)	Load with 150 mm/s and approx. 4000 hours	Max load
AM4-X	16x05	1500 N	10000 N
AM5-X	32x10	9000 N	15000 N

B

9,5
14
 $\varnothing 10$
41,81
35
60,5
129 + stroke
50
26 closed
50,5
12
9,5
ch. 28
 $\varnothing 30$
 $\varnothing 45$

A

90°
27°
M6x1 6H 16 mm prof.
60
 $\varnothing 56$
M12x1,5 18 mm prof.
60
M6x1 6H 16 mm prof.
M6x1 6H 16 mm prof.
60
 $\varnothing 54$
60
3
11,2
20°

B

Ø 62
Ø 16
18,5 20
65
45,3 12
204 + stroke
Ø 70
47,7 closed
60
19
16
ch. 34
Ø 45
Ø 62

A

90°
22,5°
M10x1,5 20 mm prof.
Ø 78
90
M20x1,5 38 mm prof.
90

90°
22,5°
M10x1,5 20 mm prof.
Ø 78
90
5
18

B

ORDERING KEY

AM4-VRS / 0300 / 10 / PD / OP / A4 / B

MODEL: _____

AM2-VRS
AM4-VRS
AM5-VRS
AM4-P-VRS
AM4-X-VRS
AM5-X-VRS
Other versions with parallel motor available on request

STROKE (mm): _____
es. 300 mm = 0300

SCREW PITCH: _____

MOTOR FLANGE: _____
PD: special motor flange (provide drawing)

PLATE END: _____
CF: flange
OP: swivelling version

FRONT END: _____
A7: standard end
A3: yoke + clip end
A4: rod end

OPTIONS: _____
A: stainless steel version (push rod and front end)
B: bellows boot
FCM: magnetic limit switches
FX: anti-corrosion protective painting
FXC: cataphoresis
L: anti-rotation device

NOTES:

- AM4-VRS + B = +25 mm (value valid also for AM4-P-VRS)
- AM4-VRS + FCM = +25 mm (value valid also for AM4-P-VRS)
- AM4-VRS + L = +15 mm (value valid also for AM4-P-VRS)
- AM5-VRS + B = +25 mm
- AM5-VRS + FCM = +30 mm
- AM5-VRS + L = +30 mm

For options B, FCM and L in combination with AM-X series contact MecVel.

Never allow the linear actuator to reach the mechanical stop in order to avoid damages of internal components.

*MecVel reserves the right to modify without notice any information and/or feature related to its products.
Data contained in this document are indicative and not binding for the company.*

MecVel has developed a range of electric linear actuators oriented towards the servo-actuation, as designed to mount the latest generations of servo, stepper and brushless motors. This match ensures a constant, optimal and repeated control of the linear motion performed, creating systems perfectly interchangeable with pneumatic cylinders.

Since 1987 MecVel designs and manufactures electric linear actuators constantly updated according to market requests, personalized by a customization service developed with the aim to offer tailored solutions and satisfy any customer need, thanks to years of experience and technical know-how.

AM series is intended for applications requiring high speed with medium/heavy loads, with small movements but repeated frequently.

These products, in fact, should be considered as a motorized arm that has to perform a really precise handling, where the power is supplied and adjusted according to the specific need.

This also through the use of ball screws, granting high efficiency, long life, corrosion and wear resistance, friction and energy consumption reduction.

Moreover the electric systems provides great versatility and excellent performance if compared to the pneumatic one, as it has easy and essential connections, avoids the use of pumps, valves, pipes and then the risk of contamination due to oil leaks, offers the possibility to stop along the stroke and work with high temperatures and dust together with low noise and almost no maintenance (the protection degree of this range is IP65).

MAIN FEATURES:

- AM2 – AM4 – AM5 series: more “standard” range, designed for brushless motors with square flange, but adaptation flanges are available on request
- AM4-P: version with parallel motor, 1:1 reduction allows for the direct transfer of the motion to the linear actuator shaft, without any loss in terms of efficiency
- AM4-X – AM5-X series: the design of this range has been developed to offer the best flexibility and be perfectly interchangeable with pneumatic cylinders. ISO standards of pneumatic cylinders, in fact, are exactly reproduced in flanges and female threaded holes in the front part of the linear actuators, allowing the mounting and matching of accessories typically used by pneumatic cylinders

MAIN MOTORS:

- Stepper motors: in case of low load and reduced speed (<2000-3000 rpm), to allow “step” movements (reach the established position, check of the reached position and maintain this position)
- Brushless/servo motors: in case of heavier load and higher speed, as they offer a lower mechanical resistance, being the best solution in case of high accelerations or fast movements
- Ball screws used by AM series are reversible. To ensure stability to the system and get static/self-locking conditions, include the use of a brake, mandatory in case of vertical mounting of the linear actuator

MAIN APPLICATIONS:

- Industrial automation
- Food industry (products lubricated with food-friendly grease)
- Plastic industry
- Textile industry
- Packaging
- Robotics
- Defence industry



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