

SMAC Moving Coil Actuators



High speed, compact and price-competitive

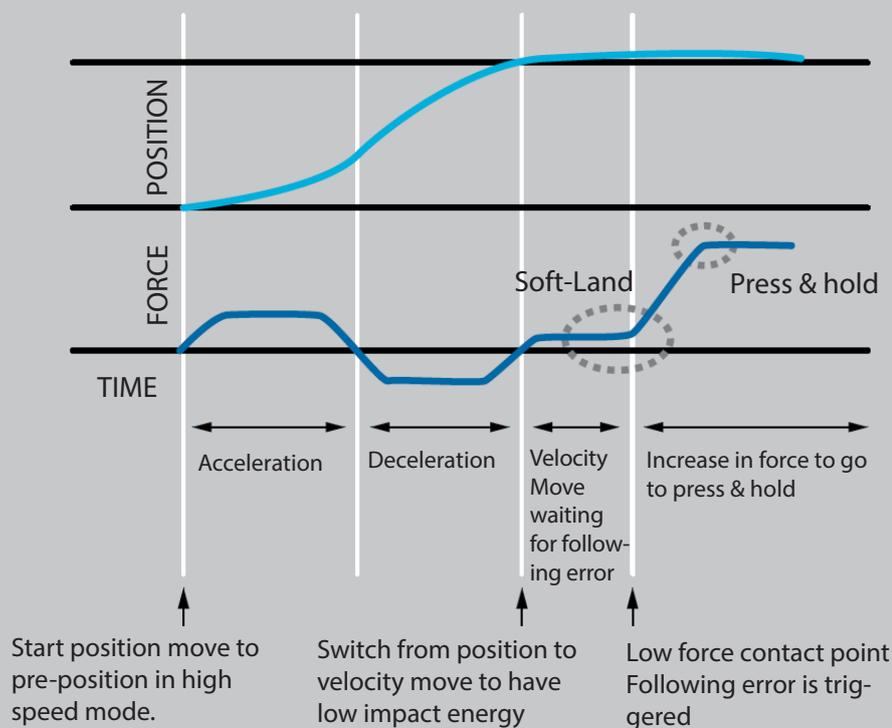
Electric Cylinder Actuators High speed, compact and price-competitive cylinder actuators that provide an alternative to pneumatic cylinders with superior performance. The conventional cylinder actuator shape and multiple mounting points allow the electric cylinders to be directly retrofitted in most cases. When you take into account the operating cost of compressed air, unit life expectancies, replacement costs, downtime and changeover times, SMAC's actuators often have a significantly lower total cost than air cylinders and electromechanical alternatives.

General, performance SMAC

Actuators able to regulate force, speed, and position, both linear (in/out) or both linear and rotating.

[Programmability & Soft-Land | SMAC Corporation \(smac-mca.com\)](https://smac-mca.com)

Soft Landing

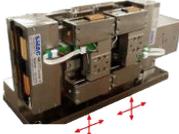


- Force up to 1000N.
- Softland Gentle touch as low as 10g
- Sub-micron resolution down to 50 nm. (0.00005 mm)
- Rotary encoder resolution: up to 132K
- Rotary MAX TORQUE: 3.5 Nm
- Rpm up to 5000 rpm
- Acc. Up to 50g
- Speed up to around 2 m/sec
- stroke from 10mm up to 250mm
- Livetime above 500mill cycles
- Noice < 50dB
- Option IP65 or IP67

Communication og controller: [SMAC Corporation \(smac-mca.com\)](https://smac-mca.com)

CONTROLLERS	INDUSTRIAL ETHERNET PROTOCOL	
	EtherNet/IP	EtherCAT
CBC-EIP	✓	
CBC-ECT		✓
VLC-ETC		✓

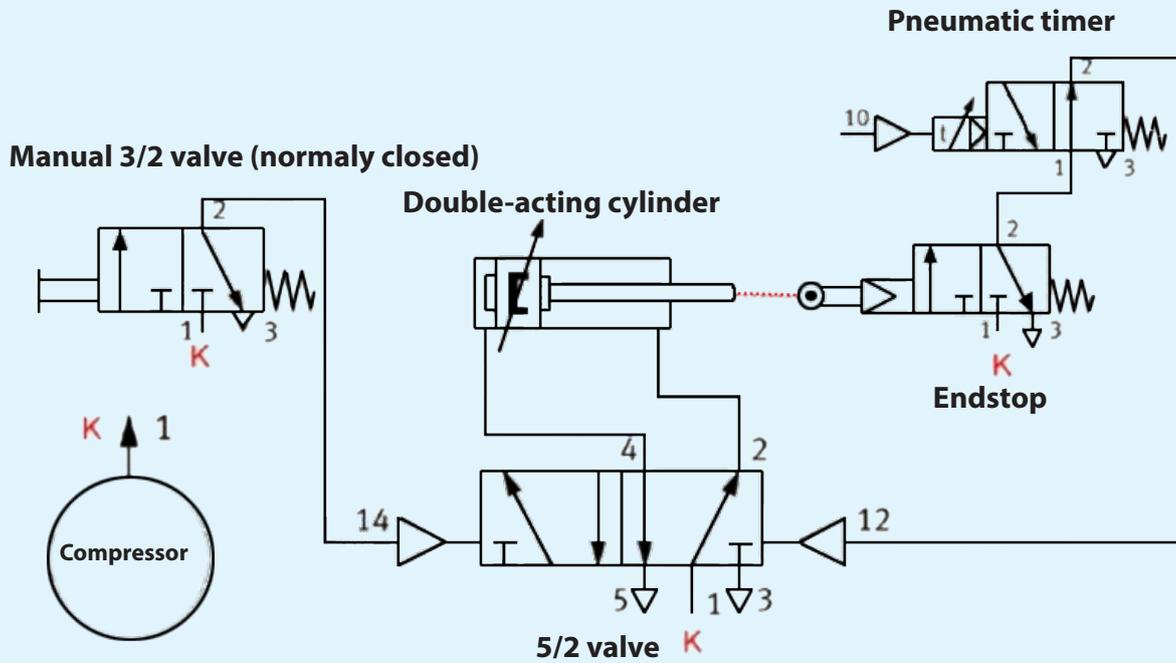
Types of actuators

Electric Cylinders	LINEAR movement	 CBL Series	 CBL Series - Electric Cylinder with Built-in Controller		
Actuators	LINEAR movement	 LDL Series & LDL Series with Built-in Controller	 LAL Series	 LCA Series	 LBL Series
Actuators	LINEAR & rotary movement	 LAR Series	 LCR Series	 LBR Series	
Slide Actuators	LINEAR movement	 LCS Series	 LAS Series	 SLA Series	 LBS Series
Grippers	Dubble LINEAR movement	 MGR Series	 GRP Series		
Multi-Axis Actuators	x-Y-Z movement				
STACK Actuators	Multi LINEAR movement				
Gauge Actuators		 MLA Series	 MSA Series		

Replacing Pneumatics

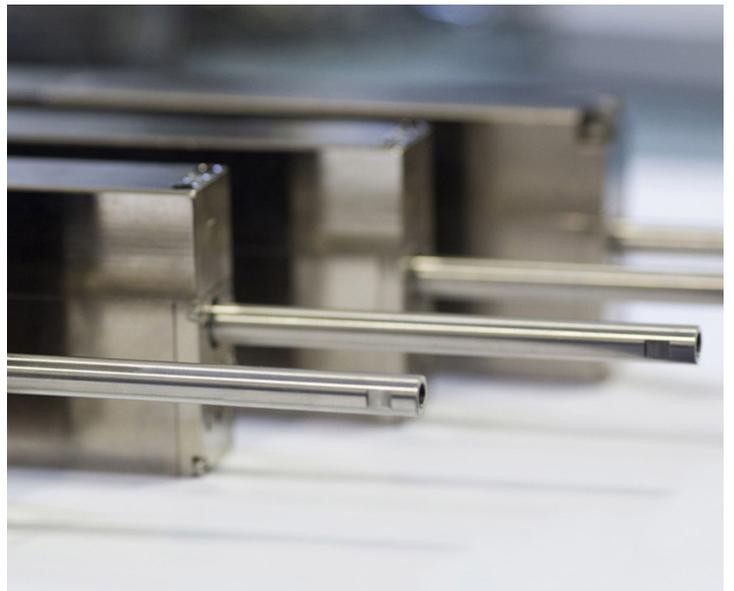
SMAC is an all-electric solution that can be used as a "drop-in" replacement for air actuators.

Example with cylinder and timer



Replacing Pneumatics with Electric Cylinders

High speed, compact and price-competitive cylinder actuators that provide an alternative to pneumatic cylinders with superior performance.

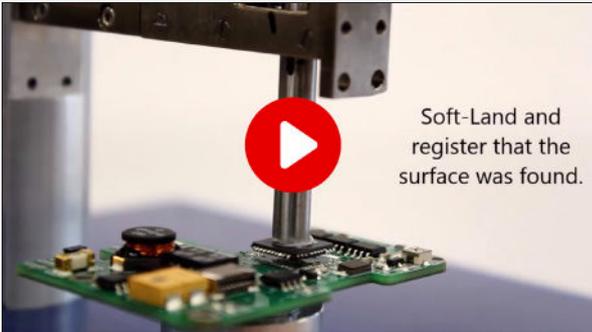


SMAC CBL vs Pneumatics Performance

FEATURE	CBL PERFORMANCE	PNEUMATICS PERFORMANCE	BENEFIT
Speed	> 2,500 CPM	<1,200 CPM (higher rates = reduced Durability)	> 1.5x throughput increase
Durability	> 200 Million Cycles	10-20 Million Cycles	CPM = 250 CB = 6,000 hrs. MTBF Air = 1,200 hrs. MTBF
Configurability	Speed, Positions and Force	None, limited to mechanical adjustment	Quick & Easy to set up/ change
Energy Consumption	Low (24/48v) voltage/ amps (1.7A peak)	High cost of Air supply + Electricity for control	>30x lower energy consumption than Air 8 HP of electricity to produce 1 HP of air
Noise Level	< 55 dB	Typically > 85 some > 110 dB	Achieves 'Silent' Industrial classification
Repeatability	+/- 1 ms cycle time variance	20 ms cycle time variance	Enables increased throughput & synchronisation of process
Validation	Encoder feedback & control of all movement parameters available	Sensors/Switches cannot control the movement, only set fixed limits	Less destructive movements No separate sensors
In-line Changeover	Reconfigure for different movements in seconds	Change unit or adjust for small variations, in minutes/ hours	Reduce change over time and cost
Cost of Ownership	One time buy, no maintenance/adjustment	Regular replacement , adjustment/repair, compressor and control valves, tubing etc	Air = Between 5-7x cost of CB moving coils solution
Position Verification	Interface visually displays rod's exact position for setup and evaluation	Location of rod un unknown and must be visually debugged	Faster setup and more precise motion profiling

Applications

Pick & Place



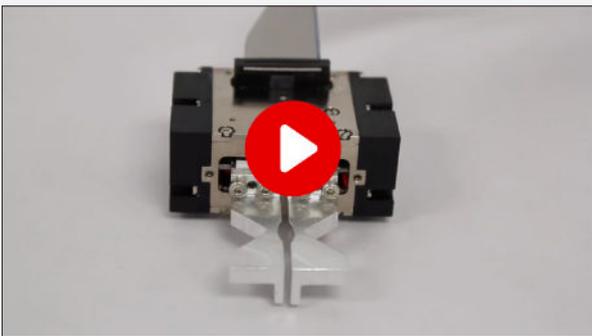
The precision Z-theta motion within one small actuator, providing a convenient pick, orient and place. The unique Soft-Land function allows the unit to gently land on a delicate component with a controlled force, avoiding damage to the component.

Switch Testing



In-line durability test. Measuring click point, force and displacement. Report force vs. position with SPC data collection. Life testing of components as well as measurement and QA reporting functions in one unit.

Programmable Micro Gripper



This Micro Gripper was developed to handle small very fragile parts. It includes the company's patented Soft-Land feature, programmable force down to 5 grams, and two independently controlled gripper fingers to pick up asymmetric parts.

100% Automated Thread Check



Fully automated 100% inspection and test of screw thread check for optimal quality assurance. The unique solution enables you to automatically check oversize/undersized threads, cross threads, thread depth, mis-located threads etc.

Measuring and bore gauging



100% measure and test inline production of small components for quality control.

Dispensing / Filling



SMAC actuators' repeatable positioning with high speed allows you to more precisely and repeatedly control the dosing amount.

Applications

High Speed Pressure/Leak Detecting



SMAC actuator senses the surface of container/package, push with specific force and monitor the movement to determine pressure in container/package. This solution can be used for soft pouch packaging such as contact lens or single-served coffee "pods."

Rejecting, Diverting, Multi-Lane Sorting



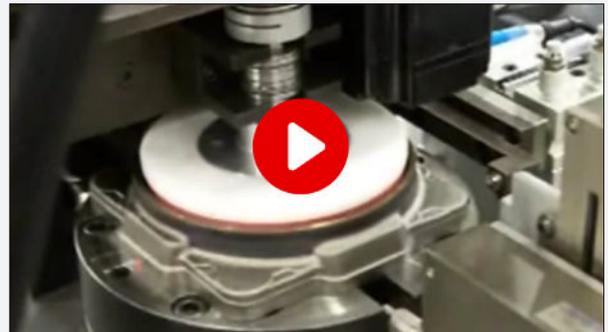
SMAC can reject or divert one container at line speeds over 1200 containers/ minute. Movement of container is smooth, fast, and gentle with unique Soft-Land™ feature. Container will not tip over because of force and velocity control.

Capping



SMAC linear rotary actuator rotates the cap while pushing down. Actuators can press with programmable force and provide torque feedback that informs when the cap has torqued out (or not) to ensure a quality operation.

Assembly



Assembly requires both precise placement and precise low force control. SMAC linear rotary actuators perform pick, orient, and place movements in a single unit.

Smart Screwdriver



SMAC linear rotary actuators are an all in one solution. Fast approach, then find the surface with Soft-Land™ capability. Turn counter clockwise, screw moves up, then drops as first thread found, then start rotating clockwise.

High Speed On-the-Fly Labeling



The label applicator (SMAC actuator) matches the speed of the conveyor as the product comes through. High cycle rate, energy efficient, and adjustable speed and height for the different kind of products.

1

We review your application and assignment



2

We find the suitable solution



3

We deliver



4

We ensure you get training in setup programming



5

You get support from hardcore technicians

IF YOU HAVE A CHALLENGE WE CAN HELP

1. We review your application and assignment
2. We find the suitable solution
3. We deliver
4. We ensure you get training in setup programming
5. You get support from hardcore technicians

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