



mecalectro

**THE INNOVATIVE  
ELECTROMAGNETIC  
SOLUTION**

**FOR VOICE COIL  
ACTUATORS**

# VOICE COIL

## STANDARD AND SPECIFIC SOLUTIONS FOR ALL CONTROL REQUIREMENTS

A **Voice Coil actuator** is a **linear** actuator whose movable armature can be controlled **bidirectionally** in terms of **force, speed and stroke**.

In combination with a **position sensor** and an **electronic control**, it enables very precise positioning.

### TECHNICAL DATA OF THE STANDARD SERIES AE.G31 TO AE.G52

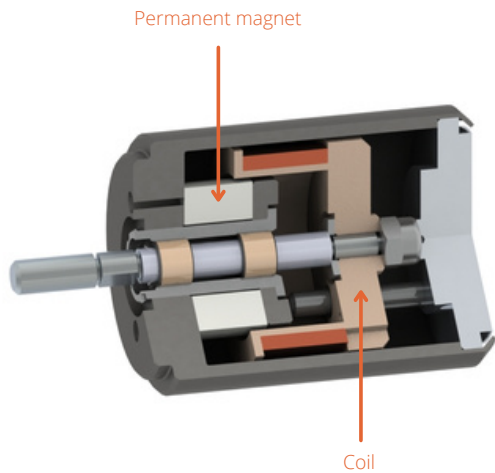


1. Force constant (N / A)	2.1 to 14.3N
2. Electrical time constant (TE)	350 to 700 $\mu$ s
3. Stroke	6mm to 12mm
4. Continuous force	2.5 to 10N
5. Continuous power	8 to 20 W.
6. Impulse force 10 sec	Up to 55N
7. Impulse power	80 to 350W
8. Control	Current or voltage regulation
9. Diameter	31mm to 52mm
10. Cycles	> 150,000,000
11. Protection class	IP42
12. Reference standard	NF C 79300

Depending on your needs, specific developments are possible, such as:

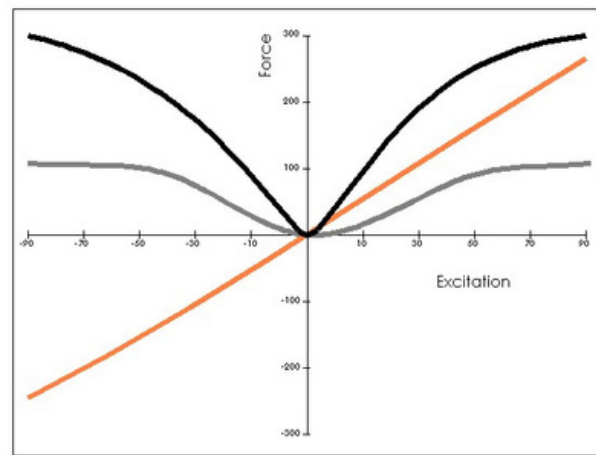
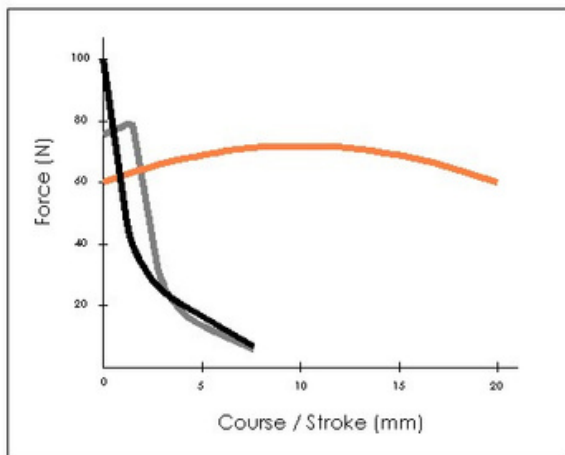
- Adjustment of all standard data
- Hall-effect sensor
- Very high frequencies up to 1KHz
- Dimensional adjustments
- Thermal circuit breaker
- Special windings for additional forces
- Surface treatments

## STANDARD FUNCTIONAL INFORMATION AE.G31 TO AE.G52



1. The actuator consists of a permanent magnet that generates a magnetic field in an air gap in which a coil is placed and attached to a power-transmitting shaft.
2. When energized, the coil moves along the air gap and generates mechanical forces that are proportional to the injected current.
3. Since the coil moves freely thanks to the two magnetic fields in the air gap, the hysteresis is very weak.

## BENCHMARKS



— Voice-coil

— Proportional solenoid

— Linear solenoid

# ADAPTED SOLUTIONS FOR THE MOST DEMANDING APPLICATIONS

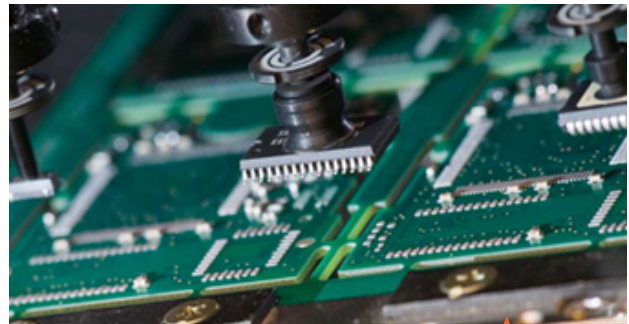


## OEM - AUTOMOTIVE INDUSTRY DOSING SLEEVE

CONTROL OF THE AMOUNT OF OIL THAT IS APPLIED TO STEEL AND ALUMINUM PLATES BEFORE MOLDING.

### CHARACTERISTICS

1. Valve controlled in the  $\mu\text{m}$  range for dosages from 0.5 g / m<sup>2</sup> to 3.5 g / m<sup>2</sup>
2. Hall effect sensor, working stroke from - 2.5mm to + 2.5mm
3. Mechanical life : > 150,000,000 cycles
4. Shaft locked against rotation
5. Housing made of galvanized steel
6. Ambient temperature 5 C ° to 80 C °.
7. Inductance 1mH



## SMT - PICK AND PLACE MACHINES

CONTROL OF COMPONENT POSITIONING HEADS

### CHARACTERISTICS

1. Assembly capacity of 100,000 components / hour
2. 51mm diameter with 8.5N / A force constant on 19mm stroke
3. 32mm diameter, 7.2N / A on 8mm stroke



## RESPIRATORS

AIR FLOW CONTROL - COMPLETE VALVE

### CHARACTERISTICS

1. Valve flap with special surface treatment to avoid the stick-and-slip phenomenon
2. Reduced friction thanks to the guide ring and special shaft treatment
3. Number of cycles > 1 000 000 000





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## CONTACT US



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