



## **ELECTRICAL ACTUATION**

INTEGRATED MECHATRONIC COMPONENTS AND SYSTEMS



# Pneumax Group

## Smart Technologies and Human Competence

Founded in 1976, PNEUMAX S.p.A. is today one of the leading international players in the sector of components and systems for automation, the parent company of the eponymous Group consisting of **28 companies** that employ **over 850 employees worldwide**. Continuous investments in research and development have allowed Pneumax to expand the range of standard products and integrated mechatronic solutions, often fully customized, combining pneumatic technology, electric actuation, and fluid control. The use of the most advanced production technologies ensures maximum flexibility and certified quality according to international standards of various sectors. The desire to offer increasingly specialized services and application expertise has also led to the creation of **3 Business Units** dedicated respectively to:

Industrial  
Automation

Automotive

Process  
Automation

Through a network of subsidiaries and exclusive distributors, Pneumax is present in over 50 countries worldwide, to support customers in all phases of the supply process.

### 3 TECHNOLOGIES

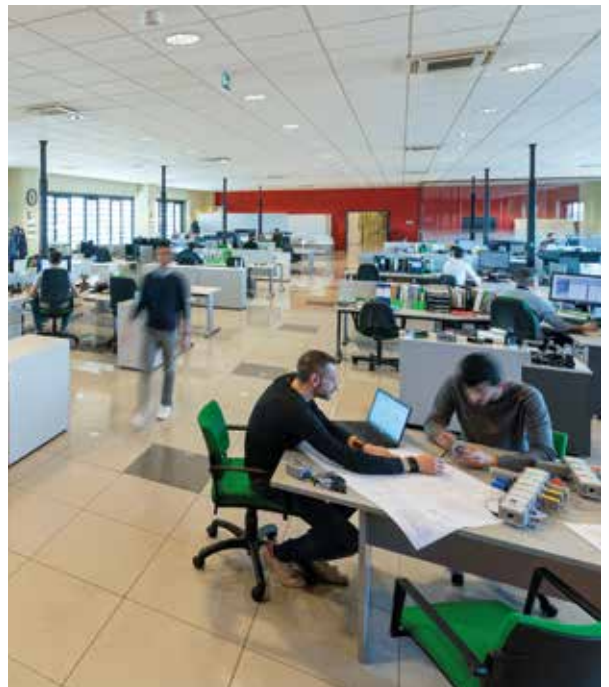
PNEUMATIC TECHNOLOGY



ELECTRIC ACTUATION



FLUID CONTROL



# AutomationWare

One step ahead on the future

**AutomationWare is now an integral part of the Pneumax Group**, one of the leading international players in the automation sector.

The company, headquartered in Martellago (VE), was founded as a manufacturer of electric actuators, designed to ensure energy savings, precision, reliability, and workplace safety.

The development of application expertise has allowed us to create a complete offering of true **Integrated Mechatronic Solutions** over time, using the most **advanced technologies** for modular and open-source design.

At **AutomationWare**, we believe in talent and are committed to the constant growth of our employees.

Competence, passion, collaboration, and motivation guide us daily in our work.

## ELECTRIC ACTUATION

- **Ball screw and belt-driven electric axes**
- **Linear and rotary actuators**
- **Servo drives**
- **Servo motors**

## Electric Actuation Ind.5.0 and Energy Sustainability

Electric actuators are precise, reliable, non-polluting, reduce energy consumption, and are easily reprogrammable.

Large companies are very meticulous in choosing future solutions for their production processes.

**Energy sustainability issues require choices for low environmental impact** and low energy consumption systems.

The answer lies in electric actuation: precision and energy efficiency (up to 90% energy savings).

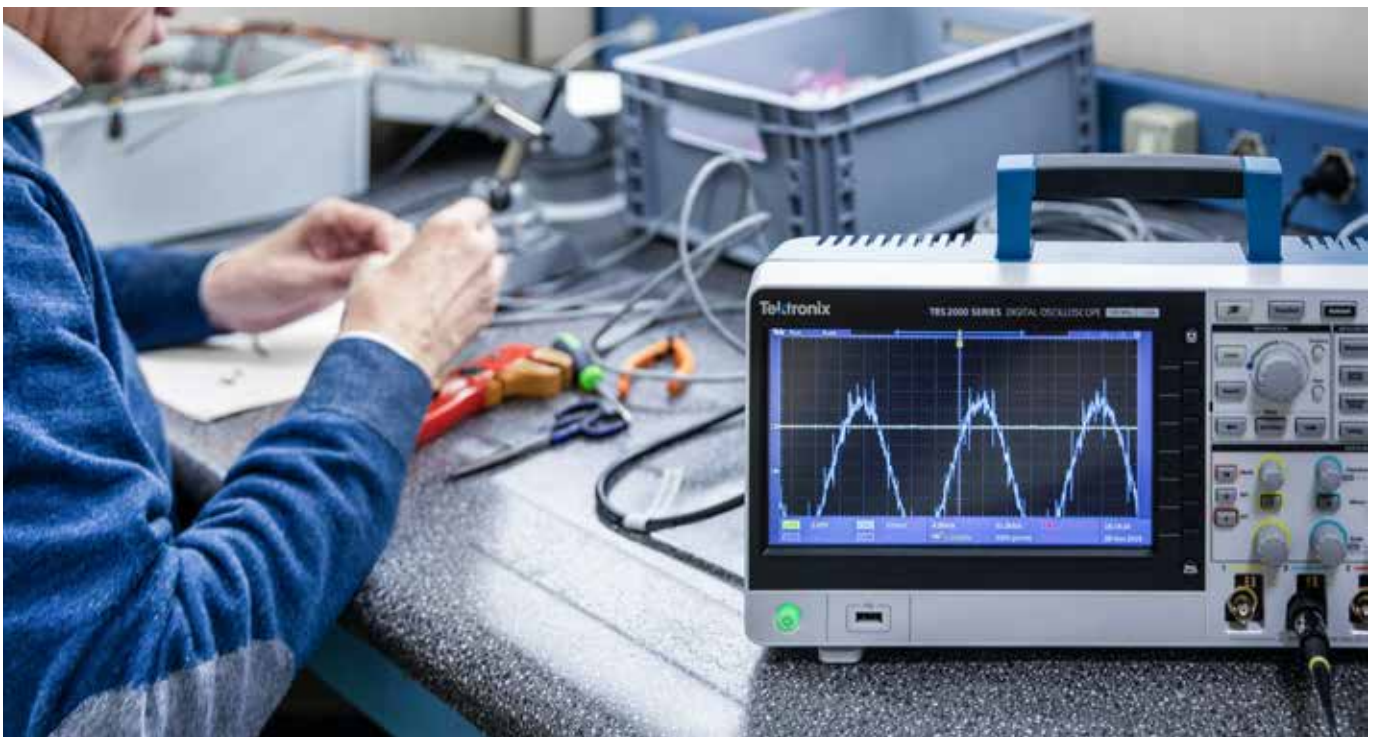
**Electric actuators are essential in hygienic and modern mechatronics, particularly in the pharmaceutical and food sectors.**

**Moreover, electronically controlled electric actuators can ensure compliance with safety directives** in the workplace, requiring less than 85 dBA@1m noise level.

**Ind. 5.0 productivity and controllability are intrinsic:** all parameters of electric actuators can be measured and monitored in real time.

**AutomationWare** offers Ind. 5.0 solutions with vibration and temperature control systems (AwareVu™) for predictive maintenance.

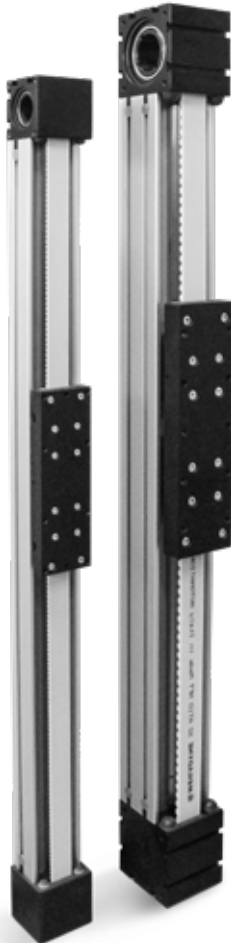
**AutomationWare, a new way of defining modular mechatronics integration.**





## LINEAR AXES

Speed, strength and accuracy



### L-Actuators

AutomationWare does not only build standard linear axes, but a range of solutions to provide customers with an adequate response based on application characteristics. Linear axes with belt or ball screw drive, combinable with each other or with other AW products for endless configuration possibilities. The catalog configurations can include the proprietary AwareVu™ diagnostic system for real-time work cycle verification and prevention of production blackouts.

### Highlights

Wide range of electric actuators for every application solution:

- Sizes from 45 mm to 160 mm
- Translation: screw axes, with ball screws, ensuring maximum speed and acceleration
- Belt axes with movable or fixed belt used as a rack
- Linear guides or rollers for high payloads
- Speed: 2 m/s (screw), 5 m/s (belt)
- Positioning accuracy:  $\pm 0.05$  mm (belt),  $\pm 0.01$  mm (screw)
- Possibility of obtaining axes of considerable lengths for logistical applications

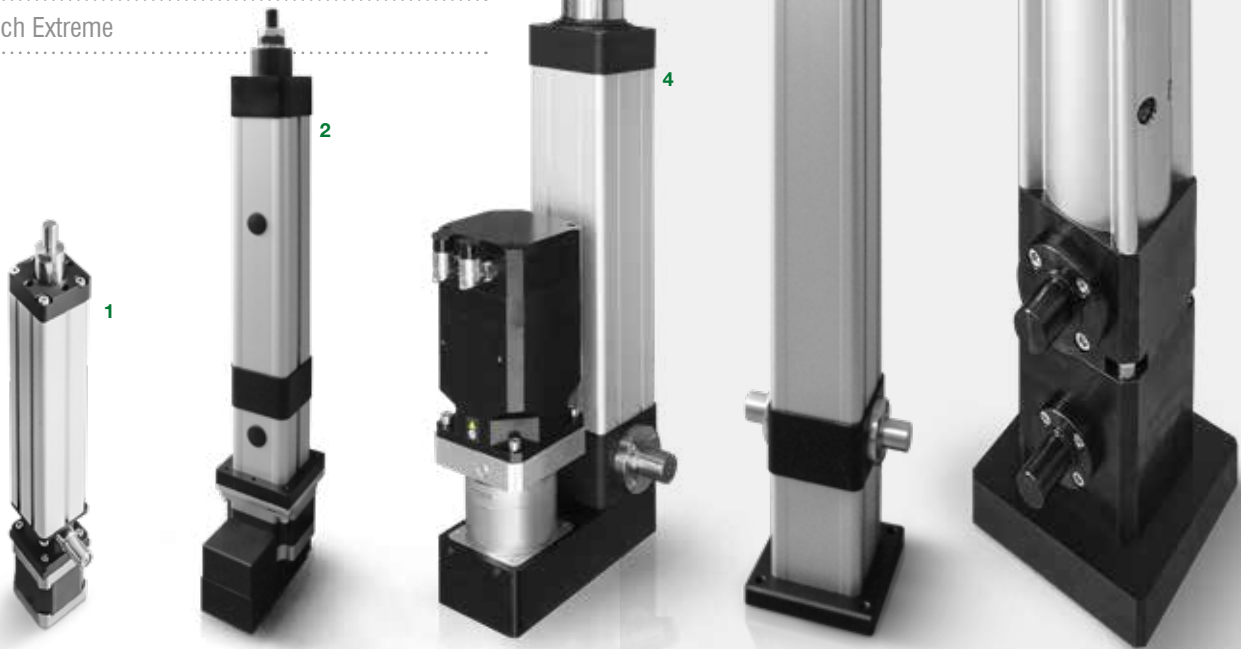


# LINEAR ACTUATORS

## Robustness and precision

### The series

1. Mech Value
2. Mech Line
3. Mech Force
4. Mech Plus
5. Mech Extreme



### E-Actuators

A portfolio of high-performance electric actuators with ball screws. A range of families for applicability in confined spaces and/or for high loads (using screws with dynamic loads up to 750kN, designed by AutomationWare).

Top-quality. Screws and nuts are selected to solve the most complex applications and are built by market leaders (AutomationWare is the only company in the world with the NSK inside logo).

### Product Families

Sizes from 16 mm to 200 mm and different load capacities for a custom solution based on the application:

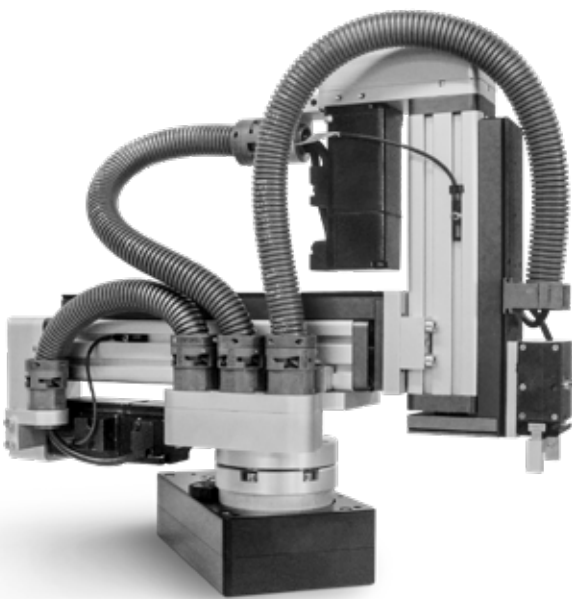
1. **Mech Value 16, 25 or 32 mm**  
Loads up to 1700 N
  2. **Mech Line 32, 50 or 63 mm**  
Loads up to 2900 N
  3. **Mech Force 50, 63, 80, 100, 125 or 150 mm**  
Loads up to 190 kN
  4. **Mech Plus compact version**  
for loads up to 213 kN
- All **E-Actuators** are ISO 15552 compatible

## MODULAR SLIDES AND ACTUATORS

Reliability, modularity, and continuous innovation

High-performance brushless motors, 17-bit encoders, direct or indirect drive.

Cylinders with ball screws for high accelerations and long lifespan



### Modular Solution for Handling or Pick & Place Systems

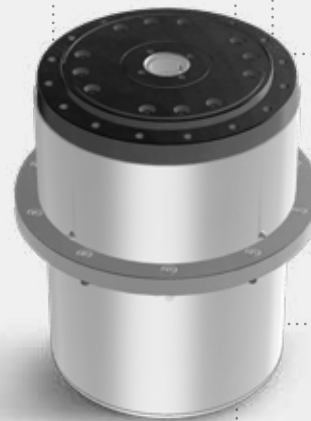
The SM series consists of modular and fully controllable linear sliders driven by high-performance brushless motors. The SM Sliders are available in 3 versions (size 32-50-63) with variable loads, strokes, and speeds, also supporting high payloads.

Positioning and movement are fully electronically controlled, ensuring precision up to 0.01mm with total control and modeling of the motion cycle.

The mechanical technologies used are top-notch; they stem from AW's extensive experience in combining advanced mechanics with electronics to achieve high-speed and high-load displacement, which are unattainable with pneumatic systems and very critical even for linear motor devices.

High speed:  
Torque motor

Aluminium alloy: the best  
mechanical technology



Braking system

Encoder on one or both axes of the reducer

Axial mounting

High load torque capacity

High-quality harmonic reducer



### T-Actuators platform state-of-the-art technology

These devices can achieve very high speeds and torques **based on high-performance torque motors**. When used in robotic applications such as SCARA or delta robots, they guarantee extremely high precision with torque control to avoid unwanted collisions.

Management is carried out with an AW Driver **that offers extremely high-performance control loop**.

Positional accuracy is provided by an absolute encoder with 20-bit resolution.

## SERVO MOTORS AND DRIVES

Productivity and efficiency



### Servomotors AWD-B

Brushless servomotors are high-performance, reliable machines that require minimal maintenance. Designed to provide the ideal solution for driving the latest production machinery and to meet the growing demands in the field of industrial automation.

The **AWM-B** series features high size/torque and size/power ratios using rare earth permanent magnets and cutting-edge solutions that ensure: low inertia with high protection degree, standard IP54/IP65, sinusoidal back electromotive force, high overload capacity, and low torque ripple. The **AWM-B** series brushless servomotors are available in 6 sizes, from the smallest AWM-B05 to the largest AWM-B26, with torque values ranging from 0.48 Nm to over 400 Nm.

### Servodrives AWD Motion Control

Developed to meet modern automation needs, the **AWD** servo drive is designed around a new CPU that enables high performance and real-time connectivity via field buses such as EtherCat, ProfiNet, CanOpen, and Modbus. **AWD** drives stand out for their great flexibility in controlling motors, whether they are AC or DC, synchronous or asynchronous, rotary or linear.

The numerous features of these drives offer a solution for most applications, whether it's speed control, torque control, or even positioning, electronic gearing, electronic shaft, and pressure control.



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