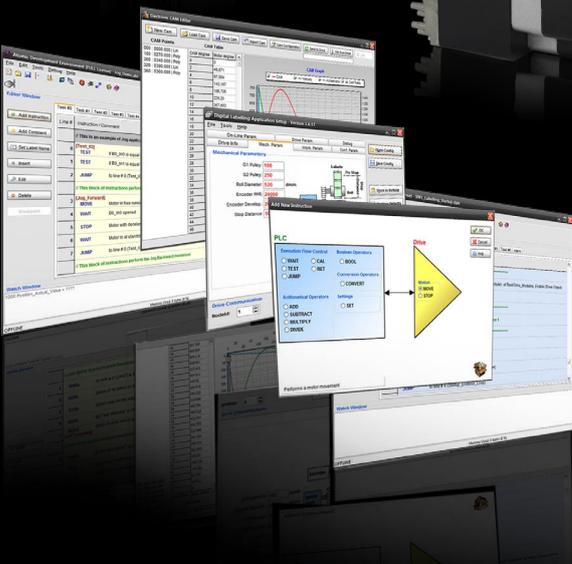
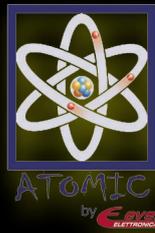




# Applications



our solutions make yours easy

2015

**Ever**  
ELETTRONICA  
the clever drive

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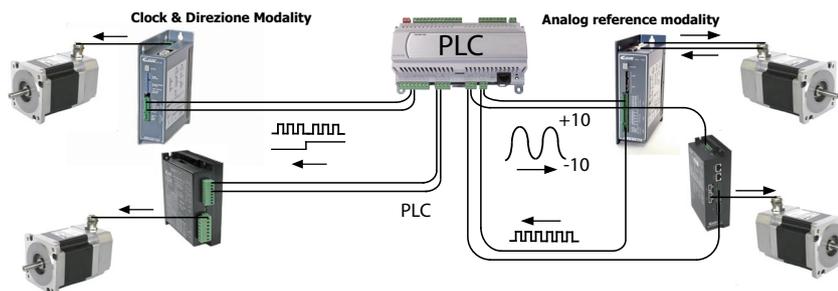
# All-rounded Drive Systems

Ever Elettronica systems are designed to adapt themselves to the various control needs.

## Clock & Direction drives and analog speed reference

microstep, in open loop and stepless in torque closed loop, speed and position, with capability of autonomously manage acceleration and deceleration ramps.

Carrying out commands from master PLC:



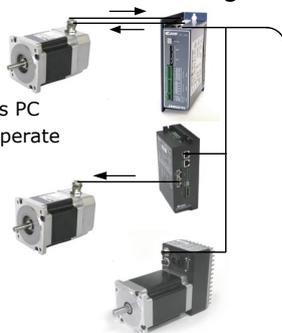
clock & direction drives are very easy to configure, they are compact in size and available in a wide range of powers for all stepper motors bipolar driving.

## Fieldbus drives and configuration software

microstep in open loop and stepless in torque closed loop, speed and position, with CANbus Slave (CANopen DS301/DS402) interface, Profibus Slave (Profibus-DP) or Serial Slave (Modbus-RTU), with configurable Advanced Power Motion Module and firmware according to working parameters through IDE software environment for windows PC.

Fieldbus network communication according to the most accomplished standards:

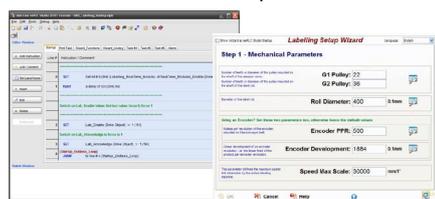
fieldbus drives are configured through windows PC software applications and operate in multi-axis networks in slave mode.



## Programmable drives and IDE software

microstep in open loop and stepless in torque closed loop, speed and position, able to operate in 'stand alone' mode and programmable by the user through IDE software, in single or multi-axis applications also with PLC function.

'Stand-alone' mode operation:



by means of programmable drives complete of PLC and "stand-alone" functions it will be easy and quick to create the required application, also using the wizard for the implementation of different kind of applications such as: electronic cams, labelling, tracker, etc. Furthermore other software instruments are available for a quick debug of the developed application.

# Motion controllers, custom drives and HMI

Motion controllers, gateway, PLC function, customized electronics and touch screens devices.

## Controllers and gateway

All in one devices with Motion Controller, Gateway for communication management between various fieldbus types and PLC for user`s applications programming and management.

Multi-axis systems with more fieldbus to operate in real time:

```

TRIPDIS for GWC - C:\inet\inet\trp
File Edit View Help
***** SUBROUTINIZATION SYSTEM CASE *****
CALL (Start_Value_To_Drives_CAN);
***** CICLO PRINCIPAL *****
M01B : DO |
CALL (Start_Processor); (* Refresh ProfI/CAN... *)
(* Start Motor Movement *)
M01B : Itemp := 1 TO SIMULACION (CAN) NY 1 DO;
WRITE SDO_CANOPEN (Itemp,4001b,3,4,MOVEMENT_STEPS); (* Par 0 = Number of
WRITE SDO_CANOPEN (Itemp,4001b,2,1,1); (* Par 1 = Steps Forward *)
WRITE SDO_CANOPEN (Itemp,4001b,3,1,3); (* Cmd = Mov *)
SDO_FOR;
(* Waits end of movement *)
M01B : Itemp := 1 TO SIMULACION (CAN) NY 1 DO;
Itemp1 := READ_SDO_CANOPEN (Itemp,4000b,3,0); (* Drive_Register *)
Itemp2 := Itemp1 AND 1b;
WRITE Itemp1.co, I_SDO;
Itemp1 := READ_SDO_CANOPEN (Itemp,4000b,3,0);

```

programmable logic controller and motion controller functions enable the user to control: a process using the fieldbus, the serial interface and the inputs/outputs, according to a specific program defined by the user himself. The communication converter function allows data exchange between the various fieldbuses: CANBus (Canopen), DeviceNet, ProfiBus and MODBus. Programming occurs through TR.I.P.O.S.GW, which is an ST compatible development environment for windows EN61131-3 systems.



## Special drives, custom 'open frame' and ASICs

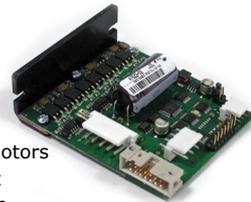
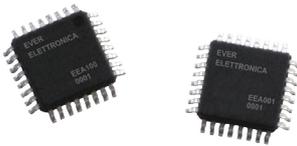
'Ad hoc' devices for better integration with the machine electronics.

The various operating modes enable to customize the following devices for special applications:

full digital 'open frame' drives with serial fieldbus, analog and digital inputs. These devices allow a perfect integration within multi-axis networks, having been designed to guarantee high performances and reliability with maximum cost reduction.

The Asic EEAxxx series provides all resources for the achievement of

a full digital drive for stepper motors control through state-of-the-art hardware schemes and software algorithms.



## Multifunction control panels and Human Machine Interface touch screens

Devices equipped with the most accomplished communication buses for fieldbus networks interaction or direct connection to programmable drives.

Human resources interaction for easy command of the system and the various process cycles



the VT series HMI terminals include monochromatic or TFT BackLight 65.536 colours displays and touch screen operator terminals up to 7,0". These devices communicate through a modbus RS232/422/485 serial bus.



All units are programmable and can be supplied with appropriate programming for interfacing with all our drives and motion controllers turnkey applications.

# Accessories for completing the required automation

**Service and expertise at the customer's disposal for your automation solution.**

Ever Elettronica considers itself as a 360 partner of its own customers, offering a mechatronic department for the definition and sizing of the hardware and software solution for the required automation.

Furthermore, Ever Elettronica offers a unique service, the possibility of having a customized product with: accessories, customized software, custom boards and mechanical modifications, even for low volumes.

Some of the customizations offered by Ever Elettronica are: motors with preassembled gears, encoders or keyed breaks, special wirings, drive shaft mechanical processing, etc.

Lastly, thanks to more than 30 years experience, we are proud to offer many ready-to-use solutions for various industrial fields, such as: packaging, textile, machine tools, office automation, printing and many others.



## Examples of ready-to-use accessories for customized solutions.



Predisposed motors or already provided with resolver and encoder.

Motors with preassembled gear and customized gear ratio.



Motors for special applications with IP65 protection and encoder, or with brakes for suspended loads applications.

Connecting cables for drives and HMI, gateway, PLC, etc.



Custom made boards according to customer's specification.

Interfacing accessories for drives and programming devices.



SMD and traditional assembly of boards designed by the customer in the internal production department.

# The concept of “Easy systems integration”

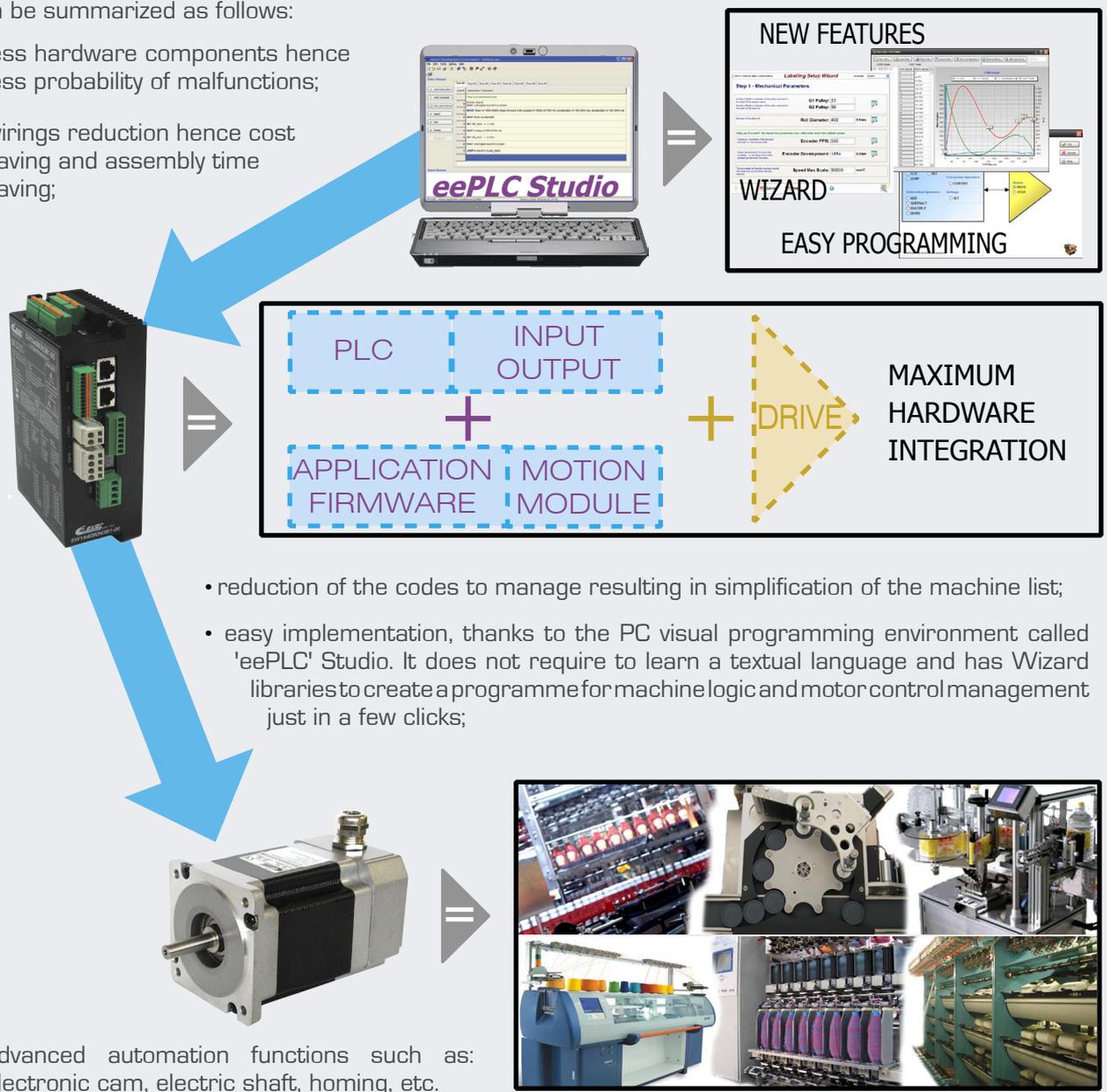
## All-in-one automation.

With its eePLC solution, Ever Elettronica has made a qualitative leap leading not simply to better the existing technologies but to conceive completely new solutions.

Thanks to its powerful microprocessors drives provided with digital and analog I/O, Ever Elettronica has introduced into the market a number of completely innovative solutions, by integrating PLC and drive into a single product able of controlling both the motor motion and the machine logic in real time.

The advantages of this type of architecture can be summarized as follows:

- less hardware components hence less probability of malfunctions;
- wirings reduction hence cost saving and assembly time saving;



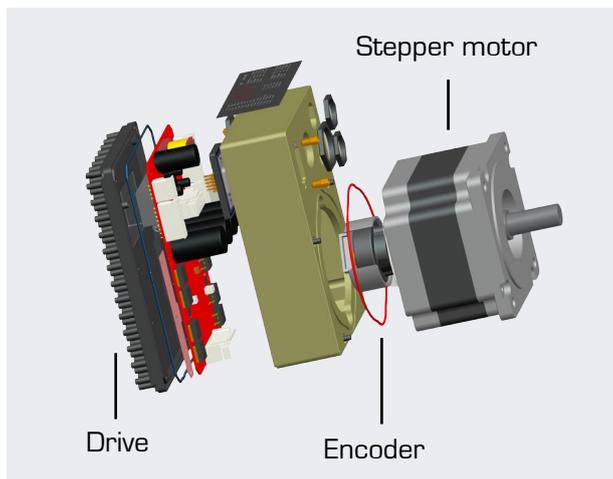
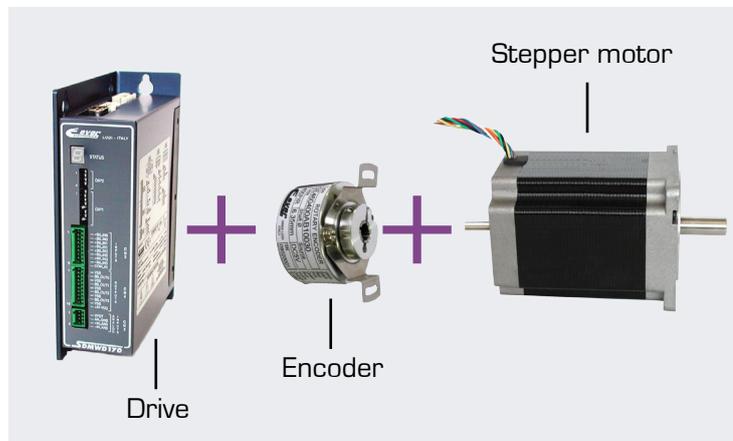
# 'Stepless' Stepper servo motors

## Closed loop torque, speed and position systems.

For over 10 years Ever Elettronica has been associating a series of servo drives for the stepper motor vector control to the open loop drives line, using the same brushless motors control techniques. Thanks to these drives the stepper motor can be effectively seen as a brushless synchronous motor using 50 poles. In fact by checking the drive shaft position in real time, the loss of pace is solved, delivering in the motor phases only the electric current needed for motion, reducing heating, vibrations and motor noise. In this way the stepper motor does not lose the synchronism by adapting electric current, ramps and maximum speed in accordance with the load to be moved, even with highly inertial loads.

The advantages of this technology compared to the brushless servo drives use, can be summarized as follows:

- precise positioning at medium low speed together with torque control in direct drive;
- precise control of the torque even without gears;
- definitely low electronic devices cost by motor feedback using a simple incremental encoder;
- simplified mechanics for the same performance level.



In many applications, the use of an integrated servo-step drive can multiply these technical and economic advantages. These drives incorporate motor, encoder and the programmable drive with digital and analog I/O, fieldbus and advanced PLC functions which can be recalled by a powerful and intuitive PC programming software, all into a single and extremely compact device of the IP 65 class.

These drives have been designed to resist high vibrations and operate in high temperature environments.

Thanks to their specifically conceived design for confined spaces assembly, the machine installation and maintenance is simplified.

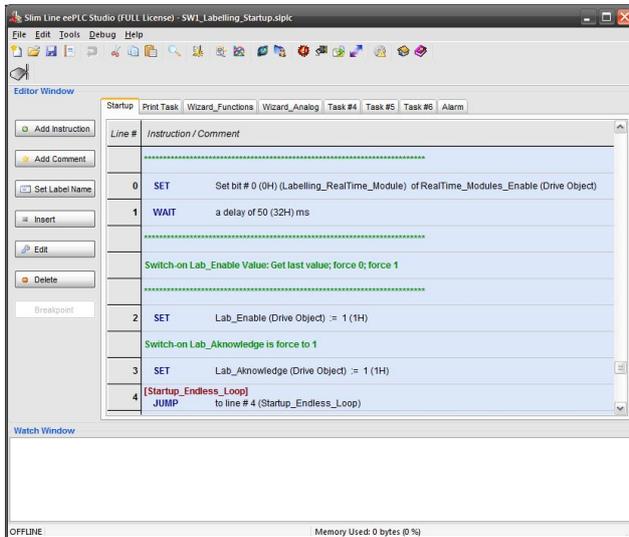
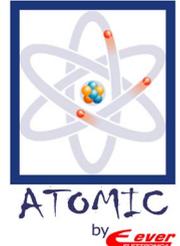
Applications	Corking		
Control types	Magnetic	Brushless	Stepless
Used components	Magnetic controller of corking strength.	Electronic controller of corking strength: - ac motor - inverter - resolver - gear	Electronic controller of corking strength: - stepper motor - drive - encoder
Advantages/ Disadvantages	Low cost Limited performances Little flexibility	Alto costo High performances High flexibility	Low cost High performances High flexibility

# IDE software for systems programming

How to carry out complex automations in just a few clicks.

Through the use of programmable drives and IDE software (Integrated Development Environment) for PC-driven programming, it has never been so **easy** to perform complex automations in **so little time**.

**eePLC** <sup>(TM)</sup> Studio for

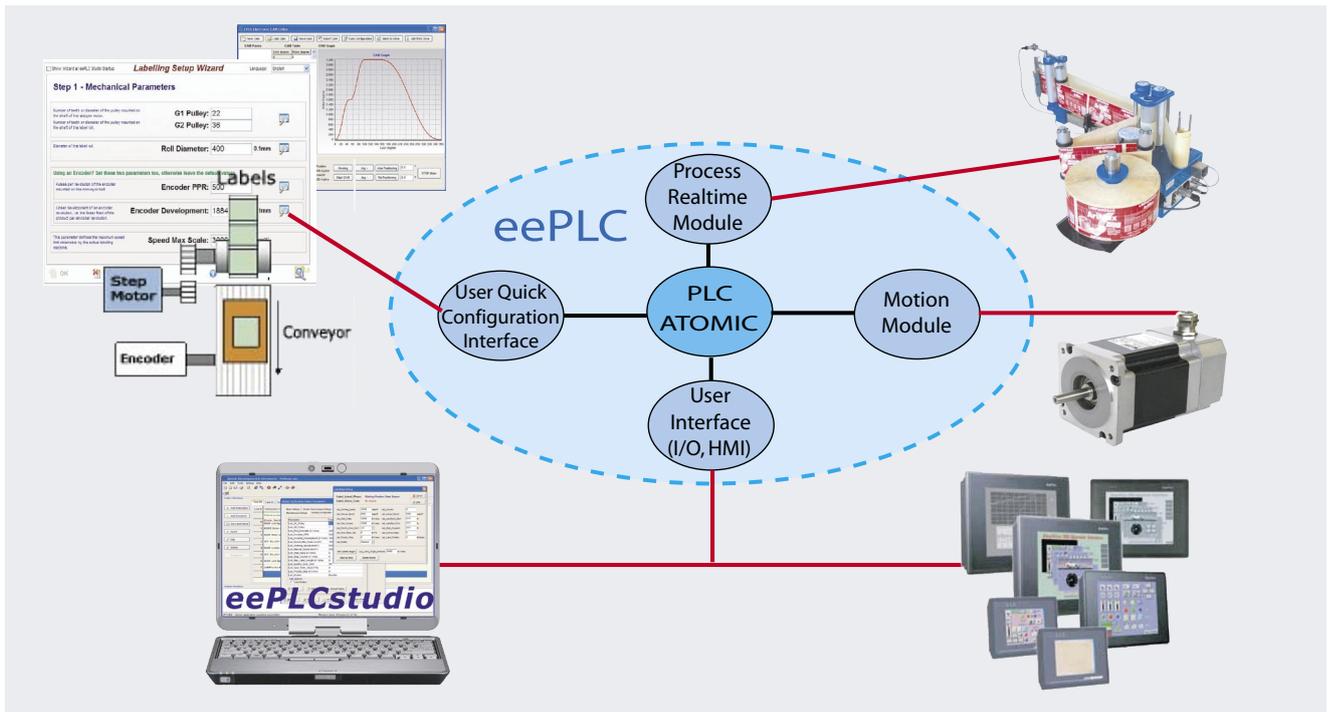


In just a few steps, requiring just a minimum number of devices and without learning any programming language, it is easy and quick to create the most widely used applications typical of the industrial automation, customizing and enriching them with new functions.

The eePLC Studio and Atomic programming environments allow the user to have unlimited level of **customization** of its own application.

Our drives programming is extremely adaptable both when drives are part of multi-axis machines thus reducing the machine PLC tasks, and in single-axis applications.

In this specific case, having all hardware and software resources, Ever Elettronica drives can completely compensate all PLC functions, thus allowing the management of complex automations with a single device.



# Solutions designed for a quick start and debug

Easy to use and advanced functions recalled through wizard.



The programmer is provided with very powerful tools for debug and real time monitoring of the drive operating status.

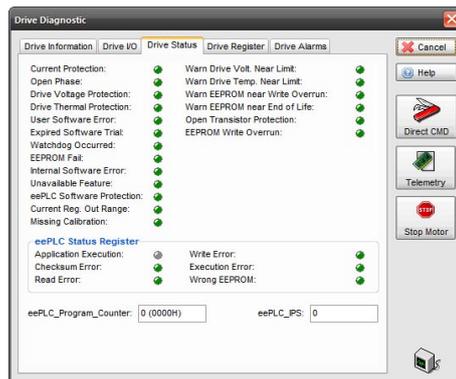
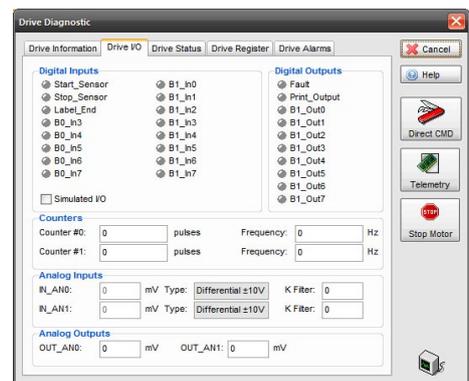
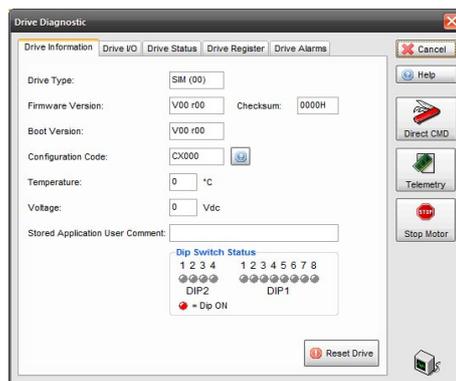
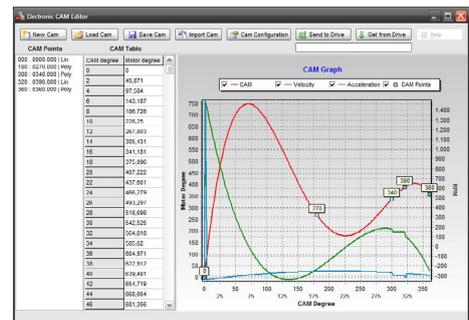
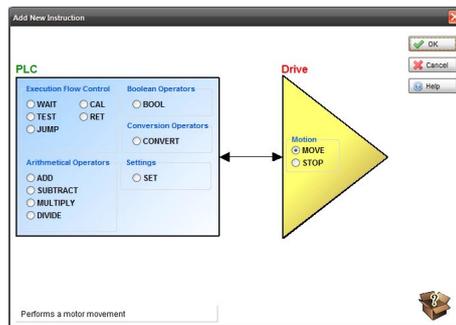
Among these there are:

- drive status monitoring;
- alarm log;
- system information:
  - serial number,
  - firmware version,
  - operating temperature and voltage;
- I/O status;
- Jog and manual controls direct command;
- oscilloscope for the torque feedback tuning.

A **protection function with password** is available to protect the know-how of every customer. This function prevents the upload to anyone without password.

Ever Elettronica provides training material, the possibility of attending **in-house courses** and **tutorial videos** for the use its own programming environments.

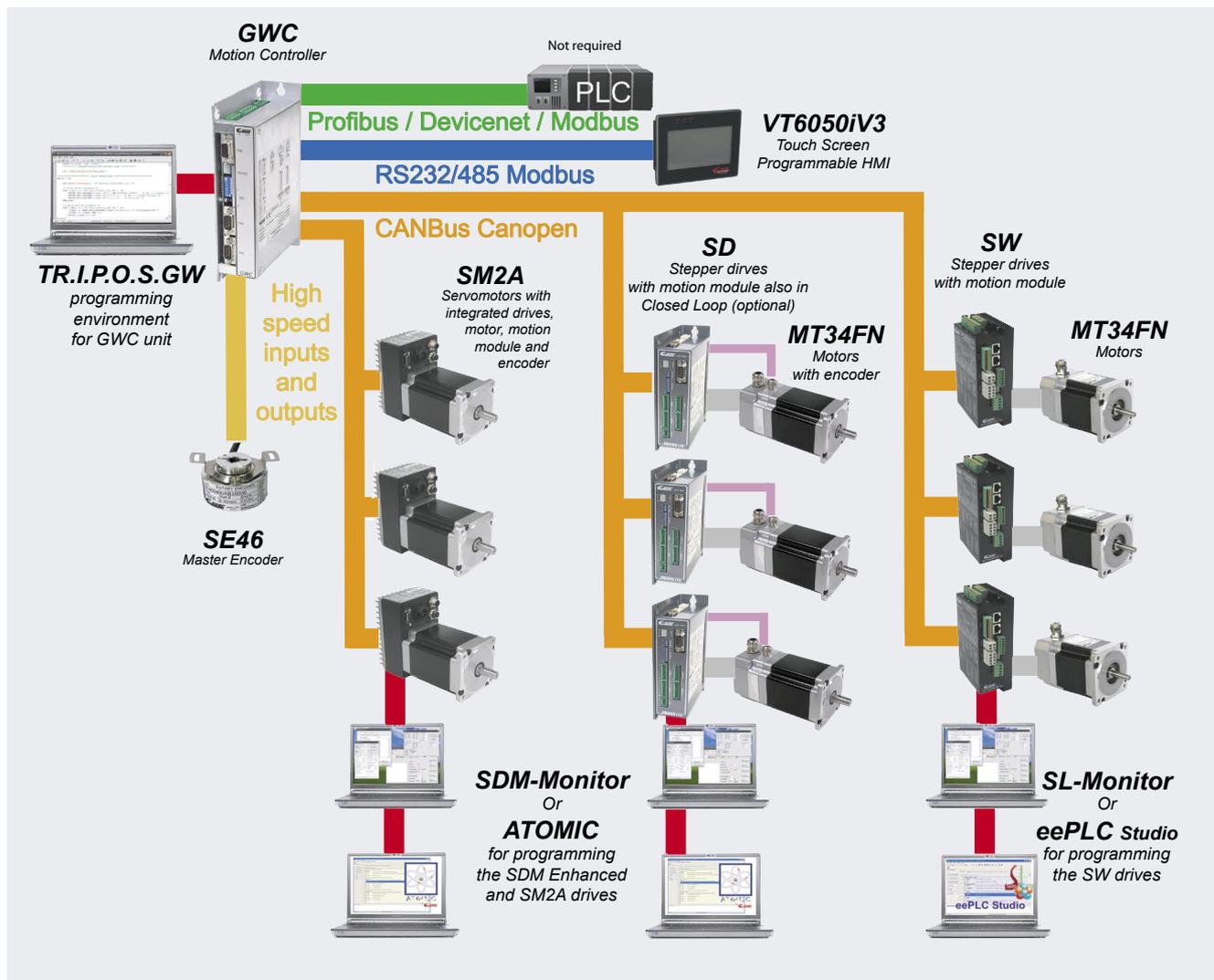
The eePLC Studio programming environment is provided with a wizard, namely guided procedures to write in just a few steps the programme for simple or complex axis automation. Among the available wizards there are, for example: the complete control of a labelling head, axis control in an electronic cam, electric shaft tracking from master encoder or analog input, etc.





# and open to industrial automation

All-rounded drives for integration in many situations to create the required applications.



Ever Electronics devices can be configured to function both in Stand Alone mode and in more complex systems such as the one described above. Our product compatibility is total and guarantees a use with the **most popular devices on the market.**

**SIEMENS**

**AB** *Allen-Bradley*

**ESN**

**Schneider**  
Electric

**OMRON**

**BECKHOFF**

**DELTA**

**WEINTEK**

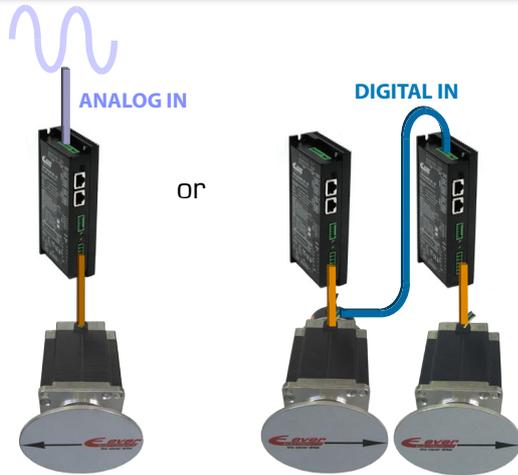
**Panasonic**

**Pro-face**  
Human Machine Interface

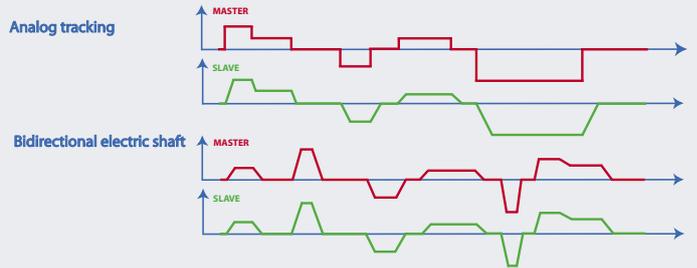
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# General purpose applications for motion

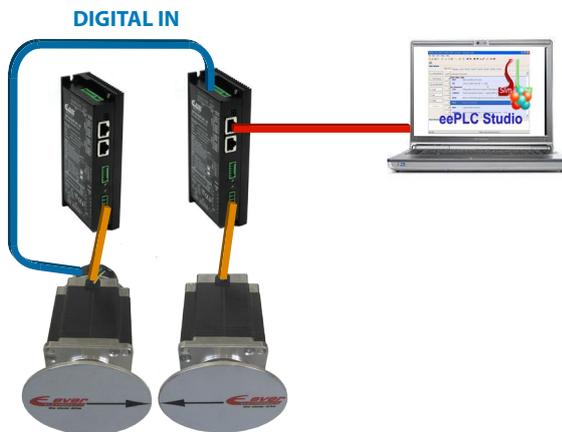
## Mono/bidirectional electric shaft



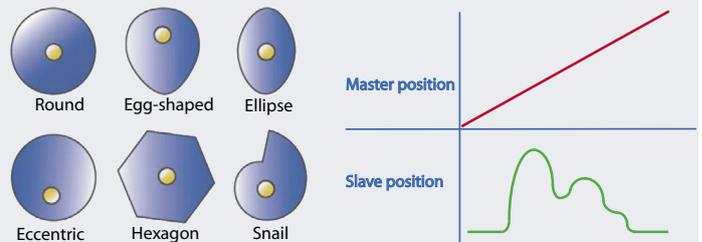
Mono and bidirectional electric shaft based on master signal tracking. This function allows the tracking both of an analog input  $0 \div 10$  V generated from a master PLC or from an analog sensor, and a digital signal generated from a master encoder. Furthermore the user can generate motor acceleration and deceleration ramps inside the drive.



## Electronic cam



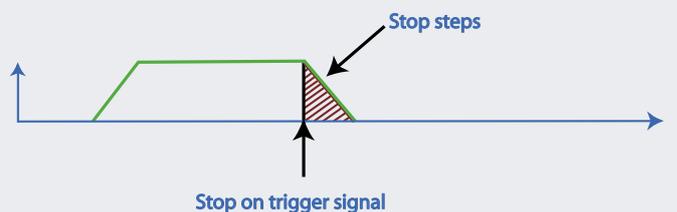
The creation of any electronic cam profile is performed through a wizard (guided procedure) within the eePLC studio software. Once programmed, the slave axis will follow the master axis, always synchronous to the defined cam profile.



## Stop on trigger

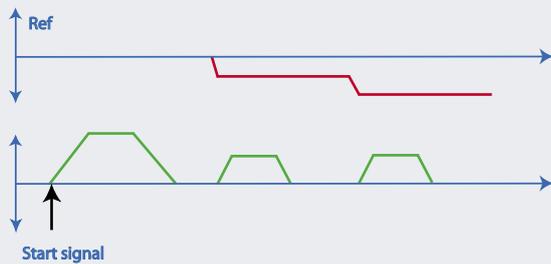


The drive commands the motor according to the programmed cycle motion and it performs a precision stop each time the digital stop signal is activated (for example, mick finder or label presence digital sensor closure). After stop signal activation, a number of steps can be configured within the drive and can be managed by HMI or PLC like all other motion parameters.



# and application control

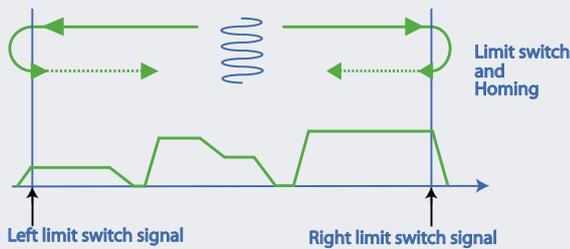
Target position tracking is achieved through an analog input, by configuring the analog voltage/motor position ratio through HMI or PLC.



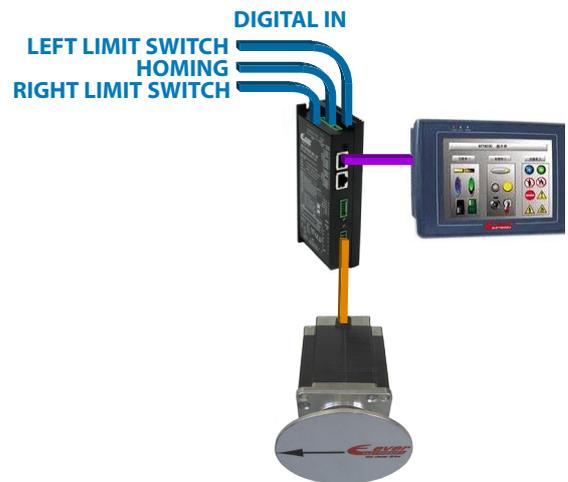
## Analog sensor position control



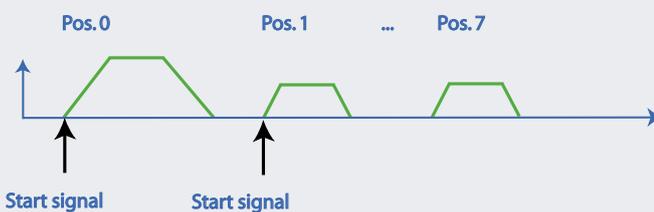
An intelligent positioning device with motion quotes and relative speed and acceleration profiles defined inside the drive. These profiles are obtained according to limit switch sensors and homing procedures. As an alternative, the motion profiles can be generated by external HMI or PLC.



## Motion control



They are configured inside the motor drive motion profiles and define: quote, speed and acceleration and deceleration ramps. Each profile execution is activated by an external master (PLC or digital switches etc) which switches the drive digital inputs.

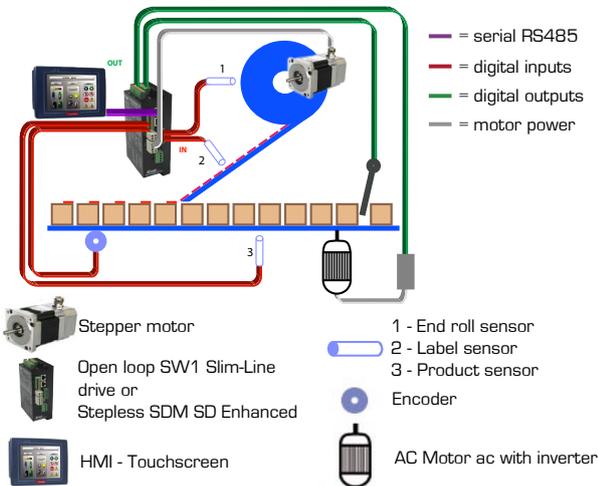


## Input positioning device



# Solutions for every type of labelling

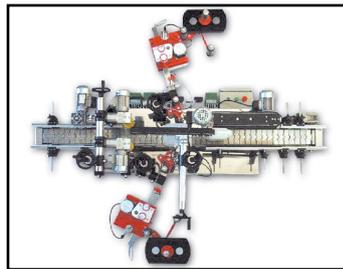
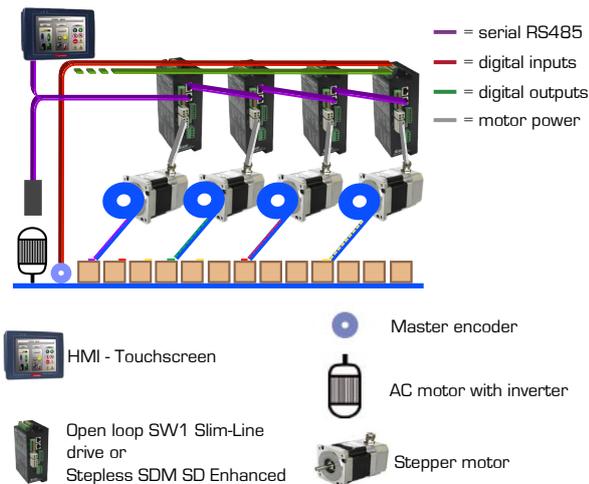
## Single head labelling system



Functions and performance:

- speed up to 80 mt. per minute using an open-loop solution;
- speed up to 120 mt. per minute using 'servostep' technology;
- precise positioning of the label on the product (+/- 0.1 mm) also at labelling speed variations;
- jump over missing label management;
- label length automatic reading;
- a filter can be programmed on the start signal to manage critical products which cause false starts due to their shapes;
- filter positioned on the sensor for the jump over missing label acquisition to manage critical labels (with microchips) which cause false missing label signals.

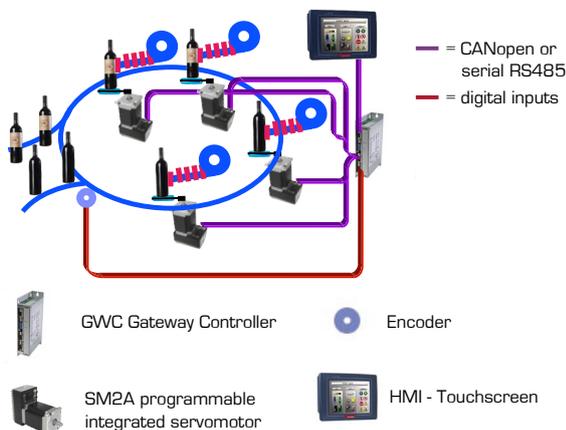
## Multi-axis labelling system



All the same performances obtainable from the single head labelling can be transferred to the multi-axis labelling, the solution consists of a SW1 for each labelling head (max 8) connected through RS485 interface to a VT series HMI.

When the machine's complexity requires control of side belt, top belt, etc. moved by inverter or brushless motors the solution can be added of a GWC. This controller is able to synchronize labeling heads working with high real-time mode and at the same time works as a gateway for the connection of the labeling with Profibus, EtherCAT, CANopen, DeviceNet or Modbus Plc.

## Rotary labelling system



The solutions for rotary labelling machines control allow high speed and high precision labelling of bottles and containers having different shapes and size. In addition to the management of more synchronous applicators (from one to four heads per machine), solutions are available for electronic cam management of the carousel which transport and direct the products, consisting of a maximum 32 plates.

# and for every type of product packaging



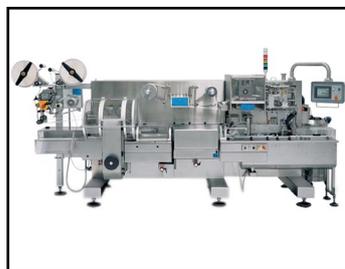
The "hot melt" solution for rotary labelling machines consists of advanced functions and can achieve high performance levels:

- speed up to 120 mt per minute with 'servostep' technology;
- highly mechanical simplification having the ability of worm shaft / unwinding in direct drive mode;
- precise positioning of the label on the product (+/- 0.1 mm) also with abrupt change in transport speed.



Complete solution for management and control of vertical flow pack packaging axis:

- film dragging;
- unwinding reel;
- product conveyor;
- cross-cutting and cross-welding;
- longitudinal welding.

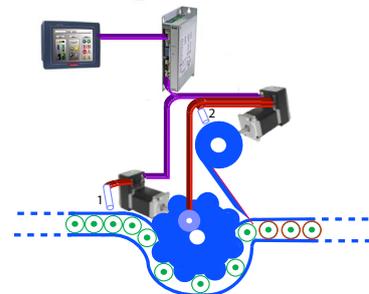


Complete solution for management and control of horizontal flow pack packaging axis:

- film dragging;
- unwinding reel;
- product conveyor;
- cross-cutting and cross-welding;
- longitudinal welding.

## Hot Melt

— = serial RS485  
— = digital inputs



GWC Gateway Controller



HMI - Touchscreen



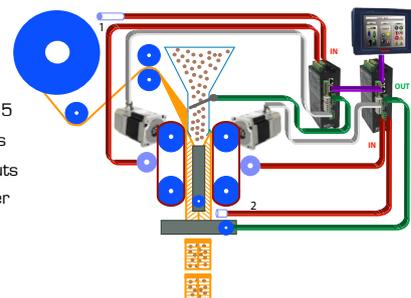
SM2A programmable integrated servomotor



Label and product presence sensor

## Vertical Flow Pack

— = serial RS485  
— = digital inputs  
— = digital outputs  
— = motor power



Stepper motor



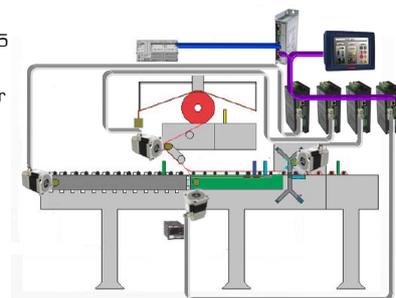
HMI - Touchscreen



Open loop SW1 Slim-Line drive or Stepless SDM SD Enhanced

## Horizontal Flow Pack

— = serial RS485  
— = Profibus DP  
— = motor power



Stepper motor



HMI - Touchscreen



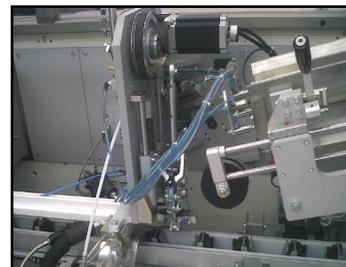
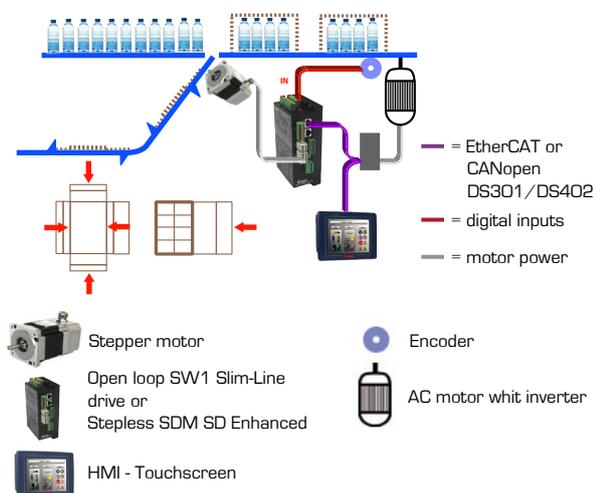
Open loop SW1 Slim-Line drive or Stepless SDM SD Enhanced



GWC Gateway Controller

# Other solutions for advanced packaging,

## Packaging machines (CAN DS301/DS402)



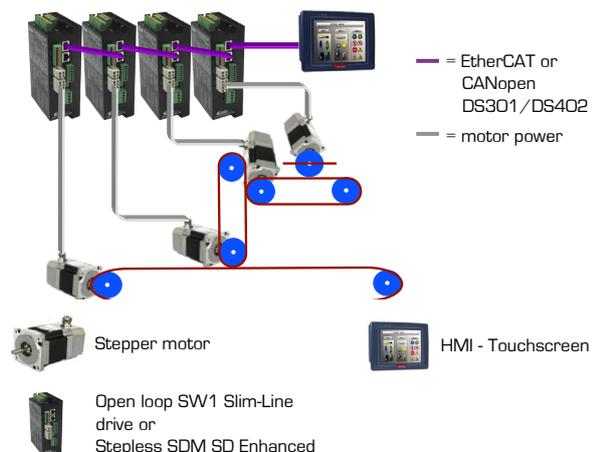
The Ever Elettronica ready-to-use solutions for packaging machines allow the following:

- board advancement;
- box shaping;
- box filling;
- box closure;
- labelling and packaging process quality controls.

Available operative mode:

- homing mode, profile velocity mode, profile position mode, interpolated mode, CSV, CSP.

## Palletization (CAN DS301/DS402)



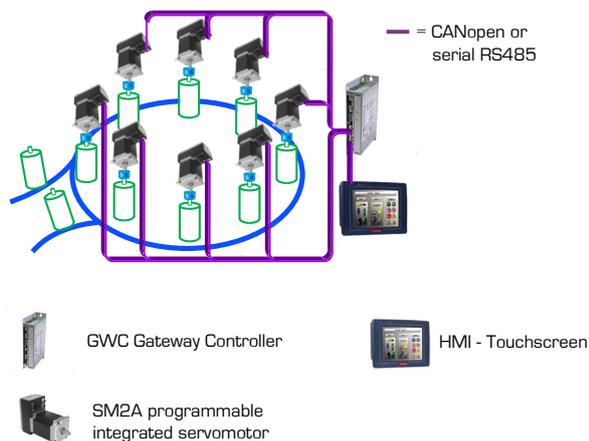
Thanks to strict cooperation with the main market leaders of the sector, Ever Elettronica has developed ready-to-use solutions for products sorting and conveying plants among which there are:

- products detection;
- products separation;
- products staking, loading and unloading;
- management of x - y - z - r axis.

Available operative mode:

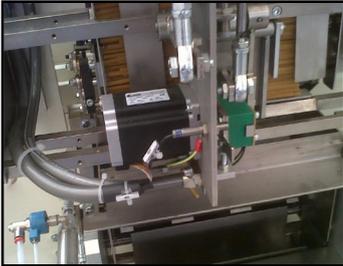
- homing mode, profile velocity mode, profile position mode, interpolated mode, CSV, CSP.

## Bottling and corking machines



Thanks to stepper motor torque control, Ever Elettronica can offer innovative solutions for various processes management such as: corking, filling, encapsulating, etc. offering a great compromise between high performance and flexibility, which can be obtained using servo-brushless motors, as well as the saving deriving from the use of mechanical or pneumatic solutions.

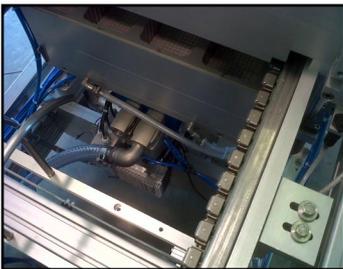
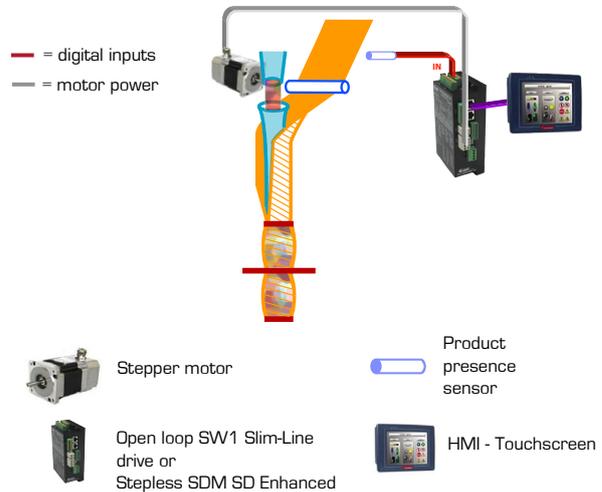
# dosing, thermoforming and format change



Application for product dosing management and control having the following characteristics:

- volumetric control with movements of a hundredth of a millimeter;
- dosing process with axis synchronism involved (see vertical flow pack).

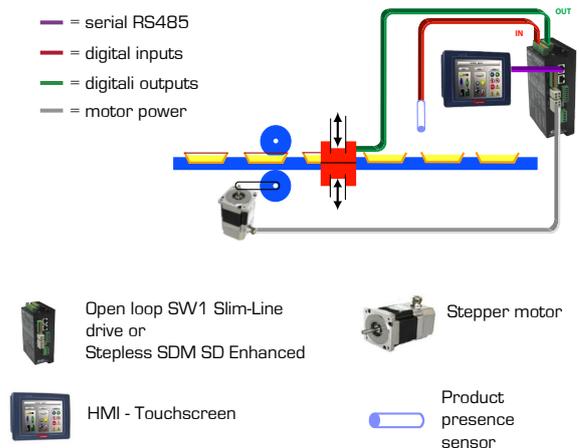
## Dosing systems



The ready-to-use solutions for thermoforming machines allow the following:

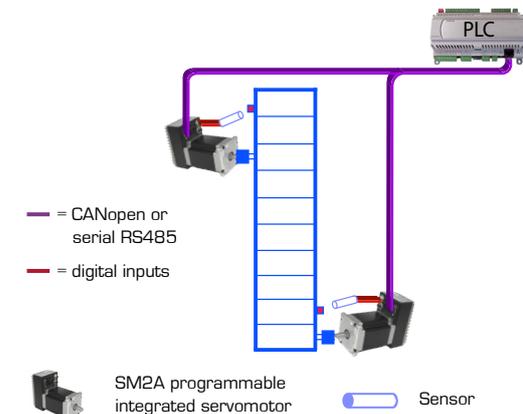
- product detection;
- precise positioning of the product to be welded;
- temperature management and welder activation;
- welding checking;
- product unloading.

## Thermoforming systems



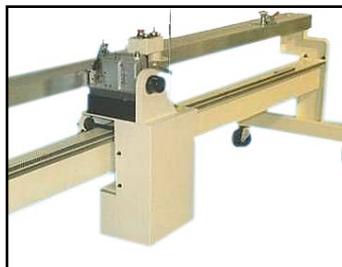
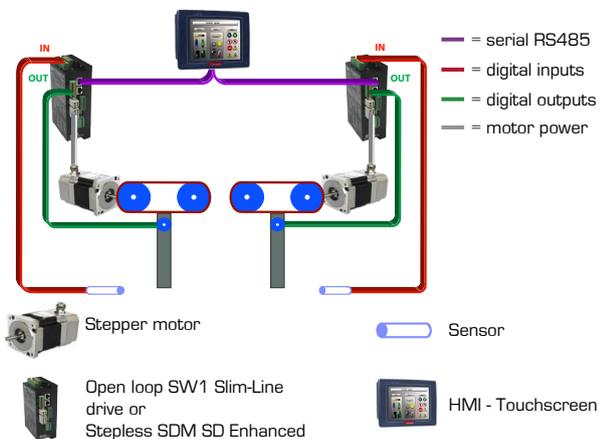
The format change process can be directly managed by PLC by means of quotes sent via fiellbus, or by selecting the quotes from a HMI device. It can be controlled in 'Stand Alone' mode using the programmable drive. Thanks to Ever Elettronica advanced drive techniques, it is possible to obtain speedy and precise format changes in both modes.

## Format change system



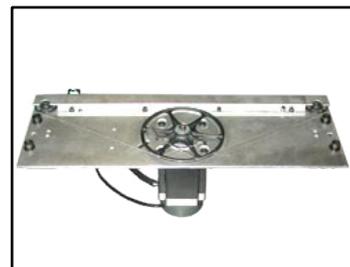
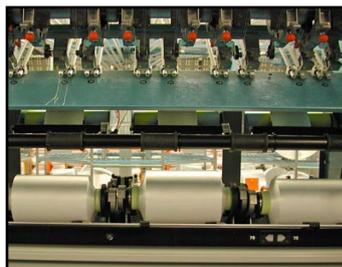
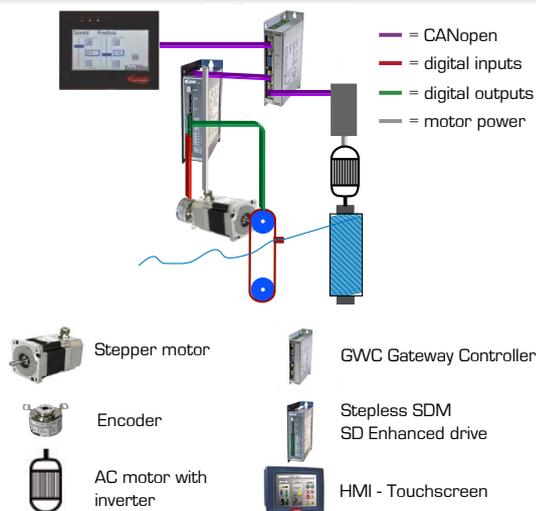
# Cutting edge applications for the textile industry

## Industrial stitching machines



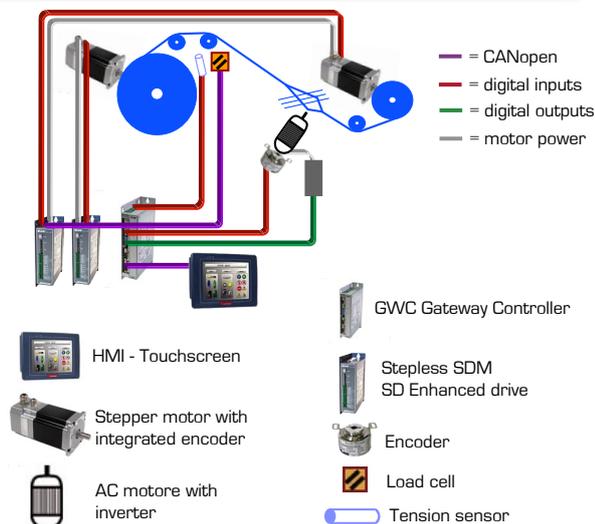
The applications for fabrics industrial stitching include ready-to-use solutions for mending, eyelet, buttonhole and stringing machines, with the ability to add new functions. In fact the possibility to customize its own machines and at the same time maintain its own know-how is extensive. These solutions can also provide highly versatile performance levels.

## Yarn guide for yarn winding



The preparation of yarn reels for dyeing, knitting, hosiery and textile, depending on the winding angle, is possible using the following three methods: random crossing, precision crossing and step precision crossing. Moreover, Ever Elettronica solution allows to obtain an excellent and uniform reel density, by checking with its own f4d2 firmware acceleration and deceleration ramps, electric current in the motor windings to avoid components overheating. By means of the complete setup software, it is very easy to set all the mechanical parameters and all the other very important spooling functions such as: tapering, disrupt, yarn distribution on reels, etc...

## Beams and roll-pulling machines



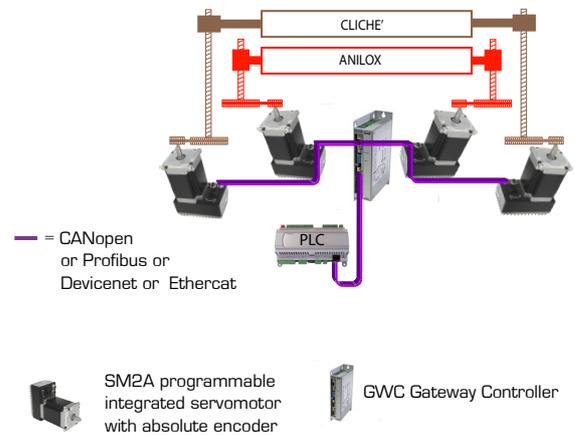
The plug and play solution for textile looms can control the beam and the roll pulling machine. Thanks to the GWC controller the system guarantees a perfect synchronism of the two operations and automatically manages the change of one or more textile parameters, realizing a high weaving regularity also dynamically changing some parameters such as: weft density, warp tension and fabric winding. The solution can be modified and easily installed both on modern looms through PLC interface via fieldbus (Profibus, Devicenet, Canopen, Modbus), and mechanical looms retro-fitting without PLC. Finally, the use of closed-loop stepper motors allows for similar performances, but at a more competitive price compared to three-phase brushless motors solutions.

# for printing and post press



Each printing group can automate the anilox cylinders advancement, cliché holder, cross and longitudinal registers, by means of six drives and motors controlled by a GWC unit. The latter, acting as a gateway, interfaces with other machine components via fieldbus (Profibus, Devicenet, Canbus or Modbus), relieving the main PLC work and provides a flexible solution for the various specifications involved. Every time the machine starts, the use of absolute encoders allows an automatic calibration of all adjustments, thus reducing the intervention of highly specialized operators.

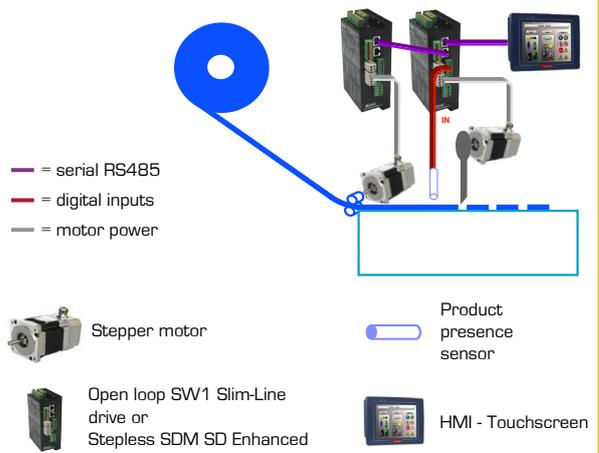
## Registers adjustment



Adaptable solutions for the management of various cutting units such as:

- cutting units for polyester:
  - precise positioning of the loom on which the yarns are laid (also with inclined sheets);
  - frame tilting for 5mm sheet cutting;
  - positioning real measurement;
  - advanced functions: cutting speed adjustments, yarn breakage control, etc.;
- small paper cutter:
  - sheet advancement and positioning with precise cutting command;
- flying shear:
  - product in movement cutting by means of speed tracking and product positioning into an electric or cam shaft.

## Automatic cutting units

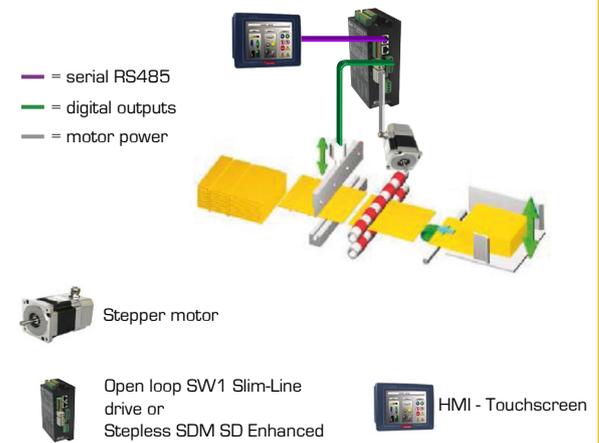


Solutions for creasing machines allow the following:

- precise positioning of the sheet for creasing with speed up to 120 m/min.;
- sheet folding activation;
- machine protections management: sheet length, number of sheets to crease, pre-stop control, etc.;

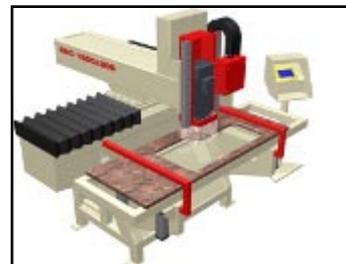
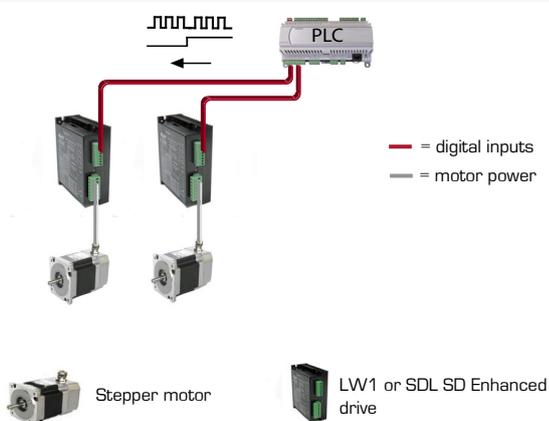
In particular the stepper motors solution can perform micro movements and precision stops, allowing to simply and linearly perform creasing operations in any part of the sheet.

## Creasing machines



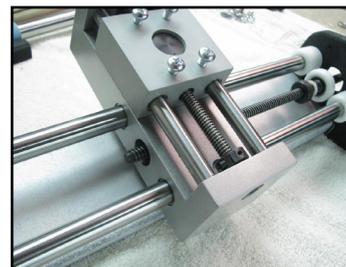
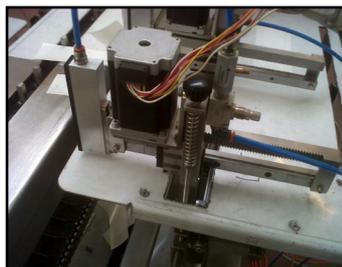
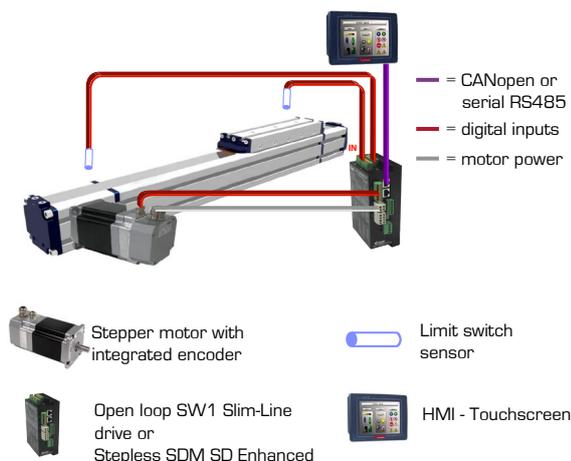
# Machine tools and CNC applications

## CNC interpolators



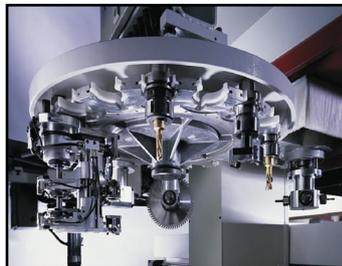
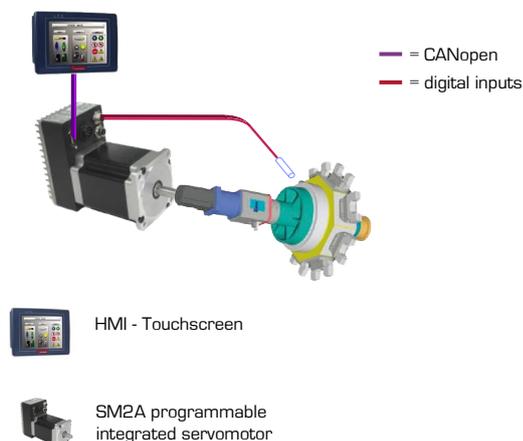
The solution allows a complete freedom of programming through its own master PLC. In this way, drives perform the required positioning according to the standard clock and direction impulses, relieving the PLC from calculations for acceleration and deceleration ramps.

## Linear guides



The linear guides control can be managed by PLC or HMI by sending quotes to the drive using a fieldbus or can be analyzed by the programmable drive in 'stand alone' mode. The specific software functions in our drives allow in both modes, an easy management of positioning following the start and limit switch, homing sensors, etc.

## Turn table with tool changer



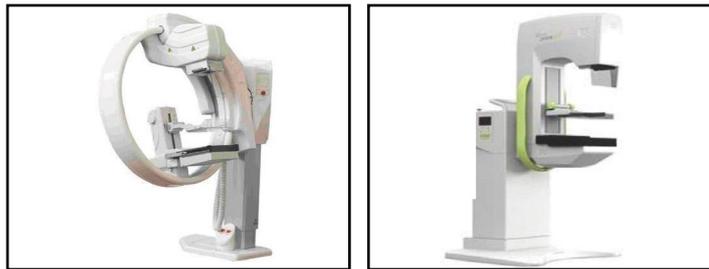
The turn table with tool changer is a classic application of numeric control machines or advanced lathes. It can be managed as a 'stand alone' application by means of a HMI interface, or using a fieldbus signal can be controlled by a master PLC controlling the tool change simply.

# X-Ray and photovoltaic systems



This innovative solution, in a single board, allows the execution of various programmes, from simple panoramic/cephalometry, to TMJ examination, always in compliance with current regulations on electromagnetic compatibility and emissions. Using the DRK board it is possible to control up to 4 axis which can be interpolated and reach high precision performances up to hundreds of a degree with electronic cams set by software. The DRK board is programmable through TRI.P.O.S. environment and can control:

- rotation axis;
- approach and distance axis from the column (X axis);
- box axis;
- ceph. axis.

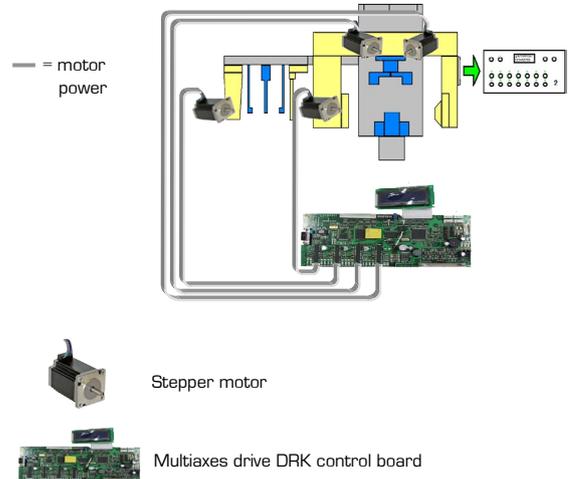


The application is possible thanks to the M5A modular drives equipped with fieldbus and connected to the master PLC, which has the general control of the machine. By simply using these open frame drives, a high degree of control and versatility of the main functions is achievable, furthermore they can be widely customized.

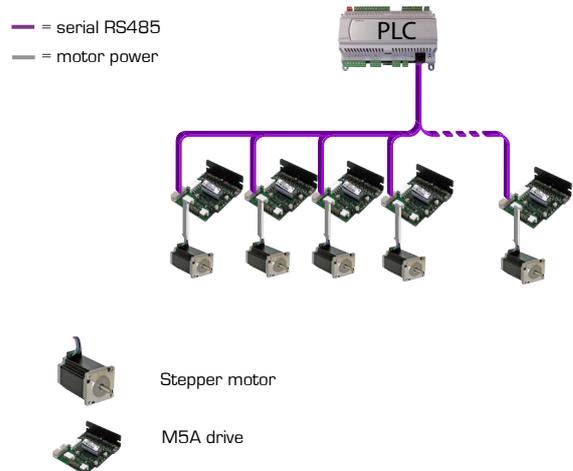


The solutions for photovoltaic modules orientation are available both for single or 2 degrees of freedom systems. The use of integrated logic drives, allows the astronomical orientation, based on the system position coordinates, or by detection, in which the command is generated according to the information of a sensor which detects the exact position of the most luminous point in the sky. A plant composed of a small number of sails can be directly monitored by a touchscreen terminal interfaced with each drive through a 485 serial, thus definitely containing solution costs. Plants consisting of more units can centralize the control of each sail by means of an external PLC controller, connected to the drives network via RS485 serial.

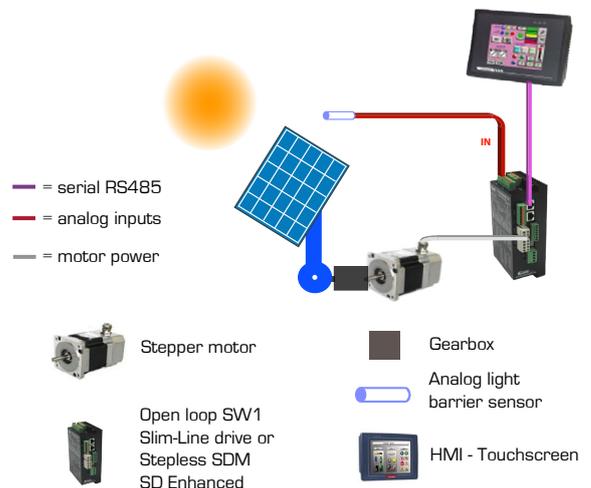
## All-in-one for dental diagnostics



## Radiology diagnostics

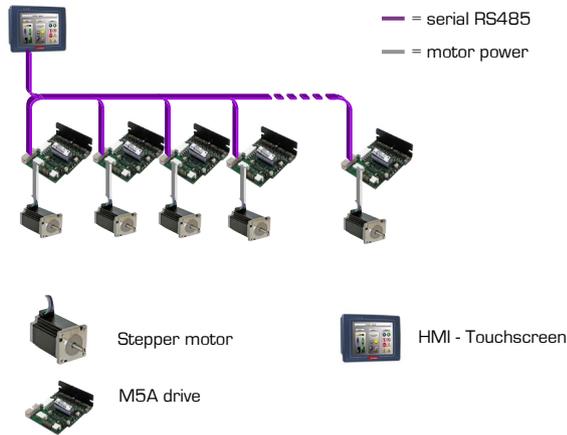


## System for photovoltaic applications



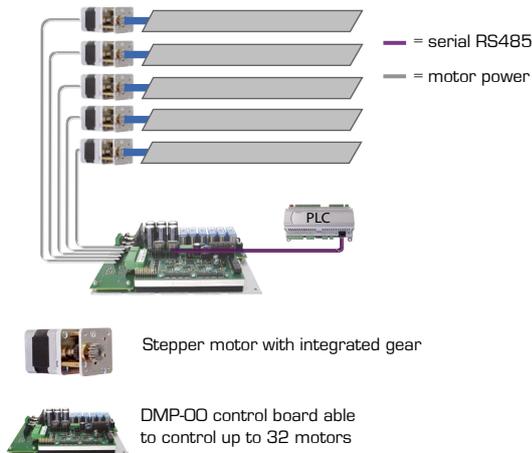
# Printers, domotics and video surveillance

## Printers



The use of stepper motors for the various functions of professional printers is simplified thanks to the versatility and small size of the M5A modular drives equipped with Modbus fieldbus and connected to the master PLC master or panel-PC.

## Sun blades control for domotics

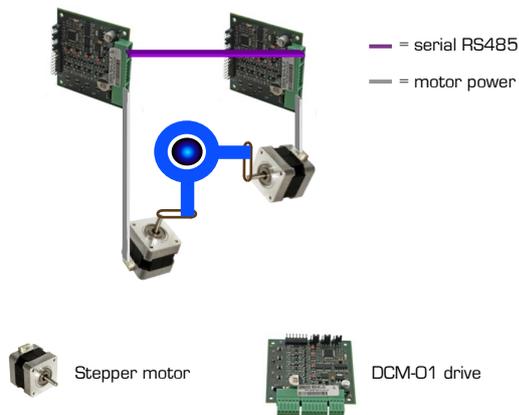


Thanks to the DMP-00 board and stepper motors ad hoc designed, it is simple to realize rolling shutters and sun blades orientation automation systems in a domotic environment.

Solutions characteristics:

- modularity thanks to the ability of controlling up to 32 rolling shutters or sun blades for each board;
- fluid and low noise movements;
- ability to interface with the PLC using both Modbus and digital inputs;
- internal diagnostics;
- great reliability even in difficult environments.

## Security cameras



DCM-01 drives can be used in applications for the pointing of video surveillance cameras. Due to their intrinsic characteristics, they perfectly adapt to the demand of fluid and precise movements.

# Other automation systems

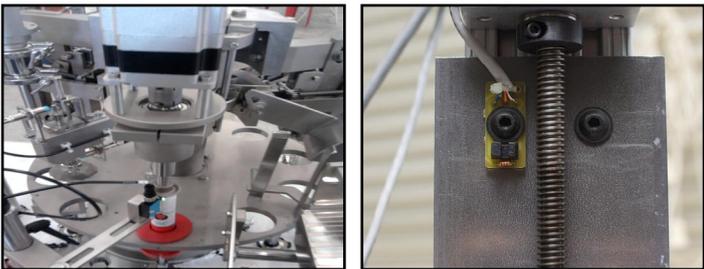
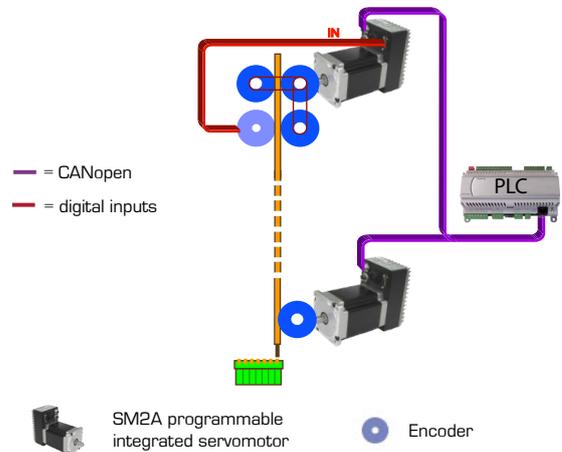


The solution for this kind of machines controls the wire advancement by means of a stepper motor driven in a closed loop, capable of adjusting the stability of the wire speed emission, checking the possible slide through an encoder and allowing a precise and repetitive working process.

Axis main functions:

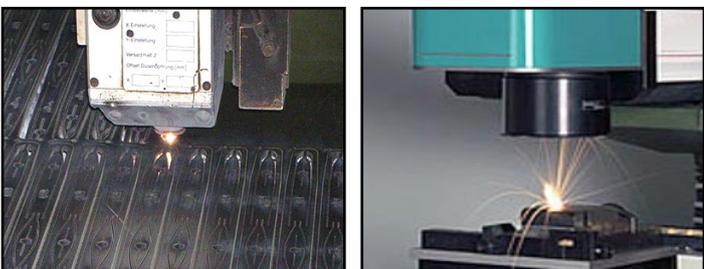
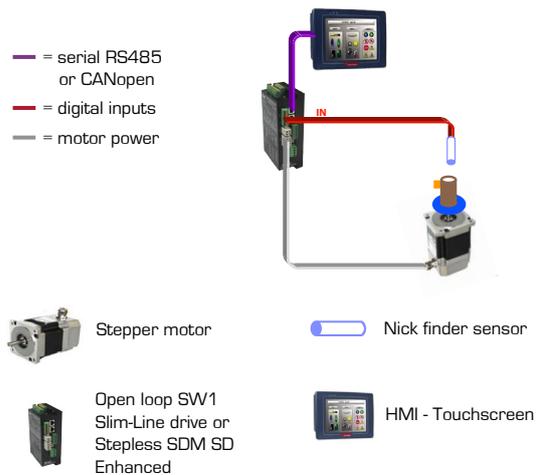
- wire sliding correction;
- machine PLC program simplification by commissioning the control functions to a GWC controller in real time;
- wire and machine list reduction by means of integrated SM2A servo drives line.

## Automations for electrical wiring



The orientation system based on searching, the nick on the product to be positioned, through appropriate sensor, is able to offer high performances in terms of speed and precision. This user-friendly solution allows to simplify many applications in the industrial automation field.

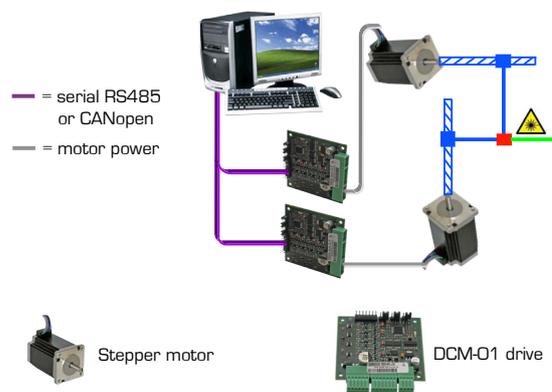
## Nick finder for orientation



The solutions for the control of scanner or laser emitters for materials workings normally uses DCM-01 drives, designed for a stepper motor fluid, without vibrations upon blockage and highly precise control. The main characteristics are:

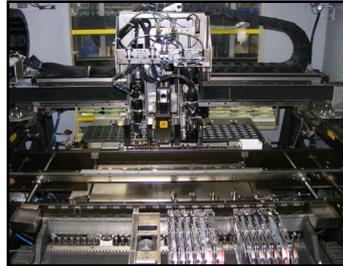
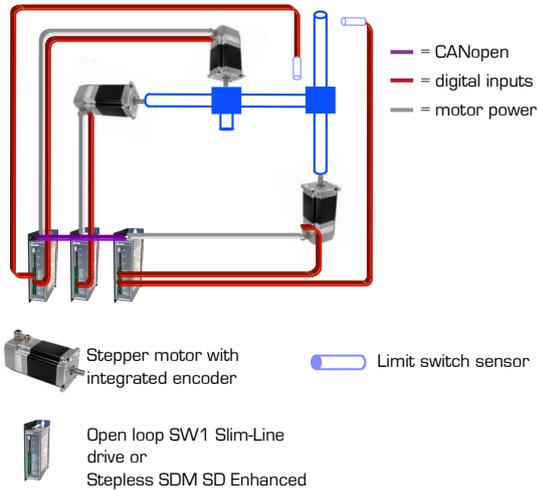
- smoothing movements;
- absence of vibrations when the motor is off;
- RS485 Modbus serial fieldbus and digital and analog inputs for interfacing with Pc, Panel Pc, HMI, etc.;
- open frame engineering to reduce sizes and offer reasonable costs.

## Laser Scanner



# Other automation systems

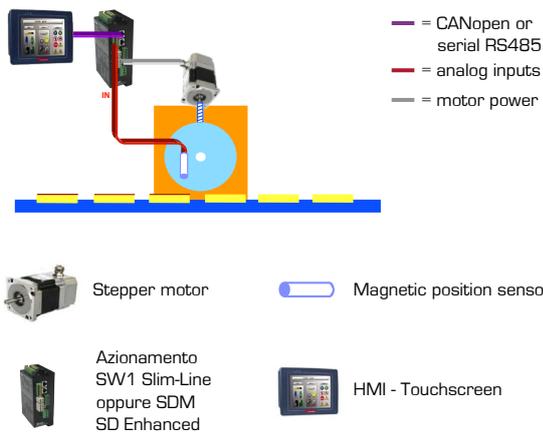
## Pick & place



The solutions proposed for pick & place machines automation allow:

- precise positioning with fast accelerations/decelerations thanks to the stepper motor closed loop control;
- top rotary speed at 3000 RPM;
- no loss of pace;
- sensor reading and management for positioning control (homing, limit switch etc.);
- flexible machine PLC interface using: modbus, canbus, clock & direction, I/O;
- cost effectiveness compared to the same performances obtained by brushless drives.

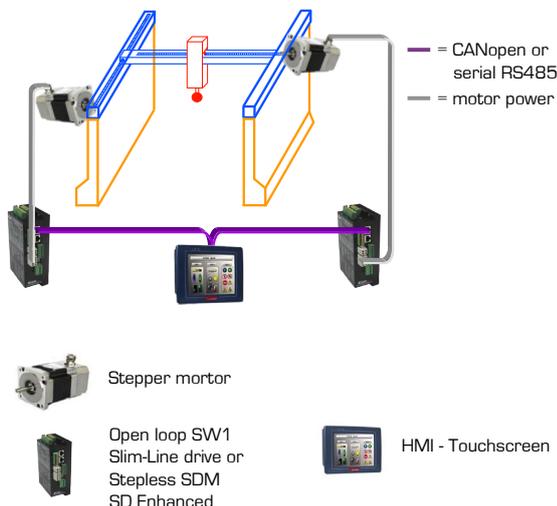
## Serigraphic machines for ceramics



The solutions for the control of ceramic printing machines have the following characteristics:

- initial calibrating procedures are directly carried out by drive (homing);
- positioning of the printing ribbon from a magnetic sensor through position closed loop;
- parameters can be set from PLC or HMI.

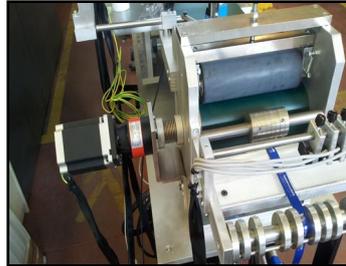
## Marble working processes



The solutions for marble working machines automation vary a lot according to the machine type, from the a, y, z table control, to the creation of format change, to tool changing. The main advantages are:

- precise movements without oscillations;
- absence of vibrations when the motor is off;
- ability to manage limit switch and homing sensors directly from the drive;
- interface flexibility with PLC and HMI (modbus, canbus, I/O);
- high performance/price ratio.

# Other automation systems



Complete solution (with HMI) or can be interfaced to PLC through fieldbus for the management of print label's process.

Ever Elettronica solutions completely fit to different axes for this kind of machines:

- paper drag;
- hot stamping foil;
- screen printing;
- hologram transfer;
- die cutting.



Full digital "Plug & Play" solution for linear and rotative filling machines control.

Main characteristics:

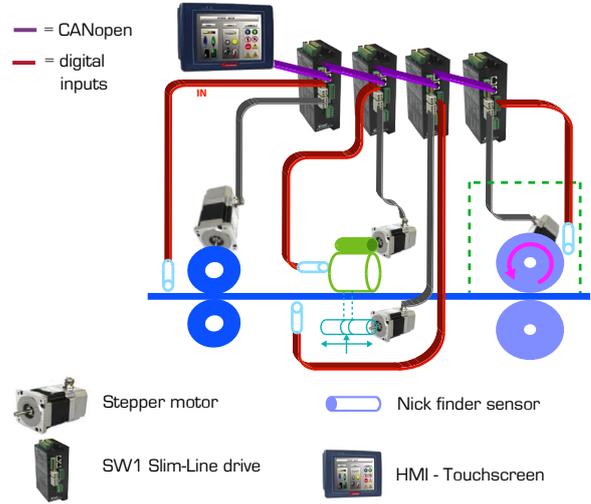
- can be controlled up to 30 fillers by each controller;
- servo-motors with high number of poles with 1500 rpm's maximum speed;
- programmable electronic cam for filling;
- homing modalities: on sensor, on mechanical block or checking fluximeter;
- filling could be started at a specific corner of the carousel;
- movement's profiles could be set according to the volume and the carousel position;
- product presence check before fill, activable at a specific corner of the carousel;
- absolute encoder CANopen can be used to detect the position of the carousel during the machine's start.



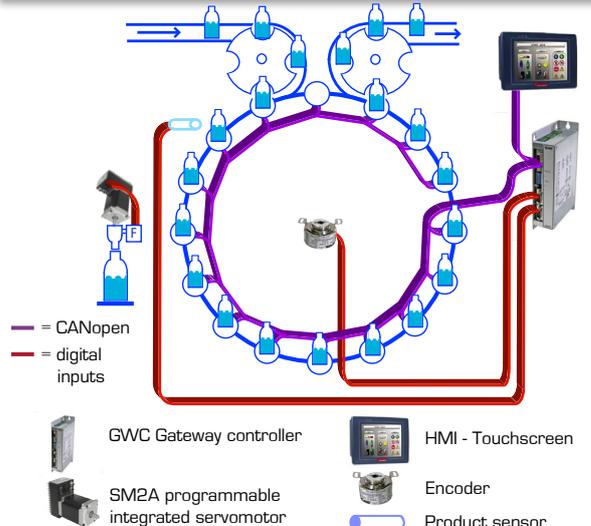
Complete solution, stand alone (with HMI), can be interfaced to PLC through fieldbus for the management of caps orientation process:

- cap's orientation at fixed/synchronous pitch with positioning' sensor;
- sensor able to recognize the type of the cap;
- solenoid valve's management to select the way through which the cap can get out (2 canals orientation);
- management of others typical signals (bevel, full line, accumulation, etc);
- simple mechanical coupling (direct drive, low gear ratio ex. 1.3).

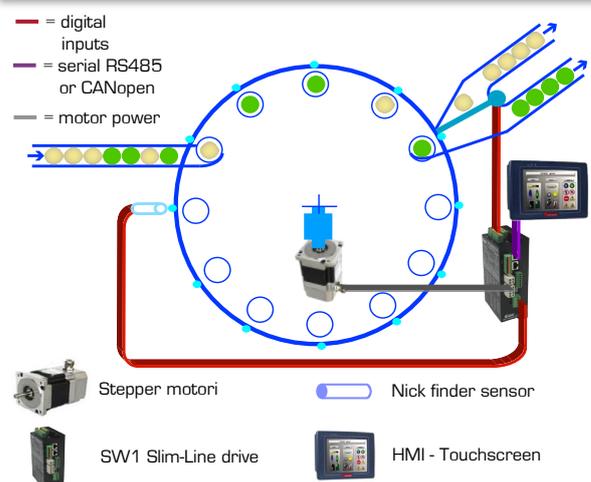
## Processing self-adhesive labels



## Filling machines



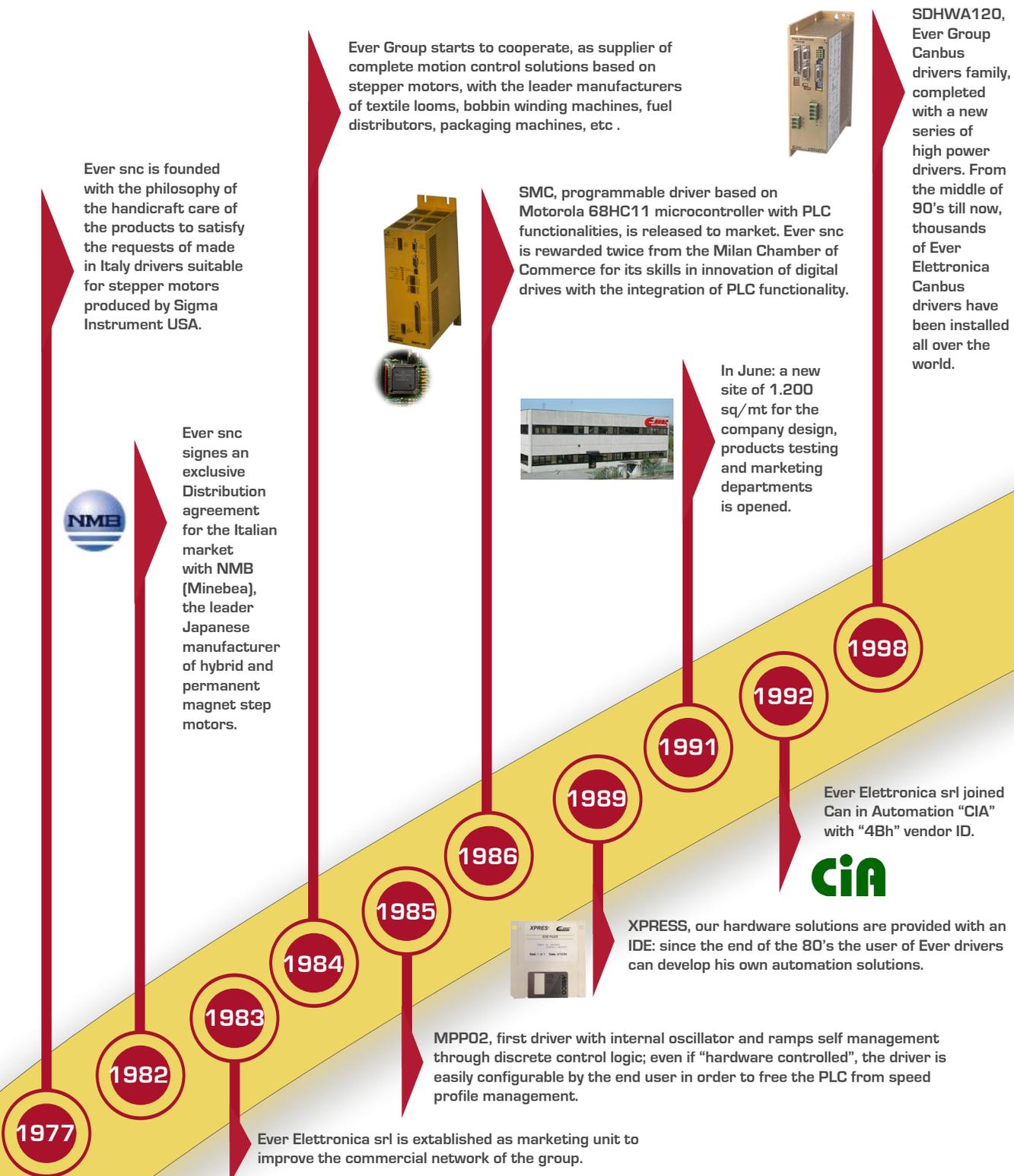
## Orientation caps



# Our history



Our solutions make yours easy



1977

Ever Elettronica srl is established as marketing unit to improve the commercial network of the group.

1982

Ever snc is founded with the philosophy of the handcraft care of the products to satisfy the requests of made in Italy drivers suitable for stepper motors produced by Sigma Instrument USA.

1983

Ever snc signs an exclusive Distribution agreement for the Italian market with NMB (Minebea), the leader Japanese manufacturer of hybrid and permanent magnet step motors.

1984

Ever Group starts to cooperate, as supplier of complete motion control solutions based on stepper motors, with the leader manufacturers of textile looms, bobbin winding machines, fuel distributors, packaging machines, etc .

1985



1986

SMC, programmable driver based on Motorola 68HC11 microcontroller with PLC functionalities, is released to market. Ever snc is rewarded twice from the Milan Chamber of Commerce for its skills in innovation of digital drives with the integration of PLC functionality.

1989



XPRESS, our hardware solutions are provided with an IDE: since the end of the 80's the user of Ever drivers can develop his own automation solutions.

1991



In June: a new site of 1.200 sq/mt for the company design, products testing and marketing departments is opened.

1992



Ever Elettronica srl joined Can in Automation "CIA" with "4Bh" vendor ID.

1998

SDHWA120, Ever Group Canbus drivers family, completed with a new series of high power drivers. From the middle of 90's till now, thousands of Ever Elettronica Canbus drivers have been installed all over the world.





GWC: this master controller, featuring Canbus and Modbus interfaces, Profibus gateway, programmable with IEC1131 ST "TRIPOS" language, helps the integration of Canbus Ever drivers into complex machine control systems.



SDMWD170, for the first time in Italy is released a step motors drive with closed loop control of torque, speed and position.

2002

2003

2005

2007

2008

2012

2013

2015



**TITANIO**  
VECTOR · STEPPER · DRIVES

Our new "state of the art" vector drives based on ARM C. M4 DSP technology.



"High Efficiency" motors. Our new HE hybrid stepper motors line with torque performances 40% higher than standard motors in standard sizes and at same price.



35 years of activity anniversary is celebrated looking at the future with the registration to CIA ETG and with the first EtherCAT SW1 driver.

**eePLC Studio**

eePLC, visual programming environment for SW1 drivers with integrated PLC. This software, resulting from our 30-years experience in design of tailored solutions development, can work as unique and user friendly tool to allow our customers to develop themselves complex applications for their machines based on our drives.



Changzhou Ever Electronics Motion Control Technology, chinese AIWEI, is set up as Ever Elettronica srl WOFE to give technical and commercial support to the customers of the Group in Asia market.



Ever Elettronica srl, according to the new manufacturing mission of the branch, sets in its new facility of 2.000 sq/mt in Lodi a SMD and THD components assembly line provided with products ICT and functionality ATE (automatic testing equipments). Our drivers are produced under our direct control; a strategic step forward allowing us to offer to our customers quality, flexibility and fast delivery.



*"We were born with Italian electronics for industrial automation and we paced as a protagonist all the technology and global way from the 70's to our days, trying to support our customers not just as a components supplier but as a partner able to provide clever solutions to their automation problems".*

Ing. Felice Caldi

**EVER snc**

Headquarter

Via del Commercio 2/4 - Z.I. San Grato  
26900 – Lodi (LO) - ITALY  
Tel. ++39 0371 412318  
Fax ++39 0371 412367  
infoever@everelettronica.it

**EVER Elettronica srl**

Production Unit

Via del Commercio, 9/11 - Z.I. San Grato  
26900 – Lodi (LO) - ITALY  
Tel. ++39 0371 413260  
Fax ++39 0371 412367

[www.everelettronica.it](http://www.everelettronica.it)

