

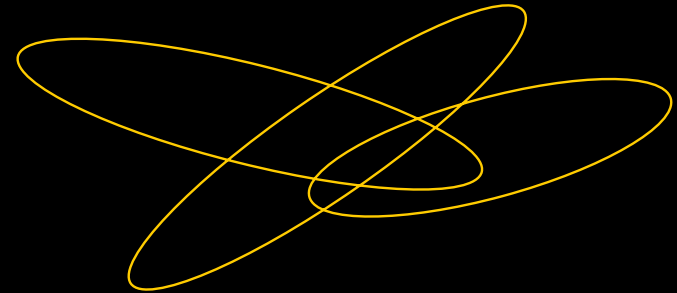
our solutions
make yours easy

***E*ever**
ELETRONICA

- Group Profile
- Servostep Technology
- Applications

the clever drive

Group Profile



Ever Elettronica Group

- Design, Commercial and Financial departments:

Ever di Ing. Caldi & C. snc
Via del Commercio, 2/4
26900 - L O D I (LO) - Italy



- Production, Assembling, Test and Warehouse depts:

Ever Elettronica srl
Via del Commercio, 9/11
26900 - L O D I (LO) - Italy



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Fax 0039 0371 412367
web <http://www.everelettronica.it>
e-mail infoever@everelettronica.it

- China branch:

Changzhou Ever Electronics Motion Control Technology Co., Ltd. (Aiwei)
R410 Building A, 25 Middle ChangJiang Road
New North Distrct, Changzhou 213022,
Jiangsu Province, People's Republic of China



Phone 0086-519-5162177, 5162507, 5166917
Fax 0086-519-5160587
web <http://www.everelectronics.net>
e-mail: info@everelectronics.net



Ever Elettronica Group

- In business since 1977 with constant growth until mid 2008.
- Within end of 2011 full recovery of turnover drop of 2008-2009.
- In 1984 establishment of Ever Elettronica srl.
- In 2003 set up of in house production facilities.
- In January 2007 opening of the branch in China.



Mission

- Ever Elettronica is committed to design motion control solutions through stepper and brushless synchronous motors with the following features:
 - smart, compact and zero defects;
 - standard, open to various field busses, or customized to target applications;
 - safe and reliable in all working conditions;
 - optimized in energy consumption and enviromental impact.
- Our commitment to our clients is to give them a ***real competitive advantage***, maximizing the return on their investments in quality products and services.



Mission

- The foundations of our industrial strategy are:

- a 360°partnership with our customers and suppliers to promote any opportunities of our and their growth;
- the product and process innovation through the implementation of cutting-edge technological advances in performance and price;
- the continuous search of design solutions optimized in time to market, development and production costs;
- the use of technologies 'best in class with reference to the published standards of excellence' to broaden our range of products, services, processes and support.



- The success benchmark tangible of our continuous efforts towards improvement and research guided by customer satisfaction, is the growing number of our not random clients.



Ever Elettronica worldwide

- Our best references located in the major european, asian and other eastern countries, belong to various industrial sectors including:

- Textile
- Labelling
- Packaging
- Medical
- Printing



- All our customers are technically and commercially supported by product engineers and export managers.



Ever Elettronica worldwide

- Ever Elettronica in the world



Products

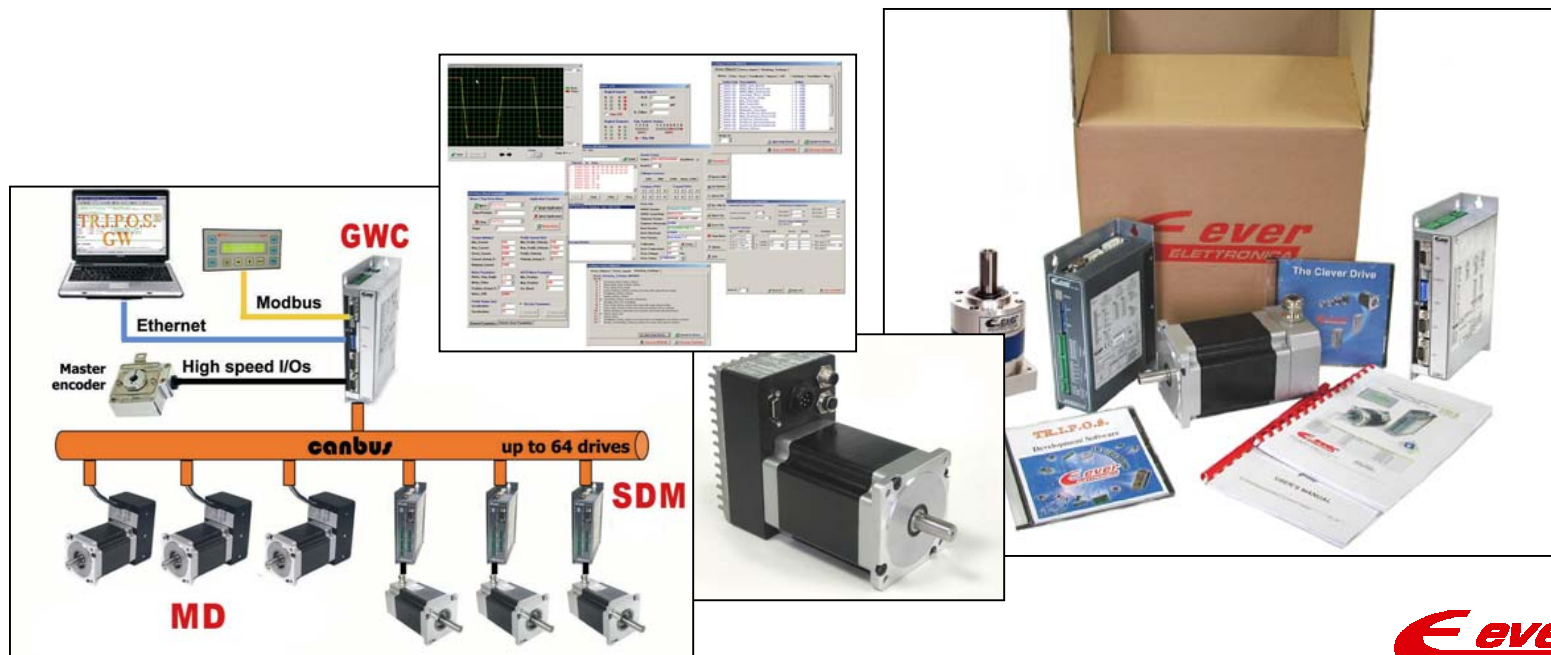
- Single-multi axes drives for motion control through synchronous motors.
- **'Full Digital'** standard drives or intelligent drives (with built-in PLC) and firmwares for “flexible” drives interfacing.
- PC software to friendly interface and customize our drives.
- Pre-post sale products support and maintenance.
- Products customizations meet special customer requirements.



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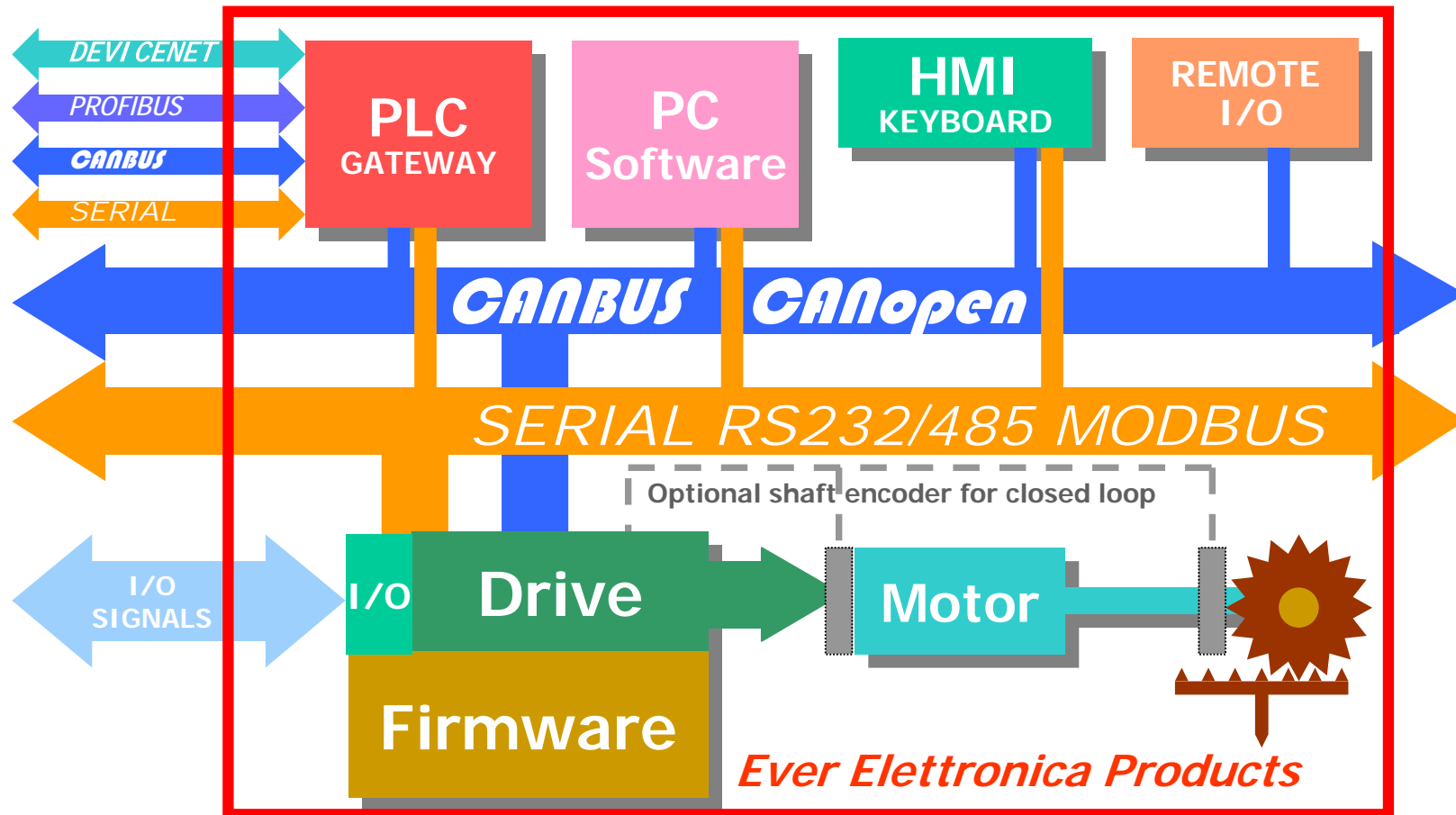
Products

- Ready to use product systems, based on different types of motors:
 - specialized for application areas;
 - open to various field busses;
 - subject to considerable use support;
 - supported by software tools for easy installation.



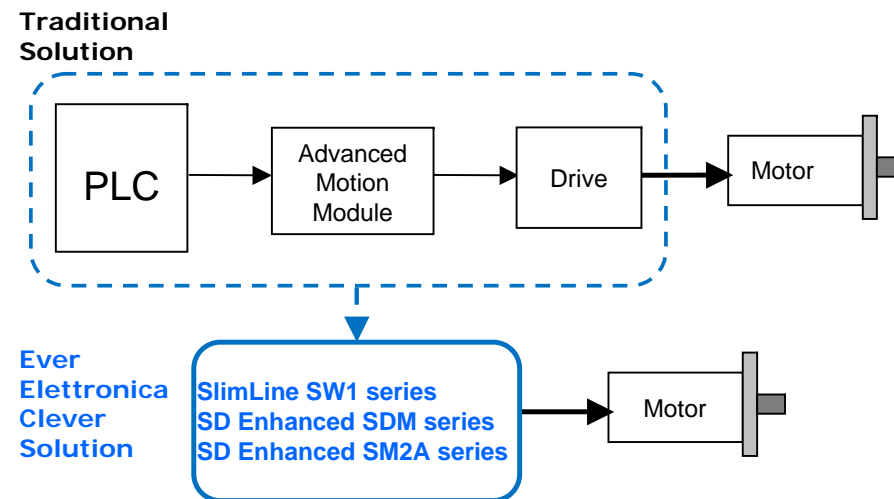
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EVER's products schematic



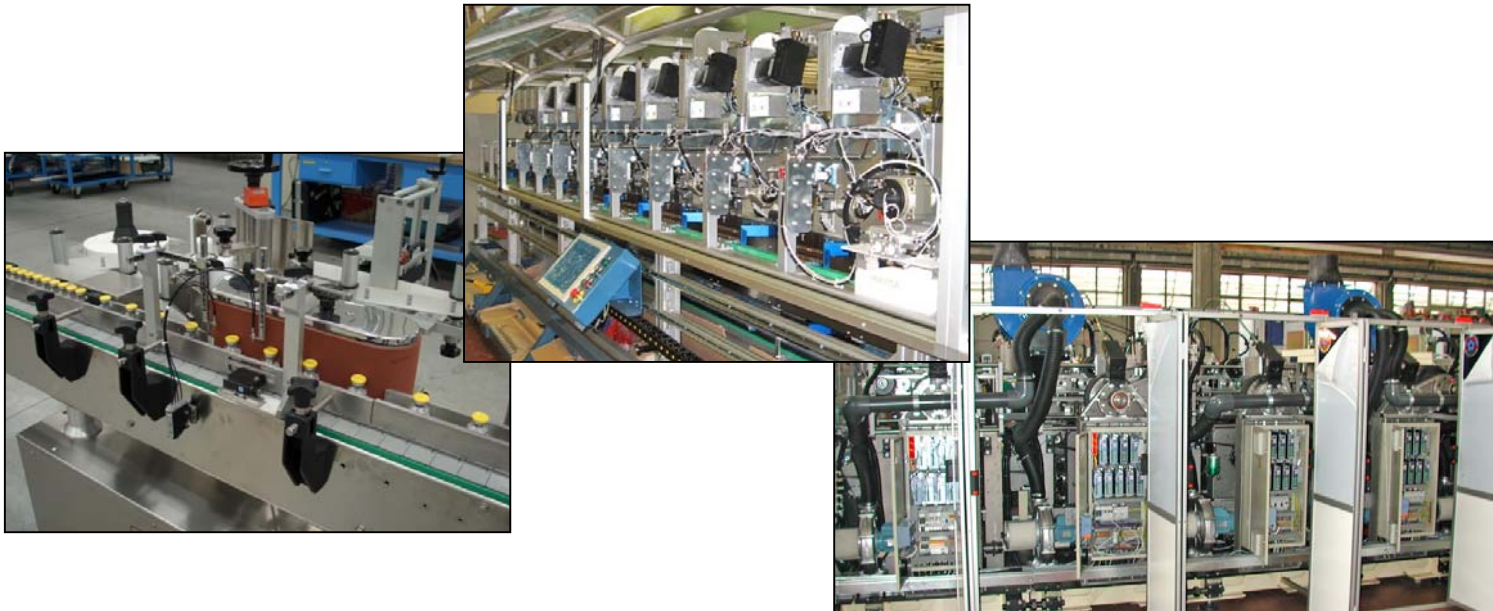
The clever drive

- **The clever drive** means intelligent drives and software technologies in innovative control of motors with high poles count: Servostep f⁴d² firmwares, closed-loop of torque-speed-position, turnkey and customizable applications software.
- All our devices feature local intelligence that optimizes their performance, manages the movement by itself or under the supervision of a master controller, communicates with other devices performing real-time diagnostic monitoring of operating status.



Target customers

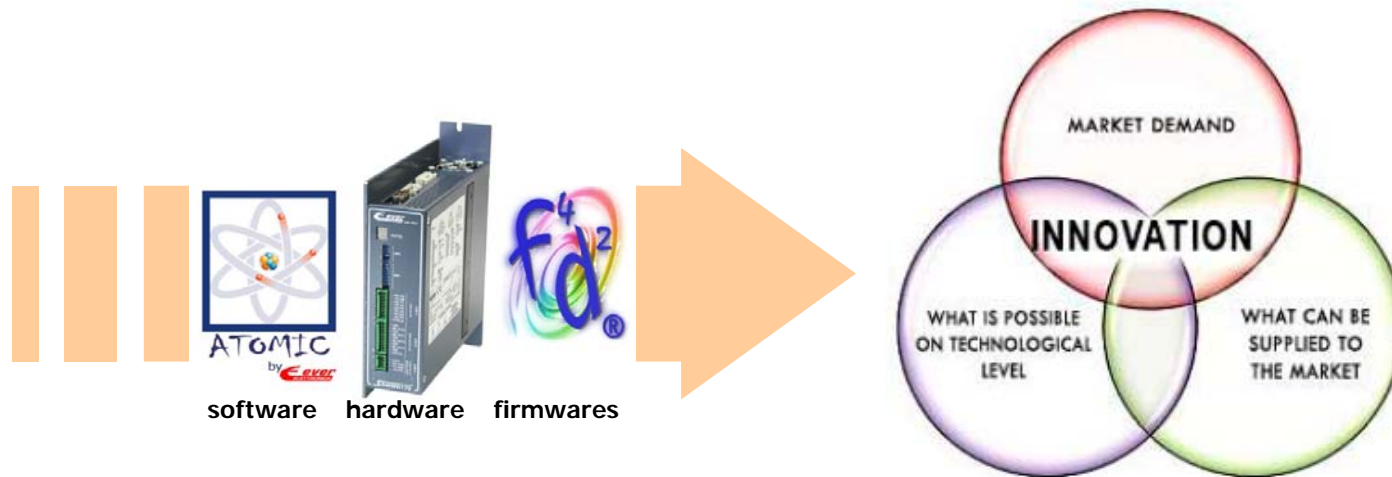
- Users of fractional motors (power ≤ 1000 watts) looking for customized motion control solutions, open to recognize a 'fair price' for innovative products offered by Ever Elettronica.



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Innovation

- Using technology solutions advanced in performance and price.
- Monitoring mission critical solutions of leading competitors.
- Widening products range to respond to specific requests of clients or market.
- Spreading Ever Elettronica innovation concepts (the stepping motor as a synchronous motor with a high number of poles).



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Process innovation

- Project solutions optimized for:

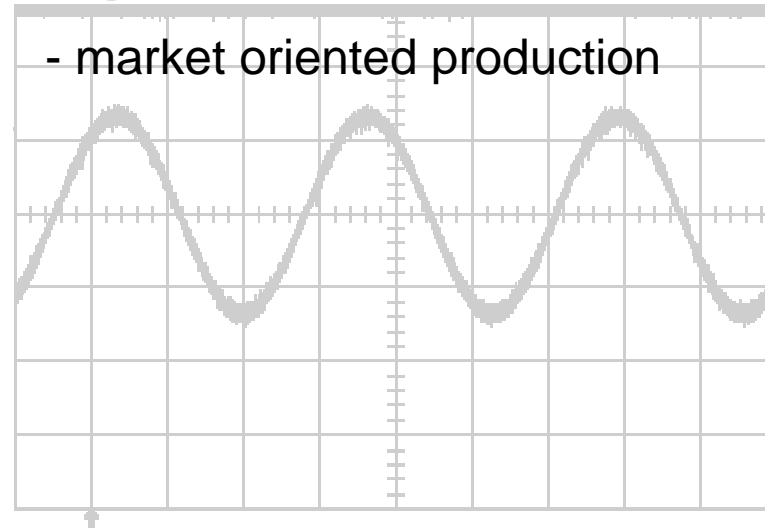
- time to market

- development costs

- production costs



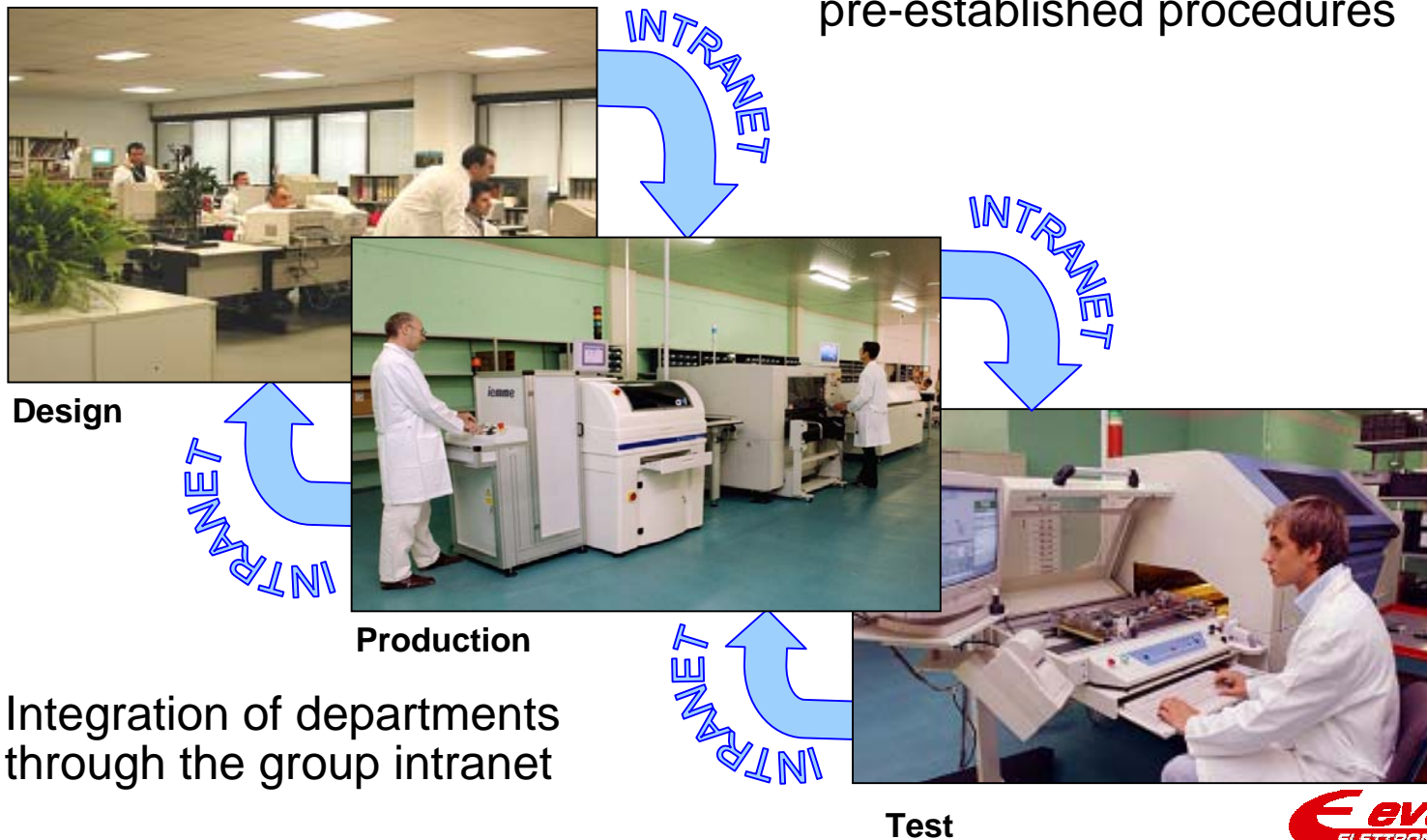
- market oriented production



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Secure processes integration

- The products quality is monitored at every stage of the production process, from design to testing, following precise and pre-established procedures



- Integration of departments through the group intranet

Standard references

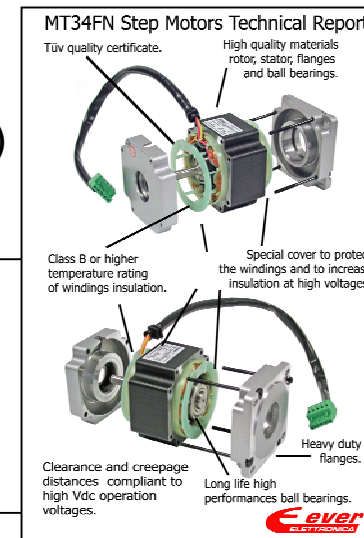
- Compliance with international standards:
 - I/O circuit: EN61131-2 specifications;
 - Connections and Fieldbusses: RS232 / RS485 / CAN-Bus
 - Software: EN61131-3 specifications for programmable drive supporting the standard motion profiles;



Member of
PLCopen

Standardization in Industrial Control programming

- CEI directives of motors and drives:
 - 89/336/CEE: EMC directives
 - 73/23/CEE: low voltage directives (Safety)



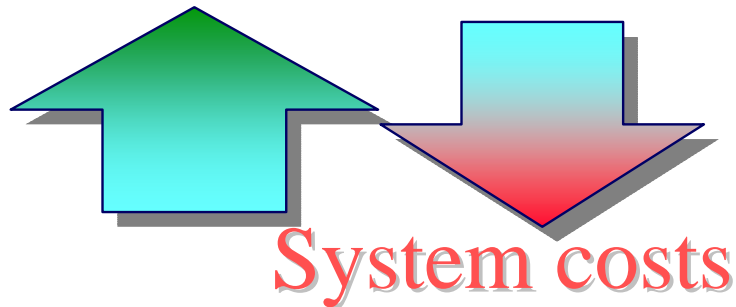
Tüv quality
compliance
certificate



Assets

- Deep knowledge about specific problems in various market areas.
- **“State of the art”** products with optimized cost/performance ratio.
- Long term business strategy to compete globally.
- Engineering and Sales Teams to promote Products and Services.
- Focusing on technology innovations.

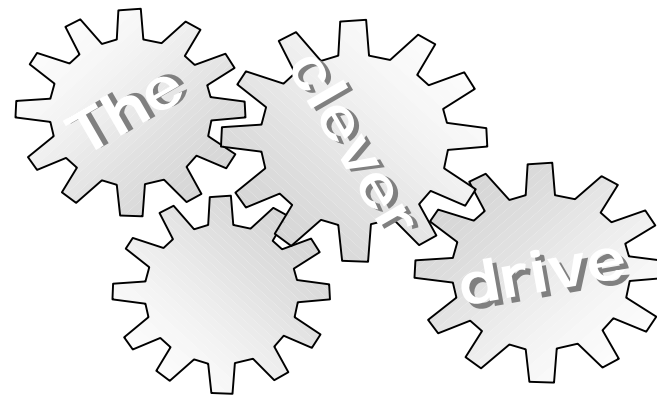
Performances



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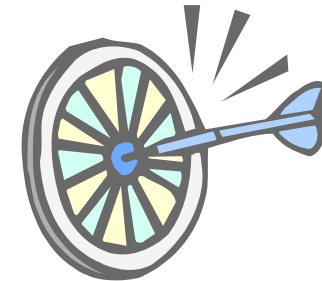
Application oriented

- Thanks to the experience and the understanding of motion control requirements acquired over thirty years of working closely to leading manufacturers in various industrial sectors, Ever Elettronica can produce hardware motion control devices equipped with application software optimized for many industries.
- The versatility of the patented company proprietary technology allows Ever Elettronica drives to meet, in a simple and direct way, numerous movement and positioning requirements necessary for today's state-of-the-art motion control applications in:
 - packaging
 - labelling
 - textile
 - food
 - medical
 - ceramics
 - printing
 - wood
 - office and banking
 - video surveillance
 - tools and robotics
 - machinery....



plug and play solutions

- The purpose of the 'turnkey' applications is to facilitate the replacement of obsolete low tech automation systems with technologically advanced solutions getting benefits in terms of:
 - Performance and functionality
 - Improved reliability
 - More versatility
 - Lower system implementation costs
 - Compatibility and integration with other systems
- Thanks to their long experience regarding the real needs of the automation market and knowledge about how much in time and money builders of automatic machinery spend for system customizing, Ever Elettronica realizes a wide series of solutions for the control of machines used in various industries.

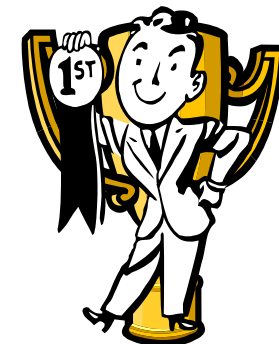


Awards

- Innovation awards and patents obtained by Ever Group:

- Ever snc:

- ❖ A monetary award for technological innovation assigned by the Chamber of Commerce of Milan in October 1985;
- ❖ A monetary award for technological innovation in the industrial and craftsmen SME assigned by the Chamber of Commerce of Milan in November 1989;
- ❖ The Italian patent no. 01236780 "Electric equipment for the driving of step motors with a high resolution registered on 10 November 1989";
- ❖ The Italian patent no. 01243033 "Electric equipment for the control of single-cylinder stockings machines driven by a step motor" registered on 24 September 1990;
- ❖ The Italian patent no. 0127589 "Method and equipment for the flexible control of the feeding of woven textile within a weaving loom" registered on 9 March 1995;
- ❖ The Italian patent no. MI2002A 0011633 "Method and equipment for the auto synchronized control of the phase current in electric synchronous motors by means of a digital processor" registered on 9 July 2002;
- ❖ The Italian patent no. MI2002A 001775 "Method and equipment for the auto synchronized control of electric synchronous motors by means of a digital processor" registered on 5 August 2002;
- ❖ The Italian patent no. MI2003A 000832 "Method and equipment for the fast thread winding on a reel" registered on 22 April 2003;
- ❖ The registration of the company brand "XPRES" on 27 June 1995;
- ❖ The Italian patent no. MI2006A 001575 "Method and equipment integrated with the step motor and casing clamp, for the control of mobile loads." registered on 4 August 2006;
- ❖ The launch of the technological brand "F4D2 " in October 2006;



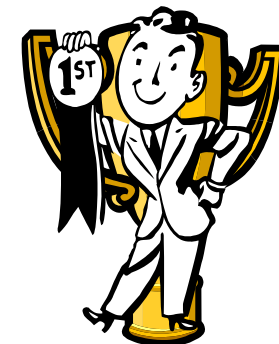
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Awards

- Innovation awards and patents obtained by Ever Group:

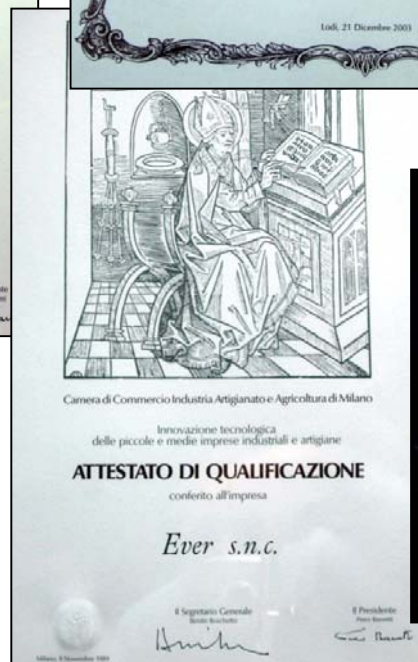
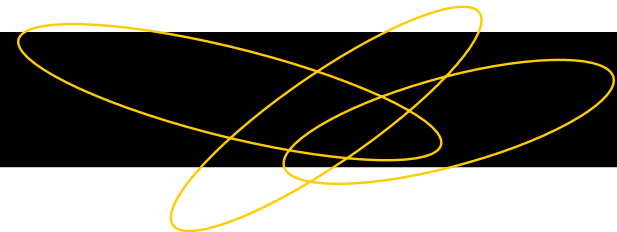
- Ever Elettronica srl:

- ❖ The Italian patent no. MI2006A 001575 "Method and equipment integrated with the step motor and casing clamp. , for the control of mobile loads." registered on 4 August 2006;
- ❖ The launch of the technological brand "F4D2 " in October 2006;
- ❖ The concession aside of the region Lombardy, on 5 October 2005 and following the Integrated Packet of Subsidies (PIA) Innovation Investment in Advanced technology L.R.35/96 measure intec4, of subsidies like a contribution to capital account and of favoured financing;
- ❖ The registration of the brand Ever Elettronica in China on 12 September 2005;
- ❖ The Italian patent no. MI2005A 002476 "System and equipment for the control of the thread guiding mechanism in textile machinery" registered on 23 December 2005;
- ❖ The Italian patent no. MI2006A 000789 "Method and equipment for the fast control of mobile alternative mechanisms" registered on 21 April 2006;
- ❖ The Chinese patent no. 200610084232.5 "System and equipment for the control of thread guiding mechanisms in textile machinery" registered on 29 May 2006;
- ❖ Reorganization of the business processes of the Ever Group with the foundation of the Equity Joint Venture Company "Changzhou Ever Electronics Motion Technology Company, Ltd." On China on 12 February 2007;

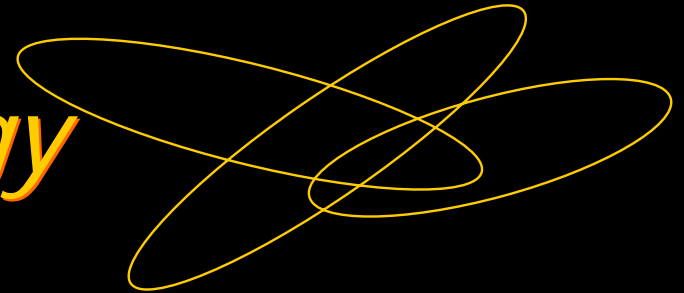


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Awards



ServoStep technology



What means "ServoStep"

- "ServoStep" in Ever Elettronica's strategy resumes seven key-points for quality and performances in motion control applications:

1 Stepping motors



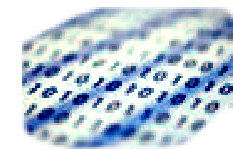
2 Fast Forward Feed Full Digital Drive



3 Full Digital technology



4 Available specific motion control applications



5 Wide products range



6 Integrated motion control systems



7 Fair price



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1 High poles count

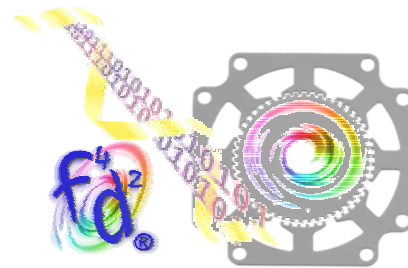
- In applications where torque need can be met by different types of motors, the user should evaluate the application of a high number of poles motor (stepper) because:
 - a) the use of other types of motors might require other motion devices (gears, couplings, encoders, etc...) featuring disadvantages in terms of loss of positioning precision and economy.
 - b) the stepper motors don't require such mechanical parts, being able to perform precise positioning, with good dynamics and simple installation and operation both in open and closed loop with a significant increase in performance.



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2 Fast Forward Feed Full Digital Drive

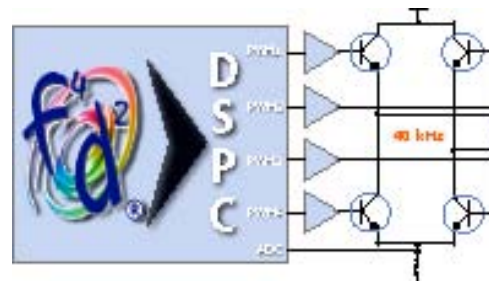
- The ServoStep technology performs step-less phase current regulation and is implemented by Ever Elettronica with an innovative algorithm called Fast Forward Feed Full Digital Drive (f^4d^2).
- The algorithm f^4d^2 can make calculations so fast to permit high chopper frequency motor excitation featuring: sinusoidal currents without parasitic harmonics, silent rotation without damping or resonance, maximum torque at any speed.
- With this technology the functionality for closed loop torque-speed-position control has been integrated obtaining the performance servo systems.



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3 Full Digital drives

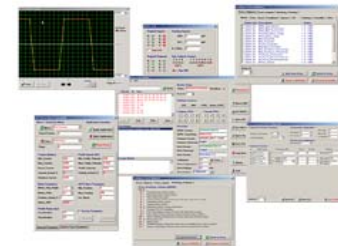
- All series of drives integrate the innovative **Full Digital** technology.
- In the drives the power stage, that supplies current to the motor, is controlled in PWM mode by a DSPC (Digital Signal Processor Controller) running the f^4d^2 firmware.
- Replacing the generic microprocessor with the DSPC controller, 'Full Digital' drives can improve the functional features of old D/A technology drives offering to the user a wide versatility in application possibilities, easy installation and best drive handling.



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4 Specific applications available

- Ever Elettronica's *Full Digital* servo drives are designed to perform autonomously, in open or closed loop, specific “turn key” motion control applications.
- Thanks to the f^4d^2 algorithm the DSPC spends a minimum part of machine time to control the motor, so flexible and enhanced motion applications can be realized by the drive.
- To simplify the drive installation and maintenance and to update the working parameters of the various available applications, Ever Elettronica provides the user with powerful PC software tools.
- Through these softwares are possible:
 - **on-line and real-time diagnostics of connected devices**
 - **drive's firmware updating**
 - **complete working parameters configuration**
 - **firmware debugging for a fast application start-up**
 - **feedback parameters optimization functionalities**



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5 Wide products range

- Wide series of standard hardwares are available to the user in terms of motors and drives, each model being specified in terms of:
 - Intelligence and programmability
 - Housing
 - Power supply
 - I/O count
 - Communication interfaces




SlimLine Drives

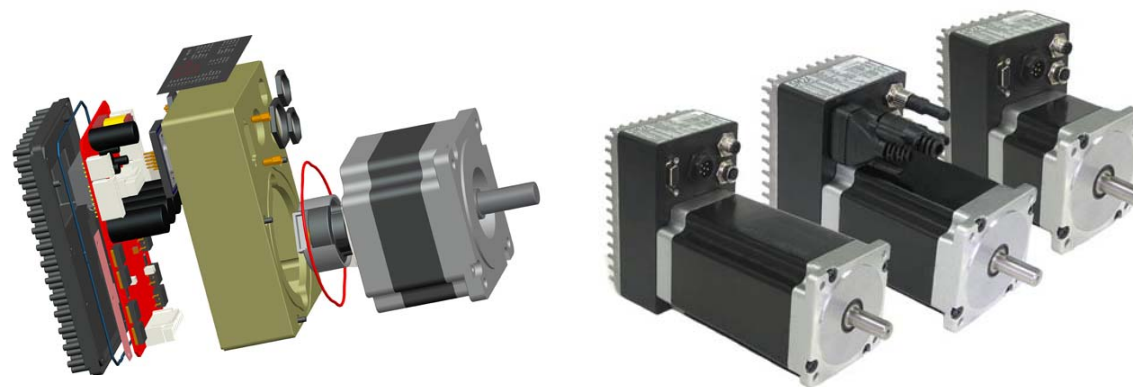



SD Enhanced Drives



6 Integrated systems

- Advantages are:
 - **Motor, drive and feedback encoder (optional) in one device simplify system cabling.**
 - **Minimum heat dissipation even at maximum power delivered.**
 - **Reliability suitable for use with severe vibrations and operating temperature.**
 - **Saving electrical panels not needed to install the drives.**



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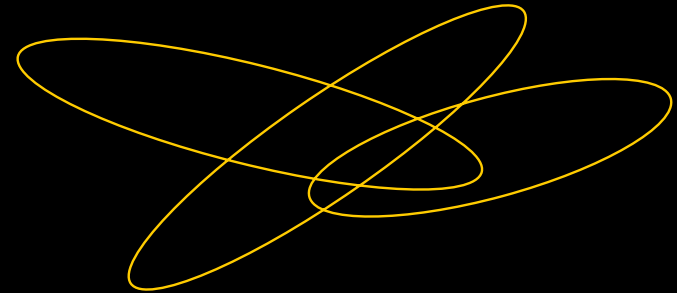
7 Fair price

- Ever Elettronica's fair price has been achieved through optimized product engineering process, aimed to reducing wastes in the production of devices, and designed to minimize material costs without sacrificing performances robustness, improved use safety and reliability, in order to meet today's needs of the automation machines manufacturers.
- The wide range of product lines the customer can choose the solution that best fits its needs.
- The easiness and reliability the user can program and customize our solutions result in an immediate time and money savings.



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Applications



Easy installation

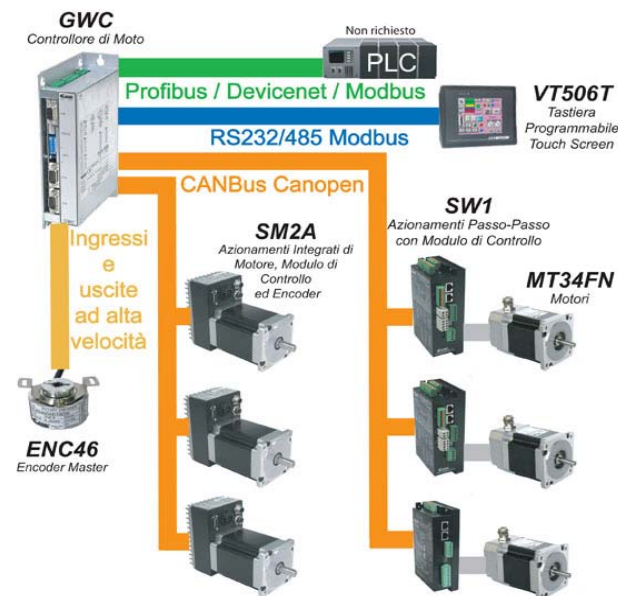
- Ever Elettronica has developed several *Advanced Motion Modules* integrated in its firmwares by which the user can control each axis in various modes: from simple step & dir or analog reference control to the control through fieldbus with integrated electronic cams, to the closed loop of torque-speed and position control, as for servomotors.
- Thanks to complete PC interfaces the user can configure all the drives application parameters.
- Ever Elettronica devices can be configured for *stand alone* operating, as slave units of a master controller such as our GWC units.



Ready-to-use solutions packages

- Ever Elettronica created various *Advanced Motion Modules* to achieve in few easy steps some of most popular applications in automation including:

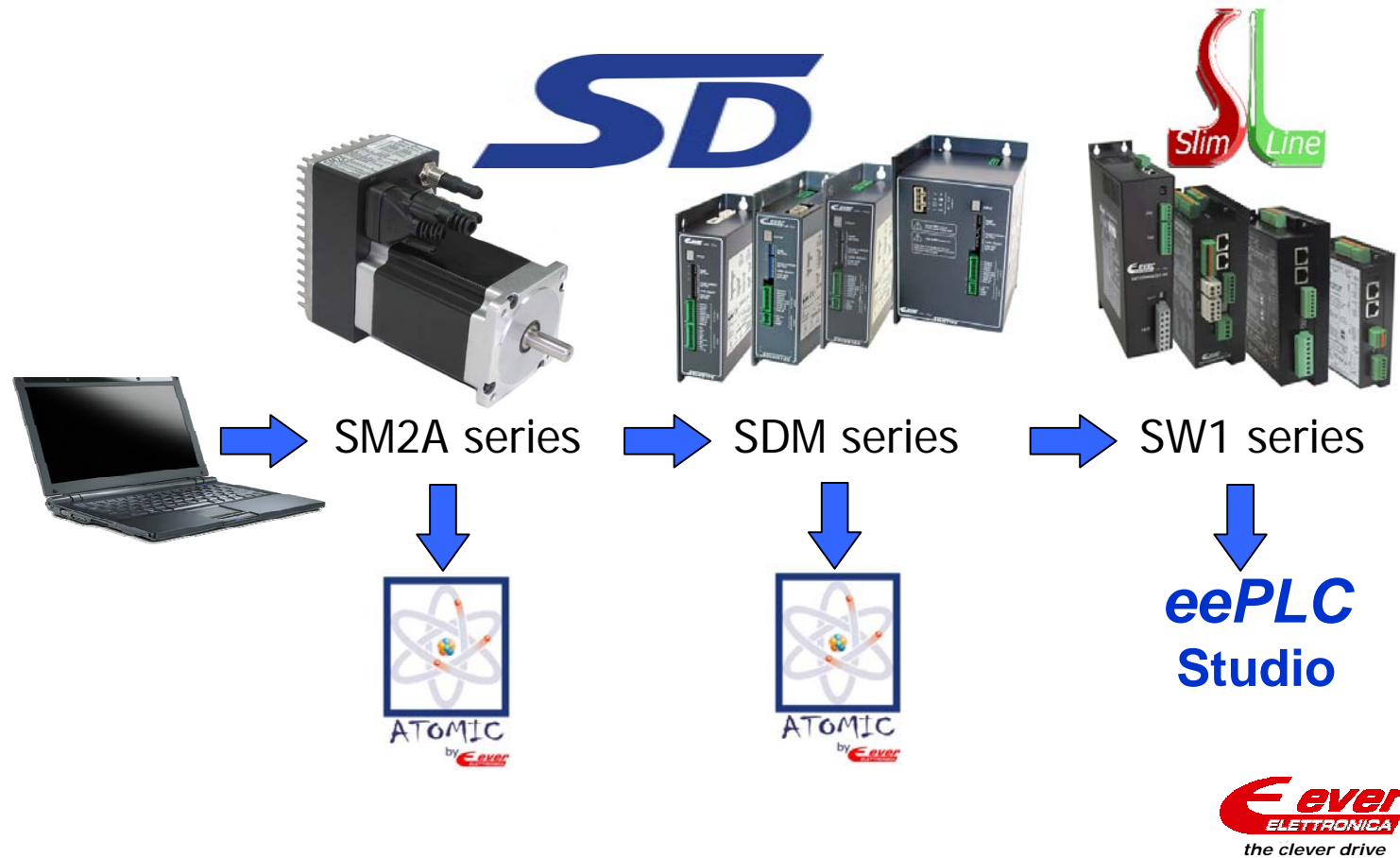
- Head labelling - Rotary labelling machine
- Flexographic printing machine
- Flow-Pack machines
- Thread winding systems
- Cam profile management
- Digital Traker
- Indexing
- CANbus slave (Canopen)
- Serial RS232/485 slave (Modbus)
- etc...



- These solutions not only meet the customers needs, but also provide a base platform with open programming easy to customize, using few hardware and software resources and easy programming in PC environments for different special applications.

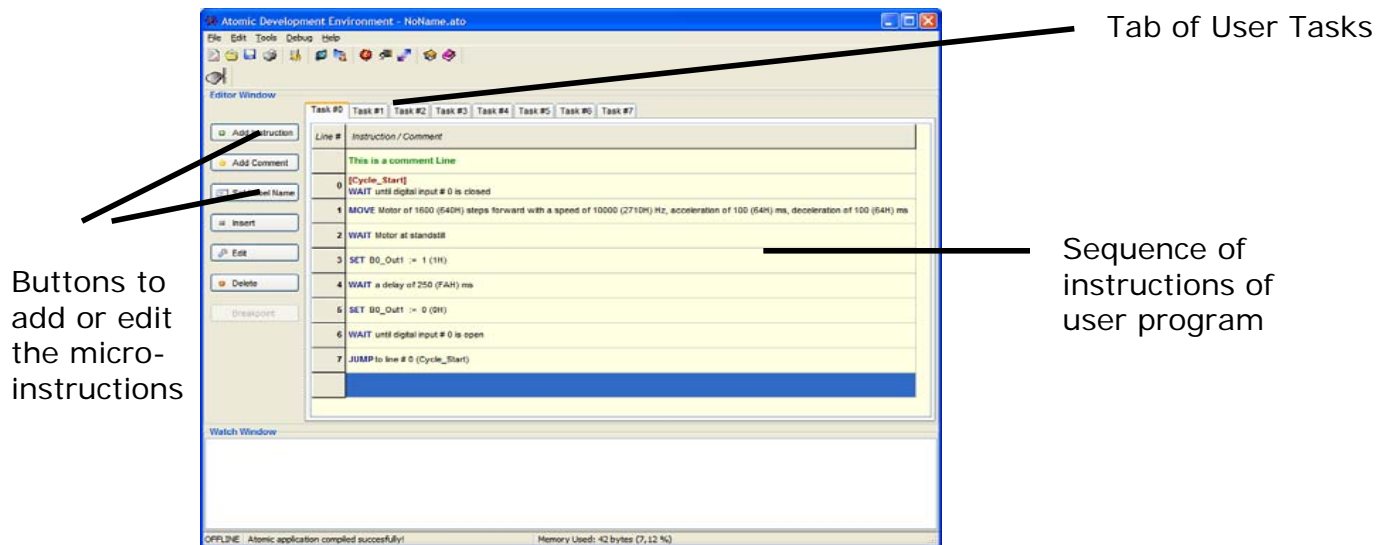
Programming environments

- **eePLC Studio** and **Atomic** are the development environments of our drives and are characterized by versatility and easiness of use.



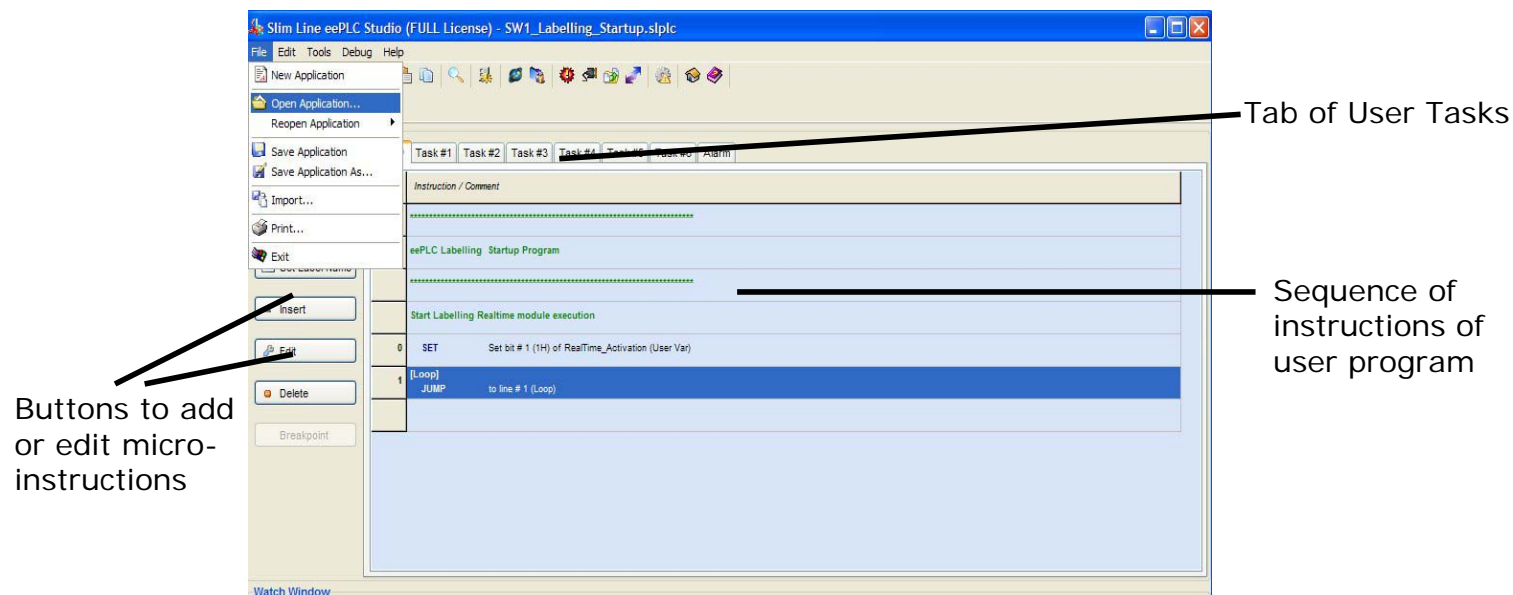
Atomic for SD Enhanced series

- **Atomic** is an IDE (Integrated Development Environment), a programming environment developed with the aim to provide the user with a powerful tool to create tailored applications without the need to learn any new programming language.
- The environment features powerful and user-friendly tools for controlling and managing all the resources available in Ever Elettronica SD Enhanced drives.



eePLC for SlimLine series

- Derived from the experience of Atomic, eePLC Studio does not require the learning of programming languages.
- Featuring software tools and functional set for writing and debugging application quickly.



eePLC wizard

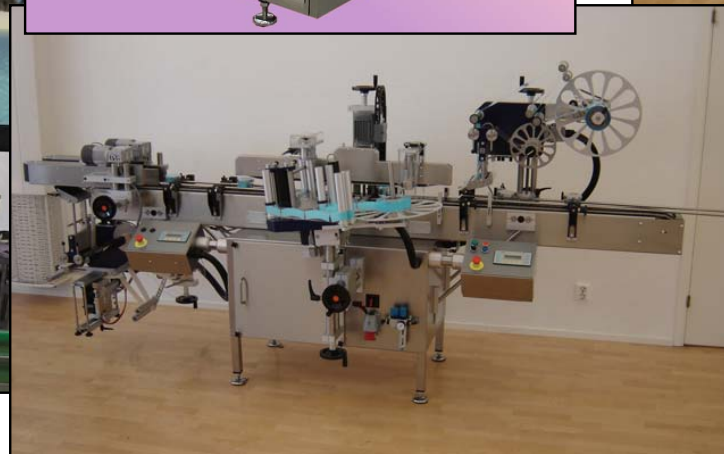
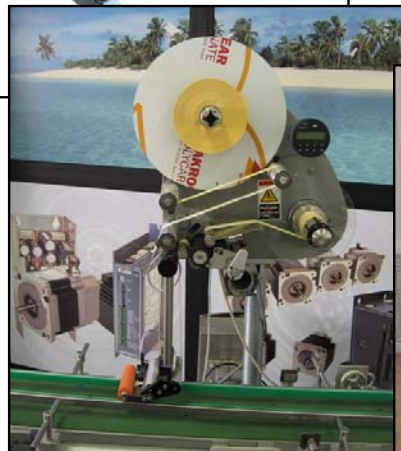
- **eePLC Studio** integrates wizard for automatic achievement of application programs by the personal computer.

The screenshot displays two software interfaces. On the left, the 'eePLC Studio' window shows the 'Labelling Setup Wizard' with 'Step 1 - Mechanical Parameters'. The parameters are: G1 Pulley: 22, G2 Pulley: 36, Roll Diameter: 400 (0.1mm), Encoder PPR: 500, Encoder Development: 1884 (0.1mm), and Speed Max Scale: 30000 (mm/1'). On the right, the 'EVER Electronic CAM Editor' window shows a 'CAM Table' and a 'CAM Graph'. The CAM Table lists 18 rows of CAM degree and Motor degree values. The CAM Graph shows a red curve of Motor Degree vs CAM Degree. The Drive Commands section includes 'Status: CAM in progress', 'Motor Pos: 358,6', and buttons for 'Start CAM', 'STOP Motor', 'Homing', 'Jog +', 'Abs Positioning', 'Jog -', and 'Rel Positioning'.

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Applications examples

- Complex labelling head



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Applications examples

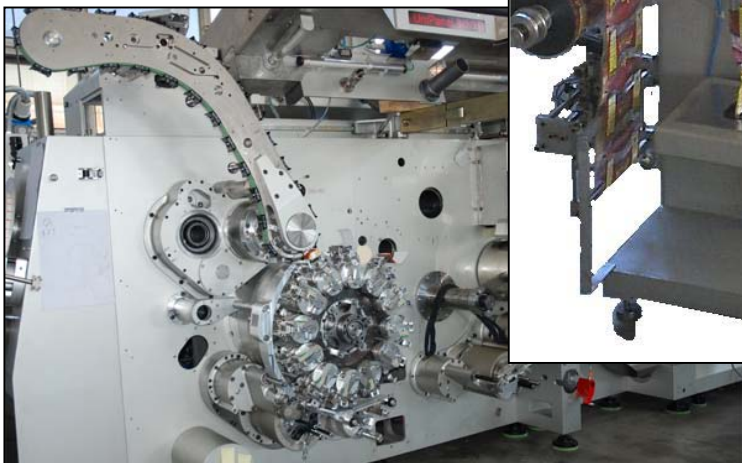
- Rotating labelling and Bottling machines



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Applications examples

- Packaging and Flow-Pack machines



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Applications examples

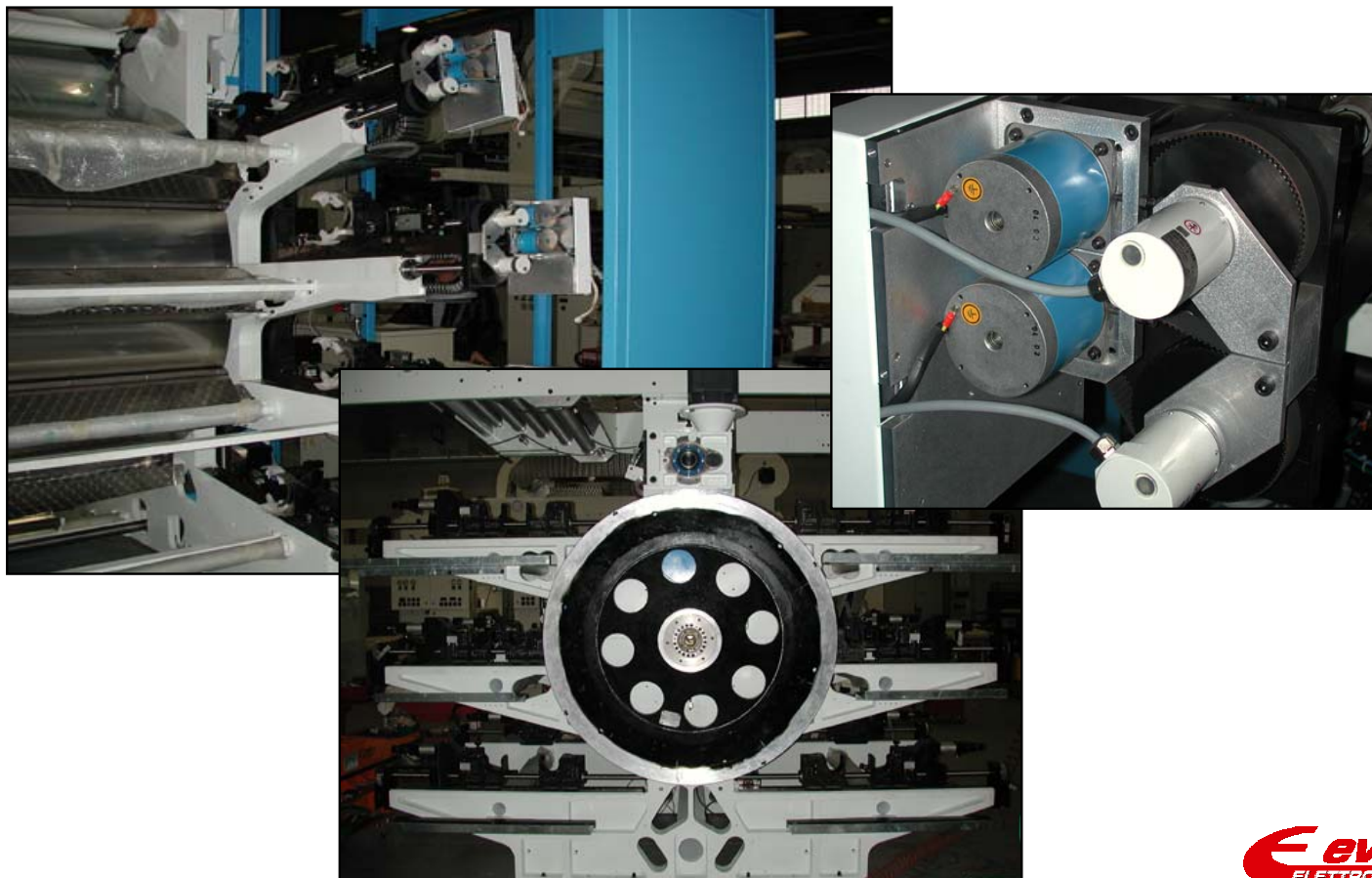
- Radiographic machines



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Applications examples

- Flexographic printing machines



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Thank you for your attention.

our solutions
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