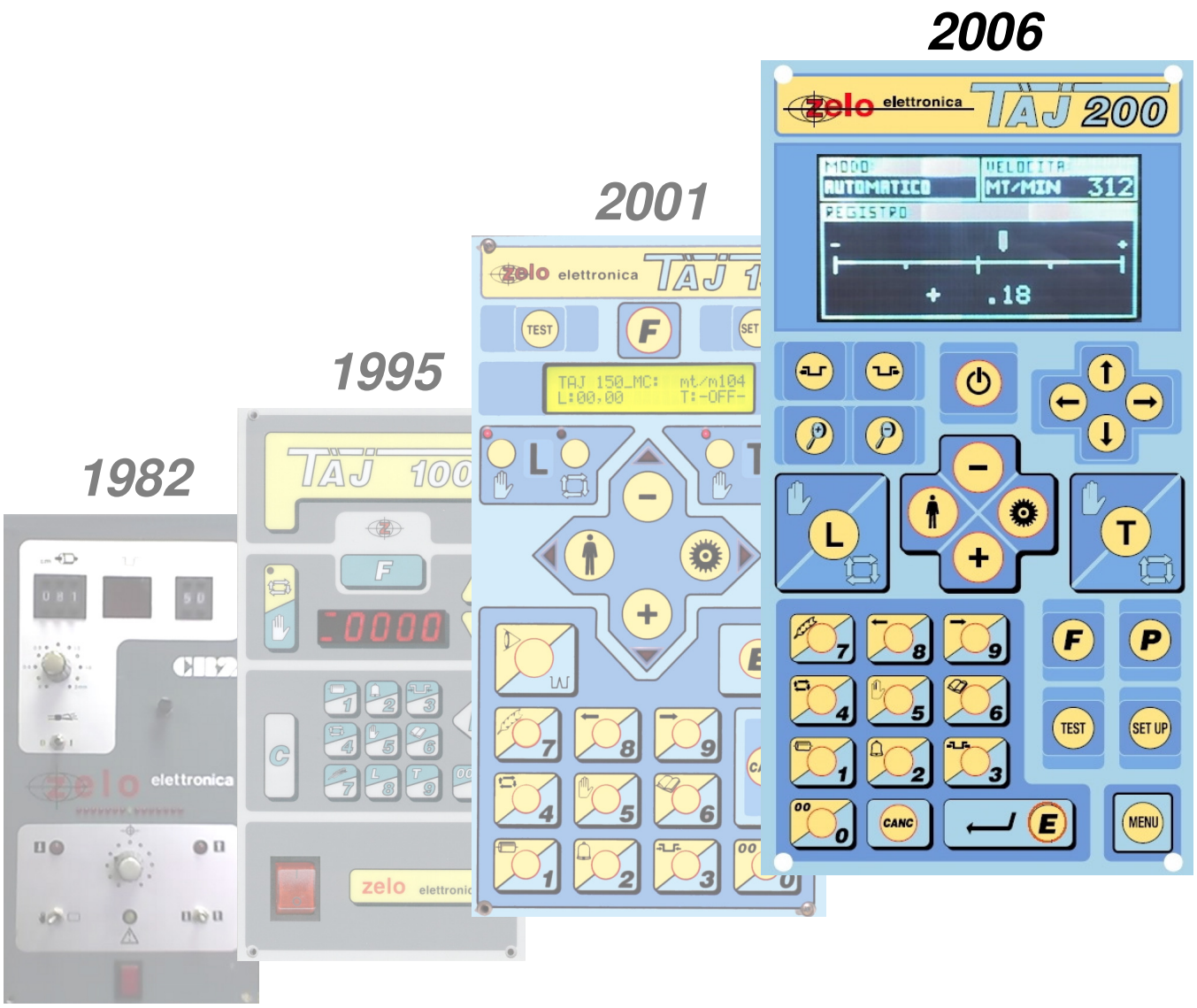


zelo elettronica s.r.l.

... printing solutions

TAJ 200

Register Control

English Version

New register control model ***TAJ 200*** is the last product of the Zelo Elettronica's TAJ series. It's an evolution of the previous model TAJ 150, increasing efficiency and effectiveness. Moreover, during the development, we've taken the advantages of the new graphic oscilloscope TAJ SCOPE, in order to guarantee flexibility and easy use.

From Research and Development labs of Zelo Elettronica is born TAJ 200 that is characterized by:

- deliberate functional design which allows to the user a easy use and supervision
- touch keyboard, optionally remote, allows user interface
- a graphic screen with VFD technology allows a good visibility, in the worst situations as well, and it provides clear messages to simplify the user understanding of any possible anomalies.
- two microprocessor grants safe and flexible control, reducing the console dimension
- a on board flash memory allows to save setup parameters and 1000 jobs can be archived and loaded at any time, reducing the start-up time.
- multi-language graphic interface

The new ***TAJ 200*** may find applications in **web folding**, **cutting-off**, **perforation**, **embossing**, **die cutting-punching**, **bags-machines**, **front-back printing**, **insetting** and **length-variation control**.

The TAJ 200 system in the base configuration is build-up as follow:

- free-standing or build-in console (about 28x20x26 cm)

- standard scanning head or optic fiber for hazardous zone

- standard encoder or ATEX compliant encoder for hazardous zone

Output control command can be adjusted to customer requirement:

- opto-coupled command (5V, 12V o 24V) for PC/PLC direct interface (***TAJ 200 O***)
- analogical output for PC/PLC interface or speed control unit input (***TAJ 200 DAC***)
- mechanical relays with simple close-contact system for parallel connection on press commands (***TAJ 200 RM***)
- 220V AC outputs for motors on gear differential (***TAJ 200 RS***)
- Outputs for our mechanical register roller (***TAJ 200 COM***)

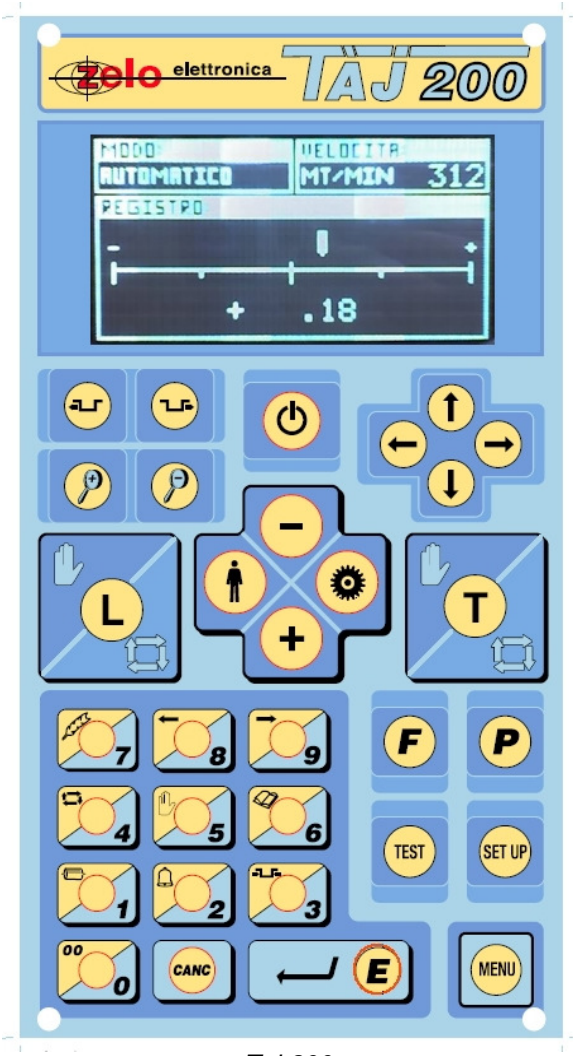
For complex system, the special version ***TAJ 200 TWIN*** has been developed. It allows using the same console for two different applications (not at the same time). A typical example can be the front/backside register control and insetting register control, another example is the control of 2 web-folding (choosing encoder and/or scanning head). A custom software version allows to the user to choose the right application for the current job.

TAJ 200 is characterized by the following functionalities:

- errors identification with 1/100 millimeter resolution
- effective working capability on a broad spectrum of materials such as paper, cartoons, plastic and metal film
- professional facility in water-marks, transparent varnishes and glues register control
- close-loop control (proportional and derivative) base on error value
- adjustable correction gain (automatic or manual by setup menu)
- adjustable correction window
- adjustable minimum speed threshold
- alarm on out of register adjustable bounds
- capability to alert and inhibit the control in case of fast acceleration/deceleration
- capability to change the language of the graphical interface
- archive capability (up to 1000 different job can be saved)
- capability to **manage the cylinder size** / **tension** in case of **re-insetting**
- capability to manage **lateral/transversal** register
- capability to manage **length variation**
- capability to manage the **automatic reel change** during the **cold-seal** application.
- register control phase with the following methods:
    - automatic: the system look for a mark that can be used as register reference
    - with oscilloscope: through a simple graphical oscilloscope, the user can select which mark, revealed by the scanning head has to be used as reference

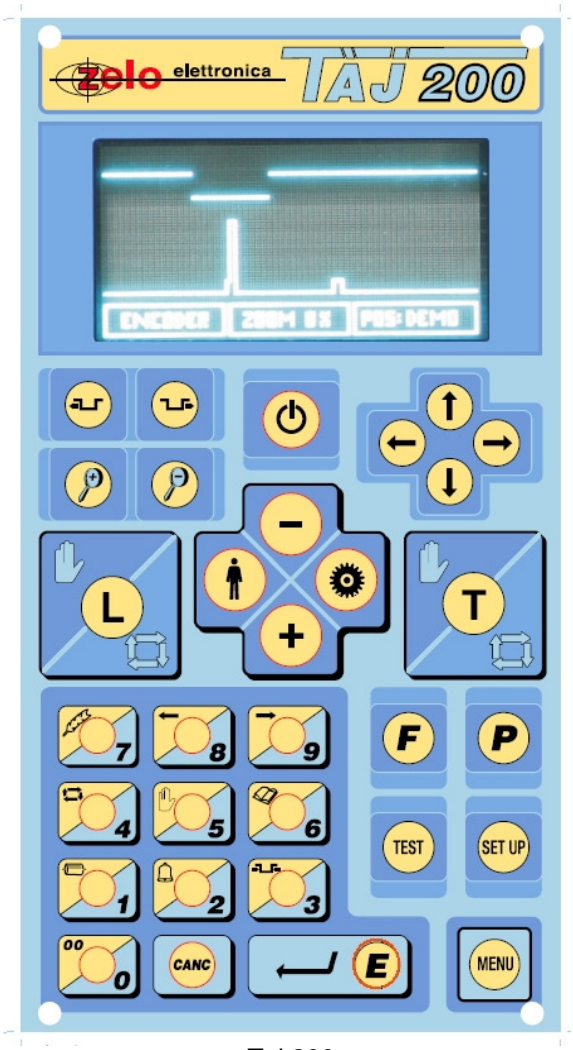
- fast correction: for cold-seal application

– capability to have a graphic indicator of the current error



Taj 200
Longitudinal register screen

– capability to visualize scanning head signal with oscilloscope



Taj 200
Oscilloscope Screen

– capability to work with mark P (dark mark on light background) or N (light mark on dark background)

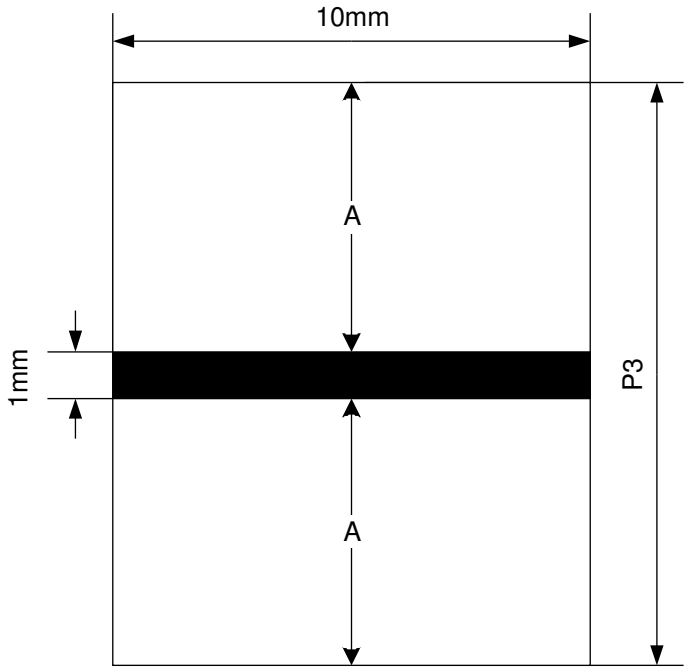
– capability to execute tests for system check-up (encoder, scanning head, outputs)

Tecnical characteristic table:

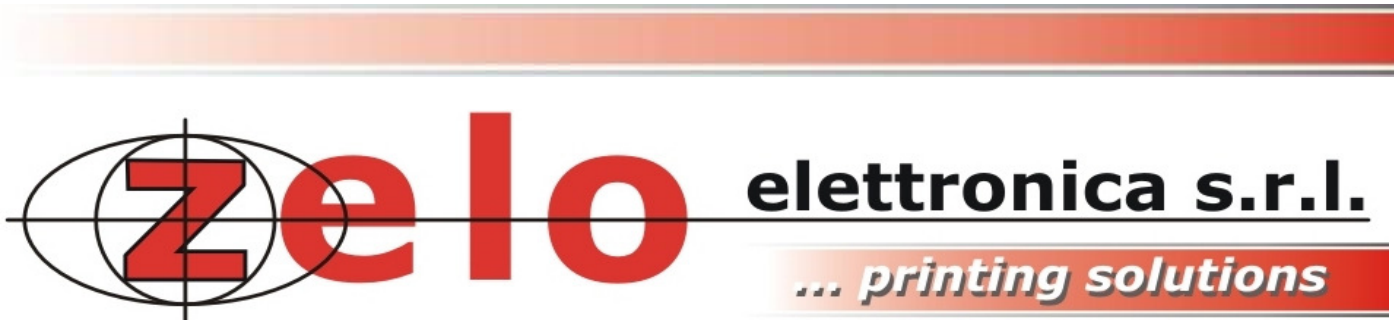
Parameter	Minimum Value	Maximum Value
Press speed[1]	10 mt/min	1000 mt/min
Cylinder size	150 mm	2500 mm
Correction window[2]	3 mm	625 mm
Register mark dimension[3]	1mm	10 mm
Power supply – input voltage[4]	85 VAC	260 VAC
Power supply – input frequency[5]	50 Hz	60Hz
Dissipated power [6]	50 W	200 W
Output voltage for opto-coupled command	5VDC	24VDC

[1] Please, mention in order if register control will work with speed higher than 400 mt/min
[2] The inserted value have to be lower than ¼ of cylinder size.
[3] See page 9
[4] Please, mention in order if register control will work with power supply voltage different from 220VAC
[5] Please, mention in order if register control will work with power supply frequency different from 50 Hz
[6] The value depend on the selected kind of outputs

Register mark dimensions for TAJ 200, standard application:



P3:	Register control working area. It should be at least equal to Gate Width parameter (PR).
A:	Free printing area
Length:	10 millimeters
Height:	from 1 to 10 millimeters



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