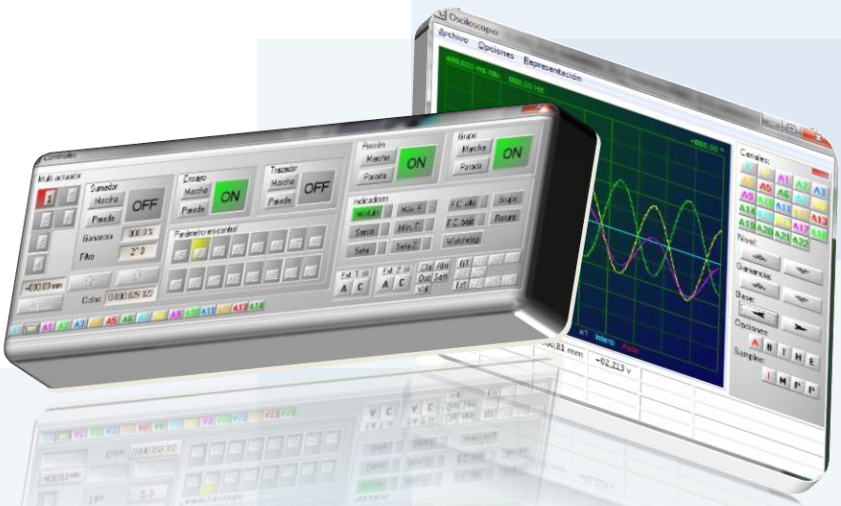
servosis
Testing Machines

PCD2K

Control and analysis software for testing machines

PCD2K is a universal control software for dynamic and static tests in all of our products.



Power

Versatility

- *Digital closed servoloop **40 kHz** with any measured or calculated channel.*
- ***Multiactuator**. Control up to 6 simultaneous actuators, with or without synchronism.*
- *Manage up to **32** phisical analog **channels.***
- *Management of all types of **digital transducers**.*
- *Communication protocols with other brand equipment.*
- ***Equation** manager, calculated measurement channels.*
- ***Customized** testing **windows**.*
- *etc.*

www.servosis.com

comercial@servosis.com // +34 91 691 68 61

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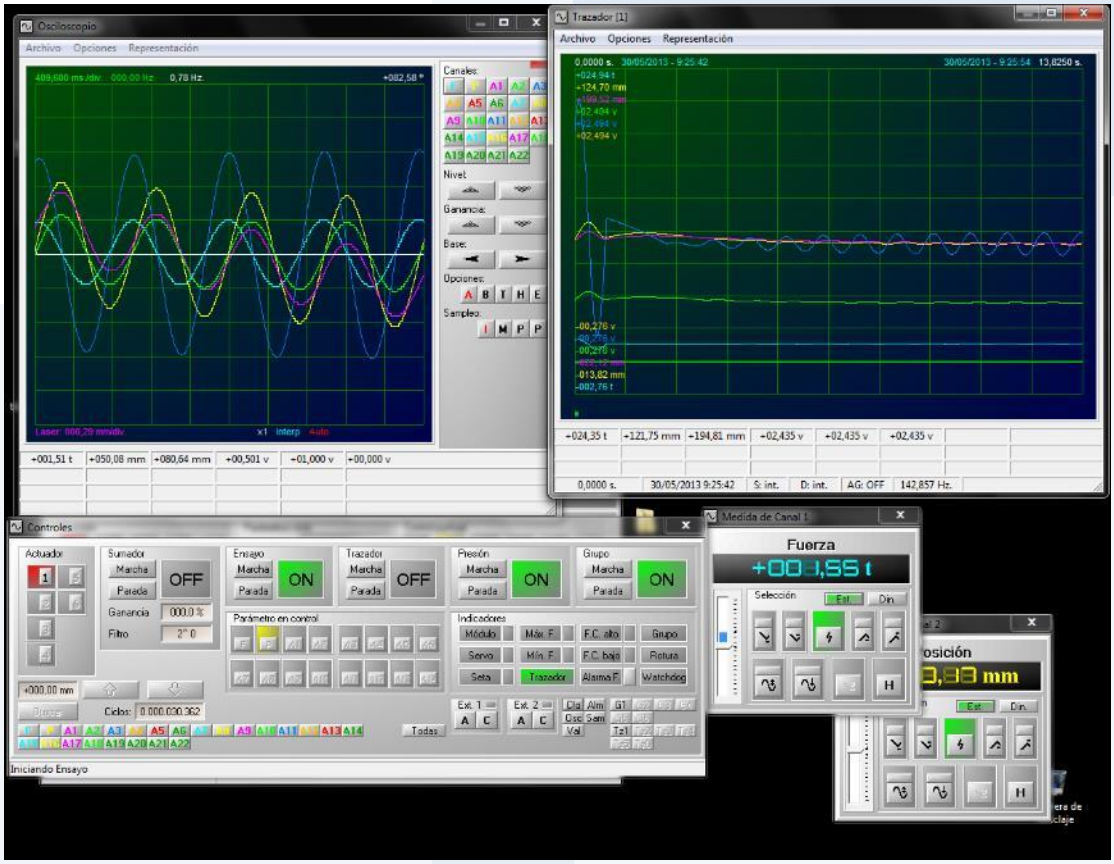
WHAT IS PCD2K?

PCD2K is a software entirely developed by Servosis for all of our testing machines.

Combined with our hardware for control and data acquisition, together they form a robust and effective solution for test perfomance.

Provides the user with the maximum number of calculations and custom tests that they may need, therefore turning it into a very versatile product, capable of managing any type of testing machine.

It also has custom modules and test windows designed to make repetitive tasks easier, reducing user intervention.



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CONTROL POWER

Adaptative Control

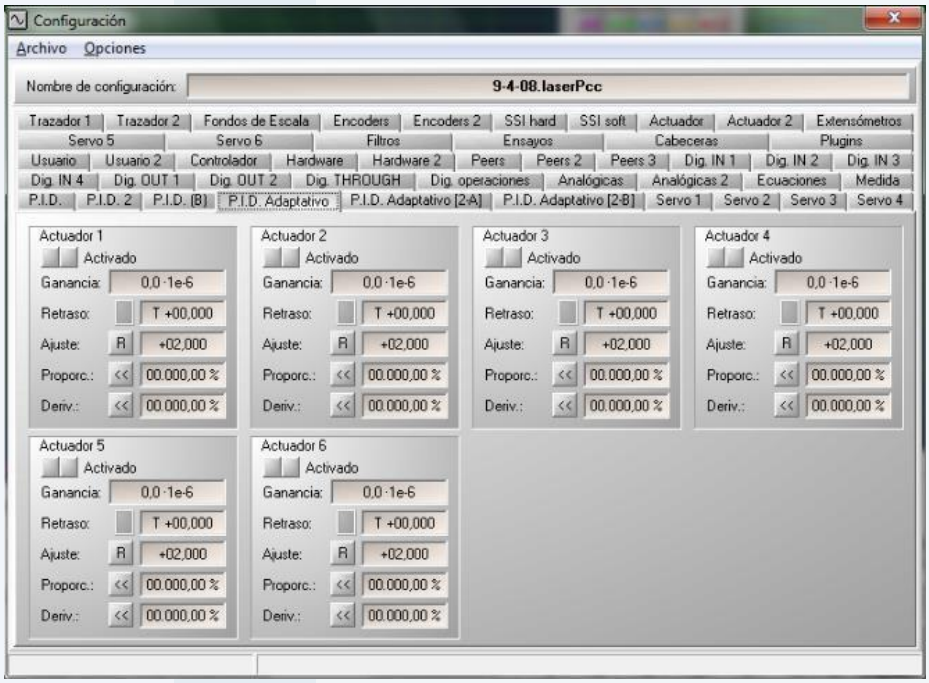
One of the main features of PCD2K is its ability to automatically adjust the control parameters depending on the specimen behavior, so that the best compliance with the set testing conditions is guaranteed. This feature is known as **adaptative PID**.

Control frequency **up to 40 kHz**.

Closed control loop with any real analog channel measurement (load, dispacement, extensometer).

Closed control loop with any virtual calculated channel (averages, speeds, accelerations…)

The system starts a test and adapts the control conditions (proportional, integral, derivative) to speciment behavior in real time. It is a totally transparent process for the user. This feature guarantees that the data obtained is what the requested test sought after, with no deviations, oscillations, etc.



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FUNCTION GENERATOR TOOL

Several types of programable functions:

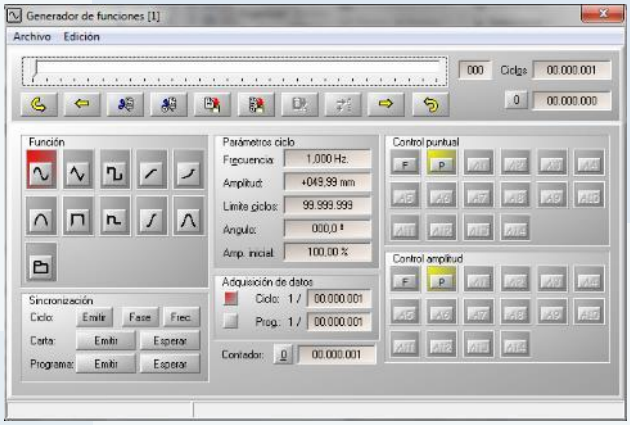
- Cyclic functions.
- Linear functions.
- Exponential functions.
- Functions **coming from real data acquisition files.**

Synchronization tools for several actuators.

Function links.

The user can **create their own testing files**, choosing the type of function to perform and defining its parameters.

The testing files are saved in the PC, and can be used as many times as wanted.

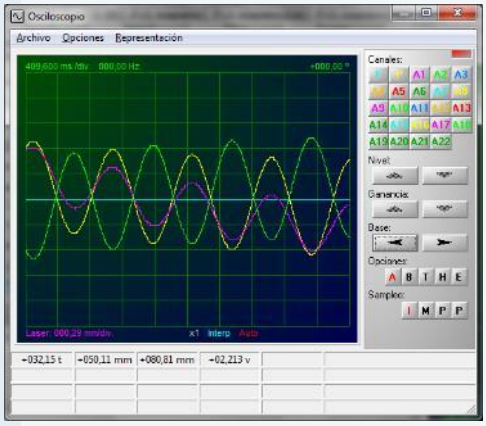


DISPLAY

Real time data display with the tool “**oscilloscope**”

Fully configurable and customizable:

- Automatic/manual zoom.
- Trigger.
- «Hold» function.
- Displayed channels selection.
- Graphic display versus time.
- Representation X-Y.
- Frequency spectrum analysis.
- etc



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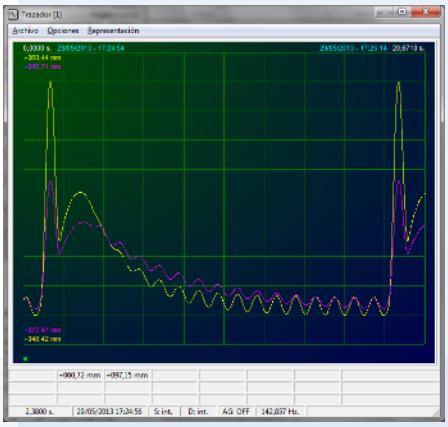
DATA ACQUISITION



Data files are created with the tool “**Data acquisition**”.

The user can define acquisition time and frequency.

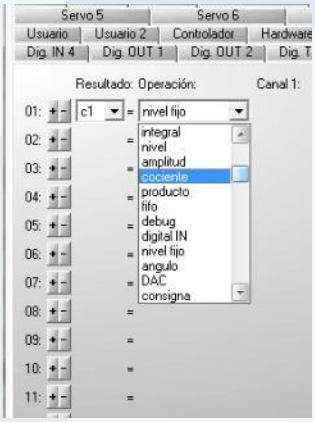
Files supported by data processing platforms (Excel, lotus, matlab…)

Custom test reports.

Data autosaving in configurable intervals.

etc

ALGORITHMS



Calculated channels:

- additions
- substractions
- derivatives
- integrals
- spikes
- zener
- maximums
- gains
- areas
- angles
- etc

EXTERNAL ELEMNTS CONTROL

Digital inputs and outputs for status indication, start and stop of auxiliary elements.

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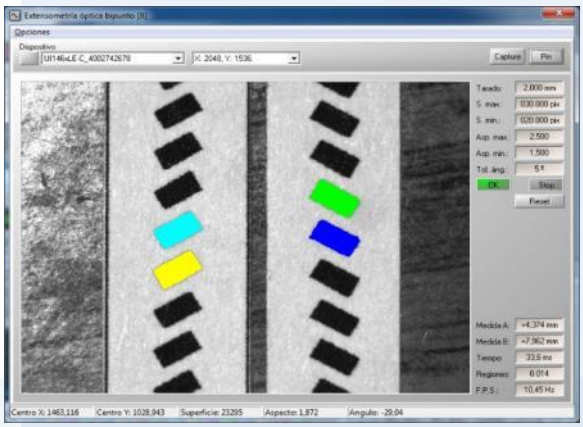
OPTICAL EXTENSOMETER

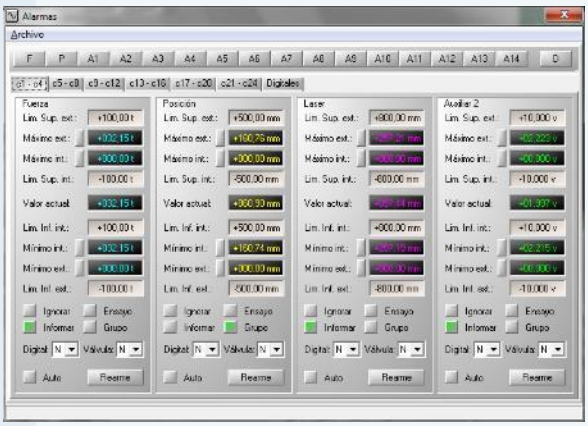
Measure module for artificial vision use in strain measurement.



SAFETY:

LIMITS DEFINITION

- Limit values for analog channels.
- **Limit values for cyclic tests.**
- Digital signals for alarm input.



DETECTION SYSTEMS

- Watchdog between control driver and software.
- Resources consumption measurement.
- etc

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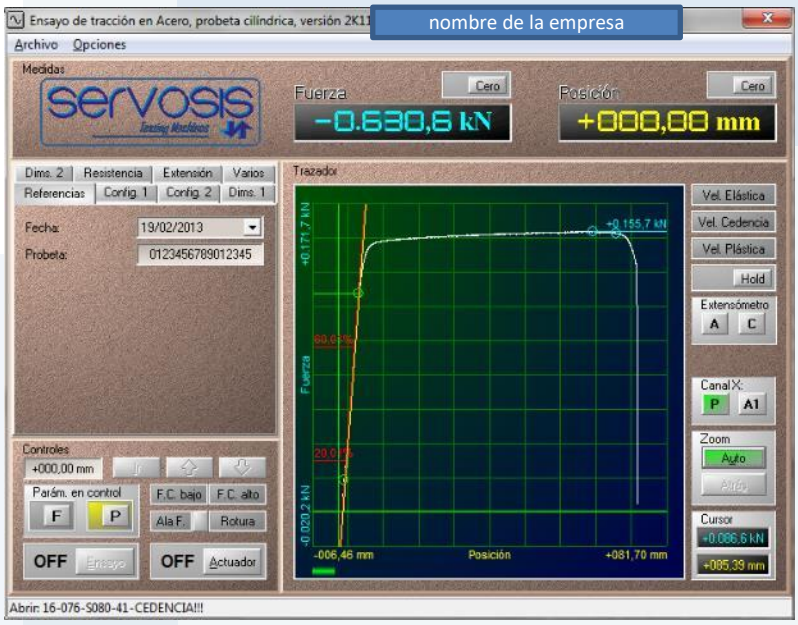
TEST WINDOWS

PCD2K includes custom test windows according to a required Standard, in which all the power of the software is combined in a very easy and intuitive tool for the user, that only parametrizes the specimen and obtains the results required by the specification.

- Custom windows, even if they are based on a Standard, the customer can define its own features.
- Testing windows, designed according to any Standard or technical specification or procedure.
- Several tools for a test performance and data acquisition are brought together in a single window.
- User friendly. They are developed for the user to intervene as little as possible.
- Test report with your logo and all the results required by the Standard, or custom made.
- Statistics, restults export…



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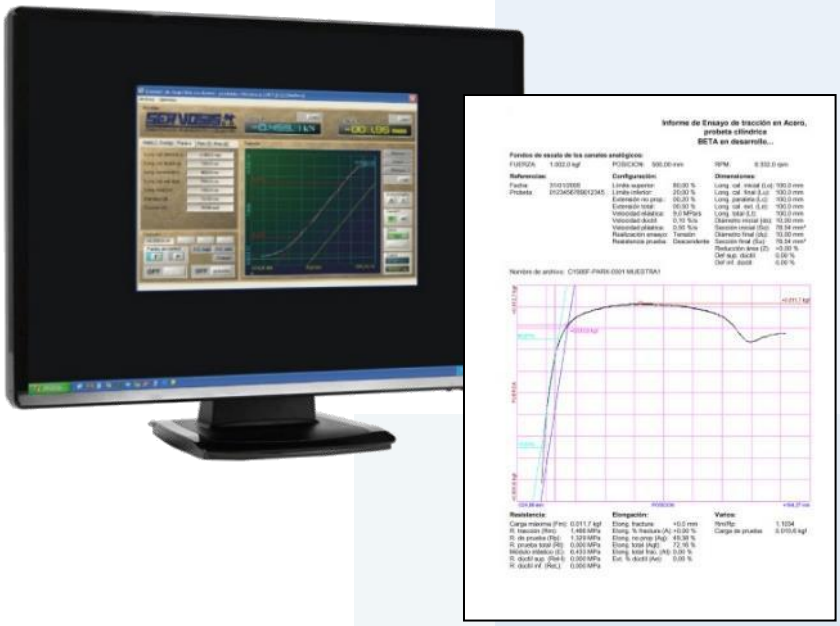

Developed tests for:

- **Steel**
  - Tensile, round specimen
  - Tensile, square specimen
  - Cyclic
  - ISO 6892
  - ASTM E-8...
- **Concrete**
  - Compression
  - 3 and 4 points flexure…
- **Asphalt**
  - Diametral compression
  - Fatigue
  - Marshall
  - EN 12697-24…
- **Rocks**
  - Triaxial compression
  - Diametral compression…
- **Plastics**
  - Ring stiffness
  - Ring flexibility
  - Adherence…
- **Shock absorbers**
  - Dynamic tests…
- **Elastomers**
  - Frequency sweep
  - Modules…
- **Insulator**
  - Point load
  - Parallel tensile strength…
- **Elastomeric bearings**
- **Lumber**
- **Biomaterials…**

- **Impact tests**
- **Free fall tests**
- **Dynamic tests**
- **etc**

We develop any type of custom test according to your needs.

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Available languages:

Spanish

English

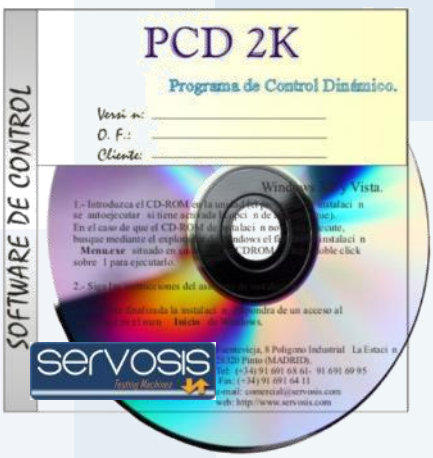
French

Portuguese

(Other languages please consult).

Can be easily integrated into other brands of testing machines.

Demo mode operation **on any PC** for data processing, test analysis, test files…



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Servosis.

Pinto-Madrid-Spain

comercial@servosis.com // + 34 91 691 68 61