



HIGH TECH  
INSPECTION  
and  
SORTING  
EQUIPMENTS  
for  
FASTENERS



## Company Profile

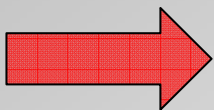
From early 80s engineers  
and built

*automatic inspection and  
sorting machines*

*giving a concrete and helpful  
solution to its customers.*



*In-house mechanical, software and electro technical development,  
completely developed by our engineers*



**MISSION : give our customer a reliable, easy-to-use and high  
tech sorting and inspection solution.**

**Business sites:**

**Urago d'Oglio (BS)** – Administration offices, commercial offices and R&D department

**Bornato (BS)** – Plant

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

*Inspection and sorting equipments*

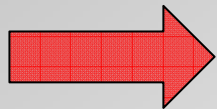


## Some of our customers ...



Interesting areas:

- Automotive
- Aerospace
- Shipping industry
- Medical
- ...



***All those Companies which grants 100% inspection over their production and are interested in quality- assurance***

## Our machines – A *RELIABLE PARTNER*



**100 % CONTROL**

**UNATTENDED  
OPERATIONS**

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

Fully automatic and with *touch screen*  
control board - very easy to set up

\*\*\*

**MACCHINE BUILT BY MODULES**  
can be updated or developed according to your  
current needs

**CUSTOMIZED SOLUTIONS: V-guides, crystal  
tables, ecc.**

\*\*\*

**Standard machine range M4 – M 16** (bigger  
diameters upon request)

**Accuracy  $\pm 0.02$  mm**

\*\*\*

**Warranted speed *up to 600 pcs /min***  
**in continuous rotation**

**CAPABILITY TESTS**

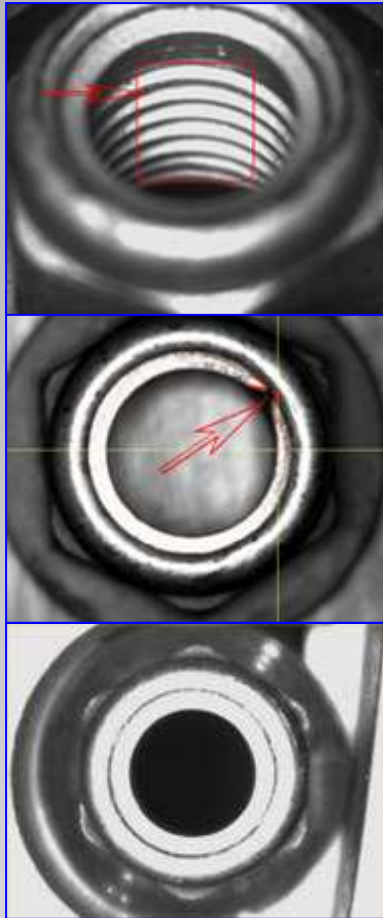
*Inspection and sorting equipments*



## Standard Optical Measurement

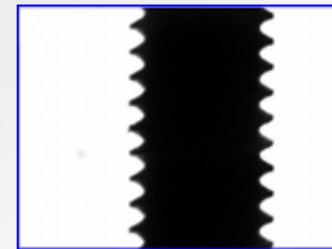
We use only digital cameras to obtain higher image definition and accuracy, repeatability and ease of use

600 pcs/ min



- Radiuses corner inspection
- Head height, corners  $\emptyset$ , flange  $\emptyset$
- Internal and external thread  $\emptyset$  – *all forms of thread*
- Pitch angle and screw pitch, helix angle, overall length, pilot point
- Open cracks on flange and on screw's head
- Internal thread presence (nuts)
- Nylon washer integrity (nuts)

... other measurements available upon request!



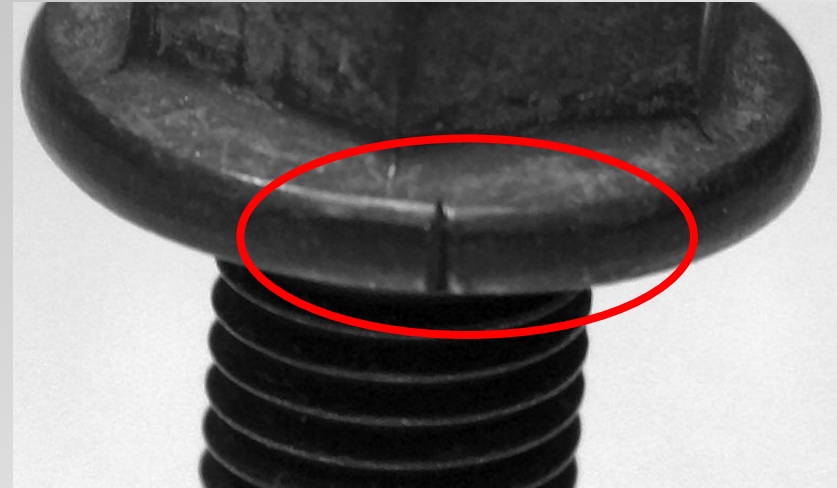
## ***Cracks Inspection – Eddy Current , for screws and nuts!***

Speed up to **220 p/min** in continuous rotation

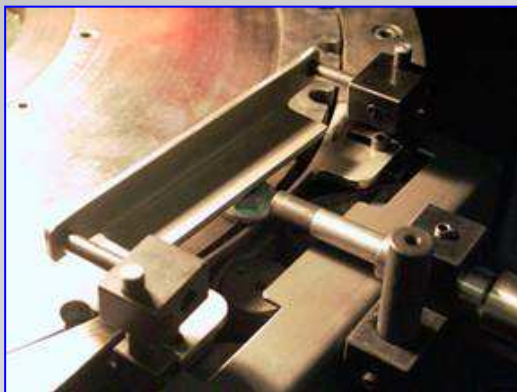
Probe moves with CPA's special mechanical chase

Detect even the smallest cracks, even on **STAINLESS STEEL**.

Special devices for probe protection –  
Easy Regulation!



SCREWS



NUTS



STAINLESS STEEL



## *Mechanical Recess Inspection*

**100 % reliability - broken edges, reduced or increased key's width, recess depth**

**100 % simplicity - Mechanical gauge, simply change the gauge when changing type of recess (torx, Phillips, hexagonal, ...)**

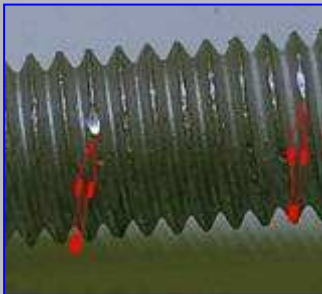
**100 % productivity - Mechanical angular chase, speed up to **170 pcs /min** in continuous rotation**



# ***PATENTED - Mechanical Thread Inspection***

**OVER 360° CONTINUOUS ROTATION WITH MEASUREMENT**

**Not by camera viewing, but using mechanical detection = 100% reliability**



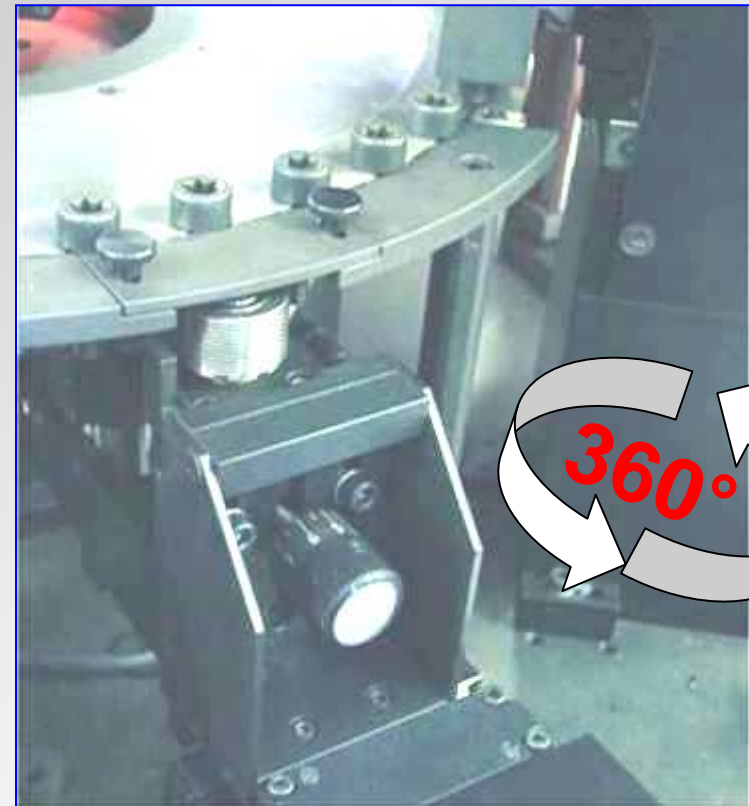
**Chochs on thread**



**Cross thread**

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

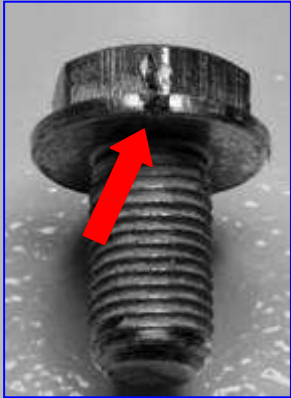
- Mechanical gauge detects thread form while rotating
- Screw turns min. 2 times (equipped with rotational control device)
- 100 % reliability
- Speed up to **150 p/min**
- Patented technology
- Control in **CONTINUOUS ROTATION**



***Inspection and sorting equipments***



## *Other technologies & Services*



SPECIAL TESTS such as *Hardness check with Eddy Current* or *screwing test for nuts* can be engineered by our internal technical dept.  
..... *Simply ask!*

### SERVICES & FACILITIES:

**Software:** entirely developed by CPA engineers, very easy to set up and available in your language.

**Complete solution:** Feeding + Sorting + Packaging

**Statistic and Protocol :** Exportable data by USB key, sorted by type.

**Remote Service:** thanks to Ethernet connection, software can be easily updated when you need it – ASSISTANCE IN 48h in your plant.

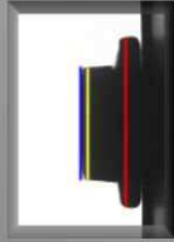
**Commercial tools:** Save money with commercial calibers!



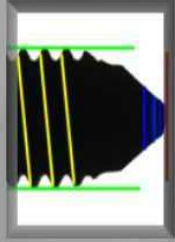
## FAST31RCS

<b>Range:</b>	M5 - M16 Length 15 - 150
<b>Speed:</b>	Up to 600 pcs
<b>Features:</b>	Continuous rotation Mechanical 360° thread inspection
<b>100% Inspection:</b>	Dimensions + Mechanical hole inspection + Eddy Current cracks inspection + Mechanical 360° thread inspection

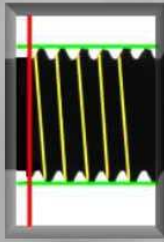
## Optical controls with high resolution digital cameras



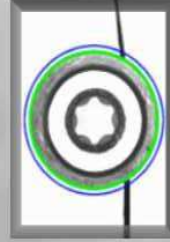
**Camera 1:**  
Flange  $\emptyset$   
Corner  $\emptyset$   
Head height



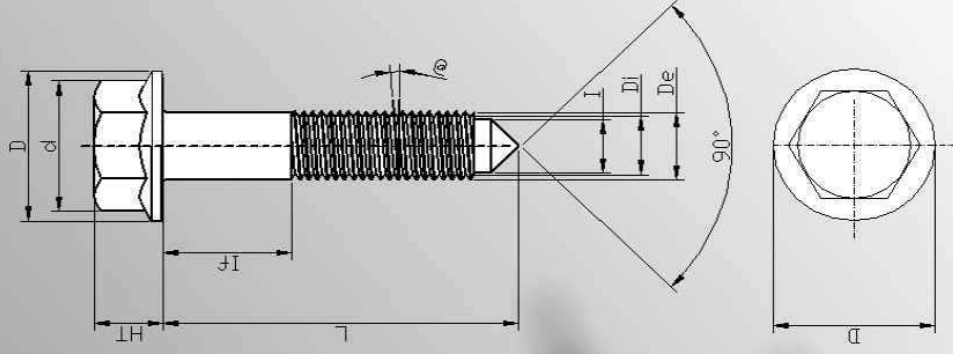
**Camera 2:**  
Ext. thread  
Int. thread  
Pitch angle  
Step  
Overall length  
Pilot point



**Camera 3:**  
Beginning thread  
Ext. thread  
Int. thread  
Pitch angle  
Step

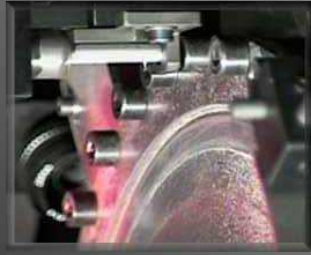


**Camera 4:**  
Flange  $\emptyset$   
Trough passing cracks

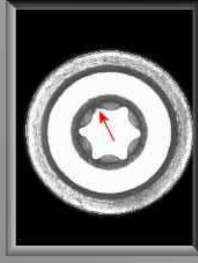


# FAST31RCS

## MECHANICAL STATIONS Mechanical chase movement



**Depth and integrity**  
internal hole  
measurement  
(hex, torx, pozydrive,  
phillips, etc.)



**Cracks detection**  
by Eddy Current probe  
and piece's rotation control



**Chochs or dents presence**  
**over thread**  
mechanical inspection  
CPA PATENT



Software developed by C.P.A.  
Multilingual and with driven-path interface  
Export data - USB, Ethernet

**C.P.A. S.r.l.**  
via Padana Superiore, 22  
25030 Urigo d' Oglio (Brescia) ITALY  
Tel. +39 0307071509 Fax +39 0307071691  
<http://www.cpasrl.it> e-mail: [info@cpasrl.it](mailto:info@cpasrl.it)

# C.P.A. S.r.l.



## NUT 2C2T



<b>Range:</b>	M8 - M14
<b>Speed:</b>	Up to 180 p/min
<b>Features:</b>	Continuous Rotation Eddy current Cracks Inspection
<b>100% Inspection:</b>	Nylon washer integrity and closure + Thread presence + Cracks inspection by Eddy Current

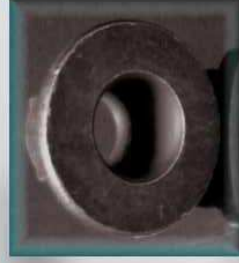
### Optical controls with high resolution digital cameras



**CAMERA 1:**  
Nylon washer integrity and closure, Clinching control



**CAMERA 2:**  
Thread presence inspection





## NUT 2C2T

### MECHANICAL STATIONS Mechanical chase movement



**Nut height**  
with mechanical system



**Cracks detection**  
by Eddy Current probe  
and piece's rotation control



Software developed by C.P.A.  
Multilingual and with driven-path interface  
Export data - USB, Ethernet

**C.P.A. S.r.l.**  
via Padana Superiore, 22  
25030 Urago d' Oglio (Brescia) ITALY  
Tel. +39 0307071509 Fax +39 0307071691  
<http://www.cpasrl.it> e-mail: [info@cpasrl.it](mailto:info@cpasrl.it)