

Ready for the future,  
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Ultrasonic Inspection  
Technologies

# TAURUS TWIN<sup>®</sup>

Dual Robot Automatic  
Inspection System

 **tecnatom**  
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CE

# TAURUS TWIN

Dual Robot Automatic Inspection System

## APPLICATION

Taurus Twin is an automatic system designed for the ultrasonic inspection of large aeronautical components using water jet through-transmission and/or pulse-echo phased-array techniques. It is based on two industrial robot arms mounted on linear tracks. The robots can work in cooperating mode to perform TTU inspections, or Pulse Echo inspections with either robot independently.

The system can assure coverage of the complete part including geometrical features such as surfaces with double curvature, edges, cut-outs, radii, T or  $\Omega$  stringers. In addition, the system can be equipped with other advanced functionalities such as a defect marker or a teaching laser scanner. These inspection modules can be easily mounted on the machine using an automatic tool changer and its associated stand.

## Proven Advantages

- **Integrated**, a unified environment covering all process steps.
- **Multi-Technique**: PA, TTU and PE.
- **Flexible**, working with wide range of products geometries.
- **Productive**, high inspection speed and Phased Array technology.
- **Scalable**, to progressively increase its performance.

Tecnatom will adapt any machine to fulfill the customer's requirements.



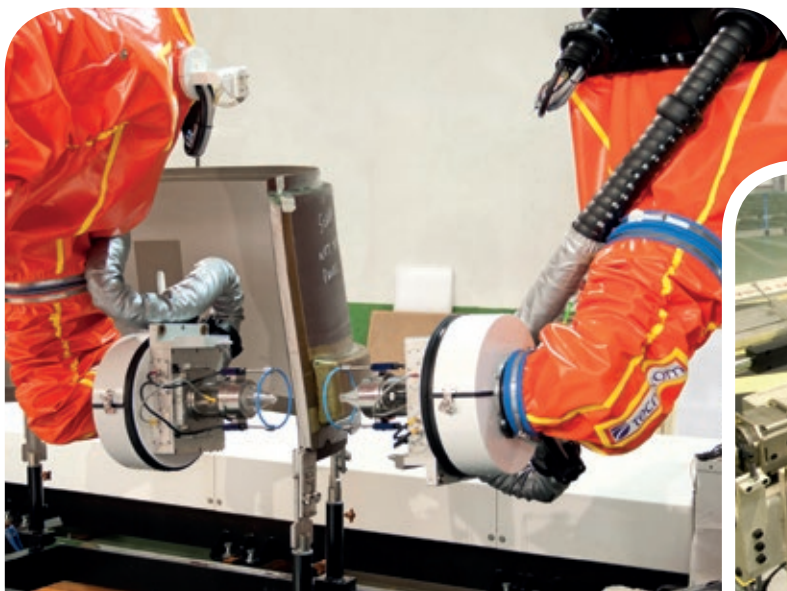


## SCOPE OF SUPPLY

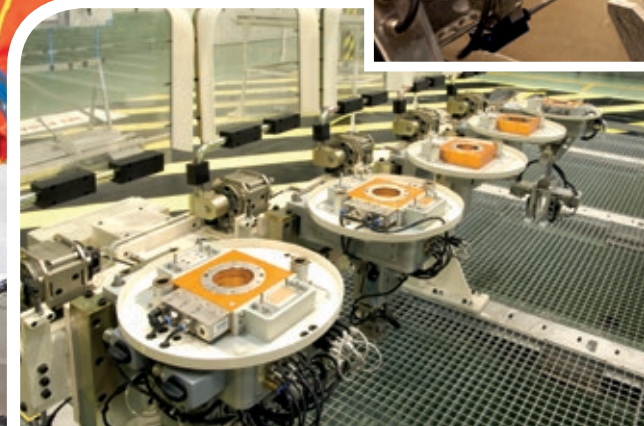
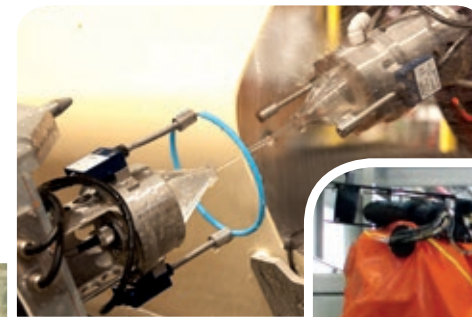
- Mechanical system with 14 axes, stroke of linear tracks and type of robots according to customer requirements.
- Tecnatom-KUKA controller to manage all motorized axes.
- Tecnatom's Phased-array and/or Conventional Ultrasonic Electronics and advanced software for acquisition, evaluation and machine control.
- Modules for inspection of a wide range of components and geometries.
- Gentry advanced software application for trajectories generation and geometry reconstruction.
- Simulation and post-processing software application.
- Computers for operation control, ultrasonic acquisition and evaluation.
- Water circulation and treatment system.
- Other accessories and services: documentation, installation, training.

## AVAILABLE OPTIONS

- Second inspection area, to be able to use the inspection cell as two independent pulse-echo machines.
- Extension of number of phased-array channels.
- Specific inspection modules for complex geometries (radii, Omega or T-shaped stringers, etc..).
- Additional axes (such as turning table).
- Laser scanner for part teaching and trajectory correction.
- Defect marking tool.
- Automatic tool changer and stand.
- Technical assistance during machine start-up.
- Machine certification.
- Part Specific Holding Fixtures.



Automatic Tool Changer

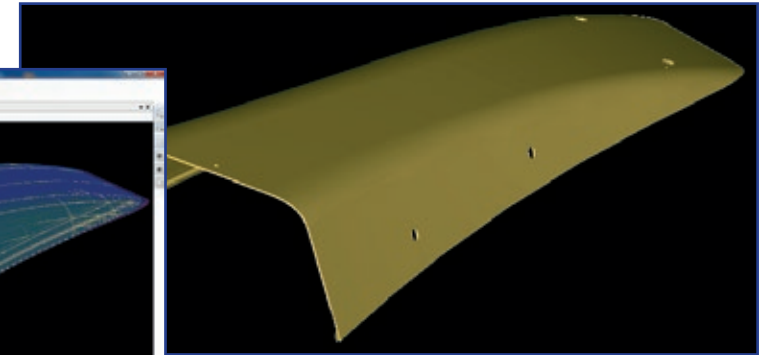
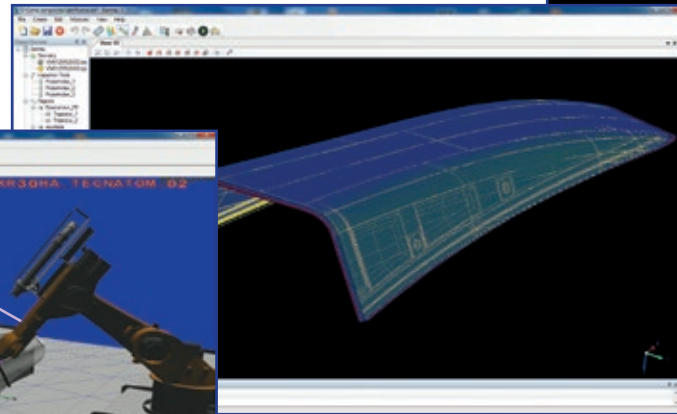
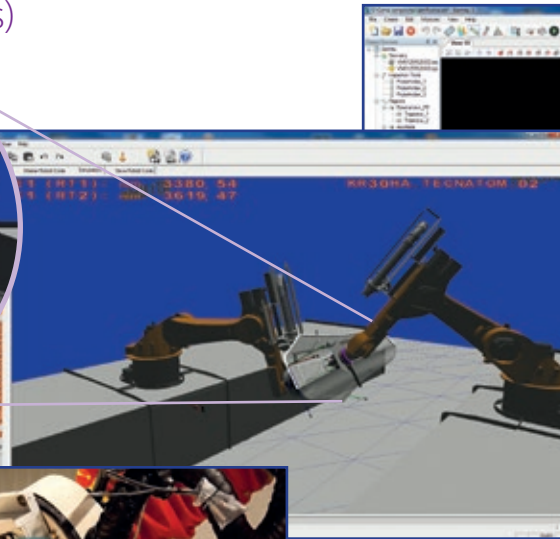
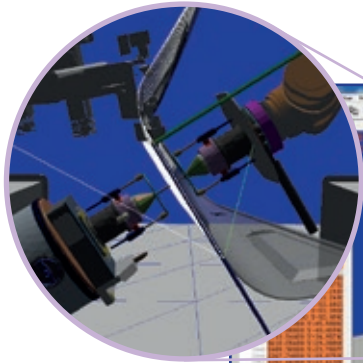


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## FULL INTEGRATED SW

(Covering all process steps)



Teaching or CAD file...

Trajectory  
programming...

Simulation...

Acquisition...

**AUTOMATIC  
PROCESS**

 **tecnaTom**

Tecnatom, S.A.  
Av. Montes de Oca, 1  
28703, San Sebastián de los Reyes / Madrid- Spain

[www.tecnatom-ndt.com](http://www.tecnatom-ndt.com)



Evaluation...

