

## Inline Robotic Inspection Solution

Flexibility & Productivity Serving Metrology in the Production Line



The Metrolog X4 i-Robot technology is suitable for all industrial robots; it provides a production-ready metrology solution that is accurate, reliable and flexible. Metrolog X4 i-Robot is perfectly suited for all applications requiring flexibility and productivity while providing high metrological accuracy.

- Measuring accuracy fully independent of robot's positioning precision.
- Robot movements perfectly synchronized with measurement.
- Robot trajectory entirely controlled by Metrolog X4 i-Robot part program.

The Metrolog X4 i-Robot measuring system is based on a high speed acquisition laser scanner or a touch probe attached to a multi-axis robot wrist. The robot, of any type or brand, without specific accuracy, behaves as a simple tool holder.

The measuring accuracy is provided, either by a separate tracking camera following the laser sensor box equipped with positioning LEDs, or by a laser tracker system.

The main applications can be found in the automotive, aerospace and their sub-contractors, for the in-line manufacturing metrology control.



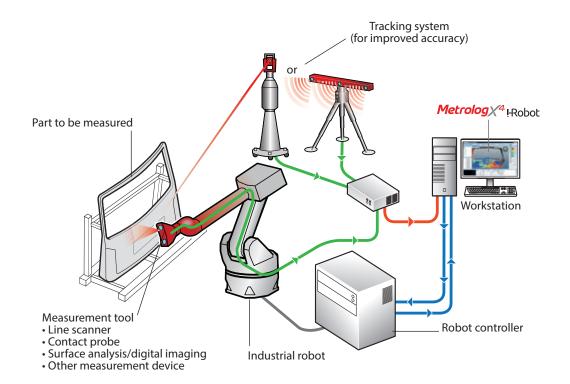
## ■ METROLOG X4 i-ROBOT, THE FUTURE OF 3D AUTOMATED INSPECTION

- Measure all your parts with a touch or scan robot inspection cell.
- Tracked in position with a laser tracker or a photogrammetric station, Metrolog X4 i-Robot cells garantee high productivity and accuracy in measurement.
- Metrolog X4 i-Robot cell may be used as a stand alone station or a fully integrated solution to assembly lines.
- Metrolog X4 i-Robot software allows a quick control of all geometrical characteristics of the part compared to CAD definition, as well as a complete analysis of free form specifications (flush and gap, sections, surface mapping...).
- Metrolog X4 i-Robot directly handles robot motions and inspection commands in one single part program.
- The solution can integrate additional robot cell axis such as 7th axis rail or rotary table...
- Metrolog X4 i-Robot is the first software enabling an intuitive all-in-one robot-based inspection.

## KEY FEATURES & CUSTOMER BENEFITS

- Independent metrology chain: the measuring accuracy is independent of robot's precision.
- Perfect synchronization between measurements and robot movements.
- Simplified programming of the robot trajectory directly from the CAD:
  - Time savings due to offline programming.
  - Complete flexibility when part is modified; simply update the trajectory inside Metrolog X4 i-Robot.
  - Independent of robot accuracy: tolerant to robot drift, warm-up and backlash.
  - No need for cyclic robot calibration.

- Process integration by using industrial robots:
  - Fast and lean manipulator for laser scanner.
  - Flexible and fast adaptation to different parts and models.
  - Existing interfaces for all robot brands or types, sizes and accuracy levels.
  - Easy robot replacement in case of maintenance. As it is not involved in the measurement chain, the robot may be replaced without wasting time, programming or calibration.
- Robust and flexible integration.



ANY DATA | ANY TECHNOLOGY | ANY APPLICATION

