

Pick & Place

Automated placing and measurement of components

- » Easy teach-in in 3 steps
- » Option for closed loop process and ERP integration
- » Pays for itself within 10 months



ALICONA INFINITEFOCUS WITH PICK&PLACE

AUTOMATED PLACING AND MEASUREMENT

Alicona Pick & Place is an automation solution that makes it possible to set up a complete automation process within ten minutes. Therefore an optical measurement system is extended with a robot arm to automatically pick, place, measure and sort components. Pick & Place can also be used in smaller production environments and pays for itself within ten months.

The system is based on the interaction between an administrator who pre-defines automation processes, the collaborative robot for the manipulation and placing of components as well as high-resolution optical 3D measurement technology. The possible connection to existing production systems including ERP facilitates adaptive production planning.



HIGH-RESOLUTION OPTICAL 3D MEASUREMENT TECHNOLOGY IN COMBINATION WITH A COLLABORATIVE ROBOT ARM ENABLES AUTOMATED PLACING, MEASURING AND OK/NOT OK SORTING IN PRODUCTION.

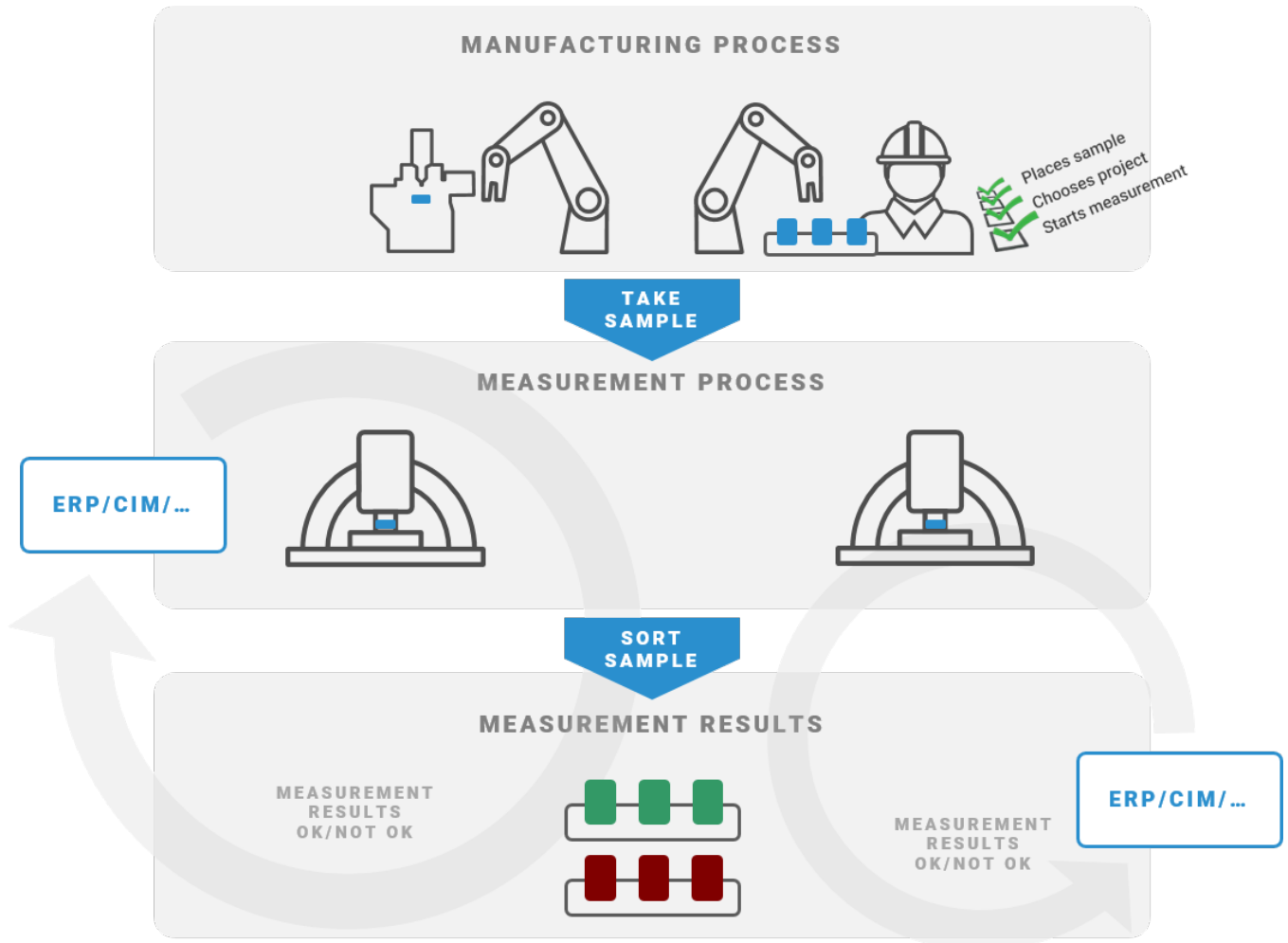


**AUTOMATED
PLACEMENT AND
MEASUREMENT
WITH DRILLS**

**AUTOMATED
PLACEMENT AND
MEASUREMENT WITH
TURBINE BLADES**



TEACH-IN OF MEASUREMENT SERIES IS CARRIED OUT IN ONLY THREE STEPS AND DOES NOT REQUIRE ANY PROGRAMMING KNOWLEDGE



INTERACTING WITH MACHINE

ADAPTIVE CLOSED LOOP PRODUCTION

The machined component is removed from the machine by the robot, clamped on the measuring system and measured automatically. Depending on the manufacturing strategy, there are different options of continuing the production process afterwards. Either the measurement result is fed back into the tool machine following a closed-loop strategy, where machine parameters are corrected automatically and manufacturing continues in a self-controlling manner. Alternatively, an automatic sorting into OK/NOT OK pallets follows after the 3D measurement for further processing.

INTERACTING WITH WORKER

EASY TEACH-IN IN ONLY 3 STEPS

The user teaches-in an automated procedure in only three steps with no programming knowledge required. The robot handles component manipulation including the positioning on the measuring system and further sorting in OK/NO OK pallets. Regardless of the number of components, only four parts per pallet have to be pre-defined. At the push of a button the operator starts the entire process in production. After the measurement is finished, the component is sorted by measurement results OK/NOK and put in the respective pallet by the robot.

Technical specifications

GENERAL SPECIFICATIONS

Robot type	UR-3, UR-5, UR-10
Reach	500mm, 800mm, 1300mm
Safety	15 advanced adjustable safety functions. TüV NORD Approved Safety Function Tested in accordance with: EN ISO 13849:2008 PL d
Axis	6 Joints
Repeatability	+/- 0.1 mm
Payload	3kg, 5kg, 10kg
Compatibility	InfiniteFocus SL, EdgeMasterX and InfiniteFocus G5 with AdvancedReal3D (Erowa and 3R)
Optional	<ul style="list-style-type: none"> » Stable table with integrated status lights and emergency switch » Pallets for 3R and Erowa, customized pallets possible » Additional HW – Laser scanner, camera system

FEATURES

Software	<p>Teach-in in 3 simple steps:</p> <ul style="list-style-type: none"> a. Define project b. Define pallets (First pallet, OK pallet, NOK pallet) c. Define procedure <p>Administrator/Worker mode for teach-in or just starting a project</p>
Interfaces	<ul style="list-style-type: none"> » TCP/IP, Profinet » Customized available
Software compatibility	AutomationManager 2.1 or higher