



ERROR PROOF
MANUAL
OPERATIONS

DIGITIZE YOUR ASSEMBLY WITH 3D VISION, AUGMENTED REALITY AND DATA ANALYTICS



3D VISION FOR QUALITY CHECK AUGMENTED REALITY FOR GUIDANCE

Smart Robots is a cutting-edge digital mate that supports human operators to avoid mistakes and improves quality and productivity.

The 3D vision sensor is the fastest and most accurate on the market to recognize operator actions and to instantaneously intervene in case of errors. The operator is guided by digital instructions with augmented reality or at screen to enable job rotation and speed up training. The solution is fully integrated with the factory, collects data and provides analytics for traceability, certification and continuous improvement.

01. REAL-TIME QUALITY CONTROL **№**

Verify the execution of each operator action by recognizing hands, fingers, components (screws, gaskets) and working tools (such as screw-drivers or riveters)



02. OPERATOR GUIDANCE >

100% digital instructions projected onto the work area, advancing in automatic for an intuitive, interactive and easily updated guidance flow



O3. CERTIFICATION AND DATA ANALYTICS >

Traceability and certification of the processes, integrated with reporting and data analytics for continuous improvement at station, line, and plant levels



UNLOCK OPERATIONAL EXCELLENCE IN MANUAL WORK

Elevate your operations with Smart Robots, an all-in one solution delivering unparalleled monetary and organizational benefits.

From cutting non-quality costs to certifying manual operations, streamlining training processes, and enhancing productivity, Smart Robots technology drives efficiency and excellence.

Smart Robots provides a flawless, digital, efficient and human-centered manufacturing.



01. SAVE NON-QUALITY COSTS >

Minimize returns from customers and customer dissatisfaction

Save costs from reworks and wastes

Save costs of substituted hardware such as sensors and pick-to-light

02. CERTIFICATION OF MANUAL OPERATIONS >

Ensure traceable and guarantee quality

Gain a competitive edge with respect to other OEMs

Enhance brand reputation

TRAINING PROCESS >

Boost production flexibility

03. STREAMLINED

Facilitate job rotations

Minimize training times and costs

CUSTOMER SERVICE COSTS

OBSOLETE QUALITY CHECKS

SALES LOSS

BRAND REPUTATION DAMAGES

CUSTOMER RETURNS

TRAINING COSTS

RIGID JOB ROTATION

UNBALANCED LINES

UNOPTIMAL CYCLE TIME

SCRAP AND RE-WORKS

04. PRODUCTION **MONITORING** AND ANALYSIS >

Gain immediate insights into manual processes

Enable anomaly detection

Detect errors frequency and data per each single action

05. PRODUCTIVITY BOOST >

Balance production lines

Standardize and homogenize

Optimize work cycles driven by data

06. WORKER HAPPINESS AND MOTIVATION >

Reduce mental stress

Improve operator motivation and comfort

Enable inclusivity for impaired workers

ELIMINATE HIDDEN AND WELL-KNOWN COSTS **OF NON-QUALITY**

FLEXIBLE APPLICATION FOR EVERY MANUAL ACTIVITY

Smart Robots has been applied successfully across numerous different industries, ranging from automotive and appliances to pumps, electronics, aerospace, and many more. Its extreme flexibility allows seamless, easy, and rapid integration into various workstation setups.

ASSEMBLY >

Verifying picking from boxes, components presence, tool handling and tightening, Smart Robots certifies every step of the assembly sequence for simple, complex, small and big parts.



PACKAGING

Errors in packaging activities result in dramatic costs. Smart Robots easily verifies the pick of the correct item from boxes and even checks its presence in the final package, eliminating customer complaints.



MACHINE TENDING

When a component is placed in a wrong position into, for example, a press machine, the entire piece has to be discarded. Smart Robots verifies that all components are correctly positioned to avoid any costly scrap.



INTEGRATION INTO ANY WORKSTATION SETUP

WORKBENCH ≥

Common static workstation, widely used in across industries for its adaptability

DISCRETE LINE >

Moving line that advances step-by-step, used for high batch size production

CONTINUOUS LINE >

Moving line that advances continuously, common in appliances industry

OPEN AREA

The operator assemble a bulky product while moving around it

IMPACTFUL CUSTOMER OUTCOMES

GIOBERT S.p.A

Giobert uses Smart Robots in its lines in two countries to certify the quality of manual work, which is a fundamental competitive edge for an OEM manufacturer in automotive. Quality checks and guidance are applied for cylinders assembly and packaging. All the installed products are fully integrated with stations machines and factory management system.



"Smart Robots is a great support. It helps me to avoid mistakes and I can work without stress"

Tiziana Palazzolo Giobert Line Operator

AEC Illuminazione S.r.l.

Smart Robots is applied for the assembly of stadium projectors, to guide and verify the actions of tightening, picking and positioning of lenses. The 3D vision sensor recognizes the correct transparent lens up to 4mm high. Thanks to Smart Robots, AEC avoids mistakes in the lenses composition of the projectors and guarantees quality to its customers.



"Smart Robots represents a great upgrade in our assembly line. It guides us in every single phase, reducing the possibility of error and reducing cycle times."

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CLEAR RETURN OF INVESTMENT

Up to 100k€

99%

10%

YEARLY COSTS SAVING

REDUCTION OF ERRORS

INCREASE PRODUCTIVITY



Embrace flawless manufacturing operations with Smart Robots. Our cutting-edge solution, driven by advanced 3D vision technology and augmented reality, revolutionizes manual stations.

The augmented human worker, assisted by our digital mate, boosts productivity while ensuring exceptional quality and customer satisfaction.

Join us in transforming the way you work, ushering in an era of unparalleled reliability, productivity, and human-centric innovation with Smart Robots.

CONTACT US >

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