partner for print solutions

Automation

WIEKON MK3
Shirt and Pocket Lupfer

kit

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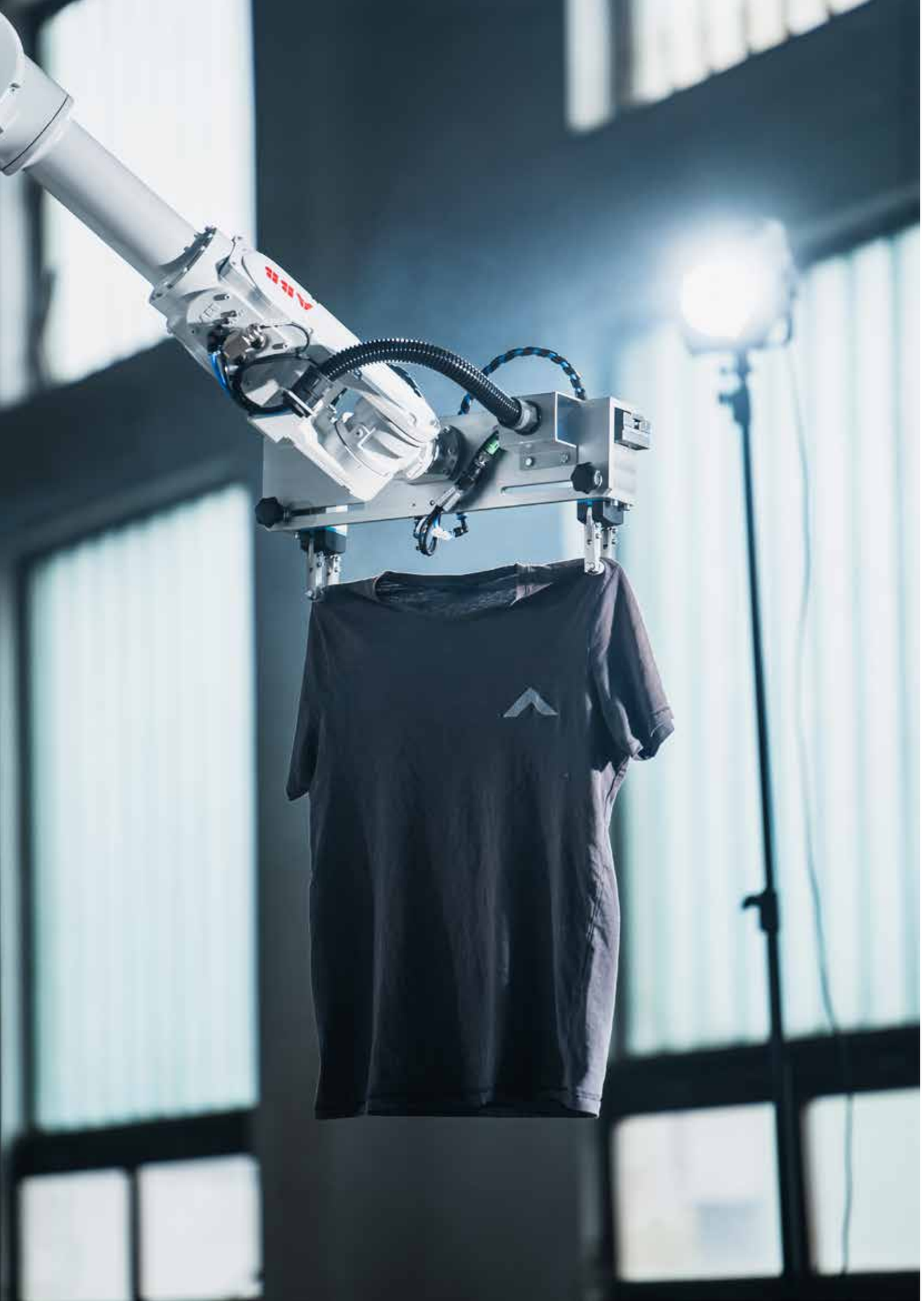


WIEKON MK3
Shirt and Pocket Lupfer
The Future of Automation in Textile Decoration

Thinking Ahead Today!
The textile decoration industry, particularly screen printing, is undergoing a transformation. A shortage of skilled workers and increasing price pressure demand a realignment of the sector. To remain competitive, especially in industrial nations like Germany, the printing industry will need to rely more on automation in the future.

While automation in our segment is still in its early stage, it holds tremendous potential. Innovative technologies not only secure existing business areas but also expand them.

Strong Partnership for Innovative Solutions
To support our customers on this path, we have partnered with **WIEKON GmbH.** Together, we firmly believe that automation technologies are crucial for long-term market success.

With **KIT GmbH** and **WIEKON GmbH,** you have two experienced partners at your side. We assist you in planning and implementing customized automation solutions tailored perfectly to your needs.

Our Common Goal
Bringing innovation into practice – that is our mission. From this vision, the MK3 Shirt and Pocket Lupfer was born. Now in its third generation, this solution combines precision, efficiency, and flexibility. With this technology, we set new standards in textile decoration automation.

Together with our partners, we help you automate your processes and tackle tomorrow's challenges today.

Our partner
WIEKON

The Future Begins Now

Experience Tomorrow`s Technology Today

With the MK3 Shirt and Pocket Lupfer, you revolutionize your production processes. The intelligent system offers precise, efficient, and gentle textile handling solutions—without compromising print quality. Thanks to its universal design, the MK3 is compatible with all common printing machine manufacturers, such as ROQ, MHM, and M&R, ensuring maximum flexibility.

Two Variants for Individual Requirements
The MK3 is available in two variants, adapted to different printing and pallet formats. Whether small or large formats – the MK3 flexibly adapts to your production needs.

Precision Instead of Pulling – The Key to Success
The adhesive strength of the pallet adhesive fluctuates due to factors such as heat, amount of adhesive, or the texture of the textiles. Conventional systems that remove textiles from the pallet by pulling can lead to distorted print images or waste.

The MK3 Shirt and Pocket Lupfer solves this problem by precisely lifting textiles. A laser adjusts to the textile size, detecting the exact hem position. The hem is lifted approximately 10 cm while a specially developed gripper with non-slip silicone jaws securely holds and removes the textile from the pallet. (Note: Pallets must be prepped beforehand.)

This method offers multiple advantages:
- **High Print Quality:** No distortions or damage to the print
- **Reduced Waste:** Errors are significantly minimized

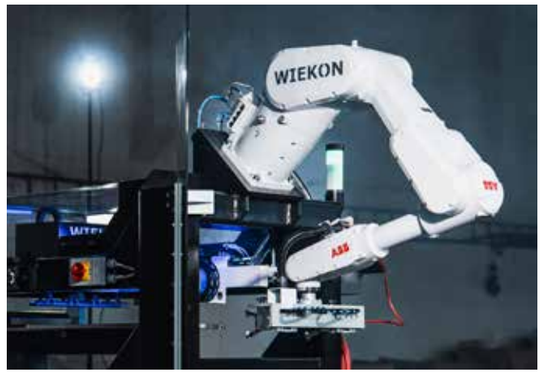
Technology That Inspires

The IRB 1300 by ABB

The MK3 Shirt and Pocket Lupfer features the IRB 1300 from ABB. This compact and powerful robotic arm is specifically designed for industrial applications. With six movable joints and a space-saving design, it is also ideal for tight work-spaces. The IRB 1300 lifts heavy loads, operates quickly and efficiently, and reduces production times. Its versatility makes it suitable for industries such as electronics, logistics, and automotive. Additionally, it is robust, water- and dust-resistant, and can be used in clean rooms.

Minimal Maintenance – Maximum Availability
The MK3 is designed for user-friendly maintenance, allowing operators to perform servicing after a brief training session. If an issue arises, you benefit from our comprehensive service offering. Remote maintenance enables quick system diagnostics and problem resolution. If necessary, German-based technicians are available for on-site support.

About ABB Robotics
ABB Robotics is a leading provider of robotics and automation solutions. The company offers an integrated portfolio of robots and machine automation, controlled by powerful software. With a global presence at over 100 locations in 53 countries, ABB supports customers in becoming more efficient and flexible.



AI Print Inspektor

Perfect Print Results with Real-Time Error Detection

The AI Print Inspector is the latest enhancement to the MK3 Shirt and Pocket Lupfer and can be optionally integrated into the machine. Since the MK3 automates the manual removal process, quality control has been seamlessly incorporated. This ensures that the entire workflow – removal, inspection, and placement – is fully automated.

With high-resolution camera technology, the AI Print Inspector checks the print design in real time and compares it with the digital template. Deviations such as misprints, lint, or tonal errors are accurately detected, marked on a screenshot, and displayed to the operator on a monitor.

- **Optional Integration:** Easily added to new or existing systems
- **Efficiency Boost:** Optimized production workflows and time savings
- **Higher Print Quality:** Precise error detection and waste reduction

output print image

printed image with error display

Wiekon Connect Gateway

The Heart of Automation

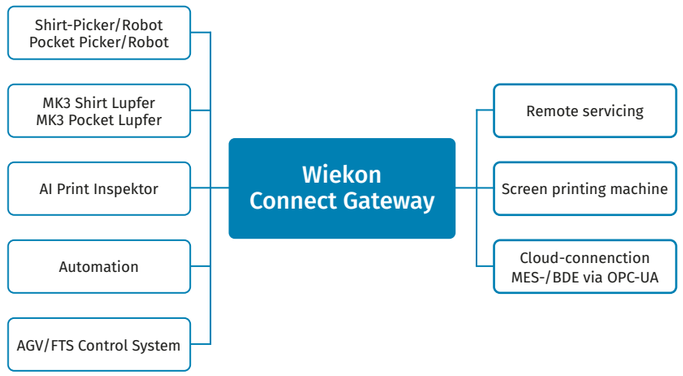
The Wiekon Connect Gateway serves as the central interface for all interconnected processes.

The Wiekon Connect Gateway links:
- Printing machine
- MK3 Shirt and Pocket Lupfer
- AI Print Inspector
- Power and air supply

Additionally, it enables:
- Remote Maintenance: Quick connection to service technicians for troubleshooting
- Integration into Control Systems: Seamless communication with AGV/FTS systems
- Cloud Connectivity: Support for MES or BDE systems via OPC-UA

The Gateway ensures smooth operations and perfect networking of all components.

Wiekon Connect Gateway – The Central Interface in the System



Maximum Safety and Flexibility

Seamless Integration for Any Production Environment

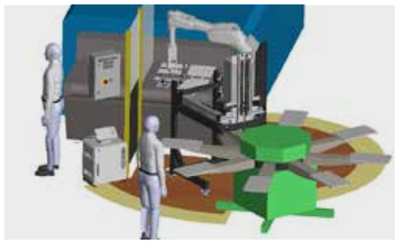
The MK3 Shirt and Pocket Lupfer can be individually adapted to spatial conditions and safety requirements. The optimal installation depends on the available space and selected safety concept:

Work Area Monitoring with Laser Scanner
- Monitors the robot's working area
- Automatically slows or stops the robot when a person enters the protected area
- Ideal when avoiding a safety fence and ample space is available

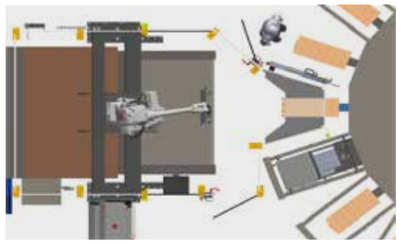
Work Area Monitoring with Laser Scanner and Fence or Safety Glass:
- Adds physical barriers like safety glass or fences to the laser scanner
- Recommended for limited spaces or when the safety distance to the robot cannot be maintained

Additional Flexible Positioning Options
- The robot can be positioned either outside the Lupfer or mounted directly above the drying conveyor via a traverse. This adaptability enables optimal integration into any production environment, regardless of space constraints or safety concepts.

These integrations ensure a safe workspace, minimize accidents, and meet modern production requirements.



Example view: Monitoring of work area with laser scanners and safety glasses



Example view: Monitoring of work area with fencing and truss assembly

Safety Standards and Sustainability
Compliance with international standards and regulations protects employees and ensures seamless integration into your production processes. At the same time, the focus remains on resource-saving technology that combines durability and environmental friendliness.

Safety and compliance with international standards are a key component:
- CE marking: According to Machinery Directive 2006/42/EC
- Compliance with EN ISO 10218-1 and 2: Safety standards for robotics

Optimize Your Printing Process

with the MK3 Shirt and Pocket Lupfer from WIEKON

Boost efficiency and quality with the MK3 Shirt and Pocket Lupfer. Precise print quality, reduced waste, and easy integration into common printing machines optimize your production. Its modular expandability, such as the AI Print Inspector, provides maximum flexibility, while its durable, low-maintenance technology supports your operations sustainably and reduces costs.

Your Benefits
- Perfect print quality: Precise handling without distortion
- Reduced waste: Less waste due to controlled work processes
- Easy integration: Compatible with all common printing presses
- Flexibility: Expandable with modules such as the AI Print Inspector
- Durability and ease of maintenance: Reliable technology that supports your production in the long term

Technical Specifications

Wiekon MK3 Shirt Lupfer
Maximum print size: 500 x 700 mm
Minimum printing plate ready: 260 mm
Push carriage stroke: 800 mm
Capacity: +/- 600 cycles/h

Wiekon MK3 Pocket Lupfer
Bag size: approx. ca. 420 x 390 mm
Printing plate width: 320 mm
Push carriage stroke: 800 mm
Capacity: +/- 600 cycles/h

Make your printing process more efficient – with the MK3 shirt and pocket Lupfer from WIEKON powered by KIT GmbH!

Scan the QR code
and learn more on our website.

Together for the Future of Automation

About KIT GmbH

For over 40 years, KIT GmbH has been a reliable partner for the printing industry. With extensive experience and a wide range of services, the company supports its customers in the fields of industrial, graphic, and textile screen printing, pad printing, textile printing, digital printing, and advertising technology. As a specialized wholesaler and partner for print solutions, KIT GmbH offers not only high-quality products but also individual consulting and tailored solutions. This combination of expertise and personal commitment makes KIT GmbH a key player in the printing industry.

About WIEKON GmbH

WIEKON GmbH was founded in 2020 by Ludwig Wiesböck and has quickly established itself as an innovative mechanical engineering company with a focus on automation. The company supports its customers in planning and implementing individual solutions for the shoe and textile industries as well as industrial automation. With comprehensive expertise and a clear understanding of industry-specific requirements, WIEKON focuses on realizing efficient and future-proof concepts.2 The goal is to optimize production processes and sustainably strengthen the competitiveness of customers. WIEKON‘s approach involves applying lean production principles and, when needed, Industry 4.0 integration to efficiently implement solutions into the customer‘s production environment. The resulting system integrates seamlessly into the customer‘s production.

Strong Together

The close collaboration between KIT GmbH and WIEKON GmbH combines long-standing industry experience with cutting-edge technology. Together, we develop solutions that are precisely tailored to our customers‘ needs, making production processes more efficient, precise, and future-proof.

Do you have any questions or would you like a consultation?

We are available to assist you:

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