World's First High-Reliability Robotic Picking Cell for Transparent Poly Bags to Be Unveiled at Automatica

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Four leading automation providers connect next-generation camera, vision AI and hybrid gripper to solve major e-commerce fulfillment bottleneck

Three makers of next-generation pick-and-place robotic technologies today unveil the world's first high-reliability robotic picking cell capable of robustly handling transparent poly bags in high-variability, mixed-material environments. It will be on display June 27-29 in Munich at Automatica, a leading exhibit for smart automation and robots, at the Zivid booth (#B5300).

"Where transparent poly bags are involved in e-commerce fulfillment, pick and place automation has less than one percent market penetration," said Preben Hjørnet, CTO for the Gripper Company. "The world's largest e-commerce marketplaces have worked on this for years, but conventional grippers have always limited success rates to less than 70 percent. This collaboration more than doubles the best throughput speed currently available, with much higher success rates."

Pairing the Zivid 2+ 3D camera with Fizyr's deep learning computer vision software provides unparalleled robustness for handling transparent objects. Fizyr identifies each item with segmentation, shape detection and material detection, and its algorithms prioritize the actions to be taken with cascading considerations that identify which items are on top of others, the location and makeup of each item's surfaces, whether the robot's gripper will have adequate room to move, where it must begin its task and more. Fizyr then instructs the robot to optimally deploy MAXXgrip from The Gripper Company. After each pick, a new image allows Fizyr to recalculate, account for any changes that occurred, and direct the robot's next step, all in a fraction of a second.

The robot never needs to slow down, consistently performing at its fastest possible speed thanks to instantaneous image capture, processing and robot instruction, and it can pick, move and place up to 1,200 fast moving consumer goods per hour in high variability environments, including transparent poly bags - which present many challenges for traditional grippers, with much greater success than leading in-market solutions. The first-of-its-kind robotic cell capably handles a wide variety of goods and packaging types, including shoeboxes (tuck boxes), books, telescopic boxes and stylepack apparel bags, which are known to cause fulfillment bottlenecks.

This collaboration integrates three next-generation technologies for the first time:

- The Zivid 2+ 3D camera from Zivid: a new general-purpose 3D+2D camera for the highest performing robotic applications.
- Deep learning computer vision software from Fizyr: the smartest, fastest and most effective brain available to maximize robotic capabilities.
- MAXXgrip from The Gripper Company: a unique hybrid gripper that uses a smart strong pinch grip to prevent apparel from swaying to safely produce extremely high pick and place rates.

Robotics integrators, systems integrators and robot manufacturers partner with Fizyr, The Gripper Company and Zivid to deliver reliable and productive automation solutions for order picking, parcel induction, mixed-SKU depalletizing, loose loads trailer unloading and a wide range of other tasks in high-variability environments.

Automatica attendees can see this collaborative e-commerce fulfillment innovation by visiting the Zivid booth (#B5300). Those not attending Automatica can see the robotic cell in action during the show at Fizyr's LinkedIn page, where video will be posted, or by requesting more information or a demonstration at Automatica@pr-return.com.

About FANUC
FANUC offers the widest range of robots in the world to cover the needs of diverse applications and industries. They are a key standard component – totally flexible with application-specific options, straightforward integration, and the colour of choice for demanding automation solutions. FANUC is the leading global manufacturer of factory automation, with 40 years of experience in the development of robot technology, more than 810,000 robots installed worldwide, and satisfied customers in every corner of the globe. https://fanuc.com

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About Fizyr
Fizyr offers advanced vision AI for robots, providing the smartest, fastest and most effective brain available to maximize robotic capabilities. Compatible with all major robotics systems on the market, Fizyr's vision-based AI enables robots to see, perceive, account for variances, learn and perform more successfully than any other robotic software. Years of leading research in computer vision for pick and place robots in logistics ensure the highest levels of accuracy and performance. https://fizyr.com

About The Gripper Company
The Gripper Company is on a MISSION to make reliable, intuitive, and affordable gripping solutions that offer the best tool for the job by applying platform thinking at every level of our design process. As we continuously expand the platform by adding new actuation methods - the introduction of MAXXgrip can finally take full advantage of the industrial robot's performance in warehouse and logistics. TGC has a VISION to offer greater opportunity for automation, to meet demands for increased productivity through 5 performance requirements: Variation, Throughput, Gentleness, Ease of Use and Job-Customization. https://thegrippercompany.com

About Zivid
Zivid is a market-leading, pure play provider of industrial 3D machine vision cameras and vision software for autonomous industrial robot cells, collaborative robot (cobot) cells and other industrial automation systems. The company's flagship hardware products are the new Zivid 2+ 3D+2D color camera product line. They are supported by companion software products: the Zivid Software Development Kit (SDK) and Zivid Studio, a graphical user interface (GUI). https://zivid.com

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