COMAU AND IUVO DESIGN NEW WEARABLE ROBOTIC TECHNOLOGIES TO REDUCE FATIGUE AND IMPROVE ERGONOMICS DURING MANUAL LOAD HANDLING AT ESSELUNGA GROUP

The innovative exoskeleton will support the lumbosacral joint and reduce the burden on the back during lifting activities, thus improving working conditions and quality for operators.

Grugliasco (Turin), February 9, 2022 – Comau and IUVO are developing an innovative wearable robotics solution to improve the ergonomics of operators engaged in manually moving loads at Esselunga, a leading large-scale retail trade company. The aim is to improve well-being by reducing lower back fatigue. The action of the exoskeleton will assist the back muscles that are typically stimulated during lifting and handling tasks, thus creating short- and long-term benefits through a significant reduction in physical effort and fatigue.

There are three protagonists of the project. Comau’s role is to lead the engineering process related to the new exoskeletal device for lumbar support. IUVO’s design team will specialize in the conception, development and testing of wearable robotic technologies. IUVO is a spin-off company of the prestigious university Scuola Superiore Sant’Anna whose majority share is held by the Comau group. Esselunga will instead be responsible for leading the validation process of the device by involving its operators from the beginning of the project. Testing of the first prototypes will begin in the first quarter of 2022, while the first lumbar exoskeletons will be available in the second quarter of 2022.

Giacomo Del Panta, Comau Chief Customer Officer, said, “The collaboration with Esselunga, a reference point within Italy’s large-scale retail trade sector, for the creation of an exoskeleton for lumbar support, confirms Comau’s commitment to developing new technologies that ensure better ergonomics and operator well-being during heavy-duty tasks. Once again, Comau is leveraging technology to support mankind by reducing the physical impact of manual and repetitive operations. By paying attention to the health and well-being of operators, Comau confirms its pledge to sustainable and human-centered manufacturing processes.”
Nicola Vitiello, associate professor at Scuola Sant’Anna and co-founder of IUVO, emphasized, “The collaboration with Esselunga is a huge opportunity to further progress the development of wearable robotic technologies for the well-being of workers, that are also easily usable in everyday life. Esselunga’s involvement early in the design process will be invaluable to our team of bio-engineers. Any technology that is created to help humans requires active participation by the end users during each stage, in order for it to be truly accepted.”

Esselunga, in choosing to contribute to the realization of this project, confirms its attention to innovation and its commitment to continually improve working conditions by placing employees at the center of its mission.

Comau and IUVO have launched their MATE-XT upper limb exoskeleton for the upper limbs, which is designed to support the operator while performing manipulation tasks with raised arms. Data collected from numerous companies using this technology has shown that the MATE-XT technology can reduce effort by about 30% and improve productivity by about 10%.

Comau, a member of Stellantis, is a worldwide leader in delivering advanced industrial automation products and systems. Its portfolio includes technology and systems for electric, hybrid and traditional vehicle manufacturing, industrial robots, collaborative and wearable robotics, autonomous logistics, dedicated machining centers and interconnected digital services and products able to transmit, elaborate and analyze machine and process data. With over 45 years of experience and a strong presence within every major industrial country, Comau is helping manufacturers of all sizes in almost any industry experience higher quality, increased productivity, faster time-to-market and lower overall costs. The company’s offering also extends to project management and consultancy, as well as maintenance and training for a wide range of industrial segments. Headquartered in Turin, Italy, Comau has an international network of 6 innovation centers, 5 digital hubs, 9 manufacturing plants that span 13 countries and employ 4,000 people. A global network of distributors and partners allows the company to respond quickly to the needs of customers, no matter where they are located throughout the world. Through the training activities organized by its Academy, Comau is also committed to developing the technical and managerial knowledge necessary for companies to face the challenges and opportunities of Industry 4.0.

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