Mobile robots streamline internal logistics at HIPRA

Autonomous mobile robots increase the flexibility, efficiency, and productivity of material transport.

HIPRA, a pioneering biotechnological company in the pharmaceutical industry, has transformed its internal logistics processes by installing a fleet of mobile robots supplied by OMRON.

HIPRA specialises in human and animal health and is a world leader in the development of animal vaccines and advanced diagnostic services. The company is the world's sixth largest producer of animal vaccines and employs some 2400 people worldwide. Its headquarters are based in Amer, Girona, Spain, and through its range of commercial subsidiaries and its global distribution network, HIPRA provides solutions and services to customers in over 100 countries.

New plant, new challenges

The company recently decided to expand its capabilities and its productivity and has built a major new production facility and warehouse in Spain. Another of the reasons for this is that HIPRA wants to be a pioneer not only in the products it develops and supplies but also in the production and processes involved. It therefore wanted to streamline some of its processes, particularly those involving the transport of materials, which had previously involved the manual loading of products from the machine to the cart transporter.

A key issue facing the company was therefore the need for greater flexibility and efficiency of its internal logistics processes. It wanted to achieve this by migrating to an automated solution. This had to be installed within a 100% collaborative and flexible environment that could provide high rates of production.

Another main challenge that HIPRA faced was the need to move vials of vaccine from the production area to the

warehouse. This includes the transportation of 700 boxes of vials each day, with each load weighing 70kg. Associated with this was the need to feed empty boxes into the system and to manage the opening of doors whilst maintaining a 100% clean environment.

Sourcing and installing the best technology

The company therefore started looking at suitable solutions. It considered several products but eventually opted for autonomous mobile robots (AMRs) provided by OMRON. It purchased a fleet of six LD-90 robots, which were then customised to meet the company's specific requirements. This included the need for the mobile robots to act harmoniously with employees working in the same area.

OMRON's LD-90 mobile robots are fully autonomous, intelligent vehicles that have been designed to increase throughput, reduce machine dwell time, eliminate errors and improve material traceability. Unlike traditional automated guided vehicles (AGVs), they navigate by the natural features of a facility.

OMRON's Project Managers Carlos Roncero explains: "The new system is integrated into HIPRA's production process, which makes it possible to have a fully automated system. With this solution, we have managed to increase performance and improve traceability. Additionally, the use of AMRs allows HIPRA to benefit from their navigation capabilities without any guides, of course with the necessary features to ensure safe operation in spaces that are shared by humans and machines. Some challenges in the application included the narrowness of the corridors, the need to manage the opening and closing of doors as well as the intensity of traffic during the peaks in production. We've used innovative fleet management and robot intelligence to ensure that the AMRs navigate correctly throughout the whole plant."

Carlos adds: "This type of application can be replicated anywhere and are in line with OMRON's vision to use autonomous mobile robots to further improve production in the pharmaceutical industry. With this technology, HIPRA has a totally flexible solution suitable for working in ISO Class 5 rooms and capable of transporting vaccine trays from the production lines to the automated warehouse. The new system is easy to scale, modify and adapt to new production requirements."

Looking to the future

With the mobile robots, HIPRA how has a totally flexible solution for transporting trays of vaccines from the production machines to the automated warehouse.

Francisco de Tierra, HIPRA's Robotics Senior Engineer, comments: "Having looked at the various alternatives, we

believe that OMRON's solution is the one that fits us best today. We've developed a strategic partnership, with a relationship that's based on trust with OMRON. We've particularly valued the high level of expert support we've received. This is a huge investment for us in pioneering technology, and we're confident that this will make us more agile in the future."

About HIPRA

For more information about HIPRA, please visit: https://www.hipra.com/en

About OMRON Corporation

OMRON Corporation is a global leader in the field of automation, based on its core technology of "Sensing & Control + Think." OMRON's business fields cover a broad spectrum, ranging from industrial automation and electronic components to social infrastructure systems, healthcare and environmental solutions. Established in 1933, OMRON has about 29,000 employees worldwide, providing products and services in some 120 countries and regions. In the field of industrial automation, OMRON supports manufacturing innovation by providing advanced automation technologies and products, as well as extensive customer support, to help to create a better society. For more information, visit OMRON's website at industrial.omron.eu.