Vol 65 | Issue 03 | English-Bi Monthly | September - October 2026 | Page - 12 | Price : Rs 15 | RNI No 6178/61

imprint™
Automation India
Magazine
India's Automation Magazine

Cover Story

When Inspection Becomes Intelligence

How connected vision systems and digital twins are reshaping quality control on the pharmaceutical production floor.

TECHNICAL ARTICLE
Automation Gossip and Forgotten Links

IMPRINT IMMERSE
When Inspection Becomes Intelligence

IMPRINT ORIGINAL
Automation Product Spotlight

10 REPUTABLE SOLUTIONS
Automation Product Spotlight

Infocast
Information Casting

Connect Your Future with Business

Professional Automation Robotics AI

PARA TECH EXPO

23 Exhibitor Segment 🔗 **13 Product Spotlight** 🔗

Engage with Automation projects from high potential product sectors

Exhibitor Booking 🔗

Download

Exhibitor Prospectus



CIDCO Exhibition & Convention Centre

Vashi, Navi Mumbai

Welcome to PARA Tech Expo

Factory Automation and Robotics in manufacturing is translaed with emphasis on Intelligent Manufacturing and Smart Production. The concept of Intelligent or Advanced Manufacturing, Smart Production or Industrial Automation is the key to establishing a strong and smart country. In the era of Artficial Intelligence 'effciency' is the basic under line. India is on the precipice of creating the worlds best technologies. With one goal. Viksit Bharat - beter than the best.
PARA Tech Expo is on a mission.

- **Industrial Automation**
- **Factory Automation**
- **Intelligent Manufacturing**
- **Smart Manufacturing**
- **Smart Production**
- **Robotics**

Mantra 1: Industrial automation leads to excellence.

Mantra 2: March of automation in manufacturing.

- PARA Tech Webinars
- PARA Tech Technical Seminars
- PARA Tech Conference
- PARA Tech CEO Round Table Conclave
- PARA Tech Awards
- Industry Associations

Organized By
Infocast
Information Casting

Media Partner
imprint™
Automation India
Magazine



Contents

Automation Product Spotlight

10 Reputable Solutions

Material handling automation is becoming increasingly important in pharmaceutical manufacturing, where precision, hygiene, containment and operational efficiency are essential. The featured solutions from **Schmalz, Piab, Daifuku, Hanningfield, POUL, Interroll, Dematic, SSI SCHAEFER, GEA and Flexicon** demonstrate how advanced lifting systems, vacuum conveying, autonomous mobile robots, automated storage technologies and controlled powder transfer equipment are transforming material movement across modern production facilities.

A defining trend is the shift towards safer, more intelligent and increasingly automated material handling, from contained transfer of potent pharmaceutical ingredients and hygienic container lifting to autonomous transportation and high-density warehouse automation. Manufacturers are adopting these technologies to minimise manual intervention, reduce contamination risks, improve material flow and strengthen operational consistency. Alongside these developments, modular conveyor systems, automated retrieval solutions and precision-engineered handling equipment are helping connect production, packaging and logistics operations more efficiently. Together, these innovations support cleaner manufacturing environments, improved workplace safety, greater productivity and more reliable material handling throughout the pharmaceutical manufacturing process.

04 **Schmalz's - PalPharma Hoist – Precision Lifting and Transfer**

Handling heavy containers and bulk materials in pharmaceutical production demands precision, safety and controlled movement. Schmalz's PalPharma Hoist is engineered for lifting, lowering, tipping and positioning drums, Intermediate Bulk Containers (IBCs) and bulk bags during material transfer and processing operations.

06 **GEA's -BUCK® MC – Ensuring Safe and Contained Powder Transfer**

Handling potent pharmaceutical powders requires stringent control over operator exposure, cross-contamination and material losses. GEA's BUCK® MC Split Butterfly Valve is engineered to facilitate contained material transfer between pharmaceutical processing vessels while maintaining a controlled production environment.

07 **POUL – The Fork – Hygienic Autonomous Material Transport**

Material transportation within pharmaceutical cleanrooms requires careful attention to contamination prevention, operational safety and the movement of equipment between controlled production areas. POUL's The Fork is a hygienic autonomous mobile robot developed specifically for pharmaceutical and other clean manufacturing environments.

08 **Daifuku – Unit Load AS/RS – Intelligent Pallet Storage and Retrieval**

Efficient storage and retrieval of palletised materials is increasingly important for pharmaceutical manufacturers managing complex production schedules, growing inventories and strict material-handling requirements. Daifuku's Unit Load Automated Storage and Retrieval System (AS/RS) provides a mechanised approach to storing and retrieving pallets within high-density warehouse environments.

10 **Dematic – Multishuttle® – High-Speed Automated Storage and Retrieval**

Pharmaceutical warehouses and distribution facilities must manage large product inventories while maintaining accurate, timely material movement across storage and order-fulfilment operations. Dematic's Multishuttle® is an automated storage and retrieval system designed to improve the handling, buffering and sequencing of cartons and containers within high-throughput logistics environments.

Column

05 **Imprint Immerse**

When Inspection Becomes Intelligence

How connected vision systems and digital twins are reshaping quality control on the pharmaceutical production floor.

09 **Imprint Original**

What If Industrial Safety Could Move?

beRobox and Sonair are challenging conventional palletizing safety by making the protective detection zone travel with the robot rather than remain fixed around the cell.

Advertisement

PARA Tech Expo

Welcome to PARA Tech Expo

Mantra 1: Industrial automation leads to excellence.
Mantra 2: March of automation in manufacturing.

11 **Imprint Media Kit**

Reach those who design, build and buy Automation

India's emerging industrial automation magazine circulated to automation actual users, automation design consultants, automation engineers and automation equipment manufacturers.

PARA Tech Webinar #2

Automation & Robotics in Pharma Manufacturing

Leadership speakers from Automation technology companies offering innovative state of the art solutions for intelligent and smart pharma manufacturing.

Technical Article

12 **Automation Gossip and Forgotten Links**

www.imprint-magazine.in

Imprint Automation India Magazine brings you upto speed with the explosion of information on breakthrough tech in PARA domain. Breaking news soon gets forgotten. Professionals can't miss out on information. Imprint you to valuable gossip

- TCS – India's First Lights-Out Factory Lab
- Universal Robots Gen 7
- *Siemens and NVIDIA Advance Autonomous Factories*
- *OMRON–OnLogic Acquisition...*





imprint™ Automation India Magazine

https://imprint-magazine.in

India's Automation Magazine
Volume 65 Issue 03
September - October 2026

Publisher
Chaitanya Chopra
+91 9820712686
chaitanya.chopra@infocast.in

Associate Publisher
Anuradha Chopra
imprint@infocast.in

Editor
Anil Chopra
+91 9821012686
anil.chopra@imprint-magazine.in
chopra@infocast.in

Executive Editor
Riya Sewatkar
+91 986767 70265
riya.sewatkar@imprint-magazine.in

Web Developer
Rohan Jena
Nandini Singh

Graphic Designer
Riya Sewatkar
+91 986767
70265
Digital Marketing Manager
Riya Sewatkar
+91 986767 70265
riya.sewatkar@imprint-magazine.in

Sales Executive
Samruddhi
Badjate
+91 75229 60086
Advertising Sales & Circulation Office 6C/5, Sangeeta Apartments, H S Revdankar Marg, Off Juhu Tara Road, Santacruz west, Mumbai 400049

Editorial Office
Infocast Systems Pvt Ltd. 250/ Floor 2, INS Towers, G Block. BKC. Mumbai 400051

Registered Office
6B/4A, Sangeeta Apartments, H S Revdankar Marg, Off Juhu Tara Road, Santacruz west, Mumbai 400049

Edited Printed Published by Chaitanya Anil Chopra on behalf of Infocast Systems Pvt Ltd. Printed at "Hariom Enterprise" G-8, Apollo Industrial Estate, Mahakali Caves Road, Andheri (East), Mumbai - 400093. and Published at Flat No 4A, Wing-6B, Sangeeta Appt, Juhu Tara Road, Santacruz (W), Mumbai - 400054. This issue includes September - October 2026 (Vol 65|Issue 03). Imprint Automation India magazine is a bi-monthly publication, reaches out to subscribers, mainly automation system integrators, automation engineers and automation industry trade professionals around the world. Additional copies are being promoted at major internat ional industry tradeshows. Imprint is a trademark under registration.

The contents of Imprint Automation India magazine are under copyright registration. All rights reserved. Reproduction by any means in whole or part without written permission is prohibited. Unsolicited printed material is welcome but no responsibility is undertaken for the same and will not be returned. Imprint Automation India magazine does not take responsibility for the absolute accuracy of information published.

Schmalz's - PalPharma Hoist – Precision Lifting and Transfer for Pharmaceutical Manufacturing

Handling heavy containers and bulk materials in pharmaceutical production demands precision, safety and controlled movement. Schmalz's PalPharma Hoist is engineered for lifting, lowering, tipping and positioning drums, Intermediate Bulk Containers (IBCs) and bulk bags during material transfer and processing operations. The system provides mechanically assisted lifting and controlled positioning, enabling operators to manage heavy loads with greater consistency while reducing the physical demands associated with manual handling. Its adaptable lifting arrangements can accommodate different container types and operating requirements, making it suitable for production environments where materials must be transferred accurately between storage vessels and processing equipment. Controlled movement is particularly important when working with valuable pharmaceutical ingredients, where handling errors can cause material losses or interruptions to production.

Designed for pharmaceutical material-handling environments, the PalPharma Hoist supports activities such as feeding process equipment, discharging



Pharmaceutical lifting system for controlled handling, positioning and discharge of drums, IBCs and bulk materials.

containers and transferring ingredients between manufacturing stages. The system can be incorporated into material preparation, formulation and production areas where repetitive lifting operations are common. By reducing dependence on manual movement, it can help improve operator ergonomics and support more consistent material-handling procedures. Its configurable design also allows manufacturers to consider different installation layouts and material-transfer arrangements according to individual process needs. For pharmaceutical facilities seeking to improve safety, productivity and the movement of bulk ingredients, automated lifting and positioning equipment represents an important component of modern production infrastructure.

Piab piFLOW®p – Hygienic Vacuum Conveying for Pharmaceutical Powders

Efficient powder transfer is essential for maintaining product quality and process consistency in pharma manufacturing. Piab's piFLOW®p Vacuum Conveyor provides an enclosed solution for transporting powders, granules and other bulk materials between processing equipment. Constructed using ASTM 316L stainless steel, the system incorporates Piab's COAX® vacuum technology, hygienic product-contact materials and automatic filter cleaning. Its enclosed conveying arrangement helps minimise manual material movement and limits the release of airborne dust during transfer.

The conveyor can be configured according to different material characteristics, conveying distances and production requirements, offering flexibility across a wide range of processing applications. Its hygienic construction is particularly valuable in operations where equipment cleanliness, product-contact compatibility and efficient changeovers are essential.

The piFLOW®p is suited to applications involving the filling and emptying of drums and bags, feeding sieves and mixers, and transferring materials to downstream pharmaceutical processing equipment. It can support ingredient movement between dispensing, blending, granulation and other production stages, reducing the need for repeated manual charging of processing machines. With configurable conveying capacities and ATEX-certified options for suitable hazardous environments, the system can be adapted to different manufacturing conditions. Automated conveying also helps manufacturers establish more consistent material-transfer procedures, reduce unnecessary handling and improve the utilisation of production equipment. For pharmaceuticalcompanies modernising powder-processing operations, the piFLOW®p provides a practical approach to combining hygienic equipment design with efficient and controlled bulk-material movement.



Hygienic vacuum conveyor for automated transfer of pharmaceutical powders and granules between processing stages.



Neil Carter

Latest innovation in Machine Vision, Virtual Simulation, Digital Twins, Imaging, Precision Motion, Smart Cameras, Vision Sensors, Vision Software and IT Solutions, with insigihtful analysis.

When Inspection Becomes Intelligence

How connected vision systems and digital twins are reshaping quality control on the pharmaceutical production floor.

For decades, machine vision in pharmaceutical manufacturing has performed a critical function: detecting defects, verifying products and ensuring quality at production speeds beyond manual inspection. From vials and syringes to tablets and packaging, cameras have become indispensable to modern pharmaceutical production.

But machine vision is evolving beyond simply identifying defective products.

The emerging convergence of artificial intelligence, machine vision and digital twins is creating new possibilities for inspection engineering. Rather than relying entirely on physical machines to configure and optimise inspection processes, manufacturers can increasingly use virtual environments to develop and test inspection parameters before implementation.

This shift is particularly relevant to pharmaceutical manufacturing, where production downtime, validation requirements and frequent product changeovers make inspection development both complex and expensive.

THE CAMERA BECOMES A DATA SOURCE

Traditional vision systems primarily answered one question: Is the product acceptable or defective?

Modern AI-enabled vision systems can deliver much more. By analysing complex visual patterns, identifying subtle variations and recognising recurring defects, they generate valuable information about manufacturing performance.

When connected with production data and industrial software, inspection systems can help engineers investigate not only what went wrong, but why.

For example, recurring defects detected during vial inspection may indicate problems with upstream filling, sealing or handling operations. This transforms machine vision from a standalone quality checkpoint into a source of manufacturing intelligence.

WHEN PRECISION MEETS SIMULATION

Advanced software alone cannot deliver reliable inspection. Accurate results still depend on precision motion, controlled lighting, high-performance imaging, stable product positioning and repeatable machine operation.

The real opportunity lies in connecting these technologies. Precision motion positions the product. Smart cameras capture images. AI algorithms interpret them. Digital twins enable engineers to simulate and refine inspection processes, while industrial software connects inspection results with broader manufacturing operations.

This integration can support faster changeovers, more consistent inspection performance and reduced dependence on physical production equipment during development.



Machine vision, AI and digital twins converge to enable intelligent pharmaceutical inspection, virtual testing and precision-driven quality control.

THE NEXT STEP FOR PHARMA

Digital twins are no longer limited to visualising machines or production facilities. When integrated with real inspection data, they can become practical engineering tools for developing and optimising manufacturing processes.

For Indian pharmaceutical manufacturers seeking greater productivity, consistent quality and internationally competitive operations, this convergence deserves serious attention.

The next generation of pharmaceutical factories will not simply inspect products faster. They will increasingly use data and simulation to understand, predict and improve inspection performance.

The factory of the future will not just see. It will learn how to see before production begins.

GEA's -BUCK® MC – Ensuring Safe and Contained Powder Transfer in Pharmaceutical Manufacturing



Split butterfly valve supporting contained transfer of potent pharmaceutical powders while reducing operator exposure and contamination risks.

Handling potent pharmaceutical powders requires stringent control over operator exposure, cross-contamination and material losses. GEA's BUCK® MC Split Butterfly Valve is engineered to facilitate contained material transfer between pharmaceutical processing vessels while maintaining a controlled production environment. The system incorporates two independently sealing valve halves that connect during docking to establish an enclosed transfer pathway. This arrangement helps minimise powder emissions during material charging and discharging, particularly when handling active pharmaceutical ingredients (APIs) and other potentially hazardous substances. Maintaining containment during these transfer operations is especially important in facilities handling highly potent compounds, where even small quantities of airborne powder can present occupational safety and product integrity concerns.

Designed for pharmaceutical solid-dose manufacturing, the BUCK® MC supports material transfer operations associated with blending, granulation, mixing and tablet production. Its modular construction allows integration with compatible processing equipment and material-handling systems, supporting reliable docking and controlled powder movement between production stages. By limiting direct operator contact with sensitive or potent compounds, the valve helps strengthen workplace safety and contamination control. Its containment-focused design can also contribute to more consistent material handling and improved operational efficiency. As pharmaceutical manufacturers increasingly adopt enclosed processing systems and automated material transfer solutions, technologies such as the BUCK® MC play an important role in reducing manual handling at critical transfer points while supporting cleaner, safer and more controlled manufacturing workflows.

GEA Engineering for a better world.

Flexicon – BULK-OUT® Bulk Bag Discharger – Automated Bulk Powder Handling for Efficient Production

Efficient handling of bulk powders and granules plays a critical role in maintaining consistent material flow throughout pharmaceutical manufacturing. Flexicon's BULK-OUT® Bulk Bag Discharger is designed to simplify the unloading of large bulk bags while minimising dust emissions, material wastage and repetitive manual handling. The system combines a robust bag-supporting frame with an enclosed discharge arrangement, allowing ingredients to be transferred into downstream processing equipment in a controlled manner. Its configurable design accommodates different bulk bag sizes and discharge requirements, making it suitable for handling a variety of powdered and granular materials. By replacing labour-intensive unloading practices with a more structured discharge process, the equipment helps manufacturers improve material-handling consistency while reducing interruptions associated with manual ingredient transfer.

To improve the discharge of difficult-flowing ingredients, BULK-OUT® can incorporate FLOW-FLEXER® bag activators that promote material movement and TELE-TUBE® telescoping technology that maintains controlled bag tension during emptying. These features help address common handling challenges such as bridging, inconsistent discharge and residual material accumulation. Stainless-steel configurations and integration with pneumatic or mechanical conveying systems enable the equipment to support automated ingredient feeding and bulk material transfer. For pharmaceutical manufacturers, the system offers a practical approach to improving material utilisation, reducing operator intervention and maintaining more reliable production workflows while supporting cleaner and more organised processing environments.

Flexicon®

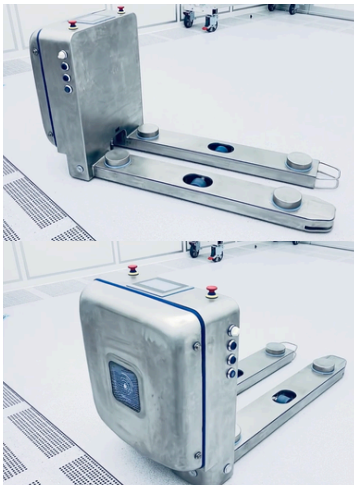


Bulk bag discharge system enabling controlled powder unloading, improved material flow and efficient transfer to downstream pharmaceutical processing equipment.

POUL – The Fork – Hygienic Autonomous Material Transport for Pharmaceutical Cleanrooms

Material transportation within pharmaceutical cleanrooms requires careful attention to contamination prevention, operational safety and the movement of equipment between controlled production areas. **POUL's The Fork is a hygienic autonomous mobile robot** developed specifically for pharmaceutical and other clean manufacturing environments. Unlike conventional industrial transport vehicles, its design addresses the particular challenges of moving materials in spaces where particle generation, cleanability and controlled operating procedures are important. With a standard payload capacity of 1,000 kg and a configurable fork arrangement, the robot is intended to transport a variety of production loads while reducing dependence on manual material movement.

The Fork has been designed with reference to EHEDG, 3-A and ISO guidelines, incorporating features intended to support hygienic operation and minimise particle generation. Its proposed applications include transporting bioreactors, fermentation vessels, mixing tanks, active pharmaceutical ingredients and raw materials between production areas. The company also identifies potential use in filling-line operations, where automated transportation can support the movement of containers, components and waste materials. For pharmaceutical manufacturers, autonomous material transport offers an opportunity to reduce repetitive handling activities and establish more consistent internal logistics workflows. The technology is particularly relevant where production equipment and materials must move between controlled environments. By bringing mobile robotics into hygienic material handling, POUL presents an alternative to conventional manual transport methods while addressing the specialised requirements of pharmaceutical manufacturing.



Hygienic mobile robot designed for autonomous transportation of pharmaceutical materials, vessels and equipment within controlled production environments.

Interroll – Light Conveyor Platform – Modular Conveyor Automation for Efficient Material Flow

Maintaining uninterrupted movement of materials between production, packaging and logistics operations is essential for efficient pharmaceutical manufacturing. **Interroll's Light Conveyor Platform (LCP)** provides a modular solution for automating the transportation of cartons, containers and smaller industrial loads across manufacturing facilities. Designed around preassembled conveyor modules, the platform helps simplify installation while allowing manufacturers to configure material-flow systems around existing equipment and production layouts. Its plug-and-play architecture supports the development of flexible conveying arrangements that can be adapted as production requirements change, reducing dependence on manual transportation between successive handling stations.

The Light Conveyor Platform includes straight conveying and transfer functions, with options for stand-alone operation or PLC-based integration.



Modular conveyor platform enabling automated carton and container movement between pharmaceutical packaging and logistics operations.

Pre-routed cables, pretensioned belts and integrated controls are intended to simplify commissioning and maintenance. Interroll also offers an LCP AMR Top Module, enabling conveyor-based load transfer to be combined with autonomous mobile robots for more flexible intralogistics. In pharmaceutical facilities, these capabilities can be applied to secondary packaging, carton transportation, container movement and the connection of packing stations with downstream handling operations. By supporting consistent load movement and reducing unnecessary manual transfers, the platform can help minimise material-flow interruptions while improving coordination between different production areas. Its modular construction is particularly valuable for manufacturers seeking to automate individual handling processes without redesigning an entire production line. The result is a scalable approach to conveyor automation that supports reliable transportation and improved manufacturing flexibility.

Daifuku – Unit Load AS/RS – Intelligent Pallet Storage and Retrieval for Pharmaceutical Logistics

Efficient storage and retrieval of palletised materials is increasingly important for pharmaceutical manufacturers managing complex production schedules, growing inventories and strict material-handling requirements. Daifuku's Unit Load Automated Storage and Retrieval System (AS/RS) provides a mechanised approach to storing and retrieving pallets within high-density warehouse environments. The system uses automated stacker cranes operating between storage racks to move unit loads to designated locations, reducing the need for conventional forklift movements within storage aisles. By organising pallet movements through automated equipment, it supports predictable material retrieval and improved utilisation of available warehouse space.

The Unit Load AS/RS is available in different configurations, including single-deep and double-deep storage arrangements, allowing facilities to balance storage density with accessibility and throughput requirements. Daifuku also offers cleanroom-compatible applications designed for ISO Class 6–7 environments, including pharmaceutical manufacturing facilities. Depending on the installation, the technology can support controlled storage of raw materials, packaging components and finished pharmaceutical products. Integration with warehouse management and conveying systems can help coordinate inventory movements with production and dispatch operations, reducing unnecessary handling and improving material availability. For pharmaceutical manufacturers, the principal advantage lies in creating a more structured and reliable internal logistics environment. By automating repetitive pallet storage and retrieval tasks, the system helps reduce manual traffic, improve operational consistency and support increasingly sophisticated material-flow requirements across modern manufacturing and distribution facilities.

DAIFUKU
Automation that Inspires



Automated pallet storage and retrieval system supporting high-density warehousing and controlled material movement in pharmaceutical facilities.

Hanningfield – Uni-Hoist – Hygienic Lifting and Precision Container Handling for Pharmaceutical Processing

Moving drums, intermediate bulk containers and processing equipment safely between different operating heights remains a critical requirement in pharmaceutical manufacturing. Hanningfield's Uni-Hoist is designed to simplify these tasks through controlled lifting, lowering, rotating, inverting and docking of production containers. Manufactured for hygienic processing environments, the system helps reduce physically demanding manual handling while enabling accurate positioning of materials above or alongside downstream equipment. Its stainless-steel construction and adaptable lifting arrangements make it suitable for pharmaceutical facilities where cleanliness, repeatability and operator safety are essential considerations during routine production activities.

The Uni-Hoist range includes electrically powered, pneumatically operated and manually controlled models, available in stationary and mobile configurations. Depending on the selected arrangement, the system can incorporate lifting forks, clamps, platforms and other attachments to accommodate specific vessels or processing machinery. Typical applications include raising IBCs above tablet presses, positioning containers for powder discharge and manoeuvring mills, mixers or vacuum conveyors. Hanningfield also offers configurations for hazardous environments and documentation packages supporting equipment qualification requirements. The ability to integrate lifting operations with existing manufacturing equipment makes the Uni-Hoist particularly useful in plants handling multiple batches or requiring frequent container changes. By reducing operator strain and supporting consistent container positioning, the system contributes to safer material handling, improved workflow efficiency and more dependable transfers between successive pharmaceutical manufacturing stages.

hanningfield



Hygienic lifting system for controlled positioning, docking and discharge of pharmaceutical drums, containers and processing equipment.



Riya Sewatkar - Executive Editor

Identifying Original design and content in industrial automation product that serves the smart factory, which plays a critical role in improved automation design enhancing production efficiency.

What If Industrial Safety Could Move?

beRobox and Sonair are challenging conventional palletizing safety by making the protective detection zone travel with the robot rather than remain fixed around the cell.



> Originality in automation is not always found in speed or power. Sometimes it lies in redesigning the way a machine works safely within the production environment.

A moving 3D protective zone follows the palletizing robot, enabling more flexible operator access while maintaining the required machine-safety functions.

Industrial automation has traditionally treated safety as a fixed boundary. In robotic palletizing, that often means the entire cell must slow down or stop when a person enters a predefined zone. The newly introduced 3D Dynamic Safety concept from beRobox, developed in collaboration with Sonair, challenges that assumption by rethinking where safety intelligence should sit.

Instead of keeping detection fixed around the machine, the system integrates Sonair's safety-certified ADAR One 3D ultrasonic sensor directly onto the robot arm. As the robot moves through its workspace, the sensor moves with it, creating a dynamic protective zone that adapts to the robot's position. By detecting the presence of people and objects in three dimensions, the system can respond more selectively to what is happening inside the palletizing area.

The design becomes particularly interesting during routine production activities. Consider a palletizing system with two stations. When a completed pallet needs to be replaced, an operator can access one station while the robot continues palletizing at the other, provided the required safety conditions are maintained. Rather than stopping the entire operation unnecessarily, the safety system responds according to the robot's position and the operator's presence.

This approach could have important implications for production efficiency. Conventional safeguarding arrangements can impose restrictions on access and machine movement. A protective zone that moves with the robot offers greater flexibility in how manufacturers organise pallet changes, operator interactions and production workflows. The technology's ultrasonic sensing principle also makes it relevant to industrial environments where lighting conditions, dust and reflective surfaces can complicate optical detection.

The real originality, however, lies beyond the sensor itself. beRobox and Sonair have reconsidered the relationship between machine motion, operator access and production continuity. Instead of treating safety and productivity as opposing requirements, their design seeks to make them work together.

For the smart factory, that is a meaningful direction in automation engineering. Improving manufacturing performance does not always require a faster robot, a larger machine or another layer of artificial intelligence. Sometimes, it begins with questioning a long-established design convention and finding a more intelligent way to solve an everyday production problem.

Dematic – Multishuttle® – High-Speed Automated Storage and Retrieval for Pharmaceutical Logistics

Pharmaceutical warehouses and distribution facilities must manage large product inventories while maintaining accurate, timely material movement across storage and order-fulfilment operations. **Dematic's Multishuttle® is an automated storage and retrieval system** designed to improve the handling, buffering and sequencing of cartons and containers within high-throughput logistics environments. The system uses independently moving shuttle vehicles operating across multiple rack levels, supported by lifts, conveyors and software-controlled material-flow processes. This arrangement enables rapid access to stored inventory while reducing reliance on manual travel between conventional shelving locations, making it suitable for facilities managing frequent retrieval requests and changing order volumes.

A key advantage of the Multishuttle architecture is its ability to combine dense storage with controlled inventory sequencing. Products can be temporarily buffered and released in the required order to support downstream picking, consolidation or dispatch operations. The modular arrangement allows storage capacity and system throughput to be adapted to operational requirements, while integration with goods-to-person workstations can reduce manual travel and improve picking efficiency. In pharmaceutical logistics, the technology can support organised movement of packaged medicines, secondary packaging materials and other suitable containerised inventory. Its relevance is strongest in warehouses and distribution centres, where reliable stock retrieval and accurate order preparation are essential. By connecting automated storage with inventory handling and dispatch processes, Dematic's Multishuttle helps establish more consistent material flow and supports scalable, data-driven warehouse operations.





Multi-level shuttle system enabling high-speed storage, retrieval and sequencing of cartons and containers in pharmaceutical logistics.

DEMATIC

SSI SCHAEFER – SSI Cuby – Compact Shuttle-Based Storage for Automated Material Handling

Efficient management of cartons and containers is increasingly important as pharmaceutical manufacturers and distributors seek to improve warehouse capacity, inventory accessibility and material-handling accuracy. **SSI SCHAEFER's SSI Cuby is a fully automated shuttle-based storage and retrieval system** designed to combine compact storage with efficient movement of containerised goods. The system employs a shuttle vehicle on each storage level, supported by racking, vertical lifts and coordinated warehouse controls. By automating the storage and retrieval process, it reduces dependence on manual handling within storage aisles while enabling more organised inventory movement between warehouse locations and downstream workstations.

SSI Cuby incorporates a modular architecture that allows storage layouts to be configured according to available space and operational requirements.Its double-deep storage arrangement improves space utilisation, while lift and shuttle operations can be coordinated to support the required throughput. Integration with SSI SCHAEFER's WAMAS® logistics software enables the management of automated inventory movement within the storage system. For pharmaceutical manufacturers and distribution facilities, SSI Cuby can support the handling of packaged products, containers, components and suitable production-related materials. Its principal value lies in establishing a structured storage environment where goods can be located and retrieved with reduced manual intervention. By combining compact warehousing with automated transport and retrieval, the system supports improved inventory accessibility, more predictable material flow and efficient utilisation of warehouse infrastructure.

SSI SCHAEFER





Automated shuttle storage system enabling compact, organised retrieval of cartons and containers for pharmaceutical warehousing applications.

Reach those who design, build and buy Automation

India's emerging industrial automation magazine circulated to automation actual users, automation design consultants, automation engineers and automation equipment manufacturers.



Imprint Automation India
March-April 2026

Advertise with Imprint Automation India to reach the real decision-makers driving India's smart manufacturing revolution.

Media Kit 2026

Infocast
Information Casting

Plan your digital and print advertising campaign
Riya Sewatkar - Marketing Manager
riya.sewatkar@imprint-magazine.in
+91 98676 70265

imprint™
Automation India
Magazine

www.imprint-magazine.in

Imprint Automation India Magazine brings you upto speed with the explosion of information on breakthrough tech in PARA domain. Breaking news soon gets forgotten. Professionals can't miss out on information. Imprint you to valuable gossip

1. India now has a "lights-out factory" lab
TCS has opened what it calls India's first lights-out factory lab at its Sahyadri Park campus in Pune. The facility includes a fully robotic battery-pack assembly line and brings together industrial AI, robotics, digital twins, factory control systems and real-time operational intelligence. What was once a futuristic manufacturing concept is now being demonstrated on an actual production-style line in India.
TCS – India's First Lights-Out Factory Lab



2. Tech Mahindra wants Physical AI to reach the factory floor
Tech Mahindra and German robotics software company Wandelbots have teamed up to help manufacturers deploy Physical AI-powered automation at scale. Their pitch is particularly interesting: reduce the complexity of programming different robots and connect AI, simulation and automation through Wandelbots' NOVA platform. Physical AI is quickly becoming more than another robotics buzzword.
Tech Mahindra–Wandelbots Physical AI Partnership

3. Universal Robots redesigns the cobot for the AI era
Universal Robots used IMTS 2026 to unveil Gen 7, its seventh-generation industrial robot platform. Rather than simply launching another cobot model, UR has redesigned the platform from controller to tool flange with AI deployment in mind. With machine vision, gripping and Physical AI partners already being integrated, the cobot is increasingly becoming a software and AI platform — not just a robot arm.
Universal Robots Gen 7



4. Five million industrial robots are now working in factories
The International Federation of Robotics says the global stock of operational industrial robots reached a record five million units in 2025, up 9% in a year. More than 600,000 new robots were installed during 2025 alone. Perhaps the bigger story: China accounted for 59% of global installations. Industrial robotics has clearly moved from specialised automation into manufacturing infrastructure.
IFR World Robotics 2026 – Five Million Robots

5. Qualcomm is moving deeper into industrial robotics
Qualcomm has agreed to acquire PickNik, the company behind MoveIt, one of the best-known open-source frameworks for robotic manipulation. The plan is to bring MoveIt closer to Qualcomm's Dragonwing robotics platforms while keeping the core software open. A semiconductor heavyweight buying into foundational robot software is another sign that the battle for Physical AI will not be fought by robot manufacturers alone.
Qualcomm to Acquire PickNik

6. OMRON spends $675 million to strengthen its industrial edge
OMRON has agreed to acquire rugged industrial-computer specialist OnLogic in a deal valuing the company at approximately $675 million. OMRON explicitly links the acquisition to its ambition to move beyond conventional factory-automation equipment toward manufacturing-site digital transformation and Physical AI. Industrial PCs, sensing, control and robotics are increasingly being pulled into one edge-computing architecture.
OMRON–OnLogic Acquisition

7. OT cybersecurity consolidation is accelerating too
Industrial cybersecurity specialist Dragos acquired runZero and NetRise following Accenture's majority investment in the company. The idea is to extend security beyond traditional OT network monitoring into asset exposure and software supply-chain risks. As factories connect more machines, edge devices, AI systems and cloud services, cybersecurity is rapidly becoming part of the automation architecture itself rather than an IT layer added afterwards.
Dragos Acquires runZero and NetRise

8. Siemens and NVIDIA are testing the autonomous factory for real
Siemens and NVIDIA have moved their AI-factory partnership into live production at Siemens' electronics factory in Erlangen. AI agents can generate alternative production plans, while a digital twin validates the options before changes reach the physical factory. This is an important shift: digital twins are beginning to move from visualisation tools toward active decision-making systems for production.
Siemens and NVIDIA Advance Autonomous Factories



9. Humanoid robots are now helping manufacture humanoid robots
Schaeffler has opened a 7,500-square-metre humanoid robotics lighthouse factory in Taicang, China, where six humanoid robots work across five stations assembling joint modules and other components for next-generation humanoids. The facility also combines robot training, data acquisition and digital twins. "Humanoids making humanoids" sounds like a headline written for science fiction — except it is now happening on a factory floor.
Schaeffler – Humanoids Making Humanoids

10. Rockwell wants AI agents to start working together
Rockwell Automation has introduced FactoryTalk Conductor, an AI-native orchestration platform designed to coordinate multiple AI agents, industrial software tools and engineering workflows. Instead of using an AI copilot for one isolated job, the idea is to let agents collaborate across automation engineering tasks involving Studio 5000, Logix Echo, Emulate3D and FactoryTalk Optix. Industrial AI appears to be moving from "assistant" to "orchestrator."
Rockwell Automation – FactoryTalk Conductor

To feature your exciting news on this column send me a 🔗

Riya Sewatkar
riya.sewatkar@imprint-magazine.in
+91 98676 70265

PARA TECH

WEBINAR

imprint™ Automation India

Expo, Magazine, Technical Seminar, Webinar, Website, Social Media

PARA Tech WEBINAR #2



CATALYST

Automation & Robotics in Pharma Manufacturing

Leadership speakers from Automation technology companies offering innovative state of the art solutions for intelligent and smart pharma manufacturing.

Hosted on zoom Webinar

Media Partner imprint™ Automation India Magazine

Organized By Infocast Information Casting

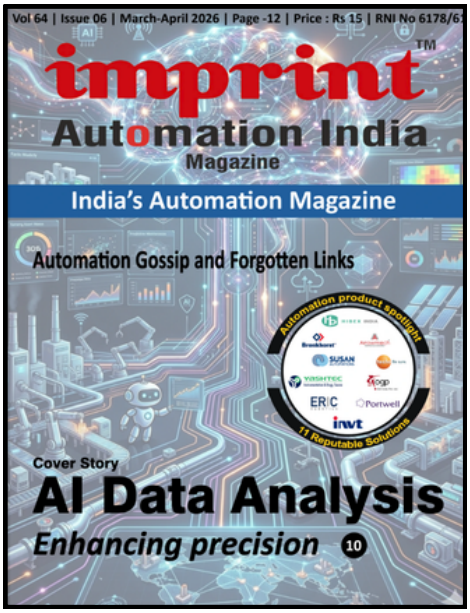
imprint™ Automation India Magazine

India's emerging industrial automation magazine circulated to automation actual users, automation design consultants, automation engineers and automation equipment manufacturers.

Media kit for Digital and Magazine Advertsing







Imprint Automation provides latest automation process solutions for optimized automation