

**SEW**  
EURODRIVE

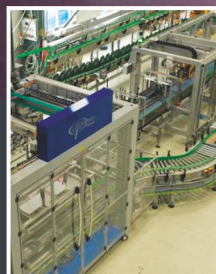
# Drive India

The SEW-EURODRIVE Customer Magazine

## Page 4 SEW Unveils Cutting-Edge Automation Technology at Automation Expo 2024



Page 2  
Clearpack and  
SEW-EURODRIVE:  
Powering the Future of  
Packaging Automation



Page 3  
Enhancing SEW's Decentralized  
Drive Portfolio with Dynamic  
MOVIMOT® Performance



Dear Reader,

As we approach the end of 2024, India's economic outlook presents a mixed picture, with GDP growth projected at over 7%. While it reflects a resilient economy, our sales growth has remained modest, reflecting broader challenges in the industrial and capital goods sectors. Global uncertainties necessitate a focus on innovation and operational efficiency to sustain our growth trajectory.

In our **customer story**, we highlight our commitment to driving innovation and operational efficiency through our products. Our partnership with Clearpack exemplifies this, integrating solutions like the MOVI-C® for precise motion control and energy savings. This collaboration empowers manufacturers to optimize production lines and reduce downtime.

In the **product section**, we discuss the MOVIMOT® performance drive unit, part of our MOVI-C® system. This compact solution offers high overload capacity and energy efficiency, enabling manufacturers to optimize operations across various applications.

Finally, in our **feature article**, we showcase our cutting-edge automation technology presented at Automation Expo 2024, including MOVI-C® controllers and Omni Directional Mobile Robots, reinforcing our commitment to precision and efficiency in machine automation & Intra logistics on the shop floor.

Thank you for your continued support



**S. Vasudevan**

Managing Director, SEW-EURODRIVE India

## Clearpack and SEW-EURODRIVE: Powering the Future of Packaging Automation

Clearpack Automation Pvt Ltd., headquartered in Greater Noida, has established itself as a global leader in automated packaging solutions, specializing in primary, secondary, and end-of-line packaging systems. The company caters to a diverse range of industries, including food, beverage, pharmaceuticals, and chemicals. Renowned for its innovative use of robotics and cutting-edge technology, Clearpack ensures efficient and reliable packaging solutions for its clients. This commitment to customer satisfaction has positioned Clearpack as a leader in packaging automation worldwide.

### Partnership with SEW

Clearpack has partnered with SEW to enhance its automated packaging solutions. This collaboration focuses on integrating cutting-edge technology and software, leveraging SEW's expertise in drive and motion control. With a robust service network of 20 technical offices across the country and a team of experienced application engineers, SEW provides Clearpack with reliable support and innovative solutions, significantly improving the performance, reliability, and energy efficiency.

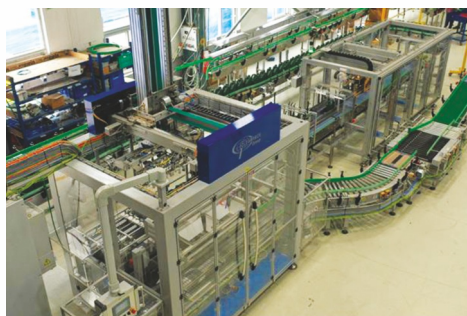
### Recent Innovations with SEW's MOVI-C® Platform

A significant advancement in this partnership is the integration of SEW's MOVI-C® automation platform into Clearpack's secondary packaging lines. This platform enhances performance with high-precision motion control and optimized hardware configurations for telescopic lane diverters and roller gantry pick-and-place application.

SEW's roller gantry solution, used in pick-and-place tasks, features stationary drive installations that reduce the required mass and cabling. By distributing loads between two motors, this design optimizes motor selection, leading to reduced power

consumption and lighter equipment. The CMPZ servo motors, equipped with high inertia rotors, help balance the mass moment of inertia in roller gantries, while CMP servo motors deliver the dynamic performance necessary for high-speed operations.

In addition, the MOVIDRIVE® double-axis module significantly reduces cabinet space while accurately controlling two axes simultaneously. This compact design contributes to both space and energy efficiency, making the overall system more cost-effective.



### MOVIKIT® Software and Modular Solutions

SEW's MOVIKIT® software simplifies motion control with modular, ready-to-use modules for various drive functions.

For roller gantry robots, MOVIKIT® robotics & robot monitor software provides a predefined kinematic model with two degrees of freedom and supports multiple operating modes with 3D simulation.

Additionally, it features linear interpolation with jerk-limited blending for smooth movements.

For lane diverter, MOVIKIT® Multi-Motion enhances packaging line performance by enabling precise speed control, positioning, and tracking, reducing complexity through SEW's parameterization approach.

### Key Benefits:

- **Reduced Power Consumption:** Optimized motor selection leads to lower energy usage.
- **Compact Cabinet Design:** Space-efficient solutions contribute to cost-effectiveness.
- **Increased Productivity:** Enhanced performance improves operational efficiency.
- **Enhanced Mechanical Life:** Jerk-free operation increases durability.
- **Saving Cost:** Simple setup, reducing commissioning time saves cost

### Technical Specifications

Servo Motor CMPZ71L/BY/PK/AK1H/SB1 & CMP50M/PK/RH1M/SB1

#### MOVIDRIVE® Modular

MDP90A-0250-503-4-000 (Power)

MDA90A-0160-503-X-S00 (Axis)

MDD90A-0040-503-X-S00 (Double axis)

MOVI-C® Controller UHX45A-N/OMH45A/MOVIKIT® (SMR001-040) With MOVIKIT®



SEW team is really cooperative and their support structure is also very good. We have been working for quite a long time, seeing their support, technical assistance and knowledge in the various fields is very nice. Also, whenever required, they are taking additional support from Germany counterpart to cater the need of any program & optimise the best solution. Also in terms of delivery, they are very cooperative and supportive which we have seen multiple times when we were facing challenges.

**Rahul Pandey - Sr Manager, Electrical & Automation**

# Enhancing SEW's Decentralized Drive Portfolio with Dynamic MOVIMOT® Performance

SEW-EURODRIVE has enhanced its decentralized drive portfolio with the introduction of the **MOVIMOT® performance** drive unit, which is part of the MOVI-C® modular automation system. This innovative drive unit is designed for dynamic applications, offering a compact and efficient solution for various industrial needs.

**Introduction:**

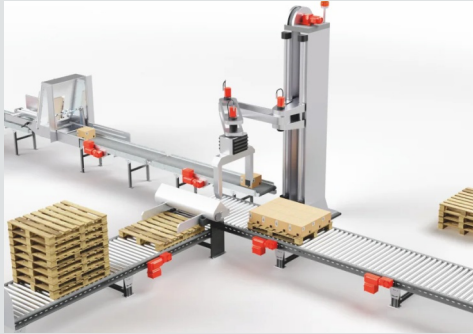
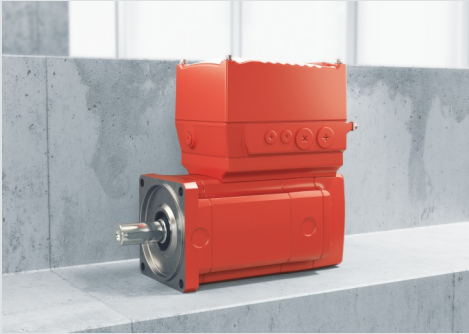
MOVIMOT® performance combines SEW's CM3C series synchronous servo motor with a decentralized inverter, delivering exceptional overload capacity and high responsiveness. It is ideal for applications ranging from intelligent conveyor axes to simple lifting and dynamic positioning axes. This compact decentralized inverter features an increased degree of protection and operates quietly without a fan, creating a pleasant working environment while maximizing energy efficiency. Utilizing **IE5 motor technology**, it ensures excellent energy savings and compatibility with various system topologies and standard communication protocols, providing high flexibility.

**Key Features:**

- **Modular Compatibility**  
MOVIMOT® modular can be combined with all 7 & 9 series gear units as well as helical bevel servo gear units.
- **Manual Brake Release**  
Brake motor options is available with manual brake release or with DynaStop® electrodynamic retarding function
- **Standardized Communication**  
Higher flexibility for various advanced level systems includes PROFINET, EtherNet/IP™, Modbus TCP, POWERLINK CiA402

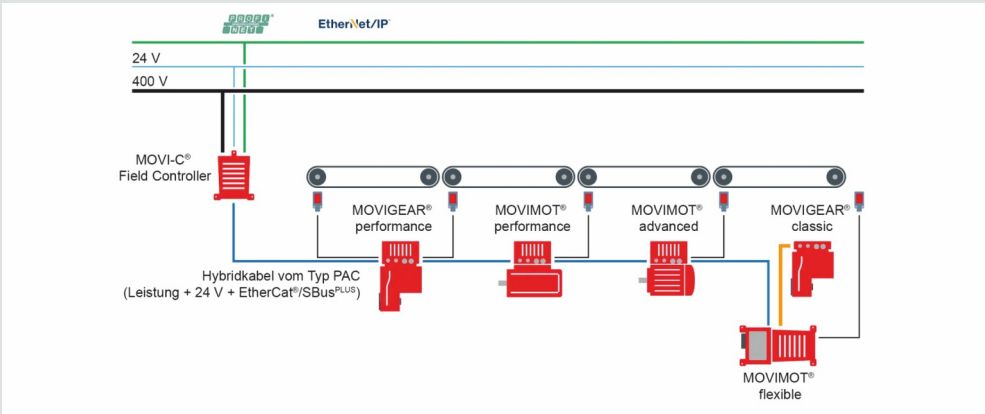
**Benefits**

- **Easy Start-up**  
The integrated digital interface allows for quick and convenient setup, compatible with a wide range of gear motor options.
- **Overload Capability**  
With an overload capacity of up to 300%, the drive can be optimally utilized, reducing the rated connected load and infrastructure size.



- **Environmentally Friendly**  
Low-noise operation without a fan, with motor efficiency class  $\geq$  IE5. (in accordance with IEC TS 60034-30-2)
- **Precision**  
High dynamics and a wide speed range are achieved using the Extended Sensorless Controller (ELSM® control mode) or through optional positioning with single-turn (EZ2Z) or multi-turn encoders (AZ2Z).
- **Cost-effective Installation**  
Direct wiring through terminals or fast installation using optional plug connectors and the MOVILINK® DDI digital interface.

- Applications**
- The MOVIMOT® performance drive unit is suitable for various applications, including
- **Horizontal Conveyor Systems**  
Ideal for intralogistics and parcel logistics
  - **Food and Beverage Industry**  
Efficient handling and transport solutions
  - **Automotive Industry**  
Reliable drive solutions for various automotive applications
  - **Baggage Handling**  
Enhanced efficiency in airport baggage handling systems



**Technical Specifications**

Nominal power ratings	0.75 - 4 kW (Servo Motor)
Nominal torque	3.6 - 20 Nm
Communications	<ul style="list-style-type: none"><li>- DFC – Direct Fieldbus Communication (PROFINET, EtherNet/IP™, Modbus TCP, POWERLINK/CiA402)</li><li>- DBC – Direct Binary Communication</li><li>- DAC – Direct AS-interface Communication</li><li>- DSI – Direct System bus installation (EtherCAT®/SBus<sup>PLUS</sup>, EtherCAT®/CiA402)</li></ul>
Digital and analog inputs/outputs	<ul style="list-style-type: none"><li>- DFC/DSI: Up to 4 digital inputs and up to 2 digital inputs or outputs</li><li>- DBC: 4 digital inputs/1 relay output and 1 analog input (0 – 10 V, 0 – 20 mA, 4 – 20 mA)</li><li>- DAC: 4 digital inputs/1 relay output</li></ul>



# SEW Unveils Cutting-Edge Automation Technology at Automation Expo 2024

South East Asia's Biggest Automation Expo held from 21st to 24th August at BEC Mumbai. More than 1000 exhibitors showcased their latest technologies and products to over 43000 visitors.

## The SEW India Stall

SEW-EURODRIVE India has exhibited **MOVI-C®** the new generation of controllers for machine automation and an advanced **OMR** (Omni Directional Mobile Robot) with **Shuttle system** for factory automation.

Higher accuracy and faster response are prime requirements of machine manufacturers across various industry segments. SEW meets and exceeds these requirements with its new generation portfolio of MOVI-C® inverters with centralised & decentralised configurations along with MOVIKIT® Software and installation & commissioning from a single source.

At the exhibition, SEW showcased three working models with MOVI-C®:

### Power and Energy solution

High power peaks are a common challenge in applications such as hoists and storage/retrieval systems during lifting operations, while lowering operations generate significant recuperative energy. By utilizing SEW's MDP92A power supply module alongside an energy storage unit, these energy dynamics can be optimized effectively.

The MDP92A module mitigates power peaks by leveraging stored energy during high-demand lifting movements' results in to overall lower energy usage and this leads to use of smaller cables, switchgear and braking resistor, ultimately lowering costs and reducing energy consumption-contributing to sustainability goals.

### Anti-Sway, Tower Sway & Slosh control system

SEW's MOVIKIT® multi-axis controller software module is designed to manage, synchronize and control the complex motions of machinery by coordinating

multiple axes. At the exhibition, SEW demonstrated how this software effectively controls the slosh of liquids and the sway of towers & pendulums.

The Anti-Sway control system minimizes lateral oscillations in tall structures, such as cranes, high-rise towers, and storage systems, ensuring stability during operations.

Meanwhile, the anti-slosh control system is specifically tailored to manage liquid movement, which is crucial for reducing wastage in various applications within the beverage industry.

### Counter torque system (Backlash control)

Backlash poses significant challenges in positioning of precision application when an axis changes direction. The slack in the gears cause measureable error in axis positioning. SEW's counter torque system, demonstrated with MOVIKIT® software, showcases the ability to control tension between axis group to minimize gear backlash and enhances load distribution between axes.

By optimizing these parameters, the system increases accuracy in high-precision applications such as radar systems and turntables, ensuring zero backlash and improving overall performance.

## Factory Automation

### Shuttle system with OMR

OMR under the MAXOLUTION® brand are designed by SEW India to precisely meet the specific customer requirement. OMR provide maximum flexibility, scalability & system safety with an ability to fully integrate into the customer's production and warehousing system with additional visualisation and fleet management capabilities.

OMR is designed with shorter safety scan field enabling it to manoeuvre in confined spaces, crowded situations. With the ability to turn sideways & turn on the spot, it can follow complex trajectories on floor.

### Applications:

- Material handling
- Processing operation
- Assembly & inspection

### A Shuttle system

Shuttle system is an efficient, compact vehicle designed for automated operations within a warehouse storage area. It operates independently in each rack row and can navigate both vertical levels and aisles, depending on the specific model. By

deploying multiple shuttles within a single aisle, warehouses can significantly enhance their storage and retrieval performance compared to traditional storage and retrieval cranes.

This system can function as a channel storage or satellite vehicle storage solution, particularly effective when using pallets as load carriers. Additionally, it can be integrated with Autonomous Mobile Robots (AMRs) or Automated Guided Vehicles (AGVs) to facilitate the transportation and storage of goods, bridging the gap between production and warehousing, or for managing raw materials from the warehouse to the production floor.

### Benefits of Shuttle system

- Redundancy
- Higher Performance
- Better Energy Efficiency
- Optimal Load-to-Weight Ratio
- Modular Construction
- 24/7 Operation
- High Density Stock Levels
- Minimal Building Footprint

