



More Efficiency for Packaging Machines in the
Food and Consumer Goods Industry:

Drive Systems from SEW-EURODRIVE



We drive packaging machines in the food and consumer goods industry

SEW-EURODRIVE knows the requirements for packaging machines in the food and consumer goods industry, such as filling, closing, palletizing, and transporting. All these movements demand dynamics, precision and continuity of the drive systems used for the specific application. For the system operator, such powerful packaging machines not only mean targeted investments but also a long term commitment to the chosen technology. The availability of machines and systems has top priority when it comes to choosing drive engineering components. This aspect also includes, for example, work involved in batch changing.

Another reason to choose the drive engineering products of a professional, global player: Drive engineering products "made by SEW-EURODRIVE" are reliable, flexible, dynamic and accurate. They aim at economically implementing individual material flow processes, regardless whether they involve synchronized or continuous transport, and fast and efficient filling processes. Another advantage: Thanks to the modular design and countless combination options, all drive engineering components from SEW-EURODRIVE can be replaced quickly, if the need arises.

SEW-EURODRIVE is your competent partner for all areas, from planning, through project planning all the way to startup; we also keep in mind the mutual goal of "reliable system operation." Our services are available around the globe, reducing standstill times to a minimum!

Our reliable mechanical and innovative electronic drive components are the result of decades of experience in building drives for packaging machines. SEW-EURODRIVE helps drive applications in the food and consumer goods industry from the filling process to transport.

Driving the world – with innovative drive solutions for all packaging machines in the food and consumer goods industry. All SEW-EURODRIVE products and systems make the best use of the space available around the machine and ensure great flexibility and reliability. Minimum maintenance and simple operation ensure that you will operate machines and equipment efficiently from the very beginning.



“SEW-EURODRIVE systems drive the world.
And make your applications even better.“



High-quality products with excellent performance

The SEW-EURODRIVE modular concept offers millions of combinations. This broad selection enables you to choose the correct drive for all applications, each based on the required speed and torque range, space available and the ambient conditions. Our helical, parallel shaft helical, helical-bevel, SPIROPLAN® and planetary gearmotors offer power levels from 0.06 – 200 kW and torques from 25 – 50,000 Nm, combined with an unparalleled number of closely-spaced power steps. These factors added together create the best possible conditions for economical operation.

Energy efficient motors, gearmotors for overhead trolley systems, variable speed gearmotors or industrial gear units “made by SEW-EURODRIVE” complete this comprehensive product portfolio.

The gearmotors are complemented by MOVIDRIVE® drive inverters and MOVITRAC® frequency inverters, a combination that blends perfectly with the existing SEW-EURODRIVE system program. Ultimate control accuracy, integrated positioning and sequence control system, hoist capability and much more are all standard features of

MOVIDRIVE® and MOVITRAC® drive inverters which cover a power range of up to 160 kW. Drive electronics “made by SEW-EURODRIVE” means SEW-EURODRIVE develops, produces and assembles these electronic products. These features enable our drives to achieve maximum flexibility so you can face future challenges with confidence.

Operator terminals provide optimum visualization of the system. They allow for display and control of production processes via a graphical and text-based display, particularly in conjunction with higher-level controllers.

Standardized fieldbus interfaces:

Standard:	PROFIBUS DeviceNet CANopen	INTERBUS CAN
Actuator/sensor bus:	RS485-Interface	AS-Interface
Safety fieldbus:	PROFIsafe	SafetyBUS p
Ethernet:	ETHERNET MODBUS-TCP	PROFINET

System solutions based on these products

Products from the servo drive system provide precision and dynamics: Individual and flexible solutions can be found for many single or multi-axis applications and synchronized process sequences using low-backlash servo planetary or helical-bevel gear units, powerful and compact servomotors or synchronous linear motors.

For economical, decentralized installation, SEW-EURODRIVE offers components from its decentralized drive system, such as MOVIMOT®, the gearmotor with integrated frequency inverter or MOVI-SWITCH®, the gearmotor with integrated switching and protection function. SEW-EURODRIVE hybrid cables have been designed specifically to ensure cost-effective solutions, independent

of the philosophy behind or size of the system.

Mobile conveyor technology components powered via conductor rails or cable carriers are being replaced by a new development from SEW-EURODRIVE: Contactless energy transfer with MOVITRANS® system components.



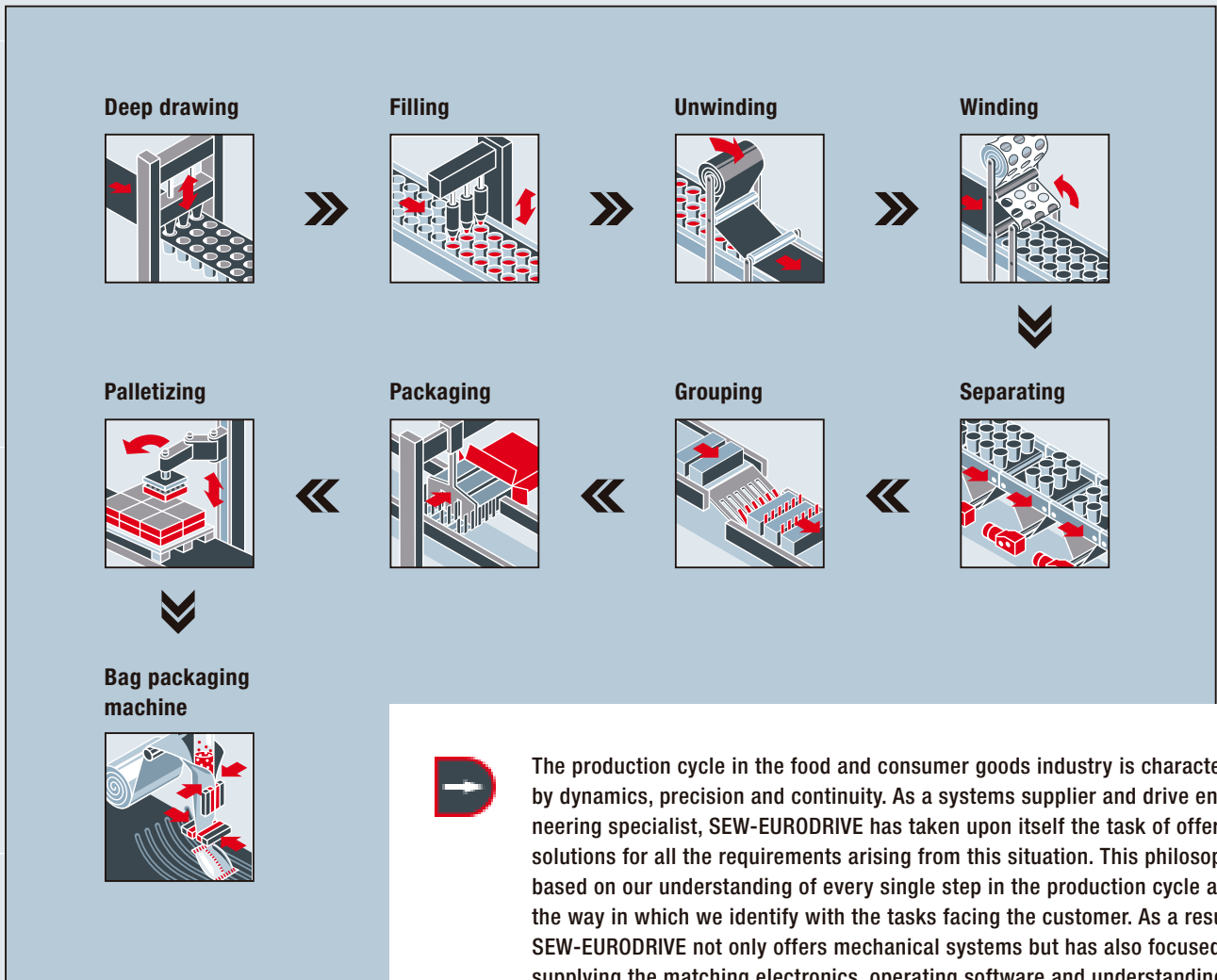
Only the best for your industry – drive engineering solutions from SEW-EURODRIVE

The outstanding properties of our drive technology make it clear why SEW-EURODRIVE is featured in the most important industries all over the world: Power density, modularity, overload capacity and reliability give the user the desired security – optimally positioned and highly efficient in every application.

The modular structure of our system and the countless combination options create the best possible prerequisites for the development of tailor-made solutions as required in packaging machines in the food and consumer goods industry.



The production cycle in the food and consumer goods industry



Central, modular or stand-alone automation concepts: SEW-EURODRIVE provides a solution for any task

Drive and automation concepts are as manifold as the requirements for packaging machines. SEW-EURODRIVE efficiently supports central and decentralized concepts as well as a combination of both.

Optimum solutions are offered for all structures, from central machine control that sends simple commands to the drives, through to solutions where individual machine modules are automated, all the way to complete solutions for small and medium-complex machines.

The solution packages primarily focus on optimum scalability of drive solutions so that

each application will be operated with customized and cost-optimized drive technology. The same statement holds true for both the control intelligence and the driving units themselves. The options for adaptation of the driving units provide the potential for cost savings as numerous drive solutions are required particularly for small or medium-complex machines.

Scalable precision, dynamics and continuity in all movements

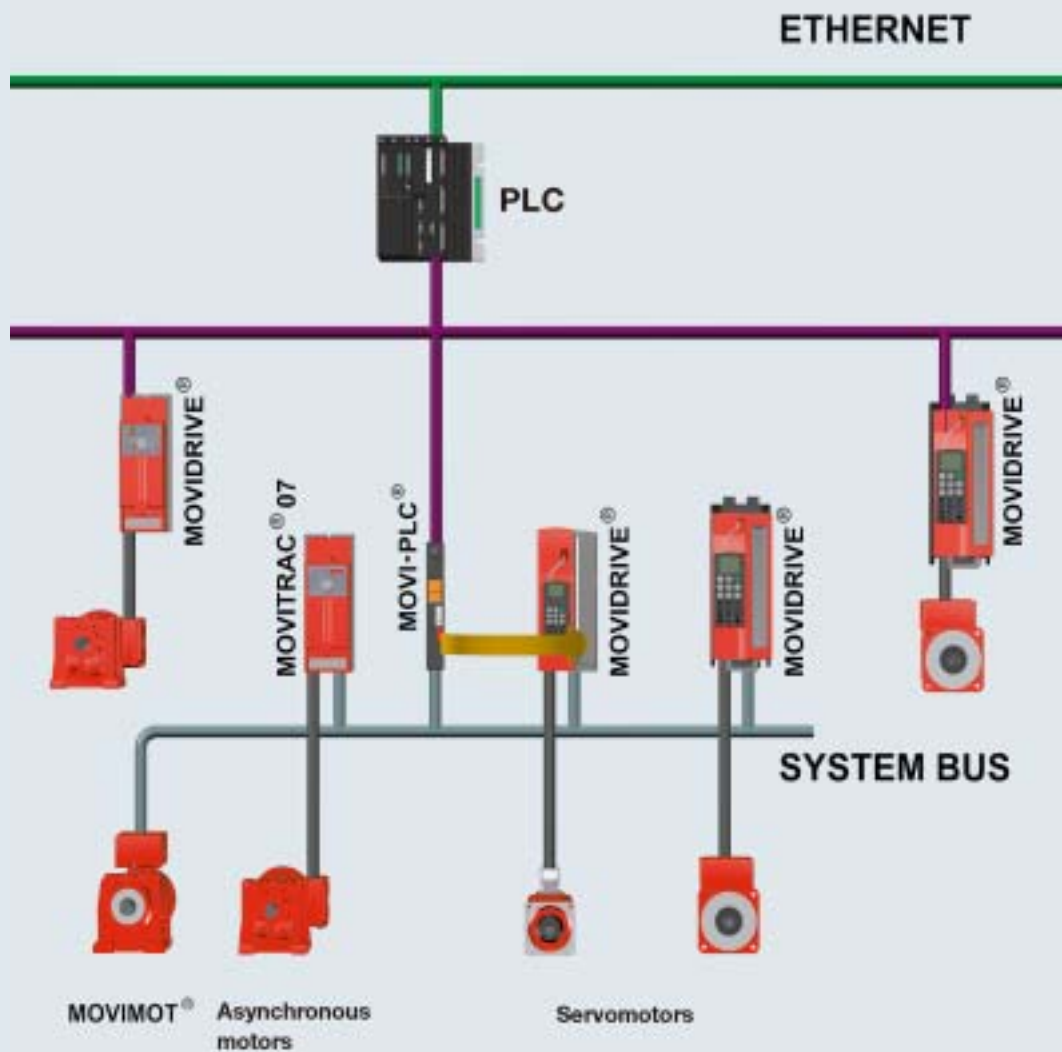
A wide spectrum of drives, from simple SPIROPLAN® right-angle gearmotors to asynchronous motors, servomotors and linear motors, are driving packaging machines all over the world. All drives can be connected to the fieldbus systems PROFIBUS, INTERBUS, INTERBUS LWL, CAN, CANopen and DeviceNet via the corresponding MOVIDRIVE® drive inverter or MOVITRAC® frequency inverter, which means the drives can be controlled from a central PLC. ETHERNET enables vertical data communication to the master level and horizontal communication between controller and application. System solutions from SEW-EURODRIVE are not only reliable and flexible but also absolutely functional: Parameter setting, programming and diagnostics via ETHERNET.



Central machine and system control

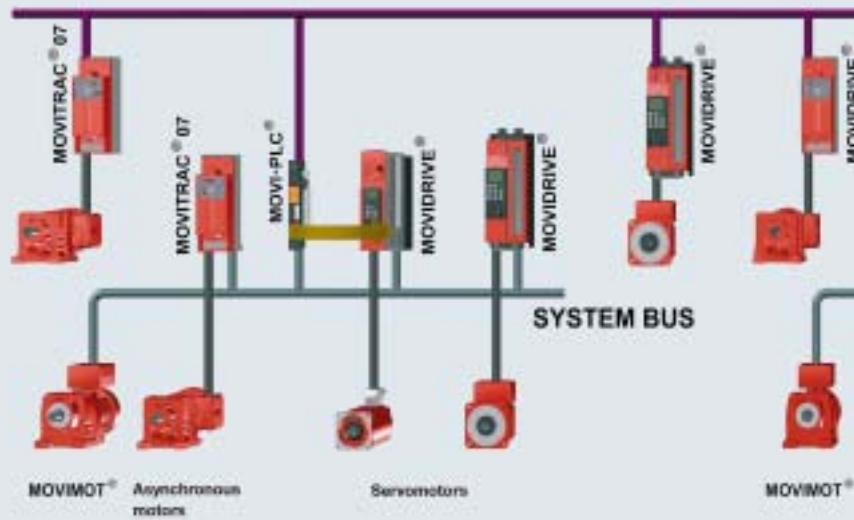
Drives from SEW-EURODRIVE can easily and quickly be connected to higher-level controllers as nearly all fieldbus and ETHERNET protocols are supported. A great number of preconfigured functional modules allows for quick startup without the need for programming.

Example of an automation concept: vertical sachet packaging machine

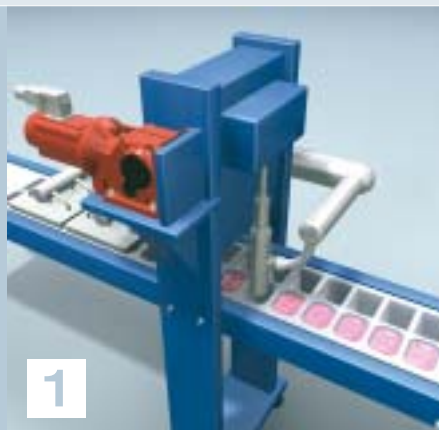


Modular machine and system control

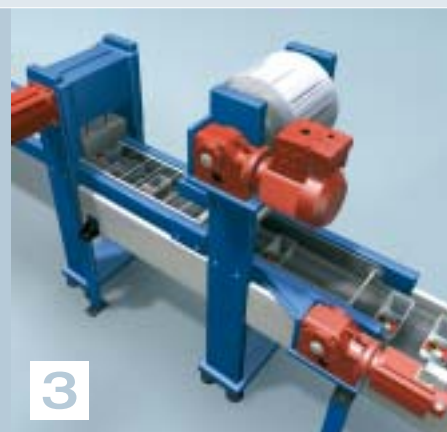
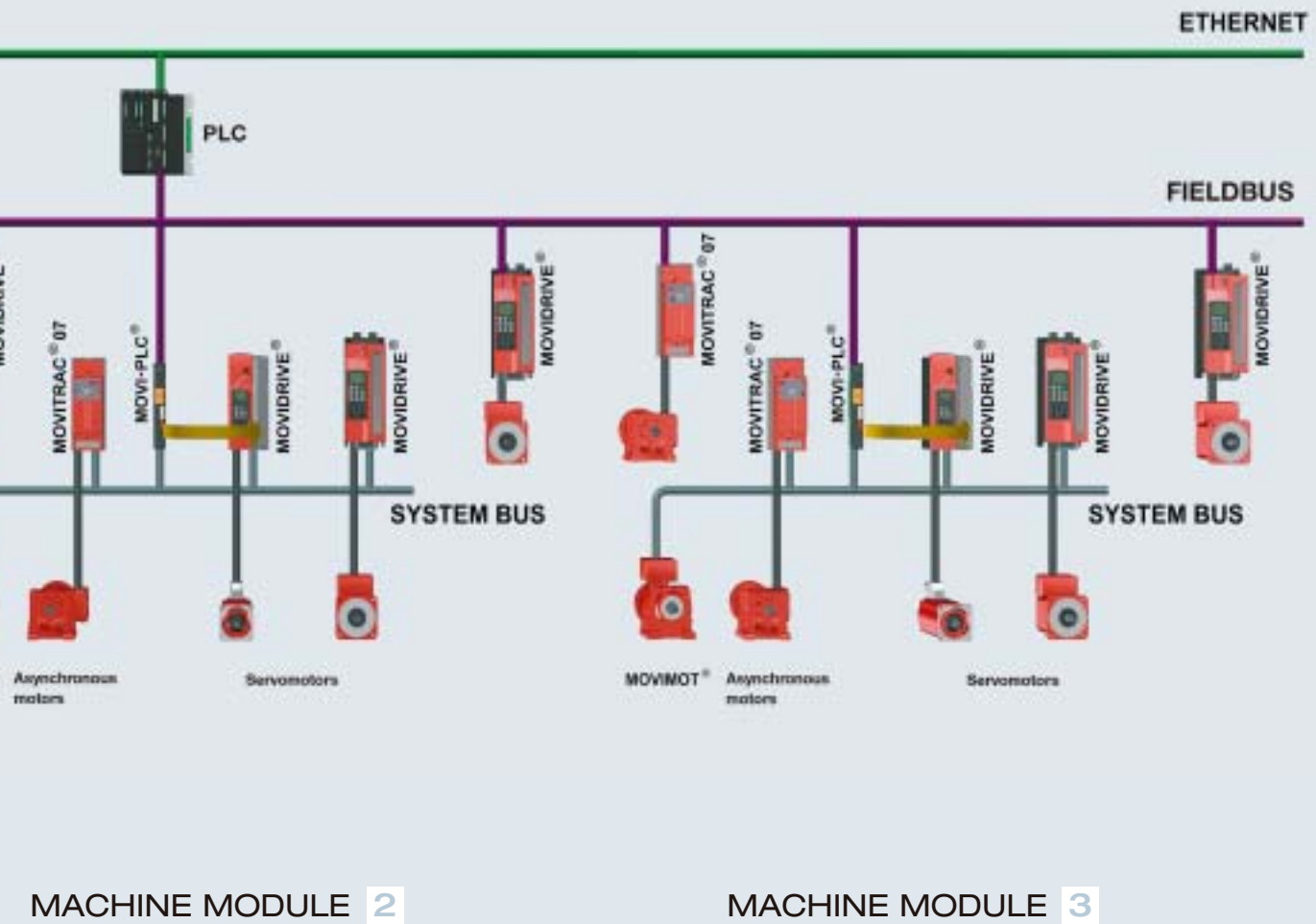
SEW-EURODRIVE permits even exacting drive application tasks to be achieved in a decentralized way with the new DHP11B MOVI-PLC® control card for MOVIDRIVE® drive inverters. A fast system bus makes it possible to synchronize axes and coordinate complex sequences of motions within a very short period of time. Connection to a central PLC is possible via fieldbus. This makes for efficiently automating machine modules or stations in specified groups.



MACHINE MODULE 1



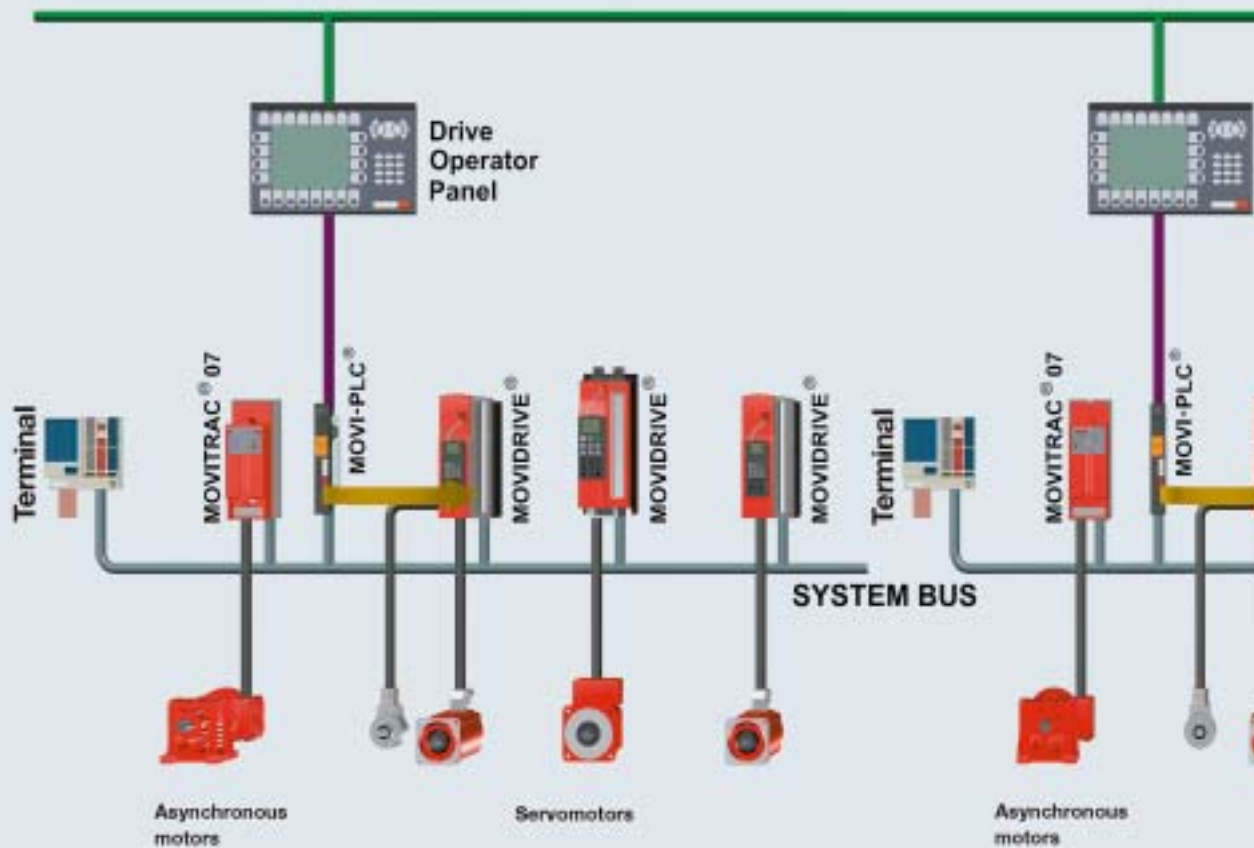
Example of an automation concept: form, fill and seal machine



Stand-alone machines and system control

If an installation concept is to be implemented without a separate machine PLC, then the MOVIDRIVE® drive inverter with the DHP11B MOVI-PLC® control card takes over all tasks of the PLC, which means it evaluates decentralized inputs and outputs, controls the drives and exchanges data with a DOP (Drive Operator Panel) operator terminal for visualization purposes. This concept is the perfect solution for small to medium-complex machines and has the advantage of being very cost-efficient.

Example of an automation concept: end-of-line packaging

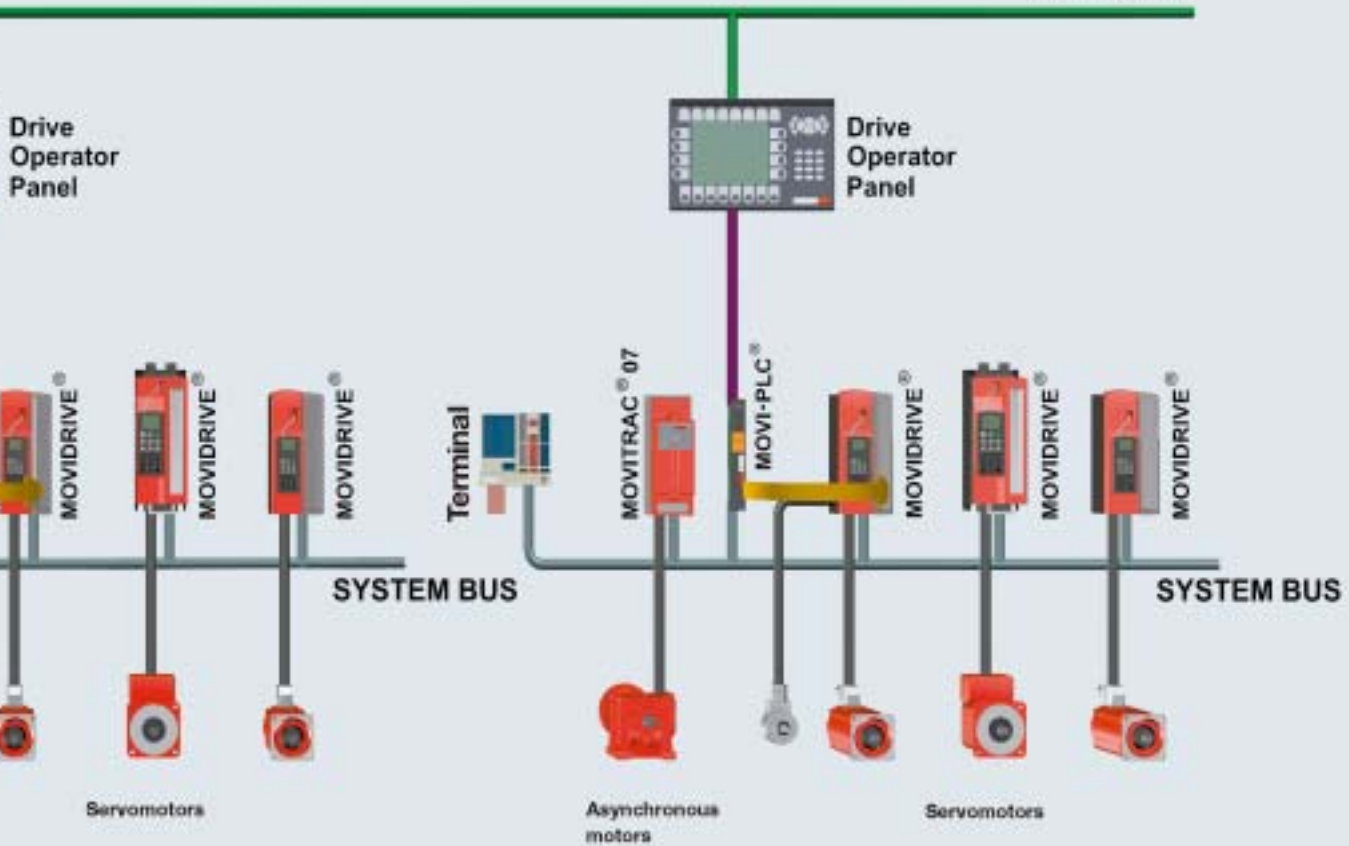


MACHINE 1

MACHINE 2



ETHERNET



MACHINE 3

Solution packages: Servo drive systems, consultation, support and process-accompanying software

The productivity and efficiency of packaging machines not only depend on the appropriate drive but also on the engineering of hardware and software. This is why SEW-EURODRIVE supports the system manufacturer and operator efficiently throughout all planning and implementation phases with innovative and competent consultation from project planning to startup.

SEW-EURODRIVE – engineering from one source:

- User-friendly project planning program ProDrive for selecting the right drive
- DXF design drawings
- Electronic product catalog EKAT for preconfiguration
- EPLAN macros for easily integrating wiring diagrams
- MOVITOOLS® operating software for all drives incl. diagnostics, programming compliant with IEC 61131-3, startup and application functions, such as “electronic cam“

The DOP operator terminals with their intuitive project planning software enable straightforward and quick operation, monitoring and visualization within the system.

What makes SEW-EURODRIVE, the supplier of drive engineering solutions, an expert in complete solutions?

- Standard, decentralized and servo drive systems of high quality and functionality
- Maximum scalability of hardware and software solutions
- Competent and innovative consultation and support in design, project planning and programming of machinery and system
- Application-specific software

Benefits for system manufacturers and operators:

- Reduced number of interfaces in the automation system
- Significantly reduced integration effort
- One contact person if the machine or system requires adaptation or modification
- The global network of production, assembly and service offers logistic advantages in terms of ordering, parts handling, supply and storage





Worldwide acceptance through standards

Standardized fieldbus interfaces, such as PROFIBUS, INTERBUS, INTERBUS LWL, CAN, CANopen and DeviceNet, make it possible to maintain the interfaces and control to the PLC chosen at an earlier time by simply exchanging the protocol for the required PLC. This means significantly reduced time involved in development and startup. ETHERNET combines the functions of traditional fieldbus technology with the functions of visualization. SEW-EURODRIVE focuses on the MODBUS TCP, PROFINET SRT protocols and the realtime protocols ETHERCAT and PROFINET IRT.

SEW-EURODRIVE defines the standards for the automation of packaging machines



together with machine manufacturers and end customers in the Packaging Machinery Working Group of the OMAC. Being a member of the PLC Open User Organization, SEW-EURODRIVE also cooperates in the standardization of drive motion in PLC programming based on standardized PLC languages compliant with IEC 61131-3.

In addition to the standards in the drive and control software, SEW-EURODRIVE has certified the products for compliance with regional standards, such as UL approval for the  US-American market or CCC approval for the Chinese market .

Aseptic, long-lived and efficient under all ambient conditions

The continuous operation of packaging machinery in dry areas places high demands on the reliability and long service life expected from drives operated under such conditions. In contrast, drives in wet areas are subject to many corrosive influences, such as moisture, oil, dirt or chemicals. SEW-EURODRIVE does not solve these tasks by implementing time-consuming, costly special components. All gearmotors from SEW-EURODRIVE are equipped with an installed and activated breather valve as standard. All shaft mounted gear units are supplied with NOCO® fluid paste to prevent contact corrosion.

Optional:

- Gear units filled with food grade oil
 - Connection via motor plug connector for ease of installation and servicing
 - All surface recesses sprayed with elastic rubber compound
- A number of targeted additional treatments and the use of special materials allow operation even under extreme ambient conditions. The interaction between internal and external preventative measures offers reliable protection against damage.



Don't give germs a chance

Drive engineering solutions from SEW-EURODRIVE not only meet the operating requirements in the standard hygienic area but can also be used if there is a need for resistance to aggressive cleansing agents and disinfectants.

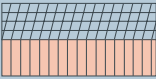
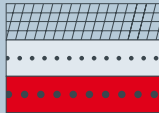
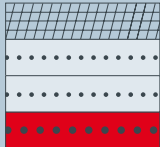
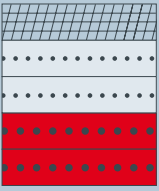
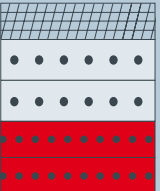
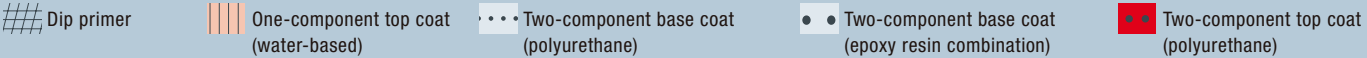
Often, regulations stipulate a completely germ-free environment. Standard motors usually have cooling fins and fans.

The dirt collects in these areas and cannot be removed completely because the design makes access difficult.

This can lead to a build-up of germs!

SEW-EURODRIVE offers the following solutions

- Aseptic gearmotors of the DAS series for drive solutions with smooth surfaces and without fans, which can be cleaned with water – in enclosure IP69K as standard
- New: ASEPTIC^{plus} drive package for resistance to chemicals, cleansing agents and disinfectants

Overview of surface protection coatings						
	Standard	OS1	OS2	OS3	OS4	Z
Description	1 x dip primer 1 x one-pack topcoat	1 x dip primer 1 x two-component base coat 1 x two-component varnish	1 x dip primer 2 x two-component base coat 1 x two-component varnish	1 x dip primer 2 x two-component base coat 2 x two-component varnish	1 x dip primer 2 x two-component base coat – epoxy resin combination 2 x two-component varnish	Before coating: Surface recesses are sprayed with a rubber filling
Coating structure						–
Standard depth of layer approx µm (NDFT)**	70	150	210	270	320	–
Application	Normal ambient conditions Relative humidity below 90 % Surface temperatures up to 120 °C Corrosion category C1* (negligible)	Low environmental impact Relative air humidity max. 95 % Surface temperatures up to 120 °C Corrosion category C2* (low)	Medium environmental impact Relative humidity up to 100 % Surface temperatures up to 120 °C Corrosion category C3* (moderate)	High environmental impact Relative humidity up to 100 % Surface temperatures up to 120 °C Corrosion category C4* (high)	Very high environmental impact Rel. humidity up to 100 % Surface temperature up to 120 °C Corrosion categories C5-1* (very high)	Additional feature to OS1/2/3/4 to prevent accumulation of dirt and contour recesses prone to corrosion
						
<p>* according to DIN EN ISO 12 944-2 ** (NDFT = nominal dry film thickness) corresponds to DIN EN ISO 12 944-5</p>						

Global service

Our idea of a complete system includes global presence and service

We see service as an integrative function. Our sales engineers will assist you with expert advice, open analysis and application project planning. You can find our specialists in 58 assembly plants located in 44 countries around the globe. They will be glad to answer any questions you might have and respond very quickly to any service call. Installation and startup are performed on-site quickly and individually, factors which are essential for smooth plant operation. Our global after-sales service combined with preventive maintenance makes for many years of trouble-free operation. And if anything does go wrong, we offer a 24/7 hotline for maximum availability.

Whether you require maintenance, repair, spare parts service, preventative maintenance, oil service or 24-hour availability: The individual modules from SEW-EURODRIVE's Complete Drive Management system can be combined with one another to offer a service tailored to suit all requirements.

Each module is based on the expertise of a global player with practical experience and an understanding of customer service at the highest level. Feel free to contact SEW for further information.

CDM® – Complete Drive Management

The new service brand from SEW-EURODRIVE

Request a brochure today!

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Drive Repair Service



Drive Inspection Service



Drive Oil Check Service



Drive Maintenance Service



Drive Scan Service



Drive Pickup & Delivery Service



Drive Startup Service



Drive Application Programming Service



Drive Industrial Gear Units Service



Drive Express Assembly Service



Drive Decentralized Technology Service



Drive Condition Monitoring Service



Drive Service Hotline

24-hour availability

0 18 05 – SEWHELP

0 18 05 – 7 39 43 57

Let us share our knowledge with you



Our range of services for customers also includes seminars and information sessions as well as special literature containing details on products and basic know-how. SEW-EURODRIVE offers practice-based seminars throughout the year that are designed to meet the requirements of specific target groups, such as the personnel responsible for project planning, startup, maintenance or service, as well as the drive technology implemented. For an overview of the seminars on offer and the dates, go to www.drive-academy.de!



Always available:
Our website (www.sew-eurodrive.de) not only includes up-to-date information, seminars currently on offer and detailed documentation, it also provides software updates for you to download. It is also easy to purchase spare parts and track the status of your orders via the Internet.

How we're driving the world

With people who think fast and develop the future with you.

With a worldwide service network that is always close at hand.

With drives and controls that automatically improve your productivity.

With comprehensive knowledge in virtually every branch of industry today.

With uncompromising quality that reduces the cost and complexity of daily operations.



SEW-EURODRIVE
Driving the world

With a global presence that offers responsive and reliable solutions. Anywhere.

With innovative technology that solves tomorrow's problems today.

With online information and software updates, via the Internet, available around the clock.

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