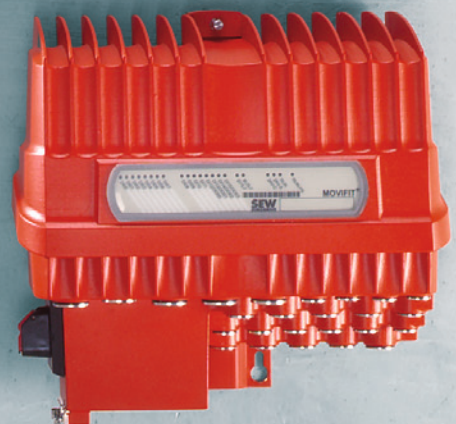


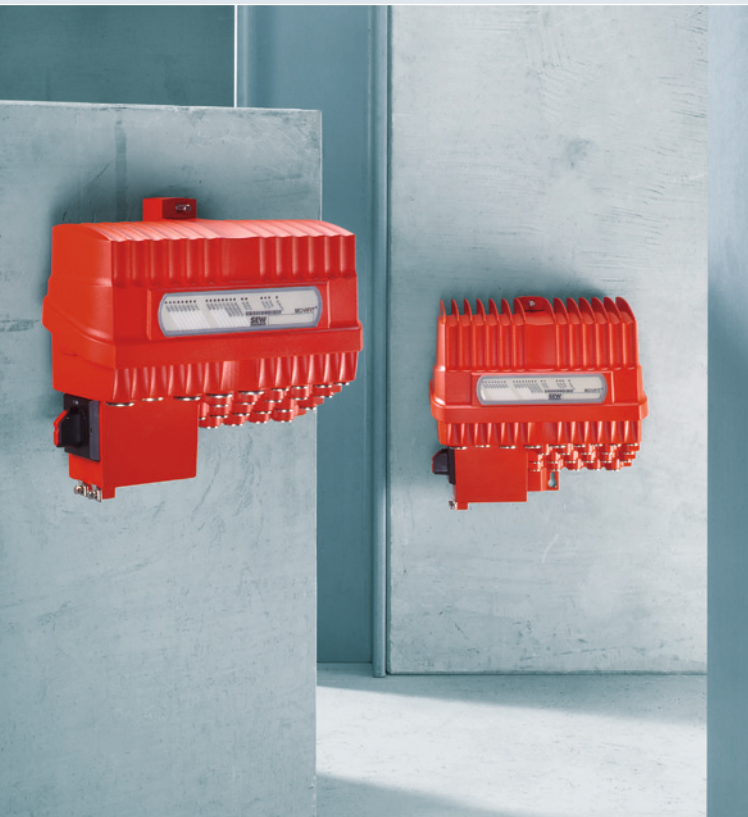
## Decentralized Drive Control

**MOVIFIT®**



## MOVIFIT® provides new perspectives

For years now, the components from SEW-EURODRIVE's decentralized drive system have been proving how compact and modular a decentralized system structure can be in a variety of applications. And yet, even in this area, the drive engineering requirements are becoming more and more demanding. System designers and operators are looking for alternatives that offer more efficiency early in the planning phases for components and systems.



SEW-EURODRIVE has met these challenges by developing a new concept for installations covering a lot of floor space: MOVIFIT®, the decentralized drive controller combines the well-known advantages of SEW-EURODRIVE decentralized installation technology with modern, application-oriented drive and communication functions. The resulting application solutions represent actual reductions in unit costs, setup times and startup work.

Driving the world – with innovative drive solutions for all branches of industry and for every application. Products and systems from SEW-EURODRIVE for any application – worldwide. SEW-EURODRIVE products can be found in a variety of industries, e. g. automotive, building materials, food and beverage as well as metal-processing. The decision to use drive technology “made by SEW-EURODRIVE” stands for safety regarding functionality and investment.

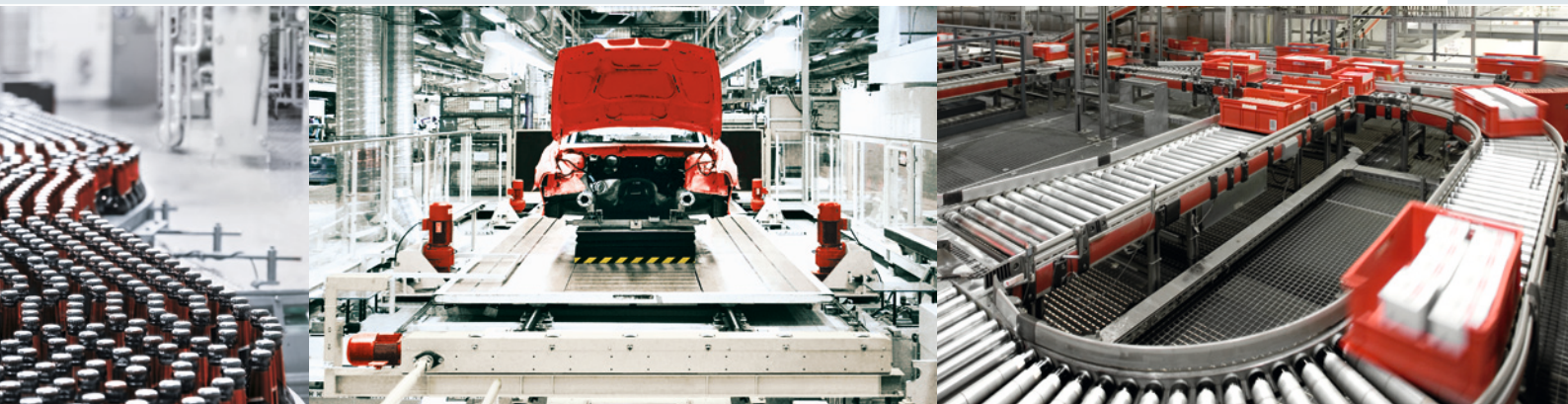


## MOVIFIT® is:

Modular	Flexible	Economical
<ul style="list-style-type: none"> <li>– Three unit variants are available</li> <li>– New power electronics with frequency inverters and motor control switches</li> <li>– High level of integration</li> </ul>	<ul style="list-style-type: none"> <li>– State-of-the-art connection technology makes for fast installation and startup, a high degree of serviceability and ease of diagnostics, also when replacing the electronics</li> <li>– Support of new strategies for optimized system topologies</li> <li>– Communication via all commercial fieldbus systems: PROFIBUS, PROFINET, PROFI-safe, DeviceNet, EtherNet/IP and Modbus/TCP</li> <li>– Various areas of application</li> </ul>	<p>Reduced investment and operating costs and project planning times:</p> <ul style="list-style-type: none"> <li>– Standardized conveyor elements</li> <li>– Well-structured, functional system topology</li> <li>– Modular, decentralized concept allows for quick and easy expansion of a system should this become necessary</li> <li>– Reusability of the modules reduces project planning costs and times</li> <li>– A decentralized electronics unit enables control of several drives, which reduces the number of units</li> <li>– Less space required in the control cabinet</li> <li>– Minimized error sources during wiring</li> <li>– MOVIFIT® Hygienic<sup>Plus</sup>: Standard design for use under special ambient conditions, e.g. in wet areas</li> </ul>



MOVIFIT® is the result of SEW-EURODRIVE's many years of experience in decentralized drive engineering. It is suitable for materials handling applications in demanding fields, for example in the automotive industry, food and beverage industry and logistics.



## MOVIFIT®: Designs and features

MOVIFIT® provides decentralized installation technology with the latest in application-oriented drive and communication functions. This technology allows for saving a substantial amount of time and money already in the project planning phase and for significantly reducing investment and operating costs.

### MOVIFIT® MC



- Up to three MOVIMOT® can be connected via hybrid cable
- Voltage range 3x 380 ... 500 V
- Integrated power distribution and line protection
- Integrated communication interface
- Maintenance switch
- safetyDRIVE integrated functional safety up to PL d according to ISO EN 13849-1
  - Safe Torque Off (STO)
  - Safe Stop (SS1)
  - Optional safe bus system PROFIsafe
- 12 digital inputs + 4 digital inputs/outputs
- CAN/SBus interface for external components
- Simple and fast parameter setting via DIP switches or fieldbus

### MOVIFIT® SC



- Electronic (contactless) motor starter
  - Connection of two motors (dual motor starter) → one direction of rotation
  - Connection of one motor (reversing starter) → two directions of rotation
- Power range
  - with connection of two motors / → 2 x 0.37 to 1.5 kW
  - with connection of one motor / → 1 x 0.37 to 3.0 kW
- Adjustable soft startup time
- Voltage range 3x 380 ... 500 V
- Increased safety by switching of three phases
- Integrated energy distribution
- Integrated brake management for SEW three-wire brakes
- Optional maintenance switch
- Integrated communication interface
- Digital inputs/outputs
  - 6 DI + 2 DIO with function level Classic
  - 12 DI + 4 DIO with function level Technology
- CAN/SBus interface for external components
- Simple and fast parameter setting via DIP switches
- Expanded parameter setting via fieldbus or diagnostics interface

**MOVIFIT® FC**

- Configurable (open-loop) frequency inverter
- Power range from 0.37 to 4 kW (in two sizes)
- Voltage range 3x 380 ... 500 V
- Integrated energy distribution
- Integrated brake management for SEW three-wire brakes and additional brake control output for non-SEW brakes
- Optional internal braking resistor (integrated in ABOX)
- Optional external braking resistor
- Optional maintenance switch
- Integrated communication interface
- Freely programmable integrated controller (IEC 61131)
- Digital inputs/outputs
  - 6 DI + 2 DIO with function level Classic
  - 12 DI + 4 DIO with function level Technology
- CAN/SBus interface for external components
- safetyDRIVE integrated functional safety up to PL d according to ISO EN 13849-1
  - Safe Torque Off (STO)
  - Safe Stop (SS1)
  - Optional safe bus system PROFIsafe
- Simple and fast startup via DIP switches
- Expanded parameter setting via fieldbus or diagnostics interface

**MOVIFIT® function levels**

The function level indicates the functions included in the software for MOVIFIT® units regarding

- operation
- system control
- diagnostics

**Overview of MOVIFIT® function levels**

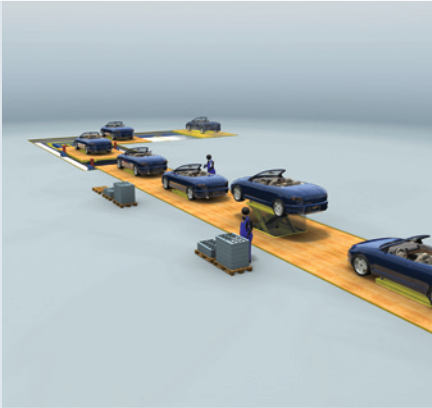
<b>Classic</b>	<b>Technology</b>
Simple functions	Free programming (MOVI-PLC®/MOVITOOLS® MotionStudio)
<ul style="list-style-type: none"> <li>– Control as fieldbus gateway via MOVILINK®</li> <li>– Simple handling and functionality</li> </ul>	<ul style="list-style-type: none"> <li>– Programming takes place according to IEC 61131 (e.g. in LD, FBD, IL, ST, AS)</li> <li>– MOVITOOLS® MotionStudio with PLC Editor, Application Builder, etc.</li> <li>– Multi-stage library concept (application and program modules of the MOVI-PLC® controller series)</li> </ul>

**Communication:**

All common bus systems are available: PROFIBUS, PROFINET, PROFIsafe, DeviceNet, EtherNet/IP and Modbus/TCP,

**NEW:** PROFINET interface SCRJ / POF

## Diverse areas of application – flexible installation technology



Horizontal or vertical conveying technology, belt or chain conveyors, elevating or rotary tables – the requirements on a drive system are diverse and demanding. No problem for the MOVIFIT® system from SEW-EURODRIVE: With its flexible installation technology, the system sets new standards resulting in more efficiency in component and system planning. The system is really simple: It is a modular system enabling the electronics and connection units to be combined and configured to match the requirements of the application and the installation concept, for example



- in the automotive industry in the body shop or final assembly
- in the food and beverage industry in baking lines, in meat or poultry conveyor systems, as well as in beverage conveyor belts both in dry and wet areas
- in intralogistics in conveyor belts and storage and retrieval units



### Advantages of MOVIFIT®:

- Gearmotors and drive electronics are perfectly matched
- Startup effort is reduced through preconfigured and optimized drive packages
- Simplified order processing
- Worldwide service: Complete Drive Service from SEW-EURODRIVE, e.g. 24-h hotline

## The version for the food industry

The new MOVIFIT® HygienicPlus combines the familiar advantages of decentralized installation technology, such as short wiring distances and

modular machine design, with the food and beverage industry's more exacting requirements in terms of leak-tightness and cleaning.

- Housing design and inspection window meet the requirements for degree of protection IP69K
- The special surface of the MOVIFIT® housing makes the unit suitable for operation in the food industry:
  - Easy cleaning due to self draining design: cleansing agents and water do not adhere to the unit or leave any traces
  - Meets standards for hygienic criteria according to DIN EN 1762-2 and DIN EN ISO 14159
- Cleaning agent compatibility: Disinfectant cleaning agents containing alkali and acids can be used without any problems
- Anti-adhesive properties
- Surface highly resistant against mechanical impacts
- Insensitivity to temperature fluctuations: Condensation and suction effect
  - High protection against humidity due to separation of electronics and connection technology
  - Screw fittings: Stainless steel instead of plastic
  - Cable run: downwards (meeting the general guidelines)



## Active electronics

### Electronics unit: EBOX

EBOX: Uniform mounting position, interfaces and closing mechanism regardless of integrated functions

#### EBOX

- Closed electronics unit with communication interface, I/Os and optional power section (frequency inverter or electronic motor control switch)
- Optional drive control
- DIP switch for easy configuration of power components
- Diagnostic LEDs for
  - I/Os (can be labeled)
  - communication
  - unit status

#### Size 1



- For MOVIFIT® MC, SC and FC
- MOVIMOT® controller
- Starter up to 3 kW
- Inverter power ratings up to 1.5 kW

#### Size 2



- For MOVIFIT® FC
- Inverter power ratings from 2.2 kW to 4.0 kW



## Passive connection technology

### Connection unit: ABOX

#### ABOX: Passive connection and mounting technology with uniform interfaces

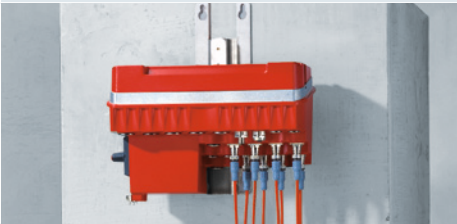
##### Standard ABOX



Standard ABOX with terminals and cable glands

- Cable glands
- Terminal strip for I/Os and bus
- Terminal strip for motor cables
- Terminal strip for power

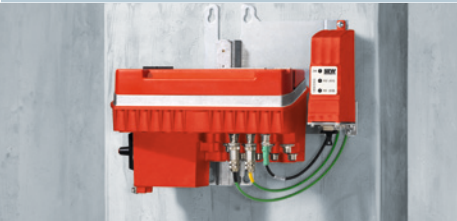
##### Hybrid ABOX



Hybrid ABOX with

- M12 for I/Os
- M12 for I/Os and bus
- M12 for I/Os and push-pull RJ45 for bus

##### Hybrid ABOX



Hybrid ABOX with POF option L10

- M12 for I/Os and push-pull SCRJ for bus

##### Hybrid ABOX



Hybrid ABOX with Intercontec motor connector

- M12 for I/Os and bus
- M12 for I/Os and push-pull RJ45 for bus



The simple and uniform closing mechanism of the ABOX and EBOX allow for a range of various combination options as well as quick and easy installation. This means you can combine the MOVIFIT® system in such a way that it provides the function level and design best suited to the particular application.

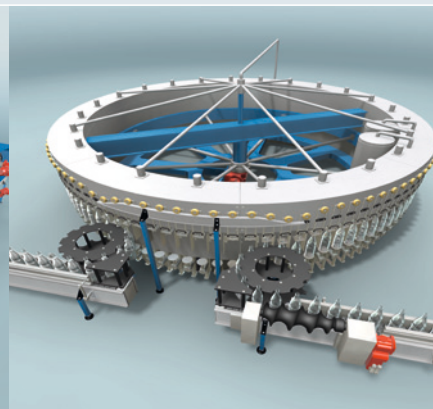
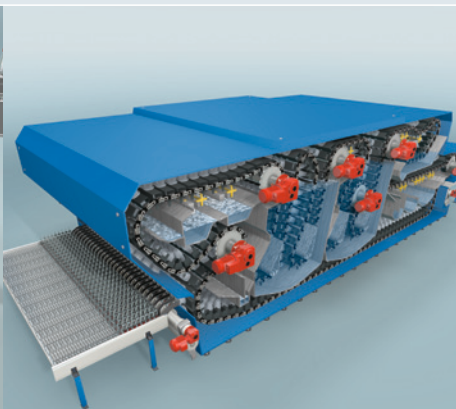
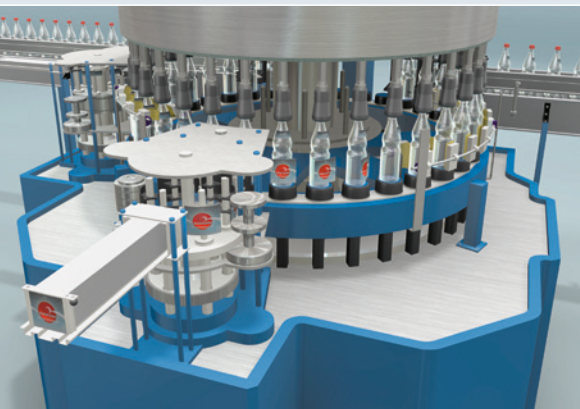
## Safety technology is integrated in MOVIFIT® as a matter of course

Mechanical protection devices, such as covers, guards or fences are still being used in many applications to ensure operator safety. But more flexible and economic solutions can also be implemented to allow employees to work in protected areas and to ensure plant operation.

For example by using the MOVIFIT® drive controller of the type MOVIFIT® MC or FC. It can be controlled via PROFIsafe using the PROFIsafe option S11. This is the function of the "safe stop". PROFINET/PROFIsafe provide users with safety technology combined with a future-oriented fieldbus system. The great advantage of this technology is that users do not need a separate safety controller and cabling. The PROFIsafe option S11 offers four additional safety-related inputs for connecting safe sensors and two safety-related outputs.

### Overview of the features:

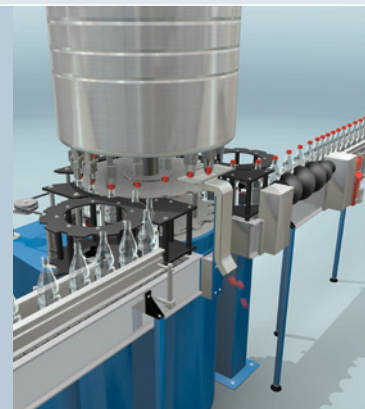
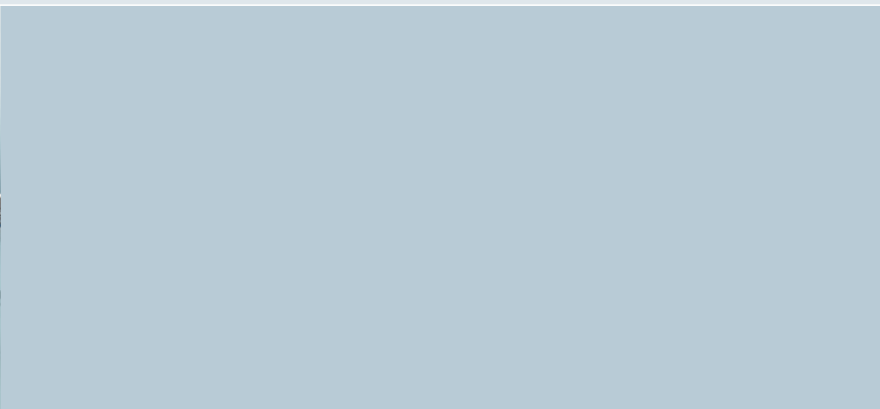
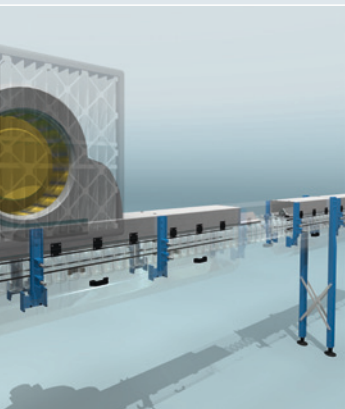
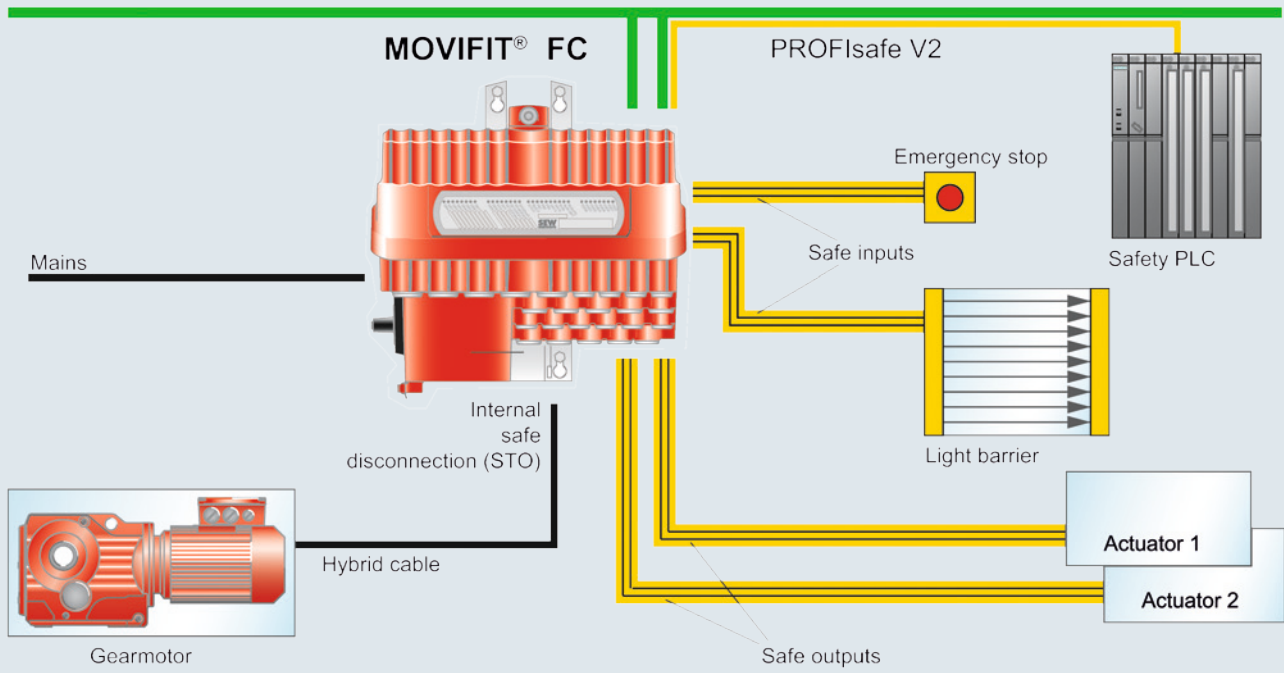
- PROFIsafe communication
- safetyDRIVE integrated functional safety up to PL d according to ISO EN 13849-1
  - Safe Torque Off (STO)
  - Safe Stop (SS1)
  - Optional safe bus system PROFIsafe
- 2x 2-pole safe inputs (F-DI)
- 2x 2-pole safe outputs (F-DO)



The graphic shows the implementation of decentralized installation right through to the

control level via PROFIsafe for safety applications up to PL d according to ISO 13849-1.

PROFINET/PROFIBUS



## How we're driving the world



**SEW-EURODRIVE**  
Driving the world

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