

Solutions for Reducing the Total Cost of Ownership

New Perspectives in the Beverage Industry



Energy – an economic factor. With our TCO solutions, you can reduce energy and overall costs.

Dwindling resources and rising energy costs prompt companies in the beverage industry to review the degree of energy efficiency of their systems and the amount of follow-up costs. To find the right solution for this can pay off – both for planned systems and for existing ones.

As system supplier and specialist for drive technology, SEW-EURODRIVE offers a highly efficient, modular energy efficiency system for the beverage industry. It comprises perfectly

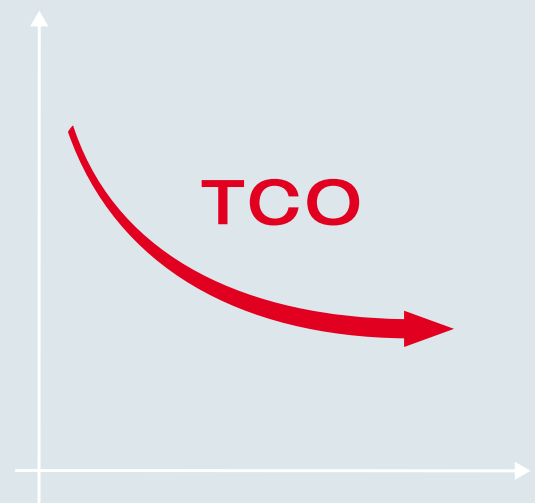
matched drive solutions in combination with practice-oriented TCO concepts. This provides cost transparency for the entire life cycle of the system already in the planning stage.

Driving the world – with innovative drive solutions for all applications in the beverage 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 work and simple handling in terms of operation and servicing mean you can be sure that your machines and equipment will work more efficiently right from the first time.



The Right Solution for Every Area of Application

Optimum system availability and minimum downtimes are the main criteria also for the beverage industry for making a decision for or against a supplier. This is why many system operators have relied on the industry expertise and high product quality of SEW-EURODRIVE for decades.



Here, industry-specific solutions are based on a modular system as well: Further developing tried and tested products specifically for industries and applications and avoiding time-consuming and expensive special designs.

SEW-EURODRIVE is thus the right partner for the beverage industry – not only for dry and wet applications. Solutions for sensitive areas, in which hygienic requirements for drive technology are very strict, are also offered as standard by SEW-EURODRIVE.



How energy efficiency allows you to save money and help the environment.

Our latest in-house developments, the energy efficient type DRE../DRP.. motors in connection with the MOVIFIT® drive controller for innovative decentralized installation and the mechatronic MOVIGEAR® drive system, are the logical consequence of continuous development and research work. They form two central components of the modular energy efficiency system of SEW-EURODRIVE.

Many system operators use these products in dry or wet areas of their system as a matter of course. However, SEW-EURODRIVE also offers standard solutions for hygienic areas in the beverage industry. They meet the strict requirements for such areas, e.g. high degree of protection and resistance to cleaning agents, without any problems.

Specific surface and corrosion protection measures for gear units and motors ensure reliable operation of the drive components.

The smooth surface design of MOVIGEAR® prevents the built-up of dirt; the units are virtually self-cleaning. The completely enclosed mechatronic drive system also uses surface cooling and does not require an additional fan. Sucking in dirt and spreading germs and bacteria due to air swirls are absolutely impossible.

Surface treatment, housing design and inspection window of MOVIFIT® in hygienic design meet all requirements of IP69K as standard. It is not affected by alkaline or acidic cleaning agents, either.

TCO Product Solutions from SEW-EURODRIVE



Helical, helical-bevel and SPIROPLAN® gear units:
Reliable, low maintenance and high efficiency

The gearing of the gear units is designed for high endurance and thus makes for a high-torque, wear-free drive.

Due to their extremely high degree of efficiency, our gear units form real energy efficient drives together with energy efficient motors. Their long, maintenance-free service life is another reason why they contribute to a lower total cost of ownership.



Energy efficient motors with die-cast copper rotors (IE1, IE2, IE3)

SEW-EURODRIVE is the first company worldwide that has managed to use die-cast copper technology in an industrial high-volume production. Result: The highly effective energy efficient motors type DRE../DRP... The DRP...-motor surpasses the efficiency levels of the new international IEC 60034-T30 standard. It is labelled IE3 (Premium Efficiency). All this comes at a surprisingly economic price, which enables amortization within one or two years.



MOVIFIT® drive controller:
Reduces investment costs,
increases system availability

The MOVIFIT® system provides decentralized installation technology with state-of-the-art, application-oriented drive and communication functions. Three function levels are available:

- From simple functionality
- via user-defined programming
- to drive-oriented conveyer functions

The flexible connection technology, i.e. the separation of connection unit and electronics, significantly reduces installation times and increases system availability.



MOVIGEAR®:
Functionality, flexibility and highest energy efficiency combined

The mechatronic drive system MOVIGEAR® combines motor, gear unit and electronics in one product. With optimized interfaces between the inverter, motor and gear unit, minimized friction and current losses and intelligent control modes, this system provides a higher overall efficiency level than any previously achieved, up to 25 % above that of conventional drive solutions. Here, too, system manufacturers at this stage achieve an efficiency that surpasses efficiency class IE3 (Premium Efficiency), reducing their energy costs by about 15 to 30 %. Excellent networking features reduce the time required for installation, startup and integration, resulting in reduced overall costs.

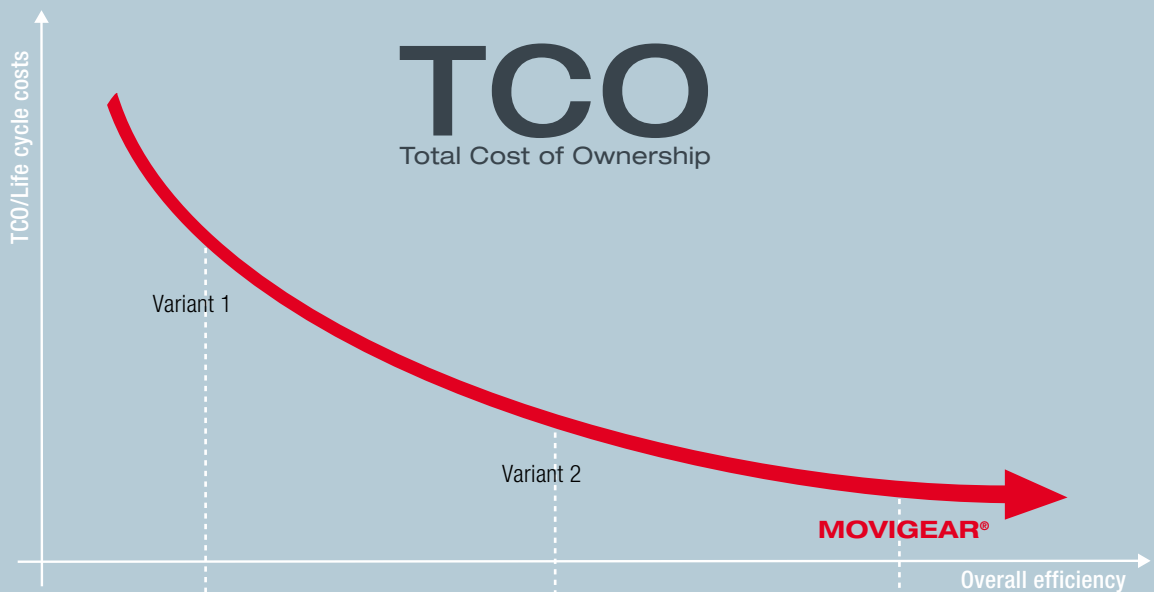
Practical Example of a Bottle Conveyor

The production cycle in the beverage industry is characterized by a wide range of extremely varied tasks. No matter if palletizing, cask transporting

or bottle conveying in dry, wet or hygienic areas: As a systems supplier and drive engineering specialist, SEW-EURODRIVE has taken upon itself

the task of offering energy efficient solutions for all the requirements arising from this situation.

Comparison between standard variant and optimization solutions



Project variants	Variant 1	Variant 2	Variant 3
Bottle conveyor of a bottling plant with 105 drives with approx. 1.1 kW, 1.5 kW and 2.2 kW drive power	105 helical-worm gearmotors with standard motors and standard frequency inverters in the control cabinet	105 helical-bevel gear units KA47 with DRE.. energy efficient motors and decentralized MOVIFIT® FC drive control	MOVIGEAR® SNI mechatronic drive system with 105 MOVIGEAR® drive units
Investment/ components	94 %	98 %	100 %
Energy costs/year*	44,150 €	37,020 €	34,500 €
Energy consumption	128 %	107 %	100 %
Amortization of additional costs after		approx. 1.2 years	approx. 1.3 years
Total savings after 5 years of operation		26,650 €	35,300 €

* Basis for calculation: 3,500 hours of operation/year x 0.10 €/kWh x system power

Potential for saving energy costs

If you compare all costs incurred during the life cycle of a system, you will notice that energy costs of systems that have not been optimized with respect to their energy consumption can constitute up to 90 % of the follow-up costs. This shows that optimizing the energy efficiency of each individual component effects significant economies.

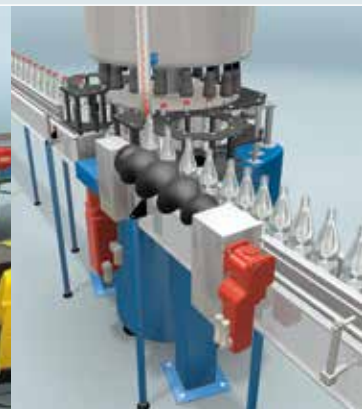
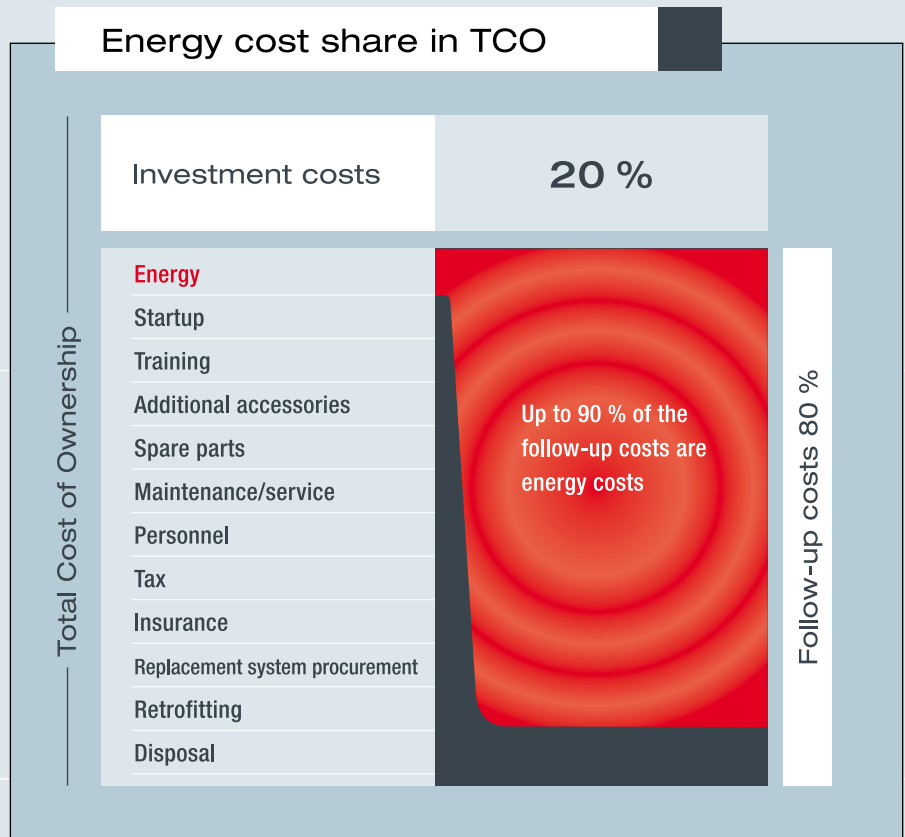
The right strategy

The processing steps in the beverage industry are characterized by a wide range of extremely varied tasks. The right strategy is essential for implementing energy-optimizing changes in existing systems in this complex environment. This is why SEW-EURODRIVE offers highly efficient drive solutions, industry-specific expertise and the planning security you need.

The right time

A good time for optimizing the energy efficiency of a system is when parts of a system have to be replaced. This usually takes place during a regular exchange of components or a complete re-engineering process.

Energy cost share in TCO



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