

Energy Efficient – Compact – Sustainable

Energy Saving Electric Drive Units for Material Handling Technology

Since material handling equipment usually requires lots of electric drive units the operator will realize huge saving effects, if he uses energy saving drive units. The energy savings are especially large, if the equipment is powered by drive units of ABM Greiffenberger. The company will show exactly that to LogiMAT visitors based on tangible examples. With SINOCHRON® drive units the energy consumption is reduced by up to 35%. In complex equipment cost savings in the 6-digit Euro area are very well possible.

The material handling technology is an important consumer industry for electric drive units – and for the operator an area with good results in terms of energy savings. Because, in only one haulage way numerous electric motors are used - the same is true for storage facilities and commission areas. Over all in only one fully automated complex for storage and distribution of goods hundreds, in many cases even thousands of motors can be installed requiring energy correspondingly. In reverse that means, if the operator bets on energy saving drive unit technology, the effects will be measurable very fast.

In past years equipment manufacturers and operators achieved considerable successes by reducing the energy consumption of the equipment. The individual drive units or rather equipment segments had been switched on and off as needed and speed controlled asynchronous motors have been used increasingly. Also the trend towards decentralized drive units leads to energy saving solutions consequently.

The next step to minimization of the energy consumption

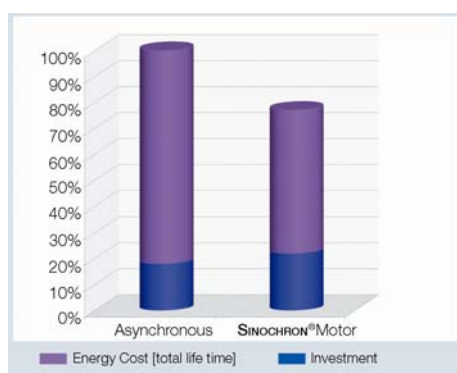


With the **SINOCHRON**® motor ABM Greiffenberger developed an energy saving alternative compared to asynchronous motors.

At LogiMAT ABM Greiffenberger will show equipment manufacturers and operators can reduce the energy consumption even further. The key component to reach this goal is the **SINOCHRON**® Motor developed by ABM. Thereby it is a matter of synchronous motor with high performance permanent magnets showing a sinusoidal flux distribution (EMF).

These motors feature good true-running and low noise emissions. They differ by an approximate double short-time overload capability in comparison to asynchronous motors. That allows for smaller motors in many cases saving installation space and energy. In comparison to conventional servo motors the sensorless control algorithm is to be mentioned made possible by the sinusoidal back EMF. Since the encoder is eliminated not only the connection technology is simpler – also the availability rises.

Energy savings of 20 to 35%



In comparison to asynchronous drive units the operator saves between 20 and 35% of energy by the use of **SINOCHRON**® Motors. Due to these extremely high energy saving effects the relatively low additional charge is amortized in less than one year in many cases.

In reality the operator of storage or material handling equipment saves between 20 and 35% of energy by the use of **SINOCHRON**® drive units, if compared to conventional asynchronous drive units. Due to these extremely high energy saving effects the relatively low additional charge is amortized in less than one year and savings in the 6-digit Euro area are possible over the life of the equipment.

Compact units from a drive unit construction kit

ABM offers a decentralized drive unit system with these innovative motors combining motor, brake, gearbox and electronic in one compact unit – exactly as desired in the material handling technology. An intelligent construction kit assures an optimized drive unit solution for every application. Thereby, different gearbox configurations like bevel, helical and parallel shaft gearboxes are available – made in-house and tuned to the output data of the motors.

The modular principle of the drive unit construction kit also fulfils very special demands of the equipment manufacturer with components from series production. That positively affects the quality by the use of proven modules. It also allows for low costs since complex special constructions can be avoided.

Integrated electronics – wide spectrum of applications



The drive unit systems are available as decentralized units consisting of motor, brake, gearbox and controller. The modular system cares for a variety of variations.

By integration of the electronics into the drive unit modules the planning complexity is dramatically reduced. Also parameterization of the drive units is imaginably simple. By the use of connectors and pre-configured cables the drive units are connected to complete drive unit systems fast, safely and precisely.

Most common use of **SINOCHRON**[®] drive units in the material handling technology is found in roller, chain, and belt conveyors. Especially, the efficiency of the motor in the partial load area is of great value. However, also similar complex and dynamic drive unit duties as seen in corner turntables, rotary tables, vertical conveyors, storage lifts and paternosters are solved with these motors optimally.

100% quality

Independent of the use:

The user can expect highest reliability and quality from the **SINOCHRON**[®] drive units. That is what ABM Greiffenberger drive unit components and systems are known for. Manufacturing of ABM Greiffenberger is subject to tight quality guidelines: all produced parts like gearing and housings are checked on most modern measuring devices. Additionally, ABM Greiffenberger invested in new testing technology allowing also complex units to be checked by 100% in final testing.

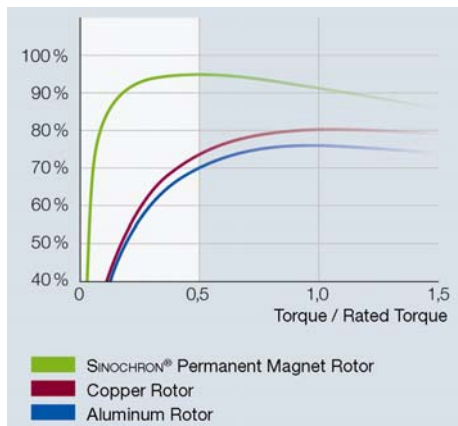
Low maintenance and durability

SINOCHRON[®] motors are as maintenance free as standard asynchronous motors due to their design. All gearboxes are practically maintenance free thanks to the high quality of the bearings, housings, shafts and gearing as well as the use of appropriate lubricants, if aging of the gearbox oil can be neglected in the particular application. Our vertically integrated manufacturing affects that positively. E.g. the gearbox housings are manufactured in our own state-of-the-art die-cast shop permanently monitoring the quality of the casts by X-ray examination.

The professional adaption to the job requirement as well as use of high-quality materials and accurate processing guarantees longevity of the drive units and assures the “pay back” of the investment.

Ideal for the material handling technology

With these characteristics **SINOCHRON**[®] drive unit systems are perfectly suited for the use in intra-company logistic equipment. The individual components are exactly tuned to the applications in storage logistics, e.g. by speed optimized windings, optimized interfaces and customized soft- and hardware. The compact design lays the foundation for simple integration of the drive units.



In comparison of different systems the high efficiency of the SINOCHRON® motor is visible.

Since a very high acceleration torque is available for a short period of time high-performance equipment with dynamic drive units are part of possible applications. In all areas of application the user will benefit from low energy consumption resulting from the high system efficiency of the **SINOCHRON®** motor.

The complete spectrum of drive units

The user can also bank on the industrial sector specific know-how in material handling of ABM Greiffenberger. Due to the availability of different drive unit solutions ABM Greiffenberger is able to operate in that demanding sector of electronic drive units – e.g. with drive units for storage paternoster, warehouse elevators, accumulation roller conveyors, slat conveyors, mobile storage shelves and many more.

**Visit us at the LogiMAT fair (March 13 - 15, 2012) in Stuttgart.
Hall 1 (EG), booth 867.**

Marktredwitz, November 29, 2011

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