Electric cylinders moving in the right direction

Environmental benefits*

- Reduced energy use
- Reduced CO_2 emissions
- Avoided hazardous waste associated with compressed air systems
- Less contamination

* compared to pneumatic systems

CASM electric cylinders enable up to 90% of energy savings compared to pneumatic cylinders.

CASM electric cylinders effectively reduce energy use

The CASM electric cylinder is an energy-efficient electromechanical solution for replacing conventional pneumatic cylinder systems.

Making compressed air is an inherently inefficient process from an energy perspective, and while hydraulic systems are somewhat better, they also suffer fundamental inefficiencies compared to direct electromechanical energy transmission. Pneumatic systems require constant power to maintain air pressure – even when the actuators are not moving – while SKF electric cylinders only require energy during movement. This allows customers to realize an energy use reduction of up to 90% when they replace pneumatic cylinders with electric cylinders.

In a recent study in India, an SKF customer replaced hydraulic lifts in a textile printing machine with two CASM electric cylinders. The observed reduction in energy use was estimated to be 7MWh per year. In terms of CO_2 emission reduction, this meant that 5.3 tonnes could be saved per year (according to world power grid mix CO_2 factor of 0.749 kg CO_2e/kWh). In addition, by applying the SKF solution, the customer eliminates the need for about 400 litres of hydraulic oil per year.

SKF BeyondZero solutions can help reduce CO_2 emissions, preserve limited resources and protect the environment from the use and spread of toxic substances. For more details, including documentation of reduced environmental impact, visit www.beyondzero.com

Production efficiency with SKF electric cylinders

CASM electric cylinders offer improved performance

Operational benefits

- **Easy integration and fast assembly**
- **Use your own controls and motors**
- **Lower energy cost***
- **Less noise and contamination***
- **Increased productivity***

* Compared to pneumatic systems

Operational features

- **Multi-option modular system**
- **Customized motor adapter**
- **Highly energy efficient**
- **Highest levels of precision and repeatability**
- **Variable speed**
- **Accurate positioning**
- **Virtually maintenance-free**

Whether used in packaging or factory automation industries, SKF electric cylinders have been designed to withstand severe conditions. Every CASM cylinder is made from high-grade material and available with ball or trapezoidal screws. These are available with short delivery times in different sizes and stroke lengths in order to fit the widest range of applications. When coupled with an electric motor, the CASM becomes an effective electromechanical device for replacing pneumatic cylinders as well as mechanical systems.

Replacing pneumatic cylinders with CASM electric cylinders can be accomplished simply and effectively, because CASM are designed following the standards as pneumatic cylinders. Additionally, SKF offers diverse attachment options and several motor adapters to allow operation with different motor brands and types.

Facilities that replace their pneumatic cylinders with CASM electric cylinders will realize tremendous energy use and cost savings. Electric cylinders are virtually maintenance-free. Costs associated with cleaning or replacing compressor filters are eliminated and this in turn reduces the overall maintenance costs. Finally, due to the variable speeds and accurate positioning of CASM electric cylinders, facility efficiency can be increased.

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