

10K Drive™ System for Gearless Elevators

The modern solution for energy cost, HD, and RFI problems

ThyssenKrupp 10K Drive™ technology is the smart, cost-effective solution to three major problems of gearless elevator systems. Designed by the research team at ThyssenKrupp Elevator, the ThyssenKrupp 10K Drive system:

- Reduces operating costs by maximizing energy efficiency
- Protects electronic equipment through low Harmonic Distortion
- Eliminates disruption caused by Radio Frequency Interference

With an innovative, high-tech design that offers both superior performance and significant savings, the ThyssenKrupp 10K Drive is the system of choice for modernization of high-speed gearless elevators.

Energy Efficiency Lowers Costs

The ThyssenKrupp 10K Drive system is regenerative, meaning that it recycles unused electricity. In fact, the system is so energy efficient that its “power factor” approaches 1.0, the perfect operating condition.

The power factor is important because it is a measure of how efficiently a device uses or wastes energy. The closer to 1.0, the better. Unfortunately, typical elevators operate with power factors between 0.74 and 0.89, with some running as low as 0.50.

To encourage efficient use of energy, many utility companies offer discounts or lower rates

to customers that generate excellent power factors, while customers that waste energy often face higher rates or surcharges.

Low Harmonic Distortion Protects Electronic Equipment

Installing a ThyssenKrupp 10K Drive system can actually help protect sensitive electronic equipment located in the building. Harmonic Distortion (HD) is the disruption of the waveform of Alternating Current that supplies most existing elevator drives. Excessive Harmonic Distortion can interfere with today’s sophisticated equipment, causing motors to overheat, degrading the performance of emergency generator systems,

increasing objectionable noise, and leading power factor improvement capacitors to overheat or even explode.

The guidelines adopted by the Institute of Electrical and Electronic Engineers (IEEE) state that in the most restrictive cases the Current Total Harmonic Distortion (THD) cannot exceed 5% at the point of common coupling [PCC]*. The ThyssenKrupp 10K Drive system will assist the building owner/manager in meeting the IEEE Standard. This may not be possible with other standard drives.

* For a definition of point of common coupling, see IEEE Standard 519-1992.

ThyssenKrupp Elevator
Americas Business Unit



ThyssenKrupp

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Design Eliminates Radio Frequency Interference

The kind of Radio Frequency Interference (RFI) that sometimes comes from a radio—noise and static—can be irritating. However, in a modern building full of sensitive electronic systems, RFI can lead to major

disruptions. Today's high-speed elevators are run with DC gearless machines and drive systems that can cause significant RFI problems throughout a building.

The ThyssenKrupp 10K Drive system produces so little RFI that it meets or exceeds the

established standards in the United States, Canada, and the European Community. That means virtually no disruption to today's most sophisticated technologies.

Superior Products, Superior Service

At ThyssenKrupp Elevator, our quality standards are so stringent that no one comes close to providing more reliable and durable end products. The result? Peace of mind that comes from knowing we're completely committed to providing you with superior products, along with superior service that is second to none.

