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An Overview of Sector Wise Uses of an Electric Actuator

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An electric actuator is one of the most important automation devices available today. While mechanical, pneumatic and hydraulic devices have been conventionally used for automation, they are not only less precise as compared to their electric counterparts, but they are also less programmable and controllable. In many cases, the use of hydraulic fluids or pneumatic pressure proved to be a hassle.

On the other hand, electrically driven actuators provide a wide range of motion that can be very precisely controlled. For instance, the stroke lengths can range from as low as 5mm to as much as 150mm. And, the stroke force can also be determined with unmatched precision. Force as high as 500N can be achieved with the help of these devices. This makes electrically driven actuators best suited for critical operations where the tolerance to errors and discrepancies is very low. Here are some characteristics of a high quality electric actuator:

â€¢The ability to enable free and independent control of velocity, position and force all at the same time.

â€¢The presence of intelligent features such as the "Soft-Land" function. This attribute comes in very handy when it comes to handling fragile components such as glass or thin sheets that are susceptible to bending or denting.

â€¢Energy efficiency that allows you to harness the maximum potential of your actuator without having to incur high power bills. At the same time, the device should also have the ability to offer you a long service life.

While most manufacturers offer standard models of actuators, there are many who will also provide you with customized solutions based on your specific requirements. For instance, you could ask for customized resolution, shaft ends or the addition of a return spring.

We shall now discuss some of the commonly seen applications of an electric linear actuator across different industrial sectors:

â€¢Printed circuit board application: If you need to execute pick and place applications while setting up a circuit on hardboard, you can do so with the able assistance of an actuator. The actuator can help place components at different heights and also help you line conductive ink on the circuit.

â€¢Automotive applications: There are a number of applications such as checking for faultless threading on screws, seat belt and automotive switch testing, quality control for fuel injector components, and pressure testing of automotive wheels, among other vital tests.

â€¢Electronic sector: Right from testing whether the buttons of cell phones are functioning properly to ascertaining that the die bonding process takes place as desired, an electric actuator can be employed for myriad tasks.

â€¢Other applications: A linear actuator can be used for measuring the thickness of glass and also for measuring the curvature of the glass on windshields of automobiles.

It is a wise decision to contact a reputable electric actuator manufacturer to discuss innovative solutions pertaining to your field of operations.

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I have many years of experience in the electronics & electrical manufacturing industry. I take interest in sharing my knowledge about unique a electric actuator and a linear actuator for businesses. If you are looking for cost effective electric linear actuators, you stand to benefit from my articles.

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