The Uses of an Electric Actuator in the Packaging Industry

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An electric actuator is a motor that produces motion in a straight or linear line. They are used in several industrial globally. However, in this article we shall focus on the use of such actuators in the packaging industry. There are applications such as applying labels, product placement on conveyor belts and for bottling.

They are highly preferred for these applications mainly because they provide precise and repeatable force control. In addition, their stroke force and length can also be controlled rather precisely. They offer great operating speeds and smooth acceleration and deceleration as and when the need arises.

Look around any packaging line and you shall see that they certainly incorporate linear motors. Since most packaging applications have zero tolerance towards errors, the actuators can be programmed to provide feedback to controllers. This makes way for better and constant verification while the packaging process is in progress. Thus, at the end of it you shall realize that there are very few errors and rejects. These actuators are increasingly being preferred over pneumatic devices.

Now that we have discussed the basic features and advantages, hereâ€™s an overview of the various applications and the role of an electric actuator in the same:

â€¢Bottle filling: These devices feature a programmable speed and motion profile. This helps you to change and monitor the bottle filling process based on the material and the size of the bottle. This gives you a fast fill time and the ability to change the settings at any time you wish.

â€¢Dispensing cups: For packaging lines that require cups or similar containers to be dispensed, this device is a great investment. Cups can be dispensed at very high speeds going up to as much as 400 (or more) per minute. While pneumatic cylinders have been used for this purpose in the past, the electric alternatives are fast gaining popularity.

â€¢De-blistering: If your process requires dispensing of tablets from foil and plastic containers, then this actuator is the best choice. You can precisely control the speed, force and stroke adjustment. Moreover, they offer quiet operation ultimately reducing shop noise.

â€¢Bottle and jar labeling: Linear motors can be used to drive a label applicator. The actuator can be programmed to match the speed of the conveyor as products approach in a series. The height, speed and force with which the label needs to be applied can be easily adjusted. For glass bottles and jars, a feature called â€˜Soft Landâ€™ can be used to reduce the impact of the landing, thus negating chances of damage to glass bottles or jars.

Apart from this, an electric actuator can also be used for several other applications such as capping bottles, filling line rejection systems and dosing liquid Nitrogen among other things.

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

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