Using a Linear Actuator in Assembly Applications by Michael Adams

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A device that converts a hydraulic, electric or battery generated power source into linear (straight line) motion is known as a linear actuator. This is different from the circular motion generated by an electric motor. To state a simple example of such an actuator that generates linear motion, consider the disk drive of a DVD player that ejects in a linear manner at the press of a button. This motion is made possible because of linear actuators.

If you are investing in such a device, it is important to consider features such as precision of the highest levels, highly controllable speeds, and programmable force. Apart from this, it is essential to invest in an actuator that is light weight, compact and easy to integrate with your larger process. In some cases, you might need to opt for actuators that offer the same velocity in linear and rotary axes simultaneously.

Most of these characteristics make such an actuator just perfect for operations pertaining to the assembly sector. They can be coupled with an electric cylinder-a device that is rapidly challenging conventionally used pneumatic devices. In fact, a number of printed circuit board assemblies also make use of actuators for myriad of reasons.

Let's take a look at some of the functions that allow these devices to be highly compatible with assembly operations:

They feature a highly programmable force and torque. In addition, you can expect controllable position and velocity in all axes.

They can be easily integrated into a number of printed circuit board assembly lines.

With an innovative soft land function allowing the unit to land very gently on some of the most delicate components such as glass or the circuits, there is no danger of damage to your assembly. In addition, the force can be entirely controlled to ensure that there is absolutely no damage to the printed circuit board or the actuator.

The actuators can be placed at different heights in the assembly. This makes it easy to monitor the presence of broken parts or to warn the user about missing components.

Apart from being used in the assembly operations, you can also integrate a linear actuator series in your testing lines. They can be used for testing the functionality of switches or plugs. Besides, they can also be employed in measurement applications rather easily because they can cover set distances in a rapid manner.

With the help of a linear actuator, you can resolutions of a few microns. In addition, you can achieve repeatable motion which means that the actuators work parallel to your other devices. By investing in an actuator manufactured by a reputable firm, you can achieve exceedingly precise positions with almost negligible shaft run out. An electric cylinder can be coupled with these actuators to obtain repeatable motion and force.

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

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