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Parameters to Make Selecting Your Electromechanical Actuator Easy



To select the best electromechanical actuator, knowing the parameters below will help make your selection process easier.

To define the performance characteristics your application needs, imagine how you would move an elephant.



The Essentials

- **Load:** What's the weight of the elephant?
- **Force Required:** What will it take to get this elephant moving? What outside elements are affecting its movement and the amount of force needed? Is it stuck in mud or wearing roller skates on a flat surface?
- **Speed:** What is the fastest rate at which the elephant needs to move?
- **Stroke:** How far does the elephant need to travel in one direction?
- **Cycle Time:** What's the total time needed for the elephant to travel the length of the stroke and then back to the starting point?
- **Acceleration:** How quickly does the actuator need to get up to top speed within the stroke length?

The parameters above are required. The following are additional factors that are helpful to know.

Performance Needs

- **Dwell time:** The time when the actuator is at rest and not required to move the elephant.
- **Duty Cycle:** The ratio of time the actuator is moving the elephant vs. dwell time.
- **Variable speed:** Does the actuator need to move at different speeds to reach different points?
- **Orientation:** What is the direction of motion – horizontal, vertical, or pivoting?
- **Repeatability:** The ability to be consistently accurate in reaching a specified position. What level of variance is allowable within a specified accuracy tolerance?



- **Accuracy:** The ability to reach a specified position. It's also helpful to know the allowable tolerance of the application.
- **Life Cycle:** How long does the actuator need to last? Does this specific application require a prolonged service life?

External Factors

- **Environment:** Is this a food service application? Will the actuator be working in wet or dusty areas, or subjected to severe temperatures?
- **Induced Loads:** Forces that are applied to the load in addition to the force required for the application. Are there significant moment loads (cantilever), reflected acceleration loads, or additional external loads to consider?
- **Lead Time:** Are there scheduling constraints or deadlines that need to be considered?
- **Cost:** Are there budgetary restrictions that need to be considered?



Download our FREE guide, "How to Select the Appropriate Electromechanical Actuator" for more information on choosing the ideal actuator solution.

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