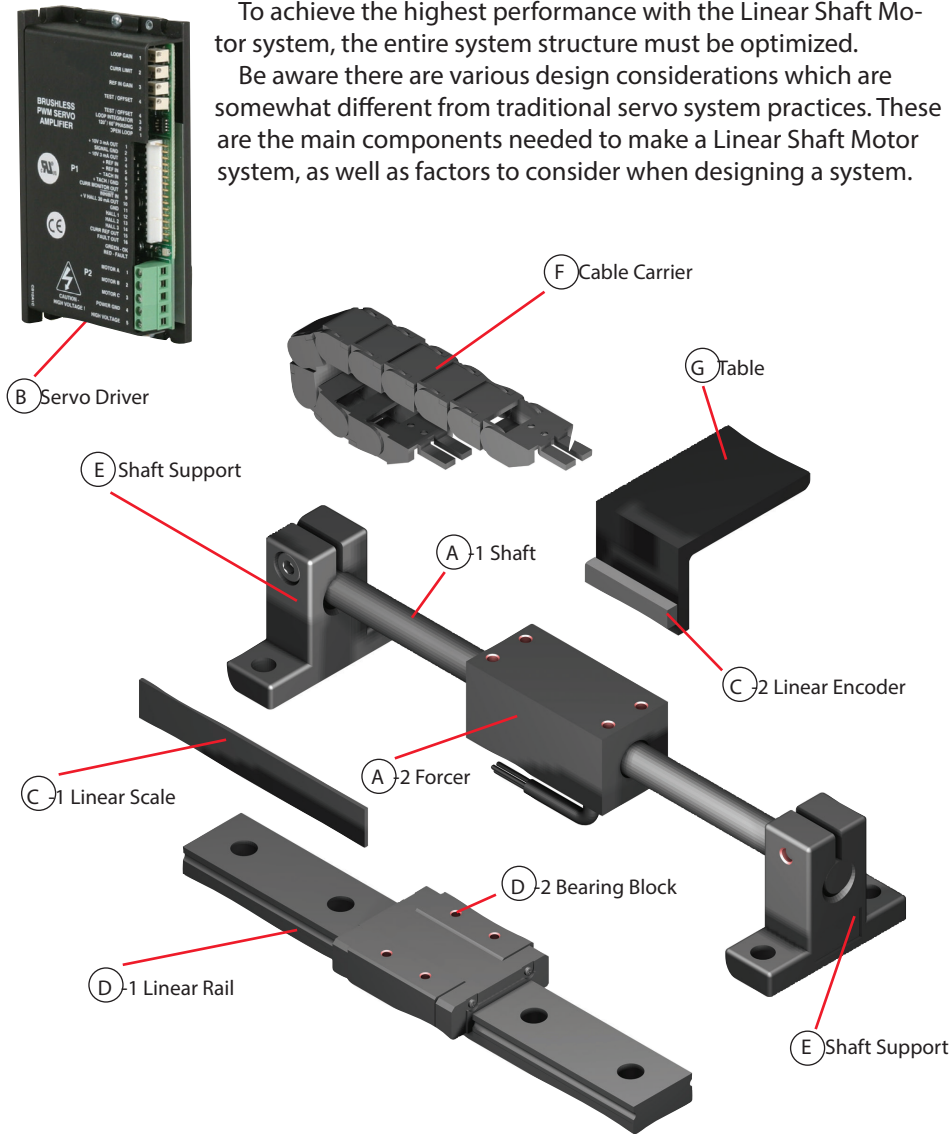


The design of the Linear Shaft Motor allows you to replace traditional linear motion systems, such as a standard ball screw, with the Linear Shaft Motor and achieve higher speed and resolution.

To achieve the highest performance with the Linear Shaft Motor system, the entire system structure must be optimized.

Be aware there are various design considerations which are somewhat different from traditional servo system practices. These are the main components needed to make a Linear Shaft Motor system, as well as factors to consider when designing a system.



Configuring the Linear Shaft Motor

To configure a system using the Linear Shaft Motor, the following peripheral devices are required:

- A. Linear Shaft Motor
- B. Servo Driver
- C. Linear encoder (optical or magnetic)

Item D (Linear Guide) is a necessary part of a system, but consideration must be given to the application, demand specifications, environmental conditions, and which will be moving--the forcer or the shaft.

The other items, E through G, are optional and will need to be selected depending on the application.

System Design

Linear Shaft Motor

Steps to putting together a Linear Shaft Motor System

Choose the Linear Shaft Motor based on force and stroke requirements.

Choose the shaft supports based on design and motor specifications.

Choose the linear guide (bearings) based on cost and smoothness (performance) constraints.

Choose the linear encoder to achieve the required position resolution.

Choose the servo driver to match the power requirements of the Linear Shaft Motor.

Choose the OTL, limit switches/other components and assemble the Linear Shaft Motor system.