

Motor Gearhead Assemblies



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A passion for performance.

Introduction

Aeroflex has provided many custom motor gearhead assemblies for high-reliability applications. These devices have generally been application specific. As such the devices covered in this catalogue can be considered examples of the type of product Aeroflex can design and manufacture.

Motor Gearhead Description

In general terms a motor gearhead assembly will consist of a Brushless DC motor and some variation of a gearhead to amplify the motor output. The motor will be either a traditional Brushless DC motor (and may include Hall Effect Devices for commutation) or a stepper motor.

The gearhead can be a variety of configurations depending on the application. Multi-stage planetary gearheads are common in our product line along with options such as a Harmonic Drive gear set. The gear ratio and sizing will be selected based on the application. The proper lubricant will be chosen based on the survival/operational temperature range and expected life.

Aeroflex can also add an integral brake to motor gearhead designs if desired.

Performance Considerations

When specifying a motor gearhead combination please be prepared to discuss the following parameters with Aeroflex applications engineers:

Motor: Stepper or Brushless DC, # phases, controller constraints, inductance, commutation method, rotation speed, power.

Gearhead: Load characteristics, output speed, output torque, stiffness requirements, backlash constraints, overall envelope, and mass.