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Coupling Basics

A critical element of a motor and planetary gearbox assembly is the coupling that connects the motor to the gearbox. This coupling transmits the motor power to the gearbox and then through the output shaft. Based on the mechanical configuration of the motor and gearbox and the requirements of the application, a variety of couplings can be used:

Rigid Couplings:

A rigid coupling is used for a zero-backlash connection that maintains accurate shaft alignment. This type of coupling provides efficient power transmission.

Flexible Couplings:

When there is an axial, angular, or parallel misalignment, a flexible coupling is typically needed to tolerate these issues. This type of coupling provides high torsional stiffness to maintain the connection.

Gear Couplings:

A gear coupling that meshes two distinct toothed hubs. This style allows for some misalignment and can accommodate high motor torque transmission.

Disc Couplings:

A disc coupling consists of a series of thin, flexible metal discs used to transmit high torque levels. This type of coupling can also handle some misalignment.

Jaw Couplings:

Like a gear coupling, the jaw coupling utilizes two interlocking jaws separated by an elastomeric spider. The elastomeric spider dampens vibrations and accommodates misalignment.

Coupling choice is dependent on the application requirements, such as required torque and power, critical alignment specifications, and vibration dampening needs.

GearKo focuses on the research and development of high-quality planetary gear boxes and reducers, committed to providing customers with the best products and solutions. If you wish to learn more about how our precision planetary gearboxes or reducers can enhance the performance of your equipment, please feel free to [contact us](#).