Coupling Selection Method

1. When Selection is Based on Motor
   - Choose the appropriate coupling type based on the motor type and the application in which it is to be used.
   - Criteria:
     - Motor Type and Coupling Types are not limited to the following conditions. Select after confirming each product page.
     - Select coupling in accordance with the following criteria.

### Coupling Selection Chart

<table>
<thead>
<tr>
<th>Coupling Characteristics</th>
<th>Motor</th>
<th>Servo Motor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zero Backlash</td>
<td></td>
<td>Y</td>
</tr>
<tr>
<td>High Torque</td>
<td></td>
<td>Y</td>
</tr>
<tr>
<td>Loading Capacity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stopper</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dismount</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mating Flange</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Calculation of Compensation Torque

- **Connection with Servo Motors / Stepping Motors**
  - Torque capacity (shaft slip torque) higher than the calculated compensation torque.
  - Please see products page. Choose a coupling with the torque factor with the Motor's Peak Torque. For Compensation Factor, refer to the catalogue for the device.
- **Connection with General-purpose Motor**
  - Torque capacity (shaft slip torque) higher than the calculated compensation torque.
  - Please see products page. Choose a coupling with the torque factor with the Motor's Peak Torque. For Compensation Factor, refer to the catalogue for the device.

### Selection Example

- **Motor**: General-purpose Motor
  - **Servo Motor**: General-purpose Motor
- **Shaft Bore Diameter**: Motor Side: 14mm, Ball Screw Side: 15mm
- **Lateral Misalignment**: 0.1mm
- **Angular Misalignment**: 1°
- **Axial Misalignment**: ±0.1mm
- **Drive Motor**: Servo Motor, **Driven Side**: Ball Screw
- **Nominal Torque**: 3.0N m
- **Nominal Speed**: 10000rpm
- **Allowable Lateral Misalignment**: 0.25mm
- **Allowable Angular Misalignment**: 1°
- **Allowable Axial Misalignment**: ±0.5mm

### Terminology for Couplings

- **Allowable Torque**
  - A torque that is applied continuously. Select an allowable torque according to the selection method given on page 1061, which will ensure that the load torque is less than the allowable torque of the coupling. In couplings for Servo Motors, compensation factor recommended for each part number is set.
- **Slip Torque**
  - A torque that spins the fastened shaft and coupling, and slides out. Select the shaft slip torque when it is less than the allowable torque according to the selection method given on page 1061, such that the load torque is less than the shaft slip torque of the coupling.
- **Misalignment**
  - An error between two coupling shafts. Misalignments are Angular Misalignment, Lateral Misalignment and Axial Misalignment. Aligning within the device will ensure that misalignment between two shafts is less than the mentioned allowable misalignment. When two or more misalignments are combined, the allowable value for the respective misalignment is decreased. The allowable value for misalignment is given on the selection table.
- **Angular Misalignment**
  - Angle Error between two coupling shafts.
- **Lateral Misalignment**
  - Angle Error between two coupling shafts.
- **Axial Misalignment**
  - Axial Offset between two shafts.

### Assembly Procedure

1. Confirm that the clamping screws are loosened, and wipe clean the inner bore and shaft surfaces off dust and oil.
2. Insert the shaft into the coupling while taking care not to apply excessive compressive/axial forces on the disc section.
3. Adjust the disc coupling in left-right hub connection in precise manner, using the coupling. Quickly check the angular and lateral misalignment using coupling as a base.
4. Final assembly. Adjust the shaft insertion as per the dimensions given in the catalogue (Fig. 6) and fasten it with prescribed torque by using the torque wrench. Do not fasten it with excessive preload to the coupling. Alternately between left and right clamp and tighten it two or three times.

**Fig. 6 Shaft Insertion