Mechanical Drive Solutions
FOR CARTESIAN ROBOTS
Mechanical Drive Solutions for Cartesian Robots

Whether you need assistance with a simple motor mount or mechanical engineering support for a complex assembly, GAM has the product range and design expertise for your next Cartesian robot application. Choose from a variety of inline and right angle gearboxes that connect directly with actuators as well as the necessary mounting adapters, couplings, and rack/pinion components to transform individual products into an integrated robotic solution. Get your Cartesian robot moving with GAM precision mechanical drive solutions.

### Gear Reducers

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>EPL-H Inline Gearbox</strong></td>
<td>• Our most popular in-line planetary with a unique hollow output and zero-backlash clamping ring&lt;br&gt;• Quick, simple, and low-cost solution used to mount onto any off-the-shelf linear belt or ball screw module&lt;br&gt;• Ratios up to 1000:1&lt;br&gt;• Frame sizes from 64 mm to 118 mm</td>
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<tr>
<td><strong>DL-DC Right-Angle Gearbox</strong></td>
<td>• Right angle hypoid gearbox with unique hollow output and zero-backlash clamping ring&lt;br&gt;• Mount directly to any linear belt or ball screw module for a compact design&lt;br&gt;• Ratios from 3:1 up to 150:1&lt;br&gt;• Frame sizes from 55mm to 90mm</td>
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### Couplings

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<tr>
<td><strong>EDC Distance Coupling</strong></td>
<td>• Elastomer style distance coupling provides vibration and resonance dampening&lt;br&gt;• Easily connect linear modules&lt;br&gt;• Split hub design allows for easy assembly&lt;br&gt;• Higher torque elastomer distance coupling available (EKZ)</td>
</tr>
<tr>
<td><strong>WDS Distance Coupling</strong></td>
<td>• Bellows style distance coupling for high torsional rigidity and improved accuracy&lt;br&gt;• Easily connect linear modules&lt;br&gt;• Split hub design allows for easy assembly&lt;br&gt;• A complete range of standard bellows couplings are also available</td>
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### Mounting Kits

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<tr>
<td><strong>LSK Linear Slide Kit</strong></td>
<td>• Customized assembly to mount any motor or gearbox in-line with any linear belt or ball screw module&lt;br&gt;• Includes machined adapter plates, bellows or elastomer coupling, and hardware&lt;br&gt;• Quick delivery</td>
</tr>
<tr>
<td><strong>PMK Parallel Mount Kit</strong></td>
<td>• Customized assembly to mount any motor or gearbox in parallel with any linear ball screw product&lt;br&gt;• Includes a robust anodized housing, precision machined adapter plate, timing pulleys, belt, and hardware&lt;br&gt;• Quick delivery</td>
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### Rack & Pinion

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<tr>
<td><strong>EPL-F Rack &amp; Pinion</strong></td>
<td>• Helical and straight cut rack and pinion solutions&lt;br&gt;• A variety of quality levels, materials, and treatments offered&lt;br&gt;• Modules from 1 up to 12&lt;br&gt;• Customized versions available for special applications</td>
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**Everything between the Motor and Actuator**

**Products Designed for Actuators**

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<tr>
<td><strong>ANY MOTOR, ANY ACTUATOR</strong></td>
<td>• Regardless of motor or actuator manufacturer, GAM can provide a drive solution&lt;br&gt;• Years of experience, proven design calculators, and quality systems ensure proper interface between components</td>
</tr>
<tr>
<td><strong>COMMON COMPONENTS, COST EFFECTIVE SOLUTIONS</strong></td>
<td>• By using common components, it is possible to provide these solutions quickly and cost effectively&lt;br&gt;• Special adapters that match actuator housing profiles are available upon request</td>
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</table>
**Comprehensive Product Range**

- Gear Reducers, Couplings, and Adapter Kits that interface directly with actuators and other mechanical devices
- A complete offering of standard products that can also be integrated together for endless design options
- "For everything between the motor and actuator"

**Engineering Design Collaboration**

- GAM’s experienced team of engineers are eager to help solve design challenges and collaborate with your engineers
- Thorough understanding of complex assembly requirements and sizing considerations
- Consultative approach reduces iterations for a streamlined design process

**Product Integration**

- Expertise integrating individual products together into complete system solutions
- GAM designs and manufactures all adapters required for assembly
- Ensures proper configuration and performance specifications are met

**Efficient Production Systems**

- Pre-engineered components and modular designs enable short leadtimes
- Quick time to market for modified and special configurations
- Flexible manufacturing operations

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**Improved Mechanical Solutions**

**ELIMINATE COMPONENTS**

- Fewer components and direct mounting result in increased rigidity
- Installation is easier and simplified

**SAVE VALUABLE SPACE**

- Bring power transmission elements closer to the machine
- Reduce machine footprints
1. **Actuator System**

- **DS-T**: Right angle Dyna Series gearbox with dual output shaft configuration.
- **EDC**: Low cost elastomer distance coupling.
- **DL-DC**: Right angle Dyna Lite gearbox with hollow output design for easy mounting to linear actuators. Includes output adapter tailored to the actuator.

2. **Actuator System**

- **PMK**: Parallel mounting kit.
- **LSK**: Inline motor mounting kit.
**Application Examples**

### Actuator System

- **WDS** Bellows style distance coupling
- **PMK** Parallel mounting kit
- **DL-DC** Right angle Dyna Lite gearbox with hollow output design for easy mounting to linear actuators. Includes output adapter tailored to the actuator
- **EPL-H** Inline gearbox, with hollow output design for easy mounting to linear actuators

### Lift System

- **VC-T** Spiral bevel gearbox with dual shaft output and motor mount to match any motor
- **KM** Zero backlash bellows coupling (Many coupling styles available)
- **V-C0** Spiral bevel gearbox with single shaft output and single shaft input
- **LSK** Inline motor mounting kit
Application Examples

5 Lift System

- **Adapter Kit**: Specially designed interface to connect components together (Consists of adapters, coupling, and hardware)
- **V-G0**: Spiral bevel gearbox with dual input shafts and a single output shaft
- **EPL-H**: Inline gearbox, with hollow output design for easy mounting to linear actuators
- **V-C0**: Spiral bevel gearbox with single shaft output and single shaft input
- **EKZ**: Performance elastomer distance coupling for higher torques
- **Adapter Plate**: Specially designed interface to connect components together
- **V-E0/HSD**: Spiral bevel gearbox with smooth hollow output shaft and shrink disc
- **Multiple GAM products integrated together**

6 Lift System (Exploded View)

- **Adapter Kit**: Specially designed interface to connect components together (Consists of adapters, coupling, and hardware)
- **V-E0**: Spiral bevel gearbox with keyed hollow output shaft
- **Adapter Plate**: Specially designed interface to connect components together
- **V-C0**: Spiral bevel gearbox with single shaft output and single shaft input
- **V-D0**: Spiral bevel gearbox with dual shaft output and single shaft input
- **EDC**: Low cost elastomer distance coupling
GAM excels at taking **standard** products and providing **unique solutions** to meet special application requirements.

### DL-DC Gearbox with Extended Shaft
This hollow output gearbox was designed with a solid shaft extended through the back side of the housing. This feature allowed two actuators to be geared and connected while eliminating the need for an additional mounting kit.

### VC Spiral Bevel Gearbox for Actuator
GAM designed a unique hollow clamping element and adapter to connect a VC to an actuator. A spiral bevel gearbox was used because a 1:1 ratio was required for this application.

### LSK with Stub Shaft
GAM can provide a stub shaft to be used in conjunction with the LSK for mounting to actuators with hollow drive units.

### LSK with Safety Coupling
GAM has a wide selection of safety couplings that can be used in LSK assemblies to protect systems during crash or overload situations.

### Multishaft V-Series Gearbox with Adapters
For this unique application, GAM provided a standard spiral bevel gearbox and designed two motor adapters along with an output plate that matched the dimensions of the primary motor.

### Stainless Steel Assembly
For a wash down application, GAM provided a stainless steel V-Series spiral bevel gearbox, a KG-VA stainless steel coupling, and a stainless steel adapter.
GAM is your complete source for Gear Reducers, Servo Couplings, and other precision mechanical drive solutions used in automation technology.

With one of the largest product offerings in the motion control industry as well as the engineering expertise and manufacturing capabilities to develop customized solutions, GAM can help with your application.

Being flexible to meet the needs of customer requests and great service are what set us apart from the rest.

GAM Can.

GAM Website
- Clean layout for easy navigation
- Continually updated with pertinent news and information
- Online catalog with over 16,000 products
- Search products on performance specifications or by part number

NEW Sizing Tool
- Quickly size the right gear reducer, coupling, or mounting kit compatible with your motor
- Over 9,000 popular servomotors available
- Easily narrow down the products that match
- Compare matching products side-by-side

Download CAD models
- All products configured to your specifications
- Quickly download CAD models in popular 2D / 3D formats
- Motor selection tool simplifies adapter plate generation
- Actuator selection tool generates adapter plates for mounting kits