



# OEM Solutions for Automotive Powertrain Applications



 **Kilian**<sup>®</sup>  
Manufacturing  
An Altra Industrial Motion Company

## KILIAN MANUFACTURING PROVIDES POWERTRAIN SOLUTIONS FOR AUTOMOTIVE APPLICATIONS

Kilian is the world leader in designing, developing, and manufacturing machined race bearings and custom engineered powertrain components. Kilian's powertrain products serve OEM requirements for demanding automotive applications.

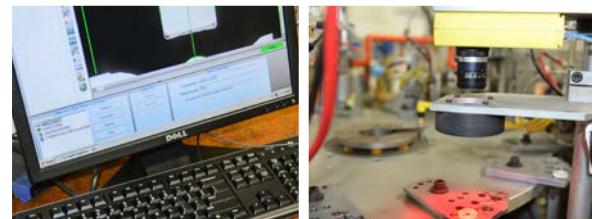


With expert mechanical engineers on staff and thousands of innovative designs, Kilian works as an extension of your own, in-house engineering team to create cost-effective solutions and deliver the support you need to speed new product development and dramatically cut time to market. Our engineers leverage years of experience in design to build a custom solution that perfectly meets your application needs.

With a reputation built on rapid, professional response that spans over 80 years in business, Kilian produces the finest precision-machined bearings and components available today.

### KILIAN PRODUCTS DESIGNED SPECIFICALLY FOR **AUTOMOTIVE POWERTRAIN APPLICATIONS**

Kilian designs a wide range of products to meet a broad spectrum of automotive powertrain application needs. Our major application areas are: **Transmission, Transfer Case, Shift Actuation, & Variable Cam Timing.**



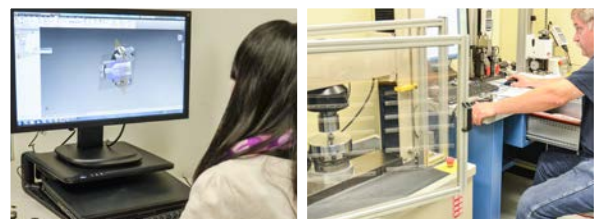
#### **Allow Kilian to be your Automotive Powertrain Component Supplier**

- Design and manufacturing engineering
- Quantities up to 8,000,000 pieces annually
- CNC precision machining
- Automated assembly
- Heat treating
- Plating
- Injection molding

### LEVERAGE THE STRENGTH OF KILIAN'S **DESIGN ENGINEERING TEAM**

**We develop our products to meet the customer's design needs.**

Our engineers will work closely with your engineering team to develop a custom solution, making on site visits whenever necessary.



#### **Tools used for rapid and robust design engineering:**

- Solid modeling
- FEA
- On-site test lab for design verification
- Rapid prototyping capability



# DUAL CLUTCH TRANSMISSION ACTUATION PISTON IN APPLICATION



Actuator Piston and Detent

## MANUFACTURING CAPABILITIES

### DCT Piston



- Precision machined
- Broached and milled slot
- Carburized for wear resistance
- Engineered polymer overmold
- Neodymium magnet



### DCT Detent



- Injection molded polymer insert
- High fatigue limit spring
- Precision bored I.D.
- Through hardened housing for durability
- Assembly pre-form and staking operation
- Plated for corrosion protection
- Machine and precision ground O.D.

### Shift Fork



- Heat treated casting
- CNC machined finishing operation
- Staked actuation bearing
- Assembled to mating components
- Low friction engineered polymer pads

**Belted Drives and Sheaves**

**TB Wood's**

*Belted Drives*

Chambersburg, PA - USA  
**1-888-829-6637** – Press #5

*For application assistance:*  
 1-888-829-6637 – Press #7

**Couplings**

**Ameridrives Couplings**

*Mill Spindles, Ameriflex,  
 Ameridisc*

Erie, PA - USA  
**1-814-480-5000**

*Gear Couplings*

San Marcos, TX - USA  
**1-800-458-0887**

**Ameridrives Power Transmission**

*Universal Joints, Drive Shafts,  
 Mill Gear Couplings*

Green Bay, WI - USA  
**1-920-593-2444**

**Bibby Turboflex**

*Disc, Gear, Grid Couplings,  
 Overload Clutches*

Dewsbury, England  
**+44 (0) 1924 460801**

Boksburg, South Africa  
**+27(0) 11 918 4270**

**Guardian Couplings**

*Engineered Flywheel Couplings,  
 Engine Housings and Pump Mounts,  
 Flexible Shaft Couplings*

Michigan City, IN - USA  
**1-219-874-5248**

**Huco Dynatork**

*Precision Couplings and  
 Air Motors*

Hertford, England  
**+44 (0) 1992 501900**

Chambersburg, PA - USA  
**1-888-829-6637**

**Couplings Cont.**

**Lamiflex Couplings**

*Flexible Couplings, Bearing  
 Isolators, and Coupling Guards*

Cotia, SP - Brasil  
**+55 (11) 4615-6300**

**TB Wood's**

*Elastomeric Couplings*

Chambersburg, PA - USA  
**1-888-829-6637** – Press #5

*For application assistance:*  
 1-888-829-6637 – Press #7

*General Purpose Disc Couplings*

San Marcos, TX - USA  
**1-888-449-9439**

**Electromagnetic  
 Clutches and Brakes**

**Inertia Dynamics**

*Spring Set Brakes; Power On and  
 Wrap Spring Clutch/Brakes*

New Hartford, CT - USA  
**1-800-800-6445**

**Matrix International**

*Electromagnetic Clutches  
 and Brakes, Pressure Operated  
 Clutches and Brakes*

Brechin, Scotland  
**+44 (0) 1356 602000**

New Hartford, CT - USA  
**1-800-825-6544**

**Warner Electric**

*Electromagnetic Clutches  
 and Brakes*

New Hartford, CT - USA  
**1-800-825-6544**

*For application assistance:*  
 1-800-825-9050

Saint Barthélemy d'Anjou, France  
**+33 (0)2 41 21 24 24**

*Precision Electric Coils and  
 Electromagnetic Clutches and  
 Brakes*

Columbia City, IN - USA  
**1-260-244-6183**

**Engineered  
 Bearing Assemblies**

**Kilian Manufacturing**

*Engineered Bearing  
 Assemblies*

Syracuse, NY - USA  
**1-315-432-0700**

**Gearing**

**Bauer Gear Motor**

*Gearred Motors*

Esslingen, Germany  
**+49 (711) 3518-0**

Somerset, NJ - USA  
**1-732-469-8770**

**Boston Gear**

*Enclosed and Open Gearing,  
 Electrical and Mechanical  
 P.T. Components*

Charlotte, NC - USA  
**1-800-825-6544**

*For application assistance:*  
 1-800-816-5608

**Nuttall Gear and  
 Delroyd Worm Gear**

*Worm Gear and  
 Helical Speed Reducers*

Niagara Falls, NY - USA  
**1-716-298-4100**

**Heavy Duty  
 Clutches and Brakes**

**Industrial Clutch**

*Pneumatic and Oil Immersed  
 Clutches and Brakes*

Waukesha, WI - USA  
**1-262-547-3357**

**Svendborg Brakes**

*Industrial Brakes and  
 Brake Systems*

Vejstrup, Denmark  
**+45 63 255 255**

**Twiflex Limited**

*Caliper Brakes and Thrusters*

Wichita Falls, TX - USA  
**1-844-723-3483**

Twickenham, England  
**+44 (0) 20 8894 1161**

**Heavy Duty  
 Clutches and Brakes Cont.**

**Wichita Clutch**

*Pneumatic Clutches  
 and Brakes*

Wichita Falls, TX - USA  
**1-800-964-3262**

Bedford, England  
**+44 (0) 1234 350311**

**Linear Products**

**Warner Linear**

*Linear Actuators*

Belvidere, IL - USA  
**1-800-825-6544**

*For application assistance:*  
 1-800-825-9050

Saint Barthélemy d'Anjou,  
 France  
**+33 (0)2 41 21 24 24**

**Overrunning Clutches**

**Formsprag Clutch**

*Overrunning Clutches  
 and Holdbacks*

Warren, MI - USA  
**1-800-348-0881** – Press #1

*For application assistance:*  
 1-800-348-0881 – Press #2

**Marland Clutch**

*Roller Ramp and Sprag Type  
 Overrunning Clutches  
 and Backstops*

South Beloit, IL - USA  
**1-800-216-3515**

**Stieber Clutch**

*Overrunning Clutches  
 and Holdbacks*

Heidelberg, Germany  
**+49 (0) 6221-30470**

For information concerning our  
 sales offices in Asia Pacific  
 check our website  
[www.altramotion.com.cn](http://www.altramotion.com.cn)



[www.kilianbearings.com](http://www.kilianbearings.com)

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