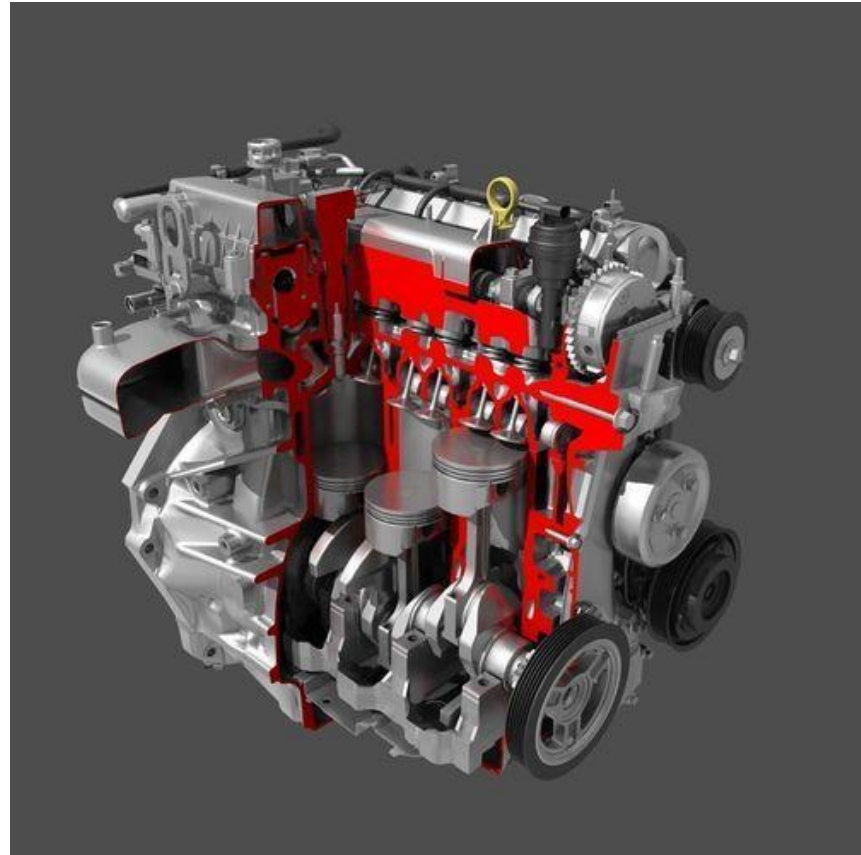


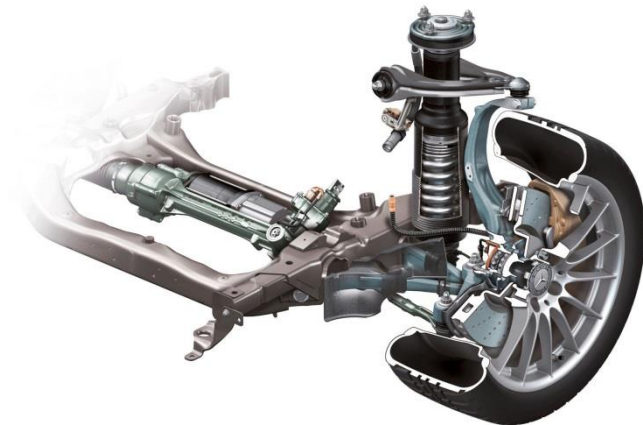
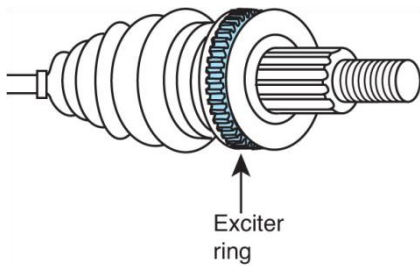
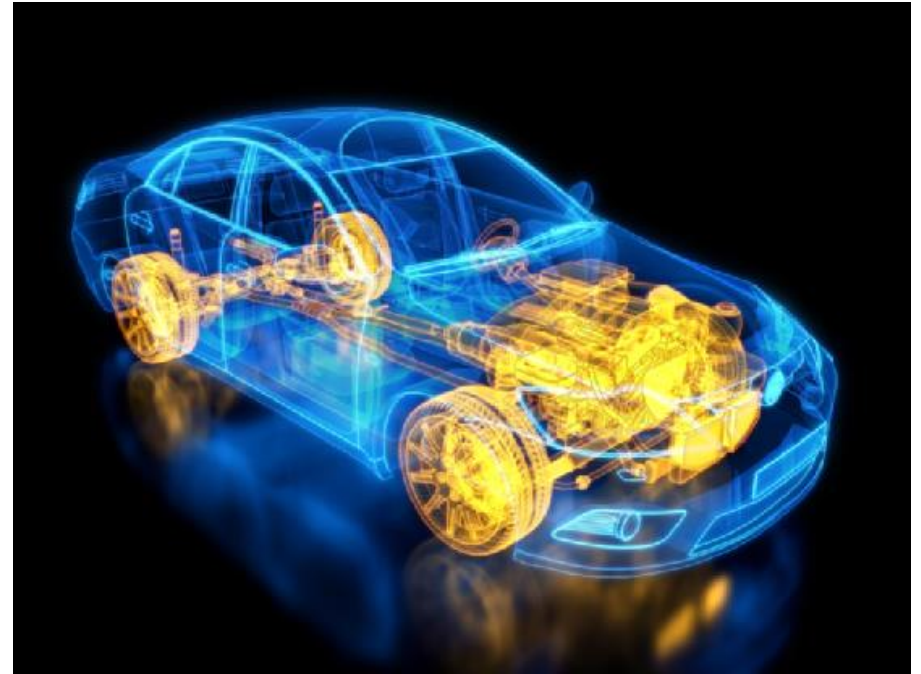
APPLICATIONS AND USES

- **AUTOMOTIVE**
 - Engine/Transmission
 - Bearing & Bushing Insertion
 - Freeze plug Insertion
 - Water Pump Assembly
 - Head Assembly
 - Fuel Rail Forming
 - Seal Insertion/Installation
 - Cam & Stator Ring Assembly
 - AC, Fuel & Brake Line Assembly/Forming



APPLICATIONS

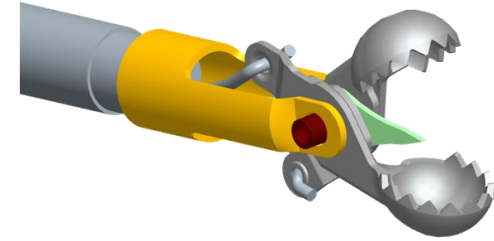
- **AUTOMOTIVE**
 - Suspension
 - Isolation Bushing Insertion, Trailing Arm, A-Arm, Engine Cradle, Twist Axle
 - Ball Joint Assembly/Insertion
 - Steering Arm Assembly
 - Stud/Spindle Assembly
 - Exciter Ring Installation



APPLICATIONS

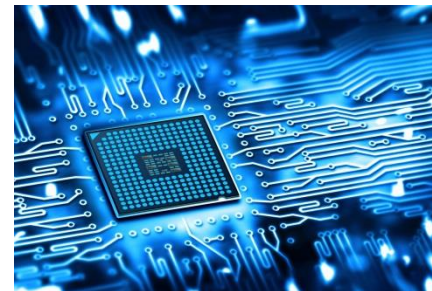
- AUTOMOTIVE
 - Body
 - Metal Piercing Holes, slots and shapes
 - SPAC Nut installation Self-Piercing and Clinch)
 - Riveting
 - Shearing Excess Material
 - Plastic Degating – Trim Front & Rear Fascia Access Holes
 - Door Hinge Assembly
 - Fastener Staking





APPLICATIONS

- **NON-AUTOMOTIVE**
 - Medical Device Mfg. (clean-Room)
 - Semi-Conductor Mfg. (clean-Room)
 - Electronic Device Mfg.
 - Appliance Mfg. (washer, dryer etc.)
 - Munitions Mfg. (DoD)
 - Office Furniture Mfg.
 - Coining
 - Hemming





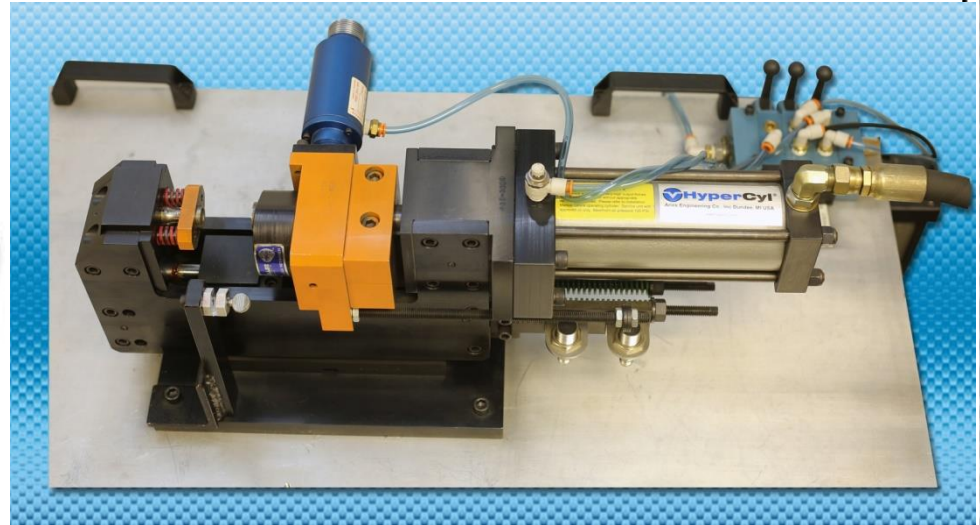
HPI Series Cylinders;

- HPI = Inline Series
- Single, self-contained Component
- 1-200 Tons Output Force
- Fastest Operation (versus HPS or HPT)
- Limited Strokes vs. HPS Series Cylinders
- Greatest Force per Dollar Investment
- 16.00" Max Total Stroke, 2.00" Total Stroke Increments
- 2.00" Max Power Stroke, 0.250" Increments



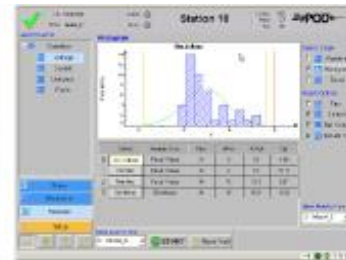
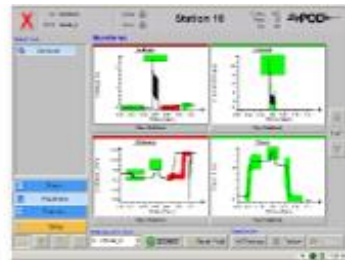
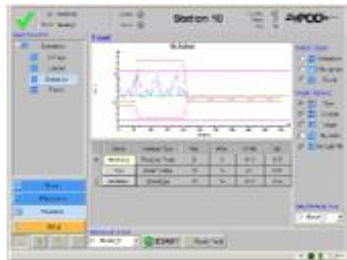
HPS Series Cylinders;

- HPS = Satellite Series
- 2-Component System (w/hydraulic hose & Quick disconnects)
- 1-200 Tons Output Force using 100 PSI line pressure
- Multiple Mounting Configurations available (NFPA standard mounts)
- Up to (6) Work Cylinders powered by Single Booster w/Manifold
- Most Flexible Design and easiest to Maintain
- 24.00" Max Total Stroke, 2.00" Total Stroke Increments (2", 4", 6", etc.)
- 6.00" Max Power Stroke, 0.250" Increments (0.25", 0.50", 0.75", etc.)



Force/Distance Monitoring & IntelliCyl;

- IntelliCyl option (which includes analog LVDT & analog Load Cell) can be added to any Hydra-Pneumatic or HyperCyl-EMA
- Monitoring unit (1202 or 1204) provides a means of Active Cycle Quality Control, so part non-conformance drops to nearly Zero. Bad parts do NOT leave the cell.
- Signature Analysis is used to determine bad part metrics; nominal dimensions/forces with Plus and Minus tolerancing on each.
- Pass (Green) or Fail (Red) screen for confirmation, (1) Ethernet connection for Remote storage or PLC connection, (2) USB connections, (8) Digital I/O, (2-4) Analog Inputs, (2-4 Encoder Inputs), 40GB SSD.



FOCUS AREAS;

- Bushing and Bearing Installation
- SPAC Nut & Stud installations
- Piercing applications (plastic, steel, aluminum)
- Suspension Assemblies

Can include Integrators, end-Customers, (Tier 1-2-3 suppliers)

