



**Hi-Performance**

# Specialty Cold Headed Fasteners and Assemblies



Hi-Performance Fastening Systems is an expert in the manufacture and supply of cold-headed fasteners and assemblies. With a wide range of capabilities, internal engineering services, external direct sales and application field support, indirect or direct end-user support, and dedication to total customer satisfaction, you can put your trust in us.

## Licensed MATHread® Supplier



- Anti-cross threading feature
- Various styles of point options
- All head styles available
- Low and medium Carbon Steel, Stainless Steel
- Class 8.8, 9.8, 10.9
- Grade 5, 5.1, 8, 8.1, 8.2
- American and Metric sizes available
- Sizes: M4 - M12 / #8 - 1/2"
- MATHread® fasteners have a proven record throughout the Automotive and Heavy Truck Markets
- Reduces scrap and rework
- Reduces labor times
- Minimizes repetitive motion injuries

## Licensed Phillips II® Drive Systems



- Licensed anti-cam-out drive
- Available in both PSD & ACR II
- Materials: Steel, Stainless Steel, Brass, Silicon Bronze, Aluminum
- Sizes: M2.6 - M12 / #4 - 1/2"; American and Metric sizes
- Stick fit eliminates need for magnetic driver bits
- ACR Phillips PSD & ACR II recessed drive systems both feature the internal ribbed design that eliminate cam-outs of the Phillips recess
- Reduces operator fatigue
- Reduces application scrap
- Improves automated assemblies

## Licensed TORX® Drive Systems



- Provides alternative option to conventional slotted, hex, and cruciform systems
- With hex-lobular design, far less strain on fastener or tool is recognized
- 15 degree drive angle providing higher torque transfer, little to no end load, and drastically reduced radial forces
- Broad contact surface providing deep lobe engagement
- Straight, vertical sidewalls which increases tool engagement and virtually eliminates camout
- Same-sized drive tool seat both American and Metric fasteners

## SEMS Products



- Head Style: Available with any style
- Thread Style: Any type of thread style, machine screw, thread forming for both metal and plastic, tapping screw, and MATHread®
- Sizes: M2.6 - M12 / #4 - 1/2"
- Length: 0.250" - 4.00" (6mm - 100mm)
- Materials: Steel, Stainless Steel, Brass, Silicon Bronze, Aluminum
- Can be manufactured with different materials for both the screw and washer
- Most effective when used in compression applications where greater bearing surface is required
- Reduced assembly times and errors

## Multi-Die Products



- Head Style: Available with any style
- Thread Style: Any available
- Size range: M3 - M12 / #4 - 1/2"
- Length: Up to 4" (100mm)
- Shoulder diameter: Up to 0.650 (17mm)
- Materials: Carbon Steel, Stainless Steel, Brass, Aluminum, Silicon, Bronze
- moved, not removed
- Improved product strength with cold forming process
- Tighter tolerances can be achieved when combined with secondary processes
- **Part Consolidations**
- Combines multi-piece components into one piece design
- Eliminates part numbers
- Simplifies assembly process and reduces cycle times
- Significant cost savings through scrap reduction - material is

## Weld Screws & Weld Pins



- Type U3, T3, UR, TUS3, and others available upon request
- MATHread® thread style is available
- Size: M5 - M12 / #10 - 1/2
- Length: 1.00" - 4.00" (25mm - 100mm)
- Low carbon or alloy if required
- A weld stud is a threaded fastener that once permanently incorporated into an assembly can be used for a

- long lasting and secure hold.
- Weld studs have specific "Nibs" located on either the top of the head or underneath, depending on what the application requires

## Tri-Lobular Thread Forming Products - Metals



- Head styles: Available with any style, including tri-points
- Size range: M2.5 - M12 / #2 - 1/2"
- Length: 0.250" - 4.00" (6mm - 100mm)
- Materials: Carbon Steel, Stainless Steel
- Case harden, through harden,

- induction hard, brite harden available
- Tri-lobular thread rolling screws roll form strong, high integrity threads in drilled, punched, or cored holes in ductile metals and castings
- Chipless thread forming

## Thread Forming Products - Plastics



- Thread styles: Hi-low and several wide space thread types are available; also 60-1, 48-2, 45-1 tri-lobular threads
- Head styles: Available with any style
- Size range: #2 - 3/8"; Metric also
- Length: 0.250" - 4.00" (6mm - 100mm)

- Tri-Lobular thread forming screws were developed specifically for use in plastic. They roll-form precise threads, without chips, in a variety of thermoplastics and certain thermosetting compounds
- Greater holding power and reduced hoop stress and fewer burst bosses

## Solid Body Rivets



- Solid body, double ended rivets
- Solid body shoulder rivets
- Sizes: 0.125" - 0.650" (3.5mm - 17mm)
- Length: Varies depending on Rivet configuration
- Shoulder rivets quickly and inexpensively join work pieces together while providing for

- rotation of the riveted joint. They should act as a bearing surface when the rivet shank is secured to the non-rotating portion of the assembly
- Very common in automotive seat assemblies, furniture manufacturing, and scissor lifts assemblies

## Thread-Locking Products



- Make threaded fasteners of all sizes and configurations, self-locking and self-sealing
- Automotive and military approved

## Custom Engineered Products



- We have multiple sources to accommodate all of your special application requirements

- All sources are ISO approved.
- Contact us to discuss your custom design product needs
- Our team can work with various materials, finishes, coatings, styles, and sizes to design the product for your project requirements

# Process Capabilities

Hi-Performance Fastening Systems is focused on manufacturing and supplying only the highest level of quality products our customers have grown to expect, delivered on time. We have been very successful in positioning ourselves for growth through added capabilities, increased capacity, additional product offerings, utilization of best practices, as well as remaining extremely agile and flexible in an ever changing, customer driven market.

<b>Diameter</b>	Metric: M2.2 - M12 American: #2 - 1/2"
<b>Length</b>	Metric: 6mm - 100mm American: 0.250" - 4.00"
<b>Materials</b>	Carbon Steel: 1010 1018, 10B21, 1022, 10B30, 1035, 1038, 1524, 1541 Alloy Steel: 4037, 4140 Stainless Steel: 302, 304, 316, 410, 430, A286 Specialty: Brass, Silicon Bronze, Aluminum, Copper
<b>Manufacturing Process</b>	<ul style="list-style-type: none"> <li>• Heading (Single &amp; Multi-Die)</li> <li>• Rolling (SEMs &amp; Non-SEMs)</li> <li>• Roll Forming</li> <li>• Slotting (Shank &amp; Head) Trimming</li> <li>• Shaving</li> <li>• Grinding</li> <li>• Pointing</li> <li>• Drilling</li> <li>• Tapping</li> <li>• Turning</li> <li>• Broaching</li> <li>• Burnishing</li> </ul>
<b>Sorting</b>	<ul style="list-style-type: none"> <li>• Camera Systems</li> <li>• Optic Systems</li> <li>• Eddy-Current Technology</li> <li>• Mechanical</li> <li>• Roller</li> <li>• Manual</li> </ul>
<b>Additional Processes</b>	<ul style="list-style-type: none"> <li>• Heat Treating (Neutral/Through, Case, Induction)</li> <li>• Platings (Electroplate, Mechanical)</li> <li>• Coatings/Paints (Conversion, E-Coat, Dip-Spin)</li> <li>• Adhesives</li> <li>• Patches</li> <li>• Thread Sealers</li> <li>• Retention Features &amp; Designs</li> <li>• Over-Mold Designs</li> <li>• Component Assemblies</li> </ul>
<b>Certifications</b>	ISO 9001: 2015 ITAR

## Markets Served

- Agriculture
- Appliances
- Construction
- Consumer Electronics
- Consumer Products
- Distribution
- Heavy Truck
- Tiered Automotive
- Industrial
- Lawn & Garden
- Off-Road & Emergency Vehicles
- Oil, Gas, & Energy



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