

### INNOVATIVE CUSTOM SOLUTIONS

## APEX SOLUTIONS TAILORED TO YOUR NEEDS

Let APEX's in-house prototype department, backed by a state-of-the-art manufacturing plant, partner with you to develop a custom fastener drive tool designed to optimize your operations and ensure that your assembly line runs smoothly.

Since 1933, manufacturers around the world have relied on APEX to solve their critical fastening problems.

As the world-renowned specialist in developing screwdriver bits and impact sockets, we create innovative custom solutions for industrial assembly plants around the world.



#### GLOBAL INDUSTRY LEADER

- The industry expert in developing customized, "hard-to-design" bits, bit holders, sockets, and universal wrenches
- Unparalleled experience: Thousands of custom products designed for our global customers

#### SUPERIOR PRODUCT QUALITY

- Superior quality due to advanced engineering capabilities, proprietary raw materials, and consistent manufacturing process
- Value-oriented custom designs that provide the greatest strength and longevity in the industry
- Lower total cost of ownership, as Apex tools significantly outlast competitive tools

#### ADVANCED TECHNOLOGY

- Latest solid-modeling and FEA tools used in product design
- 3D-printed ABS Thermoplastic prototypes can be ordered to confirm dimensions and fit
- Flexible machining processes allow for optimum handling of both small and large orders

# THE GLOBAL LEADER IN MANUFACTURING CUSTOM-BUILT FASTENER DRIVE TOOLS FOR INDUSTRIAL APPLICATIONS

#### **AUTOMOTIVE CASE STUDIES**

#### AXLE AND CHASSIS SOLUTIONS: BEVEL PINION CONNECTOR NUT

**PROBLEM:** Competitive socket had frequent breakage issues at the weld point.

#### **APEX SOLUTION:**

• Specially designed milled tangs mate with the connector nut

#### **BENEFIT:**

• Milled tangs provide greater strength and longer life than the welded option previously used

#### DOOR AND WINDOW LINE ASSEMBLY AND INSTALLATION SOLUTIONS

**PROBLEM:** Productivity issues due to excessive bit breakage.

#### **APEX SOLUTION:**

 Developed a covered tool that reduced tolerance stack-up and ensured superior bit engagement with the fastener

#### **BENEFIT:**

 Improved productivity due to significant increase in bit life; increased safety due to addition of a free-spinning cover

#### AUTOMATED APPLICATIONS

PROBLEM: Client had situations where the driver couldn't travel with the fastener as the fastener was run down.

#### **APEX SOLUTION:**

• Developed a collapsible spring-loaded socket that changes length during socket operation

#### **BENEFIT:**

• Great for multi-spindle situations where all fasteners may not have the same travel distance to complete tightening







#### **SOLUTION HIGHLIGHTS**



#### **Plunger Style sockets**

For retaining non-ferrous fasteners where magnets will not work



#### Thermoplastic sockets

For pre-torque applications while protecting adjacent surface, eliminating marring, with a free-spinning cover



#### **Delrin covers**

Cover almost any tool in orange Delrin, to provide anti-marring properties and an added level of safety



#### **Slotted Electric Harness sockets**

For applications where external wiring or other protrusions cannot be contained in a standard socket

## BECAUSE THERE'S A LOT ON THE LINE™







#### **BIT | BIT HOLDER** CAPABILITIES

- Longer lengths
- Special body diameters
- Special drive styles
- Special turn lengths

#### **SOCKET** CAPABILITIES

- Specific lengths
- Special body diameters
- Different shapes + sizes
- Different magnetic styles
- All square drive sizes + styles
- All magnetic sockets come with rare earth magnets for greater magnetism

#### UNIVERSAL WRENCH CAPABILITIES

- Different shank styles
- Different socket styles + lengths
- Different wrench ball sizes to solve clearance problems
- Tension or non-tension types

#### 3-D PRINTED PROTOTYPE PARTS

APEX offers the option of ordering 3-D printed prototype parts, in thermoplastic material, to help you evaluate the design and confirm the fit to the fastener. Once you are satisfied, we can then manufacture the metal part for you.



