

# THE APEX ADVANTAGE

APEX quality begins with our **superior raw materials**. Only carefully chosen, mostly proprietary, industrial grade tool steel is used.

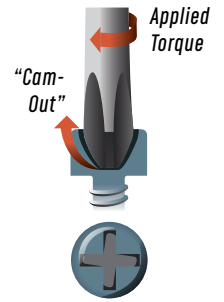
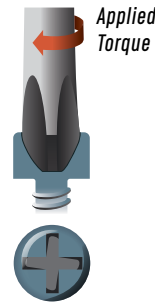
Each tool is **engineered to the highest specifications** in the industry. APEX bits are specified to meet the most stringent government and military specifications where applicable. Our sockets, nutsetters, and universal wrenches have hex tolerances that are on average 45% tighter than ASME (B107.17) and 42% tighter than DIN 475 standards.

Almost all APEX tools are **manufactured in our state-of-the-art facility in Dayton, Ohio**. Our tools are machined, not forged, which produces consistent, precision fit tools that have the tightest tolerances for straightness and concentricity in the industry.

**APEX**

**VS**

**BRAND X**



Precision fit of APEX tools eliminates "camout" and premature bit failure.

High grade alloy steel for improved tool life

Precision fit exceeds industry standards for extended tool and fastener life



Salt-bath Heat Treat process for improved consistency and strength

Advanced engineering specifications lead to tighter tolerances

Precision machined tools run true

## TOOLS THAT RUN TRUE, PERFORM BETTER AND LAST LONGER.

# THE APEX ADVANTAGE

Each APEX tool is tempered with *our proprietary salt-bath heat treat process*, the most advanced treatment available on the market. Salt bath process minimizes surface oxidation and carburization, and provides our tools with significantly improved consistency and strength. If needed, we have the capability to customize the heat treatment on a tool to meet the requirements of your particular application.

Our *Quality Management System is certified to ISO 9001*. All tools must pass our strict quality control standards. This ensures that we only provide you with the highquality tool that you have come to expect from APEX.



## APEX ADVANTAGE

- Globally recognized leader in industrial-grade fastener drive tools
- Superior product durability and consistency because of proprietary materials and consistent manufacturing process
- Greater torque transfer to the fastener due to precision fit design and tighter tolerances
- Diverse offering of more than 10,000 parts available
- Custom solutions capability with quick turnaround times

## SIGNIFICANTLY REDUCED TOTAL COST OF OWNERSHIP



## SELECTING THE PROPER HEAT TREAT FOR BITS

Choosing the proper heat treat is important in achieving long tool life. Different applications, different operators, and different power tools require different heat treats. APEX offers a choice of three heat treat hardness levels in many of our screwdriver bits to match the particular customer's application. These heat treats are specified by a letter suffix as follows:

- X - The hardest heat treat in the industry
- I - Intermediate hardness
- R - Lowest hardness

Selecting the heat treat best suited for a particular application may require some trial and error. The proper heat treat depends on the failure mode. If the bit breaks or shatters, select a bit with less hardness. If the failure mode is wear, select a harder bit. Many times both breakage and wear may occur within the same application. This can be due to a number of factors such as a different operators, different torque values, and different power tool settings.

In general, high torque applications require "R" heat treats to withstand twisting and resist breakage. The "X" heat treat is most suitable for low torque applications, particularly if hardened screws are used.

If a failure occurs, a change in hardness may result in better service. The "X" heat treat is most common and should be selected unless the specifics of an application or an existing problem would suggest using "I" or "R" hardness. To specify a particular heat treat, add a letter suffix to the part number. For example, to specify "X" hardness in a #2 Phillips insert, the part number would be 440-2X. Not all APEX bits are available in all heat treats. Special heat treats can be supplied for a particular application. Contact your APEX representative for specific recommendations.

Since "X" hardness is the most popular with our customers, it is our default product where "X" designation may be omitted from the part number. For all other hardness designations, the product packaging will be marked with the appropriate hardness designation letter.

**APEX**



**BRAND X**



*APEX bits and sockets last significantly longer than most of our competitors.*

## UNSURPASSED OFFERING

This catalog contains 5,000+ of the most frequently requested bits, sockets, universal wrenches, and fastening accessories. Our entire active offering approaches 10,000 sellable part numbers. If the tool you need does not appear in this catalog, please give us a call. The odds are, we may have what you need as a non-catalog item. If not, our experienced staff of tooling experts can design and manufacture custom solutions to meet the needs of your specific applications. You can even submit custom requests on-line at our website [www.APEX-tools.com](http://www.APEX-tools.com) by completing a simple form. This flexibility has helped make APEX the only manufacturer which is a market and technology leader in all of the following industrial product categories: Bits & Bit Holders, Impact Sockets, Extensions and Universal Wrenches.

## AVAILABILITY & SERVICE

APEX has approximately 2,000 authorized distributor locations globally to provide product off-the-shelf as well as knowledgeable service and support. APEX stocks over 1,000 part numbers and a multitude of blanks to manufacture several thousand more in order to support our strong global distribution network.



# PHILLIPS BITS

## 1/4" HEX INSERT BITS LIMITED CLEARANCE



| Part Number | Point Size | Overall Length |     | Turned Length (A) |     | Turned OD (B) |      |
|-------------|------------|----------------|-----|-------------------|-----|---------------|------|
|             |            | IN.            | MM. | IN.               | MM. | IN.           | MM.  |
| 446-0X      | 0          | 1              | 25  | 7/16              | 11  | 0.17          | 4.06 |
| 446-1X      | 1          | 1              | 25  | 7/16              | 11  | 0.17          | 4.06 |
| 446-12X     | 1          | 2              | 51  | 7/16              | 11  | 0.17          | 4.06 |
| SD-1055-A   | 1          | 2              | 51  | 1 3/8             | 35  | 0.17          | 4.06 |
| 446-2I      | 2          | 1              | 25  | 7/16              | 11  | 0.17          | 4.06 |
| 446-2X      | 2          | 1              | 25  | 7/16              | 11  | 0.17          | 4.06 |
| 446-27X*    | 2          | 1              | 25  | 7/16              | 11  | 0.17          | 4.06 |
| 446-215T    | 2          | 1 1/2          | 38  | 1                 | 25  | 0.17          | 4.06 |
| 446-215X    | 2          | 1 1/2          | 38  | 7/16              | 11  | 0.17          | 4.06 |
| 446-22TX    | 2          | 2              | 51  | 1 1/2             | 38  | 0.17          | 4.06 |
| 446-22X     | 2          | 2              | 51  | 7/16              | 11  | 0.17          | 4.06 |
| 446-225T    | 2          | 2 1/2          | 64  | 1 3/4             | 44  | 0.17          | 4.06 |
| 446-23T     | 2          | 3              | 76  | 2 1/4             | 57  | 0.17          | 4.06 |
| 446-3X      | 3          | 1              | 25  | 7/16              | 11  | 0.24          | 6.1  |

\* For shallow screw recess



### ADVANTAGE OF REDUCED DIAMETER BITS:

Reduced diameter bits are ideal for driving screws below the surface of drywall.

## 5/16" HEX INSERT BITS – ACR®



| Part Number   | Point Size | Overall Length |     |
|---------------|------------|----------------|-----|
|               |            | IN.            | MM. |
| 480-2-ACR2-RX | 2          | 1 1/4          | 32  |
| 480-2-ACR2X   | 2          | 1 1/4          | 32  |
| 480-3-ACR3X   | 3          | 1 1/4          | 32  |
| 480-4-ACR4X   | 4          | 1 1/4          | 32  |

|                           |  |                          |  |                          |                              |
|---------------------------|--|--------------------------|--|--------------------------|------------------------------|
| Part Number<br>Suffix - R |  | Part Number<br>Suffix -D |  | No Part<br>Number Suffix |                              |
| For removal               |  | For driving              |  |                          | For both removal and driving |

## 5/16" HEX INSERT BITS



| Part Number | Point Size | Overall Length |     | Bit Notes  |
|-------------|------------|----------------|-----|------------|
|             |            | IN.            | MM. |            |
| 480-1X      | 1          | 1 1/4          | 32  |            |
| 480-2X      | 2          | 1 1/4          | 32  |            |
| 480-2I      | 2          | 1 1/4          | 32  |            |
| 480-22X     | 2          | 2              | 51  |            |
| 480-225X    | 2          | 2 1/2          | 64  |            |
| 480-24X     | 2          | 4              | 101 |            |
| 480-3X      | 3          | 1 1/4          | 32  |            |
| 480-3I      | 3          | 1 1/4          | 32  |            |
| 480-325X    | 3          | 2 1/2          | 64  |            |
| 480-34X     | 3          | 4              | 101 |            |
| 480-4X      | 4          | 1 1/4          | 32  |            |
| 480-4BNX    | 4          | 1 1/2          | 38  | Large Body |
| 480-425X    | 4          | 2 1/2          | 64  |            |

## 5/16" SQUARE INSERT BITS



| Part Number | Point Size | Overall Length |     |
|-------------|------------|----------------|-----|
|             |            | IN.            | MM. |
| 830-1X      | 1          | 1 1/8          | 29  |
| 830-2X      | 2          | 1 1/8          | 29  |
| 830-2R      | 2          | 1 1/8          | 29  |
| 830-3X      | 3          | 1 1/8          | 29  |
| 830-4X      | 4          | 1 1/8          | 29  |



### ADVANTAGE OF APEX ACR® BITS:

Painted, coated or corroded fasteners can present special problems. APEX® ACR® insert bits' special wing-face ribs grip screw recesses to reduce stripping and cam-out which can result in damage to the surrounding workpiece. Choose from bits ribbed for screw removal, driving or both. They're also available in both insert bits and power drives.